



## COTTAGE GROVE CITY COUNCIL

June 26, 2024

12800 RAVINE PARKWAY SOUTH  
COTTAGE GROVE, MINNESOTA 55016  
COUNCIL CHAMBER- 7:00 PM

- 1 Call to Order
- 2 Pledge of Allegiance
- 3 Roll Call
- 4 Open Forum
- 5 Adoption of Agenda
- 6 Presentations
  - A Eagle Scout Award - Christian Meyer  
*Staff Recommendation: Recognize Christian Meyers accomplishment of Eagle Scout and award him with a plaque.*
  - B Fourth of July Fireworks Donation Presentation  
*Staff Recommendation: Accept Fourth of July Fireworks Presentation.*
- 7 Consent Agenda
  - A City Council Special Meeting Minutes Joint Workshop (5-29-2024)  
*Staff Recommendation: Approve the May 29, 2024, Special Meeting Joint Workshop Minutes.*
  - B City Council Special Meeting Minutes (6/05/2024)  
*Staff Recommendation: Approve the June 5, 2024, Special Meeting Minutes.*
  - C ACHP Meeting Minutes  
*Staff Recommendation: Accept and place on file the minutes from the April 9, 2024, meeting of the Advisory Committee on Historic Preservation (ACHP).*
  - D Appointment of Election Judges - 2024 Statewide Primary Election  
*Staff Recommendation: Approve Resolution 2024-099 and the appointment of the election judges listed in Exhibit A for the Statewide Primary Election on August 13, 2024, and authorize the City Clerk to appoint additional election judges, as needed, to fill vacancies.*
  - E Approval of Rental Licenses  
*Staff Recommendation: Approve the issuance of rental licenses to the properties listed in the attached table.*
  - F 2023 Convention and Visitor's Bureau Annual Report  
*Staff Recommendation: Receive the 2023 Cottage Grove Convention and Visitor's Bureau Annual Report.*
  - G Authorization to Apply for Public Safety Grants  
*Staff Recommendation: Authorize the Public Safety Department – Police Division to apply for the MNOSHA Safety, Advisory Council on Traffic Safety (ACTS) Safety Project, Department of Justice Body-Worn Camera, and the Minnesota Department of Public Safety-Office of Traffic Safety grants.*

- H      **Renovation Systems Final Payment**  
*Staff Recommendation: Authorize resolution 2024-092 approving final payment to Renovation Systems in the amount of \$3,631.53 for the Glacial Valley Park Building Project.*
- I      **Local Option Sales Tax Referendum Ballot Question**  
*Staff Recommendation: Adopt resolution 2024-093 approving referendum questions on the November 5, 2024 ballot to impose a local option sales tax for the betterment of Hamlet Park, Mississippi Dunes Park and River Oaks Golf Course and Event Center.*
- J      **DuPont PFAS Settlement**  
*Staff Recommendation: Adopt resolution 2024-089 authorizing submission of the claim form for the DuPont AFFF Class Action Settlement and authorizing the City Administrator or her designee to sign all documents necessary to complete the claim form process.*
- K      **Goodview Ave Water Connections Quote Award**  
*Staff Recommendation: Adopt resolution 2024-098 awarding the 2024 Goodview Avenue Water Service Installation Project to Capra's Utilities Inc. in the amount of \$123,025.00 and approve the contract with Capra's Utilities Inc.*
- L      **Low Zone Water Treatment Plant Change Order # 1**  
*Staff Recommendation: Approve Change Order #1 in the amount of \$450,285.33 for the Low Zone Water Treatment Plant project, increasing the contract amount from \$38,182,800, to \$38,633,085.33.*
- M      **2024-2026 MCES Water Efficiency Grant**  
*Staff Recommendation: 1) Adopt Resolution 2024-097 approving the Metropolitan Council Clean Water Fund Grant Agreement No.: SG-21410, and authorizing the Public Works Director to sign all documents necessary to effectuate the Grant. 2) Authorize the expenditure of \$11,750 from the Water Utility Fund to match the MCES grant.*
- N      **Market Analysis and Small Area Plan - Professional Services Agreement**  
*Staff Recommendation: Approve the Professional Services Agreement with Stantec Consulting Services for a Market Analysis and Small Area Plan.*
- O      **Hawthorne Pines Third Addition - Final Plat, Development Agreement, and Approval of Plans & Specs**  
*Staff Recommendation: 1) Adopt Resolution 2024-094 approving the final plat for Hawthorne Pines Third Addition. 2) Approve the Hawthorne Pines Third Addition Development Agreement with Pulte Homes of Minnesota with minor modifications as approved by the City Attorney. 3) Adopt Resolution 2024-095 approving the Hawthorn Pines Third Addition Development Plans dated April 30, 2024, prepared by Alliant Engineering and as approved with minor modifications by the City Engineer.*
- P      **Donations - 4th of July Fireworks**  
*Staff Recommendation: Approve Resolution 2024-100 accepting donations received for the 4th of July Fireworks.*
- 8      **Approve Disbursements**
  - A      Approve disbursements from 05-30-2024 through 06-19-2024 in the amount of \$6,786,241.02
- 9      **Public Hearings**
- 10    **Bid Awards**
  - A      **TH 61 River Oaks RCUT Project – Bid Award**  
*Staff Recommendation: Adopt Resolution 2024-096 awarding the TH 61 River Oaks RCUT Project to Pember Companies, Inc. in the amount of \$1,203,803.45.*
- 11    **Regular Agenda**



12 Council Comments and Requests

13 Workshops - Open to Public

A Mississippi River/Grey Cloud Island Flood Update

*Staff Recommendation: Receive current water level conditions on Grey Cloud Island and provide staff with feedback.*

14 Workshops - Closed to Public

A Closed Workshop - Labor Negotiation

*Staff Recommendation: Closed meeting pursuant to Minn. Stat. 13D.03 to consider strategy for labor negotiations.*

15 Adjournment



## City Council Action Request

### 6.A.

|                             |                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------|
| <b>Meeting Date</b>         | 6/26/2024                                                                             |
| <b>Department</b>           | Administration                                                                        |
| <b>Agenda Category</b>      | Presentation                                                                          |
| <b>Title</b>                | Eagle Scout Award - Christian Meyer                                                   |
| <b>Staff Recommendation</b> | Recognize Christian Meyers accomplishment of Eagle Scout and award him with a plaque. |
| <b>Budget Implication</b>   | N/A                                                                                   |
| <b>Attachments</b>          | None                                                                                  |



## City Council Action Request

# 6.B.

|                             |                                                |
|-----------------------------|------------------------------------------------|
| <b>Meeting Date</b>         | 6/26/2024                                      |
| <b>Department</b>           | Administration                                 |
| <b>Agenda Category</b>      | Action Item                                    |
| <b>Title</b>                | Fourth of July Fireworks Donation Presentation |
| <b>Staff Recommendation</b> | Accept Fourth of July Fireworks Presentation.  |
| <b>Budget Implication</b>   | N/A                                            |
| <b>Attachments</b>          | None                                           |



# City Council Action Request

## 7.A.

|                      |                                                                                                                |    |                                                         |
|----------------------|----------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------|
| Meeting Date         | 6/26/2024                                                                                                      |    |                                                         |
| Department           | Administration                                                                                                 |    |                                                         |
| Agenda Category      | Action Item                                                                                                    |    |                                                         |
| Title                | City Council Special Meeting Minutes Joint Workshop (5-29-2024)                                                |    |                                                         |
| Staff Recommendation | Approve the May 29, 2024, Special Meeting Joint Workshop Minutes.                                              |    |                                                         |
| Budget Implication   | N/A                                                                                                            |    |                                                         |
| Attachments          | <table border="1"><tr><td>1.</td><td>2024-05-29 City Council Special Meeting (Joint Meeting)</td></tr></table> | 1. | 2024-05-29 City Council Special Meeting (Joint Meeting) |
| 1.                   | 2024-05-29 City Council Special Meeting (Joint Meeting)                                                        |    |                                                         |

## **MINUTES**

**COTTAGE GROVE CITY COUNCIL  
COUNCIL CHAMBER  
12800 RAVINE PARKWAY SOUTH  
COTTAGE GROVE, MN 55016**

**May 29, 2024**

**JOINT COUNCIL WORKSHOP - OPEN TO THE PUBLIC - 5:00 P.M**  
HERO CENTER (10125 85<sup>th</sup> Street South Cottage Grove, MN 55016)

### **1. CALL TO ORDER**

The City Council of the City of Cottage Grove, Washington County, Minnesota, held a Joint workshop with the City Council of the City of Woodbury. This workshop was open to the public, and held on May 15, 2024, at the Cottage Grove HERO Center, 10125 85<sup>th</sup> Street. The start time for the workshop was 5:00 p.m. with the presentation beginning at 6:30 p.m.

### **2. ATTENDANCE**

#### Cottage Grove

Mayor Bailey

Council Member Khambata

Council Member Olsen

Council Member Thiede

Council Member Garza

Also present from Cottage Grove: Jennifer Levitt, City Administrator; Emily Schmitz, Community Development Director; Ryan Burfeind, Public Works Director; Pete Koerner, Public Safety Director; Brad Peterson Public Safety Captain; Dan Anselment, HERO Center Manager, Gretchen Larson, Economic Development Director

#### Woodbury

Mayor Burt

Council Member Santini

Council Member Wilson

Council Member Morris

Council Member Date

Also present from Woodbury: Clint Gridley, City Administrator; Janelle Schmitz, Community Development Director; Angela Gorall, Deputy City Administrator; Jason Posel, Public Safety Director; Mary Van Milligen, Public Works Director; Shelly Schafer, Community Relations Manager;

Also present: Amanda Hemmingsen-Jaeger, State Representative 47A; Karla Bigham, Washington County Commissioner; Ann Schweisguth, SWCTC Interim Executive Director; Lonnie Garland, SWCTC Interim Assistant Executive Director; Brian Johnson, SWWD President; John Loomis, SWWD District Manager

### 3. WORKSHOPS - OPEN TO THE PUBLIC

#### **Washington County Update**

Washington County Commissioner Bigham provided an update on the planning process for Highway 13 (Radio Drive). This project expands the two-lane highway to a four-lane highway, adds multi-modal trails, manages and treats stormwater runoff and improves the intersection of Radio Drive and Dale Road. Bigham explained the public engagement process which included multiple open houses where the public was encouraged to give feedback.

Commissioner Bigham provided an update on the Food Scrap Collection program highlighting the successes and benefits to the environment.

#### **HERO Center Report**

A report on the HERO Center was provided, including its mission statement, memberships, non-member usage, revenue and expenditures, and facility usage statistics.

#### **Cottage Grove & Woodbury Public Safety Update**

Updates were provided on emergency medical services (EMS) fire response data, fire shift model conversion, Woodbury police calls for service, public safety partnerships, and police and overall public safety trends.

The importance of mental health and well-being for public safety personnel was highlighted. Initiatives discussed included peer support teams, mental health check-ups, on-duty fitness time, critical incident stress debriefings, family events, and an expanded Community Support Team (CST).

The Community Emergency Response Team (CERT) program was presented, outlining its role in training volunteers to assist during emergencies.

Plans for a thoughtful redesign of the Woodbury Public Safety Campus were introduced, with funding proposed through Local Option Sales Tax.

A collaboration with the Teddy's Heart Foundation was outlined to increase the accessibility and availability of Automated External Defibrillators (AEDs) throughout the

community. This initiative was inspired by the tragic passing of Teddy Dowdle at Woodridge Park on May 4, 2022, due to sudden cardiac arrest.

### **Cottage Grove & Woodbury PFAS Projects Update**

A detailed update was provided on the ongoing efforts to address polyfluoroalkyl substances (PFAS) in Cottage Grove's and Woodbury's drinking water. This included the timeline for interim and long-term treatment solutions, the current status, the layout and perspectives of Cottage Grove's Intermediate Zone Water Treatment Plant (IZWTP) site, and the Woodbury Water Treatment Plant.

The project mission statement, key considerations, and potential risks associated with the timeline were outlined by Woodbury. Next steps were identified, including securing grant funding and awarding bids for the water treatment plants and pipeline construction.

### **3M Settlement Fund Status**

An update was provided on the status of the 3M settlement funding for capital construction and ongoing operations & maintenance.

### **South Washington Watershed District**

An update was provided by the South Washington Watershed District on their watershed management plan which included capital improvements, operation and maintenance, education, monitoring, regulations, incentives and water restoration and protection.

### **South Washington County Telecommunications Commission**

SWCTC presented a video introducing the members of their team and highlighting the 2023 annual report. A list of the 2024 Commission Directors was provided.

### **Cottage Grove & Woodbury Development Update**

An update was provided on growth management efforts in Cottage Grove and Woodbury, particularly along the joint city border, including housing growth initiatives, affordable housing projects, economic development partnerships, and new commercial developments.

### **Cottage Grove Local Option Sales Tax (LOST) for Parks Referendum**

Information was presented on the proposed "Preserve.Play.Prospers" plan, which if approved, would see a 0.5% sales tax increase to fund improvements to Hamlet Park,

Mississippi Dunes Park, and River Oaks Golf Course and Event Center. Specific Park improvement plans were detailed.

### **Questions and Closing Remarks**

Time was allocated for questions and closing remarks.

### **4. ADJOURNMENT**

The special meeting was adjourned at 8:57 p.m.

Minutes prepared by Tamara Anderson, City Clerk.





# City Council Action Request

## 7.B.

**Meeting Date** 6/26/2024

**Department** Administration

**Agenda Category** Action Item

**Title** City Council Special Meeting Minutes (6/05/2024)

**Staff Recommendation** Approve the June 5, 2024, Special Meeting Minutes.

**Budget Implication** N/A

|                    |                                            |
|--------------------|--------------------------------------------|
| <b>Attachments</b> | 1. 2024-06-05 City Council Special Meeting |
|--------------------|--------------------------------------------|

## **COTTAGE GROVE CITY COUNCIL**

**June 5, 2024**

**12800 RAVINE PARKWAY SOUTH  
COTTAGE GROVE, MN 55016**

### **SPECIAL MEETING - TRAINING ROOM - 5:45 P.M**

#### **1. CALL TO ORDER**

Mayor Bailey called the Special Meeting/Workshop to order.

#### **2. AGENDA**

##### **A. Independent School District 833 Project Review.**

Mayor Bailey stated he was excited and looking forward to seeing and hearing the District 833 Project overview. He stated Julie Nielsen, Superintendent, and Dan Pyan, Executive Director of Finance & Operations, would start us off on this.

Julie stated thank you for having us here. We shared it on our last day of students, not our last day because we work all year. While Dan is retiring, I'm getting older, too, and I'll be the most senior person. We are excited to be here just to share a little update.

We'd like to go through our overall slides, I think it gives the community a reminder of who we are as South Washington County Schools: We're the second-largest employer in Washington County, behind Andersen Windows. We're the 6th largest district: Anoka-Hennepin remains 1st, Rosemount-Apple Valley-Eagan moved into 3rd, Minneapolis is 4th, and Osseo Public Schools is 5th. We're still holding tight on close to nearly 4,000 employees. Across the district, there are 1,800 K-12 students. If we factor in our little pre-K students, we're talking about another 1,000 students; so, we have that many students who are in our early learning pre-K. You are aware that we provide programming really from birth all the way up to people getting their GEDs, sometimes at the age of 90.

I think the last time I was here, we were sitting at about 51%-52%, and really, as we look over the years and having been in the district since 1991, this pie chart of demographics gives you an idea of who we serve and what our students and families bring to our communities, what they bring to our schools. This just really highlights the diversity that we have in terms of student backgrounds. Of course, many of our students are born here in the United States, but we do have a number of students that come in with 3M, with Medtronic, and are part of our school district.

This shows our projected enrollment; if you look at the bottom left-hand corner, you're going to see that this was done by Hazel Reinhardt as part of our demographic study, which led to the bond question. Something to note when we look at 2024 into 2025, while these were projections, what we heard as part of that demographic study, nationally and certainly across Minnesota, we are seeing smaller classes of kindergarteners coming in; we're graduating a large class, we have smaller numbers of kids coming in, and that is because of fertility rates and overall birth rates. So, it means that nationally we're seeing a trend of lower enrollment. We have been holding steady, and we look at next year's enrollment, depending on the day it can go up and down slightly, we look at it every week. We're talking about 150 students that we're down, as I said graduating a large class; so, we're still continuing to hold our own. We have a lot of families who are interested in open enrollment, which is great, as Minnetonka and some of the west side really do a lot of recruiting with the open enrollment. We would do the same if we had a lot of extra space, but we don't have that extra space; we want to make sure that we have space for our own students first.

This is just to give you a little idea of enrollment. The school district, while we passed our first portion of a bond referendum, it doesn't take away some of the inefficiencies when we take a look at our elementary schools. So, you're going to see those elementary schools in the 200s and the 300s; some of them are located right next to each other, we have Hillside and Armstrong that are like basically almost on the same property, but not quite. Just looking at the sizes of our schools, you'll see they range from 260 all the way up to Liberty Ridge at 821. So, when we do our staffing, when we talk about students, it's all done from a district perspective, looking at the number of students at each school.

This just highlights for Council just the numbers of secondary students; you'll see on the left-hand side in bold are the Cottage Grove schools, Cottage Grove Middle and Oltman Middle School. On the right-hand side are high schools, so you'll see where Park High School is sitting as well as South Washington County Alternative High School.

Mayor Bailey asked between Cottage Grove Middle and Oltman Middle School, what's our capacity at?

Dan replied Oltman has a capacity of 990; Mayor Bailey stated so you're over a little bit, which Dan confirmed. Dan stated Cottage Grove Middle is about 1,200. Julie stated Lake and Cottage Grove are that same prototype in terms of schools.

Julie stated so, let's just take a quick look back. I know you want to get to the project and take a look at where we're at; but if you remember, Question 1 was the highest priority. That dealt with making space in our high schools, as well as the remodels at our secondary, and the safety and security at our secondary schools. Question 2, when we focus over there, it will be on safety and security at the elementary level addition, along with bathrooms. So, if you look at Question 1, Dan is going to be sharing a little bit of Cottage Grove Middle School; we're actually just beginning that project, and they will be doing a secured entryway. Oltman Middle School, if you remember, they're going to have another wing added on, and that was all planned for as part of the last referendum. East Ridge High School is going to have a whole addition as well, so construction of new classrooms: CTE, computer and technology classrooms, biomed, science technology, and engineering. Park is going to have a new cafeteria, kitchen, and expansion of various areas, and then, of course, that secured entryway. When we look at East Ridge and Park, East Ridge right now has that secured entryway whereas at Park, you kind of go into the vestibule and once you step in, it's just wide open to the learning space.

Elementary Schools for Cottage Grove: Grey Cloud Elementary School because of its size, you saw kind of a higher enrollment and just overall growth in that particular school, construction of classroom additions, a long list of the need for a bigger cafeteria and kitchen. Pine Hill is the same, you all are aware of the growth over in that area. If you haven't noticed, there's some kids coming out of the cracks, I think every space in that school is utilized for something; closets are offices, sometimes working with kids one on one. Finally, Crestview, Hillside, Pullman, and Royal Oaks, in Woodbury, they will all have the construction of the bathrooms as well; those are planned for later, but Dan will talk about that.

Julie stated I'm going to let Dan talk about the construction phasing and then where we are with each of the projects. Please, as we go through, if you have questions, stop us. Some of the information that we have prepped for our Board, we wanted to make sure that our Board saw it before we brought it here, so we continue to move every week as we go through these plans.

Dan stated as we're talking, the design and planning process is underway for the first tier of our projects. We will be eventually working on 15 different construction projects across the district over the next three years. The first tier projects are the highest-priority items, and that's focusing on safety and security and overcrowding in the secondary schools. We will start designing the elementary addition, the elementary school restrooms in January 2025; so, we're really at a cycle where we'll get these projects designed, we'll get the bids out, and get the construction schedule, then we'll start designing the next. Our architects have been meeting with groups of staff to gather input, feedback, and to start the design work for all these additions. We hope that by 2027, all 15 projects will be done.

This is more of a graphic way to look at the construction plans and phasing it; it's subject to a little bit of change, but certainly my eyes already flirted with the end for each project. You can see that we're looking at high growth in Lake Middle and Oltman Middle, being done by the fall of 2026; Woodbury Middle School will actually be the first thing done in April 2026. We're scheduled to have East Ridge done

by 2026, and then Park High School and Woodbury High School done by the fall of 2027. This is on our website; this is just an easy way to look at it.

Julie stated and if I can just interrupt, keep in mind we passed the bond in 2023, and so the work isn't going to be done until 2027. One of the first things we heard was, well, why do we have these delays, it's going to be so long. I think that's the difference between our school district having a five-year plan and a ten-year plan, because when approved, it still takes five years to actually get the building done. So, we've heard some of that, why it takes so long, and that is part of the statement.

Administrator Levitt stated I don't think people recognize that you're not going to spend money on design services without a referendum passed; so, why would you spend all of that money financially, I don't think they understand that dollar use.

Council Member Khambata asked when you guys put out a Request for Proposal when you bid any of these projects, how many firms normally respond?

Dan replied these projects will have to be bid based on the year for them, when they're contracted, so, they don't actually get bid before that.

Council Member Khambata stated I'm just curious, like how many firms are out there that are trying to like compete in this space.

Administrator Levitt stated you use Kraus-Anderson.

Dan stated yes, we do, so we use them as our construction manager, so they'll act as the general; so, say electrical, we'll probably get three or four general construction. There are some big players, we're hoping to get a lot more, but it depends on what else is going on. Generally, for each one, three or four.

Council Member Khambata asked have you guys witnessed or kind of seen any kind of downward trend in what the estimated bids were vs. like what actual costs are? I know we've been seeing some of that with our capital improvement projects where for a long time, things were coming in a little bit above the engineer's estimate, and now we're starting to see bids come in a little bit below, which is a nice surprise.

Dan stated our current experience has lots of, let's call it long-term facility maintenance, which we work on every year, about \$20M worth; usually, it's the real boring stuff, roofs, parking lots, HVAC equipment. Yes, we've definitely seen it flatten and we're pleased with some of that, but it has flattened out, knock on wood. Like you said, so we can see after the first of the year, the first month, and it will be interesting to see how it goes after that.

Council Member Khambata stated very cool, thank you.

#### **Oltman Middle School**

Dan stated the scope of this project is to create capacity for about 400 more students, so they'll be at almost 1,400. People may ask why do you have to expand; I don't think philosophically we want to have any middle schools with more than 1,400 students. If we get to that point, we're going to have so many middle schools, that we'll have to look at start building in a different area. The space includes STEM classrooms, multipurpose classrooms, science classrooms, general classrooms. We will expand the cafeteria and the kitchen. We now need to comply with storm shelter requirements, meaning that we'd need to have an area there that would withstand certain parameters for storms, which is new, based on the last time we built this, and that adds about \$2M to each project we're doing.

Our guiding principles in designing this building is that the additions will look and feel like they match the rest of the building; the pod layouts will vary from existing with updated learning opportunities, and we'll plan additional opportunities for flexible learning in the pod areas and the science and general areas.

Council Member Garza asked are any of their bathrooms going to multigender bathrooms?

Julie replied yes, across our secondary projects, we have a couple different templates of bathrooms, and depending upon where its located, we're really looking in places like theater area, gymnasium, but locations where large groups gather to have single-user stalls. So, we actually have two different prototype bathrooms for the secondary that we're looking at, depending upon the location.

Council Member Garza stated that's good. I've gotten a lot of feedback from some of the St. Paul schools; the ones that boys and girls are both using that in the lower schools is not as nice for girls because little boys and little girls are using them.

Julie stated I think the one thing that we just have to think about is at any level is if someone identifies as transgender, then by law they need to have access to the bathroom they identify with. So, typically,

with an elementary we work with families closely on that, but I think at the secondary level, we really are trying to look at the spaces and where large groups gather to make sure we have some options.

Dan stated so here's the overall floorplan that we've come up with so far. You remember we're expanding the cafeteria and the kitchen, you can see that in the yellow. We'll be pushing that cafeteria out and then adding actually this is a little branch, adding a little bit more to that kitchen because of the original design and we're feeding more and more students.

Then the actual addition of the classrooms was fairly simple on this one, same design and putting it on the end that we had planned on, and then make that some storm shelter security, to fit the requirements of the storm shelters.

Here is an illustration of what it will look like; as you can see, being its such a new building, adding the same type of classroom that you can see on that slide. Here's the other slide of the cafeteria; you can see where the old walls are now, we'll bump that out; right now it's the courtyard out there, and this will be beyond that when we expand the kitchen. You can also see that on the other side.

Dan stated the schedule for this one, we'll be designing up until September, and we'll put together the best possible bid in the fall, the bond and the bid documents. We hope we can start construction in the spring of 2025.

Administrator Levitt stated and the nice thing, as Dan pointed out, the project on its original approval had already contemplated those additions; so, you won't see it go through Planning Commission or City Council because it was already approved originally. That will help expedite them directly to a building permit.

#### **Cottage Grove Middle School**

Dan stated this is one where we would like to establish a better secured entrance. So, we're looking at putting a secured private entrance and moving the office basically to the front of the building, and we'll remodel existing portions of the front-office area.

Council Member Olsen asked don't you have an entry/exit on both sides at Cottage Grove Middle School? One in the front and one in the back? Julie asked the pool area? Council Member Olsen replied yes. Julie said yes, the pool area during the school day, though, is not used. Council Member Olsen stated I see. Dan stated it's secured, as well as the back. Julie stated the exterior doors are locked and they come in, just to the left, that will be the main area. Council Member Olsen stated okay, perfect, thank you.

Dan stated that is not an exciting change, but you can see where we'd like to put that, and this actually makes it the easiest and most useful place to put the offices, and we're really not taking away much green space because this is just your entryway right now.

Dan stated hopefully this will be designed by the end of February 2025, we'll bid in the spring of 2025, and start construction between January and the summer of 2026.

#### **Park High School**

Dan stated now remember, with Park we're not adding capacity, as Park has the capacity of about 2,100; it should be okay, as there are about 1,900 students right now. Based on the way the classes are flowing through, we should be good for at least three-to-five more years.

We probably do need to expand the cafeteria and the kitchen, as they were built too small for that in the first place. We also want to expand our Career Tech Education department and modernize those classrooms. This one has a secured entrance, but it's one, like Julie said, that opens up into the main school building; so, we'll move the offices and the secured entrance to that portion and reconfigure all of that. Of course, the site traffic and the safety improvements, as you're all very familiar with the traffic around there. We're hoping to come up with a plan now to improve it; we keep looking at it, and you'll be able to see that in a second.

Dan stated I kind of already touched on the scope, but we are looking at a new entry and roadway to address traffic on 80th Street; we'll have to do some more new stormwater management, relocate the athletic field, a new building and grounds athletic storage building, relocate staff parking. Of course, inside we talked about the cafeteria and some of the classrooms. It'll probably be easier to see it than to talk about it. Here's an example of the draft Site Plan. As you can see, the spot in here is 80th Street, and the idea at this point is to enter down by Crestview. The Crestview people would just go around, back into their lot, and drop off the kids and pick them up. Park students will follow a new road that goes in, around

back, to where you see the student drop off is going to be back where that cafeteria and kitchen are, the new cafeteria is in the back there. Just for reference, you can see the football field, you know what part of the building we're talking about. We've been kind of going over these Site Plans a lot and coming up with different types. The athletic fields aren't for sure in there because as we looked at some of the budgets, we may not be able to take out that big hill behind Crestview, but we'll just figure that part out.

Julie stated this one isn't as exciting. When you look at this, it doesn't look like very much for \$38M or whatever it is, but I think as you go through now, you're going to see a little bit more detail. What we're planning to do with these large buildings, though, is to have two spaces where we have secured entryways. It's really difficult with student parking because what kids start doing is they start opening doors for each other. So, on the back end, where the cafeteria is, will be an entryway in the morning that will be staffed. So, then, if kids go out for lunch, seniors, then when they come back, they'd have a door on that side. Otherwise, they're not going to walk around the whole school to get in the front. So, we really tried to make sure that we could set it up that way.

Mayor Bailey asked so, where it says staff parking with that little arrow, that's the Ice Arena, right? Julie replied yes.

Council Member Olsen stated so this is slated for completion in 2027. So, I assume you'll do the planning and bidding and all the rest of that for this building in 2025 vs. 2024, is that right?

Julie replied stated we have the bidding on here, it's all phased in. So, the bidding will have to happen in 12/2024, so about a month. The bid cap, too, I think the first bid cap will be the cafeteria; the first thing we have to do is move that new cafeteria because it's new, and that's in the back. Then, where the existing cafeteria is, then that will be remodeled with offices, etc.

Council Member Olsen stated okay, I'm about to ask you a question that probably isn't part of your presentation, and I don't want to get off on a tangent; I just want to know have you had any dialogue with any of the users of the Ice Arena with respect to connecting the two in some way for kids who are crossing from Park to the Ice Arena, Ice Arena to Park, pick up, drop off, or games, tournaments, etc.? Just wondering specifically maybe Coach Corkish or some of those folks, have they had any input into this or will they at some point?

Dan replied they approached us about adding a locker room. Council Member Olsen stated well, that's another part of this conversation. Dan replied there have not been any conversations that I have heard about that we've had with them. So, then we looked at it and decided to leave room, we found the places where we could do it and do the HVAC and things like that. So, as far as I know, and I can do some research and reevaluate. I don't know that we've had any conversations. When you talk about connecting, do you mean?

Council Member Olsen stated again, I don't want to get off on a tangent; I'll just tell you that they have had conversations with our Park and Recreation department, with the mayor and myself, about some different thoughts that they have relative to the Ice Arena and its adjacency to the school and how that could work better, etc. So, I just wanted to know if they had approached you. Because if they haven't, I mean, at some point they should so that at least they can be heard.

Dan stated I'll check back with Kyle and see if he's had any conversations. We have talked about the locker room. Dan stated I'll find out.

Council Member Olsen stated sure, understood. Okay, thank you.

Mayor Bailey stated so, I think I heard you say, I'm just making sure I catch this; so, Crestview's down in the left corner there, and you have your visitors' parking. So, if I heard what you said, at least at this point if you're picking up or dropping off, either at Crestview or at Park, you're going to come in down there, correct, vs. up on the other lot?

Julie replied yes.

Mayor Bailey stated so, if there's a student who's going to park, they're going to go up there, and then the drop off and such is going to be in the back, what will now be the back of the school.

Julie replied yes, that will be where the traffic of cars will come in, then the buses will stay in the front.

Mayor Bailey stated so, the only question I have is not, I don't know if this is so much for you but with our staff, too, is as we've been challenged, and so have you with the whole parking between the Ice Arena and the schools, in this conversation are we having discussions about where we can expand

parking opportunities? I mean, I see the one where it says staff parking, that's kind of an existing lot, though, is that staying that size, or?

Dan replied I might be wrong, and I brought it up because we had conversations, I think that is just additional parking there now, but I'm not quite sure.

Mayor Bailey stated yes, because to me it looks like it's closer to the Ice Arena, which right now there's that old white, it used to be a warming house.

Dan stated yes, and that was that building I was talking about, if we can get rid of that. Mayor Bailey stated yes.

Council Member Olsen asked and you're talking about that hill behind there, too, right? About doing something with the hill. So, I mean, is that going to enable you to add ballfields and maybe change?

Dan replied oh, you mean behind there? Yeah, that might. I might have to take that up with engineering.

Council Member Olsen stated I'll take it down myself, if you want me to, because I had to run it under Coach Ekmark more times than he did, so.

Mayor Bailey stated that's the only reason you want the hill gone. Council Member Olsen stated I will happily come by and do that. Mayor Bailey stated kids will be mad at you for that, though, if they're not sledding.

Dan stated that might not be true value engineering. We had the schematic design, composite numbers, and then we had to go back to the drawing board to take some dollars off.

Administrator Levitt stated the one thing, too, is they have designed all those pull-in spots off of the driveway, to the north. So, those are all added parking stalls as well. I think our biggest comment is then we need sidewalks and lighting to provide safety navigation to the Ice Arena, but they're adding a tremendous amount of parking stalls on that pull in.

Mayor Bailey stated I'm just interested, as you get further along, what the difference of parking is going to be for the grand scheme of things. Administrator Levitt asked kind of a site totality? Mayor Bailey stated yes, and how we're part of that, too, obviously.

Council Member Khambata asked so the egress onto 80th Street from the student parking lot, does that become like an exit only? Or how do you navigate that traffic signal then if you've got this new drop-off lane that goes around the back of the school?

Julie asked oh, the stoplight that's directly on this student exit? Council Member Khambata replied yes.

Dan stated well, at this point, I believe we can come up with all kinds of ideas, too, and I know our guys have been working the City, too. So, I think those will remain; I think the hope is that we're going to take so much of the drop-off traffic down to there that you'll have a lot less traffic flow up on top.

Council Member Khambata stated when I drop my kids off in the morning, I'm impressed at the amount of animosity that parents throw at each other in the drop-off line. I just park my car and walk my kid up, I don't mess with the line. But on the off chance that I am trying to get in or out of the line, I have been in less tense traffic in like Chicago than I have experienced in the drop-off line. My question is if you give somebody two options, like how do you incentivize them to use the one that you want and not just create like a bigger mess with two options?

Julie replied you show them.

Council Member Khambata stated well, at Hillside, they put cones out in front, so all the nasty parents that want to skip in line and go the short way, they can't, they have to go all the way around the back.

Julie stated so does the superintendent when she visits Hillside, they just want you to know.

Council Member Khambata stated but on more than one occasion, somebody's like trying to run over the cone to get in. So, I'm just curious how you manage that because I know that's a big problem, both at Crestview and at Park with the like stacking during pick up and drop off.

Dan stated there are various ways; there's not a uniform way we can do that because we look at the different schools and the different drivers. We go to Oltnan, and they set up a system that not only works, but it took a lot of push and pull to get there.

Julie stated Red Rock is another one of those schools that sits right there.

Dan stated the building manager is the one who usually comes up with the plan. It all depends on what kind of parents you're dealing with, things like that, the ages. Because if you go to Liberty Ridge, and

theirs is totally different, the way they do theirs. So, there's no answer yet, but the hope is get that traffic down there and take it away from up at the stoplight.

Mayor Bailey stated the only other thing for our staff, as you guys were working through this, is obviously is it next year or the year after we're doing 80th Street? Administrator Levitt replied 2026.

Mayor Bailey stated so we're doing 80th in 2026. One of the things I was going to say when we got to that point is when you go by Crestview or those areas now, the lanes are stopped because traffic is backed up so bad; is our goal then from a staff perspective that turn lanes are going to be, like whether you're going west or east, is there going to be longer turn lanes?

Administrator Levitt replied well, engineering is working directly with the school district to design and figure out how we can make those things more efficient. They're looking at that queuing space, the timing of the signals because there can be gaps. So, it's still numbers, and we're still in schematic design to figure out all of those solutions, but we're working in tandem.

Mayor Bailey stated I figured you were.

Julie stated the City engineers have been great, working with and even talking about this, and how much of a line can we have to keep traffic flowing.

Mayor Bailey stated the only reason I bring it up, and I 100% agree with what you're trying to do, but I also worry that if we're going to put all the Park kids and the Park parents are doing drop off, along with Crestview, and they're all going in one entrance, what's already a backup at Crestview is going to multiply. And I'm not sure this has happened, but I'm just going to say you could have traffic that's backed through the intersection on Hinton.

Julie stated well, we have different start times.

Mayor Bailey stated okay, so, you're going to make sure of that.

Julie stated Crestview is an early start school, and of course our high schools are on second tier. So, the times are different and the same with the dismissal times then, of course. So, we thought about that, the dismissal times are different, so there may be some traffic coming in there from like elementary when it's high school time, but most of it would be high school. There has also been some conversations about having gates and when might this area be gated off so that now kids don't have access to that and they have to go to the student parking. I think the exciting thing, and you don't get to see it with the images we have here, is when we take a closer deep dive into that cafeteria and kitchen if you can imagine that by the football field; having a brand-new addition with an area that has glass and windows and not lower ceilings than this, with 1,000 kids trying to eat lunch in there, it's designed beautifully.

Dan stated this is the specific schedule: Right now, we just finished up schematic design, and we went through our first budget cut, and now we're into design and development. Construction documents at the end of this calendar year, bidding first pack in November, bidding the second pack in February, and construction hopefully starting in June 2025, finally ending in August 2027. As Julie pointed out, we have to build the new cafeteria before we can remodel the old one, so that makes it a little tougher. We'll run into the same issues at Woodbury High School.

### **East Ridge High School**

Dan stated this is where a lot of Cottage Grove students go; the overall schedule on that is we're in schematic design, we're almost done with that, and we're in design and development. These documents will be done by October 2024, bidding at the end of this year. Construction starting in April 2025, which really isn't that far away now, and ending in August 2026.

The scope on East Ridge High School is to put new parking in, to replace the removed parking that this new building section will take up. Reconfigure the staff parking and pick up and drop off. Building wise, classroom addition to increase the capacity to 2,300. Also, do an addition to the career type education area to enhance our curricular offerings, and then, of course, expand the cafeteria, the kitchen, and renovate so we can handle that number of students in the cafeteria. Online learning, office of special education, and renovations.

At this point, this is the way this one looks: Oltman and East Ridge kind of have the same look, and at Oltman, we were able to add our new addition to the old sawtooth. We had a sawtooth plan at East Ridge where the building goes like this; Julie said that's down in the left-hand area if you want to show them where that would be. Dan said the original plan, we were able to expand down here, but as we looked at doing that, the designers and the school leaders found that this made the school so long that it would take



you a half hour to go from one end to the other. So, they moved the addition to the front area; if you know how to go up there, it used to be the activities entrance where you walk in the glass doors and you go straight to the cafeteria; otherwise, you take a right to the gymnasium.

Council Member Olsen asked are you going to have to reconfigure the access to the football field, etc.?

Dan replied no, we should be okay on the football field. We're going to push that out there, right now it's just a big graveyard tank area. Then they're going to sweep it for more parking, but the flow of the drop offs is still a work in progress there.

The exciting part is the ability to handle up to 2,300 students in the classroom additions; all the additions were going to the front of the building, meaning that they're getting so long that it's hard to manage.

Mayor Bailey stated so basically what you're saying is that courtyard area and the stuff in front of that will become part of the new?

Julie replied a new classroom pod, yes. If you think about the pod, it's similar to the upper level and lower level, similar to Oltman where they added it on at the end. This one is now going by the athletic entrance so it will be an upper level and a lower level, a learning space, and then increasing the capacity of the cafeteria. Mayor Bailey stated that makes sense.

Dan stated the CTE right now, where they do robotics and stuff, that's back in the one corner, by the gymnastics room, and that's going to be expanding to handle more students and just to upgrade the whole thing. That's why that one looks like it's far away, but that's just the original building between there.

Dan stated we're planning on doing the demolition, as they looked ahead at the activities entrance, because basically we're taking that out and moving the whole building out in spring break of 2025; once again, that's not that far away. We'll have to do all the bids and stuff to get all that in. We're looking a new classroom, a cafeteria addition from April 2025 to August 2026, and the CTE addition from June 2025 to December 2025.

#### **Our Next Steps**

Dan stated we'll continue to collaborate with the cities to work through planning. There's a School Board Business Meeting on July 18 where the architects will share the high school designs with the Board. It will be much more detailed than this, and you're encouraged to come down or tune in and watch it. You can always look online for updates on construction.

Julie stated we certainly have updated iterations of our plans, but in lieu of putting them out there when they haven't been costed out, we just want to make sure that we give the costings so that we're not showing something that we can't afford. So, just know that week after week of meeting with teachers and groups that our architects are updating and updating. July 18 will probably be our most up-to-date iteration that will go to the Board. We'd be happy to share the presentation back, and then you can share it with the Council Members.

Mayor Bailey said thank you.

Julie asked what other questions do you have about any of the projects in Cottage Grove?

Council Member Khambata stated it's not specific to Cottage Grove, but can you remind me what the term is on those bonds that were issued?

Dan replied 18 to 20, depending on what works best for us overall, debts and assets.

Council Member Olsen stated first of all, going back to the grade schools, I know you guys have been really working to understand how to reconfigure busing and different things and where to put kids, schools that are over vs. under, etc. So, I'm just curious, do you feel like you've come up with the grand plan, or is it still a work in progress? Because some of those schools are really, really tight and some of them, obviously, are not, and busing isn't free. So, I'm just wondering where you're at with all that.

Julie replied I think that it is always a plan in motion, and I think that while we asked the community for \$463M and I'm grateful for \$200M, it means that in the next years we have to take a look at other efficiencies. We have really prided ourselves on making sure that we could pay our staff; obviously, our teachers are our largest bargaining group, but if we want to be a place where the best teachers want to be, then we have to make sure that we're efficient everywhere else. And, so, we will continue to address that.

You may have heard at our last Board Meeting, Light the Way Church, we put in a request to purchase that; we put in a review and comment to the State to purchase that for Next Step and Pathways, keeping mind that's for our 18-to-22-year-olds with disabilities. Now, that was originally on the bond, and so, we're already beginning to take steps and take a look at what's available to us to go back and say we still have these needs and how can they best be addressed. But, Justin, you're right; in the future, I don't know if that means 5 years, 8 years, 4 years, we're going to have to relook at things in terms of attendance boundaries. Because, and I know that you will understand this, but in every one of those schools, whether you're 260 or 800, you have a principal, you have a nurse, you have custodian, you have nutrition services backing up office staff. And, so, at some point you know we say our ideal size of an elementary school is about 550 to 600 students; that's where you're running an efficiency. When we do staffing and a school has 30 kids in first grade, do we give them one teacher or two teachers? Well, everybody else has 24 kids in a first-grade classroom because they would have 15. And, so, we run into that, and it's really difficult to understand because the sentiment in our school district is not favorable to repurposing but we have to begin to take a look at the sites that we own and say how can we do this better and more efficiently?

Council Member Olsen stated I appreciate you talking about the boundaries, that was going to be my next question; and you're talking to a kid who lived north of 70th Street, back in the day, and went to Woodbury Junior High as a result, so, I know how it used to work. And one of the things that I saw there that surprised me was the enrollment of Cottage Grove Elementary, when my kids went to CGE, it was packed. But that just shows you that as the area that school serves age, you're not getting the little kids anymore, now they're either middle schoolers or high schoolers. I just wondered what you're going to have to do with boundaries because as we continue to develop, and I know you also work with Woodbury, but as we continue to develop, Pine Hill's just not going to make it, it's just not; and there's no other land there unless you go up, right?

Julie stated so we know that on that particular side, we have some options; we have Pullman and Crestview there. So, we have some other options, but I think Cottage Grove since our last boundary changed has surprised us; that's one of the schools that has surprised us the most. With some of that new construction, we thought for sure that it was going to bring in more kids. It just happens, but again, kids don't come in special packages; we never know who's going to move in until fall, so, Cottage Grove has surprised us. But with Middleton, that sits between Liberty and Red Rock, it's the same thing. They're falling into the 400s or the lower 500s. So, I think when we get to a certain point, it's going to begin to warm the conversation around attendance boundaries. You don't want to bring up attendance boundaries unless you're certain that this is the direction you have to.

Council Member Olsen stated understood. I just don't see how you can avoid it, based on at least what I saw.

Julie stated but with Pine Hill, you are exactly right, that one is.

Dan stated and the Pine Hill one is interesting, too, because as we get word oh, they're developing here and here, we've been proactive and we've already changed those boundaries down there, in Mississippi Dunes, over to Pullman. We've already moved some over to Armstrong, and knowing that there will be plenty of houses still coming into the Pine Hill boundary.

Council Member Olsen stated sure, fair enough, thank you.

Council Member Garza stated I'll say in the private sector, too, in Washington County, the schools are getting packed. I've heard regularly, in our school, we went from 15 in a class to 21 in a class. And, so, you're really seeing that it's going up, and not able to staff to two teachers or whatnot. So, it's getting interesting.

Council Member Olsen stated now with the Light the Way project, if it happens, would be massive, it would be great.

Julie stated we just are really excited, Dan and I went and took a look at it, and there is just so much potential, the location, the kind of dip; when you think about the students and what their needs are, to be able to have, because there's still a multipurpose space where they can be active. Then there's a garden there, I mean, what a great skill. There's an opportunity to do something with a trail with bikes; you know, something where they can learn independence and life skills.

Council Member Olsen stated my kid was a Next Step kid. Julie stated and we think that location is beautiful. Council Member Olsen stated yes, it is, but it was tough and really tight spaces, so it's good.

Mayor Bailey stated so part of Next Step, just to refresh my memory, is that the one that's behind the hotel? Council Member Olsen replied yes, and then there's a Woodbury site, too.

Mayor Bailey stated it would be nice for you for that, for us, too, by the way, as we look for redevelopment opportunities.

Julie stated yes, we were very excited. Council Member Olsen stated yes, that's a perfect opportunity. Mayor Bailey asked if Council had any more questions, none were asked.

Mayor Bailey stated I think it will be interesting, as you really, like you said, get honed in; for me, obviously, you mentioned Pine Hill because I hear about that a lot. That was my school many, many years ago, and how that all pans out. It totally makes sense what you're planning to do with like the Mississippi Dunes neighborhood going to Pullman and some of those places, especially with trying to keep those schools filled. You and I have talked many times about what that optimal size is, so I know that's a challenge for some, because I don't think anybody ever wants to have their kid bussed across the City to a different school; I get that, and they all want them in their neighborhoods, but obviously, that's not always an option.

I would be very much interested to see how all the traffic, I love the idea what you're doing with Park, I didn't envision that, how we can get all that traffic in there and staff as you continue to work, just making sure that it will.

Julie stated for communities that are growing, that's a good thing. It prevents that bussing challenge and that in and out of our schools. It's not just here, I mean, we did a traffic study at Woodbury High School, and we allowed the traffic to come into Woodbury High School and just keep going. The number of emails and phone calls we got from people were like, well, I don't know why you're doing that study because you know people drop off kids at Ojibway, and they drop off over here. Julie stated I was like, I know, but we can't do anything about that. We just wanted to watch the flow of what the traffic looked like. We're really zoning in on traffic patterns across as we do these projects.

Mayor Bailey stated good, and I guess for the future, you kind of alluded to it, too, Council Member Olsen, that like it or not, Woodbury's getting to capacity, and they would even say that to us, too, with the amount of property and housing that they can put in, unless they do redevelopment. But that's why I think you're seeing everybody's starting to come down this direction, to Cottage Grove, is because it's capped; they're pretty much going to be border to border. So, as they near that or stop certain parts from being developed, I think that's what is forcing some of those developers to come here.

Council Member Olsen stated you guys were looking at some land on the north side at one point; is that still a conversation?

Dan replied no, we just don't have the funds available.

Council Member Olsen stated fair enough.

Dan stated we put it in our plans, and we were trying to establish where we were looking at, land across County 19, where the crops are, right across County 19, and then also some land out of town further.

Council Member Olsen stated all right, thank you for that.

Julie stated I think for the Council Members to know that we have greatly appreciated our work with the City of Cottage Grove. I think as we have continued working together, I think we've gotten stronger. Even as our architects talk, they're working with your engineers, and so that feels really good. So, we appreciate the good relationship with our City of Cottage Grove. So, thank you.

Mayor Bailey replied sounds good.

Council Member Olsen said thanks, you guys, we appreciate it.

Julie stated you're welcome. We'll go celebrate our last day of school now. Administrator Levitt stated we're supposed to have severe weather; Mayor Bailey stated yes, so be careful, hail and 60 MPH winds, they're saying.

### 3. ADJOURNMENT

The meeting was adjourned at 6:35 p.m.

Minutes prepared by Judy Graf and reviewed by Tamara Anderson, City Clerk.



## City Council Action Request

# 7.C.

|                      |                                                                                                                                 |    |                                 |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------|
| Meeting Date         | 6/26/2024                                                                                                                       |    |                                 |
| Department           | Community Development                                                                                                           |    |                                 |
| Agenda Category      | Action Item                                                                                                                     |    |                                 |
| Title                | ACHP Meeting Minutes                                                                                                            |    |                                 |
| Staff Recommendation | Accept and place on file the minutes from the April 9, 2024, meeting of the Advisory Committee on Historic Preservation (ACHP). |    |                                 |
| Budget Implication   | N/A                                                                                                                             |    |                                 |
| Attachments          | <table border="1"><tr><td>1.</td><td>ACHP Meeting Minutes 2024-04-09</td></tr></table>                                          | 1. | ACHP Meeting Minutes 2024-04-09 |
| 1.                   | ACHP Meeting Minutes 2024-04-09                                                                                                 |    |                                 |



**MINUTES**  
**CITY OF COTTAGE GROVE**  
**ADVISORY COMMITTEE ON HISTORIC PRESERVATION**  
**April 9, 2024**

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Pursuant to due call and notice thereof, a meeting of the Advisory Committee on Historic Preservation was duly held at the Cottage Grove City Hall, 12800 Ravine Parkway South, Cottage Grove, Minnesota, on the 9th day of April, 2024.

**CALL TO ORDER**

Chair Reckinger called the meeting to order at 6:01 p.m.

**ROLL CALL**

**MEMBERS PRESENT:** Herb Reckinger (Chair), Joseph Gall, Tony Brinkman, Linda Johnston, Jacob Grundhauser, Marie Sumstine

**MEMBERS ABSENT:** None

**OTHERS PRESENT:** Councilmember Dave Thiede; Mike Mroska, Senior Planner; Conner Jakes, Associate Planner; David Olson, Parks and Recreation Commission

**APPROVAL OF THE AGENDA**

Motion made by Grundhauser to approve the Agenda with no changes. Gall seconded. The motion passed unanimously 6-to-0.

**APPROVAL OF MINUTES**

Grundhauser made a motion to approve the February 13, 2024 meeting minutes as is with no changes. Gall seconded. The motion passed unanimously 6-to-0.

**OPEN FORUM**

No one spoke.

**ACTION ITEMS**

***Historic Preservationist of the Year – Nomination***

Jakes summarized the memo and displayed the public's nominations for the award. The committee discussed the nominations from the public, which were all for Dodge Nature Center (Shepard Farm).

The public's nomination previously won the award, so the committee discussed further options of first-time recipients.

Sumstine commented that various members of the public worked diligently to save the house located at 10301 Grey Cloud Trail South. Reckinger stated Cindy Yff and Kathy DeMarre would be great recipients for the award due to their work on the Old People's Home & Cemetery. The committee agreed that both Cindy and Kathy should be nominated as recipients of the award if selected. Brinkman stated Corrine Marz would be a good recipient as well due to her work on Native American history.

The committee agreed after discussion that Cindy Yff and Kathy DeMarre should be nominated due to their detailed work on preserving the history of the Old People's Home & Cemetery. Johnston made a motion to nominate Cindy Yff and Kathy DeMarre. Brinkman seconded. The motion passed unanimously 6-to-0.

### ***Historical Markers – Plaque Design***

Jakes summarized the memo and displayed the two potential plaque designs. Grundhauser stated the second option with the ACHP's themed colors is preferred and the inclusion of a QR code to additional information the site would be great to include. Grundhauser stated sites where the resource is still present doesn't need the amount of information as other sites. More photos of sites where the resource does not exist would be more beneficial. The committee agreed that the second option of the plaque design with the ACHP's themed colors is preferred. The motion passed to select the second option with the ACHP's themed colors as the design preference 6-to-0.

## **DISCUSSION ITEMS**

### ***Historical Markers – Plaque Information***

Jakes summarized the memo and displayed the information gathered for each site; the committee reviewed each site and discussed the information and photos for each site.

Atkinson Cemetery information was accurate. Brinkman stated there is a book titled "History of Newport (Red Rock)" which discussed the Atkinson Cemetery in detail. The committee agreed that a list of prominent names buried in the cemetery and potentially photos of the headstones would be a good addition to the plaque.

The Old People's Home & Cemetery information was accurate. The committee requested staff contact Cindy Yff and Kathy DeMarre to assist in writing the plaque information. In addition, the committee requested there be a map of where the two homes were, if possible.

The Cottage View Drive-In site was discussed as staff did not have any information on the site. Grundhauser and Johnston stated photos have been found in the Cottage Grove Facebook groups. Councilmember Thiede stated the drive-in was located adjacent to the current Walmart site, so a good location for the plaque would be at the corner of the east Walmart entrance adjacent to the public trail. Grundhauser stated once the Shoppes at Cottage View develop, it would be beneficial to move the plaque to the north corner of the site.

Shepard Farm was discussed, and the information was accurate. Councilmember Thiede stated the house onsite has historic photos that could be utilized for the plaque if the Shepard Farm staff is

contacted. Grundhauser stated it would be nice to include the acreage of the site as it is generally unknown how large the site is.

The Cedarhurst site was discussed, and the information was accurate. The committee discussed and desired for the plaque to talk through the site starting with a farmhouse and moving to modern day. Grundhauser stated the plaque should incorporate Cass Gilbert.

The Thompson Grove development was discussed, and the information was accurate. Brinkman stated Orrin Thompson was not associated with any of the Thompson Grove plats. Rather, his brother Olin Thompson is associated with the plats. Grundhauser stated it would be interesting to reference that this is one of the earliest large developments in the southern area of the county. Johnston inquired as to whether the old street names could be incorporated into the plaque.

The Hill-Gibson house was discussed, and the information was accurate, no comments were made from the committee.

## **PROJECT UPDATES – VERBAL UPDATES**

### ***Historical Display Case***

Jakes stated the historical display case has been completed along with the tri-fold brochure that contains detailed information on each of the schools within the display case. Johnston stated staff could put an article in the Cottage Grove Reports to inform residents the project is completed, and the information is available.

### ***Certified Local Government Grant (CLG) Application***

Jakes stated staff submitted the application for the Certified Local Government Grant and that staff will be informed as to whether the city has been awarded the grant on April 12, 2024.

### ***Mississippi Landing***

Mroska summarized the status of the Mississippi Landing development and that photographs documenting the house were obtained. Staff also stated other items such as doors, barn wood, and part of the wall were preserved in order to be utilized for a display case at the future Mississippi Landing park building.

### ***Historic Properties Conditional Use Permit – Code Language Revisions***

Jakes provided the committee with an update that the Historic Properties Conditional Use Permit has been added into the code. In addition, staff provided the uses that would be permitted with the permit and the process for issuance.

### ***Langdon Village – Ground Penetrating Radar/SWCTC Video***

Jakes provided the committee with an update on the schedule of the Langdon Village privy dig. The dig was scheduled for April 20, 2024, and committee members were invited to attend. Jakes also stated that the South Washington County Telecommunications Commission is producing a video on the history of the Langdon Village, which include the privy digging event.



## **HISTORIC INQUIRIES, ARTICLES, AND RESEARCH INFORMATION**

### ***7575 Lamar Avenue South – House History***

Mroska stated the new property owner of 7575 Lamar Avenue South is searching for history on the property and its correlation to the Military Trail.

## **COUNCIL LIASON COMMENTS**

There were none.

## **COMMITTEE COMMENTS**

Grundhauser inquired as to the requirements for obtaining a valid Historic Properties Conditional Use Permit. Staff provided the list of requirements as listed in the city code.

Grundhauser inquired as to how staff's work of making historic information more accessible is progressing. Staff stated work is progressing as it relates to internal organization of information and scanning documents.

Grundhauser inquired about the Cedarhurst property and the current status. Staff stated a wedding venue user was interested but that there are no additional details at this time.

## **STAFF COMMENTS**

There were none.

## **ADJOURNMENT**

Reckinger made a motion to adjourn the meeting. Gall seconded. The motion passed unanimously 6-to-0, and the meeting was adjourned.



# City Council Action Request

7.D.

|                      |                                                                                                                                                                                                                                                     |    |                                                                  |    |                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------|----|----------------------------------------------------|
| Meeting Date         | 6/26/2024                                                                                                                                                                                                                                           |    |                                                                  |    |                                                    |
| Department           | Administration                                                                                                                                                                                                                                      |    |                                                                  |    |                                                    |
| Agenda Category      | Action Item                                                                                                                                                                                                                                         |    |                                                                  |    |                                                    |
| Title                | Appointment of Election Judges - 2024 Statewide Primary Election                                                                                                                                                                                    |    |                                                                  |    |                                                    |
| Staff Recommendation | Approve Resolution 2024-099 and the appointment of the election judges listed in Exhibit A for the Statewide Primary Election on August 13, 2024, and authorize the City Clerk to appoint additional election judges, as needed, to fill vacancies. |    |                                                                  |    |                                                    |
| Budget Implication   | N/A                                                                                                                                                                                                                                                 |    |                                                                  |    |                                                    |
| Attachments          | <table><tr><td>1.</td><td>Resolution- 2024-099 Appointing Election Judges General Election</td></tr><tr><td>2.</td><td>Exhibit A (Election Judges for Primary 2024-08-13)</td></tr></table>                                                         | 1. | Resolution- 2024-099 Appointing Election Judges General Election | 2. | Exhibit A (Election Judges for Primary 2024-08-13) |
| 1.                   | Resolution- 2024-099 Appointing Election Judges General Election                                                                                                                                                                                    |    |                                                                  |    |                                                    |
| 2.                   | Exhibit A (Election Judges for Primary 2024-08-13)                                                                                                                                                                                                  |    |                                                                  |    |                                                    |



**TO:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**FROM:** Tammy Anderson

**DATE:** June 26, 2024

**RE:** Appointment of Election Judges - 2024 Statewide Primary Election

---

## Discussion

The City Clerk is required under the Joint Powers Election Agreement with Washington County to appoint election judges no later than 25 days prior to an election. Washington County has completed the recruitment and training process for the election judges listed in attachment A. These election judges will serve as the election clerks for the Statewide Primary Election on August 13, 2024, and be responsible for tabulating ballots and reporting the results to the county in accordance with Minnesota State election law.

## Recommendation

Approve Resolution 2024-099 and the appointment of the election judges listed in Exhibit A for the Statewide Primary Election on August 13, 2024, and authorize the City Clerk to appoint additional election judges, as needed, to fill vacancies.

## Attachments

|    |                                                                  |
|----|------------------------------------------------------------------|
| 1. | Resolution- 2024-099 Appointing Election Judges General Election |
| 2. | Exhibit A (Election Judges for Primary 2024-08-13)               |

CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-099

**RESOLUTION APPOINTING ELECTION JUDGES FOR THE AUGUST 13,  
2024, STATEWIDE PRIMARY ELECTION**

WHEREAS, The individuals specified on EXHIBIT A attached hereto, each of whom is qualified to serve as an election judge, are hereby appointed as judges of election for the Statewide Primary Election on August 13, 2024 to act as such at the polling places listed on said exhibit.

WHEREAS, The election judges shall act as clerks of election, count the ballots cast, and submit the results to the county for canvass in the manner provided by Minnesota State Election Law.

WHEREAS, The city clerk is hereby authorized to appoint additional election judges, as needed, to fill vacancies that may occur on or before Election Day.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, that the individuals listed in Exhibit A will be appointed to serve as election judges for the August 13, 2024, Statewide Primary Election and the City Clerk will be authorized to appoint additional judges to fill vacancies.

Passed this 26th day of June 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk

| Position | Last Name        | First Middle | Precinct         | Polling Place                                  | Assignment Dt |
|----------|------------------|--------------|------------------|------------------------------------------------|---------------|
| HJ       | BLEGEN           | RICHARD      | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| CJ       | HOFSTRA          | SUSANNE      | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | BOCK             | CAMDEN       | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | DEUTSCH          | GARY         | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | KOESTER          | ERIC         | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | MILLER           | LEE HOLLY    | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | MULLINS          | JOHN         | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | RYAN             | RENEE        | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | SEAVER           | ALBERT       | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | SEVERSON         | CONNER       | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | WALKER           | SUSAN        | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| EJ       | WOUTS            | KRISTEL      | Cottage Grove P1 | Park Senior High School                        | 8/13/2024     |
| HJ       | WALETZKO         | DIANA        | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| CJ       | BORN             | MITCHELL     | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | BROADDUS         | DEENA        | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | BURAZIN          | THOMAS       | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | HICKEY           | KAREN        | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | MANNING McCUSKER | ELIZABETH    | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | MCCOY            | WENDEE       | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | NICKELSON        | KATHY        | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | SCHMIDT          | EUGENE       | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | TOURVILLE        | LINDA        | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | WALLIN           | JILLIAN      | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| EJ       | YATES            | MARY         | Cottage Grove P2 | Cottage Grove Middle School                    | 8/13/2024     |
| HJ       | OLSON            | EMILY        | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| CJ       | RICKARD          | SHERRY       | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| ST       | CALDWELL         | LIAM         | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| EJ       | BURFEIND         | JEANETTE     | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| EJ       | HEBL             | ADELE        | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| EJ       | MILLER           | LINDA        | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| EJ       | NUTE             | DRUSCILLA    | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| EJ       | RUDEEN           | LINDA        | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| EJ       | STROM            | GREGORY      | Cottage Grove P3 | Crestview Elementary School                    | 8/13/2024     |
| HJ       | WHITE            | CHARLES R    | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| CJ       | PIERCE           | JAMES        | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | BRUCKNER         | SANDRA       | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | CARLIER          | MARTIN       | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | HENDRIKSON       | ELIZABETH    | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | KOPISCHKE        | STEVEN       | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | SCHLORF          | ERVIN        | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | SCHOONOVER       | GRANT        | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | SCHWARTZ         | ALAN         | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| EJ       | TUFTE            | THERESIA     | Cottage Grove P4 | District 833 Service Center                    | 8/13/2024     |
| HJ       | FOURNIER         | GEOFFREY     | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| CJ       | BAUER            | EMILY        | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| EJ       | BLACKSTAD        | PETER        | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| EJ       | GRAFF            | THOMAS       | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| EJ       | HANSON           | DEBRA        | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| EJ       | POWER            | BONNIE       | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| EJ       | RIVERA           | CAROL        | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| EJ       | ROYCE            | WILLIAM      | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |
| EJ       | TIEFENBRUCK      | GRANT        | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024     |

|    |                   |           |                  |                                                |           |
|----|-------------------|-----------|------------------|------------------------------------------------|-----------|
| EJ | TOROK             | TIMOTHY   | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024 |
| EJ | WESSINGER         | WILLIAM   | Cottage Grove P5 | Washington County Cottage Grove Service Center | 8/13/2024 |
| HJ | DECKER            | JOAN      | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| CJ | HAUKOM-BRANDT     | RANDY     | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | ALME              | MICHELLE  | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | GLASS             | CLAUDIA   | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | JEMIE             | SANDRA    | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | JORDAN            | JONATHAN  | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | LEASE             | KATHRYN   | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | McNULTY           | SHARON    | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | PETERSEN          | JEREMY    | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | SUEPER            | LEONARD   | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| EJ | VON HAGEN         | STEVEN    | Cottage Grove P6 | Cottage Grove National Guard Armory            | 8/13/2024 |
| HJ | SARTORI           | NINA      | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | BOYLES            | SUZANNE   | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | BUDAHN            | LORI      | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | BUTT              | WAYNE     | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | KUTA              | AMY       | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | LAKSO             | BARBARA   | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | MAI               | ELENA     | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | NELSON            | LINDA L   | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | WEBER             | ROBERT    | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| EJ | ZAPPA             | DAVID     | Cottage Grove P7 | Pine Hill Elementary School                    | 8/13/2024 |
| HJ | PETERSEN          | SHANNON   | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| CJ | ROBINSON III      | WILLIAM   | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | ANASTOS           | GEORGE    | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | AWADA             | KRISTINE  | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | CABEZAS-VELASQUEZ | DANIELLE  | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | HOLY              | CHRISTIN  | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | McDONALD          | LEEANN    | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | McELWEE-STEVENS   | KATY      | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | McNULTY           | MICHAEL   | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |
| EJ | SEIDL             | CONSTANCE | Cottage Grove P8 | Cottage Grove Elementary School                | 8/13/2024 |



# City Council Action Request

## 7.E.

**Meeting Date** 6/26/2024

**Department** Community Development

**Agenda Category** Action Item

**Title** Approval of Rental Licenses

**Staff Recommendation** Approve the issuance of rental licenses to the properties listed in the attached table.

**Budget Implication** N/A

**Attachments**

|    |                                 |
|----|---------------------------------|
| 1. | Rental License Approval CC Memo |
| 2. | Rental License Approvals Table  |

**TO:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**FROM:** Samantha Drewry, Code Enforcement Officer

**DATE:** June 20, 2024

**RE:** Rental License Approvals

---

## **Background/Discussion**

Rental licenses are required for nonowner-occupied residential properties (City Code Title 9-13, Property Maintenance, and Title 9-14, Rental Licensing) and are issued on a biennial basis. The licensing process includes submittal of the rental license application, payment of \$180, and public criminal history report. Rental inspections are conducted on all rental properties as part of the licensing process. Once all information has been submitted and the inspection satisfactorily completed, the Council must approve the license prior to it being issued.

The properties listed in the attached table have completed the licensing process and are ready to have their licenses issued following Council approval.

## **Recommendation**

Approve the issuance of rental licenses to the properties in the attached table.



**2024 RENTAL LICENSES**  
**CITY COUNCIL APPROVAL - JUNE 26, 2024**

| <b>RENTAL LICENSE<br/>NUMBER</b> | <b>PROPERTY<br/>STREET #</b> | <b>PROPERTY STREET NAME</b> | <b>PROPERTY OWNER</b> |
|----------------------------------|------------------------------|-----------------------------|-----------------------|
| RENT-001928                      | 9453                         | Hallmark Avenue South       | Ishola, Taofeek       |
| RENT-002042                      | 8017                         | Hornell Avenue South        | RESI SFR Sub, LLC     |
| RENT-002046                      | 7062                         | Lower 94th Street South     | RESI SFR Sub, LLC     |
| RENT-002401                      | 7441                         | Ideal Avenue South          | Gamache, Jason        |
| RENT-002404                      | 6548                         | Joliet Avenue South         | Bingi, Nishanth       |
| RENT-002406                      | 7348                         | Timber Crest Drive South    | Vasavi Holdings LLC   |



# City Council Action Request

7.F.

**Meeting Date** 6/26/2024

**Department** Convention and Visitors Bureau

**Agenda Category** Action Item

**Title** 2023 Convention and Visitor's Bureau Annual Report

**Staff Recommendation** Receive the 2023 Cottage Grove Convention and Visitor's Bureau Annual Report.

**Budget Implication** N/A

**Attachments**

|    |                             |
|----|-----------------------------|
| 1. | CVB 2023 Annual Report Memo |
| 2. | 2023 CVB Annual Report      |



**TO:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**FROM:** Jaime Mann, Assistant to the City Administrator

**DATE:** June 21, 2024

**RE:** 2023 Annual Report

---

## **Background/Discussion**

According to the bylaws for the Cottage Grove Convention and Visitor's Bureau (CVB), each year the CVB is required to submit a written Annual Report to the City Council no later than 2<sup>nd</sup> Quarter of the following year. The Annual Report provides an overview of highlights, activities, and the budget from the 2023 calendar year.

## **Recommendation**

Receive the 2023 Cottage Grove Convention and Visitor's Bureau Annual Report.



# MORE THAN YOU *Imagine*

**Cottage Grove Convention  
& Visitors Bureau**  
2023 Annual Report

12800 Ravine Parkway South  
Cottage Grove, MN 55016  
651-458-2800 | [DiscoverCottageGrove.com](https://DiscoverCottageGrove.com)

DISCOVER  
**COTTAGE GROVE**







**Welcome**

|                                          |    |
|------------------------------------------|----|
| A Message from the Chairman of the Board | 03 |
| About Cottage Grove                      | 04 |
| Meet Our Team                            | 05 |

**Key Accomplishments**

|               |    |
|---------------|----|
| Visitor Guide | 06 |
| Website       | 07 |
| Photo & Video | 08 |
| Social Media  | 09 |

**Public Relations**

|                            |    |
|----------------------------|----|
| Marketing & Communications | 10 |
| Strategic Partnerships     | 10 |
| Community Engagement       | 12 |

**Financial Resources**

|                   |    |
|-------------------|----|
| Budget Highlights | 14 |
|-------------------|----|

**Strategic Plan**

|               |    |
|---------------|----|
| Looking Ahead | 15 |
|---------------|----|

## A Message From The

# CHAIRMAN OF THE BOARD

Dear Friends, Partners and Visitors,

As we reflect on the year 2023 for Discover Cottage Grove, we are filled with a sense of pride and accomplishment. The Cottage Grove Convention and Visitor Bureau (CVB) has been at the forefront of promoting our vibrant community, rich in history and bursting with natural beauty. Our mission to enhance the visitor experience and support local businesses has never been more relevant.

In Cottage Grove, 2023 was a year filled with connection and celebration. In this report, we will share the highlights of our efforts to enhance tourism and support our local economy. From hosting the inaugural Discover Cottage Grove Food Truck Festival, to celebrating our community's events, the CVB continues to promote local business and events and create marketing campaigns that showcase our town's uniqueness. All of this while working with our local and state partners to ensure positive economic impact in Cottage Grove while continuously working to put Cottage Grove on the map as a must-visit destination.

Our mission remains ever critical as we review the year and plan for the future. The mission of Discover Cottage Grove is to promote Cottage Grove as a premier destination for leisure travelers, weddings, and outdoor enthusiasts, ensure Cottage Grove is a recognized and successful host city for meetings and conventions, and establishing the city as a prominent and respected venue for sporting events. Building and maintain successful partnership will be key to helping us continue to achieve our mission.

With the annual report, we would like to look back and celebrate the past years' successes along with laying the groundwork for an even brighter 2024 and beyond. Together, we are not just promoting a destination; we are nurturing a legacy for generations to come.

Thank you for discovering Cottage Grove!

**Justin Olsen**

Chairman of the Board

Cottage Grove Convention and Visitors Bureau







## Live. Work. Play. Visit.

Nestled between Wisconsin and the Twin Cities Metro, Cottage Grove is a haven for those seeking an active lifestyle and a deep connection with nature. With its extensive network of parks and trails, it beckons residents and visitors alike to explore and unwind amidst lush greenery and scenic landscapes. From sprawling urban parks teeming with recreational facilities to winding trails that meander through picturesque woodlands and along tranquil rivers, there's something for every outdoor enthusiast to enjoy. Families gather for picnics, friends engage in friendly games, and fitness enthusiasts jog or cycle along the paths, invigorated by the fresh air and revitalizing surroundings. Amidst the hustle and bustle of city living, these green oases provide a sanctuary for rejuvenation, reflection, and connection with the natural world, embodying the perfect balance between urban excitement and natural tranquility.

Whether you're here for a long time, or just a fun time, Cottage Grove offers ample opportunities for housing, work and play. Not only are we a safe and prosperous community, we pride ourselves in being a warm and welcoming place for residents and visitors to live, work, play and visit.





# MEET OUR TEAM

The Convention and Visitors Bureau (CVB) markets and promotes Cottage Grove as a year-round visitor destination, working in partnership with industries, corporate partners, state partners, city departments and regional destination marketing organizations. The CVB serves as the primary marketing organization responsible for the development and implementation of promotional programs to ensure positive economic impact in Cottage Grove through steady growth of the travel industry.

## Mission

The CVB’s mission is to promote Cottage Grove as a premier destination for leisure travelers, weddings, and outdoor enthusiasts, a recognized and successful host city for meetings and conventions, and a prominent and respected venue for sporting events. To learn more about the CVB’s activities, please visit our website or sign up for our newsletter.

## Board Members



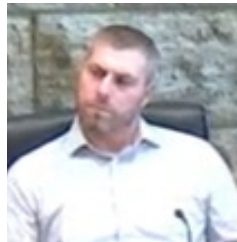
**Justin Olsen**  
Chair



**Tony Khambata**  
Vice Chair



**Sarah Grecula**  
Director



**Steve Hanson**  
Director



**Gretchen Larson**  
Director



**Laurie Levine**  
Director



**Druscilla Nute**  
Director



**Erik Olsen**  
Director

## Staff Members



**Jennifer Levitt**  
City Administrator



**Jaime Mann**  
Assistant to the  
City Administrator



**Liz Dillon**  
Communications  
Specialist



**Courtney Hanna**  
Communications  
Specialist





## Key Accomplishments

# VISITOR GUIDE

The 35-page guide represents the opportunities for visitors and travelers alike to discover our unique city. From lodging facilities, outdoor parks and recreation, events, meeting venues and more, there's something inside for everyone. Flipping through the pages is truly a reminder of what people who live here already know: The city is a special place to live, work and play.

### By the Numbers

- This is the second annual publication for Cottage Grove.
- This guide boasts 35 pages full of amenities, activities and information about Cottage Grove.
- There are 10 total ads in this publication.
- \$5,095 in revenue was collected from advertising dollars through this publication.

### In Addition to the Numbers

- This publication was created entirely in-house, providing massive cost savings to the CVB by not hiring an outside organization.
- There is a digital flipbook of the guide hosted on [DiscoverCottageGrove.com](https://DiscoverCottageGrove.com) which is an elevated version of the printed piece. This includes links driving traffic to local businesses and advertisers.

### Where Can I Find It?

- Mall of America, MSP Airport, Welcome Centers and Visitor Centers.
- City Hall, Cottage Grove Ice Arena, and other local locations.
- To see the digital flipbook, visit our website: [DiscoverCottageGrove.com/Visitors-Guide](https://DiscoverCottageGrove.com/Visitors-Guide)



**5,000**  
Copies Printed



**10**  
Paid Advertisers

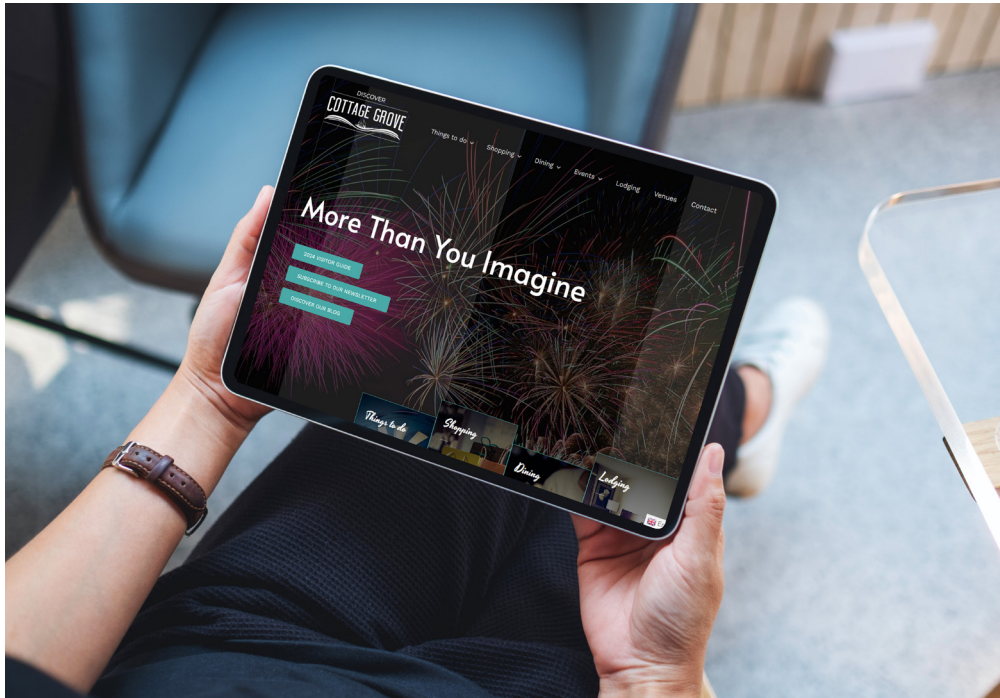


**\$5,095**  
Revenue Collected

## Key Accomplishments

# WEBSITE

The CVB's most valuable marketing asset is our website, **DiscoverCottageGrove.com**. Here is where residents and visitors can access the Visitor Guide, our events calendar, and a list of suggestions for dining, lodging and more.



## Users by Month

January – 1.9K  
 February – 1.3K  
 March – 3.3K  
 April – 3.7K  
 May – 6K  
 June – 5.5K  
 July – 2.8K  
 August - September – N/A

## Most Viewed Pages

1. Homepage
2. Visitor Guide
3. One Family Fest
4. Saints Tickets Contest
5. Blizzard Bash
6. Photo Contest
7. Strawberry Fest

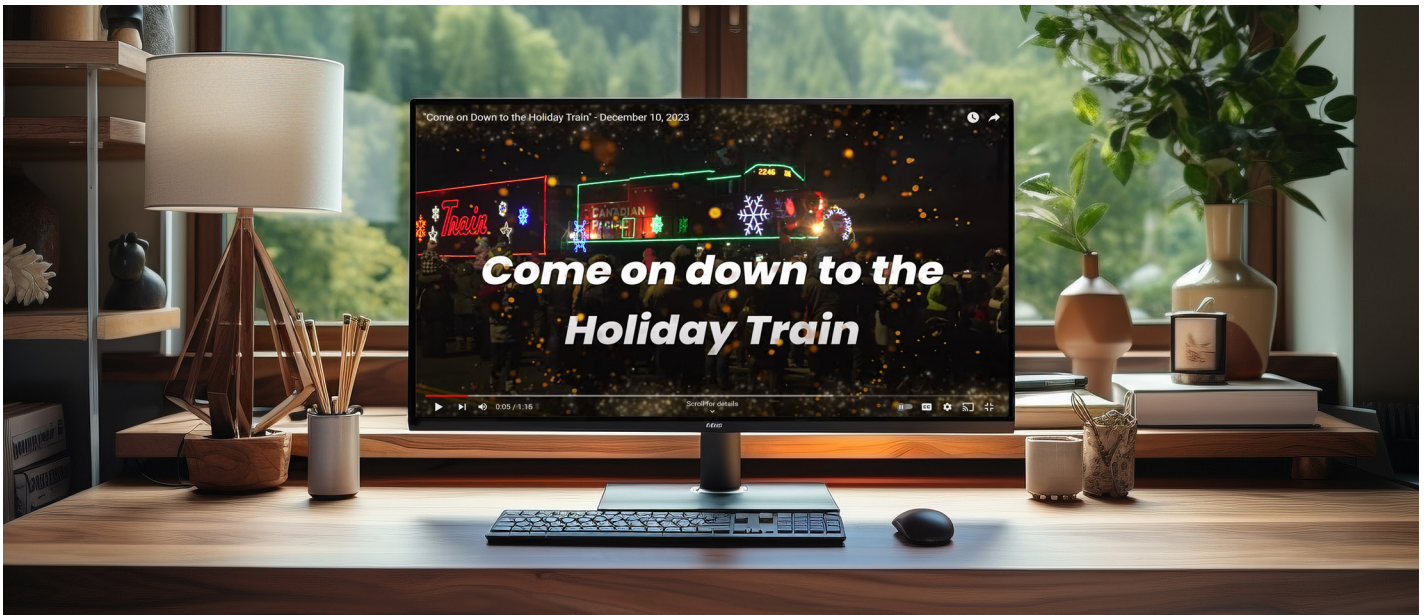
| Session primary...Channel Group) ▾ |                | Session source / medium ▾ ×     | ↓ Users<br>-----               | Sessions<br>-----              | Engaged<br>sessions<br>-----   |
|------------------------------------|----------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <b>Total Users (YOY)</b>           |                |                                 | <b>42,592</b><br>100% of total | <b>52,464</b><br>100% of total | <b>20,279</b><br>100% of total |
| 1                                  | Organic Search | google / organic                | 16,208                         | 21,145                         | 11,340                         |
| 2                                  | Organic Social | sieverscreative / Social        | 10,858                         | 12,412                         | 2,780                          |
| 3                                  | Unassigned     | sieverscreative / Facebook      | 6,589                          | 7,621                          | 1,677                          |
| 4                                  | Direct         | (direct) / (none)               | 3,728                          | 4,790                          | 1,597                          |
| 5                                  | Organic Social | m.facebook.com / referral       | 2,098                          | 2,239                          | 456                            |
| 6                                  | Organic Social | l.facebook.com / referral       | 586                            | 820                            | 351                            |
| 7                                  | Organic Social | lm.facebook.com / referral      | 586                            | 657                            | 230                            |
| 8                                  | Organic Search | bing / organic                  | 555                            | 769                            | 548                            |
| 9                                  | Organic Search | yahoo / organic                 | 232                            | 317                            | 181                            |
| 10                                 | Referral       | exploreminnesota.com / referral | 217                            | 275                            | 169                            |

Organic: Visitors landing on your website due to unpaid search results. (SEO, keywords, etc.)

Direct: Visitors who arrive at your site by typing your website URL directly into their browser's address bar.

Referral: Visitors who land on your website from sites other than the major search engines. (Facebook, Google, Private Domains, etc.)





## Key Accomplishments

# PHOTO & VIDEO

Working with local talent builds professional relationships within our community, all while highlighting the authentic beauty Cottage Grove has to offer, at little or no cost to us. The CVB worked with various professional photographers in the area: Isaac Pavek, Nathan Klok, Sigrid Dabelstein and others. We also partnered with South Washington County Telecommunications Commission (SWCTC) to produce seven videos that highlight the city's unique events and activities.



## Key Accomplishments

# SOCIAL MEDIA

Effective social media plays a key role in building our brand and bringing people to Cottage Grove. The interactive and visual nature of Facebook, Twitter and Instagram all provide powerful opportunities for people to engage and experience Cottage Grove through video and photos. Giving potential visitors a first-hand look at the city's restaurants, parks, recreational opportunities, wedding venues and other offerings has been incredibly effective. We've reached thousands of people and shown them all the city has to offer.

## Ad Campaigns

Not only does effective social media play a key role in building our brand, but effective social media ad campaigns reach new users, target specific audiences, increases brand visibility and, at a relatively low-cost, helps to increase sign-ups and lead generation. An advantage of marketing through social media as opposed to "traditional" print advertising is the ability to allow for consumer interaction. Not only can people click where to go, they can also "like" and "share" without any additional cost to the producer.



## Boosted Ad

**CPKC HOLIDAY TRAIN RETURNS TO COTTAGE GROVE**  
(Facebook Event)

34,331 Impressions | 1,245 Event Responses | \$600.00



## Top Performing Campaign

**FOOD TRUCK FESTIVAL**  
(Facebook Event)

29,600 Impressions



## Top Performing Video

**COTTAGE GROVE BIKE PARK**  
(YouTube Account)

2,780 Impressions

## Facebook Stats

January 1 - December 31, 2023

502,000 People Reached

11,900 Engagements

33,300 Link Clicks

3,900 Followers

## Instagram Stats

January 1 - December 31, 2023

47,900 People Reached

864 Followers

97 Engagements

10 Reels/Videos

216 Posts

## Twitter (X) Stats

January 1 - December 31, 2023

200 Tweets

90 Followers

## YouTube Stats

**Come to Strawberry Fest**  
313 views

**Come on Down to the Holiday Train**  
231 views

**Kayak on the River**  
109 views

**Winter Wonderland**  
83 views

**Ice Fishing**  
82 views

**Celebrate Halloween in CG**  
68 views

**Cottage Grove Community Night  
at the St. Paul Saints**  
46 views



## Public Relations

# MARKETING & COMMUNICATIONS

Effectively marketing the city and showcasing it as a recreation, retail and meeting destination requires a multi-faceted approach. We use strategic practices to promote our community such as the visitor guide, strategic partnerships, paid media, blog posts, monthly newsletter, community engagement, sponsorships and more.



# STRATEGIC PARTNERSHIPS

Throughout 2023, Discover Cottage Grove partnered and collaborated with top brands on unique promotions that drive awareness and demand for the destination in non-traditional tourism channels. Both Discover Cottage Grove and its partners were able to take advantage of these co-op opportunities for added reach and credibility.

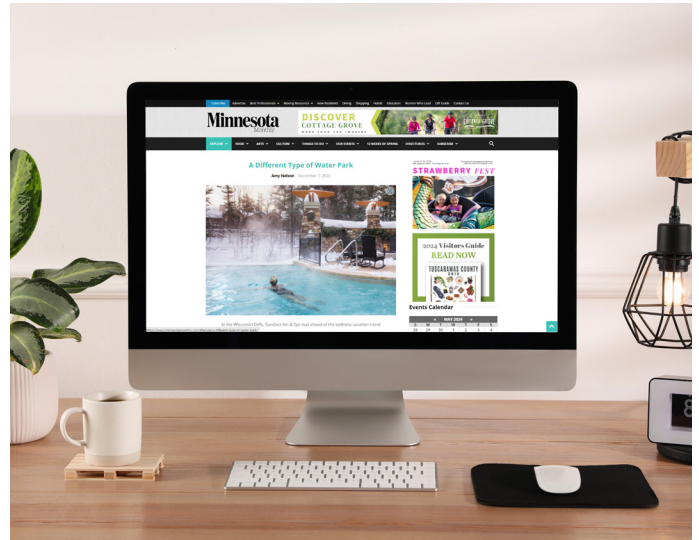


## Public Relations

# PAID MEDIA

### Minnesota Monthly – \$3,595

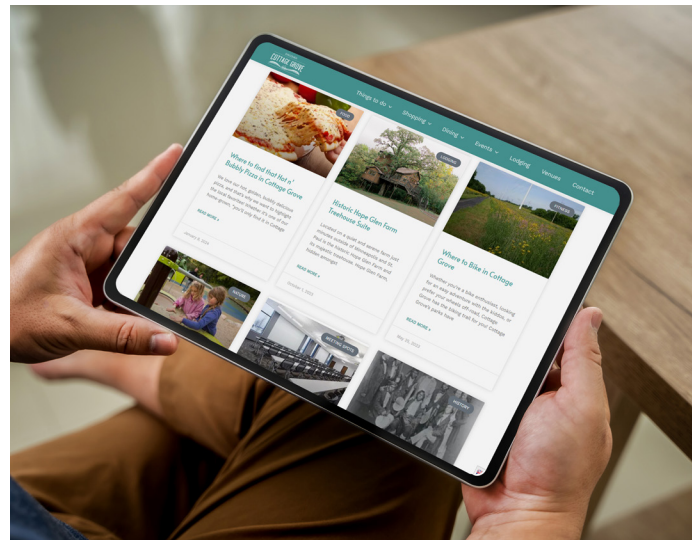
- 12 Weeks of Summer
- Run of Site Advertising
- Native Article
- E-Newsletter Sponsorship
- Sponsored Social Posts
- Destinations Itinerary
- Summer Bucket List | Cottage Grove Bike Park
- Fall Bucket List | Food Truck Festival



# BLOG POSTS

### Discover Cottage Grove Blog

- Discover Woodridge Park
- Where to Bike in Cottage Grove
- Historic Hope Glen Farm Treehouse Suite



# E-NEWSLETTER

### The Insider | Monthly Newsletter

Our monthly E-newsletter, The Insider, delivers a curated blend of local events, classes, tips, tricks, helpful links, ideas and more. Each month is full of seasonal happenings with a direct link to our Discover Cottage Grove event calendar. You can also access our social media platforms and visitor guide. Your ultimate, digital guide to Cottage Grove.

# SWAG

In 2023, we handed out a few different swag items: branded beach balls, luggage tags, drawstring bags, frisbees and MN-shaped pens.



# COMMUNITY ENGAGEMENT



## Cottage Grove Community Night at CHS Field

Discover Cottage Grove teamed up with the St. Paul Saints on June 10, 2023 to promote Cottage Grove Community Night at the St. Paul Saints game. As we passed out DCG swag in front of our colorful tent, we enjoyed talking to attendees about visiting Strawberry Festival.



## Cottage Grove Strawberry Fest

We partnered with Cottage Grove Strawberry Fest to bring families together for the annual, four-day event. The festival is run completely by volunteers with no admission fee or cost to watch the main stage events. We are continuous supporters of Cottage Grove Strawberry Fest and have a DCG booth in the marketplace area.



## One Family Tournament

Showing our support in our community is at the top of our priority list. In 2023, we attended the 3rd Annual Hmong Memorial Sport Fest Tournament at Kingston Park. People from all around stopped at our branded booth as we talked with them about all Cottage Grove has to offer. We also attended their event on Labor Day.



# COMMUNITY ENGAGEMENT



**6,000 - 7,000**  
Attendance



**23**  
Food Trucks



**4**  
Sponsors



## Food Truck Festival

The inaugural Discover Cottage Grove Food Truck Festival was a huge success! Guests enjoyed a variety of food trucks, live music, a beer garden, free admission, games and more.

# BUDGET HIGHLIGHTS

## Revenue

Budgeted Revenue = \$94,390

Total 2023 Revenue = \$99,792

## Revenue Breakdown

State Grant = \$14,000

Lodging Tax = \$71,599

### Q1

- Budgeted: \$22,877
- Actual: \$18,145
- - 20.7%

### Q2

- Budgeted: \$22,338
- Actual: \$24,493
- 9.6%

### Q3

- Budgeted: \$32,588
- Actual: \$40,399
- 24.0%

### Q4

- Budgeted: \$16,587
- Actual: \$16,707
- 0.7%

### Overall

- Budgeted: \$94,390
- Actual: \$99,744
- 5.7%

## Expenses

Budgeted Expenses = \$70,920

Total 2023 Expenses = \$81,884

## Expenses Breakdown

Marketing Expenses

- Budgeted: \$45,874
- Actual: \$58,532

Operating Expenses

- Budgeted: \$38,696
- Actual: \$23,352

## Summary

| 2023    | Budget   | Actual   |
|---------|----------|----------|
| Revenue | \$94,390 | \$99,792 |
| Expense | \$70,920 | \$81,884 |

\*Revenue and expense figures do not include budgeted salary and benefits expense or ARPA funds received. Those numbers offset each other in our budget.

# LOOKING AHEAD

Creating new ideas is key for a visitor bureau to stay relevant, innovative, and competitive in the ever-evolving tourism industry. Fresh ideas enable visitor bureaus to adapt to changing traveler preferences, market trends, and technological advancements, ensuring they remain ahead of the curve. Introducing new concepts, experiences, and initiatives not only attracts attention but also keeps visitors engaged and excited about the destination.

## Building the Strategic Plan

Discover Cottage Grove recently partnered with Chandlerthinks, a group of destination branding specialists, to create a strategic plan and comprehensive roadmap for the visitor bureau. This will provide a framework for decision-making and resource allocation, guiding the visitor bureau to achieve its mission and fulfill its mandate of promoting the destination to a wider audience. The plan is estimated to take approximately 10-13 weeks and cost approximately \$35,750. This partnership will drive future direction.

### 1. Revamped Website (Desktop, Tablet and Mobile)

An engaging website is paramount for a visitor bureau as it serves as the digital gateway to a destination, offering a virtual storefront for travelers seeking information and inspiration. It is a centralized hub where visitors can access resources such as accommodations, event calendars, dining options, and activity recommendations. A well-designed website with a reliable host delivers a user-friendly experience, ensuring that visitors can easily navigate your website.

### 2. Discover Cottage Grove, Welcome Video

A welcome video serves as a powerful tool for a visitor bureau, offering a dynamic and engaging introduction to a destination. Through captivating visuals and compelling narratives, it conveys the unique charm, attractions, and amenities of the area, enticing travelers to explore further. This video can showcase not only iconic landmarks but also hidden gems and local experiences, providing a comprehensive overview of what the destination has to offer.

### 3. Increased Partnerships = Increased Exposure

Local collaborations not only amplify the visibility of the event but also provide invaluable resources to attendees. By joining forces, visitor bureaus and local events can leverage each other's strengths, tapping into wider networks and attracting a more diverse audience. Moreover, such partnerships foster community engagement and economic growth, as they promote tourism, stimulate spending in local businesses, and cultivate a sense of pride in the host destination.

### 4. "Tour the Town" – Discover Cottage Grove Passport

We want our visitors to *Discover* Cottage Grove, and we've come up with a fun tool to get them exploring our parks, trails and open spaces. Whether we go digital (or keep it on paper), "Tour the Town" passport will be an interactive activity for people of all ages to participate in. As they embark on their journey to hit all the spots, the passport will encourage them to mark off where they've been in Cottage Grove, all while enjoying this free and adventurous activity.

### 5. Diversity, Equity and Inclusion (DE&I)

Diversity, Equity, and Inclusion (DE&I) are fundamental principles that must be prioritized to create welcoming and inclusive destinations for all travelers. Continuing to include all types of abilities and cultures in our photos and marketing is imperative to make sure all people can see someone who looks like them when they look at Cottage Grove. By celebrating diversity, we can attract a wider range of tourists and enhance the overall visitor experience.

### 6. Billboard

Billboard advertising is still one of the most effective forms of advertising. Billboards may not be your go-to option when we compare it to getting responses from email campaigns, websites, or calls. Billboards are viewed by hundreds and thousands of people daily. In fact, the same person may be seeing your billboard regularly which creates brand awareness. This prompts your potential customers to at least do their research on your brand, product, or service.









## Cottage Grove Convention & Visitors Bureau

12800 Ravine Parkway South  
Cottage Grove, MN 55016  
651-458-2800 | [DiscoverCottageGrove.com](http://DiscoverCottageGrove.com)







## City Council Action Request

# 7.G.

|                             |                                                                                                                                                                                                                                                                           |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Meeting Date</b>         | 6/26/2024                                                                                                                                                                                                                                                                 |
| <b>Department</b>           | Public Safety                                                                                                                                                                                                                                                             |
| <b>Agenda Category</b>      | Action Item                                                                                                                                                                                                                                                               |
| <b>Title</b>                | Authorization to Apply for Public Safety Grants                                                                                                                                                                                                                           |
| <b>Staff Recommendation</b> | Authorize the Public Safety Department – Police Division to apply for the MNOSHA Safety, Advisory Council on Traffic Safety (ACTS) Safety Project, Department of Justice Body-Worn Camera, and the Minnesota Department of Public Safety-Office of Traffic Safety grants. |
| <b>Budget Implication</b>   | N/A                                                                                                                                                                                                                                                                       |
| <b>Attachments</b>          | None                                                                                                                                                                                                                                                                      |



**TO:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**FROM:** Pete Koerner

**DATE:** June 26, 2024

**RE:** Authorization to Apply for Public Safety Grants

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## Discussion

In 2024, the Public Safety Department – Police Division presented our 5-year strategic plan at a Council workshop. During discussion of staffing, Council recommended that the department actively pursue grant opportunities. Within our plan, we aim to obtain grant funds to add staffing, enhance traffic safety, upgrade technology, and improve officer safety and wellness. Often when the grant window is open, there is a limited time to apply. We have found that we are eligible to apply for the following grant opportunities to support our strategic goals:

1. FY24 MNOSHA Safety Grant offering up to \$10,000 of matching funds. We would use this grant to purchase hearing and eye personal protective equipment.
2. FY24 Advisory Council on Traffic Safety (ACTS) Safety Project Grant. We are asking for \$250,000.00 over 2 years to fund a full-time traffic enforcement officer. The first 2 years of the grant the officer will be funded through grant funds.
3. FY24 Department of Justice Body-Worn Camera Grant. Request is to apply for up to \$2M to upgrade our body-worn camera program.
4. FY25 Minnesota Department of Public Safety-Office of Traffic Safety Grant. The details will be published in quarter 4. We will ask for funds to support a full-time traffic enforcement officer. (pending outcome of ACTS Safety Project Grant (item 2))

Some of the grant opportunities will require a match, however those are needed items that will otherwise be purchased with current budgeted monies. The grant for a full-time traffic enforcement officer will be discussed further in the budget process. We are asking for authorization to apply if the grant meets our needs. If awarded, Council would still need to approve acceptance.

## Recommendation

Authorize the Public Safety Department – Police Division to apply for the MNOSHA Safety, Advisory Council on Traffic Safety (ACTS) Safety Project, Department of Justice Body-Worn Camera, and the Minnesota Department of Public Safety-Office of Traffic Safety grants.

## Attachments

None



# City Council Action Request

## 7.H.

**Meeting Date** 6/26/2024

**Department** Parks and Recreation

**Agenda Category** Action Item

**Title** Renovation Systems Final Payment

**Staff Recommendation** Authorize resolution 2024-092 approving final payment to Renovation Systems in the amount of \$3,631.53 for the Glacial Valley Park Building Project.

**Budget Implication** \$3,631.53 for the Glacial Valley Park Building Project.

**Attachments**

|     |                                                                    |
|-----|--------------------------------------------------------------------|
| 1.  | 1-Memo - Renovation Syst Final Payment                             |
| 2.  | 2-Resolution                                                       |
| 3.  | 093000-003 Tile Maintenance Data                                   |
| 4.  | 093000-004 Tile Warranty                                           |
| 5.  | 096566-004 Resilient Athletic Flooring Warranty-Maintenance Data   |
| 6.  | 096813-003 Carpet Flooring Maintenance Data                        |
| 7.  | RSI-Commercial-Labor-Warranty Completion Date of November 17, 2023 |
| 8.  | WS 09B-09D-001 AIA G734                                            |
| 9.  | WS 09B-09D-002 AIA G706                                            |
| 10. | WS 09B-09D-003 AIA G706A                                           |
| 11. | WS 09B-09D-004 AIA G707                                            |
| 12. | WS 09B-09D-005 MNIC134                                             |





**To:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**From:** Zac Dockter, Parks and Recreation Director

**Date:** June 10, 2024

**Subject:** Glacial Valley Park – Renovation Systems Final Payment

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**Introduction/Background**

Renovation Systems is the tile/flooring contractor for the Glacial Valley Park Building Project. The contract with Renovation Systems is held directly by the City of Cottage Grove. The original contract sum was for \$72,630.57. \$68,999.04 has been paid on the contract to date.

Renovation Systems' work has been completed satisfactorily on this project and has supplied the appropriate contract closeout documentation. Staff is recommending final payment for the amount of \$3,631.53.

**Staff Recommendation**

Authorize resolution 2024-092 approving final payment to Renovation Systems in the amount of \$3,631.53 for the Glacial Valley Park Building Project.

**CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION NO. 2024-092**

**RESOLUTION APPROVING FINAL PAYMENT TO RENOVATION SYSTEMS  
IN THE AMOUNT OF \$3,631.53 FOR CONTRACTED TILE/FLOORING WORK  
AT THE GLACIAL VALLEY PARK BUILDING PROJECT**

WHEREAS, the City of Cottage Grove contracted Renovation Systems for tile/flooring work for the Glacial Valley Park Building Project in the amount of \$72,630.57; and

WHEREAS, the City has made previous contract payments to Renovation Systems in the amount of \$68,999.04; and

WHEREAS, Renovation Systems work is completed satisfactorily in accordance to the contract and has supplied the appropriate contract closeout documentation.

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, that the City of Cottage Grove approves final payment to Renovation Systems in the amount of \$3,631.53 for contracted tile/flooring work at the Glacial Valley Park Building Project.

Passed this 26th day of June 2024.

\_\_\_\_\_  
Myron Bailey, Mayor

Attest:

\_\_\_\_\_  
Tamara Anderson, City Clerk



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## CERAMIC TILE CARE INSTRUCTIONS

Daltile product experts provide step-by-step instructions for the best way to care for and maintain ceramic tile.

**ALL ABOUT CERAMIC  
TILE**

**(/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE/CERAMIC-  
TILE)**




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Glazed tile products should be cleaned routinely with an all purpose, low pH, household or commercial cleaner. The product chosen should also be grout joint cleaning compatible. The type of product may vary depending on the tile application and use. A multipurpose spray cleaner, which removes soap scum, hard water deposits and mildew designed for everyday use can be used on wall tile areas in residential baths and showers. A cotton mop, cloth, sponge, or non-metallic brush should be used to apply and agitate cleaner. Rinse the area with clean water and dry thoroughly. Routine cleaners should never contain harsh chemicals as these can damage tile. Acids can damage grout and the glazed surface of the tile. Ammonia can discolor grout.

Regular dust mopping, sweeping, or vacuuming is recommended prior to cleaning with liquid products.

Unglazed tile should be cleaned routinely with concentrated tile cleaners with a neutral pH for safe regular use. These cleaners are better suited for removing grease, oils, and normal spills from unglazed products. Again these products will vary depending on the application, amount of traffic and the use. The product chosen should also be compatible with the grout.

## REMOVAL OF SEALERS, WAXES, FLOOR FINISHES

Glazed ceramic tile should not be sealed. It is recommended that grout be sealed.

If you need to remove a topical sealer or floor wax from a ceramic tile you should use a tile sealer and adhesive remover. Always test a small area first. Apply a liberal amount of undiluted sealer & adhesive remover to a manageable area. Allow it to set without drying until coating or residue softens. Reapply if necessary until sealer softens and can be removed. If necessary, agitate with white nylon scrub pad. Wipe up the residue with a cotton towel or sponge. Rinse thoroughly with clean water. Do not use ceramic sealer removers on natural stone products.

## GROUT CARE

Grout is the material used to fill the spaces between the individual tiles. Grout comes in many colors. While color is important to the final finished look of the tile installation, it has little effect on the functionality of the grout. The purpose of grout is, simply, to fill the joint between the tiles and becomes a permanent, integral component of the





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## GROUT INSTALLATION

Immediately after tile has been installed and grouted, the new installation should be covered with brown paper to protect it from debris during the remaining construction process. The grout joints should be dampened daily with water using a clean sponge or mop during the first seven days. This procedure facilitates the grout cure and color lock. The paper will allow for two important things: (1) to protect the newly installed tile grout and (2) to allow moisture to escape from the grout as it cures, further protecting the look and utility of the floor. This is an important step in achieving color consistency. Never use plastic or non-absorbent materials to protect freshly installed tile. These types of non-absorbent products will trap moisture, causing the grout to discolor during the curing period. The protective brown paper should remain until construction is complete and the floor is opened for intended (post-construction) use.

Following a curing period of at least 24 hours, grout haze can be removed with plain water or a grout haze remover, which usually contains Sulfamic acid. Sulfamic acid can also be purchased in powder form and mixed with water to different strengths by qualified professionals. Similarly, epoxy grout haze can be removed with an epoxy haze remover. These removers are formulated to safely and quickly remove cured epoxy haze from new tile installations. Their unique formulation will soften most epoxy hazes for easy removal without damaging the grout or tile, usually in one application. Sulfamic acid or grout removers should never be used on natural stone products.

## PENETRATING/IMPREGNATING SEALER

Most tile installations use cementitious grouts. This type of grout should be sealed after installation to prevent it from staining. The grout should be sealed with a penetrating/impregnating sealer (often called grout sealers), which does not contain silicone, as silicone can shorten the useful life of the sealer. Epoxy grouts, conversely, are chemically cured and acid resistant, and as a result, do not require a sealer. The application of a good quality penetrating/impregnating sealer into the grout joints of a cementitious grout will not change the natural color of the grout, but will prevent the penetration of moisture, simplify maintenance, and help prevent staining or discoloration. Only the grout needs to be sealed, it is not required for glazed tiles to be sealed. Grout can be sealed 72 hours after installation.

There are different grades of penetrating/impregnating sealers. Be sure you are aware of the life-span of your sealer. You may need to reapply the sealer on an annual basis depending on the sealer quality, traffic patterns, and maintenance routine. Some



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## GROUT MAINTENANCE

Neither sealing the grout nor using an epoxy grout will guarantee against surface buildup or discoloration of the grout. Grout needs to be cleaned on a periodic basis to remove any surface buildup. Routine grout cleaning can be done with a daily concentrated household or commercial cleaner depending on the application. When heavy-duty grout cleaning is required, you will need to use a professional strength tile and grout cleaner that is capable of removing grease, soap scum, body oil, mildew stains, algae, and synthetic or acrylic waxes from the grout joints. However, such a product should contain non-polluting chemicals and low VOC levels. This type of product can be purchased from most home centers, or through your local professional floor covering dealer.

## GROUT COLOR RESTORATION

When grout has been stained to the point that it cannot be maintained or returned to its natural color, you can return the grout back to its original color or any other color through the use of a grout stain. Grout stains are epoxy-based products that are specifically designed to penetrate into the grout and seal the surface with a permanent color. Once the grout has been stained there is no need to seal it any further with a penetrating/impregnating sealer. Prior to staining, the grout joint should be cleaned thoroughly to remove any dirt, oils, grease, or sealers with a professional strength tile and grout cleaner.

## DISCLAIMER

### CARE AND MAINTENANCE GUIDE

Dal-Tile does not manufacture installation products or countertop cleaning/maintenance products. Dal-Tile provides the information on this page to its customers as an information source only. Please contact an installation product manufacturer directly, **prior** to usage, to obtain proper handling instructions, application instruction and warnings concerning potential health hazards for any product contemplated for use.



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serves its intended purpose.

## SAFETY PRECAUTION TO CUSTOMERS

The products described in this document may have chemicals that cause reactions in certain individuals. Dal-Tile strongly recommends the use of safety glasses, respirators (masks) and gloves in handling any materials that contain chemicals. Dal-Tile recommends the proper disposal of any scrap tile/stone, installation and/or maintenance products discussed herein.

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## ADDITIONAL RESOURCES



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[choose  
the-  
right-  
tile/wall-  
tile\).](#)

## SELECTING WALL TILE

From feature wall & backsplash to shower & outdoor tile, see how to select wall tile.

[LEARN THE DETAILS \(/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE/WALL-TILE\)](/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE/WALL-TILE)





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the-  
right-  
tile).



## CHOOSING THE RIGHT TILE

Picking the right tile should not be difficult. We have outlined key information to help.

[HOW TO CHOOSE \(/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE\)](#)



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## HOW TO LAY TILE PATTERNS

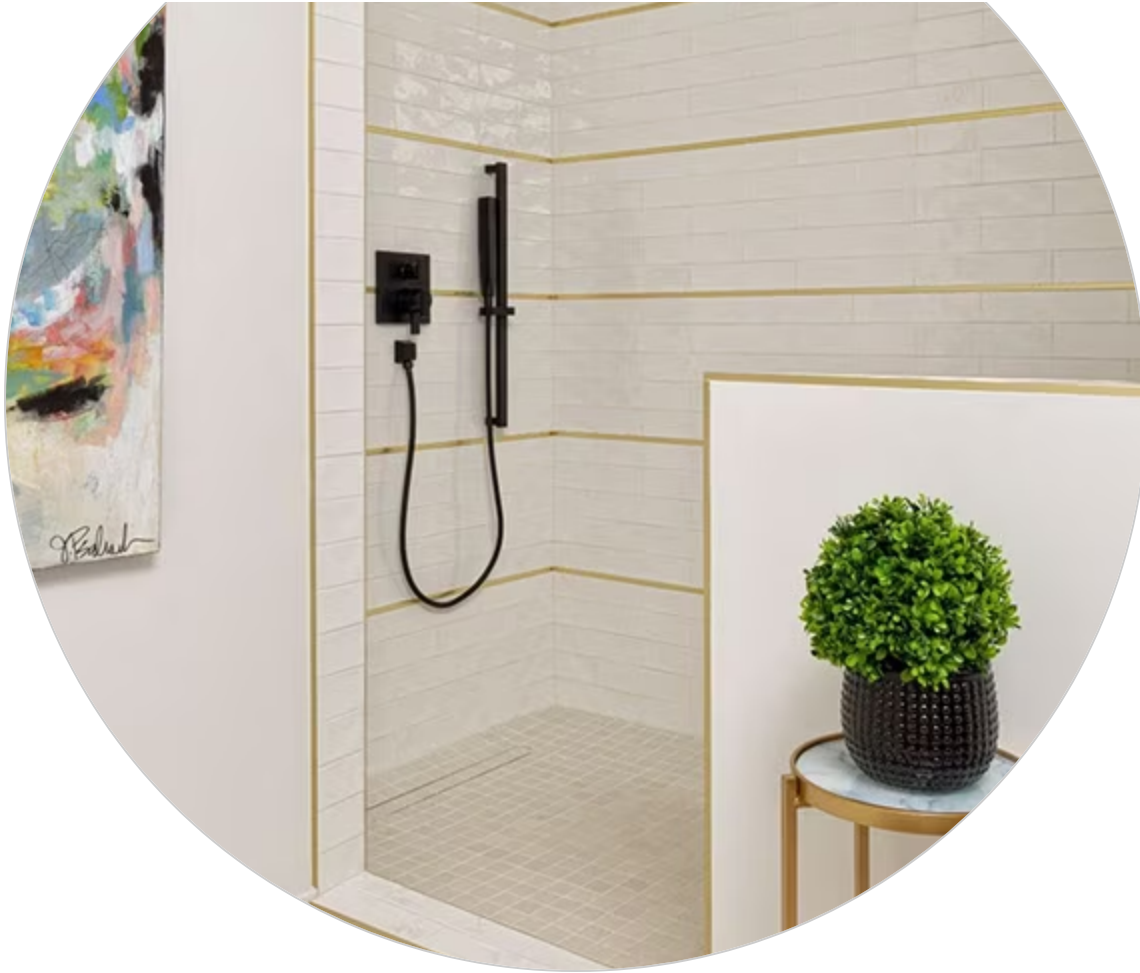
A multitude of tile patterns to give your space pizzazz. Includes downloadable PDFs.

[PATTERN GUIDES \(/HOW-TO/FLOOR-PATTERNS\)](/HOW-TO/FLOOR-PATTERNS)



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[the right](#)  
[tile/facto](#)  
[to-](#)  
[consider](#)  
[while-](#)  
[selecting](#)  
[tile\).](#)

## FACTORS TO CONSIDER

Knowing these technical details can help you make the best choice when selecting tile.

[GET THE FACTS \(/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE/FACTORS-TO-CONSIDER-WHILE-SELECTING-TILE\)](/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE/FACTORS-TO-CONSIDER-WHILE-SELECTING-TILE)

### FOLLOW DALTILE



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## ABOUT US



## CUSTOMER SERVICE



## TRADE PROFESSIONALS



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## CARING FOR & MAINTAIN PORCELAIN

Porcelain is the champion floor, wall, and countertop tile that brings flexible style and enduring quality to your home or commercial space. With the minimal care, your porcelain can easily have a decades-long lifespan.

ALL ABOUT PORCELAIN  
TILE

(/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-  
TILE/PORCELAIN-TILE)

## ROUTINE CARE AND CLEANING

Regular, basic cleaning with warm water and mild soap is sufficient to keep floors looking good. You can also use gentle, everyday multipurpose spray cleaner to remove soap scum, hard water deposits, and mildew. Do not use cleaning products that contain acids or ammonia (and other harsh chemicals) as these can damage grout and glazed surfaces of the tile. Choose products that are compatible with your grout to avoid damage or discoloration of the grout. Always dry your porcelain thoroughly after cleaning.

Unglazed tile should be cleaned routinely with concentrated tile cleaners that have a neutral pH. These cleaners are better suited for removing grease, oils and normal spills from unglazed products.

## STEPWISE™ PRODUCT CARE

StepWise (</why-daltile/innovation-and-technology/stepwise>) is a technology infused into tile that makes it 50% more slip resistant than regular tile. Products with StepWise do not require any specialized care. They can be cleaned and maintained as you would any porcelain surface.





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these might not be removable. If porcelain surfaces are exposed to permanent marker or dye, rinse the area with water as soon as possible then apply approved cleaning product. Rinse and dry thoroughly. Although porcelain is resistant to stains from juice, wine, coffee and other food substances, it is best to wipe up spills immediately to prevent possible stains.

When chopping vegetables, slicing bread or preparing other foods with sharp utensils on a porcelain countertop, use a cutting board. Use cleaning products and implements that are non-abrasive. Additionally, sweep or vacuum tile prior to cleaning to remove dust or debris.

## PROTECTING PORCELAIN SURFACES

Porcelain does not require sealing, however, it is a good idea to seal grout or any joints. Use a product that is safe for both the tile and the grout.

To remove sealers, waxes and other floor finishes from porcelain tile or countertops, use a tile sealer and adhesive remover. Always test a small area first. Apply a liberal amount of undiluted sealer and adhesive remover in a manageable area. Allow it to sit without drying until sealer residues on the surface soften. Reapply if necessary until sealer softens and can be removed by wiping off with a cotton towel or sponge. If necessary, agitate with a nylon scrub pad. Rinse thoroughly with clean water. Do not use on tile or grout sealers on natural stone products.

## GROUT CARE

The purpose of grout is twofold, to fill the joint between the tiles and to provide a space for tile to flex. It decreases breakage of tile and becomes a permanent, integral component of the finished installation. Grout is one of the more difficult parts of maintaining a porcelain tile floor. It tends to capture dirt and darkens over time. It requires more specialized cleaning and maintenance than tile.

## INSTALLATION

Immediately after tile has been installed and grouted, the new installation should be covered with brown paper (to protect it from debris and allow for moisture evaporation) during any remaining construction. The grout joints should be dampened daily with clear water using a clean sponge or mop during the first seven days. This procedure facilitates the grout cure and helps it retain its color better.



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this different form of grout. Both haze cleaners are safe for grout and tile but should not be used on natural stone.

For tips [selecting the right grout color \(/trend-hub/chips-tips/how-to-choose-grout-color\)](#) or [hiring a tile installer \(/trend-hub/chips-tips/5-things-to-do-when-hiring-a-tile-installer\)](#), check out HGTV star [Chip Wade's tips \(/trend-hub/chips-tips\)](#).

## SEALING

Cementitious grouts should be sealed after installation. A penetrating/impregnating sealer that does not contain silicone is effective in grout's resistance to spills, stains and moisture absorption and can help it retain its original color better and decrease maintenance. Sealers should be reapplied regularly to grout (glazed tile does not need to be sealed). Some sealers will last several years (see product information, and warranties) but frequency will also depend on traffic patterns and maintenance routines. Grout should be sealed 72 hours after installation.

Epoxy grout is chemically cured and doesn't require the sealers that cementitious grouts do. They are naturally resistant to spills, stains and moisture.

## CLEANING

Grout needs to be cleaned on a periodic basis to remove any surface buildup. Routine grout cleaning can be done with a daily concentrated household or commercial cleaner depending on the application. When heavy-duty grout cleaning is required, you will need to use a professional strength tile and grout cleaner that is capable of removing grease, soap scum, oils, mildew stains, algae, and synthetic or acrylic waxes from the grout joints. Select a product that does not contain polluting chemicals and is low VOC. This type of product can be purchased from most home centers, or through your local, professional floor covering dealer. You might also consider professional grout cleaning companies.

## GROUT RESTORATION

When grout has been stained to the point that it cannot be maintained or returned to its natural color, you can use a "grout stain." Grout stains are epoxy-based products that are specifically designed to penetrate into the grout and seal the surface with a permanent color. Once the grout has been stained there is no need



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## DISCLAIMER

### CARE AND MAINTENANCE GUIDE

Dal-Tile does not manufacture installation products or countertop cleaning/maintenance products. Dal-Tile provides the information on this page to its customers as an information source only. Please contact an installation product manufacturer directly, **prior** to usage, to obtain proper handling instructions, application instruction and warnings concerning potential health hazards for any product contemplated for use.

To ensure your products will provide you with a lifetime of beauty and utility, proper maintenance is crucial. Natural stone products are porous by nature and require a different maintenance program than traditional ceramic tile. Dal-Tile also strongly recommends testing a small area PRIOR to usage of any installation/cleaning/maintenance product to determine whether the product serves its intended purpose.

### SAFETY PRECAUTION TO CUSTOMERS

The products described in this document may have chemicals that cause reactions in certain individuals. Dal-Tile strongly recommends the use of safety glasses, respirators (masks) and gloves in handling any materials that contain chemicals. Dal-Tile recommends the proper disposal of any scrap tile/stone, installation and/or maintenance products discussed herein.

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## ADDITIONAL RESOURCES



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## HOW TO INSTALL TILE

Experience how easy tile installation can be with step-by-step tips from our experts.

[HELPFUL TIPS \(/HOW-TO/HOW-TO-INSTALL-TILE\)](#)

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## CHOOSING THE RIGHT TILE

Picking the right tile should not be difficult. We have outlined key information to help.

[HOW TO CHOOSE \(/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE\)](/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE)





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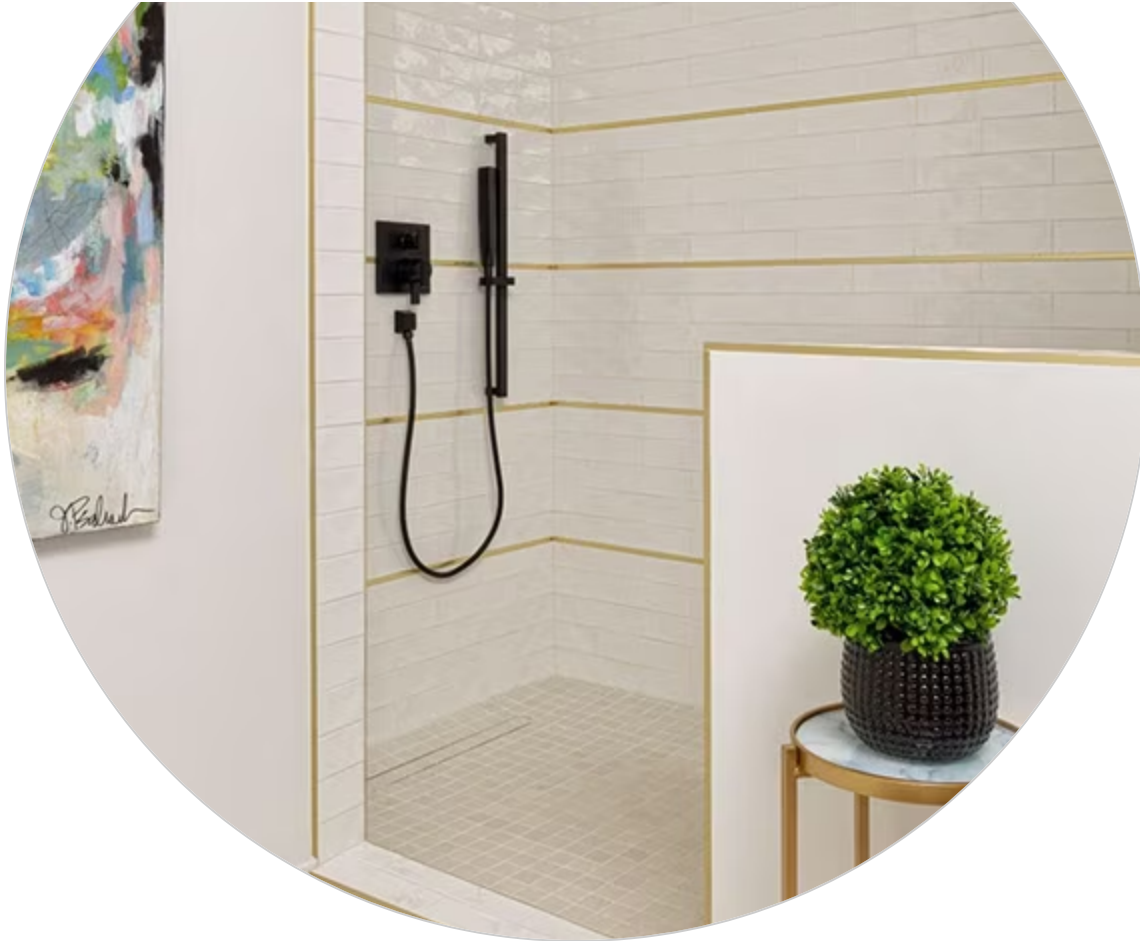
## FREQUENTLY ASKED QUESTIONS

Learn from the experts as they answers a wide array of commonly asked questions.

[PRO TIPS \(/HOW-TO/FAQS\)](/HOW-TO/FAQS)

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[consider](#)  
[while-](#)  
[selecting](#)  
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## FACTORS TO CONSIDER

Knowing these technical details can help you make the best choice when selecting tile.

[GET THE FACTS \(/HOW-TO/HOW-TO-CHOOSE-THE-RIGHT-TILE/FACTORS-TO-CONSIDER-WHILE-SELECTING-TILE\)](#)

### FOLLOW DALTILE





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ABOUT US



CUSTOMER SERVICE



TRADE PROFESSIONALS



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## Daltile 1-Year Limited Warranty

Daltile warrants that manufactured products will be free from defect for a period of one year from date of purchase. Defect is defined as a shortfall in the product to perform to Daltile specifications as disclosed in product literature, within industry-allowable tolerances as set forth in standard, national industry protocols. **THIS ONE-YEAR EXPRESS WARRANTY IS THE SOLE WARRANTY EXTENDED AND REPLACES ANY STATUTORY WARRANTIES TO THE MAXIMUM EXTENT ALLOWABLE BY LAW.** Customer misuse including negligence, physical, or chemical abuse is not covered by this warranty. Installation defects are not covered by this warranty. All warranty claims must be reported immediately. Failure to report any warranty claim within 30 days of defect discovery will void this warranty. All products must be inspected prior to installation. Visual defects or nonconformities apparent prior to installation voids this warranty.

Tile is subject to variation in technical specifications, including DCOF, due to inherent variability in the raw materials and production process. Express technical specifications are not guarantees of minimum or maximum thresholds of performance. Tile containing abrasives create a rough surface, creating cleaning challenges because dirt and other contaminants lodge in the surface. Extra attention is necessary to ensure contaminants are removed promptly. Unless specifically stated otherwise, tile recommended for floor or wall applications refers to interior applications only. Daltile does not recommend its products for use on ceilings or roofs. Local building codes may dictate minimum tile performance specifications. Daltile does not warrant product installations that violate building codes. Photographic color images may not be an exact product match. Product samples are representative only. Express color match warranties are only extended to actual product samples.

## Other Daltile Warranties

### Implied Warranties Limited in Duration and Scope

Any implied warranty applicable to the product sale, including the implied warranty of merchantability or the implied warranty of fitness for a particular purpose is limited in duration to the duration of this written warranty or the maximum statutory period, whichever is less. Some states do not allow limitations on implied warranty duration, so the above limitation may not apply to you.

The Federal Magnuson-Moss Warranty Act limits disclaimers of implied warranties involving consumer products. To the maximum extent allowable by federal and state law, this warranty supplements or supersedes federal and state consumer goods warranty protections.

### Implied Warranty of Fitness for a Particular Purpose

Daltile provides detailed information in its product literature with regard to appropriate tile and stone applications. In these specified applications, Daltile limits the duration of the implied warranty of fitness for a particular purpose to one year or the maximum statutory period prescribed by law, whichever is less. Failure to comply with recommended applications voids this warranty.

Natural stone products are mined and cut from natural formations. Because these products are not subject to a manufacturing process, quality warranties are limited to the specified representations in product literature and guidelines established by the Marble Institute of America. Daltile does not

warrant natural stone products for shade, size, thickness, warping, cleft variations, surface finish variations, or other natural variances on stone products.

## Remedy Limitation and Disclaimer

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If a defect in materials or workmanship is discovered within the one-year period, Daltile will either refund the price of the product or provide a replacement product after a reasonable number of attempts to remedy product defects. Buyer's remedy is limited to replacement or repair of the defective product. No consequential (including, but not limited to, lost profits) or incidental damages are recoverable. Daltile disclaims all express warranties not contained in this limited express warranty. Any representations made in connection with the sale of this product that differs from the terms of this warranty are not valid and should be brought to the attention of Daltile immediately (1-800-933-TILE).

Legal Notice: Warning Tile and installation products contain chemicals known to the state of California to cause cancer, birth defects, reproductive harm, respiratory harm or other health problems. For more product-specific information on chemical content, obtain an MSDS at [Daltile.com](http://Daltile.com) or contact Daltile at 1-800-833-TILE.

## To Make a Claim

1. The original purchaser must notify a Daltile Sales Service Center or an authorized representative in writing within 30 days of the occurrence of any defect.
2. After notification, Daltile or an authorized representative will inspect and/or test the product for defect and complete a Product Claim Action form. No claim will be honored without product inspection by Daltile or an authorized representative.
3. Upon determination that the product defect claim is valid, Daltile will notify the purchaser in writing. Daltile reserves the right to repair, replace or refund the originally purchased product, at its sole discretion.





# 25 Year System Limited Warranty (United States)

DS-025.0

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| APPLICATION                                       | PRODUCTS                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Air Barrier Components<br>(exterior veneers only) | MVIST™ Air & Water Barrier<br>LATAPOXY® Waterproof Flashing Mortar<br>LATICRETE Flashing Sealant                                                                                                                                                                                                                                                                            |
| Underlayment                                      | NXT® LEVEL PLUS LITE<br>NXT® LEVEL PLUS<br>SUPERCAP® SC500 Plus<br>Skim Lite<br>NXT® Patch                                                                                                                                                                                                                                                                                  |
| Primer                                            | Primer Plus<br>PRIME-N-BOND™                                                                                                                                                                                                                                                                                                                                                |
| Floor Warming <sup>Δ</sup>                        | STRATA_HEAT™ Wire<br>STRATA_HEAT<br>STRATA_HEAT Thermal Packs<br>†14-XLT with STRATA_HEAT Thermal Packs                                                                                                                                                                                                                                                                     |
| Vapor Reduction                                   | VAPOR BAN™ E<br>VAPOR BAN ER<br>VAPOR BAN Primer ER                                                                                                                                                                                                                                                                                                                         |
| Waterproofing/<br>Anti-Fracture                   | HYDRO BAN®<br>HYDRO BAN XP<br>9235 Waterproofing Membrane                                                                                                                                                                                                                                                                                                                   |
| Waterproofing                                     | HYDRO BAN Sheet Membrane<br>LATAPOXY Waterproof Flashing Mortar<br>HYDRO BAN Cementitious Waterproofing Membrane<br>HYDRO BAN Quick Cure                                                                                                                                                                                                                                    |
| Shower System                                     | HYDRO BAN Pre-Sloped Shower Pan (and applicable accessories)<br>HYDRO BAN Linear Pre-Sloped Shower Pan (and applicable accessories)<br>HYDRO BAN Shower & HYDRO BAN Shower Kits<br>HYDRO BAN Linear Drain (and applicable accessories)<br>HYDRO BAN Bonding Flange Drain (and applicable accessories)<br>HYDRO BAN Board (and applicable accessories)<br>4-XLT <sup>Δ</sup> |
| Sound Control/<br>Anti-Fracture                   | 125 TRI MAX®<br>170.3 OR 170.5 Sound & Crack Isolation Mat<br>FRACTURE BAN™ 40 OR 90<br>FRACTURE BAN Primer                                                                                                                                                                                                                                                                 |
| Plaza & Deck                                      | Plaza and Deck System                                                                                                                                                                                                                                                                                                                                                       |
| Uncoupling                                        | STRATA_MAT™<br>STRATA_MAT XT                                                                                                                                                                                                                                                                                                                                                |
| Thick Bed Method                                  | 3701 Fortified Mortar Bed<br>3701 Lite Mortar / 3701 Lite Mortar R<br>Quick Cure Mortar Bed                                                                                                                                                                                                                                                                                 |
| Slurry Bond Coat                                  | 254 PLATINUM™ PLUS<br>254 PLATINUM                                                                                                                                                                                                                                                                                                                                          |
| Thin Bed / Adhesive<br>Method                     | 254 PLATINUM™ PLUS<br>254 PLATINUM (regular or rapid version)<br>LATAPOXY 300 Adhesive OR BIOGREEN™ 300<br>Glass Tile Adhesive Lite                                                                                                                                                                                                                                         |
| Large, Heavy Tile Method                          | MULTIMAX™ LITE<br>TRI-LITE™                                                                                                                                                                                                                                                                                                                                                 |
| Spot Bonding                                      | LATAPOXY 310 Stone Adhesive - Standard and Rapid Grade                                                                                                                                                                                                                                                                                                                      |
| Grouting / Pointing                               | SPECTRALOCK® PRO Premium Grout (non-industrial applications)<br>SPECTRALOCK PRO Grout (non-industrial applications)<br>SPECTRALOCK 1 Pre-Mixed Grout<br>READY-TO-USE Grout<br>PERMACOLOR® Grout<br>PERMACOLOR Select                                                                                                                                                        |
| Profiles & Trims                                  | Aluminum<br>Brass<br>Stainless Steel                                                                                                                                                                                                                                                                                                                                        |
| Sealant†                                          | LATASIL™<br>LATASIL 9118 Primer                                                                                                                                                                                                                                                                                                                                             |

<sup>†</sup> Use of suitable flexible sealant is required per Tile Council of North America Detail EJ171 for use in expansion joints, coves, corners, changes in plane and other joints or wherever tile or stone abuts dissimilar materials or restraining surfaces.

<sup>Δ</sup> 4-XLT for use to install HYDRO BAN® Pre-Sloped Shower Pans to substrate only.

<sup>Λ</sup> Floor Warming Thermostat and STRATA\_HEAT™ Thermostat sold by LATICRETE warrants parts and materials for one (1) year from the date of purchase. The sole remedy for the Floor Warming Thermostats and STRATA\_HEAT Thermostats is product replacement (see Data Sheet 230.13 for full details on the LATICRETE® Product Limited Warranty).

<sup>††</sup> 4-XLT with STRATA\_HEAT Thermal Packs when used as a large & heavy tile adhesive mortar.

## LIMITED WARRANTY

Subject to the conditions and limitations stated in this limited warranty statement (this “Limited Warranty”), LATICRETE INTERNATIONAL, INC. (“LATICRETE”) warrants that the LATICRETE® products listed on this document (“Products”) will be free from manufacturing defects and

will not break down or deteriorate under normal usage when installed in accordance with the written specifications of LATICRETE and industry standard guidelines. For this Limited Warranty to apply, all of the applications that comprise the installation must be performed exclusively with one or more of the Products listed in this document for each application (refer to chart on the left). This Limited Warranty can also be found online at <https://laticrete.com/en/support-and-downloads/product-support/warranties>. LATICRETE'S responsibility for defective Products is limited to repair or replacement as described below in this Limited Warranty.

## NO ASSIGNMENT; SCOPE OF COVERAGE

LATICRETE extends this Limited Warranty only to the original purchaser of the Product (“you”) and only for the duration of the Warranty Period. This Limited Warranty is not transferable or assignable. It does not extend to any subsequent owner or other transferee of the Product, and therefore there shall be no third party beneficiary to this Limited Warranty. If you purchased your Product from LATICRETE, you may obtain coverage under this Limited Warranty. AS TO ALL OTHERS, LATICRETE MAKES NO AND HEREBY DISCLAIMS ALL REPRESENTATIONS, WARRANTIES, COVENANTS, AND CONDITIONS OF ANY KIND, EXPRESS OR IMPLIED, ARISING FROM OR RELATING TO THE PRODUCTS, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS OF THE PRODUCT FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT, WHETHER ARISING FROM STATUTE, COMMON LAW, CUSTOM OR OTHERWISE.

## WARRANTY PERIOD

This Limited Warranty starts on the date of your purchase of the Product and lasts for twenty five (25) years (the “Warranty Period”). The Warranty Period is not extended if LATICRETE repairs or replaces your Product. LATICRETE may change the availability of this Limited Warranty at its discretion, but any changes will not be retroactive.

## DISCLAIMER

FOR COMMERCIAL CUSTOMERS (INCLUDING SMALL, MEDIUM, AND LARGE BUSINESSES, PROFESSIONAL INSTALLERS, AND GOVERNMENT AND PUBLIC SECTOR CUSTOMERS) AND RESELLERS: This paragraph only applies to you if you purchase Products from LATICRETE for resale or for commercial or professional purposes. LATICRETE'S RESPONSIBILITY FOR DEFECTS IN MANUFACTURING OR FOR A PRODUCT'S BREAK DOWN OR DETERIORATION UNDER NORMAL USE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY. EXCEPT FOR THE LIMITED WARRANTY EXPRESSLY STATED ABOVE FOR LATICRETE PRODUCTS, LATICRETE PROVIDES NO WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OR CONDITION (1) OF MERCHANTABILITY,



# 25 Year System Limited Warranty (United States)

DS-025.0

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MERCHANTABLE QUALITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, SUITABILITY OR NONINFRINGEMENT; (2) RELATING TO ANY THIRD-PARTY PRODUCT; OR (3) REGARDING THE RESULTS TO BE OBTAINED FROM THE PRODUCT. LATICRETE EXPRESSLY DISCLAIMS ALL WARRANTIES AND CONDITIONS NOT STATED IN THIS LIMITED WARRANTY.

FOR CONSUMERS: This paragraph applies to you only if you purchase Products from LATICRETE that are normally used for personal, family or household purposes other than for resale, or for commercial or professional use. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE. LATICRETE'S RESPONSIBILITY FOR DEFECTS IN MANUFACTURING OR FOR A PRODUCT'S BREAK DOWN OR DETERIORATION UNDER NORMAL USE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY. LATICRETE LIMITS THE DURATION AND REMEDIES OF ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO THE DURATION OF THE WARRANTY PERIOD. NO WARRANTIES OR CONDITIONS, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE WARRANTY PERIOD HAS EXPIRED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

## LIMITATION OF LIABILITY

THE REMEDIES DESCRIBED BELOW IN THE "EXCLUSIVE REMEDY" SECTION BELOW ARE YOUR SOLE AND EXCLUSIVE REMEDIES, AND LATICRETE'S ENTIRE LIABILITY, FOR ANY BREACH OF THIS LIMITED WARRANTY. LATICRETE'S LIABILITY SHALL, UNDER NO CIRCUMSTANCES, EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE DEFECTIVE PRODUCT, NOR SHALL LATICRETE UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

## EXCLUSIVE REMEDY

The sole and exclusive remedy for a breach of this Limited Warranty is replacement of only the specific portion of the installation that is proven to be defective. LATICRETE will pay for replacement of its own products and replacement of finishing materials, as well as for labor for the replacement installation, provided that LATICRETE will not pay more for the replacement than the original purchase price of the

portion being replaced as calculated on a square-foot (or, if applicable, square-meter) basis. LATICRETE will not pay for replacement of any portion of the installation that is not proven to be defective.

In the event that the sole and exclusive remedy described above fails of its essential purpose, the liability of LATICRETE is limited to the monetary value, on a square-foot (or, if applicable, square-meter) basis, of the original purchase price of the portion being replaced.

## EXCLUSIONS

This Limited Warranty does not cover any damage due to (a) transportation; (b) storage; (c) improper use; (d) failure to follow LATICRETE's Product instructions and industry standard guidelines; (e) modifications; (f) unauthorized repair; (g) normal wear and tear; or (h) external causes such as accidents, abuse, or other actions beyond LATICRETE's reasonable control, including cracking due to structural movement, excessive deflection or other failure in the substrate.

Please refer to individual product data sheets available at <https://laticrete.com/en/support-and-downloads/product-support/data-sheets> for specific guidelines.

This Limited Warranty also excludes (a) any Products used in any exterior facades with ceramic tile, stone, adhered masonry veneer, or thin brick installed over substrates with steel or wood framing (see Data Sheet 230.15 for such applications) and (b) any ceramic tile, stone or quarry/packing house tile installed in commercial and industrial kitchens (see Data Sheet 230.10IG for such applications).

This Limited Warranty does not apply to the Floor Warming Thermostat and STRATA\_HEAT™ Thermostat sold by LATICRETE – please see Data Sheet 230.13 for full details on the LATICRETE warranty terms that apply to these products.

**\*\*Note:** Efflorescence is a normal condition of Portland cement mortars and is not a defective condition.

## HOW TO MAKE A CLAIM

To make a claim under this limited warranty, you must notify LATICRETE in writing within thirty (30) days of the discovery of the alleged manufacturing defect. At the option of LATICRETE, you may be required, as a condition of this limited warranty, to provide proof of product purchase and use.

Address your claim to:

LATICRETE International, Inc.  
1 LATICRETE Park North  
Bethany, CT 06524-3423 USA  
Attn.: Technical Services Department



# 25 Year System Limited Warranty (United States)

DS-025.0

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## SEVERABILITY

If any portion of this Limited Warranty is held to be illegal or unenforceable, such partial illegality or unenforceability shall not affect the enforceability of the remainder of the Limited Warranty.

## TECHNICAL INFORMATION

Technical assistance and information are available by calling the LATICRETE Technical Services Line:

Toll Free: 1.800.243.4788, ext. 1235  
Telephone: +1.203.393.0010, ext. 1235  
Fax: +1.203.393.1948  
E-mail: [technicalservices@laticrete.com](mailto:technicalservices@laticrete.com)  
Web and Chat: [www.laticrete.com](http://www.laticrete.com)

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**LATICRETE International, Inc.**

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## Stamina Flooring 5 Year Limited Warranty

Subject to the following terms and conditions, *North West Rubber Ltd.*, ["NWR"] hereby warrants to the Original Purchaser that SportFloor® **Stamina** will be free from manufacturing defects.

### Warranty Coverage and Duration

- This is a **five (5) year** limited warranty, prorated as outlined in the warranty coverage schedule below.

| Number of years from date of original shipment to date of claim | Percentage of purchase price of product for which seller is responsible |
|-----------------------------------------------------------------|-------------------------------------------------------------------------|
| 0-3 years                                                       | 100 %                                                                   |
| More than 3 years, but less than 4                              | 75 %                                                                    |
| More than 4 years, but less than 5                              | 50 %                                                                    |

- Unless otherwise approved by NWR, this warranty will commence on the date of sale as documented by an invoice or bill of lading with the Original Purchaser.

### Warranty Remedies

- NWR warrants the product to be free from defects in material or workmanship and agrees to replace those products which disclose such defects when used under normal conditions.
- NWR will not accept responsibility under the warranty for anything more than replacement of the product, FOB Abbotsford, BC, Canada. In the event of a Warranty Claim, contact your dealer.
- This remedy is the sole and exclusive remedy available to the Original Purchaser for breach of express or implied representations or warranties with respect to the product.

### Warranty Exclusions

- This warranty is in lieu of all other representations, warranties, guarantees, obligations or liability, expressed or implied, including any warranty of merchantability or fitness for a particular purpose other than resilient rubber floor covering.
- NWR extends no guarantee for installation or issues caused by excessive moisture under Stamina or water migration through concrete, etc.
- NWR strictly monitors color consistency, though exact uniformity of color is not guaranteed between dye lots.
- The product will not be covered under warranty if/when/for:
  - Improper installation or maintenance of the product, including, but not limited to, the product being found to have been installed with previous damage or irregularities, or installed over uneven/inappropriate sub-surfaces or foreign material such as loose sand, dust, etc.
  - The material is used in applications/locations other than those for which it was designed.
  - Normal wear over time.
  - Damage from picks and heel points on Figure Skates, punctures, gouges or tears caused by materials dropped on to flooring
  - Heavy use areas (i.e., players' benches, penalty boxes, main access to ice surface or change rooms, free weight areas) pivot points and other high stress areas where excessive wear will occur because of the nature of use.
  - Gradual changes in color shading due to exposure to sunlight and/or climatic conditions.
  - Difference in color/shading/flecking variations with actual samples, printed illustrations and/or previously purchased SportFloor products.

- The mat releases from the adhesive over time due to heavy vehicle (forklift) traffic
- Slight variations in surface appearance/texture are a common occurrence in the manufacture of recycled rubber product and do not indicate a defect.
- The product is damaged due to occurrence of a natural disaster including, but not limited to, flooding, earthquakes, tornadoes, hurricanes, etc.
- An act of negligence, abuse, accident, misuse, including but not limited to, vandalism, civil disobedience, act of crime, act of war and the like occurs.
- Acids, caustic materials or petroleum chemicals and the like, direct or airborne, are or have been in contact with the product.
- Repairs, alterations or modifications are made to the surfaces without prior consultation, consent or authorization from *NWR*.
- The Original Purchaser fails to comply with all terms and conditions stated herein.
- The Original Purchaser denies *NWR* and/or its representative access to the installed product and/or fails to cooperate in providing permission for this access.
- Payment for the product has not been made in full.
- In no event will *NWR* be liable to the Original Purchaser or any third party for any damages, including any lost profits, lost savings or other consequential or incidental damages arising out of the use or inability to use the product even if *NWR* and/or its representatives have been advised of the possibility of these damages. The liability of *NWR* shall in no event exceed the replacement cost of the product, FOB Abbotsford, BC, Canada.

SportFloor® 1 or 2-part Urethane Adhesive is the recommended adhesive for use when installing SportFloor flooring products. This adhesive is VOC compliant and is solvent free.

For **Stamina** warranty compliance, any alternate adhesive being considered for use must be pre-approved by *NWR* in writing. If these guidelines are not followed, the purchaser acknowledges that this product warranty is void.

In the event of a Warranty Claim, Proof of Purchase from *NWR*, or a qualified dealer, is necessary for the Warranty to be valid.



# Maintenance Manual

Thank you for purchasing your **SportFloor® Stamina** product. You have made an exceptional choice for your facility, one that you will want to properly protect. **Stamina** surfaces are engineered and manufactured using the highest quality recycled materials to ensure a long and useful life.

**Note: Slight variations in surface color/texture may be evident on the Stamina mat. These marks are a common occurrence in the manufacture of this type of recycled rubber product. They do not indicate a change in the physical properties or quality of the mat and the marks will become less obvious over time. They should not be considered a product defect and are not covered under the product warranty.**

The following maintenance guidelines have been prepared to assist purchasers of **Stamina** Recreational Flooring in the recommended care of your new product. It is a guideline which may be used to produce an effective finished installation and should be reviewed in the context of the installation site(s).

**Stamina must not be cleaned with any petroleum-based cleaners. If any petroleum fuels are spilled on the matting, it should be removed immediately to avoid damage to the matting and voiding of warranty.**

Rubber flooring will typically and gradually “oxidize” and “break in” over time. This “maturing” is a completely natural phenomenon, which helps to create an easy to clean surface. However, during the early stages of this “break in” period (approximately 6 months), the surface will attract soil more easily than it would once it has matured so initial maintenance is very important.

**These maintenance guidelines are applicable for both adhered and interlock installation methods.**

For interlocking **Stamina**

- Cleaning can be performed immediately after installation.

For glued down **Stamina**

- Wait 72 hours (minimum) after installation before proceeding with floor maintenance.

## Equipment Needed

- Broom
- Wet/dry Vacuum

- Wet floor signs and/or caution tape
- TASKI™ Profi® and Material Safety Data Sheets
- Personal protective equipment (if required)
- Rotary buffing machine (300 rpm max)
- Medium Scotch Brite® pad
- Restoration only:
  - TASKI Ice-it
  - Purple Scotch Brite® pad or nylon brush

## I. Debris Removal

- Initial Cleaning:** Thoroughly vacuum or sweep your new floor to remove all dust and/or debris.
- Routine Cleaning:** Vacuuming or sweeping should be done daily to minimize dirt buildup. As a minimum this cleaning should be performed weekly or more frequently as required.

## II. Cleaning

### A. Initial Cleaning

- DO NOT clean for minimum of 72 hours after installation. This ensures that the adhesive has fully cured and that there is no risk of compromising the newly installed flooring system.
- Recommended cleaner is TASKI™ Profi® or a similar PH neutral bio-degradable cleaner.
- For safety, post “Wet Floor” signs, use caution tape or barricade the area from entry.
- Refer to Material Safety Data Sheets (MSDS) for proper personal protective equipment before working with chemicals.
- Mix the appropriate ratio of the cleaner as recommended by the manufacturer.

**Note: Test diluted solution on small area of floor surface to measure its efficiency. If it is not producing desired results, slightly adjust your mixing ratio accordingly.**

- Using a mop, apply approved floor cleaner diluted with clean water.
- Follow cleaning product manufacturer’s instructions and allow solution to stand for 5-10 minutes after application, but do not allow surface to dry out.

- While still wet, scrub floor using a rotary buffing machine equipped with a medium Scotch Brite® pad.
- Scrub surface in multiple directions with the rotary buffing machine and remove wet residue using a wet-dry vacuum.
- Damp mop rinse the surface thoroughly using clean fresh water.
- Repeat cleaning as required to remove any remaining mold release or sediment.
- Insufficient rinsing of the flooring surface after it has been washed can lead to the accumulation of soap residue. Repeat rinsing as required to remove all residues.
- Prohibit foot traffic on flooring until area is dry.

**B. Regular Cleaning:** *(Minimum Once Weekly)*

- For safety, post wet floor signs, caution tape or barricade area
- Refer to Material Safety Data Sheets (MSDS) for proper personal protective equipment before working with chemicals.
- Begin by thoroughly vacuuming or sweeping the Stamina surface.
- Using a mop, apply approved floor cleaner diluted with clean water. Depending on how soiled the area is, you may choose to increase the concentration of the cleaner.
- Follow cleaning product manufacturer's instructions and allow solution to stand for 5-10 minutes, but do not allow surface to dry out.
- Scrub floor using a rotary buffing machine equipped with a medium Scotch Brite® pad.
- Scrub surface in multiple directions and remove wet residue using a wet-dry vacuum.
- Damp mop rinse the surface thoroughly with clean fresh water.
- Insufficient rinsing of the flooring surface after it has been washed can lead to the accumulation of soap residue. Repeat rinsing as required to remove all residues.
- Prohibit foot traffic on flooring until area is dry.

**C. Restorative Cleaning:** *(As required or approximately every 2-3 years.)*

- For safety, post wet floor signs, caution tape or barricade the area
- Refer to Material Safety Data Sheets (MSDS) for proper personal protective equipment before working with chemicals.

- Begin by thoroughly vacuuming or sweeping the **Stamina** surface.
- Use TASKI Ice-It and mix to manufacturers suggested ratio as required for condition of flooring.
- Using a mop, apply mixed floor cleaner diluted with clean water.
- Allow solution to stand for 10-20 minutes but do not let surface dry out before scrubbing.
- Scrub floor using a rotary buffing machine equipped with a purple Scotch Brite® pad or nylon brush.
- Scrub surface in multiple directions and remove wet residue using a wet-dry vacuum.
- Damp mop rinse the surface thoroughly with clean fresh water.
- Repeat cleaning as required removing any remaining sediment or "applied finish" material.
- Insufficient rinsing of the flooring surface after it has been washed can lead to the accumulation of soap residue. Repeat rinsing as required to remove all residues.
- Prohibit foot traffic on flooring until area is dry.

### III. Waxes and Coatings

**Stamina** does not require an applied finish.

- A regular maintenance regimen is all that is needed to care for your rubber flooring.
- An applied finish may alter the surface characteristic of the floor.

### IV. Precautionary Measures

- **Note:** Always wait 72 hours after the installation before performing the initial maintenance of the surface.
- **Note:** DO NOT use a brown or black (coarse) scrubbing pad or it may damage the material and void the warranty.
- **Note:** DO NOT use steel wool or abrasive brushes, acetone, gasoline or turpentine to clean your flooring.
- **Note:** *If any petroleum product is spilled on the flooring, it should be removed immediately to avoid damage to the surface and voiding of warranty.*

### A. Cleaning Products

It is recommended that Stamina be cleaned with TASKI™ Profi®. If you choose to use cleaners other than the TASKI™ Profi® the flooring cleaner is required to have a neutral pH (between 7 and 9). All chemicals used must be solvent-free, phosphate-free and phenol-free. As a general guideline, never select chemicals that have a pH below 2 or above 12.

### B. Cleaning Equipment

Best results come from using a rotary buffing machine. If installed equipment or furniture is preventing access, perform regular cleaning with a wet or microfiber mop. Spot cleaning can be done with a soft nylon bristle deck brush.

**Note: DO NOT allow water to pool under pieces of equipment installed on the flooring. Rust may develop and permanently stain your rubber surface.**

### C. Heavy Equipment

Heavy equipment placed on the flooring should not exceed the flooring's capacity/tolerance. Make sure loads are properly distributed and that the wheel base or legs of the equipment are properly functional and protected with caps to avoid permanently scratching, indenting or gouging the surface of the rubber.

If heavy equipment must be moved across the finished floor, use extra care to avoid damage to the flooring. Plywood or Masonite can be used as a protective layer over the flooring to avoid damaging the surface.

Utility vehicles should be kept off the finished floor surface. Sudden stops and/or spinning wheels can cause tire marks or streaks on the surface. When vehicles must be allowed onto the surface, operators should be cautioned to avoid quick starts and stops. Plywood tracks placed under tires are recommended for crossing over the floor surface when required.

In heavy vehicle (forklift) traffic areas **Stamina** mats may release from the adhesive over time. This is not a product defect. The mat can easily be re-adhered following the same method described in this document.

**Note:** All equipment moving on or off the **Stamina** should be in good mechanical condition to avoid any oil drips or fluid spills.

### D. Food and Beverages

When possible, food and beverages should not be allowed onto the surface of the **Stamina**. Certain types of food and highly colored drinks, if spilled and/or left in place could be difficult to remove and may cause permanent staining to the surface.

### E. Skates and Spikes

**Stamina** is designed to tolerate the use of skates and spikes. It is engineered to provide a safe and slip-resistant floor system, but is not indestructible and requires maintenance and eventual replacement depending on concentration of use.

## Milliken Recommended Carpet Maintenance

1. **Barrier Mats** - Barrier mats should be placed at all entrance ways into the facility and at locations where there is a transition from hard surface flooring onto the carpet if possible. This will help prevent soil from being tracked onto the carpet, improving its appearance and extending its life. Barrier mats should be vacuumed daily and cleaned or replaced frequently depending on the weather and use.
2. **Vacuuming** - Proper vacuuming is one of the most important parts of a total preventive maintenance program. Ineffective equipment or procedures will accelerate the appearance loss of the carpet by allowing dirt and grit to penetrate the pile surface. The accumulation of this soil, especially the smaller respirable particulates, can lead to Indoor Air Quality problems.

The janitorial / housekeeping staff is typically assigned the task of scheduled vacuuming. Vacuuming frequencies should be determined by four factors:

1. Type of carpet installed and appearance expectations.
2. Type and quality of vacuum used.
3. Expected traffic for each area of the facility.
4. Soiling environment of each area of the facility.

A commercial upright vacuum with a beater brush approved under the CRI Seal of Approval Green Label program is recommended for vacuuming of all carpet. For a list of approved vacuums visit [www.carpet-rug.org](http://www.carpet-rug.org). Regular maintenance of vacuums is also essential. Vacuums should be emptied and inspected after every use. Particular attention should be paid to the condition of the brushes. Also, make sure that there is no material obstructing the air-flow channel. Typical vacuuming frequencies are as follows:

- |               |                                                                                                                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High traffic: | Every full work day. All entrances, exits, lobbies, food service areas, main corridors, elevators, funnel and pivot points. The vacuum should make a minimum of three passes in all high traffic areas. |
| Med. traffic: | Every other work day. All secondary corridors, conference rooms, private offices.                                                                                                                       |
| Low traffic:  | Once a week. Minimal use corridors, rarely used conference rooms and training rooms.                                                                                                                    |

3. **Spot Cleaning** - Spots and stains are one of the biggest detractors to high appearance levels. In order to maintain a consistent appearance level between periodic maintenance, it's critical that spots and stains be removed on a daily basis. In most cases, daily spotting is the responsibility of the janitorial or housekeeping staff. Milliken recommends the use of a Capture® Spot Kit for treating most spots, following these procedures:

- spot cleaning continued -

1. Remove as much excess material as possible prior to spot removal. Blot up liquids with a clean white terry cloth, vacuum up soil and gently scrap up encrusted material.
2. Spray Capture Pre-mist onto a clean, white terry towel and work in gently. Do not scrub. Blot, absorbing as much of the spot into the towel as possible. Work from the outside edge of the spot into the center to prevent spreading.
3. Apply Capture dry carpet cleaner to the spot. Gently agitate with a brush, wait 30 mins. and vacuum.

Note: Milliken does not recommend using any spotting agents containing solvents as they can leave residue that contributes to resoiling and can possibly damage the carpet.

#### 4. Regular Cleaning

- Regular cleaning of the carpet is required to remove ground in soil and soil that is bonded to the fiber. Milliken recommends hiring a Millicare Floor and Textile Care® specialist for this purpose.
- Milliken does not recommend any cleaning system consisting of detergent or solvent-based products. Our studies have revealed that excessive re-soiling occurs from residues left on the carpet fibers when using these systems. In addition to excessive re-soiling problems, we have experienced texture damage to fibers, de-twisting of yarns, as well as matting and crushing of the carpet pile from surface cleaning procedures such as spin pad cleaning.
- Where customers choose not to use MilliCare or a MilliCare specialist is not available in the area hot water extraction is an acceptable alternative using the following procedure.
  - o An appropriate pre-mist should be sprayed and brushed thoroughly into the carpet using a dual cylindrical brush type scrubber and allowed to work for the recommended dwell time. This should be followed by flushing with the Hot Water Extractor.
- For restorative cleaning where detergent residues were left in the carpet a mild acid (5.0 pH) type pre-mist mixed per label directions with water should be used.
  - o For greasy, oily soil conditions, a higher pH product (8.5 or 9.0 pH) mixed with water per label directions should be used as the pre-mist.
  - o The Hot Water Extractor should be filled with plain hot tap water containing 5.0 oz. of acid rinse/gallon in the tank at a temperature not to exceed 140° F. This procedure should remove as much detergent residue, soil and/or debris as possible.
  - o The carpet should be allowed to fully dry using blowers and fans and be examined for wickback. (Wickback is a condition where soil moves from the lower part of the fiber to the tips as the carpet dries). If wickback is evident, repeat the pre-mist extraction process and again allow the carpet to fully dry. Re-check for wickback and repeat above procedure until there is no evidence of wickback.
  - o Once restored, the carpet should then be thoroughly vacuumed, and spot cleaned on a regular frequency in accordance with Milliken Approved Carpet Maintenance Procedures.

Milliken recommends the use of cleaning products and hot water extraction equipment that have been approved by the Carpet and Rug Institute Seal of Approval. For a list of approved products and equipment visit [www.carpet-rug.org](http://www.carpet-rug.org).



# Milliken Commercial Modular Carpet Warranties

These warranties are subject to the Warranty Terms and Conditions provided at the end of this document and apply only to commercial modular carpet products sold by Milliken. Details about the test methods supporting these warranties are available upon request.

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## WARRANTIES APPLICABLE TO ALL MILLIKEN COMMERCIAL MODULAR PRODUCTS:

(See additional warranties under Specialty Product Limited Warranties below.)

### FACE FIBER WEAR

Milliken warrants that the carpet will lose no more than ten percent (10%) of its face fiber by weight during the Lifetime of the carpet. If the carpet is installed on stairs, this warranty will be limited to five years. A claim against this warranty requires the submittal of a sample (one square yard minimum) of unused attic stock and a like-size piece of carpet from the area that is believed to be worn beyond the terms of this warranty. These samples will be submitted to an independent testing lab for verification.

### STAINING/SOILING RESISTANCE (StainSmart®)

StainSmart provides lifetime resistance for your carpet against penetrating stains and soil.

### COLOR PATTERN PERMANENCY

Milliken warrants that the carpet will exhibit no pattern loss during the Lifetime of the carpet. If the carpet is installed on stairs this warranty will be limited to five years.

### DELAMINATION OF BACKING

Milliken warrants that the backing of the carpet will not delaminate during the Lifetime of the carpet.

### EDGE RAVEL

Milliken warrants that the carpet will exhibit no edge ravel or “zippering” during the Lifetime of the carpet.

### TUFT BIND

Milliken warrants that the carpet will maintain its tuft bind integrity during the Lifetime of the carpet.

### FLOOR COMPATIBILITY

Milliken warrants that the carpet will not cause a reactivation of old adhesives due to plasticizer migration during the Lifetime of the carpet.

### ANTISTATIC

Milliken warrants that the carpet will not generate static shock greater than 3.5 kilovolts during the Lifetime of the carpet.

### FLAMMABILITY

Milliken warrants that at the time of shipment the carpet will comply with the applicable provisions of the Federal Flammable Fabrics Act for carpet used as floor covering in commercial installations. Milliken does not represent that this or any other carpet fabric will not burn or generate smoke under actual fire conditions.

### CUSHION RESILIENCY

Milliken warrants that the modular carpet with WellBAC™ cushion will retain 90% of its cushion resilience during the Lifetime of the modular carpet.



## **DIMENSIONAL STABILITY**

Milliken warrants that the modular carpet will maintain its dimensional stability during the Lifetime of the modular carpet.

## **FLOOR RELEASE**

Milliken warrants that the initial installation of the modular carpet will release from the floor during the Lifetime of the modular carpet.

## **TOP DOWN MOISTURE RESISTANCE**

Milliken warrants that the modular carpet will resist moisture penetration during the Lifetime of the modular carpet. This warranty does not include moisture penetration at the seams of modular carpet.

## **SITE RELATED SOLUTIONS**

Additional warranties may apply when Milliken Non-Reactive Standard or Milliken Mosaic Moisture XT Adhesive is used with Milliken Modular Carpet Tile. Click on one of the links below to learn more:

[Milliken Non-Reactive Standard Adhesive – Warranty](#)

[Milliken Mosaic Moisture XT Spray Adhesive - Warranty](#)

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## **SPECIALTY PRODUCT LIMITED WARRANTIES:**

### **TRACTIONBACK® MODULAR CARPET**

Milliken warrants that at the time of shipment, modular carpet with TractionBack will maintain sufficient bond strength to hold the modular carpet in place under normal foot traffic use for ten (10) years.

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## **WARRANTY TERMS AND CONDITIONS:**

The following terms and conditions (the 'Warranty Terms and Conditions') apply to all warranties made by Milliken & Company ("Milliken") for commercial carpet sold by Milliken Design, Inc. These Warranty Terms and Conditions and related warranties do not apply to non-commercial installations.

The warranties provided herein are in lieu of any and all other warranties, express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose. These warranties are subject to the limitations and exclusions set forth in these Warranty Terms and Conditions and in the individual warranties. These warranties only apply to carpet installed in accordance with Milliken's then current published instructions for installation and orientation (which are specific for each carpet product), installed in an indoor commercial environment and properly maintained in accordance with current, published Milliken specifications. These warranties shall not apply to carpet which has been placed in storage for extended periods, exposed to temperature extremes, or bent or deformed. Additionally, these warranties do not cover damage arising from any use that is different from the normal, intended use of carpet, including, but not limited to, (i) damage caused by chlorinated or any other solvent-based cleaning agents; (ii) damage caused by exposure to substances or contaminants which degrade or destroy color in carpet; (iii) damage caused by use of inappropriate maintenance methods, (iv) damage caused by sharp objects and the like; (v) damage caused by athletic footwear containing metal spikes, cleats, blades and the like; (vi) damage caused by the installer or the workmanship of the installer (if not installed by Milliken or Milliken Design, Inc.); and (vii) damage arising from factors outside the control of Milliken, including, but not limited to, the condition of the sub-floor, hydrostatic pressure, and moisture from broken pipes.

Milliken is not responsible for any change or modification to the carpet which might occur after it leaves Milliken's premises, including, but not limited to, the presence of chemicals or materials which were not specified as



components of the carpet. In no event shall Milliken be liable for incidental or consequential damages, whether in contract, warranty, negligence, strict liability, or otherwise. Service properties such as pile shading, pile crushing, being used as a traffic lane, wear or abrasion and other similar properties are not defects and such properties are not warranted.

Warranty periods, whatever the length and wherever referenced in this document, begin at the date of the applicable invoice.

Milliken recommends and endorses the **MilliCare® Textile and Carpet Care** service network as the best way to maintain and prolong the life of Milliken Commercial Carpet.

Purchaser's exclusive remedy for any and all losses or damages resulting from defective carpet shall be the repair or replacement of the carpet in the affected area, as determined by Milliken in its sole discretion. The selected remedy shall reflect the previous usage of the carpet and may take the form of credit toward future purchases. This shall be the purchaser's sole remedy. If replacement is chosen by Milliken as the appropriate remedy, Milliken will pay the reasonable costs for such replacement. Replacement must be performed by Milliken or a Milliken-approved vendor. Milliken's obligation hereunder shall not include payment of any indirect costs or incidental or consequential damages arising from replacement or repair. Purchaser must provide reasonable cooperation to facilitate Milliken's repair or replacement in the affected area. If any modular carpet is replaced as part of the remedy, the replacement will be made with a current, comparable Milliken product.

Warranty coverage is limited to the original purchaser of the carpet (which includes anyone purchasing carpet through a dealer) and is not transferable. Milliken requires the original sales receipt or other sufficient documentation, as determined by Milliken, as proof of warranty coverage.

**"Lifetime"** is defined as the period of time that the original purchaser of the carpet chooses to keep the carpet on the floor at the original installation site. Lifetime warranties only apply to carpet invoiced after February 1, 2005. For carpet invoiced prior to February 1, 2005 the warranties then in effect apply.

#### **OBLIGATIONS OF PURCHASER-OWNER:**

1. Purchaser/Owner must submit notice of all claims under this warranty within a reasonable period of time after the discovery of the alleged defect giving rise to the claim and within the warranty period.
2. Claims must be submitted in writing to Milliken Quality Assurance at [carpetclaims@milliken.com](mailto:carpetclaims@milliken.com) or to a Milliken Quality Assurance representative by phone at 1-9800-528-8453 (Option 2 at prompt for Quality Assurance).
3. For further information about Milliken warranties, please contact your Milliken Sales Representative or Milliken Quality Assurance at: Phone number: 1-800-528-8453 (Option 2 @ prompt for Quality Assurance); E-mail: [carpetclaims@milliken.com](mailto:carpetclaims@milliken.com); or Toll Free Fax Number: 1866-503-6815.

#### **OBLIGATIONS OF MILLIKEN:**

Milliken will, within ten (10) business days of receipt of notice made pursuant to Section 2 above, designate a representative to promptly respond and arrange an inspection of the carpet.





## OUR COMMITMENT TO NEW CONSTRUCTION AND COMMERCIAL PROJECTS

*Provided all manufacturer guidelines were followed,  
Renovation Systems includes RELAX: 1 Year Warranty  
on all installations, including:*

- Carpet Re-stretches
- Seam Repairs
- Re-securing transitions/re-attaching carpet to transitions
- Re-securing carpet base and vinyl cove base to walls
- Curling edges on carpet tile and LVP
- Weld labor for hard surface sheet goods



# AIA<sup>®</sup> Document G734<sup>™</sup> – 2019

## Certificate of Substantial Completion Construction Manager as Adviser Edition

**PROJECT:** *(name and address)*

City of Cottage Grove - Glacial Valley  
Park Building  
9900 Ravine Pkwy S  
Cottage Grove, MN 55016

**CONTRACT INFORMATION:**

Contract For: Work Scope 09-B:  
Tile and Work Scope 09-D:  
Flooring

**CERTIFICATE INFORMATION:**

Certificate Number: 222064/2210103

**OWNER:** *(name and address)*

City of Cottage Grove  
12800 Ravine Parkway South  
Cottage Grove, MN 55016

Date: January 6, 2023

**ARCHITECT:** *(name and address)*

Wold Architects and Engineers  
332 Minnesota Street, Suite W2000  
Saint Paul, MN 55101

Date: January 19, 2024

**CONSTRUCTION MANAGER:** *(name and address)*

Kraus-Anderson Construction Company  
501 South Eighth Street  
Minneapolis, MN 55404

**CONTRACTOR(S):**

*(Enter names and addresses for all Contractors)*

Renovation Systems, Inc.  
2735 Cheshire Lane North  
Plymouth, MN 55447

The Work identified below has been reviewed and found, to the Construction Manager's and Architect's best knowledge, information and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work of all of the Contractors, or designated portion thereof, is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project, or portion thereof designated below, is the date established by this Certificate

*(Identify the Work of all of the Contractors, or portion thereof, that is substantially complete.)*

Project in its entirety per plans, specifications, addendums, change orders, etc

For all Contractors, the date of Substantial Completion of the Project, or portion thereof, is:

*(Insert the date of Substantial Completion for all Contractors of the Work described above.)*

November 17, 2023.

Kraus-Anderson  
Construction Company  
**CONSTRUCTION MANAGER**  
*(Firm Name)*

DocuSigned by:

*Dan Kjellberg*

SIGNATURE

Dan Kjellberg, Project  
Manager

**PRINTED NAME AND TITLE**

1/22/2024 | 2:38 PM CST

**DATE**

Wold Architects and  
Engineers  
**ARCHITECT** *(Firm Name)*

DocuSigned by:

*Jacob Wollensak*

SIGNATURE

Jacob Wollensak,  
Associate

**PRINTED NAME AND TITLE**

1/22/2024 | 2:57 PM CST

**DATE**

**WARRANTIES**

The date of Substantial Completion of the Project, or portion designated above, is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

*(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)*

November 17, 2023

**WORK TO BE COMPLETED OR CORRECTED**

A list of items to be completed or corrected by each of the Contractors, including a cost estimate, is attached hereto or transmitted as agreed upon by the parties, and identified as follows:

*(Attach a list of items to be completed or corrected by each of the Contractors and provide an identification of each list.)*

N/A

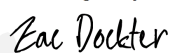


The failure to include any items on such list does not alter the responsibility of a Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached lists will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. Each Contractor will complete or correct the Work on the appropriate list of items attached hereto within (30) days from the above date of Substantial Completion.

As of the date of Substantial Completion, the Owner shall be responsible for security, maintenance, heat, utilities, damage to the Work, and insurance, except as noted below:  
(Identify any responsibilities that are assigned to the Contractors.)  
N/A

(Note: Owner’s and Contractor’s legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

|                                                           |                                                                                                                               |                                             |                         |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------|
| Renovation Systems, Inc.<br><b>CONTRACTOR</b> (Firm Name) | <div>DocuSigned by:<br/><br/>SIGNATURE</div> | Adam Mueller                                | 1/22/2024   2:35 PM CST |
|                                                           |                                                                                                                               | PRINTED NAME AND TITLE                      | DATE                    |
| City of Cottage Grove<br><b>OWNER</b> (Firm Name)         | <div>DocuSigned by:<br/><br/>SIGNATURE</div> | Zac Dockter, Parks &<br>Recreation Director | 1/25/2024   7:25 AM CST |
|                                                           |                                                                                                                               | PRINTED NAME AND TITLE                      | DATE                    |



# AIA® Document G706® – 1994

## Contractor's Affidavit of Payment of Debts and Claims

**PROJECT:** (Name and address)  
City of Cottage Grove - Glacial  
Valley Park Building  
9900 Ravine Pkwy S  
Cottage Grove, MN 55016

**ARCHITECT'S PROJECT NUMBER:**  
222064

OWNER: ☒  
ARCHITECT: ☒  
CONTRACTOR: ☒  
SURETY: ☐  
OTHER: ☐

**CONTRACT FOR:** Work Scope 09-B: Tile  
and Work Scope 09-D: Flooring

**CONTRACT DATED:** January 6, 2023

**TO OWNER:** (Name and address)  
City of Cottage Grove  
12800 Ravine Parkway South  
Cottage Grove, MN 55016

**STATE OF:** Minnesota  
**COUNTY OF:**

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

### EXCEPTIONS:

### SUPPORTING DOCUMENTS ATTACHED HERETO:

- Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose
- Indicate Attachment ☐ Yes ☒ No

**CONTRACTOR:** (Name and address)  
Renovation Systems, Inc.  
2735 Cheshire Lane North  
Plymouth, MN 55447

BY:

(Signature of authorized representative)

Robert Villaume, Accountant  
(Printed name and title)

The following supporting documents should be attached hereto if required by the Owner:

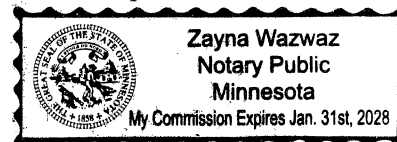
- Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
- Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
- Contractor's Affidavit of Release of Liens (AIA Document G706A).

Subscribed and sworn to before me on this date: 03-15-2024

Notary Public:

My Commission Expires:

01-31-2028



# AIA® Document G706®A – 1994

## Contractor's Affidavit of Release of Liens

|                                                                                                                                                       |                                                                                                                       |                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PROJECT:</b> <i>(Name and address)</i><br>City of Cottage Grove - Glacial Valley<br>Park Building<br>9900 Ravine Pkwy S<br>Cottage Grove, MN 55016 | <b>ARCHITECT'S PROJECT NUMBER:</b><br>222064                                                                          | <b>OWNER:</b> <input checked="" type="checkbox"/><br><b>ARCHITECT:</b> <input checked="" type="checkbox"/><br><b>CONTRACTOR:</b> <input checked="" type="checkbox"/><br><b>SURETY:</b> <input type="checkbox"/><br><b>OTHER:</b> <input type="checkbox"/> |
| <b>TO OWNER:</b> <i>(Name and address)</i><br>City of Cottage Grove<br>12800 Ravine Parkway South<br>Cottage Grove, MN 55016                          | <b>CONTRACT FOR:</b> Work Scope 09-B:<br>Tile and Work Scope 09-D: Flooring<br><b>CONTRACT DATED:</b> January 6, 2023 |                                                                                                                                                                                                                                                           |

**STATE OF:** Minnesota  
**COUNTY OF:**

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

### EXCEPTIONS:

#### SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

#### CONTRACTOR: *(Name and address)*

Renovation Systems, Inc.  
2735 Cheshire Lane North  
Plymouth, MN 55447

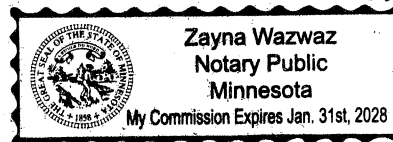
BY:

  
*(Signature of authorized representative)*  
Robert Villanue, Accountant  
*(Printed name and title)*

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires 01-31-2028



Bond No. HGMW-25-A273-0035

CONSENT OF  
SURETY COMPANY  
TO FINAL PAYMENT  
AIA DOCUMENT G707

Owner  
Architect  
Contractor  
Surety  
Other

PROJECT: City of Cottage Grove - Glacial Valley Park Building, 9900 Ravine Pkwy S,  
(name, address) Cottage Grove, MN 55016

TO: (Owner)

City of Cottage Grove  
7516 80th Street South  
Cottage Grove, MN 55016

ARCHITECT'S PROJECT NO:

CONTRACT FOR: Construction

CONTRACT DATE: 1/6/2023

CONTRACTOR:

Renovation Systems, Inc.  
2735 Cheshire Ln N.  
Plymouth, MN 55447

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the  
Hudson Insurance Company  
100 William Street  
New York, New York 10038

,SURETY COMPANY

on bond of (here insert name and address of Contractor)

Renovation Systems, Inc.  
2735 Cheshire Ln N.  
Plymouth, Minnesota 55447

,CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not  
relieve the Surety Company of any of its obligations to (here insert name and address of Owner)

City of Cottage Grove  
7516 80th Street South  
Cottage Grove, Minnesota 55016

,OWNER,

as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,

the Surety Company has hereunto set its hand this

5th

day of

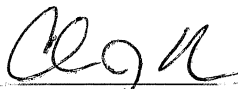
April,

2024

Surety Company  
Hudson Insurance Company

  
Signature of Authorized Representative

Attest:  
(Seal):



Melissa M. Nordin - Attorney-In-Fact  
Title

NOTE: This form is to be used as a companion document to AIA DOCUMENT G706, CONTRACTOR'S AFFIDAVIT OF PAYMENT OF  
DEBTS AND CLAIMS, Current Edition

AIA DOCUMENT G707-CONSENT OF SURETY COMPANY TO FINAL PAYMENT-APRIL 1970 EDITION-AIA®  
PAGE

ONE

©1970-THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK, AVE., NW, WASHINGTON, D.C. 20006



## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That HUDSON INSURANCE COMPANY, a corporation of the State of Delaware, with offices at 100 William Street, New York, New York, 10038, has made, constituted and appointed, and by these presents, does make, constitute and appoint

**Jeff Settem, Alan Starks, Name Alemdar, Melissa Nordin, Tyler Gerads**

**of the State of Minnesota**

its true and lawful Attorney(s)-in-Fact, at New York City in the State of New York, each of them alone to have full power to act without the other or others, to make, execute and deliver on its behalf, as Surety, bid bonds for any and all purposes.

Such bid bonds, when duly executed by said Attorney(s)-in-Fact, shall be binding upon said Company as fully and to the same extent as if signed by the President of said Company under its corporate seal attested by its Secretary.

In Witness Whereof, HUDSON INSURANCE COMPANY has caused these presents to be of its Senior Vice President thereunto duly authorized, on this 5th day of March, 20 23 at New York, New York.



Attest.....

**Dina Daskalakis**, Corporate Secretary

STATE OF NEW YORK  
COUNTY OF NEW YORK SS.

HUDSON INSURANCE COMPANY

By.....

**Michael P. Cifone**, Senior Vice President

On the 5th day of March, 20 23 before me personally came Michael P. Cifone to me known, who being by me duly sworn did depose and say that he is a Senior Vice President of HUDSON INSURANCE COMPANY, the Company described herein and which executed the above instrument, that he knows the seal of said Company, that the seal affixed to said instrument is the corporate seal of said Company, that it was so affixed by order of the Board of Directors of said Company, and that he signed his name thereto by like order.

(Notarial Seal)



ANN M. MURPHY  
Notary Public, State of New York  
No. 01MU6067553  
Qualified in Nassau County  
Commission Expires December 10, 2025

## CERTIFICATION

STATE OF NEW YORK  
COUNTY OF NEW YORK SS.

The undersigned **Dina Daskalakis** hereby certifies:

THAT the original resolution, of which the following is a true and correct copy, was duly adopted by unanimous written consent of the Board of Directors of Hudson Insurance Company dated July 27<sup>th</sup>, 2007, and has not since been revoked, amended or modified:

"RESOLVED, that the President, the Executive Vice Presidents, the Senior Vice Presidents and the Vice Presidents shall have the authority and discretion, to appoint such agent or agents, or attorney or attorneys-in-fact, for the purpose of carrying on this Company's surety business, and to empower such agent or agents, or attorney or attorneys-in-fact, to execute and deliver, under this Company's seal or otherwise, bonds obligations, and recognizances, whether made by this Company as surety thereon or otherwise, indemnity contracts, contracts and certificates, and any and all other contracts and undertakings made in the course of this Company's surety business, and renewals, extensions, agreements, waivers, consents or stipulations regarding undertakings so made; and

FURTHER RESOVLED, that the signature of any such Officer of the Company and the Company's seal may be affixed by facsimile to any power of attorney or certification given for the execution of any bond, undertaking, recognizance, contract of indemnity or other written obligation in the nature thereof or related thereto, such signature and seal when so used whether heretofore or hereafter, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed."

THAT the above and foregoing is a full, true and correct copy of Power of Attorney issued by said Company, and of the whole of the original and that the said Power of Attorney is still in full force and effect and has not been revoked, and furthermore that the Resolution of the Board of Directors, set forth in the said Power of Attorney is now in force.



Witness the hand of the undersigned and the seal of said Company this 5th day of April, 20 24.

By.....

**Dina Daskalakis**, Corporate Secretary



## Contractor Affidavit

This Contractor Affidavit must be certified by the Minnesota Department of Revenue before the state of Minnesota or any of its subdivisions can make final payment to contractors. For more detailed information, see the instructions on the back of this form.

Please type or print clearly. This information will be used for returning the completed form.

|                                                |                    |                          |                                             |                                                |
|------------------------------------------------|--------------------|--------------------------|---------------------------------------------|------------------------------------------------|
| Company name<br><b>Renovation Systems, LLC</b> |                    |                          | Daytime phone<br><b>763-551-3500</b>        | Minnesota tax ID number<br><b>92-1714340</b>   |
| Address<br><b>2735 Cheshire Lane North</b>     |                    |                          | Total contract amount<br><b>\$ 72630.57</b> | Month/year work began<br><b>October, 2023`</b> |
| City<br><b>Plymouth</b>                        | State<br><b>MN</b> | ZIP code<br><b>55447</b> | Amount still due<br><b>\$ 3631.53</b>       | Month/year work ended<br><b>January, 2024</b>  |

|                                               |                                                                                                      |                              |                    |                          |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------|--------------------|--------------------------|
| Project number<br><b>WS 09-B / 09-D</b>       | Project location<br><b>Glacial Valley Park Building, 9900 Ravine PKWY S, Cottage Grove, MN 55016</b> |                              |                    |                          |
| Project owner<br><b>City of Cottage Grove</b> | Address<br><b>12800 Ravine Parkway South</b>                                                         | City<br><b>Cottage Grove</b> | State<br><b>MN</b> | ZIP code<br><b>55016</b> |

Did you have employees work on this project? ☐ Yes ☒ No. If no, who did the work? **Farley Flooring, LLC**

Check the box that describes your involvement in the project and fill in all information requested.

- ☐ **Sole contractor**
- ☐ **Subcontractor**

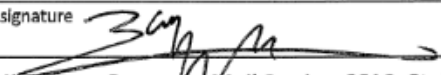
Name of contractor who hired you

Address

- ☒ **Prime contractor**—If you subcontracted out any work on this project, all of your subcontractors must submit their own Contractor Affidavits and have them certified by the Department of Revenue *before* you can submit your Contractor Affidavit. For each subcontractor you had, fill in the information below and attach a copy of each subcontractor's certified Contractor Affidavit. If you need more space, attach a separate sheet.

|                                              |                                                          |                                       |
|----------------------------------------------|----------------------------------------------------------|---------------------------------------|
| Business name<br><b>Farley Flooring, LLC</b> | Address<br><b>403 Chestnut Lane, Faribault, MN 55021</b> | Owner/Officer<br><b>Nathan Farley</b> |
|----------------------------------------------|----------------------------------------------------------|---------------------------------------|

*I declare that all information I have filled in on this form is true and complete to the best of my knowledge and belief. I authorize the Department of Revenue to disclose pertinent information relating to this project, including sending copies of this form, to the prime contractor if I am a subcontractor, and to any subcontractors if I am a prime contractor, and to the contracting agency.*

Contractor's signature  Title **AR Specialist** Date **5-24-2024**

**Mail to:** Minnesota Revenue, Mail Station 6610, St. Paul, MN 55146-6610  
**Phone:** 651-282-9999 or 1-800-657-3594

### Certificate of Compliance

Based on records of the Minnesota Department of Revenue, I certify that the contractor who has signed this Contractor Affidavit has fulfilled all the requirements of Minnesota Statutes 290.92 and 270C.66 concerning the withholding of Minnesota income tax from wages paid to employees relating to contract services with the state of Minnesota and/or its subdivisions.

Department of Revenue approval

Date



May 3, 2024

ID: XX-XXX5504  
Letter ID: L1563158624

#BWBDMR  
#0000 0156 3158 6243#  
FARLEY FLOORING LLC  
403 CHESTNUT LN  
FARIBAULT MN 55021-8928

### **Certificate of Compliance for Form IC134, Contractor Affidavit**

The Minnesota Department of Revenue certifies that FARLEY FLOORING LLC fulfilled their Minnesota Withholding Tax requirements for the following project:

**Project Location:** GLACIAL VALLEY PARK BLDG  
**Project Owner:** CITY OF COTTAGE GROVE  
**Project Number:** WS 09-B / 09-D  
**Project Begin Date:** October, 2023  
**Project End Date:** January, 2024

#### **What do I do with this certificate?**

**If you are a contractor,** provide this certificate to the governmental unit or prime contractor who hired you for the project.

**If you are the project owner,** verify that the project location, owner, begin date, and end date are correct. If not, have the contractor resubmit Form IC134 to us with the correct information.

#### **What if I have questions?**

For details on Contractor Affidavit requirements, go to [www.revenue.state.mn.us](http://www.revenue.state.mn.us) and type **Withholding Fact Sheet 13** into the Search box. You may also contact us.

Income Tax and Withholding Division  
Phone: 651-282-9999 or 1-800-657-3594 (toll-free)  
Email: [withholding.tax@state.mn.us](mailto:withholding.tax@state.mn.us)

Daniel Getschel, Director  
Income Tax and Withholding Division



# City Council Action Request

7.I.

**Meeting Date** 6/26/2024

**Department** Parks and Recreation

**Agenda Category** Action Item

**Title** Local Option Sales Tax Referendum Ballot Question

**Staff Recommendation** Adopt resolution 2024-093 approving referendum questions on the November 5, 2024 ballot to impose a local option sales tax for the betterment of Hamlet Park, Mississippi Dunes Park and River Oaks Golf Course and Event Center.

**Budget Implication**

**Attachments**

|    |                                |
|----|--------------------------------|
| 1. | Memo-Resolution Question       |
| 2. | Resolution-Referendum Question |



**To:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**From:** Zac Dockter, Parks and Recreation Director

**Date:** June 11, 2024

**Subject:** Local Option Sales Tax Referendum Ballot Question Resolution

---

### **Introduction/Background**

At the June 5 City Council Workshop, staff presented a draft ballot for the proposed local option sales tax referendum. That question was developed and reviewed by staff, local option sales tax communication consultants, the City attorney and the City bonding attorney. The ballot question must be approved by resolution at a regular City Council meeting.

### **Staff Recommendation**

Adopt resolution 2024-093 approving referendum questions on the November 5, 2024 ballot to impose a local option sales tax for the betterment of Hamlet Park, Mississippi Dunes Park and River Oaks Golf Course and Event Center.

**CITY OF COTTAGE GROVE  
CITY COUNCIL  
RESOLUTION NO 2024-093**

**RESOLUTION APPROVING REFERENDUM QUESTIONS ON THE  
NOVEMBER 5, 2024 BALLOT TO IMPOSE A LOCAL OPTION SALES TAX  
FOR THE BETTERMENT OF HAMLET PARK, MISSISSIPPI DUNES PARK  
AND RIVER OAKS GOLF COURSE AND EVENT CENTER**

WHEREAS, Laws 2023, Regular Session, Chapter 64, Article 10, authorized the City of Cottage Grove to impose a local sales and use tax but only if approved by the voters at a general election; and

WHEREAS, if approved, the sales and use tax revenue will be used for specific projects for the betterment of Hamlet Park, Mississippi Dunes Park and River Oaks Golf Course and Event Center;

WHEREAS, in accordance with state law, each project must be voted on separately;

WHEREAS, the project estimates for each project are as follows:

Hamlet Park - \$17M

Mississippi Dunes Park - \$13M

River Oaks Golf Course and Event Center - \$6M

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, that the City will add the following referendum questions to the November 5, 2024 general election ballot:

“Cottage Grove residents are being asked to authorize the City of Cottage Grove to add a one-half of one percent (0.5%) sales and use tax to fund three separate parks and recreation projects that would protect, enhance, and restore natural habitat and upgrade and improve health, wellness and recreational activities. If voters approve one, two, or all three questions, the City is only authorized to add a single one-half of one percent (0.5%) sales and use tax which will expire when enough sales tax revenue has been raised to pay for the costs of the voter-approved projects or 25 years, whichever comes first.”

**Q1: Sales and Use Tax for Improvements to Hamlet Park**

*Shall the City of Cottage Grove be authorized to impose a sales and use tax to improve Hamlet Park until up to \$17,000,000 plus an amount equal to debt service and the costs of the issuance of any bonds is raised? By voting "yes" on this question, you are voting to increase the sales tax in Cottage Grove to pay for the construction of improvements, which may include a new building, play*



**CITY OF COTTAGE GROVE  
CITY COUNCIL  
RESOLUTION NO 2024-093**

*equipment, skateboard park, athletic facilities, splash pad, and related updates that provide arts, wellness and recreational activities.*

**Q2: Sales and Use Tax for Development of Mississippi Dunes Park**

*Shall the City of Cottage Grove be authorized to impose a sales and use tax for the construction of improvements to the Mississippi Dunes Park Project until up to \$13,000,000 plus an amount equal to debt service and the costs of the issuance of any bonds is raised? By voting "yes" on this question, you are voting to increase the sales tax in Cottage Grove to pay for improvements to this approximately 33.3-acre site, which may include a year-round, four-season interpretive center, habitat restoration, a kayak, canoe, and small boat launch, outdoor educational spaces, walking and hiking trails, and a nature-themed playground.*

**Q3: Sales and Use Tax for Improvements to River Oaks Golf Course and Event Center**

*Shall the City of Cottage Grove be authorized to impose a sales and use tax to improve the River Oaks Golf Course and Event Center until up to \$6,000,000 plus an amount equal to debt service and the costs of the issuance of any bonds is raised? By voting "yes" on this question, you are voting to increase the sales tax in Cottage Grove to pay for the construction of improvements, which may include premier pickleball courts, indoor multi-sports simulators, a winter mountain biking course, upgrades to the building and patio, and a nine-hole putting green course.*

Passed this 26th day of June 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk



# City Council Action Request

## 7.J.

|                      |                                                                                                                                                                                                                                           |    |                                                      |    |                                                                   |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------------------------|----|-------------------------------------------------------------------|
| Meeting Date         | 6/26/2024                                                                                                                                                                                                                                 |    |                                                      |    |                                                                   |
| Department           | Public Works                                                                                                                                                                                                                              |    |                                                      |    |                                                                   |
| Agenda Category      | Action Item                                                                                                                                                                                                                               |    |                                                      |    |                                                                   |
| Title                | DuPont PFAS Settlement                                                                                                                                                                                                                    |    |                                                      |    |                                                                   |
| Staff Recommendation | Adopt resolution 2024-089 authorizing submission of the claim form for the DuPont AFFF Class Action Settlement and authorizing the City Administrator or her designee to sign all documents necessary to complete the claim form process. |    |                                                      |    |                                                                   |
| Budget Implication   | N/A                                                                                                                                                                                                                                       |    |                                                      |    |                                                                   |
| Attachments          | <table><tr><td>1.</td><td>1_AFFF PFAS Settlement Claim Authorization_2024-6-20</td></tr><tr><td>2.</td><td>2_Resolution DuPont Settlement claim form authorization 6-26-2024</td></tr></table>                                            | 1. | 1_AFFF PFAS Settlement Claim Authorization_2024-6-20 | 2. | 2_Resolution DuPont Settlement claim form authorization 6-26-2024 |
| 1.                   | 1_AFFF PFAS Settlement Claim Authorization_2024-6-20                                                                                                                                                                                      |    |                                                      |    |                                                                   |
| 2.                   | 2_Resolution DuPont Settlement claim form authorization 6-26-2024                                                                                                                                                                         |    |                                                      |    |                                                                   |



**To:** Honorable Mayor and City Council  
Jennifer Levitt, PE, City Administrator

**From:** Ryan Burfeind, PE, Public Works Director

**Date:** June 20, 2024

**Re:** AFFF PFAS Settlement – Claim Forms Signature Authority

---

## **Background**

In 2023, nationwide class action settlements were finalized with 3M and DuPont related to PFAS in Aqueous Film-Form Foam (AFFF). Due to the PFAS contamination in the City water, Cottage Grove was included as an eligible Public Water System (PWS) to submit a claim in the DuPont AFFF settlement. All communities that are included in the Minnesota 3M PFAS Settlement were specifically written out of the 3M AFFF settlement. These class action settlements were discussed with the City Council at a closed workshop on November 15, 2023.

## **Discussion**

Cottage Grove is listed as a Phase One PWS, as we had detection of PFAS in our wells prior to June 30, 2023. All claim forms need to be submitted by July 12, 2024. City staff, in coordination with the City Attorney, are preparing the necessary claim form for the City of Cottage Grove. City staff will work through the required steps to submit the documents. There has not been a specific date set for when claims will be finalized. While the entire settlement amount is \$1,185,000,000, the final settlement amounts will depend on how many claims are submitted.

## **Recommendation**

It is recommended that the City Council adopt resolution 2024-089 authorizing submission of the claim form for the DuPont AFFF Class Action Settlement and authorizing the City Administrator or her designee to sign all documents necessary to complete the claim form process.

CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-089

**RESOLUTION AUTHORIZING SUBMISSION OF CLAIM FORM FOR THE  
AQUEOUS FILM-FORMING FOAMS PRODUCTS LIABILITY LITIGATION  
(MDL 2873) (DUPONT) PUBLIC WATER SYSTEMS SETTLEMENT**

WHEREAS, the City of Cottage Grove's ("City") public water supply wells contain PFAS contamination; and,

WHEREAS, a class action lawsuit, "Aqueous Film-Forming Foams Products Liability Lawsuit (MDL 2873) (DuPont)" ("DuPont Class Action") has resulted in a settlement agreement with several producers of PFAS chemicals; and,

WHEREAS, the City qualifies to participate in the DuPont Class Action and receive compensation; and,

WHEREAS, the City must submit a claim form in order to participate in the DuPont Class Action.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota as follows:

1. The City Council approves the submission of a claim form to participate in the Aqueous Film-Forming Foams Products Liability Litigation (MDL 2873) (DuPont) Public Water Systems Settlement.
2. The City Administrator or her designee, is authorized to sign all documents necessary to complete the claim form process.

Passed this 26<sup>th</sup> day of June 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk



# City Council Action Request

## 7.K.

**Meeting Date** 6/26/2024

**Department** Public Works

**Agenda Category** Action Item

**Title** Goodview Ave Water Connections Quote Award

**Staff Recommendation** Adopt resolution 2024-098 awarding the 2024 Goodview Avenue Water Service Installation Project to Capra's Utilities Inc. in the amount of \$123,025.00 and approve the contract with Capra's Utilities Inc.

**Budget Implication** \$123,025.00 from 3M Settlement Funds

**Attachments**

|    |                                                                     |
|----|---------------------------------------------------------------------|
| 1. | 1 2024 Goodview Ave Water Services Quote Award Letter               |
| 2. | 2 2024 Goodview Ave Water Services Quote Award Resolution 6-26-2024 |
| 3. | 3 2024 Goodview Ave Water Services Contract Agreement               |
| 4. | 4 Capras Utilities Quote                                            |
| 5. | 5 Miller Excavating Quote                                           |





Building a Better World  
for All of Us®

June 18, 2024

RE: Cottage Grove, MN  
2024 Goodview Avenue Water Services  
SEH No. COTTG 177864

Ryan Burfeind, Public Works Director  
City of Cottage Grove  
12800 Ravine Parkway S.  
Cottage Grove, MN 55016

Dear Mr. Burfeind:

Please find the enclosed quotes for the 2024 Goodview Avenue Water Service Installation project. This project consists of installing eight new water services to residential homes in the Goodview Avenue area. The property owners have elected to connect to City water as an extension of the 2022 Goodview Avenue Water Main project.

Two quotes were received for the project. They are as follows:

|                        |           |
|------------------------|-----------|
| Miller Excavating, Inc | \$143,220 |
| Capra's Utilities, Inc | \$123,025 |

The quotes have been reviewed and we hereby recommend accepting the quote from Capra's Utilities, Inc for \$123,025. Capra's has successfully completed numerous projects of similar size and scope in several local communities including Cottage Grove.

Please don't hesitate to contact me with any questions or comments. Thank you.

Sincerely,

Brad Swanson  
Project Manager

Enclosure

CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-098

**RESOLUTION AWARDING THE  
2024 GOODVIEW AVENUE WATER SERVICE INSTALLATION  
PROJECT TO CAPRA'S UTILITIES, INC.  
IN THE AMOUNT OF \$123,025.00**

WHEREAS, the City of Cottage Grove, as part of the Goodview Avenue Watermain Extension Project, is commencing with the second phase of water service connections to properties in the project area; and

WHEREAS, quotes were requested to provide the necessary work; and

WHEREAS, two firms submitted quotes; and

WHEREAS, it appears that Capra's Utilities, Inc. provided the lowest accepted quote; and

WHEREAS, it is the recommendation of the Public Works Director that the quote be awarded to Capra's Utilities, Inc. in the amount of \$123,025.00.

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, that the 2024 Goodview Avenue Water Service Installation Project be awarded to Capra's Utilities, Inc. in the amount of \$123,025.00.

Passed this 26th day of June 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk

**CONFORMED CONTRACTS**

# **Project Manual**

## **2024 Goodview Avenue Water Service Installation**

City of Cottage Grove, Minnesota

SEH No. COTTG 177864

May 1, 2024



Building a Better World  
for All of Us®

Engineers | Architects | Planners | Scientists

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CERTIFICATION

I hereby certify that this specification was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



---

Chad E. Setterholm, PE

Date: May 1, 2024

Lic. No. 40913

END OF SECTION



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**DOCUMENT 00 01 10**

**TABLE OF CONTENTS**

| <b>Number</b> | <b>Document</b>                                            |
|---------------|------------------------------------------------------------|
|               | <b>Introductory Information</b>                            |
| 00 01 05      | Certification                                              |
| 00 01 10      | Table of Contents                                          |
|               | <b>Bidding Requirements</b>                                |
| 00 45 45      | Verification of Compliance with Minnesota Statutes 16C.285 |
|               | <b>Contract Forms</b>                                      |
| 00 52 00      | Standard Form of Agreement                                 |
|               | <b>Conditions of the Contract</b>                          |
| 00 72 00      | Standard General Conditions                                |
| 00 73 00      | Supplementary Conditions                                   |
| 00 73 44      | Wage Determination Schedule                                |
| 00 73 45      | Minnesota Labor and Wage Rate Requirements                 |

**SPECIFICATIONS**

City of Cottage Grove Standard Specification for Utility and Street Construction

**DIVISION 1 - GENERAL REQUIREMENTS**

|          |                             |
|----------|-----------------------------|
|          | <b>Summary</b>              |
| 01 11 00 | Summary of Work             |
|          | <b>Temporary Facilities</b> |
| 01 54 10 | Equipment Rental            |

**DIVISION 33 - UTILITIES**

|           |                              |
|-----------|------------------------------|
|           | <b>Water Utilities</b>       |
| 33 14 18R | Interior Plumbing Connection |
| 33 14 18R | Water Services               |

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COTTAGE GROVE, MINNESOTA  
2024 GOODVIEW AVE WATER SERVICE INSTALLATION  
Quote Form  
SEH NO. 177864 - COTTG  
6/17/2024

| Capra's Utilities, Inc Quote |                                                | UNIT | UNIT COST   | TOTAL              |                |
|------------------------------|------------------------------------------------|------|-------------|--------------------|----------------|
|                              |                                                |      |             | ESTIMATED QUANTITY | ESTIMATED COST |
| LINE NO.                     | ITEM                                           |      |             |                    |                |
| 1                            | Mobilization                                   | LS   | \$2,500.00  | 1                  | \$2,500.00     |
| 2                            | Topsoil Borrow (CV)                            | CY   | \$75.00     | 35                 | \$2,625.00     |
| 3                            | 1" HDPE Service Trenchless - Curb Box To House | EACH | \$10,475.00 | 7                  | \$73,325.00    |
| 4                            | 2" HDPE Service Trenchless - Curb Box To House | EACH | \$22,725.00 | 1                  | \$22,725.00    |
| 5                            | Plumbing Labor For Interior Connection         | HR   | \$135.00    | 44                 | \$5,940.00     |
| 6                            | Electrician Labor For Interior Connection      | HR   | \$125.00    | 22                 | \$2,750.00     |
| 7                            | Residential Pressure Reducing Valve            | EACH | \$395.00    | 6                  | \$2,370.00     |
| 8                            | Irrigation Repair                              | LF   | \$15.00     | 150                | \$2,250.00     |
| 9                            | Hydro Seeding With Mulch (Type 25-151)         | SY   | \$5.95      | 700                | \$4,165.00     |
| 10                           | Rock Excavation                                | CY   | \$125.00    | 25                 | \$3,125.00     |
| 11                           | Exporatory Excavcation                         | HR   | \$125.00    | 10                 | \$1,250.00     |
|                              |                                                |      |             | Total              | \$123,025.00   |

BID PREPARED BY:  
MIKE CAPRA

*Mike Capra*

PRESIDENT  
CAPRA'S UTILITIES INC.



**VERIFICATION OF COMPLIANCE  
WITH MN STATUTES 16C.285**

**State of Minnesota – Responsible Contractor Requirement (for responses in excess of \$50,000 only)**

Minnesota Statute 16C.285, subdivision 7, **IMPLEMENTATION.** ... any prime contractor or subcontractor or motor carrier that does not meet the minimum criteria in subdivision 3 or fails to verify that it meets those criteria is not a responsible contractor and is not eligible to be awarded a construction contract for the project or to perform work on the project... *It is your sole responsibility to provide this information at the due date and time of the bid.*

Minnesota Statute 16C.285, subdivision 3, **RESPONSIBLE CONTRACTOR, MINIMUM CRITERIA.** “Responsible Contractor” means a contractor that conforms to the responsibility requirements in the solicitation document for its portion of the work on the project and verifies that it meets the following minimum criteria:

Your response will be rejected unless:

- (1) The Contractor:
  - (i) is in compliance with workers' compensation and unemployment insurance requirements;
  - (ii) is in compliance with Department of Revenue and Department of Employment and Economic Development registration requirements if it has employees;
  - (iii) has a valid federal tax identification number or a valid Social Security number if an individual;
  - (iv) has filed a certificate of authority to transact business in Minnesota with the secretary of state if a foreign corporation or cooperative;

Your response will be rejected unless:

- (2) The Contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 177.24, 177.25, 177.41 to 177.44, 181.13, 181.14, or 181.722, and has not violated United States Code, title 29, sections 201 to 219, or United States Code, title 40, sections 3141 to 3148. For purposes of this clause, a violation occurs when a contractor or related entity:
  - (i) repeatedly fails to pay statutorily required wages or penalties on one or more separate projects for a total underpayment of \$25,000 or more within the three-year period, provided that a failure to pay is “repeated” only if it involves two or more separate and distinct occurrences of underpayment during a three year period;
  - (ii) has been issued an order to comply by the commissioner of labor and industry that has become final;
  - (iii) has been issued at least two determination letters within the three-year period by the Department of Transportation finding an underpayment by the contractor or related entity to its own employees;
  - (iv) has been found by the commissioner of labor and industry to have repeatedly or willfully violated any of the sections referenced in this clause pursuant to section 177.27;
  - (v) has been issued a ruling or findings of underpayment by the administrator of the Wage and Hour Division of the United States Department of Labor that have become final or have been upheld by an administrative law judge or the Administrative Review Board; or
  - (vi) has been found liable for underpayment of wages or penalties or misrepresenting a construction worker as an independent contractor in an action brought in a court having jurisdiction. Provided that, if the contractor or related entity contests a determination of underpayment by the Department of Transportation in a contested case proceeding, a violation does not occur until the contested case proceeding has concluded with a determination that the contractor or related entity underpaid wages or penalties; \*



- (3) the Contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 181.723 or chapter 326B. For purposes of this clause, a violation occurs when a contractor or related entity has been issued a final administrative or licensing order; \*
  - (4) the Contractor or related entity has not, more than twice during the three-year period before submitting the verification, had a certificate of compliance under section 363A.36 revoked or suspended based on the provisions of section 363A.36, with the revocation or suspension becoming final because it was upheld by the Office of Administrative Hearings or was not appealed to the office; \*
  - (5) the Contractor or related entity has not received a final determination assessing a monetary sanction from the Department of Administration or Transportation for failure to meet targeted group business, disadvantaged business enterprise, or veteran-owned business goals, due to a lack of good faith effort, more than once during the three-year period before submitting the verification; \*
- \* Any violations, suspensions, revocations, or sanctions, as defined in clauses (2) to (5), occurring prior to July 1, 2014, shall not be considered in determining whether a contractor or related entity meets the minimum criteria.
- (6) the Contractor or related entity is not currently suspended or debarred by the federal government or the state of Minnesota or any of its departments, commissions, agencies, or political subdivisions that have authority to debar a contractor; and
  - (7) Check if all subcontractors that the contractor intends to use to perform project work have verified to the contractor through a signed statement under oath by an owner or officer that they meet the minimum criteria listed in clauses (1) to (6).

**Minn. Stat. 16C.285, Subd. 5. SUBCONTRACTOR VERIFICATION**

A Prime Contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project.

Prior to execution of a construction contract, and as a condition precedent to the execution of a construction contract, the apparent successful prime contractor shall submit to the contracting authority a supplemental verification under oath confirming compliance with subdivision 3, clause (7). Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.

If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors.

A prime contractor shall submit to the contracting authority upon request copies of the signed verifications of compliance from all subcontractors of any tier pursuant to subdivision 3, clause (7). A prime contractor and subcontractors shall not be responsible for the false statements of any subcontractor with which they do not have a direct contractual relationship. A prime contractor and subcontractors shall be responsible for false statements by their first-tier with which they have a direct contractual relationship only if they accept the verification of compliance with actual knowledge that it contains a false statement.

**Minn. Stat. 16C.285, Subd. 5a. MOTOR CARRIER VERIFICATION**

A prime contractor or subcontractor shall obtain annually from all motor carriers with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each motor carrier. A prime contractor or subcontractor shall require each such motor carrier to provide it with immediate written notification in the event that the motor carrier no longer meets one or more of the minimum criteria in subdivision 3 after submitting its annual verification. A motor carrier shall be ineligible to perform work on a project covered by this section if it does not meet all the minimum criteria in subdivision 3. Upon request, a prime contractor or subcontractor shall submit to the contracting authority the signed verifications of compliance from all motor carriers providing for-hire transportation of materials, equipment, or supplies for a project.

**Minn. Stat. 16C.285, Subd. 4. VERIFICATION OF COMPLIANCE**

A contractor responding to a solicitation document of a contracting authority shall submit to the contracting authority a signed statement under oath by and owner of officer verifying compliance with each of the minimum criteria in subdivision 3, with the exception of clause (7), at the time that it responds to the solicitation documents.

A contracting authority may accept a signed statement under oath as sufficient to demonstrate that a contractor is a responsible contractor and shall not be held liable for awarding a contract in reasonable reliance on that statement. A prime contractor, subcontractor, or motor carrier that fails to verify compliance with any one of the required minimum criteria or makes a false statement under oath in a verification of compliance shall be ineligible to be awarded a construction contract on the project for which the verification was submitted.

A false statement under oath verifying compliance with any of the minimum criteria may result in termination of a construction contract that has already been awarded to a prime contractor or subcontractor that submits a false statement. A contracting authority shall not be liable for declining to award a contract or terminating a contract based on a reasonable determination that the contractor failed to verify compliance with the minimum criteria or falsely stated that it meets the minimum criteria. A verification of compliance need not be notarized. An electronic verification of compliance made and submitted as part of an electronic bid shall be an acceptable verification of compliance under this section provided that it contains an electronic signature as defined in section 325L.02, paragraph (h).

**Minn. Stat. 16C.285, Subd. 6. ADDITIONAL CRITERIA**

Nothing in this section shall restrict the discretion of a contracting authority to establish additional factors for defining contractor responsibility. This subdivision is not an independent grant of authority to a contracting authority to establish additional minimum criteria pursuant to subdivision 3.

**CERTIFICATION**

By signing this document, I certify that I am authorized to sign on behalf of the company, and I swear under oath that:

- 1) My company meets each of the minimum criteria to be a responsible contractor as defined in Minn. Stat. 16C.285,
- 2) I have included a list of my first-tier subcontractors with my company's solicitation response,
- 3) If my company is awarded a contract, I will submit a list of additional subcontractors as required.

Name of Company: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_ Telephone number: \_\_\_\_\_

Before me on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared \_\_\_\_\_  
\_\_\_\_\_ known to be, who being duly sworn did depose and say that they  
are the \_\_\_\_\_ (office) of the Contractor above mentioned that they executed the  
above Verification of Compliance and Affidavit on behalf of said Contractor; and that all of the statements  
contained therein are true, correct and complete.

**Attest:**

Notary Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

My Commission expires: \_\_\_\_\_, 20\_\_\_\_

Date: \_\_\_\_\_ Telephone number: \_\_\_\_\_

## LIST OF FIRST TIER SUBCONTRACTORS

Company \_\_\_\_\_ Telephone No. \_\_\_\_\_

Name of Contact \_\_\_\_\_

Address \_\_\_\_\_

Type of Construction \_\_\_\_\_

Company \_\_\_\_\_ Telephone No. \_\_\_\_\_

Name of Contact \_\_\_\_\_

Address \_\_\_\_\_

Type of Construction \_\_\_\_\_

Company \_\_\_\_\_ Telephone No. \_\_\_\_\_

Name of Contact \_\_\_\_\_

Address \_\_\_\_\_

Type of Construction \_\_\_\_\_

Company \_\_\_\_\_ Telephone No. \_\_\_\_\_

Name of Contact \_\_\_\_\_

Address \_\_\_\_\_

Type of Construction \_\_\_\_\_

Company \_\_\_\_\_ Telephone No. \_\_\_\_\_

Name of Contact \_\_\_\_\_

Address \_\_\_\_\_

Type of Construction \_\_\_\_\_

Company \_\_\_\_\_ Telephone No. \_\_\_\_\_

Name of Contact \_\_\_\_\_

Address \_\_\_\_\_

Type of Construction \_\_\_\_\_

**STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR  
ON THE BASIS OF A STIPULATED PRICE**

**THIS AGREEMENT** is by and between the City of Cottage Grove, Minnesota  
(Owner) and Capra's Utilities, Inc. (Contractor).

Owner and Contractor hereby agree as follows:

**ARTICLE 1 – WORK**

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Horizontal directional drilling of residential water services. Interior plumbing connections. Turf restoration.

**ARTICLE 2 – THE PROJECT**

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: 2024 Goodview Avenue Water Service Installation.

**ARTICLE 3 – ENGINEER**

- 3.01 The Project has been designed by Short Elliott Hendrickson Inc. (SEH®).
- 3.02 The Owner has retained SEH (Engineer) to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

**ARTICLE 4 – CONTRACT TIMES**

- 4.01 *Time of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Dates*
- A. Construction to occur no earlier than **August 12, 2024** until **October 15, 2024** (Substantial Completion).
- B. Substantial Completion must be substantially complete by **October 15, 2024**. Substantial completion shall be defined as completion of the following:
1. Installation of water service from curb box to house
  2. Connection of existing interior plumbing to new water service
  3. 100% Turf restoration
- C. Final Completion: Final completion for all phases shall be on **October 30, 2024** and will include, but not limited to the following:
1. Punch List work
  2. Final cleanup
  3. Final payment

#### 4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed and milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. Substantial Completion: Contractor shall pay Owner \$2,500 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
  2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$2,500 for each day that expires after such time until the Work is completed and ready for final payment.
  3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

#### **ARTICLE 5 – CONTRACT PRICE**

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item as indicated in Contractor's Quote.

The Quote Prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 10.06 of the General Conditions.

The Estimated Total of All Unit Price Work is: \$ 123,025.00

#### **ARTICLE 6 – PAYMENT PROCEDURES**

##### 6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

##### 6.02 *Progress Payments; Retainage*

- A. Subject to the provisions of SC-15.01.C, Owner shall make monthly progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications of Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract:
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract:
    - a. 95 percent of Work completed (with the balance being retainage).

- b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

6.04 *Interest*

All amounts not paid when due shall bear interest at the maximum rate allowed by law at the place of the project.

**ARTICLE 7 – CONTRACT DOCUMENTS**

7.01 *Contents*

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 00 52 00-1 to 00 52 00-6, inclusive).
  - 2. City of Cottage Grove, Minnesota Standard Specifications for Utility and Street Construction, dated January, 2024 and all subsequent amendments.
  - 3. General Conditions (pages 00 72 00-1 to 00 72 00-66, inclusive).
  - 4. Supplementary Conditions (pages 00 73 00-1 to 00 73 00-9, inclusive).
  - 5. Specifications as listed in the table of contents of the Project Manual.
  - 6. Drawings bearing the following general title:  
2024 Goodview Avenue Water Service Installation
  - 7. Exhibits to this Agreement (enumerated as follows).
    - a. Contractor's Quote.
    - b. Documentation submitted by Contractor prior to Notice of Award (pages \_\_\_\_ to \_\_\_\_, inclusive).
    - c. Certificate of Insurance.
  - 8. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    - a. Notice to Proceed.
    - b. Field Order(s).
    - c. Work Change Directive(s).
    - d. Change Order(s).
- B. The documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.



## **ARTICLE 8 – REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS**

### **8.01 Contractor's Representations**

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
1. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
  2. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  3. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
  4. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
  5. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
  6. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
  7. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
  8. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
  9. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
  10. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

### **8.02 Contractor's Certifications**

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the Quote process or in the Contract execution;
  2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the Quote process or the execution of the Contract to the detriment of Owner, (b) to establish Quote or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Quote prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the Quote process or affect the execution of the Contract.

## **ARTICLE 9 – MISCELLANEOUS**

### **9.01    *Terms***

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

### **9.02    *Assignment of Contract***

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

### **9.03    *Successors and Assigns***

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

### **9.04    *Severability***

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Contract).

OWNER:

City of Cottage Grove, Minnesota

By: \_\_\_\_\_

Title: \_\_\_\_\_

[CORPORATE SEAL]

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Address for Giving Notices:

City of Cottage Grove

12800 Ravine Parkway South

Cottage Grove, MN 55016

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Owner-Contractor Agreement).

Designated Representative:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

CONTRACTOR:

Capra's Utilities, Inc.

By: \_\_\_\_\_

Title: \_\_\_\_\_

[CORPORATE SEAL]

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Address for Giving Notices:

Capra's Utilities Inc.

2340 Leibel Street

White Bear Lake, MN 55110

License No. \_\_\_\_\_  
(Where Applicable)

Agent for service of process: \_\_\_\_\_

(If Contractor is a corporation or a partnership, attach evidence of authority to sign.)

Designated Representative:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

**END OF DOCUMENT**

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## TABLE OF CONTENTS

|                                                                                              | Page |
|----------------------------------------------------------------------------------------------|------|
| Article 1—Definitions and Terminology.....                                                   | 1    |
| 1.01 Defined Terms.....                                                                      | 1    |
| 1.02 Terminology.....                                                                        | 5    |
| Article 2—Preliminary Matters .....                                                          | 6    |
| 2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance .....                  | 6    |
| 2.02 Copies of Documents .....                                                               | 7    |
| 2.03 Before Starting Construction .....                                                      | 7    |
| 2.04 Preconstruction Conference; Designation of Authorized Representatives .....             | 7    |
| 2.05 Acceptance of Schedules .....                                                           | 7    |
| 2.06 Electronic Transmittals .....                                                           | 8    |
| Article 3—Contract Documents: Intent, Requirements, Reuse.....                               | 8    |
| 3.01 Intent .....                                                                            | 8    |
| 3.02 Reference Standards.....                                                                | 9    |
| 3.03 Reporting and Resolving Discrepancies.....                                              | 9    |
| 3.04 Requirements of the Contract Documents .....                                            | 10   |
| 3.05 Reuse of Documents.....                                                                 | 10   |
| Article 4—Commencement and Progress of the Work .....                                        | 10   |
| 4.01 Commencement of Contract Times; Notice to Proceed .....                                 | 10   |
| 4.02 Starting the Work.....                                                                  | 11   |
| 4.03 Reference Points .....                                                                  | 11   |
| 4.04 Progress Schedule .....                                                                 | 11   |
| 4.05 Delays in Contractor's Progress .....                                                   | 11   |
| Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions ..... | 12   |
| 5.01 Availability of Lands.....                                                              | 12   |
| 5.02 Use of Site and Other Areas.....                                                        | 13   |
| 5.03 Subsurface and Physical Conditions .....                                                | 14   |
| 5.04 Differing Subsurface or Physical Conditions .....                                       | 14   |
| 5.05 Underground Facilities.....                                                             | 16   |
| 5.06 Hazardous Environmental Conditions at Site .....                                        | 18   |
| Article 6—Bonds and Insurance .....                                                          | 20   |
| 6.01 Performance, Payment, and Other Bonds.....                                              | 20   |
| 6.02 Insurance—General Provisions.....                                                       | 20   |
| 6.03 Contractor's Insurance .....                                                            | 22   |
| 6.04 Builder's Risk and Other Property Insurance .....                                       | 23   |



|                                               |                                                              |    |
|-----------------------------------------------|--------------------------------------------------------------|----|
| 6.05                                          | Property Losses; Subrogation .....                           | 24 |
| 6.06                                          | Receipt and Application of Property Insurance Proceeds ..... | 25 |
| Article 7—Contractor’s Responsibilities ..... |                                                              | 25 |
| 7.01                                          | Contractor’s Means and Methods of Construction .....         | 25 |
| 7.02                                          | Supervision and Superintendence.....                         | 25 |
| 7.03                                          | Labor; Working Hours.....                                    | 25 |
| 7.04                                          | Services, Materials, and Equipment.....                      | 26 |
| 7.05                                          | “Or Equals” .....                                            | 26 |
| 7.06                                          | Substitutes.....                                             | 27 |
| 7.07                                          | Concerning Subcontractors and Suppliers .....                | 29 |
| 7.08                                          | Patent Fees and Royalties .....                              | 30 |
| 7.09                                          | Permits .....                                                | 30 |
| 7.10                                          | Taxes.....                                                   | 30 |
| 7.11                                          | Laws and Regulations .....                                   | 30 |
| 7.12                                          | Record Documents.....                                        | 31 |
| 7.13                                          | Safety and Protection .....                                  | 31 |
| 7.14                                          | Hazard Communication Programs .....                          | 32 |
| 7.15                                          | Emergencies.....                                             | 32 |
| 7.16                                          | Submittals.....                                              | 33 |
| 7.17                                          | Contractor’s General Warranty and Guarantee.....             | 35 |
| 7.18                                          | Indemnification .....                                        | 36 |
| 7.19                                          | Delegation of Professional Design Services.....              | 37 |
| Article 8—Other Work at the Site.....         |                                                              | 37 |
| 8.01                                          | Other Work .....                                             | 37 |
| 8.02                                          | Coordination .....                                           | 38 |
| 8.03                                          | Legal Relationships .....                                    | 38 |
| Article 9—Owner’s Responsibilities .....      |                                                              | 39 |
| 9.01                                          | Communications to Contractor .....                           | 39 |
| 9.02                                          | Replacement of Engineer .....                                | 39 |
| 9.03                                          | Furnish Data .....                                           | 39 |
| 9.04                                          | Pay When Due .....                                           | 39 |
| 9.05                                          | Lands and Easements; Reports, Tests, and Drawings .....      | 40 |
| 9.06                                          | Insurance.....                                               | 40 |
| 9.07                                          | Change Orders .....                                          | 40 |
| 9.08                                          | Inspections, Tests, and Approvals.....                       | 40 |
| 9.09                                          | Limitations on Owner’s Responsibilities .....                | 40 |
| 9.10                                          | Undisclosed Hazardous Environmental Condition .....          | 40 |
| 9.11                                          | Evidence of Financial Arrangements.....                      | 40 |
| 9.12                                          | Safety Programs.....                                         | 40 |

|                                                                                              |    |
|----------------------------------------------------------------------------------------------|----|
| Article 10—Engineer’s Status During Construction .....                                       | 40 |
| 10.01 Owner’s Representative .....                                                           | 40 |
| 10.02 Visits to Site.....                                                                    | 41 |
| 10.03 Resident Project Representative .....                                                  | 41 |
| 10.04 Engineer’s Authority .....                                                             | 41 |
| 10.05 Determinations for Unit Price Work .....                                               | 41 |
| 10.06 Decisions on Requirements of Contract Documents and Acceptability of Work .....        | 41 |
| 10.07 Limitations on Engineer’s Authority and Responsibilities .....                         | 42 |
| 10.08 Compliance with Safety Program .....                                                   | 42 |
| Article 11—Changes to the Contract .....                                                     | 42 |
| 11.01 Amending and Supplementing the Contract.....                                           | 42 |
| 11.02 Change Orders .....                                                                    | 43 |
| 11.03 Work Change Directives.....                                                            | 43 |
| 11.04 Field Orders.....                                                                      | 43 |
| 11.05 Owner-Authorized Changes in the Work .....                                             | 44 |
| 11.06 Unauthorized Changes in the Work.....                                                  | 44 |
| 11.07 Change of Contract Price .....                                                         | 44 |
| 11.08 Change of Contract Times.....                                                          | 45 |
| 11.09 Change Proposals .....                                                                 | 45 |
| 11.10 Notification to Surety .....                                                           | 46 |
| Article 12—Claims .....                                                                      | 47 |
| 12.01 Claims.....                                                                            | 47 |
| Article 13—Cost of the Work; Allowances; Unit Price Work .....                               | 48 |
| 13.01 Cost of the Work.....                                                                  | 48 |
| 13.02 Allowances .....                                                                       | 51 |
| 13.03 Unit Price Work.....                                                                   | 51 |
| Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work ..... | 52 |
| 14.01 Access to Work.....                                                                    | 52 |
| 14.02 Tests, Inspections, and Approvals.....                                                 | 52 |
| 14.03 Defective Work .....                                                                   | 53 |
| 14.04 Acceptance of Defective Work .....                                                     | 54 |
| 14.05 Uncovering Work.....                                                                   | 54 |
| 14.06 Owner May Stop the Work .....                                                          | 55 |
| 14.07 Owner May Correct Defective Work .....                                                 | 55 |
| Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period .....             | 55 |
| 15.01 Progress Payments .....                                                                | 55 |
| 15.02 Contractor’s Warranty of Title.....                                                    | 58 |
| 15.03 Substantial Completion.....                                                            | 58 |
| 15.04 Partial Use or Occupancy.....                                                          | 59 |

|                                                     |    |
|-----------------------------------------------------|----|
| 15.05 Final Inspection .....                        | 60 |
| 15.06 Final Payment.....                            | 60 |
| 15.07 Waiver of Claims .....                        | 61 |
| 15.08 Correction Period.....                        | 61 |
| Article 16—Suspension of Work and Termination ..... | 62 |
| 16.01 Owner May Suspend Work.....                   | 62 |
| 16.02 Owner May Terminate for Cause .....           | 62 |
| 16.03 Owner May Terminate for Convenience.....      | 63 |
| 16.04 Contractor May Stop Work or Terminate.....    | 64 |
| Article 17—Final Resolution of Disputes.....        | 64 |
| 17.01 Methods and Procedures .....                  | 64 |
| Article 18—Miscellaneous .....                      | 64 |
| 18.01 Giving Notice .....                           | 64 |
| 18.02 Computation of Times .....                    | 65 |
| 18.03 Cumulative Remedies .....                     | 65 |
| 18.04 Limitation of Damages.....                    | 65 |
| 18.05 No Waiver.....                                | 65 |
| 18.06 Survival of Obligations.....                  | 65 |
| 18.07 Controlling Law.....                          | 65 |
| 18.08 Assignment of Contract.....                   | 65 |
| 18.09 Successors and Assigns .....                  | 66 |
| 18.10 Headings .....                                | 66 |

# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
  3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  5. *Bidder*—An individual or entity that submits a Bid to Owner.
  6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
  7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
  8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
  9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
  10. *Claim*
    - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
  - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
  - d. A demand for money or services by a third party is not a Claim.
- 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
  - 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
  - 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
  - 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
  - 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
  - 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
  - 17. *Cost of the Work*—See Paragraph 13.01 for definition.
  - 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
  - 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
  - 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
  - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.
  - 22. *Engineer*—The individual or entity named as such in the Agreement.
  - 23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
- The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
  - The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
  - The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.



37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.
43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
  - If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of

subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

- c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day*: The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
  - 1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## ARTICLE 2—PRELIMINARY MATTERS

### 2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

## 2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

## 2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
  - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  - 2. a preliminary Schedule of Submittals; and
  - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

## 2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

## 2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
  - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

#### 2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

### **ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

#### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
  1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
  2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

### 3.02 *Reference Standards*

#### A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

#### B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
  - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or



- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

### 3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

## **ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

### 4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

#### 4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

#### 4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

#### 4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
  - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  - 2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
  4. Acts of war or terrorism.
- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
  2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
  3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
  2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
  3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
  4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
  5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

## **ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

### **5.01 *Availability of Lands***

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

## 5.02 *Use of Site and Other Areas*

### A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
  2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

#### 5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

#### 5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
2. is of such a nature as to require a change in the Drawings or Specifications;
3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
  1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
    - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
    - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
  2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
    - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

- b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
  - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
- 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
- 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
  - 1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
  - 2. complying with applicable state and local utility damage prevention Laws and Regulations;
  - 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
  - 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
  - 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
  - 1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;



2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
    - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
    - c. Contractor gave the notice required in Paragraph 5.05.B.
  2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
  4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface

Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

**5.06 Hazardous Environmental Conditions at Site**

**A. Reports and Drawings:** The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

**B. Reliance by Contractor on Technical Data Authorized:** Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

**C.** Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

**D.** Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

**E.** If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the

Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 6—BONDS AND INSURANCE

### 6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

### 6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party’s obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner’s option, may purchase and maintain Owner’s own liability insurance. Owner’s liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner’s liability policies for any of Contractor’s obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
  - 1. Subcontractors to purchase and maintain worker’s compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor’s liability policies) on each Subcontractor’s commercial general liability insurance policy; and
  - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

#### 6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
  - 1. include at least the specific coverages required;
  - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
  - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
  - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
  - 5. include all necessary endorsements to support the stated requirements.

- C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
  2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
  3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);
  4. not seek contribution from insurance maintained by the additional insured; and
  5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

#### 6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.



#### 6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
  2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

#### 6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

### **ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

#### 7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

#### 7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

#### 7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.
- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

#### 7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
      - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
      - 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
      - 3) has a proven record of performance and availability of responsive service; and
      - 4) is not objectionable to Owner.

- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
    - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
    - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

#### 7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
  - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
  - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
  - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
    - a. will certify that the proposed substitute item will:
      - 1) perform adequately the functions and achieve the results called for by the general design;
      - 2) be similar in substance to the item specified; and
      - 3) be suited to the same use as the item specified.

- b. will state:
    - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
    - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
    - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
  - c. will identify:
    - 1) all variations of the proposed substitute item from the item specified; and
    - 2) available engineering, sales, maintenance, repair, and replacement services.
  - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

#### 7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

#### **7.08 *Patent Fees and Royalties***

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

#### **7.09 *Permits***

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

#### **7.10 *Taxes***

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

#### **7.11 *Laws and Regulations***

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.



- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

#### 7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

#### 7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

#### 7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

## 7.16 Submittals

### A. Shop Drawing and Sample Requirements

1. Before submitting a Shop Drawing or Sample, Contractor shall:
  - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determine and verify:
    - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
    - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
    - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
  - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

### B. Submittal Procedures for Shop Drawings and Samples: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

#### 1. Shop Drawings

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

#### 2. Samples

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

*C. Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

*D. Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

**E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs***

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
  - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
  - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
  - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
  - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.

**F. *Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.***

**7.17 *Contractor's General Warranty and Guarantee***

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
  1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
  2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  2. normal wear and tear under normal usage.

- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
  2. Recommendation by Engineer or payment by Owner of any progress or final payment;
  3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  4. Use or occupancy of the Work or any part thereof by Owner;
  5. Any review and approval of a Shop Drawing or Sample submittal;
  6. The issuance of a notice of acceptability by Engineer;
  7. The end of the correction period established in Paragraph 15.08;
  8. Any inspection, test, or approval by others; or
  9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

#### **7.18 Indemnification**

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

#### 7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
  - 1. Checking for conformance with the requirements of this Paragraph 7.19;
  - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
  - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

### **ARTICLE 8—OTHER WORK AT THE SITE**

#### 8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.



- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

#### 8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
  - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
  - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

#### 8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other

contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
  - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
  - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

## **ARTICLE 9—OWNER'S RESPONSIBILITIES**

### **9.01   *Communications to Contractor***

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

### **9.02   *Replacement of Engineer***

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

### **9.03   *Furnish Data***

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

### **9.04   *Pay When Due***

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

**ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION**

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

#### 10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

#### 10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

#### 10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.
- E. Engineer's authority as to Applications for Payment is set forth in Article 15.

#### 10.05 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

#### 10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will

not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

#### **10.07 *Limitations on Engineer's Authority and Responsibilities***

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

#### **10.08 *Compliance with Safety Program***

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

### **ARTICLE 11—CHANGES TO THE CONTRACT**

#### **11.01 *Amending and Supplementing the Contract***

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

## 11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
  - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
  - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

## 11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.
- B. If Owner has issued a Work Change Directive and:
  - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
  - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

## 11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

#### 11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
  - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
  - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
  - 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
  - 1. A mutually acceptable fixed fee; or
  - 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;



- c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
- d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
- f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

#### 11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

#### 11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.
- B. *Change Proposal Procedures*
  - 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
  - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
  - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
  4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
  5. *Binding Decision:* Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion:* Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

#### 11.10 Notification to Surety

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

## ARTICLE 12—CLAIMS

### 12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
  3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
  4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
  2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
  3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim

is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## **ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### **13.01 Cost of the Work**

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
  2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
  2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
5. Other costs consisting of the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
    - 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.
  - c. *Construction Equipment Rental*
    - 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
    - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
    - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.
  - g. The cost of utilities, fuel, and sanitary facilities at the Site.
  - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
  - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
  - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
  - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
  - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
  - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
  - 6. Expenses incurred in preparing and advancing Claims.
  - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*
- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
    - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

- b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
    - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
    - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
  - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.
- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

### 13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
  - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
  - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

### 13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.



- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.
- E. *Adjustments in Unit Price*
  - 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
    - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
    - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
  - 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
  - 3. Adjusted unit prices will apply to all units of that item.

## **ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

### **14.01 Access to Work**

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

### **14.02 Tests, Inspections, and Approvals**

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
  - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  - 3. by manufacturers of equipment furnished under the Contract Documents;
  - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.
- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

- F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

#### 14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

### **ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

#### 15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

*C. Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
  - a. to supervise, direct, or control the Work;
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
  - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
  - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

**D. *Payment Becomes Due***

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

**E. *Reductions in Payment by Owner***

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
  - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;

- d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. The Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. The Contract Price has been reduced by Change Orders;
  - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
  - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
  - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
  3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

#### 15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.



- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
  - 1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
  - 2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 15.06 *Final Payment*

##### A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
  - d. a list of all duly pending Change Proposals and Claims; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

- B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

#### 15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such adjacent areas;
  - 2. correct such defective Work;
  - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

### **16.02 *Owner May Terminate for Cause***

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
  1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
  2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
  2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### **16.03 Owner May Terminate for Convenience**

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

#### 16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

### ARTICLE 17—FINAL RESOLUTION OF DISPUTES

#### 17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
  1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
  2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
  1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
  2. agree with the other party to submit the dispute to another dispute resolution process; or
  3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

### ARTICLE 18—MISCELLANEOUS

#### 18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
  1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

#### 18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

#### 18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

#### 18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

#### 18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

#### 18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

#### 18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

#### 18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.



18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

## SUPPLEMENTARY CONDITIONS

## TABLE OF ARTICLES

| Article Number | Title                                         | Page |
|----------------|-----------------------------------------------|------|
| SC-2.02        | Copies of Documents .....                     | 1    |
| SC-4.03        | Reference Points .....                        | 2    |
| SC-5.03        | Subsurface and Physical Conditions .....      | 2    |
| SC-5.05        | Underground Facilities .....                  | 2    |
| SC-5.05.B      | Underground Facilities .....                  | 2    |
| SC-5.06        | Hazardous Environmental Conditions .....      | 3    |
| SC-6.03        | Contractor's Insurance .....                  | 3    |
| SC-7.03        | Labor; Working Hours .....                    | 3    |
| SC-7.03        | Labor; Working Hours .....                    | 3    |
| SC-7.07        | Concerning Subcontractors and Suppliers ..... | 4    |
| SC-7.09        | Permits .....                                 | 4    |
| SC-7.11        | Laws and Regulations .....                    | 4    |
| SC-10.03       | Resident Project Representative .....         | 4    |
| SC-12.01       | Claims .....                                  | 6    |
| SC-13.03       | Unit Price Work .....                         | 7    |
| SC-15.01.B     | Applications for Payments .....               | 7    |
| SC-15.01.B     | Applications for Payments .....               | 7    |
| SC-15.01.C     | Review of Applications .....                  | 7    |
| SC-15.03       | Substantial Completion .....                  | 7    |
| SC-15.03       | Substantial Completion .....                  | 8    |
| SC-15.05       | Final Inspection .....                        | 8    |
| SC-15.06.A     | Final Payment .....                           | 8    |
| SC-15.08       | Correction Period .....                       | 8    |
| SC-17.01       | Methods and Procedures .....                  | 9    |

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2018 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

#### **SC-2.02      Copies of Documents**

Delete Paragraph 2.02.A in its entirety and insert the following:

- A. Owner shall furnish to Contractor 5 printed copies of the Contract Documents (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished on request at the cost of reproduction.

**SC-4.03 Reference Points**

Add a new paragraph immediately after Paragraph 4.03.A to read as follows:

- B. Contractor shall provide a minimum of 48 hours' written notice to the Resident Project Representative in advance of the need for construction stakes on the Project. No claim for delays under Paragraph 4.05 of the General Conditions due to the need for construction stakes will be considered unless 48 hour written notice has been provided and the Contractor is proceeding under an accepted Progress Schedule.

**SC-5.03 Subsurface and Physical Conditions**

Add the following new paragraph(s) immediately after Paragraph 5.03.B:

- C. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:
  - 1. Report dated December 10, 2021, prepared by American Engineering Testing, titled: Report Of Geotechnical Exploration, consisting of 30 pages. The Technical Data contained in such report upon which Contractor may rely are:
    - a. Soil Boring Logs
    - b. Laboratory Test Results
- D. Copies of reports and drawings identified in SC-5.03.C are included with the bidding Documents in the Appendix.

**SC-5.05 Underground Facilities**

Add the following sentence at the end of the first sentence of Paragraph 5.05.A:

The subsurface utility information in this plan is utility quality level D. This quality level was determined according to the guidelines of [CI/ASCE 38-02](#), titled "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.

**SC-5.05.B Underground Facilities**

Add new paragraph immediately after Paragraph 5.05.B to read as follows:

- 1. Underground utility locations can be obtained from the following owners and services:

| Utility            | Owner                                                                                                                 | Phone                                                                |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Water              | City of Cottage Grove, Rick Alt                                                                                       | 651.458.2842<br>651.737.2984                                         |
| Storm Sewer        | City of Cottage Grove, Rick Alt                                                                                       | 651.458.2842<br>651.737.2984                                         |
| Cable TV/Telephone | Comcast, Benjamin Ueland<br><br>CenturyLink, Jeremy Wegleitner<br>(Terra Technologies, LLC)<br><br>Zayo, Steve Senger | 612.462.7911<br>651.493.5158<br><br>651.336.6557<br><br>612-210-8036 |
| Electric           | Xcel Energy, Jeremy Moore                                                                                             | 651.458.1265<br>651.788.3374                                         |
| Gas                | Xcel Energy, Bill Lynaugh Jr                                                                                          | 651.458.4453<br>651.328.4358                                         |
| Location Service   | Gopher State One Call                                                                                                 | Metro: 651.454.0002<br>Out State: 800.252.1166                       |

### SC-5.06 Hazardous Environmental Conditions

Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

### SC-6.03 Contractor's Insurance

Add the following new paragraph immediately after Paragraph 6.03.C.5:

- D. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
  - 1. Worker's Compensation and related coverages under Paragraphs 6.03 of the General Conditions:
    - a. State: Statutory
    - b. Federal, if applicable (e.g., Longshoreman's): Statutory
    - c. Employer's Liability:
      - 1) Bodily injury, each accident \$2,000,000
      - 2) Bodily injury by disease, each employee \$2,000,000
      - 3) Bodily injury/disease, aggregate \$2,000,000
  - 2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:
    - a. General Aggregate \$2,000,000
    - b. Products - Completed Operations Aggregate \$2,000,000
    - c. Personal and Advertising Injury \$2,000,000
    - d. Each Occurrence (Bodily Injury and Property Damage) \$2,000,000
  - 3. Automobile Liability under Paragraph 6.03.C of the General Conditions:
    - a. Bodily Injury:
      - Each person \$2,000,000
      - Each Accident \$2,000,000
    - b. Property Damage:
      - Each Accident \$2,000,000
  - 4. Excess or Umbrella Liability:
    - a. General Aggregate \$2,000,000
    - b. Each Occurrence \$2,000,000
  - 5. Additional Insureds: In addition to **Owner** and **Short Elliott Hendrickson Inc.**, include as additional insureds the following:
    - a. Washington County

### SC-7.03 Labor; Working Hours

Add the following new subparagraphs immediately after Paragraph 7.03.C:

- 1. Regular working hours will be as specified in Section 01 11 00.
- 2. Owner's legal holidays are as specified in Section 01 11 00.

### SC-7.03 Labor; Working Hours

Delete Paragraph 7.03.C in its entirety and substitute the following in its place:

- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all

Work at the Site shall be performed during regular working hours, Monday through Friday from 7:00AM to 7:00PM and Saturday from 9:00AM to 5:00 PM. Contractor will not perform Work on a Sunday or any legal holiday. Contractor may perform Work outside these hours and days only with Owner's written consent, which will not be unreasonably withheld.

#### **SC-7.07 Concerning Subcontractors and Suppliers**

Add the following paragraph after Paragraph 7.07.M:

- N. In accordance with Minnesota Statute 471.425, Contractor shall pay any subcontractor within ten days of the Contractor's receipt of payment from the municipality. Contractor shall pay interest on any unpaid amounts in accordance with the statute.

#### **SC-7.09 Permits**

Add new paragraphs immediately after Paragraph 7.09.A to read as follows:

- B. This Project falls under the requirements of the Minnesota Pollution Control Agency (MPCA) General Stormwater Permit for Construction Activity. The Contractor and Owner are considered Co-Permittees and shall complete form MN R100001 jointly. Contractor shall submit the NPDES form to the MPCA and be the sole permittee responsible for implementing the short- and long-term best management practices (BMP). Information and requirements of the permit are available on the MPCA website: [www.pca.state.mn.us](http://www.pca.state.mn.us).
- C. Owner has made application for the following permits:
  - 1. Minnesota Department of Health – Plan Review
  - 2. South Washington Watershed District Permit
  - 3. Washington County Right Of Way Permit

Fees and bonding costs for these permits will be paid by the Owner.

#### **SC-7.11 Laws and Regulations**

Add new paragraphs immediately after Paragraph 7.11.C which are to read as follows:

- D. Contractor shall specifically comply with Equal Opportunity Requirements as listed in Minnesota Rules 5000.3535, Standard State Equal Employment Opportunity Construction Contract Specifications.
- E. Contractor shall specifically comply with Minnesota Rules 5000.3550, Disabled Individuals Affirmative Action Clause.

#### **SC-10.03 Resident Project Representative**

Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
  - 1. *General:* RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. The RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
  - 2. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
  - 3. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

4. *Liaison:*
  - a. Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative or designee, assist in providing information regarding the intent of the Contract Documents.
  - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
  - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. *Shop Drawings and Samples:*
  - a. Record date of receipt of Samples and approved Shop Drawings.
  - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
  - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
7. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. *Review of Work and Rejection of Defective Work:*
  - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
9. *Inspections, Tests, and System Startups:*
  - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
  - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
10. *Records:*
  - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
  - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
  - c. Maintain records for use in preparing Project documentation.

11. *Reports:*

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. *Payment Requests:* Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. *Completion:*

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the Work.

D. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor's superintendent.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

**SC-12.01 Claims**

Amend the first sentence of Paragraph 12.01.B to read as follows:

- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 15 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal.

### **SC-13.03 Unit Price Work**

Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E. The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment under the following conditions:
  - 1. if the extended price of a particular item of Unit Price Work amounts to 10 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 20 percent from the estimated quantity of such item indicated in the Agreement; and
  - 2. if there is no corresponding adjustment with respect to any other item of Work; and
  - 3. if Contractor believes that Contractor has incurred additional expense as a result thereof; Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a claim, seeking an adjustment in the Contract Price.

### **SC-15.01.B Applications for Payments**

Add the following language at the end of Paragraph 15.01.B.1:

Supporting documentation to accompany each Application for Payment shall include:

- a. Updated Project Schedule.
- b. Updated list showing current status of submittals.
- c. Documentation showing payment by Contractor for materials and/or equipment stored.
- d. Documentation showing insurance coverage for materials and/or equipment stored.

### **SC-15.01.B Applications for Payments**

Amend Paragraph 15.01.B.4 to read as follows:

- 4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement and as follows:

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| Minnesota:                            | 5 percent                              |
| Exempt Non-Minnesota Contractors:     | 5 percent                              |
| Non-Exempt Non-Minnesota Contractors: | 5 percent plus 8 percent* = 13 percent |

\*State Surety Deposit

Non-Minnesota Contractors are advised to file Form SD-3 with the Minnesota Department of Revenue to determine their exemption status.

### **SC-15.01.C Review of Applications**

Delete Paragraph 15.01.C.1 in its entirety and insert the following:

- 1. Engineer will, within 15 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

### **SC-15.03 Substantial Completion**

Add a new paragraph immediately after Paragraph 15.03.A which reads as follows:

- 1. For this Work, Substantial Completion is further defined as follows:
  - a. All utilities installed and in use.
  - b. All lifts of pavement & concrete curb placed.
  - c. Driveway pavement placed.
  - d. Pavement markings installed.



- e. all wells abandoned.
- f. Restoration completed.

### **SC-15.03 Substantial Completion**

Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

### **SC-15.05 Final Inspection**

Add the following language after the second sentence of Paragraph 15.05.A:

If, after such measures are taken, subsequent inspections by Engineer reveal that any of the previously identified particulars remain incomplete or defective, Engineer will again notify Contractor in writing of the remaining particulars. All costs associated with any subsequent inspections in which said remaining particulars are revealed, will be documented by Engineer and paid by Contractor to Owner.

### **SC-15.06.A Final Payment**

Add the following new paragraph immediately after Paragraph 15.06.A.3:

4. Before final application for payment is made for the work, Contractor must make satisfactory showing of compliance with M.S.A. §290.92 which requires the withholding of state income taxes for wages paid employees on this project. Submittal of Certificate of Compliance from the Commissioner of Taxation to the Owner will satisfy this requirement. Contractor is advised that before such certificate can be issued, they must first place on file with the Commissioner of Taxation an affidavit that they have complied with the provisions of M.S.A. §290.92. The required affidavit form will be supplied by the Minnesota Commissioner of Taxation on request.

### **SC-15.08 Correction Period**

Delete Paragraph 15.08.A in its entirety and insert the following in its place:

- A. If within two year after the date of Final Payment (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  1. correct the defective repairs to the Site or such other adjacent areas; or
  2. correct such defective Work; or
  3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

## **SC-17.01      Methods and Procedures**

Add Article 17.01: in its entirety to read as follows:

- A. In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the Project, the Contractor and the Engineer agree that all disputes between them arising out of or relating to this Agreement shall be resolved, if possible, at the lowest possible staff level. If the dispute cannot be resolved between the Contractor and the Engineer staff, the presidents of the respective firms will meet to attempt to resolve the dispute(s). If resolution is not achieved, the dispute shall be submitted to non-binding mediation.

The rights and remedies available to the Contractor shall be limited to breach of Contract, and no other cause of action, including, without limitation, negligence, misrepresentation or other tort theory. The Owner or Contractor may assert any such breach of contract claim in any court of competent jurisdiction. Neither the Owner nor the Contractor shall be entitled to a jury trial in any such action. The right and remedies to the Owner hereunder shall be in addition to and shall not be constructed in any way as a limitation of any rights and remedies available to the Owner, which is otherwise available by law or contract, by special warranty or guarantee, or by other provision of the Contract documents. The provision of this paragraph shall be as effective as if repeated specifically in the contract documents in connection with each particular duty, obligation, right and remedy to which it may apply. All representations, warranties and guarantees made in the Contract documents shall survive final payment, termination or completion of this agreement.

No waiver or failure to enforce any part or provision of the Contract Documents, including but not limited to the change order process, shall be deemed to be waiver by the Owner of any subsequent default or breach of the same or any other part of provision contained herein, or right to enforce the same or any other part or provision contained herein.

**END OF DOCUMENT**



**DOCUMENT 00 73 44**  
**WAGE DETERMINATION SCHEDULE**

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MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY PREVAILING WAGES FOR STATE FUNDED CONSTRUCTION PROJECTS



THIS NOTICE MUST BE POSTED ON THE JOBSITE IN A CONSPICUOUS PLACE

**Construction Type: Highway and Heavy**

**Region Number: 09**

Counties within region:

- ANOKA-02
- CARVER-10
- CHISAGO-13
- DAKOTA-19
- HENNEPIN-27
- RAMSEY-62
- SCOTT-70
- WASHINGTON-82

Effective: 2023-11-20    Revised: 2024-02-05

This project is covered by Minnesota prevailing wage statutes. Wage rates listed below are the minimum hourly rates to be paid on this project.

All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at a rate of one and one half (1 1/2) times the basic hourly rate. *Note: Overtime pay after eight (8) hours on the project must be paid even if the worker does not exceed forty (40) hours in the work week.*

Violations on MnDOT highways and road projects should be reported to:

Department of Transportation  
Office of Construction  
Transportation Building MS650  
John Ireland Blvd  
St. Paul, MN 55155  
(651) 366-4209

All other prevailing wage violations and questions should be sent to:

Department of Labor and Industry  
Prevailing Wage Section  
443 Lafayette Road N  
St Paul, MN 55155  
(651) 284-5091  
[DLI.PrevWage@state.mn.us](mailto:DLI.PrevWage@state.mn.us)

| LABOR CODE AND CLASS                            |                                                          | EFFECT DATE | BASIC RATE | FRINGE RATE | TOTAL RATE |
|-------------------------------------------------|----------------------------------------------------------|-------------|------------|-------------|------------|
| LABORERS (101 - 112) (SPECIAL CRAFTS 701 - 730) |                                                          |             |            |             |            |
| 101                                             | LABORER, COMMON (GENERAL<br>LABOR WORK)                  | 2023-11-20  | 38.90      | 23.49       | 62.39      |
|                                                 |                                                          | 2024-05-01  | 41.63      | 24.24       | 65.87      |
| 102                                             | LABORER, SKILLED (ASSISTING<br>SKILLED CRAFT JOURNEYMAN) | 2023-11-20  | 38.90      | 23.49       | 62.39      |
|                                                 |                                                          | 2024-05-01  | 41.63      | 24.24       | 65.87      |

| LABOR CODE AND CLASS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EFFECT DATE | BASIC RATE | FRINGE RATE | TOTAL RATE |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|-------------|------------|
| 103                  | LABORER, LANDSCAPING<br>(GARDENER, SOD LAYER AND<br>NURSERY OPERATOR)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2023-11-20  | 28.29      | 20.41       | 48.70      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2024-05-01  | 30.04      | 21.16       | 51.20      |
| 104                  | FLAG PERSON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2023-11-20  | 38.90      | 23.49       | 62.39      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2024-05-01  | 41.63      | 24.24       | 65.87      |
| 105                  | WATCH PERSON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2023-11-20  | 35.50      | 22.94       | 58.44      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2024-05-01  | 38.23      | 23.69       | 61.92      |
| 106                  | BLASTER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2023-11-20  | 22.08      | 6.87        | 28.95      |
| 107                  | PIPELAYER (WATER, SEWER AND<br>GAS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2023-11-20  | 42.40      | 23.49       | 65.89      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2024-05-01  | 45.13      | 24.24       | 69.37      |
| 108                  | TUNNEL MINER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2023-11-20  | 40.40      | 23.49       | 63.89      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2024-05-01  | 43.13      | 24.24       | 67.37      |
| 109                  | UNDERGROUND AND OPEN DITCH<br>LABORER (EIGHT FEET BELOW<br>STARTING GRADE LEVEL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2023-11-20  | 40.40      | 23.49       | 63.89      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2024-05-01  | 43.13      | 24.24       | 67.37      |
| 110                  | SURVEY FIELD TECHNICIAN<br>(OPERATE TOTAL STATION, GPS<br>RECEIVER, LEVEL, ROD OR RANGE<br>POLES, STEEL TAPE<br>MEASUREMENT; MARK AND<br>DRIVE STAKES; HAND OR POWER<br>DIGGING FOR AND<br>IDENTIFICATION OF MARKERS OR<br>MONUMENTS; PERFORM AND<br>CHECK CALCULATIONS; REVIEW<br>AND UNDERSTAND<br>CONSTRUCTION PLANS AND LAND<br>SURVEY MATERIALS). THIS<br>CLASSIFICATION DOES NOT APPLY<br>TO THE WORK PERFORMED ON A<br>PREVAILING WAGE PROJECT BY A<br>LAND SURVEYOR WHO IS<br>LICENSED PURSUANT TO<br>MINNESOTA STATUTES, SECTIONS<br>326.02 TO 326.15. | 2023-11-20  | 38.90      | 23.49       | 62.39      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2024-05-01  | 41.63      | 24.24       | 65.87      |
| 111                  | TRAFFIC CONTROL PERSON<br>(TEMPORARY SIGNAGE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2023-11-20  | 38.90      | 23.49       | 62.39      |

| LABOR CODE AND CLASS                          |                                                                                                                                                                                                                                                                                                                                                     | EFFECT DATE | BASIC RATE | FRINGE RATE | TOTAL RATE |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|-------------|------------|
|                                               |                                                                                                                                                                                                                                                                                                                                                     | 2024-05-01  | 41.63      | 24.24       | 65.87      |
| 112                                           | QUALITY CONTROL TESTER (FIELD AND COVERED OFF-SITE FACILITIES; TESTING OF AGGREGATE, ASPHALT, AND CONCRETE MATERIALS); LIMITED TO MN DOT HIGHWAY AND HEAVY CONSTRUCTION PROJECTS WHERE THE MN DOT HAS RETAINED QUALITY ASSURANCE PROFESSIONALS TO REVIEW AND INTERPRET THE RESULTS OF QUALITY CONTROL TESTERS. SERVICES PROVIDED BY THE CONTRACTOR. | 2023-11-20  | 16.28      | 4.07        | 20.35      |
| <b>SPECIAL EQUIPMENT (201 - 204)</b>          |                                                                                                                                                                                                                                                                                                                                                     |             |            |             |            |
| 201                                           | ARTICULATED HAULER                                                                                                                                                                                                                                                                                                                                  | 2023-11-20  | 42.49      | 25.20       | 67.69      |
|                                               |                                                                                                                                                                                                                                                                                                                                                     | 2024-04-29  | 44.67      | 26.40       | 71.07      |
| 202                                           | BOOM TRUCK                                                                                                                                                                                                                                                                                                                                          | 2023-11-20  | 44.94      | 25.20       | 70.14      |
|                                               |                                                                                                                                                                                                                                                                                                                                                     | 2024-04-29  | 47.25      | 26.40       | 73.65      |
| 203                                           | LANDSCAPING EQUIPMENT, INCLUDES HYDRO SEEDER OR MULCHER, SOD ROLLER, FARM TRACTOR WITH ATTACHMENT SPECIFICALLY SEEDING, SODDING, OR PLANT, AND TWO-FRAMED FORKLIFT (EXCLUDING FRONT, POSIT-TRACK, AND SKID STEER LOADERS), NO EARTHWORK OR GRADING FOR ELEVATIONS                                                                                   | 2023-11-20  | 28.29      | 20.41       | 48.70      |
|                                               |                                                                                                                                                                                                                                                                                                                                                     | 2024-05-01  | 30.04      | 21.16       | 51.20      |
| 204                                           | OFF-ROAD TRUCK                                                                                                                                                                                                                                                                                                                                      | 2023-11-20  | 42.49      | 25.20       | 67.69      |
|                                               |                                                                                                                                                                                                                                                                                                                                                     | 2024-04-29  | 44.67      | 26.40       | 71.07      |
| 205                                           | PAVEMENT MARKING OR MARKING REMOVAL EQUIPMENT (ONE OR TWO PERSON OPERATORS); SELF-PROPELLED TRUCK OR TRAILER MOUNTED UNITS.                                                                                                                                                                                                                         | 2023-11-20  | 32.04      | 21.96       | 54.00      |
| <b>HIGHWAY/HEAVY POWER EQUIPMENT OPERATOR</b> |                                                                                                                                                                                                                                                                                                                                                     |             |            |             |            |



| LABOR CODE AND CLASS |                                                                                                                                                                                                                                     | EFFECT DATE | BASIC RATE | FRINGE RATE | TOTAL RATE |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|-------------|------------|
| <b>GROUP 2</b>       |                                                                                                                                                                                                                                     | 2023-11-20  | 43.38      | 25.20       | 68.58      |
|                      |                                                                                                                                                                                                                                     | 2024-04-29  | 45.61      | 26.40       | 72.01      |
| 302                  | HELICOPTER PILOT (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                                           |             |            |             |            |
| 303                  | CONCRETE PUMP (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                                              |             |            |             |            |
| 304                  | ALL CRANES WITH OVER 135-FOOT BOOM, EXCLUDING JIB (HIGHWAY AND HEAVY ONLY)                                                                                                                                                          |             |            |             |            |
| 305                  | DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR OTHER SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS THREE CUBIC YARDS AND OVER MANUFACTURER.S RATED CAPACITY INCLUDING ALL ATTACHMENTS. (HIGHWAY AND HEAVY ONLY) |             |            |             |            |
| 306                  | GRADER OR MOTOR PATROL                                                                                                                                                                                                              |             |            |             |            |
| 307                  | PILE DRIVING (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                                               |             |            |             |            |
| 308                  | TUGBOAT 100 H.P. AND OVER WHEN LICENSE REQUIRED (HIGHWAY AND HEAVY ONLY)                                                                                                                                                            |             |            |             |            |
| <b>GROUP 3</b>       |                                                                                                                                                                                                                                     | 2023-11-20  | 42.81      | 25.20       | 68.01      |
|                      |                                                                                                                                                                                                                                     | 2024-04-29  | 45.01      | 26.40       | 71.41      |
| 309                  | ASPHALT BITUMINOUS STABILIZER PLANT                                                                                                                                                                                                 |             |            |             |            |
| 310                  | CABLEWAY                                                                                                                                                                                                                            |             |            |             |            |
| 311                  | CONCRETE MIXER, STATIONARY PLANT (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                           |             |            |             |            |
| 312                  | DERRICK (GUY OR STIFFLEG)(POWER)(SKIDS OR STATIONARY) (HIGHWAY AND HEAVY ONLY)                                                                                                                                                      |             |            |             |            |
| 313                  | DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS, UP TO THREE CUBIC YARDS MANUFACTURER.S RATED CAPACITY INCLUDING ALL ATTACHMENTS (HIGHWAY AND HEAVY ONLY)          |             |            |             |            |
| 314                  | DREDGE OR ENGINEERS, DREDGE (POWER) AND ENGINEER                                                                                                                                                                                    |             |            |             |            |
| 315                  | FRONT END LOADER, FIVE CUBIC YARDS AND OVER INCLUDING ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)                                                                                                                                         |             |            |             |            |
| 316                  | LOCOMOTIVE CRANE OPERATOR                                                                                                                                                                                                           |             |            |             |            |
| 317                  | MIXER (PAVING) CONCRETE PAVING, ROAD MOLE, INCLUDING MUCKING OPERATIONS, CONWAY OR SIMILAR TYPE                                                                                                                                     |             |            |             |            |
| 318                  | MECHANIC . WELDER ON POWER EQUIPMENT (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                       |             |            |             |            |
| 319                  | TRACTOR . BOOM TYPE (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                                        |             |            |             |            |
| 320                  | TANDEM SCRAPER                                                                                                                                                                                                                      |             |            |             |            |
| 321                  | TRUCK CRANE . CRAWLER CRANE (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                                |             |            |             |            |
| 322                  | TUGBOAT 100 H.P AND OVER (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                                   |             |            |             |            |
| <b>GROUP 4</b>       |                                                                                                                                                                                                                                     | 2023-11-20  | 42.49      | 25.20       | 67.69      |
|                      |                                                                                                                                                                                                                                     | 2024-04-29  | 44.67      | 26.40       | 71.07      |
| 323                  | AIR TRACK ROCK DRILL                                                                                                                                                                                                                |             |            |             |            |
| 324                  | AUTOMATIC ROAD MACHINE (CMI OR SIMILAR) (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                    |             |            |             |            |
| 325                  | BACKFILLER OPERATOR                                                                                                                                                                                                                 |             |            |             |            |
| 326                  | CONCRETE BATCH PLANT OPERATOR (HIGHWAY AND HEAVY ONLY)                                                                                                                                                                              |             |            |             |            |
| 327                  | BITUMINOUS ROLLERS, RUBBER TIRED OR STEEL DRUMMED (EIGHT TONS AND OVER)                                                                                                                                                             |             |            |             |            |
| 328                  | BITUMINOUS SPREADER AND FINISHING MACHINES (POWER), INCLUDING PAVERS, MACRO SURFACING AND MICRO SURFACING, OR SIMILAR TYPES (OPERATOR AND SCREED PERSON)                                                                            |             |            |             |            |
| 329                  | BROKK OR R.T.C. REMOTE CONTROL OR SIMILAR TYPE WITH ALL ATTACHMENTS                                                                                                                                                                 |             |            |             |            |

| LABOR CODE AND CLASS | EFFECT DATE | BASIC RATE                                                                                                | FRINGE RATE | TOTAL RATE |
|----------------------|-------------|-----------------------------------------------------------------------------------------------------------|-------------|------------|
| 330                  |             | CAT CHALLENGER TRACTORS OR SIMILAR TYPES PULLING ROCK WAGONS, BULLDOZERS AND SCRAPERS                     |             |            |
| 331                  |             | CHIP HARVESTER AND TREE CUTTER                                                                            |             |            |
| 332                  |             | CONCRETE DISTRIBUTOR AND SPREADER FINISHING MACHINE, LONGITUDINAL FLOAT, JOINT MACHINE, AND SPRAY MACHINE |             |            |
| 333                  |             | CONCRETE MIXER ON JOBSITE (HIGHWAY AND HEAVY ONLY)                                                        |             |            |
| 334                  |             | CONCRETE MOBIL (HIGHWAY AND HEAVY ONLY)                                                                   |             |            |
| 335                  |             | CRUSHING PLANT (GRAVEL AND STONE) OR GRAVEL WASHING, CRUSHING AND SCREENING PLANT                         |             |            |
| 336                  |             | CURB MACHINE                                                                                              |             |            |
| 337                  |             | DIRECTIONAL BORING MACHINE                                                                                |             |            |
| 338                  |             | DOPE MACHINE (PIPELINE)                                                                                   |             |            |
| 339                  |             | DRILL RIGS, HEAVY ROTARY OR CHURN OR CABLE DRILL (HIGHWAY AND HEAVY ONLY)                                 |             |            |
| 340                  |             | DUAL TRACTOR                                                                                              |             |            |
| 341                  |             | ELEVATING GRADER                                                                                          |             |            |
| 342                  |             | FORK LIFT OR STRADDLE CARRIER (HIGHWAY AND HEAVY ONLY)                                                    |             |            |
| 343                  |             | FORK LIFT OR LUMBER STACKER (HIGHWAY AND HEAVY ONLY)                                                      |             |            |
| 344                  |             | FRONT END, SKID STEER OVER 1 TO 5 C YD                                                                    |             |            |
| 345                  |             | GPS REMOTE OPERATING OF EQUIPMENT                                                                         |             |            |
| 346                  |             | HOIST ENGINEER (POWER) (HIGHWAY AND HEAVY ONLY)                                                           |             |            |
| 347                  |             | HYDRAULIC TREE PLANTER                                                                                    |             |            |
| 348                  |             | LAUNCHER PERSON (TANKER PERSON OR PILOT LICENSE)                                                          |             |            |
| 349                  |             | LOCOMOTIVE (HIGHWAY AND HEAVY ONLY)                                                                       |             |            |
| 350                  |             | MILLING, GRINDING, PLANNING, FINE GRADE, OR TRIMMER MACHINE                                               |             |            |
| 351                  |             | MULTIPLE MACHINES, SUCH AS AIR COMPRESSORS, WELDING MACHINES, GENERATORS, PUMPS (HIGHWAY AND HEAVY ONLY)  |             |            |
| 352                  |             | PAVEMENT BREAKER OR TAMPING MACHINE (POWER DRIVEN) MIGHTY MITE OR SIMILAR TYPE                            |             |            |
| 353                  |             | PICKUP SWEEPER, ONE CUBIC YARD AND OVER HOPPER CAPACITY(HIGHWAY AND HEAVY ONLY)                           |             |            |
| 354                  |             | PIPELINE WRAPPING, CLEANING OR BENDING MACHINE                                                            |             |            |
| 355                  |             | POWER PLANT ENGINEER, 100 KWH AND OVER (HIGHWAY AND HEAVY ONLY)                                           |             |            |
| 356                  |             | POWER ACTUATED HORIZONTAL BORING MACHINE, OVER SIX INCHES                                                 |             |            |
| 357                  |             | PUGMILL                                                                                                   |             |            |
| 358                  |             | PUMPCRETE (HIGHWAY AND HEAVY ONLY)                                                                        |             |            |
| 359                  |             | RUBBER-TIRED FARM TRACTOR WITH BACKHOE INCLUDING ATTACHMENTS (HIGHWAY AND HEAVY ONLY)                     |             |            |
| 360                  |             | SCRAPER                                                                                                   |             |            |
| 361                  |             | SELF-PROPELLED SOIL STABILIZER                                                                            |             |            |
| 362                  |             | SLIP FORM (POWER DRIVEN) (PAVING)                                                                         |             |            |
| 363                  |             | TIE TAMPER AND BALLAST MACHINE                                                                            |             |            |
| 364                  |             | TRACTOR, BULLDOZER (HIGHWAY AND HEAVY ONLY)                                                               |             |            |
| 365                  |             | TRACTOR, WHEEL TYPE, OVER 50 H.P. WITH PTO UNRELATED TO LANDSCAPING (HIGHWAY AND HEAVY ONLY)              |             |            |
| 366                  |             |                                                                                                           |             |            |

| LABOR CODE AND CLASS | EFFECT DATE | BASIC RATE | FRINGE RATE | TOTAL RATE |
|----------------------|-------------|------------|-------------|------------|
|                      |             |            |             |            |
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| 367                  |             |            |             |            |
| 368                  |             |            |             |            |
|                      |             |            |             |            |
| <b>GROUP 5</b>       | 2023-11-20  | 39.33      | 25.20       | 64.53      |
|                      | 2024-04-29  | 41.36      | 26.40       | 67.76      |
| 369                  |             |            |             |            |
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| 385                  |             |            |             |            |
| <b>GROUP 6</b>       | 2023-11-20  | 38.06      | 25.20       | 63.26      |
|                      | 2024-04-29  | 40.02      | 26.40       | 66.42      |
| 387                  |             |            |             |            |
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| LABOR CODE AND CLASS  |                                                                                         | EFFECT DATE | BASIC RATE | FRINGE RATE | TOTAL RATE |
|-----------------------|-----------------------------------------------------------------------------------------|-------------|------------|-------------|------------|
| <b>TRUCK DRIVERS</b>  |                                                                                         |             |            |             |            |
| <b>GROUP 1</b>        |                                                                                         | 2023-11-20  | 31.25      | 17.50       | 48.75      |
| 601                   | MECHANIC . WELDER                                                                       |             |            |             |            |
| 602                   | TRACTOR TRAILER DRIVER                                                                  |             |            |             |            |
| 603                   | TRUCK DRIVER (HAULING MACHINERY INCLUDING OPERATION OF HAND AND POWER OPERATED WINCHES) |             |            |             |            |
| <b>GROUP 2</b>        |                                                                                         | 2023-11-20  | 34.70      | 21.76       | 56.46      |
| 604                   | FOUR OR MORE AXLE UNIT, STRAIGHT BODY TRUCK                                             |             |            |             |            |
| <b>GROUP 3</b>        |                                                                                         | 2023-11-20  | 34.60      | 21.76       | 56.36      |
| 605                   | BITUMINOUS DISTRIBUTOR DRIVER                                                           |             |            |             |            |
| 606                   | BITUMINOUS DISTRIBUTOR (ONE PERSON OPERATION)                                           |             |            |             |            |
| 607                   | THREE AXLE UNITS                                                                        |             |            |             |            |
| <b>GROUP 4</b>        |                                                                                         | 2023-11-20  | 37.54      | 21.76       | 59.30      |
| 608                   | BITUMINOUS DISTRIBUTOR SPRAY OPERATOR (REAR AND OILER)                                  |             |            |             |            |
| 609                   | DUMP PERSON                                                                             |             |            |             |            |
| 610                   | GREASER                                                                                 |             |            |             |            |
| 611                   | PILOT CAR DRIVER                                                                        |             |            |             |            |
| 612                   | RUBBER-TIRED, SELF-PROPELLED PACKER UNDER 8 TONS                                        |             |            |             |            |
| 613                   | TWO AXLE UNIT                                                                           |             |            |             |            |
| 614                   | SLURRY OPERATOR                                                                         |             |            |             |            |
| 615                   | TANK TRUCK HELPER (GAS, OIL, ROAD OIL, AND WATER)                                       |             |            |             |            |
| 616                   | TRACTOR OPERATOR, UNDER 50 H.P.                                                         |             |            |             |            |
| <b>SPECIAL CRAFTS</b> |                                                                                         |             |            |             |            |
| 701                   | HEATING AND FROST INSULATORS                                                            | 2023-11-20  | 47.10      | 24.40       | 71.50      |
| 702                   | BOILERMAKERS                                                                            | 2023-11-20  | 44.37      | 30.55       | 74.92      |
|                       |                                                                                         | 2024-01-01  | 46.00      | 31.93       | 77.93      |
| 703                   | BRICKLAYERS                                                                             | 2023-11-20  | 45.47      | 25.76       | 71.23      |
|                       |                                                                                         | 2024-05-01  | 48.51      | 25.76       | 74.27      |
| 704                   | CARPENTERS                                                                              | 2023-11-20  | 43.58      | 27.91       | 71.49      |
|                       |                                                                                         | 2024-05-01  | 47.08      | 27.91       | 74.99      |
| 705                   | CARPET LAYERS (LINOLEUM)                                                                |             |            |             |            |

| LABOR CODE AND CLASS |                                                                                          | EFFECT DATE                                                                                                          | BASIC RATE | FRINGE RATE | TOTAL RATE |
|----------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------|-------------|------------|
|                      |                                                                                          | FOR RATE CALL 651-284-5091 OR EMAIL<br><u><a href="mailto:DLI.PREVWAGE@STATE.MN.US">DLI.PREVWAGE@STATE.MN.US</a></u> |            |             |            |
| 706                  | CEMENT MASONS                                                                            | 2023-11-20                                                                                                           | 45.17      | 24.22       | 69.39      |
|                      |                                                                                          | 2024-04-29                                                                                                           | 48.57      | 24.22       | 72.79      |
| 707                  | ELECTRICIANS                                                                             | 2023-11-20                                                                                                           | 52.00      | 32.80       | 84.80      |
| 711                  | GROUND PERSON                                                                            | 2023-11-20                                                                                                           | 35.60      | 18.92       | 54.52      |
| 712                  | IRONWORKERS                                                                              | 2023-11-20                                                                                                           | 43.00      | 34.11       | 77.11      |
|                      |                                                                                          | 2024-04-28                                                                                                           | 46.00      | 34.11       | 80.11      |
| 713                  | LINEMAN                                                                                  | 2023-11-20                                                                                                           | 50.86      | 23.57       | 74.43      |
| 714                  | MILLWRIGHT                                                                               | 2023-11-20                                                                                                           | 40.39      | 33.37       | 73.76      |
|                      |                                                                                          | 2024-05-01                                                                                                           | 43.44      | 33.37       | 76.81      |
| 715                  | PAINTERS (INCLUDING HAND BRUSHED, HAND SPRAYED, AND THE TAPING OF PAVEMENT MARKINGS)     | 2023-11-20                                                                                                           | 38.70      | 22.76       | 61.46      |
| 716                  | PILEDRIIVER (INCLUDING VIBRATORY DRIVER OR EXTRACTOR FOR PILING AND SHEETING OPERATIONS) | 2023-11-20                                                                                                           | 43.53      | 27.91       | 71.44      |
|                      |                                                                                          | 2024-05-01                                                                                                           | 47.03      | 27.91       | 74.94      |
| 717                  | PIPEFITTERS . STEAMFITTERS                                                               | 2023-11-20                                                                                                           | 53.94      | 33.30       | 87.24      |
|                      |                                                                                          | 2024-05-01                                                                                                           | 57.14      | 33.30       | 90.44      |
| 719                  | PLUMBERS                                                                                 | 2023-11-20                                                                                                           | 52.60      | 31.10       | 83.70      |
| 721                  | SHEET METAL WORKERS                                                                      | 2023-11-20                                                                                                           | 44.46      | 29.17       | 73.63      |
| 723                  | TERRAZZO WORKERS                                                                         | FOR RATE CALL 651-284-5091 OR EMAIL<br><u><a href="mailto:DLI.PREVWAGE@STATE.MN.US">DLI.PREVWAGE@STATE.MN.US</a></u> |            |             |            |
| 724                  | TILE SETTERS                                                                             | 2023-11-20                                                                                                           | 34.76      | 23.29       | 58.05      |
| 725                  | TILE FINISHERS                                                                           | FOR RATE CALL 651-284-5091 OR EMAIL<br><u><a href="mailto:DLI.PREVWAGE@STATE.MN.US">DLI.PREVWAGE@STATE.MN.US</a></u> |            |             |            |

| LABOR CODE AND CLASS |                           | EFFECT DATE                                                                                                        | BASIC RATE | FRINGE RATE | TOTAL RATE |
|----------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------|------------|-------------|------------|
| 727                  | WIRING SYSTEM TECHNICIAN  | 2023-11-20                                                                                                         | 44.61      | 20.16       | 64.77      |
| 728                  | WIRING SYSTEMS INSTALLER  | 2023-11-20                                                                                                         | 31.25      | 16.34       | 47.59      |
| 729                  | ASBESTOS ABATEMENT WORKER | 2023-11-20                                                                                                         | 37.63      | 23.36       | 60.99      |
|                      |                           | 2024-01-01                                                                                                         | 39.86      | 24.11       | 63.97      |
| 730                  | SIGN ERECTOR              | FOR RATE CALL 651-284-5091 OR EMAIL<br><u><a href="mailto:DLLPREVWAGE@STATE.MN.US">DLLPREVWAGE@STATE.MN.US</a></u> |            |             |            |



**MINNESOTA LABOR AND WAGE RATE REQUIREMENTS**

**1.01 GENERAL**

- A. Contractor shall conform to the requirements herein specified.
- B. The wage rates provided are in effect on the date of these documents and shall remain in effect for the entire project regardless of the start date or duration of the Work.

**1.02 LABOR PROVISIONS**

- A. Contractor shall have copies of these provisions on file at the job headquarters, and shall post a notice, approved by Engineer, in a conspicuous place at the site of the Work, informing employees that these provisions are available for their inspection. If a job headquarters is not provided, Contractor shall provide an individual copy to each employee on the job. A copy of the submitted notice will be provided to Owner.

**1.03 EMPLOYMENT CLASSIFICATIONS**

- A. All employees on the Project shall be classified as being in one of the following four categories, in accordance with the definitions given:
  - 1. Executive or Administrative
    - a. Employees in this category shall be classified in accordance with the definitions for Executive and Administrative employees as adopted by the Secretary of Labor, and in effect at the time of invitations for bids.
  - 2. Skilled
    - a. Skilled labor shall include the operators of complex, heavy power equipment and skilled craftsmen at the journeyman grade.
  - 3. Intermediate Grade
    - a. Intermediate Grade labor shall include:
      - 1) Operators of power equipment except complex, heavy power equipment; trucks of 1 and 1/2 tons or less (manufacturer's rated capacity); tractors of less than 20 horsepower (manufacturer's rated capacity), and passenger cars; and
      - 2) Persons performing any other labor that requires considerable training and experience.
  - 4. Unskilled
    - a. Unskilled labor shall include:
      - 1) Operators of trucks of 1 and 1/2 tons or less (manufacturer's rated capacity), operators of tractors of less than 20 horsepower (manufacturer's rated capacity), and operators of passenger cars; and
      - 2) Helpers of journeyman craftsmen and all other labor that requires no special skill or experience or the exercise of discretion or judgment.

**1.04 LABOR INFORMATION**

- A. In the selection of labor, Contractor may use the services of the Minnesota State Employment Service.

**1.05 MINIMUM WAGE RATES**

- A. The minimum hourly rates of wages required to be paid to the various laborers and mechanics employed by Contractor shall be an amount equal to the sum of the basic hourly wage rate plus applicable fringe benefits as noted in the schedule contained in the prevailing Wages for state Funded Construction projects of the Minnesota Department of Labor and Industry. These rates have been determined by the Minnesota Department of Labor and Industry pursuant to the provisions set forth in Minnesota Statutes, Sections 177.41 through 177.44 as applicable, to be those prevailing on the same type of work on similar construction in the immediate locality.



During the periods from the time an hourly employee is required to report for duty at the site of the Work until such time that he/she is released or permitted to leave the site of the Work, no deduction shall be made from his/her time for any delays of less than 30 consecutive minutes.

In the event the Contractor or subcontractor employees apprentice workers under the occupational training program of the State of Minnesota, Department of Education, or under the Division of Voluntary Apprenticeship of the State of Minnesota, Department of Labor and Industry, or under the Veterans Training Program of the United States Veterans Administration, he/she may pay wages to such apprentice workers at hourly rates approved by the appropriate agency regardless of the hourly rates specified in the schedule of wage rates to be paid to any classification of labor.

A Contractor or subcontractor may discharge his/her minimum hourly rate obligation as defined above by (a) making cash payments to the employee plus payments to an employees' fringe benefit program, funded or unfunded, that is established by collective bargaining agreements, the sum of which is equal to the minimum hourly rate; or (b) making payments in cash to the employee in the amount equal to the minimum hourly rate.

While the rates shown are at the minimum hourly rates required for the life of this Contract, this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to local labor conditions and prospective changes or adjustments of wage rates. No increase in the Contract Price shall be allowed or authorized on account of payment or rates in excess of those listed herein.

All cash payments due to mechanics and laborers employed or working upon the site of the Work shall be paid unconditionally and not less often than once a week, and without subsequent deductions or rebate on any account regardless of any contractual relationship which may be alleged to exist between the Contractor or subcontractor and such laborers and mechanics.

The schedule shall be kept posted by the Contractor at the site of the Work in a conspicuous place where it can be easily seen by the workers.

If an employee has a question in regard to the minimum wage rate paid, he should communicate directly with his employer. If the issue remains unresolved, the employee should be informed that he may take his question to the Owner for solution.

Owner may withhold or cause to be withheld from the Contractor a portion of the amounts due to the Contractor as may be considered necessary to ensure payment to laborers and mechanics employed by the Contractor or any subcontractor on the Work the full amount of the minimum hourly rates required by the Contract.

## **1.06 PREVAILING HOURS OF LABOR**

- A. The Prevailing Wages for State Funded Construction Contracts issued by the Minnesota Department of Labor and Industry, which are available from the Department of Labor and Industry, set forth the Prevailing Hours of Labor as 8 hours per day or 40 hours per week. In accordance with Minnesota Statutes Sections 177.41 through 177.44 as applicable, Subdivision 1, employees may not be permitted or required to work longer than the prevailing Hours of Labor unless the employee is paid for all hours in excess of the prevailing hours at a rate of at least 1 and 1/2 times his/her hourly basic rate of pay; nor shall he/she be paid a lesser rate of wages than the prevailing wage rate in the same or most similar trade or occupation in the area.

## **1.07 REQUIRED CONTRACT PROVISIONS**

- A. These Contract provisions shall apply to all Work performed on the Contract by the Contractor with his/her own organization and with the assistance of workmen under his/her immediate superintendence and to all Work performed on the Contract by piecework, station work, or by subcontract.

Contractor shall insert in each of his/her subcontracts all stipulations contained in these Required Contract Provisions and also a clause requiring his/her subcontractors to include these Required Contract

Provisions in any lower tier subcontracts which they may enter into, together with a clause requiring the inclusion of these provisions in any further subcontract that may in turn be made. The Required Contract Provisions shall in no instance be incorporated by reference.

**A breach of any of the stipulations contained in these Required Contract provisions may be grounds for termination of the Contract.**

## **1.08 STATEMENTS AND PAYROLLS**

### **A. Payrolls and Payroll Records**

1. Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the Work and preserved for a period of three years thereafter for all laborers, mechanics, apprentices, trainees, watchmen, and guards working at the site of the Work. Such records shall contain name, social security number, and address of each such employee, his/her correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever it is found by the Department of Labor, upon written request of the Contractor, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected and records which show the costs anticipated or the actual cost incurred in providing such benefits.
2. While performing work on the Contract, the Contractor shall furnish under oath signed by an owner or officer of the organization, to the contracting authority and the project owner every two weeks, a certified payroll report with respect to the wages and benefits paid each employee during the preceding weeks specifying for each employee the following:
  - a. Full name.
  - b. Individual identification number (e.g., Last four digits of social security number, full social security numbers and addresses shall not be submitted with certified payroll reports).
  - c. Prevailing wage master job classification.
  - d. Hours worked each day.
  - e. Total hours.
  - f. Rate of pay.
  - g. Gross amount earned.
  - h. Each deduction for taxes.
  - i. Total deductions.
  - j. Net pay for the week.
  - k. Dollars contributed per hour for each benefit (including name and address of administrator).
  - l. Benefit account number.
  - m. Telephone number for health and welfare, vacation or holiday, apprenticeship training, pension, and other benefit programs.
  - n. Contractor shall submit a statement indicating that the wage rates contained therein are not less than those determined by the Department of Labor and Industry, and that the classification set forth for each laborer or mechanic conform with the work he/she performed, i.e., Form MnDOT 21658A.
3. Contractor shall make the records required under the labor standards clauses of the Contract available for inspection by authorized representatives of the Owner and the Department of Labor and Industry, and shall permit such representatives to interview employees during working hours on the job.
4. The wages of labor shall be paid in legal tender of the United States, except that this will be considered satisfied if payment is made by negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payment, Contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.
5. No fee of any kind shall be asked or accepted by the Contractor or any of his/her agents from any person as a condition of employment on the Project.
6. No laborers shall be charged for any tools in performing their respective duties except for reasonable avoidable loss or damage thereto.

7. Every employee on the Work covered by this Contract shall be permitted to lodge, board, and trade where and with whom he/she elects, and neither Contractor nor his/her agents, nor his/her employees shall, directly or indirectly, require as a condition of employment that an employee shall lodge, board, or trade at a particular place or with a particular person.
8. No charge shall be made for any transportation furnished by the Contractor, or his/her agents, to any person employed on the Work.
9. No individual shall be employed as a laborer or mechanic on this Contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks, or other equipment from an individual.
10. It shall be Contractor's responsibility to determine the proper wage rates to be paid for each class of Work on this Contract.

#### **1.09 PAYROLL CERTIFICATION**

- A. With initial Application for Payment, submit statement from each contractor that prevailing wages were paid to personnel working on the Project.
- B. Copies of weekly payroll statements may be required by Owner.
- C. Contractor shall submit certification that he has complied with this section of the specifications before final payment will be made.

**END OF DOCUMENT**

# Standard Specifications for Utility and Street Construction

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January 2024





**SECTION 00 01 10**  
**TABLE OF CONTENTS**

**Introductory Information**

|          |                         |
|----------|-------------------------|
| 00 01 10 | Table of Contents       |
| 00 71 00 | Contracting Definitions |

**SPECIFICATIONS GROUP**

**GENERAL REQUIREMENTS SUBGROUP**

**Division 01 - General Requirements**

|          |                                        |
|----------|----------------------------------------|
| 01 31 00 | Project Management and Coordination    |
| 01 33 00 | Submittal Procedures                   |
| 01 40 00 | Quality Requirements                   |
| 01 50 00 | Temporary Facilities and Controls      |
| 01 57 13 | Temporary Erosion and Sediment Control |
| 01 70 00 | Execution Requirements                 |

**Division 02 - Existing Conditions**

|          |                           |
|----------|---------------------------|
| 02 41 13 | Selective Site Demolition |
|----------|---------------------------|

**SITE AND INFRASTRUCTURE SUBGROUP**

**Division 12 - Furnishings**

|          |                             |
|----------|-----------------------------|
| 12 41 00 | Furnishings and Accessories |
|----------|-----------------------------|

**Division 26 - Electrical and Lighting**

|          |                                     |
|----------|-------------------------------------|
| 26 05 59 | Irrigation System Electrical Supply |
| 26 56 00 | Exterior Lighting                   |

**Division 31 - Earthwork**

|          |                      |
|----------|----------------------|
| 31 10 00 | Site Clearing        |
| 31 23 00 | Excavation and Fill  |
| 31 23 13 | Subgrade Preparation |

**Division 32 - Exterior Improvements**

|          |                                                     |
|----------|-----------------------------------------------------|
| 32 11 23 | Aggregate Base Courses                              |
| 32 11 25 | Full Depth Reclamation                              |
| 32 12 01 | Flexible Paving                                     |
| 32 13 14 | Concrete Walks, Medians, & Driveways                |
| 32 16 13 | Concrete Curbs and Gutters                          |
| 32 17 23 | Pavement Markings                                   |
| 32 80 00 | Irrigation System                                   |
| 32 92 00 | Turf and Grasses                                    |
| 32 93 05 | Planting Materials, Installation, and Establishment |

**Division 33 - Utilities**

|          |                                              |
|----------|----------------------------------------------|
| 33 01 38 | Cured-in-Place Pipe (CIPP) Gravity           |
| 33 01 40 | Sewer Pipe Joint Sealing                     |
| 33 01 46 | Manhole Rehabilitation                       |
| 33 05 06 | Trenching and Backfilling                    |
| 33 05 18 | Adjust Miscellaneous Structures              |
| 33 05 20 | Reconstruct Miscellaneous Structures         |
| 33 05 28 | Conduit for Private Utilities                |
| 33 08 30 | Commissioning of Sanitary Sewerage Utilities |
| 33 10 00 | Water Utilities                              |
| 33 14 18 | Water Utility Service Laterals               |
| 33 31 00 | Sanitary Sewerage Piping                     |
| 33 31 14 | Sanitary Sewerage Services                   |
| 33 39 00 | Sanitary Sewerage Structures                 |
| 33 40 00 | Stormwater Utilities                         |
| 33 41 00 | Subdrainage                                  |

**Division 34 - Transportation**

|          |                           |
|----------|---------------------------|
| 34 41 05 | Traffic Signs and Devices |
|----------|---------------------------|

**END OF SECTION**

**SECTION 00 71 00**  
**CONTRACTING DEFINITIONS**

**PUBLIC PROJECTS:**

Owner: As identified in the Agreement (Section 00 52 00).

Engineer: As identified in the Agreement (Section 00 52 00).

Whenever reference is made to the Minnesota Department of Transportation Specifications, such reference shall mean "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.) and all subsequent revisions and supplements. The word "Engineer" is understood to refer to the Engineer for the Owner.

**PRIVATE PROJECTS:**

Owner: Whenever reference is made within the City of Cottage Grove's Standard Specifications for Utility and Street Construction, the word "Owner" is understood to refer to the City of Cottage Grove.

Engineer: Whenever reference is made within the City of Cottage Grove's Standard Specifications for Utility and Street Construction, the word "Engineer" is understood to refer to the City of Cottage Grove's designated engineering representative.

Whenever reference is made to the Minnesota Department of Transportation Specifications, such reference shall mean "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.) and all subsequent revisions and supplements. The word "Engineer" is understood to refer to the City of Cottage Grove's designated engineering representative.

Whenever reference is made to the General Conditions, such reference shall mean "Standard General Conditions of the Construction Contract" as published by the Engineers Joint Contract Documents Committee (EJCDC) 2018 version.

**END OF SECTION**



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## **SECTION 01 31 00**

### **PROJECT MANAGEMENT AND COORDINATION**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A. Section Includes:
  - 1. General requirements for overall Project coordination.

##### **1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.
- B. Related Sections:
  - 1. 01 33 00 Submittal Procedures

##### **1.03 PROJECT COORDINATION**

- A. Coordinate all Work with the Engineer and City engineering staff. City engineering staff are located at Cottage Grove City Hall, 12800 Ravine Parkway South. Regular office hours are 8 A.M. to 4:30 P.M.
- B. Coordinate the Work of the Contract and the Work of others relating to the Project. Work with others to cause the efficient and timely completion of the Work. These responsibilities include, among others, the following:
  - 1. Coordinate activities of all sub-contractors.
  - 2. Inform emergency services (Police, Fire), Post Office, and Schools of traffic situations as appropriate to Project circumstances.
  - 3. Inform City Public Works Department of Project schedule and upcoming activities that will affect their operation.
  - 4. Inform non-municipal utilities (gas, telephone, electric, etc.) of Project schedule to allow for planning of any activities they wish to coordinate with the Project.
  - 5. Maintain and coordinate access needs of adjacent properties.
  - 6. Conform to the requirements of Section 01 33 00.

##### **1.04 UTILITIES**

- A. Notify Gopher State One Call before starting construction in a given area requesting utility locates in the Site:
  - 1. Engineer has requested information at time of construction document preparation on existing private utilities via design locate request through the Gopher State One Call Program.
  - 2. The original version of the information supplied by the utilities is available for viewing at the office of the Engineer.

- B. Known Information On Private Utilities: Known information regarding the private utilities is depicted on the Drawings and information supplied by utility companies can be viewed at the office of the Engineer by request.
- C. Project Utility Sources: Coordinate Work with the following utility owners:
  - 1. City of Cottage Grove Public Works                      651-458-2808
  - 2. Gopher State One Call                                              651-454-0002
- D. Locating Owner owned public utilities:
  - 1. Owner will complete initial locating of all existing Owner owned public utilities including communication lines, lighting, sanitary sewer, signal, storm sewer, and water utility. The request for initial locate of all utilities within the project limits must be submitted to Owner a minimum of 4 business days prior to the project start date.
  - 2. The responsibility of locating existing Owner owned utilities within the project limits shall be transferred to the Contractor after initial locating has been completed by the Owner until final completion.
  - 3. Contractor shall be responsible for locating all newly installed public utilities installed within the project limits until final completion.
  - 4. Locate requests within the project limits received by the Owner will be forwarded to the Contractor's representative responsible for coordinating locate requests within the project limits by email. Confirmation of receipt of the locate ticket must be sent by the Contractor's representative back to the Owner within 2 hours of Owner sending the locate request to the Contractor's representative.
  - 5. The Contractor shall be responsible for repairing any damage as the result of improperly located or unmarked public utilities within the project limits. The repair must be completed in accordance with the project requirements and to the satisfaction of the Engineer. This work shall be considered incidental.
  - 6. Owner requires a 48-hour notice for all utility interruptions.
- E. Coordinate the relocation or protection of all existing facilities. Any costs for such Work shall be the responsibility of the Contractor.

#### 1.05 PERMITS

- A. Apply for, obtain, and comply with the provisions of the following permits, which the Owner will waive the permit application fee:
  - 1. City of Cottage Grove Right-of-Way Permit
- B. Comply with the stipulations of the following permits, which have been applied for and will be furnished by the Owner.
  - 1. The following will be furnished on public projects only:
    - a. Minnesota Pollution Control Agency (MPCA) Permit for Sanitary Sewer Extensions.
    - b. Minnesota Department of Health (MDH) Permit for Water Main Extensions.
    - c. MPCA Stormwater Discharges Associated With Construction Activities NPDES General Permit.
- C. Apply for, obtain, and comply with other permits, licenses, and approvals which may be required for the Project.

## 1.06 SURVEYING AND CONSTRUCTION OBSERVATION

- A. Provide Engineer a minimum of 48-hour notice in advance of the need for establishing lines, grades, measurements, grade checks, and observation of Work.
- B. Engineer will furnish a Resident Project Representative.
- C. The Contractor is responsible for:
  - 1. Grades and elevations for pedestrian ramps.

## 1.07 PROJECT MEETINGS

- A. Administrative Requirements:
  - 1. Project Superintendent or persons designated by the Contractor to attend and participate in the Project meetings shall have all required authority to commit the Contractor to solutions agreed upon in the Project meetings.
  - 2. Engineer will set the time, sites, and prepare the agenda for the meetings.
  - 3. Engineer will prepare meeting minutes and distribute 1 copy to Contractor. Notify Engineer of inaccuracies or discrepancies in the meeting minutes within 5 calendar days of receipt of the minutes.
  - 4. The attendance and cooperation of subcontractors and suppliers may be required.
- B. Preconstruction Conference:
  - 1. Provisions for the Preconstruction Conference are set forth in the General Conditions.
  - 2. Requirements for preconstruction submittals are set forth in the General Conditions. Submittal procedures shall be consistent with Section 01 33 00.
- C. Progress Meeting Procedures:
  - 1. Weekly Status Meetings will be held during weeks when construction activity is occurring on the Project. The meetings will take place at Cottage Grove City Hall. Day and time will be determined at the preconstruction meeting. If no Work is occurring, no meeting will be required:
    - a. Weekly Status Meetings are anticipated to be 30 to 60 minutes in length.
    - b. Furnish a detailed schedule of work for the following week as well as provide an update on construction activity from the previous week for the purpose of allowing the City to provide information on its website as well as communicate to residents within the project limits.
    - c. Provide copies of erosion control inspections completed during the previous week.
    - d. Developers, private utilities, and others may attend to communicate Project issues.

## PART 2 PRODUCTS

Not Used.

## PART 3 EXECUTION

Not Used.

**END OF SECTION**

**SECTION 01 33 00**  
**SUBMITTAL PROCEDURES**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. General procedures and requirements for submittals during the course of construction.

**1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

**1.03 SEQUENCING AND SCHEDULING**

- A. Schedule submittals consistent with the Contractor's schedule of shop drawings.

**PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

**3.01 CONSTRUCTION SCHEDULE**

- A. Submit preliminary schedule and progress schedule consistent with the General Conditions.
- B. Prepare schedules on 11 inch by 17 inch sheets showing overall sequence of construction. Organize the schedule by work activity. Identify separate stages of each work activity:
  - 1. List work items in chronological sequence. Show beginning and completion dates of each activity. Include all activities with an estimated duration of 3 days or longer.
  - 2. Format schedule as a horizontal bar chart. Provide separate bars for each activity or trade.
  - 3. Provide space for revisions and notations.
  - 4. Identify interrelations between activities.
  - 5. Identify critical path of tasks to be performed.
  - 6. Include estimated times for preparation of submittals by Contractor, processing and review of submittals by Engineer, fabrication, delivery, installation, testing, start-up, instruction of Owner, and clean-up.
- C. As Work progresses, revise, update, and resubmit schedule as requested by Owner or Engineer. At a minimum, update schedule with each Application for Payment. Show all activities started or finished since previous schedule was submitted and show percentage of completion for each activity.

### 3.02 EMERGENCY CONTACT LIST

- A. Before any Work at the Site is started, submit a typed list on 8.5 inch by 11 inch paper outlining 24 hour on-call contacts for the Project. This list shall include the Contractor's safety representative, Contractor's locating representative, key representatives from the Contractor, subcontractors, and suppliers. Include the following information for each contact:
  - 1. Company name.
  - 2. Contact person(s).
  - 3. Local and mobile phone numbers.

### 3.03 SHOP DRAWINGS AND MANUFACTURERS' INFORMATION

- A. Conform to the requirements of the General Conditions, except as modified herein.
- B. The minimum sheet size shall be 8.5 inches by 11 inches. Non-legible copies will not be reviewed.
- C. Submit a minimum of 3 copies of shop drawings, plus the quantity of copies the Contractor wants returned, or submit electronically. Each copy shall contain the following information:
  - 1. Date of submission and date of any previous submittals.
  - 2. Project Title.
  - 3. Names Of: Contractor, subcontractor, supplier, and manufacturer.
  - 4. Identification of product and Specification Section number.
  - 5. Identification of revisions from previous submittals.
- D. Engineer's review will be in conformance with the requirements of the General Conditions, except as modified herein.
- E. Engineer will stamp shop drawings and indicate requirements for Contractor's review or re-submittal as follows:
  - 1. "Approved" – Appears that items covered by the submittal will, after installation or incorporation into the Work, conform to the Contract Documents and appears to be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
  - 2. "Approved as Noted" – Appears that items covered by the submittal will, after installation or incorporation into the Work, conform to the Contract Documents and appears to be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, except as noted by Engineer.
  - 3. "Revise and Resubmit" – Appears that items covered by the submittal will not, after installation or incorporation into the Work, conform to the Contract Documents and will not be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Work cannot proceed until the submittal is revised and resubmitted conforming to the re-submittal procedures described in the General Conditions.
  - 4. "Rejected" – Work covered by the submittal is not complete or it appears that items covered by the submittal will not, after installation or incorporation into the Work, conform to the Contract Documents and will not be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Contractor shall conform to the re-submittal procedures described in the General Conditions.

#### 3.04 TEST REPORTS

- A. Submit 3 copies of all inspections, tests and approvals required in the Specifications.

#### 3.05 MATERIAL AND SAFETY DATA SHEETS

- A. Furnish Owner with current copies of Material Safety Data Sheets for all chemicals and products on Site.

**END OF SECTION**



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**SECTION 01 40 00**  
**QUALITY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Information required for conformance to regulatory requirements.
  - 2. Quality assurance.
  - 3. Procedures to measure and report the quality and performance of the Work.

**1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

**1.03 REFERENCE STANDARDS**

- A. Whenever reference is made to the Minnesota Department of Transportation Specifications, such reference shall mean "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.) and all subsequent revisions and supplements. The word "Engineer" is understood to refer to the Engineer for the Owner.

**1.04 SUBMITTALS**

- A. Prior to start of Work, submit testing laboratory name for various specified tests for approval by Engineer.
- B. Laboratory test results or analysis.
- C. Manufacturer's certificates of quality control or performance.

**1.05 WORKMANSHIP**

- A. Comply with industry standards of the region, except where more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

**1.06 TESTS AND INSPECTIONS**

- A. Conform to the requirements of the General Conditions, except as modified herein.
- B. Notify Engineer 48 hours prior to expected time for operations requiring tests and inspections.
- C. Provide incidental labor and facilities to obtain and handle samples at Site or source, transport samples to laboratory, and facilitate tests and inspections for storing and curing of test samples.

- D. On public projects, Owner shall pay for all required tests except as indicated in the Specifications:
  - 1. If, under test, any portion of the work fails to meet contract requirements and is altered, renewed, replaced, tests on that portion so altered, removed, replaced, together with portions of the work as are affected thereby, shall, if so required by Engineer, be repeated within reasonable time and in accordance with the specified conditions and the Contractor shall reimburse Owner for incurred costs of all subsequent tests to ensure compliance.
- E. Notify Engineer of pit and scale location and other correlated items prior to beginning Work.
- F. Following substantial completion of the project and in accordance with Standard General Conditions of the Construction Contract, the Engineer and Owner will perform a Final Inspection of the work performed under the contract. Based on that Inspection 1 initial Inspection Notice Report (INR) will be prepared. Contractor shall notify Engineer when items listed in INR have been completed. The Engineer will inspect Contractor's work a second time to verify the items in the initial INR have been completed. If there are items still unacceptable to the Owner/Engineer, a second INR will be prepared. All costs for Owner's/Engineer's time to prepare the second and, if needed, subsequent INRs and to verify that the work has been completed will be deducted from payments to the Contractor.

#### 1.07 LABORATORY REPORTS

- A. After each inspection and test, submit 3 copies of Laboratory Report to Engineer.
- B. Include: Date issued, Project title and number, name of inspector, date and time of sampling or inspection, identification of product and Specifications Section, location in the Project, type of inspection or test, date of test, results of tests, and conformance with Contract Documents.

#### 1.08 LABORATORY RESPONSIBILITIES

- A. Test samples and perform field tests.
- B. Provide qualified personnel. Cooperate with Engineer and Contractor in performance of services.
- C. Ascertain compliance with the requirements of the Contract Documents.
- D. When requested by Engineer, provide interpretation of test results.

#### 1.09 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of the Work.
- C. Laboratory may not assume any duties of Contractor.
- D. Laboratory has no authority to stop Work.

#### 1.10 MANUFACTURER'S CERTIFICATES

- A. If requested by Engineer, submit manufacturer's certificate with shop drawings certifying that products meet or exceed specified requirements executed by responsible officer.

#### 1.11 MANUFACTURER'S FIELD SERVICES

- A. Provide qualified representative to observe field conditions; conditions of surfaces and installation; quality of workmanship; start-up of equipment; and test, adjust, and balance of equipment.

#### 1.12 RIGHT OF REJECTION

- A. The Engineer, acting for the Owner, shall have the right, at all time and places, to reject any articles or materials to be furnished hereunder which in any respect, fail to meet the requirements of these specifications, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site. If the Engineer or RPR, through an oversight or otherwise, has accepted materials or work which is defective or which is contrary to the specifications, such material, no matter in what stage or condition of manufacture, deliver, or erection may be the Engineer for the Owner.

### **PART 2 PRODUCTS**

NOT USED.

### **PART 3 EXECUTION**

NOT USED.

**END OF SECTION**

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## SECTION 01 50 00

### TEMPORARY FACILITIES AND CONTROLS

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Temporary utilities and miscellaneous temporary facilities required during construction.
- B. Products furnished but not installed under this Section or products installed but not furnished under this Section.
- C. Related Sections:
  - 1. Section 01 33 00 – Submittal Procedures.
  - 2. Section 33 10 00 – Water Utilities.
  - 3. Section 33 14 18 – Water Utility Service Laterals.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Mobilization: Measurement is Lump Sum. This will be considered payment in full for all work and costs of this Bid Item for the entire Project. Partial payment of the Lump Sum Bid Item “Mobilization” will be made using a percentage based on the table below. If the contract unit price for mobilization exceeds 5 percent of the total contract amount, the owner may withhold (on any partial estimate) the portion in excess of 5 percent until the Contractor earns at least 95 percent of the original contract amount.

|                                                  | Cumulative Percent of Mobilization Item Paid |
|--------------------------------------------------|----------------------------------------------|
| First Partial Payment                            | 50                                           |
| Percent of original contract amount earned - 25  | 70                                           |
| Percent of original contract amount earned - 50  | 90                                           |
| Percent of original contract amount earned - 100 | 100                                          |

- 2. Traffic Control: Measurement is Lump Sum. This shall be considered payment in full for all labor, equipment, and materials associated with the required Traffic Control devices for vehicular and pedestrian traffic for the entire Project. This Bid Item shall include but not be limited to furnishing, installing, maintaining, relocating, and ultimate removal of the Traffic Control devices used over the duration of the Contract or as directed by the Engineer. Also included within this item is temporary pavement markings and detours as shown in the Drawings. Partial payment of the Lump Sum Item “Traffic Control” will be made using a percentage based on the table below. If the contract unit price for Traffic Control exceeds 5 percent of the total contract amount, the owner may withhold (on any partial estimate) the portion in excess of 5 percent until the Contractor earns at least 95 percent of the original contract amount.

|                                                  | Cumulative Percent of<br>Traffic Control Item Paid |
|--------------------------------------------------|----------------------------------------------------|
| First Partial Payment                            | 50                                                 |
| Percent of original Contract amount earned – 25  | 70                                                 |
| Percent of original Contract amount earned – 50  | 90                                                 |
| Percent of original Contract amount earned – 100 | 100                                                |

3. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.).
- B. The Minnesota Manual on Uniform Traffic Control Devices (MMUTCD), including the Field Manual on Temporary Traffic Control Zone Layouts – Latest edition.
- C. Minnesota Department of Transportation Traffic Engineering Manual.

### 1.04 SUBMITTALS

- A. Construction Staging Plan consistent with Section 01 33 00, including the following information:
  1. Sequence of construction and traffic control.
  2. Streets closed or restricted during any stage of construction.
  3. Provisions for routing any detoured traffic as permitted.
  4. Specific signs, striping, and other traffic control devices to be utilized.
- B. Traffic Management Plan consistent with Section 01 33 00, including the following information:
  1. Haul and access routes.
  2. Permits or applications required by local authorities.
  3. Temporary facilities required.
  4. Names, addresses, and phone numbers of at least 3 individuals responsible for placement and maintenance of traffic control devices. At least one of these individuals shall be “on call” 24 hours per day, 7 days per week during the time any traffic control devices furnished and installed by the Contractor are in place.

## PART 2 PRODUCTS

### 2.01 TRAFFIC CONTROL CHANGE

- A. Sign:
  1. Conform to MMUTCD 6F30 - W3-X5, minimum dimensions of 36 inch X 36 inch.
  2. Sign material meeting the requirements of Section 34 41 05.
- B. High Level warning device:
  1. Conform to MMUTC 6F62 Orange flag, min 16 square inches surface area.

2. Minimum of two flags per sign.

## **PART 3 EXECUTION**

### **3.01 MOBILIZATION**

- A. Move personnel, equipment, materials, and all other items required to complete the Work at the Site.
- B. Establish Contractor offices, building, or other facilities necessary for Work on the Project.
- C. Temporarily hold or relocate utilities and any miscellaneous structures, such as signs, power poles, guy wires, and mailboxes disturbed.

### **3.02 TEMPORARY WATER FOR CONSTRUCTION AND USE OF OWNER'S WATER SYSTEM**

- A. Regulations of the Minnesota Department of Health as adopted by the City of Cottage Grove prohibits the indiscriminate use of the City's water hydrants by persons other than City personnel.
- B. Contractors are not allowed to operate or connect to a City hydrant for water usage without a Hydrant Use Permit. A Hydrant Use Permit is available at Public Works Department 8635 West Point Douglas Road. Office hours 7 A.M. to 3:30 P.M. A deposit is required for the use of a hydrant meter.
- C. No direct connection will be allowed from a hydrant to a tank truck or watering vehicle or hose. Contractor must provide a backflow preventer or fill pipe air gap equal to 2 times the diameter of the fill pipe or hose.
- D. Clean and thoroughly disinfect all containers and testing equipment to eliminate the possibility of contamination of the system.
- E. Disinfect water mains and services consistent with Section 33 10 00 and Section 33 14 18.
- F. The following is a summary of the procedural requirements for installation and testing of City water mains and services.
- G. Phase 1: Utility projects consisting of sanitary sewer, water main, and storm sewer improvements:
  1. Step 1 - Open Connections to Existing Mains and/or Fittings:
    - a. Contractor schedules shutdown and contacts City Water Department a minimum of 48 hours prior to performing Work. At this time, the Contractor is responsible to notify the City Fire Department of the intended shutdown. Contractor must abide with specific requirements for the Project that limits or defines certain hours that the shutdown maybe be performed.
    - b. If water service is to be turned off, the Contractor is responsible to provide written notification to all affected property owners and customers at least 48 hours prior to the actual loss of service.



- c. The City Water Department must open and close the existing valves for this part of the operation. If required, the City will be responsible for flushing the existing mains after the connection is completed; however, the Contractor shall assist the City as necessary.
- 2. Step 2 - Filling Newly Installed Water Mains Prior to Service Installation:
  - a. Contractor contacts City Water Department a minimum of 48 hours prior to performing Work. Engineer reviews with the Contractor the sequence of lines to be filled and which hydrants to open to eliminate trapped air. Taps of 1 inch diameter may be required in dead end plugs to relieve air from the system as part of the Project.
  - b. After the Contractor notifies the City Water Department, the Contractor and Engineer Representative operate valve to slowly fill the mains.
  - c. When filling water mains 12 inches and larger, the City Water Department must be present.
  - d. Contractor is responsible to verify that all existing valves are off and that untested water is not able to enter the City system. The Contractor is further responsible to have all new valves in their system open to assure that all new mains are filled but that the water is contained within the new system.
- 3. Step 3 - Water Service Installation:
  - a. All corporation stops shall be tapped with the main under water pressure.
  - b. Contractor is responsible to open all corporation stops and curb stops to bleed air and flush any dirt from the copper water line. Afterwards, the Contractor shall close the curb stop and shall crimp the end of the short tail section.
  - c. During the service installation activity, the Contractor opens and closes existing main valve as necessary to maintain pressure for tapping and bleeding service lines only. The Engineer Representative must be present at the time the Contractor re-pressurizes the mains.
  - d. Engineer checks and verifies that existing valve is opened and closed promptly; however, the Contractor is responsible for this procedure.
- 4. Step 4 - Pressure and Conductivity Testing:
  - a. Pressure and conductivity testing shall be performed as per the Contract Specifications and shall be performed in that order to assure mains are full of water for conductivity testing.
  - b. All service lines shall be in place and on before the pressure test is administered.
  - c. Document and provide the City with static pressure readings obtained during the pressure testing procedure.
- 5. Step 5 - Flushing of Water Mains for Bacteria Test:
  - a. Contractor contacts City Water Department a minimum of 48 hours prior to performing Work. Engineer reviews with Contractor the sequence of lines and valves to operate to thoroughly flush system.
  - b. After notifying the City, the Engineer Representative and Contractor operate existing valve/valves for flushing.
  - c. City Water Department must be present when flushing water mains 12 inches and larger.
  - d. Contractor shall notify the Engineer for the scheduling of water sample for bacteria test, which shall be pulled and tested by a certified independent testing firm. The Contractor will be required to assist the Engineer to operate valves for sampling if necessary.
- 6. Step 6 - Turning On New Mains into Existing Water System:
  - a. All testing complete - pressure, conductivity, and bacteria accepted by the Engineer.

- b. Engineer completes required documentation notifying Public Works Department, Engineering Department, and Building Inspection Department that the new system is turned on or can be scheduled to be turned on.
  - c. Engineer contacts the City Public Works Department which must be present to turn on the new system for mains 12 inches and larger. System shall be turned on within 14 calendar days of completion of passing tests.
  - d. Engineer and Contractor together turns on the new system for mains smaller than 12 inches. System shall be turned on within 14 calendar days of completion of passing tests.
- H. Phase 2 - Street Construction, Restoration, and Landscaping Work:
  - 1. Contractors, subcontractors, builders, or developers are not allowed to operate or connect to a City's hydrant for water usage without a hydrant use permit.
  - 2. The sources of City water for street construction, restoration, and landscaping work is as follows:
    - a. Public Works will designate a hydrant for the Contractors as part of Hydrant Use Permit process.
    - b. If hydrant meters are not available or if the City determines the Contractors request for water warrants it, the City will designate an existing hydrant for the Contractors use. The same hydrant use permit, deposit, and water use charge will be applied, as required for the hydrant meter.
    - c. Prices and deposit amounts may change without notice.
- I. Water Restrictions: Contractor may be required to use non-potable water during a drought period. Owner will assist Contractor in locating source.

### 3.03 CONSTRUCTION FACILITIES

- A. Sanitary Facilities:
  - 1. Comply with all governing regulations, including safety and health codes, for sanitary fixtures and facilities.
  - 2. Provide self-contained toilet units, or water and sewer connected temporary toilet facilities, consistent with governing regulations. Contractor may not use Owner's toilet facilities.
  - 3. Provide and maintain adequate supply of toilet tissue, paper towels, paper cups, and similar disposable materials appropriate for each facility. Provide appropriate covered waste containers for used material.

### 3.04 TEMPORARY CONSTRUCTION

- A. Bypass Pumping:
  - 1. All sanitary flows shall be pumped around areas with no spillage allowed.
  - 2. Any spill needs to be reported as required by law.
- B. Pumping and Dewatering:
  - 1. Provide draining, pumping, dewatering, and cleaning operations necessary to complete the Work.
  - 2. Provide all necessary pumping to remove all surface water and groundwater from structures as required for the Work. Provide erosion control measures for discharge of water.
  - 3. Protect Site and adjacent property to avoid damage.

### 3.05 TRAFFIC CONTROL

#### A. General

1. Provide and maintain all traffic control devices in accordance with the approved Construction Staging Plan. All traffic control devices and other protective measures shall conform to MMUTCD, including its supplements and part IV, "Field Manual on Temporary Traffic Control Zone Layouts", the "Guide to Establishing Speed Limits in Highway Work Zones", and, if any, traffic control layouts and typical traffic control layouts in the Plans.
2. Flaggers are required to protect construction vehicles during unloading of construction materials. Conform to the requirements of the MMUTCD, the Flagging Handbook included in the Field Manual for Temporary Traffic Control Zone Layouts, and the following:
  - a. While on duty flaggers shall wear hard hats and reflectorized florescent orange vests;
  - b. Flaggers shall be fully clothed when on duty with shirt or blouse, slacks or trouser, and sturdy shoes.
3. Do not park vehicles as to obstruct a traffic control device. The parking of workers' vehicles will not be allowed within the Project limits, unless so approved by the Engineer.
4. Do not store materials or equipment within 30 feet of through traffic, unless approved by the Engineer. If materials or equipment must be stored within 30 feet of through traffic, the Contractor shall provide barricades or barriers, as directed by the Engineer, to warn and protect traffic.
5. Conduct Work in a manner that will allow access to all properties within and adjacent to the Project by fire, police, and emergency vehicles.
6. Maintain all unpaved surfaces. The surface shall be watered and bladed as directed by the Engineer.
7. Remove traffic control devices at the conclusion of the Work
8. Protect work at all times, including during structure adjustment work.
9. Provide access for emergency vehicles and busses to all residences at all times.

#### B. Traffic Control Devices:

1. Daily inspect and insure that all traffic control devices required by the construction are in accordance with the MMUTCD. Any discrepancy between the actual devices in use and the required devices shall be immediately rectified. At least 1 nighttime inspection shall be made each week.
2. Respond with sufficient personnel, equipment, and/or materials to any request from the Engineer to improve or correct the usage of traffic control devices on or related to this Project within 1 hour of the time of notification or be subject to a \$100 per hour deduction from the time of notification for non-attention to protect security and safety.
3. Keep all traffic control signs and devices in a legible condition. This shall include but not be limited to removing grime and dust deposited on any device by traffic, natural causes, or when requested by Engineer.
4. Store at least 10 extra Type 1 barricades with flashers, 5 extra Type III barricades, and 10 extra drums, at a convenient location within the Project limits for use in an emergency, as approved by the Engineer. No direct compensation will be made to the Contractor for furnishing and erecting these traffic control devices.

#### C. Place traffic control with flashers around areas disturbed by removal and replacement of utility structures and concrete curb and gutter:

1. Place at least one Type 1 barricade with flasher or barrel with flasher per panel of curb removed.
- D. Establish and maintain advisory signs at all entrances to Site:
  1. Signs shall state "Construction Zone" and "Proceed at Own Risk" in black letters on orange background.
- E. Prior to disturbing any existing trail or sidewalk, place Type 3 barricade with "Sidewalk Closed" sign on each side of the disturbed area.
- F. Closure of a roadway using Type III barricades will require a sufficient number of barricades to span the entire roadway width, at the discretion of the Engineer.

### 3.06 TRAFFIC CONTROL CHANGE

- A. General
  1. Advanced warning signage must be in place prior to changes in traffic control, including removal of existing traffic control signs (e.g. stop, yield).
  2. Advanced warning signs must be located behind the curb.
  3. Advanced warning signage must remain in place for 60 days after change in traffic control and removed within 65 days of change in traffic control.
  4. After removal complete restoration in accordance with section 32 92 00.

### 3.07 TEMPORARY BARRIERS AND ENCLOSURES

- A. Temporary Barriers:
  1. Provide temporary covers, enclosures, markers, and barriers as necessary to protect Work.
  2. Promptly repair any damage to the Site caused by removal of temporary fencing, including potholes. During removal, at no time shall the Work remain unattended if a dangerous condition exists because of incomplete removal or Site requiring repair.
- B. Temporary Fence:
  1. Install as shown on the Drawings.
  2. Maintain and repair fence throughout the duration of the Project.
  3. Provide Owner and Engineer with keys or combinations to any locks that may be used to secure fencing gates.

### 3.08 RESTRICTIONS

- A. Temporary stockpiling of materials or debris on any City street overnight is not allowed. Proper traffic control is required for stockpiling during the day.
- B. Overnight parking of equipment will be allowed along city streets. Overnight parking of equipment must meet the following requirements or be subject to Penalty.
  1. Proper traffic control is required.
  2. Equipment left onsite must be utilized for construction purposes within the project limits a maximum of 48 hours from time of last use unless otherwise approved by Engineer.
  3. Equipment left onsite must be parked at locations that will not restrict access to driveways or access for emergency vehicles.

4. All overnight parking locations must be approved of by Engineer.

**END OF SECTION**

## SECTION 01 57 13

### TEMPORARY EROSION AND SEDIMENT CONTROL

#### PART 1 GENERAL

##### 1.01 SUMMARY

###### A. Section Includes:

1. Managing storm water runoff and other Project related water discharges to minimize sediment pollution during construction.

##### 1.02 PRICE AND PAYMENT PROCEDURES

###### A. Measurement and Payment:

1. Payment at the Bid Unit Price will be considered compensation in full for all Work necessary to complete the Bid Item in full, including installation, maintenance, sediment removal, repairs, and removals.
2. Measurement will be based upon the units as listed below for Bid Items removed, abandoned, or salvaged complete as specified. No measurement will be made of any removals that are not required. The actual quantity installed multiplied by the appropriate Bid Unit Price will be compensation in full for all Work and costs of the following Bid Items. 80-percent partial payment will be made upon installation and 20-percent payment will be made upon removal and restoration:
  - a. Silt Fence: Payment will be by type. Measurement will be by the linear foot along the base of the fence, from outside to outside of the end posts for each section of fence.
  - b. Floatation Silt Curtain: Payment will be by type. Measurement will be by linear foot installed.
  - c. Storm Drain Inlet Protection: Measurement will be per each, according to type furnished. Payment shall include installation and maintenance, removal, including cleaning and reinstallation.
  - d. Temporary Construction Entrance: Measurement will be by the cubic yard of material furnished and installed on the Project.
  - e. Rolled Erosion Prevention Products: Payment will be by type installed. Measurement will be by square yard.
  - f. Mulch: Measurement will be by the acre of material installed.
  - g. Temporary Hydraulic Matrix: Measurement will be by the acre of material installed.
  - h. Filter Berm: Payment will be by type. Measurement will be by the linear foot.
  - i. Sediment Control Logs: Payment will be by type. Measurement will be by the linear foot.
  - j. Sediment Trap: Shall be considered incidental to the Project.
  - k. Temporary Slope Pipe: Measurement will be by the linear foot. Payment shall include rip rap used to provide an outlet.
  - l. Bale Barrier: Measurement will be by the linear foot.
  - m. Flocculants and Polyacrylamides: Measurement will be by dry weight in pounds based on tickets submitted to the Engineer.
  - n. Flocculant Sock: Measurement will be by the each.

- o. Rapid Stabilization Methods:
      - 1) Method 1 and 2: Measurement will be by the acre.
      - 2) Method 3: Measurement will be by the 1,000 gals.
      - 3) Method 4: Measurement will be by the square yard.
  - 3. Bid Form for Street Sweeper With Operator and Skidsteer (Bobcat) With Operator:  
Measurement shall be by the hour of equipment use, based on the actual amount of time spent cleaning street surfaces. However, if the Contractor is careless in their construction operations, they will be required to clean and sweep streets at their own expense. Payment at the Unit Price shall be considered complete compensation for all work associated with the cleaning, including water as directed by Engineer, and disposal of collected materials:
    - a. Anticipate multiple mobilizations to perform this work.
  - 4. Erosion Control Supervisor throughout the duration of the project: No measurement will be made of the various duties performed or of the number of hours required, but all such work will be construed to be included in the lump sum payment, half to be paid after 50-percent of the project is complete and the remainder at closeout of the project. The bid item is for providing an Erosion Control Supervisor to perform all duties as described in Paragraph 1.05.A.
  - 5. Water for Dust Control: Measurement will be per 1,000 gallons (MGAL) applied. Payment will constitute compensation in full for all Work and costs to furnish and apply the water. This Bid Item is intended to pay for water used for dust control only and only at those times that it is requested by either the Engineer or Owner.
    - a. Water used for the construction of the streets will be considered incidental to the Project.
  - 6. When the contract Bid Item requires maintenance, partial payment for installation will be made no greater than 50-percent of the contract unit price. The remaining partial payment will be made after maintenance and final acceptance by the Engineer.
  - 7. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.
- B. Related Sections:
- 1. Section 01 33 00 - Submittal Procedures.
  - 2. Section 32 92 00 - Turf and Grasses.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.):
- 1. 1717 - Air, Land, and Water Pollution.
  - 2. 2573 - Storm Water Management.
  - 3. 2575 - Establishing Vegetation and Controlling Erosion.
  - 4. 3733 - Geosynthetic Materials.
  - 5. 3882 - Mulch Material.
  - 6. 3884 - Hydraulic Erosion Control Products.
  - 7. 3885 - Rolled Erosion Prevention Products.
  - 8. 3886 - Silt Fence.
  - 9. 3887 - Flotation Silt Curtain.
  - 10. 3890 - Compost.
  - 11. 3892 - Temporary Slope Pipe Drain.

12. 3897 - Sediment Control Log.
13. 3898 - Flocculants.
14. 3911 - Calcium Chloride.
15. 3912 - Magnesium Chloride Solution.
16. MPCA's NPDES General Stormwater Permit for Construction Activity.

#### 1.04 SUBMITTALS

- A. MPCA's NPDES General Stormwater Permit for Construction Activity (MN R100001):
  1. NPDES permit inspection log resulting from weekly Site inspections will be prepared by the Contractor and submitted to the Engineer on a weekly basis.
  2. Amendments to the Stormwater Pollution Prevention Plan (SWPPP) for the Project.
  3. Completed form for MPCA's Notice of Termination, in conjunction with Owner.
  4. Provide documentation of certifications for Erosion Control Supervisor and Certified Installers that will be on this project.
- B. Contractor Prepared Schedules and Plans:
  1. Erosion and Sediment Control Schedule: Conforming to MnDOT Spec. 1717.2.B and submitted each week that construction is active.
  2. Site Management Plans in conformance with MnDOT Spec. 1717.2.C:
    - a. Submitted when requested by the Engineer.
    - b. Site plans prepared by Contractor will indicate Contractor operations, erosion and sediment control measures, and a schedule of starting and completion times.
- C. Certification and Sampling:
  1. Furnish a manufacturer's certification stating that the material supplied conforms to the requirements of this Section. The certification shall include or have attached typical results of tests for the specified properties, representative of the materials supplied.

#### 1.05 QUALITY ASSURANCE

- A. Erosion Control Supervisor: Provide an Erosion Control Supervisor with a valid Minnesota Construction Site Management certification, or approved equal, authorized to represent the Contractor on matters pertaining to Erosion and Stormwater Management, work in public waters and be available to the work site within 24 hours of initial disturbance and daily when work is taking place until final stabilization. The following list describes the duties of the Erosion Control Supervisor:
  1. Implements the quality control program.
  2. Ensures proper installation, functionality, and maintenance, clean-up, and removal of all erosion and sediment control Best Management Practices (BMP's) and in accordance with manufacturer's recommendations.
  3. Implements the erosion and sediment control schedule.
  4. Coordinates the work of subcontractors and ensures the full execution of erosion and sediment control measures for each operation and stage of the work.
  5. Oversees the work of subcontractors and ensures the subcontractors undertake erosion and sediment preventative measures at each stage of the work.
  6. Prepares the required weekly erosion control schedule and inspections with the dates and times.



7. Attends construction meetings to discuss the erosion control schedule and inspections.
  8. Prepares the erosion and sediment control Site Management Plans as required by the contract or as directed by the Engineer.
  9. Provides for erosion and sediment control methods for temporary work not shown on the plans.
  10. Ensures effective preventative BMP's are in place, recommends changes to the SWPPP for the Engineer's approval, and amends the SWPPP to document changes.
  11. Ensures acquisition of and compliance with applicable permits for borrow pits, dewatering, and temporary work in rivers, lakes, and streams.
  12. Ensures the full installation of erosion and sediment control before suspension of the work.
  13. Coordinates with federal, state, and local regulatory agencies on resolution of erosion and sediment control issues resulting from the work.
  14. Ensures that proper clean-up occurs from vehicle tracking on paved surface locations where sediment leaves the project.
  15. Ensures daily compliance with environmental laws, permits, and SWPPP narrative requirements.
  16. Ensures the certification of installers for operations in accordance with Paragraph 1.05.B.
- B. Certified Installers: Provide at least one certified installer with a valid certification obtained through the University of Minnesota Erosion Control Inspector/Installer Certification program, or approved equal to install or direct installation of erosion or sediment control practices as listed below:
1. Seeding.
  2. Sodding.
  3. Mulching.
  4. Silt Fence or other perimeter sediment control device installations.
  5. Rolled Erosion Control Practices (RECP) installation.
  6. Hydraulic erosion control product installation.
  7. Silt curtain installation.
  8. Ditch check installation.
  9. Compost installation.

If the Contractor fails to provide the required certified installer, the Engineer may reject the work as unauthorized.

- C. If the Project disturbs 1 or more acres of total land area, Co-submittal with the Owner of a completed NPDES application form for the MPCA's General Stormwater Permit for Construction Activity and the appropriate fees to the MPCA is required. Engineer will complete the online application and fees will be paid as described in Section 01 31 00.

## 1.06 SEQUENCING AND SCHEDULING

- A. Install sediment control measures prior to grading activities.
- B. Schedule and coordinate the Work so that permanent erosion and sediment control BMPs, such as basin construction, rip rap placement, and permanent seeding, are directly incorporated into the supplement permanent erosion and sediment control BMPs with temporary BMPs. Place temporary BMPs when permanent erosion control cannot be achieved. Coordinate construction

operations so that erosion and sediment control measures (permanent or temporary) are installed and maintained concurrently with the rest of the Work of the Project.

- C. Coordinate and schedule the Work of subcontractors such that erosion and sediment control measures are fully executed for each operation and in a timely manner over the duration of the Project. Develop a chain of responsibility for all subcontractors and operators on the Project to ensure that permit provisions are adhered to.
- D. Infiltration areas and constructed infiltration systems should not be constructed until the contributing drainage area and/or adjacent construction has been completely stabilized. When this timing of construction is not possible, ensure sediment from exposed soil areas of the Project does not enter into the infiltration area or system.
- E. Stabilization timeframes shall conform to the NPDES General Stormwater Permit for Construction Activity.
- F. Perform weekly and post-rainfall event inspections in accordance with the NPDES permit.
  - 1. Complete and submit the required weekly inspection log.
- G. Prior to Project shutdown for the winter or other periods of a week or more, adequately protect Site from erosion and off site damage by covering exposed soils with mulch and establishing perimeter controls.
- H. If the Contractor fails to install erosion or sediment measures, the Engineer may withhold payment from related work until the control measures are undertaken by the Contractor:
  - 1. When the Contractor fails to conduct the quality control program, does not conduct the inspection required in the NPDES permit, or fails to take action ordered by the Engineer to remedy erosion or sediment control problems, the Engineer shall issue a Written Order to the Contractor.
  - 2. Respond within 24 hours with sufficient personnel, equipment, materials, and conduct the required Work or be subject to a \$1,000 per calendar day deduction for noncompliance.
- I. Establish permanent turf in accordance with Section 32 92 00 to prevent excessive soil erosion.
- J. Multiple mobilizations will be required for the various erosion and sediment control items.
- K. Silt fence shall be removed prior to project closeout and final acceptance.

## **PART 2 PRODUCTS**

### **2.01 SILT FENCE: Conform to MnDOT Spec. 3886.2.**

- A. Machine sliced in accordance with Standard Detail Plate ERO-1.
- B. Heavy Duty in accordance with Standard Detail Plate ERO-3:
- C. Delete MnDOT Spec. 3886.1. Pre-assembled (PA) silt fence.

## 2.02 TEMPORARY CONSTRUCTION ENTRANCE

- A. Construction Entrance: Conform to Standard Detail Plate ERO-12:
  - 1. Rock Entrance:
    - a. 2 inches minimum clear/washed rock.
    - b. Underlying Geotextile: Conform to MnDOT Spec. 3733, Type 5.
    - c. Minimum Thickness of Rock Placed: 6 inches.
  - 2. Wood Slash Mulch Construction Entrance:
    - a. Raw wood slash only. No chipped-up manufactured wood or chemically treated wood is allowed.
    - b. Splinter material to an average approximate length of 6 inches with a maximum length of 20 inches. Bark and wood splinters less than 2 inches long shall not exceed 20 percent by mass of the material.
    - c. Underlying Geotextile: Conform to MnDOT Spec. 3733, Type 5.
    - d. Minimum Thickness of Mulch Placed: 18 inches.

## 2.03 MULCH: Conform to MnDOT Spec. 3882.

- A. Type 1, clean grain straw only. Project specific, refer to MnDOT Spec. for options.
- B. Hydraulic erosion control products may be used in lieu of mulch with the approval of the Engineer.

## 2.04 HYDRAULIC EROSION CONTROL PRODUCTS (HECPs)

- A. Hydraulic Matrix:
  - 1. Mulch: Conform to MnDOT Spec. 3884.2.B.2.
  - 2. To be used as part of the Temporary Hydraulic Matrix Bid Item with no seed.

## 2.05 ROLLED EROSION PREVENTION PRODUCTS

- A. Conform to MnDOT Spec. 3885:

## 2.06 STORM DRAIN INLET PROTECTION

- A. Inlet protection for paved streets with concrete curb and gutter: The following methods are acceptable:
  - 1. Conform to the details on the Drawings.
  - 2. Catch Basin Inserts:
    - a. Road Drain by Wimco, LLC ([www.roaddrain.com](http://www.roaddrain.com)), in accordance with Standard Detail Plate ERO-9.
    - b. Lange Industries ([www.langeindustries.com](http://www.langeindustries.com)), or approved equal.
    - c. Filter bag insert subject to Site and approved by the Engineer.
- B. Inlet protection for non-paved surfaces without curb or areas where vegetation will be established. The following methods are acceptable:
  - 1. Conform to the details on the Drawings.
  - 2. Silt fence box: conform to Standard Detail Plate ERO-7 and ERO-10, or approved equal.
  - 3. Sediment control inlet hat:

4. InfraSafe Sediment Control Barrier by Royal Enterprises (<http://www.royalenterprises.net/>).
5. Rock filter: conform to Standard Detail Plate ERO-8.

2.07 SEDIMENT CONTROL LOGS:

- A. Conform to MnDOT Spec. 3897.

2.08 DITCH CHECKS AND VELOCITY CHECKS

- A. Conform to MnDOT Spec. 2573.3.F.4 and details in Drawings.

2.09 BALE BARRIERS

- A. Conform to MnDOT Spec. 2573.3.C.
- B. All bales shall be either bound with wire or tied with nylon string.
- C. Hardwood stakes shall be 1-1/2 inches by 1-1/2 inches by 36 inches.

2.10 FLOATATION SILT CURTAIN

- A. Conform to MnDOT Spec. 3887.
- B. Curtain depth shall extend to the bottom of the water body.

2.11 DUST CONTROL

- A. Water clear and free from suspended fine sediment.

2.12 TEMPORARY SLOPE PIPE DRAIN:

- A. Conform to MnDOT Spec. 3892 and detail in Drawings.

2.13 TEMPORARY SEED

- A. Conform to Section 32 92 00.

2.14 DEWATERING SEDIMENT CAPTURE

- A. General – Sizing, configuration, capacity, and selection of dewatering sediment capture techniques shall be based on Site and flow conditions. Submit the means and methods for review by the Engineer. Sizing of the sediment capture systems will have to be adjusted such that the ultimate discharge water is not visibly different from the receiving water.

2.15 FLOCCULANTS:

- A. Conform to MnDOT Spec. 3898.

## 2.16 EQUIPMENT

- A. Street sweeper with mechanism for picking up and containing sweepings. Power broom will not be allowed. The Street Sweeper shall have the minimum bristle length as recommended by the manufacture.
- B. Skidsteer (bobcat) to assist in street sweeping.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Comply with all applicable laws, ordinances, regulations, permit requirements, orders and decrees pertaining to erosion/sediment control and stormwater discharge during the conduct of the Work.
- B. Take necessary precautions against damage to the Project by action of the elements.
- C. Implement the Project's NPDES Stormwater Pollution Prevention Plan (SWPPP) and take necessary actions to prevent off Site damage resulting from Work conducted on the Project or Project related stormwater runoff.
- D. Minimize the amount of disturbed land that is susceptible to erosion at any time. Delineate areas not to be disturbed:
  - 1. Exclude vehicles and construction equipment from area not to be disturbed to preserve natural vegetation.
  - 2. Maintain and preserve riparian and naturally vegetated buffer strips (10 feet minimum distance) along water courses.
- E. Restore all disturbed areas that have not had construction activity for more than 14 calendar days with temporary hydraulic matrix. All costs related to furnishing and installing the temporary hydraulic matrix will be considered incidental to the Project, unless a Bid Item has been provided for it and direction has been given by the Engineer.
- F. Street sweeping operations must include the application of water to effectively remove fine materials from pavement areas, as directed by the Engineer. The appropriate amount of water shall be applied to eliminate dust as part of the sweeping operations.

### 3.02 INSTALLATION

- A. General: Install temporary stormwater management and sediment control devices in conformance with the details, typical sections, and elevations shown on the Drawings.
- B. The location of temporary stormwater and sediment control devices may be adjusted from that shown on the Drawings to accommodate actual field conditions and increase the effectiveness of the installation.
- C. Silt Fence: Conform to MnDOT Spec. 2573.3.B:

1. Install in the locations shown on the Drawings using the machine sliced installation method, unless directed otherwise by the Engineer.
  2. Use additional measures, such as rock aggregate, placed along the base of the silt fence where the silt fence geotextile cannot be trenched in, i.e. tree roots, frost, bedrock.
  3. Use short sections of silt fence placed in J-hook patterns to:
    - a. Supplement the perimeter silt fence at corner locations and areas where sediment deposition will occur. No more than 100 feet of silt fence shall be installed per 1/4 acre of drainage.
    - b. Break up flow path along silt fence running across contours to be no more than 100 feet between hooks or as directed by the Engineer.
  4. Silt fence longer than 600 feet shall be constructed in separate independent units with each unit having a length less than 600 feet. Avoid splices whenever possible. If necessary, make splices at an opposing fence post and according to the manufacturer's specifications.
- D. Temporary Construction Entrance:
1. Install at locations shown on the Drawings.
  2. Construct construction entrance before grading begins on the Site.
  3. Inspect construction entrance daily for mud accumulation to minimize vehicle tracking of sediment onto public roadways. Remove fugitive rock or wood mulch from adjacent roadways daily.
- E. Mulch:
1. For seeded Sites, apply at a rate of 2 tons per acre (4,500 kg/ha).
  2. For unseeded Sites, apply at a rate of 2 to 3 tons per acre (4,500 to 6,700 kg/ha), covering the entire soil surface.
  3. Distribute mulch evenly by hand or machine and cover the exposed area to a uniform depth.
  4. Disk anchor in conformance to MnDOT Spec. 2575.3.D.
  5. Anchor mulch immediately to minimize loss by wind or water.
- F. Temporary Hydraulic Matrix:
1. Apply in conformance with Section 32 92 00 and MnDOT Spec. 2575.3.E, but without seed.
- G. Slope (Cat) Tracking:
1. Slope tracking consists of operating a dozer up and down slopes so that the cleats of the tracks create grooves perpendicular to the slope. By operating the dozer up and down, the soil surface is firmed and miniature interceptor checks are created.
  2. Required on all slopes equal to or steeper than 3:1 (H:V).
- H. Rolled Erosion Prevention Products:
1. Install immediately following seeding in accordance with MnDOT Spec. 2575.3.G, and as modified below.
  2. Install per Detail Plate ERO-5 and as shown on the Drawings.
  3. Raking or harrowing of soil/seed shall be done before installation of erosion control blanket.
  4. Install blanket parallel to the direction of flow.
  5. If permanent seeding is not available at the time of blanket installation, this material will have to be removed, re-seeded, and installed again as a permanent erosion control measure. If permanent seeding is available at the time of initial installation, a one-time proper installation is acceptable.

- I. Storm Drain Inlet Protection:
  - 1. Provide effective storm drain inlet protection over the life of the Project until all sources with potential for discharging to inlets have been paved or stabilized.
  - 2. Place devices so that driving hazards or obstructions are not created. The devices must be cleaned out regularly and all devices must have an emergency overflow to reduce flooding potential.
- J. Temporary Sediment Basins:
  - 1. Sediment basins shall be excavated as a first priority when grading begins on the Project. The location and outlet configuration are shown on the Drawings.
- K. Temporary Sediment Traps:
  - 1. Temporary sediment traps are excavated in conjunction with other grading activities. Temporary traps are approximately 2 feet or less in depth with a length to width ratio of 1:2.
  - 2. Effectiveness of sediment traps can be increased by placing a rock weeper at the outlet.
- L. Temporary Diversion Berm:
  - 1. Temporary diversion berm shall be installed at locations shown on the Drawings. The berm shall be located to minimize damage by construction operations and traffic.
  - 2. Temporary diversion berm shall be installed as a first step in the land-disturbing activity and must be functional prior or in conjunction with upslope land disturbance.
  - 3. The berm shall be adequately compacted to prevent failure.
  - 4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
- M. Temporary Slope Pipe Drains:
  - 1. When temporary down drains are placed on fill slopes, a temporary earth berm or sandbag barrier shall be constructed as necessary to guide water into the drain.
  - 2. The inlet of a drain and berm system must be properly constructed to channel water into the temporary drain.
  - 3. All temporary drains shall be adequately anchored to the slope to prevent disruption by the force of the water flowing into the drain:
    - a. If the drain consists of plastic pipe, it must be securely anchored to the ground.
- N. Filter Berm:
  - 1. Install in accordance with MnDOT Spec 2573.3.E and as detailed in Drawings.
- O. Floatation Silt Curtain:
  - 1. Floatation silt curtain shall be installed in locations shown on the Drawings and according to the manufacturer's specifications:
    - a. "Anchor" and secure to prevent any material from passing beneath, over, around, or through the barrier.
    - b. Provide sufficient slack to permit the curtain to rise to the maximum expected high water level, including wave action, without being overtopped and still be in continuous contact with the bottom.
  - 2. Place floatation silt curtain as close to the shoreline or work area as possible. Flotation silt curtain shall not be placed across flowing rivers, streams, drainage ditches, or across culvert inlets or outlets.

P. Rapid Stabilization:

1. Work to be performed under non-schedulable situations requiring rapid stabilization of small critical areas within 200 feet of surface waters to comply with permit requirements.
2. Methods per MnDOT Spec. 2575.3.M with Seed Mix 22-111.

3.03 MAINTENANCE

A. Conform to MnDOT Spec. 2573.3.A, NPDES permit, and as follows:

1. Inspect, maintain, and repair any washouts or accumulations of sediment that occur as a result of the grading or construction. Restoration consists of grade repair, turf re-establishment, and street sweeping of mud and debris tracked from the Site.
2. Inspection of all erosion and sediment control items will take place immediately after each runoff event and at least daily during prolonged rainfall. Make any required repairs immediately.
3. Maintain the temporary sediment control devices until they are no longer necessary and are removed:
  - a. Maintenance consists of keeping the devices functioning properly.
  - b. Repair or replace plugged, torn, displaced, damaged, or non-functioning devices.
4. Upon final acceptance of the Project and establishment of permanent erosion control measures, remove all temporary erosion control measures:
  - a. Catch basin protection becomes property of Contractor.
5. Temporary mulching and temporary seeding/mulching are very effective at controlling erosion. However, these are considered temporary measures. These measures may need to be re-established several times throughout the duration of the Work.
6. Floatation silt curtain shall remain in place until such time that water contained within is free from turbidity:
  - a. Remove curtain within 72 hours after this determination has been made.
  - b. At the completion of the Project, remove floatation silt curtain in such a manner so as to minimize release of sediment adhering to the turbidity curtain.

B. Sediment Removal: Conform to MnDOT Spec. 2573.3.P:

1. Remove sediment from erosion control devices when sediment reaches one-third of the height of the devices, restore such features to their original condition.
2. Established areas disturbed by the removal of sediment, will require finish grading and restoration with in-kind materials, such as area disturbed as part of silt fence removal. This work shall be considered incidental to the specific bid item.

C. Control dust blowing and movement on Site and roads as directed by Engineer to prevent exposure of soil surfaces, to reduce on and off site damage, to prevent health hazards, and to improve traffic safety.

**END OF SECTION**



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**SECTION 01 70 00**  
**EXECUTION REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Requirements for overall execution of the Work and closeout of the Contract for Final Payment.
- B. Measurement and Payment:
  - 1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

**1.02 SUBMITTALS**

- A. Submit the following items consistent with the Conditions of the Contract and Division 01 Sections:
  - 1. Written Notification of Substantial Completion.
  - 2. Executed Certificate of Substantial Completion.
  - 3. Written Notification of Final Completion.
  - 4. Spare Parts, Operation and Maintenance Manuals, instructions, schedules, warranties, guarantees, Bonds, certificates, certificates of inspection, and other documents.
  - 5. Final Application for Payment, including accompanying documentation.
  - 6. IC-134 Forms.
  - 7. Lien Waivers.

**PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Acceptance of Conditions: By commencing Work, Contractor construes acceptance of the adjacent work as satisfactory to receive subsequent work.
- B. Existing Conditions: Before commencing Work, inspect work completed by others that is adjacent to Work. If adjacent conditions prevent completion of Work, Contractor will not commence Work until the conditions are corrected.
- C. Inspect each product immediately prior to installation. Remove damaged products from Site.

### 3.02 GENERAL INSTALLATION REQUIREMENTS

- A. Comply with the manufacturer's instructions for installation of manufactured products to the extent that these instructions are applicable and more explicit or more stringent than requirements indicated in the Contract Documents.
- B. Secure Work true to line and level, within recognized industry tolerances, with anchorage devices designed and sized to withstand stresses, vibration, and rocking. Allow for expansion and movement of building.
- C. Install each element of work during weather conditions and Project status to ensure coordination of the Work. Isolate each element of work from incompatible work as necessary to prevent deterioration.
- D. Record installation details and prepare Record Documents consistent with the General Conditions.

### 3.03 SITE MAINTENANCE

- A. Maintain stockpiles, excavations, access roads, and all other work areas free from dust. Employ dust abatement techniques whenever a dust nuisance or hazard occurs, or as directed by Engineer. Comply with local ordinances.
- B. Protect hazardous work areas and hazardous material storage areas.
- C. Protect trees, unless specifically indicated on Drawings.
- D. Clean access roads and haul routes with mechanical street sweeper.
- E. Maintain and repair any damage to haul roads. Maintenance shall include, but not be limited to, the following: blading, patching, signing, graveling and dust control. This work will be at the Contractor's expense, without any direct compensation being made other than the payment received for Contract items.
- F. If Contractor fails to maintain Site, Engineer will provide Written Notice of Contractor's defective Work. Contractor will be given 12 hours from the Notice to clean Site. After the 12 hour period, Owner may correct the defective Work.

### 3.04 CLEANING AND PROTECTION

- A. Clean and protect Work in progress and adjoining Work during handling and installation. Apply protective covering on installed Work where it is required to ensure freedom from damage or deterioration.
- B. Clean and perform maintenance as frequently as necessary throughout construction period. Adjust and lubricate operable components to ensure operability without damage effects.

### 3.05 CUTTING AND PATCHING

- A. Complete all cutting, fitting, and patching as necessary to join the new Work to existing conditions.
- B. Remove or cut existing work only as necessary to join the new work to the existing construction or as required by the Contract Documents.
- C. Patch defective and incomplete surfaces caused or exposed by Work of the Project.
- D. Repair any damage to existing conditions and patch to match.
- E. Existing construction designated by the Contract Documents to remain that is loosened, cracked, or otherwise damaged or defaced beyond repair as a result of Work by the Contractor will be considered unsuitable for the use intended and shall be removed and replaced by the Contractor.

### 3.06 CERTIFICATE OF COMPLIANCE WITH MINNESOTA STATUTES 290.92 AND 290.97

- A. Upon completion of the Project and prior to Final Payment, the Contractor and all subcontractors shall complete Minnesota Department of Revenue Revised Form IC-134. This form, Affidavit for Obtaining Final Settlement of Contract with the State of Minnesota and any of its Political or Governmental Subdivisions, is to be signed by a Department of Revenue representative and forwarded to the Owner. Copies of this form can be obtained by writing to the Minnesota Department of Revenue, Forms Section, Mail Station 1173, St. Paul, MN 55146-1173 or by calling (651) 296-4444.

### END OF SECTION

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## SECTION 02 41 13

### SELECTIVE SITE DEMOLITION

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. Complete or partial removal and disposal or salvage of at grade, above grade, and below grade structures and miscellaneous items.

B. Related Sections:

1. Section 31 23 00 - Excavation and Fill.
2. Section 32 13 14 - Concrete Walks, Medians, and Driveways.
3. Section 32 16 13 - Concrete Curb and Gutters.
4. Section 32 17 23 - Pavement Markings.
5. Section 33 05 06 - Trenching and Backfilling.
6. Section 33 10 00 - Water Utilities.
7. Section 34 41 05 - Traffic Signs and Devices.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Payment at the Bid Unit Price will be considered compensation in full for all Work necessary to complete the Bid Item in full, including removal, salvage, storage, disposal, and reinstallation.
2. Measurement will be based upon the units as listed below for items removed, abandoned, or salvaged complete as specified. No measurement will be made of any removals that are not required. The actual quantity removed multiplied by the appropriate Bid Unit Price will be compensation in full for all Work and costs of the following Bid Items:
  - a. Sawing Concrete Pavement and Sawing Concrete Driveway Pavement: Per lineal foot along the saw cut line as staked, regardless of thickness.
  - b. Sawing Bituminous Pavement (Street or Trail) and Sawing Bituminous Driveway Pavement: Per lineal foot along the saw cut line as staked, regardless of thickness.
  - c. Remove Bituminous Street Pavement: Per square yard without regard to thickness, including integral bituminous curb if applicable.
  - d. Remove Bituminous Trail and Remove Bituminous Driveway Pavement: Per square yard without regard to thickness.
  - e. Remove Bituminous Wedge: Per square yard of bituminous wedge removed, regardless of thickness.
  - f. Mill Bituminous Pavement: Per square yard, according to depth, including off-site disposal.
  - g. Remove Concrete Pavement: Per square yard without regard to thickness.
  - h. Remove Concrete Sidewalk or Pedestrian Ramp: Per square foot without regard to thickness.
  - i. Remove Concrete Valley Gutter: Per square yard without regard to thickness.
  - j. Remove Concrete Curb and Gutter: Per linear foot, regardless of type.

- k. Remove Concrete Driveway Pavement: Per square yard without regard to thickness.
  - l. Remove Concrete Spillway: Per square yard without regard to thickness.
  - m. Remove Concrete Median: Per square yard, without regard to thickness.
  - n. Remove Valve and Box: Per each.
  - o. Remove Hydrant: Per each.
  - p. Remove Catch Basin or Manhole: Per each. Regardless of size of structure. Granular material is incidental to the removal.
  - q. Remove Retaining Wall: Per square yard, measured to existing ground level.
  - r. Remove Pipe or Culvert: Per linear foot of the size and type specified, measured from center of junction fittings, catch basins, or manholes, and will include the length of any aprons.
  - s. Remove Trash Guard from Flared End Section: Per each, according to size and type.
  - t. Remove Sign and Post, Signpost, or Barricade: Per each.
  - u. Remove Pavement Markings: Per linear foot, regardless of type or size.
  - v. Remove Pavement Messages: Per each, regardless of type or size.
  - w. Remove and Replace Concrete Curb and Gutter (High Early): A Bid Item has been provided in Section 32 16 13.
  - x. Remove and Replace Valve and Box: A Bid Item has been provided in 33 10 00.
  - y. Abandon Pipe: Per linear foot according to size of pipe, measured from center of junction fittings, catch basins, or manholes, and will include bulk heading and filling the pipe with lean mix backfill.
  - z. Abandon Structure: Per each, regardless of size of structure, and will include furnishing and installing granular material and removal of casting, adjusting rings and top section from Site.
  - aa. Salvage and Reinstall Fence: Per linear foot of the type specified.
  - bb. Salvage and Reinstall Pipe or Culvert: Per linear foot of the type and size specified.
  - cc. Salvage and Reinstall Flared End Section: Per each of the size specified.
  - dd. Salvage and Reinstall Sign: Per each. Payment will include all hardware required to reinstall sign.
  - ee. Salvage and Reinstall Sign and Post: Per each
  - ff. Salvage and Reinstall Mailbox: Per each. Payment will include all costs to salvage and re-install the mailbox, including similar footing.
  - gg. Salvage and Reinstall Community Mailbox: Per each. Payment will include all costs to salvage and reinstall the mailbox and removal of existing concrete pad. A separate bid item has been provided for 6 Inch Concrete Mailbox Pad.
  - hh. Temporary Mailbox: Per each. Payment will include all costs to furnish and install a temporary mailbox at a temporary location as determined by the Engineer in the field.
  - ii. Salvage and Reinstall Permanent Barricade: Per each, including sign panel.
  - jj. Salvage and Reinstall Hydrant: Per each.
  - kk. Salvage and Reinstall Valve and Box: Per each, according to size & type.
  - ll. Salvage and Reinstall DIP: Per linear foot, according to size. Sawcutting and removing any extra pipe that is not needed at the new hydrant location will be considered incidental.
3. Homeowners will be responsible for removing irrigation, landscaping, fences, etc. within the right-of-way that are in conflict with the proposed construction of the final street improvements.
  4. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction” 2020 Edition (MnDOT Spec.):
  - 1. 2104 – Removing Pavement and Miscellaneous Structures.
  - 2. 2520 – Lean Mix Backfill.

### 1.04 DEFINITIONS

- A. Remove: To take away or eliminate from the Site by any method selected by the Contractor, including disposal of material.
- B. Salvage: To dismantle, disassemble, or remove carefully without damage so the item can be re-assembled, replaced, or reused in a workable condition equal to that existing before removal.
- C. Abandon: To fill, bulkhead, or close off pipes and structures so that no settlement or flow can occur.

### 1.05 REGULATORY REQUIREMENTS

- A. Conform to MnDOT Spec. 2104.3.C, with the following modifications:
  - 1. Dispose of all materials designated for removal outside the Site at locations selected by Contractor.
  - 2. Stockpile or temporarily store materials designated for salvage at locations provided by Contractor.

### 1.06 SCHEDULING

- A. Prior to starting Work, submit for review by the Engineer and approval by the Owner, a schedule showing the commencement, order, and completion dates of the various parts of this Work.
- B. Install temporary erosion control, construction fence, barriers, and warning signs prior to removals.
- C. Fill holes or depressions resulting from removal or salvage immediately.
- D. Complete the remove and replace concrete curb or sidewalk to allow access to driveway within 7 calendar days, beginning on the day of the removals, or per applicable Milestones in Section 00 52 10, Paragraph 4.02.A.1.
- E. Provide temporary surface restoration for traffic continuity where removal or salvage operations are completed within streets, driveways, or parking lots.

## **PART 2 PRODUCTS**

### 2.01 LEAN MIX BACKFILL:

- A. Conform to MnDOT Spec. 2520



## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Dispose of all items removed, except for those items identified to be salvaged or recycled. Said disposal shall be in accordance with all laws, regulations, statutes, etc.
- B. Protect all sawcut edges. Where sawn edge is damaged, the Contractor shall recut sawn edge, remove damaged material, and replace damaged material at no expense to the Owner.
- C. Perform removal work without damage to adjacent retained work. Where such Work is damaged, patch, repair, or otherwise restore same to its original condition at no expense to the Owner.
- D. Remove debris from the work area as often as necessary, but not less than at least once at the end of each workday. Debris shall be placed in approved containers to prevent the spread of dust and dirt.
- E. Execute the Work in a careful and orderly manner with the least possible disturbance to the public and occupants of buildings.
- F. The Contractor shall notify Engineer immediately if existing street lighting wire is exposed during removal operations.
- G. Fill holes resulting from removals consistent with Section 31 23 00.
- H. Remove and replace damaged curb as directed by the Engineer.
- I. Remove 10 feet of concrete curb and gutter on each side of the catch basin that are adjusted, as directed by the Engineer.

### **3.02 EXAMINATION**

- A. Meet with owners of signs to determine requirements for salvage, storage, and replacement.
- B. Develop plan acceptable to Engineer and postal service for maintaining mail service. Temporary relocations of mailboxes will be necessary.

### **3.03 PROTECTION**

- A. Take all necessary precautions to adequately protect personnel and public and private property in the areas of Work. All Site fencing shall be in place prior to the start of any removal work.
- B. Remove, store safely, and replace all street signs, traffic control signs, guy wires, mailboxes, posts, wood fence, etc. that may interfere with construction.
- C. Provide approved barriers or warning signs as necessary.
- D. Provide and maintain temporary protection of existing structures designated to remain where removal work is being done, connections made, materials handled, or equipment moved.

- E. Do not close or obstruct walkways or roadways. Do not store or place materials in passageways or other means of egress. Conduct operations with minimum traffic interference.
- F. Take reasonable precautions to limit damage to existing turf.
- G. Holes or depressions created by removals shall not be left open for more than 1 day. Any hole within 10 feet of sidewalks shall be filled, suitably marked, or covered immediately.
- H. Avoid disturbance to any material beyond the limits required for new construction.

#### 3.04 SAWING PAVEMENT

- A. Concrete Pavement: Saw along the removal line to full depth of the existing concrete prior to removal of the pavement.
- B. Bituminous Pavement: Saw along the removal line to the full depth of the pavement prior to removal of the pavement.
- C. Provide means and method (such as snapping a chalk line) to establish a straight and uniform sawed line.

#### 3.05 REMOVE CONCRETE PAVEMENT

- A. Remove in accordance with MnDOT Spec. 2104.3.C, except as modified below:
  - 1. Saw cut concrete pavement and concrete base prior to mechanical pavement removal equipment. Remove concrete in such a manner that the remaining pavement is not damaged.
  - 2. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

#### 3.06 REMOVE BITUMINOUS PAVEMENT

- A. Remove in accordance with MnDOT Spec. 2104.3.C, except as modified below:
  - 1. Saw cut bituminous pavement at the removal limits prior to that removal, unless otherwise approved by the Engineer.
  - 2. Remove bituminous in such a manner that the remaining surfacing is not damaged.
  - 3. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.
  - 4. If a reclamation process is used to remove pavement, the resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.

#### 3.07 REMOVE CURB AND GUTTER

- A. Excavation of the existing boulevard material to allow for the placement of the new concrete curb and gutter, and specified depth of topsoil/compost shall be considered incidental to the concrete curb removal Bid Item.
  - 1. This will include stripping and disposing of 6 inches of existing vegetation for 6 feet (full curb) or 2 feet (spot curb).

- a. In the full curb area, boulevard trees will need to be worked around and protected per the Engineer's direction.
- B. Saw cut at removal limits.
- C. Limits of removal may vary in length (5 feet minimum) and may be in multiple locations.

### 3.08 PAVEMENT MILLING

- A. Bituminous:
  - 1. Saw cut at removal limits prior to milling process.
  - 2. Mill bituminous surface to the depth specified as shown on the Drawings or as directed by the Engineer. The milled surface shall be uniform and consistent, with minimal depth of grooves.
  - 3. Dispose of millings at an approved off-site disposal location.
  - 4. Sweeping with pickup broom or vacuum clean the milled surface shall be incidental to the milling process. Perform sweeping until milled surface is accepted by the Engineer.
- B. Concrete:
  - 1. Mill surface to the depth specified as shown on the Drawings or as directed by the Engineer.
  - 2. Dispose of millings at an approved off-site disposal location.
  - 3. Sweeping with pickup broom and cleaning the milled surface shall be incidental to the milling process.

### 3.09 REMOVE CONCRETE SURFACING

- A. Work includes sidewalks, pedestrian ramps, medians, valley gutters, and driveways.
- B. Saw cut concrete surfacing prior to removal.
- C. Remove concrete in such a manner that the remaining surfacing is not damaged.
- D. When removing existing sidewalks, do not disturb any material beyond the limits required for new construction (assumed as 6 inches maximum beyond and 8 inches maximum below existing grade).
- E. When removing existing driveways, do not disturb any material beyond the limits required to form for new construction (assumed 12 inches maximum from the back of new Work and 6 inches beyond the edge of new driveways).
- F. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

### 3.10 REMOVE BITUMINOUS TRAILS AND DRIVEWAYS

- A. Saw cut bituminous surfacing to full depth at the limits of partial removal prior to that removal, unless otherwise approved by the Engineer.
- B. Remove bituminous in such a manner that the remaining surfacing is not damaged.

- C. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.
- D. When removing existing trails and driveways, do not disturb any material beyond the limits required to form for new construction (assumed 12 inches maximum from the back of new work and 6 inches beyond the edge of new driveways).

### 3.11 REMOVE BITUMINOUS WEDGE

- A. Remove bituminous wedge as shown on the Drawings or as directed by the Engineer.
- B. Mill bituminous wedge in a manner that does not disturb the bituminous non wear course.

### 3.12 REMOVE/ABANDON MANHOLES AND CATCHBASINS

- A. Remove Structure:
  - 1. Remove entire structure, including casting and adjusting rings.
  - 2. Fill void left by structure with suitable material per Section 33 05 06.
  - 3. If requested by the Owner, deliver salvaged casting to Owner's Maintenance Facility.
- B. Abandon Structure:
  - 1. Remove casting, adjusting rings, and cone section or manhole section of structure, a minimum of 3 feet below final grade.
  - 2. Place and compact granular material within the remaining in place structure and the excavated area to finish grade.

### 3.13 REMOVE/ABANDON SECTIONS OF EXISTING PIPE

- A. Remove Pipe:
  - 1. Remove entire pipe to limits shown on the Drawings or as directed by the Engineer.
  - 2. Fill void left by pipe with suitable material per Section 33 05 06.
- B. Abandon Pipe:
  - 1. Bulkhead pipe with an 8 inch thick, non-shrink concrete grout plug at the upstream and downstream ends, and at locations as determined by the Engineer. On pipes 18 inches diameter and larger, brick or concrete block masonry may be used with non-shrink grout to construct the bulkhead.
  - 2. Fill with lean mix backfill.
- C. Remove pipe to be abandoned if the top of pipe is within 3 feet of final surface elevation.

### 3.14 REMOVE RETAINING WALL

- A. Avoid damage to sections of wall to remain.
- B. Dispose of materials off the Site at a predetermined location.
- C. Remove wall in its entirety, including footings and tiebacks.

### 3.15 REMOVE SIGNS AND BARRICADES

- A. Remove signs and barricades as shown on the Drawings or as directed by the Engineer.
- B. Owner to salvage sign panel from post prior to removal of post.
- C. Remove remaining post following salvaging of sign panel by Owner.
- D. Remove barricade, including "Future Road Extension" sign.
- E. Provide Engineer or Owner 48 hours notice prior to removing posts or barricades.

### 3.16 REMOVE PAVEMENT MARKINGS AND MESSAGES

- A. Remove to the limits shown on the Drawings or as directed by the Engineer.
- B. Removal of markings and messages shall be accomplished with suitable sand or water blasting equipment, unless other means are authorized by the Engineer. Grinding is not an acceptable method of removal. The bituminous street surface shall not be damaged by the removal operations.

### 3.17 SALVAGE AND REINSTALL

- A. Signs and Barricades:
  - 1. In no case shall a traffic sign or street sign be removed or disturbed by Contractor without prior notification being given to Engineer and then only after satisfactory arrangements have been made for a temporary installation or its disposition:
    - a. Maintain temporary post mounted street identification signage at all times due to its importance to the 911 Emergency Response System.
    - b. Maintain temporary post mounted traffic signage on all streets open to traffic.
    - c. Temporary post mounted installation shall be considered incidental to the Project.
  - 2. Owner to salvage sign panel from post and temporarily store until reinstallation.
  - 3. Remove remaining post following salvaging of sign panel by Owner.
  - 4. Install temporary post mounted signs as described above.
  - 5. Install new post and hardware per Section 34 41 05.
  - 6. Attach salvaged sign panel provided by Owner.
  - 7. Remove signs and barricades that are damaged during construction and replace with new signs as incidental to the Project.
  - 8. Contact the County directly related to all signs within the County right-of-way that may need to be temporarily or permanently removed.
- B. Mailboxes:
  - 1. Remove and salvage existing mailboxes that interfere with the Work or whose access is restricted by the construction activities.
  - 2. Place at temporary locations as directed by Engineer or as shown on Drawings.
  - 3. Removal, temporary re-installation, and replacement shall occur such that mail delivery is not interrupted.
  - 4. Reinstall in locations as shown on Drawings or as directed by Engineer.

5. Replace mailboxes, posts, and appurtenances damaged during construction at no charge to Owner.
- C. Community Mailboxes:
1. Remove and salvage existing mailboxes that interfere with the Work or whose access is restricted by the construction activities. Includes the removal and disposal of the existing concrete pad.
  2. Removal, temporary re-installation, and replacement shall occur such that mail delivery is not interrupted.
  3. Reinstall in locations as shown on Drawings or as directed by Engineer. A separate bid item has been provided for the 6 Inch Concrete Mailbox Pad.
  4. Replace mailboxes, posts, and appurtenances damaged during construction at no charge to Owner.
- D. Fences:
1. Salvage and store fence and post material where they are not in conflict with the Work.
  2. After completion of Work, reinstall fence to the condition existing prior to removal.
  3. Install temporary snow fence or similar barrier at the end of the working day while the permanent fence is removed.
- E. Culverts and Flared End Sections:
1. Where possible, salvage existing pipe in areas to be disturbed by the construction.
  2. Reinstall in original condition and location as shown on the Drawings.
  3. If requested by the Owner, deliver salvaged material to Owner's Maintenance Facility.
- F. Hydrants, Gate Valves, and Hydrant Leads:
1. Salvage existing hydrants, gate valves, and ductile iron pipe leads at locations shown on the Drawings or as determined by the Engineer.
  2. Reinstall in original condition at the location shown on the Drawings or as directed by the Engineer.
  3. Reinstall per Section 33 10 00 and the Standard Detail Plates in the Drawings.

### 3.18 FIELD QUALITY CONTROL

- A. Salvaged items to be reinstalled shall be of the same shape, dimension, location, and quality of the original item prior to construction.
- B. Items damaged during removal or salvaging operations shall be replaced with new material of equal type and quality of the damaged item when it was new.

### 3.19 DISPOSING OF MATERIAL

- A. Dispose of all materials outside of the Site at disposal location selected by Contractor in compliance with state and local regulations. Burying of material and debris is not allowed within the Site.

## END OF SECTION

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## SECTION 12 41 00

### FURNISHINGS AND ACCESORIES

#### PART 1 GENERAL

##### 1.01 SUMMARY

###### A. Section Includes:

1. Types of Project Site Furnishings Include: basketball post and backboard, and park shelter.
2. Work includes furnishing and installing Project Site Furnishings and supplying necessary inserts, anchors, templates, and setting diagrams for incorporation into the work of others.

###### B. Related Sections:

1. Section 01 33 00 – Submittals
2. Section 03 30 10 – Reinforced Concrete
3. Section 32 13 14 – Concrete Walks, Medians, Driveways
4. Section 32 11 23 – Aggregate Base Courses

##### 1.02 PRICE AND PAYMENT PROCEDURES

###### A. Measurement and Payment:

1. Tree Protection Fence: Measurement shall be by linear foot and payment shall be full compensation for all work and costs in furnishing, installing, maintaining and removing the fence.
2. Picnic Table: Measurement shall be by each and payment shall be full compensation for all work and cost in furnishing and installing picnic table on concrete pad.
3. Park Bench: Measurement shall be by each and payment shall be full compensation for all work and cost in furnishing and installing park bench on concrete pad.
4. Trash Can: Measurement shall be by each and payment shall be full compensation for all work and cost in furnishing and installing trash can on concrete pad.
5. Concrete Bollard: Measurement shall be by each and payment shall be full compensation for all work and costs for furnishing and installing concrete bollard.
6. Pipe Rail: Measurement shall be by linear foot based on horizontal length of the railing as shown on the Drawings regardless of number of vertical and horizontal members. Payment shall be full compensation for fabrication, surface preparation, coating, galvanizing, metal posts, fittings, castings, anchor bolts, accessories required for erection, and installation.
7. Park Shelter: Measurement shall be by each according to size and payment shall be full compensation for all work and costs associated with furnishing and installing this item complete as specified, including excavation, aggregate, concrete foundation and slab, shelter lighting, and GFIC receptacle.
  - a. Lighting and receptacle include installation of light, conduit, wire, outlet box, mounting hardware, and miscellaneous items required for complete installation.
8. Basketball Pole and Backboard: Measurement shall be by each and payment shall be full compensation for all work and costs associated with furnishing and installing this work complete as specified.
9. Park Monument Sign Foundation: Measurement shall be by each and payment shall be full compensation for all work and costs associated with installation including excavation, aggregate, and concrete as specified.



10. Concrete Pad: Measurement shall be by square yard and payment shall include excavation, subgrade preparation, aggregate, concrete, and all other incidental items needed to place concrete as specified.
11. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction," 2020 Edition (MnDOT Spec.)
- B. American Society for Testing and Materials (ASTM)
- C. American Concrete Institute (ACI)
- D. Concrete Reinforcing Steel Institute (CRSI)

### 1.04 SEQUENCING AND SCHEDULING

- A. Prior to starting work, submit a schedule showing the order and completion of Work for review and approval by the Owner.
- B. Perform routine inspections to make sure the tree protection fence is still functioning as designed.
- C. Provide notice by 2:00 PM the day prior to any concrete placement to allow time for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing concrete, and foreman onsite during placement.
  1. Aggregate base DCP tests (per Section 32 11 23) prior to concrete placement.
  2. Inspection of placement operations. No concrete will be accepted without inspection.
  3. Concrete field and plant testing if required.
- D. Protection fence shall be removed upon project completion.
- E. Install park bench, picnic table, trash can, bollard, and pipe rail after topsoil placement has been completed.

### 1.05 SUBMITTALS

- A. Submit all required items before commencement of Work in accordance with Section 01 33 00.
- B. Shop Drawings
  1. For each item specified, provide information showing detail, location, material, finish, size and method of joining various assemblies.
  2. Provide templates and rough-in measurements as required.
  3. Mark items requiring field assembly for erection identification and furnish erection drawings and instruction.
  4. Reinforcing steel in accordance with CRSI Manual of Standard Practice and ACI SP 66.
  5. Submit MnDOT approved mix design for each concrete mix designation used.

C. Setting Diagrams

1. Provide setting diagrams, templates, instructions and directions for installation of anchorage devices and any cut-out requirements in other work.

1.06 QUALITY ASSURANCE

A. Qualifications

1. Installer: Engage experienced installer that has completed installation similar in material, design, and extent to that depicted on the Drawings.

1.07 DELIVERY, STORAGE AND HANDLING

A. Delivery and Acceptance

1. Package to prevent damage during shipment, handling, storage and installation. Maintain protective covering in place and in good repair until removal is necessary.
2. Products shall be delivered to the Site in the manufacturer's original, unopened containers and packaging. Notify Owner's Representative a minimum of 5 days prior to delivery for inspection.
3. Contractor shall remove all shipping materials as necessary to inspect products for damage immediately upon delivery and coordinate inspection by Owner's Representative.

B. Storage and Handling

1. Contractor shall repack and store products in a secure area and protect from damage and adverse environmental conditions until installation is performed. Products shall be protected from damage during handling and installation.

C. Waste Management and Disposal

1. Dispose of all waste generated from packaging and installation as in accordance with applicable regulations.
2. Any excess material is the property of the Contractor and shall be disposed of off-Site.

1.08 WARRANTY

A. Manufacturer's Warranty: Submit manufacturer's standard limited warranty on all Site furnishing Bid Items.

B. Installer Warranty: Installer shall warrant all site furnishing installations for a period of no less than one year, including anchorage and fastener failure.

**PART 2 PRODUCTS**

2.01 MATERIALS

A. Tree Protection Fence:

1. Orange safety fence.
2. At least 4' in height.
3. Steel T posts placed a maximum of 10' on center.

- B. Picnic Table:
  - 1. Provide a picnic table as manufactured by Pilot Rock, or approved equal.
  - 2. Model: Pilot Rock WPTS/CB-8RB Series with powder coated frame and thermoplastic coated perforated steel black in color, 8' with ADA access.
  - 3. Supplier: St Croix Recreation Co, Inc.  
<http://www.stcroixrec.com>, 1-800-525-5914  
Contact: Mike Basich, 651-430-1247
- C. Park Bench:
  - 1. Urbanscabe Butler Series, or approved equal.
    - a. 6' bench with back, black, BU1114C.
- D. Tash Can:
  - 1. Urbanscape, or approved equal.
    - a. 32 gallon flat top lid, black, TE3F34S.
- E. Concrete Bollard:
  - 1. Conform to the detail shown on the Drawings.
- F. Pipe Rail:
  - 1. Conform to MnDOT Spec. 2475.3.B and 2475.3.C.
- G. Basketball Pole and Backboard
  - 1. Model: First Team – Legacy Supreme, or approved equal.
    - a. 6' Black Square Post.
    - b. Adjustable Extension Arm.
    - c. 42" x 72" Acrylic Backboard.
    - d. Heavy Duty Flex Goal.
- H. Park Shelter:
  - 1. All-Steel Shelter w/All-Steel Square Cupola, Manufactured by Superior Shelters, RCP Shelters, or CoverWorx (Steelworx).
    - a. Dimensions as shown on Drawings.
      - 1) Minimum 7'6" Eave Height.
      - 2) 4:12 Roof Pitch, w/24 Ga. MultiRib PreCut Metal Roofing with steel edging.
  - 2. Powder coated forest green roof with chocolate brown framing
  - 3. Provide signed Drawings by a licensed Engineer in the state of Minnesota for the shelter structure, typically obtained from the supplier. The signed Drawings will need to be submitted with the building permit discussed in paragraph 3.04.
  - 4. Include security light located in center of shelter
    - a. Light shall be LED 20W RAB WPLED20, or approved equal.
  - 5. Include GFCI outlet located at corner of shelter as shown on Drawings.
- I. Concrete:
  - 1. Conform to section 32 13 14 2.01.A except as modified herein:
    - a. Slab, Park Monument Sign Foundation, and Concrete Pad Mix No. 3F52A.
  - 2. Foundation: conform to MnDOT 2461.2 mix design 1G52.
  - 3. Curing Compound: conform to section 32 13 14 2.01.D.
  - 4. Reinforcing Steel:

- a. Deformed bars: ASTM A615, grade 60.
  - b. Welded wire fabric: ASTM A497, flat sheets only.
- J. Aggregate Base:
  - 1. Conform to section 32 11 23 2.01.B.
- K. Miscellaneous Material:
  - 1. Nonshrink Grout:
    - a. Color to match concrete.
    - b. Nonmetallic and nongas-liberating flowable fluid.
    - c. BASF: Masterflow 928, Euclid Chemical Co
  - 2. Steel Anchors and Fasteners:
    - a. Dowels and Pins: Stainless steel, ASTM A276, Type 304. Substitutions may be submitted to Owners Representative.
    - b. Anchor rod structural adhesive: Hilti, Inc HIT-RE 500 V3 Epoxy Adhesive or approved equal.
  - 3. Joint Sealant: One-component elastomeric self-leveling polyurethane sealant by BASF: Sonolastic SL1, Sika: Sikaflex -1C SL, or approved equal.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Field Measurements: The Contractor shall verify site conditions and dimensions shown on the Drawings. Notify the Owner's Representative of any differences, obstructions, or utilities that in any way affect the installation of furnishings.
- B. The Contractor shall be responsible for verifying the presence and location of underground utilities prior to excavation. Damage to utility lines, services, and other structures shall be repaired at the Contractor's expense.
- C. Examine the surfaces intended to receive the furnishings for compliance with all requirements, including tolerances, level grade, mounting requirements, and any other conditions affecting performance.
- D. The Contractor shall inspect the correct and level finish grade, mounting surfaces, and other conditions affecting performance. Discrepancies, irregularities, etc. shall be brought to the attention of the Owner's Representative.

### **3.02 PREPARATION**

- A. Where existing work and improvements are in place, cover, fence, and protect all such work from damage and soiling from construction operations.
- B. Contractor shall maintain and protect all erosion control measures during construction. Contractor shall also protect all existing trees on Site not noted for removal. Any damage to existing structures, vegetation to remain, or erosion control shall be immediately reported to the Owner's Representative and replaced at the Contractor's expense.

- C. If the Site conditions do not allow for the installation as shown on the Drawings, contact the Owner's Representative and provide a proposed modification to the method or location for approval prior to proceeding with the installation.
- D. Unpack and assemble (as needed) and install the items in accordance with the manufacturer's printed instructions, unless otherwise specified or shown.

### 3.03 INSTALLATION

- A. General
  - 1. Install all items per the manufacturer's printed recommendation, details, and product literature. Do not remove any protective coverings until installation is complete.
  - 2. Install items rigid, plumb, level, and true to lines and orientation shown in the Drawings or shop drawings.
  - 3. Contractor shall take necessary steps to protect furnishings and existing work, surfaces, and vegetation from damage during transport, handling, or installation.
  - 4. Contractor shall permanently affix all site furnishings to the ground as specified.
  - 5. Erection tolerances: Maximum variation from True position = 0.5 inch.

### 3.04 PARK SHELTER

- A. Contractor will be responsible to pull a building permit with the City of Cottage Grove Building Official, submit all required documentation – including signed drawings, and schedule all necessary inspections.
- B. Submit proposed method of passing electrical conduit through foundation slab and inside of structure column to the shelter light unit and receptacle in accordance with Section 01 33 00 – Submittals.
- C. Furnish and install security light inside of structure, including all electrical connections and wiring necessary within the structure.
- D. Provide power from power source as indicated on drawings to light and receptacle.

### 3.05 CONCRETE

- A. Formwork:
  - 1. Construction:
    - a. In accordance with ACI 347.
    - b. Make joints tight to prevent escape of mortar and to avoid formation of fins.
    - c. Brace as required to prevent distortion during concrete placement.
    - d. On exposed surfaces locate form ties in uniform pattern or as shown.
    - e. Construct so ties remain embedded in the wall with no metal within 1 inch of concrete surface when forms, inserts, and tie ends are removed.
  - 2. Form Removal:
    - a. Remove after concrete has attained at least 70% of 28 day strength, or approval is obtained in writing from Engineer.
    - b. Remove forms with care to prevent scarring and damaging the surface.

3. Reinforcing steel:
  - a. Unless otherwise specified, place reinforcing steel in accordance with CRSI Recommended Practice for Placing Reinforcing Bars.
  - b. Place and support slab reinforcement on reinforcement chairs. Place reinforcement 2" from the top surface of the slab.
  - c. Splices and Laps: As specified on the Drawings and as listed below:
    - 1) Tie splices with 18 gauge annealed wire as specified in CRSI Standard.
    - 2) Splice length for WWF: One full mesh plus 2 inches, 6 inches minimum.
4. Placement and Finishing
  - a. Place concrete in accordance with section 32 13 14 3.01 and 3.06.A except as modified herein:
    - 1) Prior to placing concrete, remove water from excavation and debris and foreign material from forms. Check reinforcing steel for proper placement and correct discrepancies.
    - 2) Before depositing new concrete on old concrete, clean surface using sandblast or bushhammer or other mechanical means to obtain a 1/4 inch rough profile, and pour a cement-sand grout to minimum depth of 1/2 inch over the surface. Proportion 1 part cement to 2.5 parts sand by weight.
    - 3) Place concrete as soon as possible after leaving mixer, without segregation or loss of ingredients, without splashing forms or steel above, and in layers not over 2 feet deep. Place within 90 minutes after adding cement to mix.
    - 4) Four feet maximum vertical drop to final placement, when not guided with chutes or other devices to prevent segregation due to impact with reinforcing.

### 3.06 CLEANING, REPAIR, & RESTORATION

- A. All damage to Site resulting from the installation of the furnishings shall be repaired by the Contractor at no cost to the Owner.
- B. Soil, dust, or other materials brought onto paved areas shall be removed promptly.
- C. Restore areas damaged during installation to their original condition unless otherwise specified or depicted on the Drawings.
- D. Touch-Ups: Touch up scratches and other blemishes in the powder coat, paints and other finishes in accordance with the manufacturer's recommendations.

### 3.07 FIELD QUALITY CONTROL

- A. Any concrete damaged prior to acceptance shall be removed and replaced by the Contractor, and will be incidental to the Project.
- B. The Owner shall have an independent testing laboratory perform the following tests as a minimum. The test locations will be determined by the Engineer.
  1. One Air Entrainment test per day, per concrete mix.
  2. One slump test per day per concrete mix.
  3. One set of cylinders for compression tests per day, per concrete mix.

## END OF SECTION

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## SECTION 26 05 59

### IRRIGATION SYSTEM ELECTRICAL SUPPLY

#### PART 1 GENERAL

##### 1.01 SUMMARY

###### A. Section Includes:

1. Provide and install materials and equipment for supply of power to irrigation control cabinet and pumps in accordance with the National Electrical Code (NEC), MnDOT Specifications, and as specified in the Contract.
2. Coordination with utility to obtain electrical service and connection to electrical service source.
3. Other miscellaneous work shown on the plans or specified herein.

###### B. Related Sections:

1. Section 32 80 00 – Irrigation System

##### 1.02 PRICE AND PAYMENT PROCEDURES

###### A. Measurement and Payment:

1. Payment included under bid item for Irrigation System in section 32 80 00 1.02 includes full compensation for the cost of conduit, conduit sleeves, handholes, couplings, elbows, bushings, sealing around the conduit where it enters a pull box, conductors, pulling, splicing, making required connections, testing, grounding and bonding, and other miscellaneous items required for a complete installation as specified.
2. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 REFERENCES

###### A. National Electrical Code (NEC).

###### B. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):

1. 3801 – Rigid Steel Conduit.
2. 3815 – Cables and Conductors.

##### 1.04 SUBMITTALS

###### A. Submit all required Items before commencement of Work in accordance with section 01 33 00.

###### B. Submit an electrical design including the following items:

1. Size and type of conduit.
2. Size and type of conductors.
3. Location of connection to source of power.

###### C. Submit manufacturers product information for the following items as specified:



1. Conduit.
2. Conductors and splices for above and below ground.
3. Handhole.
4. Receptacles and switches.

D. Provide operations manual for booster pump if pump required.

#### 1.05 QUALITY ASSURANCE

##### A. Qualifications

1. Contractor: Must be a Minnesota Licensed Electrical Contractor in “good standing” with the Minnesota State Board of Electricity at the time of bid submission.
2. Contractor must provide at least one person at all times during execution of this portion of work who is thoroughly familiar with the type of materials being installed and is directly responsible for all work performed under this Section.

#### 1.06 SEQUENCING AND SCHEDULING

- A. Begin coordination with utility company for power supply prior to preconstruction meeting.
- B. Provide 48 hour notice to Engineer prior to installations to allow for staking locations of any conduit, handholes.
- C. Install all conduit for crossings under, streets, parking lots, trails, and sidewalks as identified in drawings prior to grading work.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

- A. Non-Metallic Conduit: Except where required by the NEC and noted herein all conduct shall be type PVC schedule 40.
  1. Provide conduit in accordance with NEC Article 352 except as modified herein:
    - a. Conduit shall be a minimum of .75 inch diameter unless otherwise noted.
      - 1) The conduit that contains only control wiring may be reduced in size to 0.5 inch.
  2. All Exposed Conduit installed on an exterior surface or emerges from the ground outside of an enclosure shall be type rigid steel in accordance with MnDOT Spec. 3801.
    - a. Includes conduit containing only control wiring.
  3. Liquid Tight Flexible Metal Conduit may be used only when the entire length of conduit, including fittings, is not greater than 6 feet and the entire run is located within the irrigation cabinet.
- B. Conductors:
  1. Provide conductors in accordance with MnDOT 3815 except as modified herein:
    - a. Unless otherwise noted, all conductors shall be stranded copper, Type XHHW.
    - b. Conductors shall be sized according to National Electric Code and verified through voltage drop calculations except as noted:
      - 1) Minimum size conductor shall be #10 AWG except as noted:

- a) The Minimum size conductor that supplies power to the irrigation controller only may be reduced to #12 AWG.
- 2) Conductors for irrigation pumps shall not have a voltage drop exceeding 3% when calculated from the overcurrent protective device at the service to the irrigation pump disconnect.
- C. Splices in below grade wiring within handhole:
  - 1. Raychem GTAP 1 or GTAP 2, or approved equal
- D. Hand Holes:
  - 1. Type A: 12 x 12 x 12 stackable Quazite Box PC1212BA12 (all applications).
    - a. Cover PC1212HA0017 stamped "Electric".
- E. Booster Pump and Booster Pump Disconnect:
  - 1. Booster pump if required shall be sized as needed to provide sufficient flow for proper operation of irrigation system.
  - 2. The disconnecting means shall be lockable and meet the requirements of NEC Article 110-25.
- F. Devices
  - 1. Receptacles and switches shall be Spec grade.

### **PART 3 EXECUTION**

#### **3.01 GENERAL**

- A. All installations shall meet or exceed NEC requirements.
- B. All circuits exceeding 50VAC to ground shall be installed in conduit.

#### **3.02 CONNECTION TO SOURCE OF POWER**

- A. The source of power shall be indicated in the Drawings.
- B. Connection of conduit to the service cabinet shall be made by one of the following methods:
  - 1. Core Drilling the concrete base and installing a new conduit.
  - 2. Utilization of an existing empty conduit.
  - 3. Installation of a handhole in an existing conduit with wiring. Existing wire shall be replaced with new wire as required to return the circuit to operation. The new wire shall be of the same size and type as the existing wire.
  - 4. Knock out holes are not allowed in the service cabinet to allow for the connection of a conduit.

#### **3.03 CONNECTION TO IRRIGATION CONTROLLER:**

- A. Final connection shall be made by cord and plug to a GFCI receptacle installed inside the irrigation cabinet.

### 3.04 BOOSTER PUMP AND BOOSTER PUMP DISCONNECT:

- A. A disconnecting means for the booster pump shall be installed on the exterior of the booster pump cabinet . Installation of the disconnecting means shall meet the requirements of NEC Article 430 Part IX. Disconnecting means located at locations other than on the exterior of the booster pump cabinet shall not be considered as meeting the requirements of NEC Article 430.102.
  - 1. NEC Articles 430.109(A)(2), 430.109(A)(3), 430.109(A)(4), 430.109(C)(1), and 430.109(C)(2) shall not apply to this section
  - 2. For the purpose of this section the disconnecting means shall be considered to require serve or maintenance when energized and the installation shall meet the requirements of the NEC Table 110.26(a)(1).
- B. Only the booster pump circuit shall enter or leave the disconnect.
- C. Demonstrate operation of booster pump at irrigation system startup.

**END OF SECTION**

## SECTION 26 56 00

### EXTERIOR LIGHTING

#### PART 1 GENERAL

##### 1.01 SUMMARY

###### A. Section Includes:

1. Provide and install materials and equipment for construction of lighting systems in accordance with the National Electrical Code (NEC), MnDOT Specifications, and as specified in the Contract.

###### B. Related Sections

1. Section 00 31 00 – Project Management and Coordination.

##### 1.02 PRICE AND PAYMENT PROCEDURES

###### A. Measurement and Payment:

1. Non-Metallic Conduit: Measurement will be per lineal foot for each size and type from center of handhole, base, service cabinet, or connection to existing conduit to center of handhole, base, service cabinet, or connection to existing conduit along the centerline of the conduit as installed. Payment at the Bid Unit Price shall be full compensation for the cost of conduit, conduit sleeves, couplings, elbows, bushings, sealing around the conduit where it enters a pull box, grounding and bonding, and other miscellaneous items required for a complete installation of the conduit.
2. Underground Wire: Measurement will be per lineal foot for each size and type from center of handhole, base, or service cabinet to center of handhole, base, or service cabinet along the centerline of the wire installed. Payment at the Bid Unit Price shall be full compensation for the cost of wire, pulling, splicing, terminals, making required connections, slack required at connections, testing, and other miscellaneous items required for complete installation of underground wire.
3. Lighting Service Cabinet: Measurement will be per each. Payment at the Bid Unit Price shall be full compensation for the cost of panel board enclosure, circuit breakers, switches, relays, photoelectric control, internal wiring, service entrance circuit, mounting hardware, grounding, painting, sealing around cabinet base, numbering of the service cabinet, permits, and miscellaneous items required for a complete installation of the lighting service cabinet.
4. Handhole: Measurement will be per each by type. Payment at the Bid Unit Price shall be full compensation for handhole, frame and cover, excavation, aggregate drain bed, backfilling, sealing conduit entrances, surface restoration, and miscellaneous items required for the complete installation of handholes.
5. Lighting Unit (City supplied Light Pole and Luminaire): Measurement will be per each by type. Payment at the Bid Unit Price shall be full compensation for lamps, assembly and installation of the luminaire and pole base, pickup and delivery of pole and luminaire to place of installation, pole bracket, inline fuse, wiring between pole base and luminaire, luminaire wire holder, splice to power circuit, numbering of the light pole, luminaire labeling, and other miscellaneous items required for a complete installation of the lighting unit.

6. Light Foundation: Measurement will be per each by type. Payment at the Bid Unit Price shall be full compensation for excavation, concrete, reinforcement, anchor rods, ground rod, ground lead, grounding connections, conduit elbows and bushings, and other miscellaneous items required for the complete installation of light foundation.
7. Equipment Pad: Measurement will be per each. Payment at the Bid Unit Price shall be full compensation for excavation, aggregate, concrete, reinforcement, anchoring hardware within the pad, conduits within the pad, ground rods, grounding connections, mounting brackets, mounting hardware, and miscellaneous items required for the complete equipment pad installation.
8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

#### 1.03 REFERENCES

- A. National Electrical Code (NEC).
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
  1. 2471 – Structural Metals.
  2. 2545 – Lighting Systems.
  3. 3101 – Portland Cement.
  4. 3113 – Admixtures for Concrete.
  5. 3803 – Non-Metallic Rigid PVC and HDPE Conduit.
  6. 3815 – Cables and Conductors.
- C. American Society of Testing Materials (ASTM):
  1. C260 - Air-Entraining Admixtures for Concrete.

#### 1.04 SUBMITTALS

- A. Conduit.
- B. Conductors and splices for above and below ground.
- C. Handhole.
- D. Service Cabinet.
- E. MnDOT approved design mix for each concrete mix designation used.

#### 1.05 SEQUENCING AND SCHEDULING

- A. Concrete curb and gutter construction precedes street light system installations.
- B. Provide 48 hour notice to Engineer prior to installations to allow for staking the locations of poles, handholes and cabinets.
- C. Concrete shall be placed in the form the same day the form is placed for all pour in place light foundations.

- D. Install conduit crossings prior to curb placement when replacing existing curb or installing new curb at the point of the crossing as part of the project.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. Non-Metallic Conduit: Provide conduit in accordance with MnDOT Spec. 3803 except as modified herein:
  - 1. Except where required by the NEC conduct shall be type PVC schedule 40.
  - 2. Conduit shall be 1.5 inch unless otherwise noted.
    - a. The portion of conduit that feeds receptacle stations or landscape/accent lighting may be reduced in size, but not less than .75 inch.
- B. Conductors:
  - 1. Provide conductors in accordance with MnDOT 3815 except as modified herein:
    - a. Unless otherwise noted, all conductors shall be Copper, Type XHHW-2
    - b. Conductors shall be sized according to National Electric Code and verified through voltage drop calculations except as noted:
      - 1) Minimum size phase conductor for lighting system shall be #6 wire gauge.
      - 2) Minimum size equipment ground wire conductors shall be #8 wire gauge.
      - 3) Minimum size conductor feeding receptacle stanchions or landscape/accent lighting shall be #10 wire gauge.
      - 4) Conductors within lighting unit extending from the fuseholder to the luminaire, including the equipment grounding conductor, shall be #12 gauge stranded XHHW
        - a) The grounding electrode conductor shall be green or bare, stranded or solid, and no smaller than #6 gauge wire.
        - b) If installed wholly within the lighting unit the grounding electrode conductor may be reduced to #8 gauge wire.
    - c. Phase conductors shall be color coded
      - 1) Phase conductors for 240 volt circuits shall be red and black.
      - 2) Phase conductors for 240/120 volt circuits shall be red, black, and white.
      - 3) Phase conductors supplying receptacles, pole, or ground mounted shall be blue and white.
  - 2. Phase conductors shall be color coded
- C. Above grade wiring within lighting unit:
  - 1. Fuses shall be dual element time delay, FNM5 or equal.
  - 2. Pole fuse holders for 240 volt circuits shall be Bussmann Hex-AA, for 120 volt circuits shall be Bussmann Heb AA.
    - a. tape used around fuse holder shall be 3M 33Plus or equal.
  - 3. Splicing shall be Burndy 1PL4-X, or approved equal.
    - a. The number of terminals shall not be less than the number of Conductors.
    - b. In the event a conductor larger than #4 is used, the corresponding insulated splice block of the manufacturer's series shall be provided.
- D. Below grade wiring within handhole:
  - 1. Splicing shall be Raychem GTAP 1 or GTAP 2, or approved equal.

- a. Splices that contain no conductor larger than #10 AWG may utilize Ideal Gel Filled Wire Connectors.
- E. Service Cabinet (120/240 VAC) – Feed Point, Povolny Specialties or approved equal:
  - 1. Nema 3 R, neoprene gasket on doors, 1/8" aluminum 5052-H32, anodized 30MIN, clear, non-corroding hardware, ETL listed in accordance with UL508A.
  - 2. Dimensions of box 17" x 17" x 55" height.
  - 3. 4" divider, rear lower section of cabinet, full width utility wire way.
  - 4. Photocell.
  - 5. 7" x 7" 178MM Lexan Window.
- F. Handholes:
  - 1. Type A: 13 x 24 x 12 stackable Quazite Box PG1324BA12 (all applications).
    - a. Cover PG1324CA0041 stamped "STREET LIGHTING".
  - 2. Type B: 12 x 12 x 12 stackable Quazite Box PC1212ZA12 (only allowed when located behind pole Type F or reconstruct when specifically identified in Drawings).
    - a. Cover PC1212CA0041 stamped "STREET LIGHTING".
- G. Light Foundation:
  - 1. All foundations shall be poured in place except design F foundations.
  - 2. Concrete to Conform to MnDOT Spec. 2461, except as modified herein:
    - a. Portland Cement: Conform to MnDOT Spec. 3101:
      - 1) Type 3 air-entraining concrete produced by using Type I Portland Cement.
    - b. Air-Entraining Admixtures: Conform to MnDOT Spec. 3113:
      - 1) Conforming to ASTM C260.
      - 2) Not to be added to the concrete mixtures in the field without approval from Engineer.
    - c. Mix Designation and Classification for Concrete foundations.
      - 1) Equipment Pad and Light Pole Foundation: Mix No. 3G52.
  - 3. Reinforcing to Conform to MnDOT Spec. 3301.
  - 4. Design P and E anchor bolt circle dimension and projection shall be modified to meet lighting unit manufacturers specifications.
- H. Equipment Pad:
  - 1. Concrete to conform to 2.01.G.2.
- I. Lighting Unit Provided by the City.
  - 1. Light Pole Type A Residential (LGT-7)
    - a. Holophane Standard Pole
      - 1) RTA 1650C PLN NDR BZ 35HH FBC RFD2043
      - 2) 3" x 5"- Handhole Base Cover
      - 3) Dark Anodized Duranodic Bronze Finish
      - 4) Full spun aluminum cover
    - b. Holophane Taft LED Luminaire
      - 1) PTE2 P20 40K MVOLT GL3 BZ BL
      - 2) 55W LED
      - 3) Auto-sensing (120-277) 50/60 HZ voltage
      - 4) Type III glass reflector
      - 5) Painted Standard Holophane Bronze Finish

- 6) Ball final
- 7) Standard solid rib
- 2. Light Pole Type P1 Ravine Single LED Fixture 14 Foot (LGT-8)
  - a. Holophane Columbia
    - 1) Aluminum Sitelink Pole
    - 2) CLA 14 SL5 17D C04 BZ
  - b. Holophane Granville Luminaire
    - 1) Classic Utility LED3 Version
    - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
- 3. Light Pole Type P2 Ravine Single LED Fixture 18 Foot (LGT-9)
  - a. Holophane Columbia
    - 1) Aluminum Sitelink Pole
    - 2) CLA 18 SL5 17D C04 BZ
  - b. Holophane Granville Luminaire
    - 1) Classic Utility LED3 Version
    - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
- 4. Light Pole Type E2 Ravine Double LED Fixture 14 Foot (LGT-10)
  - a. Holophane Columbia
    - 1) Aluminum Sitelink Pole
    - 2) CLA 14 SL5 17D C04 BZ
  - b. 2-Holophane Granville Luminaire
    - 1) Classic Utility LED3 Version
    - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
    - 3) Cincinnati Cross Arms (two at 180°) CSC 15 2A TN SL5 BZ
- 5. Light Pole Type E3 Ravine Double LED Fixture 18 Foot (LGT-11)
  - a. Holophane Columbia
    - 1) Aluminum Sitelink Pole
    - 2) CLA 18 SL5 17D C04 BZ
  - b. 2-Holophane Granville Luminaire
    - 1) Classic Utility LED3 Version
    - 2) GVD3 P20 40K MVOLT MS GL3 BZ RB ST TBZ
    - 3) Cincinnati Cross Arms (two at 180°) CSC 15 2A TN SL5 BZ
- 6. Light Pole Type A2 Cobra Head LED Fixture 20 Foot (LGT-12)
  - a. Holophane Standard Pole
    - 1) Autobahn Series
    - 2) RTA 2050E PLN NDR BZ – FBC RFD2043
    - 3) Full spun aluminum cover
  - b. Holophane Standard Mast Arm
    - 1) 1MA-BZ
    - 2) Dark Anodized Duranodic Bronze Finish
  - c. Luminaire-American Electric
    - 1) Autobahn Series, LED Version, 45 inch slip over arm
    - 2) ATB2 40X MVOLT R2 BZ NL AO RFD330774
    - 3) 88w 11.7k lm
- 7. Light Pole Type E4 Cobra Head LED Fixture 30 Foot (LGT-13)
  - a. Holophane Standard Pole
    - 1) RTA3070E PLN NDR BZ FBC RFD2043
    - 2) Dark Anodized Duranodic Bronze Finish



- 3) Full spun aluminum cover
- b. Holophane Standard Mast Arm
  - 1) 1MA-BZ
  - 2) Dark Anodized Duranodic Bronze Finish
- c. Luminaire-American Electric
  - 1) Autobahn Series, LED Version
  - 2) ATB2 40X MVOLT R2 BZ NL AO FRD330774
  - 3) 88w 11.7k lm
- 8. Light Pole Type F1 LED Lighting Unit 31 Foot 11 Inches (LGT-14)
  - a. Holophane Wadsworth
    - 1) Aluminum Sitelink Pole
    - 2) WDA 30 SL6 17D C05 BZ
  - b. Holophane Memphis Luminaire
    - 1) Utility Tear Drop LED 2
    - 2) MPL2 P50S 40K MVOLT BG3 QSM BZ SS BHDF QSM BZ
    - 3) 30" Dia. Shallow Skirt, Bronze, Bowl Glass
    - 4) Boston Harbor Style Arm, Model: BHC 72IN 1A TN SL6 BZ
    - 5) Boston Harbour Style Decorative Arm Fitter Model: BHDF13 200 BZ

### **PART 3 EXECUTION**

#### **3.01 CONSTRUCTION REQUIREMENTS**

- A. General
  - 1. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.
- B. Service Cabinet:
  - 1. Contractor shall furnish and install a Service Cabinet, for supplying power to an electric lighting system.
  - 2. Supplying power to an electric lighting system, on an equipment pad concrete foundation at the location indicated in the Plans.
  - 3. The Service Cabinet shall be modified as needed to include the appropriate number and size of circuits to make the lighting systems operational.
    - a. 240 volt 30 AMP branch circuits required.
      - 1) If the street light pole is equipped with a pole mounted receptacle, 240/120 volt 30 AMP circuits may be utilized.
- C. Conductors:
  - 1. All below grade conductors must be located in conduit.
  - 2. Conductor color code shall be maintained for the entire length of the circuit.
  - 3. Sufficient slack shall be provided in all conductors to allow removal from the pole of all fuseholders and splices.
  - 4. Insulation damage shall be replaced with a new conductor running the full length between two pull points (light pole, handhole, or cabinet). No taping of damaged areas is permitted.

D. Conduit:

1. Install with a minimum of 24" cover measured from top of conduit to finished grade.
2. When installed parallel to curb install between 12 inches and 24 inches from the back of curb unless specifically identified otherwise on drawings or approved by Engineer.
3. Street crossings:
  - a. Shall occur at intersections only unless otherwise approved by Engineer.
  - b. Shall be installed perpendicular to the centerline of the street being crossed.
  - c. Shall not be installed within 6' of private utility crossings.
4. Shall not be installed within another conduit of larger diameter.
5. Install such that each run shall contain no more than a combined total of 270 degrees of bends regardless of radius size of bends.

E. Handholes:

1. Handholes to be installed in green space only.
2. When installed along roadside, the roadside edge of the handhole shall be located between 12 inches and 18 inches from the back of curb.
3. Type F1 Light Pole requires installation of a handhole adjacent to light pole foundation which will include ground rod.

F. Below Grade Cable Splices:

1. Below Grade cable splices shall be used in all handholes (only) to provide for the lighting as specified in the Plan.
2. Below Grade cable splices must be located within a handhole. Direct bury splices are not allowed.
  - a. Provide adequate slack in the conductor assembly to allow for each individual conductor to extend at least 2 feet above the top of the handhole.
  - b. Maintain proper circuit color identification within each splice.

G. Light Foundation:

1. Foundations installed adjacent to curb shall be installed with the center of the foundation 3' from the back of curb.
2. Foundations shall be located no closer than 5' from any hydrant, valve, or manhole unless otherwise approved by Engineer.
3. Conduits within light foundation
  - a. At the last foundation in a line one conduit shall be stubbed out to allow for future expansion. The stub conduit shall be the same size as the conduit being utilized.
  - b. No more than 3 conduits shall be located within one light foundation.
  - c. Conduit projection shall be no less than 2 inches and no more than 3 inches above the top of the light foundation.
4. The threaded portion of anchor bolts protruding above the lighting foundation shall have an anti-seize compound applied prior to the installation of the light pole.
5. All light foundations, except type F, shall contain a 0.625 inch diameter grounding rod as identified in the standard detail plates that projects no less than 2 inches and no more than 4 inches above the top of the light foundation.
6. Forming material shall extend the entire depth of the foundation.
  - a. Forming material shall be removed after concrete has cured from the top of the foundation to a depth of 3" below finished grade.

7. Excavation of foundations shall be completed with Auger unless otherwise noted:
    - a. The auger size shall correspond with the diameter of the specific light foundation being utilized except as noted.
      - 1) For precast Type F foundations the auger diameter shall be 36 inches.
    - b. Other means of excavation may be needed when utilities are located within 2 feet of light foundation or if large rocks are encountered.
  8. Finishing
    - a. All concrete foundations shall have a broom finish.
    - b. Foundations for pole types A1, A2, and E4 shall be finished with a 0.75 inch crown.
    - c. Foundations for pole types P1, P2, E2, E3, and F1 shall be finished with a flat and level top.
- H. Equipment Pad:
1. Equipment pad shall be located no further than 15 feet from source of power.
  2. Use the equipment pad mentioned for mounting the lighting service cabinet and meter socket.
  3. Construct the mounting bracket assembly for the service equipment using 5/8 inch (9.5 mm) bolts anchored in the equipment pad.
  4. Install one spare conduit of each type and size utilized for possible future expansion.
    - a. If equipment pad is located within an outlot or park property install two additional 0.75 inch diameter conduit stubs for future expansion.
- I. Lighting Unit:
1. Light poles and luminaires are available at the City of Cottage Grove Public Work Facility.
  2. Contractor shall load and deliver to the project site.
  3. Contractor shall install the light poles and luminaires as required by the project.
  4. Lighting units shall be installed plumb.
    - a. Install lighting units on leveling nuts for pole types A1, A2, and E4.
    - b. Install pole types P1, P2, E2, E3, and F1 directly on light foundations without leveling nuts.
      - 1) MnDOT approved shims may be used for leveling, but total height of shims shall not exceed 0.25 inches.
  5. Each lighting unit shall have a fuseholder and fuses installed at the base of the pole
  6. Each pole shall be grounded at the pole handhole location to the grounding rod with a minimum #8 conductor.
  7. A grounding conductor shall be installed from the base of the pole to the luminaire.
  8. No splicing is allowed on any of the conductors located within the pole between the luminaire and the fuseholder or splice located in base of the pole.
  9. Splicing materials within the pole shall be arranged in a way that will not allow water to pool in the devices.
  10. All fasteners of the pole, luminaire, mast arms or twin arms shall have anti-seize compound applied prior to installation.
  11. Luminaires shall be installed such that both the access cover/door and the street side optics face the street.
  12. Poles shall be installed such that the handhole at the bottom of the pole is on the side of the pole opposite the street.
- J. Above Ground Wiring:
1. MnDOT Spec. 2545.3.F.2, except as modified here in:
    - a. Fuses, fuse holders, and splicing materials in accordance with 2.01.C

K. Arc-Flash Hazard Warning Labeling:

1. Calculate available fault current in accordance with MnDOT Spec. 2545.3.U and 2565.3.Z.
2. Establish available fault current and apply the appropriate label as follows.
3. Use the current edition of NFPA 70E “Standard for Electrical Safety in the Workplace” to determine the required PPE category and personal protective equipment.
4. If the available fault current is  $\leq 25,000$  amps, then provide a label with the following information shown in Example 1.

*Example 1*

**Warning**

**Arc Flash Hazard**

**Appropriate PPE Required**

**Arc Flash Boundary** 19 Inches

**Arc Flash PPE Category** 1

**Working Distance** 18 Inches

**Arc Flash Personal Protection Equipment (PPE)**

List required clothing, **Min Arc Rating of 4 cal/cm<sup>2</sup>**, and protective equipment in accordance with the PPE Table from the current edition of NFPA 70E Standard for Electrical Safety in the Workplace

**Equipment ID**

5. If the available fault current is  $> 25,000$  amps:
  - a. Determine PPE requirements in accordance with the current edition of NFPA 70E Standard for Electrical Safety in the Workplace, and
  - b. Provide a label with the following information shown in Example 2.
    - 1) Fill in the \_\_\_\_ (**blank**) with the required arc-flash PPE category and arc-flash boundary distance.

*Example 2*

**Warning**

**Arc Flash Hazard**

**Appropriate PPE Required**

**Arc Flash Boundary** Feet

**Arc Flash PPE Category** \_\_\_\_\_

**Working Distance** 18 Inches

**Arc Flash Personal Protection Equipment (PPE)**

List required clothing, **Min Arc Rating of \_\_\_\_ cal/cm<sup>2</sup>**, and protective equipment in accordance with the PPE Table from the current edition of NFPA 70E Standard for Electrical Safety in the Workplace

**Equipment ID**

6. Install labels on the front of the dead front door of the electric service cabinet at eye level.

L. Electric Service:

1. Proposed source of power addresses are identified in the Plan.
2. Coordinate the installation of Electrical Service, provide power to the service cabinets.

3. Fees for the “Application for Electrical Service” and payment to the Electric Utility for providing the electrical service connections is the responsibility of the Contractor.
4. Secure approval from the Engineer for any changes to the Electrical Service as reflected in the Plan.
5. No measurement will be made of the various items that constitute Electrical Service. Electrical Service shall be incidental to the service cabinets and shall include all compensation in full for all costs incidental thereto, including, but not limited to providing power to service cabinets, power company fees, Power Utility Company.

M. Compliance with NEC Article 110.24:

1. Provide fault current calculations in accordance with 2545.3.U.

**END OF SECTION**

## SECTION 31 10 00

### SITE CLEARING

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. Removal and trimming of vegetation and trees and stripping and stockpiling of sod and topsoil.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measure and Payment:

1. Payment at the Unit Price will be considered compensation in full for all work necessary to complete the Bid Item in full.
2. Clearing and Grubbing:
  - a. Measurement will be by physical count of each tree cleared and grubbed having a diameter of more than 3 inches at a point 24 inches above the ground surface. Payment will constitute compensation in full for all removal, disposal work, and costs.
  - b. Measurement will be by lump sum for all Project Clearing and Grubbing. Payment will constitute compensation in full for all removal, disposal work, and costs.
  - c. Measurement will be by acre of trees cleared and grubbed. Measurements shall be made horizontally to points 10 feet outside the trunks of trees or stumps on the perimeter of the area being measured. Any separate area smaller than 1/20 acre will be considered to be 1/20 acre:
    - 1) Whenever isolated trees or stumps are removed outside the areas designated to be cleared and grubbed, the acre payment will be made by:
      - a) Each tree measuring more than 3 inches, but less than 36 inches in diameter, at a point 2 feet above the ground surface, and each stump measuring more than 3 inches, but less than 36 inches, at the point of cutoff will be considered as being 1/20 acre.
      - b) Each tree or stump measuring 36 inches or more in diameter will be considered as being 1/10 acre.
    - 2) Payment will constitute compensation in full for all removal, disposal, and costs.
3. Clearing:
  - a. Measurement will be by physical count of each tree cleared having a diameter of more than 3 inches at a point 24 inches above the ground surface. Payment will constitute compensation in full for all removal, disposal, and costs.
  - b. Measurement will be by acre of trees cleared. Measurements shall be made horizontally to points 10 feet outside the trunks of trees or stumps on the perimeter of the area being measured. Any separate area smaller than 1/20 acre will be considered to be 1/20 acre.
4. Grubbing:
  - a. Measurement will be by physical count of each tree or stump grubbed. Payment will constitute compensation in full for all removal, disposal, and costs.
  - b. Measurement will be by acre of trees or stumps grubbed. Measurements shall be made horizontally to points 10 feet outside the trunks of trees or stumps on the perimeter of

the area being measured. Any separate area smaller than 1/20 acre will be considered to be 1/20 acre.

5. Salvage and Respread Topsoil: Measurement will be per square yard of surface area by depth of topsoil to be respread. Payment will include vegetation removal, striping existing topsoil, stockpiling, and resspreading material, Excavation of topsoil in excess of the volume to be respread shall be included under the Excavation – Common Bid Item.
6. Sod Removal: This Work is considered incidental to the other Work of the Contract.
7. Windfall/Deadfall Removal: This Work shall be incidental to the Project with no direct compensation.
8. Brush Removal: This Work shall be incidental to the Project.
9. Stripping and Stockpiling of Soil: This Work shall be considered incidental to other Work in the Contract.
10. Stripping and Stockpiling of Soil: This Work shall be considered incidental to other Work in the Contract.
11. Any tree trimming necessary to perform other work in the Contract shall be considered incidental.
12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

#### 1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):
  1. 2101 – Clearing and Grubbing.

#### 1.04 DEFINITIONS

- A. Brush: All bushes, shrubs, and other vegetation that can be cut with a brush scythe or mowing machine, including small isolated trees having a diameter of 4 inches or less at a point 2 feet above the ground surface.
- B. Clearing: Cutting, removing, and disposing of trees, shrubs, bushes, windfalls, and other vegetation in the designated areas.
- C. Grubbing: Removing and disposing of stumps, roots, and other remains in the designated areas.
- D. Tree Trimming/Pruning: Cutting broken, damaged, or obstructing branches and installing wound dressing. Includes the uplift of branches along the roadway to allow for street construction.

#### 1.05 SITE CONDITIONS

- A. Work consists of removing trees generally along the easement lot lines designated for utilities.
- B. The Drawings do not specifically show all trees to be removed or transplanted.
- C. Protect specimen trees close to Work that are designated to remain but may be damaged by Work.

## 1.06 SEQUENCING AND SCHEDULING

- A. Install temporary erosion control measures prior to Work of this Section.
- B. Complete before or sufficiently ahead of on-going rough grading, excavation, backfill, and compacting for utilities.

## PART 2 PRODUCTS

### 2.01 WOUND DRESSING

- A. Asphalt base tree paint.
- B. Other acceptable materials per Engineer's approval.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Review removals in the field with the Engineer prior to doing Work. Clearing limits will be clearly marked by the Engineer.
- B. Assume multiple mobilizations for the Work of this Section.
- C. Stockpile soil to eliminate contamination with other on site materials.

### 3.02 CLEARING AND GRUBBING

- A. Clearing Trees: Cut off, remove, and dispose of trees and brush in the areas designated as a clearing operation. When grubbing is not required, the point of cut off shall be 6 inches above the ground.
- B. Clearing Brush: Cut even with the ground surface.
- C. Grubbing: Remove brush, stumps, roots, and other remains to a minimum depth of 6 inches below subgrade for all proposed sections.
- D. Backfill all depressions resulting from the grubbing operations in accordance with Section 31 23 00.

### 3.03 TRIMMING AND PRUNING

- A. As directed by the Engineer, trim trees that are to be saved but interfere with the proposed construction. Paint all cuts with wound dressing.

### 3.04 STRIPPING

- A. After clearing and grubbing have been completed, strip sod and topsoil to a line 2 feet outside of areas to be occupied by structures, walks, roadways, areas to be excavated or filled, and other areas shown.



1. Do not strip within the drip line (branch spread) of trees identified to remain.
- B. As directed by Engineer, stockpile sufficient topsoil to re-spread at a uniform depth of 6 inches to all disturbed areas identified for seeding or sodding.

### 3.05 SALVAGE AND RESPREAD TOPSOIL

- A. Strip in accordance with 3.04.A.
  1. Strip existing topsoil to a depth to stockpile a sufficient volume of material to be respread at depth as specified.
- B. Stockpile stripped topsoil at locations within the project grading limits.
- C. Re-spread at a uniform depth as specified at locations within the project grading limits after grades have been verified by Engineer.

### 3.06 DISPOSAL LIMITATIONS

- A. Conform to MnDOT Spec. 2101.3.D, or as modified herein:
- B. Dispose of all cleared and grubbed material and debris outside the right-of-way at a location selected by the Contractor, except for trees and logs identified to be salvaged.
- C. Disposal site should be a properly designated landfill area as determined by appropriate governmental agencies or lands under direct control of the Contractor.
- D. Stripped materials not used for embankments shall be disposed off the site.
- E. On Site burial of any debris is not permitted.
- F. On Site burning of debris is not permitted.

### 3.07 PROTECTION

- A. Conduct operations so as not to damage surrounding private property.
- B. Protect trees intended to be saved from injury or defacement during operations:
  1. Restrict widths of utility trenches.
  2. Provide protective bracing, sheeting, or box to insure safe Work conditions as incidental to Contract.
- C. Exercise care to keep salvaged material as clean as possible during operations.
- D. Install temporary fencing at the construction limits and drip lines of trees to be protected prior to any construction activities in order to protect vegetation.

**END OF SECTION**

**SECTION 31 23 00**  
**EXCAVATION AND FILL**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Excavation and fill for roadways, foundations, channels, ponds, and other areas.
- B. Related Sections:
  - 1. Section 01 57 13 - Temporary Erosion and Sediment Control.
  - 2. Section 02 41 13 - Selective Site Demolition.
  - 3. Section 31 10 00 - Site Clearing.
  - 4. Section 31 23 13 - Subgrade Preparation.
  - 5. Section 33 05 06 - Trenching and Backfilling.
  - 6. Section 32 92 00 - Turf and Grasses.

**1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 1. Measurement and payment shall be at the Bid Unit Price consistent with MnDOT Spec. 2106.4 and 2106.5, except as modified in the following.
  - 2. Excavation - Common (EV) (P): Measurement will be by volume of material in its original position, based on pre-construction digital surface model and design digital surface model. Quantity shall be calculated and computed by the surface comparison completed by Engineer. Payment will include excavation, testing, and disposal of material. Placement of suitable excavated material on site shall be included under the Common Embankment Bid Item.
    - a. Excavation and disposal if existing topsoil will be included within the Excavation – Common quantity when a Salvage and Respread Topsoil Bid Item is not provided in the Bid Form.
    - b. When a Salvage and Respread Topsoil Bid Item is provided and the existing onsite topsoil is in excess of the volume needed to be respread, excavation and disposal of the excess existing topsoil will be included in the Excavation – Common Bid Item.
    - c. Excavation – Common will include material within trail and sidewalk sections when no separate bid item is provided for Excavation – Common Trail or Sidewalk.
  - 3. Excavation - Common (EV) – Trail or Sidewalk: Measurement will be by volume of material in its original position, based measurements performed by the Engineer at the time of construction. Payment will include excavation, testing, and disposal of material.
  - 4. Excavation - Subgrade (EV): Measurement will be by volume of material in its original position, based on pre-construction and post-construction cross sections taken by the Engineer. Quantity shall be calculated by the average end area method. Payment will include excavation, testing, and disposal of material.
  - 5. Excavation - Subgrade (EV) – Trail or Sidewalk: Measurement will be by volume of material in its original position, based on pre-construction and post-construction cross sections taken by the Engineer. Quantity shall be calculated by the average end area method. Payment will include excavation, testing, and disposal of material.

6. Common Embankment (CV) (P): Measurement will be volume of material compacted in place based on pre-construction digital surface model and the design digital surface model. Quantity shall be calculated and computed by surface comparison completed by Engineer. Payment will include all costs related to testing, delivery, placement, compaction, and final finishing.
7. Aggregate Backfill (Modified): Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer. Payment will include all costs to performing the Work in accordance with these Specifications, including shaping, grading, compacting and tolerancing, and include all costs related to furnishing and installing the material complete in place as specified:
  - a. If the aggregate backfill material is being wasted or placed excessively thick, the Owner reserves the right to deduct quantities that are in excess of plan thickness. Said quantities shall be based on material weighing 110 pounds per square yard of area per inch of thickness.
8. Aggregate Backfill (Modified) – Trail or Sidewalk: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer. Payment will include all costs to performing the Work in accordance with these Specifications, including shaping, grading, compacting and tolerancing, and include all costs related to furnishing and installing the material complete in place as specified:
  - a. If the aggregate backfill material is being wasted or placed excessively thick, the Owner reserves the right to deduct quantities that are in excess of plan thickness. Said quantities shall be based on material weighing 110 pounds per square yard of area per inch of thickness.
9. Pond Liner (CV): Measurement will be volume of material compacted in place based on pre-construction cross sections and design grades. Payment will include all costs related to testing, delivery, placement, compaction, and final finishing.
10. Boulevard Grading: Payment for this final Boulevard Grading, including placing, grading, and compacting topsoil, shall be made under the Bid Item included in the Bid Form based upon the number of hours actually spent grading:
  - a. Initial backfilling of the curb is considered incidental to the installation of the curb.
  - b. Payment for furnishing of topsoil will be made under the Topsoil Borrow Bid Item, per Section 32 92 00.
11. Boulevard Stripping: Measurement will be per hour of time actually spent stripping, hauling, and disposing of boulevard sod. Payment will include all costs related for performing the work as specified.
12. Haul Excess Reclaimed Material Offsite (LV): Measurement will be by the loose volume of material hauled offsite by means of a truck count. Payment will include all costs related to removing and disposing of material off the Site.
13. Payment for Placing Topsoil Borrow will be made in Section 32 92 00 – Turf and Grasses.
14. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):
  1. 2106 - Excavation and Embankment – Compacted Volume Method.
  2. 3149 - Granular Material.

3. 3877 - Topsoil Material.

#### 1.04 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
  1. Gradation tests for borrow materials.
  2. Pond liner permeability testing.

#### 1.05 DEFINITIONS

- A. The definitions of the different classifications of excavation and borrow material shall conform to MnDOT Spec. 2106.1 and 2106.2, or as modified herein:
  1. Excavation - Common: In locations where the design cross section is in a cut section, excavation – common shall be classified as all excavation above the grading grade that has not been classified as another form of excavation in this section. In areas where the design cross section is in a fill section, common excavation shall consist of excavation of topsoil. Excavation - common shall not include payment for pavement removal when a separate bid item is present.
  2. Excavation - Subgrade: Excavation below the grading grade that has not been classified as another form of excavation in this Section.
  3. Topsoil borrow material shall conform to Section 32 92 00 – Turf and Grasses.

#### 1.06 QUALITY ASSURANCE

- A. Assist testing laboratory by excavating for density tests. Assist testing laboratory with obtaining material samples.

#### 1.07 SEQUENCING AND SCHEDULING

- A. Perform excavation as soon as possible after sewer and water construction.
- B. Submit pond liner permeability test results for either on site material or imported material prior to placement.
- C. Complete subgrade for streets, driveways, walks, and parking lots immediately after trench backfill and compaction.
- D. Provide notice by 3:00 P.M. of any aggregate backfill placement for the following day, to allow time for scheduling subgrade inspection and compaction tests prior to any aggregate backfill being placed.
- E. Aggregate backfill placement shall not occur until the Boulevard has been graded to within 6 inches of finished grade per typical section.
- F. Complete finish grading of turf areas within 5 calendar days after backfill.

### **PART 2 PRODUCTS**

#### 2.01 MATERIALS

- A. Embankment Materials: Conform to MnDOT Spec 2106.2.B except as modified:
  - 1. Common Embankment: Conform to MnDOT Spec 2106.2.B.1 except as modified:
    - a. Soil which is capable of attaining specified compaction levels, excluding soils which contain organics, contain debris or are potentially expansive (CH or MH per the Unified Soil Classification System).
    - b. Materials Containing recycled asphalt or recycled concrete are not allowed without prior approval from Engineer.
- B. Aggregate Backfill (Modified):
  - 1. Only naturally occurring sand meeting the following requirements:
    - a. Uniformly blended.
    - b. Non-manufactured.
    - c. Uncrushed.
    - d. Mineral materials.
  - 2. Conform to the following gradation requirements or a deduct will be required per price adjustment tables found on the Grading and Base website.

| Sieve Size | Percent Passing |
|------------|-----------------|
| 3 Inch     | 100             |
| 2 Inch     | 80 to 100       |
| #40        | 0 to 50         |
| #200       | 0 to 12         |

- C. Pond Liner:
  - 1. Maximum permeability of  $1 \times 10^{-6}$  cm/s.
  - 2. Minimum of 15% passing the #200 Sieve.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Conform to MnDOT Spec. 2106.3.A, or modified herein:
  - 1. Establish traffic control prior to excavations.
  - 2. Establish the specified erosion control devices according to Section 01 57 13 prior to all excavations.
  - 3. Notify utility companies of progress schedule so they can accomplish relocations, removals, and holding of lines.
  - 4. Perform removals consistent with Section 02 41 13.
  - 5. Strip topsoil consistent with Section 31 10 00.
  - 6. No borrow areas are allowed within City right-of-way.

### **3.02 PREPARATION OF EMBANKMENT**

- A. Conform to MnDOT Spec. 2106.3.D, or as modified herein:
  - 1. Engineer's approval is required of all areas where preparation work has been performed prior to the placement of the embankment or fill material.

2. Where embankment is to be constructed over swamp, marsh, or other locations where the foundation material is unstable, the foundation shall be excavated to remove all or part of the unstable material.

### 3.03 EXCAVATION OPERATIONS

- A. Conform to MnDOT Spec. 2106.3.E, or as modified herein:
  1. Perform excavations to the alignment, cross section, and grade as shown on the Drawings and staked by the Engineer.
  2. Excavation of unstable material below grade shall be done under the direction of the Engineer as the subsurface conditions are disclosed.
  3. Remove muck excavation material so as to minimize disruption to the bottom of the excavation.
  4. Notify Engineer immediately of any large boulders or ledge rocks encountered so proper measurement or profile can be made for pay quantities.
  5. No solid rock will be allowed within 12 inches of the subgrade.
  6. Provide and maintain temporary drainage facilities until permanent facilities are completed.
  7. After the roadway excavation is complete and prior to backfilling operations, notify the Engineer 24 hours in advance so all excavation areas can be cross-sectioned to determine quantities.
  8. Cut, fill, and grade Site to elevations and contours shown on the Drawings with allowances for pavements, topsoil, and structures.
  9. Mining of material in boulevards for use in street construction will not be allowed.
  10. Excess reclaimed material above and beyond that is needed for the aggregate base shall be properly disposed of at a location off of the Site:
    - a. The resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.
- B. On street rehabilitation projects, excavation and disposal of the existing boulevard material to allow for the placement of the new concrete curb and gutter, and specified depth of topsoil/compost shall be considered incidental to the concrete curb removal Bid Item.

### 3.04 DISPOSITION OF EXCAVATED MATERIAL

- A. Conform to MnDOT Spec. 2106.3.J, or as modified herein:
  1. No disposition of bituminous millings will be permitted, unless thoroughly mixed with other on Site materials.
  2. If a reclamation process is used to remove pavement, the resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.

### 3.05 PLACING EMBANKMENTS

- A. Conform to MnDOT Spec. 2106.3.F:
  1. Topsoil placement shall conform to Section 32 92 00.

### 3.06 COMPACTING EMBANKMENTS

- A. Conform to MnDOT Spec. 2106.3.G, or as modified herein:

1. Compaction required for embankment materials shall conform to the Specified Density Method (nuclear) with the testing location and rates being determined by the Engineer.
2. Backfilling of embankments shall be performed using on Site materials: If the Contractor is unable to meet the specified density requirements using that material due to excess moisture content, they shall immediately notify the Engineer of this condition.
3. Recognize that inclement weather (sometimes heavy) occurs during the construction season and be responsible for protecting the moisture condition of soils during the construction phase. Such protection measures include sloping of exposed surfaces to promote runoff (avoid ponding) and compacting exposed surfaces prior to rain events to minimize infiltration.
4. Compaction required for aggregate backfill materials shall conform to the Specified Density Method (nuclear) with the testing location and rates being determined by the Engineer.

### 3.07 FINISH OPERATIONS

- A. Conform to MnDOT Spec. 2106.3.I, or as modified herein:
  1. Finish grading of granular material, select granular material, and aggregate backfill prior for placement of an aggregate base shall conform to MnDOT Spec. 2112.3.E.
  2. Grading of the soils beneath the proposed topsoil shall be reviewed and approved by the Engineer prior to the start of the topsoil placement.

### 3.08 POND LINER

- A. Grading of soils beneath pond liner shall be reviewed and approved by the Engineer prior to the start of liner placement.
- B. Place liner along pond bottom a minimum thickness of 1 foot or as indicated on the Drawings.
  1. Where riprap is present place liner a minimum of 1 foot thickness below riprap.
- C. Pond liner shall extend from pond bottom up pond slopes to an elevation 1 foot above the normal water level.

### 3.09 BOULEVARD GRADING

- A. Backfill Curb After It Has Hardened:
  1. Leave the boulevards within a tolerance of 0.3 feet plus or minus of finish grade prior to installation of private underground utilities.
  2. Compact the backfill material directly behind the concrete curb to meet the requirements of "Quality Control Compaction."
- B. Following installation of private underground utilities by others, re-grade entire boulevard area to the right-of-way, including the re-spreading of topsoil stockpiles located adjacent to the boulevard areas:
  1. It is intended that this work be done with 1 small dozer.
  2. The extent of the final work and the hours of work shall be reviewed with the Engineer prior to any grading being done.
  3. Compaction is required as part of the backfill procedure.
- C. Reconstruction and Final Street Improvement Projects:

1. Grade, shape, and prepare boulevards disturbed by construction for topsoil and sod placement.
2. Place, grade, and compact topsoil, minimum 6 inches thick.

### 3.10 BOULEVARD STRIPPING

- A. Final Street Improvement Projects:
  1. Strip sod adjacent to bituminous curb prior to reclamation process.
  2. Haul and dispose of stripped material off of the Site.

### 3.11 FIELD QUALITY CONTROL

- A. The Owner shall have an independent testing laboratory perform the following tests. The location of the tests shall be determined by the Engineer:
  1. Aggregate Backfill – Modified:
    - a. 1 gradation test per 1,000 tons of material placed.
    - b. 1 density test, monitored by Specified Density Method (nuclear), per 2,000 square yards of street constructed.
  2. Pond Liner Material:
    - a. 1 permeability test per pond of in place pond liner material.

**END OF SECTION**



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## **SECTION 31 23 13**

### **SUBGRADE PREPARATION**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

**A. Section Includes:**

1. Grading, shaping, and compacting subgrade prior to placing an aggregate base or aggregate backfill materials.

##### **1.02 PRICE AND PAYMENT PROCEDURES**

**A. Measurement and Payment:**

1. Subgrade Preparation: Measurement by the square yards and shall be based on a width of 1 foot behind the back of curb, except as modified below. Payment at the Unit Price shall include all costs related to performing the Work in accordance with these Specifications, including shaping, grading, compacting, and tolerancing.
2. Subgrade Preparation - Trail or Sidewalk: Measurement by the square yards and shall be based on a width of 1 foot behind the edge of trail or sidewalk, except as modified below. Payment at the Unit Price shall include all costs related to performing the Work in accordance with these Specifications, including shaping, grading, compacting, and tolerancing.
3. Geotextile Fabric: Measurement by the square yard of area covered with no allowance for overlaps, according to type installed. Payment will include all costs related to furnishing and placing fabric.
4. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### **1.03 REFERENCES**

**A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):**

1. 1103 – Definitions.
2. 2106 – Excavation and Embankment – Compacted Volume Method.
3. 2108 – Geosynthetic Construction Materials.
4. 2111 – Test Rolling.
5. 2112 – Subgrade Preparation.
6. 3733 – Geosynthetic Materials.

##### **1.04 SEQUENCING AND SCHEDULING**

- A. Perform subgrade preparation prior to placement of the aggregate base or aggregate backfill material.**
- B. Complete subgrade preparation for streets, driveways, walks, and parking lots immediately after installation of pipe as part of trench backfill and compaction when project includes pipe installation.**

## 1.05 DEFINITIONS

- A. Subgrade Preparation – grading, shaping, and compacting existing soil below the top of subgrade as defined in MnDOT Spec. 1103.

## 1.06 SUBMITTALS

- A. Submit Manufacturer's Certificate of Compliance for the following items:
  - 1. Geotextile Fabric.

## PART 2 PRODUCTS

### 2.01 GEOTEXTILE FABRIC

- A. Provide geotextile meeting the requirements of MnDOT 3733.2.
- B. MnDOT Type 7 – Needle-punched nonwoven meeting the requirements of Table 3733.2-1.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Subgrade preparations shall be performed to produce the required density, grade, and cross-section.
- B. At the end of each day and prior to placement of aggregate base, the contractor shall eliminate surface indentations, including those caused by sheeps foot rollers and tractor cleats, and roll the surface with a steel wheel or rubber tire roller.

### 3.02 PREPARATION

- A. If the subgrade is unstable and the instability is due to excessive moisture, the subgrade shall be scarified and dried over a reasonable time period. When the material has reached acceptable moisture limits, the material shall be returned to the roadbed and compacted into place to the proper elevation. If the material continues to be unstable, the Engineer may authorize the removal of the undesirable material as subgrade excavation.
- B. Test roll subgrade conforming to MnDOT Spec. 2111, or as modified herein:
  - 1. The equipment used for test rolling shall be a Tandem Truck with a gross weight of 45,000 pounds.
  - 2. If rutting is greater than 1/2 inch, subgrade excavation and aggregate backfill will be required.
- C. Once the subgrade has been test rolled and accepted by Engineer, no traffic or construction equipment shall be permitted to operate directly on the subgrade without the prior approval of Engineer.
- D. In the event that inclement weather occurs after a test roll, and prior to placement of the aggregate base or backfill material, the test roll shall be voided and a new test roll shall be performed.

### 3.03 COMPACTION

- A. Conform to MnDOT Spec. 2106.3.G.1, or as modified herein:
  - 1. For the Specified Density Method, the Engineer will sample and test the soils to determine the Maximum Density and Optimum Moisture.
  - 2. The Owner will have an independent testing laboratory perform the following test, as minimum. The tests will be taken on the compacted subgrade at the location and testing rates designated by the Engineer. Nuclear density testing shall be considered an approved method:
    - a) 1 density test for every 2000 square yards of street in the upper 3 feet of subgrade (100 percent density zone) at varying distances either side of centerline. Note: This is done if subgrade excavation is not required.
    - b) 1 density test for every 500 lineal feet of trail or sidewalk in the upper 3 feet of subgrade (100 percent density zone) at varying distances either side of centerline. Note: this is done if subgrade excavation is not required.

### 3.04 FINISH OPERATIONS

- A. Subgrade tolerance shall conform to MnDOT Spec. 2112.3.E.

### 3.05 GEOTEXTILE FABRIC

- A. Install in accordance with MnDOT 2108.3A and as described herein:
  - 1. If multiple pieces of geotextile are required, overlap joints between separate pieces of fabric a minimum of 2'.

**END OF SECTION**

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## SECTION 32 11 23

### AGGREGATE BASE COURSES

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Requirements for aggregate base course on a prepared subgrade and gravel driveway patching.
- B. Related Sections:
  - 1. Section 31 23 00 - Excavation and Fill.
  - 2. Section 32 23 13 - Subgrade Preparation.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Conform to MnDOT Spec. 2211.4 and 2211.5 For Measurement and Payment except as modified herein:
  - 1. Aggregate Base, Virgin Class 5: This Bid Item is for aggregate base placed in the streets and aggregate base placed below new concrete driveways, concrete medians, concrete approach noses, and valley gutters as described in section 32 13 14. Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer.
  - 2. Aggregate Base, Virgin Class 5 - Trail or Sidewalk: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer.
  - 3. Finish Grading – Street: Measurement will be by the square yard of surface area to be paved.
  - 4. Finish Grading – Trail or Sidewalk: Measurement will be by the square yard of surface area to be paved or covered with concrete sidewalk.
  - 5. Shoulder Base Aggregate, Virgin Class 2: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer.
  - 6. Patch Gravel Driveway: Measurement will be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer. Payment will include all costs related to patching the driveway, including excavation and aggregate base.
  - 7. If the aggregate base course material is being wasted or placed excessively thick, the Owner reserves the right to deduct quantities that are in excess of Drawing thickness. Said quantities shall be based on material weighing 110 pounds per square yard of area per inch of thickness.
  - 8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction”, 2020 Edition (MnDOT Spec.):
  - 1. 2211 - Aggregate Base.
  - 2. 2221 - Shoulder Base Aggregate.
  - 3. 3138 - Aggregate for Surface and Base Courses.

#### 1.04 SUBMITTAL

- A. Submit gradation report on sample of aggregate base to be used.
- B. Submit aggregate quality testing per MnDOT 3138.3.B virgin aggregates.

#### 1.05 DEFINITIONS

- A. Finish Grading: Grading, shaping, compacting, and tolerancing of new gravel base, existing gravel base, reclaimed material, existing gravel base that has been supplemented with Aggregate Base, or reclaimed material that has been supplemented with Aggregate Base.

#### 1.06 SEQUENCING AND SCHEDULING

- A. Construct aggregate base only after all of the following have been completed:
  - 1. Top of subgrade or surface of aggregate backfill has been approved by Engineer.
  - 2. If aggregate backfill is required, a minimum 400 lineal feet of roadway has been placed, compacted, shaped, graded, and checked for conformance to line and grade tolerances.
  - 3. The Boulevard has been graded to within 6 inches of finished grade per typical section.
- B. Provide notice by 3:00 P.M. of any aggregate base placement for the following day, to allow time for scheduling aggregate backfill compaction testing prior to any aggregate base being placed.
- C. Finish grading of gravel base prior to placing bituminous surface shall not be performed until initial curb backfilling is complete.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

- A. Aggregate Base within Street:
  - 1. Conform to MnDOT Spec. 3138.2.B Virgin class 5 aggregate, except as modified herein:
    - a. The City reserves the right to reject the material in lieu of a deduct.
  - 2. Conform to MnDOT Spec. 3138.2.E, Table 3138.2-3 for gradation requirements.
- B. Aggregate Base within Trail, Sidewalk, or paved driveway:
  - 1. Conform to MnDOT Spec. 3138.2.B Virgin class 5 aggregate, except as modified herein:
    - a. The City reserves the right to reject the material in lieu of a deduct.
  - 2. Conform to MnDOT Spec. 3138.2.E, Table 3138.2-3 for gradation requirements.
- C. Aggregate surface driveway and shoulder base aggregate:
  - 1. Conform to MnDOT Spec. 3138.2.B Virgin class 2 aggregate.
  - 2. Conform to MnDOT Spec. 3138.2.E, Table 3138.2-3 for gradation requirements.

### PART 3 EXECUTION

#### 3.01 GENERAL

- A. Finish Grading:

1. Supplement existing gravel base with Aggregate Base, Class 5, as required to meet specified tolerances.
2. Grading and Shaping Aggregate Base shall be considered grading, shaping, compacting, and tolerancing material from 0 to 2 inch depth.

### 3.02 PREPARATION

#### A. Street:

1. Prepare the subgrade in accordance with Section 31 23 13.
2. Prepare the surface of the aggregate backfill in accordance with Section 31 23 00.

### 3.03 CONSTRUCTION REQUIREMENTS

#### A. Conform to MnDOT Spec. 2211.3, except as modified herein:

1. Compaction shall conform to 2211.3.D.2.c, Table 2211.3-3 Penetration Index Method or Specified Density (100% Standard Proctor Density) as directed by the Engineer.
2. Pneumatic Roller is required for compaction on all aggregate base courses with recycled bituminous (e.g. reclamation projects, etc.).
3. Install aggregate base in accordance with details on Drawings.
4. Deliver weight tickets to Engineer daily.
5. Patch gravel driveways to the thickness shown on the Drawings.

### 3.04 FIELD QUALITY CONTROL

#### A. The Owner shall perform Agency Verification Testing (VT) by use of an independent testing laboratory to sample the aggregate base materials, determine the moisture/density relationships, gradations, and perform field moisture tests and field density (DCP) tests at locations determined by Engineer. The following are minimum testing rates:

1. 1 gradation test per 500 ton of material placed.
  - a. Contractor shall provide split sample of aggregate base material for gradation test.
2. 1 density test per 2,000 square yards of street gravel surface, minimum 3 DCP tests per Project.
3. 1 density test per every 500 feet of trail or sidewalk, minimum 3 DCP tests per Project.
4. 1 moisture test per Project during compaction.
5. Density testing (DCP) at the curb lines prior to concrete curb and gutter placement is at the discretion of the Engineer.

#### B. The Owner shall perform Agency Verification Testing (VT) by use of an independent testing laboratory to sample reclaimed gravel base materials, determine the moisture/density relationships, gradations, and perform field moisture tests and field density tests (DCP) at locations determined by Engineer. The following are minimum testing rates:

1. 1 gradation test per 500 ton of material placed.
  - a. Contractor shall provide split sample of reclaimed gravel base material for gradation test.
2. 1 density test per 2,000 square yards of gravel surface, minimum 3 DCP tests per Project. Full depth reclamation (Shear Strength Method) DCP testing if depth of reclaimed gravel is greater than 8 inches.

#### C. The Owner will not allow a "Roll Test" as a method of measuring acceptance of the final aggregate base surface.



- D. Line and Grade Tolerance for Aggregate Base or Reclaimed Aggregate Base: The final aggregate base or reclaimed aggregate base surface will be checked for conformance to specified tolerances by the “stringline” method. Grade shall be  $\pm 0.03$  feet of grade. Notify Engineer a minimum of 4 hours (one half day) prior to paving to allow for the “Field Quality Control” tolerance check.
- E. Line and Grade Tolerance for Trail and Sidewalk: The final aggregate base surface needs to be graded and toleranced. Grade tolerance shall be  $\pm 3/8$  inch as measured with a 10 foot straight edge. Notify Engineer a minimum of 4 hours (one half day) prior to paving to allow for the “Field Quality Control” tolerance check.

### 3.05 PROTECTION

- A. Protect aggregate base until it is covered by surface pavement.
- B. Keep aggregate base free of ruts and irregularities until covered by surface paving.
- C. Place water on aggregate base for dust control as required, to eliminate nuisance conditions for adjacent properties.

**END OF SECTION**

## SECTION 32 11 25

### FULL DEPTH RECLAMATION

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Reclamation of the existing bituminous surfacing and a portion of the underlying existing base material.
- B. Related Sections:
  - 1. Section 31 23 00 - Excavation and Fill.
  - 2. Section 31 23 13 - Subgrade Preparation.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment
  - 1. Full Depth Reclamation: Measurement will be by the square yard, based on the width of the existing pavement, regardless of depth of reclamation required:
    - a. Payment for leveling and compaction of the material immediately after it is reclaimed is to be included in the Bid Unit Price per square yard.
    - b. The Bid Unit Price is to include the motor grader and any water necessary to maintain the reclaimed material until paved.
  - 2. Finish grading and tolerancing of reclaimed material prior to paving shall be per Section 32 11 23.
  - 3. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
  - 1. 2215 - Reclamation.

##### 1.04 SEQUENCING AND SCHEDULING

- A. Reclamation will be performed at locations shown on the drawings.
- B. Provide a 48 hours' notice prior to beginning the reclamation process.
- C. Initial grading/leveling and interim compaction of the reclaimed material by a motor grader and rubber-tired roller is required immediately following the reclamation process.
- D. Reclamation and base stabilization process can not be performed while rain is occurring.
- E. Maintain access to all residents during the reclamation and tolerancing process.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

#### **A. Reclaimed material – Pulverized Aggregate:**

1. Pulverize the full depth of the existing bituminous material and underlying base materials until 100-percent passes the 3 inch sieve size and 97-percent or more pass the 1.5 inch sieve size.

#### **B. Contractor's Gradation Quality Control (QC):**

1. The Contractor shall be responsible for gradation control by testing the reclaimed material at a rate of 1 test per 5,000 square yards, with a minimum 1 test per day.
2. Provide the Engineer a verification sample for Quality Assurance testing at the discretion of the Engineer. This shall be a split sample taken by the Contractor.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Create an aggregate base course composed of the existing bituminous pavement and a portion of the existing underlying base material.
- B. The reclamation process cannot be performed during rain events. Compact reclaimed material prior to rain events.
- C. Disposal of the oversize bituminous pieces, within the Right-of-Way, will not be permitted. Any oversize bituminous pieces found in the Right-of-Way shall be removed by the Contractor and at the Contractor's expense.
- D. Access to all residents shall be maintained during the reclamation and tolerancing process.
- E. The resulting reclaimed material could contain diesel range organics (DRO) which must be disposed of in accordance with MPCA requirements.

### **3.02 EQUIPMENT**

#### **A. Conform to MnDOT Spec. 2215.D.1 except as modified herein:**

1. Reclaiming Machine:
  - a. Equipment to be hydrostatically driven.
  - b. Computerized operation controls.
  - c. Rotating cutter drum to operate parallel to the existing road surface, providing a uniform section across the entire roadway.
  - d. Capable of cutting up to a 12 inch depth in 1 pass.
  - e. Equipment exhaust must be on the top and not the side.

### 3.03 PREPARATION

- A. Remove grass and other vegetation from the edge of the existing pavement to prevent contamination of the pulverized material during the reclamation process. Remove this material per Section 31 23 00.

### 3.04 PLACING AND COMPACTING

- A. Finish grading, compaction, and tolerancing of the reclaimed material shall conform to Section 32 11 23.
- B. Control moisture content of reclaimed material 3 to 7-percent by dry weight during the initial leveling/compaction and final shaping and tolerancing process as incidental to reclamation.
- C. The maximum reclaimed layer thickness for compaction shall be 8 inches.
- D. Removal of excess reclaimed material shall be per Section 31 23 00.

### 3.05 THICKNESS REQUIREMENTS

- A. Typical reclaimed section varies. Refer to typical sections on Drawings.

**END OF SECTION**

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## SECTION 32 12 01

### FLEXIBLE PAVING

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Hot plant mixed asphalt-aggregate mixtures for wearing and non-wearing courses.
  - 2. Bituminous tack coat.
- B. Related Sections:
  - 1. Section 01 57 13 - Temporary Erosion and Sediment Control.
  - 2. Section 02 41 13 - Selective Site Demolition.
  - 3. Section 31 23 00 - Excavation and Fill.
  - 4. Section 32 11 23 - Aggregate Base Courses.
  - 5. Section 33 05 18 - Adjust Miscellaneous Structures.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Method of measurement and payment shall conform to MnDOT Spec. 2360.4 and 2360.5, except as modified herein.
  - 2. Bituminous Material for Tack Coat:
    - a. Measured by volume in gallons at 60 degrees F.
    - b. Payment for bituminous material used for Tack Coat includes compensation in full for all costs incidental to the furnishing and application at the Bid Unit Price per gallon.
    - c. Cleaning of all debris and dirt from the previous bituminous surfaces prior to placement of Tack Coat is included in the Bid Unit Price for Tack Coat.
    - d. Payment for the accepted quantity of asphalt emulsion shall be at the Contract price per unit of measure for undiluted asphalt emulsion.
    - e. Payment for tacking exposed edges of existing bituminous surfaces and concrete curb and gutter in conjunction with initial lift placement is considered incidental to the placement of the initial lift.
  - 3. Bituminous Mixtures:
    - a. Measured by the weight in tons of material placed and accepted for each specified Bid Item as stated in the Bid Form. Payment shall be made in accordance with the acceptance and payment schedules provided in MnDOT Spec. 2360.
    - b. The Bid Unit Price includes both the bituminous course mixture and asphalt binder material.
    - c. Partial payment will not exceed 70-percent of the total calculated payment until the required testing and product documentation is received and found to be acceptable to the Engineer.
    - d. Payment for the bituminous final lift will not be made until the corresponding signing and pavement markings have been installed.
  - 4. Preparation of Bituminous Initial Lift consists of final clean up of the bituminous initial lift prior to paving final lift:
    - a. Street Sweeper with power pickup broom, including operator: per hour

- b. Skidsteer (Bobcat), including operator: per hour
- 5. Patch Bituminous Driveway and Patch Bituminous Trail: Measurement will be by the square yard. Payment will include all costs related to patching the driveway or trail to the thicknesses shown on the Drawings, including excavation, subgrade preparation, aggregate base, and the bituminous wearing course:
  - a. Saw cutting just prior to paving will be paid separately, per Section 02 41 13.
  - b. Removing bituminous pavement will be paid separately, per Section 02 41 13.
  - c. The Bid Unit Price includes both the bituminous course mixture and asphalt binder material.
- 6. Remove and Replace Bituminous Driveway and Remove and Replace Bituminous Trail: Measurement will be by the square yard. Payment will include all costs related to patching the driveway or trail to the thicknesses shown on the Drawings, including sawcutting just prior to paving per Section 02 41 13, removing bituminous pavement per Section 02 41 13, excavation and subgrade preparation, aggregate base, and the bituminous wearing course.
- 7. Patch Bituminous Street: Measurement will be by the square yard. Payment will include all costs related to patching the street to the thicknesses shown on the Drawings, including excavation, aggregate backfill, Class 5 aggregate base, bituminous initial lift(s), tack coat(s), and bituminous final lift:
  - a. Saw cutting just prior to paving will be paid separately, per Section 02 41 13.
  - b. Removing bituminous pavement will be paid separately, per Section 02 41 13.
- 8. Remove and Replace Bituminous Street: Measurement will be by the square yard. Payment will include all costs related to patching the street to the thicknesses shown on the Drawings, including sawcutting just prior to paving per Section 02 41 13, removing bituminous pavement per Section 02 41 13, excavation and subgrade preparation, aggregate backfill, Class 5 aggregate base, bituminous initial lift(s), tack coat(s), and bituminous final lift.
- 9. Bituminous Wedge: Measurement will be by weight in tons of material placed and accepted. Payment will include all costs related to constructing the Bituminous Wedge per the Standard Detail and as specified:
  - a. Silt fence placed behind the curb and adjacent to the Bituminous Wedge will be paid per Section 01 57 13.
- 10. Bituminous sawcutting or milling that is required for joint construction will be paid per Section 02 41 13:
  - a. Removal of temporary bituminous ramps is considered incidental to the sawing bituminous pavement or milling Bid Item.
- 11. Bituminous Incentive and Disincentive Allowance: The allowance indicated in the Bid Form is maximum incentive based on the Engineer's estimated unit prices for the various bituminous bid items. The final incentive and disincentive will be based on the actual unit prices in the contract award. Payment will be based on the actual incentive or disincentive determined under MnDOT Spec. 2360.5.B.13, for bituminous placed per Paragraph 3.07. Example: if the allowance in the Bid Form is \$10,000 and the incentive is determined by the Engineer to be \$2,500, a quantity of 0.25 will be paid under the lump sum bid item, resulting in a total price of \$2,500 (i.e.  $\$10,000 \times 0.25 = \$2,500$ ). Similarly, if a disincentive is determined to be \$1,525, a quantity of -0.1525 will be paid, resulting in an amount of -\$1,525 (i.e.  $\$10,000 \times -0.1525 = -\$1,525$ ).
- 12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation “Standard Specifications for Construction” 2020 Edition (MnDOT Spec.):
  - 1. 2360 – Plant Mixed Asphalt Pavement.
    - a. Within this document replace the words “Department Bituminous Engineer” or “District Materials Engineer” with the word “Engineer”.
  - 2. 2357 – Bituminous Tack Coat.
  - 3. 3139 – Graded Aggregate for Bituminous Mixtures.
  - 4. 3151 – Bituminous Material.
- B. American Society of Testing and Materials (ASTM):
  - 1. ASTM D2950 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.

### 1.04 SUBMITTALS

- A. Submit mixture design report to the Engineer. Conform to MnDOT Spec. 2360.2.E.5.b(2), 2360.2.E.9, 2360.2.F, and 2360.2.G.8.
- B. Submit mix design report for all projects, regardless of the size of the project.
- C. Submit Q/C results in accordance with MnDOT Spec. 2360.2.G.1, 2360.2.G.4 and MnDOT’s most recent Materials Control Schedule.
- D. Submit Q/C testing for Class B aggregates included in mix designs based on the following schedule:
  - 1. For every 5,000 tons of bituminous mixture placed on the project, or for mix placed 30 days after the previous submittal, perform and submit the following Q/C testing from Class B aggregate stockpile:
    - a. Soundness Testing (ASTM C 88)
    - b. Loss by Abrasion and Impact (ASTM C 131)
  - 2. Aggregate testing requirements shall be submitted on a per project basis. Individual tests and submittals are required for each project.
- E. Submit final lift paving schedule while providing a continuous operation to the extent feasible.

### 1.05 DEFINITIONS

- A. “Special” Mixture: A bituminous mixture that does not allow the use of Recycled Asphalt Pavement (RAP), MnDOT 3139.2.A.2.k; Recycled Asphalt Shingles (RAS), MnDOT 3139.2.A.2.h; Ash, MnDOT 3139.2.A.2.j; and Crushed Concrete and Salvaged Aggregate, MnDOT 3139.2.A.2.i.
- B. Irregular Paving:
  - 1. The entire circular portion “bubble” of a cul-de-sac.
  - 2. Portion of pavement that extends beyond the standard width of a street based on the width shown on the typical sections provided in the plan set.
- C. Street Paving: Paving of any portion of roadway except those defined as Irregular Paving.



## 1.06 SEQUENCING AND SCHEDULING

- A. Engineer will schedule Correlation Process for Nuclear Gauge Density Testing with the Prime Contractor's or Paving Subcontractor's (if appropriate) designated Quality Control Tester and Owners Verification Tester a minimum of 1 week prior to the first day of paving.
- B. Prime Contractor is responsible for scheduling an onsite pre-paving meeting with the Owner, Engineer, Paving Subcontractor (if appropriate), including the Paving Foreman a minimum 24 hours prior to the paving operations.
- C. Aggregate base and concrete curb and gutter to be completed and approved by the Engineer prior to placement of bituminous surfaces.
- D. Concrete pedestrian ramps to be completed and approved by the Engineer prior to placement of bituminous trail.
  - 1. Concrete pedestrian ramps must be protected during paving of bituminous trail. Method of protection must be approved by the Engineer.
- E. Concrete valley gutters to be completed and approved by the Engineer prior to placement of bituminous street.
  - 1. Concrete valley gutters must be protected during paving of bituminous street. Method of protection must be approved by the Engineer.
- F. Provide notice by 2:00 P.M. the day prior to any bituminous placement to allow for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing mix, and Foreman onsite during paving operations:
  - 1. Aggregate base DCP tests, per Section 32 11 23, prior to any bituminous being placed.
  - 2. Inspection of paving operations by a City representative, no paving will be allowed or accepted without inspection.
  - 3. Bituminous plant testing if required.
- G. Provide 48 hour notice for scheduling and noticing of the residents prior to paving operations.
- H. Sweeping of pavement must occur immediately prior to placement of the final lift. Swept surface must be approved by the Engineer prior to the placement of the final lift.
- I. Adjust structures prior to placement of bituminous wedge or bituminous final lift as specified in Section 33 05 18.
- J. Bituminous Wedge Placement:
  - 1. Minimum 6 days after placement of first lift of bituminous pavement.
  - 2. Completed prior to Private Utility Installation.
- K. Sidewalks, trails, and final restoration must be completed prior to final lift paving.
- L. Sequence Work to avoid construction traffic on the final lift.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. Mixture Designation: Conform to MnDOT Spec. 2360.1.B, except as modified in the drawings and Bid Form:
  - 1. Residential Streets (Low Volume):
    - a. Wearing Course (Final Lift) = SPWEA330C, Special.
    - b. Wearing Course (Initial Lift) = SPWEA330C.
  - 2. Trails: Wearing Course = SPWEA230C.
  - 3. Driveways and Patching: Wearing Course = SPWEA230B.
  - 4. Bituminous Wedge: Non Wear Course = SPNWA230B.
- B. Conform to MnDOT Spec. 2360.2 and 3139 except as modified herein:
  - 1. Recycled Asphalt Shingles (RAS), MnDOT Spec. 3139.2.A.2.h, are not allowed in the wearing course mixtures.
  - 2. Ash, MnDOT Spec. 3139.2.A.2.j will not be allowed in the wearing course mixtures.
  - 3. Warm Mix Asphalt (WMA) will not be accepted as an approved alternative to HMA.
  - 4. See paragraph 1.05A for "Special" Mixture definition.
- C. Bituminous Tack Coat:
  - 1. Bituminous Material: Conform to MnDOT Spec. 2357:
    - a. Emulsified Asphalt, Cationic, CSS-1 or CSS-1h.
- D. Asphalt Binder Material: Conform to MnDOT Spec. 2360.1.B, Table 2360.1-2; MnDOT Spec. 3151 and as identified in the Mix Designation.
- E. Mixture Design: Conform to MnDOT Spec. 2360.2.E.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Conform to the requirements of MnDOT Spec. 2360.3, except as modified herein.
- B. Review the proposed paving sequence with the Engineer prior to placement of each bituminous course (lift).
- C. The proposed sequence shall address the: longitudinal seams, compaction, traffic control, hauling routes, and placement of pavement markings.
- D. Preparation of Bituminous Lower Lift:
  - 1. Final clean up of the bituminous surface with the use of a power pickup broom and front end loader/skidsteer.
  - 2. Street sweeping operations must include the application of water to effectively make the pavement free and clear of material and debris to allow for successful application and adhesion of bituminous tack coat to the pavement. The appropriate amount of water shall be applied, eliminating dust as part of the sweeping operations.

- E. Bituminous Driveway Patching:
  - 1. Paving requires two lifts.
  - 2. Tack coat prior to final lift.
  - 3. Protection of concrete curb, incidental to placing both lifts of bituminous.
- F. Adjust structures conforming to the requirements of Section 33 05 18:
  - 1. Have a valve wrench on site during the paving operations for the purpose of final adjustments to the valve boxes to meet the specified tolerances. This work shall be considered incidental to the valve box adjustment bid item.
- G. Joints: Where new construction meets existing bituminous surfacing, the existing surface shall be uniformly milled or saw-cut straight, and bituminous tack coat applied prior to placement of each bituminous course (lift):
  - 1. For joint construction, an existing bituminous surface shall be considered to include any bituminous surface not paved on the same day as the new construction. The Owner may require milling or sawcutting on surfaces paved the same day, if, in the opinion of the Owner, the mix has cooled to a point where a new milled or sawed edge is necessary
  - 2. Construct 2 foot wide (min.) ramp where new construction does not match existing construction (i.e. initial lift to final lift).
  - 3. Longitudinal Joints: Utilize Maryland Joint construction method.
- H. Finish bituminous surface shall be flush with concrete surface at curb depression for pedestrian curb ramps.

### 3.02 RESTRICTIONS

- A. Conform to MnDOT Spec. 2360.3.A, except as modified herein.
- B. Following the street sweeping operations, the condition of the pavement surface must be approved by the Engineer prior to paving.
- C. Existing bituminous surfaces must be dry prior and during placement of any bituminous pavements.
- D. Bituminous surfaces shall not be constructed on frozen gravel base.
- E. Final Lift shall not be placed when the air temperature in the shade and away from artificial heat is 50 degrees or less.

### 3.03 EQUIPMENT

- A. Conform to MnDOT Spec. 2360.3.B.
- B. Nuclear Gauge:
  - 1. Troxler or Seaman Gauge capable of completing required tests.
  - 2. Contractor must provide a minimum of two gauges designated for the project.
  - 3. Nuclear gauges must be calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.

4. Contractor must conform to all Minnesota Department of Health requirements.

### 3.04 REQUIRED PERSONNEL

- A. Contractor must designate a Quality Control Tester to perform Nuclear Gauge Density Testing. Quality Control Tester must be able to provide proof of a minimum of 25 hours field experience performing Nuclear Gauge Testing.

### 3.05 TREATMENT OF SURFACE

- A. Bituminous Tack coat shall conform to MnDOT Spec. 2357, except as modified herein.
- B. Restrictions:
  1. The tack coat shall not be applied when the road surface is wet or when the weather conditions are unsuitable.
  2. The area for tack coat application shall be limited as directed by the Engineer.
  3. The Contractor shall have sole responsibility of claims of tack coat on personal property due to lack of notification or signage of the area being tack coated.
  4. No tack coat prior to placement of bituminous wedge.
  5. Cleanup of tack coat material tracked and build up onto adjacent roadway surfaces by truck hauling shall be performed on a daily basis, or as directed by the Engineer.
- C. Distributor Equipment: Conform to MnDOT Spec. 2360.3.B.2.d, except as modified herein:
  1. The Engineer at anytime can direct the Contractor to perform test strip to determine if the equipment is applying the specified application rate for the emulsion. All cost associated with this test strip is considered incidental to the tack application.
- D. Road Surface Preparation: Conform to MnDOT Spec. 2357.3.C.
- E. Application:
  1. At a uniform rate conforming to MnDOT Spec. 2357.3.D, but not greater than 0.07 gallon per square yard, new asphalt.
  2. Along the front edge of the concrete curb and gutter, prior to placement of bituminous initial lift.

### 3.06 MIXTURE QUALITY CONTROL

- A. Mixture Quality Management (Quality Control/Quality Assurance): Conform to MnDOT Spec. 2360.2.G., except as modified herein:
  1. Quality Assurance testing will be completed at the discretion of the Engineer, testing rates will not exceed Table 2360.2-7 and 2360.2-8.
- B. Bituminous plant inspections are required on all publicly bid projects and will be scheduled by Engineer.

### 3.07 PAVEMENT DENSITY

#### A. General:

1. This contract will utilize Nuclear Density Gauge testing for density determination for all pavement except as noted. Density testing shall be completed as described in this section and in accordance with MnDOT 2360.3.D.1 except as modified herein:
  - a. Delete the first paragraph of MnDOT 2360.3.D.1 and replaced with the following:
    - 1) Compact the pavement to at least the minimum required maximum density values in accordance with Table 2360.3-1.
  - b. Delete the first sentence of MnDOT 2360.3.D.1.e and replace with the following:
    - 1) Complete compaction within 8 hours of mixture placement and before completing density testing. All density testing must be done as soon as practical after the compaction process and before opening to traffic.
  - c. Modify Table 2360.3-3 as indicated below:

| Daily Production (Tons) | Lots |
|-------------------------|------|
| 0 to 1,000              | 1    |
| 1,001 to 2,000          | 2    |
| 2,001 to 3,600          | 3    |
| 3,601 to 5,000          | 4    |
| 5,001 +                 | 6    |
  - d. Delete the following sections:
    - 1) 2360.3.D.1.h.
    - 2) 2360.3.D.1.i.
    - 3) 2360.3.D.1.j.
    - 4) 2360.3.D.1.k.
    - 5) 2360.3.D.1.l.
  - e. Delete the third sentence in the 1st paragraph of MnDOT Section 2360.3.D.1.m and replace with the following:
    - 1) The Contractor must notify the Engineer, in writing, by the third day of Paving or 1 day prior to the last day of paving of the first lift (whichever is sooner) of their intent to wave Maximum Density.
  - f. Pathways, Driveways, Patching shall conform to MnDOT Spec. 2360.D.2.

#### B. Longitudinal Joint Density, delete the following:

1. 2360.3.D.1.n.
2. 2360.3.D.1.o.
3. 2360.3.D.1.p.

#### C. Nuclear Gauge Correlation:

1. The QC (Contractor), Verification (Owner), and back-up gauges used on the project must complete the correlation process a minimum of one week prior to paving operations.
2. Engineer shall select a section of existing pavement to be used as the test site for the correlation process. The section does not have to be the same mix design.
3. Correlate all gauges to be used for density measurement on the project (minimum of two QC & two Verification).

- a. QC and Verification gauges will be correlated with Correlation Core results to determine a correction factor for each gauge. Correlation Cores will be obtained and tested by the Owner.
  - 4. All results for the Correlation Process must be recorded on the **Nuclear Gauge Correlation** form. The Owner will complete the form once core testing is complete, then will send it to the Contractor. The form should be completed and submitted to the Engineer prior to the first day of paving.
  - 5. Nuclear Gauge Correlation process may be waved at the Owners discretion on projects that do not include state of federal funding.
- D. Reference Site Monitoring:
- 1. After performing the gauge correlation process, the Engineer shall establish a project reference site. Reference site shall consist of a flat surface of concrete, asphalt or other material that will not be disturbed during the duration of the project and must be clearly marked. Perform reference site monitoring of all QC and QV gauges used on the project at the reference site.
  - 2. See Reference Site Summary – Instructions for the process.
    - a. Complete **Reference Site Summary** form and **Reference Site Daily Record** form as required.
- E. Target Maximum Density:
- 1. The target value is established using the mixture maximum specific gravity (Gmm). For the first day of paving with a mix design the target maximum density will be the Gmm value indicated on the mix design times 62.24 to get lb/ft<sup>3</sup>. The target maximum density for all other days will be the running average of four Gmm tests at the end of the previous day times 62.24 for your new lb/ft<sup>3</sup>. If four tests have not been completed the first day, the average of the first day's Gmm tests must be used for the second day target lb/ft<sup>3</sup>. This process will continue until a running average of four is established.
- F. Use of Nuclear Gauges on Bituminous Pavement:
- 1. During testing, the gauge must be placed on a flat level surface on the material being tested. The longest dimension of the gauge must be parallel and perpendicular to the longitudinal edge of the pavement.
  - 2. Conform to ASTM D2950 Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods. Provide Engineer a copy of documented results from daily check at the end of each day. Perform nuclear gauge measurements using gamma radiation in the backscatter position. Each test shall be for a duration of 4 minutes of nuclear gauge count time.
- G. Contractor Quality Control Testing:
- 1. General:
    - a. Paving lots will be established, tested, and evaluated separately for each paving layer and mix type.
    - b. All test locations will be determined by the Engineer at random locations. The Engineer will provide test locations following compaction of the pavement. Two individual tests will be required at each test location. The second test shall be taken with the gauge rotated 90 degrees from the first test. The average of the two tests will be recorded and submitted to the Engineer at the end of each paving day.

- c. If the Engineer requests, additional testing may be required at no additional cost to the owner. Additional test results may be incorporated into the calculations for average lot density.
    - d. Density testing will be required at the discretion of the Engineer when the production of a specific mix type is between 0 to 300 tons.
  - 2. Street Paving Density:
    - a. Density tests will be performed on equal size lots based on the design street section. Each lot will consist of 5 test locations.
  - 3. Irregular Paving Density:
    - a. Density tests will be performed on lots of bituminous mixture placed consisting of a minimum of one density test performed per each occurrence of irregular pavement. Each lot will contain a maximum of 5 tests.
- H. Owner Verification:
  - 1. General:
    - a. One Verification test will be performed on each lot of bituminous mixture placed.
    - b. The Verification test must be located at the same location as a QC test.
- I. Tolerance Comparison and Dispute Resolution:
  - 1. Tolerance Comparison
    - a. Compare Verification test with corresponding companion test taken at the same location. If the QC and Verification tests differ by more than 1.5lb/ft<sup>3</sup> Owner will check two additional locations within the same lot and compare the average of three Verification tests with the average of three corresponding QC tests.
      - If the difference in average is greater than 1lb/ft<sup>3</sup>, the average of the Verification tests will be used for that lot, and the Contractor will pay the Owner \$100 for each additional test completed.
      - If the difference in average is less than 1lb/ft<sup>3</sup>, the Contractors QC results will be used and no further action will be required.
  - 2. The testers may check gauges with the reference site monitoring (Reference Site Summary form) to determine if one of the gauges is out of tolerance.
- J. Contractor required documentation shall include completing the documents listed below and provided at the end of this technical specification section:
  - 1. **Nuclear Gauge Correlation**
  - 2. **Reference Site Summary**
  - 3. **Reference Site Daily Record**

Providing the completed documents above is considered incidental to the placement of the specified bituminous mix.

### 3.08 THICKNESS AND SURFACE SMOOTHNESS REQUIREMENTS

- A. Conform to MnDOT Section 2360.3.E.
- B. Structure Adjustment – Conform to Section 33 05 18 for tolerances.

### 3.09 TEMPORARY BITUMINOUS WEDGE

- A. Where concrete curb and gutter is installed, construct a temporary bituminous wedge meeting the following requirements:
  - 1. 8 or 10 feet wide from front edge of concrete curb and gutter.
  - 2. Thickness to be 1/4 inch over curb and taper to meet the non wear course base course mat elevation.

### 3.10 PATCH BITUMINOUS STREET, DRIVEWAY, OR TRAIL

- A. Perform patching at locations shown on the Drawings or as directed by Engineer.
- B. Remove existing bituminous per Section 02 41 13.
- C. Saw cut existing bituminous per Section 02 41 13.
- D. Excavate to the bottom of the aggregate base or aggregate backfill layer as shown on the Drawings and dispose of material per Section 31 23 00.
- E. Place aggregate backfill, as required, per Section 31 23 00.
- F. Place aggregate base per Section 32 11 23.
- G. Place bituminous pavement.
- H. Driveway patching requires bituminous placement in two separate equal lifts.

**END OF SECTION**



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# Nuclear Gauge Correlation

(Instructions on back)

|             |  |            |  |                      |  |
|-------------|--|------------|--|----------------------|--|
| Project     |  | Contractor |  | Date                 |  |
| Project No. |  | Plant      |  | Verification Company |  |
| Owner       |  | QC Tester  |  | Verification Tester  |  |

## Core Density Results

|                                  |   |   |   |  |  |
|----------------------------------|---|---|---|--|--|
| Correlation Test #               | 1 | 2 | 3 |  |  |
| A. Weight in Air                 |   |   |   |  |  |
| B. S.S.D Weight                  |   |   |   |  |  |
| C. Weight in Water               |   |   |   |  |  |
| D. Volume (B-C)                  |   |   |   |  |  |
| E. Core Density<br>((B/D)x62.24) |   |   |   |  |  |

| Nuclear Density Readings                                    | Gauge Serial No. |  | Standard Count |  |
|-------------------------------------------------------------|------------------|--|----------------|--|
| F. Density 1                                                |                  |  |                |  |
| G. Density 2                                                |                  |  |                |  |
| H. Ave. Nuclear Density                                     |                  |  |                |  |
| I. Individual Correction Factor (E-H), Show +/-             |                  |  |                |  |
| Correction Factor to be applied to Nuclear Density Readings |                  |  |                |  |

| Nuclear Density Readings                                    | Gauge Serial No. |  | Standard Count |  |
|-------------------------------------------------------------|------------------|--|----------------|--|
| F. Density1                                                 |                  |  |                |  |
| G. Density2                                                 |                  |  |                |  |
| H. Ave. Nuclear Density                                     |                  |  |                |  |
| I. Individual Correction Factor (E-H), Show +/-             |                  |  |                |  |
| Correction Factor to be applied to Nuclear Density Readings |                  |  |                |  |

| Nuclear Density Readings                                    | Gauge Serial No. |  | Standard Count |  |
|-------------------------------------------------------------|------------------|--|----------------|--|
| F. Density1                                                 |                  |  |                |  |
| G. Density2                                                 |                  |  |                |  |
| H. Ave. Nuclear Density                                     |                  |  |                |  |
| I. Individual Correction Factor (E-H), Show +/-             |                  |  |                |  |
| Correction Factor to be applied to Nuclear Density Readings |                  |  |                |  |

| Nuclear Density Readings                                    | Gauge Serial No. |  | Standard Count |  |
|-------------------------------------------------------------|------------------|--|----------------|--|
| F. Density1                                                 |                  |  |                |  |
| G. Density2                                                 |                  |  |                |  |
| H. Ave. Nuclear Density                                     |                  |  |                |  |
| I. Individual Correction Factor (E-H), Show +/-             |                  |  |                |  |
| Correction Factor to be applied to Nuclear Density Readings |                  |  |                |  |

OWNER

CONTRACTOR

## Nuclear Gauge Correlation

### Instructions:

1. Engineer to locate and identify a minimum of three correlation test locations. (*Engineer*)
2. Complete daily standard count prior to starting test. (*Contractor, Owner*)
3. For each gauge to be used on project (minimum of two QC and two Verification) perform two density tests at each correlation test location. Each test shall be for a duration of 4 minutes. The second test shall be taken with the gauge rotated 90 degrees from the first test. Record results in chart (F & G). (*Contractor, Owner*)
4. Calculate the Average Nuclear Density (H) for each test location. (Contractor, Owner)
5. Obtain a Correlation Core at each correlation test location. (*Owner*)
6. Determine the core bulk specific gravity for each Correlation Core per MnDOT Laboratory Test Method 1810 (A-E). (*Owner*)
7. Calculate the Individual Correction Factor (I) for each correlation test location. (*Engineer*)
8. Calculate the Correction Factor (Average of I for all locations) to be applied to each nuclear gauge. (Engineer)

Sketch location of tests below

## Reference Site Summary

(Instructions on back)

|             |  |            |  |                      |  |
|-------------|--|------------|--|----------------------|--|
| Project     |  | Contractor |  | Date                 |  |
| Project No. |  | Plant      |  | Verification Company |  |
| Owner       |  | QC Tester  |  | Verification Tester  |  |

### Bulk Density Readings

|                                 |  |  |
|---------------------------------|--|--|
| Gauge Serial No.                |  |  |
| QC/Verification                 |  |  |
| Density 1A                      |  |  |
| Density 1B                      |  |  |
| Density 2A                      |  |  |
| Density 2B                      |  |  |
| Density 3A                      |  |  |
| Density 3B                      |  |  |
| Density 4A                      |  |  |
| Density 4B                      |  |  |
| Density 5A                      |  |  |
| Density 5B                      |  |  |
| Gauge Reference Value (Average) |  |  |

## Daily Check

[illegible]

## Reference Site Summary Instructions

Instructions:

1. Engineer to locate and identify a Reference Site. (*Engineer*)
2. Complete daily standard count prior to starting test. (*Contractor, Owner*)
3. For each gauge to be used on project (minimum of two QC and two Verification) perform five density tests at Reference Site. Each test shall be for a duration of 4 minutes and consist of two gauge readings.  
The second test shall be taken with the gauge rotated 90 degrees from the first test. (*Contractor, Owner*)
4. Calculate the average for each gauge to establish a reference value. Use the established reference value as a control to monitor the calibration of the gauge during the duration of the project. (*Contractor, Owner*)
5. A minimum of once per day, on every day of paving operations, perform one test at the Reference Site.  
Record test result on **Reference Site Daily Record**. (*Contractor, Owner*)
6. Compare daily test results for each gauge to the gauges Reference Value. If the daily result is within 1lb/cf of the Reference Value for that gauge proceed with project testing. If the daily result is not within 1lb/cf, investigate the cause of the difference. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests on the **Reference Site Daily Record**. If the average of five tests is within 1 lb/cf proceed with project testing. If the average of five tests is not within 1lb/cf remove the gauge from the project and use different gauge. (*Contractor, Owner*)

Sketch location of tests below

## Reference Site Daily Record

|             |  |                |  |
|-------------|--|----------------|--|
| Project     |  | QC/V Company   |  |
| Project No. |  | QC/ V Tester   |  |
| Owner       |  | Gauge Serial # |  |

## Reference Site Value for Gauge No.

[illegible]

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## SECTION 32 13 14

### CONCRETE WALKS, MEDIANS, AND DRIVEWAYS

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. Cast-in-place concrete walkways, medians, driveways, and valley gutters.

B. Related Sections:

1. Section 02 41 13 - Selective Site Demolition.
2. Section 31 23 00 - Excavation and Fill.
3. Section 31 23 13 - Subgrade Preparation.
4. Section 32 11 23 - Aggregate Base Courses.
5. Section 32 16 13 - Concrete Curbs and Gutters.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. 6 Inch Concrete Sidewalk: Measurement shall be on the basis of in-place square yard:
  - a. Payment of the Bid Item shall include the following:
    - 1) Concrete materials.
    - 2) Subgrade and base preparation.
    - 3) Placement and finishing of materials.
    - 4) Labor and equipment.
    - 5) Curing and protection.
    - 6) Backfilling.
  - b. Excavation for concrete sidewalk shall be measured and compensated per Section 31 23 00.
  - c. Aggregate base beneath concrete sidewalk shall be measured and compensated per Section 32 11 23.
2. Remove and Replace 6 Inch Concrete Sidewalk: This Bid Item shall be used for all concrete sidewalk removed and replaced on this Project without regard to thickness and is assumed to be all hand placed. Measurement shall be on the basis of in-place square yard of sidewalk removed and replaced:
  - a. Payment of the Bid Item shall include the following:
    - 1) Sawcutting at the removal limits.
    - 2) Removal and disposal of existing concrete and excess aggregate materials.
    - 3) Excavation and subgrade preparation.
    - 4) Aggregate base and concrete materials.
    - 5) Placement and finishing of materials.
    - 6) Labor and equipment.
    - 7) Curing and protection.
    - 8) Backfilling.
3. 6 Inch Concrete Pedestrian Curb Ramp: Measurement shall be on the basis of square feet of ramp actually constructed:



- a. Measurement of ramp shall not include adjacent concrete curb and gutter, which shall be measured and compensated separately.
  - b. Payment shall include the following:
    - 1) Concrete materials, including material under truncated dome.
    - 2) Subgrade and aggregate base preparation.
    - 3) Placement and finishing of materials.
    - 4) Labor and equipment.
    - 5) Curing and protection.
    - 6) Backfilling.
  - c. Excavation for concrete pedestrian ramp shall be measured and compensated per Section 31 23 00.
  - d. Aggregate base beneath concrete pedestrian ramp shall be measured and compensated per Section 32 11 23.
4. Remove and Replace 6 Inch Concrete Pedestrian Curb Ramp:
- a. Measurement of ramp shall be the final finished square feet of concrete placed.
  - b. Measurement of ramp shall not include adjacent concrete curb and gutter, which shall be measured and compensated separately.
  - c. Payment shall include the following:
    - 1) Sawcutting at the removal limits.
    - 2) Removal and disposal of existing concrete, bituminous, and excess aggregate materials.
    - 3) Excavation and subgrade preparation.
    - 4) Aggregate base materials, placement, and preparation.
    - 5) Concrete materials, including material under truncated dome.
    - 6) Placement and finishing of materials.
    - 7) Labor and equipment.
    - 8) Curing and protection.
    - 9) Backfilling.
5. Truncated Dome Panel, which is part of the concrete pedestrian curb ramp: Measurement shall be on the basis of square feet of Truncated Dome Panels actually constructed:
- a. Payment shall include the following:
    - 1) Truncated panel materials.
    - 2) Placement of truncated panels.
    - 3) Joint sealing material.
    - 4) Protection of truncated panels during construction.
  - b. Radial truncated domes will be measured along the long cord and multiplied by 2 feet to compute square feet.
6. 6 Inch Concrete Driveway (Residential) and 7 Inch Concrete Driveway (Commercial): Measurement shall be on the basis of in-place square yard:
- a. Payment of the Bid Item shall include the following:
    - 1) Concrete materials.
    - 2) Subgrade and Aggregate base preparation.
    - 3) Placement and finishing of materials.
    - 4) Labor and equipment.
    - 5) Curing and protection.
    - 6) Backfilling
  - b. Excavation for concrete driveway shall be measured and compensated per Section 31 23 00.

- c. Aggregate base beneath concrete driveway shall be measured and compensated per Section 32 11 23.
- 7. Remove and Replace 6 Inch Concrete Driveway (Residential) and 7 Inch Concrete Driveway (Commercial): Measurement shall be on the basis of in-place square yard of Concrete Driveway Apron removed and replaced:
  - a. Payment of the Bid Item shall include the following:
    - 1) Sawcutting at the removal limits.
    - 2) Removal and disposal of existing concrete pavement and excess aggregate materials.
    - 3) Excavation and subgrade preparation.
    - 4) Aggregate base and concrete materials.
    - 5) Placement and finishing of materials.
    - 6) Patching of adjacent street.
    - 7) Labor and equipment.
    - 8) Curing and protection.
    - 9) Backfilling.
- 8. 4 Inch Concrete Median: Measurement shall be on the basis of in-place square yard:
  - a. Payment of the Bid Item shall include the following:
    - 1) Concrete materials.
    - 2) Subgrade and aggregate base preparation.
    - 3) Placement and finishing of materials.
    - 4) Labor and equipment.
    - 5) Curing and protection.
    - 6) Backfilling.
  - b. Excavation for concrete median shall be measured and compensated per Section 31 23 00.
  - c. Aggregate base beneath concrete median shall be measured and compensated per Section 32 11 23.
- 9. Remove and Replace 4 Inch Concrete Median: Measurement shall be on the basis of in-place square yard of median removed and replaced:
  - a. Payment of the Bid Item shall include the following:
    - 1) Sawcutting at the removal limits.
    - 2) Removal and disposal of existing concrete and excess aggregate materials.
    - 3) Excavation and subgrade preparation.
    - 4) Aggregate base and concrete materials
    - 5) Placement and finishing of materials.
    - 6) Labor and equipment.
    - 7) Curing and protection.
    - 8) Backfilling.
- 10. Concrete Median Approach Nose: Measurement shall be on the basis of in-place square yard:
  - a. Payment of the Bid Item shall include the following:
    - 1) Concrete materials.
    - 2) Subgrade and aggregate base preparation.
    - 3) Placement and finishing of materials.
    - 4) Labor and equipment.
    - 5) Curing and protection.
    - 6) Backfilling.
  - b. Excavation for concrete median approach nose shall be measured and compensated per Section 31 23 00.

- c. Aggregate base beneath concrete median approach nose shall be measured and compensated per Section 32 11 23.
- 11. Remove and Replace Concrete Median Approach Nose: Measurement shall be on the basis of in-place square yard of median approach nose removed and replaced:
  - a. Payment of the Bid Item shall include the following:
    - 1) Sawcutting at the removal limits.
    - 2) Removal and disposal of existing concrete and excess aggregate materials.
    - 3) Excavation and subgrade preparation.
    - 4) Aggregate base and concrete materials.
    - 5) Patching of adjacent street.
    - 6) Placement and finishing of materials.
    - 7) Labor and equipment.
    - 8) Curing and protection.
    - 9) Backfilling.
- 12. Concrete Valley Gutter: Measurement shall be on the basis of in-place square yard:
  - a. Payment of the Bid Item shall include the following:
    - 1) Concrete materials.
    - 2) Subgrade and aggregate base preparation.
    - 3) Placement and finishing of materials.
    - 4) Reinforcement.
    - 5) Labor and equipment.
    - 6) Curing and protection.
    - 7) Backfilling.
  - b. Excavation for concrete valley gutter shall be measured and compensated per Section 31 23 00.
  - c. Aggregate base beneath concrete valley gutter shall be measured and compensated per Section 32 11 23.
- 13. Remove and Replace Concrete Valley Gutter: Measurement shall be on the basis of in-place square yard:
  - a. Payment of the Bid Item shall include the following:
    - 1) Sawcutting of existing pavement.
    - 2) Removal and disposal of existing concrete, bituminous, and excess aggregate materials.
    - 3) Excavation and subgrade preparation.
    - 4) Aggregate base and concrete materials.
    - 5) Reinforcement.
    - 6) Placement and finishing of materials.
    - 7) Patching of adjacent street.
    - 8) Labor and equipment.
    - 9) Curing and protection.
    - 10) Backfilling
- 14. High Capacity Concrete Apron: Measurement shall be on the basis of each:
  - a. Payment of the Bid Item shall include the following:
    - 1) Concrete materials.
    - 2) Subgrade and aggregate base preparation.
    - 3) Placement and finishing of materials.
    - 4) Reinforcement.
    - 5) Labor and equipment.

- 6) Curing and protection.
  - 7) Backfilling.
  - b. Excavation for high capacity concrete apron shall be measured and compensated per Section 31 23 00.
  - c. Aggregate base beneath high capacity concrete apron shall be measured and compensated per Section 32 11 23
15. Concrete Spillway: Measurement will be by the square feet of spillway constructed.
- a. Payment of the Bid Item shall include the following:
    - 1) Excavation and subgrade preparation.
    - 2) Removal and disposal of all excess materials.
    - 3) Aggregate base and concrete materials.
    - 4) Placement and finishing of materials.
    - 5) Labor and equipment.
    - 6) Curing and protection.
    - 7) Backfilling.
16. Concrete Truck Apron: Measurement will be by depth of concrete on the basis of in-place square yard:
- a. Payment of the Bid Item shall include the following:
    - 1) Concrete materials.
    - 2) Subgrade and aggregate base preparation.
    - 3) Placement and finishing of materials.
    - 4) Reinforcement including tie bars and dowel bars.
    - 5) Curing and Projection.
    - 6) Backfilling.
  - b. Excavation for concrete truck apron shall be measured and compensated per Section 32 11 23.
  - c. Aggregate base beneath concrete pavement shall be measured and compensated per Section 32 11 23.
17. 6 Inch Concrete Hydrant Access Pad or Mailbox Pad: Measurement shall be on the basis of square feet of Concrete Pad actually constructed:
- a. Payment of the Bid Item shall include the following:
    - 1) Excavation and subgrade preparation.
    - 2) Removal and disposal of all excess materials.
    - 3) Aggregate base and concrete materials.
    - 4) Placement and finishing of materials.
    - 5) Labor and equipment.
    - 6) Curing and protection.
    - 7) Backfilling.
18. Maturity Testing for Compressive Strength: Measurement shall be Lump Sum for testing all concrete curb, driveways, and valley gutters. Payment shall include, but is not limited to, maturity curve establishment and all testing and necessary equipment to complete the maturity determination for each type of concrete mix used for curbs and driveways on the project.
19. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. American Society of Testing Materials (ASTM):  
C260 - Air-Entraining Admixtures for Concrete.
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
  - 1. 2211 – Aggregate Base.
  - 2. 2461 – Structural Concrete.
  - 3. 2521 – Walks.
  - 4. 3101 – Portland Cement.
  - 5. 3113 – Admixtures for Concrete.
  - 6. 3702 – Preformed Joint Fillers.
  - 7. 3754 – Poly-Alpha Methyl Styrene (AMS) Membrane Curing Compound.

### 1.04 SUBMITTALS

- A. Submit MnDOT approved design mix for each concrete mix designation used.
- B. The Contractor is responsible for developing the maturity curve for each specified mix and delivering a copy of the results to Engineer no later than two weeks prior to placement.
- C. The Contractor is responsible for taking maturity readings and delivering a copy of the results to the Engineer by the end of the each work day on a daily basis, until the concrete meets the specified strength. The Contractor shall provide the testing data from the in-place maturity measuring devices through a cell phone App or electronically.

### 1.05 SEQUENCING AND SCHEDULING

- A. Provide notice by 2:00 P.M. of the day prior to any concrete curb and gutter placement, to allow time for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing concrete, and Foreman onsite during placement:
  - 1. Aggregate base DCP tests (per Section 32 11 23) prior to any concrete curb being placed.
  - 2. Inspection of curbing operations by a City representative. No curbing will be allowed or accepted without inspection.
  - 3. Concrete field and plant testing if required.
- B. Complete construction of concrete pedestrian ramps prior to the paving of bituminous path and construction of the concrete sidewalk.
- C. Complete construction of concrete sidewalks following the paving of the bituminous initial lift wearing course and following the installation of Private Utilities.
- D. Begin construction of the concrete driveway aprons, concrete hydrant access pads, mailbox pads, and concrete medians no sooner than 24 hours after placement of the adjacent concrete curb and gutter.
- E. Construct concrete valley gutter prior to the paving of bituminous initial lift.

1. Concrete valley gutters must be protected during the paving of bituminous street. Method of protection must be approved by the engineer.
  2. On street rehabilitation projects, valley gutters shall be constructed in halves to provide access for residents.
- F. All concrete placed between October 1 and October 15 must be high early strength concrete.
- G. Under no circumstances will concrete be allowed to be placed after October 15, without prior approval from the Engineer.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. Concrete to conform to MnDOT Spec. 2461, except as modified herein:
1. Portland Cement: Conform to MnDOT Spec. 3101:
    - a. Type 3 air-entraining concrete produced by using Type I Portland Cement.
  2. Air-Entraining Admixtures: conform to MnDOT Spec. 3113:
    - a. Conforming to ASTM C260.
    - b. Not to be added to the concrete mixtures in the field without approval from Engineer.
  3. Mix Designation and Classification:
    - a. Sidewalk, Pedestrian Ramps, Hydrant Pads and Medians: Mix No. 3F52A.
    - b. Valley gutters: Mix No. 3HE52A.
    - c. Residential and Commercial Driveways: Mix No. 3HE52A.
- B. Truncated Dome Panels: Approved products:
1. East Jordan Iron Works – Cast Iron Uncoated.
  2. Neenah Foundry Company – Cast Iron Uncoated.
  3. Natural color – unpainted.
- C. Preformed Joint Filler: Conform to MnDOT Spec. 3702.
- D. Curing Compound: Conform to MnDOT Spec. 3754:
1. Curing compound shall contain a fugitive dye.
  2. Spot Removal and replacement projects: Curing compound shall conform to ASTM C309, Type 1-D, clear with fugitive dye, Class B applied at a rate of 200 square feet per gallon.
- E. Sub-Grade Base Material:
1. Aggregate Backfill: Conform to Section 31 23 00.
  2. Aggregate Base: Conforming to Section 32 11 23.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Concrete contractor shall have at least two people with a current ACI concrete flatwork technician or flatwork finisher certification, and at least one of them must be onsite for all concrete pours.
- B. Provide copies of batch tickets for concrete mix at the time of material delivery to Site.

- C. Construct concrete sidewalk, pedestrian ramps, driveways, medians, median approach noses, and valley gutters at the locations and elevations indicated on the Drawings.
- D. Construct sidewalks and medians to conform to the typical section shown on the Drawings.
- E. Construct concrete driveway aprons to conform to Standard Detail Plates STR-17 and STR-18.
- F. Construct concrete median approach nose per Standard Detail Plate STR-38.
- G. Construct concrete valley gutters to conform to Standard Detail Plate STR-16 and prior to the paving of bituminous street.
- H. Construct High Capacity Concrete Apron to conform to Standard Detail Plate STR-15.
- I. Construct concrete hydrant pads to conform to Standard Detail Plate STR-37.
- J. Construct concrete curb ramp to conform to MnDOT Standard Details, current version, and prior to the paving of bituminous trail.
- K. Verify locations with Engineer in the field prior to construction.
- L. The completed concrete work shall give the appearance of uniformity in surface contour and texture, and shall be accurately constructed to line and grade. The required joints, edges, and flow lines shall show neat workmanship. The concrete work shall be in full accordance with the Standard Detail Drawings. Any deviations from the Standard Detail Plates may be cause for removal and replacement at the Contractor's expense. No price reductions will be allowed as a means to correct deviations.
- M. Re-tempering of concrete which has partially hardened with or without additional materials or water is prohibited.
- N. Remove and Replace Concrete Sidewalks, Concrete Pedestrian Ramps, Concrete Driveways, Concrete Medians, Concrete Median Approach Noses:
  - 1. Perform patching at locations shown on the Drawings or as directed by the Engineer per Standard Detail Plate STR-42.
  - 2. Remove existing concrete per Section 02 41 13.
  - 3. Saw cut existing concrete per Section 02 41 13.
  - 4. Excavate to the bottom of the aggregate base layer and dispose of the material per Section 31 23 00.
  - 5. Place aggregate base per Section 32 11 23.
  - 6. Place concrete pavement.
- O. Construct Concrete Spillway:
  - 1. Construct a concrete spillway at locations shown on the Drawings or as directed by the Engineer.
  - 2. 6 inches thick (minimum).
  - 3. 5 feet wide (minimum).
  - 4. Construct spillway such that the storm water is conveyed directly to the bottom of the drainage way, thereby minimizing erosion in the general area.

P. Concrete washout locations shall conform to the requirements of the NPDES Permit.

### 3.02 FOUNDATION PREPARATIONS

- A. Placement of the aggregate base or granular material to support the concrete work shall conform to Section 32 11 23 or Section 31 23 13. Compaction of subgrade base shall conform to MnDOT Spec. 2211.3.D.2.c.
- B. The foundation shall be approved by the Engineer prior to placement of concrete material.

### 3.03 FORMS

- A. Conform to MnDOT Spec. 2521.3.C.

### 3.04 JOINT CONSTRUCTION

- A. Conform to MnDOT Spec. 2521.3.D.2, except as modified herein:
  - 1. Match joints of adjacent concrete work.
  - 2. Transverse expansion joints for sidewalk:
    - a. 200 foot intervals.
    - b. Concrete areas that are poured separately.
  - 3. Contraction joints shall be formed. Sawed joints not allowed.

### 3.05 METAL REINFORCEMENT

- A. Conform to MnDOT Spec. 2472, except as modified herein:
  - 1. Install 3 No. 4 steel reinforcing rods in lower portion of the valley gutter section with minimum 2 inch coverage on all sides.

### 3.06 PLACING AND FINISHING

- A. Conform to MnDOT Spec. 2521.3.D and 2531.3.C for manual placement or 2531.3.D for slip form, except as modified herein:
  - 1. Any deviation in the design curvature of concrete edges in excess of 3/8 of an inch, measured with a 10 foot straight edge, will be considered unacceptable.
  - 2. Any surface area allowing the entrapment of water at a depth 1/8 inch or greater will be considered unacceptable.
  - 3. Unacceptable work shall be removed and replaced with acceptable Work as directed by the Engineer. Acceptance of Work by price reduction will not be allowed.
- B. Pedestrian Curb Ramp - Truncated Dome:
  - 1. Truncated Dome Panels - Conform to the manufacturer's recommendations for placement.
  - 2. Truncated dome panels shall be placed (wet set) on a minimum of 6 inches concrete and prior to finishing the adjacent concrete surface of the pedestrian ramp. The joint between the panel and concrete shall be finished with 1/2 inch radius edging tool.
  - 3. Conform to MnDOT Standard Detail Plate No. 7038A for specified truncated dome surface pattern dimensions. Refer to the Drawings for actual ramp size, shape, and slopes.
  - 4. Multiple Truncated Dome panels shall be rectangular or radial plates of equal size and shall be joined together per the manufacturer's recommendation.



5. Joint space between truncated dome panels shall be no greater than 1/4 inch in width.
6. Radius style Truncated Dome Panels required when exceeding 5-foot dimension from back of curb.

### 3.07 CONCRETE CURING AND PROTECTION

- A. Conform to MnDOT Spec. 2521.3.E and 2521.3.E.1.a, except as modified herein:
  1. Coat all surfaces with membrane curing compound within 30 minutes after finishing at the specified rate.
  2. The membrane-curing compound must be applied at 2 different directions perpendicular to each other. Curing compound containing fugitive dye must provide a uniform solid white opaque coverage (equal to a white sheet of typing paper) on all exposed concrete surfaces.
  3. A second application of membrane curing compound shall be applied 4 to 8 hours after the first application at the specified rate.
  4. Protect concrete against hot weather conditions as defined in the PCA Design and Control of Concrete Mixtures as when the rate of evaporation of bleed water per hour exceeds 0.2 lb. of water per square foot per hour. A chart published by the ACI and PCA can be used to predict the bleed water rate.
  5. Cold weather curing, when temperatures fall below 40 degrees F during placement or within the following 24 hours, shall conform to MnDOT Spec. 2521.3.E.3.a and 2521.3.E.1.b blanket curing method, except as modified below:
    - a. If temperatures are projected to fall below 32 degrees within 24 hours of concrete placement, insulated blankets shall be used for curing.
    - b. All costs associated with blanket curing shall be incurred by the Contractor.
  6. Failure to comply with these provisions will result in a price reduction for the concrete Bid Item involved in accordance with MnDOT Spec. 1503.
  7. The freshly finished surface shall be protected, surfaces pitted by rain will be considered unacceptable.
  8. Removal and replacement of any concrete section damaged by traffic, rain, cold weather, or other causes occurring prior to final acceptance shall be the responsibility of the Contractor.

### 3.08 HIGH EARLY CONCRETE

- A. Conform to MnDOT Spec. 2461.2.E.2.b(2), except as modified herein:
  1. High early concrete shall be designed to provide a maximum water/cementitious ratio of 0.42.
  2. High early concrete shall be designed to provide a minimum flexural strength of 500 psi and a minimum compressive strength of 3,000 psi in 48 hours.

### 3.09 CONCRETE STRENGTH BY MATURITY TESTING

- A. When utilized on a project, the intent of the maturity testing is so the Contractor can proceed with work once concrete has achieved maturity.
- B. Determining concrete maturity (time temperature factor, TTF) and estimating in-place concrete strength is a two-step procedure as follows:
  1. Maturity Curve:
    - a. Create maturity curve in accordance with MnDOT section 2461.G.6.a(1)
    - b. Complete No later than 2 weeks prior to construction.

- 2. Equipment:
  - a. Conform to MnDOT 2461.g.6.a(2).
- 3. Estimating in-Place Strength:
  - a. Estimate in place strength in accordance with MnDOT 2461.G.6.a(3).
- C. Early-strength concrete shall achieve sufficient strength to be opened to traffic within three days of placement, or earlier if the compressive strength of 3000 psi is achieved.
- D. Changes in Concrete Mixture:
  - 1. Conform to MnDOT 2461.G.6.d.

### 3.10 BACKFILLING

- A. Backfill to protect the concrete and perform vibratory operations adjacent to concrete no sooner than 72 hours after placement of the concrete, after concrete field control strength cylinders have reached a compressive strength of at least 3,000 psi, or concrete strength by maturity testing has reached a compressive strength of 3,000 psi.
  - 1. Concrete field control strength cylinders will only be cast when requested by contractor in accordance with 1.05.A.

### 3.11 FIELD QUALITY CONTROL

- A. Any sidewalk, driveway, pedestrian ramp, etc. damaged by the Contractor shall be removed and replaced by the Contractor, and will be incidental to the Project.
- B. The Owner shall have an independent testing laboratory perform the following tests as a minimum. The test locations will be determined by the Engineer:
  - 1. 1 air entrainment test per day, per Project (per concrete mix).
  - 2. 1 slump test per day, per Project (per concrete mix).
  - 3. 1 set of cylinders for compression test per day, per Project (per concrete mix).
    - a. Additional cylinders may be cast to be tested to confirm when concrete has reached maturity.
- C. The Contractor will be responsible for maturity testing per day that concrete is being poured on the Project (per concrete mix) when a bid item is provided. Refer to Section 32 16 13, Paragraph 3.10.

**END OF SECTION**

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## SECTION 32 16 13

### CONCRETE CURBS AND GUTTERS

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Cast-in-place concrete curb and gutter.
- B. Related Sections:
  - 1. Section 02 41 13 - Selective Site Demolition.
  - 2. Section 32 11 23 - Aggregate Base Courses.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Concrete Curb and Gutter: Measurement shall be by the linear foot measured along the face of the curb at the gutter line for each type. Payment shall include materials, preparation, placement, finishing, curing, protection, and backfilling. Measurement shall not include frames/castings that are located along the face of curb.
  - 2. Remove and Replace Concrete Curb and Gutter: This Bid Item shall be used for all concrete curb and gutter removed and replaced on this Project without regard to type or size and is assumed to be all hand placed. Measurement will be per linear foot along the face of curb. Payment will include all costs, including labor, materials, and equipment necessary to complete the work, including sawcutting at the removal limits and disposal of the material per Section 02 41 13, stripping and offsite disposal of soil per Section 31 00 00, construction of new curb and gutter, and patching of adjacent street.
  - 3. Maturity Testing for Compressive Strength: Per Section 32 13 14.
  - 4. No separate measurement or payment for modifications at driveways, pedestrian ramps, transition sections, or B618 curb installed at catch basins and radii.
  - 5. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 REFERENCES

- A. American Society of Testing Materials (ASTM):
  - 1. C260 - Air-Entraining Admixtures for Concrete.
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
  - 1. 1503 – Conformity with Contract Documents.
  - 2. 2211 – Aggregate Base.
  - 3. 2461 – Structural Concrete.
  - 4. 2531 – Concrete Curbing.
  - 5. 3101 – Portland Cement.
  - 6. 3113 – Admixtures for Concrete.

7. 3702 – Preformed Joint Fillers.
8. 3754 – Poly-Alpha Methyl Styrene (AMS) Membrane Curing Compound.

#### 1.04 SUBMITTALS

- A. Submit MnDOT approved design mix for each concrete mix designation used.
- B. If utilized on a project, the Contractor is responsible for developing the maturity curve for each specified mix and taking maturity readings. See Section 32 13 14.

#### 1.05 SEQUENCING AND SCHEDULING

- A. All temporary stockpile located within the boulevard area or other areas behind the concrete curb and gutter must be removed prior to curb placement.
- B. Concrete curb and gutter construction precedes installation of pavement.
- C. Provide notice by 2:00 P.M. of the day prior to any concrete curb and gutter placement, to allow time for scheduling of the following activities. Notice must include mix designation, start time of placement, plant producing concrete, and Foreman onsite during placement:
  1. Aggregate base DCP tests (per Section 32 11 23) prior to any concrete curb being placed.
  2. Inspection of curbing operations by a City representative. No curbing will be allowed or accepted without inspection.
  3. Concrete field and plant testing if required.
- D. Horizontal and vertical alignment established with “stringline” and or forms for concrete curb and gutter placement shall be approved by the Engineer prior to concrete placement. Notify the Engineer a minimum of 4 hours (one half day) prior to placement of concrete to allow for review and approval.
- E. Complete backfilling within 6 days of original placement, or per applicable in Milestones per Section 00 52 10, Paragraph 4.02.A.1.
- F. All concrete placed between October 1 and October 15 must be high early strength concrete.
- G. Under no circumstances will concrete be allowed to be placed after October 15, without prior approval from the Engineer.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

- A. Concrete to Conform to MnDOT Spec. 2461, except as modified herein:
  1. Portland Cement: Conform to MnDOT Spec. 3101:
    - a. Type 3 air-entraining concrete produced by using Type I Portland Cement.
  2. Air-Entraining Admixtures: Conform to MnDOT Spec. 3113:
    - a. Conforming to ASTM C260.
    - b. Not to be added to the concrete mixtures in the field without approval from Engineer.

3. Mix Designation and Classification for Concrete Curb and Gutter:
  - a. Manual Placement Mix No. 3F52.
  - b. Slip Form Placement Mix No. 3F32.
- B. Pre-Formed Joint Filler: Conform to MnDOT Spec. 3702.
- C. Curing Compound: Conform to MnDOT Spec. 3754, except as modified below:
  1. Curing compound shall contain a fugitive dye.
  2. Remove and Replace Concrete Curb and Gutter (spot repairs): Curing compound shall conform to ASTM C309, Type 1-D, clear with fugitive dye, Class B applied at a rate of 200 square feet per gallon.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Concrete contractor shall have at least two people with a current ACI concrete flatwork technician or flatwork finisher certification, and at least one of them must be onsite for all concrete pours.
- B. Provide copies of batch tickets for concrete mix at the time of material delivery to the Site.
- C. Construct concrete curb and gutter at the locations and elevations indicated on the Drawings. Any concrete curb and gutter that is longer than 200 linear feet continuously, shall be placed using slip form placement.
- D. Construct the style or type of curb and gutter as shown on the Drawings.
- E. Construct intersection curb radii and transitions to conform to the detail on the Drawings.
- F. Construct transition sections at inlet structures to conform to the detail on the Drawings.
- G. Construct concrete curb ramp depressions to conform to the detail on the Drawings.
- H. Construct curb transitions for driveways to conform to the detail on the Drawings. Locations to be verified by Engineer at the time of construction.
- I. Stamp the concrete curb and gutter for sewer and water service locations conforming to Standard Detail Plate STR-11.
  1. Stamping must conform to the dimensions indicated on the detail plate.
  2. The location of the "W" & "S" shall be located on the face of the concrete curb.
  3. The location of the "W" & "S" stamp shall be staked by the engineer.
  4. Stamping of the service locations shall be considered incidental to the placement of the concrete curb.
  5. "W" & "S's" not placed by the specified stamp will not be accepted and will require removal and replacement.
- J. The completed concrete work shall give the appearance of uniformity in surface contour and texture, and shall be accurately constructed to line and grade. The required joints, edges, and flow lines shall show neat workmanship. The concrete curb shall be in full accordance with the

Standard Detail Drawings. Any deviations from the Standard Detailed Plates may be cause for removal and replacement at the Contractor's expense. No price reduction will be allowed as a means to correct the deviations.

- K. Re-tempering of the concrete which has partially hardened with or without additional materials or water is prohibited.
- L. Concrete washout locations shall conform to the requirements of the NPDES.

### 3.02 FOUNDATION PREPARATIONS

- A. Support on a compacted aggregate base extending 1 foot behind the back of curb:
  - 1. Conform to typical sections as shown on the Drawings.
  - 2. Conform to Section 32 11 23 and MnDOT Spec. 2211.3.D.2.c.

### 3.03 FORMS

- A. Conform to MnDOT Spec. 2531.3.B.

### 3.04 JOINT CONSTRUCTION

- A. Conform to MnDOT Spec. 2531.3.E, except as modified herein:
  - 1. Contraction joints: 10 foot intervals.
  - 2. Transverse expansion joints:
    - a. 400 foot intervals.
    - b. Adjacent to hand placed curb.
  - 3. Contraction joints shall be formed. Sawed joints not allowed.

### 3.05 PLACING AND FINISHING

- A. Conform to MnDOT Spec. 2531.3.C, except as modified herein:
  - 1. The top surface of the curb and gutter shall have a brush finish at right angles to the curb line.

### 3.06 CONCRETE CURING AND PROTECTION

- A. Conform to MnDOT Spec. 2531.G and 2531.3.G.1.a, except as modified herein:
  - 1. Coat all surfaces with membrane curing compound within 30 minutes of concrete placement unless otherwise directed by Engineer.
  - 2. The membrane-curing compound must be applied in 2 different directions perpendicular to each other to provide a uniform solid white opaque coverage (equal to a white sheet of typing paper) on all exposed concrete surfaces.
  - 3. A second application of membrane curing compound shall be applied 4 to 8 hours after the first application at the specified rate.
  - 4. Protect concrete against hot weather conditions as defined in the PCA Design and Control of Concrete Mixtures as when the rate of evaporation of bleed water per hour exceeds 0.2 lb. of water per square foot per hour. A chart published by the ACI and PCA can be used to predict the bleed water rate.

5. Cold weather curing, when temperatures fall below 40 degrees during placement or within the following 24 hours, shall conform to MnDOT Spec. 2531.3.G.3.a and 2531.3.G.1.b blanket curing method or method approved by the Engineer, except as modified below:
  - a. If temperatures are projected to fall below 32 degrees within 24 hours of concrete placement, insulated blankets shall be using for curing.
  - b. All costs associated with blanket curing shall be incurred by the Contractor.
6. Failure to comply with these provisions will result in a price reduction for the concrete curb and gutter Bid Item involved in accordance with MnDOT Spec. 1503.
7. The freshly finished surface shall be protected. Surfaces pitted by rain will be considered unacceptable.
8. Removal and replacement of any curb section damaged by traffic, rain, cold weather, or other causes occurring prior to final acceptance shall be the responsibility of the Contractor.

### 3.07 BACKFILLING

- A. Backfill to protect the concrete and perform vibratory operations adjacent to concrete no sooner than 72 hours after placement of the concrete, after concrete field control strength cylinders have reached a compressive strength of at least 3,000 psi, or concrete strength by maturity testing has reached a compressive strength of 3,000 psi.
  1. Concrete field control strength cylinders will only be cast when requested by contractor in accordance with 1.05.A.
  2. Tolerance within 0.3 feet to the top of curb elevation.

### 3.08 HIGH EARLY CONCRETE

- A. Conform to MnDOT Spec. 2461.2.E.2.b(2), except as modified herein:
  1. High early concrete shall be designed to provide a maximum water/cementitious ratio of 0.42.
  2. High early concrete shall be designed to provide a minimum flexural strength of 500 psi and a minimum compressive strength of 3,000 psi in 48 hours.
  3. High early concrete may be included as a separate Bid Item.

### 3.09 REMOVE AND REPLACE CONCRETE CURB AND GUTTER

- A. It is anticipated that sections of curb and gutter or sidewalk may be cracked, broken or have settled over time. Removal and replacement will be identified by the Engineer as part of a street rehabilitation type project.
- B. Sawcut at removal limits per Section 02 41 13.
- C. Do not disturb any material beyond the limits required to form for new construction (assumed 2 feet maximum from the back and 6 inches beyond the edge of new work).
- D. Complete stripping and offsite disposal of soil per Section 31 00 00.
- E. Install new curb and gutter as described previously in this Section.

### 3.10 CONCRETE STRENGTH BY MATURITY TESTING

- A. Refer to Section 32 13 14, Paragraph 3.09.



### 3.11 WORKMANSHIP AND FINISH

- A. Conform to MnDOT Spec. 2531.3.I, except as modified herein:
  - 1. Any deviation in the design curvature of concrete edges in excess of 3/8 of an inch, measured with a 10 foot straight edge, will be considered unacceptable.
  - 2. Acceptance of Work by price reduction will not be allowed.

### 3.12 FIELD QUALITY CONTROL

- A. Any curb damaged by the Contractor shall be removed and replaced by the Contractor, and will be incidental to the Project.
- B. The Owner shall have an independent testing laboratory perform the following minimum tests. The test locations shall be determined by the Engineer:
  - 1. 1 air entrainment test per day, per Project (per concrete mix).
  - 2. 1 slump test per day, per Project (per concrete mix).
  - 3. 1 set of cylinders for compression tests per day, per Project (per concrete mix).
    - a. Additional cylinders may be cast to be tested to confirm when concrete has reached maturity.
- C. The Contractor will be responsible for maturity testing per day that concrete is being poured on the Project (per concrete mix).

### END OF SECTION

**SECTION 32 17 23**  
**PAVEMENT MARKINGS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Pavement markings for control and guidance of traffic.
- B. Related Sections:
  - 1. Section 01 33 00 - Submittal Procedures.

**1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 1. Lines:
    - a. Lines shall be measured by the linear foot on the basis of length actually applied, regardless of color:
      - 1) Separate measurement will be made on the basis of type and nominal width.
      - 2) Double yellow lines shall be measured to include both lines per linear feet of quantity because they are applied simultaneously.
    - b. For the paint pavement markings, the second application shall be measured the same as the first application; for example: 1,000 LF of application painted twice would be paid as 2,000 LF.
    - c. All permanent lines and messages shall be Ground In (GR IN) to pavement surface.
  - 2. Messages:
    - a. Messages shall be measured on the basis of each applied:
      - 1) Separate measurement will be made for each type of message.
      - 2) Separate measurement will be made for paint messages and thermoplastic messages.
  - 3. Payment of each Bid Item shall be compensation in full for all costs incidental thereto, including but not limited to surface preparation, traffic control measures, maintaining the Work, removal of temporary pavement markers, together with any other expenses incurred in completing the Work that are not specifically included for payment under the Contract Bid Items.
  - 4. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

**1.03 REFERENCES**

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
  - 1. 2582 – Pavement Markings.
  - 2. 3356 – Preformed Thermoplastic.
  - 3. 3590 – Multi-Component Liquid Pavement Markings (Multi Comp).

- 4. 3591 – Water-Based Traffic Paint.
- 5. 3592 – Drop-On Glass Beads.
- B. MnDOT Application Specification for Conventional Pavement Marking Materials 3-Minute Dry Alkyd and High Solids Latex.
- C. MnDOT Temporary Traffic Control Zone Layouts – Field Edition.

#### 1.04 SUBMITTALS

- A. Submit the following consistent with Section 01 33 00:
  - 1. 1 copy of the chosen multi-component lot or batch formulation.
  - 2. Pavement Marking Contractor Qualifications/Certifications.
  - 3. MnDOT Certification approvals.

#### 1.05 SEQUENCING AND SCHEDULING

- A. Prime Contractor is responsible for scheduling an onsite pre-signing meeting with the Owner, Engineer, and Signing Subcontractor (if appropriate) a minimum of 24 hours prior to the installation of any signing.
- B. Conform to the requirements of MnDOT Spec 2582.3 except as modified herein:
  - 1. Multi-Component Liquid Pavement Markings:
    - a. Place ground-in markings immediately after completion of the wear course bituminous paving and following the grinding operations.
    - b. Place non-ground-in or per manufacturer recommendations on MnDOT's approved products list.
    - c. Place all markings indicated as Multi-Component striping on Drawings.
  - 2. Temporary Paint Pavement Markings:
    - a. Place following completion of the final bituminous wearing course or interim bituminous course.
    - b. Place immediately after paving and allowing pavement surface to cool.
  - 3. Pavement Markings Thermoplastic:
    - a. Place following bituminous wearing course placement.
    - b. Place all markings indicated as pavement marking thermoplastic on Drawings.
- C. Complete application of pavement markings under traffic.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

- A. Paint:
  - 1. Conform to MnDOT Spec 3591.2 except as modified herein:
    - a. High Solids Water Based:
      - 1) Free of toxic heavy metals, including lead, mercury, and cadmium.
      - 2) Track Free Time - 3 minutes or less.
      - 3) Yellow Prime Pigment - Color Index Pigment Yellow No. 65 or No. 75.
      - 4) White Color - Flat white.

- 5) Yellow Color - Color No. 33538 of Federal Standard 595.
- b. 3-Minute Dry Alkyd:
  - 1) Free of toxic heavy metals, including lead, mercury, and cadmium.
  - 2) Track Free Time - 3 minutes or less.
  - 3) Yellow Prime Pigment - Color Index Pigment Yellow No. 65 or No. 75.
  - 4) White Color - Flat white.
  - 5) Yellow Color - Color No. 33538 of Federal Standard 595.
- B. Preformed Thermoplastic Pavement Marking:
  - 1. As manufactured by Ennis-Flint or approved equal.
    - a. White Lines: 125mil Premark Preformed Thermoplastic.
    - b. Arrows: Premark Preformed Thermoplastic – 8330241L (Left Turn), 8330241R (Right Turn), 8330240 (Straight), 8330142L (Combination Left-Straight), 8330142R (Combination Right-Straight).
    - c. Sealer: 600/300 two part sealer tube, #7 – 102EF.
  - 2. <http://www.ennisflintamericas.com>.
- C. Glass Beads:
  - 1. Conform to MnDOT Spec. 3592.
- D. Multi-Component Liquid Pavement Markings (Multi Comp):
  - 1. Conform to MnDOT Spec. 3590.

## 2.02 EQUIPMENT

- A. General:
  - 1. Vehicles used shall be deployed and equipped with traffic control devices set forth in the “Minnesota Manual on Uniform Traffic Control Devices, Field Manual.”
  - 2. Shadow vehicle with truck-mounted attenuator shall be used on streets with posted speed equal to or greater than 40 M.P.H. or ADT greater than 1,500 vehicles per day.
  - 3. Equipment used for spray applications shall be capable of applying glass beads by a pressurized system at a rate of at least 25 lbs/gal.
  - 4. Capable of accumulating footage applied per gun.
  - 5. Stainless steel components in the delivery system required for water-based materials.
  - 6. The only acceptable equipment for installation of Premark Thermoplastic is an infrared heater (Street Heat SR-20 or SR-28 as manufactured by Ennis-Flint).

## PART 3 EXECUTION

### 3.01 GENERAL

- A. The pavement marking crew shall include at least 1 technical expert knowledgeable in each of the following areas:
  - 1. Equipment operation.
  - 2. Application techniques.
  - 3. Traffic control.
  - 4. Safety regulations.

- B. All pavement markings shall be ground in (GR IN) or recessed. Conform to MnDOT Spec. 2582.3.B.7 Recessing.
- C. The filling of tanks, pouring of materials, or cleaning of equipment shall not be performed on unprotected pavement surfaces, unless adequate provisions are made to prevent spillage of material.
- D. Thermoplastic pavement markings installers must show proof of certification for Premark Thermoplastic installation.

### 3.02 PREPARATION

- A. Locations:
  - 1. In general accordance with the Drawings:
    - a. Location of marking designating no passing zones to be coordinated with corresponding traffic signs.
  - 2. The Engineer will place necessary "Spotting" at appropriate points:
    - a. Horizontal control.
    - b. Starting and stopping points.
    - c. Broken line intervals will not be marked.
    - d. Longitudinal joints, pavement edges, and existing markings shall serve as horizontal control when so directed.
    - e. Notify Engineer at least 48 hours in advance when requesting spotting locations.
  - 3. Edge lines and lane lines are to be broken only at intersections with public roads and at private entrances if they are controlled by a yield sign, stop sign, or traffic signal.
  - 4. The break point is to be at the start of the radius for the intersection or at marked stop lines or crosswalks.
- B. Street Surface:
  - 1. Engineer may direct cleaning of surface as necessary immediately prior to marking application:
    - a. Brushing with non-metallic rotary broom.
    - b. Other cleaning method approved by Engineer.
    - c. Air blast following cleaning.
  - 2. Surface must be dry.
  - 3. Minimum surface temperature is 50 degrees F.
- C. Traffic Control:
  - 1. Conform to latest edition of MnDOT "Temporary Traffic Control Zone Layouts – Field Edition."
  - 2. Shadow vehicle with truck-mounted attenuator shall be used on streets with posted speed equal to or greater than 40 M.P.H. or ADT greater than 1,500 vehicles per day.

### 3.03 APPLICATION

- A. General:
  - 1. Tolerance:

- a. Width: A tolerance of 1/4 inch under or 1/4 inch over the specified width will be allowed for striping provided the variation is gradual and does not detract from the general appearance.
  - b. Length: Broken line segments may vary up to 2-3/4 inches from the specified lengths provided the over and under variations are reasonably compensatory.
  - c. Alignment: Deviations from the control guide shall not exceed 2 inches.
  - d. Establishment of application tolerances shall not relieve the Contractor of his responsibility to comply as closely as practicable with the planned dimensions.
- 2. Material shall not be applied over longitudinal joints.
- 3. 4 inch broken line consists of 10 feet of paint and 40 feet space (1 cycle).
- 4. If same equipment used for different color material with change in color, an amount of material equal to fifteen 10 foot long stripes shall be wasted prior to beginning application with the new color.
- 5. Conditions:
  - a. Markings shall not be applied when wind or other conditions cause a film of dust to be deposited on the pavement surface after cleaning and before the marking material can be applied.
  - b. Except when used as a temporary marking, pavement markings shall only be applied in seasonable weather when air temperature is 50 degrees F or higher.
- B. Glass Beads:
  - 1. Shall be applied immediately after application of paint or multi-component markings.
  - 2. Rate of application shall be 8 lbs. per gallon.
- C. Pavement Marking Thermoplastic:
  - 1. Grind pavement surface prior to application.
  - 2. Apply per the manufacturer's instructions for application requiring EF 2-part sealer.
  - 3. Width of thermoplastic must match design pavement marking width. For example, 12-inch wide thermoplastic must be used for 12-inch stop bar. Two 6-inch wide strips of thermoplastic will not be allowed to be used to create a 12inch stop bar.
- D. Multi-Component Liquid Pavement Markings:
  - 1. Conform to MnDOT Spec. 2582.

### 3.04 CORRECTION OF DEFECTS

- A. All pavement markings not conforming to the requirements of the Specifications shall be removed and replaced, or otherwise repaired to the satisfaction of the Engineer.
- B. Where yield computations show a deficiency in material usage of not more than 20-percent, Owner may require satisfactory repair or may accept the Work at a reduced Bid Unit Price that is in direct proportion to the percent of the deficiency.
- C. Where yield computations show a deficiency in material usage in excess of 20-percent, Owner will require removal and replacement to the satisfaction of the Engineer, unless other means are approved by the Engineer.
- D. If removal and replacement is required, at least 90-percent of the deficient line shall be removed.

- E. Width of removal shall be 1 inch wider on all sides than the nominal width of the marking to be removed.
- F. Removal of unacceptable Work shall be accomplished with sand or water blasting equipment, unless other means are authorized by the Engineer. Bituminous street surfacing shall not be damaged by the removal operation.

**END OF SECTION**

**SECTION 32 80 00**  
**IRRIGATION SYSTEM**

**PART 1 GENERAL**

**1.01 SUMMARY**

**A. Section Includes:**

1. Design, Furnish and install an underground irrigation system as conceptually shown on Drawings and as specified herein. The Irrigation Plan is for conceptual purposes only and it is the Contractor's responsibility to design the irrigation system addition and provide approved shop drawings for the irrigation system.
2. Work to be included under this Section shall consist of but not be limited to the following:
  - a. Furnishing and installing automatic sprinkler heads.
  - b. Sizing, furnishing, and installation of irrigation cabinet, booster pump, backflow preventer, underground piping and conduit including connections to the existing water main and water service into the irrigation cabinet.
  - c. Supply of power, electrical connections, and necessary equipment for complete operation to supply irrigation system with required volume of water.
  - d. Installation, connection, and adjustment of Irrigation Control System, including controller adjustment, control valves and all control wire sized appropriately.
  - e. Installation of required thrust blocks.
  - f. Installation of concrete equipment pad for service cabinet.
  - g. Installation of concrete equipment pad for service cabinet.
  - h. Other miscellaneous work shown on the plans or specified herein.
  - i. Warranty and system start-up and shut down as specified herein.

**B. Related Sections:**

1. Section 26 05 59 – Irrigation System Electrical Supply
2. Section 32 14 13 – Concrete Walks, Medians, and Driveways

**1.02 PRICE AND PAYMENT PROCEDURES**

**A. Measurement and Payment:**

1. Irrigation System: Measurement will be per lump sum and shall include irrigation design, equipment, materials, labor to furnish and install the irrigation system as shown on the Drawings and as specified including supply of power, and as-built drawings.

**1.03 SEQUENCING AND SCHEDULING**

- A. Prior to starting work, submit a schedule showing the order and completion of Work for review and approval by Owner.
- B. Contractor shall install irrigation crossings under streets, trails, and sidewalk prior to placement of aggregate backfill and/or aggregate base course on streets, trails, and sidewalks.
- C. All irrigation system components other than conduit crossings shall not be installed until all utility, concrete, bituminous, topsoil placement and finish grading, and site furnishings have been completed.



D. Irrigation system shall be installed and fully operational prior to turf restoration.

#### 1.04 SUBMITTALS

A. Submit all required items before commencement of Work in accordance with Section 01 33 00.

B. Shop drawings

1. Provide irrigation design to Engineer prior to commencement of Work.
2. For each item specified in the Drawings, provide information showing detail, location, and manufacturers product information.

C. Contractor shall provide record drawings, operations and maintenance manuals, and warranty information to the Engineer at the completion of the project.

#### 1.05 QUALITY ASSURANCE

A. Qualifications

1. Contractor: Must be a Minnesota Licensed Technology System Contractor in “good standing” with the Minnesota State Board of Electricity at the time of bid submission. Contractor shall also currently employ a licensed Power limited technician which is required by law to work on irrigation system.
2. Contractor must provide at least one person at all times during execution of this portion of work who is thoroughly familiar with the type of materials being installed and is directly responsible for all work performed under this Section.

B. As-Built Drawings

1. Contractor shall prepare and maintain accurate record drawings of all underground concealed work.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance

1. Package to prevent damage during shipment, handling, storage, and installation. Maintain protective covering in place and in good repair until removal is necessary.
2. Contractor shall remove all shipping materials as necessary to inspect products for damage immediately upon delivery and coordinate inspection by Owner’s Representative.

B. Storage and Handling

1. Contractor shall repack and store products in a secure area and protect from damage and adverse environmental conditions until installation is performed. Products shall be protected from damage during handling and installation.

C. Waste Management and Disposal

1. Dispose of all waste generated from packaging and installation as in accordance with applicable regulations.
2. Any excess material is the property of the Contractor and shall be disposed of off-Site.

## 1.07 WARRANTY

- A. Upon completion of irrigation system installation and training, and initial acceptance of Engineer, Contractor shall warranty all materials and workmanship for the period of One Year and shall include one complete operating season from Start-up to shut down. Any defects in materials, needed repairs, adjustments and required maintenance will be responsibility of Contractor at no additional cost to the Owner.
- B. At end of One Year warranty period, the Contractor shall conduct a thorough review of the complete irrigation system with Owner's Representative and make any needed repairs or adjustments necessary at no additional cost to the Owner.
- C. Included in the irrigation system warranty, the Contractor shall complete the initial start-up of the system, system shut down and winterization at end of the first season, and system start-up the following season. These services shall be performed under the supervision of the Owner's representative and performed at no additional cost to the Owner.

## 1.08 OPERATIONS AND MAINTENANCE MANUALS AND TRAINING OF MAINTENANCE PERSONNEL

- A. The Contractor shall provide four (2) copies of operation and maintenance manuals for the all portions of the irrigation system, including sprinklers and automatic control system. The manuals shall be prepared specifically for the equipment furnished and shall include all required catalog cut sheets, drawings, instructions and other materials required to instruct operating and maintenance personnel in the proper use, adjustment, operation and repair of equipment furnished.
- B. Upon completion of the work and acceptance by the owner, the Contractor and/or supplier shall be responsible for the training of maintenance personnel in the operation and maintenance of the automatic control system and pop-up sprinklers. The Contractor and/or supplier of the control system shall set the initial watering schedules and programming of the automatic control system in the presence of City maintenance staff. The initial programming shall be as required by the Owner to meet the needs of the facility. Changes in the programming and instructions on how to make such changes shall be the responsibility of the supplier.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. General:
  - 1. All irrigation components shall be manufactured by Rain Bird Corporation as shown in the plans and details.
  - 2. All materials incorporated into this system shall be new and without flaws or defects and of quality and performance as specified and meeting the requirements of this system. All materials shall have a minimum guarantee of one year against material defects or defective workmanship.
  - 3. Any material specified by name and/or model in the specifications or on the plans shall be deemed to be used for the purpose of identifying the materials and insuring the specific use of that material in the construction of the system. No substitutions will be permitted without the prior written approval by the Engineer or Owner.

B. Pipe:

1. Pipe shall be Class 160 PVC pipe. The pipe shall be made from clean, virgin N.S.F. Approved Type 1, Grade 1 (PVC 1120) PVC conforming to ASTM resin specifications D1784 - 60T. Pipes shall be pressure rated for 160 psi @ 73.4 degrees F. and shall meet requirements set forth in Commercial Standard C.S. 256-63 with standard dimension ratio SDR-26. All PVC pipe 3 inch in diameter or greater shall have rubber gasket joints. All PVC pipe less than 3 inch in diameter shall be belled end with solvent weld joints.
2. All Swing Joints shall be constructed of Schedule 80 PVC with threaded and coupled ends as manufactured by Spears Manufacturing Co., Sylmar, California, or approved equal.
3. Pipe Identification:
  - a. Pipe shall be continuously and permanently marked with the following information: Type of pipe, working pressure at 73.4 degrees F., and N.S.F. approval.
4. Pipe Delivery:
  - a. All pipe shall be delivered to the site in unbroken bundles, packaged in such a manner as to provide adequate protection for the pipe ends, either threaded or plain.

C. Pipe Fittings and Connections:

1. All fittings for pipe 4 inches and over shall be ductile iron.
2. All pipe fittings 2 inches and under to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for either solvent weld or screwed connections. No fittings of other material shall be used.
3. When connecting plastic to metal, male adapters shall be used. The male adaptor shall be hand tightened, plus one turn with a strap wrench. Threaded joints shall be coated with Teflon tape.

D. Pop-Up Sprinklers:

1. All irrigation heads shall be manufactured by Rain Bird Corporation. Verify with Owner's representative prior to installation.
  - a. Turf Spray: Rain Bird 1804-PRS 15 Strip Series.
  - b. Shrub Spray: Rain Bird 1812 15 Strip Series.
  - c. Shrub Rotary: Rain Bird R-VAN24 1812-SAM-P45.
  - d. Turf Rotor: Rain Bird 3504-PC-SAM 2.0.
  - e. Turf Rotor: Rain Bird 5004-PC-R-LA.
2. All rotary pop-up sprinklers shall be provided with an on-off-auto-manual selector accessible from the surface with a special key.
3. Pressure regulation shall be preset by the factory according to nozzle set.

E. Wire:

1. All wire will be of sufficient size for its intended end use.
2. All electrical control and ground wire used to connect automatic remote control valves to the controllers shall be 600 volt, solid copper with PVC insulation and have UL approval for type

UF. All control wire shall be of different colors and common wire shall be white with green stripe. Minimum wire size shall be 14 gauge.

3. Splices of wire in the field must be absolutely waterproof so there is no chance for moisture or corrosion build-up on the joint. Requires 3M DBY or DBR Splice Kit.

F. Conduit for Wire:

1. Conform to section 26 05 59 Irrigation System Electrical Supply 2.01.

G. Concrete:

1. Concrete used in thrust blocks shall be a mix of one part cement, two parts sand and three parts gravel (washed sand and gravel should be used) and will be "dry" or "stiff" mix (minimum amount of water).
2. Concrete used for control cabinet base shall conform to 32 13 14 2.01.A except as modified herein:
  - a. Slab and Concrete Pad Mix No. 3F52A.
  - b. Foundation: conform to MnDOT 2461.2 mix design 1G52.
  - c. Curing Compound: conform to section 32 13 14 2.01.D.

H. Irrigation Control Cabinet:

1. Size as required to contain piping, fittings, backflow preventer, valves, meter, irrigation controller, and booster pump if required.
2. Manufactured by Povolny Specialties Inc. or approved equal.

I. Irrigation System Control:

1. Irrigation Controller shall be Rain Bird 2-Wire Decoder controller. All control valves shall be compatible with specified controller and be manufactured by Rain Bird Corporation. Shop drawings shall identify type, size, and location.
2. See plan for approximate location of controller and POC. Coordinate and verify with Owner on connection configuration and location prior to installation.
3. System controller must be capable of managing area as identified in the Drawings.

J. Booster Pump:

1. See section 26 05 59.

K. Valve and Box:

1. Remote control valve Model Rain Bird PEB-IVM.
2. Quick coupling valve model Rain Bird 3-RC ¾".
3. Valve box- N lock bolt and Q.C. heat bonded on cover.

L. Drip Irrigation

1. Salco flexible PVC line ¾ inch diameter.

## **PART 3 EXECUTION**

### **3.01 STAKING**

- A. The Contractor shall stake out all proposed lines prior to trenching operations. Contractor must have engineer and Owner approval prior to trenching. Contractor responsible for verification of existing drain tile locations prior to trenching.
- B. The location of the stakes will be checked by the Engineer or Owner prior to trenching or plowing.
- C. Location of controllers shall be as directed by the Engineer or Owner, but near the locations indicated on the Drawings.
- D. Stakes shall be clearly marked to designate the type of equipment to be installed at that point. The Contractor shall maintain the stakes until all equipment is in place and the location of all equipment is properly indicated on the record drawings.
- E. The Contractor shall replace any stakes disturbed to the correct position.

### **3.02 ADJUSTMENTS**

- A. Where minor adjustments to the system layout may be required, as in connections to existing piping or in working around existing structures, the Contractor shall make the required adjustments at no additional cost to the Owner.

### **3.03 PROTECTION**

- A. Actual construction on the site will cease during heavy rains or other inclement weather that will adversely affect the quality of the work or cause damage to the site.
- B. Work will be allowed to resume when, in the opinion of the Owner or Engineer, conditions are such that no excessive damage to the existing turf will occur.
- C. The Contractor shall utilize equipment and methods that will result in the least possible damage to the existing turf.
- D. The Contractor is responsible to protect all installed components of the irrigation system until the final restoration has been accepted. Any damage to system prior to acceptance of restoration will be replaced by Contractor at no cost to Owner.

### **3.04 EXCAVATION**

- A. Contractor shall perform all excavation of every description and of whatever substances encountered, to the depth indicated on drawings or as otherwise specified. Contractor shall supply sleeves for his/her piping to pass under roads and walkways. During excavation, material suitable for back filling shall be placed in piles in an orderly manner, a sufficient distance from the banks of the trench to avoid sliding or sloughing back into the trench. All material not required or suitable shall be removed and wasted in a designated area within the limits of the project as instructed by the Engineer. Such grading shall be done as may be necessary to prevent surface water from flowing into the trenches or other excavation and any water accumulating therein shall be removed by pumping or by other approved methods. Such sheeting and shoring shall be done as necessary to provide for the protection of the work and the safety of the personnel at no cost to owner.
- B. Any known existing water, sewer, drainage, electrical and other useful lines will be noted on the drawings or otherwise marked on the ground. It is the responsibility of the Contractor to repair any damage to existing materials. Repairs must be done to the satisfaction of the Owner.

- C. The cutting of tree roots shall be avoided.
- D. Where rocks and other abrasive substances are encountered, they shall be removed from the line of trenching and disposed of offsite or at a location within the project limits as instructed by the Engineer.
- E. When placing sprinklers in existing turf, the Contractor shall place the excavated soil onto a drop cloth placed next to the hole.

### 3.05 INSTALLATION OF PIPE AND PIPE COMPONENTS

- A. Pipe and accessories shall be handled in such a manner as to insure delivery to the trench in sound, undamaged condition. Particular care shall be taken not to injure pipe coating. If the coating or lining of any type of pipe or fitting is damaged, the repair shall be made by the Contractor, at his/her expense, satisfactory to the Owner. Pipe shall be carried into position, not dragged. The interior of the piping and accessories shall be thoroughly cleaned of foreign matter before being lowered into the trench and should be kept clean during laying operations by plugging or other approved method. Before installation the pipe shall be inspected for defects by the Contractor. Material found to be defective before or after laying shall be replaced with sound material without additional expense to the Owner. Rubber gaskets that are not to be installed immediately, shall be stored in a cool dark place and out of the direct rays of the sun.
- B. All wiring shall be laid alongside the pipe.
- C. Cutting of pipe shall be done in a neat and workmanlike manner without damage to the pipe. The edge shall be true and at a right angle to the pipe. The end shall be reamed out to the original diameter of the pipe. Unless otherwise authorized by the Owner or recommended by the manufacturer, cutting shall be done with an approved mechanical cutter.
- D. When work is not in progress, exposed ends of pipe, fittings and valves shall be securely closed so that no trench water, earth, or other substance will enter the pipe or fittings.
- E. All pipe shall be installed in accordance with manufacturer's recommendations.
- F. Where solvent joints are used, only solvent recommended by the pipe manufacturer should be used. The solvent weld joints shall be made in the following manner:
  - 1. Thoroughly clean the mating pipe and fitting with a clean, dry cloth. Use of an approved liquid primer, purple in color shall be used.
  - 2. Apply a uniform coat of solvent to the outside of the pipe with a non-synthetic bristle brush.
  - 3. Apply solvent to fitting in a similar manner.
  - 4. Re-apply a light coat of solvent to the pipe and quickly insert it into the fitting.
  - 5. Give the pipe or fitting a quarter turn to insure even distribution of solvent and make sure the pipe is inserted to the full depth of the fitting socket.
  - 6. Wipe off excess solvent that appears at the outer side of the fitting.
  - 7. Care should be taken as to not use an excess amount of solvent, thereby causing a burr or obstruction to form on the inside of the pipe.
  - 8. The joints shall be allowed to set at least 12 hours before pressure is applied to the system.

### 3.06 SLEEVES

- A. The Contractor shall provide sleeves where shown on plans.

### 3.07 INSTALLATION OF CONTROL WIRE

- A. All control shall be installed in the piping trenches wherever possible. Wire shall be snaked into the trench as loose as possible and with as much slack as possible to allow for expansion and contraction of the wire.
- B. If it is so desired, rather than leaving slack in the wire, expansion joints in the wire may be provided at 200 foot intervals by making 5 to 6 turns of the wire around a 1 inch piece of plastic pipe.
- C. The wire shall be installed alongside the pipe. Where it is necessary to run wire in a separate trench, the wire shall be installed at a depth of not less than 24 inches.
- D. Control wire between the automatic controller and the remote control valves shall be laid in the pipe trenches not less than 18 inches deep, and via the shortest main line route between controller and valve. Control wire shall then be placed into the trench to one side of the pipe in as loose a manner as possible to allow for expansion and contraction. Extra wire in the form of expansion joints shall be left at all connections and valves.
- E. All Control wire installed in conduit located on an exterior surface or that emerges from the ground outside of an enclosure shall be type rigid steel in accordance with MnDOT Spec. 3801.

### 3.08 INSTALLATION OF THRUST BLOCKS

- A. Concrete thrust blocks must be provided on the thrust side whenever the pipe line:
  - 1. Changes in direction, as at tees and bends.
  - 2. Changes in size, as at reducers.
  - 3. Stops, as at a dead end.
  - 4. At valves where thrust may be expected.
- B. Thrust blocks are to be made of concrete and placed between the fitting and the trench wall. The concrete shall be fresh and extend to undisturbed (freshly cut) trench wall.
- C. On the smaller sizes of pipe, up to and including 4 inch pipe, the construction of horizontal thrust blocks requires only the simplest of forms; the stiff concrete is shaped to block a wedge with its widest part against the solid trench wall; larger blocks require some form of construction at the sides and the top to achieve proper bearing area with a minimum amount of concrete. In a stable clay soil, a 4 inch line will require 2 square feet of bearing area, a 6 inch pipe will require 6 square feet of bearing area and a 10 inch pipe will require 16 square feet of bearing area.
- D. If the ground is too soft to provide proper support for the thrust block, the Contractor will furnish and install clamps and tie rods for the retainment of the fitting.

### 3.09 BACKFILLING

- A. Initial Backfilling
  - 1. Selected fill dirt or sand shall be used for backfill if soil is rocky. If rocky subsoil conditions are encountered, the trenching depth should be 2 inches below normal depth to allow for proper bedding.

2. The initial backfill will always be done by hand and shoveled in evenly along both sides of the pipe and hand tamped into place. Care will be exercised to insure the soil does not bridge and fail to go under the pipe. Next, another layer will be shoveled in and tamped to provide a 4 inch to 6 inch cover over the pipe.
3. The excavated area around the sprinkler risers and sprinkler heads shall be backfilled by hand with select material free of large rocks, roots or foreign debris. If, in the opinion of the Engineer or the Owner, the excavated material is not suitable for use in backfilling, the Contractor shall furnish clean, fine sand for that purpose from an off-site source at no expense to Owner.

B. Final Backfilling

1. After the wiring has been installed and examined by the Owner, the trench shall be carefully backfilled with excavated materials approved for backfilling. The remaining backfill shall contain no lumps or rocks no larger than 3 inches. The top 6 inches of backfill shall be good topsoil, acceptable to the Owner and shall be free of lumps, rocks, subsoil, and trash.
2. The trenches will be accepted as completed when they are left in a condition to receive sod or seed without further grading.
3. Trench settlements that occur before or during the correction period shall be repaired in a manner acceptable to the Owner at the Contractor's expense.
4. The Contractor shall remove and dispose of any excess excavated material, rocks, debris continuously as the construction areas are backfilled so as to cause the least possible disruption to the existing turf.

3.10 POP UP SPRINKLERS

- A. Sprinklers shall be set plumb and level with the turf at the locations called for on the drawings. Elevation of the sprinkler heads is critical and the contractor shall exercise care to set them exactly on grade.
- B. All threaded fittings shall be OCV screwed malleable, mild iron. An appropriate joint compound shall be used.
- C. After all new sprinkler piping, risers and sprinkler heads are in place and connected, and all necessary division work has been completed, all control valves should be opened and a full head of water used to flush out the system. After the system is thoroughly flushed, the system will be tested for operation in accordance with design requirements under normal operating pressure.

3.11 CONTROL CABINET

- A. Control cabinet shall be located no further than 15 feet from source of power.
- B. Cabinet base placement consistent with section 32 13 14 PART 3.
- C. Construct the mounting bracket assembly for the control cabinet using 5/8 inch bolts anchored inside the control cabinet.

3.12 IRRIGATION SYSTEM CONTROLLERS

- A. Central Controller:
  1. The central controller will be installed at location as indicated in the Drawings.



2. Power supply for central controller and wiring from the source of power to the controller and pumps, if required, shall be included under this Contract.
3. The controller shall be installed in strict conformance with the manufacturers' recommendations and under the supervision of the supplier.

### 3.13 LIGHTNING ARRESTERS

- A. Each Controller shall include an Intermatic 117 VAC surge arrester Model number AG2401. This device shall be installed on the primary power supply and wired according to manufacturer's recommendations. Each Satellite or cluster of Satellites shall have a ground rod, 5/8 inch diameter by 8 feet long copper clad, attached to the grounding lug inside of the pedestal, using an 8 gauge bare copper wire or larger.

### 3.14 TESTING

- A. Where possible, new piping shall be subjected to a hydrostatic pressure test maintaining for at least one hour at a pressure of at least 120 psi.
- B. Cracked or defective pipe or fittings disclosed in the test shall be replaced by the Contractor with sound material and the test repeated until the results are satisfactory with the Owner and show no leakage or loss of pressure.

### 3.15 SPRINKLER LOCATIONS

- A. It shall be the Contractor's responsibility to establish the location of all sprinkler heads on all areas indicated on the plans in order to assure proper coverage of all areas.

### 3.16 WARRANTY

- A. Upon completion of irrigation system installation and training, and initial acceptance of Engineer, Contractor shall warranty all materials and workmanship for the period of One Year and shall include one complete operating season from Start-up to shut down. Any defects in materials, needed repairs, adjustments and required maintenance will be responsibility of Contractor at no additional cost to the Owner.

## END OF SECTION

## SECTION 32 92 00

### TURF AND GRASSES

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. Restoration of construction area by installation of topsoil, topsoil/compost mixture, seed, sod, soil amendments, mulch, and erosion control.

B. Related Sections:

1. Section 01 33 00 - Submittal Procedures.
2. Section 01 57 13 - Temporary Erosion and Sediment Control.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Seeding: Measurement will be based upon pounds of seed placed as specified, according to type of seed mixture. Payment will include soil amendments, furnishing and installing seed, preparation of surface, establishment, and all incidental items associated with the work.
2. Sodding: Measurement will be based upon units of square yards of sod installed complete in place as specified, including soil amendments, furnishing and installing sod, preparation of surface, establishment, and all incidental items associated with the work.
3. Mulch Material: Measurement will be based upon units of acres, according to type, complete in place as specified. Payment will include preparation of seedbed, fertilizer, furnishing and installing mulch including disk anchoring, and all correlated activity.
4. Rolled Erosion Prevention: Measurement will be based upon units of square yards of area restored, according to the type of blanket installed. Payment will include all costs related to furnishing and placing fertilizer, blanket, and all correlated activity.
5. Hydraulic Matrix:
  - a. Measurement will be per acre of area restored, according to the type hydraulic matrix used. Payment will include all costs related to furnishing and placing fertilizer, hydraulic matrix, and all correlated activity.
  - b. Measurement will be per square yard of area restored, according to the type hydraulic matrix used. Payment will include all costs related to furnishing and placing fertilizer, hydraulic matrix, and all correlated activity.
6. Topsoil Borrow: Measurement will be per cubic yard (loose volume) of material hauled to the Site. Payment will include all costs related to furnishing the topsoil:
  - a. All costs related to placing, shaping, and compacting the topsoil at locations shown on the Drawings or as directed by the Engineer shall be incidental to the Boulevard Grading Bid Item. Where boulevard grading is not required, all costs are considered incidental to the various Seed or Sod Bid Items.
7. Topsoil/Compost Mixture: Measurement will be per cubic yard (loose volume) of material hauled to and placed on the Site. Payment will include all costs related to furnishing the topsoil, compost, thoroughly mixing the compost with topsoil, and placing the mixture:

- a. All costs related to placing, shaping, and compacting the topsoil/compost mixture at locations shown on the Drawings or as directed by the Engineer shall be incidental to the Boulevard Grading Bid Item. Where boulevard grading is not required, all costs are considered incidental to the various Seeding, Sodding, or Planting Bid Items.
8. Emergency Overflow Swale Grading and Restoration, Including Seed and Erosion Control Blanket: Payment for the grading and restoration of the emergency overflow swale will be made at the Unit Price per square yard. This shall be considered full compensation for all labor, equipment, and materials associated with the work as specified, including the seed and erosion control blanket:
  - a. No separate measurement and payment for seed and erosion control blanket will be made for areas paid for as Emergency Overflow Swale.
9. Application of Water for Turf Establishment: Measurement shall be based on each 1,000 gallons (MG) of water applied to restored areas. Payment at the Unit Price shall be considered payment in full for all labor, equipment, water, and material necessary to complete the watering as directed:
  - a. Compensation will be made for all watering activity during the initial 45 day maintenance period for seed.
  - b. Compensation for watering will be made for all watering activity during and following the 30 day maintenance period for sod.
10. Furnishing and installation of items to secure required restoration materials, including staples for erosion control blanket, shall be considered included in the Bid Item for that particular material. No separate measurement or payment will be made for such items.
11. All costs related to sweeping and cleaning any pavement, driveways, trails, sidewalks, etc. that are impacted by restoration activities shall be considered incidental to the restoration Bid Items. No payment will be made under the Street Sweeper With Operator and Skidsteer (Bobcat) With Operator Bid Items for this work.
12. Measurement of restored areas shall be on the area actually covered. No additional compensation will be made for overlapping of restoration materials, such as erosion control blanket.
13. Payment for Bid Items included within this section will made per MnDOT Spec. 2575.5.I. Partial payment of 50-percent of the contract unit items, with the remaining partial payment after proper maintenance and acceptance of the vegetative cover.
14. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
  1. 2575 – Establishing Vegetation and Controlling Erosion.
  2. 2574 – Soil Preparation.
  3. 3876 – Seed.
  4. 3877 – Topsoil Material.
  5. 3878 – Sod.
  6. 3881 – Fertilizer.
  7. 3882 – Mulch Material.
  8. 3884 – Hydraulic Erosion Control Products.
  9. 3885 – Rolled Erosion Prevention Products.

10. 3890 – Compost.

B. Minnesota Department of Transportation Seeding Manual 2014 (MnDOT Seeding Manual).

#### 1.04 SUBMITTALS

A. Provide the following submittals consistent with Section 01 33 00:

1. Seed:
  - a. Provide source and invoice for seed to be used for this Project.
  - b. Producer's certificate of compliance – Written documentation verifying compliance of mixture of seed furnished. Include percentage of various seed species, year of production, germination rate, seed bag tags, and weed seed content. Submit to the Engineer at least 5 days prior to delivery.
  - c. Species within native seed mixes species shall have their origin documented by the Minnesota Crop Improvement Association (MCIA) to certify that the product is a local ecotype plant.
  - d. Provide Engineer with seed bag tags used for identification purposes.
2. Topsoil per MnDOT Spec 3877.3.
3. Sod certification per MnDOT Spec 3878.2.
4. Compost material per MnDOT Spec 3890.3.

#### 1.05 PLANT ESTABLISHMENT PERIOD

- A. The Establishment Period for plants shall begin for immediately after installation, with the approval of the Engineer, and continue until the date that the Engineer performs a final inspection:
1. The establishment period for sod is 30 days.
  2. The establishment period for seeded areas is 45 days.
  3. The germination period and initial growth for seeded areas is 14 days.

#### 1.06 SEQUENCING AND SCHEDULING

- A. Provide submittals prior to preconstruction meeting.
- B. Notify the Engineer 30 days prior to placement topsoil/compost mixture to allow for inspection, sampling, and testing if necessary.
- C. Notify the Engineer at least 3 days in advance of hauling topsoil borrow on Site so the Engineer may review grades prior to placement.
- D. Begin final restoration within 7 calendar days of the bituminous initial lift paving or interim bituminous course paving and demonstrate continuous progress until completed, or as modified in Milestones per Section 00 52 10, Paragraph 4.02.A.1.
- E. Roadway Rehabilitation projects, begin final restoration within 5 calendar days of the bituminous initial lift paving and demonstrate continuous progress until completed, or as modified in Milestones per Section 00 52 10, Paragraph 4.02.A.1.

## **PART 2 PRODUCTS**

- 2.01 TOPSOIL: Topsoil Borrow Conforming to MnDOT Spec. 3877.2.B, Loam Topsoil Borrow:
- A. Loam Topsoil Borrow must be supplied from an off-site source tested in accordance with Paragraph 3.13.A., meeting the requirement of 100% of the material passing the ¾ inch sieve.
  - B. No existing on-site topsoil is to be used, unless approved by City Engineer.
- 2.02 FERTILIZER: Conform to MnDOT Spec. 3881.2.B.3, TYPE 3.
- A. Provide plant fertilizer that is commercial grade and uniform in composition and conforms to applicable state and federal regulations.
  - B. Slow-release fertilizer. A minimum of 70-percent of the nitrogen component shall be a slow-release water insoluble nitrogen.
  - C. Fertilizer shall contain a minimum percentage by weight 10-10-10 (NKP).
- 2.03 SOD: Conform to MnDOT Spec. 3878.2.C, Mineral Sod.
- 2.04 SEED: Conform to MnDOT Spec. 3876:
- A. Lawns: MnDOT Mixture 25-151.
  - B. General Roadside: MnDOT Mixture 25-141.
  - C. Temporary Spring Cover: MnDOT Mixture 21-111.
  - D. Temporary Fall Cover: MnDOT Mixture 21-112.
  - E. Temporary Mix: MnDOT Mixture 21-113.
  - F. Pond Edge Mix: MnDOT Mixture 33-261.
- 2.05 MULCH: Conform to MnDOT Spec 3882:
- A. Type 1, clean grain straw unless identified otherwise.
  - B. Hydraulic erosion control products may be used in lieu of mulch with the approval of the Engineer.
- 2.06 HYDRAULIC EROSION CONTROL PRODUCTS (HECPS): Conform to MnDOT Spec 3884
- A. Hydraulic Matrix:
    - 1. Mulch: Conform to MnDOT Spec. 3884.2.B.2
    - 2. Bonded Fiber Matrix (BFM): Conform to MnDOT Spec 3884.2.B.4

2.07 ROLLED EROSION PREVENTION PRODUCTS: Conform to MnDOT Spec 3885

- A. Erosion Control Blanket, Category 20, Straw unless identified otherwise in the Drawings.
- B. Turf Reinforcement Mat, Category 70 unless identified otherwise in the Drawings.

2.08 COMPOST: Conform to MnDOT Spec. 3890.2.B, Grade 2 Compost.

**PART 3 EXECUTION**

3.01 EXAMINATION

- A. Review restoration areas with the Engineer. Determine locations for seed or sod. Schedule for restoration of areas may be revised to fit field conditions:
  - 1. No compensation will be allowed for areas considered to be needlessly restored if restoration activities are performed without the authorization of the Engineer.
- B. Finish grades are to be inspected and approved by the Engineer prior to start of restoration.

3.02 DELIVERY AND STORAGE

- A. Delivery:
  - 1. Notify the Engineer of the delivery schedule in advance so the plant material may be inspected upon arrival at the Site. Remove unacceptable plant material from the Site immediately.
  - 2. Deliver fertilizer and lime to the Site in the original, unopened containers bearing the manufacturer's guaranteed chemical analysis, name, trade name or trademark, and in conformance to state and federal law. In lieu of containers, fertilizer and lime may be furnished in bulk and a certificate indicating the above information shall accompany each delivery.
  - 3. During Delivery: Protect sod from drying out and seed from contamination.
- B. Storage:
  - 1. Sprinkle sod with water and cover with moist burlap, straw, or other approved covering, and protect from exposure to wind and direct sunlight. Covering should permit air circulation to alleviate heat development.
  - 2. Keep seed, lime, and fertilizer in dry storage away from contaminants.

3.03 PREPARATION

- A. General: Conform to MnDOT Spec. 2575.3.A.
- B. Soil Preparation: Conform to MnDOT Spec. 2574.
- C. Fertilizers and Conditioners: Conform to MnDOT Spec. 3881 and 3879:
  - 1. Apply fertilizer at a rate of 400 lbs. per acre (9.2 lbs./1,000 sq. ft.).
  - 2. Where soil pH is lower than 5.5, apply lime at 3 tons per acre (140 lbs./1,000 sq. ft.).

### 3.04 TOPSOIL/COMPOST MIX

- A. Subgrade to be inspected and approved by Engineer prior to placement of topsoil/compost mix.
- B. Construct mix by thoroughly blending topsoil and compost at 70-percent/30-percent ratio:
  - 1. Off site blending of topsoil and compost is required.
  - 2. The blended materials shall be screened to 1 inch size.
- C. 6 inch minimum compacted thickness.

### 3.05 SOWING SEED

- A. Seeding Preparation and Application: Conform to MnDOT Spec. 2574 and 2575.3.B for the mixes specified.
- B. Prior to placing hydraulic erosion control products (hydraulic matrix):
  - 1. Install seed prior to hydraulic matrix installation using a “brilliant type” seeder to evenly spread seed over the entire Site.
  - 2. The Site shall be harrowed or raked parallel to the slope contours following seeding.
  - 3. The Site shall be packed using a culti-packer or equivalent, following harrowing.
  - 4. Application of fertilizer.

### 3.06 PLACING SOD

- A. Conform to MnDOT Spec. 2575.3.F.
- B. Place, shape, and compact 6 inches of topsoil or 6 inches of topsoil/compost mix, as appropriate, prior to placement of sod.

### 3.07 MULCH: Conform to Section 01 57 13.

### 3.08 ROLLED EROSION PREVENTION PRODUCTS

- A. Erosion control blanket shall be installed immediately following seeding in accordance with MnDOT Spec. 2575.3.G.2, and as modified below.
- B. Raking or harrowing of soil/seed shall be done before installation of erosion control blanket.
- C. Install blanket parallel to the direction of flow in all cases.
- D. If permanent seeding is not available at the time of blanket installation, this material will have to be removed, re-seeded, and installed again as a permanent erosion control measure. If permanent seeding is available at the time of initial installation, a 1-time proper installation is acceptable.

### 3.09 HYDRAULIC EROSION CONTROL PRODUCTS

- A. Hydraulic Matrix:
  - 1. Apply in conformance with MnDOT Spec. 2575.3.E.

2. Raking or harrowing of soil/seed and slope (cat) tracking shall be done before installation of hydraulic matrix.
3. Apply hydraulic matrix in at least 2 opposing directions so that a shadowing effect leaving the back side of a soil clod unprotected is minimized.
4. Application Rate:
  - a. Slopes steeper than 1:4: Apply at a rate of 2,800 lbs per acre. Two applications may be necessary.
  - b. All other slopes: apply at a rate of 2,100 lbs per acre.
5. Apply hydraulic matrix immediately following seeding.

### 3.10 EMERGENCY OVERFLOW SWALE

- A. Construct emergency overflow swales at locations shown on the Drawings.
- B. Grade the overflows as staked and directed.
- C. Upon approval of the grading, place topsoil, seed, and erosion control blanket.
- D. Re-establish the emergency overflow swale as part of the final Site clean-up and restoration.

### 3.11 SWEEPING AND CLEANUP

- A. Immediately following the topsoil, seed and sod placement, sweep and clean all pavement, driveways, trails and sidewalks impacted these operations:
  1. Final clean up of the bituminous surface with the use of a power pickup broom and front end loader/skidsteer.
  2. Street sweeping operations must include the application of water to effectively remove fine materials from pavement areas. The appropriate amount of water shall be applied, eliminating dust as part of the sweeping operations.
  3. Respond within 24 hours of a request by the Engineer, with the necessary street sweeping equipment to perform the cleanup operations.

### 3.12 MAINTENANCE:

- A. Conform to MnDOT Spec. 2575.3.K, or as modified herein:
  1. Restored areas that have been satisfactorily completed and are disturbed by additional construction activity required by the timing and sequencing of the Work shall be restored over to the same requirements of the original work.
  2. Any sod that does not show definite growth and establishment 30 days after installation shall be replaced and established at the proper season by the Contractor at his/her expense.
  3. Seed maintenance shall be done in conformance with the MnDOT Seeding Manual – With the following exception: Water the seeded areas to ensure establishment:
    - a. Compensation will be made for all watering activity during the initial 45 day maintenance period for seed, per Bid Item for Application of Water for Turf Establishment.
    - b. At the end of the 45 day maintenance period, Engineer will make an inspection of all restored areas. Engineer may direct Contractor to continue watering of any area if deemed necessary. Frequency of watering shall be as directed and modified by the Engineer. Duration of watering shall continue at the directed frequency until Contractor is directed by Engineer to cease.



4. Weed control shall be the responsibility of the contractor during the initial 45 day establishment period. Weed control may include spot spraying and mowing to control weed growth.
5. Seeded areas that do not show seed germination 14 days after installation shall be replaced by the Contractor at his/her expense and watering will be required every day at a minimum.
6. Seeded areas that do not show definite growth and establishment 45 days after installation shall be replaced and established by the Contractor at his/her expense.
7. Watering of sod areas shall be done for a minimum period of 30 days from installation sufficient to ensure establishment of permanent vegetation:
  - a. At the end of the 30 day maintenance period, Engineer will make an inspection of all restored areas. Engineer may direct Contractor to continue watering of any area if deemed necessary. Frequency of watering shall be as directed and modified by the Engineer. Duration of watering shall continue at the directed frequency until Contractor is directed by Engineer to cease.

### 3.13 FIELD QUALITY CONTROL

#### A. Topsoil Borrow:

1. Source testing:
  - a. The Contractor shall split and test a sample from prospective source with the Owner prior to the preconstruction meeting.
  - b. The Contractor's QC sample and Owner's QA sample shall meet the requirements of Paragraph 2.01.A. If the requirements are not met the Contractor must provide material from another source.
2. Placement testing:
  - a. The Contractor shall split and test a sample onsite at the time of placement with the Owner.
  - b. The Contractor's QC sample and Owner's QA sample shall meet the requirements of Paragraph 2.01.A. If the requirements are not met the material will be rejected. The Contractor is responsible for all costs associated with additional testing due to failing materials.

### 3.14 INSPECTION AND ACCEPTANCE

- A. Seeding and turf work will be inspected for acceptance in parts agreeable to the Engineer, provided Work offered for inspection is complete, including maintenance for the portion in question.
- B. Seeded areas will be inspected for germination and growth 14 days after placement. Any restored areas that do not show definite germination and growth, as determined by the Engineer, shall be replaced and re-established by the Contractor at his/her expense.
- C. At the conclusion of the establishment period(s), a final inspection of planting(s) will be made to determine the conditions of areas specified for landscaping.
- D. When inspected landscape work does not comply with requirements, replace rejected Work and continue specified maintenance until re-inspected by Engineer and found to be acceptable. Remove rejected materials from the Site.

- E. Seed evaluation at the conclusion of the establishment period related to acceptance, shall be based on at least 1 species per square foot with 90-percent of seeding per square foot being of the permanent seed species within the applied mix.
- F. Boulevard settlements that occur during the correction period and are greater than 1 inch as measured by a 10 foot straight edge will be repaired in a manner acceptable to the Owner at the Contractor's expense.

**END OF SECTION**

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## SECTION 32 93 05

### PLANTING MATERIALS, INSTALLATION, AND ESTABLISHMENT

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. This section covers the furnishing of all labor, materials, tools, equipment and performance of all work and services necessary or incidental to plant installation as indicated on the drawings or as specified herein.

##### 1.02 PRICE AND PAYMENT PROCEDURES:

A. Measurement and Payment:

1. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:
  - a. Deciduous Trees or Coniferous Trees: Measurement will be by each tree species, variety, and caliper and/or size range furnished and planted in accordance with the Drawings. Payment shall include:
    - 1) Excavation for tree planting hole.
    - 2) Furnishing and Planting of tree.
    - 3) Furnishing and installing accessories.
    - 4) Maintenance and watering, including furnishing and installing slow release watering bag.
  - b. Shrubs: Measurement will be by each shrub species, variety, and size range furnished and planted in accordance with the Drawings. Payment shall include:
    - 1) Excavation for planting hole.
    - 2) Furnishing and Planting of shrub.
    - 3) Furnishing and placing mulch.
  - c. Perennials: Measurement will be by each perennial species, variety, and size range furnished and planted in accordance with the Drawings. Payment shall include:
    - 1) Excavation for planting hole.
    - 2) Furnishing and Planting of perennial.
    - 3) Furnishing and placing mulch.
  - d. Transplant Tree: Measurement will be per each tree, regardless of size or type. Payment will include salvaging the tree, temporarily storing the tree during construction, and re-planting the tree as specified in the same general location and as directed by the Engineer.
2. All other work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 (MnDOT Spec.):
1. 2571 – Plant Installation and Establishment.
  2. 3861 – Planting Materials.

3. 3881 – Fertilizer.
  4. 3882 – Mulch Material.
- B. American National Standards Institute (ANSI)
1. ANSI Z60.1 – American Standard for Nursery Stock.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. Nursery Stock:
1. Plant materials shall conform to the requirements of MnDOT Spec. 3861 and ANZ60.1.
  2. No substitutions will be accepted without written approval from the Owner or Engineer.
  3. Treated burlap will be allowed on soil balls, as an exception to MnDOT Spec. 2571.3.F, and 3861.2.F, if vertical slits are cut through the burlap. The vertical slits shall be made at 6 inch intervals horizontally around the circumference of the root ball and shall be made from the top of the root ball extending downward and shall be done in a manner which does not damage the root system.
- B. Fertilizer: Conform to MnDOT Spec. 3881.2.B.3 - Type 3 - Slow-Release Fertilizer.
- C. Mulch: Conform to MnDOT Spec. 3882.2.E, and as modified herein:
1. Shredded hardwood mulch shall be provided free of dirt, ashes, sawdust, rocks, leaves, roots, black bark mold or any other debris.
- D. Soil moisture Amendment Pellets: Soil Moist Professional Granular by JRM Chemical, Inc. or approved equal.
- E. Slow Release Watering Bag: Treegator® Original or approved equal.

## **PART 3 EXECUTION**

### **3.01 CONSTRUCTION REQUIREMENTS**

- A. Planting operations shall not be started, nor shall any planting stock be delivered to the Project site, until all other work has been completed in the area of the proposed planting site as determined by the Engineer.
- B. Notify the Engineer orally or in writing, as designated by the Engineer, at least 24 hours prior to the start of any planting operations during this Contract, including layout staking, clearing, weed spraying, soil preparation, watering, mulching, plant protection, weeding and clean-up.
- C. All planting operations shall be performed during normal working hours and under conditions suitable for such work, as determined by the Engineer, unless otherwise authorized by the Engineer.
- D. The Engineer and City Parks Department will field stake the location of trees to be planted. All other plantings shall be staked by the contractor then reviewed and accepted by the City prior to installation.

- E. Trees delivered with the root flare more than 3 inches below the ball will be rejected.
- F. Set tree plumb and maintain throughout the establishment period. Place root ball on firm unexcavated or tamped soil. Tamp soil around base of the root ball with foot pressure so that root ball does not shift. Remove all flagging and labels.
- G. Prune branches to a minimum 5 foot to allow for a clear sight distance. Do not heavily prune the tree at planting. Prune only crossover limbs, co-dominant leaders and broken branches. Some interior twigs and lateral branches maybe pruned. Do not remove the terminal buds that extends to the edge of the crown.
- H. During the spring planting season, any evergreen plant delivered with new growth in advance stage of candling out will be rejected. Evergreen trees not fully branched from the bottom to top will be rejected and those terminal leaders exceeding 12 inches in length will be rejected.
- I. Trees planted within heavy soils, extend the excavation and backfill soil around the root ball to a point 6 inches below the bottom of the root ball to ensure adequate drainage.
- J. Establish final grade prior to planting trees.
- K. Balled and Burlapped Tree Planting:
  - 1. Construct planting hole to be 3 times as wide as the diameter of the root ball.
  - 2. Construct planting hole to be deep enough so the root flare is 1-2 inches above finished grade.
  - 3. Scarify the sides of the planting hole to avoid glazing.
  - 4. Remove any excess soil to expose the root flare after placing the tree in the planting hole and adjust the depth as necessary to keep root flare 1-2 inches above finished grade.
  - 5. Remove a minimum 2/3 of the wire basket and as much burlap as possible from the root ball.
  - 6. Remove all twine or rope and plastic wrap from the root ball.
  - 7. Backfill with soil from the original planting hole, tamping every few inches while backfilling. Keep the root flare exposed.
  - 8. Taper the outside edges of the backfill slightly below the original grade to help retain water.
- L. Container Grown Trees:
  - 1. Construct planting hole to be 3 times as wide as the diameter of the root ball.
  - 2. Construct planting hole to be deep enough so the root flare is 1-2 inches above finished grade.
  - 3. Scarify the sides of the planting hole to avoid glazing.
  - 4. Remove the container from the root ball by slicing the sides of the container. Use fingers or small tools to pull roots out of the outer layer of the potting soil, then cut or pull apart any circling roots.
  - 5. If the tree is heavily pot bound, use the box cut method to reduce the chance of girdling roots. Using a pruning saw, cut 1-3 inches off the roots on 4 sides, leaving a square or box to be planted.
  - 6. Remove any excess soil to expose the root flare after placing the tree in the planting hole and adjust the depth as necessary to keep root flare 1-2 inches above finished grade.
  - 7. Backfill with soil from the original planting hole, tamping every few inches while backfilling. Keep the root flare exposed.
  - 8. Taper the outside edges of the backfill slightly below the original grade to help retain water.

M. Mulching:

1. Place a layer of mulch 2-4 inches thick extending 1-2 inches past the outside of the planting hole.
2. Do not mulch in contact with tree trunk. Leave 2-3 inches of space between the root flare and mulch.
3. Place mulch within 48 hours of second watering.
4. The outside boundary of the mulch ring should be raised slightly to help retain water.
5. Stake only as needed and directed by the Engineer.
6. Stake when the root ball moves easily while the top of the tree is being moved back and forth or when the top cannot support itself and is bending.
7. Materials directly connecting to the tree should have a broad smooth surface.
8. Place stakes 6 inches inside the mulched area directly across from each other.
9. Wire or rope used to connect the stake to the tree should be loose enough to allow the tree to move slightly in all directions.
10. Stake the tree as low as possible, but not higher than  $\frac{2}{3}$  the height of the tree.

N. Soil Moisture Amendment:

1. Apply per manufacturer's recommendations.
2. This item shall be considered incidental to the respective planting.

O. Shrub and Perennial Planting:

1. Excavate planting hole to a width of 2 times the container size.
2. Excavate planting hole to the depth of the container.
3. Furnish and install specified plant.
4. If plant is shipped in a container remove the container from the root ball by slicing the sides of the container. Use fingers or small tools to pull roots out of the outer layer of the potting soil, then cut or pull apart any circling roots.
5. Set root ball flush with finish grade.
6. Backfill with soil from the original planting hole. Respread any excess excavated material.
7. Place mulch 3 inches thick, unless otherwise specified on the drawings. Do not place mulch in contact with the plant. Place mulch within 48 hours of second watering.
8. Do not heavily prune at planting. Prune only broken or dead branches, retaining natural form.

P. The Plant Establishment Period shall be 2 years, and shall begin upon written approval of the work by the Engineer. Replacement of dead or defective trees or incidental materials shall be required immediately or as soon as is practicable within an appropriate period of time as ordered by the Owner or Engineer. It is anticipated that the plant establishment will be included in the specified warranty period and that no retainage will be held throughout the plant establishment period unless the Owner or Engineer determine that the materials or procedures warrant such a retainage.

Q. Watering during the Plant Establishment Period shall consist of maintaining adequate (but not excessive) soil moisture at all times. Each tree planted shall have a slow release watering bag furnished and installed per manufacturer's recommendation in addition to the watering requirements. It is recommended that after the initial thorough "watering in", every tree should receive a thorough watering, as necessary, at weekly intervals, on the average, throughout the growing season (approximately May 1 thru October 1). Avoid over watering all trees. **GENERAL** water guidelines for the average condition are as follows:

| <u>Plant Type</u>                            | <u>Average Amount of Water<br/>Per Application</u> |
|----------------------------------------------|----------------------------------------------------|
| Machine Transplanted Trees (3" caliper plus) | 50 to 100 Gallons                                  |
| Balled & Burlapped Trees                     | 20 Gallons ±                                       |
| Bare Root Trees                              | 15 Gallons ±                                       |
| Balled & Burlapped Shrubs                    | 10 Gallons ±                                       |
| Bare Root or Container Shrubs                | 7 Gallons ±                                        |

### 3.02 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove excess and waste materials, including unacceptable excavated material, trash, and debris from the job site.

**END OF SECTION**



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## SECTION 33 01 38

### CURED-IN-PLACE PIPE (CIPP) GRAVITY

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to the installation of a resin-impregnated flexible liner which is inserted into the original conduit by use of a hydrostatic head. Methods that are pulled in and inflated rather than inverted will be considered, providing they meet the other provisions of this specification. When cured, the finished pipe (CIPP) will be continuous and tight fitting.

B. Related Sections:

1. Section 01 33 00 – Submittal Procedures.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Inline CIPP: Measurement will be per linear foot of liner installed, according to type and diameter of pipe. Payment shall be compensation in full for all equipment, materials, and labor required to complete the CIPP installation.
2. CIPP Short Liner: Measurement will be per each according to type of pipe, diameter, and length of short liner installed. Payment shall be compensation in full for all equipment, materials, and labor required to complete the CIPP short liner installation.
3. Lateral Reinstatement: Measurement will be per each, regardless of the size of the wye. Payment shall be compensation in full for all labor, materials, and equipment required to determine which are active, and complete the lateral reinstatements of all lateral lines conveying sewage in accordance with these specifications.
4. Trim Protruding Tap: Measurement will be per each. Payment shall be compensation in full for all labor, equipment and materials required to determine which taps are to be trimmed and subsequent trimming, regardless of tap diameter.
5. Lateral Service T-Liner: Measurement will be on the basis of each. Payment will constitute full compensation for all work and costs to furnish and install lateral service T-liner complete in place, including line cleaning and clearing before installation, bypass pumping, dewatering, sealing the liner at the ends, testing, and pre and post television inspection.
6. No alteration of Bid Unit Prices will be allowed due to modification of Project quantity by Engineer and Owner based on updated information from pre-construction television inspection.
7. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

- B. The furnishing and installing of specific items and /or the performance of work under certain circumstances shall not be individually paid in the absence of a specific bid item for the work. The costs shall be included in the unit price bid for the CIPP, as indicated. Such items of work include, but are not limited to:

1. Coordination with City to coordinate access to the sanitary sewer systems.
2. Securing and withdrawing from a water source.
3. Furnishing, installing and maintaining traffic control devices where necessary not already provided for by bid items.
4. Pre-installation and post-installation cleaning and televising.
5. Removal and disposal of internal debris from the sewer mainline and services prior to installation.
6. Bypass pumping unless otherwise specified and included in the bid form.
7. Providing all required notifications of restricted sewer service periods to the Owner and residents affected by the work as well as coordination of resident relocations and reimbursements, if applicable.
8. Installation of pipe pre-liners or grouting if required to install CIPP in areas of excess infiltration.
9. Dye testing as required to determine active laterals (where needed).
10. Installation of hydrophilic end seals at the ends of the liner in each manhole.
11. Removal of liner in manholes if pulling/inverting through manholes (unless manhole is being abandoned).
12. Excavation and restoration required to reinstate sewer services if the Contractor is unable to reinstate services via trenchless methods.
13. General project related restoration where not already provided by bid items.

### 1.03 REFERENCES

- A. This specification references below are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and the ASTM referenced sections, this specification will govern.
  1. ASTM F2019 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastics (GRP) Cured-In-Place Pipe (CIPP)
  2. ASTM F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.
  3. ASTM F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull in and inflate and Curing of a Resin-Impregnated Tube.
  4. ASTM F2561 – Standard Practice for Rehabilitation of a Sewer Service Lateral and its Connection to the Main Using a One-Piece Main and Lateral Cured-in-Place Liner.
  5. ASTM D543 Test Method for Resistance of Plastics to Chemical Reagents
  6. ASTM D578 Standard Specification Glass Fiber Strands
  7. ASTM D638 Standard Test Method for Tensile Properties of Plastics.
  8. ASTM D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
  9. ASTM D2122 Standard 1 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
  10. ASTM D2990 Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
  11. ASTM D3567 Standard Practice for Determining Dimensions of “Fiberglass” (Glass-Fiber Reinforced Thermosetting Resin) Pipe and Fittings
  12. ASTM D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe

- B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

#### 1.04 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:

1. Inline CIPP and CIPP Short Liner:

- a. The Contractor shall submit, prior to the installation or use of any lining materials or equipment, certified test results from the manufacturers which indicate that all materials conform to the applicable requirements.
- b. A copy of the license or certificate verifying the manufacturer's or licensor's approval of the INSTALLER.
- c. Chemical resistance submittals --- The Contractor shall submit test results of the resin proposed that meet the chemical resistance requirements of ASTM F2019, Section 5.2.6. The chemical resistance tests will be completed in accordance with Test Method D543.
- d. CIPP Field Samples ---Field sampling procedure shall be in accordance with ASTM 2019 and in accordance with ASTM D5813.
- e. MSDS Sheets --- The Contractor shall submit Material Safety Data Sheets for all resins, and other additives such as accelerants, colorants, and lubricants utilized in the pipe liner/lining process.
- f. Manufacturer Protocols - The Contractor shall submit manufacturer information that describes the materials, curing speeds/schedule, curing installation processes, installation pressures, temperature limitations, and recommended post curing documentation.
- g. Residential Informational Handout - The Contractor shall submit an informational hand out that describes the materials, processes, installation, pressures, temperature limitations, and odors associated with the lining process that shall be provided at the request of concerned residents.
- h. Proposed plan for temporary conveyance of sewer flows and bypass monitoring.
- i. Proposed construction schedule.
- j. Liner pipe thickness design for each pipe segment. No liner will be approved for installation until liner thickness calculations have been submitted and reviewed for conformance with the specification.
- k. Evidence of the INSTALLER's experience including a list of similar projects completed within the previous 2 years.
- l. Description of cure method(s) proposed by the Contractor.

2. Lateral Service T liner:

a. Product Data:

1) Resin:

- a) Long term creep test data confirming the resin system's 50-year design life in accordance with ASTM D2990.
- b) Chemical Resistance in accordance with ASTM F1216.
- c) Certificate of Compliance in accordance with ASTM F1216.
- d) Material Safety Data Sheets (MSDS).

2) Liner:

- a) Certificate of Compliance in accordance with ASTM 1216 for inversion tubes.
- b) Certificate of Compliance in accordance with ASTM 1743 for pull in place tubes.

- b. CIPP wall thickness design calculations in accordance with ASTM F1216. Design calculations will include applicable designs as follows:

- 1) 4- thru 6-inch diameter lateral liner assuming Fully Deteriorated conditions.
- 2) Main line pipe liner assuming Partially Deteriorated conditions when the main line pipe is lined.
3. Main line pipe liner assuming Fully Deteriorated conditions when the main line pipe is NOT lined.

B. Televising Log:

1. All televising and construction logs, or copies thereof, shall become the property of the Owner. This includes the videos made at the beginning of the project just prior to the installation of the liner.
2. Televising logs shall be provided in thumb drive format.
3. Two copies of all thumb drives shall be submitted.

## 1.05 QUALITY ASSURANCE

A. Televising completed work:

1. Provide Engineer a minimum 72-hour advance notice prior to televising to allow monitoring of the process.
2. Provide the Engineer with a copy of the TV inspection tape, DVD format.

B. Test samples of the cured material for physical strength before a sample may be taken from the wet out tube, clamped between flat plates, and cured in the down-tube.

## PART 2 PRODUCTS

### 2.01 PREQUALIFICATION

A. Only bids for pre-qualified products will be accepted. Bids submitted for products or from Contractors that have not been pre-qualified may be rejected, pending review by the Owner. The Contractor and the proposed method of reconstruction and the product manufacturer's name shall be clearly identified on the bid.

B. Pre-qualified Products and Installers:

1. Insituform Technologies USA, LLC.
  - a. 1140 Bunker Lake Boulevard NW, Anoka, MN 55303, Telephone: 651-762-1238
2. (National Liner) Visu-Sewer
  - a. 3155 104<sup>th</sup> NE Lane, Blaine, MN 55449, Telephone: 763-252-0004
3. Veit Companies
  - a. 14000 Veit Place Rogers MN 55374, Telephone 763-428-2242
4. Granite Inliner
  - a. 16028 Forest Blvd N. PO Box 353, Hugo, MN 55038, Telephone 612-369-1633
5. Michels Pipe Service – A Division of Michaels Corporation
  - a. 817 West Main Street, P.O. Box 128, Brownsville, WI 53006, Telephone: 920-583-3132
6. Sak Construction
  - a. 864 Hoff Road, O'Fallon, MO 63366, Telephone 626-385-1000
7. Hydro-Klean
  - a. 333 NM 49<sup>th</sup> Place, Des Moines, IA 50313, Telephone 855-845-5326
8. SJ Louis Construction
  - a. 1351 Broadway St W, Rockville, MN 56369, Telephone 320-253-9291

C. Qualification Process:

1. Contractors wishing to qualify for this project must submit a copy of the license or certificate verifying the manufacturer's or licensor's approval, and evidence of the INSTALLER's experience including the number, total length, and locations of inversions installed to date using the proposed materials and methods together with the names and phone numbers of facility owners to the Engineer 5 days prior to the opening of bids to allow time for evaluation. The Contractor must have at least five (5) years of active experience installing the CIPP product.
2. The final decision to accept or reject the applicant lies solely with the Engineer and Owner. All decision will be based upon the long-term best interest of the City.

2.02 MATERIALS

- A. Liner - The liner material shall meet the requirements of ASTM F1216 and/or ASTM F2019.
- B. Resin - The resin system shall meet the requirements of ASTM F1216 and/or ASTM F2019. Neat resin shall be used for all lining of PVC pipes.
- C. Approved T liners:
  1. BLD "Service Connection Seal + Lateral" of BLD Services, LLC
  2. LMK "T-Liner" Main-to-Lateral Lining System

2.03 STRUCTURAL REQUIREMENTS

- A. The CIPP shall be designed as per ASTM F1216, Appendix X1. The CIPP design shall assume no bonding to the original pipe wall but a tight, intimate contact is required.
- B. The CIPP shall be designed using a Long Term Creep Retention Factor of fifty percent (50%) of the initial design flexural modulus as determined by ASTM D-790 test method. This value shall be used unless the Contractor submits long term test data (ASTM D2990) to substantiate a higher retention factor.
- C. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers.
- D. If separation of the layers occurs during testing of field samples, new samples will be cut from the work. Any recurrence may cause rejection of the work.
- E. The CIPP shall conform to the following properties:

|                       | Standard    | Min Value   | Enhanced Value | UV Value    |
|-----------------------|-------------|-------------|----------------|-------------|
| Flexural Strength     | ASTM - D790 | 4,500 psi   | 4,500 psi      | 6,500 psi   |
| Modulus of Elasticity | ASTM - D790 | 250,000 psi | 400,000 psi    | 725,000 psi |

F. The design parameters are:

|                                                           |                      |         |
|-----------------------------------------------------------|----------------------|---------|
| Pipe diameter                                             | 8                    | Inches  |
| Maximum depth from finished ground to invert              | 15                   | Feet    |
| Minimum depth from finished ground to invert              | 8                    | Feet    |
| Groundwater Depth                                         | 5 feet below surface | Feet    |
| Cover density (assumed)                                   | 120                  | Lbs/cf  |
| Design Safety Factor (1.5 for pipes 36 inches and larger) | 2.0                  | Value   |
| Ovality                                                   | 5%                   | Percent |
| Enhancement Factor (K)                                    | 7.0                  | Value   |
| Poisson's Ratio                                           | 0.3                  | Value   |
| Level of Deterioration                                    | Fully Det            | Value   |
| Creep Retention Factor                                    | 50%                  | Value   |
| Soil Modulus                                              | 1000 (0-15 feet)     | psi     |
| Host Pipe Loading                                         | H20 Highway          | Value   |

G. The required structural CIPP wall thickness shall be based as a minimum, on the physical properties listed above and in accordance with the Design Equations in the appendix of ASTM F1216. The finished/cured liner thickness shall exceed minimum thickness requirements set forth by the equations in the appendix of ASTM F1216.

## 2.04 TESTING REQUIREMENT

- A. Chemical Resistance - The Contractor shall certify that CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of liner and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.
- B. Hydraulic Capacity - The Contractor shall certify that the CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition. The roughness coefficient of the CIPP shall be verified by third party test data.
- C. CIPP Field Samples - When requested by the Owner, the Contractor shall submit test results from previous field installations in the USA of the same resin system and liner materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 2.3.D. have been achieved in previous field applications. Testing samples for this project shall be made and tested as described in Section 3.4.A.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. The Contractor shall secure his own source of water. The Contractor may contact the Owner to determine whether water is available from the Owner and the associated cost.
- B. It shall be the responsibility of the owner to locate and designate all manhole access points open and accessible for the work and provide rights of access to these points. If a street must be closed to traffic because of the orientation of the sewer, the Contractor shall furnish and install all necessary traffic control devices until the street is opened to traffic.
- C. Cleaning of Sewer Lines - The Contractor shall remove all internal debris out of the sewer line that will interfere with the installation of CIPP. The Contractor shall secure their own disposal site for all debris removed from the sewers.
- D. Bypassing Sewage - The Contractor shall provide for the flow of sewage around the section or sections of pipe designated for lining. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow.
- E. Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions that may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected.
- F. Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the proper insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, offset joint, or a collapse that will prevent the inversion process, and it cannot be removed by conventional sewer cleaning equipment, the Contractor shall immediately notify the Owner. The Owner may choose to have the Contractor make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be considered as a separate pay item.
- G. The Contractor shall notify the Owner prior to initiating cleaning and flushing and shall coordinate his operations with the Owner.
- H. The Contractor shall determine the length and diameter of the pipe to be lined prior to fabrication of the liner. No additional compensation will be paid for measured diameters, which vary from measure indicated on the plans or bid form.
- I. The Contractor shall provide all necessary equipment, jigs, pipe pieces, sandbags, labor, etc. to install CIPP tube through the available access locations provided and shown on the plans. The Contractor shall also cut open, reinstate, and prepare the edges of cut surfaces in a clean and orderly fashion to reopen the pipe within manholes that have been lined through. No additional compensation shall be made for lined through manholes, and such items of work shall be considered incidental to the contract.

### 3.02 NOTIFICATION

- A. Notice required. At least six days before the start of lining, the Contractor shall provide notice, including the approximate schedule of lining, as described below.



1. Written notice must be given to the adult residents of buildings, and to the owner or administrator of any property directly served by the sewer to be lined.
  2. The notice must be mailed or hand delivered to the owner or administrator of a child care building, school building, commercial business, and/or industry.
  3. The notice may be put on or under the door of each residence, one notice for each single-family building and one notice for each unit of a multi-unit building.
- B. Contents of notice to residents, administrator and Owner. The notice shall specify the days and the hours during which sewer service will be restricted.
- C. Reminder Notice: A written, or verbal reminder notice shall be delivered at least 48 hours prior to the actual work.

### 3.03 CONSTRUCTION REQUIREMENTS

- A. CIPP installation shall be in accordance with ASTM F1216, Section 7, or ASTM F2019, Section 6.4 with the following additional requirements:
1. Resin Impregnation - The quantity of resin used for liner impregnation shall be sufficient to fill the volume of air voids in the liner with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. A roller system shall be used to uniformly distribute the resin throughout the liner.
  2. Liner insertion shall be performed in accordance with manufacturer's recommendations and in such a way to fully extend the liner to its termination point, hold the liner tight against the pipe wall, and produce dimples at service connections and flared ends at maintenance holes. Lubricants may be used as necessary. Care shall be taken so as not to overstress the felt fiber.
  3. Unless otherwise indicated in the plans or authorized in writing by the Engineer, steam curing, water curing, and UV curing shall all be considered as an acceptable cure method for this project:
    - a. Steam Cure:
      - 1) After inversion is completed, suitable steam-generating equipment is required to distribute steam throughout the pipe.
      - 2) The equipment should be capable of delivering steam throughout the section to uniformly raise the temperature within the pipe above the temperature required to effect a cure of the resin.
      - 3) The temperature and pressure maintained in the pipe and the duration of the cure period shall be as recommended by the manufacturer.
      - 4) The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of soil).
    - 5) Cooling:
      - a) The new pipe should be cooled to a temperature below 113 degrees Fahrenheit before relieving the internal pressure within the section.
      - b) Cool-down may be accomplished by the introduction of cool water into the section to replace the mixture of air and steam being drained from a small hole made in the downstream end.
      - c) Care shall be taken in the release of head so that a vacuum will not be developed that could damage the newly installed pipe.

- b. Circulated Heated Water Cure:
  - 1) After inversion is completed, suitable heat source and water recirculation equipment are required to circulate heated water throughout the pipe.
  - 2) The equipment should be capable of delivering hot water throughout the section to uniformly raise the water temperature above the temperature required to effect a cure of the resin.
  - 3) The heat source should be fitted with suitable monitors to gauge the temperature of the incoming and outgoing water supply. Another such gauge should be placed between the impregnated tube and the pipe invert at the termination to determine the temperatures during cure.
  - 4) The temperature and pressure maintained in the pipe and the duration of the cure period shall be as recommended by the manufacturer.
  - 5) The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of soil).
  - 6) Cooling:
    - a) The new pipe should be cooled to a temperature below 100 degrees Fahrenheit before relieving the static head in the inversion stand pipe.
    - b) Cool-down may be accomplished by the introduction of cool water into the inversion stand pipe water to replace hot water being drained from a small hole made in the down-stream end.
    - c) Care shall be taken in the release of head so that a vacuum will not be developed that could damage the newly installed pipe.
- c. UV Cure – Follow ASTM F2019, Section 6.6 & 6.7:
  - 1) The approved system must utilize an outer and inner film to ensure that the liner remains intact during the insertion process and to protect the resin at all times during the installation and curing process from water and debris contamination and resin migration.
  - 2) A winch should be used to pull the glass fiber liner into position in the pipe. The pulling speed shall not exceed 15ft/min. The liner shall have a lateral fiberglass reinforcement band which runs the entire length of the liner ensuring that the pulling force is transferred to the band and not the fiberglass liner. Once inserted, end plugs shall be used to cap each end of the glass fiber liner to prepare for pressurizing the liner. As with all CIPP products liner restraints should be used in manholes.
  - 3) A slip sheet shall be installed on the bottom one third to one half of the pipe prior to liner insertion, for the purpose of protecting the liner during insertion and reduce the drag, or as recommended by the liner manufacture.
  - 4) The glass fiber liner shall be cured with UV light sources at a constant inner pressure. When inserting the curing equipment in the liner, care should be taken to not damage the inner film material.
  - 5) The UV light sources should be assembled according to the manufacture's specification for the liner diameter. For the liner to achieve the required water tightness and specified mechanical properties, the following parameters must be controlled during the entire curing process, giving the Engineer a record of the curing parameters over every segment of the entire length of the liner. This demonstrates that the liner is cured properly. The recording will include:
    - a) Curing Speed
    - b) Light Source and Wattage

- c) Inner Air Pressure
- d) Curing Temperatures
- e) Date and Time
- f) Length of Liner

This will be accomplished using a computer and data base that are tamper proof. During the curing process, infrared sensors will be used to record curing data that will be submitted to the Engineer with a post CCTV inspection on the portable hard drive.

- 6) The optimal curing speed, or travel speed of the energized UV light sources, is determined for each length of liner based on internal diameter, liner thickness, and exothermic reaction temperatures.
  - 7) The inner film material should be removed and discarded after curing to provide optimal quality of the final product.
- B. The liner pipe shall be continuous, without joints over the entire length of the pipe. The liner shall be free of all visual and material defects, including but not limited to foreign inclusions, dry spots, pinholes, and delaminations. The surface shall be smooth and free of waviness throughout the pipe.
  - C. Any defects that will affect the structural integrity or hydraulic capacity of the reconstructed pipe shall be repaired or the liner shall be replaced at the Contractor's expense, including large radial or longitudinal wrinkles that occur in such a size as to reduce the thickness or nominal diameter of the finished CIPP product.
  - D. Hydrophilic end seals are required to seal the ends of each CIPP liner as it connects to the manhole. These seals will be installed prior to CIPP to prevent water tracking between the CIPP product and the existing host pipe. End Seals shall be LMK Insignia Seals, Trelleborg Liner End Seal or Engineer approved equal.

### 3.04 REINSTATEMENT OF SEWER SERVICE LATERALS

- A. The Contractor shall certify he has a minimum of two complete working cutter units plus spare key components on the site before each inversion.
- B. Prior to installing the sewer liner (during the television process), the Contractor shall locate, dye-test and record the location of all sewer lateral connections that are in question. The Contractor shall immediately submit this information to the Owner. The Owner will then determine which, if any, sewer services are to be abandoned. Those services designated to be abandoned will not be reinstated.
- C. After the sewer lining is complete, the Contractor shall re-establish all service connections except those designated by the Owner to be abandoned. This shall be done without excavation from the interior of the pipe by means of a television camera and a remotely controlled cutting device.
  - 1. If the Contractor is unable to re-establish the service connection from inside the pipe and excavation is necessary, no additional payment will be made for excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

2. Reestablished service connections shall be clean and smooth, free of jagged edges and conform as closely as possible to the dimension of the existing service.
  3. Brush style cutters or similar device will be required to ensure that the laterals are smooth for potential CIPP lateral lining.
- D. The sewer main shall be lined prior to lining service laterals, unless approved otherwise by the Engineer.

### 3.05 INSPECTION

- A. CIPP samples shall be prepared and tested in accordance with ASTM F1216, Section 8.1 using either method proposed.
- B. Leakage testing of the CIPP shall be accomplished during cure while under a positive head. CIPP products in which the pipe wall is cured while not in direct contact with the pressurizing fluid (e.g., a removable bladder) must be tested by an alternative method approved by the Owner.
- C. Visual observation of the CIPP shall be in accordance with ASTM F1216, Section 8.4.

### 3.06 TELEVISIONING

- A. Televisioning is required both prior to liner installation and after the CIPP process has been completed.
- B. Televisioning shall be performed by experienced personnel trained in locating breaks, obstacles and service connections.
- C. All televisioning video shall be in color. Each individual reach of pipe between manholes shall be identified as a chapter on the video.
- D. Immediately prior to televisioning, the televisor shall discharge sufficient clear water into the pipe to clean the pipe and assist in identifying sags and misalignment.
- E. Post-lining televisioning shall carefully inspect the interior of the pipeline to identify any conditions which may indicate improper installation.
- F. A thumb drive and suitable log shall be kept of all televisioning and submitted to the Owner.

### 3.07 CLEAN-UP

- A. Upon acceptance of the installation work and testing, the Contractor shall clean-up the project area affected by the operations.

### 3.08 WARRANTY

- A. All lining work shall be fully guaranteed by the Contractor for a period of 2 years from the date of Final Acceptance. During this period, all serious defects discovered by the Owner or Engineer shall be removed and replaced by the Contractor in a satisfactory manner at no cost to the

Owner. In addition, the Owner may conduct independent televised inspections, at its own expense, of the lining work at any time prior to the completion of the guarantee period.

**END OF SECTION**

## SECTION 33 01 40

### SEWER PIPE JOINT SEALING

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Rehabilitation of deteriorated and leaking gravity pipe joints by grout sealing.
- B. Related Sections:
  - 1. Section 00 31 00 – Available Project Information
  - 2. Section 01 33 00 – Submittal Procedures

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Seal Pipe Joint: Measurement will be per each joint sealed by diameter of pipe. Payment will constitute full compensation for all work and costs to setting up and sealing the joint and air testing to verify seal.
  - 2. Chemical Grout: Measurement will be per gallon based on gallons of grout required to seal joint/crack. Payment will include all costs related to furnishing and installing the grout with root inhibitor as specified.

##### 1.03 REFERENCES

- A. National Association of Sewer Service Companies (NASSCO):
  - 1. PACP – Pipeline Assessment Certification Program.

##### 1.04 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
  - 1. License of certificate verifying manufacturer's/licensor approval of installer.
  - 2. Construction schedule and sequence.
  - 3. Product data and manufacturer's recommended installation procedures.
  - 4. Installer Completed Project List Which Includes: Project name and the names and phone numbers of the facility owners.
  - 5. Post sealing televising report:
    - a. Submit 1 copy of the Written Report and Video report within 30 days of completion of televising.
    - b. Report Requirements:
      - 1) Each run shall consist of a starting and ending structure number and a zero reading on the counter at center of the starting structure.
      - 2) Examine each joint sealed by using the pan and tilt feature.
      - 3) Take a still photograph at each joint sealed.
      - 4) Take a still photograph of each air test.
    - c. Submit a video report in thumb drive format with audio, including a printable version of the written report and full video of all televised pipe runs.

## **PART 2 PRODUCTS**

### **2.01 JOINT SEAL MATERIALS**

- A. Joint Grout:
  - 1. The grout shall be either Acryamide Gel or Urethane Gel.
  - 2. The grout shall contain a root inhibitor such as Avanti Barrier 50W or approved equal.

## **PART 3 EXECUTION**

### **3.01 PRE-INSTALLATION PROCEDURES**

- A. Review leaking pipe joints with Engineer prior to sealing joints:
  - 1. Clean existing pipe by removing interior debris with high-pressure washing:
    - a. Method of cleaning shall be reviewed with and approved by the Engineer.
    - b. Cost for initial cleaning shall be incidental to the Project.

### **3.02 INSTALLATION AND AIR TESTING**

- A. Prepare joint, grout seal joint, and air test in accordance with the recommended specification for sewer system rehabilitation prepared by the National Association of Sewer Service Companies (NASSCO).

### **3.03 POST SEALING TELEVISION INSPECTION**

- A. Sanitary segments with sealed joints must be in a clean and ready condition prior to the television inspection.
- B. Immediately clean any lines found to be dirty prior to televising. Costs for all such cleaning shall be the responsibility of the Contractor.
- C. Personnel completing the televising must be PACP certified.
- D. Review of the television inspection of the grouted pipe joints will be performed by the Engineer to verify the joint has been sealed and leaking has stopped.

**END OF SECTION**

## SECTION 33 01 46

### MANHOLE REHABILITATION

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Rehabilitation of manhole walls by sealing joints or lining.
- B. Related Sections:
  - 1. Section 00 31 00 – Available Project Information
  - 2. Section 01 33 00 – Submittal Procedures
  - 3. Section 33 39 00 – Sanitary Utility Sewer Structures

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Spray Line Sanitary Structure: Measurement will be per linear feet for each size of structure lined, measured from the top of the bench to the top of the cone or bottom of top slab section. Payment will include all costs related to setting up, preparing the surface of the structure, wall patching, applying the spray liner, and providing certification of product application, as specified.
  - 2. Spray Line Storm Structure: Measurement will be per linear feet for each size of structure lined, measured from the top of the bench to the top of the cone or bottom of top slab section. Payment will include all costs related to setting up, preparing the surface of the structure, wall patching, applying the liner, and providing certification of product application, as specified.
  - 3. Seal Manhole Joint: Measurement will be per each manhole by diameter of joint sealed. Payment will constitute full compensation for all work and costs to setting up and sealing the joint and air testing to verify seal.
  - 4. Chemical Grout: Measurement will be per gallon based on gallons of grout required to seal joint/crack. Payment will include all costs related to furnishing and installing the grout with root inhibitor as specified.
  - 5. Patch Structure: Measurement per each storm sewer or sanitary sewer structure patched, regardless of the size of structure or areas patched. Payment will include all cost associated with patching structure walls, doghouses, inverts, benches, rings or any other portion of the structure as specified or as identified in the Drawings.
  - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
  - 1. License of certificate verifying manufacturer's/licensor approval of installer.
  - 2. Construction sequence.
  - 3. Product date and manufacturer's recommended installation procedures.



4. Installer Completed Project List Which Includes: Project name and the names and phone numbers of the facility owners.

#### 1.04 QUALITY ASSURANCE

- A. Applicator's Qualifications: Applicator of products shall be approved by product manufacturer.
- B. Certification of Product Application: Upon completion of surface coating, an inspection shall be made by a representative of the manufacturer to ascertain that the product has been applied according to the manufacturer's published specifications and details.
- C. Warranty: Contractor shall warrant the workmanship and products for 1 full year after final Project acceptance. Warranty shall cover manhole coating deterioration, spalling of concrete, or other failure of the coating. Failure of the warranty shall be repaired by the Contractor at no charge to the Owner.

### PART 2 PRODUCTS

#### 2.01 SANITARY STRUCTURE SPRAY LINER

- A. Hydrogen sulfide and corrosion resistance liner such as Zebron, Spectrasheild, or approved equal.
- B. Polyurethane Coatings: High Performance, 2 part, 100 percent solids polyurethane coating, Zebron series, No. 386.
  1. Physical properties:
    - a. Color: Cream
    - b. Specific Gravity (ASTM D792): 1.3 (10.84 lbs per gal)
    - c. Tensile Strength (ASTM D638): 2500 psi at 77 degrees F (25 degrees C)
    - d. Elongation (ASTM D638): Recoverable; 67 percent at 77 degrees F (25 degrees C)
    - e. Flexibility (ASTM D792): No effect bending 0.5 mm plate coated with 20 mils over 8 mm diameter mandrel.
    - f. Abrasion Resistance (ASTM D4060): 2.12 oz. (20mg)
    - g. Thermal Conductivity (ASTM C177): 0.000723 cal. Per sec. cm<sup>2</sup> per degree C per cm at 20 degrees C (0.175 btu per hr. ft. at 77 degrees F)
    - h. Permeability (ASTM E96): 0.262 gms per m<sup>2</sup> per 24-hrs; 0.0358 U.S. perms
- C. Modified Polyurea barrier, polyurethane foam, two part application, Spectrasheild.
  1. Physical properties two part component barrier coat:
    - a. Color: Pink
    - b. Tensile Strength (ASTM D412-06): 2550
    - c. Elongation (ASTM D412-06): 269
    - d. Tear Strength (PLI) (ASTM D624-00) 428
    - e. Flexibility (1/8" mandrel)(ASTM D522-13): pass
    - f. Abrasion (mg loss) (ASTM D4060-14): 23 CS17 Wheel, 1 kg per 1000 cycles
    - g. Viscosity – B Side: 300 cps
    - h. Viscosity – A Side: 350 cps
  2. Physical properties polyurethane foam:
    - a. Density (ASTM D1622): 4 –10 lb/cu ft
    - b. Compressive Strength (ASTM D1621): 90 – 150 psi

- c. Closed Cell Content (ASTM D1940): >95%
- d. Water Absorption (ASTM D2842): 0.020 (gm/cc)
- e. Water Vapor Transmission (ASTM E96): 0.61 perms
- f. Shear Strength (ASTM C273): 225 – 250 psi
- g. Recycled Content: Side R 16.5 %
- h. Viscosity - Side A: @ 77°F 200 cps
- i. Viscosity - Side R: @ 77°F 660 cps

## 2.02 STORM STRUCTURE SPRAY LINER

- A. Hydrogen sulfide and corrosion resistant liner such as Quadex GeoKrete, Strong Company StrongSeal, or approved equal.

## 2.03 JOINT SEAL MATERIALS

- A. Chemical Grout:
  - 1. The grout shall be either Acryamide Gel or Urethane Gel.
  - 2. The grout shall contain a root inhibitor such as Avanti Barrier 50W or approved equal.

## 2.04 PATCH STRUCTURE

- A. Ready Mix Mortar Materials: Sand Mix, 4,000 PSI
- B. Mortar: Pre-mix bag intended for underground use conforming to ASTM C270 Type M, minimum compressive strength of 2,500 psi.

# PART 3 EXECUTION

## 3.01 GENERAL

- A. Spray line structures as directed by Engineer.
- B. Follow manufacture's installation specifications.

## 3.02 STRUCTURE SURFACE PREPARATION

- A. Clean all loose concrete and debris from the rings, interior walls, and floor of the manhole by using a high-pressure water blast.
- B. Patch any voids in the walls or rings with mortar prior to lining.
- C. Prior to lining, remove from the manhole all materials left as a result of the cleaning.
- D. Clean any exposed, oxidized rebar to a "white metal" SSPC-SPS finish profile by sandblasting.
- E. Review leaking manhole joints with Engineer prior to sealing joints.

## 3.03 SANITARY STRUCTURE SPRAY LINER

- A. If Zebron is used, minimum 125 mil liner thickness.

B. If Spectrashield is used, minimum 500 mils total thickness.

#### 3.04 STORM STRUCTURE SPRAY LINER

A. Coat all interior surfaces with a minimum ½" liner thickness.

#### 3.05 PATCH STRUCTURE

A. Clean areas to be patched by removing debris, loose concrete, and any other foreign materials.

B. Patch area with mortar to provide smooth patch that seals the structure.

**END OF SECTION**

## SECTION 33 05 06

### TRENCHING AND BACKFILLING

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. Trenching requirements for underground piping and appurtenances, including requirements for excavation, backfill, and compaction.

B. Related Sections:

1. Section 01 33 00 - Submittal Procedures.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Trench Excavation: Excavation and backfilling of trench and associated excavation for pipe bedding shall be included in the price of pipe provided.
2. Pipe Bedding All costs associated with providing the bedding material as shown on the Drawings and Standard Detail Plate BED-1 shall be considered incidental to the pipe material.
3. Rock Excavation: Measured from the top of the rock to a point 12 inches below the outside barrel of pipe and 12 inches from each side of outside diameter of pipe (at bell). The minimum trench width of Rock Excavation shall be 48 inches. For measurement purposes, volume will be computed based on vertical walls for the width specified above. Payment for Rock Excavation shall be at the Unit Price per cubic yard. Any additional Rock Excavation required for shelving or OSHA Standards will not be measured for payment and will be considered incidental to the Rock Excavation Bid Item:
  - a. The estimated quantity of Rock Excavation shown in the various parts of the Bid Form were calculated as described above, based on the top of rock elevations determined by either soil borings and/or test hole excavations. No guarantee is made as to the actual quantity of Rock Excavation that will be encountered in this Project. No variation from the Unit Price for Rock Excavation will be considered or allowed due to quantity variation.
  - b. Separate Bid Items have been provided for Rock Excavation – Soft Rock and Hard Rock. Payment will be made based on the method of rock excavation actually used in the field. Any excavation performed with a standard backhoe bucket will not be considered rock excavation.
4. Haul Excess Rock Off Site (LV): Measurement will be by the cubic yard of material hauled off site, based on a truck count. Payment will include all costs related to hauling and disposing of the material off the Site.
  - a. Any excess rock hauled off site must be approved by Engineer prior to removing.
5. Sand Cushion: Measurement shall be by the units of linear feet. Payment at the Unit Price shall include all costs related to providing the material as shown on the Drawings and Standard Detail Plate.
6. Granular Material: Measurement shall be by the ton of material compacted in place as determined from weight tickets delivered to the Engineer and shall include all costs related to providing the material as shown on the Drawings and Standard Detail Plate.

7. Improved Pipe Foundation: Measurement shall be by the linear foot for each 6 inch layer placed below pipe bedding, not including the first 6 inches:
  - a. For example, if 2 feet of foundation material is required under a pipe; 6 inches of material is required for bedding, and payment will be made for 3 linear feet of pipe foundation material, 6 inches deep, per foot of pipe installed.
  - b. No payment will be made without the knowledge or consent of the Engineer.
  - c. No payment will be made for subgrade rock installed for de-watering purposes only, unless specified.
  - d. No payment will be made for disposing of excavated material off the Site that has been created by placement of improved pipe foundation.
8. Temporary Bracing and Sheet piling: Considered part of the excavation costs with no additional compensation to Contractor, unless provided for otherwise.
9. Density Tests:
  - a. Passing Tests: All costs paid by Owner.
  - b. Failing Tests: All costs will be deducted from payments to Contractor.
10. Dewatering: No explicit, direct payment is made for this work. Include the costs in the Unit Prices for the pipe or structure installed.
11. Excavation Special (Pothole Existing Private Utility): This Bid Item is for potholing and exposing existing private utilities that may be in conflict with the proposed public utilities. Measurement will be per each location exposed regardless of the number of utilities in the respective location. Payment will include all cost related to exposing the potential conflict:
  - a. The quantity shown on the Bid Form is an estimated amount. Payment will be based on the quantity actually used, regardless of the estimated quantity. No revision to the Contract Unit Price shall be considered or allowed due to variations of the actual quantity from the estimated amount.
12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 (MnDOT Spec.):
  1. 2106 - Excavation and Embankment – Compacted Volume Method.
  2. 3149 - Granular Material.
  3. 1711 - Use of Explosives.
- B. American Society of Testing Materials (ASTM):
  1. A798 -Standard Practice for Installing Factory-Made Corrugated Steel Pipe for Sewers and Other Applications.
  2. D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
- C. American Water Works Association (AWWA):
  1. C150 - Thickness Design of Ductile-Iron Pipe.
  2. C151 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast for Water.

#### 1.04 SUBMITTALS

- A. Provide the following submittals consistent with Section 01 33 00:
  - 1. Product Data for each Borrow Material:
    - a. Name and location of source.
    - b. Results of gradation tests.

#### 1.05 DEFINITIONS

- A. Bedding: The soil material adjacent to the pipe which makes contact with the pipe foundation, walls of the trench, and upper level of backfill. The purpose of bedding is to secure the pipe to true line and grade, and to provide structural support to the pipe barrel.
- B. Foundation: Soil material beneath the pipe bedding.
- C. Improved Pipe Foundation: Foundation provided by importing material from sources outside the Site. Required when foundation is soft or unstable.
- D. Coarse Filter Aggregate: Free draining mineral product used around draintile pipe.
- E. Rock Excavation (Hard Rock): Includes such rocks that are **not** decomposed, weathered, or shattered, and which will require blasting, hydro-hammering, barring, wedging, or use of air tools for removal. Also included are any boulders, concrete, or masonry structure (except concrete pavement, curb and gutter, and sidewalk) exceeding 1 cubic yard.
- F. Rock Excavation (Soft Rock): Includes such rocks that are decomposed, weathered, or shattered, and which will require the use of ripping equipment, such as rock buckets and ripper hooks.
- G. Pipe Zone: That part of the trench below a distance of 1 foot above the top of the pipe.
- H. Sand Cushion: Aggregate bedding material used around pipe in areas where rock excavation is encountered, where pipe insulation is used, and when crossing existing utilities.
- I. Granular Material: Includes the area below the subgrade and above the pipe zone when shallow pipe is installed in areas of rock excavation.

#### 1.06 SEQUENCING AND SCHEDULING

- A. Known existing underground utilities are shown on the Drawings in a general way. Owner does not guarantee the locations as shown on the Drawings. Anticipate variations in both the vertical and horizontal locations of underground utility lines from those shown on the Drawings.
- B. Uncover utilities and verify both horizontal and vertical alignments sufficiently in advance of construction to permit adjustments in the Work. Determine location of existing utilities and identify conflicts before excavating trench for pipe installation.
- C. Notify Gopher State One Call before starting construction in a given area, requesting utility locations in the field.

- D. Provide continuance of flow of existing sewer and other facilities.
- E. Backfill and compact all trench excavations promptly after the pipe is laid.
- F. Salvage and re-spread existing topsoil within trench and spoil pile areas. This work shall be considered incidental to the pipe installation.

#### 1.07 WARRANTY

- A. Trench settlements that occur during the correction period and are greater than 1/2 inch as measured by a 10 foot straight edge will be repaired in a manner acceptable to the Owner at the Contractor's expense.

### **PART 2 PRODUCTS**

#### 2.01 PIPE BEDDING MATERIAL

- A. Comply with MnDOT Spec. 3149.2.B for Granular Material, modified with the following:
  - 1. No existing onsite granular material encountered during construction may be used unless approved by Engineer, based on quality control gradations provided by the Contractor for the onsite material being placed. The rate of testing will be determined based on changes of the existing material, or as determined by Engineer.
  - 2. 1 inch maximum aggregate size.
  - 3. Only virgin materials allowed.

#### 2.02 IMPROVED PIPE FOUNDATION MATERIAL

- A. Comply with MnDOT Spec. 3149.2.H, as modified herein:
  - 1. Crushing Requirements: At least 50-percent of the material by weight retained on the No. 4 sieve shall have 1 or more crushed faces.

#### 2.03 SAND CUSHION MATERIAL

- A. Comply with MnDOT Spec. 3149.2.B for Granular Material, modified with the following:
  - 1. No existing onsite granular material encountered during construction may be used unless approved by Engineer, based on quality control gradations provided by the Contractor for the onsite material being placed. The rate of testing will be determined based on changes of the existing material, or as determined by Engineer.
  - 2. 1 inch maximum aggregate size.
  - 3. Only virgin materials allowed.

#### 2.04 BACKFILL MATERIAL

- A. Suitable materials selected from the excavated materials to the extent available and practical.
- B. Suitable materials are mineral soils free of rubbish, trees, stumps, branches, debris, frozen soil, oversize stone (greater than 1 cubic foot), concrete and bituminous chunks, and other similar unsuitable material.

- C. When suitable materials are not available, as determined by the Engineer, comply with MnDOT Spec. 3149.2.B for Granular Material.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Prior to construction, inspect existing utility structures and surface features, and document condition.
- B. Re-inspect foundation soils if rain fall or snow has occurred after initial inspection but prior to placing pipe and bedding.
- C. Prior to construction, perform the Excavation Special (Pothole Existing Utility) for the purpose of determining possible conflicts between existing private utilities and proposed public utilities. Allow sufficient time for private utility companies to relocate facilities or Engineer to redesign public utilities.

#### **3.02 PREPARATION**

- A. Notify Utility Owners to field mark their utility locations.
- B. Protect as necessary surface features, such as utility poles, trees, structures, pavement, etc., that are not designated on the Drawings to be removed.
- C. Notify utility companies of progress schedule so they can accomplish any necessary relocations and removals that they have agreed to relocate, remove, or support.
- D. Implement traffic control.
- E. Complete temporary removal or relocation of surface features, such as fences, shrubs, signs, and mailboxes.
- F. Strip off existing topsoil from within the trench excavation limits and stockpile. Separate vegetative strippings from salvageable topsoil and dispose of appropriately.
- G. Crossing Under Existing Utility Lines:
  - 1. Use extreme care when excavating in the vicinity of underground utility lines to avoid damage to protective coatings or surfaces.
  - 2. Where possible and as authorized by the utility, temporarily remove the utility line, install the new pipe, and reinstall the utility line.
  - 3. Where existing line cannot be removed or is not feasible to remove, securely support, excavate under, backfill under and around the utility line to 100-Percent Standard Proctor Density.
  - 4. Report and repair damaged lines prior to backfilling trench.
- H. Rock Excavation:
  - 1. Contractor shall submit a blasting plan for review and approval by the Engineer.
  - 2. Use of explosives comply with MnDOT Spec. 1711.



### 3.03 CONSTRUCTION

- A. Conform to ASTM C2321 and C1479, or modified herein.
- B. Trench Excavation:
  - 1. Excavate trench to alignment and grade shown on the Drawings.
  - 2. The trench width at the surface may vary and depends on the depth of trench and nature of the excavated material encountered. However, it shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly.
  - 3. Correct any part of the trench that is inadvertently excavated below grade with approved material compacted to 100-Percent Standard Proctor Density.
  - 4. Brace, shore, or sheet trench and provide drainage. Comply with applicable State Regulations relating to industrial safety to a safe angle of repose. Angle of repose may be no less than that required by the Accident Prevention Division of the State Industrial Commission or the requirements of the Occupational Safety and Health Act (OSHA), whichever is most restrictive.
  - 5. Pile all excavated material in a manner that will not endanger the Work or obstruct sidewalks, driveways, gutters, etc.
  - 6. Segregate soils in the excavated material that are not suitable for trench backfill and dispose of in a manner that is consistent with the requirements specified herein under "Backfill Above Pipe Zone."
  - 7. Dispose of excess excavated materials off of right-of-ways and easements in a suitable site selected by the Contractor.
  - 8. Haul materials, other than natural soil materials that are suitable as backfill material, to an approved landfill as directed by the Engineer.
  - 9. It is anticipated that private utility crossings will be encountered and may interfere with the proposed public utilities.
    - a. Pothole and expose existing private utility crossings to determine location and elevation.
    - b. Perform construction activities in the vicinity of the private utilities so as not to disturb the existing crossings.
  - 10. If frost thickness exceeds 6 inches, all frost chunks must be removed from the Site and non-frozen material must be used to backfill the excavation.
- C. Water Control:
  - 1. Dewater the ground as necessary to excavate the trench and install the pipe. All pipe and structures shall be laid in a dry condition prior to backfill. Maintain groundwater level a minimum of 1 foot below the pipe invert. Measure the rate of flow from dewatering pumps at the beginning of the dewatering operation(s) and once per week thereafter. Keep a daily log of hours pumped.
- D. Trench Bottom:
  - 1. Excavate to a sufficient depth to ensure adequate foundation when the bottom of the trench is soft or where in the opinion of the Engineer unsatisfactory foundation conditions exist. Bring excavation up to pipe grade with thoroughly compacted granular materials meeting the requirements of Improved Pipe Foundation Material.
  - 2. Provide temporary support, remove, relocate, or reconstruct existing utilities located within the trench excavation. Utility shall designate method employed. Use particular care and provide compacted fill or other stable support for utility crossings to prevent detrimental displacement, rupture, or failure.

3. Excavate to expose existing utilities that cross in close proximity to the planned pipe line to determine the utilities' exact location sufficiently ahead of pipe installation to plan for the avoidance of grade conflict. Measure to determine the utilities' location relative to the planned pipe line location. A deviation from the alignment, grade, and location to avoid conflict may be ordered by the Engineer.
4. In locations where rock affects the pipe foundation, excavate the trench 12 inches below the pipe and place sand cushion material up to the top of the pipe zone. Blend suitable on Site backfill material with any rock (1 cubic foot maximum size) that is placed back in trench. Dispose of excess rock at a suitable location outside the Site:
  - a. Sand Cushion: The removal and disposal of the unsuitable material within the trench and below the invert elevation, and the replacement up to invert elevation with the appropriate bedding material.
  - b. Granular Borrow: The removal and disposal of unsuitable material within the trench, above the pipe zone, and replacement up to the subgrade with appropriate backfill material, per Standard Detail Plate BED-4. No additional compensation will be allowed for wider or deeper trenches in rock excavations.
  - c. For PVC, Corrugated PP, and HDPE Pipe, the sand cushion shall be placed to 1 foot above the pipe and shall be paid as pipe bedding. The remainder of the trench up to the top of the rock shall be backfilled with granular backfill material.
5. Improved Pipe Foundation: When unsatisfactory foundation conditions exist, excavate to a depth consisting of solid materials. Fill to pipe grade with thoroughly compacted granular materials meeting the requirements of Improved Pipe Foundation Material.

#### 3.04 PIPE BEDDING

- A. PVC Pipe: Bed pipe in accordance with ASTM D2321 and Standard Detail Plate BED-1, 3, and 4.
- B. RCP: Bed pipe in accordance with ASTM C1479 and Standard Detail Plate BED-2, 3, and 4.
- C. DIP: Bed pipe in accordance with AWWA Standard C150 and C151 and Standard Detail Plate BED-2, 3, and 4.
- D. HDPE Pipe: Bed pipe in accordance with ASTM D2321 and Standard Detail Plate BED-1, 3, and 4.
- E. Corrugated Metal Pipe: Bed pipe in accordance with ASTM A798 and Standard Detail Plate BED-2, 3, and 4.
- F. The pipe trench directly under the pipe shall be loosely placed un-compacted material per the Standard Detail Plates.
- G. Use only selected materials free from rock, boulders, debris, or other high void content substances to a level 1 foot above the top of pipe. Remove ledge rock, boulders, and large stones to provide at least 6 inch clearance from pipe.
- H. Dig bell holes of ample dimension at each joint such that the pipe barrel rests continuously on the bedding.

### 3.05 BACKFILL WITHIN PIPE ZONE

- A. Backfill immediately after pipe is laid. Restrain pipe as necessary to prevent their movement during backfill operations.
- B. Place material completely under pipe haunches in uniform layers not exceeding 4 inches in depth.
- C. Hand (shovel/slice) tamp along pipe within haunch zone to provide a solid pipe foundation.

### 3.06 BACKFILL ABOVE PIPE ZONE

- A. Use suitable materials meeting the requirements of Backfill Material.
- B. Place in uniform depth layers not to exceed 12 inches before compaction. Complete the compaction of each layer before placing material for the succeeding layer.
- C. Compact each layer by mechanical means until it meets the requirements of MnDOT Spec. 2106.3.G.1. Trenches shall be compacted to a minimum of 95-percent, except to 100-percent in the upper 3 feet:
  - 1. Trenches between existing or future buildings or structures shall be compacted to a minimum of 100-percent for the entire depth of the trench.
- D. The method and means of placement and type of compaction equipment used is at the discretion of the Contractor. However, all portions of the trench backfill must meet minimum specified compaction requirements.
- E. Any deficiency in quantity of backfill material (caused by shrinkage or settlement) shall be supplied at no additional cost to the Owner.
- F. Excavated material not suitable or required for backfill shall be disposed of outside of the Site.
- G. It is assumed that all backfilling of trenches will be performed using on Site, excavated trench material. If the Contractor is unable to meet the specified density requirements using that material due to excess moisture content or other circumstance beyond their control, they shall immediately notify the Engineer of such condition. Following investigation of the circumstances, the Engineer, Contractor, and Owner shall mutually agree upon the proper course of action to address the issue.
- H. Any excavated rock that is placed back in the trench shall be crushed to a maximum rock size of 12 inches and adequately mixed with suitable on Site backfill material before being placed and compacted in the trench.

### 3.07 FIELD QUALITY CONTROL

- A. Density Tests: to be performed by an approved soils testing firm at various locations and depths throughout the Site as directed by the Engineer. Cooperate fully and provide assistance as necessary to complete these tests.

- B. Failed density test areas shall be excavated and re-compacted until the density requirements are met.

**END OF SECTION**

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## SECTION 33 05 18

### ADJUST MISCELLANEOUS STRUCTURES

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Adjustment of utility structures.
- B. Related Sections:
  - 1. Section 01 57 13 – Temporary Erosion and Sediment Control.
  - 2. Section 33 10 00 – Water Utilities.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Payment at the Bid Unit Price for all items is considered compensation in full for all materials and Work required to furnish and install the Bid Item in place.
  - 2. Adjust Manhole Casting Including New HDPE Adjustment Rings: Measurement per each. Payment will include furnishing and installing new HDPE adjustment rings and fabric, installing new or salvaged casting, excavation, backfilling, salvaging and reinstalling aggregates, and bituminous patch when located within a paved surface.
    - a. Existing Manholes:
      - 1) Payment shall include removal and disposal of existing rings, mortar, and fabric.
    - b. New manholes and valve boxes in non-bituminous surfaced areas:
      - 1) No separate payment for adjustment to final grade will be made. Adjustment of the structure shall be considered incidental to the Bid Items for the furnishing and installation of each type of structure.
  - 3. Adjust Manhole Casting (Cast Iron Manhole Adjusting Ring): Measurement per each. structure adjusted by means of furnishing and installing steel adjusting ring as specified.
  - 4. Adjust Valve Box: Measurement per each. Payment will include installing new or salvaged casting, excavation, backfilling, salvaging and reinstalling aggregates, and bituminous patch when located within paved surface.
    - a. New valve boxes in non-bituminous surfaced areas:
      - 1) No separate payment for adjustment to final grade will be made. Adjustment of the structure shall be considered incidental to the Bid Item for Valve and Box.
  - 5. Adjust Catch Basin Casting Including New HDPE Adjustment Rings: Measurement per each. Payment will include excavation, furnishing and installing new HDPE adjustment rings and fabric, installing new or salvaged casting, and backfilling.
    - a. Existing Catch Basins:
      - 1) Payment shall include removal and disposal of existing rings, mortar, and fabric.
  - 6. Clean Out or Curb Box Protective Cover: Measurement will be per each and shall include excavation, furnishing, and installation.
  - 7. Extend Hydrant Barrel: Measurement will be by the linear foot of adjustment made, including the heavy-duty rod assembly, if required.

8. Valve Box Extension: Payment for the furnishing and installation of valve box extension sections on either new or existing valve boxes shall be made on the basis of the linear feet of extension sections installed.
9. All work associated with the surfacing removal, excavation, material replacement, compaction, and patching necessary for the adjustment of structures within bituminous surfaced areas shall be considered incidental to the adjustment.
10. For street rehabilitation projects, or if required by the Engineer, use of parachute is incidental to manhole adjustment.
11. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

#### 1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  1. ASTM A48 – Specification for Gray Iron Casting.
  2. ASTM D1248 – Polyethylene Plastics Molding and Extrusion Materials.
- B. Minnesota Department of Transportation “Standard Specifications for Construction” 2020 Edition (MnDOT Spec.):
  1. 3733 – Geosynthetic Materials.

#### 1.04 DEFINITIONS

- A. Adjust Manhole or Catch Basin Casting: A change in rim elevation accomplished for manholes or catch basins through the addition or removal of adjustment rings only. Adjustment does not include the addition or removal of sections from the structure.
- B. Adjust Valve Box: A change in elevation of the top of the valve box accomplished through the raising or lowering of the existing top section of the valve box only. Adjustment does not include the addition or removal of sections from the valve box.
- C. Remove and Replace Adjustment Rings: The process of removing the existing concrete adjustment rings from an existing structure and placing new rings on manholes and catch basins.

#### 1.05 SEQUENCING AND SCHEDULING

- A. Contractor, Engineer, and Owner shall inspect all existing structures prior to beginning construction.
- B. Owner will remove any foreign material found in the existing structures prior to construction. Remove any foreign material that enters the structures during construction. Notify owner any time foreign materials enter structures regardless of the amount of material.
- C. When temporarily removing existing castings and valve box top sections, place castings and valve top sections in the boulevard area directly behind the curb, and in line with the existing structure for the purpose of locating the plated structure and valve box.

- D. Use care when removing bituminous surfacing around existing structures to avoid damage to existing materials. Replace any castings or valve box materials damaged during the surfacing removal with equal materials at no cost to the Project.
- E. Bituminous street patching associating with the structure adjustment shall be completed the same day as the structure is adjusted, including manhole casting protection.

## **PART 2 PRODUCTS**

### **2.01 ADJUSTING RING**

- A. High-Density Polyethylene (HDPE): Molded high-density polyethylene conforming to ASTM D1248.
- B. Cast Iron Manhole Adjusting Ring: R-1979 Series adjusting ring as manufactured by Neenah Foundry, or approved equal.

### **2.02 ADHESION MATERIALS**

- A. Ram-Nek material, or approved equal.
- B. Sealant (For HDPE Rings):
  - 1. DOW 999 – A building caulking and glazing sealant, or approved equal.
  - 2. Open cell polyurethane foam sealant with adhesive backing.

### **2.03 HYDRANT EXTENSIONS**

- A. Sections: Match existing hydrant manufacturer and model.

### **2.04 CASTINGS**

- A. Manhole, Catch Basin Frames, and Covers:
  - 1. Requirement: ASTM A48.
  - 2. Material: Class 35 cast iron. Best grade. Free from injurious defects and flaws.
  - 3. Finish: Coal tar pitch varnish.
  - 4. Finish Preparation: Sandblast.
  - 5. Machine cover and frame contact surface for non-rocking protection.
  - 6. Type and Style:
    - a. NEENAH R-1642 Type “B”, Platen Lid, 2 concealed pick holes, or approved equal, for sanitary manholes. Covers stamped with “SANITARY SEWER”. Use 2 inch letters.
    - b. NEENAH R-1642 Type “B”, Platen Lid, Open Hole, or approved equal, for storm manholes. Covers stamped with “STORM SEWER”. Use 2 inch letters.
    - c. NEENAH R-1642-A, short casting – 5 inch height.
    - d. NEENAH R-3067-VB (use at low points), and R-3067-V (not at low points), or approved equal, for storm sewer catch basin manholes and catch basins.
    - e. NEENAH R-4342, or approved equal, for beehive catch basin manholes.
    - f. NEENAH R-3290-A (Type A grate), or approved equal, for storm sewer catch basins within commercial driveway entrances.
    - g. NEENAH R-1755 E, Water tight casting.



- h. NEENAH R-3501TB, or approved equal, for storm sewer catch basins within surmountable curb at residential driveway entrances.

B. Cleanout and curb box protection: Ford Type A1

## 2.05 VALVE BOX

A. Risers:

1. Valve box riser to fit the Tyler No. 6850, 6855, 6860, or 6865 top section and drop lid, or approved equal.
2. Tyler No. 69 gate valve extension screw adjustable, or approved equal.
3. Cast iron valve adjusting rings are not allowed.
4. Conform to the requirements of Section 33 10 00.

## 2.06 GEOSYNTHETIC MATERIALS

- A. Non-woven filter fabric type 1 in accordance with MnDOT Spec. 3733.B for use in conjunction with HDPE rings.

# PART 3 EXECUTION

## 3.01 GENERAL

- A. The necessary vertical alignment will be determined by the Engineer and generally as indicated on the schedule of adjustments.
- B. Where existing frame is within 0.10 feet of grade, no adjustment is to be made.
- C. Raise or lower the frame to match the street or gutter.
- D. Protect existing structures from damage.
- E. Prevent sand, concrete, or any other debris from entering the structures.
- F. HDPE rings to be used on all structures.
- G. Adjust all structures located in non bituminous surface areas to final design grade.
- H. Immediately following removal of existing casting and adjusting rings, cover structure opening with suitable steel plate to prevent foreign debris from entering structure. Secure plate to top slab or cone with Ram-Nek.
- I. For street rehabilitation projects, or if required by the Engineer, use parachute or approved equal to prevent debris from entering structures while active work is being done on or near an existing structure.
- J. Installation of Cast Iron Manhole Adjustment Rings shall be as directed by the Engineer.

### 3.02 PREPARATION

- A. Call utility owners to field mark their utility locations.
- B. Verify exact location of existing utilities.

### 3.03 ADJUST MANHOLE AND CATCH BASIN FRAME

#### A. HDPE Adjusting Ring:

- 1. See Standard Detail Plate STR-23.
- 2. Remove all dirt, debris, dust, and other deleterious material from surface prior to placement of first ring.
- 3. Install adhesive for manhole adjusting rings as per the following:

| Location of Sealant                   | Type of Sealant                                                                       |
|---------------------------------------|---------------------------------------------------------------------------------------|
| Between casting and last ring:        | 3/4 inch by 3/4 inch open cell polyurethane foam sealant and 1/2-inch bead of DOW 999 |
| Between intermediate rings:           | ½ inch bead of DOW 999                                                                |
| Between cone/top slab and first ring: | 3/4 inch by 3/4 inch open cell polyurethane foam sealant and ½ inch bead of DOW 999   |

- 4. Sealant to be placed around entire circumference of each unit with no gaps.
- 5. Utilize a variety of thickness of flat units and sloping units to match the required grade and slope of the area at the location of the structure:
  - a. Shims are not allowed.
  - b. HDPE rings must be stacked plumb and cannot be staggered.
- 6. Total Thickness of Rings Allowed: Minimum of 3 inches, maximum of 12 inches.
- 7. Wrap entire casting and ring system with geotextile. For structures with cone section, geotextile wrap to extend over a minimum length of 18 inches of the cone.

- B. New adjusting rings shall be used on all casting adjustments, regardless of whether casting is salvaged, existing, or new.

#### C. Cast Iron Manhole Adjusting Ring:

- 1. Use of the adjustment ring shall be as directed by the Engineer.
- 2. Install per manufacture's recommendations.
- 3. 1- 5/8 inch minimum to 2.0 inch maximum steel ring height.
- 4. Apply adhesive as recommended by the manufacture.
- 5. Only 1 steel ring allowed for adjustment from the initial lift of wear course grade to the final wear course grade.

### 3.04 ADJUST VALVE BOX

- A. Adjust box by screwing top section up or down.
- B. Prevent sand, chunks of concrete, or any other debris from entering the valve box:
  - 1. Short sections inserted inside the existing top section are not allowed to perform adjustment, unless specified.

- C. Install approved sections as needed for extension by removing top section, installing additional extension, and re-installing top section.
- D. Patch road to match existing pavement section.

### 3.05 HYDRANT EXTENSIONS

- A. Remove upper section.
- B. Install extension kit as per manufacturer's requirements.
- C. Replace upper and lower rod assemblies with heavy-duty for extensions in excess of 18 inches.
- D. Replace the upper section.

### 3.06 SCHEDULE OF ADJUSTMENTS

- A. Manholes Outside of Street Areas:
  - 1. Permanently adjust casting to design rim elevation at time of structure installation.
- B. Manholes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Same Year as the Initial Lift Wearing Course):
  - 1. At time of structure installation, install casting directly upon top slab or cone section with Ram-Nek material.
  - 2. Prior to street construction, remove casting from all new and existing manholes and cover structure opening with suitable steel plate. Secure plate to top slab or cone with Ram-Nek.
  - 3. Following initial lift wearing course paving perform adjustment:
    - a. Locate structure and expose.
    - b. Remove steel plate. Permanently place HDPE rings on structure. Permanently place casting on top ring with adhesive. Wrap filter fabric over casting and rings. For structures with cone section, fabric shall extend a minimum of 18 inches down cone.
    - c. Replace and compact gravel base material. Patch initial lift wearing course around structure:
      - 1) Bituminous patch to be 6 feet by 6 feet, minimum.
    - d. Top of casting to be 1/4 to 3/8 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the structure.
    - e. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.
- C. Manholes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Following Year or Later):
  - 1. At time of structure installation, install casting directly upon top slab or cone section with Ram-Nek material.
  - 2. Prior to street construction, remove casting from all new and existing manholes and cover structure opening with suitable steel plate. Secure plate to top slab or cone with Ram-Nek.
  - 3. Following non-wearing course paving perform adjustment:
    - a. Locate structure and expose.

- b. Remove steel plate. Permanently place HDPE rings on structure. Permanently place casting on top ring with adhesive. Wrap filter fabric over casting and rings. For structures with cone section, fabric shall extend a minimum of 18 inches down cone.
      - c. Replace and compact gravel base material. Patch initial lift wearing course around structure:
        - 1) Bituminous patch to be 6 feet by 6 feet, minimum.
      - d. Top of casting to be 1/4 to 3/8 inch lower than the initial lift wearing course grade, as measured with a 6 foot straight edge centered on the structure.
      - e. Adjustment of all manholes must be completed within 15 working days after the start of placement of the initial lift wearing course. Adjustment will not be allowed prior to initial lift wearing course paving.
    - 4. Prior to final wearing course paving (the following year or later), perform adjustment:
      - a. Permanently adjust casting to final grade with steel adjusting ring.
      - b. Top of casting to be 1/4 to 3/8 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the structure.
      - c. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.
- D. Street Catch Basins:
  - 1. Within Concrete Curb and Gutter:
    - a. At time of structure installation, place HDPE rings and casting on dry.
    - b. Establish erosion control around structure per Section 01 57 13. Structure to be allowed to accept runoff during this condition. Basin grate shall not be covered with fabric or other impervious material.
    - c. Immediately prior to concrete curb and gutter installation, remove erosion control and permanently adjust casting to proper grade.
    - d. Pour concrete curb and gutter adjacent to structure, permanently setting casting into curb line.
- E. Valve Boxes Outside of Street Areas:
  - 1. Permanently adjust box to design rim elevation at time of valve installation.
- F. Existing Valve Boxes Outside of Street Areas:
  - 1. Permanently adjust box to design rim elevation prior to final restoration work.
- G. Valve Boxes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Same Year as the Initial Lift Wearing Course):
  - 1. At time of valve installation, install box.
  - 2. Prior to street construction, lower top section of box sufficiently to avoid damage during street base construction.
  - 3. Perform adjustment following initial lift wearing course paving:
    - a. Locate box and expose.
    - b. Adjust box to final wearing course grade by raising of top section.
    - c. If top section cannot be raised to proper grade, install valve box extension section.
    - d. Replace and compact gravel base material. Patch initial lift wearing course around structure:
      - 1) Bituminous patch to be 4 feet by 4 feet, minimum.

- e. Top of box to be 3/4 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the box.
  - f. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.
- H. Valve Boxes Within Street Areas with Concrete Curb and Gutter (Final Wearing Course Paved the Following Year or Later):
  - 1. At time of valve installation, install box.
  - 2. Prior to street construction, lower top section of box sufficiently to avoid damage during street base construction.
  - 3. Perform adjustment following initial lift wearing course paving:
    - a. Locate box and expose.
    - b. Adjust box to initial lift wearing course grade by raising of top section.
    - c. If top section cannot be raised to proper grade, install valve box extension section.
    - d. Replace and compact gravel base material. Patch initial lift wearing course around structure:
      - 1) Bituminous patch to be 4 feet by 4 feet, minimum.
    - e. Top of box to be 3/4 inch lower than the initial lift wearing course grade, as measured with a 6 foot straight edge centered on the box.
    - f. Adjustment of valve boxes must be completed within 15 working days after the start of placement of the bituminous initial lift wearing course. Adjustment will not be allowed prior to paving.
  - 4. Prior to final wearing course paving (the following year or later), perform adjustment:
    - a. Remove initial lift wearing course around valve box. Remove sufficient material to allow for compaction of the gravel base.
    - b. Adjust box to final wearing course grade by raising of top section.
    - c. If top section cannot be raised to proper grade, install valve box extension section.
    - d. Replace and compact gravel base material. Patch initial lift wearing course around structure:
      - 1) Bituminous patch to be 4 feet by 4 feet, minimum.
    - e. Top of box to be 3/4 inch lower than the final wearing course grade, as measured with a 6 foot straight edge centered on the box.
    - f. Perform adjustment no more than 5 working days prior to placement of bituminous final wearing course, unless approved by Engineer.

### 3.07 TRAFFIC CONTROL

- A. Place construction advisory signs, 36 inch by 36 inch, stating “Construction Zone” and “Proceed at Your Own Risk” in black letters on an orange field at all entrances to the Project prior to beginning final adjustment of structures within bituminous surfaced areas.
- B. Exposed edges of manhole castings and valve boxes raised prior to bituminous wear course paving shall be painted with “White” or “Pink” paint.
- C. Provide appropriate traffic control devices to protect the traveling public during all phases of the structure adjustment work.

### 3.08 FIELD QUALITY CONTROL

- A. For adjustments made within bituminous surfaced areas, any settlements of the bituminous surfacing below the rim of the adjustment structure will require removal and replacement of the bituminous surfacing at the expense of the Contractor.
- B. Secure manholes and structures immediately after completion or before suspension of operations at the end of working day with castings or suitable alternative device.
- C. Adjust manhole and catch basin frames as described above. Thorough tamping of the material around manhole and catch basin frames is required. Where existing frame is within 0.10 feet of grade, no adjustment is to be made. In such cases the crown or gutter shall be either lowered or raised, as the case may be, to put the street and frame at the same grade.
- D. No shims of any material will be allowed.
- E. Adjust valve boxes as described above. Thorough tamping of the material around the valve box is required. All valve boxes shall be clean, straight, plumb, and keyable, allowing a 4 inch schedule 40 pipe to be placed and centered over the valves operating nut from the street surface. This alignment check will be performed on all valves after the final adjustment of the valve box and prior to placement of the bituminous wearing course. Supply the alignment tool (4 Inch Schedule 40 Pipe) and perform this test with the Owner's representative.
- F. Settlements around structure adjustments that occur during the correction period and result in the casting being higher than the bituminous wearing course will be repaired in a manner acceptable to the Owner at the Contractor's expense.

### END OF SECTION

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## SECTION 33 05 20

### RECONSTRUCT MISCELLANEOUS STRUCTURES

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Reconstruction of existing utility and drainage structures.
- B. Related Sections:
  - 1. Section 02 41 13 - Selective Site Demolition.
  - 2. Section 33 05 06 - Trenching and Backfill.
  - 3. Section 33 05 18 - Adjust Miscellaneous Structures.
  - 4. Section 33 10 00 - Water Utilities.
  - 5. Section 33 31 00 - Sanitary Utility Sewer Piping.
  - 6. Section 33 39 00 - Sanitary Sewerage Structures.
  - 7. Section 33 40 00 - Stormwater Utilities.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Add Manhole or Catch Basin Section: Measurement per each section installed, according to the height, size, and type of section. Payment will include all costs related to furnishing and installing the section, including excavation, salvaging and reinstalling the cone section or top slab, backfilling, and compaction.
  - 2. Remove and Replace Cone Section or Top Slab: Measurement per each cone section replaced on an existing sanitary sewer structure, according to size. Payment will include all costs related to furnishing and installing the new section, including excavation, removal and disposal of existing cone section, backfilling, and compaction.
  - 3. Remove and Replace Casting: Measurement per each replaced, according to type. Payment shall include removal and disposal of existing casting and furnishing new casting. Installation of the casting will be included under the adjustment bid item by type of casting as described in Section 33 05 18.
  - 4. Install Step: Measurement will be per each. Payment will include all costs related to furnishing and installing a step within a storm sewer or sanitary sewer structure. Payment will include removal of existing step.
  - 5. Remove and Replace Step: Measurement per each. Payment will include all costs related to removing, furnishing, and installing the step.
  - 6. Remove and Replace Inside Drop Pipe: Measurement will be per each. Payment will include all costs related to removing the existing riser pipe and furnishing and installing a new riser pipe including bend.
  - 7. Reconstruct Invert: Measurement per each and shall include all costs associated with removals of existing concrete base, concrete work for new invert, and all work related to doghouses.
  - 8. Reconstruct Doghouse: Measurement per each and shall include all costs associated with all work related to removing the existing doghouses and constructing new.



9. Watermain Evaluation Excavation: Measurement per each and shall include all costs related to excavating the existing water main fitting or valve, exposing all bolts for inspection by Engineer, and backfilling. Payment under this bid item will only be made if the fitting or valve is determined to be acceptable by Engineer and does not require any repair. Additional bid items have been provided for fitting or valve evaluation excavations requiring repair.
10. Watermain Evaluation Excavation and Fitting Bolt Replacement: Measurement per each and will include all costs related to excavating to the existing watermain fitting, replacing all fitting T-bolts with Cor-Blue bolts, and backfilling.
11. Watermain Evaluation Excavation, Valve Repair, and Valve Box Replacement: Measurement per each and will include all costs related to excavating to the existing watermain fitting, repairing the existing valve, removing and replacing valve box, and backfilling.
  - a. Valve repairs include:
    - 1) Remove and replace wrench nut
    - 2) Remove and replace wrench nut cap screw
    - 3) Remove and replace bonnet gasket, bolts, and nuts
    - 4) Remove and replace stuffing box gasket, bolts, and nuts
    - 5) Remove and replace stem O-rings (2 or 3 each)
    - 6) All repairs above completed with Grade 316 stainless steel bolts and nuts
    - 7) Remove and replace all T-bolts with Cor-Blue bolts
12. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  1. ASTM A615 - Specification for Deformed and Plain Billet - Steel Bars for Concrete Reinforcement.
  2. ASTM C139 - Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes.
  3. ASTM C150 - Specification for Portland Cement.
  4. ASTM C206 - Specification for Finishing Hydrated Lime.
  5. ASTM C478 - Specification for Precast Reinforced Concrete Manhole Sections.

### 1.04 SEQUENCING AND SCHEDULING

- A. Contractor, Engineer, and Owner shall inspect all structures prior to beginning construction.
- B. Owner will remove any foreign material found in these structures prior to construction.
- C. Remove and dispose of any foreign material which enters the structures during the construction period.

## PART 2 PRODUCTS

### 2.01 CONCRETE MATERIALS

- A. Standard Portland Cement Type 1, clean washed sand, crushed rock, and gravel free from deleterious materials for monolithic concrete manholes and all manhole bases.

- B. Portland Cement: Comply with the requirements of ASTM C150.
- C. Design Mix: Subject to the approval of the Engineer. Use proper water-Cement Ratio to obtain 4,000 psi in 28 days.
- D. Mortar Materials:
  - 1. Cement: Type 1 Standard Portland Cement conforming to ASTM C150.
  - 2. Lime: Normal finishing hydrated lime meeting the requirements of ASTM C206.
  - 3. Mix Proportions:
    - a. 1-part cement to 3-parts of suitable plaster sand for mortar used for plastering the exterior walls of block manholes, catch basins, adjusting rings, and lift holes. Use lime or mortar mix in the amount necessary to make a suitable mixture for plastering purposes, but not to exceed 15 percent by volume.
    - b. 1-part Portland cement to 2 parts of sand to which lime or mortar mix may be added but not to exceed 15 percent by volume for mortar used for laying concrete block.
- E. Reinforcing Steel: Comply with the requirements of ASTM A615, Grade 60.

## 2.02 PRE-CAST CONCRETE MANHOLES

- A. Sanitary Sewer sections conform to 33 39 00.
- B. Storm Sewer sections conform to 33 40 00.

## 2.03 PRE-CAST SEGMENTAL BLOCK

- A. Conform to ASTM C139.

## 2.04 MANHOLE STEPS

- A. Reinforced Polypropylene plastic steps with No.2 deformed grade steel rod.

## 2.05 CASTINGS

- A. Conform to Section 33 05 18.

# PART 3 EXECUTION

## 3.01 TRENCHING AND BACKFILLING

- A. Conform to the requirements of Section 33 05 06.

## 3.02 REMOVALS

- A. Conform to the requirements of Section 02 41 13.

## 3.03 EXAMINATION

- A. Field verify size of structure prior to ordering materials.

### 3.04 PROTECTION

- A. Secure structures immediately after completion or before the end of working day with castings or suitable alternative device.
- B. Clearly mark structures to avoid damage by vehicular traffic.

### 3.05 RECONSTRUCT MANHOLE OR REPLACE MANHOLE SECTION

- A. Salvage and reinstall existing casting or install new casting.
- B. Salvage and reinstall structure top slab or cone section and mid sections as required.
- C. Remove structure section or cone as required to match Drawings.
- D. Install new structure or cone.
- E. In absence of the o-ring joint seal manhole section using Ram-neck, or approved equal, gasket material applied in accordance with manufacturers recommendations.
- F. Rings: install in conformance with Section 33 05 18.
- G. Neatly mortar lift holes.
- H. Excavate around entire structure to the required depth for reconstruction, After new sections are in place backfill and compact around structure.

### 3.06 RECONSTRUCT INVERT OR DOGHOUSE

- A. Jack hammer or remove entire existing invert or doghouse.
- B. Place grout to create smooth seeping invert and/or doghouse.

### 3.07 WATERMAIN EVALUATION EXCAVATION AND REPAIR

- A. The drawings depict locations of the initial watermain evaluation excavations. At these locations, the contractor shall excavate to the existing watermain valve or fitting and expose all bolts. The Engineer will evaluate the condition of the bolts and determine if a repair is needed.
- B. If a repair is not needed, the contractor will be paid for one "Watermain Evaluation Excavation" as described above.
- C. If a repair is needed, the Contractor will be paid for one "Watermain Evaluation Excavation, Valve Repair, and Valve Box Replacement" or "Watermain Evaluation Excavation and Fitting Bolt Replacement" as described above.
- D. The locations shown on the plans are the initial watermain evaluation locations. Depending on the results of the watermain evaluation, additional watermain evaluations and possible repairs at other valves or fittings along the corridor may be completed as directed by the engineer.

**END OF SECTION**

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## SECTION 33 05 28

### CONDUIT FOR PRIVATE UTILITIES

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. Placement of PVC and ductile iron pipe conduits to be used at a later date by private utility contractors, developers, and the City of Cottage Grove.

B. Related Sections:

1. Section 33 05 06 - Trenching and Backfilling.
2. Section 33 14 18 - Water Utility Service Laterals.
3. Section 33 31 14 - Sanitary Sewerage Services.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Conduit Crossings based on the number of conduits per crossing: Measurement shall be per linear foot of crossing. For example, if a location is determined to require 3 conduits, the Contractor would be paid for the length of the crossing (not the total length of all 3 conduits) under the Bid Item for 3 conduits. Payment at the Unit Price will be considered compensation in full for the installation of the conduits as shown in the Drawings, including conduit, excavation, backfill, compaction, and steel fence posts, regardless of the number of conduits in the trench excavation:
  - a. It should be noted that due to the estimation required for Drawing preparation, the quantities of private utility crossings actually constructed may vary significantly from those given in the Bid Form.
  - b. The Engineer reserves the right to increase or decrease the conduit quantities with no change to the Contract Unit Price. No additional compensation will be considered or allowed for changes to the estimated quantities or for the deletion of any of these Bid Items in their entirety.
  - c. For most crossings, the 4 Inch Diameter PVC conduit is of adequate size for the private utility companies to place their facilities. If a 6 inch conduit is required, measurement shall be identical to that for the 4 inch diameter conduits with payment made under a separate Bid Item for 6 Inch Conduit.
2. Irrigation Conduit Crossing: Measurement and Payment shall be made based on the linear foot of pipe installed, including 4 inch ductile iron pipe (conduit), trench, excavation, backfill, and steel fence posts markers.
3. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 SEQUENCING AND SCHEDULING

- A. Install conduit (provided by contractor) after the public utilities are completed and after the street sub-grade and aggregate backfill work is complete and prior to the gravel base improvements.
- B. Bid Items are included in the Bid Form for crossings consisting of single or multiple conduits, based on estimates made at the time of Drawing preparation.
- C. At the pre-construction meeting, a final plan of proposed crossings will be presented to the Contractor based on the actual needs of each private utility company. Irrigation crossings will be provided by the Developer. The location of the City's conduit will also be identified on this final plan.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Conduit: 4 inch and 6 inch diameter PVC, Schedule 40 conforming to Section 33 31 14.
- B. Markers: Steel fence posts, 5 feet in length.
- C. Irrigation Conduit: 4 inch diameter ductile iron pipe conforming to Section 33 14 18.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Excavation and Backfill to conform to Section 33 05 06.

### 3.02 INSTALLATION

- A. Conduit Trenching:
  - 1. In general, underground conduit shall be installed by trenching.
  - 2. The location of each crossing will be staked by the Engineer at the time of construction to assist the Contractor in proper placement of conduits both horizontal and vertical locations.
  - 3. Install conduit as shown on Standard Detail Plate STR-34. Mark ends of crossing locations with steel fence posts. One post required at each end of a crossing, regardless of number of conduits within that crossing.
  - 4. Trenches for the crossings shall be backfilled and compacted to the same standards as the water and sewer utility trenches.
  - 5. Excess excavated material shall be removed and disposed of off the Site.
  - 6. Irrigation conduits shall be 4 inch, ductile iron pipe, installed 4 feet below the design street grade, and shall extend 4 feet beyond the back of curb on both sides of the street, or as directed by Engineer.

### 3.03 FIELD QUALITY CONTROL

- A. The Engineer reserves the right to reject any material or workmanship not in accordance with the Specifications either before or after installation.

- B. After trenches are excavated and conduit is placed, the Engineer shall be notified so that an inspection may be made before backfilling.
- C. All trench backfill shall be compacted by mechanical means and by "Quality Compaction Method."

**END OF SECTION**



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## **SECTION 33 08 30**

### **COMMISSIONING OF SANITARY SEWERAGE UTILITIES**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A. Section Includes:
  - 1. Testing of sanitary sewer pipe, manholes, fittings, and miscellaneous appurtenances.

##### **1.02 PRICE AND PAYMENT**

- A. Measurement and Payment:
  - 1. Televis Sanitary Sewer: Measurement will be based upon units of linear feet of pipe televised, regardless of size and type. Pipe will be measured from centerline of structure to centerline of structure. Payment will be compensation for pipe preparation, televising, providing televising report, and all other associated costs.
  - 2. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### **1.03 REFERENCES**

- A. American Society of Testing and Materials (ASTM):
  - 1. D3034 - Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
  - 2. F679 - Standard Specification for Poly (Vinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings.
  - 3. F1417 - Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines using Low-Pressure Air.
- B. National Association of Sewer Service Companies (NASSCO):
  - 1. PACP - Pipeline Assessment Certification Program

##### **1.04 SEQUENCING AND SCHEDULING**

- A. Televis Sanitary Sewer:
  - 1. Notify Engineer 48 hours in advance of the televising of all pipes.
  - 2. Complete all required mandrel and air testing prior to televising.
  - 3. Start televising no sooner than 30 days, but no later than 60 days after all utility, excavation, and street subgrade work is completed as part of this contract.

##### **1.05 SUBMITTALS**

- A. Televising Report:
  - 1. Submit 1 copy of the Written Report and Video Report within 30 days of completion of televising.

2. Report Requirements:
  - a. Each run shall consist of a starting and ending structure number and a zero reading on the counter at center of the starting structure.
  - b. Examine each service wye by using the pan and tilt feature.
  - c. Show location and length, and identify sags within the flowline of the pipe of 10-percent or greater, example 0.06 feet for an 8 inch diameter pipe.
  - d. Location in change in pipe material to be noted.
  - e. The video camera operator shall type into the video the station (distance), wye location on either the left or right side of the pipe, and any problems they notice while televising the sewer lines.
  - f. Take a still photograph at any questionable joint or possible defect.
3. Provide a Written Report with a graphic cross section of the pipe showing the manholes, all wye connections, and defects. This report shall include PACP codes and descriptions
4. Submit a Video Report in a DVD format with audio, including a printable version of the Written Report and full video of all televised pipe runs.

## **PART 2 PRODUCTS**

Not Used.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Perform televising pipeline inspections in accordance with NASSCO Pipeline Assessment and Certification Program (PACP). When requested provide the require certification for personnel preforming the actual work.
- B. Commence test procedures only when pipe and structures are clean and free of dirt, water, or other foreign matter. Pipe cleaning shall be performed in accordance with NASSCO Jetter Code of Practice.

### **3.02 FIELD QUALITY CONTROL**

- A. Engineer will observe all tests and visually inspect the Work for compliance.
- B. Provide all material, equipment, and labor required to test the sanitary sewer systems.
- C. Lamping: Engineer will verify installation for true line and grade, joints are home, no broken or deflective pipes exist, the installed pipe is structurally sound, and that the structures conform to the specified requirements.
- D. Gravity Pipe Leak Testing:
  1. General:
    - a. Test all systems (pipe and structures) for leakage before being put in service. Notify Engineer of the date and time for each test 1 day prior to actual testing.
  2. Low Pressure Air Test:
    - a. Diameter: Less than or equal to 24 inches.
    - b. Must meet criteria set forth in ASTM F1417.

- c. Pipe shall be cleaned but may be wetted. Pneumatic balls shall be used to plug the ends at manholes. Low-pressure air shall be introduced into plugged line until the internal air pressure reaches 4.0 psig greater than the average back pressure of any groundwater pressure that may submerge the pipe. At least 2 minutes shall be allowed for the pressure to stabilize before readings are taken and the timing started. During this time, check all plugs with soap solution to detect plug leakage. If any plugs are found to leak, air shall be bled off, the plugs shall be retightened, and the air shall be reintroduced into the line.
  - d. The sewer line under test will be accepted as having passed the air test if the pressure does not drop more than 0.6 psig in less time than 1/2 minute per inch in diameter of the pipe being tested. The minimum starting pressure is 3.6 psig.
  - e. Requirement may be waived for reconstruction projects where reconnection of active sewer services prevents testing with permission from Owner.
- E. Gravity Pipe Deflection Testing:
- 1. Required for all flexible pipe.
  - 2. Deflection Testing Methods:
    - a. Pipe Diameters Through 24 Inches: Pull mandrel through the pipe by hand (without aid of mechanical pulling devices).
    - b. Pipe Diameters Greater Than 24 Inches Through 36 Inches: Deflections shall be determined by use of a mandrel or a method submitted to and approved by the Engineer. If mandrel is used, it shall be pulled through the pipe by hand (without aid of mechanical pulling devices).
    - c. Pipe Diameters Greater Than 36 Inches: Deflection measurements shall be determined using a mandrel, rigid bar, a circular rigid template, or by a method approved by the Engineer. If mandrel is used, it shall be pulled through the pipe by hand (without aid of mechanical pulling devices).
  - 3. Deflection testing shall be conducted at least 30 days after the pipe has been backfilled to the desired finish grade on all direct bury flexible pipe and shall be done in the presence of the Engineer.
  - 4. 5-percent deflection allowance.
  - 5. Mandrel Diameter Requirements:
    - a. Diameter equal to 95 percent of the base inside diameter noted in Appendix XI of ASTM C3034 for PSM PVC pipe (SDR pipe) and calculated from Appendix X2 of ASTM F679 for PS 46 or 115 pipe.
    - b. Mandrel shall be constructed of rigid steel, be non-adjustable, and have an odd number of legs (9 legs minimum). Its effective length shall not be less than its nominal diameter.
  - 6. Deflection Template/Bar Requirements:
    - a. The circular template diameter (or rigid bar length) shall be equal to the mandrel diameter requirements as determined above.
    - b. Circular templates shall be constructed of rigid materials and be non-adjustable.
    - c. Rigid bars shall have a 1 inch diameter circular section, be constructed of steel, and be non-adjustable.

### 3.03 REQUIREMENTS FOR TEST FAILURES

- A. Leak Test Failure:
- 1. Repair piping as necessary to conform to product requirements.

2. All repair work shall be subject to approval by the Engineer.
3. Chemical type sealants added to the test water will not be permitted.
4. The Engineer may require removal and replacement of pipe in failed test sections.
5. Pay for the cost of replacement, repair, and re-testing of failed pipe sections.

B. Deflection Test Failure:

1. Owner reserves the right to measure the deflection of all flexible pipe at any time during the correction period. Deflections greater than 5 percent of the inside diameter of the pipe shall be considered failure. Re-excavate the trench, re-compact the backfill material, and restore the surface with no additional compensation for such work. Re-rounding of pipes that fail the deflection test will not be allowed.
2. Damaged pipe shall not be reinstalled, but shall be removed from the Site.

### 3.04 SANITARY SEWER CLOSED CIRCUIT TELEVISION INSPECTION

A. Pre-Televising:

1. Newly installed sanitary sewer segments must be in a clean and ready condition prior to the television inspection.
2. Immediately clean any lines found to be dirty prior to televising. Costs for all such cleaning shall be the responsibility of the Contractor.
3. Provide sufficient water to run through the new sanitary sewer system prior to televising lines to be able to distinguish any sags or alignment problems with the pipe.
4. Personnel completing televising must be PACP certified.
5. Final acceptance of the video report will require the pipe to be clean as a new pipe.

B. General:

1. Provide a camera that will be self-propelled and will have the ability to tilt up and down and pan left and right. The camera must provide color images.
2. Speed shall not exceed 30 feet per minute.

C. Defects:

1. Immediately correct any defects, faulty joints, cracked pipe, or other deficiency noted by the television inspection.
2. A plan for repair shall be presented to and approved by the Owner and Engineer prior to the repair occurring.
3. Re-televising all corrected pipe runs after correction.
4. Any costs associated with correction and re-televising of the sewer system will be paid by the Contractor.

### END OF SECTION

## SECTION 33 10 00

### WATER UTILITIES

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Water main pipe, hydrants, valves, fittings, and miscellaneous appurtenances.
- B. Related Sections:
  - 1. Section 01 33 00 - Submittal Procedures.
  - 2. Section 01 50 00 - Temporary Facilities and Controls.
  - 3. Section 33 05 06 - Trenching and Backfilling.
  - 4. Section 33 05 18 - Adjust Miscellaneous Structures.
  - 5. Section 33 14 18 - Water Utility Service Laterals.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Water Main Pipe: Measurement will be based upon units of linear feet for each size and type of pipe installed, as measured along the axis of pipe, without regard to intervening valves or fittings. Water main over depth shall not be measured. Payment at the Bid Unit Price shall include furnishing and installing pipe complete in place as specified:
    - a. All required poly encasement on water main system shall be considered part of the Bid Item for the installation of the various components of the system. No separate measurement or payment for poly encasement shall be made.
  - 2. Valve and Box: Measurement will be based on each size and type of Valve and Box installed. Payment at the Unit Price shall include furnishing and installing the Valve and Box, and valve adaptor complete in place as specified.
  - 3. Hydrant: Measurement will be based on units of each Hydrant installed. Payment at the Unit Price shall include furnishing and installing the Hydrant, including hydrant flag, as well as furnishing and delivering the extra flag and one "Out of Service" tag for each hydrant installed to the Owner:
    - a. A separate Bid Item will be provided for hydrants requiring vertical bends per Standard Detail Plate WAT-2. Payment will include cost of the hydrant described above and bend.
  - 4. DIP Fittings: Measurement shall be based on the total fitting weight installed, not including accessories, as shown in AWWA C153/A21.53, latest revision (provide weights from supplier for crosses). Payment at the Unit Price shall include all costs related to furnishing and installing the DIP fitting, all hardware and accessories, and required labor. Any provisions, such as corporations, rods, copper pipe, Megalugs, etc. installed on the plugs of the stub for testing purposes or for future irrigation or service connections, shall be considered incidental to the plug. No separate measurement or compensation shall be made for such provisions:
    - a. Fittings required for construction of future irrigation services will be paid under this Bid Item.
    - b. Removal of the copper after successful testing will be incidental to this Bid Item.

| TEES, CROSSES, & REDUCERS |                |                 |       |         |             |                |                 |       |         |
|---------------------------|----------------|-----------------|-------|---------|-------------|----------------|-----------------|-------|---------|
| RUN<br>SIZE               | BRANCH<br>SIZE | MJ X MJ FITTING |       |         | RUN<br>SIZE | BRANCH<br>SIZE | MJ X MJ FITTING |       |         |
|                           |                | TEE             | CROSS | REDUCER |             |                | TEE             | CROSS | REDUCER |
| 4                         | 4              | 32              | 40    |         | 18          | 18             | 439             | 520   |         |
| 6                         | 4              | 46              | 52    | 24      | 20          | 6              | 315             |       |         |
| 6                         | 6              | 56              | 68    |         | 20          | 8              | 349             | 364   |         |
| 8                         | 4              | 60              | 68    | 32      | 20          | 10             | 374             |       | 206     |
| 8                         | 6              | 72              | 84    | 36      | 20          | 12             | 395             | 423   | 205     |
| 8                         | 8              | 86              | 105   |         | 20          | 14             | 440             |       | 216     |
| 10                        | 4              | 78              | 84    | 46      | 20          | 16             | 469             |       | 209     |
| 10                        | 6              | 90              | 100   | 47      | 20          | 18             | 509             | 558   | 205     |
| 10                        | 8              | 105             | 119   | 50      | 20          | 20             | 535             | 640   |         |
| 10                        | 10             | 114             | 133   |         | 24          | 6              | 423             | 434   |         |
| 12                        | 4              | 94              | 103   | 58      | 24          | 8              | 450             | 464   |         |
| 12                        | 6              | 110             | 121   | 58      | 24          | 10             | 480             |       |         |
| 12                        | 8              | 125             | 139   | 57      | 24          | 12             | 508             | 529   | 285     |
| 12                        | 10             | 140             | 161   | 61      | 24          | 14             | 550             |       | 298     |
| 12                        | 12             | 160             | 182   |         | 24          | 16             | 588             | 641   | 299     |
| 14                        | 4              | 152             |       |         | 24          | 18             | 632             |       | 305     |
| 14                        | 6              | 178             | 190   | 93      | 24          | 20             | 670             | 757   | 291     |
| 14                        | 8              | 193             | 209   | 92      | 24          | 24             | 752             | 870   |         |
| 14                        | 10             | 211             | 255   | 92      | 30          | 6              | 685             |       |         |
| 14                        | 12             | 228             | 269   | 94      | 30          | 8              | 703             |       |         |
| 14                        | 14             | 262             | 313   |         | 30          | 10             | 760             |       |         |
| 16                        | 6              | 228             | 229   | 120     | 30          | 12             | 765             | 787   | 541     |
| 16                        | 8              | 233             | 249   | 118     | 30          | 16             | 878             |       | 613     |
| 16                        | 10             | 253             | 275   | 118     | 30          | 18             | 909             |       | 631     |
| 16                        | 12             | 272             | 299   | 112     | 30          | 20             | 988             |       | 612     |
| 16                        | 14             | 307             |       | 131     | 30          | 24             | 1077            | 1169  | 478     |
| 16                        | 16             | 335             | 399   |         | 30          | 30             | 1271            | 1603  |         |
| 18                        | 6              | 275             |       |         | 36          | 6              | 927             |       |         |
| 18                        | 8              | 295             |       | 165     | 36          | 8              | 1018            |       |         |
| 18                        | 10             | 315             |       | 160     | 36          | 12             | 1072            |       | 731     |
| 18                        | 12             | 335             | 360   | 152     | 36          | 14             | 1135            |       |         |
| 18                        | 14             | 372             |       | 168     | 36          | 16             | 1211            |       | 804     |
| 18                        | 16             | 401             |       | 174     | 36          | 18             | 1252            |       | 930     |
| 18                        | 18             | 439             | 520   |         | 36          | 20             | 1350            |       | 969     |
| 20                        | 6              | 315             |       |         | 36          | 24             | 1421            | 1528  | 770     |
| 20                        | 8              | 349             | 364   |         | 36          | 30             | 1674            |       | 811     |
| 20                        | 10             | 374             |       | 206     | 36          | 36             | 1940            | 2229  |         |
| 20                        | 12             | 395             | 423   | 205     |             |                |                 |       |         |
| 20                        | 14             | 440             |       | 216     |             |                |                 |       |         |

| BENDS, CAPS, PLUGS, & SLEEVES                         |                           |      |      |       |         |         |         |
|-------------------------------------------------------|---------------------------|------|------|-------|---------|---------|---------|
| SIZE                                                  | BENDS - MJ X MJ (DEGREES) |      |      |       | CAPS    | PLUGS   | SLEEVES |
|                                                       | 90                        | 45   | 22.5 | 11.25 | MJ X MJ | MJ X MJ | MJ X MJ |
| 3                                                     | 19                        | 16   | 15   | 14    | 8       | 8       | 17      |
| 4                                                     | 25                        | 22   | 18   | 16    | 9       | 10      | 20      |
| 6                                                     | 39                        | 32   | 31   | 30    | 15      | 16      | 29      |
| 8                                                     | 57                        | 46   | 46   | 42    | 22      | 26      | 45      |
| 10                                                    | 89                        | 70   | 64   | 58    | 32      | 36      | 61      |
| 12                                                    | 108                       | 86   | 80   | 67    | 42      | 46      | 76      |
| 14                                                    | 210                       | 160  | 136  | 93    | 66      | 75      | 128     |
| 16                                                    | 264                       | 202  | 172  | 148   | 92      | 95      | 159     |
| 18                                                    | 335                       | 250  | 255  | 205   | 114     | 121     | 200     |
| 20                                                    | 400                       | 305  | 310  | 245   | 125     | 135     | 236     |
| 24                                                    | 565                       | 405  | 412  | 315   | 166     | 175     | 306     |
| 30                                                    | 930                       | 780  | 665  | 600   | 345     | 355     | 634     |
| 36                                                    | 1450                      | 1135 | 960  | 820   | 628     | 688     | 889     |
| NOTE: SLEEVE WEIGHTS BASED ON THE USE OF LONG SLEEVES |                           |      |      |       |         |         |         |

5. Connect to Existing Water Main: Measurement will be based on each connection made, according to size. Payment of this Bid Item shall be considered complete compensation for all work associated with the connection to the existing water main, including removal and disposal of the existing plug.
6. Wet Tap: Measurement shall be based on each Wet Tap installed by size. Payment at the Bid Unit Price shall include stainless steel tapping sleeve and hardware, valve, and valve box.
7. Water Main Offset: Measurement shall be based on each offset made, according to size. Payment shall include all pipe, fittings, restraints, and materials to complete the offset per the Standard Detail Plate WAT-7.
8. Insulation: Measurement will be based on square yards of Insulation at the specified thickness. Payment shall be made at the Unit Price and will include furnishing and installation of the Insulation.
9. Cut In Valve: Measurement will be based on the number of valves installed, according to size. Payment shall include all water main cutting, removal, pumping, water main pipe, sleeves, fittings, and valve and box needed to complete the installation.
10. Irrigation Service: Measurement and Payment will be made under each Bid Item to construct in accordance with the Detail Drawing.
11. Hydrant Reconditioning and Painting: Measurement and payment will be based on units of each Hydrant that is reconditioned and painted and shall include sandblasting, primer coat, top coat, protection, materials, and all work associated with the reconditioning and painting:
  - a. Includes furnishing and installing a new hydrant flag, and salvaging and delivering the existing flag to the City of Cottage Grove Public Works Department.
12. Remove and Replace Valve and Box: Measurement will be per each of size and type specified and will include all costs related to removing the existing valve and valve box per Section 02 41 13 and furnishing and installing a new valve, fittings, and valve box.



13. Joint Restraint: No Bid Item has been provided. Joint restraint shall be considered incidental to water main installation with no direct payment made.
14. All required testing shall be considered incidental to the installation of the water main system. No direct or separate payment for testing will be made.
15. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. American Water Works Association (AWWA):
  1. C104 - American National Standard for Cement Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
  2. C105 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
  3. C111 - American National Standard for Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
  4. C116 - American National Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service.
  5. C151 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water.
  6. C153 - American National Standard for Ductile-Iron Compact Fittings for Water Service.
  7. C502 - AWWA Standard for Dry-Barrel Fire Hydrants.
  8. C504 - AWWA Standard for Rubber-Seated Butterfly Valves.
  9. C515 - AWWA Standard for Resilient-Seated Gate Valves for Water Supply Service.
  10. C550 - American National Standard for Protective Interior Coatings for Valves and Hydrants.
  11. C600 - AWWA Standard for Installation of Ductile-Iron Water Main and Their Appurtenances.
  12. C651 - AWWA Standard for Disinfecting Water Mains.
- B. American Society of Testing and Materials (ASTM):
  1. A48 - Gray Iron Castings.
  2. A126 - Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
  3. A536 - Standard Specification for Ductile Iron Castings.
  4. A674 - Standard Practice for Polyethylene Encasement for Ductile Iron Pipe for Water or Other Liquids.
  5. C578 - Specification for Rigid, Cellular Polystyrene Thermal Insulation.

### 1.04 SUBMITTALS

- A. Submit Product Data for the following items consistent with Section 01 33 00:
  1. Pipe, fittings, valves, and hydrants.
  2. Joint restraint and corrosion resistant coatings.

### 1.05 SEQUENCING AND SCHEDULING

- A. Notify the Owner a minimum of 48 hours prior to performing Work. At this time, also notify the City Fire Department of the intended shutdown.
- B. Notify all customers connected to water system to be shut down 48 hours in advance of shut down.

- C. The Owner must open and close the existing valves for this part of the operation. The Owner is responsible for flushing the mains after the connection is completed; however, the Contractor shall assist the Owner as necessary.
- D. Successfully complete required test and inspections before restoration of surface.

#### 1.06 USE OF CITY WATER SYSTEM

- A. Any water use for this project will need to be coordinated with the City of Cottage Grove Public Works and a water use permit will be required. Conform to Section 01 50 00.

### **PART 2 PRODUCTS**

#### 2.01 DUCTILE IRON PIPE (DIP) AND FITTINGS

- A. General Requirement: AWWA C151/A21.51.
- B. Cement-mortar lining conforming to AWWA C104/A21.4.
- C. Class: As shown on Drawings.
- D. Fittings: AWWA C153/A21.53, latest revision, Ductile Iron Compact Fittings, 250-psi working pressure, AWWA C111/A21.11 latest revision, mechanical joint or push-on:
  - 1. All fittings shall be fusion bonded epoxy coated per ANSI/AWWA C116/A21.
- E. Cor-Blue bolts required on all mechanical joint fittings.
- F. Wrap all pipe and fittings according to pipe encasement requirements.

#### 2.02 HYDRANT

- A. General Requirements: AWWA Standard C502.
- B. Specified Hydrant: WB-67-250, or approved equal.
- C. Approved Manufacturer: Waterous Pacer, or approved equal.
- D. Two 2-1/2 inch hose connections, National Standard Thread.
- E. One 4-1/2 inch steamer, Nation Standard Thread.
- F. National standard operating nut.
- G. 5 inch valve opening.
- H. 6 inch mechanical joint pipe connection.
- I. Break-off flange with breakable rod coupling.
- J. 7 feet-6 inch cover.

- K. 16 inch high traffic section.
- L. Nozzle caps attached to hydrant with metal chains.
- M. Stainless steel hardware.
- N. Hydrant Flag: Senior Hydrant Marker w/Red and White Reflective LRSH-85000W: Marker by Vait Products or approved equal:
  - 1. Fiberglass rod, 5 red and 5 white reflective bands.
  - 2. Minimum 60 inches long, 3/8 inch diameter.
  - 3. Stainless steel spring and mounting bracket.
- O. Hydrant Tag: Rhino Markers “Out of Service” circular tag, or approved equal:
  - 1. Size, fit around the steamer nozzle
  - 2. Red color
  - 3. White Lettering “Fire Hydrant Out of Service”
- P. Hydrants placed where the ground water table is less than 8 feet below the ground surface shall have the drain holes plugged and shall be equipped with a tag stating the need for pumping after use.
- Q. High-pressure valve seat (referred to as the Colorado Kit).
- R. Color: Painted Waterous Enamel No. V1814-R at the place of manufacture.

## 2.03 GATE VALVE AND BOX

- A. General Requirement: AWWA C515.
- B. Ductile iron body valves, bronze mounted.
- C. Non-rising stem (NRS), opening by turning counter clockwise, 2 inches square operating nut.
- D. O-ring seals.
- E. Mechanical joint ends conforming to AWWA C111/A21.11.
- F. Stainless steel hardware.
- G. All internal and external surfaces of the valve body and bonnet shall have a fusion bonded epoxy coating complying with ANSI/AWWA C550 and C116/A21.16.
- H. Wrap gate valves with pipe encasement.
- I. Valve Boxes:
  - 1. 3-piece, ductile iron, screw-type.
  - 2. Adjustable for 7-1/2 foot depth of cover.
  - 3. Valve and box considered as integral units.
  - 4. 5-1/4 inch diameter shafts.
  - 5. “Stay put” type drop covers, “WATER” on top with extended skirts.

- 6. Valve Adaptor: Adaptor Inc., or approved equal.

#### 2.04 BUTTERFLY VALVE AND BOX

- A. General Requirement: AWWA C504.
- B. Mechanical joint valve ends conforming to AWWA C111/A21.11.
- C. AWWA C504, Class 250B.
- D. O-ring seal.
- E. All stainless steel hardware required.
- F. Wrap butterfly valve with pipe encasement.
- G. Actuator:
  - 1. Manually operated.
  - 2. Traveling nut type sealed, gasketed, and lubricated for underground service.
  - 3. Open counter clockwise with mechanical stops in the open and closed positions.
- H. Valve Box:
  - 1. 3-piece, ductile iron, screw-type.
  - 2. Valves and boxes to be considered integral units.
  - 3. 5-1/4 inch diameter shafts.
  - 4. Round or oval bases.
  - 5. "Stay put" type drop covers, bearing the word "WATER" on top with extended skirts.
  - 6. Valve Adaptor: Adaptor Inc., or approved equal.

#### 2.05 CONDUCTIVITY STRAP

- A. As specified by the pipe manufacturer.

#### 2.06 WET TAP

- A. Stainless steel tapping sleeve.
- B. 3/4 inch gaskets.

#### 2.07 JOINT RESTRAINT

- A. Tie Rods: Steel rods with "Star" brand tie bolts.
- B. Mechanical Joint Restraint:
  - 1. Ductile iron conforming to ASTM A536.
  - 2. Working Pressure: Minimum 250 psi.
  - 3. EBAA Iron, Inc. Mega-lug, Star Pipe Products Stargrip, Sigma OneLock, or approved equal.
  - 4. Casting body and wedge assemblies coating:
    - a. Fusion bonded epoxy per ANSI/AWWA C116/A2.
    - b. Bond coating per manufacturer's recommendations:

- 1) Mega-Bond, Star-Bond, or approved equal.

## 2.08 PIPE ENCASEMENT

- A. Material: Polyethylene film conforming to AWWA C105/A21.5 and ASTM A674, tube form.
- B. Color: Black.
- C. Film Marking Requirements: Conform to AWWA C105/A21.5 and ASTM A674, including AWWA/ASTM standard, corrosion protection warning and applicable range of nominal pipe diameter size(s) every 2 feet along its length.

## 2.09 INSULATION

- A. Polystyrene Insulation: Extruded type conforming to ASTM C578, Type VI, VII, or V.

## 2.10 CORPORATION STOP

- A. Conform to the requirements of Section 33 14 18.

## 2.11 COPPER SERVICE PIPE

- A. Conform to the requirements of Section 33 14 18.

## 2.12 HYDRANT RECONDITIONING AND PAINTING

- A. Materials shall conform to the following:
  1. Primer: Apply Devoe High Performance Coating, Devran 201H Epoxy Primer.
  2. Paint (hereinafter "Top Coat"): Apply Devoe High Performance Coating, Devthane 379 Polyurethane.
    - a. Color: Safety Red
    - b. Finish: Glossy Enamel
  3. Proposed paint material substitution for consideration as an approved equal shall be submitted in writing to the Engineer for review and consideration. Otherwise, furnish materials exactly as specified.

# PART 3 EXECUTION

## 3.01 GENERAL

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

## 3.02 PREPARATION

- A. Conform to the requirements of Section 33 05 06.

### 3.03 INSTALLATION OF PIPE

- A. Install pipe and fittings in accordance with the manufacturer's instructions and with the details shown on the Drawings.
- B. Permanently support, remove, relocate, or reconstruct existing utility pipes, cables, structures, or other appurtenances when they obstruct the line, grade, or location of the pipe or appurtenance.
- C. At the time of the connection to the existing water main, the Contractor must notify the Engineer if they are experiencing any existing water main leakage.
- D. Remove foreign matter or dirt from the inside of pipe to insure each pipe is clean before it is installed.
- E. All jointing of mechanical joint pipe and push-on joint pipe in accordance to AWWA C600.
  - 1. Mechanical joint restraints and retainer glands are not allowed on existing cast iron pipe.
- F. Outside of the spigot and the inside of the bell, wire brush, wipe clean and dry. Keep pipe ends clean until joints are made.
- G. Lay and maintain pipe and appurtenances to the alignment, grade, and location shown on the Drawings. No deviation from the Drawing alignment, grade, or location is allowed, unless approved by the Engineer. No pipe shall be laid in water or when the trench conditions are unsuitable for such Work.
- H. Provide conductivity throughout the water system. Use of conductivity straps between pipe segments is required at all valve and fitting locations.
- I. Cap or plug end of each pipe until next pipe is ready to be laid to prevent debris or groundwater from entering the pipe.
- J. Installing Fittings:
  - 1. General Requirements: AWWA C600.
  - 2. Set and jointing to existing pipe and fittings as specified for cleaning, laying, and joining pipe.
- K. Dead End Lines:
  - 1. Install plug tapped with a 1 inch corporation at all stubs.
  - 2. Extend a temporary section of 1 inch copper to above grade for flushing and testing.
  - 3. Install a temporary curb stop on the 1 inch copper bleed off above ground.
  - 4. Mark with wood marker per Standard Detail Plate WAT-8.
- L. Wrap all ductile iron pipe and fittings with pipe encasement.
- M. Backfilling: Conform to Section 33 05 06.

### 3.04 INSTALLATION OF HYDRANT

- A. Location determined by Engineer. A grade stake and location stake will be provided by the Engineer before the hydrant may be set.

- B. Set on 8 inch concrete block, or approved equal concrete base.
- C. Brace according to Drawings.
- D. After each hydrant has been set, place around the base of the hydrant not less than 1 cubic yard of coarse filter aggregate (MnDOT Spec. 3149.2.H). Carefully place 2 layers of polyethylene, minimum 4 mm thickness each, over the rock to prevent backfill material from entering voids in the drain rock.
- E. Wrap the hydrant assembly with pipe encasement to the bottom of the break off flange.
- F. Maintain hydrants in a plumb position during the backfilling operation.
- G. Attach a hydrant marker to the hydrant using an existing flange bolt located at the back of the hydrant.
- H. Furnish 1 additional marker for each hydrant to the Owner.
- I. Furnish and install a Hydrant tag on all Hydrants until the lines have been tested and accepted. Once accepted, the Contractor shall deliver the hydrant tags to the City Public Works Department.

### 3.05 INSTALLATION OF VALVE

- A. Set and joint valves to new pipe in the manner as specified for cleaning, laying, and jointing pipe. Location to be determined by the Engineer.
- B. Valves and boxes shall be supported on an 8 inch concrete block, and encased with coarse filter aggregate (MnDOT Spec. 3149.2.H) as shown on the Drawings.
- C. Install valve adaptor.
- D. Maintain valve box centered and plumb over the operating nut of the valve.
- E. Set top of valve box flush with the existing surface to provide 12 inches of upward adjustment.
- F. Wrap valves with pipe encasement. Conform to AWWA C105.

### 3.06 ANCHORAGE

- A. Restrain all hydrant leads, lateral lines, bends, fittings, and valves using Megalug glands as per Drawings.
- B. Provide concrete thrust blocking for all bends, tees, hydrants, and plugs:
  - 1. Requirements per Drawings.
  - 2. Block tees, plugs, and hydrants to same requirements as 90 degree bend.
  - 3. Thrust blocking for 4 inch, 6 inch, and 8 inch fittings shall be precast concrete blocking.
  - 4. Thrust blocking must be poured-in-place concrete for fittings 12 inch and larger.
  - 5. Wrap plug in poly prior to pouring of thrust block in anticipation of future removal.

- C. Brace fittings and hydrants securely against undisturbed soil using precast concrete blocks. Rod all joints from main line tee to hydrant gate valve, then from hydrant gate valve to hydrant.
- D. Where lines terminate with plugs, restrain the plug and a minimum of the next 3 joints for 6 and 8 inch pipe with 3/4 inch tie rods in conjunction with blocking, as directed by the Engineer. The number of joints restrained for pipe larger than 8" shall be, as recommended by manufacturer. The number of rods required is as follows:

| <u>Pipe Size</u> | <u>No. of 3/4 inch Rods</u> |
|------------------|-----------------------------|
| 6 inch           | 2                           |
| 8 inch           | 2                           |
| 12 inch          | 4                           |
| 16 inch          | 6                           |
| 18 inch          | 6                           |
| 20 inch          | 8                           |
| 24 inch          | 10                          |

Joint restraints other than rods shall be as approved by the Engineer.

### 3.07 INSULATION

- A. Review insulation installation with Engineer:
  1. Place insulation between water pipe and sanitary pipe when water main or service is within 1 foot above or below the sanitary pipe.
  2. Place insulation between storm sewer pipe and water main or water service when pipes are separated by less than 2 feet.

### 3.08 INSTALLATION OF IRRIGATION SERVICE

- A. Install at locations shown on the Drawings and as directed by Engineer.
- B. Install per Standard Detail Plate SER-6.

### 3.09 PIPE CONFLICTS (WATER MAIN OFFSET)

- A. Install water main offset per Standard Detail Plate WAT-7 and as shown on Drawings.
- B. All offset piping shall be DIP.
- C. Megalug and Tie Rod type joint restraints.

### 3.10 HYDRANT RECONDITIONING AND PAINTING

- A. Project Coordination:
  1. Conduct pre-construction meeting with Engineer to review Work schedules for all stages of Work, review material application process and discuss any questions before work begins.
  2. Provide written documentation of primer and paint material used for Project.
- B. Preparation:
  1. Salvage flag and deliver to Cottage Grove Public Works Department.
  2. Sandblast the entire fire hydrant to base metal to ensure good adhesive bonding of the paint.



3. Produce smooth surface ready to receive primer material in accordance with manufacturer's recommendations.
  4. During painting and blasting operations, provide adequate protection and containment to prevent damage to adjacent structures and property. This includes protecting the area surrounding the hydrant from overspray through the use of a template or ground covering around the hydrant. The contractor is responsible for any and all damage resulting from painting and/or blasting operations. Remedy all damages within 48 hours of notification.
- C. Coatings:
1. Primer and Top Coat shall be applied to the hydrant by using a spray method application. The use of painting mitts is not allowed on any surface.
  2. Primer: Immediately after surface preparation, apply in accordance with manufacturer's instructions at a rate to provide a uniform dry film thickness of 2.0 to 3.0 mils. Care must be taken to ensure uniform application of material around bolt heads, underside of nozzles, and other surface irregularities. Paint films that show sags, blisters, etc. will not be accepted.
  3. Prior to Top Coat application, primed surface must be clean, dry, undamaged, and free of all contaminants including salt deposits.
  4. Top Coats: Apply to coat in accordance with manufacturer's instructions at a rate to provide a uniform dry film thickness of 2.0 to 3.0 mils. Maintain minimum coverage around bolt heads, underside of nozzles, and other surface irregularities.
  5. Produce glossy, smooth, and uniform surface finish.
  6. Follow product data/application instructions and manufacturer's recommendations in completing the work.
- D. Process: follow all requirements for working in public right-of-way, and maintain full compliance with specified traffic control and applicable OSHA Standards. Remove all Primer and Paint Top Coat material that is over-sprayed, dripped, spilled or deposited on sidewalks or other ground surfaces as directed by Engineer at the Contractor's expense.
- E. Furnish and install new flag after hydrant has been painted.

### 3.11 REMOVE AND REPLACE VALVE AND BOX

- A. Coordinate the necessary water main shut down with City Public Works and Resident notification.
- B. Excavate and remove existing valve.
- C. Install new valve include necessary sleeve.
- D. Backfill and compact trench per Section 33 05 06.

### 3.12 PROTECTION

- A. Existing valves and hydrants shall be operated in accordance with Section 01 50 00, Paragraph 3.02, unless under emergency situations.
- B. Securely plug all water main openings promptly before suspension of Work at any time to prevent earth or other substances from entering the water main.

- C. Mark valve boxes and structures susceptible to being hit by construction or vehicular traffic.
- D. All newly installed core blue nuts and bolts that are marred or scratch during installation, shall have an Asphalt Aerosol Spray applied to the surface.

### 3.13 FIELD QUALITY CONTROL

- A. Scope:
  - 1. Perform hydrostatic pressure, disinfection, and conductivity tests.
  - 2. The Engineer will observe and verify all tests and visually inspect final Work for compliance.
- B. Hydrostatic Pressure Test:
  - 1. Minimum Test Pressure: 150 psi.
  - 2. Test Duration: 2 hours.
  - 3. Criteria: No drop in pressure allowed.
  - 4. Testing Gauge: Liquid filled, 4-1/2 inches diameter, labeled in 1-psi increments, such as Ashcroft Model 1082, or approved equal.
  - 5. Test all lines, including hydrant leads, water services, and stubs.
  - 6. Any valved section of water system may be isolated for pressure testing.
  - 7. Sequence and sectioning of water system for pressure testing shall be proposed by Contractor and approved by the Engineer prior to testing.
  - 8. Notify the Engineer immediately if it is determined that the existing valve is not holding pressure during the hydrostatic pressure test.
  - 9. The Contractor may request the City to perform leak detection testing on existing valves if the Contractor has tried testing the line and the required testing pressure will not hold. If the valve is found not to be leaking, the Contractor will be responsible for the testing costs.
  - 10. If a faulty valve is suspected, a meeting with the Engineer and Owner will be necessary to attempt pressure testing prior to the Contractor continuing. No claims by the Contractor for extra work related to pressure testing will be processed if this meeting has not occurred.
- C. Disinfection:
  - 1. General Requirement: AWWA C651 – Disinfecting Water Mains (Tablet Method).
  - 2. Place hypochlorite tablets in each section of pipe and all appurtenances:
    - a. Attach tablets to top of pipe with a food grade adhesive, such as denture grip.
    - b. The estimated number of tablets required per 20 foot length of pipe based on 3-1/4 grain available chlorine per tablet is as follows:

|     | <u>Diameter</u> | <u>No. of Tablets</u> |
|-----|-----------------|-----------------------|
| 1)  | 4 Inches        | 1                     |
| 2)  | 6 Inches        | 2                     |
| 3)  | 8 Inches        | 3                     |
| 4)  | 10 Inches       | 4                     |
| 5)  | 12 Inches       | 5                     |
| 6)  | 16 Inches       | 9                     |
| 7)  | 18 Inches       | 12                    |
| 8)  | 20 Inches       | 14                    |
| 9)  | 24 Inches       | 20                    |
| 10) | 30 Inches       | 28                    |

- c. Use specified number of tablets to disinfect water main for 24 hours with at least 50 ppm available chlorine, with a residual of at least 10 ppm throughout the length of the main at the end of the 24 hour period.
  3. Fill main with water at a velocity of less than 1 foot per second if tablet method is used.
  4. Begin flushing after the chlorinated water has been allowed to disinfect the new pipe for 24 hours.
  5. 1 bacteria test location is required for every 1,200 feet of water main installed, with a minimum of 2 sample locations per Project. Locations shall be identified by the Engineer. Two bacteria test samples will be taken at each location with a minimum 24 hour separation of the sampling. The first test shall occur no sooner than 24 hours after flushing has been completed.
  6. Coordinate all bacteria testing with Engineer. Assist with the sampling process by operating valves if necessary at the time of testing. Engineer will coordinate with a City approved and certified independent testing firm to complete the sampling and testing. Results will be provided to contractor as soon as available.
  7. The owner will be responsible for costs associated with bacteria testing of samples obtained. Contractor is responsible for costs associated with bacteria testing of any failing tests.
  8. Water mains needing reflushing or to be rechlorinated, must be done to meet Department of Health and AWWA requirements. Perform re-flushing or re-chlorination within 48 hours of notification of failing tests.
- D. Conductivity (DIP):
1. Conductivity to be provided throughout the water system by use of copper straps or approved conductive gaskets with copper inserts.
  2. Test Current: 350 amps at approximately 30 volts for 4 minutes, then 400 amps for 1 minute without fluctuation.
  3. Fill lines with water prior to test.
  4. Test all lines, including hydrant leads, water services, and stubs.
- E. Trench Backfill – Compaction: The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests will be determined by the Engineer:
1. 1 density test for every 300 feet of trench at varying depths.
- F. Adjust valve boxes per Section 33 05 18. Thorough tamping of the material around the valve box is required. All valve boxes shall be clean, straight, plumb, and keyable, allowing a 4 inch schedule 40 PVC pipe to be placed and centered over the valves operating nut from the street surface. This alignment check will be performed on all valves after the final adjustment of the valve box and prior to placement of the bituminous wearing course. Supply the alignment tool (4 Inch Schedule 40 PVC Pipe) and perform this test with the Owner's representative.

**END OF SECTION**

## SECTION 33 14 18

### WATER UTILITY SERVICE LATERALS

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Construction of water service pipe, corporation stops, curb stops and boxes, and all appurtenances.
- B. Related Sections:
  - 1. Section 01 31 00 - Project Management and Coordination.
  - 2. Section 01 33 00 - Submittal Procedures.
  - 3. Section 33 05 06 - Trenching and Backfilling.
  - 4. Section 33 10 00 - Water Utilities.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Water Service Line: Measurement by linear foot of each size and type of pipe measured along the axis of the pipe, from centerline of the water main to termination as shown on the Drawings with no regard to intervening fittings. Payment at the Bid Unit Price per foot shall include cost of all pipe, laying, excavation, poly encasement for ductile iron pipe, backfilling, and testing:
    - a. Placement and compaction of the aggregate material around the corporation stop and gooseneck is incidental to the service line.
    - b. Supplying and installing required markers is incidental to the service line.
    - c. Ductile iron fittings will be paid per Section 33 10 00.
    - d. Any provisions, such as corporations, rods, copper pipe, etc. installed on the plugs of a stub for testing purposes or for future service connections, shall be considered incidental to the plug.
  - 2. Corporation Stop: By physical count of each type installed, according to size:
    - a. Placement and compaction of the required support is incidental.
  - 3. Curb Stop: By physical count of each type installed, according to size:
    - a. Required support is incidental.
  - 4. Gate Valve and Box will be paid per Section 33 10 00.
  - 5. Material, placement, compaction, and removal of excess trench material to be included in the Bid Unit Price for Water Service Line.
  - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  - 1. B88 - Class K Copper Water Service Pipe.

#### 1.04 SUBMITTALS

- A. Submit the Product Data for the following items consistent with Section 01 33 00:
  - 1. Pipe and fittings.
  - 2. Corporation stop and curb boxes.

#### 1.05 SEQUENCING AND SCHEDULING

- A. Install sanitary sewer, water main, and all pipe deeper than the services prior to the installation of the services.
- B. Install water service in same trench as the sanitary sewer service, wherever possible.
- C. Perform testing of new water main prior to reconnecting existing services.

### **PART 2 PRODUCTS**

#### 2.01 SERVICE PIPE

- A. Copper Water Tube: 1 inch through 1-1/2 inches for buried service shall be seamless, Type K water tube conforming to ASTM B88:
  - 1. Fittings shall be designed for working pressures up to 150 psi. Fittings used in service lines shall be designed for connection to the service line by threads, brazing, and/or flaring (compression fittings not allowed).
  - 2. 4 Inch diameter (minimum) DIP shall be used for services larger than 1-1/2 inches Ductile Iron Pipe (DIP): Conform to Section 33 10 00.

#### 2.02 CORPORATION STOP

- A. Approved Manufacturers: Mueller Minneapolis Pattern H-15000, Ford Type 600, Hayes No. 5200, or McDonald No. 74701.
- B. Threaded on outlet for flared connection with copper service pipe.
- C. Threaded on inlet end with standard tapered corporation cock thread.

#### 2.03 CURB STOP

- A. Approved Manufacturers:
  - 1. Curb Stops - 1 Inch: Mueller Oriseal, Minneapolis Pattern H-15151, Ford No. B22, Hayes No. 5155 or McDonald No. 76104.
  - 2. Curb Stops - 1-1/2 Inches: Mueller Oriseal H-15154, Minneapolis pattern, Ford No. B22 Series ball valves, Hayes Nuseal No. 4008 or McDonald No. 76104 ball valves.
- B. Same size and connection type for inlet and outlet.
- C. Full opening through the valve body with no smaller restriction allowed.

## 2.04 CURB BOX

- A. Approved Manufacturers:
  - 1. Mueller H-10300.
  - 2. McDonald 5614 or 5615
- B. Adjustable in height from seven feet to eight feet.
- C. Stationary rods.
- D. 1-1/4 inch upper section.
- E. Mueller, Minneapolis pattern base.

## 2.05 SADDLE

- A. Smith Blair stainless steel strap 317 or approved equal.
- B. Saddles are to be used at locations shown on the drawings unless otherwise approved by the Engineer.

## 2.06 GATE VALVE AND BOX

- A. Conform to the requirements of Section 33 10 00.

## 2.07 DIP FITTINGS

- A. Conform to the requirements of Section 33 10 00.

# **PART 3 EXECUTION**

## 3.01 GENERAL

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

## 3.02 INSTALLATION

- A. Install in accordance with Standard Detail Plate SER-1 shown on Drawings.
- B. Governing Code: Minnesota Plumbing Code and any local ordinances that may apply.
- C. Preparation: Conform to Section 33 05 06.
- D. Locations of services to be staked by Engineer during construction.
- E. Copper Water Service Line:
  - 1. Parallel and upstream, 3 to 5 feet, of the sewer service line in the same trench.

2. Minimum 7.5 feet of cover from finished grade.

F. Corporation Stop:

1. Tap into main only when water main is under pressure.
2. Use 2 layers of pipe tread sealant tape on corporations as a thread lubricant and sealant, or product approved by Owner.
3. Provide support for corporation and gooseneck per Standard Detail Plate SER-1.
4. Install saddle per the manufacture's recommendations.
5. Operation must be with open wrench.

G. Curb Stop:

1. Support on full size pre-cast segmental manhole block.
2. Provide support for curb stop per Standard Detail Plate SER-1.
3. Grade stakes will be furnished to establish elevations.
4. Operation must be with open wrench.

H. DIP Water Service Line:

1. Minimum 7.5 feet of cover from finished grade.
2. Use mega-lugs and Tie Rods from tee at main to end of service.
3. Place a plug, tapped with 2 inch corporation stop, at the end of the water service. Attach copper to the corporation and extend to the surface to bleed off air and to perform pressure tests, conductivity tests, and other items. Review such provisions with the Engineer prior to construction.

- I. All trenches shall be backfilled and compacted in accordance to Section 33 05 06.

### 3.03 FIELD QUALITY CONTROL

- A. Do not backfill trench until the service has been inspected and approved by the Engineer.
- B. Pressure Testing: All water services will be pressure tested in conjunction with the water main, conforming to Section 33 10 00.
- C. The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests shall be determined by the Engineer:
1. 1 density test for every 4 services installed at varying depths.
- D. Required documentation shall include completing the "Sewer and Water Service Data Plan Sheet" per detail Drawings, at the time of installation:
1. Measure and record the longitudinal distance from sanitary sewer wye to the water service line (perpendicular to the water service line) or from the sanitary sewer service line to the corporation stop/tee (perpendicular to the water service line).
  2. Measure and record the longitudinal distance between the sanitary sewer plug and the water curb stop or plug (perpendicular to water line).
  3. Measure and record the length of water line material for each service pipe installed.

### 3.04 PROTECTION

- A. Mark each curb stop and plug with:

1. Solid 4 inches by 4 inches by 8 feet wood post extending 4 feet above and 4 feet below grade.

**END OF SECTION**



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## SECTION 33 31 00

### SANITARY SEWERAGE PIPING

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. Section Includes:

1. Sanitary sewer gravity pipe, fittings, and miscellaneous appurtenances.

B. Related Sections:

1. Section 01 31 00 - Project Management and Coordination.
2. Section 01 33 00 - Submittal Procedures.
3. Section 01 57 13 - Temporary Erosion and Sediment Control.
4. Section 02 41 13 - Selective Site Demolition.
5. Section 33 05 06 - Trenching and Backfilling.
6. Section 33 08 30 - Commissioning of Sanitary Sewerage Utilities.
7. Section 33 31 14 - Sanitary Sewerage Services.
8. Section 33 39 00 - Sanitary Sewerage Structures.

##### 1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment:

1. Sanitary Sewer Pipe: Measurement will be based upon units of linear feet for each size, type, and class, furnished and installed complete in place as specified, regardless of depth. Including excavation, backfilling, and compaction. Pipe will be measured from centerline to centerline of manholes, or to the connection point of the existing pipe:
  - a. PVC pipe bedding will be paid in accordance with Section 33 05 06.
  - b. Improved pipe foundation material, if necessary, shall be per Section 33 05 06.
  - c. Plugs on dead end lines will be considered incidental to the pipe.
2. Connect to Existing Manhole: Measurement shall be on the basis of each and shall be considered to include all excavation, labor, materials, and equipment necessary to make the required connection, including reconstructing bench/invert.
3. Connect to Existing Manhole (Core Drill): Measurement will be per each, regardless of the pipe size required. Payment will be compensation for excavating, core drilling the manhole and reconstructing bench/invert.
4. Connect to Existing Pipe: Measurement shall be on the basis of each, according to size, and shall be considered to include all excavation, labor, materials, and equipment necessary to make the required connection, including removal/salvaging of existing plug.
5. Wyes: Measurement will be per each, according to size and type. Payment at the Unit Price will be considered compensation in full for all work and costs to furnish and install the wye as specified:
  - a. Cut-In Wye: Measurement shall be on the basis of each, according to size and type. Payment shall be considered compensation in full for all work, including excavation, backfilling, labor, materials, concrete encasement (or PVC saddle if approved), and equipment necessary to cut in the wye as specified.
6. Furnishing and installing plugs shall be considered incidental to the installation of the pipe.

7. Insulation: Measurement will be based on square yards of Insulation at the specified thickness. Payment will include furnishing and installation of the Insulation.
8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

#### A. American Society of Testing and Materials (ASTM):

1. C76 - Specification for Reinforced Concrete Culvert, Drain, and Sewer Pipe.
2. C361 - Specification for Reinforced Concrete Low Head Pressure Pipe.
3. C443 - Specification for Joints for Circular Concrete Sewer and Pipe, Using Rubber Gaskets.
4. C578 - Specification for Rigid, Cellular Polystyrene Thermal Insulation.
5. C1619 - Standard Specification for Elastomeric Seals for Joining Concrete Structures.
6. D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds.
7. D3034 - Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
8. D3212 - Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
9. F477 - Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
10. F679 - Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.

#### B. American Water Works Association (AWWA):

1. C105 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
2. C111 - American National Standard for Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
3. C116 - American National Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service.
4. C151 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water.
5. C153 - American National Standard for Ductile-Iron Compact Fittings for Water Service.
6. C900 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 Inches Through 12 Inches, For Water Distribution.
7. C905 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 Inches Through 48 Inches, For Water Transmission and Distribution.

### 1.04 SITE CONDITIONS

- #### A.
- Sanitary sewer lines are shown on the Drawings in a general way. Anticipate minor variations in both horizontal and vertical directions in locating existing system.

### 1.05 SUBMITTALS

#### A. Submit Product Data for the following items consistent with Section 01 33 00:

1. Pipe and fittings.
2. Transition couplings.

## 1.06 SEQUENCING AND SCHEDULING

- A. Do not pursue Work causing shut off of utility services (gas, water, electric, telephone, TV, etc.) to consumers until the utility owner is contacted and all consumers are notified of the shut-off schedule.
- B. Verify vertical and horizontal location of sanitary sewers sufficiently in advance of installing new pipe to determine the extent of conflict, if any.
- C. Successfully complete required inspections and testing before restoration of surface.

## PART 2 PRODUCTS

### 2.01 SOLID WALL PVC PIPE

- A. PSM Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings (4 Inch Through 15 Inch Diameter):
  - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of ASTM D3034.
  - 2. Design: Integral bell gasketed joint and a minimum wall thickness conforming to SDR 26 or 35 as shown on the Drawings.
  - 3. Joints: Push-on type only with the bell-end grooved to receive a gasket.
  - 4. Elastomeric Seal (Gasket): A basic polymer of synthetic rubber conforming to ASTM F477. Natural rubber gaskets will not be accepted.
  - 5. Marking: Each pipe shall be identified with the name of the manufacturer, or trademark and code, nominal pipe size in inches, the PVC cell classification, and "Specification D3034."
- B. Polyvinyl Chloride (PVC) Pipe and Fittings (18 Inch Through 48 Inch Diameter):
  - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of ASTM F679.
  - 2. Design: Integral bell gasketed joint with a minimum wall thickness conforming to PS 46 or PS 115 as shown on the Drawings.
  - 3. Joints: Elastomeric gasket joints providing a water-tight seal conforming to ASTM F477.
  - 4. Marking: Conform to ASTM F679.
- C. Polyvinyl Chloride (PVC) Pressure Pipe and Fittings:
  - 1. General: Pipe shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of AWWA C900 (4 inch to 12 inch diameter pipe) or AWWA C905 (14 inch to 48 inch diameter pipe).
  - 2. Design: Cast-iron-pipe-equivalent outside diameter with a minimum pressure class (PC) or dimension ratio (DR) as shown on the Drawings.
  - 3. Joints: Integral bell with elastomeric gasket joints providing a water-tight seal conforming to ASTM D3212 or ASTM F477.
  - 4. Fittings: Conform to Ductile Iron Pipe (DIP) and Fittings under this Section.
  - 5. Marking: Conform to AWWA C900 and C905 respectively.

### 2.02 DUCTILE IRON PIPE (DIP) AND FITTINGS

- A. General Requirement: Pipe to conform to AWWA C151/A21.51.

- B. Pipe Class: As shown on Drawings.
- C. Fittings: AWWA C153/A21.53, Ductile Iron, 250-psi working pressure, AWWA C111/A21.11 latest revision, mechanical joint or push-on.
  - 1. All fittings shall be fusion bonded epoxy coated per ANSI/AWWA C116/A21.
- D. Pipe and Fitting Lining: Protecto 401® Ceramic Epoxy (Ceramic Quartz Filled Amine Cured Novalac Epoxy), PVC Lined Ductile Iron or approved equal.
- E. Marking: Conform to AWWA C151/A21.51.

#### 2.03 REINFORCED CONCRETE PIPE (RCP)

- A. General Requirement:
  - 1. Reinforced concrete pipe conforming to ASTM C76, Wall B with gasketed joint forming a water-tight seal conforming to ASTM C443.
- B. Pipe Class: As shown on the Drawings.
- C. Materials: Conform to the requirements of ASTM C76 Wall B with circular reinforcing. Profile gaskets shall be synthetic rubber, circular in cross-section, and conform to ASTM C1619 Class C.
- D. Pipe Joints: Bell and spigot conforming to MnDOT Plate 3006.
- E. Marking: Each pipe shall be identified with the name of the manufacturer identification of plant, date of manufacture, the pipe class, and specification design.

#### 2.04 PIPE BEDDING

- A. Conform to Section 33 05 06.

#### 2.05 INSULATION

- A. Polystyrene Insulation: Extruded type conforming to ASTM C578, Type VI, VII, or V.

#### 2.06 DIP ENCASEMENT

- A. Material: Polyethylene film conforming to AWWA C105/A21.5 and ASTM A674, tube form.
- B. AWWA/ASTM standard, corrosion protection warning and applicable range of nominal pipe diameter size(s) every 2 feet along its length.

#### 2.07 TRANSITION COUPLING

- A. Coupling consisting of an elastomeric sleeve with incorporating stainless steel tension bands, tightening mechanism, and less than 0.01 inch thick shear ring conforming to ASTM C1173, Type A.
- B. Separate bushings are not allowed without approval from the Engineer.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

### **3.02 PREPARATION**

- A. Excavation and Preparation of Trench: Conform to Section 33 05 06.
- B. By-Pass Pumping: Contractor is responsible for all items required to maintain sewer flows during construction of the new sanitary sewer line. All Work and costs for this are considered incidental to the Project, unless otherwise specified.
- C. Erosion control and dewatering in conformance with Section 01 57 13.

### **3.03 PIPE INSTALLATION**

- A. Trench Excavation and Backfill: Conform to Section 33 05 06.
- B. Lay and maintain pipe appurtenances to the alignment, grade, and location shown on the Drawings and/or staked in the field. No deviation from the Drawing and/or staked alignment, grade, or location is allowed, unless approved by Engineer. Deviation from grade in excess of 0.02 percent (with no intermediate high points, level sections, or reverse invert slope) may be cause for removal and relaying pipe at the Contractor's expense.
- C. Maintain reference line and grade with laser equipment or other equipment approved by the Engineer. Periodically check equipment for adjustment and accuracy. Correct deficiencies in equipment, reference line, and reference grade. Take precautions to prevent deflections in reference line and grade.
- D. Non-Conforming Pipe Installation: Remove and reinstall.
- E. Inspect pipe for defects and cracks while suspended immediately prior to installation.
- F. Install pipe from lower to higher invert elevation with uniform and smooth invert line.
- G. Install pipe length spigot ends pointing in the direction of flow.
- H. No pipe is to be laid in water or when trench conditions are unsuitable for such Work.
- I. Jointing:
  - 1. In conformance with recommendations of manufacturers of pipe and joint material.
  - 2. All joints must be watertight.
  - 3. Hand fill and compact all bell depressions with granular bedding materials to prevent joints from sagging or movement.

J. Cleaning and Protection:

1. Protection of the existing downstream system/pipe will be required. A temporary plug (approved by the Engineer) shall be installed and maintained until acceptance of the new pipe lines. Once accepted the contractor shall be responsible for the removal of the plug. This work shall be considered incidental to the pipe installation.
2. Remove all dirt and debris from the interior of each pipe length as the Work progresses.
3. Protect the exposed end of the pipe with temporary covers or plugs.
4. Protect in place pipe from damage and dislocation.

K. Flexible Pipe Installation: Conform to ASTM D2321.

L. Sanitary Sewer Service Connections:

1. Wye:
  - a. Wye to be at 45-degree angle from horizontal.
  - b. Plugs installed with Atlastic 77, Sonolastic Sealant, or approved equal, or specifically designed for the opening to be plugged.
2. Risers: Conform to Section 33 31 14.

M. Installation of Insulation:

1. Place insulation over pipe in locations as shown on the Drawings.
2. Insulation is to be placed wherever sanitary sewer line comes within 3 feet of any storm structure or line, or within 5 feet of the ground surface.

N. Sanitary Sewer Stub:

1. Mark each plug location with 4 inch by 4 inch timber to above existing grade.
2. End all sanitary sewer pipe stubs with bell end of pipe and push-on type plug.

### 3.04 CONNECT TO EXISTING SYSTEM

A. Connect to Existing Structure:

1. Connect to existing structure at location shown on the Drawings.
2. If rubber boot exists at manhole opening, connect new pipe to the boot and secure.
3. If manhole opening does not contain rubber boot or the existing boot is damaged, core drill opening in the structure, and install a rubber boot in manhole opening prior to connection of pipe.
4. Make repairs to the structure required due to the Work performed, including installation of doghouse.
5. If necessary, the invert shall be reconstructed to accommodate new flow location. Reconstruction of invert will also be necessary if pipe sizes increase.

B. Connect to Existing PVC Pipe (Stub):

1. Locate and expose end of existing stub.
2. Remove existing plug and connect to pipe.

C. Cut-in Wye:

1. Cut-in Wye at location shown on Drawings. Type and size shown on Drawings.
2. Remove existing mainline pipe as necessary to make connection per Section 02 41 13.
3. Connect wye to existing mainline pipe with transition coupling. Pour concrete encasement around coupling.

4. In lieu of cutting in a wye, PVC saddles will be accepted following Engineer review and acceptance of shop drawings provided by Contractor.
5. Perform excavation and backfilling of trench per Section 33 05 06.

### 3.05 MANHOLE INSTALLATION

- A. Conform to the requirements of Section 33 39 00.

### 3.06 PROTECTION

- A. Plug all entrances and openings to the system promptly and before suspension of operations at the end of working day.
- B. At connections to existing system, temporarily plug the existing pipe with acceptable device until newly installed sewer lines have been accepted.

### 3.07 FIELD QUALITY CONTROL

- A. Trench Backfill – Compaction: The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests will be determined by the Engineer:
  1. 1 density test for every 300 feet of trench at varying depths (per 10 foot depth increments).
  2. 1 gradation test per Project for pipe bedding.
  3. 1 gradation test per Project for improved pipe foundation material.
- B. Testing in conformance with requirements of Section 33 08 30.
- C. Re-test after corrective measures are completed.
- D. Cleanup:
  1. Cleaning Pipe and Structures:
    - a. If newly installed mains and structures are kept clean during construction, cleaning will not be required.
    - b. If newly installed mains and/or structures become dirty due to negligence of the Contractor, cleaning will be performed at the sole expense of the Contractor.
  2. The bailing or flushing method of cleaning pipe is acceptable only if adequate provisions, acceptable to the Engineer, for keeping dirt and debris out of the existing sewer system. Jetting may be required.
  3. Complete prior to final inspection for acceptance.
  4. Notify Engineer when all pipes and structures are clean, which will allow the Owner to schedule the televising of the sewer mains.

**END OF SECTION**



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## **SECTION 33 31 14**

### **SANITARY SEWERAGE SERVICES**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

**A. Section Includes:**

1. Sanitary sewer service pipe and all appurtenances.

**B. Related Sections:**

1. Section 01 31 00 - Project Management and Coordination.
2. Section 01 33 00 - Submittal Procedures.
3. Section 33 05 06 - Trenching and Backfilling.
4. Section 33 05 18 - Adjust Miscellaneous Structures.
5. Section 33 08 30 - Commissioning of Sanitary Sewerage Utilities.
6. Section 33 31 00 - Sanitary Sewerage Piping.

##### **1.02 PRICE AND PAYMENT PROCEDURES**

**A. Measurement and Payment:**

1. Service Pipe: Measurement will be by linear foot for each size and type of pipe installed (including 3 foot end piece) as measured along the axis of the pipe with no regard to intervening fittings. Payment at the Bid Unit Price shall be compensation in full for all Work and costs, including excavation, pipe, fittings, 6 inch PE sleeve (as specified), backfill, and trench compaction.
2. Pipe Bedding for the PVC Sanitary Sewer Service Pipe: Measurement and payment shall be as per Section 33 05 06.
3. Improved Pipe Foundation Material: Measurement and Payment shall be as per Section 33 05 06.
4. No Bid Items have been included for service plugs or marking service ends. Payment for these items shall be included in the linear foot price for Service Pipe.
5. Service Riser Pipe: Measurement will be based on units of linear feet, according to size, measured laterally along the laying length from the wye to the top of the last riser section, with no regard to intervening fitting. Payment at the Unit Price will be considered payment in full for all work and costs associated with this Bid Item, including concrete reinforcement of the riser, wye, and main sewer.
6. Expose and Connect to Existing Wye: Measurement will be per each, according to size and type. Payment will include all costs related to excavating, exposing, and connecting to an existing wye that was installed by others, including removal of existing plug.
7. Required measurements of service installations shall be considered incidental to the service installation.
8. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. American Society of Testing Materials (ASTM):
  - 1. D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds.
  - 2. D1785 - Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
  - 3. D2564 - Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
  - 4. D2665 - Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent (DWV) Pipe and Fittings.
  - 5. D2672 - Specification for Joints for IPS PVC Pipe Using Solvent Cement.
  - 6. D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

### 1.04 SYSTEM DESCRIPTION

- A. This Work shall consist of the construction of sanitary sewer services in accordance with the requirements of the Contract.
- B. It is the intent of these Specifications to require the same quality of Work be received on the house services in the way of grade and alignment as is required on the main lines and laterals.

### 1.05 SUBMITTALS

- A. Submit the following items consistent with Section 01 33 00:
  - 1. Product data for the following items:
    - a. Pipe and fittings.
  - 2. Provide and record information on the "Sewer and Water Service Data Sheet" (Contractor Responsibility), in accordance with 3.02.D. The Data Sheet for recording required measurements will be provided by Engineer.

### 1.06 SITE CONDITIONS

- A. All Work must be confined to within the limits of construction easements or public right-of-way.

### 1.07 SEQUENCING AND SCHEDULING

- A. Install sanitary sewer, water main, and all pipe deeper than the services prior to the installation of the services.
- B. Install sanitary sewer service in same trench as the water service or as directed by the Engineer.

## PART 2 PRODUCTS

### 2.01 MANUFACTURED UNITS

- A. Poly (Vinyl Chloride) (PVC) Schedule 40 Plastic Pipe and Fittings:
  - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of D1785 and ASTM D2665. PVC fittings shall

conform to ASTM D2665. Belled end pipe shall have tapered sockets conforming to ASTM D2672.

2. Design: Integral belled pipe with a minimum wall thickness conforming to Schedule 40.
3. Solvent Cement Joints: The solvent cement used to join pipe and fittings shall meet the requirements of ASTM D2564.
4. Risers: conform to same requirements as service pipe.

## 2.02 BEDDING MATERIAL

- A. See Section 33 05 06.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

### 3.02 INSTALLATION

- A. Installation to be in accordance with the Detail Plate shown on Drawings.
- B. Governing Code: Minnesota Plumbing Code and any local ordinances that may apply.
- C. Locations of services to be staked by Engineer during construction.
- D. PVC Risers:
  1. Pour concrete casement around connection per Standard Detail Plate SER-9.
  2. Support pipe on undisturbed trench slope for entire riser length.
  3. Slip joint connection of 4 inch PVC riser to wye.
- E. Minimum 1/4 inch per foot (2-percent) grade, unless otherwise directed by the Engineer.
- F. Installation and fittings: Similar to main line sanitary sewer pipe installation, conforming to the requirements of Section 33 31 00.
- G. Install pipe bedding for PVC sanitary sewer services per Section 33 05 06.
- H. The installation of solvent cemented joints shall be in accordance with ASTM D2855.
- I. Place glue-on plug at end of service, and a 3 foot long, 6 inch diameter perforated flexible polyethylene sleeve over the end of the vertical riser pipe.
- J. All proposed service line locations are shown on the Drawings.
- K. Provide and record information on the "Sewer and Water Service Data Sheet" (Contractor Responsibility), in accordance with 3.02.D.

### 3.03 FIELD QUALITY CONTROL

- A. Do not backfill trench until the service has been inspected and approved by the Engineer.
- B. Low pressure air and infiltration testing shall conform to Section 33 08 30.
- C. The Owner shall have an independent testing laboratory perform, as a minimum, the following tests. The location of the tests shall be determined by the Engineer:
  - 1. 1 density test for every 3 services installed, at varying depths.
- D. Required documentation at the time of installation:
  - 1. Field measurement of length of each sanitary sewer and water service installed.
  - 2. Field measure the depth from the surveyed grade stake provided by the Owner to the invert of the 45 degree bend adjacent to the curb stop.
  - 3. Field measurements as identified on Standard Detail Plate SER-5.
  - 4. Field measurements for Riser/45 degree bend closest to the main.
    - a. Field measure the depth from the surveyed grade stake provided by the Owner to the invert of the 45 degree bend.
    - b. Horizontal distance from 45 degree bend to center of main pipe
    - c. Length of vertical riser pipe
  - 5. Provide Engineer with record of measurements on a weekly basis.

### 3.04 PROTECTION

- A. Mark end of new service as shown on Standard Detail Plate SER-1.

**END OF SECTION**

## SECTION 33 39 00

### SANITARY SEWERAGE STRUCTURES

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Sanitary sewer manholes and miscellaneous appurtenances.
- B. Related Sections:
  - 1. Section 01 33 00 - Submittal Procedures.
  - 2. Section 33 05 18 - Adjust Miscellaneous Structures.
  - 3. Section 33 05 06 - Trenching and Backfilling.
  - 4. Section 33 31 00 - Sanitary Sewerage Piping.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Refer to Section 33 31 00 for gravity sewer pipe pay items.
  - 2. Sanitary Sewer Manhole: Measurement will be per linear foot of depth from final rim elevation to lowest invert elevation based on the diameter of the manhole. Payment will include the manhole, manhole frame, and casting as specified on the Drawings:
    - a. Separate payment shall be made in accordance with Section 33 05 18 for placement of frame, casting, and adjustment rings.
    - b. 70-percent partial payment will be made upon installation of the structure and 30-percent payment will be made upon final completion of doghouses and inverts and submittal of Manhole/Catch Basin Elevation Report.
  - 3. Construct Manhole Over Existing Pipe: Measurement will be per linear foot of depth from final rim elevation to lowest invert elevation based on the diameter of the manhole. Payment will include the manhole, manhole frame, and casting as specified in the Drawings, connection to the existing pipe, and any necessary modifications to existing pipe and manhole to complete the connection.
  - 4. A Bid Item has been provided for Sanitary Manhole, Spray Liner. Measurement will be per linear foot of depth of the precast concrete and based on the diameter of the manhole. Payment will include all preparation work and material application per the manufacture's recommendations, as specified on the Drawings:
  - 5. Inside Drop Inlet Pipe: Drop inlets will be measured by length from the lowest invert of the manhole to the invert of the pipe being served by the drop inlet. Payment shall be considered compensation in full for all work, including PVC C900 drop pipe, PVC C900 Tee (modified), PVC C900 90 degree bend, pipe brackets and poured in place invert & benches.
  - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

##### 1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  - 1. C150 - Specification for Portland Cement.

2. C443 - Specification for Joints for concrete Pipe and Manholes, Using Rubber Gaskets.
3. C478 - Specification for Precast Reinforced Concrete Manhole Sections.

#### 1.04 SITE CONDITIONS

- A. Manhole locations are shown on the Drawings in a general way. Anticipate minor variations in both horizontal and vertical directions in locating existing system.

#### 1.05 SUBMITTALS

- A. Submit Product Data for the following items consistent with Section 01 33 00:
  1. Gaskets.
  2. Joint sealants.
  3. Manufacturers recommended installation procedures for jointing.
  4. Manhole spray lining materials.
- B. Submit shop drawings for the following items consistent with Section 01 33 00:
  1. Manholes, including reinforcing, joints, pipe connections, and castings.
  2. Shop drawings shall indicate complete information for fabrication and installation of units. Include the following:
    - a. Plans and elevations locating and defining all material furnished by manufacturers.
    - b. Sections and details showing connections, cast-in items, field installed lifting devices, capacities, all openings, and their relation to the structure.
- C. Submit Manufacturer's Certificate of Compliance for the following items consistent with Section 01 33 00:
  1. Castings.
  2. Precast manhole sections and steps.
- D. Manhole/Catch Basin Elevation Report:
  1. Complete the report attached to the end of this Section for each structure as it is constructed. The completed report shall be submitted each week to the Engineer or the Engineer's designated representative at some mutually agreeable time.
- E. Inside Drop Inlet Pipe per Standard Detail Plate SAN-4.

#### 1.06 QUALITY ASSURANCE

- A. The quality of all materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the Engineer or other representative of the Owner. Such inspection may be made at the place of manufacture or on the Work after delivery, or at both places and the materials shall be subject to rejection at any time on account of failure to meet any of the requirements specified herein. Material rejected after delivery to the Site shall be marked for identification and shall be removed from the Site at once. All materials which have been damaged after delivery will be rejected and if already installed shall be removed and replaced entirely at the Contractor's expense.
- B. At the time of inspection, the materials will be carefully examined for compliance with the appropriate ASTM Standard and this Section and with the approved manufacturer's drawings. All

precast manhole sections shall be inspected for general appearance, dimension, "scratch-strength," blisters, cracks, roughness, soundness, etc. The surface shall be dense and close-textured.

C. Manhole Design:

1. Have the manhole sections and top and bottom slabs designed and the detailed drawings prepared by a Professional Engineer, experienced in precast concrete manhole design, who is registered in the Project's state.

## **PART 2 PRODUCTS**

### **2.01 COMPONENTS**

A. Manholes:

1. Precast concrete sections conforming to ASTM C478 and this Section. No lift holes permitted. No structures constructed either partially or completely from segmental block will be accepted:
  - a. All sections shall be cured by an approved method and shall not be shipped nor subjected to loading until the concrete compressive strength has attained 4,000 psi and not before 2 days after fabrication and/or repair, whichever is longer.
  - b. The date of manufacture and the name and trademark of the manufacture shall be clearly marked on the inside of each precast section.
  - c. Precast inverts to match pipe size and pipe grade through manhole (with flat grades, manhole inverts will not be allowed to have a 0.10 foot drop).
  - d. No structures with any cracks will be accepted.
2. Height of the precast eccentric cone section shall be either 36 inch, 42 inch, or 48 inch in height.
3. Joints: Rubber gasketed joint forming a watertight seal conforming to ASTM C443.
4. Size: Inside diameter as indicated on the Drawings.
5. Water Tight Pipe Connections:
  - a. All manholes shall be fabricated with pipe openings consisting of a rubber boot and stainless steel band in accordance with ASTM C923 to seal off the joint from allowing dirt, ground water, or other objectionable material from entering. These materials shall be installed with the fabrication on all new manholes.
6. Inside Drop Manhole:
  - a. Drop pipe mounting brackets shall be Reliner Stainless Adjustable Pipe Brackets or approved equal, minimum 2 inch width.
  - b. Stainless steel hardware.
  - c. Mortar is allowed for upper doghouse in place of rubber boot when booted connections are not available due to outside diameter of pipe fitting used for drop pipe connection.
  - d. Drop pipe per section 33 31 00 2.01.C.
  - e. Drop Tee shall be PVC C905 non-pressure tee. GPK non-stock, 8 inch Tee extension x G x G, or approved equal.
  - f. 90 Degree Base Bend shall be PVC C905 non-pressure bend. GPK Y24-008 90 EL S x G, or approved equal.
  - g. Inverts and benches are to be poured in the field and include the 90 degree bend.
7. Transitions sections: when required the maximum depth from the rim elevation to the top of the reducing cone is 10 feet.



- B. Steps: Reinforced polypropylene plastic steps with No. 2 deformed grade steel rod.
- C. Structure Bases:
  - 1. Pre-cast integral with bottom section of manhole for all structures 8 foot inside diameter and smaller. All structures supplied smaller than 8 foot inside diameter shall also have pre-cast inverts installed.
  - 2. For structures with inside diameters greater than 8 feet, the structure base slab and manhole sections may be separate pre-cast units. A field constructed invert will be required when base slab and bottom manhole section are not integral.
- D. Castings: See Section 33 05 18.

## 2.02 ACCESSORIES

- A. Concrete Materials:
  - 1. Standard Portland Cement Type I, II, or IL, clean washed sand, crushed rock, and gravel free from deleterious materials for monolithic concrete manholes and all manhole bases.
  - 2. Portland Cement: Comply with the requirements of ASTM C150 or C595.
  - 3. Design Mix: Subject to the approval of the Engineer. Use proper water-cement ratio to obtain 4,000 psi in 28 days.
- B. Mortar: Pre-mix bag intended for underground use conforming to ASTM C270 Type M, minimum compressive strength of 2,500 psi.
- C. Joint Sealants:
  - 1. Ramnek, or approved equal.
  - 2. Open cell polyurethane foam sealant, DOW 999, or approved equal.
- D. Adjusting Rings: Conform to Section 33 05 18.

## 2.03 SPRAY LINER

- A. Hydrogen sulfide and corrosion resistant liner such as Zebron or approved equal.
- B. Polyurethane Coatings: High Performance, 2-part, 100 percent solids polyurethane coating, Zebron series, No.386.
  - 1. Physical Properties:
    - a. Color: Cream
    - b. Specific Gravity (ASTM D792): 1.3 (10.84 lbs per gal)
    - c. Tensile Strength (ASTM D638): 2500 psi at 77 degrees F (25 degrees C)
    - d. Elongation (ASTM D638): Recoverable; 67 percent at 77 degrees F (25 degrees C)
    - e. Flexibility (ASTM D792): No effect bending 0.5 mm plate coated with 20 mils over 8 mm diameter mandrel.
    - f. Compressibility (ASTM G95): 4200 psi
    - g. Surface Hardness: 60 to 70, Shore "D"
    - h. Abrasion Resistance (ASTM D4060): 2.12 oz. (60 mg)
    - i. Thermal Conductivity (ASTM C177): 0.000723 cal. Per sec. cm<sup>2</sup> per degree C per cm at 20 degrees C (0.175 btu per hr. ft. degree F per ft. at 77 degrees F)
    - j. Permeability (ASTM E96): 0.262 gms per m<sup>2</sup> per 24-hrs; 0.0358 U.S. perms.

## **PART 3 EXECUTION**

### **3.01 TRANSPORTATION**

- A. Transport precast units by rail or truck in a manner to avoid excessive stress or strain on units.
- B. Support units during hauling and stockpiling with sufficient hardwood shores to prevent cracking and spalling. Secure units in place to prevent shifting or undesired movements. Location of temporary supports shall be as directed by precast manufacturer.

### **3.02 MANHOLE INSTALLATION**

- A. Excavation and Preparation of Trench: Conform to Section 33 05 06.
- B. Furnish and install structures in accordance with Standard Detail Plates as shown on the Drawings.
- C. Place pre-cast integral base section on compacted subgrade and bedding for structures 6 feet diameter and smaller.
- D. Set pre-cast concrete sections plumb with a 1/2 inch (per 4 foot precast section) maximum out of plumb tolerance allowed.
  - 1. Initial base section shall be set plumb with a 1/4 inch (per 4 foot precast section) maximum out of plumb tolerance allowed.
- E. Install short precast section (maximum 12 - 24 inch height) immediately below the eccentric cone or precast top slab.
- F. Position vertical wall of the eccentric cone on the downstream side.
- G. Casting Adjustment:
  - 1. Conform to Section 33 05 18.
  - 2. Seal joint at the casting frame seat with 2 rows of joint sealer.
- H. Steps:
  - 1. Set the centerline of each step within each manhole to be within 2 inches of the vertical centerline for the group of steps.
  - 2. Locate over downstream pipe, except for pipe 24 inches in diameter or greater. Then place where most appropriate to provide the most suitable access.
  - 3. Offset step centerline from drop openings.
  - 4. Install top step at a maximum of 20 inches below top of casting.
  - 5. Secure and neatly mortar in place 12 - 16 inches on center spacing.
- I. Prevent entrance of dirt and debris from all new and existing manholes.
- J. Pipe Connections:
  - 1. All pipes entering the manhole must be cut with a power saw to provide a clean, smooth pipe surface. The pipe shall be cut to be 2 inches inside the manhole at the pipe's midpoint.
  - 2. Annular space between the outside of the pipe and opening in the structure shall be filled with mortar on the interior and exterior of the structure. Construct an interior

collar/doghouse around the pipe from the wall of the structure to the end of the pipe with mortar.

- K. Inside Drop manhole inlets shall be constructed in accordance with Standard Detail Plate SAN-4 shown on the Drawings.
- L. Construct Manhole Over Existing Pipe:
  - 1. Construct manhole over existing pipe at locations shown on the Drawings.
  - 2. Saw cut existing pipe to fit flush with inside wall of new structure.
  - 3. Seal any openings in manhole.
- M. When identified on the drawings, apply Zebron lining material per manufacturer's recommendations and specifications found at the following link:

### 3.03 FIELD QUALITY CONTROL

- A. Failure of any mortar work within a structure (i.e. invert, doghouse, etc.) that occurs during the correction period will be repaired in a manner acceptable to the Owner at the Contractor's expense.
- B. Any leak of a precast manhole section joint shall be repaired by chemical injection or other approved material to the satisfaction of the Engineer.

### 3.04 PROTECTION

- A. Secure manholes and structures immediately after completion or before suspension of operations at the end of working day with casting or suitable alternative device.
- B. Mark structure susceptible to being hit by construction or vehicular traffic.

### 3.05 CLEANING

- A. All new manholes shall be thoroughly cleaned of all silt, debris, and foreign matter of any kind prior to final inspection.

**END OF SECTION**

## Manhole/Catch Basin Field Elevation Report

|                            |                           |
|----------------------------|---------------------------|
| Project Name:              | Date:                     |
| Owner:                     | Owner Project No:         |
| Bolton & Menk Project Rep: | Bolton & Menk Project No: |
| Contractor:                | Contractor's Rep:         |

**Contractor is required to complete this form before payment of structure is approved.**

| Structure Location |                   |                          |                                  | Structure Type<br>(circle one) | Design Invert<br>(from Plan) | As-Constructed Invert Elevation * | Difference<br>( + / - ) | Comments /<br>Quality Assurance |
|--------------------|-------------------|--------------------------|----------------------------------|--------------------------------|------------------------------|-----------------------------------|-------------------------|---------------------------------|
| Structure No.      | Structure Station | Direction of invert/flow | Street Name or Easement Location |                                |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |

**\* - As-Constructed Invert Elevation provided by Contractor from measurements taken in the field to nearest 0.01'.**

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**SECTION 33 40 00**  
**STORMWATER UTILITIES**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Storm sewer pipe, manholes, catch basins, fittings, and miscellaneous appurtenances.
- B. Related Sections:
  - 1. Section 01 31 00 - Project Management and Coordination.
  - 2. Section 01 33 00 - Submittal Procedures.
  - 3. Section 01 57 13 - Temporary Erosion and Sediment Control.
  - 4. Section 32 11 23 - Aggregate Base Courses.
  - 5. Section 32 16 13 - Concrete Curbs and Gutters.
  - 6. Section 33 05 06 - Trenching and Backfilling.
  - 7. Section 33 05 18 - Adjust Miscellaneous Structures.

**1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 1. Storm Sewer Pipe: Measurement based upon units of linear feet for each size, type, and class, furnished and installed complete in place as specified, regardless of depth. Including excavation, backfilling, and compaction. Pipe will be measured from centerline of structure to centerline of structure and will not include end sections:
    - a. Pipe bedding will be paid in accordance with Section 33 05 06.
    - b. Improved pipe foundation material, if necessary, shall be per Section 33 05 06.
  - 2. Catch Basin, Catch Basin Manhole, Skimmer, and Manhole Structure: Measurement per linear foot of depth from final rim elevation to lowest pipe invert elevation or bottom of sump according to type and size for furnishing and installing structures complete in place as specified, including casting frame and cover, mortar invert (if required) and concrete stool grate frame (if required per detail).
    - a. 70-percent partial payment will be made upon installation and 30-percent payment will be made upon final completion of doghouses and inverts and submittal of Manhole/Catch Basin Elevation Report.
  - 3. Flared Ends with trash guard: Measurement based upon units of each size installed, according to type, at locations indicated in the Drawings complete in place as specified, including excavation, backfilling, compaction and trash guard:
    - a. Where a sewer line is terminated with a flared end section, tying the last 3 joints per Standard Detail Plate STO-11 is considered incidental to the installation of the pipe.
  - 4. Random Riprap: Measurement based upon units of cubic yards of Riprap placed, according to class. Payment of the Bid Item shall include geotextile fabric as required per Standard Detail Plate STO-12.
  - 5. Grouted Riprap: Measurement based upon units of cubic yards of riprap placed, according to class. Payment of the Bid Item shall include geotextile fabric and 6 inch concrete layer as required per Standard Detail Plate STO-13.

6. Connect to Existing Pipe: Measurement per each connection made, according to size and type of existing pipe, and regardless of type of existing bulkhead or plug, or type of connection made. Payment will include all costs related to making the connection, including removal and disposal of the existing bulkhead or plug, and construction of concrete collar if necessary.
7. Connect Existing Pipe to New Structure: Measurement per each pipe connected to the new structure, regardless of size of existing pipe. Payment will include all costs related to making the connection, including removal and replacement of existing pipe as directed by Engineer.
8. Connect to Existing Structure: Measurement shall be per each connection made, regardless of size of opening, type of existing bulkhead, or type of existing structure. Saw cutting of the pipe installed in the opening if necessary shall be considered incidental. Core cutting the connection and reconstruction of existing structure invert if necessary shall also be considered incidental to the connection.
9. RC LR Bend: Measurement per each, according to size and class. Payment will include all costs related to furnishing and installing the bend, including excavation, backfilling, and compaction.
10. Bulkhead Storm Sewer Pipe: Measurement per each bulkhead installed according to size. Payment will include all costs related to bulkheading or plugging the pipe as described in this Section.
11. Poured-In-Place Concrete Seepage Collar: Measurement per each collar constructed according to size of pipe it is constructed around. Payment at the Unit Price shall include all costs related to constructing the collar in accordance with Standard Detail Plate STO-21, including excavation, forms, and material.
12. Construct Manhole Over Existing Pipe: Measurement per linear foot of depth from final rim elevation to lowest invert elevation according to size. Payment will include the cost of the manhole and installation over the existing line, casting frame and cover, and adjusting rings in place as specified.
13. Outlet Structure: Measurement per each according to size and type. Payment will include all costs related to furnishing and installing the structure complete in place as specified, including casting frame and cover and grate.
14. Overflow Structure: Measurement per each according to size and type. Payment will include all costs related to furnishing and installing structures complete in place as specified, including casting frame and cover and grate.
15. Patch Structure: Measurement per each storm sewer or sanitary sewer structure patched, regardless of the size of structure or areas patched. Payment will include all cost associated to patching the structure as specified.
16. Clean Sump: Measurement per each. Payment will include all costs to remove any water and dirt within the structure. This Bid Item is intended for vacuum cleaning of sump manholes to allow inspection by the Owner or Engineer.
17. Televis Storm Sewer: Measurement based upon units of linear feet of pipe televised, regardless of size or type. Pipe will be measured from centerline of structure to centerline of structure. Payment will be compensation for pipe preparation, televising, providing televising report, and all other associated costs.
18. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  - 1. A153 - Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
  - 2. C76 - Specification for Reinforced Concrete Culvert, Drain, and Sewer Pipe.
  - 3. C139 - Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes.
  - 4. C150 - Specification for Portland Cement.
  - 5. C206 - Specification for Finishing Hydrated Lime.
  - 6. C361 - Specification for Reinforced Concrete Low Head Pressure Pipe.
  - 7. C443 - Specification for Joints for Circular Concrete Sewer and Pipe, Using Rubber Gaskets.
  - 8. C478 - Specification for Precast Reinforced Concrete Manhole Sections.
  - 9. C595 - Specification for Type 1L Cement.
  - 10. C1479 - Standard Practice for the Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations.
  - 11. C1619 - Standard Specification for Elastomeric Seals for Joining Concrete Structures.
- B. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 (MnDOT Spec.):
  - 1. 2461 - Structural Concrete.
  - 2. 2511 - Riprap.
  - 3. 3601 - Riprap Material.
  - 4. 3733 - Geosynthetic Materials.
- C. National Association of Sewer Service Companies (NASSCO):
  - 1. PACP – Pipeline Assessment Certification Program

### 1.04 SEQUENCING AND SCHEDULING

- A. Maintain existing storm sewer flows during construction. This may require a temporary pipe connection during periods of time when construction is not occurring.
- B. Set up traffic control prior to removals. Maintain traffic during storm sewer improvements unless otherwise approved by Owner.
- C. Do not pursue work-causing shut off of utility service (gas, water, electric, telephone, TV, etc.) to consumers until the utility owner is contacted and all consumers are notified of the shut-off schedule.
- D. Successfully complete required inspections and tests before commencement of Section 32 11 23 and Section 32 16 13.
- E. Coordinate inspection of completed sump structures with City prior to acceptance. May require pumping water and vacuuming dirt out of structure prior to inspection.
- F. Televising Storm Sewer:
  - 1. Notify Engineer 48 hours in advance of the televising of all pipes.
  - 2. Complete all required mandrel and air testing prior to televising.
  - 3. All private utilities shall be installed by others prior to televising storm sewer.



4. Start televising no sooner than 30 days, but no later than 60 days after all utility, excavation, and street subgrade work is completed as part of this contract.

## 1.05 SUBMITTALS

- A. Submit Shop Drawings for storm sewer structures consistent with Section 01 33 00.
- B. Shop drawings shall indicate complete information for fabrication and installation of units. Include the following:
  1. Plans and elevations locating and defining all material furnished by manufacturers.
  2. Sections and details showing connections, cast-in items, and field installed lifting devices, capacities, all openings, and their relation to the structure.
- C. Submit Manufacturer's Certificate of Compliance for the following items:
  1. Gray iron castings.
  2. Precast manhole sections.
  3. Rip rap.
  4. Pipe.
- D. Manhole/Catch Basin Elevation Report:
  1. Complete the report attached to the end of this Section for each structure as it is constructed. Submit complete report each week to the Engineer or the Engineer's designated representative at some mutually agreeable time.
- E. Televising Report:
  1. Submit 1 copy of the Written Report and Video Report within 30 days of completion of televising.
  2. Report Requirements:
    - a. Each run shall consist of a starting and ending structure number and a zero reading on the counter at center of the starting structure.
    - b. Examine each service wye by using the pan and tilt feature.
    - c. Location, length and identify sags within the flowline of the pipe of 10% or greater, example 0.06 foot for an 8 inch diameter pipe.
    - d. Location in change in pipe material to be noted.
    - e. The video camera operator shall type into the video the station (distance), wye location on either the left or right side of the pipe, and any problems they notice while televising the sewer lines.
    - f. Take a still photograph at any questionable joint or possible defect.
  3. Provide a Written Report with a graphic cross section of the pipe showing the manholes, all wye connections, and defects. This report shall include PACP codes and descriptions.
  4. Submit a Video Report in a DVD format with audio, including a printable version of the Written Report and full video of all televised pipe runs.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Ready Mix Mortar Materials:
  1. Sand Mix, 4,000 PSI

- B. Mortar: Pre-mix bag intended for underground use conforming to ASTM C270 Type M, minimum compressive strength of 2,500 psi.

## 2.02 STORM MANHOLE AND CATCH BASIN FRAMES AND COVERS

- A. Conform to Section 33 05 18.

## 2.03 STORM MANHOLES AND CATCH BASINS

- A. Precast Concrete Sections conforming to ASTM C478 and this section.
  - 1. No structure or any portion thereof will be allowed to be constructed of segmental block.
    - a. Shallow structures that cannot be constructed in the standard manner shall be fabricated in a precast design similar to Standard Detail Plate STO-10.
  - 2. Preformed inverts are not allowed.
  - 3. No structures with any cracks will be accepted
  - 4. All sections shall be cured by an approved method and shall not be shipped nor subjected to loading until the concrete compressive strength has attained 4,000 psi and not before 2 days after fabrication and/or repair, whichever is longer
  - 5. The date of the manufacture and the name and trademark of the manufacture shall be clearly marked on the inside of each precast section.
- B. Diameter and special requirements are shown on the Drawings.
- C. Manhole Joints: Rubber gasketed joint forming a watertight seal conforming to ASTM C443.
- D. Manhole Steps: Reinforced polypropylene plastic steps with No. 2 deformed grade steel rod.
- E. Design:
  - 1. Have the manhole sections and top and bottom slabs designed and the detailed drawings prepared by a Professional Engineer, experienced in precast concrete manhole design, who is registered in the Project's state.

## 2.04 PIPE MATERIALS

- A. Reinforced Concrete Pipe (RCP) and Fittings:
  - 1. General Requirement: ASTM C76.
  - 2. Materials: Conform to the requirements of ASTM C76. Profile gaskets shall be synthetic rubber and shall conform to MnDOT Plate 3006.
  - 3. Pipe Joints: Bell shall conform to MnDOT Plate 3006.
  - 4. Pipe Class: As shown on the Drawings.
  - 5. Marking: Each pipe shall be identified with the name of the manufacturer trade name or trademark and code, identification of plant, date of manufacture, and the pipe class and specification design.

## 2.05 TRASH GUARDS

- A. General Requirement: ASTM A153.
- B. Materials: Galvanized steel rods meeting the requirements in ASTM A153.

C. Bar size and configuration as shown on the Drawings.

D. Securely attached to end section.

## 2.06 PIPE TIE RODS

A. HAALA Industries, Inc, or approved equal.

1. Washington County Tie Rod.
2. Standoff Culvert Tie.
3. Hot Dip Galvanized.

## 2.07 RIPRAP

A. General Requirement: Conform to MnDOT Spec. 2511:

1. Riprap Material: Conform to MnDOT Spec. 3601.2.
2. Granular Filter: Conform to MnDOT Spec. 3601.2.D and 3601.2.E.
3. Geotextiles: Conform to MnDOT Spec. 3733, Type 4.
4. Concrete: Conform to MnDOT Spec. 2461.

## 2.08 CONCRETE STOOL GRATE FRAME FOR OFF STREET CATCH BASIN

A. General Requirement: Conform to Standard Detail Plate STO-9.

# PART 3 EXECUTION

## 3.01 GENERAL

A. Locating of public utilities within the project limits in accordance with section 01 31 00 Project Management and Coordination shall be incidental to the project and included in the Total Base Bid.

## 3.02 PREPARATION

A. Trench Excavation and Backfill shall conform to Section 33 05 06.

## 3.03 EXAMINATION

A. Perform televising pipeline inspections in accordance with NASSCO Pipeline Assessment and Certification Program (PACP). When requested provide the require certification for personnel preforming the actual work.

B. Commence test procedures only when pipe and structures are clean and free of dirt, water, or other foreign matter. Pipe cleaning shall be performed in accordance with NASSCO Jetter Code of Practice.

## 3.04 INSTALLATION

A. Connect to Existing Structure:

1. Connect to existing structure at location shown on the Drawings.

2. Core the hole in the structure and saw cut the pipe 2 inches inside the manhole at the pipe's midpoint.
  3. Bulkhead void between outside wall of pipe and edge of opening with mortar and block/brick.
  4. Reconstruct manhole bench/invert.
- B. Connect Existing Pipe to New Structure:
1. Where an existing structure is removed and replaced with a new structure, connect all existing pipes to the new structure.
  2. Remove pipe segments that are damaged during the structure replacement with new pipes of the same size and type, or as directed by Engineer.
  3. Saw cut existing or new pipes 2 inches inside the manhole wall at the pipe's springline.
  4. Bulkhead void between outside wall of pipe and edge of opening with mortar and block/brick.
- C. Connect to End of Existing Pipe:
1. Connect to existing pipe at locations shown on the Drawings.
  2. Locate and expose end of existing pipe.
  3. Remove existing bulkhead or plug and dispose of off Site:
    - a. Take care not to damage existing pipe.
    - b. Any segment of pipe damaged by Contractor shall be replaced with new materials at no expense to the Project.
  4. Utilize standard bell and spigot joint with rubber profile gasket if possible.
  5. If butt connection must be made to existing pipe, construct concrete collar around joint. Collar shall be minimum 12 inches thick in all locations and shall extend a minimum of 12 inches each way of the joint.
- D. Pipe Installation:
1. Lay and maintain pipe appurtenances to the alignment, grade, and location shown on the Drawings and/or staked in the field. No deviation from the Drawing and/or staked alignment, grade, or location is allowed, unless approved by Engineer. Deviation from grade in excess of 0.05 percent (with no intermediate high points, level sections, or reverse invert slope) may be cause for removal and relaying pipe at the Contractor's expense.
  2. General Pipe Installation Procedures:
    - a. Wipe joints clean; apply the manufacturer's recommended lubricant compound over the entire joint surface; center spigot in bell and push spigot home; take care to prevent dirt from entering the joint space; bring pipe to proper line and grade, and secure pipe in place by properly bedding.
  3. Lay pipe upgrade with spigot ends pointing in the direction of flow.
  4. All joints must have a watertight seal conforming to ASTM C443.
  5. Remove all foreign matter or dirt from inside the pipe. Keep the bell and spigot clean during and after installation. Take care to prevent dirt from entering the joint space. Remove any superfluous material from inside the pipe after pipe installation by means of an approved follower or scraper.
  6. Where cut-ins make it impossible to construct bell and spigot joints or when dissimilar pipe materials are joined, a reinforced concrete collar shall be placed completely surrounding the joint or the connection shall be made by using an approved adapter.
  7. Any pipe which has been disturbed after being laid must be taken up, the joint cleaned and properly re-laid as directed by the Engineer.
  8. Trash guards required on upstream and downstream pipes, regardless of pipe size.

9. Where a sewer line outlets to grade or where the line is terminated with a flared end section:
  - a. Fasten the last 3 joints together using 2 bolt fasteners (tie rods) per joint approved and installed on outside of the pipe, regardless of pipe size.
  - b. Tie rods shall be Washington County Tie Rod.
- E. Structures and Appurtenances Installation:
  1. Furnish and install structures in accordance with the Drawings.
  2. Excavate to depth and size as shown in the Drawings.
  3. Structure inverts:
    - a. Construct inverts of manholes and catch basins using a Ready Mix mortar material.
    - b. Construct inverts shaped to the half section of equivalent size pipe conforming to the inlet and outlet pipe so as to allow for a free, uninterrupted flow with all surfaces sloping to the flow line.
  4. Concrete pipes entering manholes:
    - a. End of pipes must be cut with a concrete saw.
    - b. Annular space between the outside of the pipe and opening in the structure shall be filled with mortar on the interior and exterior of the structure. Construct an interior collar/doghouse around the pipe from the wall of the structure to the end of the pipe with mortar.
  5. Steps:
    - a. Locate on the downstream side, except for pipe 24 inches in diameter or greater. Install in the most appropriate place, to provide suitable access.
    - b. Secure and neatly mortar in place 12 - 16 inches on center spacing.
  6. Position vertical wall of the eccentric cone on the downstream side.
  7. On structures with a build that contains more than 1 barrel section, the section immediately below the precast top slab shall be maximum 16 inch height.
  8. Lift holes shall be neatly mortared up.
  9. Remove all debris from Structures, invert and benches prior to final inspection and acceptance.
  10. Remove all water and debris from Sump Manhole Structures, to allow for final inspection and acceptance.
  11. Install Adjustment Rings and Adjust Casting: Conforming to Section 33 05 18.
- F. Construct Manhole Over Existing Pipe:
  1. Construct manhole over existing pipe at locations shown on the Drawings.
  2. Saw cut existing pipe to fit flush with inside wall of new structure.
  3. Seal any openings in manhole.
- G. Riprap:
  1. General: Conform to MnDOT Spec. 2511.
  2. Install Riprap per Standard Detail Plates STO-12 and STO-13 prior to placement of flared end section.
  3. Place 6 inch thick layer of concrete at the midpoint of the Riprap per Detail Plate STO-13.
- H. Bulkhead Pipe:
  1. Bulkhead pipe at locations shown on Drawings with brick, mortar, or concrete block masonry 8 inches thick.

2. Precast concrete plugs may be used in lieu of bulkhead. Plug must fit snugly into pipe opening and be watertight.
- I. Seepage Collar:
  1. Construct at location indicated on Drawings.
  2. Construct per Standard Detail Plate STO-21.
- J. Patch Structure Walls, Doghouse, Invert, or Rings:
  1. Clean areas to be patched by removing debris, loose concrete, and any other foreign materials.
  2. Patch area with mortar to provide smooth patch that seals the structure.
- K. Concrete Stool Grate Frame:
  1. Construct on off street catch basins as shown on the plans or as directed by Engineer.
  2. Construct per Standard Detail Plate STO-9.
- L. Storm Structure Location Marker:
  1. Off street structures shall be marked permanently with the specified sign and sign post as indicated on the plans.
  2. Install sign in accordance with Section 34 41 05.

### 3.05 FIELD QUALITY CONTROL

- A. Scope:
  1. All pipeline testing is considered incidental to the Bid cost of the pipe.
  2. Engineer to observe and verify that all tests and visual inspections have been completed prior to final acceptance.
- B. Cleaning:
  1. Consists of Cleaning the Pipe and Structures:
    - a. If newly installed mains and structures are kept clean during construction, cleaning will not be required.
    - b. If newly installed mains and/or structures become dirty due to negligence of the Contractor, cleaning will be performed at the sole expense of the Contractor.
  2. The bailing or flushing method of cleaning pipe is acceptable only if adequate provisions acceptable to the Engineer for keeping dirt and debris out of the existing sewer system or ponds are employed. Jetting may be required.
  3. Complete prior to final inspection for acceptance.
- C. Required Tests and Inspections:
  1. Infiltration:
    - a. To determine the amount of ground water infiltration into the sewers.
    - b. Test waived if no visible infiltration is observed during the televising inspection.
    - c. Measurement made by means of 90 degree v-notch weirs placed in the lines as directed by the Engineer.
    - d. Measurements taken at the points where in the Engineer's opinion the flow of water in the sewer is greater than the maximum allowable leakage.
    - e. Maximum Allowable Rate of Leakage: Not more than 100 gallons per mile per inch diameter per day.

- f. Tests may be taken between individual manholes and the infiltration in any given line must not exceed the specified maximum allowable rate.
  - g. Method of Measurement: Measurement of time for a predetermined volume of flow to occur.
- 2. Lamping will be performed by Engineer to:
  - a. Verify installation is to true line and grade.
  - b. Verify installed pipe is structurally sound.
  - c. Verify there are no broken or deflective pipes.
  - d. Verify that joints are all home.
  - e. Verify structures conform to specified requirements.
- 3. Trench Backfill Compaction:
  - a. The Owner shall have an independent testing laboratory perform, as minimum, the following tests. The location of the tests shall be determined by the Engineer:
    - 1) 1 density test for every 300 feet of trench at varying depths (per each 10 foot depth increment).
- 4. Alignment:
  - a. Horizontal deviation in excess of 3 inches from back of curb to back of structure opening (for casting and rings) is not allowed. Deviation in excess of 3 inches will be cause for reinstallation of structure at the Contractor's expense.
  - b. The vertical and horizontal alignment of the casting adjustment shall be approved by the Engineer prior to constructing the 10 foot concrete curb and gutter transition on either side of the casting.

### 3.06 STORM SEWER CLOSED CIRCUIT TELEVISION INSPECTION

- A. Televising:
  - 1. Newly installed storm sewer segments must be in a clean and ready condition prior to the television inspection.
  - 2. Immediately clean any lines found to be dirty prior to televising. Costs for all such cleaning shall be the responsibility of the Contractor.
  - 3. Provide sufficient water to run through the new storm sewer system prior to televising lines to be able to distinguish any sags or alignment problems with the pipe.
  - 4. Personnel completing televising must be PACP certified.
  - 5. Final acceptance of the video report will require the pipe to be clean as a new pipe.
  - 6. Provide video and report to Owner.
- B. General:
  - 1. Provide a camera that will be self-propelled and will have the ability to tilt up and down and pan left and right. The camera must provide color images.
  - 2. Speed shall not exceed 30 feet per minute.
- C. Defects:
  - 1. Immediately correct any defects, faulty joints, cracked pipe, or other deficiency noted by the television inspection.
  - 2. A plan for repair shall be presented to and approved by the Owner and Engineer prior to the repair occurring.
  - 3. Re-televising all corrected pipe runs after correction.

4. Any costs associated with correction and re-televising of the sewer system will be paid by the Contractor.

### 3.07 PROTECTION

- A. Plug all entrances and openings to the system promptly and before suspension of operations at the end of working day.
- B. Secure manholes and structures immediately after completion or before suspension of operations at the end of working day with castings or suitable alternative device.
- C. Mark all structures to avoid being hit by construction or vehicular traffic.
- D. Mark each plug location with 4 inches by 4 inches timbers to above grade to aid in marking the future connection.
- E. Establish erosion control measures as per Section 01 57 13.

**END OF SECTION**



## Manhole/Catch Basin Field Elevation Report

|                            |                           |
|----------------------------|---------------------------|
| Project Name:              | Date:                     |
| Owner:                     | Owner Project No:         |
| Bolton & Menk Project Rep: | Bolton & Menk Project No: |
| Contractor:                | Contractor's Rep:         |

**Contractor is required to complete this form before payment of structure is approved.**

| Structure Location |                   |                          |                                  | Structure Type<br>(circle one) | Design Invert<br>(from Plan) | As-Constructed Invert Elevation * | Difference<br>( + / - ) | Comments /<br>Quality Assurance |
|--------------------|-------------------|--------------------------|----------------------------------|--------------------------------|------------------------------|-----------------------------------|-------------------------|---------------------------------|
| Structure No.      | Structure Station | Direction of invert/flow | Street Name or Easement Location |                                |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |
|                    |                   |                          |                                  | MH<br>CB<br>Apron              |                              |                                   |                         |                                 |

**\* - As-Constructed Invert Elevation provided by Contractor from measurements taken in the field to nearest 0.01'**

## SECTION 33 41 00

### SUBDRAINAGE

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Storm sewer service and drain tile.
- B. Related Sections:
  - 1. Section 33 05 06 - Trenching and Backfilling.
  - 2. Section 33 31 14 - Sanitary Sewerage Services.

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Perforated PVC Drain Tile, SDR 26: This Bid Item shall be used for installation of Drain Tile for subgrade drainage within street areas. Measurement will be by linear feet of pipe along its axis, according to size, and with no regard to intervening fittings. Payment shall include all costs related to furnishing and installing the drain tile pipe per Standard Detail Plate STO-14, including geotextile, aggregate and fittings:
    - a. It should be noted that due to the estimation required for Drawing preparation, the quantity of drain tile actually constructed may vary significantly from those given in the Bid Form.
    - b. The Engineer reserves the right to increase or decrease the Drain Tile quantity, and associated Connect Drain Tile to Structure quantity, with no change to the Contract Unit Price. No additional compensation will be considered or allowed for changes to the estimated quantities or for the deletion of any of these Bid Items in their entirety.
  - 2. Connect Drain Tile to Existing Structure: Measurement will be per each. Payment will include all costs related to core drilling a hole in the storm sewer structure, making the connection, and patching as specified.
  - 3. Storm Sewer Service: Measurement will be by linear feet of pipe actually installed, according to size and type, as measured along the axis of the pipe with no regard to intervening fittings. Payment at the Unit Price shall be compensation in full for all work and costs, including excavation, pipe, fittings, backfill, and trench compaction:
    - a. Connecting to an existing hole in a precast structure will be considered incidental to the installation of the service pipe.
    - b. PVC plug for the end of the service is considered incidental.
  - 4. Pipe Bedding for the PVC Storm Sewer Service Pipe: Measurement and payment shall be as per Section 33 05 05.
  - 5. Supplying and installing required markers at service ends shall be considered incidental to the service installation.
  - 6. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

### 1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  - 1. D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds.
  - 2. D3034 - Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
  - 3. D3212 - Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
  - 4. F477 - Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- B. Minnesota Department of Transportation "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.):
  - 1. 3149 - Granular Material.
  - 2. 3733 - Geosynthetic Materials.

### 1.04 SEQUENCING AND SCHEDULING

- A. Install sanitary sewer, water main, storm sewer, and all pipe deeper than the services prior to the installation of the services.
- B. Install draintile after completion of aggregate backfill and prior to gravel base placement.

## PART 2 PRODUCTS

### 2.01 PIPE AND FITTINGS

- A. Drain Tile: PSM Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings:
  - 1. General: Pipe and fittings shall be made of compounds conforming to ASTM D1784 in accordance with the material requirements of ASTM D3034.
  - 2. Design: Integral bell gasketed joint and a minimum wall thickness conforming to SDR 26.
  - 3. Joints: Elastomeric gasket joints providing a water-tight seal conforming to ASTM D3212 or ASTM F477.
  - 4. Perforations: Circular on 3-1/4 inches by 6-1/4 inches centers.
    - a. Hole size: maximum of 3/8 inch and a minimum of 3/16 inch, arranged in 4 rows along the full length of the pipe.
- B. Storm Sewer Service: Poly (Vinyl Chloride) (PVC) Schedule 40 Plastic Pipe conforming to Section 33 31 14.

### 2.02 BEDDING MATERIAL FOR STORM SEWER SERVICE

- A. Granular Material meeting MnDOT Spec. 3149.2.B.1, as modified herein:
  - 1. 100-percent passing, by weight, the 1 inch sieve.

### 2.03 DRAIN TILE AGGREGATE

- A. Coarse Filter Aggregate conforming to MnDOT Spec. 3149.2.H, as modified herein:
  - 1. Excluding crushed carbonated quarry rock, crushed concrete, and salvaged bituminous.

## 2.04 GEOSTNTHETIC MATERIALS

- A. Geotextile wrap shall conform to MnDOT Spec. 3733, Type 1.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. The location and alignment of the subsurface drains and outlets will be determined in the field by the Engineer, based on subsurface conditions.

### 3.02 DRAIN TILE INSTALLATION

- A. Conform to details on Drawings.
- B. Construct at locations and elevations determined by Engineer or as shown on the Drawings.
- C. Pipe Bedding: drain tile aggregate.
- D. Grade: Unless otherwise specified or shown on the Drawings, the grade of pipes shall not be flatter than 0.50-percent grade or match the street grade.
- E. Plug upstream end of the drain pipe.
- F. Sections of the drain pipe shall be firmly joined.
- G. Place pipe so that the perforations are in the position indicated on the Drawings or designated by the Engineer.
- H. Connections: Connect to hole provided in precast structure. Seal joint with mortar. Core drill connection to structure where precast hole is not provided.
- I. Compaction: Conform to Section 33 05 06.
- J. Flushing: After installation has been completed, pipes shall be flushed with sufficient water to remove material that has entered the pipes during construction.

### 3.03 STORM SEWER SERVICE INSTALLATION

- A. Construct at locations and elevations determined by Engineer or as shown on the Drawings.
- B. Pipe Bedding: Bedding material.
- C. Plug upstream end of pipe.
- D. Sections of the pipe shall be firmly joined.
- E. Connections: Connect to hole provided in precast structure. Seal joint with mortar. Core drill connection to structure where precast hole is not provided.

F. Compaction: Conform to Section 33 05 06.

3.04 FIELD QUALITY CONTROL

A. Do not backfill trench until the pipe has been inspected and approved by the Engineer.

B. Compact all trench backfill with mechanical means by "Quality Compaction Method."

3.05 PROTECTION

A. Mark each storm sewer service plug location with 4 inch by 4 inch timbers to above grade to aid in marking the future connection.

**END OF SECTION**

**SECTION 34 41 05**  
**TRAFFIC SIGNS AND DEVICES**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Signs, signposts, and hardware.
  - 2. Double wooden barricades.
- B. Related Sections:
  - 1. Section 02 41 13 - Selective Site Demolition.

**1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 1. Sign Panel: Measurement will be per square foot by type. Payment shall include sign panel and sheeting. Signs are considered rectangular for the purpose of measurement except measurement for triangular shaped sign panels shall be the actual area of the triangle.
  - 2. Install Sign Panel: Measurement will be per each. Payment shall include all hardware, posts, stringers, equipment, and labor necessary to install each sign panel at the identified location in place as specified:
    - a. There will be no extra compensation for posts, regardless of length or required configuration.
    - b. There shall be no extra compensation for post installations in bituminous or concrete surfaces.
  - 3. Sign Post Flange Channel: Measurement will be per Each. Payment shall include the post and installation at locations as identified.
  - 4. Sign Post for Street Name Blades: Measurement will be per Each. Payment shall include post and installation at locations as identified. City will provide and install name blades on supplied post.
  - 5. Permanent Barricade: Measurement will be per each. Payment will include all costs related to furnishing and installing the barricade per the Standard Detail Plate STR-32.
    - a. The future road extension sign, if required, will be paid separately as a new sign under the appropriate Bid Item.
  - 6. City Monument Post: Measurement will be per each. Payment will include pick-up and installing the open space marker per the Standard Detail Plate STR-40.
  - 7. All other Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

**1.03 REFERENCES**

- A. Minnesota Department of Transportation "Standard Specifications for Construction", 2020 Edition (MnDOT Spec.):
  - 1. 2564 - Traffic Signs and Devices.
  - 2. 3352 - Signs.

- B. Minnesota Manual on Uniform Traffic Control Devices (MMUTCD).
- C. Minnesota Department of Transportation Standard Signs Manual.

#### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Upon delivery to the Site, store the materials at least 10 feet away from any construction or traveled roadways areas. Vehicles and equipment shall not be stored, even temporarily, in the buffer zone of the work area or where it would be so close to moving traffic that it is in the judgment of the Engineer a potential hazard to motorists.

#### 1.05 SEQUENCING AND SCHEDULING

- A. Notify the Engineer at least 48 hours prior to commencing the work under this Section of the Contract for required construction staking.
- B. Schedule an onsite pre-signing meeting with the Owner, Engineer, and Signing Subcontractor (if appropriate) a minimum of 24 hours prior to the installation of any signing.
- C. Schedule private utility locates through Gopher State One. Call program prior to sign post installation.
- D. Contact Washington County for all signs within the County right-of-way that will require temporary or permanent removal.
- E. Install signs within 7 calendar days after placement of the pavement adjacent to the sign locations.

### **PART 2 PRODUCTS**

#### 2.01 MATERIALS

- A. Sign Material:
  - 1. Sign Panel Base Material: Sheet aluminum conforming to the material requirements of MnDOT Spec. 3352.2.A.1.
  - 2. Sign Face Material:
    - a. Traffic Sign Panels: Reflective sheeting conforming to the requirements of MnDOT Spec. 3352.2.A.3. Diamond Grade DG3, Electro cut or silk screen only, no digital printing.
    - b. Street Name Blade Signs: reflective sheeting, Diamond Grade DG3, Electro cut or silk screen only, no digital printing.
  - 3. Sign Legend Material for Signs: "Direct Applied" conforming to the requirements of MnDOT Spec. 3352.2.A.6.
- B. Sign Panels:
  - 1. Sign panels shall be fabricated and hole punched in accordance with the standard drawings in the MnDOT Standard Signs Manual.
  - 2. Public street name blade signs shall be provided by and installed by the City of Cottage Grove.
  - 3. Private street name blade signs shall be blue with white lettering.

- C. Sign Post for Name Blades:
1. 12 feet long.
  2. Round tubular aluminum or hot dipped galvanized steel.
  3. Outside diameter 2-3/8 inches
  4. Wall thickness 0.109 inches.
- D. Sign Posts Flange Channel:
1. Traffic Signs:
    - a. Boulevard Installation:
      - 1) All sign posts shall conform to MnDOT Spec. 3401 and to MNDOT Standard Plan "Type C&D Sign Structural Details". Posts to be 2 sections with the following weight:
        - a) Bottom Section: 3.0 lbs./ft.
        - b) Top Section: at least 2.5 lbs./ft. and not greater the weight of the bottom post.
      - 2) The appropriate length of the upper post shall be determined by the Contractor to meet the construction requirements of the above ground stated references at each specific location.
    - b. Concrete Median Installation:
      - 1) Telespar square tube system
      - 2) 2 inches square
      - 3) 12 gauge galvanized steel
      - 4) Length: 9 feet, or as determined by Contractor as necessary to meet the construction requirements of the references and this section at each specific sign location:
        - a) Telespar Post Part No. 16125 (9 foot)
  2. Anchor System:
    - a. Concrete Median Location – Kleen Break Anchor:
      - 1) Kleen Break Surface Mount Anchor (Model No. 425), with receiving coupler, shear bolt and locking wedge.
      - 2) Mount to surface using Galvanized Simpson Strongtie Titan HD Concrete anchor bolt 1/2 inch x 4 inch (1/2 inch bolt shank):
        - a) 3D Specialties (Part No. 55820).
        - b) Minimum embedded depth of 3-5/8 inches.
        - c) Allowable tension load shall be 2,270 lbs. when installed in 3000 psi concrete.
        - d) Allowable shim of up to 1/2 inch.
        - e) Longer bolt is acceptable to maintain the 3-5/8 inch minimum embedment depth when shimming.
      - 3) Use 2 inch square X 9 foot, 12 gauge Telespar posts (Part No. 16125) with a 1-3/4 inch square X 3 foot, 12 gauge Telespar post (Part No. 15520) insert in the bottom (to cover bumper strike area).
      - 4) Follow Kleen Break Model 425, Drawing No. XKBSM425-20-CI, for installation instructions.
    - b. Hardware:
      - a. Sign Panel: No rivets:
        - 1) 5/16 – 18 by 2-1/2 inch galvanized carriage bolts.
        - 2) 7/8 inch OD Nylon washer, 1/32 inch thick.
        - 3) 3/8 inch stainless steel washer.
        - 4) 5/16 – 18 galvanized hex nuts.
      - b. Anchor System: Boulevard Location:



- 1) 5/16 inch diameter medium corner bolt with nut. Galvanized. (Telespar Part No. 56202).

E. Permanent Barricade:

1. Per Standard Detail Plate STR-32.

F. City Monument Post:

1. Monument posts shall be purchased from the City of Cottage Grove directly and picked up from Cottage Grove Public Works facility at 8635 West Point Douglas Road, Cottage Grove MN 55016.

## 2.02 SOURCE QUALITY CONTROL

- A. All material certification shall conform to MnDOT Spec 2564.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Unless otherwise noted or modified herein, all sections of MnDOT Spec. 2564, all sections of MnDOT's Standard Signs Manual, and Chapter 6 of MMUTCD shall apply.
- B. The fabrication of all signs and devices shall conform to MnDOT Spec. 2564 and the latest edition of the MMUTCD and the MnDOT Standard Signs Manual.
- C. The sign number designation indicated on the Drawings shall comply with applicable requirements of MMUTCD and MnDOT Standard Signs Manual.

### 3.02 CONSTRUCTION

- A. Sign locations shown on the Drawings are only approximate. The final locations shall be determined in the field by the Engineer. Have all underground utilities located prior to installing all signposts. Provide Engineer 48 hour notice prior to sign installations to allow for adequate staking time:
1. Standard location for traffic sign posts shall be a 6 feet behind the back of curb or edge of traveled road.
  2. The lowest point of any traffic sign panel installed shall be 7 feet above finish grade at the point of installation. The lowest point of any street name sign installed shall be 10 feet above finish grade at the point of installation.
- B. Fabricate, hole punch, and mount sign panels in accordance with the standard drawings in the MnDOT Standard Signs Manual. Date the back of each newly installed sign panel with a theft warning sticker stating the month and year using inventory/I.D. stickers approved by the Owner.
- C. Install nylon washers between the bolt and the sign face (sheeting) to protect face. Do not over tighten bolts to the point where the sign sheeting separates from the sign backing, which would be cause for rejection and replacement at no additional cost to the Contract. There shall also be a stainless steel washer between the nylon washer and the bolt head.

- D. Post Anchorage:
  - 1. Within concrete median: Install Surface Mount Anchor and bolts as shown on Standard Detail Plate STR-36.
- E. Permanent Barricade:
  - 1. Install at locations shown on Drawings and per Standard Detail Plate STR-32.
  - 2. Barricades to span entire roadway.
  - 3. If shown on Drawings or required by Engineer, attach "Future Road Extension Sign" per Standard Detail Plate STR-31.
  - 4. If shown on Drawings or required by the Engineer, attach "end of road marker", 9 button OM4-2 red on black sign.
- F. Provide traffic control to safely install signs and to safely guide traffic through the work area during installation.
- G. Sign Post Flange Channel:
  - 1. The bottom section of each sign post shall be mounted into the ground to a minimum depth of 3-1/2 feet.
  - 2. The lower section of the post shall be at least 30 inches above ground to allow for a 12 inch splice and a minimum clearance of 18 inches from the ground to the bottom of the top section of the post.
  - 3. The splice of the upper and lower section posts shall be made with 2 – 5/16 inch stainless steel bolts with nylon insert lock nuts placed in the top and bottom holes of the overlap splice.
  - 4. Where 2 or more single post signs are mounted side by side, they shall be reinforced laterally by at least 2 post sections, bolted at each post, and located approximately at the quarter points.
- H. Sign Post for name blades shall be driven 4 feet into the ground with 8 feet exposed above grade.

### 3.03 FIELD QUALITY CONTROL

- A. All work shall conform to MnDOT Spec. 2564.

### 3.04 CLEANING

- A. Clean any sign after installation if requested by the Engineer.

## END OF SECTION

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SUMMARY OF WORK

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Work Included in Contract Documents
  - 2. Contract Information
  - 3. Work Under Other Contracts
  - 4. Work Sequence
  - 5. Contractor Use of Premises
  - 6. Products Ordered in Advance
  - 7. Owner Furnished Products
  - 8. Work Restrictions

**1.02 WORK INCLUDED IN CONTRACT DOCUMENTS**

- A. Description of the Project:
  - 1. The project consists of directionally drilling residential water service pipes from an existing water service curb box in the street right of way to inside of seven residential homes in the Goodview Neighborhood as directed by the Engineer. The water services are to be connected to the existing curb box near the street and to the interior plumbing of the home to provide municipal water supply inside of the home under this contract.

**1.03 CONTRACT INFORMATION**

- A. Type of Contract: Owner will award a Single Prime Contract.
- B. Scope of Contract:
  - 1. This Contractor is solely responsible for the Work.
  - 2. The Contract will include:
    - a. Contract Forms:
      - 1) Agreement
      - 2) Certificates
    - b. Conditions of the Contract:
      - 1) General Conditions
      - 2) Supplementary Conditions
    - c. Specifications:
      - 1) Division 1 - General Requirements
      - 2) Applicable Technical Sections
    - d. Addenda
  - Contract Modifications

**1.04 WORK UNDER OTHER CONTRACTS**

- A. Other Work at Site:
  - 1. Owner reserves the right to let other separate contracts for Work of the Project, or to pursue other Work at the Site with its own personnel.
  - 2. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.
  - 3. Coordinate the Work of this Contract with work performed under separate contracts.

- B. Work Not Included:
  - 1. Work not included is either marked "NIC," or "by others," on Drawings or is noted in each section of Specifications.
  - 2. Provide all labor and materials required unless so specifically noted or marked.
  - 3. Install Work indicated to be furnished by others or Owner unless specifically stipulated to be furnished and installed by others or Owner.

#### **1.05 WORK SEQUENCE**

- A. Coordinate construction schedule and operations with Owner and Engineer.
- B. Implement construction as to maintain vehicle access to residential homes at all times unless authorized by Engineer
  - 1. Authorization shall be granted two weeks prior to vehicle access interruption to allow affected residents to be notified in a timely manner.

#### **1.06 CONTRACTOR USE OF PREMISES**

- A. Confine operations at Site to areas permitted under contract or as directed by Engineer.
- B. Conform to site rules and regulations affecting Work while engaged in Project construction.
- C. Existing Structures:
  - 1. Keep existing driveways and adjacent streets clear and available to public in accordance with Owner's or local authority's requirements.
  - 2. Repair damages caused to existing public and private property and structures due to operations of Contractor to the satisfaction of, and at no additional cost to Owner.
- D. Construction personnel may park only in areas designated by the Owner.
- E. Damaged Property:
  - 1. Patch and/or clean existing improvements and restore damage of property on, or adjacent to Site occasioned by this Work, including, but not limited to, lawns, walks, curbs, pavements, roadways, structures, and utilities which are cut or damaged by operations and are not designated for removal, relocation, or replacement in the course of construction.
  - 2. Public Property or Utilities: Comply with laws, ordinances, rules, regulations, standards, orders of utility owner or any public authority having jurisdiction.
  - 3. Provide written acceptance of restoration work by authority or Owner.
- F. Product Requirements:
  - 1. Confine stockpiling of materials or equipment and location of storage sheds and offices to areas approved by engineer.

#### **1.07 PRODUCTS ORDERED IN ADVANCE**

- A. Storage:
  - 1. Products will not be allowed to be stored at the Site prior to commencement of construction activities.
  - 2. Contractor shall store such items as directed by Owner.

#### **1.08 OWNER FURNISHED PRODUCTS**

- A. Items furnished by Owner will be identified in the Specification sections.
- B. Owner's Responsibilities:
  - 1. Arrange for, and deliver Owner reviewed Shop Drawings, Product Data and samples to Contractor.
  - 2. Arrange and pay for product delivery to Site.
  - 3. At time of delivery, inspect products jointly with Contractor.

4. Submit claims for transportation damage and replace damaged, defective or deficient items.
  5. Arrange for manufacturer's warranties, inspections and service.
- C. Contractor's Responsibilities:
1. Review Owner reviewed Shop Drawings, Product Data and samples.
  2. Receive and unload products at Site; inspect for completeness or damage, jointly with Owner.
  3. Provide support systems to receive Owner's equipment.
  4. Protect Owner-furnished items from damage during storage and handling, including damage from exposure to the elements.
  5. Install and otherwise incorporate Owner-furnished items into the Work.
  6. Repair or replace items damaged after receipt, except that damage caused by Owner's employees or agents.

## **1.09 WORK RESTRICTIONS**

- A. On-Site Work Hours:
1. Normal business working hours of 7:00 a.m. to 7:00 p.m. Monday through Friday.
  2. Weekend Hours: Saturday from 9:00 a.m. to 5:00 p.m.
  3. Legal Holidays:
    - a. Memorial Day – May 25
    - b. Independence Day – July 4
    - c. Labor Day – September 7
  4. Hours for Utility Shutdowns: 8:00 a.m. to 5:00 p.m. (Weekdays)
  5. Hours for Noisy Activity: 7:00 a.m. to 7:00 p.m. on Weekdays, and 9:00 a.m. to 5:00 p.m. on Weekends.

## **PART 2 PRODUCTS**

Not Used

## **PART 3 EXECUTION**

Not Used

**END OF SECTION**

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**SECTION 01 54 10**  
**EQUIPMENT RENTAL**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section includes furnishing labor and/or specific equipment with operators for work as directed by the Engineer which is not covered under other bid items. The following equipment and labor specification applies to exploratory digging work deemed necessary by the engineer due to unforeseen conditions associated with the installation of water services, service connections at the home, and abandoning of wells.
- B. Method of Measurement:
  - 1. Equipment (Tractor Backhoe for Exploratory Service Excavation):
    - a. Measure by time in hours.
    - b. Measure only actual working time and travel time within the project limits.
  - 2. Labor (Labor for Exploratory Service Excavation):
    - a. Measure by time in hours for each laborer.
    - b. Measure only actual working time and travel time within the project limits.
- C. Basis of Payment:
  - 1. Contract price for equipment includes:
    - a. One operator
    - b. Tractive equipment as required
    - c. Accessories as specified
  - 2. Contract price for labor includes:
    - a. Hand tools as required
    - b. Contractor supervision
  - 3. Payment for labor and equipment shall be at the Contract unit price as listed on the Bid Form. All associated work items shall be considered incidental.

**1.02 REFERENCES**

- A. MnDOT 2123 - Equipment Rental
- B. Related Sections:
  - 1. 33 10 00 Water Utilities
  - 2. 33 12 12 Water Services

**1.03 PERFORMANCE REQUIREMENTS**

- A. All equipment and accessories shall be fully operational and in good mechanical condition.
- B. All equipment operated on bituminous or concrete surfaces shall be equipped with rubber tires or smooth street plates.
- C. Tractive equipment shall be rated and have sufficient power to effectively operate the drawn equipment.
- D. Operators shall be fully proficient in the operation of the specified equipment.



## **PART 2 PRODUCTS**

### **2.01 EQUIPMENT**

- A. Provide the following equipment which meets the specific requirements and includes the accessories listed:
  - 1. Tractor Backhoe:
    - a. Rubber Tire Tractor Backhoe
    - b. Bucket size - 1 C.Y.
    - c. Bucket size shall not exceed manufacturer's recommendation for the shovel
    - d. Minimum 13,000 lb machine

## **PART 3 EXECUTION**

Not Used

**END OF SECTION**

## SECTION 33 14 18R

### INTERIOR PLUMBING CONNECTION

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes connection of new water service to existing interior plumbing system
- B. The work includes the following:
  - 1. Disconnect existing well pressure tank (Contractor to remove and dispose).
  - 2. Disconnect all electrical services related to well pressure tank AND existing well.
  - 3. Connect new supplied water service from penetration in floor or wall to existing interior plumbing.
  - 4. Install water meter supplied by city.
  - 5. Install PRV if directed to do so by the Engineer.
  - 6. Connect to existing lawn irrigation system.
  - 7. Coordination of any required inspections with the City of Cottage Grove.
  - 8. Coordination and scheduling of access to the property with Engineer.
- C. Related Sections:
  - 1. Section 33 14 18 - Water Services

##### 1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment:
  - 1. Connect Interior Plumbing to Service: Measurement and payment will be by HOUR. Payment will be by the HOUR for any labor done on-site. Materials will be paid under the HOUR bid item. Any additional service connections that are currently connected within the structure to interior plumbing must be connected as part of this Bid Item. This includes all labor and material associated with connecting new water service to existing interior plumbing excluding the following:
    - a. Residential Pressure Reducing Valve: Labor and materials to install a Residential Pressure Reducing Valve (PRV) are NOT included with the interior connection fee. This will be paid for by EACH as a separate Bid Item. Cost includes all parts and installation operations of the PRV.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. All plumbing materials shall be approved for use under the Minnesota Residential Plumbing Code.
- B. All plumbing materials shall be approved for use by the City of Cottage Grove.
- C. Water meters shall be supplied by the City of Cottage Grove.
- D. All electrical materials shall be approved for use under the Minnesota Electrical Code.
- E. PRVs shall be the Honeywell DS06 Series DialSet® Pressure Regulating Valve or approved equal.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify all connection materials are compatible with new water service and existing plumbing.
- B. Coordinate connection schedule with water service utility contractor, Engineer, City and property owner.
- C. Permits for electrical and plumbing work shall be obtained prior to commencing individual installations.
- D. All work shall comply with the Minnesota Plumbing Code.
- E. All work shall comply with the Minnesota Electrical Code.

### **3.02 CONNECTION OPERATIONS**

- A. All plumbing work shall be performed by a plumber licensed to work in the state of Minnesota.
  - 1. All work shall conform to all applicable state and federal health regulations.
  - 2. All work shall be communicated with and governed by the City of Cottage Grove Building Inspection Department.
  - 3. Existing water pressure in interior plumbing system shall be documented by the contractor prior to disconnection.
  - 4. All irrigation systems shall be verified to have all required backflow prevention prior to connection. System shall conform to current plumbing standards prior to connection.
- B. All electrical work shall be performed by an electrician licensed to work in the state of Minnesota.
- C. Disconnect pressure tank if applicable. The pressure tank shall be removed and disposed of by the contractor. The property owner is allowed to keep their pressure tank upon request.
- D. Disconnect electrical service to the existing pressure tank AND existing well.
- E. Connect new water service line after it has been successfully cleaned and tested.
- F. Install PRV or booster pump system if so directed by the Engineer.
  - 1. PSI shall be adjusted to match previous water pressure for interior plumbing system.
- G. Disconnect existing Granular Activated Carbon (GAC) filter from plumbing if one is present in the home. GAC filter and associated equipment shall be moved as necessary to accommodate connection of interior plumbing to service. GAC filters and associated equipment is the property of Culligan. Owner's representative will coordinate with Culligan for removal of GAC filter from the home.
- H. Areas shall be cleaned and restored to previous condition after completion of work.

## **END OF SECTION**

## **SECTION 33 14 18 R**

### **WATER SERVICES**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

- A. Section Includes:
  - 1. Construction of water service pipe, corporation stops, curb stops and boxes, and all appurtenances.
- B. Related Sections:
  - 1. Unless specifically modified in this section, all work shall conform to the requirements of Section 33 14 18 of the City of Cottage Grove's Standard Specifications for Utility and Street Construction, dated January, 2024.

##### **1.02 PRICE AND PAYMENT PROCEDURES**

- A. Measurement and Payment:
  - 8. Directionally drilled HDPE water service pipe shall be paid by EACH installation of each size. The installation shall include:
    - a. All labor and materials to install HDPE water service line from curb box to inside structure terminating at least 2 feet inside floor or wall penetration.
    - b. Connection to curb box.
    - c. Installation of tracer wire and Snake Pit tracing box or equivalent
    - d. Removal and repair of access hole in residential structure created for water service pipe installation
    - e. All other operations and materials necessary for the construction of water service line.
    - f. No compensation will be made for broken equipment.

#### **PART 2 PRODUCTS**

##### **2.01 SERVICE PIPE**

- C. HDPE water service pipe and fittings 3-inches and smaller shall conform to requirements of AWWA C901, current edition, "Polyethylene (PE) Pressure Pipe and Tubing, ½ In. (13 mm) through 3 In. (76 mm), For Water Service" and ASTM D2239 or D3035. Pipe shall be PE4710 compound conforming to ASTM D3350 minimum cell classification 445574C-CC3, DR 9, shall have a minimum working pressure of 250 psi at 73 deg. F. and have outside diameter similar to iron pipe size. Joints shall be butt heat fusion type, ASTM F2620. Joints may be socket fused type for service pipes 3 inches and smaller. Ends shall be plain for butt fusion joining as specified the Standard Specifications for High Pressure Gas Mains, Transmission Line, and service Installation, Welding Qualifications and Qualifications for Joining PE Pipe.
  - 1. Pipe shall be new or stored for a period of time that does not exceed the manufacturer's recommended maximum period of exposure, regardless of the method of storage.

2. The DR number and pressure rating specified above shall be considered a minimum. Provide stronger class pipe if required by loads imposed by directional drilling pulling operation.
  3. Shop drawings for HDPE pipe must specify minimum allowable pipe deflection radius.
  4. Reference Standards ASTM D638, D790, D3035, D3261, D3350, F714, F2206 and F2620.
- D. HDPE Electrofusion Fittings: All electrofusion fittings shall be manufactured by Plason USA, George Fischer Central Plastics Company, Integrity Fusion Products or ISCO: AND shall meet the following requirements:
1. Couplings used for water service mains and services (4 inches and larger) shall be electrofusion type. Couplings used for services (3 inches and smaller) shall be electrofusion or socket fused type.
  2. Any other brand of electrofusion fittings shall be submitted to the Engineer for approval a minimum of 2 weeks prior to any bids. Regardless of any pre-bid approvals or subsequent shop drawings approvals, the City reserves the right to reject any electrofusion fitting (including damages due to poor handling, storage or workmanship) based solely upon appearance noted during an on-site inspection.
  3. Electrofusion fittings must be stored in the manufacturer's sealed shipping bag until incorporation into the work. All electrofusion fittings found in torn, ripped or cut-open bags will immediately be unacceptable and not used in the work.

E. Tracer Wire:

Tracer wire shall be SoloShot Extra-High Strength CCS Tracer Wire

## **PART 3 EXECUTION**

### **3.04 HORIZONTAL DIRECTIONAL DRILLING**

A. General

This work shall consist of the installation of an underground pipe using the horizontal directional drilling method indicated on the contract drawings. Products installed under this section include water main pipe and fittings, water service pipe and fittings.

a. Definitions

i. Horizontal Directional Drilling (HDD)

Method of trenchless construction producing continuous bores, using a surface launched, remotely steerable, electronically monitored drilling tool controlled from a mobile drilling frame, and including a field power unit, mud mixing, storage and recycling system, and mobile spoils extraction system.

ii. HDD Subcontractor

Firm engaged in the construction of underground sanitary sewer, water or gas lines and with demonstrated competency using HDD methods of installation of pipe.

b. System Description

The drilling system differs from the micro-tunneling, auger boring or pipe jacking equipment in that operations are performed from the surface: large pits to place and align equipment are not necessary. The drilling frame is sited and aligned to bore a pilot tunnel that conforms to the planned line and grade of pipe. The drilling frame is typically set back from an access pit that has been dug at the location of a tie-in, connection, manhole (or other appurtenance), or other location: and a high pressure/low volume fluid-jet toolhead that uses an inert, environmentally acceptable mixture of bentonite clay and water is launched and guided to the

correct invert elevation and line required at the manhole (or other appurtenance). This is called the pilot hole. A real-time guidance system is attached behind or within the toolhead to measure inclination, roll and azimuth. Upon reaching the receiving pit, the toolhead is removed and a reamer with the product pipe attached is joined to the drill string and pulled back through the tunnel created by the pilot hole. For some pipe sizes and soil conditions, the Contractor may also introduce cement into the stabilizing mud mix. A vacuum spoils extraction system removes any excess spoils generated during the installation.

c. Performance Requirements

- i. Contractor shall provide a horizontal directional drilling system compatible with the subsurface conditions and the size, type, depths and lengths of pipe to be installed.
- ii. Contractor shall provide all labor, materials, equipment and incidentals necessary to install pipe by horizontal directional drilling as shown on the Drawings and as specified herein.
- iii. Contractor shall provide all survey layout, inspection and record-keeping incidental to the drilling pipe installation.
- iv. This procedure is applicable to the installation of sanitary sewer and sewer services, water main and water services and gas main and gas services.

d. Submittals

- i. Submit product data for the drilling fluid including a description of the following items:
  - a. Manufacturer
  - b. Components
  - c. Special Precautions
  - d. Manufacturers recommended method of mixing and application
  - e. Manufacturers recommendation for storage and handling
  - f. Material Safety Data Sheet (MSDS)
- ii. Certificate of Compliance:  
Submit Certificates of Compliance for products and materials.
- iii. Equipment and Construction Procedures:  
Submit working drawings, manufacturer's data sheets and written procedures describing in detail the equipment, tools and materials to be used along with the proposed method of product pipe staging and installation. This will include, but not be limited to, size, capacity and setup requirements of equipment; location and sizing of drilling and receiving pits; dewatering if applicable; type of cutting tool head; backreaming tool types and sizes; method of monitoring and controlling line and grade; locations and sizes of product jointing and staging areas; type of equipment for joining pipe; and time requirements of joint fusion. The Contractor shall detail a description of line and grade control and a viable method to eliminate accumulative error due to the inclinometer (pitch or accelerometer) and demonstrate that method in the field prior to commencing drilling operations.
  1. Grouting techniques to be used for over-excavation, if any, including equipment, pumping procedures, grout types and mixtures.
  2. Proposed procedures, materials and equipment for lubricating the exterior of the pipe during pulling.

3. Details of spoil removal system, including equipment type, number and disposal location.
4. Proposed methods, materials and equipment for removing and clearing obstructions so that the HDD can advance forward.
5. Furnish compliance submittals showing all fabrication and construction details for the directional drilling installation of the pipe.
6. The Contractor shall submit a construction schedule with starting and completion dates for each of the procedure tasks.
7. If the Contractor determines that modifications to the methods and equipment as stated in the submittal are necessary during construction, the Contractor shall submit a revised plan.

iv. Contractor Qualifications:

- Submit the documentation showing five years of HDD and references for at least three jobs of similar magnitude and detail completed within the past five years. Information must include, but is not limited to, date and duration of work, location, pipe information, project owner information (including a name and phone number), and the contents of the pipeline.
- Submit references for any subcontractors that may be used on site.

v. Record Drawings:

After completion of pilot hole drilling, submit tabulation of pilot hole coordinates as required under "Pilot Hole" paragraph below.

e. Qualifications of the Directional Drilling Contractor

The HDD contractor shall be trained and certified to operate the Horizontal Directional Drilling equipment with at least five years of experience in directional drilling, obtained over the last five years. Perform HDD operations under the constant direction of a drilling supervisor who shall remain on site and be in responsible charge throughout the drilling operation. The supervisor shall have supervised directional drilling and a minimum of 10,000 linear feet of pipe. Submit a list of field supervisory personnel and boring machine operator(s) and their experience with HDD operations. At least one of the field supervisors listed must be at the site and responsible for all work at all times when HDD operations are in progress, and both that person and the HDD machine operator shall have been employed with the HDD specialty contractor for a minimum continuous period of one year immediately prior to this work. HDD specialty subcontractor shall not mobilize to the site until the resumé of the Contractor's field supervisory personnel and boring machine operator have been reviewed by the Engineer.

f. Delivery, Storage and Handling

Check the materials upon delivery to assure that proper material has been received. Store drilling fluid components in accordance with manufacturer's recommendations and out of the effects of inclement weather.

g. Materials

Bentonite for drilling fluid shall be high quality Wyoming bentonite composed primarily of sodium montmorillonite.

h. Drilling Site

Additional work space and access may be acquired by Contractor only with approval of Owner and applicable property owners. Expense of acquiring additional work space shall be

borne by Contractor. Site access, clearing, grading, and preparation necessary for construction operations shall be performed as required.

i. Quality Assurance

Fusing of polyethylene pipe shall be done by qualified fusers. Certification of personnel and fusing of pipe shall comply with the requirements for gas lines in the Standard Specifications for High Pressure Gas Mains, Transmission Line, and Service Installation, Welding Qualifications and Qualifications for Joining PE Pipe.

B. Execution

1. Joining Pipe

Pipe fusing shall be done by qualified fusers. Certification of personnel and fusing of pipe shall comply with the requirements for gas lines in the Standard Specifications for High Pressure Gas Mains, Transmission Line, and Service Installation, Welding Qualifications and Qualifications for Joining PE Pipe, included in these specifications. All sanitary sewer main and water main shall be butt fused. Sanitary sewer and water branch or tap service pipe of any diameter shall also be butt fused.

2. Monitoring

Contractor shall at all times provide and maintain instrumentation which will accurately locate pilot hole position in X, Y, and Z axis relative to ground surface. Drilling fluid flow rate and pressure shall also be monitored. Engineer and Owner shall have access to this data at all times during the operation.

Prior to the start of any directional drilling, the Contractor shall pothole all proposed utility and service line crossing locations to confirm the depth of the main. The Contractor shall maintain the excavation or reopen the excavation to verify that pilot hole, prereaming, and back-reaming drilling operations did not interfere or damage existing facilities. In addition to all crossing facilities either shown on the Plans and/or as located in the field as a result of the GSOC locate request, the Contractor should anticipate potholing for crossing private water, sewer and gas services to homes and businesses. All costs associated with monitoring shall be incidental to pertinent pipe bid items.

3. Pilot Hole

A pilot hole shall be drilled along the path shown on Drawings to the following tolerances:

- a. Elevation: Plus 0.5 feet, minus 0.5 feet for low pressure sanitary sewer and plus 0 feet, minus 1 foot for water main and gas main.
- b. Alignment: Plus or minus 1 foot for low pressure sanitary sewer and plus or minus 2 feet for water main and gas main.
- c. Curve Radius: minimum 250 feet or pipe manufacturer's recommendation, whichever is greater.
- d. Entry Point: At the location shown on Drawings.
- e. Exit Point: Pilot hole shall penetrate ground surface within plus or minus 10 feet of alignment shown on Drawings and within plus 20 feet and minus 0 feet of length shown on Drawings. In all cases, pipe shall remain within easement and right-of-way areas.

Contractor shall plot actual horizontal and vertical alignment of pilot bore at intervals not exceeding 25 feet for low pressure sanitary sewer and 50 feet for water main and gas main. This "as-built" plan and profile shall be updated as pilot bore is advanced.



In all cases, right-of-way restrictions shall take precedence over the tolerances listed above. Regardless of the tolerance achieved, no pilot hole will be accepted if it will result in any or all of pipeline being installed in violation of right-of-way restrictions. In all cases, concern for adjacent utilities and structures shall take precedent over the tolerances listed above. Specification of tolerances does not relieve Contractor from responsibility for safe operations or damage to adjacent utilities and structures.

After completion of pilot hole drilling, Contractor shall provide a tabulation of coordinates to Engineer, referenced to drilling entry point, which accurately describes location of pilot hole.

#### 4. Reaming and Casing Pipe Pull-Back Operation

General: Upon completion of pilot hole drilling, hole shall be enlarged by reaming and preassembled pipeline pull section shall be installed in hole. Pipeline shall be preassembled to provide one continuous pulling operation. Pipeline shall be temporarily capped before pulling operations to prevent any drilling fluid, water, or debris from entering pipeline.

Prereaming: Prereaming operations shall be conducted at discretion of Contractor. All provisions of this specification relating to simultaneous reaming and pulling back operations shall also pertain to prereaming operations.

Backreaming: Backreamer must be of large enough diameter to insure a competent tracer wire can also be pulled back with the pipe.

Pulling Loads: The maximum allowable tensile load imposed on the pipeline pull section and used for setting weak-link devices for polyethylene pipe shall be in accordance with ASTM F 1804 "Standard Practice for Determining Allowable Tensile Load for Polyethylene (PE) Gas Pipe During Pull-In Installation." The maximum allowable tensile loads for polyethylene pipe shall be within the values shown in the following table for pull durations up to 12 hours and material temperature of 100°F. For longer pull durations or higher pipe material temperatures, these values will be recalculated by the Engineer. If more than one value is involved for a given pull section, the lesser value shall govern. The Contractor shall maintain accurate records of pull forces at all times for review by the Engineer. The "weak link" may be a pulling head or next smaller diameter pipe (same SDR) than the pipe being pulled. See table below.

**MAXIMUM ALLOWABLE TENSILE LOAD FOR MDPE AND HDPE PIPE****(material temperature @ 100°F, pipe under tension ≤ 12 hours)**

| NATURAL GAS PIPE (MDPE) |        |        | WATER & SEWER PIPE (HDPE) |      |         |
|-------------------------|--------|--------|---------------------------|------|---------|
| SIZE                    | SDR    | LBS.   | SIZE                      | SDR  | LBS.    |
| 1/2" CTS                | 7.0    | 135    | 3/4" IPS                  | 9.0  | 367     |
| 1" CTS                  | 9.3    | 343    | 1" IPS                    | 9.0  | 582     |
|                         |        |        | 1 1/4" IPS                | 9.0  | 925     |
|                         |        |        | 1 1/2" IPS                | 9.0  | 1,213   |
| 2" IPS                  | 11.0   | 1,316  | 2" IPS                    | 9.0  | 1,892   |
| 3" IPS                  | 11.5   | 2,746  | 3" IPS                    | 9.0  | 4,103   |
| 4" IPS                  | 11.5   | 4,539  | 4" DIPS                   | 11.0 | 6,472   |
| 6" IPS                  | 11.5   | 9,839  | 6" DIPS                   | 11.0 | 13,374  |
| 8" IPS                  | 11.5   | 16,675 | 8" DIPS                   | 11.0 | 23,003  |
|                         |        |        | 10" DIPS                  | 11.0 | 34,607  |
| 12" IPS                 | 11.0 * | 46,673 | 12" DIPS                  | 11.0 | 48,940  |
|                         |        |        | 14" DIPS                  | 11.0 | 65,749  |
|                         |        |        | 16" DIPS                  | 11.0 | 85,036  |
|                         |        |        | 20" DIPS                  | 11.0 | 131,041 |
|                         |        |        | 24" DIPS                  | 11.0 | 186,968 |

\* HDPE pipe for 12" IPS gas main only

**Torsional Stress:** A swivel shall be used to connect pipeline pull section to reaming assembly to minimize torsional stress imposed on section.

**Pull Section Support:** Pull section shall be supported as it proceeds during pull-back so that it moves freely and pipe is not damaged.

**External Collapse Pressure:** Pull section shall be installed in reamed hole in such a manner that external pressures are minimized. Any damage to pipe resulting from external pressure during installation shall be the responsibility of Contractor.

**Buoyancy Modification:** Buoyancy modification shall be used at the discretion of Contractor. Any buoyancy modification procedure proposed for use shall be submitted to Engineer for acceptance. No procedure may be used which has not been reviewed by Engineer. Contractor will be responsible for any damage to the pipeline resulting from buoyancy modification.

## 5. Drilling Fluids

**General:** Drilling fluids shall be in compliance with environmental regulations.

**Recirculation:** Contractor shall employ his best efforts to minimize excess drilling fluid by recirculating surface returns. This shall include, but not be limited to, provision of a solids control system sized and configured to remove spoil from drilling fluid surface returns so that fluid may be returned to active system without hindering drilling progress.

**Inadvertent Returns:** Contractor shall employ his best efforts to maintain full annular circulation of drilling fluids. Drilling fluid returns at locations other than entry and exit points shall be minimized. In the event that annular circulation is lost, Contractor shall take steps to restore circulation. If inadvertent surface returns of drilling fluids occur, they shall be immediately contained with hand placed barriers (hay bales, sandbags, silt fences, etc.), and collected using pumps, where practicable. If amount of surface return is not great enough to be collected, affected area shall be flushed with fresh water and fluid shall be allowed to dry and dissipate naturally. If amount of surface return exceeds that which can be contained with hand-placed barriers, small collection sumps (less than 5 cubic yards) may be used. If

amount of surface return exceeds that which can be contained and collected in small sumps, drilling operations shall be suspended until surface return volumes can be brought under control. Clean-up of inadvertent returns shall be the responsibility of Contractor.

Disposal: Disposal of excess drilling fluids and spoil shall be the responsibility of Contractor and shall be conducted in compliance with environmental regulations, right-of-way and workspace agreements, and permit requirements. Drilling fluid and spoil disposal procedures proposed for use shall be submitted to Engineer for acceptance. No procedure may be used which has not been reviewed by Engineer.

#### 6. Damage to Surfaces

The contractor will be responsible for restoration of damage caused by drilling, pulling pipe or drilling equipment to surrounding street, parking lot and driveway pavement, sidewalk and curb and gutter and turf by the contractor's equipment at no cost to the Department.

#### 7. Locating Wire

The locating wires shall be pulled along with the pipe. The Contractor shall be responsible for the installation of a locating wire with electrical continuity throughout the entire length. The locating wire shall be made accessible as shown on the Standard Details or the Contract Drawings. The cost of furnishing and placing locating wire shall be considered incidental to the pipe.

#### 8. Connection To Existing Structure

- a. The contractor shall be responsible for coordinating service installation schedules to existing structures with both the Engineer and property owner.
- b. The contractor shall be responsible for any damage to private property during installation.
- c. The contractor shall use preventative measures to prevent bringing dirt and debris into the structure during installation.
- d. Any concrete floor or wall removed for water service installation shall be done in a manner to prevent concrete dust or debris spreading to other areas of the home.
- e. The water service pipe shall be vertically plumb from the top of the basement floor to the termination point 2 ft above the floor. Fusible fittings may be used to adjust the alignment below, at or just above the basement floor. Mechanical fittings shall not be used to adjust the alignment at the basement floor.
- f. The contractor is responsible for repairing the floor penetration area with like material in a manner which is allowed under the Minnesota Residential Building Code. This work is considered incidental to the service pipe installation.
- g. The contractor is responsible for repairing the wall penetration area with like material in a manner which is allowed under the Minnesota Residential Building Code. **Wall penetrations must be sealed by a contractor specializing in foundation repair** or approved by Engineer.
- f. The contractor shall coordinate location of water service entry into the existing structure with Engineer prior to construction. Location shall be determined by existing interior plumbing and any other physical obstacles that may affect constructability and use.

- g. Should conditions prevent the installation of the service line into the structure as determined by the Engineer, the service line will be installed to the existing residential well for that property to connect to the existing water line serving the structure

C. Testing

1. Pressure and Leakage Test

Pressure and leak test of carrier piping shall be as specified in section 33 10 00 of the Standard Utility Specifications for the City of Cottage Grove

2. Testing and Locating Wire Continuity

Test locating wire continuity after installation of each section of continuous tracer wire. The Contractor shall be responsible for the installation of at least one locating wire with electrical continuity throughout the entire length. No payment shall be made for a pipe with a tracer wire that has not passed a continuity test.

D. Measurement and Payment

Pipe placed by horizontal directional drilling shall be paid for under the applicable utility. No payment shall be made for a pipe with a tracer wire that has not passed a continuity test.

E. Locating Wire For Directional Drilled Installations

1. Locating wire shall be installed on all HDPE and PVC water and sewer (sanitary or storm) mains and services. Refer to natural gas specifications for locating wire requirements for natural gas installations.
  2. The tracer wire shall be blue coated 12 gauge extra high strength copper clad steel tracer wire for directional drilling. Insulation for sanitary and storm sewer shall be green. Insulation for water main shall be blue. The wire shall be tested in accordance with ASTM B-1 and D-1248 and spark tested at 7500 VAC. The minimum breaking strength of the wire shall be at least 1700 pounds; wire that has less than this breaking strength shall not be accepted. To minimize splices, wire shall be supplied on spools of not less than 500 feet.
  3. Tracer wire shall remain continuous to the greatest extent possible. Splices in the copper tracer wire should be made with solder, split bolt type connectors or other type approved by the engineer. Splices in the stainless steel tracer wire should be made with split bolt type connectors or other type approved by the engineer. Wire nuts or clip type connectors shall not be used. All connections shall be protected to make them watertight. Waterproofing material shall be 3M 2200 or equal.
  4. Locating wires shall bridge curb stops and connect to copper service piping with a brass connector to ensure the water service is traceable from the main to the receiving residential structure.
1. Locating wires shall terminate inside the dwelling a minimum of 12" above the floor. Wire shall be fastened to the water service line with appropriate fastener.

**END OF SECTION**





COTTAGE GROVE, MINNESOTA  
2024 GOODVIEW AVE WATER SERVICE INSTALLATION  
Quote Form  
SEH NO. 177864 - COTTG  
6/17/2024

| Capra's Utilities, Inc Quote |                                                | UNIT | UNIT COST   | TOTAL              |                |
|------------------------------|------------------------------------------------|------|-------------|--------------------|----------------|
|                              |                                                |      |             | ESTIMATED QUANTITY | ESTIMATED COST |
| LINE NO.                     | ITEM                                           |      |             |                    |                |
| 1                            | Mobilization                                   | LS   | \$2,500.00  | 1                  | \$2,500.00     |
| 2                            | Topsoil Borrow (CV)                            | CY   | \$75.00     | 35                 | \$2,625.00     |
| 3                            | 1" HDPE Service Trenchless - Curb Box To House | EACH | \$10,475.00 | 7                  | \$73,325.00    |
| 4                            | 2" HDPE Service Trenchless - Curb Box To House | EACH | \$22,725.00 | 1                  | \$22,725.00    |
| 5                            | Plumbing Labor For Interior Connection         | HR   | \$135.00    | 44                 | \$5,940.00     |
| 6                            | Electrician Labor For Interior Connection      | HR   | \$125.00    | 22                 | \$2,750.00     |
| 7                            | Residential Pressure Reducing Valve            | EACH | \$395.00    | 6                  | \$2,370.00     |
| 8                            | Irrigation Repair                              | LF   | \$15.00     | 150                | \$2,250.00     |
| 9                            | Hydro Seeding With Mulch (Type 25-151)         | SY   | \$5.95      | 700                | \$4,165.00     |
| 10                           | Rock Excavation                                | CY   | \$125.00    | 25                 | \$3,125.00     |
| 11                           | Exporatory Excavcation                         | HR   | \$125.00    | 10                 | \$1,250.00     |
|                              |                                                |      |             | Total              | \$123,025.00   |

BID PREPARED BY:  
MIKE CAPRA

*Mike Capra*

PRESIDENT  
CAPRA'S UTILITIES INC.



COTTAGE GROVE, MINNESOTA  
2024 GOODVIEW AVE WATER SERVICE INSTALLATION  
Quote Form  
SEH NO. 177864 - COTTG  
5/17/2024

| LINE NO. | ITEM                                           | UNIT | UNIT COST | TOTAL              |                |
|----------|------------------------------------------------|------|-----------|--------------------|----------------|
|          |                                                |      |           | ESTIMATED QUANTITY | ESTIMATED COST |
| 1        | Mobilization                                   | LS   | 24350.00  | 1                  | 24350.00       |
| 2        | Topsoil Borrow (CV)                            | CY   | 147.00    | 35                 | 5145.00        |
| 3        | 1" HDPE Service Trenchless - Curb Box To House | EACH | 7280.00   | 6 7                | 51016.00       |
| 4        | 2" HDPE Service Trenchless - Curb Box To House | EACH | 12520.00  | 1                  | 12520.00       |
| 5        | Plumbing Labor For Interior Connection         | HR   | 540.00    | 40 44              | 23760.00       |
| 6        | Electrician Labor For Interior Connection      | HR   | 325.00    | 20 22              | 7150.00        |
| 7        | Residential Pressure Reducing Valve            | EACH | 464.00    | 6                  | 2784.00        |
| 8        | Irrigation Repair                              | LF   | 24.00     | 150                | 3600.00        |
| 9        | Hydro Seeding With Mulch (Type 25-151)         | SY   | 5.00      | 700                | 3500.00        |
| 10       | Rock Excavation                                | CY   | 59.00     | 25                 | 1475.00        |
| 11       | Exporatory Excavcation                         | HR   | 792.00    | 10                 | 7920.00        |
|          |                                                |      |           | Total              |                |
|          |                                                |      |           | 143,220.00         |                |

Bid total assumes add'l service that  
was added.

Andy Hackett  
Miller Excavating Inc.



# City Council Action Request

7.L.

|                      |                                                                                                                                                                                                                           |    |                                                                |    |                                  |    |                       |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------|----|----------------------------------|----|-----------------------|
| Meeting Date         | 6/26/2024                                                                                                                                                                                                                 |    |                                                                |    |                                  |    |                       |
| Department           | Public Works                                                                                                                                                                                                              |    |                                                                |    |                                  |    |                       |
| Agenda Category      | Action Item                                                                                                                                                                                                               |    |                                                                |    |                                  |    |                       |
| Title                | Low Zone Water Treatment Plant Change Order # 1                                                                                                                                                                           |    |                                                                |    |                                  |    |                       |
| Staff Recommendation | Approve Change Order #1 in the amount of \$450,285.33 for the Low Zone Water Treatment Plant project, increasing the contract amount from \$38,182,800, to \$38,633,085.33.                                               |    |                                                                |    |                                  |    |                       |
| Budget Implication   | \$450,285.33, paid for by 3M Settlement funds                                                                                                                                                                             |    |                                                                |    |                                  |    |                       |
| Attachments          | <table><tr><td>1.</td><td>Memo - Low Zone Water Treatment Plant Change Order 1_6-26-2024</td></tr><tr><td>2.</td><td>Change Order #1 Item Description</td></tr><tr><td>3.</td><td>LZWTP Change Order #1</td></tr></table> | 1. | Memo - Low Zone Water Treatment Plant Change Order 1_6-26-2024 | 2. | Change Order #1 Item Description | 3. | LZWTP Change Order #1 |
| 1.                   | Memo - Low Zone Water Treatment Plant Change Order 1_6-26-2024                                                                                                                                                            |    |                                                                |    |                                  |    |                       |
| 2.                   | Change Order #1 Item Description                                                                                                                                                                                          |    |                                                                |    |                                  |    |                       |
| 3.                   | LZWTP Change Order #1                                                                                                                                                                                                     |    |                                                                |    |                                  |    |                       |





**To:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**From:** Ryan Burfeind, P.E., Public Works Director

**Date:** June 20, 2024

**Re:** Low Zone Water Treatment Plant Project – Change Order #1

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### **Background/ Discussion**

The Low Zone Water Treatment Plant project was awarded at the August 2, 2023 City Council meeting to Rice Lake Construction Group in the base bid, contract amount of \$38,182,800. As the Council will recall, the base bid for the project also included costs for work for the Utility and Engineering building (\$774,017). The Low Zone Water Treatment Plant portion of the project costs, subtracting the costs for the Utility and Engineering building, is \$37,408,783, which is fully funded by the 3M Settlement as an identified project in the Conceptual Drinking Water Supply Plan.

To meet the required time frame to get the plant commissioned by Spring of 2025, the project was put out to bid while under review by the Minnesota Department of Health (MDH) and the Department of Labor and Industry (DOLI). Both agencies forwarded review comments that resulted in changes to the design, materials and/or equipment. The required changes constitute the majority of the costs of the change order. There are also several deducts and other miscellaneous additional cost changes included. The net cost of the additions and deducts results in the change order amount of \$450,285.33, which is fully funded by the 3M Settlement. The cost of this change order is well within the project contingency that was approved with the grant agreement, which is in the amount of \$1,712,200. The MPCA has been updated on the costs and reasoning behind the change order. There are a few additional changes to the treatment plant from the MDH and DOLI plan review comments, however the costs are still being determined with the contractor and will be included in a later change order.

With this change order, the total contract amount for this project would increase to \$38,633,085.33.

### **Recommendation**

It is recommended that the City Council approve Change Order #1 in the amount of \$450,285.33 for the Low Zone Water Treatment Plant project, increasing the contract amount from \$38,182,800, to \$38,633,085.33.

|               |                                     |       |               |
|---------------|-------------------------------------|-------|---------------|
| To:           | Ryan Burfeind                       | From: | Brian Lintgen |
|               | Cottage Grove Public Works Director |       | Minneapolis   |
| Project/File: | 193805365                           | Date: | June 7, 2024  |

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**Reference: Low Zone WTP - Change Order No. 1**

Below is a summary of Change Order No. 1 for the Cottage Grove Low Zone Water Treatment Plant. Detailed information on each change order is attached.

- 1.1 Remove GAC filter to waste through clearwells: Based on the Minnesota Department of Health (MDH) plan review, the filter to waste line could not be routed through clearwells. This deducted costs from the overall project.
- 1.2 Add filter to waste connections at Granular Activated Carbon (GAC) tanks: In response to MDH comments on 1.1 above, a direct connection from GAC effluent (clean water) to the waste line was provided to allow for forward flushing of the vessels. Double valves isolate the finished and waste line.
- 1.3 Upsize GAC waste piping from 8" to 10" and 12" pipe: To allow for better flow and lower velocities during backwashing, forward flushing, and multiple vessel flushing, the waste piping size was increased.
- 1.4 Add backwash air break elements: In response to MDH comments, air break elements were added for each pretreatment backwash pipe and the combined GAC backwash pipe as they enter the backwash tanks. Five total air breaks.
- 1.5 Extend south clearwell to pump chamber pipe: Extended the 30" connection from the south clearwell to pump chamber to limit short circuiting of the clearwell water when the north clearwell is out of service.
- Add 16" butterfly valves (BV) to each combined GAC effluent pipe: Added valves to better isolate the finished water from each set (north or south) of GAC tanks.
- Added plugs and blind flanges: Sleeves are installed to accommodate future expansion in each clearwell. Plugs/blind flanges were not included for these in the plans and needed to be added. Steel plates were utilized in places where appropriate to reduce material costs. A credit was provided for the wall hatches that were removed early in the construction phase.
- 1.6 Pretreatment vessel coating: The pretreatment vessel coating was revised to meet new NSF 61 requirements. There was no cost for this change.

**Reference: Low Zone WTP - Change Order No. 1**

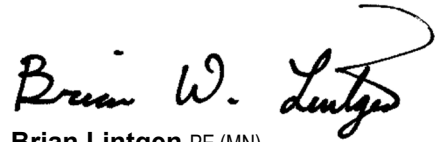
- 1.7 Site work revisions: In response to the Department of Labor and Industry (DOLI) comments, changes were made to the site piping, specifically the sanitary sewer and building drains. Pipes were slopes were increased and materials were revised to meet the plumbing code.
- 1.8 Plumbing revisions: In response to the DOLI comments, changes were made to the building plumbing, specifically the venting methods for floor drains and floor drain locations. A block wall was revised to accommodate additional plumbing.
- 1.9 Electrical revisions: In response to MDH comments, the fan switch configuration for the Chlorinator room was revised. Starters were added to fans that did not have them on the bid plans. Temperature sensors were switched from high to low temp, and some locations were revised.
- 1.10 Chlorinator room exhaust fan: Initial MDH comments would have required an exhaust fan that could provide 60 air changes per hour in the chlorinator room. In working with MDH, it was determined that this fan upsizing was not needed. No change to the contract.
- Water stop: Additional water stop material was cast into the north clearwell and pump chamber to accommodate future clearwell expansion to the north.
- 2.1 Overflow modifications: The original overflow piping design accommodated the plant and discharged to storm sewer ponds. Upon further review, the pump chamber, clearwell, and backwash tank overflows were raised to provide an extra level of reliability in the event that storm pond overflows were plugged or compromised. The revisions included stainless steel weir boxes that replaced the flange & flare fittings and upsized pump chamber piping. Also included is an expansion of the north overflow swale and the addition of a second outlet to the swale. The actual change order amount does not include increases and decreases to unit price items.
- 2.1 Reinforcement: Additional slab and wall reinforcement was required in the pretreatment room because of higher vessel weights that was planned for in design.
- 2.1 Engineer trailer: An engineer's trailer was added to the jobsite for Stantec to work out of when onsite. This should have been included in the original bid.
- 2.2 Garage door: The east garage door for GAC deliveries was increased from 16' tall to 24' tall. This will accommodate GAC tank installation in a vertical position, making for easier and safer installation of the vessels after the roof is installed (vessels from Well 2) and any future vessel moves.
- 2.3 Backwater valve vault: The backwater valve for the sanitary sewer leaving the building needs to be accessible for maintenance. Since the valve was several feet under the slab, a sump pit/manhole was installed. The structure was grouted in for rigidity.
- 2.6 Pipe painting: No price has been provided yet for painting the addition process pipe that was added. To be included on a future change order.
- Camera power: Costs for the electrician to wire in the City's camera on their pole near the engineer's trailer.

**Reference:** Low Zone WTP - Change Order No. 1

Please reach out with any questions.

Regards,

**STANTEC CONSULTING SERVICES INC.**

A handwritten signature in black ink that reads "Brian W. Lintgen". The signature is fluid and cursive, with a large loop at the end of the last name.

**Brian Lintgen** PE (MN)

Project Manager

Mobile: (320) 333-6825

brian.lintgen@stantec.com

Attachment: Change Order No. 1

C: Ryan Capelle, Stantec; Lee Mann, Stantec

## CHANGE ORDER NO.: 1

Owner: City of Cottage Grove, Minnesota Owner's Project No.:  
Engineer: Stantec Consulting Services, Inc. Engineer's Project No.: 193805365  
Contractor: Rice Lake Construction Group Contractor's Project No.: 23-33  
Project: Low Zone Water Treatment Facility Improvements  
Contract Name:  
Date Issued: 6/7/2024 Effective Date of Change Order: 6/7/2024

The Contract is modified as follows upon execution of this Change Order:

Description:

**See Attachment A (Summary of Changes)**

Attachments:

**See Attachment B (Backup Information)**

| Change in Contract Price                                                                      | Change in Contract Times                                                                                                                              |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Original Contract Price:<br>\$ 38,182,800.00                                                  | Original Contract Times:<br>Substantial Completion: June 1, 2025<br>Ready for final payment: September 30, 2025                                       |
| <del>[Increase]</del> <del>[Decrease]</del> from previously approved Change Order:<br>\$ 0.00 | <del>[Increase]</del> <del>[Decrease]</del> from previously approved Change Order:<br>Substantial Completion: 0<br>Ready for final payment: 0         |
| Contract Price prior to this Change Order:<br>\$ 38,182,800.00                                | Contract Times prior to this Change Order:<br>Substantial Completion: June 1, 2025<br>Ready for final payment: September 30, 2025                     |
| <del>[Increase]</del> <del>[Decrease]</del> this Change Order:<br>\$ 450,285.33               | <del>[Increase]</del> <del>[Decrease]</del> this Change Order:<br>Substantial Completion: June 1, 2025<br>Ready for final payment: September 30, 2025 |
| Contract Price incorporating this Change Order:<br>\$ 38,633,085.33                           | Contract Times with all approved Change Orders:<br>Substantial Completion: June 1, 2025<br>Ready for final payment: September 30, 2025                |

Recommended by Engineer (if required)

Accepted by Contractor

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Authorized by Owner  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved by Funding Agency (if applicable)  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

# **ATTACHMENT A**

## **Change Order Summary**

Cottage Grove Low Zone Water Treatment Plant  
Change Order No. 1 - Attachment A

| No.  | Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Reason                                                                                                                                                                      | Add           | Deduct         | Price Determined |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------|------------------|
| 1.1  | Removal of filter to waste pipe and associated fittings through clearwell chamber                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MDH comments                                                                                                                                                                |               | \$ (24,476.52) | \$ (24,476.52)   |
| 1.2  | Addition of two filter to waste line connections to re-establish wasting capabilities from GAC vessels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MDH comments                                                                                                                                                                | \$ 21,811.34  |                | \$ 21,811.34     |
| 1.3  | Upsizing of GAC backwash waste piping and associated fittings from 8" to 10" and 12"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MDH comments and improved operations                                                                                                                                        | \$ 80,691.10  |                | \$ 80,691.10     |
| 1.4  | Addition of five total backwash air break elements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MDH comments                                                                                                                                                                | \$ 18,227.84  |                | \$ 18,227.84     |
| 1.5  | Extension of south clearwell to pump chamber bypass piping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Improved water quality                                                                                                                                                      | \$ 14,208.66  |                | \$ 14,208.66     |
|      | 16" GAC butterfly valves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Improved operations and ability to isolate vessels                                                                                                                          | \$ 7,790.00   |                | \$ 7,790.00      |
|      | Clearwell plugs, blindflanges                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Plan updates                                                                                                                                                                | \$ 40,615.00  | \$ (2,500.00)  | \$ 38,115.00     |
| 1.6  | Revise pretreatment pressure vessel paint to Tnemec Series 22 Epoxoline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MDH comments                                                                                                                                                                | \$ -          |                | \$ -             |
| 1.7  | Revisions to sanitary and storm sewer pipe elevations, manhole depth, and pipe materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DLI comments                                                                                                                                                                | \$ 80,138.08  | \$ (41,671.48) | \$ 38,466.60     |
| 1.8  | Revisions to plumbing drainage piping and venting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DLI comments                                                                                                                                                                | \$ 52,725.00  |                | \$ 52,725.00     |
| 1.9  | Provide FVNR starters in MCC for fans EF-2, EF-3, EF-4, EF-5, EF-6, EF14, and additional fan EF-15. Control EF15 from light switches shown on sheet E202 and sheet E802. Use two spare FVNR starters (shown on sheet E701) and add 5 additional starters. Refer to attached updated sheet E701. Move Chlorine gas sensor AE2310 from Chlorine storage room to Chlorinator Room. 3.Change high temperature alarm thermostats in Fluoride Room, Sodium Permanganate Room, Sodium Bisulfite Room, and Chlorinator Room to low temperature alarm thermostats, as shown on sheet E502. Add low temperature alarm thermostat in Chlorine Storage Room as shown on sheet E502. | MDH comments, plan updates                                                                                                                                                  | \$ 29,921.18  |                | \$ 29,921.18     |
| 1.10 | Increase exhaust fan size in Chlortainer room and increased louver and building opening sizes, revisions to Chlortainer room light and fan switches, revisions to fire protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MDH comments                                                                                                                                                                | \$ -          |                | \$ -             |
|      | Water stop for future clearwells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Future planning                                                                                                                                                             | \$ 2,530.00   |                | \$ 2,530.00      |
|      | Taxes and markups for 1.1 to 1.10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                             | \$ 56,415.80  |                | \$ 56,415.80     |
| 2.1  | Overflow Revisions (North Clearwell, South Clearwell, Pump Chamber, Backwash): Raise overflow pipes. Provide stainless steel weir boxes in place of flange and flare. Provide all 30" pipe from pump chamber to discharge structure. Adjust overflow structure locations and elevations. Expand overflow swale. Add second outlet to overflow swale. Move STMH 213 north and modify connecting pipes. Clarification provided on Backwash Tank wall openings for tank connection purposes (no additional payment). Pretreatment room floor slab reinforcement upsizing. Engineer's trailer.                                                                              | Revisions to provide additional overflow storage, improved overflow clearances, and to accommodate larger future plant flows as to eliminate future changes.                | \$ 115,034.00 | \$ (21,424.00) | \$ 93,610.00     |
| 2.2  | Increase height of Door D116D (overhead coiling door on east side of Filter Room) to 24 feet tall. Shorten corresponding precast pannel over door.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Allows for GAC vessels to be rolled into the building upright. Simplifies Well 2 vessel installation, future vessel movements, and provides for safer rigging environments. | \$ 10,986.00  |                | \$ 10,986.00     |
| 2.3  | Provide backwater valve vault. Encase in concrete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Allows for improved access to backwater valve for servicing.                                                                                                                | \$ 7,686.00   |                | \$ 7,686.00      |
|      | Camera mounting onsite on Vinco pole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | City camera to look at the site.                                                                                                                                            | \$ 1,577.33   |                | \$ 1,577.33      |

Totals: \$ 540,357.33 \$ (90,072.00)

Net Total: \$ 450,285.33

# **ATTACHMENT B**

**Change Order Proposals**





22360 County Road 12  
PO Box 517  
Deerwood, MN 56444  
218-546-5519  
[ricelake.org](http://ricelake.org)

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DEERWOOD | MONTICELLO

Change Order Proposal #: 001

June 7th, 2024

Brian Lintgen, PE  
Stantec  
3717 23rd Street South  
St. Cloud MN 56301-5094

Re: Cottage Grove Low Zone Water Treatment Facility Improvements

Brian:

We propose to furnish labor, material, and equipment to complete Change Order 001R1 – Combined Design Changes:

All for the sum of:     \$336,426.00

Clarifications: Item 1.6 has removed from CO 01 and is not included  
Item 1.10 has removed from CO 01 and is not included  
Additional Coatings have not been included, cost to be included on future change order.

Reference the attached itemized proposal and feel free to reach out with any comments.

Sincerely,  
RICE LAKE CONSTRUCTION GROUP

Chad Napstad  
Project Manager

Enc

Cc: 2333 Cottage Grove LZWTP  
Superintendent: Jack Boelter



## CHANGE ORDER PROPOSAL

RLCG PROJECT #: 23-33  
 PROJECT NAME: Cottage Grove Low Zone Water Treatment Plant  
 DATE: 6/7/2024  
 COP: 1

| DESCRIPTION                                 | QTY     | UNIT      | LABOR  |           |              | MATERIAL     |               | SUBCONTRACTOR<br>TOTAL | EQUIPMENT<br>TOTAL | LINE | TOTAL          |                                 |
|---------------------------------------------|---------|-----------|--------|-----------|--------------|--------------|---------------|------------------------|--------------------|------|----------------|---------------------------------|
|                                             |         |           | HOURS  | \$ RATE   | TOTAL        | RATE         | TOTAL         |                        |                    |      |                |                                 |
|                                             |         |           |        | \$ -      | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$0.00         |                                 |
|                                             |         |           |        | \$ -      | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ -           |                                 |
| Rice Lake                                   |         |           |        |           | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ -           |                                 |
| - Supervision (REMOVED PER STANTEC)         | 0.00    | HR        | 0.00   | \$ 110.00 | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ -           | (REMOVED PER STANTEC)           |
| - 1.1 Material                              | -1.00   | LS        |        | \$ -      | \$0.00       | \$ 20,391.52 | (\$20,391.52) | \$ -                   | \$ -               |      | \$ (20,391.52) |                                 |
| - 1.1 Labor                                 | -1.00   | LS        | -43.00 | \$ 95.00  | (\$4,085.00) | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ (4,085.00)  |                                 |
| - 1.2 Material                              | 1.00    | LS        |        | \$ -      | \$0.00       | \$ 17,156.34 | \$17,156.34   | \$ -                   | \$ -               |      | \$ 17,156.34   |                                 |
| - 1.2 Labor                                 | 1.00    | LS        | 49.00  | \$ 95.00  | \$4,655.00   | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ 4,655.00    |                                 |
| - 1.3 Material (Breakout Included)          | 1.00    | LS        |        | \$ -      | \$0.00       | \$ 67,296.10 | \$67,296.10   | \$ -                   | \$ -               |      | \$ 67,296.10   | Breakout included               |
| - 1.3 Labor                                 | 1.00    | LS        | 141.00 | \$ 95.00  | \$13,395.00  | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ 13,395.00   |                                 |
| - 1.4 Material                              | 1.00    | LS        |        | \$ -      | \$0.00       | \$ 14,617.84 | \$14,617.84   | \$ -                   | \$ -               |      | \$ 14,617.84   |                                 |
| - 1.4 Labor                                 | 1.00    | LS        | 38.00  | \$ 95.00  | \$3,610.00   | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ 3,610.00    |                                 |
| - 1.5 Material                              | 1.00    | LS        |        | \$ -      | \$0.00       | \$ 11,168.66 | \$11,168.66   | \$ -                   | \$ -               |      | \$ 11,168.66   | (REVISED PER STANTEC)           |
| - 1.5 Labor                                 | 1.00    | LS        | 32.00  | \$ 95.00  | \$3,040.00   | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ 3,040.00    | (REVISED PER STANTEC)           |
| - D303 16" GAC BFV's Material               | 1.00    | LS        |        | \$ -      | \$0.00       | \$ 6,840.00  | \$6,840.00    | \$ -                   | \$ -               |      | \$ 6,840.00    |                                 |
| - D303 16" GAC BFV's Labor                  | 1.00    | LS        | 10.00  | \$ 95.00  | \$950.00     | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ 950.00      |                                 |
| - Add 12" PRV RFI 003 (REMOVED PER STANTEC) | 0.00    | LS        |        | \$ -      | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ -           | (REMOVED PER STANTEC)           |
| - Add 12" PRV RFI 003 (REMOVED PER STANTEC) | 0.00    | LS        | 0.00   | \$ 95.00  | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ -           | (REMOVED PER STANTEC)           |
| - FO 02 Plugs and Blind Flanges             | 1.00    | LS        |        | \$ -      | \$0.00       | \$ 29,375.00 | \$29,375.00   | \$ -                   | \$ -               |      | \$ 29,375.00   | (5 Blind Flanges, 5 Plates)     |
| - FO 02 Plugs and Blind Flanges             | 1.00    | LS        | 88.00  | \$ 95.00  | \$8,360.00   | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ 8,360.00    | (Plates not guaranteed to seal) |
| - FO 02 Concrete                            | 3.00    | CY        | 24.00  | \$ 95.00  | \$2,280.00   | \$ 200.00    | \$600.00      | \$ -                   | \$ -               |      | \$ 2,880.00    |                                 |
| - Hatch Credit                              | 1.00    | LS        |        | \$ -      | \$0.00       | \$ -         | \$0.00        | \$ (2,500.00)          | \$ -               |      | \$ (2,500.00)  | (ADDED PER STANTEC)             |
| - 1.6 Item Removed No Changes               | 1.00    | LS        |        | \$ -      | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ -           |                                 |
| - 1.7 Site Work - Miller Excavating         | 1.00    | LS        |        | \$ -      | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               |      | \$ -           |                                 |
| MH 6 drop eliminated 1 LS                   | -1.00   | Item 18   |        | \$ -      | \$0.00       | \$ 2,040.00  |               | \$ (2,040.00)          | \$ -               |      | \$ (2,040.00)  |                                 |
| MH 6-9 added 7.2 depth 1 LS                 | 1.00    | Add Depth |        | \$ -      | \$0.00       | \$ 4,625.00  |               | \$ 4,625.00            | \$ -               |      | \$ 4,625.00    |                                 |
| MH 9 to plug added 4.6 depth 1 LS           | 1.00    | Add Depth |        | \$ -      | \$0.00       | \$ 924.00    |               | \$ 924.00              | \$ -               |      | \$ 924.00      |                                 |
| MH 10 to bld added 3.6 depth 1 LS           | 1.00    | Add Depth |        | \$ -      | \$0.00       | \$ 1,110.00  |               | \$ 1,110.00            | \$ -               |      | \$ 1,110.00    |                                 |
| MH 9 to 10 added 4.2 depth 1 LS             | 1.00    | Add Depth |        | \$ -      | \$0.00       | \$ 3,948.00  |               | \$ 3,948.00            | \$ -               |      | \$ 3,948.00    |                                 |
| MH 10 to 11 added 2.6 depth 1 LS            | 1.00    | Add Depth |        | \$ -      | \$0.00       | \$ 456.00    |               | \$ 456.00              | \$ -               |      | \$ 456.00      |                                 |
| MH 9 added 4.8 depth 1 LS                   | 4.77    | Item 16   |        | \$ -      | \$0.00       | \$ 664.00    |               | \$ 3,167.28            | \$ -               |      | \$ 3,167.28    | (REVISED PER STANTEC)           |
| MH 10 added 3.7 depth 1 LS                  | 3.62    | item 16   |        | \$ -      | \$0.00       | \$ 664.00    |               | \$ 2,403.68            | \$ -               |      | \$ 2,403.68    | (REVISED PER STANTEC)           |
| MH 11 added 1.5 depth 1 LS                  | 1.48    | Item 16   |        | \$ -      | \$0.00       | \$ 664.00    |               | \$ 982.72              | \$ -               |      | \$ 982.72      | (REVISED PER STANTEC)           |
| OCS 110 weir wall                           | 1.00    | Weir      |        | \$ -      | \$0.00       | \$ 4,502.40  |               | \$ 4,502.40            | \$ -               |      | \$ 4,502.40    |                                 |
| CB 202a 8 LF                                | 8.75    | Unit 68   |        | \$ -      | \$0.00       | \$ 1,060.00  |               | \$ 9,275.00            | \$ -               |      | \$ 9,275.00    | (REVISED PER STANTEC)           |
| 10" Schedule 40 PVC Storm 95                | 95.00   | EA        |        | \$ -      | \$0.00       | \$ 95.00     |               | \$ 9,025.00            | \$ -               |      | \$ 9,025.00    |                                 |
| 203 to 204 remove 21" RCP 89 LF             | -89.00  | Unit 58   |        | \$ -      | \$0.00       | \$ 105.00    |               | \$ (9,345.00)          | \$ -               |      | \$ (9,345.00)  |                                 |
| 203 to 204 add 21" PVC SDR 35 89 LF         | 89.00   | EA        |        | \$ -      | \$0.00       | \$ 110.00    |               | \$ 9,790.00            | \$ -               |      | \$ 9,790.00    |                                 |
| 213 to 213a remove 12" RCP 42 LF            | -42.00  | Unit 55   |        | \$ -      | \$0.00       | \$ 72.00     |               | \$ (3,024.00)          | \$ -               |      | \$ (3,024.00)  |                                 |
| 213 to 213a add 6" Schedule 40 PVC 42 LF    | 42.00   | Unit 12   |        | \$ -      | \$0.00       | \$ 37.00     |               | \$ 1,554.00            | \$ -               |      | \$ 1,554.00    |                                 |
| 213 to 213a 4" insulation 4' wide 20 SY     | 20.00   | Unit 40   |        | \$ -      | \$0.00       | \$ 55.00     |               | \$ 1,100.00            | \$ -               |      | \$ 1,100.00    |                                 |
| 213 to 202 remove 21" RCP 95 LF             | -95.00  | Unit 58   |        | \$ -      | \$0.00       | \$ 105.00    |               | \$ (9,975.00)          | \$ -               |      | \$ (9,975.00)  |                                 |
| 213 to 202 add 21" PVC SDR 35 95 LF         | 95.00   | EA        |        | \$ -      | \$0.00       | \$ 110.00    |               | \$ 10,450.00           | \$ -               |      | \$ 10,450.00   |                                 |
| 302 to 301 remove 15" RCP 106 LF            | -106.00 | Unit 56   |        | \$ -      | \$0.00       | \$ 83.00     |               | \$ (8,798.00)          | \$ -               |      | \$ (8,798.00)  |                                 |
| 302 to 301 add 15" PVC SDR 35 106 LF        | 106.00  | EA        |        | \$ -      | \$0.00       | \$ 83.00     |               | \$ 8,798.00            | \$ -               |      | \$ 8,798.00    |                                 |
| 212 to 211 remove 15" RCP 32 LF             | -32.00  | Unit 56   |        | \$ -      | \$0.00       | \$ 83.00     |               | \$ (2,656.00)          | \$ -               |      | \$ (2,656.00)  |                                 |



22360 County Road 12, PO Box 517  
Deerwood, MN 56444

## CHANGE ORDER PROPOSAL

RLCG PROJECT #: 23-33  
PROJECT NAME: Cottage Grove Low Zone Water Treatment Plant  
DATE: 6/7/2024  
COP: 1

|                                                  |        |         |        |          |              |               |              |               |      |               |                                                           |
|--------------------------------------------------|--------|---------|--------|----------|--------------|---------------|--------------|---------------|------|---------------|-----------------------------------------------------------|
| 212 to 211 add 15" PVC SDR 35 32 LF              | 32.00  | EA      |        | \$ -     | \$0.00       | \$ 83.00      |              | \$ 2,656.00   | \$ - | \$ 2,656.00   |                                                           |
| MH 10 to building remove 6" PVC SDR 35 82 LF     | -82.00 | Unit 12 |        | \$ -     | \$0.00       | \$ 37.00      |              | \$ (3,034.00) | \$ - | \$ (3,034.00) |                                                           |
| MH10 to building add 6" Schedule 40 PVC 82 LF    | 82.00  | EA      |        | \$ -     | \$0.00       | \$ 37.00      |              | \$ 3,034.00   | \$ - | \$ 3,034.00   |                                                           |
| MH 10 to building remove 4" PVC SDR 35 82 LF     | -82.00 | Unit 13 |        | \$ -     | \$0.00       | \$ 34.14      |              | \$ (2,799.48) | \$ - | \$ (2,799.48) |                                                           |
| MH 10 to building add 4" Schedule 40 PVC 82 LF   | 82.00  | EA      |        | \$ -     | \$0.00       | \$ 28.50      |              | \$ 2,337.00   | \$ - | \$ 2,337.00   |                                                           |
| - 1.8 Plumbing                                   |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
| - Material                                       | 1.00   | LS      |        | \$ -     | \$0.00       | \$30,275.00   | \$30,275.00  | \$ -          | \$ - | \$ 30,275.00  |                                                           |
| - Labor                                          | 1.00   | LS      | 230.00 | \$ 95.00 | \$21,850.00  | \$ -          | \$0.00       | \$ -          | \$ - | \$ 21,850.00  |                                                           |
| - Masonry                                        | 1.00   | LS      |        | \$ -     | \$0.00       | \$ 600.00     | \$600.00     | \$ -          | \$ - | \$ 600.00     |                                                           |
| - 1.9 Item (ELECTRICAL ONLY)                     | 1.00   | LS      |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ 29,921.18  | \$ - | \$ 29,921.18  | (ADDED PER STANTEC)                                       |
| - 1.10 Item Removed No Changes                   |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
|                                                  |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
| Painting - Reinhardt                             |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
| - TO BE SUBMITTED SEPERATLY IN CHANGE ORDER #002 |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
|                                                  |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
| WaterStop FO 03                                  |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
| - Labor                                          | 1.00   | MH      | 24.00  | \$ 95.00 | \$2,280.00   | \$ -          | \$0.00       | \$ -          | \$ - | \$ 2,280.00   |                                                           |
| - Material                                       | 1.00   | LS      |        | \$ -     | \$0.00       | \$ 250.00     | \$250.00     | \$ -          | \$ - | \$ 250.00     |                                                           |
|                                                  |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
|                                                  |        |         |        | \$ -     | \$0.00       | \$ -          | \$0.00       | \$ -          | \$ - | \$ -          |                                                           |
| Misc. Small Tools and Mat'l 5% of Labor          | 1.00   | ea      | 5.00%  |          |              |               |              |               |      | \$ 2,816.75   |                                                           |
| Sales Tax                                        | 1.00   | ea      | 8.375% |          |              |               |              |               |      | \$ 13,214.70  |                                                           |
| Totals                                           | 593.00 |         |        |          | \$ 56,335.00 | \$ 157,787.42 | \$ 65,887.78 | \$ -          |      | \$ 296,041.65 |                                                           |
|                                                  |        |         |        |          |              |               |              |               |      | \$ 3,294.39   | Rice Lake Mark-up on Subs (5%)                            |
|                                                  |        |         |        |          |              |               |              |               |      | \$ 32,118.36  | Rice Lake Mark-up on Labor, Material, and Equipment (15%) |
|                                                  |        |         |        |          |              |               |              |               |      | \$ 4,971.82   | Bond and Insurance Cost (1.5%)                            |
|                                                  |        |         |        |          |              |               |              |               |      | \$ 336,426.00 | Total Change Order Proposal Request                       |

Days Requested [xx]



22360 County Road 12  
PO Box 517  
Deerwood, MN 56444  
218-546-5519  
[ricelake.org](http://ricelake.org)

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DEERWOOD | MONTICELLO

Change Order Proposal #: 002 – 2.1 Overflow Revisions

June 7th, 2024

Brian Lintgen, PE  
Stantec  
3717 23rd Street South  
St. Cloud MN 56301-5094

Re: Cottage Grove Low Zone Water Treatment Facility Improvements

Brian:

We propose to furnish labor, material, and equipment to complete Change Order 002 – 2.1 Overflow Revisions:

All for the sum of:     \$93,610.00

Clarifications: Item 2.1 has been separated from the remainder of CO #02  
Concrete Reinforcement Changes have been included in this proposal  
Engineer Trailer Costs have been included in this proposal

Reference the attached itemized proposal and feel free to reach out with any comments.

Sincerely,  
RICE LAKE CONSTRUCTION GROUP

Chad Napstad  
Project Manager

Enc

Cc: 2333 Cottage Grove LZWTP  
Superintendent: Jack Boelter



22360 County Road 12, PO Box 517  
Deerwood, MN 56444

RLCG PROJECT #: 23-33  
PROJECT NAME: Cottage Grove Low Zone Water Treatment Plant  
DATE: 6/7/2024  
COP: 2

## CHANGE ORDER PROPOSAL

| DESCRIPTION                                               | QTY    | UNIT | LABOR    |             |              | MATERIAL     |               | SUBCONTRACTOR<br>TOTAL | EQUIPMENT<br>TOTAL | LINE | TOTAL        |
|-----------------------------------------------------------|--------|------|----------|-------------|--------------|--------------|---------------|------------------------|--------------------|------|--------------|
|                                                           |        |      | HOURS    | \$ RATE     | TOTAL        | RATE         | TOTAL         |                        |                    |      |              |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$ - | \$ -         |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$ - | \$ -         |
| Rice Lake                                                 |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$ - | \$ -         |
| - 2.1 Overflow Modifications                              | 0.00   | LS   |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$ - | \$ -         |
| - RLCG Labor                                              | 1.00   | LS   | 50.00    | \$ 95.00    | \$4,750.00   | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | 4,750.00     |
| - RLCG Labor Credit                                       | 0.00   | LS   | -26.00   | \$ 95.00    | (\$2,470.00) | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | (2,470.00)   |
| - Metals                                                  | 1.00   | LS   |          | \$ -        | \$0.00       | \$ 28,548.00 | \$28,548.00   | \$ -                   | \$ -               | \$   | 28,548.00    |
| - Material Credit                                         | -1.00  | LS   |          | \$ -        | \$0.00       | \$ 18,954.00 | (\$18,954.00) | \$ -                   | \$ -               | \$   | (18,954.00)  |
| - 24" to 30" Duckbill                                     | 1.00   | LS   |          | \$ -        | \$0.00       | \$ 5,850.00  | \$5,850.00    | \$ -                   | \$ -               | \$   | 5,850.00     |
| - Miller                                                  |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
| - 24" PVC C-900                                           | 99.00  | LF   |          | \$ 274.42   | \$0.00       | \$ -         | \$0.00        | \$ 27,167.33           | \$ -               | \$   | 27,167.33    |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
| - 24" RCP FES                                             | 2.00   | EA   |          | \$ 5,609.32 | \$0.00       | \$ -         | \$0.00        | \$ 11,218.64           | \$ -               | \$   | 11,218.64    |
|                                                           | 0.00   |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
| - Restocking Fee 24" DIP                                  | 110.00 | LF   |          | \$ 17.59    | \$0.00       | \$ -         | \$0.00        | \$ 1,934.63            | \$ -               | \$   | 1,934.63     |
| - Restocking Fee 30x24 Reducer                            | 1.00   | EA   |          | \$ 285.03   | \$0.00       | \$ -         | \$0.00        | \$ 285.03              | \$ -               | \$   | 285.03       |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
| - Rebar (Per comments on shop drawings) 3 tons            | 1.00   | LS   |          | \$ -        | \$0.00       | \$ 4,380.00  | \$4,380.00    | \$ -                   | \$ -               | \$   | 4,380.00     |
| - Rebar Install (Sowles)                                  | 3.00   | Ton  |          | \$ -        | \$0.00       | \$ 779.00    | \$2,337.00    | \$ -                   | \$ -               | \$   | 2,337.00     |
| - Rebar Hoisting                                          | 3.00   | Ton  |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ 468.00          | \$   | 468.00       |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
| - Engineer Trailer (Dec 23 - Sept 25)                     | 22.00  | MTH  |          | \$ 750.00   | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ 16,500.00       | \$   | 16,500.00    |
|                                                           | 0.00   | LS   |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
|                                                           |        |      |          | \$ -        | \$0.00       | \$ -         | \$0.00        | \$ -                   | \$ -               | \$   | -            |
| Misc. Small Tools and Mat'l 5% of Labor                   | 1.00   | ea   | 5.00%    |             |              |              |               |                        |                    | \$   | 114.00       |
| Sales Tax                                                 | 1.00   | ea   | 8.375%   |             |              |              |               |                        |                    | \$   | 1,855.98     |
| Totals                                                    |        |      | \$ 24.00 |             | \$ 2,280.00  | \$ 22,161.00 | \$ 40,605.63  | \$ 16,968.00           |                    | \$   | 83,984.62    |
| Rice Lake Mark-up on Subs (5%)                            |        |      |          |             |              |              |               |                        |                    |      | \$ 2,030.28  |
| Rice Lake Mark-up on Labor, Material, and Equipment (15%) |        |      |          |             |              |              |               |                        |                    |      | \$ 6,211.35  |
| Bond and Insurance Cost (1.5%)                            |        |      |          |             |              |              |               |                        |                    |      | \$ 1,383.39  |
| Total Change Order Proposal Request                       |        |      |          |             |              |              |               |                        |                    |      | \$ 93,610.00 |

Days Requested [xx]



22360 County Road 12  
PO Box 517  
Deerwood, MN 56444  
218-546-5519  
[ricelake.org](http://ricelake.org)

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DEERWOOD | MONTICELLO

Change Order Proposal #: 002 – 2.2 Garage Door

April 29th, 2024

Brian Lintgen, PE  
Stantec  
3717 23rd Street South  
St. Cloud MN 56301-5094

Re: Cottage Grove Low Zone Water Treatment Facility Improvements

Brian:

We propose to furnish labor, material, and equipment to complete Change Order 002 – 2.2 Garage Door:

All for the sum of:     \$10,986.00

Clarifications: Item 2.2 Garage Door has been separated from CO 02

Reference the attached itemized proposal and feel free to reach out with any comments.

Sincerely,  
RICE LAKE CONSTRUCTION GROUP

Chad Napstad  
Project Manager

Enc

Cc: 2333 Cottage Grove LZWTP  
Superintendent: Jack Boelter



22360 County Road 12, PO Box 517  
Deerwood, MN 56444

RLCG PROJECT #: 23-33  
PROJECT NAME: Cottage Grove Low Zone Water Treatment Plant  
DATE: 5/9/2024  
COP: 2

## CHANGE ORDER PROPOSAL

| DESCRIPTION                                               | QTY  | UNIT | LABOR  |         |        | MATERIAL |        | SUBCONTRACTOR<br>TOTAL | EQUIPMENT<br>TOTAL | LINE         | TOTAL |
|-----------------------------------------------------------|------|------|--------|---------|--------|----------|--------|------------------------|--------------------|--------------|-------|
|                                                           |      |      | HOURS  | \$ RATE | TOTAL  | RATE     | TOTAL  |                        |                    |              |       |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
| Rice Lake                                                 |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
| - 2.2 Garage Door                                         | 0.00 | LS   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
| - Yale Garage Door                                        | 1.00 | LS   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ 10,308.00           | \$ -               | \$ 10,308.00 | -     |
|                                                           | 0.00 | LS   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
|                                                           | 0.00 | CY   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
|                                                           | 0.00 | LS   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
|                                                           | 0.00 | LS   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
|                                                           | 0.00 | LS   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -         | -     |
| Misc. Small Tools and Mat'l 5% of Labor                   | 1.00 | ea   | 5.00%  |         |        |          |        |                        |                    | \$ -         | -     |
| Sales Tax                                                 | 1.00 | ea   | 8.375% |         |        |          |        |                        |                    | \$ -         | -     |
| Totals                                                    |      |      | \$ -   |         | \$ -   | \$ -     | \$ -   | \$ 10,308.00           | \$ -               | \$ 10,308.00 | -     |
| Rice Lake Mark-up on Subs (5%)                            |      |      |        |         |        |          |        |                        |                    | \$ 515.40    |       |
| Rice Lake Mark-up on Labor, Material, and Equipment (15%) |      |      |        |         |        |          |        |                        |                    | \$ -         |       |
| Bond and Insurance Cost (1.5%)                            |      |      |        |         |        |          |        |                        |                    | \$ 162.35    |       |
| Total Change Order Proposal Request                       |      |      |        |         |        |          |        |                        |                    | \$ 10,986.00 |       |

Days Requested [xx]

## DOCK AND DOOR PROPOSAL #305808

|          |                                                                                                                  |                   |                                                            |
|----------|------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------|
| To:      | <u>Chad Napstad</u>                                                                                              | Date:             | <u>4/4/2024</u>                                            |
| Phone:   | <u>218-546-5519</u>                                                                                              | Total # of pages: | <u>2</u>                                                   |
| Company: | <u>Rice Lake Construction</u><br><u>22360 County Road 12</u><br><u>P.O. Box 517</u><br><u>Deerwood, MN 56444</u> | From:             | <u>John Mann</u>                                           |
| Subject: | <u>City of Cottage Grove/</u><br><u>Low Zone Water Treatment</u>                                                 | Cell Phone:       | <u>(763)280-9066</u>                                       |
|          |                                                                                                                  | Email:            | <u>jmann@yalemech.com</u><br><u>Revision of door D116D</u> |

Yale Mechanical is pleased to present the following proposal for the above-subject project.

We propose to furnish and install the following:

1. One (1) Wayne Dalton 12 x 11-4 model 823C rolling steel door, color TBD, 20 PSF windload, insulated door. One (1) Genie GH operator, gear head, chain hoist, 460V 3-phase, reversing edge with NEMA 4 3-button controls for activation.
2. One (1) Wayne Dalton 12 x 16 model 823C rolling steel door, color TBD, 20 PSF windload, insulated door. One (1) Genie GH operator, gear head, chain hoist, 460V 3-phase, reversing edge with NEMA 4 3-button controls for activation.
3. One (1) Wayne Dalton 16 x 16 model 823C rolling steel door, color TBD, 20 PSF windload, insulated door. One (1) Genie GH operator, gear head, chain hoist, 460V 3-phase, reversing edge with NEMA 4 3-button controls for activation.
4. Two (2) Wayne Dalton 10 x 12 model 823C rolling steel door, color TBD, 20 PSF windload, insulated door. One (1) Genie GH operator, gear head, chain hoist, 460V 3-phase, reversing edge with NEMA 4 3-button controls for activation.

**\*\*Revision/potential change of 16' x 16' door to a 16' x 24' per Section C-942 field order 4, add TEN THOUSAND THREE HUNDRED EIGHT DOLLARS (\$10,308) to total\*\***

Not included:

1. Sales tax, if applicable.
2. Overtime labor.
3. Any other repairs or modifications.
4. ANY electrical wiring done by others.

**Assumption:** It is assumed that the workspace will be free and clear. All work on loading docks requires that the trailers or dumpsters be removed at the dock to be serviced. All extra time spent waiting due to not being able to access the docks will result in additional charges on a time and material basis.



Epidemic Rider

Notwithstanding any provision(s) of this proposal, if as a direct or indirect result of any virus, disease, contagion, or any other widespread communicable disease that causes disruption, including but not limited to COVID-19 or any other Epidemic or Pandemic (hereinafter collectively referred to as "Epidemic"), Yale Mechanical's work is delayed, disrupted, suspended or otherwise impacted by, among other things, (i) disruptions to material and/or equipment supply; (ii) illness of Yale Mechanical's workforce and/or unavailability of labor; (iii) government quarantines, shelter-in-place orders, closures, or other mandates, restrictions and/or directives; (iv) Owner or Contractor restrictions and/or directives; (v) fulfillment of Yale Mechanical's contractual or legal health and safety obligations associated with an Epidemic; Yale Mechanical shall be entitled to an equitable adjustment to the duration of time to complete the work described herein to account for such disruptions, suspensions, and impacts. Under such circumstances, Yale Mechanical shall not be liable for any liquidated, compensatory, consequential, special and/or indirect damages incurred by the Owner or Contractor resulting from such delays.

Owner and Yale Mechanical recognize that the current commodity market and construction industry supply chain has caused destabilization in the price and availability of components, equipment, and materials throughout the construction industry. The parties agree that in instances where component, equipment or material costs for the work increase in an amount greater than three percent (3%) from the date of this proposal until acceptance, or between acceptance and purchase of the components, equipment or materials, or a delay of more than five (5) days is caused by the unavailability of components, equipment or materials incorporated into the work, then Yale Mechanical shall be entitled an equitable adjustment to either the price, contract time or both. The adjustment shall be by way of a Change Order to the proposal.

This language shall take precedence over any conflicting language in the Contract Documents.

This proposal is firm for thirty (30) days. If an extension is required, it must be obtained in writing.

We will comply with all warranties extended by our suppliers on equipment and parts furnished and installed in conjunction with this project. The labor necessary for the repair or replacement of in-warranty defective equipment or parts will be provided at no cost to the purchaser for the period of ninety (90) days following completion of installation.

Payment shall be made by the tenth (10th) of the month on all invoices issued by the first (1<sup>st</sup>) of the month for all material and equipment installed or on hand and all labor performed. Final payment to be made within thirty (30) days after substantial completion of the work.

Thank you for the opportunity to present this proposal to you. Should you have any questions or concerns regarding this matter, please do not hesitate to call.

Sincerely,

*John Mann*

**Rice Lake Construction**

ACCEPTED BY: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_

PRINT TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

PO: \_\_\_\_\_



22360 County Road 12  
PO Box 517  
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218-546-5519  
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DEERWOOD | MONTICELLO

Change Order Proposal #: 002 – 2.3 Plumbing

April 29th, 2024

Brian Lintgen, PE  
Stantec  
3717 23rd Street South  
St. Cloud MN 56301-5094

Re: Cottage Grove Low Zone Water Treatment Facility Improvements

Brian:

We propose to furnish labor, material, and equipment to complete Change Order 002 – 2.3 Plumbing:

All for the sum of:     \$7,686.00

Clarifications: Item 2.3 Plumbing has been separated from CO 02

Reference the attached itemized proposal and feel free to reach out with any comments.

Sincerely,  
RICE LAKE CONSTRUCTION GROUP

Chad Napstad  
Project Manager

Enc

Cc: 2333 Cottage Grove LZWTP  
Superintendent: Jack Boelter



22360 County Road 12, PO Box 517  
Deerwood, MN 56444

RLCG PROJECT #: 23-33  
PROJECT NAME: Cottage Grove Low Zone Water Treatment Plant  
DATE: 5/9/2024  
COP: 2

## CHANGE ORDER PROPOSAL

| DESCRIPTION                                               | QTY  | UNIT | LABOR    |           |             | MATERIAL    |            | SUBCONTRACTOR<br>TOTAL | EQUIPMENT<br>TOTAL | LINE        | TOTAL       |
|-----------------------------------------------------------|------|------|----------|-----------|-------------|-------------|------------|------------------------|--------------------|-------------|-------------|
|                                                           |      |      | HOURS    | \$ RATE   | TOTAL       | RATE        | TOTAL      |                        |                    |             |             |
|                                                           |      |      |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
|                                                           |      |      |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
| Rice Lake                                                 |      |      |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
| - 2.3 Plumbing                                            | 1.00 | LS   |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
| - Labor                                                   | 1.00 | LS   | 16.00    | \$ 120.00 | \$1,920.00  | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ 1,920.00 | 1,920.00    |
| - Material                                                | 1.00 | LS   |          | \$ -      | \$0.00      | \$ 2,262.00 | \$2,262.00 | \$ -                   | \$ -               | \$ 2,262.00 | 2,262.00    |
| - Sub                                                     | 0.00 | LS   |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ 2,360.00            | \$ -               | \$ 2,360.00 | 2,360.00    |
|                                                           | 0.00 | LS   |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
|                                                           | 0.00 | LS   |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
|                                                           |      |      |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
|                                                           |      |      |          | \$ -      | \$0.00      | \$ -        | \$0.00     | \$ -                   | \$ -               | \$ -        | -           |
| Misc. Small Tools and Mat'l 5% of Labor                   | 1.00 | ea   | 5.00%    |           |             |             |            |                        |                    | \$ 96.00    | 96.00       |
| Sales Tax                                                 | 1.00 | ea   | 8.375%   |           |             |             |            |                        |                    | \$ 189.44   | 189.44      |
| Totals                                                    |      |      | \$ 16.00 |           | \$ 1,920.00 | \$ 2,262.00 |            | \$ 2,360.00            | \$ -               | \$ 6,827.44 | 6,827.44    |
| Rice Lake Mark-up on Subs (5%)                            |      |      |          |           |             |             |            |                        |                    |             | \$ 118.00   |
| Rice Lake Mark-up on Labor, Material, and Equipment (15%) |      |      |          |           |             |             |            |                        |                    |             | \$ 627.30   |
| Bond and Insurance Cost (1.5%)                            |      |      |          |           |             |             |            |                        |                    |             | \$ 113.59   |
| Total Change Order Proposal Request                       |      |      |          |           |             |             |            |                        |                    |             | \$ 7,686.00 |

Days Requested [xx]



22360 County Road 12  
PO Box 517  
Deerwood, MN 56444  
218-546-5519  
[ricelake.org](http://ricelake.org)

---

DEERWOOD | MONTICELLO

Change Order Proposal #: XX – Camera Power

May 17<sup>th</sup>, 2024

Brian Lintgen, PE  
Stantec  
3717 23rd Street South  
St. Cloud MN 56301-5094

Re: Cottage Grove Low Zone Water Treatment Facility Improvements

Brian:

We propose to furnish labor, material, and equipment to complete Change Order XX – Camera Power:

All for the sum of:     \$1,577.00

Reference the attached itemized proposal and feel free to reach out with any comments.

Sincerely,  
RICE LAKE CONSTRUCTION GROUP

Chad Napstad  
Project Manager

Enc

Cc: 2333 Cottage Grove LZWTP  
Superintendent: Jack Boelter



22360 County Road 12, PO Box 517  
Deerwood, MN 56444

## CHANGE ORDER PROPOSAL

RLCG PROJECT #: 23-33  
PROJECT NAME: Cottage Grove Low Zone Water Treatment Plant  
DATE: 5/17/2024  
COP: X

| DESCRIPTION                                               | QTY  | UNIT | LABOR  |         |        | MATERIAL |        | SUBCONTRACTOR<br>TOTAL | EQUIPMENT<br>TOTAL | LINE        | TOTAL       |  |
|-----------------------------------------------------------|------|------|--------|---------|--------|----------|--------|------------------------|--------------------|-------------|-------------|--|
|                                                           |      |      | HOURS  | \$ RATE | TOTAL  | RATE     | TOTAL  |                        |                    |             |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
| Rice Lake                                                 |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
| - Supervision                                             |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
| - Vinco Electrical                                        | 1.00 | LS   |        | \$ -    | \$0.00 | \$ -     | \$0.00 | 1,480.02               | \$ -               | \$ 1,480.02 |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
|                                                           |      |      |        | \$ -    | \$0.00 | \$ -     | \$0.00 | \$ -                   | \$ -               | \$ -        |             |  |
| Misc. Small Tools and Mat'l 5% of Labor                   | 1.00 | ea   | 5.00%  |         |        |          |        |                        |                    |             | \$ -        |  |
| Sales Tax                                                 | 1.00 | ea   | 8.325% |         |        |          |        |                        |                    |             | \$ -        |  |
| Totals                                                    |      |      | \$ -   | \$ -    |        |          | \$ -   |                        | \$ 1,480.02        | \$ -        | \$ 1,480.02 |  |
| Rice Lake Mark-up on Subs (5%)                            |      |      |        |         |        |          |        |                        |                    |             | \$ 74.00    |  |
| Rice Lake Mark-up on Labor, Material, and Equipment (15%) |      |      |        |         |        |          |        |                        |                    |             | \$ -        |  |
| Bond and Insurance Cost (1.5%)                            |      |      |        |         |        |          |        |                        |                    |             | \$ 23.31    |  |
| Total Change Order Proposal Request                       |      |      |        |         |        |          |        |                        |                    |             | \$ 1,577.33 |  |

Days Requested [xx]

# Request for Change

To: Rice Lake Construction Group  
22360 Co Rd 12  
Deerwood, MN 56444

RFC 1  
ITEM(S) # 1

Attn: Chad Napstad

Date: 5/13/2024

From: Dan Moeller

Project: Cottage Grove Low Zone Water Treatmer

Scope of Change: Provide and install 120V 20A circuit on power pole for owner installed camera.

## ITEM #1

|                   |            |   |              |   |            |
|-------------------|------------|---|--------------|---|------------|
| Labor:            | 4.00       | X | \$110.00 /hr | = | \$440.00   |
| Material:         | \$841.34   | X | 1            | = | \$841.34   |
| Mark-Up (10%):    | \$1,281.34 | X | 10.00%       | = | \$128.13   |
| Material Tax:     | \$841.34   | X | 8.39%        | = | \$70.55    |
| Subcontractor:    | \$0.00     | X | 1            | = | \$0.00     |
| Sub Mark-Up (5%): | \$0.00     | X | 5.00%        | = | \$0.00     |
| Equipment:        | \$0.00     | X | 1            | = | \$0.00     |
| Equip Mark-Up:    | \$0.00     | X | 10.00%       | = | \$0.00     |
| Misc:             | \$0.00     | X | 1            | = | \$0.00     |
| Misc Mark-up      | \$0.00     | X | 10.00%       | = | \$0.00     |
| TOTAL:            |            |   |              | = | \$1,480.02 |

Total Request for Change: **\$1,480.02**

*Dan Moeller*

5/13/2024

Dan Moeller  
Project Manager  
VincO Inc.

Date



# City Council Action Request

## 7.M.

**Meeting Date** 6/26/2024

**Department** Public Works

**Agenda Category** Action Item

**Title** 2024-2026 MCES Water Efficiency Grant

**Staff Recommendation** 1) Adopt Resolution 2024-097 approving the Metropolitan Council Clean Water Fund Grant Agreement No.: SG-21410, and authorizing the Public Works Director to sign all documents necessary to effectuate the Grant. 2) Authorize the expenditure of \$11,750 from the Water Utility Fund to match the MCES grant.

**Budget Implication** \$11,750 - Water Utility Fund

**Attachments**

|    |                                                |
|----|------------------------------------------------|
| 1. | MCES 2024-26 Water Efficiency Grant CC Memo    |
| 2. | MCES 2024-26 Water Efficiency Grant Agreement  |
| 3. | MCES 2024-26 Water Efficiency Grant Resolution |



**To:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**From:** Joe Fox, P.E., Project Engineer

**Date:** June 17, 2024

**Re:** 2024-2026 MCES Water Efficiency Grant

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## **Background/Discussion**

The City of Cottage Grove has been awarded a water efficiency grant from Metropolitan Council Environmental Services (MCES). This is the third such grant awarded to the city since 2019. This grant program targets cities that rely on groundwater for their municipal water supply with the goal of reducing water use.

The grant funds rebates to residents and businesses that replace inefficient clothes washing machines, dishwashers, and toilets with water-efficient models. Since 2021, through this MCES program, the city has issued rebates totaling almost \$100,000 to residents and business owners for installing appliances and fixtures that save an estimated 1,400,000 gallons of water every year.

The MCES awarded Cottage Grove \$47,000 in this round of funding. These funds must be used by the end of June 2026. The grant requires the city to pay 20 percent of each rebate. The city's total contribution would be \$11,750, which will be paid from the Water Utility Fund.

## **Recommendations**

1. Adopt Resolution 2024-097 approving the Metropolitan Council Clean Water Fund Grant Agreement No.: SG-21410, and authorizing the Public Works Director to sign all documents necessary to effectuate the Grant.
2. Authorize the expenditure of \$11,750 from the Water Utility Fund to match the MCES grant.

### **Attachment:**

Metropolitan Council Clean Water Fund Grant Agreement



**METROPOLITAN COUNCIL  
CLEAN WATER FUND GRANT AGREEMENT**

|                                                                                                                                                                                  |                                                  |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------------|
| Recipient: City of Cottage Grove                                                                                                                                                 |                                                  | Grant No.: SG-21410 |
| Council Action: 2024-121                                                                                                                                                         |                                                  |                     |
| Maximum Grant Amount: \$47,000                                                                                                                                                   | Recipient Match: \$11,750 (20% of program total) |                     |
| Recipient's Authorized Representative:<br><br>Name: Joe Fox<br>12800 Ravine Pkwy S<br>Cottage Grove, MN 55016<br>Phone: 651-458-2826<br>Email Address: joefox@cottagegrovemn.gov |                                                  |                     |

This Clean Water Fund Grant Agreement ("Grant Agreement") is entered into between the Metropolitan Council, a public corporation and political subdivision of the State of Minnesota ("Met Council") and the Recipient named above.

**RECITALS**

1. Minnesota Session Laws 2023, Chapter 40, Article 2, Section 8(b), appropriated to the Met Council \$1,500,000 in funds from the Legacy Amendment's Clean Water Fund ("Clean Water Fund") for State fiscal years 2024 and 2025, for water demand reduction grants to assist municipalities in the metropolitan area with implementing water demand reduction measures to ensure the reliability and protection of drinking water supplies.
2. The Met Council is authorized by Minnesota Statutes sections 473.129, subdivision 4 to apply for and use grants from the State for any Metropolitan Council purpose and may dispose of the money in accordance with the terms of the appropriation.
3. The Recipient is authorized to receive grants from the Clean Water Fund for a water demand reduction program to implement measures to reduce water demand to ensure the reliability and protection of drinking water supplies.
4. On May 22, 2024, the Met Council authorized the granting \$1,100,000 of the appropriation to the Recipients participating in the grant program.
5. The Recipient represents that it is duly qualified and agrees to perform all services described in this Grant Agreement to the reasonable satisfaction of the Met Council.

## **GRANT AGREEMENT**

### **1. Term of Grant Agreement.**

1.1. Effective Date. The Effective Date of this Grant Agreement is the date this agreement is fully executed.

1.2. Grant Activity Period. The Grant Activity Period runs from the Effective Date through the Expiration Date.

1.3. Expiration Date. The Expiration Date is the earlier of Recipient's satisfactory fulfillment of obligations or June 30, 2026.

1.4. Survival of Terms. The following clauses survive the expiration, termination or cancellation of this Grant Agreement:

- 9. Liability and Insurance;
- 10. Audits;
- 11. Government Data Practices;
- 13. Data Availability;
- 14. Governing Law, Jurisdiction, and Venue;
- 16. Data Disclosure; and
- 18.7 Future Eligibility.

### **2. Duties, Representations and Warranties of Recipient and Use of Grant Funds.**

2.1. The Recipient will conduct, administer and complete in a satisfactory manner and in accordance with the terms of this Grant Agreement the program ("Recipient Program") which is described in Recipient's application to the Met Council for assistance under the Met Council's Clean Water Fund grant program. The Recipient's application is incorporated into this Grant Agreement as Exhibit A. Recipient will perform the Recipient Program in accordance with the timeline in Exhibit B of this Grant Agreement and to undertake the financial responsibilities described in Exhibit B which is incorporated into this Grant Agreement. The Recipient must complete the Recipient Program as described in Exhibits A and B. The Met Council makes no representation or warranties with respect to the success and effectiveness of the Recipient Program. The Met Council acknowledges that Recipient Program work may be limited to soliciting participation by its residents and businesses in the Recipient Program and requires additional work by the Recipient only to the extent that residents and businesses choose to participate in the Recipient Program, as described in Exhibit B.

The Grant Funds must be entirely passed through and can only be used for authorized rebates or grants for qualifying activities.

2.2. Recipient Representations and Warranties. The Recipient represents and warrants to Met Council, as follows:

A. It has the legal authority to enter into this Grant Agreement and to conduct and administer the Recipient Program and use the Grant Funds for the purpose or purposes described in this Agreement

B. It has taken all actions necessary for its execution of the Agreement and has provided to Met Council a copy of the resolution by its governing body authorizing Recipient to enter into this Agreement.

C. It has the legal authority to undertake the Recipient Program, including the Recipient's financial responsibilities in Exhibit B.

D. Only its Authorized Representative may provide certifications required in this Grant Agreement and submit pay claims for reimbursement of Recipient Program costs.

E. It will comply with all the terms of this Grant Agreement.

F. It will comply with all requirements of Clean Water Funding legislation and appropriations, except for requirements that this Grant Agreement explicitly states will be handled by the Met Council.

G. It has made no material false statement or misstatement of fact in connection with the Grant Funds, and all of the information it has submitted or will submit to the Met Council relating to the Grant Funds or the disbursement of any of the Grant Funds is and will be true and correct. It agrees that all representations contained in its application for the Clean Water Fund Grant are material representations of fact upon which the Met Council relied in awarding this Grant and are incorporated into this Agreement by reference.

H. It is not in violation of any provisions of its charter or of the laws of the State of Minnesota, and there are no material actions, suits, or proceedings pending, or to its knowledge threatened, before any judicial body or governmental authority against or affecting it and is not in default with respect to any order, writ, injunction, decree, or demand of any court or any governmental authority which would impair its ability to enter into this Grant Agreement, or to perform any of the acts required of it in the Agreement.

I. Compliance with the requirements of this Grant Agreement is not prevented by, is a breach of, or will result in a breach of, any term, condition, or provision of any agreement to which it is bound.

J. The Recipient Program will not violate any applicable zoning or use statute, ordinance, building code, rule or regulation, or any covenant or agreement of record relating thereto.

K. The Recipient Program will be conducted in full compliance with all applicable laws, statutes, rules, ordinances, and regulations issued by any federal, state, or political subdivisions having jurisdiction over the Recipient Program.

L. It will comply with the financial responsibility requirements contained in Exhibit B.

M. It will furnish satisfactory evidence regarding these representations if requested by the Met Council.

### **3. Time.**

Recipient must comply with all time requirements described in this Grant Agreement. In the performance of this Grant Agreement, time is of the essence.

#### **4. Eligible Costs.**

Eligible costs are those costs incurred by parties within the jurisdiction of the Recipient for 80% of rebate or grant payments as defined in Exhibit B. The Met Council will not reimburse Recipient for non-eligible costs. Any cost not defined as an eligible cost or not included in the Recipient Program or approved in writing by the Met Council is a non-eligible cost.

#### **5. Consideration and Payment.**

5.1 **Consideration.** The Met Council will reimburse the Recipient for eligible costs performed by the Recipient during the Grant Activity Period up to the Maximum Grant Amount as specified in this agreement. The Met Council bears no responsibility for any cost overruns that may be incurred by the Recipient or any sub-recipients. The Recipient may be eligible to receive additional grant amounts or an adjustment of the Maximum Grant Amount in accordance with the procedure in the Grant Amendment Form attached and incorporated as Exhibit C. A fully executed Exhibit C will amend this Grant by the amount in Exhibit C.

5.2. **Advance.** The Met Council will make no advance of the Grant Amount to Recipient.

5.3. **Payment.** To receive payment, the Recipient must submit a Reimbursement Request on forms provided by the Met Council, including electronically scanned receipts to verify the cost of eligible devices reported for each reporting period. Reimbursement Request must be submitted quarterly, even if there are no eligible costs to report. The Recipient must describe its compliance with its the financial requirements, work completed including specific addresses where work was done, and provide sufficient documentation of grant eligible expenditures and any other information the Met Council reasonably requests. The Met Council will promptly pay the Recipient after the Recipient presents to the Met Council a Reimbursement Request and scanned copies of all receipts verifying the cost for all eligible devices reported and the Met Council's Authorized Representative accepts the invoiced services.

#### **6. Conditions of Payment.**

6.1. For each approved device for which Recipient requests payment, Recipient must certify the following to the Met Council:

- (1) the device has been purchased during the Grant Activity Period;
- (2) Recipient received receipts for the device; and
- (3) the purchase was not performed in violation of federal, state, or local law, or regulation.

6.2. **Conditions Precedent to Any Reimbursement Request.** The obligation of the Met Council to make reimbursement payments is subject to the following conditions precedent:

A. The Met Council's receipt of a Reimbursement Request/Progress Report for the funds requested, and electronic copies of receipts verifying the cost for all eligible devices for that reporting period;

B. If requested by the Met Council (in form and substance acceptable to the Met Council), evidence that (i) the Recipient has legal authority to and has taken all actions necessary to enter into this Agreement and (ii) this Agreement is binding and enforceable against the Recipient;

C. There is no Event of Default under this Grant Agreement or event which would constitute an Event of Default but for the requirement that notice be given or that a period of grace or time elapse; and

D. The Recipient has supplied to the Met Council all other items that the Met Council may reasonably require to assure good fiscal oversight of state's funding through the Clean Water Fund.

**7. Authorized Representative.**

The Met Council's Authorized Representative is:

Name: Henry McCarthy or successor  
Title: Senior Environmental Scientist  
Mailing Address: 390 North Robert Street  
St. Paul, MN 55101  
Phone: (651) 602-1946  
E-Mail Address: [henry.mccarthy@metc.state.mn.us](mailto:henry.mccarthy@metc.state.mn.us)

The Met Council's Authorized Representative has the responsibility to monitor the Recipient's performance and the authority to accept the services provided under this Grant Agreement. If the services are satisfactory, the Met Council's Authorized Representative will certify acceptance on each invoice submitted for payment.

The Recipient's Authorized Representative is noted on the first page of this Grant Agreement. If the Recipient's Authorized Representative changes at any time during this Grant Agreement, the Recipient must immediately notify the Met Council and within 30 days provide a new City resolution (if such resolution is necessary) specifying the new Representative.

**8. Assignment, Amendments, Waiver, Grant Agreement Complete, and Order of Precedence.**

8.1 Assignment. The Recipient may neither assign nor transfer any rights or obligations under this Grant Agreement without the prior written consent of the Met Council and a fully executed Assignment Agreement.

8.2 Amendments. Except as provided in this Section 8.2, any amendment to this Grant Agreement must be in writing and will not be effective until it has been executed and approved by the appropriate parties. If requested by the Recipient in writing, the Met Council may at its sole discretion authorize in writing a minor change to the Recipient Program in Exhibit A without a formal executed amendment to this Grant Agreement.

8.3 Waiver. If the Met Council fails to enforce any provision of this Grant Agreement, that failure does not waive the provision or its right to enforce it.

8.4 Grant Agreement Complete. This Grant Agreement contains all negotiations and agreements between the Met Council and the Recipient. No other understanding regarding this Grant Agreement, whether written or oral, may be used to bind either party.

8.5 Order of Precedence. This Grant Agreement will be interpreted in the following order of precedence:

(1) Grant Agreement excluding exhibits;

(2) Exhibit B; and

(3) Exhibit A.

## **9. Liability and Insurance.**

9.1 Liability. The Recipient and the Met Council are each responsible for their own acts and the acts of their employees and the results thereof. To the extent authorized by law, a party is not responsible for the acts of the other party and the results thereof. The liability of the Parties is governed by Minnesota Statutes Chapter 466 and other applicable laws. Neither Party waives any applicable limits on liability or immunities.

9.2 Relationship of the Parties. Nothing contained in this Grant Agreement is intended or should be construed in any manner as creating or establishing the relationship of co-partners or a joint venture between the Recipient and the Met Council, nor will the Recipient be considered or deemed to be an agent, representative, or employee of the Met Council in the performance of this Grant Agreement, or the Recipient Program.

The Recipient represents that it has already or will secure or cause to be secured all personnel required for the performance of this Grant Agreement and the Recipient Program. All personnel of the Recipient or other persons while engaging in the performance of this Grant Agreement or the Recipient Program will not have any contractual relationship with the Met Council related to the work of the Recipient Program and will not be considered employees of the Met Council. In addition, all claims that may arise on behalf of said personnel or other persons out of employment or alleged employment including, but not limited to, claims under the Workers' Compensation Act of the State of Minnesota, claims of discrimination against the Recipient, its officers, agents, contractors, or employees will in no way be the responsibility of the Met Council. Such personnel or other persons may not require nor be entitled to any compensation, rights or benefits of any kind whatsoever from the Met Council, including but not limited to, tenure rights, medical and hospital care, sick and vacation leave, disability benefits, severance pay and retirement benefits.

## **10. Audits.**

Under Minn. Stat. § 16C.05, subd. 5, the Recipient's books, records, documents, and accounting procedures and practices relevant to this Grant Agreement are subject to examination by the Met Council and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the termination date of this Grant Agreement.

## **11. Government Data Practices.**

The Recipient and Met Council must comply with the Minnesota Government Data Practices Act, Minn. Stat. Chapter 13, as it applies to all data provided by the Met Council under this grant contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Recipient under this Grant Agreement. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data referred to in this clause by either the Recipient or the Met Council. If the Recipient receives a request to release the data referred to in this Clause, the Recipient must immediately notify the Met Council.

**12. Workers' Compensation.**

The Recipient certifies that it is in compliance with Minn. Stat. § 176.181, subd. 2, pertaining to workers' compensation insurance coverage. The Recipient's employees and agents will not be considered Met Council employees. Any claims that may arise under the Minnesota Workers Compensation Act on behalf of these employees and any claims made by any third party as a consequence of any act or omission on the part of these employees are in no way the Met Council's obligation or responsibility.

**13. Data Availability.**

To the extent and as requested by the Met Council, Recipient agrees to comply with Minn. Stat. § 114D.50, subd. 5 requirements for data collected by the Recipient Programs funded with money from the Clean Water Fund that have value for planning and management of natural resources, emergency preparedness and infrastructure investments, including but not limited to the requirement that to the extent practicable, summary data and results of Recipient Programs funded with money from the Clean Water Fund should be readily accessible on the internet and identified as a Clean Water Fund Recipient Program. The Met Council will put overall summary information on the internet and will encourage the Recipient put its city information on the web. Recipient understands and agrees that Met Council may list its name and summary information on the internet or in any other Grantor reporting.

Data collected by the Recipient Program, if any, funded with money from the Clean Water Fund that have value for planning and management of natural resources, emergency preparedness, and infrastructure investments must conform to the enterprise information architecture developed by the Department of Information Technology Services. Spatial data must conform to geographic information system guidelines and standards outlined in that architecture and adopted by the Minnesota Geographic Data Clearinghouse at the Minnesota Geospatial Information Office. A description of these data that adheres to the Department of Information Technology Services geographic metadata standards must be submitted to the Minnesota Geospatial Information Office to be made available online through the clearinghouse and the data must be accessible and free to the public unless made private under chapter 13. To the extent practicable, summary data and results of projects funded with money from the clean water fund should be readily accessible on the Internet and identified as a clean water fund project.

**14. Governing Law, Jurisdiction, and Venue.**

This Grant Agreement will be construed and enforced under the laws of the State of Minnesota without regard to its conflict of law provisions. The venue for any legal proceedings arising out of this Grant Agreement will be the appropriate state or federal court in Ramsey County, Minnesota.

**15. Termination.**

The Met Council may cancel this Grant Agreement at any time, with or without cause, upon 30 days' written notice to the Recipient. Upon termination, the Recipient will be entitled to payment for services prequalified and satisfactorily performed before the termination notice.

**16. Data Disclosure.**

Under Minn. Stat. § 270C.65, subd. 3, and other applicable law, the Recipient consents to disclosure of its federal employer tax identification number, and/or Minnesota tax identification number, already provided to the Met Council, to federal and state tax agencies and Met Council personnel involved in the



payment of Met Council obligations. Recipient will require compliance with this Section 16 by Recipient's subrecipient of Grant funds and shall submit evidence of such compliance to Met Council as requested.

**17. Notices.**

In addition to any notice required under applicable law to be given in another manner, any notices required hereunder must be in writing and must be personally served or sent by email or United States mail, to the Authorized Representative of the party to whom it is directed.

**18. Miscellaneous.**

18.1 Report to Legislature. As provided in Minn. Stat. § 3.195, the Met Council must submit a report on the expenditure and use of money appropriated under the Clean Water Fund to the legislature by January 15 of each year. The report must detail the outcomes in terms of additional use of Clean Water Fund resources, user satisfaction surveys, and other appropriate outcomes. The Recipient agrees to provide to the Met Council by January 1 of each year a report on any user satisfaction surveys it has related to this Recipient Program, and other appropriate outcomes of the Recipient Program as prescribed in Section 18.3 of this Agreement.

18.2 Supplement. The funds granted under this agreement are to supplement and shall not substitute for traditional sources of funding. Recipient certifies to the Met Council that there was and is no traditional Recipient sources of funding for the City to help fund 80% of the subject water efficiency rebate or grant work.

18.3 Measurable Outcomes. A Recipient Program or program receiving funding from the Clean Water Fund must meet or exceed the constitutional requirement to protect, enhance, and restore water quality in lakes, rivers and streams and to protect groundwater and drinking water from degradation. A Recipient Program or program receiving funding from the Clean Water Fund must include measurable outcomes, as defined in Minn. Stat. § 3.303, subdivision 10, and a plan for measuring and evaluating the results. A Recipient Program or program must be consistent with current science and incorporate state-of-the-art technology. All information for funded Recipient Program work, including the proposed measurable outcomes, must be made available for publication on the web site required under Minn. Stat. § 3.303, subdivision 10, as soon as practicable and forwarded to the Met Council and the Legislative Coordinating Commission under the provisions of Minn. Stat. § 3.303, subd. 10. The Recipient must compile and submit all information for funded Recipient Programs or programs, including the proposed measurable outcomes and all other items required under Minn. Stat. § 3.303, subdivision 10, to the Met Council and, if requested by the Met Council, the Legislative Coordinating Commission as soon as practicable or by January 15 of the applicable fiscal year, whichever comes first.

18.4 Minn. Stat. § 16B.98. Grants funded by the Clean Water Fund must be implemented according to section 16B.98 and must account for all expenditures.

18.5 Benefit to Minnesota Waters. Money from the Clean Water Fund may only be spent on Recipient Programs that benefit Minnesota waters.

18.6 Website. If the Recipient has information on its website about the water efficiency grant program under Minn. Stat. § 114D.50, the Recipient will when practicable in accordance with Minn. Stat. § 114D.50, subd. 4(f) prominently display on the Recipient's website home page the Legacy logo accompanied by the phrase "Click here for more information." When a person clicks



on the Legacy logo image, the website must direct the person to a web page that includes both the contact information that a person may use to obtain additional information, as well as a link to the Met Council's and Legislative Coordinating Commission Website required under section 3.303, subdivision 10.

18.7 Future Eligibility. Future eligibility for money from the Clean Water Fund is contingent upon the Recipient satisfying all application requirements related to Met Council's fulfillment of Minn. Stat. § 114D.50 as well as any additional requirements contained in 2021, 1<sup>st</sup> Special Session, Chapter 1, Article 2, Section 8.

18.8 Prevailing Wages. The Recipient agrees to comply with all of the applicable provisions contained in chapter 177 of the Minnesota Statutes, and specifically those provisions contained in Minn. Stat. §§ 177.41 through 177.50, as they may be amended, modified or replaced from time to time with respect to the Recipient Program. By agreeing to this provision, the Recipient is not acknowledging or agreeing that the cited provisions apply to the Recipient Program.

18.9 Disability Access. Where appropriate, Recipient of clean water funds, in consultation with the Council on Disability and other appropriate governor-appointed disability councils, boards, committees, and commissions, should make progress toward providing greater access to programs, print publications, and digital media for people with disabilities related to the programs the recipient funds using appropriations made in this agreement.

#### 18.10. General Provisions.

(i) Lawsuit. This Grant shall be canceled if a court determines that the appropriation illegally substitutes for a traditional source of funding.

(ii) Termination Due to Lack of Funds. Recipient recognizes that Met Council's obligation to reimburse Recipient for eligible Recipient Program costs is dependent upon Met Council's receipt of funds from the State of Minnesota appropriated to Met Council under 2023 Session Law, Chapter 40, Article 2, Section 8(b). Should the State of Minnesota terminate such appropriation or should such funds become unavailable to Met Council for any reason, Met Council shall, upon written notice to Recipient of termination or unavailability of such funds, have no further obligations for reimbursement or otherwise under this Grant Agreement. In the event of such written notice, Recipient has no further obligation to complete the Recipient Program as required by this Grant Agreement.

18.11. Counterparts and Electronic Signatures. This Grant Agreement may be executed in any number of counterparts, each of which when executed will be deemed to be an original and the counterparts will together constitute one agreement. A copy of this Grant Agreement, including its signature pages, will be binding and deemed to be an original. Electronic signatures using Adobe Sign or a similar program will be deemed an original signature.

### 19. Default and Remedies.

19.1 Defaults. The Recipient's failure to fully comply with any of the provisions contained in this Grant Agreement constitute an event of default ("Event of Default").

19.2. Remedies. Upon an event of default, the Met Council may exercise any one or more of the following remedies:

- a. Refrain from disbursing the Grant;
- b. Demand that all or any portion of the Grant already disbursed be repaid to it, and upon such demand the Recipient shall repay such amount to the Met Council; and
- c. Enforce any additional remedies the Met Council may have at law or in equity.

**IN WITNESS WHEREOF**, the parties have caused this agreement to be executed by their duly authorized representatives.

**METROPOLITAN COUNCIL**

By: \_\_\_\_\_  
Regional Administrator, successor, or delegate

Date: \_\_\_\_\_

**RECIPIENT:**

The Recipient certifies that the appropriate person(s) have executed the this agreement on behalf of the Recipient as required by applicable articles, bylaws, resolutions, or ordinances.

By: \_\_\_\_\_

\_\_\_\_\_  
Printed Name and Title

Date: \_\_\_\_\_

## **EXHIBIT A**

**(Application from community)**



# 2024 – 2026 METROPOLITAN COUNCIL WATER EFFICIENCY GRANT PROGRAM APPLICATION FORM

updated 02/08/2024

## Applicant Information:

|                    |                                                    |
|--------------------|----------------------------------------------------|
| MUNICIPALITY:      | Cottage Grove                                      |
| MUNICIPAL UTILITY: | Cottage Grove Public Works                         |
| MAILING ADDRESS:   | 12800 Ravine Parkway South, Cottage Grove MN 55016 |

Grants are only for water efficiency programs offering rebates or grants to property owners who are customers of the municipal water supply system and who replace specified water using devices with approved devices that use substantially less water. In municipalities where only some neighborhoods or areas are served by a municipal public water supply system, only those served by the municipal public water supply system are eligible.

If applicable, please specify what parts of your municipality would be eligible to receive rebates or grants:

Homes, businesses, schools, churches, non-profit or apartment buildings connected to city water.

## Primary Contact Information:

Municipality primary authorized representative (all correspondence regarding the Water Efficiency Grant Program should be addressed to individual named below):

|            |                            |
|------------|----------------------------|
| NAME:      | Joe Fox                    |
| TITLE:     | Project Engineer           |
| STREET:    | 12800 Ravine Parkway South |
| CITY, ZIP: | Cottage Grove, 55016       |
| PHONE:     | 651-458-2826               |
| EMAIL:     | joefox@cottagegrovemn.gov  |

**Secondary Contact Information:**

Municipality secondary authorized representative:

|            |                            |
|------------|----------------------------|
| NAME:      | Genevieve Tester           |
| TITLE:     | Graduate Engineer          |
| STREET:    | 12800 Ravine Parkway South |
| CITY, ZIP: | Cottage Grove, 55016       |
| PHONE:     | 651-458-2829               |
| EMAIL:     | gtester@cottagegrovemn.gov |

**Water Use and Savings Information:**

|                                                                                  |           |
|----------------------------------------------------------------------------------|-----------|
| Municipal Total Per Capita Water Use, in gallons per person-day (2022):          | 109       |
| Municipal Residential Per Capita Water Use, in gallons per person-day (2022):    | 94        |
| Municipal Ratio of Peak Month to Winter Month Water Use (2022):                  | 2.95      |
| Municipality's estimated annual water savings from proposed program, in gallons: | 2,000,000 |

**Program Design:**

|                                                                                 |          |
|---------------------------------------------------------------------------------|----------|
| Requested Grant Amount (must equal 80% of total program budget):                | \$50,000 |
| Required Municipality Matching Amount (must equal 20% of total program budget): | \$12,500 |
| Total Program Budget (Requested Grant Amount + Match):                          | \$62,500 |

**Example Calculation:**

|                                       |                          |
|---------------------------------------|--------------------------|
| Requested Grant Amount                | \$16,000 (80% of total)  |
| Required Municipality Matching Amount | \$4,000 (20% of total)   |
| Total Program Budget                  | \$20,000 (100% of total) |

Will your program be a grant program or rebate program? Rebate

**Estimated Number of Items:**

| Item                              | Estimated Number |
|-----------------------------------|------------------|
| Toilets                           | 85               |
| Irrigation Controllers            |                  |
| Irrigation Spray Sprinkler Bodies |                  |
| Irrigation System Audits          |                  |
| Showerheads                       |                  |
| Clothes Washing Machines          | 130              |
| Dishwashers                       | 105              |

**Project Work Plan and Schedule:\***

| <b>Task Description</b>                                                                                                                                                                                | <b>Responsible Person</b>                         | <b>Start Date</b> | <b>Completion Date</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------|------------------------|
| Obtain City Council approval.<br><br>Sign Grant Agreement with MetCouncil.                                                                                                                             | Engineering -<br>Joe Fox                          | 5/15/24           | 5/22/24                |
| Update rebate program.<br><br>Revise infrastructure in Laserfiche to reset system for new grant cycle.                                                                                                 | Engineering -<br>Joe Fox                          | 5/22/24           | 6/3/24                 |
| Advertising rebate program: communications staff will advertise program on City social media and in monthly newsletter.                                                                                | Engineering -<br>Joe Fox                          | 6/24/24           | 6/30/26                |
| Rebate program administration: processing of rebate applications will be done by engineering staff; administrative staff will maintain the application process; finance staff will send rebate checks. | Engineering -<br>Genevieve<br>Tester              | 7/1/24            | 6/30/26                |
| Quarterly reporting to Metcouncil.                                                                                                                                                                     | Engineering -<br>Joe Fox &<br>Genevieve<br>Tester | 7/1/24            | 6/30/26                |

*\* Municipality may create own project plan and schedule form*

### Communications to Property Owners:

How will your program be advertised (check all that apply):

|                      |                                     |
|----------------------|-------------------------------------|
| Newsletter           | <input checked="" type="checkbox"/> |
| Print media          | <input type="checkbox"/>            |
| Email                | <input type="checkbox"/>            |
| X (formerly Twitter) | <input checked="" type="checkbox"/> |
| Website              | <input checked="" type="checkbox"/> |
| Radio                | <input type="checkbox"/>            |
| Television           | <input type="checkbox"/>            |
| Facebook             | <input checked="" type="checkbox"/> |
| Nextdoor             | <input type="checkbox"/>            |
| Other social media   | <input checked="" type="checkbox"/> |

Please attach examples of proposed newsletter, print media, or email communications.

### Critical Points to Remember:

- The applying municipality must be served by a municipal public water supply system
- New construction and new developments are not eligible
- A portion of each eligible activity's cost must be paid by the property owner
- Funds are for rebates or grants only; consulting and city staff time are ineligible
- Grant recipients must display the Clean Water, Land and Legacy Amendment logo and the Metropolitan Council logo on program-related web pages and paper communications



Hi Henry,

I have attached Cottage Grove's application for the 2024-2026 Metropolitan Council Water Efficiency Grant Program.

Additionally, this is the advertisement we use in our monthly resident newsletters:

## **Rebate Program for Water Efficient Appliances**

The City of Cottage Grove is offering rebates to residents for purchasing water saving toilets, dishwashers and washing machines.

As part of the city's water conservation program, grants of up to \$100 for toilets, \$200 for dishwashers and \$300 for washing machines will be offered.

A grant from the Metropolitan Council Environmental Services, through funding from the Clean Water, Land and Legacy Amendment, makes this rebate program possible. This program will run through June 2024 or until funds are exhausted. Learn more about eligible appliances and submit your application at [CottageGroveMN.gov/WaterRebate](https://CottageGroveMN.gov/WaterRebate).

Thank you!

Genevieve

**Genevieve Tester, EIT**

Graduate Engineer

City of Cottage Grove

Direct: 651-458-2829 | [gtester@cottagegrovemn.gov](mailto:gtester@cottagegrovemn.gov)

General: 651-458-2800 | [www.cottagegrovemn.gov](https://www.cottagegrovemn.gov)

12800 Ravine Parkway South, Cottage Grove, MN 55016

## EXHIBIT B



# 2024 – 2026 METROPOLITAN COUNCIL WATER EFFICIENCY GRANT PROGRAM GUIDELINES *updated 06/06/2024*

## Overview

The Metropolitan Council (Met Council) will implement a water efficiency grant program effective July 1, 2024 to June 30, 2026. Grants will be awarded on a competitive basis to municipalities that are served by a municipal water system.

The Met Council will provide 80% of the program cost; the municipality must provide the remaining 20%. Municipalities will use the combined Met Council and municipality funds to run their own grant or rebate programs.

Grants will be made available in amounts with a minimum of \$5,000 and a maximum of \$50,000. Grantees will be required to provide estimated water savings achieved through this program for Clean Water, Land & Legacy Amendment reporting purposes.

## Legislative Directive - Minnesota 2023 Session Laws

\$750,000 the first year and \$750,000 the second year are for the water demand reduction grants to assist municipalities in the metropolitan area with implementing water demand reduction measures to ensure the reliability and protection of drinking water supplies. Fiscal year 2024 appropriations are available until June 30, 2025, and fiscal year 2025 appropriations are available until June 30, 2026.

## Grant Program Goal

The goal of the water efficiency grant program is to support technical and behavioral changes that improve municipal water use efficiency in the seven-county metropolitan area.

## Critical Points to Remember

- The applying municipality must be served by a municipal public water supply system
- New construction and new developments are not eligible
- A portion of each eligible activity's cost must be paid by the property owner
- Funds are for rebates or grants only; consulting and city staff time are ineligible

- Grant recipients must display the Clean Water, Land and Legacy Amendment logo and the Metropolitan Council logo on program-related web pages and paper communications

## Grant Program Structure: Administration and Funding

The Water Efficiency Grant Program will be administered by Metropolitan Council Environmental Services (Environmental Services) and will be funded with \$1,100,000 appropriated by the 2023 Minnesota Legislature. Grant applications will be reviewed and ranked Metropolitan Council Water Resources staff. The remaining \$400,000 of this funding has been allocated to a different, equity-focused municipal water efficiency grant project.

Grants are only for water efficiency programs offering rebates or grants to property owners who are customers of the municipal water supply system and who replace specified water using devices with approved devices that use substantially less water. In municipalities where only some neighborhoods or areas are served by a municipal public water supply system, only those served by the municipal public water supply system are eligible.

Grants will be awarded to municipalities in amounts ranging from \$5,000 to \$50,000 for providing rebates or grants to property owners. Municipalities will be responsible for the design and operation of their rebate or grant program and its details. Grant payments to the municipality will be for 80% of approved program amounts. The municipality must provide the remaining 20% of the granted/rebated amount to the property owner. Municipality rebates or grants are eligible for reimbursement on device replacements conducted during the Grant Activity Period.

Here is an example of the grant funding design:

|                                         |                          |
|-----------------------------------------|--------------------------|
| Metropolitan Council Grant Amount       | \$16,000 (80% of total)  |
| Municipality Match                      | \$4,000 (20% of total)   |
| Municipality Grant/Rebate Program Total | \$20,000 (100% of total) |

## Eligibility

This grant program is limited to municipalities in the seven-county metropolitan area.

Municipalities eligible per above must apply to participate and, if approved, sign a standard Met Council Grant Agreement, before any eligible rebates or grants can be submitted for reimbursement. Agreements shall require that municipalities:

- Entirely pass through grants received (as is being done by Environmental Services)
- Verify purchase of devices to receive grants
- Retain records and cooperate with any audits
- Conduct all communications with property owners and ensure all written communications to property owners include both the Clean Water, Land and Legacy Amendment and the Metropolitan Council's logo
- Provide quantitative information for state reporting purposes

Eligible water efficiency devices consist of the following:

- Toilet replacement with a US EPA WaterSense labeled toilet

- Irrigation controller replacement with a US EPA WaterSense labeled controller, either weather-based or soil moisture-based
- Irrigation spray sprinkler body replacement with a US EPA WaterSense labeled spray sprinkler body
- Irrigation system audit by an Irrigation Professional certified by a US EPA WaterSense program
- Showerhead replacement with a US EPA WaterSense labeled showerhead
- Clothes washing machine replacement with a US DOE Energy Star labeled clothes washing machine
- Residential dishwasher replacement with a US DOE Energy Star labeled residential dishwasher

Expenses eligible for reimbursement are the out-of-pocket cost of the device and its installation only, not to include any owner labor costs. In addition, new construction and new developments are ineligible, as this program is intended as a current infrastructure replacement program.

## Application Process

- Applicants must be served by a municipal public water supply system
- Municipalities will submit Met Council supplied application form by March 29, 2024. Required information includes:
  - the municipality's rebate or grant program design and work plan
  - proposed examples of communications to property owners
  - requested total grant amount
  - estimated annual amount of water saved by the applying municipality
- Application form is available at: <https://metro council.org/Wastewater-Water/Funding-Finance/Available-Funding-Grants.aspx>
- Submit completed application to: [henry.mccarthy@metc.state.mn.us](mailto:henry.mccarthy@metc.state.mn.us)
- Metropolitan Council will notify municipalities of grant awards by May 24, 2024.

## Proposal Selection Criteria

In the event that funds requested exceed funds available, the following criteria will be used to determine the amount granted to a given municipality:

- Municipalities with identified water supply issues in Master Water Supply Plan Community Profiles or Local Water Supply Plans
- Municipalities' ratio of peak monthly water use to winter monthly water use
- Municipalities' average residential per capita water use
- The order in which applications are received and until grant funds are completely committed

## Funding Process and Reporting Requirements

- Utilizing forms provided by Met Council, the following information must be reported on a quarterly basis:
  - Number, type and amount of rebates or grants provided to property owners, along with each property address
  - Estimated annual gallons of water saved per device installation
  - Municipality matching funds disbursed
  - Number of unmet funding requests from property owners, if any

- Upon review and confirmation of the above information, Met Council will process a grant payment in the amount of 80% of approved total rebates or grants for the reporting period.
- Met Council will provide confirmation of grant balances available upon request and reserves the right to amend grant agreements, in collaboration with grantee municipality, if quarterly reporting indicates rebate or grant programs will not fully utilize grant awards within the Grant Activity Period.

## Qualified Activities

- Toilet replacement with a US EPA WaterSense labeled toilet:  
<https://lookforwatersense.epa.gov/products/Product-Search-Results-Toilets.html>
- Irrigation controller replacement with a US EPA WaterSense labeled controller, either weather-based or soil moisture-based:  
<https://lookforwatersense.epa.gov/products/Product-Search-Results-IrrigationController.html>  
<https://lookforwatersense.epa.gov/products/Product-Search-Results-SoilMoistureBasedIrrigationController.html>
- Irrigation spray sprinkler body replacement with a US EPA WaterSense labeled spray sprinkler body:  
<https://lookforwatersense.epa.gov/products/Product-Search-Results-Sprinkler.html>
- Irrigation system audit by an Irrigation Professionals certified by a US EPA WaterSense program:  
<https://lookforwatersense.epa.gov/pros/>
- Showerhead replacement with a US EPA WaterSense labeled showerhead:  
<https://www.epa.gov/watersense/showerheads>
- Clothes washing machine replacement with a US DOE Energy Star labeled clothes washing machine:  
<https://www.energystar.gov/productfinder/product/certified-clothes-washers/results>
- Residential dishwasher replacement with a US DOE Energy Star labeled residential dishwasher:  
<https://www.energystar.gov/products/dishwashers>

## Determining Estimated Water Savings

Some manufacturers include annual water savings estimates in their device descriptions or specifications, and irrigation professionals report estimated savings after performing an irrigation system audit. In cases where estimated annual water savings are not provided or can't be found, the WaterSense and Energy Star websites have information on estimated water savings.

- Toilet:  
<https://www.epa.gov/watersense/residential-toilets>
- Irrigation controller:  
<https://www.epa.gov/watersense/watersense-labeled-controllers>
- Spray sprinkler body:  
<https://www.epa.gov/watersense/spray-sprinkler-bodies#:~:text=WaterSense%20Savings,->

[Experts%20estimate%20that&text=Installing%20WaterSense%20labeled%20spray%20sprinkler,water%20and%20sewer%20costs%20annually.](#)

- Irrigation audit:  
<https://www.epa.gov/watersense/irrigation-pro>
- Showerhead:  
<https://www.epa.gov/watersense/showerheads>
- Clothes washing machine:  
[https://www.energystar.gov/products/clothes\\_washers#:~:text=ENERGY%20STAR%20can%20help%20families,less%20water%20than%20regular%20washers.](https://www.energystar.gov/products/clothes_washers#:~:text=ENERGY%20STAR%20can%20help%20families,less%20water%20than%20regular%20washers.)
- Residential dishwasher:  
<https://www.energystar.gov/products/dishwashers>

## Reporting Example

| Property Street Address and Zip Code | (Select) Property Type: | (Select) Water Device Replaced: | Cost per Device (\$): | # of Devices: | Rebate or Grant per Device (\$) | Est. Annual Water (Gallons) Saved Per Device: | Calculated Totals:    |                            |                       |                                         |
|--------------------------------------|-------------------------|---------------------------------|-----------------------|---------------|---------------------------------|-----------------------------------------------|-----------------------|----------------------------|-----------------------|-----------------------------------------|
|                                      |                         |                                 |                       |               |                                 |                                               | Total Rebate or Grant | Municipality Contribution: | Eligible Grant Amount | Estimated Annual Water Saved (Gallons): |
| 2094 Proviso Avenue                  | Residential             | Clothes Washer                  | \$800.00              | 1             | \$200.00                        | 5,000                                         | \$200.00              | \$40.00                    | \$160.00              | 5,000                                   |
| 3452 Enola Drive                     | Residential             | Irrigation Controller           | \$250.00              | 1             | \$150.00                        | 20,000                                        | \$150.00              | \$30.00                    | \$120.00              | 20,000                                  |
| 994 Argentine Place                  | Residential             | Irrigation Controller           | \$200.00              | 1             | \$150.00                        | 20,000                                        | \$150.00              | \$30.00                    | \$120.00              | 20,000                                  |
| 5377 Shoreham Way                    | Residential             | Toilet                          | \$350.00              | 1             | \$125.00                        | 7,000                                         | \$125.00              | \$25.00                    | \$100.00              | 7,000                                   |

EXHIBIT C Revision #

**METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES**

**2022-2024 CLEAN WATER FUND WATER EFFICIENCY GRANT PROGRAM  
GRANT AMENDMENT FORM**

NOTICE TO RECIPIENT: Submission of this form is required to modify the Maximum Grant Amount in your Grant Agreement with Metropolitan Council 2024-2026 Clean Water Fund Water Efficiency Grant Program (Grant Program).

After determination of your city's Maximum Grant Amount, completion and submission of this form is necessary when 1) you are requesting additional grant funds to meet unexpected rebate or grant demand, or 2) when your city has determined that the previously approved program's rebate or grant demand will not be met, requiring less grant funds than anticipated when the agreement was signed.

The process for modifying your Grant Agreement is as follows:

1. Your city's authorized representative submits one signed copy of Exhibit C to the Met Council, with any additional information requested by Met Council.
2. Upon receipt and any Met Council approval of signed Exhibit C, the Met Council's authorized representative will obtain Met Council authorized signatures returns a fully executed copy of Exhibit C indicating the new Maximum Grant Amount to City's designated authorized representative.

-----

Instructions: Indicate the date of your change request in #1 box. Indicate the number of this particular change request in #2 box (and in box at top of page – must match). Enter the current grant agreement amount (as MCES approved) in #3 box. If you wish to increase your municipality's grant amount, enter the amount you are requesting in #4 box. If you wish to decrease your grant amount due to less demand than anticipated, enter the amount in #5 box. Enter in #6 box the amount derived from adding #3 to #4 or derived from subtracting #5 from #3.

Grant Agreement #

1. Date of change request:

2. Change request number:

3. Current Grant Agreement Amount (as MCES approved):

4. Increase due to request for additional funding:

5. Decrease due to less demand:

6. Amended Maximum Grant Agreement Amount requested:

CITY NAME: \_\_\_\_\_

CITY AUTHORIZED REPRESENTATIVE (signature and date):

\_\_\_\_\_

METROPOLITAN COUNCIL PROGRAM ADMINISTRATOR APPROVAL (signature and date):

\_\_\_\_\_

METROPOLITAN COUNCIL AUTHORIZED SIGNATURE AND DATE

\_\_\_\_\_

-----

Questions may be directed to the Met Council Authorized Representative:



CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-097

**RESOLUTION APPROVING THE METROPOLITAN COUNCIL  
CLEAN WATER FUND GRANT AGREEMENT NO.: SG-21410  
AND AUTHORIZING THE PUBLIC WORKS DIRECTOR TO SIGN**

WHEREAS, the City applied for funding from the Metropolitan Council Water Efficiency Grant Program; and

WHEREAS, the Metropolitan Council awarded the City a maximum of \$47,000 to be matched by up to \$11,750 from the Water Utility Fund; and

WHEREAS, the City must execute a Grant Agreement in order to receive the funding.

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, as follows:

1. The City Council accepts and approves the Metropolitan Council Clean Water Fund Grant Agreement No.: SG-21410.
2. The City Council authorizes the Public Works Director to sign all documents necessary to effectuate the Grant.

Passed this 26th day of June 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk



# City Council Action Request

7.N.

**Meeting Date** 6/26/2024

**Department** Community Development

**Agenda Category** Action Item

**Title** Market Analysis and Small Area Plan - Professional Services Agreement

**Staff Recommendation** Approve the Professional Services Agreement with Stantec Consulting Services for a Market Analysis and Small Area Plan.

**Budget Implication** \$80,000 - EDA Trust Fund

|                    |    |                                                              |
|--------------------|----|--------------------------------------------------------------|
| <b>Attachments</b> | 1. | Small Area Plan Professional Services Agreement Memo         |
|                    | 2. | Small Area Plan Professional Services Agreement with Stantec |

**TO:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**FROM:** Emily Schmitz, Community Development Director

**DATE:** June 20, 2024

**RE:** Approve the Professional Services Agreement with Stantec Consulting Services, Inc. for a Market Analysis and Small Area Plan

---

## **Background**

In March of 2023 the City Council approved an agreement engaging the services of Bolton-Menk to complete a utility study for the properties located along the southside of the Highway 61/10 corridor from Langdon Village to Innovation Road. In addition to the utility analysis and the infrastructure needs of the area, the study also indicated that the completion of the 100th Street Realignment project would open up over 2,000 acres of property for both residential and industrial development.

At the City Council strategic planning session in January of 2024, the utility study and the options and costs for providing the necessary infrastructure in the area were presented by the Public Works Director. As a part of the discussions, the City Administrator and staff recommended that an RFP be issued for the development of a Market Analysis and Small Area Plan that would ensure that the properties in the area were developed for their highest and best use.

## **Discussion**

Based upon feedback from the City Council at the January 2024 strategic planning session, staff issued an RFP for a Market Analysis and Small Area Plan on April 19 with a deadline of May 17 for the area at the future extension of 100th Street and Innovation Road (County Road 19). Four proposals were received, and Stantec's proposal was selected with a budgeted amount of \$80,000 for the studies.

## **Recommendation**

Approve the professional services agreement with Stantec Consulting Services, Inc.

### **Attachment:**

- Professional Services Agreement with Stantec Consulting Services, Inc.

## **AGREEMENT FOR PROFESSIONAL SERVICES**

THIS AGREEMENT ("Agreement") is made and executed this 26<sup>th</sup> day of June 2024, by and between the City of Cottage Grove, 12800 Ravine Parkway, Cottage Grove, Minnesota 55016, ("City") and Stantec Consulting Services Inc. ("Consultant").

WHEREAS, the City has accepted the proposal of the Consultant for certain professional Services; and

WHEREAS, Consultant desires to perform the Services for the City under the terms and conditions set forth in this Agreement.

NOW THEREFORE, in consideration of the mutual consideration contained herein, it is hereby agreed as follows:

### **1. SERVICES.**

- a. City agrees to engage Consultant as an independent contractor for the purpose of performing certain professional Services ("Services"), as defined in the following documents:
  - i. A proposal dated May 17, 2024, incorporated herein as Exhibit A;

(Hereinafter "Exhibits.") Where terms and conditions of this Agreement and those terms and conditions included in the Exhibits specifically conflict, the terms of this Agreement shall apply.
- b. Consultant covenants and agrees to provide Services to the satisfaction of the City in a timely fashion, as set forth in the Exhibits, subject to Section 7 of this Agreement.

### **2. PAYMENT.**

- a. City agrees to pay and Consultant agrees to receive and accept payment for Services as set forth in the Exhibits.
- b. Any changes in the scope of the work of the Services that may result in an increase to the compensation due the Consultant shall require prior written approval by the authorized representative of the City or by the City Council. The City will not pay additional compensation for Services that do not have prior written authorization.

- c. Consultant shall submit itemized bills for Services provided to City on a monthly basis. Bills submitted shall be paid in the same manner as other claims made to City.
3. TERM. The term of this Agreement is identified in the Exhibits. This Agreement may be extended upon the written mutual consent of the parties for such additional period as they deem appropriate, and upon the same terms and conditions as herein stated.
4. TERMINATION.
  - a. Termination by Either Party. This Agreement may be terminated by either party upon 30 days' written notice delivered to the other party to the addresses listed in Section 13 of this Agreement. Upon termination under this provision, if there is no default by the Consultant, Consultant shall be paid for Services rendered and reimbursable expenses until the effective date of termination.
  - b. Termination Due to Default. This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The non-performing party shall have fifteen (15) calendar days from the date of the termination notice to cure or to submit a plan for cure that is acceptable to the other party.
5. SUBCONTRACTORS. Consultant shall not enter into subcontracts for any of the Services provided for in this Agreement without the express written consent of the City, unless specifically provided for in the Exhibits. The Consultant shall pay any subcontractor involved in the performance of this Agreement within the ten (10) days of the Consultant's receipt of payment by the City for undisputed services provided by the subcontractor.
6. STANDARD OF CARE. In performing its Services, Consultant will use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of its profession in the same locality at the time the Services are provided. No warranty, express or implied, is made or intended by Consultant's undertaking herein or its performance of Services.
7. DELAY IN PERFORMANCE. Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the nonperforming party. For purposes of this Agreement, such circumstances include, but are not limited to, abnormal weather conditions; floods; earthquakes; fire; epidemics; war, riots, and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage; judicial restraint; and inability to procure permits, licenses or authorizations from any local, state, or

federal agency for any of the supplies, materials, accesses, or services required to be provided by either City or Consultant under this Agreement. If such circumstances occur, the nonperforming party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement. Consultant will be entitled to payment for its reasonable additional charges, if any, due to the delay.

8. CITY'S REPRESENTATIVE. The City has designated Community Development Director to act as the City's representative with respect to the Services to be performed under this Agreement. He or she shall have complete authority to transmit instructions, receive information, interpret, and define the City's policy and decisions with respect to the Services covered by this Agreement.
9. PROJECT MANAGER AND STAFFING. The Consultant has designated Beth Elliot and Dave Sanocki to be the primary contacts for the City in the performance of the Services. They shall be assisted by other staff members as necessary to facilitate the completion of the Services in accordance with the terms established herein. Consultant may not remove or replace these designated staff without the approval of the City.

10. INDEMNIFICATION.

- a. Consultant and City each agree to indemnify, and hold harmless each other, its agents and employees, from and against legal liability for all claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are caused by its negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
- b. Consultant shall indemnify City against legal liability for damages arising out of claims by Consultant's employees. City shall indemnify Consultant against legal liability for damages arising out of claims by City's employees.

11. INSURANCE. During the performance of the Services under this Agreement, Consultant shall maintain the following insurance:

- a. General Liability Insurance, with a limit of \$2,000,000 for any number of claims arising out of a single occurrence;
- b. Professional Liability Insurance, with a limit of \$2,000,000 for any number of claims arising out of a single occurrence.

- c. Workers' Compensation Insurance in accordance with statutory requirements.
- d. Automobile Liability Insurance, with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.

Consultant shall furnish the City with certificates of insurance, which shall include a provision that such insurance shall not be canceled without written notice to the City. The City shall be named as an additional insured on the General Liability Insurance policy.

12. OWNERSHIP OF DOCUMENTS. Professional documents, drawings, and specifications prepared by the Consultant as part of the Services shall become the property of the City when Consultant has been compensated for all Services rendered, provided, however, that Consultant shall have the unrestricted right to their use. Consultant shall retain its rights in its standard drawing details, specifications, databases, computer software, and other proprietary property. Rights to proprietary intellectual property developed, utilized, or modified in the performance of the Services shall remain the property of the Consultant.

13. NOTICES. Notices shall be communicated to the following addresses:

If to City: City of Cottage Grove, Minnesota  
12800 Ravine Parkway S.  
Cottage Grove, MN 55016  
Attention: Community Development Director

Or e-mailed: [eschmitz@cottagegrovemn.gov](mailto:eschmitz@cottagegrovemn.gov)

If to Consultant: Stantec Consulting Services Inc.  
733 Marquette Ave. Suite 1000  
Minneapolis, MN 55402  
Attention: Beth Elliot

Or emailed: [beth.elliott@stantec.com](mailto:beth.elliott@stantec.com)

14. INDEPENDENT CONTRACTOR STATUS. All services provided by Consultant, its officers, agents and employees pursuant to this Agreement shall be provided as employees of Consultant or as independent contractors of Consultant and not as employees of the City for any purpose.

15. GENERAL PROVISIONS.

- a. Assignment. This Agreement is not assignable without the mutual written agreement of the parties.

- b. Waiver. A waiver by either City or Consultant of any breach of this Agreement shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.
- c. Governing Law. This Agreement shall be construed in accordance with the laws of the State of Minnesota and any action must be venued in Washington County District Court.
- d. Severability. If any term of this Agreement is found be void or invalid, such invalidity shall not affect the remaining terms of this Agreement, which shall continue in full force and effect.
- e. Data Practices Compliance. All data collected by the City pursuant to this Agreement shall be subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13.
- f. Entire Agreement. This Agreement constitutes the entire agreement of the parties and supersedes all prior communications, understandings and agreements relating to the subject matter hereof, whether oral or written.

**CITY OF COTTAGE GROVE**

By: \_\_\_\_\_  
Myron Bailey, Mayor

By: \_\_\_\_\_  
Tamara Anderson, City Clerk

Date: \_\_\_\_\_



**CONSULTANT**

By: \_\_\_\_\_

Its: Beth Elliott, Project Manager

Date: June 20, 2024



EXHIBIT A



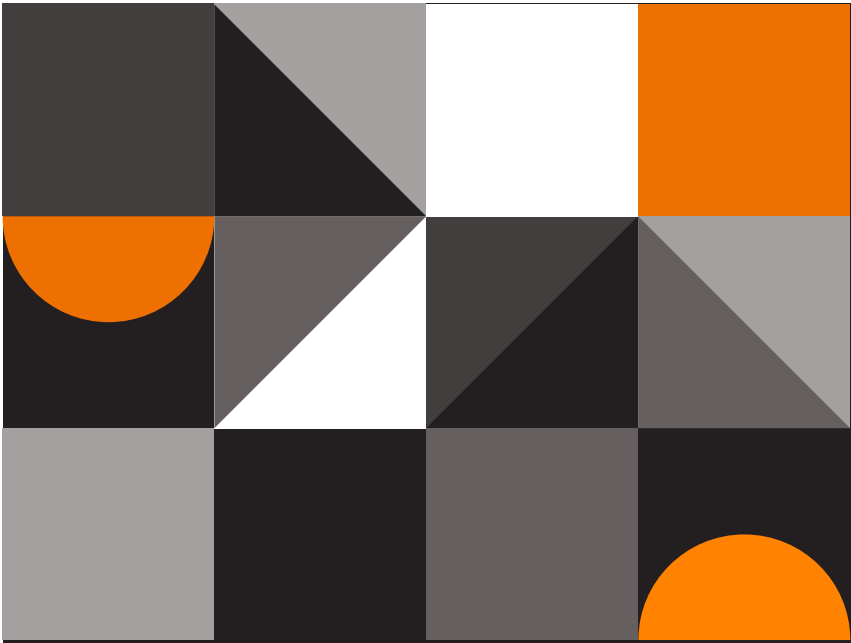
CONSULTING SERVICES PROPOSAL

# Highway 61 and Innovation Market Analysis and Small Area Plan

City of Cottage Grove

MAY 17, 2024





- 1. Cover Letter/Primary Contact ..... 1
- 2. Company Information .....3
- 3. Firm & Staff Qualifications .....4
- 4. Approach & Methodology .....9
- 5. Acknowledgments.....15
- 6. Compensation for Services (Fee) .....16
- 7. Appendix.....17
  - Project Team Resumes



May 17, 2024

Emily Schmitz, Community Development Director  
City of Cottage Grove  
12800 Ravine Parkway South  
Cottage Grove, MN 550163  
eschmitz@cottagegrovemn.gov

**RE: Highway 61 and Innovation Market Analysis and Small Area Plan**

Dear Emily and evaluation committee members:

Our relationship with Cottage Grove is long and deep. The Stantec planning team has collaborated with you on long-range plans, visions for focused areas, and tricky environmental review processes. We know one of the city's greatest assets is a forward-thinking spirit with a community that cherishes its public amenities while embracing growth. The Highway 61 and Innovation Market Analysis and Small Area Plan aims to take advantage of opportunities like the 100th Street extension and future Jamaica BRT station to deliberately plan this area to enhance walkability, promote economic vitality, and continue to foster a sense of community. Insight from a market analysis will ground land use decisions to give you confidence in responding when development proposals come your way.

The Stantec team is familiar with the challenges and opportunities facing suburbs today. Beyond knowing Cottage Grove well, our planners work with suburbs across the country. This means you will get a team of your trusted local partners who can also bring best practices and trends from communities like yours. We will partner with the City, community, and property owners to understand the current conditions, identify key development opportunities, improve existing infrastructure, and enhance mobility to develop a strategic vision for the small area that reflects its future potential while meeting current needs.



Our team has worked on more than a dozen plans for walkable, mixed-use, suburban centers. These amenity-rich places build social, economic, and environmental value. A well-designed suburban small area attracts businesses, residents, and tourists—advancing local commerce, creating jobs, and providing economic resilience. We specialize in translating market potential into achievable goals, with a particular focus on community and stakeholder buy-in that leads to full-scale implementation.

**Beth Elliott**, our project manager, is known for effectively balancing the needs of projects with the desires of elected officials and the public. She has prioritized planning for development and community reinvestment throughout her career, including the Lyndale Avenue Suburban Retrofit in Bloomington, an AUAR in Shakopee, rethinking regulations in Burnsville, and your own comprehensive plan and environmental review processes.

**Tom Leighton**, development economics expert, will make the small area plan truly actionable. He brings expertise in market analysis—including current commercial and housing study projects in Twin Cities suburbs—to an assessment of market potential in the small area. He will test your existing land use policies with new market conditions to provide the City with a realistic understanding of development opportunities and constraints.

**Joel Mann**, transportation planner, has recently brought both his policy and fine-grained mobility analysis to the Minneapolis planning team. He is a creative problem-solver focused on systematically analyzing existing conditions and then applying a custom multimodal approach to meet the needs of growing communities.

**Dave Sanocki**, your valued civil engineer, will support ground truthing of transportation investments and collaborate with Joel on a phasing approach that matches future land use needs of the area.

**Joe Polacek** and **Kristin Baldonado** will bring creative thinking and design skills to realizing the small area plan's concepts and visualizations to effectively communicate how a vision and priorities can come to life.

Great places don't just happen; they are born of thoughtful vision and inspirational design. This project demands a team with expertise in land use, urban design, market analysis, transportation, and infrastructure. Our team intimately understands the potential of Cottage Grove, and we have the strategies to promote the Highway 61 and Innovation area and achieve positive change over time. Let's grow Cottage Grove together—one thoughtful design and one vibrant place at a time. Stantec's local presence and national thought leadership positions our team as a formidable force of innovative thinkers.

Thank you for considering Stantec for this pivotal project. Should you have questions about our submittal, please contact me for further information. We look forward to hearing from you!

Sincerely,

## STANTEC CONSULTING SERVICES INC.



### **Beth Elliott, AICP**

Project Manager/Primary Contact  
612-712-2039 | beth.elliott@stantec.com

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### **Primary Contact**

#### **Stantec Consulting Services Inc.**

#### **Beth Elliott, Project Manager**

733 Marquette Ave. Suite 1000

Minneapolis, MN 55402

612-712-2039 | beth.elliott@stantec.com

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# Company Information

## About Stantec

Since 1954, our local strength, knowledge, and relationships, coupled with world-class expertise, have allowed us to go anywhere to meet our clients' needs in creative, personalized ways. The Stantec community unites more than 31,000 employees working in over 450 locations across 6 continents.

### Stantec's Urban Places

Stantec's Urban Places team brings local and national experts in planning and urban design; transportation (including smart and urban mobility); resilience; real estate feasibility; mixed-use architecture; smart cities; and brownfield redevelopment—integrating more than a dozen disciplines, we've helped suburban and urban communities across the globe chart a path to greater livability, sustainability, and equity.

Our Urban Places group produces innovative and achievable planning visions that create communities of great and lasting value for private and public stakeholders alike.

We help communities with community planning and infrastructure investment through the lasting value of economic, community building, and environmental assets.

From rural to urban, we lay the foundation for creating the communities of today and the future. Planning is problem solving—creating thoughtful options for communities that consider site conditions, public input, client needs, and project requirements.

Stantec's planning practice is more than just a collection of technical skills—it's an integrated approach that “connects the dots” to solve complex problems and unlock bigger opportunities. We're a team with broad national expertise and local knowledge with visionaries who push the edge of innovation but keep plans grounded in the realities of the market.



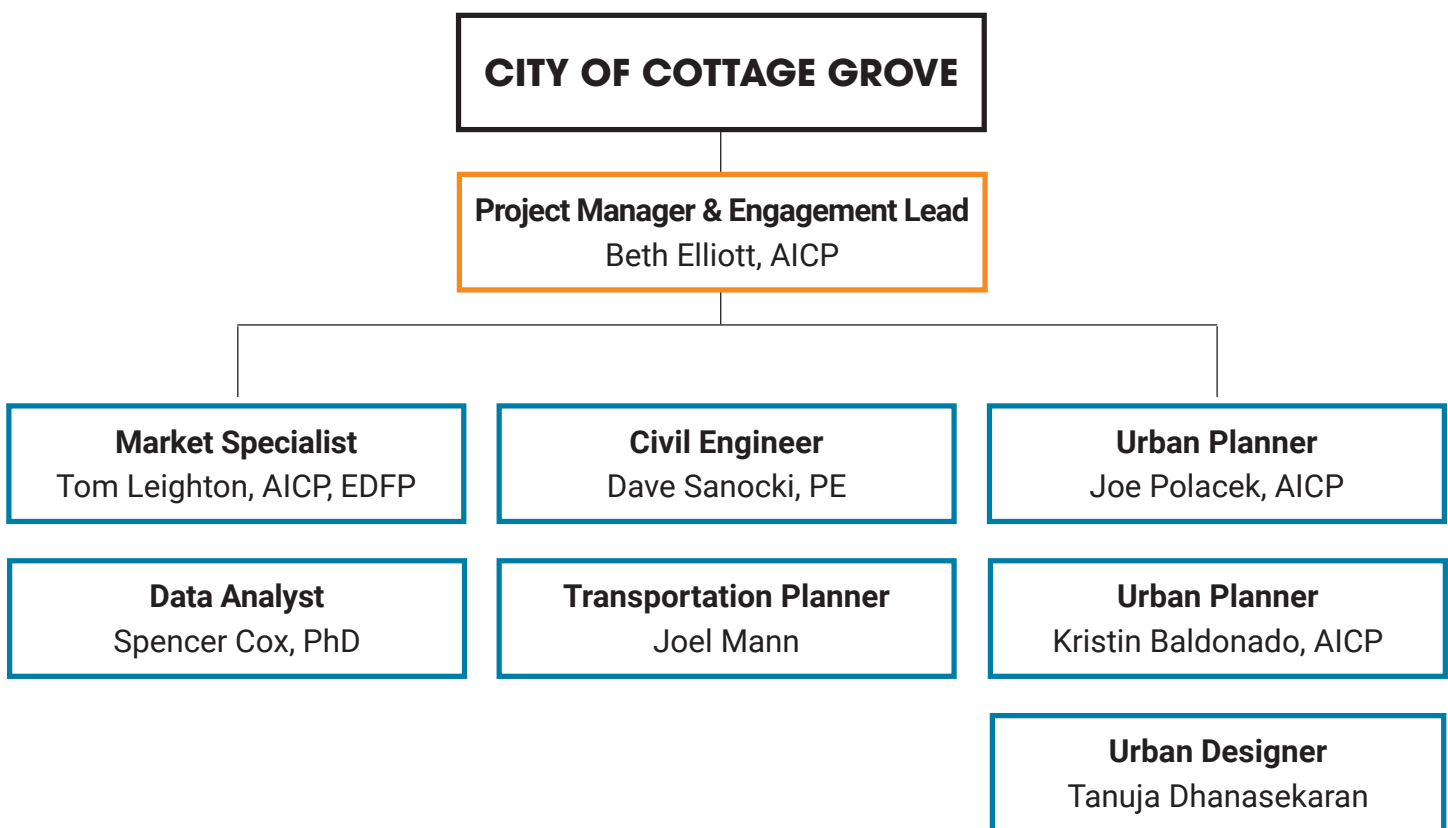


# Firm & Staff Qualifications

## Project Team Organization

### Leaders + Dreamers + Innovators

Our project team, shown on the organizational chart below, has skills and specialists who are among the best in their fields. We're proud to have them on our team, and you'll be glad to have them on yours as well.



### Team Member Resumes

Resumes detailing our team qualifications are included in the Appendix.

# Key Staff Qualifications, Experience, and Technical Competence



## **Beth Elliott AICP**

### *Project Manager/Engagement*

Beth is an urban planner with proven experience managing complex short- and long-term projects of regional significance related to downtown planning,

comprehensive planning, community revitalization, zoning and other regulatory frameworks, funding and implementation, and transit-oriented development. She also has specialized expertise in developing and facilitating inclusive and creative community engagement strategies for diverse stakeholder groups. In her 12 years as Minneapolis' downtown planner, Beth gained a reputation for her collaboration and communication skills among elected officials, community members, developers, and businesses to advance projects into implementation.



## **Tom Leighton AICP, EDFP**

### *Market Specialist*

Tom supports public sector clients with development planning, market analysis, housing and economic development strategy, and development implementation

strategy. He has developed analytical methodologies and processes that illuminate the real-world market and development context and pave the way for implementation. Clients appreciate Tom's ability to talk about real world complexities in ways that people understand, and to focus on the information and analysis that is truly relevant to public goals and objectives.



## **Spencer Cox PhD**

### *Data Analyst*

Spencer is an economic and development analyst who combines urban economic and development expertise with methodological techniques in big data

analysis, machine learning, interactive data visualization and data-driven storytelling. This combination enables him to generate insights for urban planners, real estate developers, and economic development teams.



## **Dave Sanocki PE**

### *Civil Engineer*

Dave joined Stantec in 1994 and currently serves as a Client Service Manager and Design Engineer. He has worked with the City of Cottage Grove on reconstruction

projects with our construction services group, gaining important insight and experience. In recent years, Dave has served as the Client Service Manager for all public and private projects for the City of Cottage Grove, as well as the City of Farmington. His work for these clients includes preparing plans and specifications for various utility projects throughout the communities.



## **Joel Mann**

### *Transportation Planner*

Joel is a planner with 20 years of experience in transportation planning and transportation-focused contributions to development codes, comprehensive plans,

and community master plans. His career pursuits have grown from an intersection of personal passions and commitments, including bicycle and pedestrian mobility, streets as vital urban public spaces, and use of public resources to provide the best possible returns for citizens and their quality of life. He works to develop plans that promote balanced multimodal transportation, that enhance potential for land development and urban design, and that fit within community expectations.



## **Joe Polacek AICP**

### *Urban Planner*

Joe is experienced in community engagement, master planning, spatial design, hand drawing and digital rendering, research and analysis, and report writing.

He is also involved in a wide variety of planning and design projects, including comprehensive plans, zoning studies, master plans, redevelopment projects, environmental reviews, and the design of mixed-use projects.



## **Kristin Baldonado AICP**

### *Urban Planner*

Kristin is an urban planner with a passion for advancing policies, plans, and regulations that foster low-carbon living in pedestrian-oriented, inclusive, and mixed-

use environments. Her ability to think across scales is showcased in her experience working on city-wide comprehensive plans and zoning codes down to neighborhood projects. Kristin's skill set includes geospatial data analysis, land use planning and analysis, market analysis, housing development strategy, and urban design.



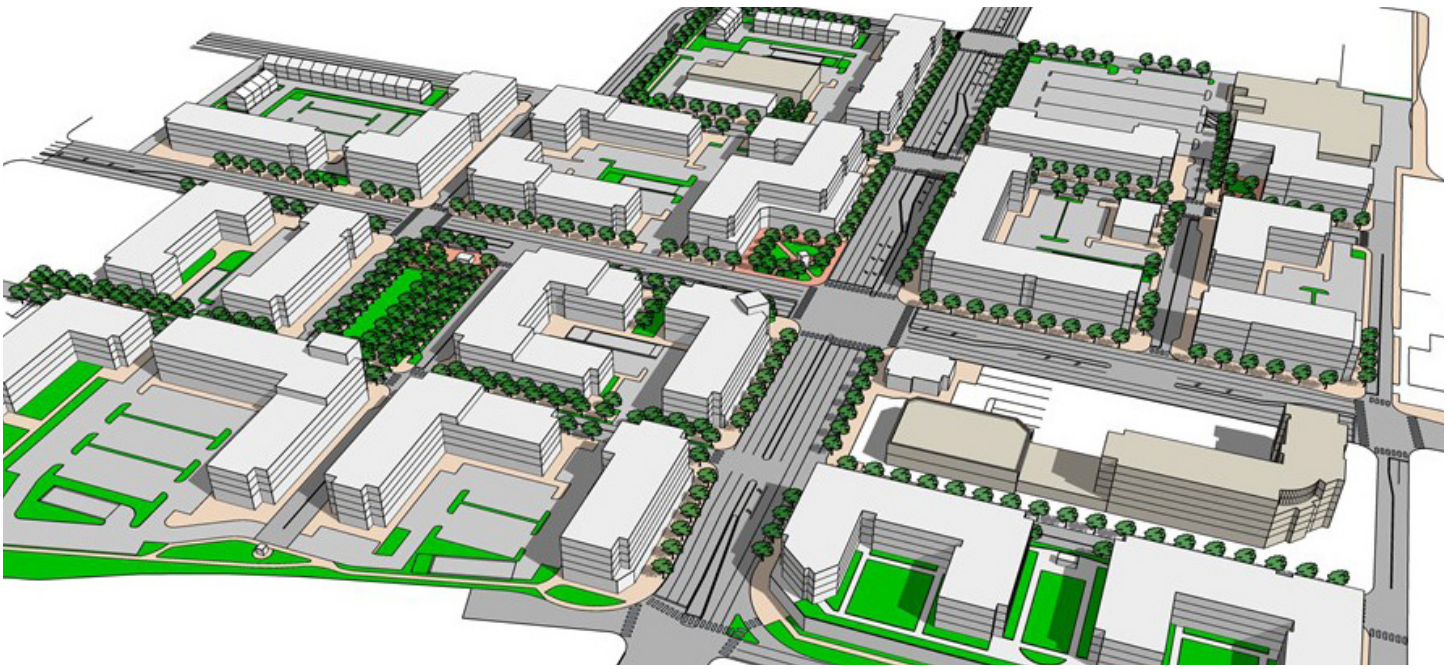
## **Tanuja Dhanasekaran**

### *Urban Designer*

Tanuja is an urban designer with a background in architecture. Fascinated with how cities work at a larger scale, her interests pivoted towards urban design

and community development. Tanuja works on urban design projects ranging from healthcare masterplans, streetscape infrastructure, riverfront and natural areas preservation and redevelopment and more. She is a strong visualizer and enjoys experimenting with mapping, graphics and visual representation techniques.





# Lyndale Avenue Suburban Retrofit

Bloomington, Minnesota

## Reference

Barb Wolff  
Assistant Port Authority Administrator  
Former Special Projects and Initiatives Mgr.  
City of Bloomington  
1800 W Old Shakopee Road  
Bloomington, MN 55431  
952-563-4706  
bwolff@bloomingtonmn.gov

Stantec's Urban Places led a team to develop a plan and suburban retrofit strategies for Lyndale Avenue—creating a dynamic, walkable boulevard that connects a series of vibrant and distinctive neighborhoods along one, cohesive corridor.

Our plan prioritized concepts at two key nodes, including transit-oriented design and development surrounding a Bus Rapid Transit (BRT) station. Following an extensive community engagement process with support from a public artist, the plan establishes a cultural heart for the community while addressing the overall urban design framework of the corridor—providing guidance for mobility, open space, and buildings. The corridor will include a series of destinations to live, dine, play, and work while preserving Bloomington's unique history and authentic character.

The final suburban retrofit plan establishes actionable strategies that make the investment case for redeveloping the area over a 20-year period.

## KEY PERSONNEL

Beth Elliott (Co-Project Manager/Engagement Lead)  
Joe Polacek (Urban Designer/Digital Engagement)  
Tom Leighton (Retail Market Analysis)  
Joel Mann (Transportation and Mobility Planner)

Final Plan: [https://www.bloomingtonmn.gov/sites/default/files/lyndale\\_avenue\\_suburban\\_retrofit\\_plan.pdf](https://www.bloomingtonmn.gov/sites/default/files/lyndale_avenue_suburban_retrofit_plan.pdf)



Langdon Village Concept Plan  
Cottage Grove, MN

## Cottage Grove Planning Projects

Cottage Grove, Minnesota

### Reference

Jennifer Levitt  
City Administrator  
City of Cottage Grove  
12800 Ravine Parkway South  
Cottage Grove, MN 55016  
651-458-2890  
jlevitt@cottagrove.mn.gov

Cottage Grove is a thriving growing suburb that needs to plan sustainably for projected growth. Stantec's role on many City projects has been to create and implement plans with a focus on market demand, environmental compliance, and land use considerations.

As a fast-growing Twin Cities suburb with undeveloped areas and a high-demand for its bucolic, family-friendly atmosphere, Cottage Grove has collaborated with Stantec planners on a variety of planning projects guiding citywide, small area, and strategic site strategies.

In its 2040 Comprehensive Plan, Stantec guided a process that educated stakeholders on where Cottage Grove has been and where demographics will drive it, developed a community-wide vision and goals, analyzed market conditions, created new policies for active living and a mix of uses, and then applied this direction in focus areas. Stantec developed small area plans for these nodes with an emphasis on density, walkability, urban-centric mixed-use sites, and placemaking amenities that would support transit use.

With comprehensive plan guidance established, Stantec has worked with Cottage Grove on a variety of environmental processes, including Alternative Urban Areawide Reviews (AUARs) for areas south of the Business Park and an Environmental Impact Statement (EIS) on Lower Gray Cloud Island. Balancing future land use needs with environmental stewardship and infrastructure improvements have been key elements to the success of these initiatives.

### KEY PERSONNEL

Beth Elliott (Project Manager)  
Joe Polacek (Urban Designer/Digital Engagement)  
Tom Leighton (Market Specialist)  
Dave Sanocki (Client Services Manager)

Final AUR: <https://www.cottagrove.mn.gov/DocumentCenter/View/2890/AUAR-Update>

Final 2004 Comp. Plan: <https://www.cottagrove.mn.gov/DocumentCenter/View/926/2040-Comprehensive-Plan?bidId=>





## New Brighton Housing Study

New Brighton, Minnesota

### Reference

Devin Massopust  
City Manager  
City of New Brighton  
803 Old Highway 8 NW  
New Brighton, MN 55112  
651-638-2046  
devin.massopust@newbrightonmn.gov

As a fully developed suburb on the north side of the Twin Cities, New Brighton offers a broad mix of housing types, yet faces challenges associated with its aging single-family homes and a concentration of 1960s-era apartment buildings. New multifamily development is desired, particularly affordable options for its community and workforce.

The Stantec team was hired to complete a housing study and develop a detailed understanding of New Brighton's housing inventory, its market and development context, the housing opportunities and challenges, and housing needs. Tom led the team to explore and recommend housing strategies that would advance housing goals and meet community needs. The project employed market research, mapping analysis, and other analytical methodologies. Structured interviews were conducted with developers familiar with the City to understand the viability of different housing formats in New Brighton, and how to improve development outcomes.

### KEY PERSONNEL

Tom Leighton (Project Manager/Market Specialist)

Final Study: <https://www.newbrightonmn.gov/DocumentCenter/View/1735/New-Brighton-Housing-Study--Final-Draft>



# Approach & Methodology

## Understanding of City's Goals

### Proven experience in successfully leading comprehensive neighborhood planning in growing communities

At Stantec, we pride ourselves on our ability to balance land use, local regulation, urban design, and implementation needs for community redevelopment. For the Highway 61 and Innovation area, we understand a small area plan cannot be simply a design exercise. The plan will need to pair market conditions and trends with existing and future amenities, such as the extension of 100th Street and future BRT.

This small area plan should be set in the context of community priorities that are outlined in past planning efforts and financial/programmatic policies related to the 2040 Comprehensive Plan, Jamaica station area planning, Business Park growth, capital investments, and 3M property intentions.

While we develop the market analysis and small area plan, we will take City staff and stakeholders through a high-level analysis of market conditions, physical site conditions, district infrastructure and surface water, mobility, and placemaking elements. The process will begin by informing property owners, businesses, and the general public of our analysis and findings while guiding them through visioning exercises to establish a direction for this key area.

Once a vision is crafted, it will be well-vetted, especially as a tool for discussions with public and private land owners. We will then provide the City with a strong implementation strategy that outlines a vision with short-, mid-, and long-term steps paired with clear implementation actions.

This will include recommendations—both small and large—for zoning changes, capital planning, development incentives, property investments, and other tools.



↑ *Stantec believes engagement should reach people where they naturally gather and in ways that match the needs of the project.*

### Our approach will balance City goals to:

- Make infrastructure investments while being thoughtful of future property improvements.
- Determine still relevant City land use and growth policies while revising outdated direction.
- Provide clear direction to City decision-makers while allowing enough flexibility for changing market conditions.
- Increase the overall Cottage Grove tax base while being deliberate about phasing growth.

This plan will not only guide the future of the Highway 61 and Innovation area, but also provide the City an opportunity to take a holistic look at its current infrastructure, land use, and mobility/transportation uses. Together, we can strategically develop a small area plan that considers changing land use trends, meets community growth, and provides economic development opportunities.

Our approach outlines key milestones and deliverables to meet the schedule and provide the City with a successful plan.





Our projects provide robust community engagement, strong **visioning**, land use, and design direction in areas of change, **innovative** mobility and resiliency considerations, and **creative** implementation strategies.



## Community Engagement and Facilitation

Effective engagement and facilitation are about customizing a process to meet community needs and project goals. The Stantec team has experience working with stakeholders to build consensus around complicated issues and divergent perspectives. It takes thoughtful planning, transparent decision-making, steady consensus-building, and tangible results.

The RFP directs this process to use a Working Group, and we agree that this team of stakeholders will be key to building that necessary consensus around the future of the Highway 61 and Innovation area. They could be community members with different perspectives and roles—residents, business representatives, landowners, and others—that can listen and learn from each other.

We will inform the Working Group about trends and physical conditions on the ground, ask key questions at milestones in the process, and facilitate exercises and discussions that make the most of their expertise.

Our engagement process will include:

- **Working Group Meetings** – These will be at four milestones in the process, focused on reaching consensus on critical topics that need to be addressed or narrowed down before the next phase of work. We understand the RFP proposed ten Working Group meetings, but we have determined that four meetings can move the schedule more efficiently while making the most of members' time. Our process means we meet to work, not work just because there is a scheduled meeting.
- **Landowner Meetings** – We will reach out to landowners early in the market study to discuss their plans and ideas.
- **Developer Interviews** – We will interview developers to test our market assumptions in real-time conditions. While not part of the requested engagement, these will be critical to ground-truthing the market analysis.
- **Stakeholder Meetings** – Based on advice from City staff, we will create a more technical group with partners from MnDOT, Washington County, the watershed, and other agencies. This group will be a sounding board for opportunities and constraints at three milestone times throughout the process.
- **Public Workshop** – Stantec will host an interactive public workshop at the point in the process where concepts are still preliminary but can be paired with alternatives for finalizing them. These alternatives could be mobility options, park locations, future land use designations, and methods of implementation.



↑ Beth Elliott, Joe Polacek, and the Stantec team collaborated with artist Monica Sheets on creative engagement for Bloomington's Lyndale Avenue Suburban Retrofit.

In addition to the engagement and facilitation needs described on the previous page, we can provide additional services that could support other Cottage Grove stakeholders. We would be happy to talk about complementary traditional, targeted, virtual, and innovative engagement techniques that bolster support for the market analysis and small area plan.

## TRADITIONAL

These are conventional methods included in most planning processes. Examples include workshops with the community, City Commissions, and City Council; newsletters; and info-blasts.



## TARGETED

This includes outreach to specific groups that may not otherwise participate in the planning process. Groups that could benefit from targeted outreach include property owners, businesses, public partners, developers, and residents. Examples of targeted outreach include focus groups, piggybacking on other meetings or gatherings, and individual interviews.

Únase a nosotros para un taller de caminata:

**Taller de caminata**

Caminata al aire libre de una milla (1 hora)

Únase a sus vecinos para una caminata inmersiva para identificar cómo se pueden mejorar las calles y los sitios para los residentes existentes y futuros. ¿Qué hará que estas comunidades sean verdaderamente completas?

Para obtener más información y formas adicionales de participar:  
[farmersbranchtx.gov/cityvision](http://farmersbranchtx.gov/cityvision)

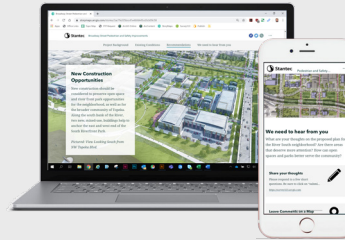
FARMERS BRANCH  
PLAN INTEGRAL  
Habitable, Inclusivo, Vibrante

Necesitamos saber cómo orientar las inversiones y crear lugares más habitables. ¡Su aporte tendrá un impacto directo en el futuro de su ciudad!

↑ Stantec created promotional postcard geared toward Spanish speakers for the Farmers Branch Comprehensive Plan, Farmers Branch, TX.

## VIRTUAL

Internet-based outreach can help increase awareness and participation and reach people who may not otherwise participate. Examples include a project website, social media, and interactive engagement tools. We can create an “online equivalent” for each public meeting in the planning process to offer diverse opportunities to participate. The online equivalent is envisioned as a way for people who did not attend the in-person meeting to review materials and provide input comparable to the opportunity that meeting attendees received.

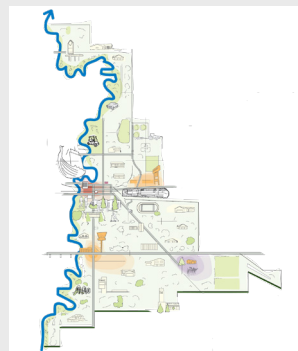


↑ ONWARD MOORHEAD

Scan the QR code or  
[CLICK HERE](#) for an  
 example StoryMap.

## INNOVATIVE

These are creative and unconventional outreach methods to help collect information, increase awareness of the planning process, and boost participation. Examples can include charrettes, pop-up events, photo inventories and stories, demonstration projects, and an implementation workshop. Creative input opportunities—such as Six-Word Stories, drawing exercises, and kids’ activities—can and should also be incorporated into public workshops.



↑ The Stantec team used a variety of creative engagement for the City of Moorhead's Downtown Master Plan and Comprehensive Plan including design workshops, pop-up events, small group listening sessions, and community-wide workshops. The team also created the above graphic used as a children's coloring page in one of the comprehensive plan workshops.



## Work Plan

To achieve a successful small area plan, it needs to be grounded in market data with a focus on trends that can support a clear policy direction. Any vision for the Highway 61 and Innovation area will balance market realities, existing policy priorities, current and future infrastructure needs, and an actionable phasing plan for community investments and regulations. Our work plan is rooted in our valuable working relationship with you and the strong desire to see Cottage Grove continue to thrive. We will help you leverage necessary public and private realm improvements in a phased implementation plan to facilitate the highest long-term value for private investment. Stantec has prepared a scope of services that identifies tasks we have determined are critical to the project's quality and benefit to the City.

## Project Administration and Engagement

Our basic tenet to a well-run project is communication. This is about how we communicate with you regularly about project progress and needs along with engaging your stakeholders to achieve an adoptable and implementable plan.

We do not take the task of maintaining the City's trust lightly. Our team has completed several successful projects with you in recent years, so we understand the practical and political issues faced by City staff and elected/appointed officials when embarking on a plan like this.

Project Manager **Beth Elliott** brings expertise in project management and leveraging the strengths of a project team. She prioritizes quality control practices, standards, and methodologies to deliver high-quality work products. As a strong communicator, she will anticipate scope and budget challenges—identifying options to convert these challenges into potential opportunities to achieve a successful vision.

Effectively managing a project extends to communication and facilitation with your external stakeholders. A Working Group will guide us through critical decisions at each milestone in the project.

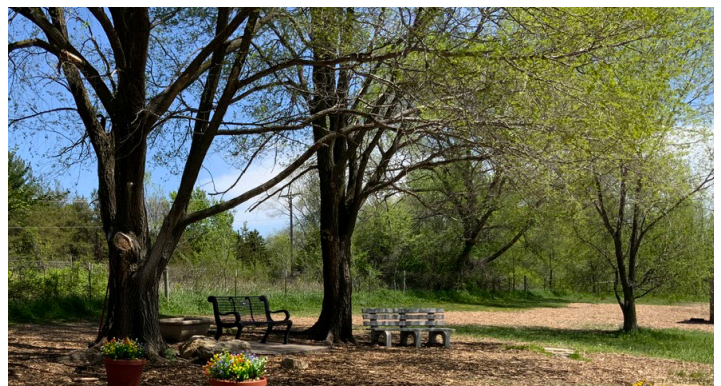
The four Working Group meetings will focus on:

- 1. Kicking off the plan:** We will walk through existing policy direction for Highway 61 and Innovation along with other factors driving change in Cottage Grove. The Working Group will help us prioritize what policies and initiatives should continue and what may not still be relevant.
- 2. Developing a vision and goals:** The Working Group will evaluate the results of the market study and other existing conditions, and then we will bring them through a visioning exercise to chart a path for the small area plan.
- 3. Concept planning:** Prior to a public workshop, the Working Group will guide us in alternative conceptual land use plans with details of a multimodal and open space strategy. Their guidance will lead to the materials to present to the public for input.
- 4. Drafting the plan:** Once Stantec has evaluated public input on the concept plans and implementation strategies, the Working Group will assist in refining the details that will be crafted into the market analysis and small area plan deliverables.

While the Working Group will guide the process, we will also focus on other stakeholders with a stake in the plan outcomes. Public partners like MnDOT, Washington County, and the South Washington Watershed District will meet three times together to provide expertise and potentially champion key plan implementation strategies. Meetings with area landowners and Cottage Grove developers will support concrete details that can inform the market analysis and future land use. And, finally, a public workshop will offer the general public an opportunity to learn about City priorities for continued investment in their community while reacting to plan concepts.

Project Administration and Engagement tasks will include:

- Working group meetings
- Biweekly check-in meetings
- Developer interviews
- Landowners' engagement
- Public workshop
- Stakeholder meetings
- Plan approval meetings
- Project management and administration



## Phase 1: Existing Conditions Analysis

The most important analytical foundation for the small area plan will be the market analysis. **Tom Leighton** and **Spencer Cox** will use industry-leading methodologies, developed over multiple projects, to clearly and efficiently build an understanding of the development context.

The first step in that process is to adapt a set of Jupyter Notebooks to the Cottage Grove context, producing observations related to the economic, demographic, and market characteristics that impact development. (Jupyter Notebooks are lengthy Python-based computer programs that extract data directly from publicly available data portals and visualize that data through charts, graphs, and maps.) We contextualize and deepen these analytical findings through structured interviews with developers who understand the Cottage Grove development context.

We will focus the market analysis on a set of key questions relevant to the specific locational context and the desired development. We will clarify that focus in the very first Working Group meeting, but preliminarily we see the following as key analytical questions:

- What mix of housing types will meet City goals and be efficiently absorbed in the local demand environment?
- Under realistic household growth scenarios, how much additional retail development can be absorbed in the Highway 61 corridor?
- What guidance can we provide for a “Main Street” style walkable amenity district, in terms of its extent, the utilization of mixed-use development formats, and the public sector support that may be required for its implementation?
- Is there demand for a hotel in Cottage Grove, and would this be seen as a viable location for a hotel?
- How should residential and commercial elements be arranged within the study area so that each element is best supported by the surrounding development context?



The area’s physical conditions and regulatory context also provide important context for understanding future opportunities. We will evaluate transportation and access, including how to make the most of new infrastructure like the extension of 100th Street and the role of the existing rail corridor. A review of the Business Park AUAR may provide details for the broader area’s environmental and natural resources and limitations. Market assets and constraints from the market study can shed light on community amenities that can drive demand for one use over another. A comprehensive review of market, policy/regulatory, and physical conditions will set up the project team for the next phase of work.

Existing Conditions Analysis tasks will include:

- Market analysis
- Summary of plans/regulations
- Physical conditions analysis



## Phase 2: Development Strategy

We will apply what we learned in Phase 1 to creating a vision and goals for the Highway 61 and Innovation small area plan. The Working Group will be guided through a visioning exercise informed by existing conditions but focused on a future thinking lens. An overall vision and topical goals will lead our project team into developing alternative conceptual plans for the area that can bring the vision to life. Stantec will continually evaluate the vision on a district-wide level and test in on specific key sites, within new or proposed streets, and other public realm features. We will prepare an area-wide plan for land use and public improvements that support the growth of the area.

Our team will conduct a session with the Working Group to show alternative concepts for implementing the vision. We will also discuss how the conceptual plan can be realized through future land use and planning strategies, multimodal improvements, and parks and open space investments. Transportation Planner **Joel Mann** will work collaboratively with land use and urban design planners to showcase creative solutions to the area’s future transportation needs. The Working Group will refine the conceptual plan and any alternative scenarios to present in a public workshop.



To maximize input from the public, we are proposing the public workshop at this point in the process before decisions are made about the final concept for the small area plan, where public input can still shape the final plan. We will educate the public about market conditions, creatively show opportunities and constraints for development in the area, back up the initial plan direction with its existing policy framework, and tee up the tools for implementation.

Development Strategy tasks will include:

- Vision and goals
- Development scenarios (concept plans)
- Future land use and planning strategies
- Multimodal strategies
- Parks and open space strategies

### Phase 3: Actionable Plan

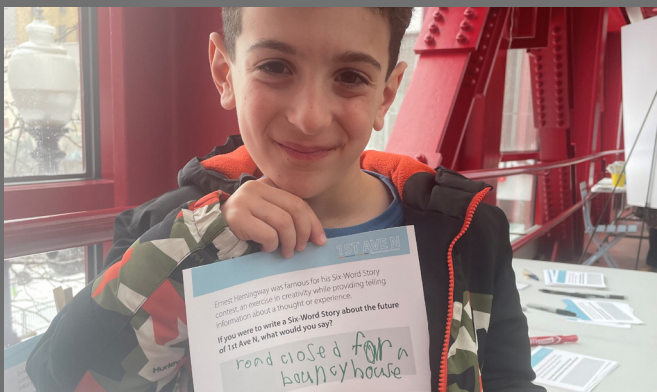
Stantec will evaluate input from the public on the concept plans and implementation strategies, and then the Working Group will help us frame the details of a small area plan. With our keen understanding of your existing comprehensive plan and zoning code, our planners will propose zoning and policy changes. These adjustments will be the first step to removing barriers to getting the development you want in the Highway 61 and Innovation study area. The plan's direction will offer flexibility but guide you when a property owner or developer calls City offices with a new idea for a site.

Civil Engineer **Dave Sanocki** and **Joel Mann** will assist in a high-level assessment of traffic considerations along with information on costs and benefits using similar Cottage Grove multimodal projects.

Stantec will package the market study and small area plan into graphically compelling and easy to read documents for City staff review. After a round of revisions, **Beth Elliott** will work with you to support the local approval process through presentations to the Planning Commission and Cottage Grove City Council. You know us, and you know we are committed to both successful processes and successful outcomes.

Actionable Plan tasks will include:

- Recommended zoning and policy changes
- Transportation cost/benefit analysis
- Phasing strategy
- Draft market study and small area plan
- Revised market study and small area plan



*The Stantec team has the experience, skills, and capacity to help the City of Cottage Grove to imagine and plan for the future.*

*We customize our approach to the plan for each client, working with the unique communities and real world needs of each local government.*

*We will work with you to develop a small area plan that is forward-thinking and implementable.*

# Acknowledgments

## Proposed Project Timeline

The Stantec team has the available capacity within its current personnel and workload to complete this scope of work within the proposed timeline. We know of no conflicts of interest that may exist with other clients or projects currently underway.

The timeline below provides the sequence of work for the Market Analysis and Small Area Plan. The schedule includes our proposed milestones and meetings.

|                                                        | 2024 |     |     |     |     |     | 2025 |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|------|
|                                                        | JUL  | AUG | SEP | OCT | NOV | DEC | JAN  |
| <b>Phase 0: Project Administration and Engagement</b>  |      |     |     |     |     |     |      |
| Task 1.1 - Working Group Meetings - (4)                | ❖    | ❖   | ❖   |     | ❖   |     |      |
| Task 1.2 - Biweekly Check-In Meetings                  |      |     |     |     |     |     |      |
| Task 1.3 - Developer Interviews (4)                    |      |     |     |     |     |     |      |
| Task 1.4 - Landowners Engagement                       |      |     |     |     |     |     |      |
| Task 1.5 - Public Workshop (1)                         |      |     |     |     |     |     |      |
| Task 1.6 - Stakeholder Meetings (3)                    | ◆    | ◆   | ◆   |     |     |     |      |
| Task 1.7 - Plan Approval Meetings (3)                  |      |     |     |     |     |     |      |
| Task 1.8 - Project Management and Administration       |      |     |     |     |     |     |      |
| <b>Phase 1: Existing Conditions Analysis</b>           |      |     |     |     |     |     |      |
| Task 2.1 - Market Analysis                             |      |     |     |     |     |     |      |
| Task 2.2 - Summary of Plans/Regulations                |      |     |     |     |     |     |      |
| Task 2.3 - Physical Conditions Analysis                |      |     |     |     |     |     |      |
| <b>Phase 2: Development Strategy</b>                   |      |     |     |     |     |     |      |
| Task 3.1 - Vision and Goals                            |      |     |     |     |     |     |      |
| Task 3.2 - Development Scenarios (concept plans)       |      |     |     |     |     |     |      |
| Task 3.3 - Future Land Use and Planning Strategies     |      |     |     |     |     |     |      |
| Task 3.4 - Multimodal Strategies                       |      |     |     |     |     |     |      |
| Task 3.5 - Parks and Open Space Strategies             |      |     |     |     |     |     |      |
| <b>Phase 3: Actionable Plan</b>                        |      |     |     |     |     |     |      |
| Task 4.1 - Recommended Zoning/Policy Changes           |      |     |     |     |     |     |      |
| Task 4.2 - Transportation Cost/Benefit Analysis        |      |     |     |     |     |     |      |
| Task 4.3 - Phasing Strategy                            |      |     |     |     |     |     |      |
| Task 4.4 - Draft Market Analysis and Small Area Plan   |      |     |     |     |     |     |      |
| Task 4.5 - Revised Market Analysis and Small Area Plan |      |     |     |     |     |     |      |

KEY:

- ❖ Working Group Meetings
- ◆ Stakeholder Meetings

# Compensation for Services (Fee)

|                                                        | Beth Elliott | Megan Allen<br>(PM Asst.) | Tom Leighton | Joel Mann | Joe Polacek | Kristin<br>Baldonado | Tanuja<br>Dhanasekaran | Spencer Cox | Dave Sanocki | Expenses     |                             |                  |
|--------------------------------------------------------|--------------|---------------------------|--------------|-----------|-------------|----------------------|------------------------|-------------|--------------|--------------|-----------------------------|------------------|
| Personnel Hourly Rate                                  | \$205        | \$169                     | \$196        | \$205     | \$163       | \$163                | \$146                  | \$169       | \$185        | -            |                             |                  |
| TASK                                                   | Hours        | Hours                     | Hours        | Hours     | Hours       | Hours                | Hours                  | Hours       | Hours        | -            | Task Total Units<br>(Hours) | Total Labor Cost |
| <b>Phase 0: Project Administration and Engagement</b>  |              |                           |              |           |             |                      |                        |             |              |              | 161                         | \$29,105         |
| Task 1.1 - Working Group Meetings (4)                  | 16           |                           | 8            |           | 40          |                      |                        |             |              |              | 64                          | \$11,368         |
| Task 1.2 - Biweekly Check-In Meetings                  | 8            |                           |              |           |             |                      |                        |             |              |              | 8                           | \$1,640          |
| Task 1.3 - Developer Interviews (4)                    |              |                           | 6            |           |             |                      |                        |             |              | \$200        | 6                           | \$1,176          |
| Task 1.4 - Landowners Engagement                       |              |                           | 8            |           |             |                      |                        |             |              |              | 8                           | \$1,568          |
| Task 1.5 - Public Workshop (1)                         | 8            |                           |              |           | 10          |                      | 10                     |             |              | \$300        | 28                          | \$4,730          |
| Task 1.6 - Stakeholder Meetings (3)                    |              |                           |              |           |             |                      |                        |             |              |              | 0                           | \$0              |
| Task 1.7 - Plan Approval Meetings (3)                  | 16           |                           |              |           |             |                      | 8                      |             |              | \$250        | 24                          | \$4,448          |
| Task 1.8 - Project Management and Administration       | 8            | 15                        |              |           |             |                      |                        |             |              |              | 23                          | \$4,175          |
| <b>Phase 1: Existing Conditions Analysis</b>           |              |                           |              |           |             |                      |                        |             |              |              | 84                          | \$14,668         |
| Task 2.1 - Market Study                                |              |                           | 24           |           |             |                      |                        | 32          |              |              | 56                          | \$10,112         |
| Task 2.2 - Summary of Plans/Regulations                |              |                           |              |           |             | 4                    |                        |             |              |              | 4                           | \$652            |
| Task 2.3 - Physical Conditions Analysis                |              |                           |              | 2         | 6           | 6                    | 8                      |             | 2            |              | 24                          | \$3,904          |
| <b>Phase 2: Development Strategy</b>                   |              |                           |              |           |             |                      |                        |             |              |              | 100                         | \$16,404         |
| Task 3.1 - Vision and Goals                            | 2            |                           | 2            |           |             | 2                    |                        |             |              |              | 6                           | \$1,128          |
| Task 3.2 - Development Scenarios (concept plans)       |              |                           |              | 4         | 24          | 24                   | 26                     |             |              |              | 78                          | \$12,440         |
| Task 3.3 - Future Land Use and Planning Strategies     | 2            |                           |              |           |             | 4                    |                        |             |              |              | 6                           | \$1,062          |
| Task 3.4 - Multimodal Strategies                       |              |                           |              | 4         |             |                      |                        |             | 2            |              | 6                           | \$1,190          |
| Task 3.5 - Parks and Open Space Strategies             |              |                           |              |           |             |                      | 4                      |             |              |              | 4                           | \$584            |
| <b>Phase 3: Actionable Plan</b>                        |              |                           |              |           |             |                      |                        |             |              |              | 118                         | \$19,012         |
| Task 4.1 - Recommended Zoning/Policy Changes           |              |                           |              |           |             | 4                    |                        |             |              |              | 4                           | \$652            |
| Task 4.2 - Transportation Cost/Benefit Analysis        |              |                           |              | 4         |             |                      |                        |             | 4            |              | 8                           | \$1,560          |
| Task 4.3 - Phasing Strategy                            |              |                           | 2            |           | 4           | 4                    |                        |             |              |              | 10                          | \$1,696          |
| Task 4.4 - Draft Market Analysis and Small Area Plan   |              |                           |              |           | 32          | 32                   | 16                     |             |              |              | 80                          | \$12,768         |
| Task 4.5 - Revised Market Analysis and Small Area Plan |              |                           |              |           |             |                      | 16                     |             |              |              | 16                          | \$2,336          |
| <b>TOTAL</b>                                           | <b>60</b>    | <b>15</b>                 | <b>50</b>    | <b>14</b> | <b>116</b>  | <b>80</b>            | <b>88</b>              | <b>32</b>   | <b>8</b>     | <b>\$750</b> | <b>463</b>                  | <b>\$79,939</b>  |



# Appendix

## Project Team Resumes

Resumes, indicating the specialized experience, qualifications, and technical competence of our team's project manager and key staff are included in this section.



## Beth Elliott

AICP

**Project Manager/  
Engagement**

**Years of experience:** 21

### **Education**

Masters in Urban and Regional Planning, University of Minnesota

Bachelor of Arts, University of Iowa

### **Registration**

Certified Planner, American Institute of Certified Planners

### **Memberships**

American Planning Association

Lambda Alpha International

Beth is an urban planner with proven experience managing complex short- and long-term projects of regional significance related to downtown planning, comprehensive planning, community revitalization, zoning and other regulatory frameworks, funding and implementation, and transit-oriented development. She also has specialized expertise in developing and facilitating inclusive and creative community engagement strategies for diverse stakeholder groups. In her 12 years as Minneapolis' downtown planner, Beth gained a reputation for her collaboration and communication skills among elected officials, community members, developers, and businesses to advance projects into implementation.

## Representative Projects

### **Cottage Grove Business Park AUAR and Update | Cottage Grove, Minnesota**

To better position themselves for future business growth, the City of Cottage Grove hired Beth to manage an AUAR for their existing business park and a large expansion area. Beth then assisted the City in updating the AUAR five years later to meet new market demands.

### **2040 Cottage Grove Comprehensive Plan | Cottage Grove, Minnesota**

Beth worked closely with Cottage Grove planners and Economic Development staff to create a land use strategy that best meets their future community's future needs and goals. A major component of this strategy was introducing a performance-based mixed-use district around future bus rapid transit (BRT) stations.

### **Lyndale Avenue Suburban Retrofit Strategy | Bloomington, Minnesota**

As the original Bloomington main street, Lyndale Avenue's auto-centric land uses and design hid its authentic character and beloved local businesses. The suburban retrofit strategy identified assets to maintain while proposing improved alternative mobility, compact critical mass and public spaces at nodes, and design and zoning criteria to evolve the suburban commercial corridor into a walkable corridor. Beth's role was to co-lead the project as well as design a creative and inclusive engagement process, including an artist-designed charrette with a gardening theme.

### **Shakopee AUAR | Shakopee, Minnesota**

The City of Shakopee wanted to understand how to guide development and infrastructure in an undeveloped part of their community. They hired Stantec to conduct an expanded version of an AUAR to develop a master plan for multiple properties, determine environmental constraints, propose infrastructure, and conduct a formal environmental review of the preferred development scenario.

### **Oakdale 3M Foundation Project AUAR | Oakdale, Minnesota**

In order to implement a small area plan on the largest vacant site in Oakdale, the City hired Stantec to analyze the environmental effects of the development concept through an AUAR process. Beth managed planners, traffic engineers, ecologists, geologists, and other specialists to outline issues, considerations, and mitigation strategies of two development scenarios in a detailed timeline with legal and procedural milestones.

### **Burnsville Parking Ordinance | Burnsville, Minnesota**

Beth led the effort to update Burnsville's parking ordinance to better reflect current best practices and offer more realistic expectations to the business community and property owners. The work included an extensive peer city review, collaboration with a diverse group of city staff, and tackling issues like shared parking and change of uses. The parking ordinance revisions gave city staff a more effective administration tool and decision-makers clarity in their approval processes.





**Tom  
Leighton**  
AICP, EDP  
Market Specialist

**Years of experience:** 26

**Education**

Master in Design Studies, Real Estate and the Built Environment, Harvard University

Master of Arts, Public Affairs, University of Minnesota

Bachelor of Arts, Natural Science, St. John's University

**Registrations**

Certified Planner, American Institute of Certified Planners

Economic Development Finance Professional, National Development Council

**Memberships**

American Planning Association

Economic Development Association of Minnesota

Tom believes that cities need community development plans and strategies that are aspirational and achievable, and that set a foundation for real world change. He supports public sector clients with development planning, market analysis, housing and economic development strategy, and development implementation strategy. Tom has developed analytical methodologies and processes that illuminate the real-world market and development context and pave the way for implementation. Clients appreciate Tom's ability to talk about real world complexities in ways that people understand, and to focus on the information and analysis that is truly relevant to public goals and objectives.

## Representative Projects

### **Cottage Grove 2040 Comprehensive Plan | Cottage Grove, Minnesota**

Tom set the stage for Cottage Grove's comprehensive planning with a market analysis and development projection. That established the market and development context for the growth of all major development types—housing, retail, office and industrial—and supported decisions about the land that needs to be set aside for future growth in those sectors.

### **Jamaica Avenue Small Area Plan\* | Cottage Grove and St. Paul Park, Minnesota**

Tom identified development opportunities in areas near future Red Rock bus rapid transit stations, and offered land use guidance and implementation strategies that would foster the desired growth. Tom played the lead role in identifying development opportunity sites, researching the market and development context for housing, retail and office development at those locations, and providing implementation strategies for the proposed developments. An Implementation Workshop allowed staff to wrestle with the challenges of developing key sites, and brainstorm approaches to surmounting challenges.

### **Velp Avenue Areawide Plan | Green Bay, Wisconsin**

Velp Avenue is a primary entry point to Green Bay from the northeast, but conditions in the corridor had deteriorated over recent decades. Tom identified catalyst sites where redevelopment would be both feasible and impactful, and lay the foundation for attracting additional development and investment. He articulated implementation strategies for achieving development goals at each site, and for the corridor as a whole.

### **Lyndale Avenue Suburban Retrofit Strategy | Bloomington, Minnesota**

Bloomington hired Stantec to work with them to develop a strategy for transforming the corridor, enhance public spaces, support various mobility modes, and attract investment. Tom completed a retail market analysis to understand the retail potential, the consumer submarkets to target, and how much retail could be sustained in new development. Tom's retail strategy highlighted actions that the business community could take in terms of marketing, physical improvements, events and identity building that would improve the vitality of the corridor.

### **New Brighton Housing Study | New Brighton, Minnesota**

Stantec completed a housing study and develop a detailed understanding of New Brighton's housing inventory, its market and development context, the housing opportunities and challenges, and housing needs. Tom led the team to explore and recommend housing strategies that would advance housing goals and meet community needs. The project employed market research, mapping analysis, and other analytical methodologies. Structured interviews were conducted with developers familiar with New Brighton to understand the viability of different housing formats in New Brighton, and how to improve development outcomes.

*\* denotes projects completed prior to joining Stantec*



Spencer  
Cox

PhD  
Data Analyst

**Years of experience:** 8

**Education**

PhD, Environment and Society,  
University of Minnesota

Bachelor of Arts, Economics  
and Environmental Studies,  
Middlebury College

Spencer is an economic and development analyst who combines urban economic and development expertise with methodological techniques in big data analysis, machine learning, interactive data visualization and data-driven storytelling. This combination enables him to generate insights for urban planners, real estate developers, and economic development teams. He holds a PhD in urban and economic geography from the University of Minnesota.

## Representative Projects

### **Northern Kentucky Area Development District Housing Gap Analysis | Northern Kentucky**

Spencer worked with team to develop novel methodologies to clean, analyze, and visualize complex housing and demographic data. He leveraged statistical models of real-time rents to produce a rent and bedroom size estimate for the designated study region and created interactive data visualizations and data dashboards for client. Spencer automated housing gap methodologies using Python scripting, increasing analytical efficiency.

### **Indianapolis Metropolitan Region MPO Housing Gap Analysis | Indianapolis, Indiana**

Spencer developed innovative methodologies to predict real-time housing supply and demand by housing tenure, income, and housing cost using big-data analytic techniques. He communicated housing gap information through interactive visualizations that give deep insight into real-time housing needs. This analysis is central to providing a snapshot of the current housing market that goes beyond public surveys.

### **City of Saskatoon Market Analysis of Housing and Retail Demand (Downtown Event and Entertainment District) | Saskatoon, Saskatchewan, Canada**

Spencer conducted an analysis on economic drivers, demographic changes, and cross-sector real-estate market indicators to determine demand for downtown housing. The analysis helped policy-makers understand the impact of downtown investment in spurring additional housing, retail, and office space development in downtown Saskatoon.

### **City of Mesquite Housing Gap Analysis | Mesquite, Texas**

Spencer gathered, analyzed, and visualized data on economic development drivers, demographic changes, and housing market indicators for the City of Mesquite, Texas. He applied an innovative machine learning model to predict rents and home values, thereby creating market-leading detail on housing supply in the region. Analysis identified major housing gaps for the city at different price points and housing market types and created a portfolio of strategies to induce needed development.

### **City of Minot Housing Gap Analysis | Minot, North Dakota**

Spencer collected, analyzed, and visualized data on economic development drivers, demographic changes, and housing market indicators to understand housing gaps in Minot, ND. He applied innovative big data and machine learning techniques to model supply and demand to understand precise housing gaps now and over the next 10 years.

### **Indianapolis Metropolitan Planning Organization Corporate SFR Analysis | Indianapolis, Indiana**

Spencer leveraged an innovative housing supply dataset to investigate the impacts of corporate single family home ownership on home ownership rates, home prices, rents, housing code violations, and tenant evictions. He applied statistical models to isolate the impact of corporate investment into the housing market and communicated analytical results through applied use of data-driven visual storytelling informed by deep housing subject-matter expertise.



David  
Sanocki

PE  
Civil Engineer

**Years of experience:** 31

**Education**

Bachelor of Science, Civil Engineering, University of Minnesota

**Registration**

Professional Engineer #40973, State of Minnesota

**Memberships**

American Public Works Association

Dave joined Stantec in 1994 and currently serves as a Client Service Manager and Design Engineer. Early in his career with Stantec, Dave worked with the Structures Group inspecting bridges for our local communities including the City of Chaska, New Hope, and Orono. He also worked with the City of Cottage Grove on reconstruction projects with our construction services group. This experience helped him gain important insight to managing reconstruction projects and in more recent years, Dave has served as the Client Service Manager for all public and private projects for the City of Farmington and Cottage Grove. His work for these clients includes preparing plans and specifications for various utility projects throughout the communities.

## Representative Projects

### **Camel's Hump Overlook Park and Oak Cove Addition Street and Park Improvements | Cottage Grove, Minnesota**

Dave prepared the street and utility plans and specifications for this project. Street, utility and park improvements are all part of this project. 8-inch sanitary sewer and 6-inch to 8-inch water were installed as part of this project. The park improvements are currently being installed and consist of bituminous trails, overlooks, benches, trash cans and landscaping. The total cost for this project is approximately \$880 thousand dollars. Dave conducted routine site inspections, met with project staff, responded to contractor questions and addressed resident concerns and problems as they arose. This project involved working with the City of Cottage Grove, Meridian Land Company, and adjoining residents.

### **Ravine Parkway Street and Utility Improvement | Cottage Grove, Minnesota**

Prepared project plans and specifications, completed surveying, and conducted construction inspection. Constructed Ravine Parkway (SAP 180-121-001: 5,820'), reconstructed 65th Street (SAP 180-123-001: 2,990'), reconstructed Jamaica Avenue (SAP 180-110-013: 1,040'), and reconstructed Keats Avenue (SAP 180-020-013: 1,330'). The project design included: grading (streets, ponding, and infiltration areas), aggregate base, bituminous pavement, bituminous trails, concrete curb/gutter, concrete medians, storm sewer, sanitary sewer, watermain, lighting, signing, pavement markings, landscaping, irrigation, and a pedestrian bridge.

### **Summers Landing 2nd Addition, Street and Utility Improvements | Cottage Grove, Minnesota**

Prepared project plans and specifications, completed surveying, and conducted construction inspection. This 96-lot residential development involved grading (streets, ponding, and infiltration areas), aggregate base, bituminous pavement, bituminous trail, concrete curb/gutter, concrete sidewalk, storm sewer, sanitary sewer, watermain, lighting, signing, and landscaping.

### **Hadley Avenue Reconstruction | Cottage Grove, Minnesota**

Prepared project plans and specifications, completed surveying, and conducted construction inspection. Reconstructed Hadley Avenue (SAP 180-107-004: 6,300'), and 95th Street South (SAP 180-111-003: 1,400'). The project design included: grading, aggregate base, bituminous pavement, bituminous trail, concrete pavement, concrete curb/gutter, concrete sidewalk, storm sewer, sanitary sewer, watermain, lighting, signing, pavement markings, landscaping, irrigation, and a roundabout.

### **70th Street South (CSAH 22) and Jamaica Avenue | Cottage Grove, Minnesota**

Prepared project plans and specifications, completed surveying, and conducted construction inspection. Reconstructed 70th Street (SAP 180-110-012: 2,400'), and Jamaica Avenue (SAP 082-622-014: 6,350'). The project design included: grading, aggregate base, bituminous pavement, bituminous trail, concrete pavement, concrete curb/gutter, concrete sidewalk, storm sewer, watermain, lighting, signing, pavement markings, landscaping, and irrigation.





Joel Mann

Transportation Planner

Years of experience: 20

**Education**

Master of Regional Planning,  
City and Regional Planning,  
University of North Carolina

Bachelor of Arts, Urban  
Studies, New College of  
Florida

Joel is a planner with 20 years of experience in transportation planning and transportation-focused contributions to development codes, comprehensive plans, and community master plans. His career pursuits have grown from an intersection of personal passions and commitments, including bicycle and pedestrian mobility, streets as vital urban public spaces, and use of public resources to provide the best possible returns for citizens and their quality of life. He works to develop plans that promote balanced multimodal transportation, that enhance potential for land development and urban design, and that fit within community expectations.

## Representative Projects

### **Lyndale Avenue Suburban Retrofit Strategy | Bloomington, Minnesota**

Joel led a complete streets mobility analysis along a tired suburban commercial corridor in need of revitalization. He balanced parking needs for existing businesses with creative solutions for improved ADA sidewalk connections, a linear bicycle facility, and street grid updates. Joel worked with land use planners and urban designers to develop key nodes for vibrant, accessible, and dense places.

### **US 278 Feasibility Study\* | Avondale Estates, Georgia**

This study explored two main project recommendations from the Avondale Estates downtown master plan, a road diet and a roundabout intersection, and used an interactive public process to allow community members to understand physical and operational impacts of each design and articulate preferences for projects to move forward.

### **Doraville Citywide Mobility Plan | Doraville, Georgia**

Project manager developing a community-wide plan for multimodal improvements, emphasizing walking and bicycling connections to transit and safety improvements along the Buford Highway corridor.

### **Connect Atlanta Plan and Atlanta's Transportation Plan\* | Atlanta, Georgia**

Lead planner for the 2017 update to the city's first-ever modern comprehensive transportation plan (2008), which focuses on improved connectivity, walkability and transit investment. Joel has been a lead project planner on both efforts, identifying recommended capital projects and developing plan policies.

### **River Arts District Form Based Code\* | Asheville, North Carolina**

Assisted a team of developing a form-based code and development concept for a maturing formerly industrial district of Asheville. Joel helped to develop a master plan framework for new street connections and a model parking management system and benefits district for the area.

### **Lee's Summit Vision 2040 Master Plan | Lee's Summit, Missouri**

Stantec worked as subconsultants to develop a new section dedicated to Multimodal Transportation as part of the City's Comprehensive Plan update. Through deep analysis and research of all local/regional plans, policies and ordinances that impact the safety, efficiency and multimodal facility development protocol, the team developed a fine-tuned process for identifying opportunities and gaps to boost the City's multimodal network approach. The new, multimodal chapter and plan of recommendations aim to accommodate Lee's Summit's evolution towards an enhanced multimodal network that also supports its economic, environmental, and cultural goals.

### **El Paso Eastside Master Plan | El Paso, Texas**

Stantec is developing a master plan to help El Paso's East Side grow. This includes a consolidation, review, and update of the existing public facilities master plan as well as preparation of new policies to manage growth and development throughout the City.

*\* denotes projects completed prior to joining Stantec*



**Joe Polacek**  
AICP  
Urban Planner

**Years of experience:** 6

**Education**

Master of Urban and Regional Planning, University of Minnesota

Metropolitan Design Certificate, University of Minnesota

Bachelor of Design in Architecture, University of Minnesota

**Registration**

Certified Planner #35813, American Institute of Certified Planners

**Memberships**

American Planning Association

Joe is experienced in community engagement, master planning, spatial design, hand drawing and digital rendering, research and analysis, and report writing. He is also involved in a wide variety of planning and design projects, including comprehensive plans, zoning studies, master plans, redevelopment projects, environmental reviews, and the design of mixed-use projects.

## Representative Projects

### Lyndale Avenue Suburban Retrofit Strategy | Bloomington, Minnesota

Once a primary commercial corridor, Lyndale Avenue since saw decades of disinvestment and a shrinking tax base. Joe supported a series of engagement events— including a design charette in a vacant storefront and custom pop-ups at local schools and a food bank—before developing an urban design framework to organize priorities along the corridor. He identified smaller character districts and delineated key nodes to focus reinvestment before developing recommendations for mobility to engage the active transportation network along the corridor using low cost, incremental, and local precedents.

### Brownfield Redevelopment | Flint Hills, Kansas

Working with a team of specialists, Joe conducted research and developed redevelopment concepts for two brownfield sites granted by the EPA. Joe produced phased development approaches that were based on market research, reoriented development to the street and sidewalk, avoided floor risk and fostered surrounding ecological assets. He presented to a core team, stakeholder groups, and the greater public using customized platforms that made participation in community design informative and easy.

### Downtown Redevelopment Plan | Palmer, Alaska

As part of a grant program through the Environmental Protection Agency, Joe developed master plans to reinvigorate what was previously an industrial site into an active part of downtown Palmer. This town was popular for its local art, shopping, and culture but elected officials and community members saw the adjacent industrial site as detracting from those assets. Joe produced design scenarios ranging from modest to bold to help the community better understand their options.

### Digital Engagement | Cottage Grove, Minnesota

Joe created project websites, content, and templates to make it easier for City Staff to update their website on key projects including Clean Water for Cottage Grove, and South District Improvements. Joe worked with staff to develop clear, concise language, graphics, and maps – and developed a simple and intuitive web experience to communicate that content with constituents.

### Towne Center Mall Redevelopment | Provo, Utah

Joe developed a series of design concepts through multiple iterations with the client and core planning team to better utilize the lots surrounding the mall—including housing, office space, hotel, and outdoor entertainment areas. Joe created drawings, diagrams, and informational packets that helped the mall owners and elected officials agree on development concepts that would support the public interest and the owners' bottom line.

### Mankato Area Wide Plan | Mankato, Minnesota

With reconstruction of a US highway, local access was expected to change for a highway-adjacent commercial corridor. Joe was hired to explore how changes would impact local development and how the city and local stakeholders should prepare to most benefit from the reconstruction. Joe created concepts for the area that took advantage of various access scenarios and maximized values. He created an interactive website and virtual townhall with small breakout-room discussions so local stakeholders could better understand impacts to their land given changes to the highway and provide a plan for redevelopment with their interests in mind.



**Kristin  
Baldonado**  
AICP  
Urban Planner

**Years of experience:** 6

**Education**

Master of Urban Planning, San Jose State

Bachelor of Arts,  
Environmental Studies;  
Geography, Gustavus  
Adolphus College

**Registration**

Certified Planner, American  
Institute of Certified Planners

**Memberships**

American Planning  
Association

Kristin is an urban planner with a passion for advancing policies, plans, and regulations that foster low-carbon living in pedestrian-oriented, inclusive, and mixed-use environments. Her ability to think across scales is showcased in her experience working on city-wide comprehensive plans and zoning codes down to neighborhood projects. Kristin's skill set includes geospatial data analysis, land use planning and analysis, market analysis, housing development strategy, and urban design.

## Representative Projects

### **Metropolitan Council SWLRT Development Impact Analysis | Various Cities, Minnesota**

Kristin collaborated with colleagues, cities, and Metropolitan Council staff to analyze the impacts of the Southwest Light Rail Transit project construction and land acquisitions on several properties along the project corridor. The analysis compared properties in the before, during construction, and after acquisition conditions for land use impacts such as zoning and building requirements, overall property function, access, parking, loading, and any issues unique to each property identified along the way.

### **Housing Studies | Various Cities, USA**

Kristin supports the Development Economics team within Stantec on housing studies across the county with GIS mapping and analysis, demographics and housing inventory analysis, market research, zoning code analysis, and housing strategies research that address the unique issues and interests within each community.

### **Glenbrook Small Area Plan | Oakdale, Minnesota**

This plan will focus on future redevelopment options to make the neighborhood more connected (via streets, pedestrian, and bicycle networks) and livable. Kristin is involved in all aspects of the project including existing condition analysis, community and stakeholder engagement, and future land use and development scenario planning.

### **Brillion IronWorks Areawide Plan | Brillion, Wisconsin**

To inform opportunities and constraints on a 150-acre site and guide the redevelopment scenario planning, Kristin led a land suitability GIS analysis utilizing environmental and physical data.

### **Tarboro Areawide Plan | Tarboro, North Carolina**

Kristin collaborated to create an urban design plan for downtown Tarboro. The redevelopment alternatives feature variations in land use intensity and public realm improvements. Kristin led the 3D model and visualizations of the alternatives.

### **Century Avenue Small Area Plan\* | Mahtomedi, Minnesota**

Kristin provided research, market analysis, GIS mapping, land use scenario planning, concept design, and plan writing for an 8-acre redevelopment site in Mahtomedi. By assessing the feasibility of future land uses, infrastructure, and economic development activities in the area, this plan helps set a clear vision for the area that the City will use to spur investment and redevelopment of one of the gateways into the community.

### **Development Impact Analysis | Fresno, California**

Kristin led a GIS analysis for the Chinatown District, a disinvested neighborhood adjacent to the future Fresno High Speed Rail station that will be a significant focus of revitalization. The analysis considers land value ratio, property size, vacancy, public and common ownership, historic resources, average annual daily traffic volume, and walking distance to the station. These characteristics were combined to select three sites to focus city resources.

*\* denotes projects completed prior to joining Stantec*



**Tanuja**  
Dhanasekararan  
**Urban Designer**

**Years of experience:** 2

**Education**

Masters in Architecture &  
Urban Design, Columbia  
University

Bachelor of Architecture,  
MEASI Academy of  
Architecture

Tanuja is an urban designer with a background in architecture. She currently works out of the Chicago office and is originally from south India where she graduated with a Bachelors degree in Architecture. Fascinated with how cities work at a larger scale, her interests pivoted towards urban design and community development. She pursued her Masters in Architecture & Urban Design from Columbia university, New York, and has been with Stantec since graduating. She works on urban design projects ranging from healthcare masterplans, streetscape infrastructure, riverfront and natural areas preservation and redevelopment and more. She is a strong visualizer and enjoys experimenting with mapping, graphics and visual representation techniques.

## Representative Projects

### **Master Plans for Blackwell, Greene Valley, and Waterfall Glen Forest Preserve | DuPage County, Illinois**

Stantec has been working with the District to prepare master plans for three preserves that are among the most popular and visited destinations for a variety of other outdoor activities. The analysis has considered existing conditions, natural resources, and visitor needs to create a framework for the management and upkeep of these popular amenities. Key priorities of that plan are to protect and restore natural resources; provide and improve nature experiences and outdoor recreation; maintain and improve trails; and invest in existing mission-aligned facilities. The team has worked to consider the unique features, landscape typologies, land uses, access, circulation, and diverse user needs within the preserves to ultimately inform the master plans. Tanuja supported the team with producing 3D models, graphics and visualization in addition to piecing the report together.

### **Wabash Riverfront Master Plan | Terre Haute, Indiana**

The Wabash Riverfront Master Plan is a community-driven master plan focused on accelerating the development of the Wabash riverfront to improve the overall quality of life along the riverfront and Downtown Terre Haute, Indiana. The master plan builds on the efforts of the 2008 master plan which led to the creation of the Wabashiki Fish & Wildlife Area, an enhanced trail system, Bicentennial Park, the RiverFront Lofts, and other projects to create an even more vibrant waterfront. As an Urban Designer, Tanuja worked with the team on procuring GIS data, analyzing current state conditions and creating a series of base maps as part of the initial discovery effort. She continues to work on the ideation stage as the project is still in progress.

### **Huntington Riverfront Master Plan | Huntington, West Virginia**

Located on the banks of the Ohio River, the City of Huntington, West Virginia, constructed floodwalls along the riverfront after a devastating flood in 1937. While effective, these floodwalls cut the City off from their riverfront asset. Stantec is working to create a master plan that reconnects Huntington to the Ohio River, enhances citywide connectivity, and improves the pedestrian realm. The plan identifies opportunities to increase views and access to the river, develops improvements to existing riverfront parks and recreational opportunities, and recommends methods to spur economic development. Tanuja provided mapping, GIS, site analysis and graphics support in addition to helping with the report.

### **Mandan High School Placemaking Plan | Mandan, North Dakota**

Leveraging funding from the U.S. Economic Development Administration Public Space Initiative, the City of Mandan was awarded a Placemaking Planning Grant through the North Dakota Main Street Initiative. With a new high school under construction the City is looking for redevelopment concepts that support the four pillars of the North Dakota Main Street Initiative. Serving as an Urban Designer and key visualization person, Tanuja contributed towards building 3D models and producing high-end rendered graphics of the proposed placemaking plan.

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. This allows us to assess what's needed and connect our expertise, to appreciate nuances and envision what's never been considered, to bring together diverse perspectives so we can collaborate toward a shared success.

We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at [stantec.com](http://stantec.com) or find us on social media.



# City Council Action Request

## 7.0.

**Meeting Date** 6/26/2024

**Department** Community Development

**Agenda Category** Action Item

**Title** Hawthorne Pines Third Addition - Final Plat, Development Agreement, and Approval of Plans & Specs

**Staff Recommendation** 1) Adopt Resolution 2024-094 approving the final plat for Hawthorne Pines Third Addition. 2) Approve the Hawthorne Pines Third Addition Development Agreement with Pulte Homes of Minnesota with minor modifications as approved by the City Attorney. 3) Adopt Resolution 2024-095 approving the Hawthorn Pines Third Addition Development Plans dated April 30, 2024, prepared by Alliant Engineering and as approved with minor modifications by the City Engineer.

**Budget Implication** N/A

**Attachments**

|    |                                                  |
|----|--------------------------------------------------|
| 1. | Hawthorne Pines Third CC Memo                    |
| 2. | Hawthorne Pines Third Final Plat                 |
| 3. | Hawthorne Pines 3rd Resolution - Final Plat      |
| 4. | Hawthorne Pines Third Development Agreement      |
| 5. | Hawthorne Pines Third Resolution - Plans & Specs |



TO: Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

FROM: Emily Schmitz, Community Development Director

DATE: June 20, 2024

RE: Hawthorne Pines Third Addition – Final Plat, Plans and Specs and Development Agreement

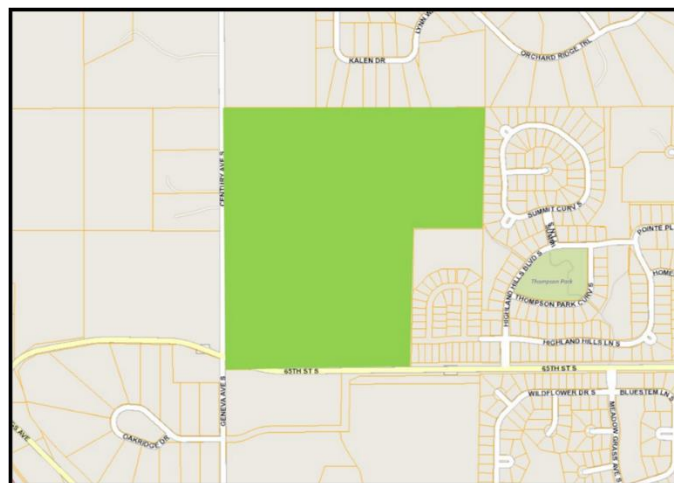
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## Introduction

The City Council is requested to take the following actions:

- 1) Adopt a resolution approving the final plat for Hawthorne Pines Third Addition.
- 2) Approve the Hawthorne Pines Third Addition Development Agreement with Pulte Homes of Minnesota LLC.
- 3) Adopt a resolution approving the Hawthorne Pines Third Addition Development Plans dated April 30, 2024, prepared by Alliant Engineering and as modified as approved by the City Engineer.

The location of the Hawthorne Pines subdivision is shown on the map below:

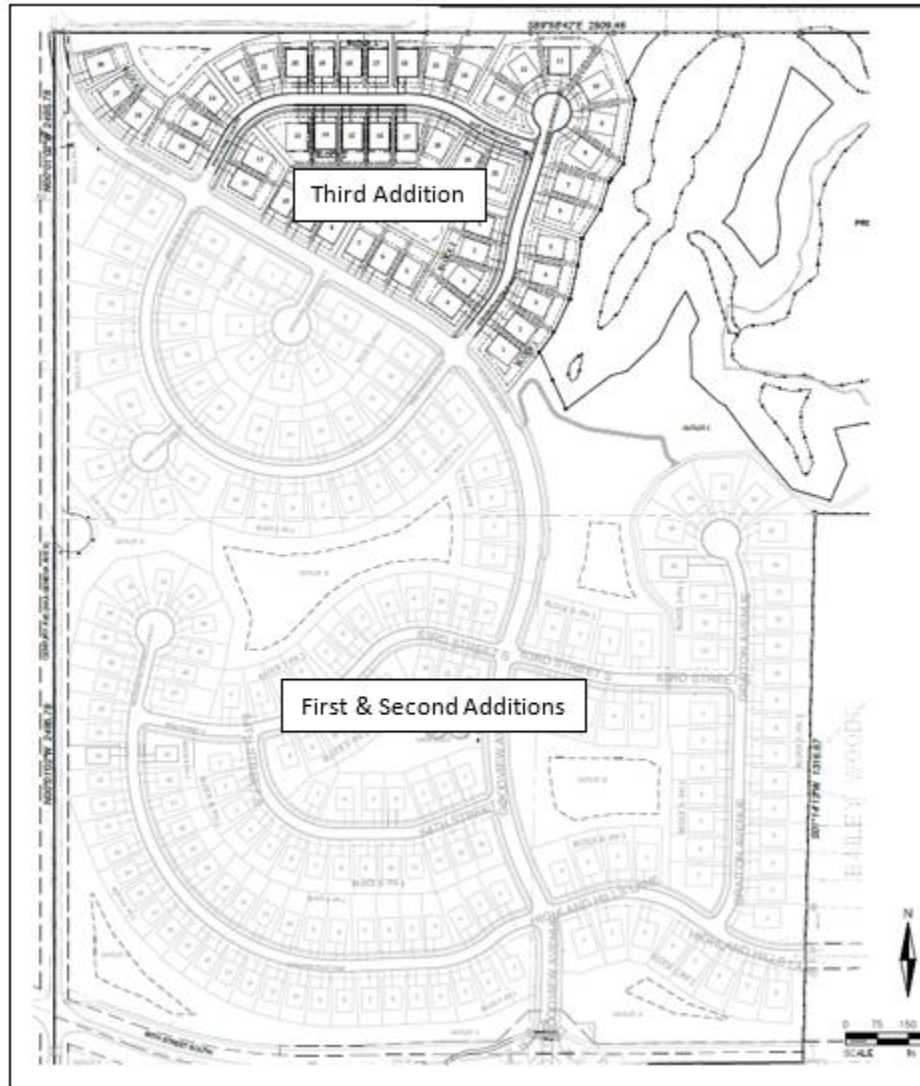


Location Map

## Background

The preliminary plat for the Hawthorne Pines development, previously known as Sullivan Pines submitted by The Excelsior Group, was approved by the City Council on March 18, 2020 (Resolution 2020-042) along with rezoning of the land from AG-1, Agricultural Preservation, and R-2.5, Residential Single Family, to R-3, Single-Family Residential, with a PUD, Planned Unit Develop-

ment, (Ordinance 1022). The preliminary plat included 247 single family detached lots and 10 outlots. In April 2021, the entire development property was sold to the Pulte Group and the development name was changed to Hawthorne Pines. Pulte Homes submitted the Hawthorne Pines First Addition final plat at the May 19, 2021, City Council meeting, that proposed 93 single-family lots and 9 outlots which was approved (Resolution 2021-070). Hawthorne Pines Second Addition was approved (Resolution 2022-026) on February 16, 2022, and consisted of 106 single-family homes and 4 outlots.



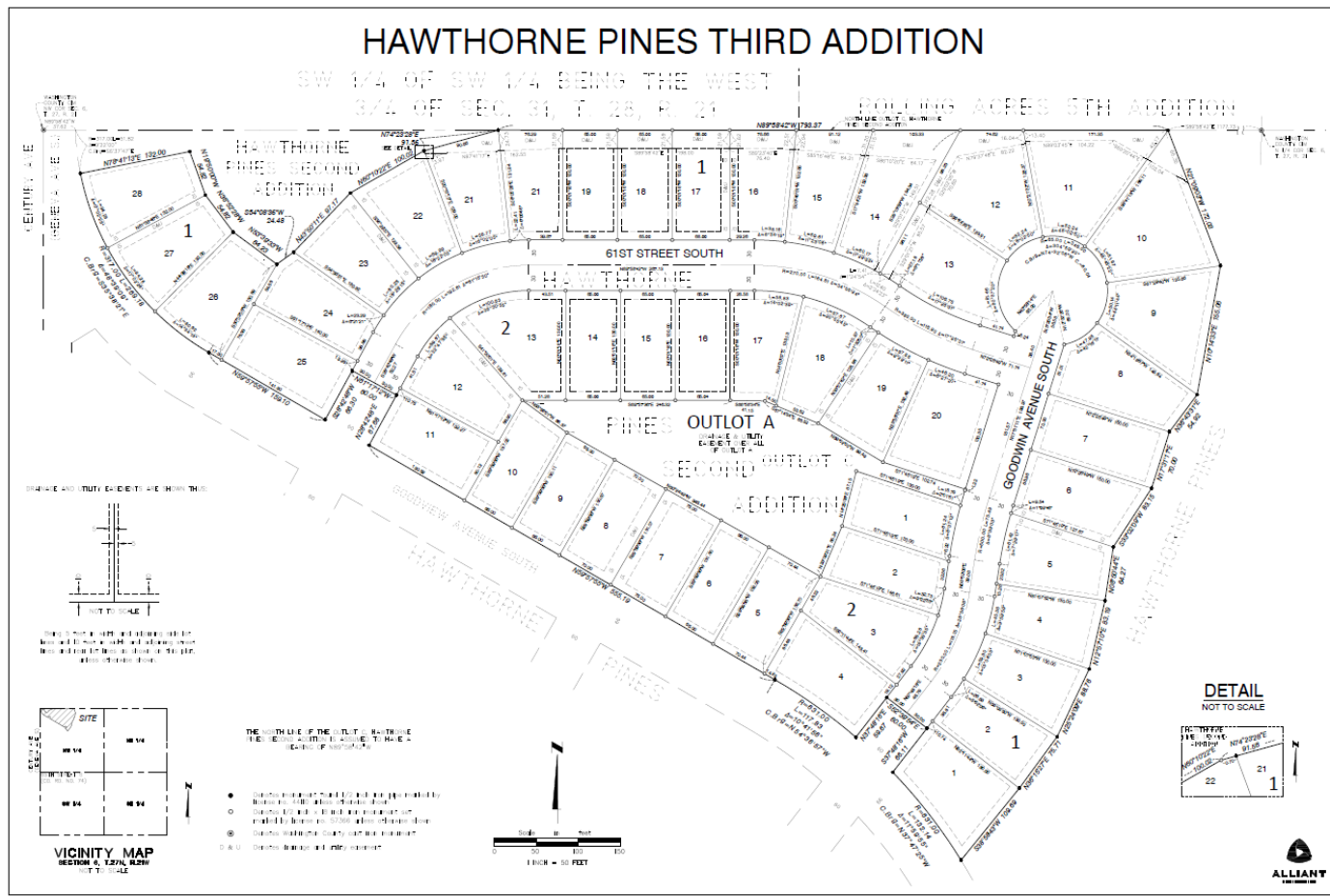
**Hawthorne Pines Development Additions**

## 1) Final Plat Review

The Hawthorne Pines Third Addition final plat was distributed to City departments, Washington County, City of Woodbury, the City of Newport, and ISD 833 for their review and comments. All comments that were received have been incorporated into the review. No comments or recommendations were received from other City advisory commissions.



The final plat is in conformance with all other conditions of the preliminary plat as approved by the City Council and as stipulated in City Resolution 2020-042 (see attached).



Hawthorne Pines Third Addition Final Plat

### Park Dedication

As part of the first addition of the Hawthorne development, the Developer deeded Outlot C (north-east corner of the development) to the City, which covered the required park dedication for the development as a whole.

### Landscape

During the preliminary plat process, the Developer requested that each lot (55-foot wide) only require two additional yard trees along with the ten shrubs. The remaining two trees were approved to be planted within common lot areas of the development or along the 65th Street buffer. This landscape has been installed as part of previous additions. Lots larger than 55 feet wide are required to plant four trees and ten shrubs.

### Geneva/Century

The City continues to work with adjacent communities, Newport and Woodbury, as well as Washington County on plans for the removal of the connection of Geneva/Century from 65th Street and providing a turnaround. Current plans include the removal of the connection of Geneva/Century to 65th Street as part of this third and final phase of the Hawthorne Pines development and the installation of a cul-de-sac within right-of-way that was platted as part of a previous phase of this devel-

opment. Staff continues to work through this connection change with the adjacent communities, specifically Newport, to ensure each community is supportive. Currently Geneva/Century sits along the city border between the two communities and therefore, both communities need to be in full support of the change. Assuming the Newport City Council supports disconnecting Geneva/Century from 65th Street on the north side of the intersection, the Developer will be responsible for severing Geneva/Century at 65th Street as well as constructing the cul-de-sac to provide access for existing Newport residents and a turnaround. Geneva/Century from Goodview Avenue to the south will become the responsibility of Newport to own and maintain. The City will continue to work with Newport, Woodbury, and Washington County on the details of the removal of the southerly section of Geneva/Century.

### ***Pond Access Routes***

As with other developments, pond access routes are required to be platted allowing for City access to ponds within developments for regular maintenance. Property owners adjacent to pond access routes are required to maintain the area to the center of those access routes. The following lots will be required to maintain to the center of adjacent pond access routes. All pond access routes are required to be sodded from the back of curb to the rear lot line of all adjacent lots. The remainder of the stormwater ponding areas are permitted to be seeded.

Lot 1, Block 2  
Lot 19, Block 2  
Lot 20, Block 2  
Lot 28, Block 1

## **2) Development Agreement**

The Developer has signed the development agreement, which is attached for review.

## **3) Development Plan Review**

The City Engineer has reviewed the development plans dated April 30, 2024, by the Developer's consulting engineer, Alliant Engineering, and is recommending approval of those plans (e.g., construction plans, drawings, specifications, and surveys) subject to the comments in the June 17, 2024, review letter (attached).

## **Recommendations**

The City Council is recommended to take the following actions:

1. Adopt Resolution 2024-094 approving the final plat for Hawthorne Pines Third Addition.
2. Approve the Hawthorne Pines Third Addition Development Agreement with Pulte Homes of Minnesota with minor modifications as approved by the City Attorney.
3. Adopt Resolution 2024-095 approving the Hawthorn Pines Third Addition Development Plans dated April 30, 2024, prepared by Alliant Engineering and as approved with minor modifications by the City Engineer.

**Attachments**

Hawthorne Pines Third Addition Final Plat

Hawthorne Pines Third Addition Development Agreement

Hawthorne Pines Third Addition Development Plans dated April 30, 2024

Engineer's Review Letter dated May 29, 2024

# HAWTHORNE PINES THIRD ADDITION

KNOW ALL BY THESE PRESENTS: That Pulte Homes of Minnesota LLC, a Minnesota limited liability company, owner of the following described property situated in the County of Washington, State of Minnesota to wit:

OUTLOT C, HAWTHORNE PINES SECOND ADDITION, according to the recorded plat thereof, Washington County, Minnesota.

Have caused the same to be surveyed and platted as HAWTHORNE PINES THIRD ADDITION and do hereby dedicate to the public for public use the public ways and the drainage and utility easements as created by this plat.

In witness whereof said Pulte Homes of Minnesota LLC, a Minnesota limited liability company, has caused these presents to be signed by its proper officer this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

Signed: Pulte Homes of Minnesota LLC

By: \_\_\_\_\_, Chief Manager

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

This instrument was acknowledged before me on this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, by \_\_\_\_\_, Chief Manager of Pulte Homes of Minnesota LLC, a Minnesota limited liability company, on behalf of the company.

\_\_\_\_\_(Signature)

\_\_\_\_\_(Print)

Notary Public, \_\_\_\_\_ County, Minnesota

My Commission Expires \_\_\_\_\_.

## SURVEYOR'S CERTIFICATE

I Daniel Ekrem, Licensed Land Surveyor, do hereby certify that I have surveyed or directly supervised the survey of the property described on the plat; and prepared this plat or directly supervised the preparation of this plat; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on this plat; that all monuments depicted on this plat have been correctly set or that all monuments indicated on this plat will be correctly set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this surveyor's certification are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_

\_\_\_\_\_  
Daniel Ekrem, Licensed Land Surveyor  
Minnesota License No. 57366

STATE OF MINNESOTA

COUNTY OF \_\_\_\_\_

This instrument was acknowledged before me on this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, by Daniel Ekrem, Licensed Land Surveyor, Minnesota License No. 57366.

\_\_\_\_\_(Signature)

\_\_\_\_\_(Print)

Notary Public, \_\_\_\_\_ County, Minnesota

My Commission Expires \_\_\_\_\_.

CITY OF COTTAGE GROVE, MINNESOTA

This plat was approved by the City Council of Cottage Grove, Minnesota this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, and hereby certifies compliance with all the requirements as set forth in Minnesota Statutes, Section 505.03, Subdivision 2.

Signed: \_\_\_\_\_ Signed: \_\_\_\_\_  
Mayor Clerk

## COUNTY SURVEYOR

Pursuant to Chapter 820, Laws of Minnesota, 1971, and in accordance with Minnesota Statutes, Section 505.021, Subd. 11, this plat has been reviewed and approved this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

By: \_\_\_\_\_ By: \_\_\_\_\_  
Washington County Surveyor

## COUNTY AUDITOR/TREASURER

Pursuant to Minnesota Statutes, Section 505.021, Subd. 9 and Section 272.12, taxes payable in the year 20 \_\_\_\_, on real estate hereinbefore described, have been paid; and there are no delinquent taxes, and transfer has been entered on this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

By: \_\_\_\_\_ By: \_\_\_\_\_  
Washington County Auditor/Treasurer Deputy

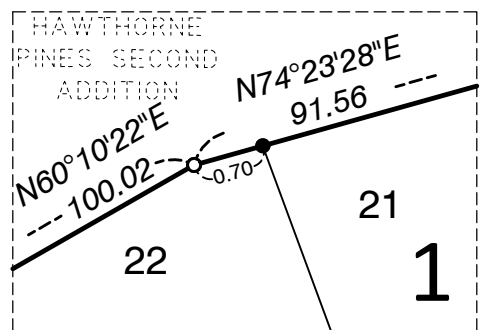
## COUNTY RECORDER

Document Number \_\_\_\_\_

I hereby certify that this instrument was recorded in the Office of the County Recorder for record on this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_ at \_\_\_\_ o'clock \_\_.M. and was duly recorded in Washington County Records.

By: \_\_\_\_\_ By: \_\_\_\_\_  
Washington County Recorder Deputy





CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-094

**RESOLUTION APPROVING THE FINAL PLAT NAMED  
HAWTHORNE PINES THIRD ADDITION**

WHEREAS, Pulte Homes of Minnesota LLC applied for a final plat to develop a residential subdivision named Hawthorne Pines Third Addition. This subdivision plat consists of 48 detached single-family homes and one outlot and is located on property legally described as:

OULOT C, HAWTHORNE PINES SECOND ADDITION, according to the recorded plat thereof, Washington County, Minnesota.

WHEREAS, the Planning Commission held the public hearing for the preliminary plat and a zoning amendment to change the zoning from AG-1, Agricultural Preservation, and R-2.5, Residential Single-Family, to R-3, Single Family Residential, with a PUD, Planned Unit Development, for the proposed Sullivan Pines subdivision on February 24, 2020; and

WHEREAS, the City Council subsequently accepted the Planning Commission's recommendations and approved the preliminary plat (Resolution No. 2020-042) and the rezoning (Ordinance No. 1022) on March 18, 2020; and

WHEREAS, the City Council approved the final plat for Hawthorne Pines First Addition (formerly Sullivan Pines) final plat at their May 19, 2021, meeting that consisted of 93 single-family lots and 9 outlots (Resolution 2021-070); and

WHEREAS, the City Council approved the final plat for Hawthorne Pines Second Addition final plat at their February 16, 2022, meeting that consisted of single-family 106 lots and 4 outlots (Resolution 2022-026); and

WHEREAS, City staff found the Hawthorne Pines Third Addition final plat substantially consistent with the approved preliminary plat and Planned Unit Development (PUD) plan; and

WHEREAS, the Developer, Property Owner, and City have entered into a development agreement for the Subdivision ("Development Agreement").

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Cottage Grove, Washington County, Minnesota, hereby approves the final plat for a residential subdivision plat named Hawthorne Pines Third Addition. This phase consists of 48 detached single-family homes, and one outlot located on the property legally described above. Approval of this final plat is subject to the following conditions:

1. The Developer and builders must comply with all City ordinances and policies.
2. The Developer must abide by the conditions stipulated in Resolution No. 2020-042, which approved the Posavad Pines preliminary plat, except as hereafter modified.
3. All utility, drainage, and development construction must conform to the plan set dated 4/30/2024 and include the completion of the comments included in the 06/17/2024 letter from Bolton and Menk and any subsequent comments from the City Engineer.

4. The Developer may start rough grading of the lots before the plat is filed, if a Minnesota Pollution Control Agency (MPCA) Construction Storm Water Permit has been issued and the City has been furnished with a cash escrow or letter of credit in the minimum amount specified in the approved development agreement.
5. Development of this project must comply with the grading and erosion control plans as approved by the City Engineer.
6. The City will supply the street light poles and luminaries. The Developer will pay the City for street light poles and street light luminaries.
7. The City agrees to review and consider the final wear course paving along certain roadway segments in advance of other roadways depending on the location of the roadway segment. The wear course/final lift of all streets in the subdivision must be completed within two years from the date all other public improvements are accepted by the City or when 90 percent of the houses have received a final certificate of occupancy, whichever is sooner.
8. After the site is rough graded, but before any utility construction commences or building permits are issued, the erosion control plan shall be implemented by the Developer and inspected and approved by the City. The City may impose additional erosion control requirements if it is determined that the methods implemented are insufficient to properly control erosion.
9. The final plat must be recorded with the Washington County Recorder's Office before any building permit can be issued.
10. Before final financial guarantees are released, a certificate signed by a registered engineer must be provided. This certificate will state that all final lot and building grades are in conformance to the grading and drainage development plan(s) approved by the City Engineer.
11. The developer is responsible for the cost and installation of the required park and open space boundary markers.
12. All monument signs must comply with the City's Sign Ordinance, must be placed on private property, a building permit secured, and must be under the control of the HOA.
13. Park dedication has already been addressed with dedication of Outlot C, Hawthorne Pines First Addition.
14. Each lot in the subdivision shall have four (4) trees in addition to the boulevard tree and ten (10) shrubs installed prior to the issuance of a certificate of occupancy.
15. All mailboxes and location of mailboxes must comply with the U.S. Post Office guidelines and regulations. Mailboxes placed at the curb shall all be the same design and color.

16. The Developer shall be required to sod all pond access routes. The following lots will be required to maintain to the center of pond access routes:

Lot 1, Block 2  
Lot 19, Block 2  
Lot 20, Block 2  
Lot 28, Block 1

17. Developer shall be responsible for severing Geneva/Century at 65th Street and construction of a cul-de-sac for turn-around purposes.

Passed this 26th day of June 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk



**DEVELOPMENT AGREEMENT**

**FOR THE PLAT OF**

**HAWTHORNE PINES THIRD ADDITION**

**BY AND BETWEEN**

**THE CITY OF COTTAGE GROVE**

**AND**

**PULTE HOMES OF MINNESOTA LLC**

**THIS AGREEMENT**, made and entered into on the \_\_\_\_\_ day of \_\_\_\_\_, 2024, by and between the City of Cottage Grove, a Minnesota municipal corporation (“CITY”), and Pulte Homes of Minnesota LLC, a Minnesota limited liability company (“DEVELOPER”).

**RECITALS:**

**WHEREAS**, in pursuant of the DEVELOPMENT PROJECT, the DEVELOPER has applied to the CITY for approval of the DEVELOPMENT PLANS and FINAL PLAT for Hawthorne Pines Third Addition; and

**WHEREAS**, in conjunction with the granting of these approvals, the CITY requires the installation and/or availability of public utilities (sewer and water), public streets, storm sewer pipes, ponds, and other facilities; and

**WHEREAS**, under authority granted to it, including Minnesota Statutes Chapters 412, 429, and 462, the COUNCIL approved the FINAL PLAT and DEVELOPMENT PLANS on the following conditions:

1. That the DEVELOPER enters into this DEVELOPMENT AGREEMENT, which contract defines the work which the DEVELOPER undertakes to complete; and
2. The DEVELOPER shall provide an irrevocable letter of credit and cash deposits in the amounts and with conditions satisfactory to the CITY, providing for assurance of payment for the actual construction and installation of the improvements in the DEVELOPMENT PLANS, as specified and required by the CITY.

**WHEREAS**, the DEVELOPMENT PLANS were prepared by a registered professional engineer and have been submitted to and approved by the CITY ENGINEER.

**NOW, THEREFORE**, subject to the terms and conditions of this DEVELOPMENT AGREEMENT and in reliance upon the representations, warranties and covenants of the parties herein contained, the CITY and DEVELOPER agree as follows:

**ARTICLE 1**  
**DEFINITIONS**

**1.1. TERMS.** The following terms, unless elsewhere defined specifically in the DEVELOPMENT AGREEMENT, shall have the following meanings as set forth below.

**1.2. BUILDER.** “BUILDER” means an entity that will be constructing a residence on a lot in the FINAL PLAT.

**1.3. CITY.** “CITY” means the City of Cottage Grove, a Minnesota municipal corporation.

**1.4. CITY ENGINEER.** “CITY ENGINEER” means the City Engineer of the City of Cottage Grove or delegates.

**1.5. CITY WARRANTIES.** “CITY WARRANTIES” means all CITY WARRANTIES identified in Article 12 of this DEVELOPMENT AGREEMENT.

**1.6. COMMUNITY DEVELOPMENT DIRECTOR.** “COMMUNITY DEVELOPMENT DIRECTOR” means the Community Development Director of the City of Cottage Grove or delegates.

**1.7. COUNCIL.** “COUNCIL” means the Council of the City of Cottage Grove.

**1.8. COUNTY.** “COUNTY” means Washington County, Minnesota.

**1.9. DEVELOPER.** “DEVELOPER” means Pulte Homes of Minnesota LLC, a Minnesota limited liability company.

**1.10. DEVELOPER DEFAULT.** “DEVELOPER DEFAULT” means and includes, jointly and severally, any of the following or any combination thereof:

- a) failure by the DEVELOPER to timely pay the CITY any money required to be paid under the DEVELOPMENT AGREEMENT;
- b) failure by the DEVELOPER to timely construct the DEVELOPER IMPROVEMENTS according to the DEVELOPMENT PLANS and the CITY standards and specifications;
- c) failure by the DEVELOPER to observe or perform any covenant, condition, obligation or agreement on its part to be observed or performed under this DEVELOPMENT AGREEMENT;
- d) breach of the DEVELOPER WARRANTIES.

**1.11. DEVELOPER IMPROVEMENTS.** “DEVELOPER IMPROVEMENTS” means and includes, individually and collectively, all the improvements identified in Article 4.

**1.12. DEVELOPER WARRANTIES.** “DEVELOPER WARRANTIES” means all DEVELOPER WARRANTIES identified in Article 10 of this DEVELOPMENT AGREEMENT.

**1.13. DEVELOPMENT AGREEMENT.** “DEVELOPMENT AGREEMENT” means this instant agreement by and among the CITY and DEVELOPER.

**1.14. DEVELOPMENT PLANS.** “DEVELOPMENT PLANS” means all the street infrastructure, utility and grading plans, drawings, specifications, and surveys dated April 30, 2024 and prepared by Alliant Engineering, including all revisions approved by the CITY ENGINEER, hereby incorporated by reference and made a part of this DEVELOPMENT AGREEMENT.

**1.15. DEVELOPMENT PROJECT.** “DEVELOPMENT PROJECT” means a residential development to be known as Hawthorne Pines Third Addition that will be constructed on the DEVELOPMENT PROPERTY that is substantially in conformance with the FINAL PLAT.

**1.16. DEVELOPMENT PROPERTY.** “DEVELOPMENT PROPERTY” means that real property legally described on Exhibit A, attached hereto, upon which the DEVELOPMENT PROJECT will be constructed.

**1.17. FINAL ACCEPTANCE.** “FINAL ACCEPTANCE” means all conditions of a DEVELOPER IMPROVEMENT have been completed and approved by the CITY ENGINEER or COMMUNITY DEVELOPMENT DIRECTOR.

**1.18. FINAL PLAT.** “FINAL PLAT” means the FINAL PLAT, approved by the COUNCIL on June 26, 2024, attached hereto as Exhibit B.

**1.19. FORCE MAJEURE.** “FORCE MAJEURE” means acts of God, including, but not limited to floods, ice storms, blizzards, tornadoes, landslides, lightning and earthquakes (but not including reasonably anticipated weather conditions for the geographic area), riots, global pandemics, insurrections, war or civil disorder affecting the performance of work, blockades, power or other utility failures, and fires or explosions.

**1.20. FORMAL NOTICE.** “FORMAL NOTICE” means notices given by one party to the other if in writing and if and when delivered or tendered either in person or by depositing it in the United States mail in a sealed envelope, by certified mail, return receipt requested, with postage and postal charges prepaid, addressed as follows:

**If to CITY:**

City of Cottage Grove  
Attention: City Administrator  
12800 Ravine Parkway South  
Cottage Grove, MN 55016

**If to DEVELOPER:**

Pulte Homes of Minnesota LLC  
Attn: Chad Onsgard  
7500 Flying Cloud Drive, Suite 670  
Eden Prairie, MN 55344

or to such other address as the party addressed shall have previously designated by notice given in accordance with this Section. Notices shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the third day after mailing if mailed as provided above, provided, that a notice not given as above shall, if it is in writing, be deemed given if and when actually received by a party.

**1.21. INDIRECT COSTS.** “INDIRECT COSTS” means the costs related to:

- a) Finance, administration and legal costs; and

- b) Engineering services performed by CITY Staff; and
- c) Testing and Right of Way services; and
- d) Consulting engineering services.

**1.22. OTHER REGULATORY AGENCIES.** “OTHER REGULATORY AGENCIES” means and includes, individually and collectively, the following:

- a) Minnesota Department of Transportation
- b) Washington County
- c) Washington County Highway Department
- d) South Washington Watershed District
- e) Minnesota Department of Health
- f) Minnesota Pollution Control Agency
- g) Metropolitan Council
- h) Minnesota Department of Natural Resources
- i) Minnesota Board of Water and Soil Resources
- j) Any other regulatory or governmental agency or entity affected by or having jurisdiction over the DEVELOPER IMPROVEMENTS.

**1.23. PRELIMINARY PLAT.** “PRELIMINARY PLAT” means the preliminary plat approved by the COUNCIL.

**1.24. PRIOR EASEMENT HOLDERS.** “PRIOR EASEMENT HOLDERS” means and includes, jointly and severally, all holders of any easements or other property interests which existed prior to the grant or dedication of any public easements transferred by the FINAL PLAT or transferred pursuant to this DEVELOPMENT AGREEMENT.

**1.25. SITE IMPROVEMENTS.** “SITE IMPROVEMENTS” means and includes, individually and collectively, all the improvements identified on Exhibit C and in Article 3.

**1.26. UTILITY COMPANIES.** “UTILITY COMPANIES” means and includes, jointly and severally, the following:

- a) Utility companies, including electric, gas and cable;

- b) Pipeline companies.

## **ARTICLE 2**

### **FINAL PLAT APPROVAL**

**2.1. FINAL PLAT APPROVAL.** The COUNCIL approved the FINAL PLAT. All conditions contained in the CITY Council Resolution for the FINAL PLAT shall be considered a condition of this DEVELOPMENT AGREEMENT.

**2.2. RECORDING OF FINAL PLAT.** The DEVELOPER shall record the FINAL PLAT and this DEVELOPMENT AGREEMENT with the COUNTY Recorder. No building permits shall be issued unless the DEVELOPER shows evidence to the CITY that the FINAL PLAT and this DEVELOPMENT AGREEMENT have been recorded with the COUNTY Recorder and the CITY has received the financial obligations required in Article 15.

## **ARTICLE 3**

### **SITE IMPROVEMENTS**

**3.1. SITE IMPROVEMENTS.** DEVELOPER shall construct and install, at its own cost, all SITE IMPROVEMENTS identified on Exhibit C in accordance with industry standards for making public improvements.

**3.2. AREA CHARGES.** The CITY imposes Area Charges for sanitary sewer, water and storm sewer impacts to all new developments pursuant to City Code Section 8-1-3.C.2 and the Fee Schedule. Such Area Charges are identified on Exhibit G.

## **ARTICLE 4**

### **DEVELOPER IMPROVEMENTS**

**4.1. DEVELOPER IMPROVEMENTS.** The DEVELOPER shall install, at its own cost, the DEVELOPER IMPROVEMENTS in accordance with the DEVELOPMENT PLANS and in accordance with the approvals of the CITY Council, and all ordinances and PRELIMINARY and FINAL PLAT resolutions of the CITY or any amendments thereto and any Miscellaneous Requirements on Exhibit D, attached hereto.

**4.2. GROUND MATERIAL.** The DEVELOPER shall ensure that adequate and suitable ground material shall exist in the areas of public street and utility improvements and shall guarantee the removal, replacement or repair of substandard or unstable material through the warranty period. The cost of said removal, replacement or repair is the responsibility of the DEVELOPER.

### **4.3. GRADING/DRAINAGE PLAN, EASEMENTS AND HOURS OF CONSTRUCTION ACTIVITIES.**

- a) The DEVELOPER shall construct drainage facilities adequate to serve the DEVELOPMENT PROJECT in accordance with the DEVELOPMENT PLANS. The DEVELOPER agrees to grant to the CITY all necessary outlots and easements for the

preservation and maintenance of the drainage system, for drainage basins and for utility service and for utility looping. The DEVELOPER shall enter into any easement agreements and stormwater management agreements with the CITY that are deemed necessary to fulfill the obligations of this Section. The grading and drainage plan shall include lot and building elevations, drainage swales to be sodded, storm sewer, catch basins, erosion control structures and ponding areas necessary to conform to the overall CITY storm sewer plan. The grading of the site shall be completed in conformance with the DEVELOPMENT PLANS, subject only to such design criteria and engineering design and construction specifications as are used in the DEVELOPMENT PLANS notwithstanding any amendment or change to CITY standards for development subsequent to approval of the FINAL PLAT.

- b) DEVELOPER shall dedicate drainage and utility easements as shown on the FINAL PLAT. Additional utility and drainage easements that may be required by the CITY may be granted by an acceptable document as approved by the CITY. Prior to issuance of a Certificate of Occupancy to a BUILDER for any dwelling unit constructed on a lot within the subdivision, a Certificate of Compliance by a land surveyor must be submitted to the CITY by the BUILDER reflecting conformance with the approved grading plan and confirming that the lot corner monuments are installed. DEVELOPER shall provide the CITY an as-built survey of the DEVELOPMENT PROPERTY in PDF and AUTOCAD format after the final rough grading is complete for review and approval by the CITY ENGINEER prior to development utility installation.
- c) Building construction and general construction activities are limited to Monday through Friday between the hours 7:00 AM and 7:00 PM and on Saturday between the hours of 9:00 AM and 7:00 PM. Site grading/excavation and street and utility construction activities are limited to Monday through Friday between the hours 7:00 AM and 7:00 PM and on Saturday between the hours of 9:00 AM and 7:00 PM. Building construction and construction activities are not allowed on CITY-observed holidays, unless agreed to in advance by the CITY ENGINEER.

**4.4. GRADING OF PUBLIC STREETS.** The DEVELOPER must grade, in accordance with the grading plan provided to and approved by the CITY, all public streets, boulevards, driveways and other public lands, if any, and other lands shown in the approved grading plan. If the DEVELOPER does not perform the work required by this paragraph, the CITY will complete all work required of the DEVELOPER. The DEVELOPER will be financially responsible for payments for this work, which will be assessed as provided in Section 16.2.

**4.5. INTERIM BITUMINOUS STREET.** The DEVELOPER will construct a bituminous wedge for the roadways within the FINAL PLAT. The bituminous wedge will be removed, and final wear course installed once 90% of the residences have final Certificates of Occupancy or after two (2) years. At the end of two (2) years from the day the bituminous wedge is installed, even if 90% of the homes do not have Certificates of Occupancy, the DEVELOPER will remove the wedge and place the wear course pavement. The DEVELOPER is responsible for the replacement of any damaged sidewalk or curb. The BUILDER will be responsible to preserve and protect the public roadway and any sidewalk/trail.

**4.6. PUBLIC STREET MAINTENANCE.** DEVELOPER is responsible for all maintenance, upkeep and repair of all public streets contained within the FINAL PLAT from initiation of construction through final acceptance by the CITY.

**4.7. STREET SWEEPING.** The DEVELOPER is responsible for the removal of all construction debris and earth materials within the public right-of-way typically resulting from new home construction activities. The CITY will inspect the roadways to ensure the DEVELOPER is keeping all public roadway surfaces clean. If any portion of a public roadway surface is found in an unacceptable condition, the CITY will have appropriate equipment dispatched to the site and all costs associated with the clean-up effort will be billed to the DEVELOPER.

**4.8. STREET SIGNS.** The DEVELOPER shall be financially responsible for the installation of street identification signs and non-mechanical and non-electrical traffic control signs. Street signs will be in conformance with the names as indicated on the FINAL PLAT and pursuant to CITY standards. The actual number and location of signs to be installed shall be determined by the CITY and actual installation shall be performed by CITY authorized personnel.

**4.9. SOD.** The DEVELOPER agrees that the BUILDER must pay for and install cultured sod from the street curb to the rear lot line(s) of each lot in the entire FINAL PLAT. For a lot where the Certificate of Occupancy is issued between August 1 and May 1 of the following year, completion of the work described in this paragraph shall be completed by the BUILDER by June 15; for a lot where the Certificate of Occupancy is issued between May 1 and July 31, completion of the work described in this paragraph shall be completed by the BUILDER by the September 15. Notwithstanding anything to the contrary in this DEVELOPMENT AGREEMENT, it is agreed that in lieu of the BUILDER installing sod on each lot, the BUILDER may provide to a lot owner a certificate that entitles the lot owner to have sod delivered to that lot at the owner's request for installation by the lot owner. All pond access routes shall be sodded by the DEVELOPER.

**4.10. BOULEVARD AND AREA RESTORATION.** All boulevards shall be permanently sodded within 30 days of final grading, with the exception of those boulevards directly adjacent to buildable lots. These boulevards may be temporarily seeded until the lot is final graded, and the as-built approved, and then sod shall be installed. The DEVELOPER shall restore all other areas disturbed by the development grading operation in accordance with the approved erosion control plan, over the entire FINAL PLAT. Upon request of the CITY ENGINEER, the DEVELOPER shall remove the silt fences once the vegetation on the surrounding area has reached 70% coverage.

**4.11. LOT CORNER MONUMENTS.** The DEVELOPER shall install all subdivision lot corner monumentation within one year from the date of recording the FINAL PLAT, or the monumentation shall be installed on a per lot basis at the time the building permit for the subject lot is issued, whichever occurs first. At the end of the one year period from recording of this DEVELOPMENT AGREEMENT, the DEVELOPER shall submit to CITY ENGINEER written verification by a registered land surveyor that the required monuments have been installed throughout the FINAL PLAT.

**4.12. BOULEVARD TREES.** If DEVELOPER or BUILDER proposes a boulevard tree location that does not align with the approved landscape plan, the CITY Forester shall review and



must approve the new location of the boulevard trees to be planted. Each lot requires at least one boulevard tree. Corner lots require a boulevard tree on each CITY Right-of-Way that abuts the property. The minimum size of tree to be planted in the CITY's Right-of-Way shall be two-and-a-half caliper (2½"), as measured by the American Association of Nurserymen. All boulevard trees shall be warranted to be alive, of good quality, and disease free as determined by the CITY Forester for twelve (12) months after planting.

**4.13. STREET MAINTENANCE, RESTORATION, ACCESS AND REPAIR DURING CONSTRUCTION.** The DEVELOPER shall clear, on a daily basis, any soil, earth or debris from the streets and wetlands within or adjacent to the FINAL PLAT resulting from the grading or building on the land within the FINAL PLAT by the DEVELOPER or its agents, and shall restore to the CITY's specifications any gravel base contaminated by mixing construction or excavation debris, or earth in it, and repair to the CITY's specifications any damage to bituminous surfacing resulting from the use of construction equipment.

Furthermore, the DEVELOPER shall maintain reasonable access to any occupied buildings within the FINAL PLAT, including necessary street maintenance such as grading, graveling, patching and snow removal prior to permanent street surfacing. The DEVELOPER agrees to perform and assume all responsibilities relating to snow removal and ice control, if the streets have not been accepted for winter maintenance by the CITY ENGINEER by October 15, or later if approved by the CITY's Public Works Director. Completion of the work described in the paragraph shall be completed within fifteen (15) days after notice by the CITY to the DEVELOPER that repair or restoration is required. Saturday working hours for the site grading/street and utility construction should start at 9:00 a.m.

**4.14. OCCUPANCY AND ACCESS.** No building permit for any lot shall be issued until the DEVELOPER has constructed a temporary access consisting of a bituminous surface base that is acceptable in design by the CITY and the conditions on Exhibit D have been followed. Special consideration may be given for eight model home building permits if approved by the CITY's Building Official and Fire Marshal as follows:

- i. One model home permit may be issued prior to roadway Class V gravel base and utilities being installed; and
- ii. One additional model home permit may be issued after Class V gravel base and utilities and storm sewer pipes have been installed to serve the lots for the model homes, as long as "Out of Service" hydrant tags have been installed on all out of service hydrants within the development.

No temporary certificate of occupancy for any lot shall be issued until the DEVELOPER has constructed a temporary bituminous roadway that is accessible in design by the CITY and water and sanitary sewer improvements are installed, tested, televised, reviewed and available for use, including the lift station as described in Exhibit D, Section 2(d). Hydrant tags must also be removed. No certificate of occupancy for any lot within the FINAL PLAT shall be issued until the first lift of street pavement and the pavement wedge has been installed. Furthermore, the DEVELOPER is responsible for the construction and cost of constructing any necessary temporary bituminous roadway before the public roadway is constructed and shall maintain reasonable access

to any occupied home or homes, including necessary street maintenance prior to permanent street improvements that are accepted by the CITY.

**4.15. DRIVEWAYS.** Upon building a residence on a lot, the BUILDER shall construct a concrete or bituminous surface driveway for the lot in accord with CITY approved standards. For a lot for which a certificate of occupancy is issued between August 1 and May 1 of the following year, completion of the work described in this paragraph must be completed by June 15; for a lot for which a certificate of occupancy is issued between May 1 and July 31, completion of the work described in this paragraph shall be completed by September 15.

**4.16. VEGETATION.** The DEVELOPER shall comply with CITY ordinances and policies related to preservation of vegetation and trees and specifically shall exercise reasonable efforts in residential areas to save mature, non-diseased trees and vegetation on the subject land which do not have to be removed for reasonable installation of buildings, streets, utilities or drainage improvements, construction activities related thereto, or site grading. Prior to any excavation, the DEVELOPER shall require a certified arborist to install tree protection on all trees that are to be saved and to mark trees such trees with a red band prior to any excavation. All diseased trees shall be removed according to CITY ordinance requirements.

**4.17. LANDSCAPING.** The responsibility for landscaping requirements are as follows:

- a) The DEVELOPER is responsible for:
  - i. Installing all landscaping improvements within the lots shown on the DEVELOPER's approved landscape plan.
  - ii. Installing all landscaping improvements as depicted on the DEVELOPER's landscape plan. Landscaping for individual lots shall be installed during the construction of each lot.
- b) Single-family lots shall meet the following standards:
  - i. Property owners shall maintain their yards all the way to the curb or shoulder of the abutting roadways, sidewalks and trail for each parcel, including any landscaping in the boulevards.
  - ii. Property owners shall maintain their yards to the edge of any abutting CITY trail.

**4.18. EROSION CONTROL.** The DEVELOPER shall provide and follow a plan for erosion control and pond maintenance in accord with the Best Management Practices (BMP) as delineated in the Minnesota Pollution Control Agency's on-line Stormwater Manual and as stated in the grading permit issued by the CITY. Such plan shall be detailed on the DEVELOPMENT PLANS and shall be subject to approval of the CITY ENGINEER. The DEVELOPER shall install and maintain such erosion control structures as appear necessary under the DEVELOPMENT PLANS, or as it becomes necessary subsequent thereto. The DEVELOPER shall be responsible for all damage caused as the result of grading and excavation within the FINAL PLAT including, but not limited to, restoration of existing control structures and clean-up of public right-of-way, until all lots are final

graded and improvements are completed. As a portion of the erosion control plan, the DEVELOPER shall seed or sod any disturbed areas in accordance with the DEVELOPMENT PLANS. After the site is rough graded, the DEVELOPER must provide erosion control devices that are reasonably required by the CITY. The parties recognize that time is of the essence in controlling erosion. If the DEVELOPER does not provide erosion control, the CITY may, after a twenty-four (24) hour notice, take appropriate action to control erosion. The CITY may, without notice draw upon any posted financial guarantee to pay costs incurred by the CITY in controlling erosion within the FINAL PLAT, or at the CITY's option, assess the additional costs incurred as part of the DEVELOPER IMPROVEMENTS.

**4.19. PROHIBITION ON TRANSFER OF RESPONSIBILITY.** The DEVELOPER must not transfer or assign its responsibility to perform the requirements of Street Sweeping, Street Signs, Street Maintenance, Restoration, Access and Repair, Landscaping, and Erosion Control to any lot purchaser or BUILDER of a home on any lot within the FINAL PLAT. Notwithstanding the foregoing, it is agreed that DEVELOPER may transfer its responsibility for sod installation, provided DEVELOPER remains liable for the performance thereof and it is understood and agreed that upon transfer of the NPDES permit to the BUILDER or buyer of an individual lot, all responsibilities subsumed under the said NPDES permit specific to the subject lot shall, thereafter, be the BUILDER's or buyer's responsibility and not DEVELOPER's responsibility.

**4.20. WEED/GRASS MAINTENANCE.** DEVELOPER must not allow or permit within the FINAL PLAT, excluding land deeded to the CITY for public purposes, any weeds, grass, brush, or other rank vegetation to a height greater than eight (8) inches, or permit any accumulation of dead weeds, grass or brush. In the event the DEVELOPER fails to comply with this provision, the CITY may give the DEVELOPER notice to cut or remove material in violation of this paragraph. All costs of cutting or removing incurred by the CITY must be paid by the DEVELOPER or assessed against the property that is in violation. The DEVELOPER shall maintain all CITY Outlots until acceptance in writing by CITY Staff.

## **ARTICLE 5** **PARK CONTRIBUTION REQUIREMENTS**

**5.1. PARK DEDICATION.** Park Dedication Fees were satisfied as part of the Hawthorne Pines Plat.

## **ARTICLE 6** **PERMITS, LICENSES AND OTHER APPROVALS**

**6.1. PERMITS.** The DEVELOPER shall obtain all necessary approvals, permits and licenses from the CITY, the OTHER REGULATORY AGENCIES and the UTILITY COMPANIES, as identified on Exhibit E, attached hereto. Major design requirements of any such entities shall be determined prior to completion and incorporated into the DEVELOPMENT PLANS. All costs incurred to obtain said approvals, permits and licenses, and also all fines or penalties levied by any agency due to the failure of the DEVELOPER to obtain or comply with conditions of such approvals, permits and licenses, shall be paid by the DEVELOPER. The DEVELOPER shall defend and hold

the CITY harmless from any action initiated by the OTHER REGULATORY AGENCIES and the UTILITY COMPANIES resulting from such failures of the DEVELOPER.

## **ARTICLE 7**

### **OTHER DEVELOPMENT REQUIREMENTS**

7.1. **MISCELLANEOUS REQUIREMENTS.** Any additional requirements to approval of the FINAL PLAT and DEVELOPMENT PLANS as specified by the COUNCIL are incorporated herein and identified on Exhibit D.

## **ARTICLE 8**

### **WARRANTY PERIOD**

8.1. **WARRANTY PERIOD.** Upon FINAL ACCEPTANCE, CITY ENGINEER or COMMUNITY DEVELOPMENT DIRECTOR, as deemed appropriate depending on the type of DEVELOPER IMPROVEMENTS, will provide written notice to DEVELOPER that the warranty period has begun.

8.2. **WARRANTY ON PROPER WORK AND MATERIALS.** The DEVELOPER warrants all work required to be performed by it under this DEVELOPMENT AGREEMENT against defective material and faulty workmanship after FINAL ACCEPTANCE for the period of time as stated below:

- a) Landscaping, which includes all trees, grass, and sod shall be warranted to be alive, of good quality and disease free shall for a period of one (1) year after planting. Any replacements shall be similarly warranted for one year after planting.
- b) Streets, sidewalks, trails, lighting and utilities shall for a period of two (2) years. The warranty shall include the obligation of the DEVELOPER to repair and correct any damage to or deficiency in such improvements during the warranty period.

## **ARTICLE 9**

### **RESPONSIBILITY FOR COSTS**

9.1. **DEVELOPER AND SITE IMPROVEMENT COSTS.** The DEVELOPER shall pay for the DEVELOPER IMPROVEMENTS and SITE IMPROVEMENTS; that is, all costs of persons doing work or furnishing skills, tools, machinery or materials, or insurance premiums or equipment or supplies and all just claims for the same; and the CITY shall be under no obligation to pay the contractor or any subcontractor any sum whatsoever on account thereof, whether or not the CITY shall have approved the contract or subcontract. Such site improvements are identified on Exhibit C.

The DEVELOPER is responsible for contracting and paying for the street and utility testing costs. The CITY's designated inspector on the DEVELOPMENT PROJECT will coordinate the street and utility testing activities. All testing reports shall be sent to the CITY with a copy to the DEVELOPER.

If deductions are owed on the street and utility construction pursuant to the MNDOT standards for construction, then these deductions will be paid by DEVELOPER to CITY within thirty (30) days after DEVELOPER receives notices of such deductions.

**9.2. MISCELLANEOUS AND AREA CHARGES.** The DEVELOPER shall reimburse the CITY for all miscellaneous costs and Area Charges incurred or to be incurred by the CITY in connection with this DEVELOPMENT AGREEMENT. Such costs are identified on Exhibit G.

**9.3. ENFORCEMENT COSTS.** The DEVELOPER shall pay the CITY for costs incurred in the enforcement of this DEVELOPMENT AGREEMENT, including engineering costs and reasonable attorneys' fees.

**9.4. TIME OF PAYMENT.** DEVELOPER shall pay all bills from the CITY within thirty (30) days after billing. Bills not paid within thirty (30) days shall bear interest at the rate of eight percent (8%) per year.

## **ARTICLE 10** **DEVELOPER WARRANTIES**

**10.1. STATEMENT OF DEVELOPER WARRANTIES.** The DEVELOPER hereby warrants and represents the following:

- a) **AUTHORITY.** DEVELOPER is the fee title owner of the DEVELOPER parcels identified in the DEVELOPMENT PROPERTY on Exhibit A and in the FINAL PLAT and has the right, power, legal capacity and authority to enter into and perform its obligations under this DEVELOPMENT AGREEMENT, and no approvals or consents of any persons are necessary in connection with the authority of DEVELOPER to enter into and perform its obligations under this DEVELOPMENT AGREEMENT.
- b) **NO DEFAULT.** DEVELOPER is not in default under any lease, contract or agreement to which it is a party or by which it is bound which would affect performance under this DEVELOPMENT AGREEMENT. DEVELOPER is not a party to or bound by any mortgage, lien, lease, agreement, instrument, order, judgment or decree which would prohibit the execution or performance of this DEVELOPMENT AGREEMENT by DEVELOPER or prohibit any of the transactions provided for in this DEVELOPMENT AGREEMENT.
- c) **PRESENT COMPLIANCE WITH LAWS.** DEVELOPER has complied with and is not in violation of applicable federal, state or local statutes, laws, and regulations including, without limitation, permits and licenses and any applicable zoning, environmental or other law, ordinance or regulation affecting the FINAL PLAT and the DEVELOPMENT PLANS and the DEVELOPER IMPROVEMENTS; and DEVELOPER is not aware of any pending or threatened claim of any such violation.

- d) **CONTINUING COMPLIANCE WITH LAWS.** DEVELOPER will comply with all applicable federal, state and local statutes, laws and regulations including, without limitation, permits and licenses and any applicable zoning, environmental or other law, ordinance or regulation affecting the FINAL PLAT and the DEVELOPMENT PLANS and the DEVELOPER IMPROVEMENTS.
- e) **NO LITIGATION.** There is no suit, action, arbitration or legal, administrative or other proceeding or governmental investigation pending, or threatened against or affecting DEVELOPER or the FINAL PLAT or the DEVELOPMENT PLANS or the DEVELOPER IMPROVEMENTS. DEVELOPER is not in default with respect to any order, writ, injunction or decree of any federal, state, local or foreign court, department, agency or instrumentality.
- f) **FULL DISCLOSURE.** None of the representatives and warranties made by DEVELOPER or made in any exhibit hereto or memorandum or writing furnished or to be furnished by DEVELOPER or on its behalf intentionally contains or will contain any untrue statement of material fact or intentionally omit any material fact the omission of which would be misleading. Any unintentional untrue statements or omissions shall be corrected or cured within thirty (30) days after the DEVELOPER receives FORMAL NOTICE or obtains knowledge of such error, unless an extension is granted by the CITY.
- g) **PLAT COMPLIANCE.** The FINAL PLAT and the DEVELOPMENT PLANS comply with all CITY, COUNTY, metropolitan, state and federal laws and regulations, including but not limited to, subdivision ordinances, zoning ordinances and environmental regulations.
- h) **OBTAINING PERMITS.** The DEVELOPER shall obtain in a timely manner and pay for all required permits, licenses and approvals, and shall meet, in a timely manner, all requirements of all applicable, local, state and federal laws and regulations which must be obtained or met before the DEVELOPER IMPROVEMENTS may be lawfully constructed. A list of the CITY permits, licenses, and approvals required is identified on Exhibit E.
- i) **HOMEOWNERS' ASSOCIATION.** DEVELOPER shall create a Homeowners' Association within 180 days of the Effective Date of this DEVELOPMENT AGREEMENT that governs the rights and responsibilities of the property owners. DEVELOPER shall specifically incorporate the responsibilities of the Homeowners' Association that are identified in this DEVELOPMENT AGREEMENT as being the responsibility of the Homeowners' Association.

## **ARTICLE 11**

[INTENTIONALLY BLANK]

**ARTICLE 12**  
**CITY WARRANTIES**

**12.1. STATEMENT OF CITY WARRANTIES.** The CITY hereby warrants and represents as follows:

- a) **ORGANIZATION.** CITY is a municipal corporation duly incorporated and validly existing in good standing the laws of the State of Minnesota.
- b) **AUTHORITY.** CITY is the fee title owner of the CITY parcel identified in the DEVELOPMENT PROPERTY on Exhibit A and in the FINAL PLAT and has the right, power, legal capacity and authority to enter into and perform its obligations under this DEVELOPMENT AGREEMENT.

**ARTICLE 13**  
**INDEMNIFICATION OF CITY**

**13.1. INDEMNIFICATION OF CITY.** Provided the CITY is not in DEFAULT under the DEVELOPMENT AGREEMENT with respect to the particular matter causing the claim, loss or damage, DEVELOPER shall indemnify, defend and hold the CITY, its COUNCIL, agents, employees, attorneys and representatives harmless against and in respect of any and all claims, demands, actions, suits, proceedings, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties and attorneys' fees, that the CITY incurs or suffers, which arise out of, result from or relate to:

- a) breach by the DEVELOPER of the DEVELOPER WARRANTIES;
- b) failure of the DEVELOPER to timely construct the DEVELOPER IMPROVEMENTS according to the DEVELOPMENT PLANS and the CITY ordinances, standards and specifications;
- c) failure by the DEVELOPER to observe or perform any covenant, condition, obligation or agreement on its part to be observed or performed under this DEVELOPMENT AGREEMENT;
- d) failure by the DEVELOPER to pay contractors, subcontractors, laborers, or materialmen;
- e) failure by the DEVELOPER to pay for materials;
- f) approval by the CITY of the FINAL PLAT;
- g) approval by the CITY of the DEVELOPMENT PLANS;
- h) failure to obtain the necessary permits and authorizations to construct the DEVELOPER IMPROVEMENTS;

- i) construction of the DEVELOPER IMPROVEMENTS;
- j) delays in construction of the DEVELOPER IMPROVEMENTS;
- k) payment by DEVELOPER for any required costs or assessments;
- l) all costs and liabilities arising because building permits were issued prior to the completion and acceptance of the DEVELOPER IMPROVEMENTS.

**13.2. NOTICE.** Within a reasonable period of time after the CITY's receipt of actual notice of any matter giving rise to a right of payment against the CITY pursuant to Section 13.1, the CITY shall give the FORMAL NOTICE in reasonable detail to the DEVELOPER. The DEVELOPER shall not be obligated to make any payment to the CITY for any such claim until the passage of thirty (30) days from the date of its receipt of FORMAL NOTICE from the CITY, during which time the DEVELOPER shall have the right to cure or remedy the event leading to such claim.

**13.3. DEFENSE OF CLAIM.** Provided the CITY is not in DEFAULT under the DEVELOPMENT AGREEMENT with respect to the particular matter causing the claim or demand, with respect to claims or demands asserted against the CITY by a third party of the nature covered by Section 13.1, and provided that the CITY gives FORMAL NOTICE thereof, the DEVELOPER will, at its sole expense, provide for the defense thereof with counsel of its own selection but approved by the CITY; the DEVELOPER will pay all costs and expenses including attorneys' fees incurred in so defending against such claims, provided that the CITY shall at all times also have the right to fully participate in the defense at the CITY's expense. If the DEVELOPER fails to defend, the CITY shall have the right, but not the obligation, to undertake the defense of, and to compromise or settle the claim or other matter, for the account of and at the risk of the DEVELOPER.

## **ARTICLE 14**

### **CITY REMEDIES UPON DEVELOPER DEFAULT**

**14.1. CITY REMEDIES.** If a DEVELOPER DEFAULT occurs, that is not caused by FORCE MAJEURE, the CITY shall give the DEVELOPER FORMAL NOTICE of the DEVELOPER DEFAULT and the DEVELOPER shall have thirty (30) days to cure the DEVELOPER DEFAULT. If the DEVELOPER, after FORMAL NOTICE to it by the CITY, does not cure the DEVELOPER DEFAULT, then the CITY may avail itself of any remedy afforded by law and any of the following remedies:

- a) the CITY may specifically enforce this DEVELOPMENT AGREEMENT;
- b) the CITY may suspend any work, improvement or obligation to be performed by the CITY;
- c) the CITY may collect on the irrevocable letter of credit ("LOC") or cash deposit pursuant to Article 15 hereof;



- d) the CITY may suspend or deny building and occupancy permits for buildings within the FINAL PLAT;
- e) the CITY may, at its sole option, perform the work or improvements to be performed by the DEVELOPER, in which case the DEVELOPER shall within thirty (30) days after written billing by the CITY reimburse the CITY for any costs and expenses incurred by the CITY. In the alternative, the CITY may in whole or in part, specially assess any of the costs and expenses incurred by the CITY; and the DEVELOPER hereby waives any and all procedural and substantive objections to the installation and construction of the work and improvements and the special assessment resulting therefrom, including, but not limited to, notice and hearing requirement and any claim that the special assessments exceed benefit to the FINAL PLAT. The DEVELOPER hereby waives any appeal rights otherwise available pursuant to Minn. Stat. § 429.081.

**14.2. NO ADDITIONAL WAIVER IMPLIED BY ONE WAIVER.** In the event any agreement contained in this DEVELOPMENT AGREEMENT is breached by the DEVELOPER and thereafter waived in writing by the CITY, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other concurrent, previous or subsequent breach hereunder. All waivers by the CITY must be in writing.

**14.3. NO REMEDY EXCLUSIVE.** No remedy herein conferred upon or reserved to the CITY shall be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the DEVELOPMENT AGREEMENT or now or hereafter existing at law or in equity or by statute. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the CITY to exercise any remedy reserved to it, it shall not be necessary to give notice, other than the FORMAL NOTICE.

**14.4. EMERGENCY.** Notwithstanding the requirement contained in Section 14.1 hereof relating to FORMAL NOTICE to the DEVELOPER in case of a DEVELOPER DEFAULT and notwithstanding the requirement contained in Section 14.1 hereof relating to giving the DEVELOPER a right to cure the DEVELOPER DEFAULT, in the event of an emergency as determined by the CITY ENGINEER, resulting from the DEVELOPER DEFAULT, the CITY may perform the work or improvement to be performed by the DEVELOPER without giving any notice or FORMAL NOTICE to the DEVELOPER and without giving the DEVELOPER the right to cure the DEVELOPER DEFAULT. In such case, the DEVELOPER shall within thirty (30) days after written billing by the CITY reimburse the CITY for any and all costs incurred by the CITY. In the alternative, the CITY may, in whole or in part, specially assess the costs and expenses incurred by the CITY; and the DEVELOPER hereby waives any and all procedural and substantive objections to the installation and construction of the work and improvements and the special assessments resulting therefrom, including, but not limited to, notice and hearing requirements and any claim that the special assessments exceed benefit to the FINAL PLAT. The DEVELOPER hereby waives any appeal rights otherwise available pursuant to Minn. Stat. § 429.081.

**ARTICLE 15**  
**FINANCIAL OBLIGATIONS**

**15.1. DEVELOPER'S LETTER OF CREDIT AMOUNT.** Prior to release of the FINAL PLAT for recording, the DEVELOPER shall deposit with the CITY an irrevocable LOC for the amounts required in Exhibits C and F. In lieu of an irrevocable LOC, DEVELOPER may deposit cash or other security acceptable to CITY.

All cost estimates shall be acceptable to the CITY ENGINEER. The bank and form of the irrevocable LOC shall be subject to approval by the CITY Finance Director and shall continue to be in full force and effect until released by the CITY. The irrevocable LOC shall be for a term ending two (2) years after acceptance by the CITY. In the alternative, the letter of credit may be for a one year term provided it is automatically renewable for successive one year periods from the present or any future expiration dates, and further provided that the irrevocable LOC states that at least sixty (60) days prior to the expiration date the bank will notify the CITY if the bank elects not to renew for an additional period. The irrevocable LOC shall secure compliance by the DEVELOPER with the terms of this DEVELOPMENT AGREEMENT. The CITY may draw down on the irrevocable LOC or cash deposit, without any further notice than that provided in Section 14.1 relating to a DEVELOPER DEFAULT, for any of the following reasons:

- a) a DEVELOPER DEFAULT; or
- b) upon the CITY receiving notice that the irrevocable LOC will be allowed to lapse prior to two (2) years after acceptance by the CITY.

The CITY shall use the LOC proceeds to reimburse the CITY for its costs and to cause the DEVELOPER IMPROVEMENTS to be constructed to the extent practicable; if the CITY ENGINEER determines that such DEVELOPER IMPROVEMENTS have been constructed and after retaining 10% of the proceeds for later distribution pursuant to Section 15.2, the remaining proceeds shall be distributed to the DEVELOPER.

With CITY approval, the irrevocable LOC may be reduced pursuant to Section 15.2 from time to time as financial obligations are paid.

**15.2. LOC RELEASE AND ESCROW INCREASE; DEVELOPER IMPROVEMENTS.** The DEVELOPER may request that the LOC or cash deposits required by the DEVELOPMENT AGREEMENT be reduced at the following milestones:

- a) LOC or cash escrow reductions. DEVELOPER may request LOC or cash escrow deposits required be reduced at the following milestones and in such amounts that are commensurate with the amount of work that has been completed to date, but subject to the limitations for retainage amounts needed during the warranty period, as described below:
  - i. Two (2) grading reductions at least two (2) months apart, except for pond cleaning.
  - ii. Three (3) site improvement reductions at least two (2) months apart.

- iii. One (1) landscaping reduction.
- b) LOC or cash escrow release. Upon FINAL ACCEPTANCE by the CITY ENGINEER or COMMUNITY DEVELOPMENT DIRECTOR of each portion of the DEVELOPER IMPROVEMENTS and upon commencement of the warranty periods, the LOC or cash escrows will be released as follows:
  - i. Grading will be released in full and no retainage is required through the warranty period with the exception of pond cleaning which will be retained in its entirety through the warranty period.
  - ii. Landscaping will be reduced by 50% and the balance will be retained through the warranty period.
  - iii. Streets will be reduced by 75% and the balance will be retained through the warranty period.
  - iv. DEVELOPER IMPROVEMENTS will be reduced by 75% and the balance will be retained through the warranty period.

Following the expiration of the warranty periods, all LOC and cash escrows will be released.

If it is determined by the CITY that the DEVELOPMENT PLANS were not strictly adhered to, or that work was done without CITY inspection, the CITY may require, as a condition of acceptance, that the DEVELOPER post an irrevocable LOC, or cash deposit equal to 125% of the estimated amount necessary to correct the deficiency or to protect against deficiencies arising therefrom. In the event that work, which is concealed, was done without permitting CITY inspection, then the CITY may, in the alternative, require the concealed condition to be exposed for inspection purposes. LOC reductions will be processed within 30 days of DEVELOPER request.

**15.3. DEVELOPER'S CASH FEES AND CASH ESCROW REQUIREMENTS.** At the time that the DEVELOPMENT AGREEMENT is approved, DEVELOPER shall deposit cash and cash escrows with the CITY for those items and in the amounts required in Exhibit G.

**15.4. BUILDER'S CASH FEES AND CASH ESCROW REQUIREMENTS.** DEVELOPER shall notify each BUILDER that certain building permit fees and an escrow shall be required prior to the issuance of a building permit for each lot for those items and in the amount stated on Exhibit H, attached hereto. If the DEVELOPER is the only BUILDER pulling building permits, the CITY, in its sole discretion, may accept an irrevocable LOC from the DEVELOPER for each lot, in an amount equal to or exceeding the total amount of cash escrow requirement that would otherwise be required under this paragraph.

## **ARTICLE 16** **MISCELLANEOUS**

**16.1. CITY'S DUTIES.** The terms of this DEVELOPMENT AGREEMENT shall not be considered an affirmative duty upon the CITY to complete any DEVELOPER IMPROVEMENTS.

**16.2. ADDITIONAL IMPROVEMENTS.** If the DEVELOPER fails to construct the DEVELOPER IMPROVEMENTS, the CITY at its option, may install and construct the DEVELOPER IMPROVEMENTS. In such case, the CITY, at its option, may specially assess the cost wholly or in part therefore under Minnesota Statutes Chapter 429, or may draw on the irrevocable LOC or cash deposit. If the CITY specially assesses the cost of any portion thereof, then the DEVELOPER hereby waives any and all procedural and substantive objections to the installation of the improvements and the special assessments, including, but not limited to, notice and hearing requirements and any claim that the special assessments exceed the benefit to the FINAL PLAT. The DEVELOPER waives any appeal rights otherwise available pursuant to Minnesota Statute § 429.081. The DEVELOPER acknowledges that the benefit from the improvements equal or exceed the amount of the special assessments.

**16.3. NO THIRD PARTY RECOURSE.** Third parties shall have no recourse against the CITY under this DEVELOPMENT AGREEMENT.

**16.4. VALIDITY.** If any portion, section, subsection, sentence, clause, paragraph or phrase of this DEVELOPMENT AGREEMENT is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion of this DEVELOPMENT AGREEMENT.

**16.5. RECORDING.** The DEVELOPMENT AGREEMENT and PLAT shall be recorded with the COUNTY Recorder and the DEVELOPER shall provide and execute any and all documents necessary to implement the recording.

**16.6. BINDING AGREEMENT.** The parties mutually recognize and agree that all terms and conditions of this recordable DEVELOPMENT AGREEMENT shall run with the land in the FINAL PLAT, and shall be binding upon the successors and assigns of the DEVELOPER. This DEVELOPMENT AGREEMENT shall also run with and be binding upon any after acquired interest of the DEVELOPER in the land made the subject of the FINAL PLAT.

**16.7. CONTRACT ASSIGNMENT.** The DEVELOPER may not assign this DEVELOPMENT AGREEMENT without the prior written consent of the COUNCIL, which approval will not be unreasonably withheld. In such case, the third-party buyer will be required to accept and assume all contractual and financial responsibilities provided in this DEVELOPMENT AGREEMENT. Upon satisfaction of such requirements by such third-party buyer, the DEVELOPER's obligations hereunder shall terminate. Absent approval of the Council, the DEVELOPER's obligations hereunder shall continue in full force and effect, even if the DEVELOPER sells one or more lots, the entire PLAT, or any part of it.

**16.8. AMENDMENT AND WAIVER.** The parties hereto may by mutual written agreement amend this DEVELOPMENT AGREEMENT in any respect. Any party hereto may extend the time for the performance of any of the obligations of another, waive any inaccuracies in representations by another contained in this DEVELOPMENT AGREEMENT or in any document delivered pursuant hereto which inaccuracies would otherwise constitute a breach of this DEVELOPMENT AGREEMENT, waive compliance by another with any of the covenants contained in this DEVELOPMENT AGREEMENT, waive performance of any obligations by the other or waive the fulfillment of any condition that is precedent to the performance by the party so waiving of

any of its obligations under this DEVELOPMENT AGREEMENT. Any agreement on the part of any party for any such amendment, extension or waiver must be in writing. No waiver of any of the provisions of this DEVELOPMENT AGREEMENT shall be deemed, or shall constitute, a waiver of any other provisions, whether or not similar, nor shall any waiver constitute a continuing waiver.

**16.9. GOVERNING LAW.** This DEVELOPMENT AGREEMENT shall be governed by and construed in accordance with the laws of the State of Minnesota.

**16.10. COUNTERPARTS.** This DEVELOPMENT AGREEMENT may be executed in any number of counterparts, each of which shall be deemed an original but all of which shall constitute one and the same instrument.

**16.11. HEADINGS.** The subject headings of the paragraphs and subparagraphs of this DEVELOPMENT AGREEMENT are included for purposes of convenience only and shall not affect the construction of interpretation of any of its provisions.

**16.12. INCONSISTENCY.** If the DEVELOPMENT PLANS are inconsistent with the words of this DEVELOPMENT AGREEMENT or if the obligation imposed hereunder upon the DEVELOPER are inconsistent, then that provision or term which imposes a greater and more demanding obligation on the DEVELOPER shall prevail.

**16.13. ACCESS.** The DEVELOPER hereby grants to the CITY, its agents, employees, officers, and contractors a license and right of entry to enter the DEVELOPMENT PROPERTY to perform all work and inspections deemed appropriate by the CITY during the installation of DEVELOPER IMPROVEMENTS and SITE IMPROVEMENTS.

**[The remainder of this page has been intentionally left blank.]**

IN WITNESS WHEREOF, the parties have executed this DEVELOPMENT AGREEMENT.

**CITY:**  
**CITY OF COTTAGE GROVE**

By: \_\_\_\_\_  
Myron Bailey  
Its Mayor

By: \_\_\_\_\_  
Tamara Anderson  
Its City Clerk

STATE OF MINNESOTA            )  
                                                  )  
COUNTY OF WASHINGTON        )       ss.

On this \_\_\_\_\_ day of \_\_\_\_\_, 2024, before me a Notary Public within and for said County, personally appeared Myron Bailey and Tamara Anderson to me personally known, who being each by me duly sworn, each did say that they are respectively the Mayor and City Clerk of the City of Cottage Grove, the municipality named in the foregoing instrument, and that the said instrument was signed in behalf of said municipality by authority of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said municipality.

\_\_\_\_\_  
Notary Public

DEVELOPER:  
PULTE HOMES OF MINNESOTA LLC

By: [Signature]  
Name: Chad Osgard  
Its: Vice President of Development

STATE OF MINNESOTA )  
 )  
COUNTY OF HENNEPIN )

ss.

On this 21 day of JUNE, 2024, before me a Notary Public within and for said County, personally appeared CHAD OSGARD to me personally known, who being by me duly sworn, did say that s/he is the VP OF DEVELOPMENT of Pulte Homes of Minnesota LLC, a Minnesota limited liability company, the entity named in the foregoing instrument, and that said instrument was signed on behalf of said entity by authority of its Board of Governors and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of the entity.



[Signature]  
Notary Public

**THIS INSTRUMENT DRAFTED BY AND  
AFTER RECORDING PLEASE RETURN TO:**

Korine Land, #262432  
LeVander, Gillen, & Miller, P.A.  
1305 Corporate Center Drive, Suite 300  
Eagan, MN 55121  
(651) 451-1831

**EXHIBIT A**  
**DEVELOPMENT PROPERTY**

Real property situated in the City of Cottage Grove, County of Washington, State of Minnesota,  
legally described as:

**DEVELOPER parcels:**

Lots 1-28, Block 1 Hawthorne Pines Third Addition  
Lots 1-20, Block 2 Hawthorne Pines Third Addition  
Outlot A, Hawthorne Pines Third Addition



## HAWTHORNE PINES THIRD ADDITION

[illegible]

<sup>a</sup> Values are means  $\pm$  SD.

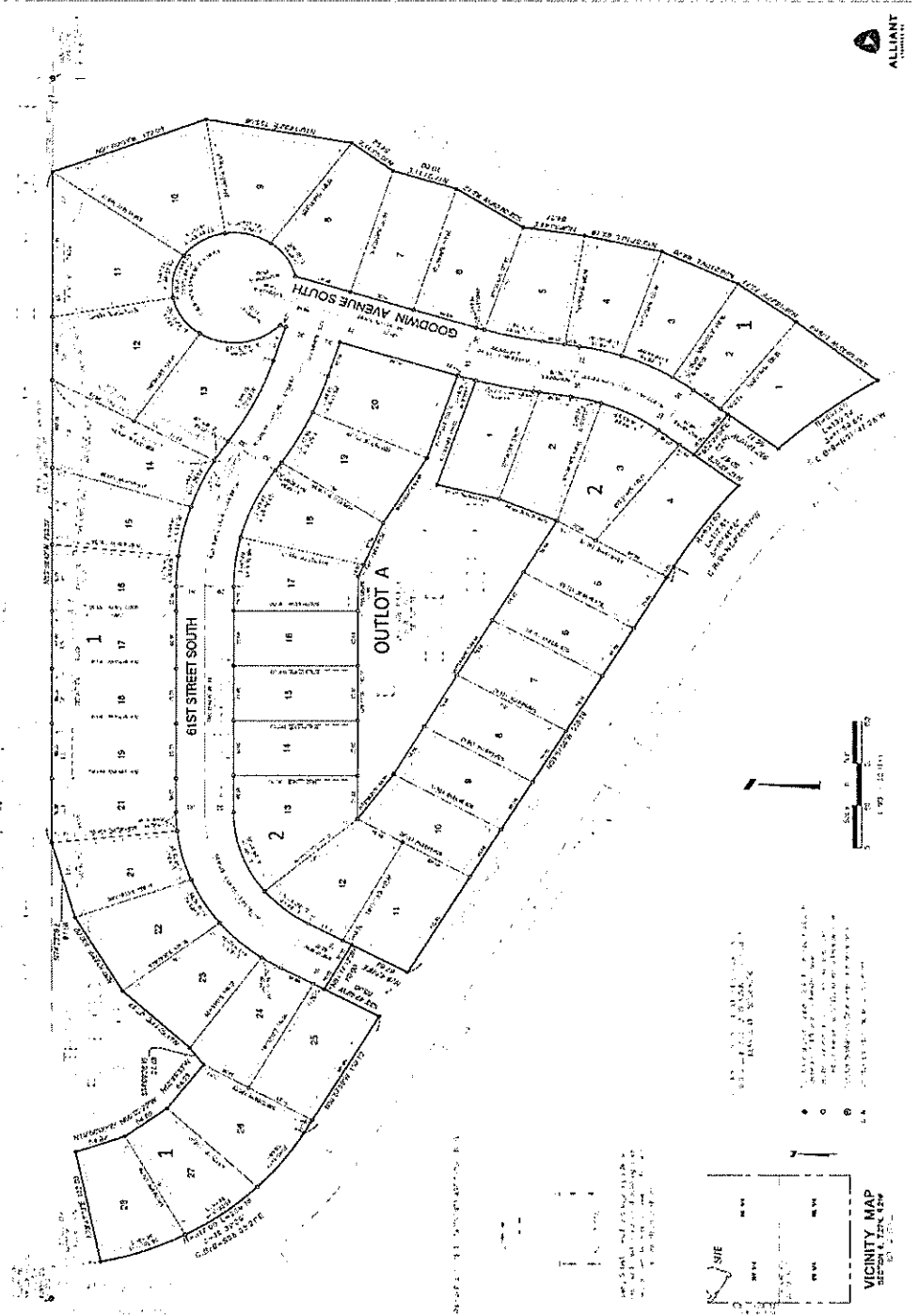
# EXERCISE 10.10

$$\frac{\partial V(\mathbf{C})}{\partial \mathbf{C}} = \frac{\partial}{\partial \mathbf{C}} \left( \frac{1}{2} \mathbf{C}^T \mathbf{C} \right) = \mathbf{C}$$

1000

**EXHIBIT B**  
**FINAL PLAT**  
**CONT.**

**HAWTHORNE PINES THIRD ADDITION**



**EXHIBIT C**  
**SITE IMPROVEMENTS**

| <b>Site Improvement LOC</b>        | <b>Estimated<br/>Construction<br/>Cost</b> | <b>Per Lot</b>      |
|------------------------------------|--------------------------------------------|---------------------|
| Sanitary Sewer                     | \$ 246,828.00                              | \$ 5,142.25         |
| Watermain                          | \$ 285,687.50                              | \$ 5,951.82         |
| Storm Sewer                        | \$ 154,134.95                              | \$ 3,211.14         |
| Streets                            | \$ 330,405.85                              | \$ 6,883.46         |
| Streets: Geneva Avenue             | \$ 104,907.00                              | \$ 2,185.56         |
| Street Lighting                    | \$ 46,227.60                               | \$ 963.08           |
| Record Plan (2%)                   | \$ 23,364.00                               | \$ 486.75           |
| Subtotal:                          | \$ 1,191,555.00                            | \$ 24,824.06        |
| LOC (125%)                         | \$ 1,489,444.00                            | \$ 31,030.08        |
|                                    |                                            |                     |
| Final Streets Construction Cost    | \$ 99,980.00                               | \$ 2,082.92         |
| Final Streets LOC (130%):          | \$ 129,974.00                              | \$ 2,707.79         |
| <b>Total Site Improvement LOC:</b> | <b>\$ 1,619,418.00</b>                     | <b>\$ 33,737.88</b> |

**EXHIBIT D**  
**MISCELLANEOUS REQUIREMENTS AND CONDITIONS**  
**IMPOSED BY THE CITY**

1) **CONDITIONS TO BE SATISFIED BEFORE CITY RELEASES THE FINAL PLAT TO BE RECORDED.**

- a) Letter of Credit. DEVELOPER must provide the LOC required in this DEVELOPMENT AGREEMENT.
- b) All Cash Deposits. DEVELOPER must pay all cash deposits required in this DEVELOPMENT AGREEMENT.
- c) Planning Fees. DEVELOPER must pay the CITY all planning, engineering review and legal fees that have been incurred up to the date of approval of this DEVELOPMENT AGREEMENT.
- d) Stormwater Ponding. DEVELOPER must execute a Warranty Deed for Outlot A for stormwater ponding.

2) **BUILDING PERMITS.** No building permits may be obtained until:

- a) All the conditions in Paragraph 1 of this Exhibit D have been met;
- b) All storm water ponds and associated drainage features including storm sewer and drainage swales have been installed as determined by the CITY ENGINEER;
- c) All sanitary sewer and water main, including services, have been installed, tested, televised as necessary, and reviewed and approved by the CITY ENGINEER and are available for use;
- d) DEVELOPER has constructed a temporary bituminous roadway that is acceptable in design and approved by the CITY;
- e) The documents below have been recorded
  - Final Plat
  - Development Agreement
  - Warranty Deed for Outlot A

3) **CERTIFICATES OF OCCUPANCY.** Prior to issuance of any certificate of occupancy, all the following conditions must be satisfied:

- a) All the conditions listed in Paragraphs 1 and 2 of this Exhibit D must be satisfied.

- b) As built surveys have been received by the CITY.
- c) All trees and shrubs required in Section 4.17(c) have been planted.
- 4) **SUBDIVISION EROSION CONTROL.** DEVELOPER is responsible for erosion control throughout the FINAL PLAT pursuant to the NPDES permit until all lots in the FINAL PLAT are built upon and until turf is established in each of the individual lots in the FINAL PLAT.
- 5) **CLEAN UP OF CONSTRUCTION DEBRIS ON STREETS AND ADJOINING PROPERTY.** The escrow amount stated on Exhibit G shall include an appropriate amount as determined by the Director of Public Works to ensure that the DEVELOPER removes any construction debris from streets adjoining the FINAL PLAT and from private properties that adjoin the FINAL PLAT. During the construction of the residences and other improvements within the FINAL PLAT, the DEVELOPER is responsible for removing any construction debris (including roofing materials, paper wrappings, construction material and other waste products resulting from construction) that may be blown from the construction site into adjoining private properties or into CITY streets or that may fall from delivery trucks onto adjoining private properties or CITY streets. Further, during construction, the DEVELOPER must clear the CITY streets of any dirt or other earthen material that may fall onto the CITY streets from the delivery trucks that are being used in the excavation and grading of the site.
- 6) **MAILBOXES.** The DEVELOPER is responsible for the placement of a mailbox for all the lots within the DEVELOPMENT PROJECT and must comply with the United States Postal Service's mailbox design and placement requirements. The mailboxes must all be of similar design and color within the DEVELOPMENT PROJECT.
- 7) **SIDEWALK SNOW REMOVAL AND TRAIL MAINTENANCE.** The CITY shall provide snow removal of transportation trails and sidewalks. If the CITY does not provide snow removal on a trail or sidewalk within the DEVELOPMENT PROJECT, the property owner abutting the trail or sidewalk must remove the snow and/or ice.

**EXHIBIT E**  
**PERMITS, LICENSES AND OTHER APPROVALS**

1. Any licenses or permits required by the Minnesota Department of Health.
2. NPDES Permit from the MPCA.
3. Right of Way Permit from the CITY.
4. Grading Permit from the CITY.
5. Any contractor licenses from the CITY or the State of Minnesota.
6. Building Permits from the CITY.
7. Electrical Permits from the CITY.
8. Utility permits that may be required from the CITY, State of Minnesota or any utility company.
9. Right of Way Permit from Washington County.

**EXHIBIT F**

[INTENTIONALLY LEFT BLANK]

**EXHIBIT G**  
**DEVELOPER'S CASH REQUIREMENTS AND**  
**INDIRECT COST CASH ESCROW**

**CASH REQUIREMENTS**

| <b>City Fees</b>                  | <b>Unit</b> | <b>Qty</b> | <b>Unit Cost</b> | <b>Total</b>        | <b>Per Lot</b>     |
|-----------------------------------|-------------|------------|------------------|---------------------|--------------------|
| City Supplied Poles & Luminares   | EA          | 6          | \$ 3,601.40      | \$ 21,608.40        | \$ 450.18          |
| Street Light Utility Surcharge    | EA          | 48         | \$ 140.40        | \$ 6,739.20         | \$ 140.40          |
| Park and Open Space Markers       | EA          | 20         | \$ 175.00        | \$ 3,500.00         | \$ 72.92           |
| Park Dedication Fees <sup>1</sup> | LOT         | 48         | \$ -             | \$ -                | \$ -               |
| 2% Engineering Fee                | LS          | 1          | \$ 25,830.70     | \$ 25,830.70        | \$ 538.14          |
| <b>Total Fees</b>                 |             |            |                  | <b>\$ 57,678.30</b> | <b>\$ 1,201.63</b> |

1. Completed as part of the first addition with dedication of Outlot C.

**CASH ESCROW**

| <b>Engineering Escrow</b> | <b>Total</b>        | <b>Per Lot</b>     |
|---------------------------|---------------------|--------------------|
| Plan Review               | \$ 20,830.70        | \$ 433.97          |
| Inspection                | \$ 44,576.75        | \$ 928.68          |
| <b>Total Escrow:</b>      | <b>\$ 65,407.45</b> | <b>\$ 1,362.66</b> |

1. Overpayment of \$40,000 in escrow as part of 1st Addition will be shifted to 3rd Addition Escrow Fund

**AREA CHARGES**

| <b>Area Charges</b>                         | <b>Cost/Acre</b> | <b>Acres</b> | <b>Total</b>         | <b>Per Lot</b>     |
|---------------------------------------------|------------------|--------------|----------------------|--------------------|
| Sanitary Area Charge – West Draw Area 2     | \$ 3,450.00      | 13.58        | \$ 46,851.00         | \$ 976.06          |
| Water Area Charge – Remainder of City       | \$ 5,850.00      | 13.58        | \$ 79,443.00         | \$ 1,655.06        |
| Storm Area Charge – West Draw Single Family | \$ 8,380.00      | 13.58        | \$ 113,800.40        | \$ 2,370.84        |
| <b>Total Area Charges:</b>                  |                  |              | <b>\$ 240,094.00</b> | <b>\$ 5,001.96</b> |
|                                             |                  |              |                      |                    |
| <b>Credits</b>                              | <b>Cost</b>      | <b>Qty</b>   | <b>Total</b>         | <b>Per Lot</b>     |
| Stormwater Oversizing Credit                | \$ (24,206.58)   | 1.00         | \$ (24,206.58)       | \$ (504.30)        |

\*Ponding HWLs were omitted from Area Charge Calculations



**EXHIBIT H**  
**BUILDER'S ESCROW REQUIREMENTS**  
**AND CASH REQUIREMENTS**

**LOC ESCROW**

| <b>Builder Escrow</b>                         | <b>Per Lot</b>     |
|-----------------------------------------------|--------------------|
| Yard & Boulevard Sod                          | \$ 7,100.00        |
| Boulevard Trees                               | \$ 500.00          |
| Property As-built Survey & Corner Replacement | \$ 1,000.00        |
| <b>Total Escrow:</b>                          | <b>\$ 8,600.00</b> |

**CASH REQUIREMENTS**

| <b>Building Permit Fees</b>                 | <b>Per Lot</b>   |
|---------------------------------------------|------------------|
| Sod & Boulevard Tree Inspection Fee         | \$ 150.00        |
| Curb Stop Inspection Fee                    | \$ 155.00        |
| Grading As-built Review Fee                 | \$ 36.00         |
| Right-of-way Permit Fee                     | \$ 50.00         |
| <b>Total Cash Added to Building Permit:</b> | <b>\$ 391.00</b> |

CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-095

**RESOLUTION APPROVING THE DEVELOPMENT PLANS AND SPECIFICATIONS  
FOR HAWTHORNE PINES THIRD ADDITION**

WHEREAS, Pulte Homes of Minnesota, LLC applied for a final plat to develop a residential subdivision named Hawthorne Pines Third Addition. This subdivision plat consists of 48 detached single-family homes and one outlot and will be located on property legally described as:

OULOT C, HAWTHORNE PINES SECOND ADDITION, according to the recorded plat thereof, Washington County, Minnesota.

WHEREAS, the Developer will utilize the approved water and sanitary sewer plans & specifications dated April 30, 2024, as prepared by Alliant Engineering to construct the public improvements within the subdivision and in conformance with the May 29, 2024, review comment letter from Bolton and Menk; and

WHEREAS, the Developer will install the water and sanitary sewer and other public improvements within the subdivision in accordance with current City ordinances and policies; and

WHEREAS, a development agreement and additional financial sureties are required for the complete development of this project; and

WHEREAS, the City Engineer has reviewed the development plans and specifications prepared by Alliant Engineering and is recommending that the City Council adopt a resolution approving said development plans and specifications.

NOW, THEREFORE, BE IT RESOLVED, that the City Council for the City of Cottage Grove, Washington County, Minnesota, hereby approves the Hawthorne Pines Third Addition development plans and specifications dated April 30, 2024, as prepared by Alliant Engineering, subject to the following conditions:

1. The developer and contractors must comply with all City ordinances and policies.
2. Modifications to the final public improvement construction plans and specifications as required in writing by the City Engineer.

Passed this 26th day of June 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk



# City Council Action Request

## 7.P.

**Meeting Date** 6/26/2024

**Department** Finance

**Agenda Category** Action Item

**Title** Donations - 4th of July Fireworks

**Staff Recommendation** Approve Resolution 2024-100 accepting donations received for the 4th of July Fireworks.

**Budget Implication**

**Attachments**

|    |                                     |
|----|-------------------------------------|
| 1. | Res Donations-4th of July Fireworks |
|----|-------------------------------------|

CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-100  
**RESOLUTION ACCEPTING DONATIONS RECEIVED FOR 4<sup>TH</sup> OF JULY  
FIREWORKS**

WHEREAS, the businesses listed below have made donations to the City of Cottage Grove between April 1, 2024 and June 30, 2024 for the 4<sup>th</sup> of July Fireworks;

| <b>Received From</b> | <b>Purpose</b>                      | <b>Amount</b> |
|----------------------|-------------------------------------|---------------|
| Tennis Sanitation    | 4 <sup>th</sup> of July Sponsorship | \$5,000       |
| NorthPoint           | 4 <sup>th</sup> of July Sponsorship | 5,000         |
| 3M                   | 4 <sup>th</sup> of July Sponsorship | 5,000         |
| Renewal by Andersen  | 4 <sup>th</sup> of July Sponsorship | 5,000         |
| Hy-Vee               | 4 <sup>th</sup> of July Sponsorship | 5,000         |

And WHEREAS, the City of Cottage Grove, on behalf of the City, gratefully accepts these donations and recommends that they be used for the proposes intended by the donors.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, that the donations listed in this resolution, and totaling \$25,000 be accepted for the 4<sup>th</sup> of July Fireworks that they were designated to support, with the sincere thanks of the City Council.

Passed this 26th day of June 2024.

\_\_\_\_\_  
Myron Bailey, Mayor

Attest:

\_\_\_\_\_  
Tamara Anderson, City Clerk



# City Council Action Request

## 8.A.

|                      |                                                                                                                                                                 |    |                                                    |    |                                      |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------|----|--------------------------------------|
| Meeting Date         | 6/26/2024                                                                                                                                                       |    |                                                    |    |                                      |
| Department           | Finance                                                                                                                                                         |    |                                                    |    |                                      |
| Agenda Category      | Action Item                                                                                                                                                     |    |                                                    |    |                                      |
| Title                | Approve disbursements from 05-30-2024 through 06-19-2024 in the amount of \$6,786,241.02                                                                        |    |                                                    |    |                                      |
| Staff Recommendation | Approve disbursements.                                                                                                                                          |    |                                                    |    |                                      |
| Budget Implication   | N/A                                                                                                                                                             |    |                                                    |    |                                      |
| Attachments          | <table><tr><td>1.</td><td>Expense Approval Report 06-26-2024 Council Meeting</td></tr><tr><td>2.</td><td>COUNCIL CHECK REGISTER CK 06.26.2024</td></tr></table> | 1. | Expense Approval Report 06-26-2024 Council Meeting | 2. | COUNCIL CHECK REGISTER CK 06.26.2024 |
| 1.                   | Expense Approval Report 06-26-2024 Council Meeting                                                                                                              |    |                                                    |    |                                      |
| 2.                   | COUNCIL CHECK REGISTER CK 06.26.2024                                                                                                                            |    |                                                    |    |                                      |



# City Council Action Request

## 10.A.

|                      |                                                                                                                                                                                                                                                                                                                     |    |                                         |    |                                         |    |                                                          |    |                                            |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------------------------------------|----|-----------------------------------------|----|----------------------------------------------------------|----|--------------------------------------------|
| Meeting Date         | 6/26/2024                                                                                                                                                                                                                                                                                                           |    |                                         |    |                                         |    |                                                          |    |                                            |
| Department           | Public Works                                                                                                                                                                                                                                                                                                        |    |                                         |    |                                         |    |                                                          |    |                                            |
| Agenda Category      | Action Item                                                                                                                                                                                                                                                                                                         |    |                                         |    |                                         |    |                                                          |    |                                            |
| Title                | TH 61 River Oaks RCUT Project – Bid Award                                                                                                                                                                                                                                                                           |    |                                         |    |                                         |    |                                                          |    |                                            |
| Staff Recommendation | Adopt Resolution 2024-096 awarding the TH 61 River Oaks RCUT Project to Pember Companies, Inc. in the amount of \$1,203,803.45.                                                                                                                                                                                     |    |                                         |    |                                         |    |                                                          |    |                                            |
| Budget Implication   | \$1,203,803.45: MnDOT Grant = \$1,010,000; MSA Funds = \$193,803.45                                                                                                                                                                                                                                                 |    |                                         |    |                                         |    |                                                          |    |                                            |
| Attachments          | <table><tr><td>1.</td><td>TH 61 River Oaks RCUT Bid Award CC Memo</td></tr><tr><td>2.</td><td>TH61 River Oaks RCUT Bid Results Letter</td></tr><tr><td>3.</td><td>TH 61 River Oaks RCUT Bid Award MnDOT Concurrence Letter</td></tr><tr><td>4.</td><td>TH 61 River Oaks RCUT Bid Award Resolution</td></tr></table> | 1. | TH 61 River Oaks RCUT Bid Award CC Memo | 2. | TH61 River Oaks RCUT Bid Results Letter | 3. | TH 61 River Oaks RCUT Bid Award MnDOT Concurrence Letter | 4. | TH 61 River Oaks RCUT Bid Award Resolution |
| 1.                   | TH 61 River Oaks RCUT Bid Award CC Memo                                                                                                                                                                                                                                                                             |    |                                         |    |                                         |    |                                                          |    |                                            |
| 2.                   | TH61 River Oaks RCUT Bid Results Letter                                                                                                                                                                                                                                                                             |    |                                         |    |                                         |    |                                                          |    |                                            |
| 3.                   | TH 61 River Oaks RCUT Bid Award MnDOT Concurrence Letter                                                                                                                                                                                                                                                            |    |                                         |    |                                         |    |                                                          |    |                                            |
| 4.                   | TH 61 River Oaks RCUT Bid Award Resolution                                                                                                                                                                                                                                                                          |    |                                         |    |                                         |    |                                                          |    |                                            |



**To:** Honorable Mayor and City Council  
Jennifer Levitt, City Administrator

**From:** Joe Fox, PE, Project Engineer

**Date:** June 18, 2024

**Subject:** TH 61 River Oaks RCUT – Bid Award

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## Background

At the May 1, 2024, City Council meeting, Council approved the plans and specifications for the TH 61 River Oaks RCUT project adjacent to the River Oaks Golf Course and Zywiec's Garden Center entrances on Highway 61. The project is funded in part by a grant from MnDOT's Metro Local Partnership Program. At the May 15, 2024, City Council meeting, the Council approved the Cooperative Agreement with MnDOT for this project.

## Discussion

Bids for the TH 61 River Oaks RCUT were opened on June 4, 2024. A total of 7 bids were received. Below is a summary of the bids:

| Contractor                    | Base Bid       |
|-------------------------------|----------------|
| 1. Pember Companies, Inc.     | \$1,203,803.45 |
| 2. Meyer Contracting, Inc.    | \$1,277,809.00 |
| 3. New Look Contracting, Inc. | \$1,335,197.00 |
| 4. Dresel Contracting, Inc.   | \$1,363,839.05 |
| 5. Ti-Zack Concrete, LLC      | \$1,490,356.24 |
| 6. Ramsey Companies           | \$1,496,418.91 |
| 7. Urban Companies            | \$1,515,308.10 |

The low bidder was Pember Companies, Inc. with a total base bid in the amount of \$1,203,803.45, which was above the engineer's estimate of \$1,015,000. While the higher bidding prices may be attributed to the timing of bidding the project, there was competitive bidding considering the seven bids received. MnDOT has reviewed the bids and provided concurrence on awarding the project. The City must award a bid by June 30, 2024 in order to utilize the grant funds. Taking all of this into consideration, and the fact that the grant will still fund 84 percent of the construction costs, it is recommended to move ahead with awarding the project.

As mentioned above, the city obtained grant funding for this project from MnDOT in the amount of \$1,010,000. Based on the low bid received, the remaining amount of \$193,803.45 will be funded by the city's MSA funds, and will not impact the general levy.

## **Recommendation**

It is recommended that the City Council adopt Resolution 2024-096 awarding the TH 61 River Oaks RCUT Project to Pember Companies, Inc. in the amount of \$1,203,803.45.

## **Attachment**

Bid Results Letter and Abstract of Bids  
MnDOT Bid Concurrence Letter





**BOLTON  
& MENK**

Real People. Real Solutions.

3507 High Point Drive North  
Bldg. 1 Suite E130  
Oakdale, MN 55128

Ph: (651) 704-9970  
Bolton-Menk.com

June 4, 2024

Honorable Mayor and City Council  
City of Cottage Grove  
12800 Ravine Parkway South  
Cottage Grove, MN 55016

Re: Bid Results  
T.H. 61 Reduced Conflict Intersection (RCI)  
BMI Project No. ON1.129262

Dear Honorable Mayor and City Council:

Bids for the T.H. 61 Reduced Conflict Intersection (RCI) were opened on Tuesday, June 4, 2024. A total of seven (7) bids were received. Below is the summary of bids:

|    | <b>Contractor</b>          | <b>Base Bid</b> |
|----|----------------------------|-----------------|
| 1. | Pember Companies, Inc.     | \$1,203,803.45  |
| 2. | Meyer Contracting Inc.     | \$1,277,809.58  |
| 3. | New Look Contracting, Inc. | \$1,335,197.00  |
| 4. | Dresel Contracting Inc.    | \$1,363,839.05  |
| 5. | Ti-Zack Concrete, LLC      | \$1,490,356.24  |
| 6. | Ramsey Companies           | \$1,496,418.91  |
| 7. | Urban Companies            | \$1,515,308.10  |

The low Bidder on the Project was Pember Companies with a Total Base Bid Amount of \$1,203,803.45, which was above the Engineer's Estimate of \$1,015,000. If the City Council decides to award the Project to the low bidder, then Pember Companies, Inc. should be awarded the Project on the Total Base Bid Amount of **\$1,203,803.45**.

If you have any questions, please feel free to contact me at (651) 968-7674.

Sincerely,

**Bolton & Menk, Inc.**

**Michael Boex, PE**

cc: Derek Arens, Bolton & Menk, Inc.

ABSTRACT OF BIDS  
T.H. 61 Reduced Conflict Intersection (RCI) Project  
S.P. No. 8205-156  
Cottage Grove, MN  
BMI Project No. 0N1.129262  
Bid: June 4, 2024 at 10:00 a.m.

|          |                                                    |          |                     | 1                                       |              | 2                                         |              | 3                                        |              | 4                                           |              |
|----------|----------------------------------------------------|----------|---------------------|-----------------------------------------|--------------|-------------------------------------------|--------------|------------------------------------------|--------------|---------------------------------------------|--------------|
|          |                                                    |          |                     | Pember Companies, Inc.<br>Menomonie, WI |              | Meyer Contracting Inc.<br>Maple Grove, MN |              | New Look Contracting, Inc.<br>Rogers, MN |              | Dresel Contracting Inc.<br>Chisago City, MN |              |
| ITEM NO. | ITEM DESCRIPTION                                   | UNIT     | APPROX.<br>QUANTITY | UNIT PRICE                              | AMOUNT       | UNIT PRICE                                | AMOUNT       | UNIT PRICE                               | AMOUNT       | UNIT PRICE                                  | AMOUNT       |
| 1        | 2011.601 AS BUILT                                  | LUMP SUM | 1                   | \$4,100.00                              | \$4,100.00   | \$2,887.83                                | \$2,887.83   | \$3,900.00                               | \$3,900.00   | \$4,800.00                                  | \$4,800.00   |
| 2        | 2021.501 MOBILIZATION                              | LUMP SUM | 1                   | \$57,385.00                             | \$57,385.00  | \$63,890.47                               | \$63,890.47  | \$75,000.00                              | \$75,000.00  | \$162,362.50                                | \$162,362.50 |
| 3        | 2102.503 PAVEMENT MARKING REMOVAL                  | LIN FT   | 9000                | \$0.90                                  | \$8,100.00   | \$1.05                                    | \$9,450.00   | \$1.00                                   | \$9,000.00   | \$1.02                                      | \$9,180.00   |
| 4        | 2104.502 REMOVE ANCHORAGE ASSEMBLY - TENSION CABLE | EACH     | 2                   | \$4,370.00                              | \$8,740.00   | \$5,287.99                                | \$10,575.98  | \$4,750.00                               | \$9,500.00   | \$5,040.00                                  | \$10,080.00  |
| 5        | 2104.502 REMOVE CONCRETE HEADWALL                  | EACH     | 1                   | \$155.00                                | \$155.00     | \$540.30                                  | \$540.30     | \$350.00                                 | \$350.00     | \$330.00                                    | \$330.00     |
| 6        | 2104.502 REMOVE DELINEATOR / MARKER                | EACH     | 1                   | \$26.00                                 | \$26.00      | \$30.86                                   | \$30.86      | \$30.00                                  | \$30.00      | \$48.00                                     | \$48.00      |
| 7        | 2104.502 REMOVE SIGN                               | EACH     | 10                  | \$26.00                                 | \$260.00     | \$30.86                                   | \$308.60     | \$30.00                                  | \$300.00     | \$120.00                                    | \$1,200.00   |
| 8        | 2104.503 SAWING CONCRETE PAVEMENT (FULL DEPTH)     | LIN FT   | 2396                | \$4.50                                  | \$10,782.00  | \$6.87                                    | \$16,460.52  | \$7.50                                   | \$17,970.00  | \$6.78                                      | \$16,244.88  |
| 9        | 2104.503 SAWING BITUMINOUS PAVEMENT (FULL DEPTH)   | LIN FT   | 383                 | \$3.25                                  | \$1,244.75   | \$2.25                                    | \$861.75     | \$3.50                                   | \$1,340.50   | \$2.22                                      | \$850.26     |
| 10       | 2104.503 REMOVE PIPE DRAIN                         | LIN FT   | 1491                | \$3.00                                  | \$4,473.00   | \$3.87                                    | \$5,770.17   | \$7.50                                   | \$11,182.50  | \$5.31                                      | \$7,917.21   |
| 11       | 2104.503 REMOVE TENSION CABLE GUARDRAIL            | LIN FT   | 1601                | \$7.85                                  | \$12,567.85  | \$9.44                                    | \$15,113.44  | \$8.50                                   | \$13,608.50  | \$9.00                                      | \$14,409.00  |
| 12       | 2104.504 REMOVE CONCRETE PAVEMENT                  | SQ YD    | 1817                | \$12.35                                 | \$22,439.95  | \$10.53                                   | \$19,133.01  | \$35.00                                  | \$63,595.00  | \$10.34                                     | \$18,787.78  |
| 13       | 2104.504 REMOVE BITUMINOUS SHOULDER PAVEMENT       | SQ YD    | 395                 | \$6.30                                  | \$2,488.50   | \$7.61                                    | \$3,005.95   | \$18.00                                  | \$7,110.00   | \$9.51                                      | \$3,756.45   |
| 14       | 2106.507 EXCAVATION - COMMON (P)                   | CU YD    | 3907                | \$22.40                                 | \$87,516.80  | \$17.53                                   | \$68,489.71  | \$18.00                                  | \$70,326.00  | \$18.80                                     | \$73,451.60  |
| 15       | 2106.507 SELECT GRANULAR EMBANKMENT (CV) (P)       | CU YD    | 1652                | \$36.50                                 | \$60,298.00  | \$29.02                                   | \$47,941.04  | \$20.00                                  | \$33,040.00  | \$31.39                                     | \$51,856.28  |
| 16       | 2106.507 COMMON EMBANKMENT (CV) (P)                | CU YD    | 2087                | \$8.10                                  | \$16,904.70  | \$7.80                                    | \$16,278.60  | \$16.00                                  | \$33,392.00  | \$13.18                                     | \$27,506.66  |
| 17       | 2118.507 AGGREGATE SURFACING (CV) CLASS 1 (P)      | CU YD    | 113                 | \$86.65                                 | \$9,791.45   | \$104.31                                  | \$11,787.03  | \$85.00                                  | \$9,605.00   | \$83.73                                     | \$9,461.49   |
| 18       | 2211.507 AGGREGATE BASE (CV) CLASS 6 (P)           | CU YD    | 673                 | \$61.55                                 | \$41,423.15  | \$51.94                                   | \$34,955.62  | \$50.00                                  | \$33,650.00  | \$32.29                                     | \$21,731.17  |
| 19       | 2301.502 DOWEL BAR                                 | EACH     | 772                 | \$10.85                                 | \$8,376.20   | \$16.89                                   | \$13,039.08  | \$17.50                                  | \$13,510.00  | \$15.28                                     | \$11,796.16  |
| 20       | 2301.504 CONCRETE PAVEMENT 8.5"                    | SQ YD    | 2818                | \$105.80                                | \$298,144.40 | \$106.83                                  | \$301,046.94 | \$110.00                                 | \$309,980.00 | \$96.65                                     | \$272,359.70 |
| 21       | 2301.508 SUPPLEMENTAL PAVEMENT REINFORCEMENT       | POUND    | 840                 | \$2.65                                  | \$2,226.00   | \$6.08                                    | \$5,107.20   | \$6.50                                   | \$5,460.00   | \$6.00                                      | \$5,040.00   |
| 22       | 2301.602 DRILL AND GROUT DOWEL BAR (EPOXY COATED)  | EACH     | 12                  | \$14.20                                 | \$170.40     | \$26.75                                   | \$321.00     | \$28.00                                  | \$336.00     | \$26.40                                     | \$316.80     |
| 23       | 2301.602 DRILL AND GROUT REINF BAR (EPOXY COATED)  | EACH     | 609                 | \$7.70                                  | \$4,689.30   | \$18.24                                   | \$11,108.16  | \$19.00                                  | \$11,571.00  | \$18.00                                     | \$10,962.00  |
| 24       | 2451.507 FINE AGGREGATE BEDDING (CV)               | CU YD    | 223                 | \$64.00                                 | \$14,272.00  | \$46.92                                   | \$10,463.16  | \$50.00                                  | \$11,150.00  | \$66.64                                     | \$14,860.72  |
| 25       | 2501.502 15" CS SAFETY APRON AND GRATE DESIGN 3128 | EACH     | 4                   | \$1,610.00                              | \$6,440.00   | \$1,825.65                                | \$7,302.60   | \$2,000.00                               | \$8,000.00   | \$870.00                                    | \$3,480.00   |
| 26       | 2501.502 12" RC SAFETY APRON                       | EACH     | 2                   | \$1,430.00                              | \$2,860.00   | \$4,734.49                                | \$9,468.98   | \$1,500.00                               | \$3,000.00   | \$1,440.00                                  | \$2,880.00   |
| 27       | 2501.503 12" RC PIPE CULVERT DESIGN 3006 CLASS V   | LIN FT   | 150                 | \$72.60                                 | \$10,890.00  | \$93.02                                   | \$13,953.00  | \$85.00                                  | \$12,750.00  | \$148.80                                    | \$22,320.00  |
| 28       | 2501.503 15" RC PIPE CULVERT DESIGN 3006 CLASS V   | LIN FT   | 227                 | \$83.30                                 | \$18,909.10  | \$100.93                                  | \$22,911.11  | \$100.00                                 | \$22,700.00  | \$148.24                                    | \$33,650.48  |
| 29       | 2502.502 4" PRECAST CONCRETE HEADWALL              | EACH     | 3                   | \$780.00                                | \$2,340.00   | \$711.89                                  | \$2,135.67   | \$850.00                                 | \$2,550.00   | \$592.00                                    | \$1,776.00   |
| 30       | 2502.503 4" TP PIPE DRAIN                          | LIN FT   | 26                  | \$35.00                                 | \$910.00     | \$20.99                                   | \$545.74     | \$45.00                                  | \$1,170.00   | \$34.98                                     | \$909.48     |
| 31       | 2502.503 4" PERF PE PIPE DRAIN                     | LIN FT   | 1636                | \$20.00                                 | \$32,720.00  | \$9.46                                    | \$15,476.56  | \$16.50                                  | \$26,994.00  | \$21.76                                     | \$35,599.36  |
| 32       | 2521.518 6" CONCRETE WALK                          | SQ FT    | 139                 | \$10.10                                 | \$1,403.90   | \$15.81                                   | \$2,197.59   | \$16.50                                  | \$2,293.50   | \$15.60                                     | \$2,168.40   |
| 33       | 2521.602 DRILL AND GROUT REINF BAR (EPOXY COATED)  | EACH     | 6                   | \$7.60                                  | \$45.60      | \$18.24                                   | \$109.44     | \$19.00                                  | \$114.00     | \$18.00                                     | \$108.00     |
| 34       | 2521.618 CONCRETE CURB RAMP WALK                   | SQ FT    | 120                 | \$8.90                                  | \$1,068.00   | \$20.67                                   | \$2,480.40   | \$22.00                                  | \$2,640.00   | \$20.40                                     | \$2,448.00   |
| 35       | 2531.618 TRUNCATED DOMES                           | SQ FT    | 22                  | \$72.90                                 | \$1,603.80   | \$85.12                                   | \$1,872.64   | \$88.00                                  | \$1,936.00   | \$84.00                                     | \$1,848.00   |
| 36       | 2545.501 LIGHTING SYSTEM                           | LUMP SUM | 1                   | \$89,200.00                             | \$89,200.00  | \$112,157.27                              | \$112,157.27 | \$100,000.00                             | \$100,000.00 | \$104,273.26                                | \$104,273.26 |
| 37       | 2554.502 ANCHORAGE ASSEMBLY - TENSION CABLE        | EACH     | 6                   | \$11,960.00                             | \$71,760.00  | \$14,479.03                               | \$86,874.18  | \$13,000.00                              | \$78,000.00  | \$12,190.00                                 | \$73,140.00  |
| 38       | 2554.602 GUIDE POST TYPE SPECIAL                   | EACH     | 6                   | \$104.00                                | \$624.00     | \$243.19                                  | \$1,459.14   | \$565.00                                 | \$3,390.00   | \$600.00                                    | \$3,600.00   |
| 39       | 2554.603 TENSION CABLE GUARDRAIL                   | LIN FT   | 1428                | \$55.15                                 | \$78,754.20  | \$66.73                                   | \$95,290.44  | \$60.00                                  | \$85,680.00  | \$56.18                                     | \$80,225.04  |
| 40       | 2563.601 TRAFFIC CONTROL SUPERVISOR                | LUMP SUM | 1                   | \$12,500.00                             | \$12,500.00  | \$3,377.89                                | \$3,377.89   | \$3,250.00                               | \$3,250.00   | \$4,840.00                                  | \$4,840.00   |
| 41       | 2563.601 TRAFFIC CONTROL                           | LUMP SUM | 1                   | \$15,540.00                             | \$15,540.00  | \$14,910.86                               | \$14,910.86  | \$85,000.00                              | \$85,000.00  | \$14,340.00                                 | \$14,340.00  |
| 42       | 2563.602 PORTABLE CHANGEABLE MESSAGE SIGN          | EACH     | 2                   | \$3,640.00                              | \$7,280.00   | \$4,320.55                                | \$8,641.10   | \$4,000.00                               | \$8,000.00   | \$4,200.00                                  | \$8,400.00   |
| 43       | 2564.602 DELINEATOR / MARKER                       | EACH     | 2                   | \$260.00                                | \$520.00     | \$308.61                                  | \$617.22     | \$300.00                                 | \$600.00     | \$480.00                                    | \$960.00     |
| 44       | 2564.602 DELINEATOR / MARKER PANEL                 | EACH     | 4                   | \$104.00                                | \$416.00     | \$123.45                                  | \$493.80     | \$115.00                                 | \$460.00     | \$210.00                                    | \$840.00     |
| 45       | 2564.618 SIGN                                      | SQ FT    | 421                 | \$64.50                                 | \$27,154.50  | \$76.54                                   | \$32,223.34  | \$70.00                                  | \$29,470.00  | \$108.00                                    | \$45,468.00  |
| 46       | 2573.501 STABILIZED CONSTRUCTION EXIT              | LUMP SUM | 1                   | \$2,000.00                              | \$2,000.00   | \$3,605.93                                | \$3,605.93   | \$2,000.00                               | \$2,000.00   | \$2,664.00                                  | \$2,664.00   |
| 47       | 2573.502 CULVERT END CONTROLS                      | EACH     | 3                   | \$230.00                                | \$690.00     | \$182.39                                  | \$547.17     | \$175.00                                 | \$525.00     | \$180.00                                    | \$540.00     |
| 48       | 2573.503 SILT FENCE, TYPE M5                       | LIN FT   | 491                 | \$2.90                                  | \$1,423.90   | \$3.04                                    | \$1,492.64   | \$3.50                                   | \$1,718.50   | \$4.80                                      | \$2,356.80   |
| 49       | 2573.503 SEDIMENT CONTROL LOG TYPE WOOD FIBER      | LIN FT   | 312                 | \$3.85                                  | \$1,201.20   | \$3.65                                    | \$1,138.80   | \$7.50                                   | \$2,340.00   | \$4.80                                      | \$1,497.60   |
| 50       | 2574.505 SUBSOILING (P)                            | ACRE     | 1.4                 | \$1,000.00                              | \$1,400.00   | \$1,215.93                                | \$1,702.30   | \$650.00                                 | \$910.00     | \$420.00                                    | \$588.00     |
| 51       | 2574.505 SOIL BED PREPARATION (P)                  | ACRE     | 1.4                 | \$1,000.00                              | \$1,400.00   | \$1,215.93                                | \$1,702.30   | \$650.00                                 | \$910.00     | \$420.00                                    | \$588.00     |
| 52       | 2574.507 COMPOST GRADE 2                           | CU YD    | 1089                | \$40.00                                 | \$43,560.00  | \$25.47                                   | \$27,736.83  | \$0.25                                   | \$272.25     | \$47.09                                     | \$51,281.01  |
| 53       | 2574.508 FERTILIZER TYPE 3                         | POUND    | 270                 | \$3.00                                  | \$810.00     | \$3.65                                    | \$985.50     | \$2.00                                   | \$540.00     | \$1.20                                      | \$324.00     |
| 54       | 2575.504 ROLLED EROSION PREVENTION CATEGORY 20     | SQ YD    | 823                 | \$2.50                                  | \$2,057.50   | \$3.65                                    | \$3,003.95   | \$3.00                                   | \$2,469.00   | \$3.60                                      | \$2,962.80   |
| 55       | 2575.505 SEEDING (P)                               | ACRE     | 1.35                | \$3,200.00                              | \$4,320.00   | \$2,431.84                                | \$3,282.98   | \$2,000.00                               | \$2,700.00   | \$780.00                                    | \$1,053.00   |
| 56       | 2575.505 MOWING                                    | ACRE     | 1.35                | \$300.00                                | \$405.00     | \$1,823.89                                | \$2,462.25   | \$10.00                                  | \$13.50      | \$300.00                                    | \$405.00     |
| 57       | 2575.505 WEED SPRAYING                             | ACRE     | 1.35                | \$350.00                                | \$472.50     | \$1,823.89                                | \$2,462.25   | \$100.00                                 | \$135.00     | \$150.00                                    | \$202.50     |

ABSTRACT OF BIDS  
T.H. 61 Reduced Conflict Intersection (RCI) Project  
S.P. No. 8205-156  
Cottage Grove, MN  
BMI Project No. 0N1.129262  
Bid: June 4, 2024 at 10:00 a.m.

| Bd: June 4, 2024 at 10:00 a.m. |                                                                    |          |                     |            | 1<br>Pember Companies, Inc.<br>Menomonie, WI |                | 2<br>Meyer Contracting Inc.<br>Maple Grove, MN |                | 3<br>New Look Contracting, Inc.<br>Rogers, MN |                | 4<br>Dresel Contracting Inc.<br>Chisago City, MN |                |
|--------------------------------|--------------------------------------------------------------------|----------|---------------------|------------|----------------------------------------------|----------------|------------------------------------------------|----------------|-----------------------------------------------|----------------|--------------------------------------------------|----------------|
| ITEM NO.                       | ITEM DESCRIPTION                                                   | UNIT     | APPROX.<br>QUANTITY | UNIT PRICE | AMOUNT                                       | UNIT PRICE     | AMOUNT                                         | UNIT PRICE     | AMOUNT                                        | UNIT PRICE     | AMOUNT                                           |                |
| 58                             | 2575.506 WEED SPRAY MIXTURE                                        | GALLON   | 0.68                | \$160.00   | \$108.80                                     | \$1,823.90     | \$1,240.25                                     | \$100.00       | \$68.00                                       | \$240.00       | \$163.20                                         |                |
| 59                             | 2575.508 SEED MIXTURE 25-131                                       | POUND    | 297                 | \$13.00    | \$3,861.00                                   | \$12.16        | \$3,611.52                                     | \$4.00         | \$1,188.00                                    | \$7.20         | \$2,138.40                                       |                |
| 60                             | 2575.508 HYDRAULIC REINFORCED FIBER MATRIX                         | POUND    | 5267                | \$1.20     | \$6,320.40                                   | \$2.43         | \$12,798.81                                    | \$3.00         | \$15,801.00                                   | \$2.40         | \$12,640.80                                      |                |
| 61                             | 2581.503 REMOVABLE PREFORMED PAVEMENT MARKING TAPE WR              | LIN FT   | 4240                | \$1.90     | \$8,056.00                                   | \$2.28         | \$9,667.20                                     | \$2.00         | \$8,480.00                                    | \$1.96         | \$8,310.40                                       |                |
| 62                             | 2581.603 REMOVABLE PREFORMED PLASTIC MASK (BLACK)                  | LIN FT   | 640                 | \$2.60     | \$1,664.00                                   | \$2.78         | \$1,779.20                                     | \$3.00         | \$1,920.00                                    | \$2.39         | \$1,529.60                                       |                |
| 63                             | 2582.503 MOBILE RETROREFLECTOMETER MEASUREMENTS                    | LIN FT   | 7185                | \$0.25     | \$1,796.25                                   | \$0.26         | \$1,868.10                                     | \$0.25         | \$1,796.25                                    | \$0.22         | \$1,580.70                                       |                |
| 64                             | 2582.503 6" SOLID LINE MULTI-COMPONENT GROUND IN (WR)              | LIN FT   | 4994                | \$2.05     | \$10,237.70                                  | \$5.31         | \$26,518.14                                    | \$2.25         | \$11,236.50                                   | \$4.56         | \$22,772.64                                      |                |
| 65                             | 2582.503 6" SOLID LINE PREFORM TAPE GROUND IN (WR) CONTRAST        | LIN FT   | 1316                | \$12.65    | \$16,647.40                                  | \$21.97        | \$28,912.52                                    | \$13.75        | \$18,095.00                                   | \$18.87        | \$24,832.92                                      |                |
| 66                             | 2582.503 6" BROKEN LINE PREFORM TAPE GROUND IN (WR) CONTRAST       | LIN FT   | 520                 | \$12.50    | \$6,500.00                                   | \$21.97        | \$11,424.40                                    | \$13.75        | \$7,150.00                                    | \$18.87        | \$9,812.40                                       |                |
| 67                             | 2582.503 24" SOLID LINE PREFORM THERMO GROUND IN CONT              | LIN FT   | 355                 | \$39.55    | \$14,040.25                                  | \$27.16        | \$9,641.80                                     | \$43.00        | \$15,265.00                                   | \$23.32        | \$8,278.60                                       |                |
| 68                             | 2582.518 PAVEMENT MESSAGE PREFORM THERMOPLASTIC GROUND IN CONTRAST | SQ FT    | 260                 | \$46.80    | \$12,168.00                                  | \$49.38        | \$12,838.80                                    | \$51.00        | \$13,260.00                                   | \$42.40        | \$11,024.00                                      |                |
| 69                             | 2582.601 WET RETROREFLECTOMETER MEASUREMENTS                       | LUMP SUM | 1                   | \$3,150.00 | \$3,150.00                                   | \$4,320.54     | \$4,320.54                                     | \$3,500.00     | \$3,500.00                                    | \$3,710.00     | \$3,710.00                                       |                |
| TOTAL BID:                     |                                                                    |          |                     |            |                                              | \$1,203,803.45 |                                                | \$1,277,809.58 |                                               | \$1,335,197.00 |                                                  | \$1,363,839.05 |

ABSTRACT OF BIDS  
T.H. 61 Reduced Conflict Intersection (RCI) Project  
S.P. No. 8205-156  
Cottage Grove, MN  
BMI Project No. 0N1.129262  
Bid: June 4, 2024 at 10:00 a.m.

|          |                                                    |          |                     | 5                                      |              | 6                                   |              | 7                               |              |
|----------|----------------------------------------------------|----------|---------------------|----------------------------------------|--------------|-------------------------------------|--------------|---------------------------------|--------------|
|          |                                                    |          |                     | Ti-Zack Concrete, LLC<br>Le Center, MN |              | Ramsey Companies<br>Minneapolis, MN |              | Urban Companies<br>St. Paul, MN |              |
| ITEM NO. | ITEM DESCRIPTION                                   | UNIT     | APPROX.<br>QUANTITY | UNIT PRICE                             | AMOUNT       | UNIT PRICE                          | AMOUNT       | UNIT PRICE                      | AMOUNT       |
| 1        | 2011.601 AS BUILT                                  | LUMP SUM | 1                   | \$3,500.00                             | \$3,500.00   | \$4,700.00                          | \$4,700.00   | \$5,000.00                      | \$5,000.00   |
| 2        | 2021.501 MOBILIZATION                              | LUMP SUM | 1                   | \$112,029.72                           | \$112,029.72 | \$73,000.00                         | \$73,000.00  | \$99,000.00                     | \$99,000.00  |
| 3        | 2102.503 PAVEMENT MARKING REMOVAL                  | LIN FT   | 9000                | \$0.85                                 | \$7,650.00   | \$0.85                              | \$7,650.00   | \$1.00                          | \$9,000.00   |
| 4        | 2104.502 REMOVE ANCHORAGE ASSEMBLY - TENSION CABLE | EACH     | 2                   | \$4,200.00                             | \$8,400.00   | \$4,200.00                          | \$8,400.00   | \$4,830.00                      | \$9,660.00   |
| 5        | 2104.502 REMOVE CONCRETE HEADWALL                  | EACH     | 1                   | \$69.50                                | \$69.50      | \$450.00                            | \$450.00     | \$1,000.00                      | \$1,000.00   |
| 6        | 2104.502 REMOVE DELINEATOR / MARKER                | EACH     | 1                   | \$25.00                                | \$25.00      | \$25.00                             | \$25.00      | \$46.00                         | \$46.00      |
| 7        | 2104.502 REMOVE SIGN                               | EACH     | 10                  | \$25.00                                | \$250.00     | \$25.00                             | \$250.00     | \$115.00                        | \$1,150.00   |
| 8        | 2104.503 SAWING CONCRETE PAVEMENT (FULL DEPTH)     | LIN FT   | 2396                | \$5.65                                 | \$13,537.40  | \$5.65                              | \$13,537.40  | \$9.00                          | \$21,564.00  |
| 9        | 2104.503 SAWING BITUMINOUS PAVEMENT (FULL DEPTH)   | LIN FT   | 383                 | \$1.85                                 | \$708.55     | \$1.85                              | \$708.55     | \$15.00                         | \$5,745.00   |
| 10       | 2104.503 REMOVE PIPE DRAIN                         | LIN FT   | 1491                | \$7.23                                 | \$10,779.93  | \$12.00                             | \$17,892.00  | \$8.00                          | \$11,928.00  |
| 11       | 2104.503 REMOVE TENSION CABLE GUARDRAIL            | LIN FT   | 1601                | \$7.50                                 | \$12,007.50  | \$7.50                              | \$12,007.50  | \$8.70                          | \$13,928.70  |
| 12       | 2104.504 REMOVE CONCRETE PAVEMENT                  | SQ YD    | 1817                | \$19.53                                | \$35,486.01  | \$51.00                             | \$92,667.00  | \$30.00                         | \$54,510.00  |
| 13       | 2104.504 REMOVE BITUMINOUS SHOULDER PAVEMENT       | SQ YD    | 395                 | \$12.03                                | \$4,751.85   | \$18.00                             | \$7,110.00   | \$15.00                         | \$5,925.00   |
| 14       | 2106.507 EXCAVATION - COMMON (P)                   | CU YD    | 3907                | \$41.69                                | \$162,882.83 | \$31.00                             | \$121,117.00 | \$28.00                         | \$109,396.00 |
| 15       | 2106.507 SELECT GRANULAR EMBANKMENT (CV) (P)       | CU YD    | 1652                | \$55.19                                | \$91,173.88  | \$56.00                             | \$92,512.00  | \$28.00                         | \$46,256.00  |
| 16       | 2106.507 COMMON EMBANKMENT (CV) (P)                | CU YD    | 2087                | \$0.01                                 | \$20.87      | \$15.00                             | \$31,305.00  | \$20.00                         | \$41,740.00  |
| 17       | 2118.507 AGGREGATE SURFACING (CV) CLASS 1 (P)      | CU YD    | 113                 | \$127.68                               | \$14,427.84  | \$200.00                            | \$22,600.00  | \$55.00                         | \$6,215.00   |
| 18       | 2211.507 AGGREGATE BASE (CV) CLASS 6 (P)           | CU YD    | 673                 | \$98.91                                | \$66,566.43  | \$108.00                            | \$72,684.00  | \$55.00                         | \$37,015.00  |
| 19       | 2301.502 DOWEL BAR                                 | EACH     | 772                 | \$16.39                                | \$12,653.08  | \$13.89                             | \$10,723.08  | \$18.50                         | \$14,282.00  |
| 20       | 2301.504 CONCRETE PAVEMENT 8.5"                    | SQ YD    | 2818                | \$123.98                               | \$349,375.64 | \$87.86                             | \$247,589.48 | \$136.00                        | \$383,248.00 |
| 21       | 2301.508 SUPPLEMENTAL PAVEMENT REINFORCEMENT       | POUND    | 840                 | \$4.74                                 | \$3,981.60   | \$5.00                              | \$4,200.00   | \$6.00                          | \$5,040.00   |
| 22       | 2301.602 DRILL AND GROUT DOWEL BAR (EPOXY COATED)  | EACH     | 12                  | \$68.85                                | \$826.20     | \$22.00                             | \$264.00     | \$46.00                         | \$552.00     |
| 23       | 2301.602 DRILL AND GROUT REINF BAR (EPOXY COATED)  | EACH     | 609                 | \$38.75                                | \$23,598.75  | \$15.00                             | \$9,135.00   | \$29.00                         | \$17,661.00  |
| 24       | 2451.507 FINE AGGREGATE BEDDING (CV)               | CU YD    | 223                 | \$30.61                                | \$6,826.03   | \$100.00                            | \$22,300.00  | \$30.00                         | \$6,690.00   |
| 25       | 2501.502 15" CS SAFETY APRON AND GRATE DESIGN 3128 | EACH     | 4                   | \$1,379.58                             | \$5,518.32   | \$2,425.00                          | \$9,700.00   | \$2,200.00                      | \$8,800.00   |
| 26       | 2501.502 12" RC SAFETY APRON                       | EACH     | 2                   | \$1,040.31                             | \$2,080.62   | \$2,350.00                          | \$4,700.00   | \$1,500.00                      | \$3,000.00   |
| 27       | 2501.503 12" RC PIPE CULVERT DESIGN 3006 CLASS V   | LIN FT   | 150                 | \$66.22                                | \$9,933.00   | \$244.00                            | \$36,600.00  | \$90.00                         | \$13,500.00  |
| 28       | 2501.503 15" RC PIPE CULVERT DESIGN 3006 CLASS V   | LIN FT   | 227                 | \$73.47                                | \$16,677.69  | \$257.00                            | \$58,339.00  | \$100.00                        | \$22,700.00  |
| 29       | 2502.502 4" PRECAST CONCRETE HEADWALL              | EACH     | 3                   | \$539.23                               | \$1,617.69   | \$1,050.00                          | \$3,150.00   | \$90.00                         | \$270.00     |
| 30       | 2502.503 4" TP PIPE DRAIN                          | LIN FT   | 26                  | \$16.08                                | \$418.08     | \$81.00                             | \$2,106.00   | \$50.00                         | \$1,300.00   |
| 31       | 2502.503 4" PERF PE PIPE DRAIN                     | LIN FT   | 1636                | \$11.36                                | \$18,584.96  | \$24.50                             | \$40,082.00  | \$10.00                         | \$16,360.00  |
| 32       | 2521.518 6" CONCRETE WALK                          | SQ FT    | 139                 | \$18.44                                | \$2,563.16   | \$13.00                             | \$1,807.00   | \$19.00                         | \$2,641.00   |
| 33       | 2521.602 DRILL AND GROUT REINF BAR (EPOXY COATED)  | EACH     | 6                   | \$39.17                                | \$235.02     | \$15.00                             | \$90.00      | \$29.00                         | \$174.00     |
| 34       | 2521.618 CONCRETE CURB RAMP WALK                   | SQ FT    | 120                 | \$18.44                                | \$2,212.80   | \$17.00                             | \$2,040.00   | \$19.00                         | \$2,280.00   |
| 35       | 2531.618 TRUNCATED DOMES                           | SQ FT    | 22                  | \$53.55                                | \$1,178.10   | \$70.00                             | \$1,540.00   | \$104.00                        | \$2,288.00   |
| 36       | 2545.501 LIGHTING SYSTEM                           | LUMP SUM | 1                   | \$121,686.57                           | \$121,686.57 | \$130,000.00                        | \$130,000.00 | \$113,126.70                    | \$113,126.70 |
| 37       | 2554.502 ANCHORAGE ASSEMBLY - TENSION CABLE        | EACH     | 6                   | \$11,500.00                            | \$69,000.00  | \$11,500.00                         | \$69,000.00  | \$13,225.00                     | \$79,350.00  |
| 38       | 2554.602 GUIDE POST TYPE SPECIAL                   | EACH     | 6                   | \$100.00                               | \$600.00     | \$100.00                            | \$600.00     | \$575.00                        | \$3,450.00   |
| 39       | 2554.603 TENSION CABLE GUARDRAIL                   | LIN FT   | 1428                | \$53.00                                | \$75,684.00  | \$53.00                             | \$75,684.00  | \$61.00                         | \$87,108.00  |
| 40       | 2563.601 TRAFFIC CONTROL SUPERVISOR                | LUMP SUM | 1                   | \$5,000.00                             | \$5,000.00   | \$10,000.00                         | \$10,000.00  | \$2,500.00                      | \$2,500.00   |
| 41       | 2563.601 TRAFFIC CONTROL                           | LUMP SUM | 1                   | \$40,000.00                            | \$40,000.00  | \$42,000.00                         | \$42,000.00  | \$30,000.00                     | \$30,000.00  |
| 42       | 2563.602 PORTABLE CHANGEABLE MESSAGE SIGN          | EACH     | 2                   | \$3,500.00                             | \$7,000.00   | \$3,500.00                          | \$7,000.00   | \$4,000.00                      | \$8,000.00   |
| 43       | 2564.602 DELINEATOR / MARKER                       | EACH     | 2                   | \$250.00                               | \$500.00     | \$250.00                            | \$500.00     | \$275.00                        | \$550.00     |
| 44       | 2564.602 DELINEATOR / MARKER PANEL                 | EACH     | 4                   | \$100.00                               | \$400.00     | \$100.00                            | \$400.00     | \$125.00                        | \$500.00     |
| 45       | 2564.618 SIGN                                      | SQ FT    | 421                 | \$62.00                                | \$26,102.00  | \$62.00                             | \$26,102.00  | \$70.00                         | \$29,470.00  |
| 46       | 2573.501 STABILIZED CONSTRUCTION EXIT              | LUMP SUM | 1                   | \$500.00                               | \$500.00     | \$2,500.00                          | \$2,500.00   | \$2,500.00                      | \$2,500.00   |
| 47       | 2573.502 CULVERT END CONTROLS                      | EACH     | 3                   | \$150.00                               | \$450.00     | \$200.00                            | \$600.00     | \$500.00                        | \$1,500.00   |
| 48       | 2573.503 SILT FENCE, TYPE M5                       | LIN FT   | 491                 | \$2.50                                 | \$1,227.50   | \$2.50                              | \$1,227.50   | \$5.00                          | \$2,455.00   |
| 49       | 2573.503 SEDIMENT CONTROL LOG TYPE WOOD FIBER      | LIN FT   | 312                 | \$3.33                                 | \$1,038.96   | \$5.00                              | \$1,560.00   | \$5.00                          | \$1,560.00   |
| 50       | 2574.505 SUBSOILING (P)                            | ACRE     | 1.4                 | \$250.00                               | \$350.00     | \$500.00                            | \$700.00     | \$1,500.00                      | \$2,100.00   |
| 51       | 2574.505 SOIL BED PREPARATION (P)                  | ACRE     | 1.4                 | \$250.00                               | \$350.00     | \$500.00                            | \$700.00     | \$1,500.00                      | \$2,100.00   |
| 52       | 2574.507 COMPOST GRADE 2                           | CU YD    | 1089                | \$46.69                                | \$50,845.41  | \$10.00                             | \$10,890.00  | \$50.00                         | \$54,450.00  |
| 53       | 2574.508 FERTILIZER TYPE 3                         | POUND    | 270                 | \$0.90                                 | \$243.00     | \$1.25                              | \$337.50     | \$3.00                          | \$810.00     |
| 54       | 2575.504 ROLLED EROSION PREVENTION CATEGORY 20     | SQ YD    | 823                 | \$1.75                                 | \$1,440.25   | \$2.00                              | \$1,646.00   | \$3.00                          | \$2,469.00   |
| 55       | 2575.505 SEEDING (P)                               | ACRE     | 1.35                | \$6,741.42                             | \$9,100.92   | \$500.00                            | \$675.00     | \$12,000.00                     | \$16,200.00  |
| 56       | 2575.505 MOWING                                    | ACRE     | 1.35                | \$200.00                               | \$270.00     | \$200.00                            | \$270.00     | \$1,000.00                      | \$1,350.00   |
| 57       | 2575.505 WEED SPRAYING                             | ACRE     | 1.35                | \$250.00                               | \$337.50     | \$350.00                            | \$472.50     | \$1,000.00                      | \$1,350.00   |

ABSTRACT OF BIDS  
T.H. 61 Reduced Conflict Intersection (RCI) Project  
S.P. No. 8205-156  
Cottage Grove, MN  
BMI Project No. 0N1.129262  
Bid: June 4, 2024 at 10:00 a.m.

|            |                                                                    |          |                     | 5<br>Ti-Zack Concrete, LLC<br>Le Center, MN |                | 6<br>Ramsey Companies<br>Minneapolis, MN |                | 7<br>Urban Companies<br>St. Paul, MN |                |
|------------|--------------------------------------------------------------------|----------|---------------------|---------------------------------------------|----------------|------------------------------------------|----------------|--------------------------------------|----------------|
| ITEM NO.   | ITEM DESCRIPTION                                                   | UNIT     | APPROX.<br>QUANTITY | UNIT PRICE                                  | AMOUNT         | UNIT PRICE                               | AMOUNT         | UNIT PRICE                           | AMOUNT         |
| 58         | 2575.506 WEED SPRAY MIXTURE                                        | GALLON   | 0.68                | \$125.00                                    | \$85.00        | \$500.00                                 | \$340.00       | \$500.00                             | \$340.00       |
| 59         | 2575.508 SEED MIXTURE 25-131                                       | POUND    | 297                 | \$3.69                                      | \$1,095.93     | \$6.00                                   | \$1,782.00     | \$5.00                               | \$1,485.00     |
| 60         | 2575.508 HYDRAULIC REINFORCED FIBER MATRIX                         | POUND    | 5267                | \$0.60                                      | \$3,160.20     | \$1.35                                   | \$7,110.45     | \$1.50                               | \$7,900.50     |
| 61         | 2581.503 REMOVABLE PREFORMED PAVEMENT MARKING TAPE WR              | LIN FT   | 4240                | \$1.85                                      | \$7,844.00     | \$1.85                                   | \$7,844.00     | \$2.20                               | \$9,328.00     |
| 62         | 2581.603 REMOVABLE PREFORMED PLASTIC MASK (BLACK)                  | LIN FT   | 640                 | \$2.25                                      | \$1,440.00     | \$2.25                                   | \$1,440.00     | \$2.60                               | \$1,664.00     |
| 63         | 2582.503 MOBILE RETROREFLECTOMETER MEASUREMENTS                    | LIN FT   | 7185                | \$0.25                                      | \$1,796.25     | \$0.25                                   | \$1,796.25     | \$0.30                               | \$2,155.50     |
| 64         | 2582.503 6" SOLID LINE MULTI-COMPONENT GROUND IN (WR)              | LIN FT   | 4994                | \$1.95                                      | \$9,738.30     | \$1.95                                   | \$9,738.30     | \$2.30                               | \$11,486.20    |
| 65         | 2582.503 6" SOLID LINE PREFORM TAPE GROUND IN (WR) CONTRAST        | LIN FT   | 1316                | \$12.15                                     | \$15,989.40    | \$12.15                                  | \$15,989.40    | \$14.00                              | \$18,424.00    |
| 66         | 2582.503 6" BROKEN LINE PREFORM TAPE GROUND IN (WR) CONTRAST       | LIN FT   | 520                 | \$12.15                                     | \$6,318.00     | \$12.15                                  | \$6,318.00     | \$14.00                              | \$7,280.00     |
| 67         | 2582.503 24" SOLID LINE PREFORM THERMO GROUND IN CONT              | LIN FT   | 355                 | \$38.00                                     | \$13,490.00    | \$38.00                                  | \$13,490.00    | \$43.70                              | \$15,513.50    |
| 68         | 2582.518 PAVEMENT MESSAGE PREFORM THERMOPLASTIC GROUND IN CONTRAST | SQ FT    | 260                 | \$45.00                                     | \$11,700.00    | \$45.00                                  | \$11,700.00    | \$51.80                              | \$13,468.00    |
| 69         | 2582.601 WET RETROREFLECTOMETER MEASUREMENTS                       | LUMP SUM | 1                   | \$3,025.00                                  | \$3,025.00     | \$3,025.00                               | \$3,025.00     | \$3,500.00                           | \$3,500.00     |
| TOTAL BID: |                                                                    |          |                     |                                             | \$1,490,356.24 |                                          | \$1,496,418.91 |                                      | \$1,515,308.10 |

June 5, 2024

Amanda Meyer  
City Engineer  
City of Cottage Grove  
12800 Ravine Parkway South  
Cottage Grove, MN 55016

RE: State Concurrence of Low Bid for SP 8205-156  
Agreement Number 1055652  
City of Cottage Grove

Dear Ms. Meyer,

I have received a copy of the certified low bid and Abstract of Bids for the above referenced project. The letting (bid opening) date was June 4, 2024. The tabulation shows that the apparent low bidder is **Pember Companies, Inc.** at **\$1,203,803.45** which is **16%** over the engineer's estimate of **\$1,015,224.20** for the total project. In addition, I have verified that **Pember Companies, Inc.** is listed as a certified contractor by checking the Minnesota Department of Human Rights Contractor Status Report today. I have reviewed the low bid price and the variance is acceptable. The City of Cottage Grove is hereby authorized to award this project as Cooperative Construction Agreement 1055652 has already been fully executed by the City and MnDOT.

See the attached sheet for people to contact for the pre-con meeting.

If you have any questions or additional comments, please let me know.

Sincerely,



Justin Attipou  
Local Partnership Project Manager  
Metro State Aid

ecopy: Adam Josephson, MnDOT-Metro Program Delivery  
Dmitry Tomasevich, MnDOT-Metro Program Delivery  
Malakai Ruranika, MnDOT-Municipal Agreements \*  
Carrie Jones, MnDOT-Municipal Agreements \*  
Almin Ramic, MnDOT-Metro Traffic Engineering  
Mike Bauer, Waters Edge Office, RTMC Building

Amanda Meyer  
June 5, 2024  
Page 2

Mike Pretel, MnDOT-Metro State Aid Construction  
Joe Fox, City of Cottage Grove  
Beth Engum, Bolton & Menk  
Michael Warner, Bolton & Menk, Inc.  
Project File

\* Separate email to be sent with attachments for records

### Pre-Con Meeting

When a pre-construction conference is arranged for this project, please include on the notification list:

- Mike Pretel (michael.pretel@state.mn.us)
- MnDOT Metro Materials Office (MetroMaterialsPreCon.DOT@state.mn.us)
- Chris Dochniak (christopher.dochniak@state.mn.us) (SIGNS)
- Brian Yarusso (brian.yarusso@state.mn.us) (SIGNS)
- Tim Pavek (timothy.pavek@state.mn.us) (GUARDRAIL, MEDIAN CABLE, R/W FENCE)
- John Pedersen (john.pedersen@state.mn.us) (LIGHTING)
- Mike Bauer (michael.j.bauer@state.mn.us) (RTMC)

I have included the web address of the **Trunk Highway Impact Contact Form**. The form needs to be filled out and returned one week before construction begins or at the pre-construction conference. The web address is <http://www.dot.state.mn.us/metro/stateaid/fedconst.html>



CITY OF COTTAGE GROVE, MINNESOTA  
CITY COUNCIL  
RESOLUTION 2024-096

**RESOLUTION AWARDING THE BID FOR THE  
TH 61 RIVER OAKS RCUT PROJECT TO PEMBER COMPANIES, INC.  
IN THE TOTAL AMOUNT OF \$1,203,803.45.**

WHEREAS, plans and specifications for the TH 61 River Oaks RCUT Project were completed according to City and MnDOT standards; and

WHEREAS, bids were requested to provide the necessary work; and

WHEREAS, seven firms submitted bids; and

WHEREAS, it appears that Pember Companies, Inc. provided the lowest responsible bid; and

WHEREAS, it is the recommendation of the City Engineer that the bid be awarded to Pember Companies, Inc. in the total amount of \$1,203,803.45.

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Cottage Grove, County of Washington, State of Minnesota, that the bid for the TH 61 River Oaks RCUT Project is awarded to Pember Companies, Inc. in the total amount of \$1,203,803.45.

Passed this 26th day of June, 2024.

---

Myron Bailey, Mayor

Attest:

---

Tamara Anderson, City Clerk



## City Council Action Request

# 13.A.

|                             |                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------|
| <b>Meeting Date</b>         | 6/26/2024                                                                                    |
| <b>Department</b>           | Public Works                                                                                 |
| <b>Agenda Category</b>      | Action Item                                                                                  |
| <b>Title</b>                | Mississippi River/Grey Cloud Island Flood Update                                             |
| <b>Staff Recommendation</b> | Receive current water level conditions on Grey Cloud Island and provide staff with feedback. |
| <b>Budget Implication</b>   | N/A                                                                                          |
| <b>Attachments</b>          | None                                                                                         |



## City Council Action Request

# 14.A.

|                             |                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------|
| <b>Meeting Date</b>         | 6/26/2024                                                                                  |
| <b>Department</b>           | Administration                                                                             |
| <b>Agenda Category</b>      | Action Item                                                                                |
| <b>Title</b>                | Closed Workshop - Labor Negotiation                                                        |
| <b>Staff Recommendation</b> | Closed meeting pursuant to Minn. Stat. 13D.03 to consider strategy for labor negotiations. |
| <b>Budget Implication</b>   | N/A                                                                                        |
| <b>Attachments</b>          | None                                                                                       |