

City of Dayton Parks & Recreation

Parks Irrigation Project

BIDS CLOSE: October 15, 2024 @ 3:00 p.m.

Prepared By:



All questions are to be directed to:
Paul Kangas – Landscape Architect
Inside Outside Architecture, Inc.
Cell: 612-237-8355
Email: paul@ioainc.net

Jim Ruzicka – Irrigation Consultant
MLC Irrigation Consultants
Cell: 612-369-5109
Email: jim@mainlineconsulting.net

City Staff Contact:
Martin Farrell – Director of Public Works
City of Dayton, Minnesota
Cell: 612-751-8847
Email: mfarrell@cityofdaytonmn.com

CERTIFICATION PAGE

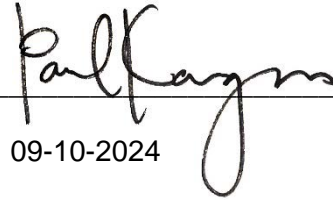
PARKS IRRIGATION PROJECT

City of Dayton, Minnesota

I hereby certify that this Project Manual was prepared by me or under my direct supervision and that I am a duly licensed professional Landscape Architect under the laws of State of Minnesota.

Name: Paul A. Kangas

Signature

A handwritten signature in black ink, appearing to read "Paul Kangas", written over a horizontal line.

Registration: MN #26017

Date:

09-10-2024

ADVERTISEMENT FOR BIDS

PARKS IRRIGATION PROJECT Dayton, Minnesota

BIDDING/CONTRACT REQUIREMENTS **PAGE**

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ADVERTISEMENT FOR BIDS

PARKS IRRIGATION PROJECT Dayton, Minnesota

Notice is hereby given that sealed bids will be received until **3:00 PM, Tuesday, October 15th, 2024**, at:

City of Dayton

Attn: Martin Farrell

12260 South Diamond Lake Road

Dayton, MN 55327

The bids received will be publicly opened and read aloud, for the furnishing of all labor and material for the construction of the Parks Irrigation Project. Major components of the work include:

1. Irrigation piping and supply lines
2. Controller and electrical system
3. Irrigation spray heads
4. Connections to water supplies

Work shall begin after October 22nd, 2024 and be substantially completed by June 1st, 2025.

Each bidder shall submit as a general contractor and partial bids are not allowed. You shall retain sub-contractors as needed to provide the full services required of the project. The City will engage in only one contract to complete this work.

Bids must be submitted on the forms provided in the Project Manual and Construction Documents.

No pre-bid conference will be held for this project.

Project bidding documents will be available after September 24th, 2024 either at the City or through IOA, Inc via email. Questions regarding the project should be directed to:

Paul Kangas, Landscape Architect

IOA Inc.

Direct Dial: 612-237-8355

Email: paul@IOAinc.net

Bid security in the amount of 5% percent of the Bid must accompany each Bid in accordance with the Instructions to Bidders.

All bidders for this contract, including subcontractors and suppliers that have 40 or more full-time employees, shall submit a certified copy of their current Affirmative Action Certificate with their bid.

Bids shall be directed to the City Administrator, be securely sealed, and be labeled on the outside wrapper, "BID FOR PARKS IRRIGATION PROJECT"

The City of Dayton reserves the right to reject any and all Bids, to waive irregularities and informalities therein and to award the Contract in the best interests of the City of Dayton.

Zach Doud

City Administrator

Dayton, Minnesota

BID FORM

Contractor: _____

Bids Due: 3:00 pm – October 15, 2024

PARKS IRRIGATION PROJECT

Dayton, Minnesota

City of Dayton - Parks & Recreation

Attn: Zach Doud – City Administrator
12260 South Diamond Lake Road
Dayton, MN 55327

To Whom it may Concern:

The undersigned, being familiar with the local conditions, having made the field inspections and investigations deemed necessary, having studied the plans and specifications for the work including Addenda No(s). _____, and being familiar with all factors and others conditions affecting the work and cost thereof, hereby proposes to furnish all labor, tools, materials, skills, equipment and all else necessary to completely construct the project in accordance with the plans and specifications on file with the County as follows (bidder shall verify quantities to his/her satisfaction):

SEE BID FORM NEXT PAGE

The low bidder shall be determined by the lowest, qualified Grand Total Base Bid entered on this Bid Form. This bid is a combination of both Lump Sum and Installed Quantity payment line items as noted on the bid form. The estimated quantities on the Proposal Form are provided for the convenience of the Bidder. Bidders are responsible for verifying quantities to their satisfaction. Unit prices entered on the Proposal Form will be used to calculate total payments during construction and to aid in determining values for possible changes in the work. If unit prices are judged to be unreasonable by the Owner, the Owner reserves the right to negotiate revisions to the prices.

Accompanying this bid is a bidder's bond, certified check, or cash deposit in the amount of at least five (5%) of the amount of my/our bid made payable to City of Dayton. The same is subject to forfeiture in the event of default on the part of the undersigned, or failure on the part of the undersigned to execute the prescribed contract and bond within fifteen (15) days after it is submittal to me/us.

In submitting this bid, it is understood that the Owner retains the right to reject any and all bids and to waive irregularities and informalities therein and to award the contract to the best interest of the Owner.

It is understood that bids may not be withdrawn for a period of 30 days after the date and time set for the opening of bids. It is understood that the Owner reserves the right to retain the certified check or bond of the three lowest bidders as determined by the Owner for a period not to exceed 30 days after the date set for the opening of the bids.

Respectfully submitted by:

(A Corporation)

(An Individual)

(Title)

(Bidder's E.I. Number)

BID FORM

| Parks Irrigation Project | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|--------|------------|
| ITEM | UNIT | QTY | BID \$ | TOTAL COST |
| Ione Gardens Neighborhood Park | LS | 1 | | \$ |
| <i>New connection from existing curb stop</i> | | | | |
| <i>Include costs to get power for controller from adjacent sites transformer to enclosure/controller location</i> | | | | |
| Sundance Woods Neighborhood Park | LS | 1 | | \$ |
| <i>Connect to existing irrigation system</i> | | | | |
| <i>Size new controller to accommodate existing zones</i> | | | | |
| Elsie Stephens Memorial Park Irrigation | LS | 1 | | \$ |
| <i>Connect to existing well</i> | | | | |
| <i>Locate controller on wood panel (outlet available) at location shown</i> | | | | |
| River Hills Neighborhood Park Irrigation | LS | 1 | | \$ |
| <i>Connect to new well - timing to be determined</i> | | | | |
| Hayden Hills Neighborhood Park Irrigation | LS | 1 | | \$ |
| <i>Connect to new well - timing to be determined</i> | | | | |
| ALL Parks | | | | |
| <i>Supply and install all new irrigation equipment, master valve, flow sensor, and connection associated equipment as shown on plans & details</i> | | | | |
| <i>Provide and install new Baseline 1000X Decoder Controller at new sites, Baseline 1000R for existing systems. On existing systems connect existing zones to R board and run two-wire path to all new zones. Provide OptConnect cellular modem - for Baseline controller, Contractor to supply cell modem service for 5 years and BaseManager service for 2 years.</i> | | | | |
| <i>Provide and install new main line & two-wire path to all new zones based on irrigation design layout. Install single station decoders as required, moisture sensors, and surge suppressors/grounding as shown.</i> | | | | |
| <i>Install new valves, lateral lines, heads as shown in design documents</i> | | | | |
| <i>Refer to irrigation design plans, specs, and details for additional information</i> | | | | |
| | | | | |
| BASE BID PROJECT TOTAL | | | | \$ |

AFFIRMATIVE ACTION DECLARATION

PARKS IRRIGATION PROJECT

Dayton, Minnesota

Please complete the questionnaire shown below and attach this completed and properly executed sheet to the bid proposal. This sheet along with the Affirmative Action Certificate (if applicable) must be submitted with the bid. Failure to do so may, at the City's discretion, cause the bid to be rejected. If, however, the bid is not rejected for your failure to attach these documents, the bid shall absolutely be rejected if you have not provided the said documents within seventy-two (72) hours after the City has deposited in the US Mail written demand therefore.

I hereby certify that I have reviewed the Affirmative Action requirements as set forth in the specifications and declare the following (must check one):

_____ We have fewer than twenty (20) employees and are therefore exempt from the Affirmative Action Requirement.

or

_____ We have attached a certified copy of our Affirmative Action Certification

or

_____ We do not have a Certificate.

Signed: _____

Firm Name: _____

AFFIDAVIT OF NON-COLLUSION

PARKS IRRIGATION PROJECT

Dayton, Minnesota

(Information Required of Bidder)

I hereby swear (or affirm) under the penalty for perjury:

1. That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its' behalf (if the bidder is a corporation);
2. That the attached bid or bids have been arrived at, by the bidder, independently, and have been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in the invitation to bid, designed to limit independent bidding or competition;
3. That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids;
4. That I have full informed myself regarding the accuracy of the statements made in this affidavit.

Signed: _____

Firm Name: _____

Subscribed and sworn to before this _____ day of _____, 20_____

Notary Public: _____

My Commission Expires: _____

Bidder's E.I. Number: _____

(Number used on Employer's Quarterly Federal Tax Return, US Treasury Dept. Form #941)

FORM OF AGREEMENT
PARKS IRRIGATION PROJECT
Dayton, Minnesota

THIS AGREEMENT, entered into this _____ day of _____, 2024, by and between the

City of Dayton hereinafter called the "Owner" and _____ hereinafter called the "Contractor".

THIS AGREEMENT WITNESSETH, that the Owner and the Contractor, for the consideration hereinafter stated, agrees as follows:

ARTICLE I. The Contractor hereby covenants and agrees to perform and execute all the provisions of the plans and specifications as prepared by Loucks Associates, Inc, and indicated below under Article IV, as provided by the Owner for:
_____ and to do everything required by this agreement and the contract documents.

ARTICLE II. The Contractor agrees that the work contemplated by this contract shall be fully and satisfactorily completed in accordance with the provisions in Article 9 of the Supplemental Conditions of the Contract.

ARTICLE III. The Owner agrees to pay and the Contractor agrees to receive and accept payment in accordance with the prices bid for the unit or lump sum items as set forth in the conformed copy of Proposal Form hereto attached, which prices shall conform to those in the accepted Contractor's Proposal on file in the Office of the **City of Dayton City Administrator** the aggregate of which prices, based on the approximate schedule of quantities is estimated to be
\$ _____. Monthly and final payment shall be made as provided in the City's Standard Specifications for Construction referred to herein.

ARTICLE IV. The contract documents shall consist of the following component parts:

1. Instruction for Bidders
2. Specifications
3. Special Provisions
4. Bid Proposal Form
5. Performance and Payment Bond
6. Plans and drawings which are attached to the specifications
7. Addenda No(s). _____.
8. This Agreement

Each and all of the aforementioned contract documents are hereby incorporated into this agreement by specific reference and the terms and provisions thereof are and constitute a part of this Agreement as though attached hereto or fully set forth herein.

CERTIFICATE OF ACKNOWLEDGMENT

PARKS IRRIGATION PROJECT

Dayton, Minnesota

CERTIFICATE OF ACKNOWLEDGMENT BY CORPORATION

(For use where Contractor is a corporation)

STATE OF MINNESOTA)
COUNTY OF HENNEPIN) SS
CITY OF DAYTON)

On this day of _____, 2024, before me personally appeared _____

and _____ to me known who, being by me duly sworn, did say that they

are respectively the _____ of _____

that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was

executed in behalf of the corporation by authority of its Board of Directors, and said _____

_____ and _____

acknowledged the instrument to be the free act and deed of said corporation.

(NOTARIAL SEAL)

Notary Public

Full Name of Surety Company

Home Office Address

Name of Attorney-in-fact

Name of Local Agency

If this bond is executed outside of the State of Minnesota, it must be countersigned on the Performance Bond by a Minnesota resident of the Surety Company.

Name of Agent affixing countersignature

Address

MEMORANDUM: Affix here Power of Attorney and Acknowledgment of Corporate surety.

CERTIFICATE OF ACKNOWLEDGMENT

PARKS IRRIGATION PROJECT

Dayton, Minnesota

CERTIFICATE OF ACKNOWLEDGMENT BY PRINCIPAL

(For use where Contractor is individual or partnership)

STATE OF MINNESOTA)
COUNTY OF HENNEPIN)
CITY OF DAYTON)

SS

On this _____ day of _____, 2024, before me personally appeared

_____, to me known to be the person described in and who executed the

foregoing bond, and acknowledge that he executed the same as _____ free act and deed.

(NOTARIAL SEAL)

Notary Public

MEMORANDUM: Affix here Power of Attorney and Acknowledgment of Corporate surety.

CONTRACTOR'S PERFORMANCE BOND

PARKS IRRIGATION PROJECT

Dayton, Minnesota

KNOW ALL PERSONS BY THESE PRESENTS, that _____

as Principal, hereinafter called CONTRACTOR, and _____
as Surety, hereinafter called Surety, are held and firmly bound onto

_____ as
Obligee, hereinafter called OWNER, in the amount of

_____ Dollars (written), (\$ _____),
for the payment whereof CONTRACTOR and Surety bind themselves, their heirs, executors, administrators, successors, and
assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has by written Agreement dated _____, 2024 entered into a Contract with OWNER for
_____ in accordance with Contract Documents

prepared by _____ which Contract is by reference made a part hereof, and is hereinafter
referred to as the Agreement.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly and faithfully
perform said Agreement, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time by OWNER.

Whenever CONTRACTOR shall be, and declared by OWNER to be, in default under the Agreement, the OWNER having performed
OWNER's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, or
2. Obtain a Bid or Bids for completing the Contract in accordance with its terms and conditions, and upon determination by
Surety of the lowest responsible Bidder, or if OWNER elects, upon determination by OWNER and the Surety jointly of the
lowest responsible Bidder, arrange for a Contract between such Bidder and OWNER, and make available as work
progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of
completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract
Price, but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set
forth in the first paragraph hereof. The term "balance of the Contract Price", as used in this paragraph, shall mean the total
amount payable by OWNER to CONTRACTOR under the Contract and any amendments thereto, less the amount properly
paid by the OWNER to CONTRACTOR.

No right of action shall accrue on this bond to or for the use of any person or corporation other than OWNER named herein or the
heirs, executors, administrators or successors of OWNER.

CONTRACTOR'S PERFORMANCE BOND

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument in _____ original counterparts, under their several seals this _____ day of _____, 2024, the names and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Affix Corporate Seal)

(CONTRACTOR)

Attest:

(Business Address)

(Title)

By _____
(Title)

(Affix Corporate Seal)

(SURETY)

Attest:

(Business Address)

(Attorney in Fact)

Approved by OWNER:

By: _____
(Name) (Title) (Date)

NOTE: The Bond must be approved and the approval dated in every case. The title of the person signing must be indicated. Certified copy of Power-of-Attorney of signatory agent for corporate Surety must be attached in every case where corporate Surety is procured. Date of Bond must not be prior to date of Contract.

CONTRACTOR'S PAYMENT BOND

PARKS IRRIGATION PROJECT

Dayton, Minnesota

KNOW ALL PERSONS BY THESE PRESENTS that _____

as Principal, hereinafter called CONTRACTOR, and _____

duly authorized and licensed to do business in the State of Minnesota, as Surety, hereinafter called Surety, are held

and firmly bound onto _____

as Obligee, hereinafter called OWNER, for the use and benefit of claimants as hereinafter provided in the amount of

_____ Dollars (written), (\$ _____), for the payment whereof CONTRACTOR and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has by written Agreement dated _____, 2024

entered into a Contract with OWNER for _____

in accordance with Contract Documents prepared by _____
which Contract is by reference made a part hereof, and is to contain in substance the following provisions:

CONTRACTOR shall pay all claims for labor performed and materials furnished, used or consumed in making the public improvement or performing the public work, including, without limitation because of specific enumeration, fuel, lumber, building materials, machinery, vehicles, tractors, equipment, fixtures, apparatus, tools, appliances, supplies, electric energy, gasoline, motor oil, lubricating oil, greases, premiums for worker's compensation insurance, and contributions for unemployment compensation.

The said written agreement, drawings, specifications, and amendments are hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION, is such that, if CONTRACTOR shall faithfully perform the said Contract and pay every person entitled thereto for all the claims for labor performed and materials furnished under the Contract to be used or consumed in making the public improvement or performing the public work as provided in the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. No assignment, modification or change of the Agreement, or change in the work covered thereby, or any extension of time for completion of the Contract shall release the Sureties on the bond.
2. Not later than one year after the completion of work under this Contract or such longer period of time as may be prescribed by law, or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any party in interest may maintain an action in his own name against CONTRACTOR and the Surety upon this bond for the recovery of any damages he may have sustained by reason of the failure of CONTRACTOR to comply with the Contract or with the Contract between CONTRACTOR and his Subcontractors. If the amount realized on this bond is insufficient to satisfy all claims of the parties in full, it shall be distributed among the parties pro rata.
3. IN WITNESS WHEREOF, the above-bounded parties have executed this instrument in original counterparts this day of _____, 2024, the names of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR'S PAYMENT BOND

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument in original counterparts, under their several seals this _____ day of _____, 2024, the names and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Affix Corporate Seal)

(CONTRACTOR)

Attest:

(Business Address)

By

(Title)

(Title)

(Affix Corporate Seal)

(SURETY)

Attest:

(Business Address)

(Attorney in Fact)

Approved by OWNER:

By:

(Name)

(Title)

(Date)

NOTE:

The Bond must be approved and the approval dated in every case. The title of the person signing must be indicated. Certified copy of Power-of-Attorney of signatory agent for corporate Surety must be attached in every case where corporate Surety is procured. Date of Bond must not be prior to date of Contract.

CONTRACTOR'S PAYMENT BOND

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SECTION 01100 PROJECT NARRATIVE

PART 1. PROJECT DESCRIPTION

This contract includes all work necessary to provide fully operational underground irrigation systems at each of the park sites listed below. The project will be competitively bid, as required by City policy, and a single Contractor will be hired to complete the work scope as defined below.

1.01 BASIC WORK DESCRIPTION

The overall intent for each park site is to create a fully operational underground irrigation system. Water source varies as noted below:

1. IONE GARDENS NEIGHBORHOOD PARK

- (a) New 2" municipal connection from existing curb stop
- (b) Include costs to get power for controller from adjacent sites transformer to enclosure/controller location

2. SUNDANCE WOODS NEIGHBORHOOD PARK

- (a) Connect to existing irrigation system
- (b) Size new controller to accommodate existing zones

3. ELSIE STEPHENS MEMORIAL PARK

- (a) Connect to existing well
- (b) Locate controller on wood panel (outlet available) at approximate location shown
- (c) design drawings

4. RIVER HILLS NEIGHBORHOOD PARK

- (a) Connect to new well – timing of well to be determined

5. HAYDEN HILLS NEIGHBORHOOD PARK

- (a) Connect to new well - timing of well to be determined

6. ALL PARKS

- (a) Supply and install all new irrigation equipment, master valve, flow sensor and connection associated equipment as shown.
- (b) Provide and install new Baseline 1000X Decoder Controller at new sites, Baseline 1000R for existing systems. On existing systems connect existing zones to R board and run two-wire path to all new zones. Provide OptConnect cellular modem - for Baseline controller, Contractor to supply cell modem service for 5 years and BaseManager service for 2 years.
- (c) Provide and install new main line & two-wire path to all new zones based on irrigation design layout. Install single station decoders as required, moisture sensors, and surge suppressors/grounding as shown.
- (d) Install new valves, lateral lines, heads as shown in design documents.
- (e) ALL parks have existing turf. Contractor responsible for restoration, to grade, for all disturbed areas. Remove any large rocks and extra dirt as required.
- (f) See irrigation design and specifications for all project details.

1.02 POWER SUPPLY

The Contractor shall be responsible for any power connections from existing meter locations. Two of the park sites will have completely new power supplies. Power at Elsie Stephens Park is available at the existing wellhead. Power supplies shall include the following:

- 1. Any electrical necessary to run the wells and future irrigation system. We anticipate the well power needs will vary based on the required volume and pump size. The Contractor shall provide any design and calculations to prove the system will function as needed.
- 2. Main power supply shutoff switch
- 3. Any connections necessary to hook future irrigation to VFD
- 4. At least one (1) 120V duplex outlet for future irrigation controller operations
- 5. Lightning and surge protection per code

PROJECT LOCATIONS

The work will be performed at five different park sites. Each park site has nuances that affect the work required. A description of each site is as follows:

1. Lone Gardens Neighborhood Park

This existing park site is found just off Pioneer Parkway and accessed at 145XX Annapolis Lane North River Road. Originally built at a neighborhood HOA park site, the property has been turned over to the City for maintenance and future upgrades. Due to its small size, the park will be irrigated using a new municipal water tap. Refer to the site plan for details on work scope and irrigation limits.

| | |
|------------------------------|----------------------------|
| Proposed Water Source: | A new municipal connection |
| Approximate Irrigation Area: | 1.90 Acres |
| Existing Irrigation: | No |
| Existing Controller: | No |

2. Sundance Woods Neighborhood Park

This park is located at 11000 Sundance Wood Boulevard. This park was completed in two phases with the easterly portion consisting of an open turf area, basketball court, and walking trails. The first phase of construction, mostly a playground and landscaped area, is covered by an existing irrigation system that will be expanded to include coverage for the Phase Two area.

| | |
|------------------------------|----------------------------------|
| Proposed Water Source: | An existing municipal connection |
| Approximate Irrigation Area: | 1.16 Acres |
| Existing Irrigation: | Yes |
| Existing Controller: | Yes, but upgrade necessary |

3. Elsie Stephens Memorial Park

This site overlooks the Mississippi River at 14430 River Road. This park has been undergoing recent multi-phased construction projects. An existing well is located just SW of the pergola above the performance area seating.

| | |
|------------------------------|-------------------------------------------|
| Proposed Water Source: | An existing well OR new well if necessary |
| Approximate Irrigation Area: | 1.00 Acres |
| Required Water Volume: | 30 GPM |
| Required Pressure: | 30 PSI |

4. River Hills Neighborhood Park

This is another newly constructed neighborhood park located at 14695 River Hills Parkway. Irrigation will be focused on the park areas surrounding the playground and existing basketball court. A new well is proposed in the southeast corner of the property. Refer to the site plan for proposed well location.

| | |
|------------------------------|---------------|
| Proposed Water Source: | A new 4" well |
| Approximate Irrigation Area: | 1.00 Acres |
| Required Water Volume: | 30 GPM |
| Required Pressure: | 80 PSI |

5. Hayden Hills Neighborhood Park

This newly constructed park site sits on the former Hayden Hills Golf Course at 15510 Pineridge Way North. The majority of the park play areas will be irrigated. A new well is proposed in the southeast corner of the property. Refer to the site plan for proposed well location.

| | |
|------------------------------|---------------|
| Proposed Water Source: | A new 6" well |
| Approximate Irrigation Area: | 4.00 Acres |
| Required Water Volume: | 80 GPM |
| Required Pressure: | 80 PSI |

CONSTRUCTION CONFERENCE

No pre-construction conference will be held, but we encourage interested contractors to review the site conditions in person. The park sites are open for visiting during daylight hours.

- 1.06 **BID FORM**
All bids shall be submitted on the bid form included in this set of documents. The contractor shall submit unit pricing and total cost for each line item. If significant discrepancies are found in the estimated quantities, please notify the landscape architect as soon as possible and an addendum will be issued. If not noted on the bid form, or addressed via addenda, the quantities are assumed correct. Minor variation in quantities will not change your total cost or payment.
- 1.07 **DEADLINE FOR BIDDING**
All bids should be received by date & time listed on the Advertisement for Bids. Partial bids are not allowed nor expected for this project. The City intends to award only one comprehensive contract for the work. Completed bids should be submitted in person, or electronically, to the following individual:
- Dayton Parks Department**
Attn: Marty Farrell – Director of Public Works
Dayton City Hall
12260 South Diamond Lake Road
Dayton, MN 55327
mfarrell@cityofdaytonmn.com
- 1.08 **CONTRACT AWARD**
A single general contract will be awarded as quickly as possible following receipt, and review, of the bids. The successful contractor will be contacted by phone and contracts will be developed between the successful bidder and the City.
- 1.09 **PERMITS & INSPECTIONS**
The Contractor is responsible for obtaining and paying for all permits and inspections necessary to complete the work as identified in the Construction Documents.
- 1.10 **CONSTRUCTION SCHEDULE**
Work for this project should begin as soon as possible after award by the City. The schedule for completion is flexible and may extend into 2025 if necessary. Ideally, the work would be completed by December 31st, 2024. However, if necessary to extend into 2025, work must be complete by June 1st, 2025.
- 1.11 **PRIORITIZATION FOR COMPLETION**
Work on each site is dependent on the ability to get power and water completed at the proposed project sites. That effort will require coordination between the well contractor, utility company, and irrigation contractor. The project sites requiring well water supply may not be ready to connect in 2024. For this reason, priority for completion of each park site should be in the following order:
- #1 Lone Gardens Neighborhood Park
 - #2 Sundance Woods Neighborhood Park
 - #3 Elsie Stephens Memorial Park
 - #4 Hayden Hills Neighborhood Park
 - #5 River Hills Neighborhood Park
- 1.12 **LIQUIDATED DAMAGES**
Failure to complete all contracted projects by June 1st, 2025 (without prior approval from owner) may result in damages set at \$250 per work day until complete.
- 1.13 **ALLOWABLE WORK SCHEDULE**
Work hours for this contract will be from 7 am to 7 pm Monday thru Friday. Work MAY be performed on the weekends if approved by the City with advance approval.
- 1.14 **QUALITY ASSURANCE**
Installer: Company specializing in performing work of this Section with a minimum of three [3] years experience. Products requiring electrical connection will be listed and classified by UL as suitable for indicated conditions of use.
- 1.15 **COMPLIANCE TO FEDERAL, STATE, LOCAL LAWS**
Submitting Respondents agree to comply with all applicable federal, state and local laws, statutes, rules, and regulations. This Bid Request, and any resulting Contract, shall be construed and governed by the laws of the State of Minnesota.

1.16 PREVAILING WAGES

- A. This project is NOT subject to the Minnesota Prevailing Wage Act as defined in Minnesota Statutes 177.41 through 177.44. Questions regarding the rules and regulations can be submitted to:

Minnesota Department of Labor and Industry

443 Lafayette Road N.

St. Paul, MN 55155

Phone: 651-284-5091

Email: dli.prevwage@state.mn.us

1.17 STAKING AND LAYOUT

The Contractor is responsible for any staking required to build the proposed improvements, but none is expected.

1.18 MEASUREMENT AND PAYMENT

Payments for construction work will be made upon successful completion of the work. Payment of materials will be considered only if approved and delivered to the site. The Contractor is responsible for submitting proof of completed work. Payment for work and materials will be lump sum per the bid form. The Contractor should note any quantity discrepancies found on the bid form if they are different than estimated. Unit prices shall be supplied in the event increases to certain line items are desired. It is expected the project duration will be

1.19 TESTING

The City reserves the right to test products or materials used on the project if there is any question as to quality or durability of the product. Any testing will be paid by the City. Failing tests will require complete removal and replacement of affected products.

1.20 CLEANING & PROJECT CLOSEOUT

The Contractor shall be responsible for thoroughly cleaning all areas of the job site affected by the work before final acceptance will be granted. Remove and dispose off-site all construction debris.

PART 2. SITE INFORMATION

2.01 ACCESS

- A. Access to the job sites shall be as directed by the City. Convenient access is available to each site, but the Contractor is responsible for field verifying access points and notifying the landscape architect if any difficulties are present.
- B. No disruption shall occur on private property or outside the limits of work as shown on the plans. Any damage outside these limits will be asked to cease and will be repaired and/or replaced by the Contractor at no additional cost to the City.
- C. Care must be taken to avoid any damage to neighboring properties. Any damage shall be immediately brought to the attention of the project manager and repaired or replaced at no additional cost to the Owner.
- D. All of the Contractor's operations and storage of materials and equipment shall be confined to areas within the construction limits.

2.02 PROTECTION OF EXISTING SITE FEATURES

All work for this project is within the limits of property controlled by the City of Dayton and the project areas are relatively free from built improvements that could be damaged. However, any damage to existing features shall be immediately brought to the Owner's attention for recommendations on repairing or replacement. Damage shall be remedied by the Contractor at no additional cost to the Owner.

2.05 PROJECT CONDITIONS

Contractor shall keep construction debris to a minimum during the construction process. Periodically clean job site to facilitate a safe, efficient work environment. Clean debris or spills as soon as possible. All of the Contractor's operations and storage of materials and equipment shall be confined to areas within the roads bordering the project site.

2.03 TRAFFIC & PARKING CONTROL

Construction activities shall not interfere with access to the site. Entrances and drives used by the public shall be maintained in safe operating condition and shall be kept free and clear of the contractor's equipment, materials and debris.

PART 3. LICENSING, CONTRACT, AND INSURANCE REQUIREMENTS

3.01 CONTRACTOR QUALIFICATIONS:

The owner and/or consultant will make such investigations as deemed necessary to determine the ability of the Proposing Firm to fully, safely and responsibly carry out all contract requirements stipulated herein. The owner reserves the right to reject the bid if evidence submitted by, or investigation of, the bidding firm fails to satisfy the owner that the firm is deemed responsible and qualified to carry out the obligations of the contract and fully complete all the work described in these bid solicitation documents.

3.02 COMPLIANCE TO FEDERAL, STATE, LOCAL LAWS

Submitting respondents agree to comply with all applicable federal, state and local laws, statutes, rules, and regulations. This RFP and any resulting Contract shall be construed and governed by the laws of the State of Minnesota.

3.03 LICENSING

The Contractor shall be a licensed contractor in the State of Minnesota and be covered by insurance that meets the following requirements:

3.04 CONTRACTOR'S INSURANCE REQUIREMENTS

A. The limits of liability for the insurance required by Paragraph 5.02 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations. Limits may be provided by a combination of primary and excess liability policies or through a single policy. If the limits are provided by a combination of primary and excess liability policies, then the excess or umbrella liability coverages shall include commercial general, comprehensive automobile, and employer's liability and shall provide coverage at least as broad as the underlying policies.

1. Workers' Compensation:

- | | |
|--------------------------------|-------------------------|
| (a) State: | Statutory |
| (b) Applicable Federal | Statutory |
| (c) Employer's Liability: | |
| (i) Bodily Injury by Accident | \$500,000 each accident |
| (ii) Bodily Injury by Disease | \$500,000 policy limit |
| (iii) Bodily Injury by Disease | \$500,000 each employee |

2. Comprehensive or Commercial General Liability:

- | | |
|----------------------------|------------------------------|
| (a) Combined Single Limit: | |
| (i) Premises/operations | \$1,000,000 each occurrence |
| (ii) Products/completed | \$1,000,000 each occurrence |
| (iii) Operations | \$2,000,000 annual aggregate |
| (iv) Personal Injury | \$1,000,000 each occurrence |

B. Policies shall include premises/operations, products, completed operations, independent contractors, explosion, collapse, underground hazards, broad form contractual, personal injury with employment contractual exclusions deleted, and broad form property damage.

- (a) If policies are written on a Commercial General Liability form, the General Aggregate shall be at least two times the 'each occurrence' limit or be written on a "per project" basis.
- (b) If policies are written on a 'claims made' form, the certificate should so specify and policies shall continue in force for one year following completion of the project. The retroactive date of the policy must be no later than the date of the Agreement.
- (c) If policies are written for split limits, limits shall be equal for bodily injury and property damage liability.

2. Comprehensive Automobile Liability (including owned, hired, and non-owned vehicles):

- (a) Combined Single Limit:
 - (i) Bodily Injury and Property Damage: \$1,000,000 each accident
- (b) If policies are written for split limits, limits shall be equal for bodily injury per person, bodily injury per accident and property damage.

C. All policies shall provide that the CONTRACTOR agrees to waive all rights of subrogation against the OWNER, the CONSULTANT, and their subconsultants, employees, officers and directors, for WORK performed under the Agreement. Endorsements shall be provided with certificates of insurance.

D. All policies shall also specify that the insurance provided by the CONTRACTOR will be considered primary and not contributory to any other insurance available to the OWNER or CONSULTANT.

- E. All policies except Workers' Compensation and Builders Risk shall name the OWNER, their consultants, subconsultants, and their officers, directors, agents and employees as additional insureds. The Builders Risk insurance shall name the CONTRACTOR, OWNER, and CONSULTANT as named insureds.
- F. All policies shall provide for thirty days notice prior to any cancellation, reduction in coverage or nonrenewal.
- G. The deductible or self insured retention on Comprehensive or Commercial General Liability shall not be greater than \$2,500. Deductibles on Builders Risk coverage shall not be greater than \$25,000 for flood or \$100,000 for earthquake coverage. All deductibles are the responsibility of the CONTRACTOR.

END OF SECTION

SECTION 00-7200

CONDITIONS OF THE CONTRACT

PART 1. DEFINITIONS

1.01 CONTRACT DOCUMENTS

The contract documents consist of the following, including all addenda issued prior to the opening of bids and modifications issued after execution of the contract:

- A. Bid Documents (Advertisement, Information to Bidders, Proposal and Bid Security);
- B. Agreement;
- C. Performance and Payment Bond;
- D. Project Specifications and Special Provisions thereof;
- E. Conditions of the Contract (General, Supplementary and other Conditions); and
- F. Drawings.

1.02 CONTRACT

The contract documents form the contract. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral.

1.03 CONSULTANT

The Consultant is the authorized representative of the Owner, as named in the contract documents.

1.04 OWNER

The Owner is the City of Dayton.

1.05 CONTRACTOR

The Contractor is the person, entity or authorized representative thereof named in the contract documents to construct the project pursuant to plans and specifications.

1.06 SUBCONTRACTOR

The subcontractor is any person or other entity acting for, or on behalf of, the Contractor in performing any part of the contract.

1.07 PROPOSAL

The proposal is the offer of a bidder to perform the work described in the bid documents when made out and submitted on the prescribed proposal form, properly signed and secured.

1.08 BID SECURITY

The bid security, where required by the advertisement or information to bidders, is a cashier's or certified check, cash or bid bond accompanying the proposal submitted by the bidder, pledging that the bidder will enter into an agreement with the Owner for the carrying out of the work, should the contract for the work be awarded to him.

1.09 AGREEMENT

The agreement is the written contract between the Owner and Contractor covering the performance of the work described in the contract documents. Other contract documents are attached to the agreement.

1.10 PERFORMANCE AND PAYMENT BOND

The performance and payment bond is the approved form of security furnished by the Contractor and their surety prior to the execution of the agreement as a pledge of good faith on the part of the Contractor, and the surety in the event of the Contractor's default, covering the Contractor's faithful performance under the contract documents and the payment of all obligations arising there under. The terms and conditions of said bond are governed by M.S.A. Section 574.26 et. seq. and amendments thereto.

1.11 BIDDER

A bidder is an individual or other entity submitting a proposal for the advertised work.

1.12 SURETY

A surety is the person or other entity executing the Contractor's performance and payment bond.

1.13 SPECIFICATIONS

The specifications consist of the construction document titled Project Manual.

1.14 DRAWINGS

The drawings are all plans, drawings or reproductions of drawings issued by the Consultant pertaining to the work and provided for in the contract documents.

1.15 WRITTEN NOTICE

Written notice shall be deemed to have been served if delivered in person or sent by registered or certified mail to the individual or other entity or to the last known business address of such individual or entity. It shall be the duty of each party to advise the other parties to the agreement as to any change in the business address until completion and acceptance of the work.

1.16 ACTS OF GOD

An Act of God is an unusual, extraordinary and sudden manifestation of the forces of nature, uncontrolled and uninfluenced by the power of man and without human intervention, which could not under normal circumstances have been anticipated or expected. Ordinary, expectable, and gradual weather conditions of normal intensity for the locality shall not be considered as an Act of God and the Owner or Consultant shall not be liable to the Contractor for damage to the work resulting there from.

PART 2. BIDDING REQUIREMENTS

2.01 PROPOSAL FORMS

The Owner will furnish proposal forms to any qualified bidder upon request.

2.02 INTERPRETATION OF PLANS, SPECIFICATIONS AND WORK SITE

The quantities appearing in the proposal shall be used as the basis of calculation for comparison of proposals. The scheduled quantities are to be considered approximate only and may be increased, decreased or omitted as provided in Section 9.4.

2.03 EXAMINATION OF PLANS, SPECIFICATIONS AND WORK SITE

Each bidder is required to examine carefully the site of the work, the proposal forms, specifications and forms. Submission of a proposal shall be considered evidence that the bidder has made such examination and that he has familiarized himself with the conditions to be encountered, the character, quality and quantity of work to be performed and material to be furnished and the requirements of these contract documents.

2.04 ADDENDA

Any addenda issued by the Owner or Consultant prior to the time of receipt of proposals or prior to the date set for opening of proposals, shall be included in the proposal and shall be made part of the contract documents. Receipt of each addendum shall be acknowledged by the bidder in their proposal.

2.05 PREPARATION OF BID

The bidder shall submit their proposal in duplicate on the proposal forms provided by the Owner. All blank spaces in the proposal must be filled in clearly and correctly in ink or typewritten. Any interlineations, alteration or erasure must be initialed by the signer of the proposal. The proposal shall be signed in ink by the individual or authorized representative making the proposal.

2.06 RESERVATION AND/OR EXCEPTIONS

Reservations or exceptions shall be clearly stated in writing and attached to the proposal. They will be deemed to be a part of and incorporated into the proposal. Bidders are advised that if such reservations or exceptions constitute a substantial deviation from the advertised terms and conditions, their proposals may be rendered non-responsive. The bidder shall make no additional stipulations on the proposal nor qualify it in any other manner.

2.07 BID SECURITY

If so stipulated in the advertisement or invitation to bid, each proposal shall be accompanied by a bid security in the required form and amount pledging that the bidder will enter into a contract with the Owner on the terms stated in their proposal and will, if required, furnish bonds as described hereunder in Section 8.3 covering the faithful performance of the contract and the payment of all obligations arising there under. Should the bidder refuse to enter into such contract or fail to furnish such bond, if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The Owner will have the right to retain the bid security of bidders until either (a) the contract has been executed and bonds, if required, have been furnished or (b) the specified time has elapsed for proposals to be withdrawn, or (c) all proposals have been rejected.

2.08 DELIVERY OF PROPOSAL

Each proposal shall be placed in an opaque envelope and securely sealed. The envelope shall be so marked as to indicate the name and address of the bidder, the type of work and the project designation. If mailed, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "PROPOSAL ENCLOSED" on the face thereof. All proposals shall be in the office of the designated recipient before the time set for bid opening.

2.09 OPENING OF PROPOSALS

Proposals will be opened publicly and read aloud at the time, date and place designated in the advertisement.

2.10 EVALUATION OF PROPOSALS

The Owner reserves the right to reject any proposal if it shows any omissions, alterations, irregularities, is submitted subsequent to the opening of the first proposal, or is unaccompanied by any required bid security. The bidder further acknowledges the right of the Owner to reject all proposals and re-advertise with the same or different bid documents. In any event, the Owner reserves the right to waive any informalities, irregularities or minor deviations in the proposal. Comparison of proposals will be made on the basis of the stated unit prices and unit prices will control in the event of a discrepancy between the unit price and the extension or summation thereof.

2.11 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION

By submission of a proposal, each bidder certifies that:

- A. The prices in the proposal have been arrived at independently, without consultation, communication or agreement as to any matters relating to such prices with any other bidder or with any competitor for the purpose of restricting competition;
- B. The prices which have been quoted in the proposal have not been or will not be knowingly disclosed to any other bidder or competitor prior to the opening of the proposals;
- C. No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.

PART 3. AWARD AND EXECUTION OF THE CONTRACT

3.01 AWARD OF THE CONTRACT

When the proposal of the lowest responsible bidder is accepted, and within 30 days after opening, the Owner will send him the necessary contract documents and a notice that the contract has been awarded to him, subject to the furnishing of a performance and payment bond, where required.

3.02 PERFORMANCE AND PAYMENT BOND

Where required and prior to or at the time of the execution of the agreement the bidder determined to be the lowest responsible bidder shall furnish a public Contractor's bond as required by M.S.A. Section 574.26 et. seq. and amendments thereto. The successful bidder is required to use the performance and payment bonds included in the bid documents.

3.03 EXECUTION OF AGREEMENT

The lowest responsible bidder shall, within 15 days after receiving the notice of award, sign the agreement contained in the contract documents and return the signed agreement and other contract documents to the Owner. No proposal will be considered as binding on the Owner until the contract has been approved and executed by all parties.

3.04 FAILURE TO EXECUTE AGREEMENT

Upon the failure of the lowest responsible bidder to furnish an acceptable bond, where required, or to execute the agreement within the time above specified, the Owner may have the option to annul the award and retain the bid security accompanying the bid as liquidated damages and not as a penalty. This shall not be the sole remedy of the Owner but upon default by the bidder the Owner may adopt any legal remedy which it may see fit to adopt.

3.05 RETURN OF BID SECURITY

All bid securities, except that of the lowest responsible bidder, will be returned within 30 days after the date of the opening of proposals. The bid security of the lowest responsible bidder will be returned upon receipt of the properly executed agreement and bond.

PART 4. DRAWINGS, SPECIFICATIONS, & RELATED DATA

4.01 INTENT OF DRAWINGS AND SPECIFICATIONS

The intent of the drawings and specifications is that the Contractor shall furnish all labor and materials, equipment and transportation necessary for the proper execution of the work unless specifically noted otherwise. The Contractor shall do all the work shown on the drawings and described in the specifications and all incidental work considered necessary to complete the project in an acceptable manner, and to fully complete the work or improvement, ready for use, occupancy and operation by the Owner.

4.02 ORDER OF PRECEDENCE

If there be a conflict between or among any of the terms or provisions of the Contract Documents, the following order of precedence shall apply:

- A. Agreement
- B. Project Specifications and Special Provisions thereof
- C. Conditions of the Contract (general, supplementary and other conditions)
- D. Drawings
- E. Bid Proposal

4.03 DISCREPANCIES

Any ambiguity or discrepancy in the drawings and specifications, no matter how seemingly insignificant to the Contractor shall be brought immediately to the attention of the Consultant for clarification. Any Contractor who fails to bring any ambiguity or discrepancy of which it was or should have been aware, shall assume the risk of loss

because of, and shall be allowed no claim for the misinterpretation of the drawings and specifications contrary to the intended interpretation of the Consultant.

4.04 ADDITIONAL INSTRUCTIONS

Further or additional instructions may be issued by the Consultant during the progress of the work by the use of drawings or other means to clarify the contract documents or to explain or illustrate changes in the work to be done.

4.05 COPIES OF DRAWINGS AND SPECIFICATIONS FURNISHED

Except as provided for otherwise, two (2) full size copies of drawings and specifications shall be furnished to the Contractor without charge. Any additional copies requested by Contractor shall be furnished upon payment of charges made at the prevailing rate charged by the Owner.

4.06 DRAWINGS AND SPECIFICATIONS AT JOB SITE

One complete set of all drawings and specifications, addenda, approved shop drawings, change orders and other modifications shall be maintained by Contractor at the job site and shall be available to the Consultant at all times.

4.07 OWNERSHIP OF DRAWINGS AND SPECIFICATIONS

All drawings and specifications and copies thereof and other data furnished by the Consultant are and shall remain their property. They are to be used only with respect to this project and are not to be used on any other project. Said documents are to be returned or suitably accounted for to the Consultant on request at the completion of the work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the project is not to be construed as publication in derogation of the Consultant's common law copyright or other reserved rights.

4.08 DIMENSIONS

Figured dimensions on the plans will be used in preference to scaling the drawings. Where the work of the Contractor is affected by dimensions, these shall be determined by the Contractor at the site, and he shall assume the responsibility.

4.09 SAMPLES

All samples called for in the specifications or required by the Consultant shall be furnished by the Contractor and shall be submitted to the Consultant for their approval. Samples shall be furnished so as not to delay the project. The Contractor shall furnish such samples of material as may be required for examination and testing. All materials and workmanship shall be in accordance with approved samples. All samples of materials for tests shall be taken according to methods provided for in the specifications.

4.10 PRODUCT DATA

Product data are illustrations, standard schedules, performance charts, instruction, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the work.

4.11 SHOP DRAWINGS

- A. The Contractor shall provide shop drawings, settings, schedules and such other drawings as may be necessary for the prosecution of the work in the shop and in the field as required by the drawings, specifications or Consultant's instructions. Deviations from the drawings and specifications shall be called to the attention of the Consultant at the time of the first submission of shop drawings and other drawings for approval. The Consultant's approval of any drawings shall not release the Contractor from responsibility for such deviations.
- B. Shop drawings shall be promptly submitted by the Contractor after he has reviewed, checked and approved the data to determine that they are in harmony with the requirements of the project and with the provisions of the contract documents and after he has verified all field measurements and construction criteria, materials, catalog numbers and similar data. In submitting the shop drawings, the Contractor is certifying that the work represented by the shop drawings is recommended by the Contractor.

C. Shop drawings shall be submitted according to the following schedule:

1. Three (3) copies shall be submitted with reasonable promptness and in such sequence as to prevent delay of the work.
2. The Consultant shall, within 14 days of the submittal of any shop drawings, return one copy to the Contractor marked with corrections and changes.
3. The Contractor shall then promptly correct the shop drawings to conform to the corrections and changes requested by the Consultant.
4. Following completion of such corrections and changes, the Contractor shall promptly furnish the Consultant two copies of the shop drawings conforming to the required corrections and changes.

4.12 QUALITY OF EQUIPMENT AND MATERIALS

- A. In order to establish standards of quality, the Consultant, in the specifications, has referred to certain products by name and catalog number. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable in design unless otherwise specifically stated in the specifications or special provisions.
- B. The Contractor shall furnish the complete list of proposed desired substitutions prior to executing the agreement, together with such engineering and product data as the Consultant and Owner may require.
- C. The Contractor shall abide by the Owner's recommendation when proposed substitute materials or items of equipment are not recommended for installation and shall furnish the specified material or item of equipment in such case. All proposals for substitutions shall be submitted in writing by the general Contractor and not by individual trades or material suppliers. The Owner will review proposed substitutions and make their recommendations in writing within a reasonable time.

4.13 FURNISHING OF PRODUCT DATA

- A. The Contractor shall furnish one copy of complete product data for every manufactured item of equipment and all components to be used to perform the work, including specific performance data, material description, rating, capacity, working pressure, material gauge or thickness, brand name, catalog number and general type.
- B. This data shall be compiled by the Contractor and reviewed by the Consultant before any of the equipment is ordered.
- C. All data shall be indexed according to specification section and paragraph for easy reference.
- D. After review, this data shall become a part of the contract, and may not be deviated from except upon written approval of the Consultant.
- E. Product data for equipment reviewed by the Consultant does not in any case supersede the contract documents. The review of the Consultant shall not relieve the Contractor from responsibility for deviations from drawings or specifications unless he has in writing called the Consultant's attention to such deviations at the time of furnishing said data. Nor shall such review relieve the Contractor from responsibility for errors of any sort in the items furnished. The Contractor shall check the work described by the product data with the contract documents for deviations and errors.
- F. It shall be the responsibility of the Contractor to ensure that items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall order such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the drawings and specifications.
- G. Where equipment requiring different arrangement of connections from those shown is approved, it shall be the responsibility of the Contractor to install the equipment so as to allow for proper operation and to be in harmony with the intent of the drawings and specifications, and to make all changes in the work required by the different arrangement of connections.

- H. Product data shall be promptly submitted by the Contractor after he has reviewed, checked and approved the data to determine if they are in harmony with the requirements of the project and with the provisions of the contract documents and after he has verified all field measurements and construction criteria, materials, catalog numbers and similar data. In submitting the product data, the Contractor is certifying that the work represented by the data is recommended by the Contractor.

PART 5. CONSULTANT-OWNER-CONTRACTOR RELATIONS

5.01 CONSULTANT'S RESPONSIBILITY AND AUTHORITY

- A. The Consultant and Owner shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, rate of progress of work, interpretation of drawings and specifications and all questions as to the acceptable fulfillment of the contract on the part of the Contractor.
- B. Claims, disputes, disagreements, or other matters in question between the Contractor and the Owner relating to the execution or progress of the work or the interpretation of the contract documents shall be referred initially to the Consultant for decision which he will render in writing within a reasonable time.

5.02 OBSERVATION OF WORK

All materials and each part or detail of the work shall be subject at all times to observation by the Consultant and the Owner, and the Contractor will be responsible for strict adherence to the true intent of the specifications in regard to quality of materials, workmanship, and the diligent execution of the work. Such observations may include mill, plant, or shop inspection, and any material furnished under these specifications is subject to such observation. The Consultant shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make their observations and construction review.

5.03 CONTRACTOR'S SUPERINTENDENT

A competent superintendent, who is acceptable to the Owner, shall give efficient supervision to the work until its completion and shall be available to the work site when given verbal notice. The superintendent shall have full authority to act on behalf of the Contractor, and all communications given to the superintendent or in their absence the project foreman, shall be as binding as if given to the Contractor. Important communications shall be confirmed by the Consultant in writing. Other communications shall be so confirmed upon written request of the Contractor. It shall be the responsibility of the Contractor's superintendent to coordinate the work of all the subcontractors. When required, the superintendent shall be present on the site to perform adequate supervision and coordination.

5.04 ASSIGNMENT OF CONTRACT

The Contractor shall neither sublet, sell, transfer, assign or otherwise dispose of the contract or any portion thereof, or of their right, title or interest therein, or their obligations hereunder, nor, if the Contractor is a corporate entity, sublet, sell, transfer or assign a majority of the outstanding shares of stock in the corporation, without prior written consent of the Owner. In case written consent is given, the Contractor will be permitted to sublet a portion of the contract or corporate stock thereof, but shall perform, with their own organization, work amounting to not less than 50% of the total original contract cost. No subcontracts or transfer of contract or corporate stock shall release the Contractor of their liability under the contract or bonds.

5.05 SUSPENSION OF WORK

- A. The Owner or Consultant shall have the authority to suspend the work, wholly or in part, for such period or periods, as he may deem necessary, due to unsuitable weather or such other conditions as are considered unfavorable for prosecution of the work, or failure on the part of the Contractor to carry out the provisions of the contract or to supply materials meeting the requirements of the specifications.
- B. Said suspension shall be effective provided the Owner gives the Contractor three (3) days written notice of suspension. The Contractor shall resume the work within ten (10) days after notice to resume work is given by the Owner to the Contractor.

5.06 OWNER'S RIGHT TO CORRECT DEFICIENCIES

Where it is not an emergency and upon failure of the Contractor to perform the work in accordance with the contract documents, including any requirements with respect to the schedule of completion, and after five (5) days written notice to the Contractor, the Owner may, without prejudice to any other remedies he may have, correct such deficiencies. In the case of an emergency the Owner shall have the right to correct the defective work immediately with payment pursuant to Section 10.13.

5.07 OWNER'S RIGHT TO TERMINATE CONTRACT AND COMPLETE THE WORK

- A. If the Contractor defaults or neglects to carry out the work in accordance with the contract documents, the Owner shall have the right to terminate the employment of the Contractor after giving ten (10) days written notice of termination to the Contractor. In the event of such termination, the Owner may take possession of the work and of all materials, tools and equipment thereon and may finish the work by whatever method and means he may select. Tools and equipment are defined as those items included in the proposal form and are not intended to be construed as being the Contractor's equipment used for installation purposes.
- B. It may be considered a default at the sole discretion of the Owner if the Contractor shall:
 - 1. File a petition in bankruptcy, attempt a reorganization under the bankruptcy laws, become insolvent, make a general assignment for the benefit of their creditors, or if a trustee or receiver be appointed;
 - 2. Disregard or violate the provisions of the contract documents, laws, regulations or orders of any public body having jurisdiction or fail to prosecute the work according to the agreed schedule of completion, including extensions thereof; or
 - 3. Fail to provide a competent superintendent, workmen or subcontractor, or proper materials, or fail to make prompt payments thereof.

5.08 CONTRACTOR'S RIGHT TO SUSPEND OR TERMINATE CONTRACT

- A. The Contractor may suspend the work or terminate the contract after giving ten (10) days written notice to the Owner and the Consultant due to the occurrence of any one of the following:
 - 1. If an order of any court or other public authority caused the work to be stopped or suspended for a period of 90 days through no act or fault of the Contractor or any of their employees;
 - 2. If the Consultant should fail to act upon any request for payment within 20 days after it is presented in accordance with the conditions of the contract;
 - 3. If the Owner should fail to act upon any request for payment within 30 days after its approval by the Consultant; or

5.09 RIGHTS OF VARIOUS INTERESTS

Wherever work being done by the Owner's forces or by other Contractors is contiguous to work covered by this contract, the respective rights of the various interests involved shall be established by agreement to secure the completion of the various portions of the work in general harmony.

5.10 SEPARATE CONTRACTS

The Owner may let other contracts in connection with the work of the Contractor. The Contractor shall cooperate with other Contractors with regard to storage of materials and execution of their work. It shall be the Contractor's responsibility to inspect all work by other Contractors affecting their work and to report to the Consultant any irregularities which will not permit him to complete their work in a satisfactory manner. Their failure to notify the Consultant of such irregularities shall indicate the work of other Contractors has been satisfactorily completed to receive their work. The Contractor shall not be responsible for defects of which he could not have known, which develop in the work of others after the work is completed. It shall be the responsibility of the Contractor to measure the completed work in place and report to the Consultant immediately any difference between completed work by others and the drawings.

5.11 SUBCONTRACTS

- A. Unless otherwise specified in the contract documents, the Contractor shall, upon receipt of the executed contract documents, submit in writing to the Owner the names of all subcontractors proposed for the work. Subcontractors may not be changed except at the request or with the consent of the Owner.
- B. The Contractor is responsible to the Owner for the acts and omissions of their subcontractors, and of their direct and indirect employees, to the same extent as he is responsible for the acts and omissions of their employees.
- C. The contract documents shall not be construed as creating any contractual relation between the Owner, the Consultant and any subcontractor.
- D. The Contractor agrees to bind every subcontractor and every subcontractor agrees to be bound by the terms of the contract documents as far as applicable to their work.
- E. For convenience of reference and to facilitate the letting of contracts and subcontracts, the specifications are separated into titled sections. Such separations shall not, however, operate to make the Consultant an arbiter to establish limits to the contracts between Contractor and subcontractors.

5.12 WORK DURING AN EMERGENCY

- A. In any emergency affecting the safety of persons or property, the Contractor shall act to prevent threatened damage, injury or loss. In all cases, he shall as soon as practicable, notify the Owner of the emergency and he shall not wait for instructions before proceeding to protect both life and property.
- B. Any additional compensation or extension of time claimed by the Contractor on account of said emergency work shall be determined under Section 10.10.

5.13 ORAL AGREEMENTS

Verbal orders and suggestions as to the performance of the work may be given from time to time by the Consultant, or by other representatives of the Owner. However, when in the opinion of the Contractor, such verbal orders or suggestions entitle him to a change in contract price or time or both, he must request a change order from the Owner. No verbal order or suggestion of any representative or employee of the Owner, or of any other person, shall be construed as authorizing any claims on the part of the Contractor for extra compensation for labor, material, or other items pertaining to such work, or for damages or any other expenses incurred because of the Contractor's compliance therewith.

5.14 NONDISCRIMINATION IN EMPLOYMENT

- A. For work under this contract the Contractor must agree:
 - 1. That in the hiring of common or skilled labor for the performance of any work under this contract or any subcontract hereunder, no Contractor, material supplier or vendor shall, by reason of race, creed, color or national origin, discriminate against the person or persons who are qualified and available to perform the work to which such employment relates.
 - 2. That no Contractor, material supplier or vendor shall, in any manner, discriminate against or intimidate or prevent the employment of any person or persons, or on being hired, prevent or conspire to prevent any person or persons from the performance of the work under this contract on account of race, creed, color or national origin.
 - 3. Violation of this section shall be cause for cancellation or termination of this contract.

PART 6. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

6.01 LANDS BY OWNER

The Owner shall provide, not later than the date specified in the construction schedule as approved by the Consultant, the lands shown on the drawings upon which the work under the contract is to be performed. The Owner shall also provide rights-of-way for access thereto. Any delay in furnishing these lands by the Owner shall be deemed proper cause for consideration of adjustment in the time of completion.

6.02 LANDS BY CONTRACTOR

Any additional land and access thereto not shown on the drawings that may be required for temporary construction facilities or for storage of materials shall be provided by the Contractor with no liability to the Owner. The Contractor shall confine their apparatus and storage of materials and operation of their workmen to those areas described in the drawings and specifications and such additional areas which he may provide at their expense. The Contractor shall notify the Consultant in writing of those lands provided at their expense.

6.03 PRIVATE PROPERTY

The Contractor shall not enter upon private property for any purpose without obtaining permission from the Owner thereof, and he shall be responsible for the preservation of all public property, trees, monuments, etc., along and adjacent to the site, and shall use every precaution necessary to prevent damage or injury thereto. He shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

6.04 SURVEYS AND STAKES

Unless otherwise specified, the Consultant retained by the Owner shall establish all points of reference including staking for proposed work. Based upon the information provided by the Consultant, the Contractor shall develop and make all detail surveys necessary for construction, including laser, and other working points, lines and elevations. The Contractor shall be responsible for carefully preserving bench marks, reference points and stakes, and, in the case of destruction thereof resulting from their negligence or otherwise, the Contractor shall be charged with the expense and damage resulting there from and shall be responsible for any mistakes that may be caused by the unnecessary loss or disturbance of such bench marks, reference points and stakes.

6.05 UTILITIES

The Contractor shall be solely responsible for verifying the exact location of all utilities. Prior to the start of any construction, the Contractor shall notify all utility companies having utilities in the project area. The Contractor shall have sole responsibility for providing temporary support and for protecting and maintaining all existing utilities in the project area during the entire period of construction including, but not limited to, the period of excavation, backfill and compaction. In carrying out this responsibility, the Contractor shall exercise particular care, whenever gas mains or other utility lines are crossed, to provide compacted backfill or other stable support for such lines to prevent any detrimental displacement, rupture or other failure.

PART 7. MATERIALS AND WORKMANSHIP

7.01 MATERIALS FURNISHED BY CONTRACTOR

- A. All materials used in the work shall be new unless otherwise provided for in the contract documents, shall meet the requirements of the specifications, and shall not be incorporated into the work until reviewed by the Consultant.
- B. Unless otherwise specifically indicated in the contract documents, all materials necessary for the proper execution of the work shall be furnished and paid for by the Contractor, whether temporary or not and whether incorporated into the work or not.

7.02 MATERIALS FURNISHED BY OWNER

- A. Materials specifically indicated shall be furnished by the Owner. Before incorporating any of the materials into the work, the Contractor shall inspect the materials so furnished by the Owner. If the Contractor discovers any defects in material furnished by the Owner, he shall notify the Consultant.
- B. Unless otherwise noted or specifically stated, materials furnished by the Owner are to be delivered to the site. The Contractor shall unload and properly protect all such materials from damage or loss. The Contractor shall be responsible for material loss or damage after receipt of material at the point of delivery.

7.03 STORAGE OF MATERIALS

Materials shall be so stored by the Contractor as to ensure the preservation of their quality and fitness for the work. Stored materials shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the Owner or lessee thereof.

7.04 CONDUCT OF WORKMEN

The qualifications and conduct of workmen shall be in accordance with Mn/DOT Specification 1802.

7.05 REJECTED WORK AND MATERIALS

- A. All materials, whether furnished by the Owner or Contractor, which do not conform to the requirements of the contract documents, or which are not equal to samples or other product data reviewed by the Consultant, or which are in any way unsatisfactory to the Owner or unsuited to the purpose for which they are intended, shall be rejected. Any defective work whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause shall be removed within ten (10) days after written notice is given by the Owner, and the work shall be re-executed by the Contractor. The fact that the Consultant may have previously overlooked such defective work shall not constitute an acceptance of any part of it.
- B. Should the Contractor fail to remove rejected work or materials within (10) days after written notice to do so, the Owner may remove them and may store the materials.
- C. Correction of faulty work after final payment shall be in accordance with Section 10.22.

7.06 MANUFACTURER'S DIRECTIONS

Manufactured supplies, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

7.07 PLANT MATERIAL DAMAGE

The Contractor shall do all wound repair or pruning as necessary to ensure the protection of any damaged tree trunk or branch. The Consultant has the right to reject any plant that has been damaged beyond recovery for reasons of plant health or plant aesthetics.

7.08 WARRANTY

- A. A Contractor shall expressly warrant the workmanship, equipment and materials furnished to be in compliance with the terms of the contract documents. The said warranty shall extend for the period defined in the SPECIFICATIONS or as awarded in the case of ADD ALTERNATES. If any of the work is found to be defective or not in accordance with the contract documents, the Contractor shall correct the said condition promptly after receipt of written notice from the Owner. Prior to commencement of the corrective work, the Contractor shall provide insurance certificate policies, in accordance to Section 8 herein. So as to protect the Owner, it's Consultant or agents during the performance of the warranty work. Acceptance by the Owner for the purpose of beginning the warranty period will be deemed to be when the project is finally accepted by the Consultant.
- B. The Contractor's performance and payment bond delivered to the Owner pursuant to the contract shall cover the Contractor's obligations provided for herein.

7.09 INDEMNITY

- A. To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless Owner, Owner's elected officials and employees, Consultant and the directors, officers, shareholders, employees and agents of any of the above mentioned parties (the 'Indemnified Parties') from and against any and all loss, cost, expense, damage, injury, liability, claim, demand, penalty or cause of action (including attorneys' fees), directly or indirectly arising out of, resulting from or related to (in whole or in part), (1) the Work performed hereunder, (2) the Contract or (3) the act or omission of Contractor, a Subcontractor or any individual, partnership, joint venture or corporation (a) directly or indirectly employed by Contractor or a Subcontractor or (b) for whose acts or omissions Contractor or a Subcontractor may be liable (excluding property damage to the Work itself, covered by the Owner's all-risk builder's risk insurance, subject to Contractor's liability for any deductible amount thereunder). The obligations of Contractor under this indemnification shall apply to all matters except those arising from the use and occupation by Owner and its invitees of the building being renovated and expanded pursuant to the Contract or except those arising from the gross negligence of Owner. Further, the obligations of Contractor under this indemnification shall not extend to the liability of the Architect, their agents or employees, arising out of (1) the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, design or Specifications or (2) the giving of or the failure to give directions or instructions by the Architect, their agents or employees provided such giving or failure to give is the provided such giving or failure to give is the primary cause of the injury or damage. Contractor shall promptly advise Owner in writing of any action, administrative or legal proceeding or investigation as to which this indemnification may apply, and Contractor, at Contractor's expense, shall assume on behalf of Owner and conduct with due diligence and in good faith the defense thereof with counsel satisfactory to Owner, provided, that Owner shall have the right to be represented therein by advisory counsel of its own selection and at its own expense; and provided further, that if the defendants in any such action include both Contractor and Owner and Owner shall have reasonably concluded that there may be legal defenses available to it which are different from or additional to, or inconsistent with, those available to Contractor, Owner shall have the right to select separate counsel to participate in the defense of such action on its own behalf at accordance with this indemnification paragraph, Owner, at its option, and without relieving Contractor of its obligation hereunder, may so perform, but all costs and expense incurred by Owner in that event shall be reimbursed by Contractor to Owner, together with interest on the same from the date any such expense was paid by Owner until reimbursed by Contractor, at the rate of interest provided to be paid on judgments, by law of the jurisdiction to which the interpretation of the Contract is subject.
- B. The obligations of Contract under this Section shall survive the expiration or termination of the Contract.
- C. In any and all claims against the Owner or the Consultant or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Section 8.2 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable or for the Contractor or any subcontractor under worker's or workmen's compensation acts, disability benefit acts or other employee benefit acts.

7.10 PERFORMANCE AND PAYMENT BOND

The Contractor shall, at the time of their execution of the agreement furnish a performance and payment bond as security for the faithful performance and payment of all their obligations under the contract. Such bonds shall be in a sum equal to the contract amount. The form of the bond shall be as the Owner may prescribe and with a surety company authorized to do business in the state where the work is located and which is named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register.

7.11 PATENTS, FEES AND ROYALTIES

Contractor shall pay all license fees and royalties and assume all costs incidental to the use in the performance of the work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular 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 Consultant 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 shall

be disclosed by Owner in the contract documents. Contractor shall indemnify and hold harmless, the Owner and Consultant, and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorneys' fees) arising out of 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, and shall defend all such claims in connection with any alleged infringement of such rights.

7.12 PERMITS AND LICENSES

All permits and licenses necessary for the performance of the work shall be secured by the Contractor prior to the commencement of the work.

7.13 LAWS, REGULATIONS AND SAFETY

- A. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the work. If the Contractor observes that the specifications or drawings are at variance therewith, he shall give Consultant prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to Consultant, he shall bear all costs arising there from; however, it shall not be their primary responsibility to make certain that the specifications and drawings are in accordance with such laws, ordinances, rules and regulations.
- B. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - (1) all employees on the job and other persons who may be affected thereby;
 - (2) all the work and all materials or 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 and utilities not designated for removal, relocation or replacement in the course of construction.
- C. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. He shall notify Owners of adjacent utilities when prosecution of the work may affect them. All damage, injury or loss to any property referred to in Sections 8.6.2 (b) and (c) caused, directly or indirectly, in whole or in part, by Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by Contractor. The Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as all the work is completed and Consultant has issued a notice to Owner and Contractor that work is acceptable.
- D. The Contractor shall designate a responsible member of their organization at the site whose duty shall be the prevention of accidents.
- E. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Owner.

7.14 WARNING SIGNS AND BARRICADES

The Contractor shall provide adequate signs, barricades, colored lights and/or watchmen and take all necessary precautions for the protection of the work and the safety of the public. All barricades and obstructions shall be protected at night by colored signal lights which shall be kept in operation from sunset to sunrise.

7.15 PUBLIC CONVENIENCE

The Contractor shall at all times conduct their work as to ensure the least possible obstruction to traffic and

inconvenience to the general public and the residents in the vicinity of the work, and to ensure the protection of persons and property. No road or street shall be closed to the public except with the permission of the Owner and proper governmental authority. Fire hydrants on or adjacent to the work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to ensure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches and irrigation ditches, which shall not be obstructed.

7.16 CROSSING UTILITIES, ETC

Intentionally left blank.

7.17 SANITARY PROVISIONS

The Contractor shall provide and maintain such sanitary facilities for the use of their employees and those of their subcontractors as may be necessary to comply with the laws, rules or regulations of the Federal, State and local governments, or agencies or departments thereof.

7.18 PRESERVATION OF HISTORICAL OBJECTS

- A. Where historical objects of potential archeological or paleontological nature are discovered within the areas on which the Contractor's operations are in progress, the Contractor shall restrict or suspend their operations in the immediate area of the discovery as may be necessary to preserve the discovered objects until the Owner has made arrangements for their disposition or has recorded the desired data relative thereto.
- B. The Contractor shall immediately notify the Owner of any historical objects he may discover or become aware of as the work is being prosecuted, and shall aid in the preservation and salvage program decided upon, as may be requested or ordered by the Owner. No work which the Contractor considers to be extra work shall be performed without the written authorization of the Owner.
- C. The Owner shall have the right to restrict or suspend the Contractor's operations in the immediate area where historical objects are discovered for a period not to exceed 72 hours, without claim being made by the Contractor for any damages he might suffer as a result thereof. Any restrictions imposed shall not remain in effect for a period exceeding 72 hours unless mutually agreed to in writing.

PART 8. PROGRESS AND COMPLETION OF WORK

8.01 NOTICE TO PROCEED

The date of commencement of the work is the date set forth in the notice to proceed. If there is no notice to proceed, commencement shall be the date of the contract or such other date as may be established therein. Thereupon, the Contractor shall begin and shall prosecute the work regularly and without interruption, unless otherwise directed in writing by the Owner, with such manpower and equipment as is necessary to complete the work within the time stated in the contract documents.

8.02 CONTRACT TIME

The Contractor shall complete, in an acceptable manner, all of the work contracted for in the time stated in the contract documents.

8.03 SCHEDULE OF COMPLETION

The Contractor shall submit, at such time as may reasonably be requested by the Consultant, schedules which shall show the order in which the Contractor proposes to carry on the work, with dates at which the Contractor will start the several parts of the work and estimated dates of completion of the several parts. The construction schedule shall be submitted for approval by the Consultant and Owner no later than 10 days after pre-construction conference.

8.04 CHANGES IN THE WORK – CHANGE ORDERS

- A. A change order is a written order to the Contractor signed by the Owner, issued after execution of the contract, authorizing a change in the work or an adjustment in the contract sum or contract time. A change order signed by the Contractor indicates their agreement therewith, including the adjustment in the contract sum or contract time.
- B. Without invalidating the contract, the Owner may, at any time or from time to time order additions, deletions or modifications in the work; these will be authorized by change orders. Upon receipt of a change order, Contractor shall proceed with the work involved. All such work shall be performed under the applicable conditions of the contract documents. If any change order causes an increase or decrease in the contract price or an extension or shortening of the contract time, an equitable adjustment will be made as provided in Section 10 if requested by either party.
- C. Additional work performed by the Contractor without authorization of a change order will not entitle him to an increase in the contract price or an extension of the contract time, except in the case of an emergency as provided in Section 5.14 and except as provided in Section 9.4.2.
- D. Minor Changes in the Work. Consultant may authorize minor changes or alterations in the work not involving extra cost and not inconsistent with the overall intent of the contract documents. These may be accomplished by a work order. If Contractor believes that any minor change or alteration authorized by Consultant entitled him to an increase in the contract price, he may make a claim therefore as provided in Section 10.
- E. Extra Work. New and unforeseen items of work found by Consultant or Owner to be necessary and which cannot be covered by any item or combination of items for which there is a contract price shall upon notice thereof to the Owner and not more than 20 days after discovery thereof be classed as extra work. The Contractor shall do such extra work and furnish such material as may be required for the proper completion or construction of the whole work contemplated upon written order from the Owner as approved by the Consultant. In the absence of such written order, no claim for extra work shall be considered. Extra work shall be performed in accordance with these specifications where applicable and work not covered by the specifications or special provisions shall be done in accordance with the best practice and in a workmanlike manner. Extra work required in any emergency to protect life and property shall be performed by the Contractor as required.
- F. Claims for Additional Cost. If the Contractor wishes to make a claim for an increase in the contract sum, he shall give the Owner and Consultant written notice thereof within 20 days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Section 5.14. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the contract sum, it shall be determined by the Consultant. Any change in the contract sum resulting from such claim shall be authorized by change order.
- G. Overrun of Unit Price Items. The Owner recognizes that the bid price is based on estimated quantity multiplied by unit price for each of the said quantities. The Owner also recognizes the contract calls for a final contract price, which are the actual quantities used on the project multiplied by the unit price bid for each specific bid item. The Owner limits herein the amount the Owner will pay for increases in the number of units applied to the project over and above the estimated number of units as set forth in the plans and specifications.

- H. Unless a change order in writing is approved by the Owner or the Consultant in cases of change orders amounting to less than \$5,000.00 in value, the Owner will not pay for an increase in units of any bid item wherein the increase will do either or both of the following: exceeds by 10% or more the estimated number of units as set forth in the plans and specifications, or increases the estimated number of units so as to increase the estimated contract price by more than \$1,000.00.
- I. Change orders under \$5,000.00 authorized by the Owner and Consultant to prevent delay to the project shall be submitted to the Owner at the next succeeding Owner meeting.)

8.05 USE OF COMPLETED PORTIONS

The Owner shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding that the time for completing the entire work or such portions may not have expired. The Owner will seek to minimize the delay to the Contractor occasioned by the Owner's occupancy before acceptance.

8.06 EXTENSION OF CONTRACT TIME

A delay beyond the Contractor's control occasioned by an Act of God, or act or omission on the part of the Owner or by strikes, lockouts, fire, etc., may entitle the Contractor to an extension of time in which to complete the work as determined by the Owner provided, however, that the Contractor shall immediately give written notice to the Owner of the cause of such delay.

8.07 LIQUIDATED DAMAGES

- A. Time is the essence of the contract. The Contractor therefore agrees that the Owner will be entitled to damages for failure on the part of the Contractor to complete the work within the time limits provided for in the contract documents.
- B. Should the Contractor neglect, refuse or otherwise fail to complete the project on or before the specified date, the amount of \$500 per day shall be deducted from any monies due or coming due to the Contractor or shall be paid to the Owner not as a penalty but as liquidated damages for each and every calendar day or portion thereof that the contract shall remain uncompleted after the specified date for completion, unless otherwise specified in the special provisions of the project specifications. Liquidated damages are specified herein because of the extreme difficulty of ascertaining and establishing the actual damages which the Owner would sustain.

PART 9. MEASUREMENT AND PAYMENT

9.01 DETAILED BREAKDOWN OF CONTRACT AMOUNT

Except in cases where unit prices form the basis for payment under the contract documents, the Contractor shall, within ten (10) days of receipt of the contract documents, submit an itemized breakdown of the contract amount having the value, including an allowance for profit and overhead, assigned to each part of the work. Unless the breakdown of the contract amount is objected to by the Owner, it shall be used as the basis for all requests for payment.

9.02 REQUEST FOR PAYMENT

- A. The Contractor may submit periodically, but not more than once each month, at the end of the calendar month, a request for payment for work done and materials delivered and stored on the site. Payment for materials stored on the site will be conditioned on the following:
 - (1) The Contractor shall submit evidence to establish the Owner's title to such materials.
 - (2) Acceptable provisions have been made for storage.
 - (3) The Contractor is responsible for all loss, theft, vandalism, storage and similar peril for the full value of the stored material.

- B. Each request for payment shall be itemized and computed as to work completed on all items listed in the detailed breakdown of contract amount less 5% to be retained until 95% of final completion and acceptance of the work, and less previous payments. Where unit prices are specified, the request for payment shall be based on the quantities completed.
- C. After 95% of the work has been completed the Owner, pursuant to Minnesota Statutes, Section 429.041, Subd. 6, shall upon the request of the Contractor consider, after receiving the Consultant's recommendation, such portions of the retained price to be released as the Owner's governing body determines are not required to be retained to protect the Owner's interest in satisfactory completion of the contract.

9.03 CONSULTANT'S ACTION ON A REQUEST FOR PAYMENT

- A. Within 10 days of submission of any request for payment by the Contractor, the Consultant shall:
 - (1) Approve the request for payment as submitted and forward it to the Owner.
 - (2) Approve such other amount as he shall consider is due the Contractor informing the Contractor in writing of their reasons for approving the modified amount.
 - (3) Withhold the request for payment, informing the Contractor in writing of their reasons for withholding it.

9.04 OWNER'S ACTION ON AN APPROVED REQUEST FOR PAYMENT

- A. Within 20 days from the date of approval of a request for payment by the Consultant, the Owner shall:
 - (1) Pay the request for payment as approved by the Consultant.
 - (2) Pay such other amount in accordance with Section 10.5 as he shall decide is due the Contractor, informing the Contractor and the Consultant in writing of its reasons for paying the modified amount.
 - (3) Withhold payment in accordance with Section 10.5 informing the Contractor and the Consultant in writing of its reasons for withholding payment.

9.05 OWNER'S RIGHT TO WITHHOLD PAYMENT

- A. The Owner may withhold payment in whole or in part to the extent necessary to protect itself from loss on account of any of the following causes:
 - (1) Violation of any of the terms of the contract documents.
 - (2) Defective work not remedied.
 - (3) (c) Reasonable evidence indicating potential filing of claims by other parties against the Contractor or Owner.
 - (4) Failure of the Contractor to make payments to subcontractors, material suppliers.
 - (5) Damage to the Owner or any other party.
- B. When any of the above grounds for which payment is being withheld is removed, payment shall be made for the amount withheld.

9.06 INTEREST ON UNPAID REQUESTS FOR PAYMENT

Should the Owner fail to pay an approved request for payment within 60 days from the date of approval by the Consultant, and should it fail to inform the Consultant and the Contractor in writing of its reasons for withholding payment, the Owner shall pay the Contractor interest on the unpaid amount of the request for payment pursuant to Minnesota Statutes Section 429.041, Subdivision 6.

9.07 PAYMENT FOR REJECTED WORK AND MATERIALS

Should the Owner direct the Contractor to not correct work that has been damaged or that has not been performed in accordance with the contract documents; an equitable deduction from the contract amount shall be made by means of a change order to compensate the Owner for the uncorrected work.

9.08 PAYMENT FOR REJECTED WORK AND MATERIALS

- A. The removal of work and materials rejected under Section 7.5 and the re-execution of acceptable work by the Contractor shall be at the expense of the Contractor, and he shall pay the cost of replacing the work of other Contractors destroyed or damaged by the removal of the rejected work or materials and the subsequent replacement of acceptable work.
- B. Removal of rejected work or materials and storage of materials by the Owner in accordance with Section 7.5 shall be paid by the Contractor within 30 days after written notice to pay is given by the Owner. If the Contractor does not pay the expenses of such removal the Owner may, after ten (10) days from the giving of written notice to the Contractor of the Owner's intent to sell the materials, sell the materials at auction or at private sale and shall pay to the Contractor the net proceeds there from after deducting all the costs and expenses that should have been borne by the Contractor.

9.09 PAYMENT FOR INCREASED OR DECREASED QUANTITIES

Whenever the quantity of any item of work as given in the proposal shall be increased or decreased payment for such item will be made on the basis of actual quantity completed, at the contract unit price for such item. No payment will be made for quantities placed without the prior written approval of the Owner.

The Owner reserves the right to increase or decrease, by 25% of the original contract quantity, any of the quantities shown. In the event the actual quantities differ more than 25% of the original contract quantity, an equitable revision of the unit price shall be made when requested by either the Owner or the Contractor. This 25% limit does not apply to items specifically excluded or listed as optional by the Owner, nor to minor contract items (items amounting to 10% or less of the total contract).

9.10 PAYMENTS FOR EXTRA WORK

Written notice of claims for payments for extra work shall be given by the Contractor within ten (10) days after receipt of a written order from the Owner to proceed with the extra work and also before any work is commenced by the Contractor, except in emergency situations endangering life or property. No claim shall be valid unless so made. In all cases, the Contractor's itemized estimate sheets showing all labor and material shall be submitted to the Owner. The Owner's written order for extra work shall specify any extension of the contract time and one of the following methods of payments:

- A. Unit prices or combinations of unit prices which formed the basis of the original contract.
- B. A lump sum based on the Contractor's estimate, approved by the Consultant and accepted by the Owner.
- C. Actual cost plus overhead and profit as follows:
 - (1) The "actual cost" shall include labor, materials, and equipment necessary to complete the work as ordered by the Consultant.
 - (2) The Contractor shall be paid for all labor, and the foreman in direct charge, for every hour they are actually engaged in the force account work. An amount equal to 45% of the sum of the above labor wage items will be paid the Contractor as full compensation for Workmen's Compensation, Social Security, pension and retirement allowances, and insurance, or other regular payroll deductions.
 - (3) Equipment used, which has authorization by the Consultant, shall be paid for per the equipment rental rates in the Rental Rate Blue Book. The rates shall be paid for the actual time the equipment is in operation on the extra work items. Travel time to and from the job site will be allowed at rental rates when the equipment is moved under its own power. Where transportation is accomplished by other than its own power, the cost of the transport shall be paid for as approved by the Consultant. Equipment rates will have no percentages added to them for overhead or profit.
 - (4) Materials accepted by the Consultant and used, including transportation costs for delivery but exclusive of machinery rentals as set forth above, will be reimbursed to the Contractor for actual costs plus 15%.

9.11 RESPONSIBILITY OF THE CONTRACTOR

A. Unless specifically noted otherwise, the Contractor shall furnish all materials and services and perform all the work described by the contract documents or shall have all materials and services furnished and all the work performed at their expense. It shall be the Contractor's responsibility to pay for:

- (1) Replacement of survey bench marks, reference and stakes provided by the Owner under Paragraph 6.4.
- (2) Lands by Contractor provided in accordance with Paragraph 6.2.
- (3) Insurance obtained in accordance with Paragraphs 8.1 and 8.2.
- (4) Performance Bond obtained in accordance with 8.3.
- (5) Royalties required under Paragraph 8.4.
- (6) Permits and Licenses required of the Contractor and all subcontractors.

9.12 PAYMENT FOR WORK SUSPENDED BY THE OWNER

If the work or any part thereof shall be suspended by the Owner as provided in Section 5.7 and abandoned by the Contractor, the Contractor will then be entitled to payment for all work done on the portions so abandoned. No payment will be made for work deleted from the project which has not been started by the Contractor.

9.13 PAYMENT FOR WORK BY THE OWNER

The cost of the work performed by the Owner in taking possession of the work and equipment, tools and supplies in accordance with Section 5.9 and in correcting deficiencies as provided in Section 5.8 shall be paid by the Contractor.

9.14 PAYMENT FOR WORK BY THE OWNER FOLLOWING OWNER'S TERMINATION OF THE CONTRACT

Upon termination of the contract by the Owner pursuant to Section 5.9, no further payments shall be due the contract or until the work is completed by the Owner. If the unpaid balance of the contract amount shall exceed the cost of completing the work including all overhead costs, the excess shall be paid to the Contractor. If the cost of completing the work shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The cost incurred by the Owner, as herein provided, and the damage incurred through the Contractor's default, shall be approved in writing by the Consultant and certified in writing by the Owner.

9.15 PAYMENT FOR WORK TERMINATED BY THE CONTRACTOR

Upon suspension of the work or termination of the contract by the Contractor pursuant to Section 5.10 the Contractor shall recover payments from the Owner for the work performed, plus loss on plant and materials, plus a reasonable profit on work performed.

9.16 PAYMENT FOR SAMPLES AND TESTING OF MATERIALS

Samples furnished in accordance with Section 4.9 shall be furnished by the Contractor at their expense. Testing of samples and materials furnished in accordance with Section 4.9 shall be arranged and paid for by the Owner, unless said tests fail, in which case they shall be paid for by the Contractor.

9.17 REMOVAL OF CONSTRUCTION EQUIPMENT, TOOLS AND SUPPLIES

At the termination of this contract, but before acceptance of the work by the Owner, the Contractor shall remove all of their equipment, tools and supplies from the work site. Should the Contractor fail to remove such equipment, tools, and supplies, the Owner shall have the right to remove them with the cost of such removal to be charged to the Contractor.

9.18 CLEANING UP

Contractor shall keep the work site free from accumulations of waste materials, rubbish and other debris resulting from the work, and at the completion of the work he shall remove all waste materials, rubbish and debris from and about the work site as well as all tools, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by Owner. Contractor shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents.

9.19 EXAMINATION OF COMPLETED WORK

If the Owner requests it, the Contractor at any time before acceptance of the work shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering or removing, and the replacing of the covering or making good of the parts removed shall be paid for as extra work, but should the work so exposed or examined prove unacceptable, the uncovering, removing and replacing shall be at the Contractor's expense.

9.20 RELEASE OF LIENS

Before any retained amounts are released or final payment is made, the Contractor shall submit with their application for payment to the Owner (1) an affidavit stating all payables, bills for materials and equipment and other indebtedness connected with the work for which the Owner or their property might in any way be responsible, have been paid or satisfied; and (2) consent of surety, if any, to final payment. If any subcontractor or material supplier refuses to furnish releases or receipts in full, Contractor may furnish a bond satisfactory to the Owner to indemnify him against such lien or claim.

9.21 ACCEPTANCE AND FINAL PAYMENT

- A. When the Contractor has completed the work in accordance with the terms of the contract documents, the Contractor shall request in writing final acceptance and the Consultant shall certify in writing their acceptance and their approval of the Contractor's final request for payment to the Owner, which shall be the contract amount plus all approved modifications, less all approved deductions and less previous payments made.
- B. The Owner shall accept the project within 60 days after receipt of the Contractor's request in writing or in the alternative notify the Contractor in writing the reasons why the project has not been accepted. The Owner's failure to respond within said 60-day period will be deemed to be acceptance of the project. Acceptance by the Owner for the purpose of beginning the warranty period will be deemed to be when the project is finally accepted by the Rosemount Park and Recreation Board.
- C. The Contractor shall furnish evidence that he has fully paid all debts for labor, materials and equipment incurred in connection with the work, following which the Owner shall accept the work and release the Contractor except as to the conditions of the performance bond, any legal rights of the Owner, required guarantees, and correction of faulty work after final payment under Section 10.22 and shall authorize payment of the Contractor's final request for payment.
- D. The Contractor must allow sufficient time between the time of completion of the work and approval of the final request for payment to allow the Consultant to assemble and check the necessary data.
- E. Before final payment is made, the Contractor shall make a satisfactory showing that he has paid the State and Federal income tax withheld from wages paid to the Contractor's employees for work performed under the contract.

9.22 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The approval of the final request for payment by the Consultant and the making of the final payment by the Owner to the Contractor shall not relieve the Contractor of responsibility for faulty materials or workmanship. The Owner shall promptly give written notice to the Contractor of faulty materials or workmanship and the Contractor shall promptly replace any such defects discovered within such time as may be prescribed by law or by the terms of special warranties required by the contract documents. The Consultant shall decide all questions arising under this paragraph and all such decisions shall be subject to arbitration under Section 5.3.

9.23 WAIVER OF CLAIMS

A. The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:

- (1) Unsettled liens or claims;
- (2) Faulty or defective work; Or
- (3) Failure of the work to comply with the requirements of the contract documents or the terms of any warranties specified therein.
- (4) The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final application for payment.

9.24 SEVERABILITY

If any provision of this contract is found to not be valid or enforceable, it shall not affect the validity or enforceability of the remaining provisions of the contract.

END OF SECTION

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SECTION 32 84 00

UNDERGROUND IRRIGATION

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- D. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- D. Scope of work: Furnish and install five separate underground irrigation system specified herein including: connection to water supplies for each individual park. Supply and install all Baseline control components as shown, piping, sleeves, valves, sprinkler heads, wiring, fittings etc., throughout site; including labor, materials, equipment, apparatus, and services for the testing, adjusting, retesting, and readjusting as required to place the system in an approved operating condition.
- E. Unless otherwise specified, the plans and specifications are intended to include everything obviously requisite and necessary for the proper installation and completion of the work whether each necessary item is mentioned herein or not.
- F. The plans and specifications are intended to be cooperative, and any item called for in one and not the other shall be as binding as if called for in both.
- G. Any Contractor field alterations to the plan, details, or specifications will not be approved by the Owner and/or Consultant.
- H. Submittals for substitutions must be submitted 14 days prior to bid for approval. All submittals must match the design parameters (flow rates, precipitation rates, control options, etc.) and design intent of the products shown in the drawings.
- I. The irrigation systems shall include the following:
 - 1. Source Location – shown in design documents.
 - a. Lone Gardens – connect to 2" municipal, curb stop in place.
 - b. Sundance Woods – connect to existing irrigation system.
 - c. Elsie Stephens – Connect to existing well.
 - d. River Hills – connect to new well.
 - e. Hayden Hills – connect to new well.Contractor to verify locations/size (approximate location shown in design documents), quality and available flow characteristics as listed in design documents. Contractor to inform Owner's Representative of any perceived issues with source location.
 - 2. Moisture based; Decoder based Control System
 - a. Baseline BL-1000X & R board-based controllers with cellular modems
 - b. Baseline BL-5311B Soil Moisture Sensors
 - c. Flomec Ultrasonic flow sensor
 - d. Baseline decoders as required, single station decoders only.
 - e. Lightning Arrestor, BL-LA01 and grounding as required on two-wire path. All grounding to be connected to two-wire path with Paige pre-welded ground rod/plate with Paige 270RC re-enterable connector.
 - 3. Piping
 - 4. Sprinkler heads
 - 5. Valves and Valve boxes
 - 6. Control wiring & Grounding.
 - 7. Fittings
 - 8. Electrical connections

9. All other necessary accessories
10. System Manuals
11. Instructional walk-through with Owner
- J. Limits of work: Area within project limits as delineated on the irrigation plan.
- K. Related Sections: The following Sections contain requirements that relate to this Section:
 1. Division ? and Division ??

1.03 QUALITY ASSURANCE

- A. Irrigation contractor must be able to provide "Verifiable Documentation" that they have the technical qualifications, experience, trained personnel, and facilities to perform the specified work. Experience with Baseline advanced control systems and a minimum of 5 projects within the last 3 years. Have been engaged in sprinkler installation, of systems of comparable size and scope for a minimum of five years. Contractor must submit, along with bid, a list of five projects/contacts of Baseline control and similar scope completed within the last three years.
- B. Quality Control Criteria:
 1. Provide irrigation products as described in this specification and according to manufacturer's specifications.
 2. The contractor shall always have on site during construction a designated individual who holds Baseline Basics Online training certificate. No work shall be done on site when the authorized individual is not on site.
 3. Contractor shall hold current Certified Irrigation Contractor as issued by the Irrigation Association.
 4. As a prerequisite of qualification to bid, the irrigation construction company shall provide verifiable documentation that such person and company is licensed by the Minnesota State Board of Electricity as a Technology Systems Contractor and that company employs not less than one Power Limited Technician and that such licenses are considered "in good standing" by the Minnesota State Board of Electricity. "Verifiable Documentation" shall include but not be limited to submission of copies of Technology System Contractor and Power Limited Technician credentials and proof of insurance.
 5. Comply with requirements of the State of installation for prevention of backflow and back-siphonage.
 6. Comply with requirements of the State of installation for plumbing and other regulations affecting site irrigation.
 7. Comply with National Plumbing Code, National Electric Code, and all other applicable city or state codes.

1.04 SUBMITTALS

- A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Submit manufacturer's literature, technical data, and recommendations for the system as specified including:
 1. Current Baseline Basics Online Training Certificate
 2. Current CIC Certificate
 3. Current Power Limited Technician Certificate
 4. Pipe
 5. Fittings
 6. Valves
 7. Controller/Flow Sensor/Pressure transducer
 8. Backflow preventer – only as required by local code.
 9. Enclosures
 10. Wiring & Grounding
 11. Valve boxes

- C. Closeout Submittals - Submit the following:
 - 1. As-built drawings: Following construction of system, submit two (2) reproducible hard-line sets of as-built drawings and an electronic copy (AutoCAD release 2018 or newer).
 - 2. Baseline controller complete setup including but not limited to.
 - a. Programs for turf, landscape, and annuals
 - b. Flows learned and verified for each zone.
 - c. Moisture Sensors setup and verified.
 - d. Zone Information including - type, decoder information and location descriptions.
 - e. Irrigation system Mapping setup in BaseManager
 - f. Grounding/Lightening Arrestors locations and field readings at all locations.
- D. Submit color-coded As-Built drawing of controller chart including zone descriptions, locations, decoder serial numbers and suggested run times.

1.05 JOB CONDITIONS

- A. The contractor shall carefully examine the work site, local conditions, specifications and plot plan for any existing conditions and limitations that may apply to the work. Submission of a proposal shall be considered evidence that an examination has been conducted and that any questions and/or concerns have been satisfied.
- B. Utilities: Determine location of utilities and perform work in a manner which will avoid possible damage. When necessary, the Contractor shall make any minor adjustments in location or alignment of the new work. Hand excavate as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned. Contact Owner if potential conflicts are apparent.

1.06 SEQUENCING AND SCHEDULING

- A. Schedule and coordinate to facilitate the most expeditious completion of the project in an efficient manner. Work with the General Roadway contractor to determine appropriate timing for installation along various roadways and medians. Work with the separate landscaping contractor for timing for placement of the drip irrigation lines in the medians to coincide with plant material placement.
- B. Consult all other relevant specification sections to determine the extent of work specified elsewhere but related to that included herein.
- C. Schedule and coordinate all required irrigation utility connections with other project trades and/or utility companies.
- D. Obtain information pertaining to location of all proposed lines and accessories prior to irrigation installation.
- E. Contractor shall assume responsibility for locating all site utilities and perform work in a manner to avoid damage.

1.07 PROTECTION OF EXISTING CONDITIONS

- A. Any existing structures, equipment, utilities, pavement, landscaping, etc., damaged by Contractor during the course of the work including any subsequent damage caused by leakage or settling of piping shall be restored at Contractor's expense.

1.08 HANDLING

- A. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.
- B. Deliver plastic piping in bundles, packed to provide adequate protection of pipe ends, both threaded and plain. Pipe and accessories shall be handled in such manner as to ensure delivery to the trench in sound, undamaged condition. Before installation, the pipe shall be inspected for defects. The interior of pipe and accessories shall be thoroughly cleaned of foreign matter before

being lowered into the trench and shall be kept clean during laying operations by plugging or other approved method.

- C. Store and handle materials to prevent damage and deterioration.
- D. Provide secure, locked storage for valves, sprinkler heads, and similar components that cannot be immediately replaced to prevent installation delays.
- E. Manufacturer's Specifications: The latest printed specifications of approved manufacturer of materials shall become part of these specifications.

1.09 EXTRA MATERIALS

- A. Provide extra materials as follows:
 - 1. Six extra sprinkler heads of each type and size.
 - 2. Six wrenches for each type of head.

PART 2 PRODUCTS

2.01 MAIN LINE

- A. Piping on pressure side of irrigation control valves:
 - 1. HDPE 4710 DR11 conforms to ASTM standards.
 - 2. PVC SDR21 Class 200 as deduct option. Gasketed pipe 4" and above.

2.02 LATERALS

- A. Piping on non-pressure side of irrigation control valves:
 - 1. Polyvinyl chloride (PVC) 1120-1220, SDR 21 Class 200, and conform to ASTM standards D2241-05 & D2672 or latest revision. Materials shall conform to all requirements of D1784, or latest revision.
 - 2. 1 1/4" and smaller pipe may also be flexible non-toxic polyethylene pipe made for 100% virgin material meeting N.S.F. (National Sanitation Foundation) standard #14 for use in pressure potable water applications, for 800 design stress. All sizes shall have a minimum 100 P.S.I. working pressure rating. All polyethylene pipes shall be continuously and permanently marked with the manufacturer's name, material, size, and schedule. Pipe shall conform to A.S.T.M., D2239, and D1248 (3C5PE34) or latest revision.

2.03 FITTINGS

- A. Solvent welded socket fittings conforming to ASTM D 2467 (Schedule 80 PVC) and ASTM D 2466 (Schedule 40 PVC). Threaded type fittings shall conform to ASTM D 2464 (Schedule 80 PVC). Solvent cement shall conform to ASTM D 2564. Swing Joints for all rotary/gear driven sprinkler heads shall be minimum schedule 40, as manufactured by Dura or approved equal. Burst strength of fittings shall equal or exceed that of the pipe on which they are installed.
- B. HDPE – all fittings shall be fusion welded. Fusion welded saddles are acceptable. No mechanical connectors will be acceptable.

2.04 SPRINKLER HEADS

- A. Sprinkler heads shall as shown in design documents.
- B. Pop-Up Rotor Heads: Hunter I-20, I-25, and I40-ON. Nozzles and arcs as shown on design documents.
- C. Pop-Up Spray Heads: Hunter PRS30-04-CV & MP-PRS40-04-CV in Turf. Matched Precipitation Nozzles - arcs as shown on design documents. Sprinkler case shall be of heavy-duty plastic construction with plastic or rubber cover, extra strong spring. Match the precipitation rates

between full circle and part circle heads when valved together in the same zone. Nozzles shall be interchangeable.

- D. Adjustable nozzles are acceptable only in "odd" angle applications.

2.05 CONTROL VALVES

- A. Remote control valves shall be Hunter ICV Series. Valves shall have Heavy-duty solenoid, High grade construction, and Manual bleed, Flow control with non-rising handle, rigid diaphragm support, Single piece diaphragm, Globe and angle configurations, Captive bonnet bolts and solenoid plunger.

2.06 CONTROLLER

- A. Control system - Baseline 1000X with R board for existing sites.
 - 1. Controller shall be an outdoor painted aluminum or stainless-steel wall mount controller.
 - 2. OptConnect Modem – Contractor responsible for any/all antenna options to get strong signal for communications.
 - 3. Moisture Sensors - located in design documents.
 - 4. Tipping Rain Can
- B. Mount the controller in such a way as to simplify the programming/visibility of the controller (see detail). Contractor to ensure controllers and wire path are grounded to 10 OHM or less. Verify the exact location with the Owner and/or Consultant while still adhering to the manufacturer's recommendations.

2.07 QUICK-COUPLING VALVES

- A. Provide quick coupling valves as shown in design documents or match existing.
- B. Provide four (3) valve keys fitted with 1" swivel hose connection.
- C. Quick Coupling Equipment:
 - 1. Valves: One-piece body constructed from heavy-duty cast bronze with a 1" FIP riser connection.
 - 2. Quick Couplers: Single lug coupler of heavy cast bronze and detachable handle.
 - 3. Swivel Hose ELL: Heavy cast bronze, connected to quick couplers for hose connection. Hose ells shall be 1" FIPX 1" Male Hose Threads.
 - 4. Each quick coupler should be installed in a valve box by Carson (or approved equal) and packed with pea gravel, 4" in depth.

2.08 VALVE BOXES

- A. Provide box and cover, with open bottom and openings for piping; designed for installing flush with grade. Include size as required for valves and service. The box shall be of plastic construction with UV protection. Boxes shall be vandal resistant including lockable lid. Permanently label valve box cover with zone number. Box and lid assembly color shall be green color.
- B. All valves shall be installed in a 12" rectangular valve box - 1 valve per valve box.
- C. All drip valve assemblies shall be contained in 12" minimum rectangular box, one valve per valve box.
- D. Accepted manufacturers: Dura.
- E. Decoders shall be secured to lip of valve box.
- F. All valve boxes shall be permanently labeled with brass/stainless tag indicating zone number and/or equipment enclosed.

2.09 CONTROL WIRE

- A. Electrical control wires shall be jacketed, minimum of #14-gauge wire - #12 gauge on any run over 2000 feet.
- B. Run an additional two-wire path with pond supply main line consisting of a jacketed and twisted pair of #14-gauge wire, as manufactured by Paige.
- C. Provide separate wire path, distinct color, for each controller.
- D. The wire path shall be grounded, to 10 ohm or less, and at a maximum of 500-foot intervals. Grounding shall also be installed at the end of all cable runs.
- E. Future wire jackets, if specified, shall be a distinct color than initial "field" wires.
- F. Provide a minimum of 3' loops for ease of connection at valves and six to ten feet extra at controller location.

2.10 BACKFLOW PREVENTER

- A. RP type. Vacuum Breaker type only if allowed by local code.

2.11 TIPPING RAIN CAN

- A. Sensor shall be capable of rain/freeze shut off. The device shall be mounted in a location unobstructed by walls, trees, or other hindrances (so as not to be vandalized). Coordinate final field placement with Owner's Representative.

2.12 MANUAL VALVES

- A. Manual valves shall be bronze gate type. Manual valves shall be sized according to the line size they are being installed on.
- B. Manual valve location(s) - refer to plan.
- C. Manual valves shall be "push-on" type with joint restraints 3" and larger.

2.13 REMOTE CONTROL

- A. BaseManager and Baseline Mobile Access shall provide remote control and monitoring of the irrigation system. Contractor to verify operation over the entire site and make any adjustments necessary to ensure uninterrupted coverage of site.
- B. Contractor to setup and pay for 3 years of BaseManager/Modem activation and service.

PART 3 EXECUTION

3.01 PERMITS, LICENSES AND CERTIFICATES

- A. The Contractor shall procure all permits and licenses, except as otherwise indicated, pay all charges and fees, and give all notices necessary and incident to the proper and lawful prosecution of the work.
- B. He shall also obtain and supply the Owner all certificates required to show that the work has been performed in accordance with the building, plumbing, other authorities, the Board of Fire Underwriter's, or such other like bodies, as the specifications may require directly or by implication.
- C. When the work performed affects the property of facilities of public utility or other corporations or of private persons, he shall obtain and supply from such corporations or person if required, statements that the work has been performed satisfactorily as far as their interests are affected and that all claims therefore have been settled by the Contractor.

3.02 RIGHTS OF WAY

- A. The Contractor shall acquire the necessary right of way or lawful authority that may be necessary for approved crossings or occupation of any roads, street, or alleys upon which the contract work will be done.

3.03 UNDERGROUND STRUCTURE

- A. The Contractor shall be responsible for all necessary information regarding the exact location of existing underground structures and utilities and shall mark their location, at the site.
- B. The Contractor shall be liable for the damages to and the cost of repairing or replacing any buried conduit, cables or piping encountered during the installation of the work, unless they were not marked, or the Contractor was not previously informed of such underground utilities. If the Contractor is aware of such utilities, he shall immediately have the incurred damages repaired at his own expense. Conversely, the Owner shall be liable for the cost of repairing any of those existing utilities of which the Contractor had not been previously informed.

3.04 EXCAVATING AND TRENCHING

- A. Perform excavations as required for installation of work. Restore all surfaces, existing underground installations, etc., damaged or cut because of the excavations, to their original condition.
- B. Dig trenches wide enough to allow a minimum 6" between parallel pipelines. Trench sufficient depth to provide minimum cover (18" for all main lines and 12" for all laterals) as measured from finish grade as shown on drawings.

3.05 SLEEVING

- A. Install PVC, see plan for type, sleeves where any control wire and/or pipe pass through or under walls.
- B. Install PVC, see plan for type, sleeves for control wiring and pipe under walks and paving.
- C. Main line shall be placed in PVC, see plan for type, sleeving that is a minimum of two sizes larger than pipe contained. Lateral line sleeving shall be a minimum of two pipe sizes larger than pipe contained.
- D. Sleeves to be provided and extend a minimum of 12" beyond edges of walls, walks, and paving.
- E. Mark the sleeve ends with an iron post.
- F. Place wires in separate sleeve (1 ½" minimum).
- G. Coordinate sleeve installation with other trades as required.

3.06 PIPE INSTALLATION

- A. Install pipe in accordance with manufacturer's instructions.
 - 1. Solvent-weld PVC pipe and fittings, using primer, solvents, and methods recommended by manufacturer, except where screw connections are required. Clean pipe and fittings of dirt and moisture before assembly. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Make all connections between PVC pipe and metal valves or pipe with threaded fittings using PVC male adapters.
 - 2. Use Teflon tape only on threaded joints, plastic to plastic and/or plastic to metal. Assemble threaded PVC fittings finger-tight plus one to two turns - no more.
- B. Install thrust blocks on main lines (larger than 3") at locations that make a change of direction.
- C. Avoid following piping layout situations:
 - 1. Avoid piping layout along sides of structures.
 - 2. Avoid odd angles in piping layout.
 - 3. Avoid unbalanced friction losses.
 - 4. Avoid high friction losses.

5. Avoid excessive trenching.

3.07 SPRINKLER HEADS

- A. Location of Sprinkler Heads: Sprinkler heads adjacent to back-of-curbs shall be located 6" off curb edge and ½" below top of curb to prevent damage to head. Contractor is responsible for 100% radius (head-to-head) overlap coverage. When possible, locate sprinkler heads so that trees are halfway between the heads. Sprinkler heads and quick coupling valves shall be installed perpendicular to grade and level with terrain, unless otherwise indicated. Do not spray buildings or sidewalks.
- B. All risers to heads shall be constructed to permit height adjustment of head.
- C. Adjustable nozzles are acceptable only in "odd angle" situations. Fixed arc nozzles are required on all other heads.

3.08 ZONE VALVES

- A. Remote Control Valves: Install control valves in valve boxes where shown and group together where practical. Place no closer than 12" to walk edges, buildings, and walls. Set valve boxes flush with finish grade.
- B. Male adapters are NOT permissible - Utilize tee nipples when installing valves or equipment with threaded fittings.
- C. 1", 1 ½", 2" valves shall be placed in separate 12" rectangular valve boxes. Quick couplers may be placed in 10" round.
- D. Valve boxes shall have crushed gravel base, hardware cloth, and landscape fabric to minimize rodent/insect intrusion.
- E. Drip valve assemblies shall be placed in a 12" rectangular valve box - one valve per valve box.

3.09 CONTROLLERS

- A. Install per local code and manufacturer's instructions.
- B. Connect remote control valves to controller in clockwise sequence to correspond with station setting beginning with Stations 1, 2, 3, etc.
- C. Affix a non-fading copy of irrigation diagram to cabinet door. Irrigation diagram is to be sealed between two sheets of 20mm laminate. Irrigation diagram shall be a copy of the as-built drawing and shall show clearly all valves operated by the controller, showing station number, valve size, and type of turf/planting irrigated.
- D. Exact field location of controllers to be verified before installation. Coordinate the electrical service to these locations.

3.10 CONTROL WIRING

- A. Install control wires with sprinkler mains and laterals in common trenches wherever possible. Lie to the side of pipeline and tie wires in bundles at 10' intervals and allow slack for contraction between ties.
- B. Provide a minimum of 3' of looped extra ground and control wire at each valve. Snake wires in trench to allow for contraction of wires.
- C. Control wire splices at remote control valves to be sealed with a Direct Burial Splice Kit - 3M DBY-6/DBR-6. Secure splice kits in an "up-right" orientation in valve box. Ensure that splice sealant completely blocks the path to wire nut inside of splice.
- D. Utilize GB liquid electrical tape to twisted wires prior to placing wire nut and splice kit.

3.11 VALVE BOXES

- A. All valve boxes shall be supported in the ground by using paver style bricks in every corner or side.
- B. See valve box detail on plan for installation directions.
- C. Provide sufficient clearance (minimum 4") between valve box cover and the automatic valve, to prevent damage if the valve box is driven over.
- D. Wood supports of any kind are not allowed.
- E. All valve boxes shall be permanently "branded", 3" minimum label size, indicating zone number and/or equipment enclosed.

3.12 IMPROPERLY OPERATING OR LOCATED EQUIPMENT

- A. Any equipment which fails to operate properly and/or is located incorrectly shall be promptly corrected or relocated at the Contractor's expense. If the Contractor wishes to make any field changes, he must receive written permission from both the Owner and Consultant.

3.13 THRUST BLOCKS

- A. Provide thrust blocks at all changes in size or direction of mainline piping (3" and larger unless otherwise specified). Elbows, reducers, plugs, and the opposite side of tee branches all require thrust blocks. Concrete thrust blocks are constructed by pouring concrete between the fitting and the undisturbed bearing wall of the trench.

3.14 FLUSHING AND TESTING

- A. Cap or plug all openings as soon as lines have been installed to prevent entrance of materials that would obstruct the pipe. Leave in place until removal is necessary for completion of installation.
- B. Thoroughly flush out all water lines before installing heads, valves, and other hydrants.
- C. Testing: All instruments, equipment, facilities, and labor required to conduct the tests shall be provided by Contractor. Piping shall be tested hydrostatically before backfilling and proved tight at a hydrostatic pressure of 100 psi without pumping for a period of one hour with an allowable pressure drop of 5 psi. If hydrostatic pressure cannot be held, Contractor shall adjust or replacements, and the tests repeated until satisfactory results are achieved and accepted by the Owner.
- D. Upon satisfactory completion of testing, complete assembly and adjust all heads for proper arc and radius.

3.15 BACKFILL AND COMPACTING

- A. After system is operating and required tests and inspections have been made, backfill excavations and trenches with clean soil, free of rubbish.
- B. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to a minimum of 95% density under pavements, 85% under planted areas.
- C. Compact trenches in areas to be planted by thoroughly flooding the backfill. Jetting process may be used in those areas.
- D. Dress off all areas to finish grade.

3.16 CLEANUP

- A. Keep areas of work clean, neat, and orderly at all times. Keep paved areas clean during installation. Clean up and remove debris from the entire work areas prior to final acceptance.

- B. Protect irrigation system and materials from damage due to performance of work, operations by other contractors, trades, and trespassers. Maintain protection during installation and testing period.
- C. The Contractor shall be responsible for all damage caused by his operations to trees, turf, shrubs, curbs, paving, structures, utilities, etc., on the site or adjacent to the site of the work and shall repair, replace, or otherwise make good any damage caused by their work.

3.17 WINTERIZATION AND SPRING START-UP OF IRRIGATION SYSTEM

- A. The contractor shall prepare the entire irrigation system for one winter by removing all water within the mainline and lateral piping. Water shall be diverted so as not erode existing landscaping or final grades. If damage does occur, the contractor shall make repairs to the owner's satisfaction at no additional cost.
- B. The contractor shall provide winterizations and Spring Start-up, through spring of 2026, of all of the irrigation systems by filling the mainline and lateral piping with water and operate all control valves with the automatic controller. The contractor shall also set the controller timing for spring irrigation.
- C. During Wintering and Spring Start-up the contractor shall contact the owner and current landscape maintenance provider responsible for the project site and educate them to the operations of the system. Also, the contractor shall provide a written copy to the owner of the irrigation timing required for establishing plants during late spring, summer and fall schedules.
- D. The contractor shall coordinate and assemble a written instruction manual that indicates step by step the winterizing and start-up operations. The instructions shall be included in the O & M manuals.

PART 4 ACCEPTANCE

4.01 ACCEPTANCE

- A. Demonstrate operation of all irrigation zones for the Owner and/or Consultant, a current As-Built is to be provided to the Owner/Consultant for purposes of the walk-thru. All irrigated areas are to have 100% coverage. Contractor shall add additional heads, as necessary, at no cost to the Owner. Adjust all heads as required for proper operation, alignment, elevation, radius, and arc.
- B. A field training course shall be provided for designated operating and maintenance staff members. Training shall be provided for a total period of up to 16 hours of normal working time and shall start after the central control system, weather station and field components of the irrigation system are functionally complete and major adjustments to controller, due to establishment of materials, is substantially complete. Field training shall cover all items contained in the operating and maintenance manuals.
- C. The Contractor will provide on-site consultation with the Owner's operating personnel for a period of 6 months, not to exceed 8 hours per month, at no cost to the Owner. This consultation will be provided at the Owner's request.
- D. All future visits required by the Irrigation Consultant, after the initial punch list, will be charged to the irrigation contractor.

4.02 GUARANTEE

- A. The entire sprinkler system will be unconditionally guaranteed against defects in material and workmanship, including settling of backfilled areas below grade and adjusting heads to proper level through spring 2026.
- B. In addition to minor adjustments, any defective electrical controls, valves, sprinkler heads or other working parts will be repaired or replaced without cost to the Owner throughout the warranty period.
- C. Damage by others during the one-year guarantee period will be the Owner's responsibility.

4.03 RECORD INFORMATION

- A. Furnish record drawings of the complete irrigation system.
- B. Record Drawings and Controller Chart:
 - 1. Provide a complete set of up to date as built drawings, and an electronic copy (AutoCAD release 2018 or newer).
 - 2. Prepare a controller chart showing:
 - a. Location of all sections, valves, lateral lines, and routes of control wires.
 - b. Identify all valves as to size, station, number, and type of irrigation.
 - c. Provide chart as a black line print with a distinct color used to show area of coverage for each station.
 - d. Locate chart inside controller door. Seal chart between two pieces of plastic.
 - 3. Provide suggested irrigation schedule at time of acceptance.
 - 4. Complete chart and receive approval prior to final inspection of irrigation system.

END OF SECTION