

**CONTRACT AND BONDS
FOR PARK CONSTRUCTION**

**PUBLIC WORKS DEPARTMENT
CITY OF WOODBURN, OREGON**



PARK CONSTRUCTION

BOONES CROSSING PARK

BID #:	<u>2023-006-17</u>
PROJECT ACCOUNT #:	_____
WORK ORDER #:	_____
BID OPENING DATE:	<u>May 1st, 2025</u>
BID OPENING TIME:	<u>2:00 PM</u>
SPEC. COMPLETION TIME:	_____

**BOONES CROSSING PARK
CITY OF WOODBURN**

270 Montgomery St
Woodburn, Oregon 97071

OWNER AND PROJECT MANAGER

CITY OF WOODBURN

270 Montgomery St
Woodburn, Oregon 97071

Contact: Jesse Cuomo

Community Development Director

Phone: (503) 982-5266

Email: jesse.cuomo@ci.woodburn.or.us

PRIME CONSULTANT AND LANDSCAPE ARCHITECT

DLA Inc.

Dougherty Landscape Architects
474 Willamette St., Suite 305
Eugene, OR 97401

Contact: David Dougherty

Landscape Architect

Phone: (541) 683-5803

Email: davidd@dladesign.com

CIVIL ENGINEER

City of Woodburn

270 Montgomery St
Woodburn, Oregon 97071

Contact: Dago Garcia,

City Engineer

Phone: (503) 982-5266

Email: Dago.Garcia@ci.woodburn.or.us

BOONES CROSSING PARK CITY OF WOODBURN

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CITY OF WOODBURN

INVITATION TO BID

PROJECT No. 2023-006-17

BID No. 2025-01

Sealed bids for the construction of Boones Crossing Park Project will be received by the City of Woodburn at 190 Garfield Street until 2:00 PM, Thursday, May 1st, 2025 and will thereafter be publicly opened and read.

Proposals shall be addressed to Dago Garcia, City Engineer, City of Woodburn, at 190 Garfield St., Woodburn, OR 97071. Bids shall be submitted in a plain, sealed envelope bearing the Bidder's name, the name of the project, the date and time of the Bid opening, and shall be marked "Bid No. 2025-01".

The major items of work are estimated (approximate) quantities as follows:

1. Grading (approx. 3 acres)
2. Concrete and AC paths
3. Topsoil Placement, Seeding, landscaping
4. Irrigation
5. Basketball court
6. Playground and picnic shelter.
7. Furnishing and related work

Plans and specifications may be examined at the Public Works – Engineering building, located at 190 Garfield Street, Woodburn, OR on or after Thursday April 17th, 2025.

Electronic plan sets are available on the Engineering Division's website at:

<https://www.woodburn-or.gov/publicworks/page/bids-and-rfps>. Additionally, plans have been provided to the following plan center(s):

DJC Plan Center – Portland, OR

Contractor's Plan Center – Clackamas, OR

Salem Contractor's Exchange – Salem, OR

Bidders must be pre-qualified in accordance with the laws of the State of Oregon. A Bidder must file for prequalification; there is no fee. An ODOT prequalification approval letter can be submitted in lieu of prequalifying directly with the City of Woodburn. To prequalify directly with the City, bidders shall make an application using the standard form which is available on the City's website at:

<https://www.woodburnor.gov/publicworks/page/bids-prequalification>. Only bids from pre-qualified Bidders will be opened. Pre-qualification forms must be submitted by 5 pm on April 30th, 2025. This deadline applies to all work related to the project.

No bid for a construction contract shall be received or considered unless the bidder is registered with the Construction Contractors Board. The Contractor and every Subcontractor must have a Public Works Bond filed with the CCB before starting work on the project.

This Contract is for a Public Work subject to ORS 279C.800 to 279C.870 or the Davis-Bacon Act (40 U.S.C. 3141 to 3148). No offer will be received or considered unless the offer contains a statement that the Contractor agrees to be bound by the above provisions.

Contractors must certify nondiscrimination in obtaining required subcontractors in accordance with ORS 279A.110(4) and OAR 137-049-0440(3).

Bidders on this project need not be licensed for asbestos handling pursuant to ORS 468A.720. Each bidder must indicate on the bid form whether they are a resident or nonresident bidder as defined in ORS 279A.120 (b).

All proposals shall be made on the proposal forms. All proposals shall be accompanied by a Bid Bond, equal to ten percent (10%) of the total bid. The form of the bid bond shall be either the Surety's standard form or the AIA form. The Bid Bond shall be forfeited to the City if the Contractor fails to execute the contract within time allotted under the specifications.

Pursuant to ORS 279C.370, bidders on public works projects with an estimated value of \$100,000 or more are required to disclose, two-hours after bid opening, the bidders first-tier subcontractors. The bidder shall provide the required information on the First-Tier Subcontractor Disclosure Form, provided in the contract documents.

At the discretion of the Project Manager, addenda and clarifications shall either be posted on the City's Engineering Division website or delivered to Plan Holders via e-mail. Potential Bidders should check the website daily until the Bid Opening date. Addenda must be signed and submitted with the Bid Proposal to be considered a responsive offer. Bid Questions to be received no later than April 23rd, 2025.

Although contract award is expected to be made by the City Council on Monday, May 12th, 2025 the City of Woodburn reserves the right to cancel, delay or suspend this solicitation or to reject any and all bids not in compliance with prescribed bidding procedures and requirements and may reject for good cause any and all bids upon a finding of the Agency if it is in the public interest to do so. The three (3) lowest bidders may not withdraw or modify their bid prior to the lapse of 35-days after the bid opening.

All project work shall be substantially completed 120 days after notice to proceed.

Heather Pierson
City Recorder
City of Woodburn, OR 9707

INSTRUCTIONS TO BIDDERS

Bids will be received by the City of Woodburn (hereinafter called City) at the City office located at 190 Garfield St, Woodburn, OR 97071, until 2:00 p.m., Pacific Standard Time, Thursday, May 1st, 2025 and shall be publicly opened at that location immediately upon closing.

Each bid must be submitted in an opaque, sealed envelope, addressed to Dago Garcia, City Engineer, City of Woodburn, at the above address. Each bid must be plainly marked on the outside of the envelope with the name of the bidder, the City's address and "Boones Crossing Park". Bids not so marked may be disqualified. If forwarded by mail, the sealed envelope containing the bid must be contained in another envelope addressed to the City at the address listed above. Bids must be received by the City in the City Hall Annex (Public Works) by 2:00 p.m. on May 1st. Faxed or electronically submitted bids shall be refused as non-responsive.

Bidders must be pre-qualified in accordance with the laws of the State of Oregon. A Bidder must file for prequalification; there is no fee. An ODOT prequalification approval letter can be submitted in lieu of prequalifying directly with the City of Woodburn. To prequalify directly with the City, bidders shall make an application using the standard form which is available on the City's website at:

<https://www.woodburnor.gov/publicworks/page/bids-prequalification>. Only bids from pre-qualified Bidders will be opened. Pre-qualification forms must be submitted by 5 pm on April 30th, 2025. This deadline applies to all work related to the project.

This project is subject to the prevailing wages rates under the Oregon Prevailing Wages Law (BOLI). Prevailing wage rates are available at the following website:
<https://www.oregon.gov/boli/employers/pages/prevailing-wage.aspx>.

Inquiries can be made to David Dougherty at DLA Inc. (Dougherty Landscape Architects); (541) 683-5803. Statements made by City through correspondence of any kind are not binding on City unless confirmed by written addendum.

Contract terms, conditions and Project specifications for this Project (Project Documents) may be examined at the City office located at 190 Garfield St, Woodburn, Oregon 97071, or downloaded from the City website at <https://www.woodburn-or.gov/publicworks/page/bids-and-rfps>. Printed Copies of the Project Documents may be obtained from DLA Inc. (Dougherty Landscape Architects), at 474 Willamette Street, Suite 305 Eugene, OR 97401 for a non-refundable cost of \$75.00.

All bids must be submitted on the required bid form. All blank spaces for bid prices must be completed in ink and the bid form must be fully completed and executed when submitted. Only one copy of the bid form is required. To be considered, each bid must be accompanied by a bid bond or certified check in the amount of 10% of the bid.

Contractor must comply with all federal, state, and local laws or regulations dealing with the prevention of environmental pollution and preservation of natural resources that affect the performance of the Contract.

1. Non-Compliant Bids

The City may reject any bid not in compliance with all prescribed public bidding procedures and requirements. Any bid failing to certify compliance with ORS 279C.800 to 279C.870 *et seq.* will not be received or considered by City. All bids must identify whether the bidder is a resident bidder as defined in ORS 279A.120. The City may reject for good cause any and all bids upon finding it is in the public interest to do so. Any bid may be withdrawn prior to the above scheduled time for the opening of bids, or any authorized postponement. Any bid received after the closing time and date specified above shall not be considered. No bidder may withdraw a bid within forty (40) days after the actual date of the bid opening. Should there be reasons why the contract cannot be awarded within the specified time, the time may be extended by mutual agreement between the City and the bidder.

2. Bidder Responsibilities

Before submitting a bid, each bidder must:

- (a) Examine the contract documents thoroughly;
- (b) Visit the site, so that the bidder may familiarize itself with local conditions which may, in any manner, affect cost progress, or performance of the Work;
- (c) Be familiar with state, federal, and local laws, ordinances, rules and regulations which may, in any manner, affect cost, progress or performance of the Work; and
- (d) Study and carefully correlate bidder's observations with the contract documents.
- (e) All prospective bidders must be added to the Plan Holders List by sending an e-mail with company contact information to max.rosenthal@ci.woodburn.or.us with the project title in the subject line. General contractors must join the plan holders list to receive addenda.

3. Instructions for First-Tier Subcontractor Disclosure

Bidders are required to disclose information about certain first-tier subcontractors when the contract value for a Public Improvement is greater than \$100,000 (see ORS 279C.370). Specifically, when the contract amount of a first-tier subcontractor furnishing labor or labor and materials would be greater than or equal to: 5% of the Project Bid, but at least \$15,000, or (ii) \$350,000 regardless of the percentage, the bidder must disclose the following information about that subcontract either in its Bid submission, or within two hours after Bid Closing:

- (1) The subcontractor's name,
- (2) The category of work that the subcontractor would be performing, and

(3) The dollar value of the subcontract.

If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate "NONE" on the accompanying form.

THE CONTRACTING AGENCY MUST REJECT A BID IF THE BIDDER FAILS TO SUBMIT THE DISCLOSURE FORM WITH THIS INFORMATION BY THE STATED DEADLINE (see OAR 137-049-0360).

4. The Importance of Bids and Contract Documents

The submission of a bid will constitute an incontrovertible representation by the bidder that the bidder has complied with each of the requirements listed above and that the contract documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work. The plans for the Project provide bidders a delineated description of the land owned and the area involving easements. Bidders are to scrupulously follow these boundaries and not encroach upon, in any manner, property owned by any other person.

The contract documents contain the provisions required for the construction of the Project. Information obtained from an officer, agent, or employee of the City or any other person is not binding upon the City, and shall not affect the risks or obligations assumed by the Contractor or relieve Contractor from fulfilling any conditions of this solicitation or the contract, once executed, unless confirmed by written addendum or contract amendment.

5. Requests for Clarification/Addenda and Protests

Prior to the deadline for submission, Contractors may request that the City clarify any provision of the invitation to bid. Requests for clarification must follow the provisions of OAR 137-049-0260. Requests for clarification must be in writing and must be submitted at least ten (10) days prior to closing. The City shall post any addenda, clarifications, etc. on the Agency website. It is the responsibility of the Contractor to download addenda and clarifications before submission of bids. Contractor shall sign and submit with offer all Addenda associated (posted on website) with the project.

Contractors may submit protests to any specifications or contract terms included in the invitation to bid. Protests must follow the provisions set out in OAR 137-049-0260. Protests must specify the legal and factual grounds as to why the terms prejudice the Contractor and how the term could be changed. Protests must be in writing and must be received ten (10) days prior to closing.

6. Performance and Payment Bonds

A performance bond and a payment bond, in the forms attached, each in the amount of 100% of the contract price, with a corporate surety approved by the City, will be required for the faithful performance of the contract. Attorneys in fact who sign bid bonds or payment bonds and performance bonds must file with each bond a certified and effective dated copy of their Power of Attorney. All bonding companies must be authorized to do business in the State of Oregon.

7. Award of Contract

Award of the Contract, by the Contract Review Board (City Council), will be by recommendation of the Public Works Department, the contractor will be selected by the lowest combined bid of base and alternate bids(s) price, with the selection of alternates at the discretion of the City in accordance of the Construction Contractors Board under ORS 701.227 for bidders who are not qualified to hold a public improvement contract and determine whether the bidder has met the standards of responsibility. City shall also consider the following factors and may disqualify any person as a bidder if it finds the bidder:

- (a) Does not have available the appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain the resources and expertise, necessary to meet all contractual responsibilities;
- (b) Does not have a satisfactory record of performance. The City shall document the record of performance of a bidder if the City finds the bidder not to be responsible under this paragraph (b);
- (c) Does not have a satisfactory record of integrity. The City shall document the record of integrity of a bidder if the City finds the bidder not to be responsible under this paragraph (c);
- (d) Is not qualified legally to contract with the City; or
- (e) Has not supplied all necessary information in connection with the inquiry concerning responsibility.

Each bidder shall promptly supply information as requested by the City pursuant to such investigation. If a bidder fails to promptly supply information requested by the City concerning responsibility, the City shall base the determination of responsibility upon any available information, or may find the bidder not to be responsible. Failure to supply such information may be grounds for disqualification.

8. Registration and Licenses

No bid for a construction contract shall be received or considered by the City unless the bidder is registered and in good standing with the Construction Contractors Board or licensed and in good standing with the State Landscape Contractors Board, as required by ORS 671.530.

9. Special Concerns

Republic Services provides waste management as a franchise utility in Woodburn. Currently they service everything north of OR-Hwy. 214 on Fridays and everything south of OR-Hwy. 214 on Mondays. The contractor shall schedule his work efforts with this schedule in mind.

Republic Services' office is located at:

2215 N. Front St.
Woodburn, OR 97071
503.981.1278

10. Process

City anticipates awarding the Contract within 30 days after the scheduled opening.

The bidder to whom the contract is awarded will be required to execute the agreement and obtain the performance and payment bonds within thirty (30) calendar days from the date when Notice of Award is delivered to the bidder. The Notice of Award shall be accompanied by the necessary agreement and bond forms. In case of a failure of the bidder to execute the agreement, the City may, at its option, consider the bidder in default in which case the bid bond accompanying the bid shall become the property of the City.

The City, within thirty (30) days of receipt of an acceptable performance bond, an acceptable payment bond, and the required agreements signed by the successful bidder, including proof of insurance as required by the contract documents, shall sign and return to the successful bidder an executed duplicate of the agreement and notice to proceed. If the 30-day notice to proceed has not been issued within the 30-day period, or within a period mutually agreed upon, the Contractor may terminate the agreement without further liability on the part of either party. Such termination shall be by written notices and will be effective upon receipt by the City.

The award will be made to the lowest responsible bidder. The Contractor shall submit to the City representative by the last calendar day of each month a partial payment estimates for work performed during the prior pay period in conformance to the payment procedure as specified. The cutoff date for work performed shall be the 26th day of the month in which a payment estimate is submitted. The City will approve and authorize payment of partial payment estimates approved by the City representative at its regular monthly City Council meeting.

11. Solicitation Schedule

- April 17th (Thursday)- **Bid Published**
- May 1st (Thursday)- **Bids Due**
- May 2nd (Friday) - **Contractor selected (Notice of Intent to Award)**
- May 12th (Monday) - **Council Award**
- May 13th (Tuesday) - **Notice of Award**

12. Estimate

The estimated range for this project is between \$1,100,000 to \$1,200,000.

BID FORM

Honorable Mayor and City Council
City Hall
Woodburn, Oregon 97071

This bid is submitted to the City of Woodburn, 190 Garfield St, Woodburn, Oregon 97071

1. The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that the Proposal is in all respects fair and without fraud, which it is made without any connection or collusion with any person making another Proposal on this Contract.
2. The Bidder further declares that he has carefully examined the Contract Documents for the construction of the proposed improvements; that he has personally inspected the site; that he has satisfied himself as to the quantities of materials, items of equipment, and conditions or work involved, including the fact that the description of work and materials as included herein, is brief and is intended only to indicate the general nature of such items and to identify the said quantities with the detailed requirements of the Contract Documents; and that this Proposal is made according to the provisions and the terms of the Contract Documents, which Documents are herein attached and are hereby made a part of this Proposal.
3. The Bidder further agrees to complete construction of all work in accordance to the specifications incorporated herein, and including the plans and details.
4. In the event the Bidder is awarded the Contract and shall fail to complete the work within the 150-day timeframe from the Notice to Proceed, liquidated damages shall be paid to the City of Woodburn, Oregon, of not less than \$350.00 per day, until the work shall have been finished, as provided by the Contract Documents.
5. The Bidder further proposes to accept as full payment for the work proposed herein the amount computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved, that they represent a true measure of the labor and material required to perform the work, including all allowance for overhead and profit for each type and unit of work called for in these Contract Documents.

The amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.

It is declared that the Bidder will comply with all the provisions of ORS 279C.840.

6. The workmen on the project will be paid not less than the prevailing rates of wages. It is agreed that if the Bidder is awarded the Contract for the work herein proposed and shall fail or refuse to execute the Contract and furnish the specified

Performance Bond within ten (10) calendar days after receipt of notification of acceptance of his Proposal, then, in that event, the bid security in the sum of:

(In Words): _____

(In Numbers):\$ _____

deposited herewith according to the conditions of the Advertisement for Bids and Information to Bidders, shall be retained by the City of Woodburn, Oregon, as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the City of Woodburn will sustain in case the Bidder shall fail or refuse to enter into the contract for the said work and to furnish the Performance Bond as specified in the Contract Documents. Bid security in the form of a certified check shall be subject to the same requirements as a bid bond.

If the Bidder is awarded a construction contract on this proposal, the surety who will provide the Performance Bond will be:

_____whose address is:

Street

City

State

Zip

Agents Name: _____ Phone No. _____

The address for all communications concerned with this Proposal and where the Contract shall be sent is:

Contractor: _____ doing business at:

Street

City

State

Zip

<u>ITEM</u>	<u>BID ITEM DESCRIPTION</u>	<u>UNITS</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
1	Mobilization, Bonds and Insurance	LS	1		
2	Erosion Control - Complete	LS	1		
3	Temp. WZTC - Complete	LS	1		
4	Construction survey	LS	1		
5	Grading / Excavation & Earthwork	SF	130,087		
6	Geotextile Paving & Filter Fabric	LS	1		
7	4- Inch Perf Pipe	LF	110		
8	6 - Inch Storm pipe	LF	629		
9	8 - Inch Storm pipe	LF	18		
10	6 - Inch Stormwater Clean out	EA	1		
11	Area Drain	EA	3		
12	Soakage Trench	EA	1		
13	Domestic Water Line	LF	202		
14	Asphaltic Concrete Paving-Complete	SF	11,723		
15	4" Concrete Paving-Complete	SF	7,208		
16	6" Concrete Paving-Complete	SF	545		
17	Concrete Driveway Approach, 8-Inch Thick Concrete Pavement- Complete	LS	1		
18	Truncated dome	EA	2		
19	Play Area Thickened Edge	LF	248		
20	Synthetic Turf Playground Surfacing (including sub-base and drainage)	SF	6,056		
21	Reinforced Concrete Basketball Court	SF	3840		
22	Concrete Seat walls	LF	72		
23	Concrete Mow Edge per detail 4/LA-4	LF	46		
24	Playground Equipment Installation (OFCI)	LS	1		
25	Picnic Shelter Installation (OFCI)	LS	1		
26	Install Basketball hoops including Footing (OFCI)	EA	2		
27	Pavement Markings (including basketball, four square and hopscotch)	LS	1		
28	Installation of Site Furnishing (13 Benches, 5 Picnic Tables, 5 Trash cans, 4 bollards, 10 bike racks)	EA	37		
29	Drinking Fountain Installation (OFCI)	EA	1		
30	Skate Deterrents	EA	20		
31	Import topsoil (18") & Soil Amendments at Plant beds	SF	4,138		
32	Import topsoil (6") & Soil Amendments at Lawn Areas	SF	83,843		
33	Irrigation	LS	1		
34	Mulch	CY	175		
35	Trees	EA	73		
36	Landscaping(bulbs, groundcover & shrubs)	LS	1		
37	Seeding & Lawn Establishment	LS	1		
38	Edging	LF	450		

BASE BID GRAND TOTAL:

\$

<u>Item</u>	<u>Bid Item Description</u>	<u>UNITS</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
	Deduct Alternate #1 - Basketball Court				
39	Asphaltic Concrete w/Surface Coating & Markings	LS	1		

ALTERNATE #1 TOTAL:

\$

	Deduct-Alternate #2 - Playground Surfacing				
40	Woodchip Play Surfacing and ADA Ramp	LS	1		

ALTERNATE #2 TOTAL:

\$

	Add Alternate #3- Borrow Fill				
41	Alternate 3B – Borrow Fill	LS	1		

ALTERNATE #3 TOTAL:

\$

	Add Alternate #4- Iris Street Frontage				
42	4" Concrete Paving-Complete	SF	5249		
43	Pedestrian Ramp - Complete	LS	1		
44	Import topsoil (6") & Soil Amendments at Lawn Areas	SF	3493		
45	Irrigation	LS	1		
46	Mulch (3")	CY	25		
47	Trees	EACH	14		
48	Seeding & Lawn Establishment	SF	2680		

ALTERNATE #4 TOTAL:

\$

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

_____interested_____

(If Sole Proprietor or Partnership)

In witness hereto the undersigned has set his (its) hand this _____ day of _____,
20____.

Signature of Bidder

Title (If Corporation)

In witness whereof the undersigned corporation has caused this instrument to be
executed and its seal affixed by its duly authorized officer this _____ day of
_____, 20_____.

Name of Corporation _____

By: _____

Title _____

Construction Contractor's Board No. _____

Attest: _____

Secretary

"Bidder will comply with the provisions of Chapter 279C.800 through 279C.870, Oregon
Revised Statutes.

Initial

Attest: _____

Bidder

NOTICE OF AWARD

To: _____

PROJECT description: City of Woodburn (City)
Boones Crossing Park

The City has considered the bid submitted by _____ (Contractor) for the above described Project in response to its advertisement for bids dated [weekday], _____, 20__, and Instructions to Bidders.

Contractor is hereby notified that its base bid in the amount of _____
(amount in written form)
(\$_____) has been accepted by the City.

Contractor is hereby notified that its Alternate #1 bid in the amount of _____
(amount in written form)
(\$_____) has been accepted or rejected by the City.

Contractor is required by the Instructions to Bidders to execute the Construction Agreement and furnish the required Contractor's Performance Bond, Payment Bond and certificates of insurance within ten (10) calendar days from the date of this notice.

If Contractor fails to execute the Construction Agreement and to furnish the required bonds and certificates of insurance within ten (10) days from the date of this notice, City will be entitled to consider all Contractor's rights arising out of City's acceptance of Contractor's bid as abandoned and as a forfeiture of Contractor's bid bond. City will be entitled to such other rights as may be granted by law.

Please return an acknowledged copy of this Notice to Award to City.

DATED this _____ day of _____, 20__

CITY OF WOODBURN

By: _____

* * * * *

ACCEPTANCE OF AWARD

Receipt of the above Notice of Award is hereby acknowledged by _____

_____ on this _____ day of _____, 20____

By: _____

Title: _____

NOTICE TO PROCEED

TO: _____ Date: _____

City of Woodburn (City)

Boones Crossing Park

_____ (Contractor) is hereby notified to commence Project in accordance with the Construction Agreement dated _____, 20__, on or before _____, 20__, and Contractor is to complete the Work on the Project within 150 consecutive calendar days thereafter. The date of final completion for all work is 30 days after substantial completion.

Please return an acknowledged copy of this Notice to Proceed to City.

CITY OF WOODBURN

By: _____

* * * * *

NON-COLLUSION AFFIDAVIT

STATE OF _____) City of Woodburn
) ss.
County of _____) Boones Crossing Park

I state that I am _____ of _____
and that I am authorized to make this affidavit on behalf of my firm, and its owners,
directors, and officers. I am the person responsible in my firm for the price(s) and the
amount of this bid.

I state that:

- (1) The price(s) and amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder, except as disclosed on the attached appendix.
- (2) That neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been discussed with any other contractor, bidder or potential bidder, except as disclosed on the attached appendix.
- (3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.
- (4) The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.
- (5) _____, its affiliates, subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted of or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as described on the attached appendix.

I state that _____ understands and acknowledges that the above representations are material and important and will be relied on by the City in awarding the contract(s) for which this bid is submitted. I understand, and my firm understands

that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the City of the true facts relating to the submission of bids for this contract.

Name of Company:_____

Position:_____

SIGNED and SWORN to before me this _____ day of _____,
20____, by _____.

Notary Public for _____

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

PROJECT NAME: Boones Ferry Crossing

BID #: _____

BID CLOSING: Date: _____ Time: _____

This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours after the advertised bid closing time.

List below the name of each subcontractor that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

NAME	DOLLAR VALUE	CATEGORY OF WORK
1) _____	\$ _____	_____
2) _____	\$ _____	_____
3) _____	\$ _____	_____
4) _____	\$ _____	_____
5) _____	\$ _____	_____
6) _____	\$ _____	_____

FAILURE TO SUBMIT THIS FORM BY THE DISCLOSURE DEADLINE WILL RESULT IN A NON-RESPONSIVE BID. A NON-RESPONSIVE BID WILL NOT BE CONSIDERED FOR AWARD.

Form submitted by (bidder name): _____

Contact name: _____

Phone no.: _____

BIDDER'S PERFORMANCE AND PAYMENT BOND STATEMENT

_____ (Contractor) is submitting a bid to City of Woodburn (City) pursuant to the City's advertisement for bids dated Thursday, April 17th, 2025

Contractor certifies that, if it is awarded the contract, Contractor has the financial ability to obtain good and sufficient bonds in the forms attached, issued by a surety to the City, each in a sum equal to the amount of the bid providing for the faithful performance of the contract.

Contractor understands and agrees that if Contractor fails to provide either the required performance bond or payment bond, the City may reject the bid and the bid bond submitted with the bid may be forfeited.

The surety requested to issue the performance bond will be _____ (Surety Company). Contractor authorizes Surety Company to disclose any information to City concerning Contractor's ability to supply a performance bond in the amount of the contract.

The surety requested to issue the payment bond will be _____ (Surety Company). Contractor authorizes Surety Company to disclose any information to City concerning Contractor's ability to supply a payment bond in the amount of the contract.

(Name of Contractor)

By: _____

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS that

(Name of Contractor)

(Address of Contractor)

a _____ hereinafter called "PRINCIPAL", and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

(Oregon representative for service of process for Surety)

hereinafter called "SURETY", are held and firmly bound unto
City of Woodburn
270 Montgomery St
Woodburn, OR 97071

hereinafter called "OWNER", in the total amount of _____
(insert here a sum
_____ Dollars (\$_____) for the
equal to the contract price)

payment whereof PRINCIPAL and SURETY bind themselves, their heirs, executors,
administrators, successors and assigns jointly and severally, firmly by these presents.

WHEREAS, the PRINCIPAL has by written agreement entered into a certain contract
with the OWNER, dated the _____ day of _____, 20____, a copy of which is
hereto attached and made a part hereof and is hereinafter referred to as the Contract.
Said Contract is for:

NOW, THEREFORE:

1. The condition of this obligation is such that, if PRINCIPAL shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

2. The SURETY hereby waives notice of any alteration or extension of time made by the OWNER.

3. It is expressly agreed that the Bond shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment of the Contract, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the Contract as so amended. The term "Amendment," wherever used in this Bond, and whether referring to this Bond, the Contract, or any Loan Documents shall include any alteration, addition, extension or modification of any character whatsoever.

4. Whenever PRINCIPAL shall be, and declared by OWNER to be in default under the Contract, the OWNER having performed OWNER's obligations thereunder, the SURETY may promptly remedy the default, or shall promptly:

a) Arrange for the PRINCIPAL, with consent of the OWNER, to perform and complete the contract;

b) Complete the Contract in accordance with its terms and conditions,
or

c) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and 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 above. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by OWNER to PRINCIPAL under the Contract and any amendments thereto, less the amount properly paid by OWNER to PRINCIPAL.

5. Any suit under this Bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

6. If any provision of this Bond conflicts with state law, such portion will be deemed deleted therefrom and provisions conforming to such state law shall be deemed incorporated herein. The intent is that the bond shall be construed as a statutory bond and not as a common law bond.

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

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2025.

ATTEST:

PRINCIPAL

(PRINCIPAL) Secretary
(SEAL)

By: _____

(Witness to PRINCIPAL)

(Address)

(Address)

(SURETY)

ATTEST:

(Witness to SURETY)

By _____
(Attorney-in-Fact)

(Address)

(Address)

NOTE:

Date of Bond must not be prior to date of Contract. If CONTRACTOR is partnership, all partners must execute Bond.

IMPORTANT:

SURETY companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in Oregon. SURETY companies must also have an Oregon representative for service of process.

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of
Principal Place of Business):

CONTRACT

Effective Date of Agreement:

Amount:

Description (Name and Location):

BOND

Bond Number: _____

Date (Not earlier than Effective Date of Agreement): _____

Amount: _____

Modifications to this Bond Form: _____

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(Seal)
Contractor's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name: _____

Print Name: _____

Title: _____

Title: _____

ATTEST: _____

Signature

ATTEST: _____

Signature

Title

Title

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the

name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor indicated the claim will be paid directly or indirectly; and
3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. Reserved.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted here from and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY:

Name, Address and Telephone:

Surety Agency or Broker:

Owner's Representative (Engineer or other):

AGREEMENT

THIS AGREEMENT is made this _____ day of _____, 20____, by and between the City of Woodburn, hereinafter called Owner, and _____, hereinafter called Contractor, in consideration of mutual covenants hereinafter set forth, agree as follows:

1. **Work.** Contractor shall complete all work as specified in the contract documents and in accordance with the documents and drawings provided for the Project known as the Boones Crossing Park.
2. **Materials.** Contractor will furnish all materials, supplies, tools, equipment, labor and other services necessary for the construction and completion of the Project described herein.
3. **Contract Time.** The Work will commence within ten (10) calendar days after the date of notice to proceed and will be completed by the Contractor within _____ days unless the period for completion is extended otherwise by the contract documents or by written agreement of the parties.
4. **Contract Price.** Owner shall pay Contractor for performance of the Work in accordance with the documents the sum of \$_____ as shown in Contractor's bid.
5. **Liquidated Damages.** Owner and Contractor acknowledge and agree that if substantial and final completion of the Work is not achieved by the contract times for such completion, the amount of Owner's actual loss of use damages will be difficult, and impractical or impossible to determine. Accordingly, the parties agree that if substantial and final completion is not achieved by the agreed dates of substantial completion and/or final completion, as adjusted pursuant to the contract documents, the Contractor shall pay to Owner as liquidated damages for the loss of use of the Project the following amounts:
 - 1) The sum of Three hundred and fifty Dollars (\$350.00) for each partial or full day of delay beyond the deadline for substantial completion; and

The parties further acknowledge and agree that the daily sums and liquidated damages to be paid as set forth above are reasonable and that the payment of such liquidated damages is not intended to nor constitutes a penalty or forfeiture.

The parties further acknowledge that these liquidated damages are meant to reimburse the Owner only for loss of use delay damages and that Owner reserves the right to claim other types of damages against Contractor including but not limited to actual delay damages.

- 6. Progress Payments.** Owner shall make progress payments on the basis of the Contractor's application for payment as approved by the Owner's representative on or about the last day of each month during construction as provided herein. All progress payments shall be on the basis of progress of the Work measured by the schedule of values provided for in Section 19 of the General Conditions. Unless the Contractor submits security as permitted by, and which complies with, ORS 279C.560 and 701.435 for all or a portion of the retainage required herein, prior to substantial completion, progress payments will be an amount equal to not more than 95% of the Work completed and 95% of the materials and equipment not incorporated in the Work, but delivered and suitably stored, less in each case the aggregate of payments previously made. Upon substantial completion, the Owner shall pay an amount sufficient to increase total payments to Contractor to 95% of the contract price, less such amounts as the Owner shall determine in accordance with Section 19 of the General Conditions. Final payment shall be upon final completion and acceptance of the Work. Approved partial payment estimates shall be reviewed and approved at the next regularly scheduled Council meeting.
- 7. Contract Documents.** The term "contract documents" means and includes the following:

 - (a) Invitation to Bid;
 - (b) Instructions to Bidders;
 - (c) Bid;
 - (d) Bid Bond;
 - (e) Construction Agreement;
 - (f) First-Tier Subcontractor Disclosure Form
 - (g) Oregon Prevailing Wage Rates;
 - (h) General Conditions;
 - (i) Payment Bond;
 - (j) Performance Bond;
 - (k) Notice of Intent to Award;
 - (l) Notice to Proceed;
 - (m) Drawings and Specifications attached;
 - (n) Change Orders;
 - (o) Addenda; Number: _____ Dated: _____
 - (p) Proof of Insurance
- 8. Contractor's Representations.** In order to induce Owner to enter into this agreement, Contractor makes the following representations:

- (a) Contractor has familiarized itself with the nature and extent of the contract documents, work, locality, and with all local conditions and any federal, state, and local laws, ordinances, rules, and regulations which, in any manner, may affect cost, progress, or performance of the Work;
- (b) Contractor has studied carefully all reports, investigations, and tests of subsurface and latent physical conditions at the site which may affect cost, progress, or performance of work and which were relied upon in the preparation of the drawings and specifications;
- (c) Contractor has made or has caused to be made examinations, investigations, tests and studies of reports and related data, in addition to those referred to in paragraph (b), which Contractor deems necessary for the performance of the Work, determination of the contract price, and completion of the Project within the contract time in accordance with the other terms and conditions of the contract documents. No additional examinations, investigations, tests, reports, or similar data are or will be required by Contractor for such purposes;
- (d) Contractor has reconciled the results of all such observations, examinations, investigations, tests, reports, and data with the terms and conditions of the contract documents;
- (e) Contractor has given the Owner's representative written notice of all conflicts, errors or discrepancies which he has discovered in the contract documents and the written resolution thereof by the Owner's representative is acceptable to the Contractor.

9. Miscellaneous.

- (a) No assignment by a party hereto of any rights under or interests in the contract documents will be binding on another party to this contract without the written consent of the parties sought to be bound; and specifically but without limitation, monies which may become due and monies which are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law) and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the contract documents.
- (b) This Agreement shall be binding upon all parties to the contract and their respective partners, successor, heirs, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the contractual documents.

THIS AGREEMENT is effective on the _____ day of _____, 2025.

OWNER:

CONTRACTOR:

By: _____

By: _____

Address for giving notices:

Address for giving notices:

ATTEST:

ATTEST:

Agent for Service of Process

License # _____

GENERAL CONDITIONS

Section 1. Definitions. Whenever used in these General Conditions or in the other contract documents, the following terms have the meanings indicated which are applicable in both the singular and plural or masculine or feminine thereof:

1. Addenda. Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the contract documents, Drawings and specifications by additions, deletions, clarifications, or corrections.
2. Bid. The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
3. Bonds. Bid, performance and payment bonds and other instruments of security.
4. Change Order. A written order to the Contractor signed by the Owner authorizing an addition, deletion or revision in the Work, or an adjustment in the contract price or the contract time issued after the effective date of the Agreement.
5. Contract Price. The total monies payable to the Contractor under the terms and conditions of the contract documents.
6. Contract Time. The number of calendar days stated in the contract documents for completion of the Work.
7. Contractor. The person, firm, or corporation with whom the Owner has executed the Agreement.
8. Drawings. The part of the contract documents which show the characteristics and scope of the Work to be performed and are referred to in the contract documents.
9. Owner's Representative. That person appointed by the City Council of the Owner to act as the Owner's Representative in all matters relating to this contract.
10. Field Order. A written order issued by the Owner's Representative which orders minor changes in Work not involving an adjustment in the contract price or an extension of the contract time.
11. Substantial Completion. The date certified by the Owner's Representative when the construction of the Project or a specified part thereof is sufficiently completed in accordance with the contract documents so that the Project or a specified part can be utilized for purposes for which it is intended.

12. Subcontractor. An individual, firm, or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site.
13. Supplier. Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design but who does not perform labor at the site.
14. Work. All labor necessary to produce the construction required by the contract documents and all materials and equipment incorporated or to be incorporated in the Project.
15. Written Notice. Any notice to any party to the Agreement, or relative to any part of this Agreement, in writing is considered delivered and service completed when posted by certified mail or registered mail to the party at the party's last given address as shown on the Agreement, or when delivered in person to the party or the party's authorized representative on the worksite.

Section 2. Preliminary Matters.

1. Delivery of Bonds. When the Contractor delivers the executed Contract Documents to the Owner, Contractor shall also deliver to Owner such bonds as the Contractor may be required to furnish.
2. Copies of Documents. Owner shall furnish to Contractor up to three (3) copies of the contract documents. Additional copies will be furnished upon request at the cost of reproduction.
3. Commencement of Contract Time. The contract time will commence to run on the day indicated in the Notice to Proceed.
4. Insurance. Before undertaking any Work on the Project, Contractor shall obtain and, during the life of this Agreement, Contractor shall maintain the following minimum public liability and property damage insurance naming the Owner as an additional insured, which shall protect the Owner and the Contractor from claims for injuries, including accidental death, as well as from claims for property damage which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents whether such performance is by Contractor or any Subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:
 - (a) Commercial general liability insurance, including personal injury liability, blanket contractual liability and broad form property damage liability. The

combined single limit for bodily injury and property damage shall not be less than \$2,000,000.

(b) Statutory workers' compensation and employer's liability insurance for the State of Oregon.

Contractor shall provide the Owner with certificates of insurance before undertaking any Work on the Project. Insurance policies shall not be amended, canceled or terminated without 30-days prior written notice to the Owner.

5. Owner Insurance. The Owner shall be responsible for purchasing and maintaining its own liability insurance. Owner shall also purchase and maintain property insurance upon the Work at the site to the full insurable value thereof and shall include the interest of the Owner, Contractor and Subcontractors in the Work against the perils of fire and extended coverage. All other risk of loss at the Work site shall be borne by Contractor until acceptance of building by Owner.
6. Subrogation Waiver. Owner and Contractor waive all rights against each other, their agents and any Subcontractors and their agents and employees for damages caused by fire or other perils to the extent covered by insurance provided for in this Section. The Contractor shall require similar written waivers from each Subcontractor and each such waiver shall be in favor of all other parties enumerated in this paragraph.

Section 3. Contract Documents.

1. The contract documents comprise the entire agreement between Owner and Contractor concerning the Work. They may be altered only by written modification, as provided in this Agreement.
2. The contract documents are complementary; what is called for by one is binding as if called for by all. If, during the performance of the Work, Contractor finds a conflict, error or discrepancy in the contract documents, Contractor shall report it to the Owner's Representative in writing at once and before proceeding with the Work affected by the conflict.
3. It is the intent of the specifications and Drawings to describe the complete Project to be constructed in accordance with the contract documents. Any Work which may reasonably be inferred from the specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials, or equipment, such words shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual or code in effect at the time of the opening of the bid, except as may be otherwise specifically

stated. However, no provision of any reference, standard, specification, manual or code shall change the duties and responsibilities of the Owner, Contractor, or any of their agents or employees from those set forth in the contract documents. Clarifications and interpretations of the contract documents shall be issued by the Owner's Representative.

4. Re-use of Documents. Neither Contractor nor any Subcontractor, manufacturer, fabricator, Supplier, or distributor shall have or acquire any title to or ownership rights in any of the Drawings, specifications, or other documents which are a part of this contract. They may not be reused by any party without the express written consent of the Owner and of the preparer of the Drawings.

Section 4. Materials, Service and Facilities.

1. It is understood that, except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, lights, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the Work within the specified time.
2. Materials and equipment shall be stored so as to ensure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
3. All materials and equipment shall be of good quality and new except as otherwise provided in the contract documents.
4. Equivalent Materials and Equipment. Whenever materials or equipment are specified or described in Drawings or specifications by using the name of proprietary item or the name of a particular manufacturer, fabricator, Supplier or distributor, the name of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other manufacturers, fabricators, Suppliers, or distributors may be accepted by the Owner's Representative if sufficient information is submitted by Contractor to allow the Owner's Representative to determine that the material proposed is equivalent to that named.
5. Contractor shall be fully responsible for all acts and omissions of its Subcontractors and of persons and organizations directly or indirectly employed by Contractor and any Subcontractor and of persons or organizations for whose acts any of them may be liable to the same extent Contractor is responsible for the acts and omissions of persons directly employed by Contractor. Nothing in

these documents creates any obligation on the part of the Owner to pay or to see to the payment of any monies due any Subcontractor or other person or organization except as may otherwise be required by law.

Section 5. Fees, Taxes and Permits.

1. Contractor shall pay all applicable royalties and license fees. Contractor shall defend all suits or claims for infringement of any patent rights and save Owner harmless from loss on account thereof.
2. All permits and licenses, including other governmental fees, licenses, and inspections required for construction shall be obtained at the expense of Contractor. Owner shall assist the Contractor when necessary in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work and which are applicable at the time of Bid opening. Contractor shall pay all charges of utility service companies for connections to the Work. Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by Contractor in accordance with the laws of the place of the Project.

Section 6. Survey, Permits and Regulations.

1. Owner shall furnish all boundary surveys and establish all base lines for locating principal component parts of the Work together with a suitable number of bench marks adjacent to the Work as shown in the contract documents. From the information provided by Owner, unless otherwise specified in the contract documents, Contractor shall develop and make all detailed surveys needed for construction such as slope stakes, stakes for piling locations, and other working points, lines, elevations and cut sheets.
2. The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, Contractor shall be charged with the resulting expense and shall be responsible for any mistakes which may be caused by unnecessary loss or disturbance.

Section 7. Protection of Work, Property and Persons.

Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor will take all necessary precautions for the safety of, or provide the necessary protection to prevent injury, damage, or loss, to all employees on the worksite and other persons who may be affected. Contractor shall also be responsible for all safety precautions regarding all Work and all materials or equipment to be incorporated into the Work, whether in storage on or off the site, and the property at the site or adjacent to it, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designed for removal, relocation, or replacement in the course of construction. Contractor will

remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or any for whose acts any of them may be liable except for acts directly attributable to Owner or Owner's Representative or any person employed by either of them whose acts are not attributable directly or indirectly in whole or in part to the fault or negligence of Contractor.

Section 8. Supervision by Contractor.

The Contractor will supervise and direct the Work. Contractor will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor will employ and maintain on the Work a qualified supervisor who shall have been designated in writing by Contractor as Contractor's representative at the site. The supervisor shall have full authority to act on behalf of Contractor and all communications given to the supervisor shall be as binding as if given to Contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.

Section 9. Changes in Work.

Owner, at any time the need arises, may order changes in the scope of the Work without invalidating the Agreement. If such changes increase or decrease the amount due under the contract documents, or the time required for performance of the Work, an equitable adjustment shall be authorized by Change Order. Owner or its representative may also, at any time, by issuing a Field Order, make changes in the details of the Work. Contractor shall proceed with the performance of any changes in the Work so ordered, unless Contractor believes that such Field Order entitles Contractor to a change in Contract Price or Contract Time, or both, in which event Contractor shall give Owner's Representative Written Notice of the proposed Change Order within two (2) days after receipt of the Field Order. Contractor shall document in Contractor's notice the basis for the change in Contract Price or Contract Time by separate notice delivered within five (5) days of the date of the Written Notice of the proposed Change Order. Contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from Owner.

Section 10. Changes in Contract Price.

The Contract Price may be changed only by a written, signed Change Order. The value of any Work covered by a Change Order or of any claim for increase or decrease in the Contract Price shall be determined by one or more of the following methods in the order of precedence listed below:

1. Unit prices previously approved.
2. An agreed lump sum.

3. The actual cost of labor, direct overhead, materials, supplies, and other services necessary to complete the Work plus an amount not to exceed 10% of the actual Work to cover the cost of general overhead profit.

Section 11. Limitation on Liquidated Damages.

Contractor shall not be charged with liquidated damages when the delay in completion of the Work is due to the following and Contractor has promptly given Written Notice of such delay to Owner or its representative:

1. Unforeseeable causes beyond the control and without the fault or negligence of Contractor, including but not restricted to acts of God or of the public enemy, acts of Owner, acts of another Contractor in performance of the contract with the Owner, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, and abnormal and unforeseen weather; and
2. Any delays of Subcontractors occasioned by any of the causes specified above.

Section 12. Correction of Work.

1. Contractor shall promptly remove from the premises all Work rejected by Owner's Representative for failure to comply with the contract documents, whether incorporated in construction or not, and Contractor shall promptly replace and re execute the Work in accordance with the contract documents and without expense to Owner and shall bear the expense of making good all Work of other contractors destroyed or damaged by such removal or replacement.
2. All removal and replacement Work shall be done at Contractor's expense. If Contractor does not take action to remove rejected Work within five (5) days after receipt of Written Notice of rejection, Owner may remove such Work and store the materials at the expense of Contractor.

Section 13. Subsurface Conditions.

Contractor shall promptly and before such conditions are disturbed, except in the event of an emergency, notify Owner by Written Notice of:

1. Subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents.
2. Unknown physical conditions at the site of an unusual nature, differing markedly from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the contract.

Owner shall promptly investigate the conditions and if found that such conditions do so materially differ and cause an increase or decrease in the cost of or in the time required for performance of the Work, an equitable adjustment shall be made and the contract documents shall be modified by a change order. Any claim of Contractor for adjustment hereunder shall not be allowed unless he has given the required Written Notice.

Section 14. Suspension of Work, Termination Delay.

1. If Contractor is adjudged a bankrupt or insolvent or if Contractor makes a general assignment for the benefit of Contractor's creditors, or if a trustee or receiver is appointed for the Contractor or for any of Contractor's property, or if Contractor files a petition to take advantage of any debtor's act or to reorganize under bankruptcy or applicable laws, or if Contractor repeatedly fails to supply sufficient skilled workmen or suitable material or equipment, or if Contractor repeatedly fails to make prompt payments to Subcontractors for labor, materials, or equipment, or if Contractor disregards laws, ordinances, rules, regulations, or orders of any public body having jurisdiction of the Work, or if Contractor disregards the authority of Owner's Representative or if Contractor otherwise violates any provision of the contract documents, then Owner may, without prejudice to any other right or remedy, after giving Contractor and Contractor's surety a minimum of five (5) days' Written Notice, terminate the services of the Contractor and take possession of the Project and all materials, equipment, tools, construction equipment, and machinery owned by Contractor and finish the Work by whatever method Owner may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to Contractor. If the costs exceed such unpaid balances, Contractor will pay the difference to Owner. Such costs incurred by Owner will be determined by Owner and incorporated in a change order.
2. Where Contractor's services have been terminated under Section 14.1, by Owner, the termination shall not affect any right of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of monies by Owner due Contractor will not release Contractor from compliance with the contract documents.
3. After five (5) days from delivery of Written Notice under Section 14.1 to Contractor, Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the contract. In such case, Contractor shall be paid for all Work executed and any reasonable expense sustained plus reasonable profit for the Work performed.

Section 15. Equal Opportunity.

Contractor agrees to comply with the applicable provisions of the Equal Opportunity Act of 1972 and the Civil Rights Act of 1964 as amended. Contractor shall have the obligation to ensure that the employees and applicants for employment are not discriminated against because of race, creed, color, sex, or national origin.

Section 16. Public Contracting Code Requirements.

1. Contractor shall pay promptly, as due, all persons supplying labor or materials for the prosecution of the Work provided for in the contract, and shall be responsible for such payment of all persons supplying such labor or material to any Subcontractor.
 - (a) ORS 279C.580(3)(a) requires the prime Contractor to include a clause in each subcontract requiring Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) days out of such amounts as are paid to the prime Contractor by the public contracting agency; and
 - (b) ORS 279C.580(3)(b) requires the prime Contractor to include a clause in each subcontract requiring Contractor to pay an interest penalty to the first-tier Subcontractor if payment is not made within thirty (30) days after receipt of payment from the public contracting agency.
 - (c) ORS 279C.580(4) requires the prime Contractor to include in every subcontract a requirement that the payment and interest penalty clauses required by ORS 279C.580(3)(a) and (b) be included in every contract between a Subcontractor and a lower-tier Subcontractor or Supplier.
2. Contractor shall promptly pay all contributions or amounts due the Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the contract, and shall be responsible that all sums due the State Unemployment Compensation Fund from Contractor or any Subcontractor in connection with the performance of the contract shall promptly be paid.
3. Contractor shall not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished and agrees to assume responsibility for satisfaction of any such lien so filed or prosecuted.
4. A notice of claim on Contractor's payment bond shall be submitted only in accordance with ORS 279C.600 and 279C.605.

5. Contractor and any Subcontractor shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
6. Contractor shall demonstrate to Owner that an employee drug-testing program is in place within ten (10) days of receiving a Notice of Award.
7. Pursuant to ORS 279C.515, if Contractor fails, neglects or refuses to make prompt payment of any claim for labor or materials furnished to the Contractor or a Subcontractor by any person in connection with the contract as such claim becomes due, the Owner may pay such claim to the persons furnishing the labor or material and charge the amount of payment against funds due or to become due to Contractor by reason of the contract. The payment of a claim in the manner authorized hereby shall not relieve the Contractor or its surety from their obligations with respect to any unpaid claim. If Owner is unable to determine the validity of any claim for labor or material furnished, Owner may withhold from any current payment due Contractor an amount equal to said claim until its validity is determined and the claim, if valid, is paid.
8. Pursuant to ORS 279C.515, if the Contractor or a first-tier Subcontractor fails, neglects, or refuses to make payment to a person furnishing labor or materials in connection with the public contract for a public improvement within 30 days after receipt of payment from Owner or Contractor, the Contractor or first-tier Subcontractor shall owe the person the amount due plus interest charges commencing at the end of the 10 day period that payment is due under ORS 279C.580(4) and ending upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest charged to Contractor or first-tier Subcontractor on the amount due shall equal three times the discount rate on 90-day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve District that includes Oregon on the date that is thirty (30) days after the date when payment was received from the public contracting agency or from the Contractor, but the rate of interest shall not exceed thirty (30) percent. The amount of interest may not be waived.
9. As provided in ORS 279C.505, if the Contractor or a Subcontractor fails, neglects, or refuses to make payment to a person furnishing labor or materials in connection with the public contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580.
10. Pursuant to ORS 279C.530, Contractor shall promptly, as due, make payment to any person, co-partnership, association, or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all monies and sums which the Contractor collected or deducted from the wages of employees pursuant to any

law, contract or agreement for the purpose of providing or paying for such service.

11. Contractor shall employ no person for more than ten (10) hours in any one day, or forty (40) hours in any one week, except in cases of necessity, emergency, or where public policy absolutely requires it, and in such cases, except in cases of contracts for personal services designated under ORS 279A.055, Contractor shall pay the employee at least time and one-half pay for all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the Work is five (5) consecutive days, Monday through Friday; or for all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the Work week is 4 consecutive days, Monday through Friday; and for all Work performed on Saturday and on any legal holidays as specified in ORS 279C.540. Pursuant to ORS 279C.545, all claims for overtime shall be filed within 90 days of completion of the contract.
12. Pursuant to ORS 279C.540(2), the Contractor must give notice to employees who Work on this contract in writing, either at the time of hire or before commencement of Work on the contract, or by posting a notice in a location frequented by employees, of the number of hours per day and the days per week that the employees may be required to Work.
13. The provisions of ORS 279C.800 to ORS 279C.870 relating to the prevailing wage rates will be complied with.
 - (a) The hourly rate of wage to be paid by Contractor or any Subcontractor to workers in each trade or occupation required for the public works employed in the performance of this Contract shall not be less than the specified minimum rate of wage in accordance with ORS 279C.838 and ORS 279C.840.
 - (b) The latest prevailing wage rates for public works contracts in Oregon are contained in the following publications: the January 5, 2025, Prevailing Wage Rates for Public Works Projects in Oregon, including any Amendments. Such publication can be reviewed electronically at:

<http://www.oregon.gov/boli/WHDPWR/Pages/prevailing-wage-rates.aspx>

and are hereby incorporated as part of the contract documents.
 - (c) Contractor and all Subcontractors shall keep the prevailing wage rates for this Project posted in a conspicuous and accessible place in or about the Project.
 - (d) The Owner shall pay a fee to the Commissioner of the Oregon Bureau of Labor and Industries as provided in ORS 279C.825. The fee shall be paid to the Commissioner as required by the administrative rules adopted by the Commissioner.

- (e) If Contractor or any Subcontractor also provides for or contributes to a health and welfare plan or a pension plan, or both, for its employees on the Project, it shall post notice describing such plans in a conspicuous and accessible place in or about the Project. The notice shall contain information on how and where to make claims and where to obtain future information.
14. Unless exempt under ORS 279C.836(4), (7), (8) or (9), before starting Work on this contract, or any subcontract hereunder, Contractor and all Subcontractors must have on file with the Construction Contractors Board a public works bond with a corporate surety authorized to do business in the State of Oregon in the amount of \$30,000. The bond must provide that the Contractor or Subcontractor will pay claims ordered by the Bureau of Labor and Industries to workers performing labor upon public works projects. The bond must be a continuing obligation, and the surety's liability for the aggregate of claims that may be payable from the bond may not exceed the penal sum of the bond. The bond must remain in effect continuously until depleted by claims paid under ORS 279C.836(2), unless the surety sooner cancels the bond. The surety may cancel the bond by giving thirty (30) days' Written Notice to the Contractor or Subcontractor, to the Construction Contractors Board and to the Bureau of Labor and Industries. When the bond is canceled, the surety is relieved of further liability for Work performed on contracts entered into after the cancellation. The cancellation does not limit the surety's liability for Work performed on contracts entered into before the cancellation. Contractor further certifies that Contractor will include in every subcontract a provision requiring a Subcontractor to file a public works bond with the Construction Contractors Board before starting Work on the Project, unless exempt under ORS 279C.836(4), (7), (8), or (9).
- (a) Unless exempt under ORS 279C.836(4), (7), (8), or (9), before permitting a Subcontractor to start Work on this public works project, the Contractor shall verify that the Subcontractor has filed a public works bond as required under this section or has elected not to file a public works bond under ORS 279C.836(7).
 - (b) Unless the Owner has been notified of any applicable exemptions under ORS 279C.836(4), (7), (8), or (9), the public works bond requirement above is in addition to any other bond Contractor or Subcontractors may be required to obtain under this contract.
15. As may be required by ORS 279C.845, Contractor or Contractor's surety and every Subcontractor or Subcontractor's surety shall file certified payroll statements with the Owner in writing.
- (a) If Contractor is required to file certified statements under ORS 279C.845, the Owner shall retain twenty-five (25) percent of any amount earned by the Contractor on the public works project until the Contractor has filed

with the Owner a certified statement as required by ORS 279C.845. The Owner shall pay the Contractor the amount retained within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements required by statute. The Owner is not required to verify the truth of the contents of certified statements filed by the Contractor under this section and ORS 279C.845.

- (b) The Contractor shall retain twenty-five (25) percent of any amount earned by a first-tier Subcontractor on this public works contract until the Subcontractor has filed with the Owner certified statements as required by ORS 279C.845. The Contractor shall verify that the first-tier Subcontractor has filed the certified statements before the Contractor may pay the Subcontractor any amount retained. The Contractor shall pay the first-tier Subcontractor the amount retained within fourteen (14) days after the Subcontractor files the certified statements as required by ORS 279C.845. Neither the Owner nor the Contractor is required to verify the truth of the contents of certified statements filed by a first-tier Subcontractor.
- 16. All employers, including Contractor, that employ subject workers who Work under this contract shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.
 - 17. All sums due the State Unemployment Compensation Fund from the Contractor or any Subcontractor in connection with the performance of the contract shall be promptly so paid.
 - 18. The contract may be canceled at the election of Owner for any willful failure on the part of Contractor to faithfully perform the contract according to its terms.
 - 19. Contractor certifies that it has not and will not discriminate against minorities, women or emerging small business enterprises in obtaining any required Subcontractors, or against a business enterprise that is owned or controlled by, or that employs a veteran as defined in ORS 408.225.
 - 20. Contractor certifies its compliance with the Oregon tax laws, in accordance with ORS 305.385.
 - 21. In the performance of this contract, the Contractor shall use, to the maximum extent economically feasible, recycled paper, materials, and supplies, and shall compost or mulch yard waste material at an approved site, if feasible and cost effective.

22. As may be applicable, Contractor certifies that all Subcontractors performing construction Work under this contract will be registered with the Construction Contractors Board or licensed by the state Landscaping Contractors Board in accordance with ORS 701.035 to ORS 701.055 before the Subcontractors commence Work under this contract.
23. Pursuant to City Public Contracting Rule 137-049-0880, the Owner may, at reasonable times and places, have access to and an opportunity to inspect, examine, copy, and audit the records relating to the Contract.
24. Pursuant to ORS 279C.510, if feasible and cost-effective and contract is for demolition, Contractor shall salvage or recycle construction and demolition debris.
25. Pursuant to ORS 279C.510, if feasible and cost-effective and contract is for lawn and landscape maintenance, Contractor shall compost or mulch yard waste material at an approved site.
26. In compliance with the provisions of ORS 279C.525, the following is a list of federal, state and local agencies, of which the Owner has knowledge, that have enacted ordinances or regulations dealing with the prevention of environmental pollution and the preservation of natural resources that may affect the performance of the contract:

FEDERAL AGENCIES:

- Agriculture, Department of
 - Forest Service
 - Soil Conservation Service
- Defense, Department of
 - Army Corps of Engineers
- Environmental Protection Agency
- Interior, Department of
 - Bureau of Sport Fisheries and Wildlife
 - Bureau of Outdoor Recreation
 - Bureau of Land Management
 - Bureau of Indian Affairs
 - Bureau of Reclamation
- Labor, Department of
 - Occupational Safety and Health Administration
- Transportation, Department of
 - Coast Guard
 - Federal Highway Administration

STATE AGENCIES:

- Agriculture, Department of
- Environmental Quality, Department of
- Fish and Wildlife, Department of
- Forestry, Department of
- Geology and Mineral Industries, Department of
- Human Resources, Department of
- Land Conservation and Development Commission
- Soil and Water Conservation Commission
- State Engineer
- State Land Board
- Water Resources Board

LOCAL AGENCIES:

- City Council
- County Court
- County Commissioners, Board of
- Port Districts
- Metropolitan Service Districts
- County Service Districts
- Sanitary Districts
- Water Districts
- Fire Protection Districts

24. Once before the first payment and once before final payment is made of any sum due on account of the contract for a public work, Contractor or Contractor's surety and every Subcontractor with a Subcontractor's surety, shall file a statement with Owner in writing in the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each classification of worker which Contractor or Subcontractor has employed upon such public work, and further certifying that no worker employed upon such public work has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the contract, which certificate and statement shall be verified by the oath of Contractor or Contractor's surety or Subcontractor or the Subcontractor's surety, that Contractor or Subcontractor has read such statement and certificate, knows the contents thereof, and that the same is true to Contractor's or Subcontractor's knowledge. A true copy of the certification or certifications required to be filed pursuant to this section shall also be filed at the same time with the Commissioner of the Bureau of Labor and Industries.

Section 17. Warranty and Guarantee.

1. Contractor warrants and guarantees to Owner that all Work will be done in accordance with the Contract Documents and will not be defective. Prompt

notice of all defects shall be given to Contractor. All defective Work, whether or not in place, may be rejected, corrected or accepted. Contractor understands that the City of Woodburn and Marion County and their various departments, and agencies, must be consulted and be allowed to inspect the Work and sign off in each particular area. At all times Owner's Representative and appropriate inspectors shall have access to the Work for inspection and testing. Contractor shall provide proper and safe conditions for such access.

2. Where any law, ordinance, rule, regulation, code, or other order of any public body having jurisdiction requires any Work or part thereof to be specifically inspected, tested or approved, Contractor shall assume full responsibility for such inspection, testing, or approval, and pay all costs in connection therewith and furnish Owner's Representative with the required certificates of inspection, testing or approval. If any Work to be inspected, tested, or approved is covered without written concurrence of Owner's Representative, it must be, if requested, uncovered for observation. Such uncovering shall be at Contractor's expense.
3. Neither observations by the Owner's Representative nor inspection tests or approvals by others shall relieve the Contractor from his obligations to perform the Work in accordance with the contract documents.
4. If, within two (2) years after the date of final completion and sign off and payment of any retainage by Owner to Contractor, there is any defect in materials or workmanship, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work or, if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where a delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replaced. All direct or indirect costs of such removal or replacement, including compensation for additional professional services, shall be paid by Contractor. Such additional professional services include the services of any attorney employed by Owner to assist it in dealings with Contractor. If Contractor does not pay for such Work, or does not ensure that such Work is performed as required by this section, Owner may pursue reimbursement from Contractor, including pursuing a claim upon Contractor's bond, if applicable, for payment of such Work. All notices sent to Contractor shall have copies sent to Contractor's surety.
5. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by the application for payment, whether incorporated in the Project or not, will pass to Owner at the time of payment, free and clear of all liens, claims, security interests and encumbrances of any party whomsoever.

Section 18. Bond Form.

Payment and Performance Bonds shall be in the form provided within the Invitation to Bid packet. Bid Bonds shall be in the standard form of the issuing company. If a standard form is not available, the AIA Form A-310 shall be acceptable for the Bid Bond.

Section 19. Payments to Contractor.

1. By the 5th day of each month, Contractor will submit to Owner's Representative a partial payment estimate filled out and signed by Contractor covering the Work performed during the period covered by the partial payment estimate and supported by such data as Owner's Representative may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to Owner, as will establish Owner's title to the material and equipment, and protect its interest therein, including applicable insurance. Owner's Representative will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to Owner, or return the partial payment estimate to Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, Contractor may make the necessary corrections and resubmit the partial payment estimate. Owner will, within ten (10) days of the next City Council meeting after presentation by Owner's Representative of an approved partial payment estimate, pay Contractor a progress payment on the basis of the approved partial payment estimate. Owner shall retain five percent (5%) of the amount of each payment until final completion and acceptance of all Work covered by the contract documents. After fifty percent (50%) of the Work has been completed, Owner may, at Owner's sole discretion, reduce or eliminate retainage on the remaining progress estimates. When the Work is substantially complete, Owner may, at Owner's sole discretion, further reduce the retained amount below 5% to only that amount necessary to assure completion. On completion and acceptance of a part of the Work on which the price is stated separately in the contract documents, Owner may, in Owner's sole discretion, pay for that part of the Work in full, including retained percentages, less authorized deductions.
2. A request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.
3. Prior to Substantial Completion, Owner, with the approval of Owner's Representative and with the concurrence of the Contractor, may use any completed or substantially completed portions of the Work. Such use shall not constitute an acceptance of such portions of the Work.

4. Owner shall have the right to enter the premises for the purpose of doing Work not covered by the contract documents. This provision shall not be construed as relieving Contractor of the sole responsibility for the care and protection of the Work, or the restoration of any damaged Work except such as may be caused by agents or employees of Owner. Such entry or Work shall only be allowed to the extent it does not interfere with Contractor's Work.
5. Upon completion and acceptance of the Work, Owner's Representative shall issue a certificate attached to the final payment request that the Work has been accepted by him under the conditions of the contract documents. The entire balance found to be due the Contractor, including the retained percentages, but except such sums as may be lawfully retained by Owner, shall be paid to the Contractor within thirty (30) days of the issuance of the certificate of completion and acceptance of the Work.
6. Contractor will indemnify and save Owner and Owner's officials, employees, agents, and volunteers harmless from all claims arising out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers or machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. Contractor shall, at Owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If Contractor fails to do so, Owner may, after having notified Contractor, either pay unpaid bills or withhold from Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to Contractor shall be resumed in accordance with the terms of the contract documents, but in no event shall the provisions of this Section be construed to impose any obligations upon Owner to either Contractor, Contractor's surety or any third party. In paying any unpaid bills of Contractor, any payment so made by Owner shall be considered as a payment made under the contract documents by Owner to Contractor and Owner shall not be liable to Contractor for any such payments made in good faith.
7. If Owner fails to make payment thirty (30) days after approval of a partial payment estimate by Owner's Representative, in addition to the other remedies available to Contractor, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the Contractor.

Section 20. Cleanup.

1. From time to time as the Work progresses and immediately after completion of the Work, Contractor shall clean up and remove all refuse and unused materials of any kind resulting from the Work. Upon failure of Contractor to do so within 24 hours after being so directed by Owner's Representative, the Work may be

done by Owner and the cost thereof may be deducted from any payment due Contractor.

2. After all other Work embraced in the contract is completed and before final acceptance of the contract, the entire right of way and driveways, alleys, and side street approaches, slopes, ditches, utility trenches, and construction areas shall be neatly finished to the lines, grades and cross sections shown in the specifications.
3. As a condition precedent to final acceptance of the Project, Contractor shall remove all equipment and temporary structures, and all rubbish, waste and generally clean the right of way and premises.

Section 21. Use of Light, Power and Water.

Contractor shall furnish temporary light, power, and water complete with connecting piping, wiring, lamps, and similar equipment necessary before the Work is improved. Contractor shall install, maintain and remove temporary lines upon completion of Work. Contractor shall obtain all permits and bear all costs for connection with temporary services and facilities at no expense to Owner.

Section 22. Arbitration.

1. All claims, disputes, and other matters in question between Owner and Contractor arising out of, or relating to, the contract documents, including rescission, reformation, enforcement, or the breach of the terms thereof, except for claims which may have been waived by the making or acceptance of final payment or for acquisition of property subject to eminent domain, may be decided by arbitration. Owner shall have the sole discretion as to whether or not a dispute will be decided by arbitration conducted in Lane County, Oregon, rather than through the court process.
2. No demand for arbitration of any claimed dispute or other matter shall be effective until after a claim or demand regarding the underlying dispute is made to the City Council and the Council at its next regularly scheduled meeting, has rendered a written decision with respect thereto denying the claim or demand. No demand for arbitration of the denial of any such claim, dispute, or other matter shall be made later than thirty (30) days after the date on which the City Council has rendered a written decision denying the claim. The failure to demand arbitration within thirty (30) days of the date of the City Council's decision denying the claim shall result in the City Council's decision being binding upon Owner and Contractor.
3. Notice of demand for arbitration shall be filed in writing with the other party to the agreement. The demand for arbitration shall be made within the 30-day period specified above. Owner, if not the party demanding arbitration, has the option of

allowing the matter to proceed with arbitration or by Written Notice within five (5) days after receipt of a demand for arbitration, or rejecting arbitration and requiring Contractor to proceed through the courts for relief. Arbitration shall be conducted under the Uniform Arbitration Act, ORS 36.600 *et seq.* If the parties are unable to mutually select an arbitrator within twenty (20) days following Owner's decision to pursue arbitration, then each party shall select an arbitrator, and the two arbitrators shall select a single arbitrator. The arbitrator(s) shall have substantial experience in construction disputes. The parties agree that any award rendered by the arbitrator will be final, and judgment may be entered upon the award in any court having jurisdiction thereof, and will not be subject to modification or appeal except to the extent permitted by Oregon law.

Section 23. Attorney Fees.

If suit, action or arbitration is brought either directly or indirectly to rescind or enforce the terms of this agreement, the prevailing party shall recover and the losing party hereby agrees to pay reasonable attorney's fees incurred in such proceeding, in both the trial and appellate courts, as well as any costs and disbursements. Further, if it becomes necessary for Owner to incur the services of an attorney to enforce any provision of this agreement without initiating litigation, Contractor agrees to pay Owner's attorney's fees so incurred. Such costs and fees shall bear interest at the maximum legal rate from the date incurred, until the date paid by losing party.

**BOONES CROSSING PARK
CITY OF WOODBURN**

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of this Contract includes site improvements for a new park. The Project consists of Grading and Earthwork, Topsoil Placement, Seeding, Landscaping, Irrigation, Concrete, Basketball Court, Furnishing and related work. The work is shown and described within the Contract Documents.

1.2 CONTRACT TIME

- A. Work of this Contract shall commence as soon as possible after execution of the Owner/Contractor agreement. Seeded turf must be established prior to the rainy season in fall of 2025.
- B. Perform work in order to achieve Substantial Completion for all other work no later than the 120-day timeframe from the Notice to Proceed. Substantial Completion includes completion of all work including, but not limited to turf establishment. Incidental or punch list items may occur after substantial completion.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION 01010

SECTION 01027 - APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 CONTRACT CONDITIONS

- A. Work of this section is bound by the Contract conditions in addition to these specifications and accompanying drawings.

1.2 WORK INCLUDED

- A. Preparation and submittal of Applications for Payment.
- B. Coordination with schedule of values and progress schedule.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. General Conditions of the Contract for Construction, Section 00700.
- B. Supplementary Conditions, Section 00800.
- C. Submittals, Section 01300.
- D. Contract Closeout, Section 01700.
- E. Alternates, Section 01030

1.4 FORMAT

- A. AIA G702 - Application and Certificate for Payment or approved.
- B. AIA G703 - Continuation Sheet or approved.

1.5 PREPARATION OF APPLICATIONS

- A. Type required information or use electronic-driven printout. No pencil or ink or hand entered information.
- B. Execute certification with signature of authorized officer. Notarize.
- C. Use line items and dollar amounts from accepted Schedule of Values. Provide dollar amount in each column for each line item for portion of work performed and for stored components.
- D. List each approved Change Order as an extension on the Continuation Sheet, listing Change Order number and dollar amount as for an original item of work.
- E. Prepare Application for Final Payment as specified in Section 01700.

1.6 SUBMITTAL PROCEDURES

- A. Submit to Landscape Architect under cover of transmittal.
- B. Submit original of each Application for Payment at times stipulated below.
- C. Submit with copy of updated progress schedule whenever the progress schedule may have changed from the previous submittal.

1.7 SUBSTANTIATING DATA

- A. When requested by Landscape Architect, submit substantiating information justifying line item amounts in question.
- B. Provide one copy of data. Show Payment Application number and date, and line item by number and description. Submit under cover of transmittal.

1.8 PAYMENT FOR MATERIAL OR PRODUCTS STORED OFF SITE

- A. When delay or added cost to Owner can be avoided by storing material or products off site, Owner will make payment to Contractor for said products provided that Contractor shall:
 - 1. Locate storage facilities with 10 miles of project site.
 - 2. Make storage facilities available for visual inspection by Owner and Landscape Architect.
 - 3. Segregate and label stored products for specified project.
 - 4. Assume all risk for loss.
 - 5. Protect stored products and provide applicable insurance against their damage, discoloration and theft, naming Owner as additional insured.
 - 6. Submit itemized inventory and schedule of values for stored products together with certificate of insurance.
 - 7. Submit payment requests as part of regular application for payment.
 - 8. Reimburse Owner for damages if stored products are not delivered to jobsite when needed.
 - 9. Submit Landscape Architect a written waiver of lien insuring Owner against claims for unpaid storage costs.
 - 10. Upon receipt of payment from Owner, prepare and issue to Landscape Architect a bill of sale for stored products.

1.9 APPLICATION SUBMITTAL SCHEDULE

- A. On or before the 26th day of each month, submit to Landscape Architect, application and certificate for payment.
- B. On or before the 30th day of the subsequent month, Owner shall issue payment to Contractor for:
 - 1. Until Substantial Completion, ninety-five percent (95%) of value of work acceptably executed, and of materials or products stored, as defined above and as in the General Conditions And Supplementary Conditions, as estimated by the Contractor and approved by the Landscape Architect.
 - 2. Upon execution of Certificate of Substantial Completion, balance due under the Contract will be paid by the Owner, excluding a retainage amount at least double the estimated value of uncompleted and/or unacceptable work, or \$5,000, which ever is the greater amount.

3. Within 30 days of final completion and acceptance of Landscape Architect and Owner, entire balance due under Contract will be paid by the Owner, provided the work has then been fully completed and Contract fully closed out, including all closeout submittals and requirements.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION 01027

SECTION 01029 - CHANGE ORDER PROCEDURES

PART 1 GENERAL

1.1 CONTRACT CONDITIONS

- A. Work of this section is bound by the Contract conditions in addition to these specifications and accompanying drawings.

1.2 WORK INCLUDED

- A. Completion and submittal of Change Order documents.
- B. Coordination with schedule of values and progress schedule.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Contract Closeout, Section 01700.

1.4 DEFINITIONS

A. Request for Information:

1. A request from Landscape Architect to Contractor for changes to Contract sum and/or Contract time for proposed changes in the work.
2. Request from Contractor to Landscape Architect for clarification, information, interpretation or changes to the work, affecting or not affecting the Contract sum and/or Contract time.

B. Change Order:

1. A written instrument prepared by the Landscape Architect and signed by the Owner, Contractor, and Landscape Architect, stating their agreement upon the following:
 - a. change in the Work.
 - b. the amount of the adjustment, if any, in the Contract Sum; and
 - c. the extent of the adjustment, if any, in Contract Time.

C. Construction Change Directive:

1. A written order from the Landscape Architect and Owner to the Contractor, signed by the Landscape Architect and Owner, which amends the Contract Documents as described, and authorizes the Contractor to proceed with a change affecting the Contract sum and/or time, for inclusion in a subsequent Change Order.

D. Landscape Architect's Supplementary Instructions:

1. A written order, instruction, or interpretation, from the Landscape Architect, to the Contractor, signed by the Landscape Architect, which authorizes minor changes in the work not affecting the Contract sum and/or Contract time.

1.5 OWNER OR LANDSCAPE ARCHITECT INITIATED CHANGES

- A. Landscape Architect will initiate a request for information that will include:
 - 1. Detailed description of the change, including location, materials, products, assembly and installation information as needed.
 - 2. Supplementary or revised drawings or specifications.
 - 3. Projected time for making changes and specific statement if Contract Time is to be affected.
- B. Such request is for information only and not an authorization or instruction to execute the proposed change in the work, or an order to stop work in progress.

1.6 CONTRACTOR INITIATED CHANGES

- A. Contractor shall initiate a request for information that will include:
 - 1. Description of proposed change, including location, materials, products, assembly and installation information as needed.
 - 2. Statement of reason(s) for request.
 - 3. Statement of effect on Contract sum and/or Contract Time.
 - 4. Statement of effect on work of other sections.
 - 5. Documentation supporting effect on Contract sum and/or Contract Time.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. In lieu of request for information, Landscape Architect may issue a Construction Change Directive authorizing the Contractor to proceed with a change in the work.
- B. The Directive will describe the work changes, including a detailed description of the change, including location, materials, products, assembly and installation, and identifying changes in Contract sum and/or Contract Time.
- C. Owner and Landscape Architect will sign the Directive authorizing the Contractor to proceed.
- D. Contractor shall, if it concurs, sign the Directive to indicate agreement with the specified terms.
- E. The Directive will be included in a subsequent Change Order.

1.8 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each cost change with sufficient substantiating data to allow Landscape Architect to evaluate quotation.
- B. When requested, submit the following:
 - 1. Labor required.
 - 2. Equipment required.
 - 3. Materials and Products required, including quantity, unit price, purchase and manufacturer source.
 - 4. Applicable taxes, insurance and bonds.

5. Credit for deleted work, similarly documented.
 6. Overhead and profit, as defined in general and supplementary conditions.
 7. Justification for any change in Contract time.
- C. Document requests for product substitution with the above information and the information required in Section 01600.

1.9 PREPARATION OF CHANGE ORDERS

- A. Landscape Architect will prepare each change order and include the following.
1. Description of work changes, with attached supplementary information or drawings or specifications as needed.
 2. Changes in Contract sum and/or Contract time.
 3. Signature of Landscape Architect and Owner.

1.10 LUMP-SUM/FIXED PRICE CHANGE ORDERS

- A. Change Order contents will be based on:
1. Landscape Architect's request for information as responded and agreed to by Contractor and as agreed to by Landscape Architect and Owner.
 2. Contractor's request for information as agreed to by Landscape Architect and Owner.
- B. Contractor shall sign and date change order to indicate agreement with specified terms.
- C. Owner and Landscape Architect will sign and date change order, following Contractor's signature, as authorization for Contractor to proceed with changes.

1.11 UNIT PRICE CHANGE ORDERS

- A. Change order contents will be based on either:
1. Landscape Architect's description of the changes.
 2. Contractor's request for information, accepted by Landscape Architect and Owner.
 3. A survey of completed work.
- B. Unit price amounts shall be either:
1. Those stated in the agreement, if any.
 2. Those mutually agreed upon in a request for information, accepted and signed by Contractor, Owner and Landscape Architect.
- C. When quantities of items affected by change order can be determined prior to the start of the work:
1. Contractor shall sign and date change order to indicate agreement with specified terms.

2. Owner and Landscape Architect will sign and date the change order, following the Contractor's signing, including the quantities to be included in the change, as authorization for the Contractor to proceed.
- D. When quantities of items affected by the change order cannot be determined prior to the start of the work:
1. Landscape Architect and Owner shall issue a construction change directive, directing the Contractor to proceed with the change on the basis of agreed upon unit prices, noting procedure for determining quantities.
 2. At completion of change directive work, Landscape Architect shall determine work cost based on quantities used.
 3. Contractor shall submit documentation to establish quantities used, in units correlating to agreed upon unit prices, and include claim for change in Contract time, if any.
 4. Landscape Architect shall initiate change order.
 5. Contractor shall sign and date change order to indicate agreement with specified terms.
 6. Owner and Landscape Architect will sign and date the change order, following the Contractor's signing, including the quantities to be included in the change.

1.12 TIME AND MATERIAL CHANGE ORDERS

- A. Include all information required under Documentation for Proposals and Claims, plus the following:
1. Dates and times of work performed, by whom.
 2. Time records, including summary of hours worked and hourly rates paid.
 3. Receipts for equipment, materials and products, including quantities and unit prices.
 4. Same information from subcontractors.
- B. Landscape Architect and Owner shall issue a construction change directive, directing the Contractor to proceed with the change, noting procedure for determining prices and quantities.
1. At completion of change directive work, Landscape Architect shall determine work cost based on items and quantities used.
 2. Contractor shall submit documentation as above, and include claim for change in Contract time, if any.
 3. Landscape Architect shall initiate change order.
 4. Contractor shall sign and date change order to indicate agreement with specified terms.
 5. Owner and Landscape Architect will sign and date the change order, following the Contractor's signing.

1.13 CORRELATING CHANGE ORDERS WITH OTHER SUBMITTALS

- A. Contractor shall revise schedule of values and progress schedule upon execution of each change order, and record each change order as a separate, single line item of work and record each time extension in the progress schedule and single unit of activity.
- B. Revised schedules shall also show changes to other affected items of work, if any.
- C. Revised schedule shall be submitted along with the next application for payment.
- D. Changes shall be recorded in the project record documents.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION 01029

SECTION 01030 - ALTERNATES

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- A. Bid Documents: Quotation of cost of each Alternate.
- B. Owner-Contractor Agreement: Alternates accepted by Owner incorporated into agreement.
- C. Specification Sections and Drawings related to the work of each Alternate.

1.2 PROCEDURES

- A. Alternates will be exercised at the option of the Owner.
- B. The Owner intends to select Alternates as allowed by the available budget. Alternates need not be exercised in the order in which they are listed.
- C. Coordinate related work and modify surrounding work as required to complete the work, including changes, under each Alternate, when Alternates incorporated into the Owner-Contractor Agreement.

1.3 DEFINITIONS

- a. Additive Alternate (Add Alternate) - the add alternate cost is the amount that exceeds the base bid.
- b. Deductive Alternates (Deduct Alternate) – the deduct alternate cost is the amount subtracted from the base bid.

1.4 ALTERNATES

- B. Deduct Alternate #1: **Basketball Court**
 - a. Omit Concrete Basketball Court base and replace with asphalt base and Court Surfacing.
 - b. See details for asphalt base and Section 32 18 23.43 Court Surface Color Coating System and Striping.
- C. Deduct Alternate #2: **Wood Chip Play Surfacing**
 - a. Omit Synthetic Grass Playground Protective Surfacing and replace with Wood Chip Play Surfacing and ADA accessible ramp
 - b. See Section 32 18 16.13 – Playground Protective Surfaces for specifications and plans for details.
- D. Add Alternate #3: **Borrow Fill**
 - a. Add Borrow Fill if not provided by Others as outlined Section 312000 - Earth Moving.
- E. Add Alternate #4: **Iris Street Frontage**
 - a. Omit bark mulch pathway and edging along east side and replace with concrete sidewalk, pedestrian ramp, landscaping, irrigation and all improvements shown on LA-8 Iris Street Frontage.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION 01030

SECTION 01220 - PROGRESS MEETINGS

PART 1 GENERAL

1.1 CONTRACT CONDITIONS

- A. Work of this section is bound by the Contract conditions in additions to these specifications and accompanying drawings.

1.2 WORK INCLUDED

- A. Preparation for and participation at Progress Meetings.

1.3 COORDINATION

- A. Coordinate with other trades affecting and affected by work of this section.

1.4 SCHEDULE

- A. Schedule and administer job-site meetings throughout duration of Contract, at weekly intervals or as needed.
- B. Make physical arrangements for meetings, prepare agenda, preside at meetings, record minutes if needed, and distribute copies to Landscape Architect, Owner, meeting participants, and those affected by discussions and decisions made at meetings.
- C. Minimum Attendance: Contractor job superintendent, primary subcontractors and suppliers as appropriate for active work and agenda items, Owner, Landscape Architect, consultants as appropriate for active work and agendas items.

1.5 AGENDA

- A. Minimum Agenda:
 - 1. Field observations.
 - 2. Status of Work:
 - a. Results of just completed field observations.
 - b. Problems, challenges and decisions from just competed field observations.
 - 3. Status of Changes:
 - a. Previously submitted Requests for Information, Directives, and Change Orders.
 - b. New Requests, Directives, or Change Orders.
 - 4. Status of Submittals:
 - a. Previously submitted Submittals.
 - b. New submittals.
 - 5. Status of Progress Schedule and adjustments thereto.
 - 6. Status of Contract sum, time, and applications for payment.
 - 7. Other items of interest.
 - 8. Next meeting.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION 01220

SECTION 01500 – TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1-Specification sections, apply to work of this Section.

1.2 WORK INCLUDED

- A. Section Includes: Minimum requirements for temporary services, utilities and facilities. Nothing in this section is intended to limit types and amounts of temporary work required, and no omission from this section will be recognized as an indication by Landscape Architect that such temporary activity is not required for successful completion of the work. The use of alternative facilities equivalent to those specified is the Contractor's option, subject to Landscape Architect's acceptance.
- B. Except as otherwise indicated, the costs of providing and using temporary utility services and facilities shall be included in the contract sum and are the responsibility of the General Contractor.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Progress Meetings: Section 01220.
- B. Material and Equipment: Section 01600.

1.4 QUALITY ASSURANCE

- A. Standards: Comply with governing regulations, industry standards and utility company regulations and recommendations including, but not necessarily limited to, code compliance, permits, inspections, testing, and health, safety, fire, pollution and environmental compliance.

- B. Definitions:

Cold Weather Protection: All heating required during construction period prior to enclosure of the buildings.

Temporary Heat: All heating required after enclosure of the buildings or floors. A building or floor is closed in when it is roofed and such protection at doorways, windows, and other openings as will provide reasonable heat retention is provided. Use of permanent equipment is subject to provisions of Division 15.

Temporary Utilities: Engage local utility companies to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.

- 1. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.

1.5 PROJECT CONDITIONS

- A. Scheduled Uses: Provide temporary facilities and services at the time first needed at the site; and maintain, expand and modify the facilities as needed throughout the construction period and do not remove until no longer needed. At the earliest feasible time and when acceptable to the Owner, change over from the use of temporary utility service to permanent service.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous, dangerous or unsanitary conditions or public nuisances to develop or persist on the site.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Provide either new or used materials and equipment for temporary facilities, which are in substantially undamaged and serviceable condition. Provide types and qualities which are recognized in the construction industry as suitable for the intended use in each application and comply with applicable codes and ordinances.

PART 3 – EXECUTION

3.1 GENERAL

- A. Use qualified workers for the installation of temporary facilities. Locate facilities where they will serve the Project adequately, and result in minimum interference with performance of the work. Locate field offices for easy access to and observation of the construction work.

3.2 TEMPORARY FACILITIES BY CONTRACTOR

- A. Field Office (if needed): Provide insulated, weather tight temporary offices of sufficient size to conduct work. Keep the office clean and orderly. Locate within limits of work area so as not to interfere with site work. Maintain at site one complete set of Contract Documents, including addenda, requests for information, construction change directives, change orders, meeting minutes, submittals, transmittals and all other project correspondence. Maintain in form and location accessible to owner, landscape architect, testing laboratory and building officials.
- B. Sanitary Facilities: Comply with local governing regulations including safety and health codes for the type, number, location, operation and maintenance of fixtures and facilities, but provide not less than the specified requirements. Install sanitary facilities in available locations which will best serve the needs of personnel at the project site.
 - 1. Provide temporary toilets as required.
 - 2. Supply and maintain toilet tissue, paper towels, paper cups and similar disposable materials as appropriate for each sanitary facility and provide appropriate waste paper containers for used materials.
- C. Drinking Water: Supply drinking water for construction personnel.

D. Temporary Telephones, if needed:

1. Provide temporary telephone service for all personnel engaged in construction activities, throughout the construction period. Pay for service.
2. Include as part of the telephone system a telephone answering machine, a separate voice-data telephone line and a facsimile machine with adequate paper supply.

E. Temporary Power, if needed: Engage local power company to provide temporary electrical power to a temporary pole and meter, location as required. Electrical installer will provide service from this point as specified.

F. Temporary Enclosure:

1. Provide temporary enclosure for protection of construction in progress and completed from exposure, foul weather, other construction operations and similar activities.
2. Provide temporary enclosure wherever temporary heat is needed.
3. Coordinate temporary enclosures with ventilating and material drying or curing requirements to avoid dangerous conditions and deleterious effects.

G. Barricades, Warning Signs and Lights:

Comply with standards and code requirements for the erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights. Where construction work is provided in the public right of way conform to City of Springfield regulations for protection of pedestrians, control of vehicular traffic, provision for construction warning signage.

H. Heating During Construction:

1. Cold Weather Protection: Provide such heat and fuel, heating units, equipment as necessary to protect the work from damage due to cold. Maintain equipment and surroundings in a clean, safe condition.

Provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

2. Ventilation: Provide such temporary ventilation as may be required to prevent hazardous accumulation of fumes, remove excess humidity, ventilate sanitary facilities and storage spaces for volatile and hazardous materials.

I. Temporary Fire Protection: Provide and maintain temporary fire suppression facilities necessary to protect persons and property against fire damage.

J. Protection of Existing Trees and Vegetation:

1. Protect existing trees and other vegetation indicated to remain in place, against damage to roots, trunks or branches. Do not stockpile construction materials or

- excavated materials within drip lines of trees. Provide temporary guards to protect trees and vegetation to be left standing.
2. Repair or replace trees and vegetation damaged by construction operations, in a manner acceptable to the Landscape Architect. Use a qualified tree surgeon to repair tree damage.
- K. Protection of Work: The Contractor shall obtain the advice and recommendations of installers for procedures to protect their work. Installers are responsible for protecting their work and that of other trades while working at the jobsite or in an area thereof.
- L. Parking: Arrange for temporary or on-street parking areas to accommodate construction personnel and project visitors.
- M. Progress Cleaning: Maintain areas free of water, materials, debris and rubbish. Maintain site in a clean and orderly condition.
- N. Project Identification: Contractor shall, within 15 days after mobilization, provide a sign on the site, located where directed by Landscape Architect. Only one sign may be constructed. No other signs or advertising permitted on premises. Construction sign of not less than 3/4" thick, 4'x8' exterior grade sanded Douglas Fir Plywood, mounted on 4x4 wood post not less than 10 ft. long, set 3 ft., minimum into the ground. Set post plumb, and compact to provide rigid support. Paint all surfaces with two coats of exterior enamel or prime coat. Employ a professional sign painter to lay out the project sign and paint on the following information:
1. Name of Project
 2. Name of Owner, Contractor, and Landscape Architect.
 3. The Landscape Architect will approve the layout of the sign and will provide any additional information required to be painted thereon.
- O. Security: Provide security program and facilities to protect work from unauthorized entry, vandalism, and theft.
- P. Environmental Protection: Provide protection, operate temporary facilities and conduct construction to comply with state and local environmental regulations and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours regulated by City of Springfield.
- Q. Dust Control: Wet down; site as required during the site work and general construction to keep flying dust to minimum. Comply with City of Springfield regulation.
- R. Removal and Cleaning: At the time the need has ended for each temporary facility, remove the facility. Repair or replace damaged work, clean exposed surfaces and replace construction which cannot be satisfactorily repaired.

END OF SECTION 01500

SECTION 01700 – CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 CONTRACT CONDITIONS

- A. Work of this section is bound by the Contract conditions in additions to these specifications and accompanying drawings.

1.2 WORK INCLUDED

- A. Substantial and final completion.
- B. Closeout submittals.
- C. Final cleaning.
- D. Record Documents.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Bidding Requirements and Contract Documents

1.4 COORDINATION

- A. Coordinate with other trades affecting and affected by work of this section.

1.5 SUBSTANTIAL COMPLETION

- A. When Contractor considers the work is substantially complete and in compliance with project schedule, as defined in these documents, Contractor shall submit to Landscape Architect written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Contractor has inspected the work for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents, or, if not completed, a detailed list of work items to complete and a date of anticipated completion, is included.
 - 4. Systems have been tested and are operational.
 - 5. The work is ready for substantial completion inspection.
 - 6. Project record documents are complete and ready for review.
- B. Within seven (7) days of receipt of such notice, Landscape Architect shall conduct a substantial completion visit and determine if the work is substantially complete.
- C. Should the Landscape Architect consider that work is not substantially complete:
 - 1. Landscape Architect will so notify Contractor, stating reasons.
 - 2. Contractor shall take immediate steps to remedy deficiencies, and send second written notice to Landscape Architect certifying that work is complete.
 - 3. Landscape Architect will re-inspect work.
- D. Should the Landscape Architect determine that the work is substantially complete:

1. Landscape Architect will prepare documentation accompanied by a list of items to be completed or corrected by the Contractor.

1.6 FINAL COMPLETION

- A. When notified in writing by the Contractor that all items noted at Substantial Completion have been completed or corrected, and when the record documents and operations and maintenance materials have been reviewed and approved by the Landscape Architect, the Landscape Architect will make a final inspection to determine that all work has been satisfactorily completed, and establish the date of final completion.
- B. When the Landscape Architect finds that the work is acceptable under the Contract Documents, the Landscape Architect will request the Contractor to submit final closeout materials.

1.7 RE-INSPECTION COSTS

- A. Should Landscape Architect perform more than one Substantial Completion and one Final Completion visit:
 1. The Owner will compensate the Landscape Architect for time and materials expended in additional visits at the then applicable rates.
 2. The Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.8 CONTRACTOR'S CLOSEOUT SUBMITTALS

- A. One reproducible original of project record documents as specified below.
- B. Three copies of operations and maintenance brochures, in hardbound 3-ring loose-leaf binders containing the following:
 1. Copies of bonds, guaranties, warranties, certificates of occupancy.
 2. Operating instructions for all mechanical and electrical equipment.
 3. Maintenance instructions for equipment and finishes.
 4. Manufacturer's instructions.
 5. Any other documents specifically described in specification sections.
 6. Report of contractor-conducted Owner's demonstration sessions.

1.9 FINAL ADJUSTMENT OF ACCOUNTS

- A. Contractor will submit final statement of accounts to Landscape Architect, including the following:
 1. Original Contract sum.
 2. Additions and deductions to the Contract sum resulting from:
 - a. Previous change orders.
 - b. Deductions for uncompleted work.
 - c. Deductions for re-inspection fees.

3. Total Contract sum, as adjusted.
 4. Previous payments.
 5. Sum remaining due.
- B. Landscape Architect will prepare a final change order, reflecting adjustments to Contract sum not previously made by change order.
- C. Contractor shall prepare and submit final application for payment.
- 1.10 FINAL CLEANING
- A. Employ skilled workers for final cleaning.
 - B. Remove grease, mastic, adhesives, dust, dirt, stains, debris, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
 - C. Clean all exterior fixtures and furnishings.
 - D. Broom clean all exterior surfaces; rake clean all grounds.
- 1.11 RECORD DOCUMENTS
- A. Maintenance of documents during construction:
1. Maintain at job site one (1) complete set of drawings and project manual, addenda, shop drawings, change orders, field orders, visitation reports, other submittals, testing lab reports and all other documents related to administration of this Contract.
 2. All material other than drawings and project manual to be in single, hardbound 3-ring loose-leaf binder.
 3. Clearly mark "Project Record Copy", maintain at jobsite in good condition, available at all times for review by Landscape Architect testing lab, and building officials. Do not use for construction purposes.
 4. Progress payments will be made after Landscape Architect's review of documents.
- B. Recording on documents:
1. Record information concurrently with construction progress. Do not conceal work until required information is recorded.
 2. Legibly mark Contract Drawings and Project Manual to record actual construction, including:
 - a. Depths of various elements in relation to finish grade including sleeves, subgrades, conduits and utilities.
 - b. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - c. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - d. Field changes in dimension and detail.

- e. Changes made by addendum.
 - f. Changes made by field order.
 - g. Changes made by change order.
 - h. Details not in original documents.
3. Legibly mark Project Manual to record actual construction, including:
- a. Manufacturer, trade name, make and model, supplier of each product different than originally specified.
 - b. Changes made by addendum, field order or change order.
- C. Submittal:
- 1. Prior to substantial completion, transfer information to set of reproducible documents, including deletions, changes and additions. Reproducible documents will be made available to Contractor from Owner at cost.
 - 2. Prepare documents by competent draftsman.
 - 3. Submit to Landscape Architect for approval at time of substantial completion.
 - 4. Final payment will not be authorized until documents have been approved.
 - 5. Document reviews in addition to the one specified herein will be treated as re-inspections specified herein.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION 01700

**BOONES CROSSING PARK
CITY OF WOODBURN**

DIVISION 2 - SITEWORK

SECTION 12 93 00 – SITE FURNISHINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Benches (Purchased by Owner, Installed by Contractor)
- B. Bike Rack (Purchased by Owner, Installed by Contractor)
- C. Bollards (Purchased by Owner, Installed by Contractor)
- D. Picnic Tables (Purchased by Owner, Installed by Contractor)
- E. Litter Receptacles (Purchased by Owner, Installed by Contractor)
- G. Basketball Hoop (Purchased by Owner, Installed by Contractor)
- H. Shelter (Purchased by Owner, Installed by Contractor)
- I. Play Equipment (Purchased by Owner, Installed by Contractor)

1.2 COORDINATION

- A. Coordinate with other trades affected by and affecting work of this section.

1.3 REVIEWS AND OBSERVATIONS

- A. Request visit by Owner's Representative 72 hours in advance of the following:
 - 1. Contractor to mark locations on paving for all furnishings in this section for approval prior to installation.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage: The contractor is responsible for delivery of materials to the project site at time of use. Store in a protected location and in a manner that protects them from damage.

1.5 ENVIRONMENTAL/SITE WORKING CONDITIONS

- A. Weather: Do no work when inclement weather may cause surfaces to be wet or cold beyond application parameters or where damage may occur.

PART 2 - PRODUCTS

2.1 BENCHES

- A. Manufacturer: Oregon Corrections Enterprises (800-776-7712)

B. Model: #702-066-006

2.2 BIKE RACKS

A. Manufacturer: Oregon Corrections Enterprises (800-776-7712)

B. Model: #718-012-006

2.3 BOLLARDS

A. Manufacturer: Grainger (1-800-472-4643)

B. Model: Removable Bollard: Embedded Sleeve, 36 in Install Ht, 5 in Dia, Carbon Steel, Yellow. IBP05080-Y-D (<https://www.grainger.com/product/Removable-Bollard-Embedded-18F769>)

2.4 PICNIC TABLES

A. Manufacturer: Oregon Corrections Enterprises (800-776-7712)

B. Model: #725-153-006

2.5 LITTER RECEPTACLES

A. Manufacturer: Oregon Corrections Enterprises (800-776-7712)

B. Model: #744-102-006

2.6 BASKETBALL HOOPS

A. Manufacturer: Dominator (801-768-4663)

2.7 SHELTER (28' X 20')

A. Manufacturer: RCP Shelters

B. Model: LW-G2028-03 20' X 28' Lam-wood gable shelter, powder coated tube steel columns w/ anchor bolts and templates.

2.8 PLAY EQUIPMENT

A. Manufacturer: Game Time

B. Link to plan: [Woodburn Boones Crossing R021925.pdf](#)

PART 3 - EXECUTION

3.1 INSTALLATION – GENERAL

A. Layout: Identify required lines, levels, grades, finish elevations, equipment heights, vertical and horizontal clearances, alignments, intersecting lines. Layout all work if this Section including required layout inspections prior to commencing work.

- B. Inspection and Verification: Prior to commencing work of this Section, inspect site and ensure site and existing and surrounding conditions are as indicated in documents and are ready to receive work of this Section.
- C. Discrepancies: Do not commence work until all unsatisfactory conditions have been corrected. Commencing work of this Section denotes acceptance of existing conditions.
- D. Tolerances: Perform work true to location and alignment. All vertical elements plumb and square with adjacent construction. All horizontal elements in alignment and parallel, 90 degrees, or specific shown angle to adjacent construction.
- E. Notice: Notify Owner's Representative 72 hours in advance prior to installing work.

3.2 ASSEMBLY AND INSTALLATION

- A. Permanently affix benches, bike racks, picnic tables and litter receptacles to the concrete paving by surface mount installation according to Owner instructions, local codes and regulations. Contractor is to provide all required hardware needed for installation.
- B. Install bollards as per manufacturer instructions, local codes and regulations. Contractor is to provide all required hardware needed for installation. Installation instructions can be found at <https://www.grainger.com/ec/pdf/Calpipe-Security-External-Removable-Bollards-5in-CAD-Drawing.pdf>
- C. Install basketball hoop as per manufacturer instructions, local codes and regulations. Contractor is to provide all required hardware needed for installation. Installation Instructions: https://www.dominatorhoop.com/blog/how-to-install-an-in-ground-basketball-hoop/?srsltid=AfmBOoof5j-IYyJ_9ld-YMKM4JzSsfV2rG5ILFcEcSogiFVHc5BNpx
- D. Install shelter as per manufacturer instructions, local codes and regulations. Contractor is to provide all required hardware needed for installation. Engineering drawings can be found here [RCP Shelter](#)
- E. Install play equipment as per manufacturer instructions, local codes and regulations. Contractor is to provide all required hardware needed for installation. Detailed installation instructions can be found here: [Play Equipment](#)
- F. Layout all site furnishings for owner's review prior to installation.

3.3 CLEANING

- A. Remove debris and clean all surfaces, including other work. Clean, repair and touch-up or replace products or finishes which have been soiled, discolored or damaged by work of this section.

END OF SECTION

SECTION 31 10 00 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Removing existing vegetation.
2. Clearing and grubbing.
3. Stripping and stockpiling topsoil.
4. Removing above- and below-grade site improvements.
5. Disconnecting, capping or sealing site utilities.
6. Temporary erosion- and sedimentation-control measures.

1.2 MATERIAL OWNERSHIP

- A. Cleared materials shall become Contractor's property and shall be removed from the Project site.**

1.3 PROJECT CONDITIONS

- A. Traffic:** Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Salvable Improvements:** Carefully remove items indicated to be salvaged and store on Owner's premises where indicated by Owner's direction.
- C. Utility Locator Service:** Notify utility locator service for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion- and sedimentation-control and tree-protection measures are in place.**
- E. Mow and strip existing lawn and vegetation in areas to receive new lawns, plant beds, paving and improvements. Remove strippings from site**

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material:** Requirements for satisfactory soil material are specified in Section 312000 "Earth Moving."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. The City will procure the 1200C permit and transfer the Legally Responsible Party to the Contractor for monitoring before the project commences.
- B. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- C. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- D. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- E. Erosion and sedimentation controls in good working condition may remain on-site after project completion. Damaged or clogged erosion control measures shall be removed.

3.3 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
 1. Arrange with utility companies to shut off indicated utilities.
- B. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify Owner and Engineer not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Engineer's written permission.

3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs and other vegetation indicated to remain. Eradicate unwanted vegetation.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Completely remove stumps, roots, obstructions and debris extending to a depth of 18 inches below exposed subgrade.
- B. Strip designated areas of organic materials at areas to be paved. Existing vegetation within areas to be landscaped may be tilled into the grade. Stripping shall not be used as a replacement for excavated material.
 - 1. Use only hand methods for grubbing within protection zones.
 - 2. Backfill around tree roots immediately after completion of construction within vicinity of trees.
- C. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

3.5 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Existing signs and sign poles to be salvaged shall be removed and stored on the project site in a secure area.

3.6 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION

SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Preparing subgrades for slabs-on-grade. Walks, pavements, lawns, and grasses, and exterior plants.
 - 2. Excavating and backfilling for buildings and structures.
 - 3. Subbase course for concrete walks and pavements.
 - 4. Subbase and base course for asphalt paving.
 - 5. Subsurface drainage backfill for walls and trenches.
 - 6. Excavating and backfilling for utility trenches.
 - 7. Excavating and backfilling trenches for buried mechanical and electrical utilities and pits for buried utility structures.
 - 8. Borrow Fill - Alternate #3 :
- B. Related Sections include the following:
 - 1. Division 31 Section "Site Clearing" for temporary erosion and sedimentation control measures, site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
 - 2. Division 32 Section "Plants" for planting bed establishment and tree and shrub pit excavation and planting.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.

- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill to raise existing grades
- E. Drainage Course: Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by City Engineer.
 - 2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by City Engineer. Unauthorized excavation, as well as remedial work directed by City Engineer, shall be without additional compensation.
- G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- H. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- I. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- J. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 QUALITY ASSURANCE

- A. Seismic Survey Agency: An independent testing agency, acceptable to authorities having jurisdiction, experienced in seismic surveys and blasting procedures to perform the following services:
 - 1. Report types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties.
 - 2. Seismographic monitoring during blasting operations.
- B. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.

1.5 CONDITIONS SUBMITTALS

- A. Samples for the following:
 - 1. Alternate #3 Borrow Fill: 1 cubic foot min.

1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated.
 - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's written permission.
 - 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Borrow Fill - Alternate #3: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations. Satisfactory soils to be free of rock and gravel, debris, waste, frozen material, vegetation and other deleterious matter. Clay and heavy silt materials are not acceptable.
- B. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- C. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- D. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- E. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.

- F. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.
- G. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.
- H. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 31 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing," during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXCAVATION, GENERAL

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1/2 inch.

3.4 FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.5 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
 - 1. Clearance: 12 inches each side of pipe or conduit.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
 - 1. For pipes and conduit less than 6 inches (150 mm) in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
 - 2. For pipes and conduit 6 inches (150 mm) or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
 - 3. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.
- D. Trench Bottoms: Excavate trenches 4 inches (100 mm) deeper than bottom of pipe elevation to allow for bedding course. Hand excavate for bell of pipe.
 - 1. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.6 SUBGRADE INSPECTION

- A. Subgrade shall be inspected and approved by a geotechnical engineer. Immediately after subgrade approval by the geotechnical engineer, the subgrade shall be covered with geotextile fabric in accordance with the manufacturer's recommendations.
- B. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation

3.7 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by Architect.
 - 1. Fill unauthorized excavations under other construction or utility pipe as directed by Architect.

3.8 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations.

3.9 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, damp proofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Removing concrete formwork.
 - 4. Removing trash and debris.
 - 5. Removing temporary shoring and bracing, and sheeting.
 - 6. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.10 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under footings and within 18 inches (450 mm) of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Division 03 Section "Cast-in-Place Concrete."
- D. Provide 4-inch- (100-mm-) thick, concrete-base slab support for piping or conduit less than 30 inches (750 mm) below surface of roadways. After installing and testing,

completely encase piping or conduit in a minimum of 4 inches (100 mm) of concrete before backfilling or placing roadway subbase.

- E. Place and compact initial backfill of subbase material free of particles larger than 1 inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the utility pipe or conduit.
 - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Controlled Low-Strength Material: Place initial backfill of controlled low-strength material to a height of 12 inches (300 mm) over the utility pipe or conduit.
- G. Backfill voids with satisfactory soil while installing and removing shoring and bracing.
- H. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- I. Controlled Low-Strength Material: Place final backfill of controlled low-strength material to final subgrade elevation.
- J. Install warning tape directly above utilities, 12 inches (300 mm) below finished grade, except 6 inches (150 mm) below subgrade under pavements and slabs.

3.11 BORROW FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under building slabs, use engineered fill.
 - 4. Under footings and foundations, use engineered fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.12 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.13 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

3.14 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.15 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION

SECTION 32 12 16 – ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. This section specifies asphalt patching requirements. Included under this section is the aggregate base material and asphalt concrete pavement.
2. This item shall include furnishing all materials, labor and equipment required to construct asphalt concrete pavement patching, complete, as shown on the typical cross section and herein specified.

1.2 ACTION SUBMITTALS

A. Material Safety Data Sheets for Asphalt and Asphalt Cement Additives.

PART 2 - PRODUCTS

2.1 AGGREGATE BASE

A. Aggregate base material shall be 3/4"-0 crushed rock.

B. Aggregate base shall conform to the requirements of Section 02630, BASE AGGREGATE, of the 2002 Oregon Standard Specifications.

2.2 ASPHALT CONCRETE PAVEMENT

A. Asphalt concrete shall be a mixture of asphalt cement, aggregate, mineral filler and additives as required, heated, and plant mixed into a uniformly coated mass.

B. Asphalt concrete shall be Class C mix conforming to Section 00749, ASPHALT CONCRETE PAVEMENT, of the ODOT Standard Specifications for Highway Construction (current edition).

2.3 ASPHALT TACK COAT

A. Asphalt tack coat shall conform to Section 00730, ASPHALT TACK COAT, of the ODOT Standard Specifications for Highway Construction. 1996.

2.4 ASPHALT CEMENT AND ADDITIVES

A. Asphalt Cement: New asphalt cement shall meet the requirements of one of the asphalt cements listed in the ODOT's current publication Specifications for Asphalt Materials. "Asphalt for asphalt concrete shall be AC-graded, meeting the requirements of

the most current ODOT design criteria and shall conform to ODOT specifications. The appropriate AC-grade asphalt shall be determined by an evaluation of the mix design for each mix from each asphalt concrete supplier.

B. Asphalt Cement Additive: Anti-stripping additives ordered and/or approved by the Engineer shall be added to the asphalt cement and shall meet the requirements of the ODOT Standard Specifications (current edition).

PART 3 - EXECUTION

3.1 EXCAVATION

A. Excavate areas to be patched to 6 inches below finish grade, compact subgrade or remaining rock with jumping jack. Tack edges of existing asphalt. Plug fill level in 2 lifts of asphalt. Compact between lifts. Prep surface for installation of 2 inch overlay, or as shown on Drawings.

3.2 AGGREGATE BASE

A. Mix, process, place, and compact in strict compliance with the ODOT Standard Specifications for Highway Construction (current edition).

B. Temperature: Minimum temperature at time of placement shall be 250° F and shall not be placed when the ambient temperature is below 45° F.

C. Tack Coat: Contact surfaces of gutter and existing pavements shall be treated with a layer of tack coat asphalt. Do not place on wet surfaces. Apply tack coat in conformance with Section 00730, ASPHALT TACK COAT, of the ODOT Standard Specifications for Highway Construction (current edition).

D. Care shall be taken at all times to prevent segregation in the mixture.

E. Deficiencies or damages in surfacing shall be immediately repaired by the Contractor upon request of and in a manner approved by the Owner's representative.

F. Compaction: Compaction shall be at least 92% as determined by AASHTO T-230.

G. Surface Smoothness & Workmanship: Surfacing of the asphaltic concrete after compaction shall be smooth and true to established cross section and grade. Any mixture which becomes loose or broken, mixed with dirt, or is in any way defective shall be removed and replaced with fresh hot mixture, which when compacted shall conform to the surrounding area. There shall be no sign of roller marks. All costs in correcting defective surfaces shall be borne by the Contractor. Surface workmanship shall meet the following minimum requirement:

1. When checked with a 10 foot straight edge, longitudinal deviation in surface smoothness for all asphalt pavement restoration shall not exceed 1 /4 inch within 10 feet. Only one such deviation is permitted within 10 feet.

H. No traffic shall come in contact with any newly paved surface until surface has cooled and set sufficiently to prevent marking. The Contractor is responsible for this traffic control.

I. After completion of paving, the Contractor shall remove all debris from the site resulting from his operation.

J. Contractor shall maintain all surfaced areas and shall furnish all required materials and workmanship at no additional cost to Owner for a period of one (1) year following the Owner's final acceptance of the completed project.

K. All costs incurred in the repair of deficiencies or damages shall be borne by the Contractor and no additional compensation will be due to the Contractor.

END OF SECTION

SECTION 32 13 13 – CONCRETE PAVING AND WALLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sidewalks and Basketball Court.
2. Cast-in Place concrete seat walls.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each exposed product and for each color and texture specified.

C. Other Action Submittals:

1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
2. Concrete Jointing Plan for all flatwork shall be submitted for review and approval at least 72 hours prior to pour.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: A qualified Installer who employs Project personnel, Concrete Flatwork Finisher, and a supervisor who has a minimum of 5 years of experience installing and finishing concrete for similar projects.

B. Ready-Mixed Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.

C. Laboratory Testing Agency Qualifications: A testing agency qualified in accordance with ASTM C1077 and ASTM E329 for testing that performs duties on behalf of the Engineer/Engineer.

D. Field Quality-Control Testing Agency Qualifications: An independent agency, qualified in accordance with ASTM C1077 and ASTM E329 for testing indicated.

1.4 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Owner will engage a qualified testing agency to perform preconstruction testing on each concrete mixture.

1. The following information will be included in each test report:

- a. Admixture dosage rates.
- b. Slump.
- c. Air content.
- d. Seven-day compressive strength.
- e. 28-day compressive strength.

PART 2 - PRODUCTS

2.1 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.

- 1. Use flexible or curved forms for curves with a radius 100 feet or less.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

A. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

B. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from as-drawn steel wire into flat sheets.

C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

D. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.

E. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.

F. Deformed-Steel Wire: ASTM A 496/A 496M.

G. Dowel Bars: ASTM A 615/A 615M, Grade 60 plain-steel bars; zinc coated (galvanized) after fabrication according to ASTM A 767/A 767M, Class I coating. Cut bars true to length with ends square and free of burrs.

H. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified.

2.3 CONCRETE MATERIALS -SAME FOR PAVING AND WALLS

A. Cementitious Material: Use the following cementitious materials, of same type,

brand, and source throughout Project:

1. Portland Cement: ASTM C 150, gray Portland cement Type I. Supplement with the following:
 - a. Fly Ash: ASTM C 618, Class C or Class F.
 - b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- B. Normal-Weight Aggregates: ASTM C 33, Class 4S, uniformly graded. Provide aggregates from a single source.
 1. Maximum Coarse-Aggregate Size: 1 inch nominal.
 2. Fine Aggregate: Free of materials with deleterious react
- C. Water: Potable and complying with ASTM C 94/C 94M.
- D. Air-Entraining Admixture: ASTM C 260.
- E. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

2.4 STEEL REINFORCEMENT MATERIALS FOR CAST-IN-PLACE SEAT WALLS

- A. Bars: ASTM A615, Grade 60.
- B. Epoxy-Coated Steel Wire: ASTM A884, Class A Coated.
- C. Plain-Steel Wire: ASTM A82.
- D. Deformed Steel Wire: ASTM A96.
- E. Bar Supports: Conform to CRSI's 'Manual of Standard Practice'. Include all devices necessary for proper reinforcement placement, spacing, supporting and fastening.

2.5 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry or cotton mats.
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

F. White, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B, dissipating.

2.6 RELATED MATERIALS

A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork in preformed strips.

B. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to requirements.

2.7 CONCRETE MIXTURES - SAME FOR PAVING AND WALLS

A. Prepare design mixtures, proportioned according to ACI 301, with the following properties:

1. Compressive Strength (28 Days): 4000 psi.
2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
3. Slump Limit: 4 inches, plus or minus 1 inch.
4. Air Content: 4-1/2 percent plus or minus 1.5 percent.

B. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

C. Concrete Mixtures for Cast-In-Place Seat Walls

1. Compressive Strength (28 days): 3500 psi.

2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading and elevation tolerances.

B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.

1. Completely proof-roll subbase in one direction. Limit vehicle speed to 3 mph.
2. Proof-roll with a loaded 10-wheel tandem-axle dump truck weighing not less than 15 tons.

3. Subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch require correction according to requirements in Division 31 Section "Earth Moving."
- C. Remove loose material from compacted subbase surface immediately before placing concrete.
- D. Proceed with concrete pavement operations only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

3.2 PREPERATION

- A. Provide reasonable auxiliary services to accommodate field testing and inspections, acceptable to testing agency, including the following:
1. Daily access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Secure space for storage, initial curing, and field curing of test samples, including source of water and continuous electrical power at Project site during site curing period for test samples.
 4. Security and protection for test samples and for testing and inspection equipment at Project site.
- B. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- C. Verify that forms are clean and free of rust before applying release agent.
- D. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.
- E. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.
1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
 2. Use latex bonding agent only for non-load-bearing applications.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. After the forms have been set to correct grade, the grade shall be thoroughly tamped, either mechanically or by hand, at both the inside and outside edges of the base of the

forms. Forms shall be staked into place with no less than 3 pins for each 10-foot section. A pin shall be placed at each side of every joint.

- C. Form sections shall be tightly locked and shall be free from play or movement in any direction. The forms shall not deviate from true line by more than 1/4 inch at any joint. Forms shall be so set that they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment.
- D. The alignment and grade elevations of the forms shall be checked and corrections made by the Contractor immediately before placing the concrete. When any form has been disturbed or any grade has become unstable, the form shall be reset and rechecked.
- E. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage. STEEL REINFORCEMENT
- F. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.4 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
- D. Longitudinal Joints: A longitudinal joint shall be considered a joint parallel with the long dimension of the paving area.
- E. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness.
- F. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.5 INSTALLATION OF JOINT FILLER

- A. Prepare, clean, and install joint filler in accordance with manufacturer's written instructions.
 - 1. Defer joint filling until concrete has aged at least one month(s).

- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joints clean and dry.
- C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints.
- D. Overfill joint, and trim joint filler flush with top of joint after hardening.

3.6 CONCRETE PLACEMENT

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed.
- B. Comply with ACI 301 requirements for measuring, mixing, transporting, placing, and consolidating concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed paving surface with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
 - 2. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.
 - 3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8-inch-deep with a stiff-bristled broom, perpendicular to line of traffic.
- C. Slip-Resistive Aggregate Finish: Before final floating, spread slip-resistive aggregate finish on paving surface according to manufacturer's written instructions.
 - 1. Cure concrete with curing compound recommended by slip-resistive aggregate manufacturer. Apply curing compound immediately after final finishing.

2. After curing, lightly work surface with a steel wire brush or abrasive stone and water to expose nonslip aggregate.

3.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these.

3.9 WALL FINISH AT CAST-IN PLACE CONCRETE SEAT WALLS

- A. Provide acid etch finish at all exposed concrete seat wall, tops and ends.

3.10 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
 1. Elevation: 1/2 inch.
 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 3. Surface: Gap below 10-foot- long, unleveled straightedge not to exceed 1/2"
 4. Joint Spacing: 1/2 inches.
 5. Contraction Joint Depth: Plus 1/4 inch, no minus.
 6. Joint Width: Plus 1/8 inch, no minus.
 7. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
 8. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.
 9. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.
 10. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.

3.11 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Agency Project Manager and Contractor within 24 hours of test.

- B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- C. Repair or replacement of defective concrete will be determined by the Agency Project Manager. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Agency Project Manager for each individual area.

3.12 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a special inspector to perform field tests and inspections and prepare testing and inspection reports.
- B. Testing Agency: Owner will engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
 - 1. Testing agency to be responsible for providing curing facility for initial curing of strength test specimens on-site and verifying that test specimens are cured in accordance with standard curing requirements in ASTM31/C31M.
 - 2. Testing agency to immediately report to City Engineer, Contractor, and concrete manufacturer any failure of Work to comply with Contract Documents.
 - 3. Testing agency to report results of tests and inspections, in writing, to Owner, Engineer, Contractor, and concrete manufacturer within 48 hours of inspections and tests.
 - 4. Provide a space and source of power or other resources for curing and access to test specimens by the testing agency.

3.13 REPAIRS AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Engineer.
- B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION

SECTION 32 17 23 - PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Painted markings applied to concrete surfaces.

1.2 ACTION SUBMITTALS

- A. Product Data: Include technical data and tested physical and performance properties.
 - 1. Pavement-marking paint, latex.

1.3 FIELD CONDITIONS

- A. Environmental Limitations: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 55 deg F for water-based materials, and not exceeding 95 deg F.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with general requirements, provide products by one of the following:
 - 1. Conco Paints.
 - 2. Ennis-Flint, Inc.
 - 3. Rodda Paint Co.
 - 4. Rust-Oleum Corporation; a subsidiary of RPM International, Inc.
 - 5. Sherwin-Williams Company (The).
- B. Source Limitations: Obtain pavement-marking paints from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design" .

2.3 PAVEMENT-MARKING PAINT

- A. Pavement-Marking Paint, Latex: MPI #97, latex traffic-marking paint.
 - 1. Basketball Court - White
 - 2. Hopscotch - Yellow
 - 3. Four Square – Red

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that pavement-marking substrate is dry and in suitable condition to begin pavement marking in accordance with manufacturer's written instructions.
- B. Proceed with pavement marking only after unsatisfactory conditions have been corrected.

3.2 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.
- B. Allow asphalt paving or concrete surfaces to age for a minimum of 30 days before starting pavement marking.
- C. Line width – Minimum 2"
- D. Linework Locations – See plans for locations.
- E. Sweep and clean surface to eliminate loose material and dust.
- F. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils .
 - 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils, firmly secured to asphalt paving or concrete surface. Mask an extended area beyond edges of each stencil to prevent paint application beyond stencil. Apply paint so that it cannot run beneath stencil.

3.3 PROTECTING AND CLEANING

- A. Protect pavement markings from damage and wear during remainder of construction period.
- B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

SECTION 32 18 16.13 – PLAYGROUND PROTECTIVE SURFACES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 RELATED SECTIONS

- A. Section 31 20 00 – Earth Moving

1.3 SUMMARY

- A. Section Includes:

- 1. Synthetic Turf Playground Protective Surfacing
- 2. Alternate #2 – Woodchip Play Surfacing:

1.4 DEFINITIONS

- A. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325 “Handbook for Public Playground Safety” this means “the fall height below which a life-threatening head injury would not be expected to occur.”
- B. Fall Height: According to ASTM F 1487, “the vertical distance between a designated play surface and the protective surfacing beneath it.”
- C. Use Zone: According to ASTM 1487, the “area beneath and immediately adjacent to a play structure or equipment that is designated or unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment.”
- D. Base: An aggregate layer under the resilient layer of the protective surfacing put over the subgrade.

1.5 PERFORMANCE REQUIREMENTS

- A. Impact Attenuation:

- 1. According to ASTM F 1292.

- B. Accessibility of Surface Systems:

- 1. According to ASTM F 1951.

1.6 QUALITY ASSURANCE

- A. Installer and Vendor Qualifications:

- 1. Synthetic Turf Surfacing Vendor and Installer Qualifications: The synthetic turf surfacing vendor and installer must be IPEMA (International Play Equipment Manufacturers Association) Certified with no less than three completed playground installations. Installer must be competent in the installation of this

material, including attachment of seams and proper installation of infill material prior to the start of turf installation.

2. Installer Qualifications: An employee or workers trained and approved by manufacturer.
- B. Source Limitations: Obtain playground protective surface materials, including primers and binders, from single source from single manufacturer.
 1. Provide secondary materials including adhesives, primers, geosynthetics, and repair materials of type and from source recommended by the manufacturer of playground protective surface system materials.
- C. Standards and Guidelines: Comply with CPSC No. 325: "Handbook for Public Playground Safety"; ASTM F 1292; and ASTM F 1487.

1.7 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Coordination Drawings: Plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
 1. Extent of surface systems and use zone for play equipment.
 2. Depth of playground protective surfaces and fall heights for equipment.
- C. Qualification Data: For qualified Installer for playground safety surfacing system.
- D. Material Certificates: For playground surface system from manufacturer.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each unitary playground safety surfacing system.
- F. Field quality-control reports.
- G. Maintenance Data: For playground protective surface system to include in maintenance manuals.
- H. Warranty: Sample of special warranty.
- I. Extra Materials:
 1. Synthetic Turf Surfacing: 1 square foot of surfacing and attenuation pad.

1.8 PROJECT CONDITIONS

- A. Verify that survey benchmark and intended elevations for the Work are as indicated.
- B. Protect existing to remain and installed work and utilities to remain undisturbed from equipment, vehicles, and materials.
- C. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit playground protective surface system installation to be performed according to manufacturer's written instructions and warranty requirements.

1.9 WARRANTY

- A. The Contractor shall provide a minimum wear policy provided by the manufacturer, against defects in materials and one year against defects in the workmanship. Defects shall include, but not be limited to ultraviolet ray fading, degradation, or excessive wear of fiber.
- B. Warranty shall be for full replacement of any damaged product within the warranty period. Warranty shall be comprehensive and sufficient to replace all turf if necessary.
- C. Warranty shall become effective from the date of substantial completion.
- D. Warranty shall contain no usage limits for warranted turf.
- E. Submit Manufacturer Warranty and ensure that forms have been completed in Owner's name and registered with Manufacturer.

PART 2 PRODUCTS

2.1 DESIGN CRITERIA

- A. Because the safety of the play areas depends on strict conformance to the design criteria, this information is provided for Contractor's information.
 - 1. The protective surfacing constitutes a resilient layer installed over a non-resilient layer, which is installed over the subgrade, with the top of playground equipment footings areas and anchorage devices covered by full depth of the resilient portion of the protective surfacing.
 - 2. The top elevation of the protective surfacing is intended to be flush with adjacent grades.
 - 3. The protective surfacing has been designed to provide acceptable impact attenuation as defined in ASTM F1292 for the Fall Height of the play equipment and natural play features indicated.
- B. If deviation from specified depth is required, it is the Contractor's responsibility to make all changes required to maintain specified top elevation and required impact attenuation at no extra cost to Owner; obtain approval prior to proceeding; follow approval request procedure as specified for substitutions.

2.2 PLAY SURFACING MATERIAL

A. Synthetic Turf Playground Protective Surfacing:

- 1. Products: GTImpax Synthetic Turf **(no substitutions)**
- 2. Vendor: MRC Recreation, contact: Martha Rainey, martha@mrcrec.com, ph: 503.708.4878.
- 3. Critical Fall Height per Play Equipment: As shown on the Drawings and Play Equipment installation guides.
- 4. Material Installation Depth: Install materials as directed by manufacturer to meet critical fall height requirements of play equipment and natural play features, per ASTM F1292.
- 5. Base Materials: Aggregate 3/4-minus compacted gravel.
- 6. Synthetic Infill Material as per manufacturer's standard.

B. Alternate #2 – Woodchip Play Surfacing:

1. Rexius Fiber-X or other approved. Submit one-quart bagged sample for approval.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Playground equipment installer will perform playground layout prior to installation of footings; verify correctness of layout before starting this Work.
- B. Verify location of underground utilities and facilities in the playground area. Damage to underground utilities and facilities will be repaired at Contractor's expense.
- C. Verify that subgrades are at proper elevations and that smooth grading is complete.
- D. Verify subgrade has been compacted, stabilized, and prepared properly for installation of base material.
 1. Base must be properly compacted to 85% Standard Proctor Compaction as per ASTM test.
 2. Base must be sloped per surface slope indicated on the drawings.
 3. Base must be a level and even and smooth plane.
- E. Verify subdrainage has been installed properly and been reviewed by Owner's Representative prior to covering with base material.
- F. Verify that proper depth of surfacing is marked on base supports of playground equipment and natural play features.

3.2 PREPERATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Correct subgrade irregularities to ensure that required depth of playground protective surfacing can be installed, and subgrade elevation is in accordance with manufacturer's requirements.
- C. Remove all obstructions that would extend into the resilient protective surfacing.
- D. Remove rocks, debris, and other similar items.
- E. Correct base irregularities to ensure that the required base depth, depth of playground protective surfacing, and to ensure a properly compacted, sloped, level and smooth base plane. Scarify soil to a depth of 6 inches at all landscape areas to receive plantings to loosen compacted grade.

3.3 INSTALLATION

- A. Synthetic Turf Playground Protective Surfacing: Comply with playground protective surface system manufacturer's written installation instructions. Install playground protective surface system over area and in thickness indicated. Contractor responsible for site work, subbase and nailer boards.

- B. Alternate #2 - Woodchip Play Surfacing: Install in accordance to details, manufacturer's specifications and at a minimum of 14" depth for fall height requirements.

3.4 FIELD QUALITY CONTROL

- A. Testing Agency: At Owner's discretion, Owner will engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing and inspecting of completed applications of playground protective surfaces system shall take place according to ASTM F 1292.
- C. Remove and replace applications of playground protective surface system where test results indicate that it does not comply with requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with requirements.

3.5 REPAIR, RESTORATION AND CLEANING

- A. Completed Work, Utilities and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
- B. Remove debris, junk, and trash from site.
- C. Leave site in clean condition, ready for subsequent work. Dig holes as needed so that mulch will not cover lower branches and so that plant crown will sit 2" above finish grade.
- D. Clean up spillage and wind-blown debris from public and private lands.
- E. Leave unused materials in a neat, compact stockpile, remove before final completion.

END OF SECTION

SECTION 32 18 23.43 - COURT SURFACE COLOR COATING SYSTEM AND STRIPING - ALTERNATE #1

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Alternate #1 Court surface color coating system and striping.

1.2 REFERENCE STANDARDS

- A. American Sports Builders Association (ASBA).
- B. National Basketball Association (NBA) Official Rules
- C. National Federation of State High School Associations (NFHS) Rule Book

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data
- B. Samples: Submit manufacturer's color samples of color coating.
- C. Test Reports:
 - 1. Submit independent test results for solar reflectance index.
 - 2. Submit independent test results for 2000 Hour ASTM G154, accelerated weathering UV test, to demonstrate long-term durability and fade resistance.
 - 3. Submit independent test results for 2000 Hour, accelerated weathering ASTM G155 Xenon Arc test, to demonstrate long-term fade resistance and quality of pigment.
- D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- E. Manufacturer's Project References: Submit manufacturer's list of successfully completed asphalt basketball & multi-purpose court surface color coating system projects, including project name, location, and date of application.
- F. Applicator's Project References: Submit applicator's list of successfully completed asphalt basketball & multi-purpose court surface color coating system projects, including project name, location, type and quantity of color coating system applied, and date of application.
- G. Warranty Documentation: Submit manufacturer's standard warranty.
- H. Authorized Installer Certificate: Submit manufacturer's authorized installer certificate.

1.4 QUALITY ASSURANCE

A. Manufacturer's Qualifications:

1. Manufacturer regularly engaged, for past 5 years, in manufacture of asphalt basketball surface color coating systems of similar type to that specified.

B. Applicator's Qualifications:

1. Employ persons trained for application of basketball surface color coating systems.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:

1. Store and handle materials in accordance with manufacturer's instructions.
2. Keep materials in manufacturer's original, unopened containers and packaging until application.
3. Store materials in clean, dry area indoors.
4. Store materials out of direct sunlight.
5. Keep materials from freezing.
6. Protect materials during storage, handling, and application to prevent contamination or damage.
7. Close containers when not in use.
8. Retain manufacturer batch codes on each container and application dates, for warranty purposes.

1.6 AMBIENT CONDITIONS

A. Do not apply asphalt basketball & multi-purpose court surface color coating system when air or surface temperatures are below 50°F (10°C) during application or within 24 hours after application.

B. Do not apply asphalt basketball & multi-purpose court surface color coating system when rain is expected during application or within 24 hours after application.

PART 2 PRODUCTS

2.1 MANUFACTURER

- ### A.
- SportMaster Sport Surfaces, PO Box 2277, 2520 South Campbell Street, Sandusky, Ohio 44870. Toll Free 800-326-1994. Fax 877-825-9226. Website www.sportmaster.net. E-mail moreinfo@sportmaster.net. or approved

2.2 MATERIALS

- A. Asphalt Basketball & Multi-Purpose Court Surface Color Coating System: SportMaster Color Coating System.
- B. Color Coating: SportMaster "ColorPlus System".
 - 1. 100 percent acrylic emulsion coating.
 - 2. Mix on-site with silica sand and water.
 - 3. Color coats basketball & multi-purpose courts.
 - 4. Weight per Gallon at 77 Degrees F: 9.2 lbs., plus or minus 0.5 lbs.
 - 5. Color: Blue and Dark Green
- C. Line Markings Primer: SportMaster "Stripe-Rite".
 - 1. 100 percent acrylic emulsion primer, clear drying.
 - 2. Primes line markings and prevents bleed-under for sharp lines.
 - 3. Chemical Characteristics, by Weight, Nominal:
 - a. Acrylic Emulsion: 38.0 percent.
 - b. Hiding Pigment: 0.0 percent.
 - c. Mineral Inert Fillers: 7.0 percent.
 - d. Film Formers, Additives: 1.5 percent.
 - e. Water: 50.0 percent.
 - 4. Weight per Gallon at 77 Degrees F: 8.9 lbs., plus or minus 0.5 lbs.
 - 5. Non-Volatile Material: 29 percent, plus or minus 5 percent.
- D. Line Paint: SportMaster "Textured Line Paint".
 - 1. Pigmented, 100 percent acrylic emulsion line paint.
 - 2. Line marking on asphalt basketball & multi-purpose courts.
 - 3. Chemical Characteristics, by Weight, Nominal:
 - a. Acrylic Emulsion: 25.89 percent.
 - b. Pigment: 14.90 percent.
 - c. Mineral Inert Fillers: 13.12 percent.
 - d. Additives: 4.73 percent.
 - e. Water: 41.36 percent.
 - 4. Weight per Gallon at 77 Degrees F: 10.65 lbs., plus or minus 0.75 lbs.
 - 5. Non-Volatile Material: 45.17 percent, plus or minus 5 percent.
 - 6. Color: White.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine asphalt basketball to receive color coating system.
- B. Verify asphalt basketball meet ASBA requirements.

- C. Notify Architect of conditions that would adversely affect application or subsequent use.
- D. Do not begin surface preparation or application until unacceptable conditions are corrected.

3.2 SURFACE PREPARATION

- A. Protection of In-Place Conditions: Protect adjacent surfaces and landscaping from contact with asphalt basketball surface color coating system.
- B. Prepare surfaces in accordance with manufacturer's instructions.
- C. Cure new asphalt surfaces a minimum of 14 to 30 days before application of asphalt basketball surface color coating system and according to manufacturer's instructions.
- D. Remove dirt, dust, debris, oil, grease, vegetation, loose materials, and other surface contaminants which could adversely affect application of asphalt basketball surface color coating system. Pressure wash entire surface.
- E. Repair cracks, depressions, and surface defects in accordance with manufacturer's instructions before application of filler course and color coating.
- F. Level depressions 1/8 inch and deeper with patch binder in accordance with manufacturer's instructions.
- G. Apply 1 or 2 coats of filler course as required by surface roughness and porosity to provide smooth underlayment for application of color coating.
- H. Ensure surface repairs are flush and smooth to adjoining surfaces.

3.3 APPLICATION

- A. Apply asphalt basketball surface color coating system in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Mix materials in accordance with manufacturer's instructions.
- C. Apply Filler Course and Color Coating with a 50-60 durometer, soft rubber squeegee.
- D. Filler Course:
 - 1. Apply 2 coats on new asphalt or existing acrylic surfaces with extensive cracks or low spot repair.
 - 2. Apply 1 coat on existing acrylic surfaces with minimal repairs.
- E. Color Coating: Apply a minimum of 2 coats of color coating to prepared surfaces in accordance with manufacturer's instructions.
- F. Allow material drying times in accordance with manufacturer's instructions before applying other materials or opening completed surface to foot traffic.

3.4 LINE MARKINGS

- A. Lay out court line markings in accordance with appropriate governing body:
 - a. NBA Official Rules for professional basketball
 - b. NFHS Rules for high school basketball
 - c. NCAA Rules for college basketball
- B. Apply line markings primer, after masking tape has been laid, to seal voids between masking tape and court surface to prevent bleed-under when line paint is applied.
- C. Apply a minimum of 1 coat of line paint in accordance with manufacturer's instructions.

3.5 PROTECTION

- A. Allow a minimum of 24 hours curing time before opening basketball & multi-purpose courts for play.
- B. Protect applied asphalt basketball surface color coating system to ensure that, except for normal weathering, coating system will be without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 32 84 00 – IRRIGATION SYSTEM

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Piping.
 - 2. Encasement for piping.
 - 3. Manual valves.
 - 4. Automatic control valves.
 - 5. Manual drain valves.
 - 6. Transition fittings.
 - 7. Dielectric fittings.
 - 8. Miscellaneous piping specialties.
 - 9. Sprinklers.
 - 10. Controllers.
 - 11. Boxes for automatic control valves.

1.3 DEFINITIONS

- A. Circuit Piping: Downstream from control valves to sprinklers, specialties, and drain valves. Piping is under pressure during flow.
- B. Drain Piping: Downstream from circuit-piping drain valves. Piping is not under pressure.
- C. Main Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under water-distribution-system pressure.
- D. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.

1.4 PERFORMANCE REQUIREMENTS

- A. Irrigation zone control shall be automatic operation with controller and automatic control valves.

- B. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain head to head irrigation coverage of areas indicated.
- C. Minimum Working Pressures: The following are minimum pressure requirements for piping, valves, and specialties unless otherwise indicated:
 - 1. Irrigation Main Piping: 55 psig
 - 2. Circuit Piping: 35 psig

1.5 REGULATORY AGENCY REQUIREMENTS

- A. Obtain and pay for any permits and inspections required by Governing Agencies and Utility Companies.

1.6 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Record Drawings
 - 1. Contractor shall maintain a current legible set of irrigation plans in a safe and accessible location on site at all times for review by Landscape Architect or inspector. Design and actual locations of pipe and valves shall be noted on the plans daily as the irrigation system is constructed.
- C. Record actual locations of all concealed components, piping system, sleeves and drain valves. Indicate two dimensions for all valves (including quick couplers and drain valves), stub-outs, and main line T's, L's, and ends. Dimension mainline pipes and wire runs at the beginning, midF-point, and end of each curve, or at each change of direction, or at 25' intervals along the curve if longer than 50'. Submit to Landscape Architect for approval.
- D. Zoning Chart: Show each irrigation zone and its control valve. Provide 11x17 color coded laminated reduction of plan legibly indicating zone areas.
- E. Controller Timing Schedule: Provide schedule indicating length of time each valve is required to be open to provide a determined amount of water for 3 seasons. Schedule is to account for differing water requirements of lawns, shrubs and different solar orientations.
- F. Operation and Maintenance Data: Provide instructions for operation and maintenance of system and controls, seasonal activation and shutdown, and manufacturer's parts catalog.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. For irrigation work: Valid Oregon Landscape Contractors License for irrigation, and a valid Oregon Landscape Business License.
 - 2. For plumbing work: Valid Oregon Plumbing License. This includes all potable water lines. For backflow preventer installations, a valid Oregon Landscape

Contractors License for irrigation and backflow or a valid Oregon Plumbing License.

- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.8 REGULATORY REQUIREMENTS

- A. Conform to applicable code for piping and component requirements.
- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

1.9 PRE-INSTALLATION MEETING

- A. Convene on site meeting with general contractor, irrigation contractor, and landscape architect one week before starting work of this section.

1.10 NOTICES

- A. Notify Landscape Architect at least (2) business days before time for inspections. Request inspections at the following times:
 - 1. Upon completion of the main line, with all valves installed, prior to backfilling.
 - 2. At start and end of pressure test.
 - 3. Upon completion of piping, prior to backfilling.
 - 4. System performance inspection upon completion of the entire system and after plant installation.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

1.12 SPECIAL WARRANTY

- A. Warranty all material for one year after date of completion or longer if manufacturer furnishes a longer guarantee.
- B. Correct immediately any failure caused by poor material or workmanship during warranty period. "Immediately" shall mean within 72 hours, as determined by the Owner depending upon the immediacy of the needed repair.
- C. Owner shall proceed with repairs and bill Contractor for costs and any damages when Contractor fails to comply.

1.13 TREE PROTECTION

- A. Protect trees and roots over 2" in diameter from damage. Route pipes under roots over 2" in diameter. Do not trench within the drip line of trees without prior approval. All trenching within critical root zones of trees to be performed by hand.

1.14 PROJECT CONDITIONS

- A. Environmental Conditions:
 - 1. In freezing weather: Do no P.V.C. solvent welding.
 - 2. In Rainy Weather: Don no P.V.C. solvent welding, except under cover.
 - 3. Maximum temperature of mating surfaces of Plastic Pipe and Fittings: 110 ° F

1.15 EXISTING UTILITIES

- A. Locate existing utilities prior to work. Protect active Pipes encountered; notify Pipe Owners. Repair or replace Utility lines damaged by Work of this Section. Remove inactive or abandoned Utilities.

1.16 CLEANING AND PROTECTION

- A. Maintain Public Streets and Driveways clean and drains open at all times.
- B. Protect Persons and Property from damage and discomfort caused by dust; water as necessary and when directed.
- C. Protect other work against damage and discoloration caused by work of this Section.

1.17 MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. (2) Sprinkler heads of each type and size.
 - 2. (4) Nozzles of each type and size.
 - 3. (2) Valve keys for manual valves.
 - 4. (2) Valve Box Keys.
 - 5. (2) Wrenches for each type of head core and for removing and installing each type of head.

PART 2 PRODUCTS

2.1 PIPES, TUBES, AND FITTINGS

- A. Main Lines: Polyvinyl Chloride (PVC) 1120, Schedule 40, ASTM D-2466
- B. Lateral Lines: Polyvinyl Chloride (PVC) 1120, Schedule 40, ASTM D-2466
- C. Swing Joints at Spray Head or MP Rotator Sprinklers: Triple elbow assembly using Rain Bird SBE Series or Rain Bird SPX-100 flexible tubing. 18" minimum length, 30" maximum.
- D. Socket Type Fittings: ASTM D-2466, Schedule 40 P.V.C.

- E. Threaded Fittings: ASTM D-2464 Schedule 80 P.V.C.
- F. Sleeve Piping: Polyvinyl Chloride (PVC) 1120, Schedule 40, ASTM D-2466.

2.2 PIPING JOINING MATERIALS

- A. Pipe-Flange Gasket Materials: AWWA C110, rubber, flat face, 1/8 inch thick unless otherwise indicated; full-face or ring type unless otherwise indicated.
- B. Metal, Pipe-Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.
- C. PVC Cleaner and Primer: R. G. Sloan "Weld-on P-70" or equal.
- D. Solvent Cements for Joining PVC Piping: R. G. Sloan "Weld-on 711" or equal. Ensure that manufacturer's expiration date is not exceeded.
- E. Pipe Joint Tape: Teflon tape or virgin Teflon paste on all threaded joints. Minimum of 4 wraps. No pipe dope.
- F. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.3 MANUAL VALVES

- A. Isolation Gate Valves at Mainline:
 - 1. Nibco T-113.
- A. Manual Drain Valves: Bronze construction, angle type, 150 lb. class, threaded end connections, with cross type Operating Handle designed to receive Operating Key. All valves to have non-floating seat disk that allows positive drainage.
 - 1. Aqualine, Champion or approved.
 - 2. Provide at Main Line low points.

2.4 AUTOMATIC CONTROL VALVES

- A. Plastic, Automatic Control Valves: Hunter ICV-G-DC.
- B. Automatic Control Valve Tags: Christy's ID-STD-Y1 or other permanent hang tag indicating zone number.
- C. Valve Sump: Provide inverted valve box sump as detailed on drawings.

2.5 SPRINKLERS

- A. Plastic, Pop-up, Gear-Drive Rotary Sprinklers: Makes and models indicated on drawings.
- B. Plastic, Pop-up Spray Sprinklers: Makes and models indicated on drawings.

2.6 CONTROLS

- A. Wire Conductors: 14-gauge, single strand. Color-coded: White - common, Red - zones, Black – spare, Yellow – master shut-off valve.
- B. Wire Connectors: DBY by 3M, Scotch Lok 3570 or approved.

C. Conduit and Fittings:

1. Under ground: Plastic, Class III, Federal Specification W-C-1094.
2. Above ground: Aluminum, Federal Specification WW-G-540.

2.7 TRACER WIRE AND TRACER WIRE BOX

- A. Contractor shall place a UF #18 minimum blue tracer wire to allow for location and marking of all otherwise unlocatable buried pipe containing pressurized water. Tracer wire shall be continuous without splices unless approved prior to the work. If approved, splices shall be made using a high-pressure type solderless connector. All splice kits shall be approved.

2.8 VALVE BOXES

- A. Automatic and Manual Control Valves: MacLean Highline 12" standard w/ locking lid. Double box assembly, see details.
- B. Manual Drain and Isolation Valves: MacLean Highline 10" round w/ "irrigation main" labeled on inside of lid.
- C. Valve Box Lid Colors: Black.

2.9 BACKFILL MATERIALS

- A. Planting Areas Subgrade: 3" sand bedding at all piping and wires; 3" debris free cover at all piping and wires; Remainder of trench up to specified topsoil depth to be native on-site soil, free of rocks and other deleterious materials.
- B. Planting Areas Finished Grade: Top layer depth and soil material to be amended topsoil as specified.
- C. Paved Areas: All backfill to be fill sand under paved areas.
- D. Drainage Backfill at Manual Drain Valves: (1) cu. foot cleaned $\frac{3}{4}$ "-1" round rock with filter fabric surround.

PART 3 EXECUTION

3.1 EARTHWORK

- A. Excavating, trenching and backfilling are specified in Section 02200 Earthwork and Grading.
- B. Provide minimum cover over top of underground piping according to the following:
1. Irrigation Main Piping: Minimum depth of 18" below finished grade to top of pipe.
 2. Circuit Piping: Minimum depth of 15" below finished grade to top of pipe.
 3. Sleeves: Minimum depth of 18" below finished grade to center of pipe.

3.2 PREPARATION

- A. Set stakes to identify locations of proposed irrigation system. Obtain Architect's approval before excavation.

- B. Review layout requirements with plantings and other affected work. Contractor is responsible for insuring irrigation equipment locations do not conflict with proposed plant locations.

3.3 PIPING INSTALLATION

A. Location and Arrangement:

1. Piping layout indicated is diagrammatic.
2. Route piping and valve boxes to avoid trees, shrubs, ground cover, and structures.
3. If conditions differ significantly from those shown on plan, contact Landscape Architect immediately.

- B. Install pipe, valves, controls, and outlets in accordance with manufacturer's instructions and details on drawings.

- C. Provide thrust blocks at all intersections or changes in direction of Mainline piping. See Detail.

- D. Provide 3" sand bedding below all main and lateral line piping.

- E. Provide 3" minimum debris free cover over all main and lateral line piping.

- F. Maintain trenches free of debris, material, or obstructions that may damage pipe.

- G. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.

- H. Install piping free of sags and bends.

- I. Snake piping slightly to provide for thermal movement of components in system.

- J. Install groups of pipes parallel to each other, spaced to permit valve servicing. (2) pipes may be stacked vertically if 4-inches of soil separates them; (3) or more pipes must be laid 4-inches apart horizontally in trench.

- K. Install fittings for changes in direction and branch connections.

- L. Lay piping on even bed, uniformly sloped without humps or depressions.

- M. Install PVC piping in dry weather when temperature is above 40 deg F. Allow joints to cure at least 24 hours at temperatures above 40 deg F before testing.

3.4 SLEEVE INSTALLATION

- A. Install sleeves under parking lots, roadways, sidewalks and elsewhere shown on drawings.

- B. Contractor responsible for installing sleeving in addition to that shown on drawings as necessary for complete installation of system as designed.

- C. Provide visible markers where sleeve ends are concealed.

- D. Extend sleeves a minimum of one-foot beyond sidewalks on each side.

- E. Run sleeves level and perpendicular to sidewalks and pavement unless show otherwise on drawings.

- F. Install sleeves at depth necessary to accommodate required mainline depth.

3.5 JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Use Teflon tape or virgin Teflon paste on all threaded joints unless dry seal threading is specified. Minimum of 4 wraps. No pipe dope.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- D. Flanged Joints: Select rubber gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- E. Ductile-Iron Piping Gasketed Joints: Comply with AWWA C600 and AWWA M41.
- F. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
 - 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
 - 2. PVC Pressure Piping: Join schedule number, ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
 - 3. PVC Nonpressure Piping: Join according to ASTM D 2855.
- G. Allow 24 hours drying time prior to pressurizing pipe.

3.6 VALVE INSTALLATION

- A. Automatic Control Valves:
 - 1. Install in double valve box assembly as detailed on drawings.
 - 2. Coil 30" length of control wires around ¾" pipe in box.
- B. Main Line Manual Drain Valves:
 - 1. Provide at main line low points.
 - 2. Install in 10" round valve box.
 - 3. Provide specified gravel sump.
 - 4. Provide 4" corrugated pipe from valve box elevation to drain valve.
- C. Isolation Valves:
 - 1. Install in 10" round valve box.
 - 2. Provide 4" corrugated pipe from valve box elevation to drain valve.

3.7 VALVE COVERS AND BOXES INSTALLATION

- A. Set all valve boxes at grade of lawn or shrub mulch surface unless otherwise noted.
- B. Minimum coverage 15 inches finished grade to lateral pipe.
- C. Install (2) valve boxes for each control valve. Set one upside down and attach top box with stainless steel screws. Bed with 2" of sand. Use landscape fabric to cover holes in box and around pipe. See detail.

3.8 SPRINKLER INSTALLATION

- A. Install sprinkler nozzles after system flushing is completed.
- B. Install sprinklers at manufacturer's recommended heights.
- C. Locate part-circle sprinklers to maintain a minimum distance of 4 inches from walls and 2 inches from other boundaries unless otherwise indicated.
- D. Install sprinkler heads plumb or perpendicular to slope of adjacent grade.

3.9 BACKFILLING

- A. Do not backfill until approved.
- B. Remove all scrap pipe from trench.
- C. Do all backfilling necessary to bring all surfaces to finished grades.
- D. Wet and tamp earth using mechanical compactor, or approved, in layers not over 8-inches until thoroughly packed and settled.
- E. Backfill within 3-inches of pipe to be free of any rock or debris which might mar the pipe.
- F. Backfill the top 2-inches of trenches in lawn area with approved topsoil.
- G. Refill trenches that have settled with loam to bring them flush with the surrounding grades.

3.10 AUTOMATIC IRRIGATION-CONTROL SYSTEM INSTALLATION

- A. Install battery operated control modules in valve boxes per manufacturer specifications.

3.11 AUTOMATIC CONTROLLER WIRE INSTALLATION

- A. Install wire beneath main line pipe and coil 24" extra wire at 100' intervals and each turn to allow for contraction of wire.
- B. Bundle wire together at 5-foot intervals with plastic tape or similar.
- C. Install control cable in same trench as irrigation piping and at least 2 inches below or beside piping.
- D. Provide conductors of size not smaller than recommended by controller manufacturer.
- E. Install wire in continuous runs with no splices unless approved.

- F. Ensure minimum additional 48-inches of wire above finished grade is coiled around ½-inch pipe in valve boxes.
- G. Control wire splices allowed with prior authorization only.
- H. Make all splices in a valve box and note these on record drawing when approved.
- I. Provide an extra coil of each wire at each splice to allow for contraction of wire due to temperature or settlement of backfill, when approved
- J. Label wires on both sides of splice with permanent, water-proof tag.
- K. Install waterproof connections at the end of extra wires.
- L. Provide spare control wires as indicated on drawings.

3.12 TRACER WIRE INSTALLATION

- A. Blue tracer wire shall be placed below the pipe and shall be continuous along otherwise unwired pieces of pipe so that it can be connected to an electrical current imposed on it for the purpose of determining its location.
- B. Tracer wire shall be extended into meter and valve boxes and shall wrap around fixture with sufficient length to extend 48" above finished grade.
- C. If approved, splices in tracer wire shall be insulated and waterproofed. Tape wrapped around splices will not be accepted as waterproofing.

3.13 CONNECTIONS

- A. Install piping adjacent to equipment, valves, and devices to allow service and maintenance.
- B. Connect wiring between controllers and automatic control valves.

3.14 IDENTIFICATION

- A. Provide permanent hang tags at automatic control valves indicating zone number and correlating to controller chart.
- B. Provide reduced, laminated copy of irrigation plan with valve schedule on each automatic controller.

3.15 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 1. Leak Test: Charge system to 100 psi and test for leaks. Pressure piping to lose no more than 4 PSI in 24 hours. Repair leaks and retest until no leaks exist.
 2. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.
 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 4. Perform coverage test of plant bed areas after plant material has been installed.
 5. Perform coverage test of lawn areas prior to seeding or sodding lawns.

- B. Any irrigation product will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports and submit for review.

3.16 STARTUP SERVICE

- A. Perform startup service.
 - 1. Complete installation and startup checks according to manufacturer's written instructions.
 - 2. Verify that controllers are installed and connected according to the Contract Documents.
 - 3. Verify that electrical wiring installation complies with manufacturer's submittal.

3.17 ADJUSTING

- A. Adjust settings of controllers.
- B. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.
- C. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with finish grade.

3.18 CLEANING

- A. Flush dirt and debris from piping before installing sprinklers and other devices.

3.19 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain automatic control valves and controllers.

END OF SECTION

SECTION 32 93 00 – LANDSCAPING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Soil preparation and fine grading
- B. New trees, plants, and groundcover
- C. Mulch and fertilizer
- D. Lawn Seed Mix
- E. Edging, Filter Fabric & Tree Stabilization Materials
- F. Maintenance

1.2 RELATED SECTIONS

- A. Section 31 10 00 – Site Clearing
- B. Section 31 20 00 – Earth Moving
- C. Section 32 84 00 – Irrigation System

1.3 REFERENCES

- A. ANSI Z60.1 – Nursery Stock.
- B. NAA (National Arborist Association) – Pruning Standards for Shade Trees

1.4 DEFINITIONS

- A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.5 SUBMITTALS

- A. Maintenance Data –at project closeout: Include pruning method; types, application frequency, and recommended coverage of fertilizer; and other routine maintenance schedules.
- B. Submit sample of each of the following to Owner for approval (7) days prior to anticipated installation:
 - 1. Each soil amendment
 - 2. Each mulch
- C. Product Data: For each type of product indicated.

1.6 REGULATORY REQUIREMENTS

- A. Comply with regulatory agencies for fertilizer and herbicide composition.

- B. Plant Materials: Certified by state department of agriculture. Described by ASTM Z60.1; "American Standard for Nursery Stock."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of Section 01600.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- C. Protect and maintain plant material until installed. Deliver plant materials immediately prior to placement. Keep plants moist.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Do not install plant material when ambient temperatures may drop below 32 degrees F (2 degrees C) or rise above 90 degrees F (32 degrees C). Planting is not permitted when ground is saturated or when wind velocity is greater than 30 mph.
- B. Bare root trees may only be planted between November 15 and March 15 unless otherwise approved. Other trees may only be planted between September 15 and April 15 unless otherwise approved.

1.9 COORDINATION

- A. Install plant material after and coordinate with work of other sections.

1.10 INSPECTIONS FOR APPROVAL

- A. Request visitation by the Landscape Architect 2 days in advance of the following:
 - 1. Finished Grading Inspection: Immediately after placement of fills Landscape Architect will review work for compliance with specified tolerance of grades, slopes and surface drainage and will determine if additional work is required.
 - 2. Materials and Layout Inspection: Immediately prior to installation, place (but do not install) plant material for approval by the Landscape Architect. All materials shall be reviewed by Landscape Architect for compliance with specifications and submittals. Layout will be approved by Landscape Architect prior to continued work.
 - 4. Installation Inspection: At time of Substantial Completion Inspection, Landscape Architect will review installation of all work of this Section. Installation Review will not occur until completion of all planting.
 - 5. Warranty Inspection: Immediately prior to the expiration of the Project Warranty, review all work of this Section for compliance with requirements. Make any corrections required by these reviews.

1.11 WARRANTY

- A. Provide one year warranty for all trees, shrubs, groundcovers, bulbs and plugs.
- B. Plant Material Warranty: Include coverage for one year after date of final completion; replace dead or unhealthy plants. Contractor is not responsible for defects caused by unusually extreme weather, vandalism, or lack of owner's maintenance.

- C. Replacements: Plants of same size and species as specified, planted in the next growing season, with a new warranty commencing on date of replacement.

1.12 MAINTENANCE SERVICE

- A. Maintain plant material until Final Completion is approved by Landscape Architect.
- B. Plant beds and plant material maintenance to include:
 - 1. Cultivation and weeding plant beds and tree pits.
 - 2. Applying herbicides for weed control in accordance with manufacturer's instructions. Remedy damage resulting from use of herbicides.
 - 3. Remedy damage from use of insecticides.
 - 4. Irrigating sufficiently to saturate root system.
 - 5. Pruning, including removal of dead or broken branches, and treatment of pruned areas or other wounds.
 - 6. Disease control.
 - 7. Maintaining guys and stakes. Repair or replace accessories when required.
 - 8. Replacement of mulch.
 - 9. Lawn Maintenance.

PART 2 PRODUCTS

2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.2 TOPSOIL

- A. Imported Topsoil: Imported, natural, fertile, friable, topsoil sandy loam free from subsoils, stones, lumps, roots, clods, sticks, weeds, weed seed and other foreign matter.
 - 1. Submit sample to Landscape Architect for approval prior to installation.
 - 2. Loam will be considered weed-free when found to contain less than 5 weeds, per 100 square feet at harvest time.
 - 3. Conform to the following:
 - (a) Moisture Content: 50% maximum.

- (b) Alkalinity-Acidity: PH 5.3-6.0.
- (c) Maximum Soluble Salts: 500 ppm.

- 4. Available as "Processed Loam" by Riverbend Materials or approved. Composition to be approximately 50% sand.

2.3 SOIL AMENDMENT MATERIALS

- A. Plant Bed Fertilizer: Containing fifty percent of the elements derived from organic sources with fast and slow-release nitrogen; of proportion necessary to eliminate any deficiencies of topsoil as indicated in analysis to the following proportions: Nitrogen 16 percent, phosphoric acid 16 percent, soluble potash 16 percent.
- B. Planting Tablets: Woodace Briquettes or approved.
- C. Lime: Ground limestone, dolomite type, minimum 95 percent carbonates with 99% passing through an 8 mesh screen and 75% passing through a 60 mesh screen.
- D. "Garden Compost" from Rexius or approved. 100% to pass through ½" mesh screen. Free from weed seeds and debris, and containing not more than 50% sawdust, straw or shavings.

2.4 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; free of substances toxic to plantings; and as follows:
- B. Available as "Garden Compost" from Rexius Forest Bi-Products or Lane Forest Products or approved.

2.5 FERTILIZERS

- A. Organic Slow-Release Fertilizer: Granular fertilizer containing beneficial bacteria, mycorrhizal fungi and water-insoluble nitrogen, phosphorus, potassium in the following composition:
 - 1. Composition: percent nitrogen, percent phosphorous, and percent potash, by weight as indicated.
 - 2. Available as "Fairway 4-4-4 SGN 100" by Perfect Blend; Available from SiteOne Landscape Supply 541-342-1203, Ewing Irrigation 541-736-9531 or approved.
- B. Lawn Fertilizer: "Fairway 150 SGN 8-4-5" by Perfect Blend, Inc. or approved. SiteOne Landscape Supply 541-342-1203, Ewing Irrigation 541-736-9531 or approved
- C. Planting Tablets: Tightly compressed chip type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.
 - 1. Size: 21-gram tablets.
 - 2. Nutrient Composition: 12 percent nitrogen, 8 percent phosphorous, and 8 percent potassium, by weight plus micronutrients.
 - 3. Available as "Healthy Start Macro Tabs 12-8-8" by Perfect Blend, LLC. www.perfect-blend.com.

2.6 MULCH

- A. At location of future fence: 2-inch depth shredded fir bark 5/8" – 1/4" diameter (max), free of growth or germination inhibiting ingredients.
- B. At Plant Beds: 3-inch depth, shredded fir bark 5/8" – 1/4" diameter (max), free of growth or germination inhibiting ingredients.
- C. At Pathway (east edge): 4-inch depth shredded hemlock bark, free of growth or germination inhibiting ingredients.
- D. At Lawn Areas: Biodegradable, fine screened, aged sawdust, not toxic and free of plant growth

2.7 LAWN SEED MIX

- A. Irrigated Lawn Area: Fresh, clean, dry, new crop seed complying with Association of Official Seed Analysts' "Rules for Testing Seeds" for purity and germination tolerances. Provide only current or last season's crop.
 - 1. Purity: 98 percent by weight
 - 2. Germination: 90 percent
 - 3. Available as "JB Sun & Shade Blend" mixture from JB Sod, Seed & Hydro seed.

2.8 FILTER FABRIC

- A. Non-woven geotextile fabric model US 120NW as manufactured by US Fabrics or approved.

2.9 EDGING

- A. Black Plastic landscape edging 4"-5" height - Available as EDG-KING from Olyola Edging or approved,
 - 1. 5 inch landscape edging - 1 inch round top bead / 4 groove wall anchor-
<https://www.olyola.com/lawn-edging/edg-king/>

2.10 TREE STABILIZATION MATERIALS

- A. Stakes: Softwood lumber, pointed end, uniformly sized, capable of at least 2 years ground burial. 2" x 2" minimum size. **Painted black.**
- B. Tree Ties: 1" wide plastic chain lock available as "Prolock 1" Polychain" available from Forestry Suppliers, Inc., or Dimex 10-1102 from Dimex Corporation or approved.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive landscaping for compliance with requirements and conditions affecting installation and performance.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
 - 3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.
 - 5. Verify that previous subgrade grading operations satisfactorily meet specifications and have been approved by Landscape Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 PLANT BED PREPERATION AND EXCAVTION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations according to required layout. Obtain Landscape Architect's acceptance before excavating or planting.

3.3 SOIL PREPARATION AND PLACEMENT SCHEDULE

- A. At Plant Beds:
 - 1. Place imported topsoil to a depth of 18 inches minimum but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - (a) Spread approximately one-half the thickness of planting soil over loosened subgrade. Mix thoroughly into the top 3 inches of subgrade. Spread remainder of planting soil.
 - 2. Upon approved placement of topsoil, apply the following soil amendments and fertilizer on surface, and thoroughly blend into top 8" min. of topsoil throughout the entire plant bed.
 - (a) 3 inches Compost

(b) Fertilizer at the rate of 20 lbs. per 1000 sf.

3. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades. Confirm that finished grade is "puddle free". Slope or crown all plant bed surfaces as needed for proper drainage. Crown plant bed surfaces as detailed.
4. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading. See required "Finished Grading Inspection".

B. At Lawns and Grassy Swale Areas:

1. Confirm subgrade is 6" below finished grade.

2. Scarify subgrade to a depth of six inches. Confirm subgrade is acceptable to Landscape Architect before topsoil placement.

3. Fill with 6" minimum imported topsoil and apply the following soil amendments and fertilizer on surface, and thoroughly blend into top 6 inches min. of planting soil throughout the entire area.

(a) 1 inch Compost

(b) Fertilizer at the rate of 15 lbs. per 1000 sf.

4. Add topsoil until flush with adjacent finished grade or adjacent paved surfaces. Compact to 85% and add soil as needed for finished grade.
5. Gravel backfill and foreign material are not permitted within 18" of finished grade. Contractor is to ensure that soil is free of gravel or foreign materials.

3.4 TREE AND SHRUB PLANTING

- A. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1.
- B. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Balled and Burlapped Stock: Set plumb and in center of planting pit or trench with root flare 2 inches above adjacent finish grades.
 1. Use planting soil with amendments for backfill.
 2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls.
 3. Do not use planting stock if root ball is cracked or broken before or during planting operation.
- D. Container Grown Stock: Carefully remove root ball from container without damaging root plant.
- E. Fabric Grown Stock: Carefully remove root ball from fabric bag without damaging root ball or plant.

- F. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 1. Place planting tablets in each planting pit when pit is approximately one-half filled; at high rates recommended by manufacturer. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - 2. At tree and shrub pits, add micorrhizal tablets in each planting pit when pit is approximately one-half filled; at specified rates. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - 3. Continue backfilling process. Water again after placing and tamping final layer of soil.
- G. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.5 TREE AND SHRUB PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape without approval of Landscape Architect.
- B. Prune, thin, and shape trees, shrubs, and vines as directed by Landscape Architect. Existing trees to remain will be pruned on site in presence of Landscape Architect.
- C. Do not apply pruning paint to wounds.

3.6 TREE STABILIZATION

- A. Install trunk stabilization as with plant protector wrapped guy wires and stakes as needed or shown in detail.

3.7 SEED INSTALLATION

- A. Sow seed at manufacturers suggested rates.
- B. Lightly rake to cover seed, roll and water with a fine spray.
- C. Seed may be applied through hydro-seeding process. Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
 - 1. Retain applicable option in first subparagraph below for improved erosion control.
 - 2. Mix slurry with manufacturer's recommended tackifier.
 - 3. Retain one of two subparagraphs below. See "Hydroseeding" Article in the Evaluations.
 - 4. Apply slurry uniformly to all areas to be seeded.

3.8 GROUND COVER AND PERENNIAL PLANTING

- A. Set out and space ground cover and plants other than trees, shrubs, and vines at indicated spacing in even rows with triangular spacing and as shown in detail. Conduct layout inspection as specified.
- B. Use planting soil with amendments for backfill.
- C. Dig holes large enough to allow spreading of roots.
- D. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- E. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- F. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.9 MULCHING INSTALLATION

- A. At Plant Beds, : Mulch all plant beds to a depth of 3 inches minimum thickness within 24 hours after planting.
 - 1. Where plant beds meet lawns, seeded areas or natural areas to remain, sidewalks or mowing edges, provide a vertical spaded edge 2 inches deep along edge to lock mulch in place.
 - 2. Immediately restore eroded material to prevent possible soil erosion.
- B. At Future Fence: Mulch to a depth of 2-inches.
- C. At Pathway: Mulch to a depth of 4-inches.

3.10 FILTER FABRIC AND EDGING

- A. Install according to detail on LA-4.

3.11 TREE PRUNING

- A. Prune new and existing trees as directed by Landscape Architect. Remove dead material from existing trees to remain within project limits. Leave existing stumps.

3.12 LANDSCAPE MAINTENANCE

- A. During specified maintenance period, maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Maintain plant materials, planted areas, and soils free of pests and pathogens or disease. Pesticides use is not permitted.
- D. At Lawns Areas: During specified maintenance period, water, weed, fertilize, and re-seed as necessary to establish healthy, thick, even grass stand, 2 inches high.
- E. Grass Mowing: Mow all areas as shown on plans. Do not attempt first mowing until grass is firmly rooted and secure in place. When grass reaches 3 inches in height,

mow to 2 inches in height. Maintain grass until end of Maintenance Period or until final completion, whichever is later. Do not remove more than 1/3 of grass leaf in any mowing operation. Remove clippings from project. Provide (3) mowings minimum.

3.13 PESTICIDE AND HERBICIDE APPLICATION

- A. Use only when approved or directed by owner. Follow manufacturer instructions and State and Federal regulations.
- B. Use extra precautions to ensure that the spraying does not cause public alarm or drift into adjoining properties.

3.14 CLEANING AND REPAIRING

- A. Maintain sidewalks and paved areas clean at all times.
- B. Maintain vehicles and equipment in clean condition to prevent soiling of roads, walks, and other paved or surfaced areas.
- C. Including work of other Sections, clean, repair, and touch-up, or replace when directed, products which have been soiled, discolored, or damaged by work of this Section
- D. Remove excess materials and debris from project site upon work completion or sooner, if directed.

END OF SECTION

SECTION 33 14 15 - SITE WATER DISTRIBUTION PIPING

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Private water distribution system improvements, including connection to the existing water system.

1.2 REFERENCES

- A. Comply with:

1. AWWA Standards (current edition)
2. NFPA Standards (current edition)
3. Oregon Standard Specifications for Construction, APWA & ODOT

1.3 SUBMITTALS

- A. Product Data: Manufacturer's specifications and technical data including performance, construction, and fabrication information.

1. Submit for pipe materials and fittings, valves, and drinking fountain.

- B. Field Quality Control submittals as specified in Part 3 of this Section:

1. Field Tests
2. Special Inspections for Code Compliance

1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Not less than 5 years' experience in the actual production of specified products.

- B. Installer's Qualifications: Firm with not less than 5 years' experience in installation of systems similar in complexity to those required for this project.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Deliver products in original, unopened packaging with legible manufacturer's identification.

- B. Storage and Protection: Comply with manufacturer's recommendations.

1. Protect from damage by the elements and construction procedures.

1.6 ADVANCE NOTICES

- A. Notify Architect at least 48 hours before starting work of this section.

1.7 COORDINATION

- A. Coordinate with other trades affecting or affected by work of this section.

PART 2 – PRODUCTS

2.1 WATER PIPE AND FITTINGS

- A. Shall be PE pressure pipe required to give pressure rating not less than 200psi. Submit product for approval.

2.2 DRINKING FOUNTAIN

- A. Drinking Fountain shall be Elkay Outdoor ezH2O Upper Bottle Filling Station Bi-Level Pedestal with Pet Station Non-Filtered Non-Refrigerated. Unit shall be capable of year-round use in freezing weather.
 - a. Model LK4420BF1UDBEVG from Elkay
 - b. Color- Evergreen.
 - c. Supplied by City, Installed by Contractor

PART 3 – EXECUTION

3.1 EXISTING CONDITIONS

- A. Prior to installation, carefully inspect trench, excavations and base to verify that all such work is complete to the point where this installation may properly commence.
- B. Do not install work of this Section until all unsatisfactory conditions have been corrected. Commencing work implies acceptance of existing conditions.
- C. If field measurements differ slightly from drawing dimensions, modify work as required for accurate fit. If measurements differ substantially, notify Engineer prior to starting work of this section. Excavate and expose existing service in a manner approved by the Engineer.

3.2 INSTALLATION - PIPE

- A. Installation shall be in accordance with the manufacturer's recommendations. All pipe ends and interiors shall be thoroughly cleaned of all foreign matter and shall be kept clean during installation. When work is not in progress, all open ends of pipe and fittings shall be securely closed so that no trench water, earth, animal life or other substance may enter.
- B. Route pipe in straight line where possible.
- C. Install pipe to allow for expansion and contraction without stressing pipe or joints.
- D. Slope water pipe and position drains at low points.
- E. Cutting of pipe to be done in a neat and workmanlike manner by method that will not damage pipe and as recommended by manufacturer.
- F. Install piping within 0.10 feet of indicated grade and location

3.3 VALVES, FITTINGS AND CAPS

- A. Shall be set and joined to the pipe as shown on the drawings. All pipe shall be supported to prevent stress on valves. All dead ends shall be closed with plugs or caps that are suitably restrained to prevent blowing off under test pressure.

3.4 DRINKING FOUNTAIN AND POST HYDRANTS

A. Installed per manufacturers recommendation.

3.5 FIELD QUALITY CONTROL

A. Field Tests:

1. Hydrostatic tests as described below.
2. Disinfection Tests.

B. Field Inspections: Notify Architect prior to work of this section.

C. Special Inspections for Code Compliance:

1. Test hydrostatically. All testing, acceptance, and documentation shall comply with Oregon State Plumbing Specialty Code and NFPA and AWWA specifications as applicable.
2. Prior to testing partially backfill or provide other means of restraint to prevent any movement during the test.
3. Observance: Engineer to observe domestic testing. Contractor shall notify Architect at least 48 hours prior to testing.
4. Obtain plumbing inspector approvals.

3.6 FLUSHING AND DISINFECTION

A. Flushing:

1. Contractor shall flush and clean all parts of all completed system. All pipe and structures shall be clean and free of all construction debris, rocks, gravel, mud, sand, silt, and other foreign material, and as directed by the Engineer.

B. Disinfection:

1. Disinfect all domestic water supply piping and appurtenances per the Oregon State Health Department requirements.
2. Provide written certification that the disinfection has been successfully completed.

3.7 CLEANING

A. Upon completion of the work of this section promptly remove from the working area all scraps, debris and surplus material.

3.8 PROTECTION

A. Protect all Work installed under this section.

B. Replace, at no additional cost to Owner, any damaged work of this section.

END OF SECTION

SECTION 33 41 00 – STORM UTILITY DRAINAGE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Pipe and fittings.
2. Nonpressure transition couplings.
3. Stormwater inlets.
4. Pipe outlets.
5. Drain Rock
6. Geotextile

1.2 ACTION SUBMITTALS

- 1) Product Data: For each type of product indicated.
- 2) Shop Drawings:
 1. Stormwater inlets. Include plans, elevations, sections, details, frames, covers, and grates.

1.3 INFORMATIONAL SUBMITTALS

- 1) Product Certificates: For each type of cast-iron soil pipe and fitting, from manufacturer.
- 2) Field quality-control reports.

1.4 PROJECT CONDITIONS

- 1) Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
 1. Notify Engineer and Owner's Project Manager no fewer than two days in advance of proposed interruption of service.
 2. Do not proceed with interruption of service without Engineer's written permission.

PART 2 - PRODUCTS

2.1 AREA DRAINS

A. Field Constructed.

1. 12" Reinforced Concrete Pipe
2. PVC sand collar connections bored and grouted
3. Neehan NF-43501200B beehive grate or approved

2.2 PVC PIPE AND FITTINGS

A. PVC Solid and Perforated Wall Piping:

1. Pipe: ASTM D 3034, PVC, solid pipe and perforated pipe with bell-and- spigot ends for gasketed joints or ASTM D1785 and D2665, PVC Schedule 40 , solid pipe with bell-and- spigot ends for welded/glued joints.
2. Fittings: ASTM D 3034, PVC molded or fabricated, socket type.
3. Gaskets: ASTM F 477, elastomeric seals.

2.3 NONPRESSURE TRANSITION COUPLINGS

A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground nonpressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.

B. Sleeve Materials:

1. For Concrete Pipes: ASTM C 443, rubber.
2. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
3. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.

C. Unshielded, Flexible Couplings:

1. Description: Elastomeric sleeve with stainless-steel shear ring and corrosion-resistant-metal tension band and tightening mechanism on each end.

D. Shielded, Flexible Couplings:

1. Description: ASTM C 1460, elastomeric or rubber sleeve with full-length, corrosion-resistant outer shield and corrosion-resistant-metal tension band and tightening mechanism on each end.

E. Ring-Type, Flexible Couplings:

1. Description: Elastomeric compression seal with dimensions to fit inside bell of larger pipe and for spigot of smaller pipe to fit inside ring.

2.4 DRAIN ROCK

A. Drain Rock:

1. Clean/washed open-graded 1-1/2" round drain rock wrapped in non-woven geotextile fabric.

B. Non-Woven Geotextile Drain Rock Wrap:

1. US 160NW Non-woven Geotextile, or approved.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Excavation, trenching, and backfilling are specified in Section 31 20 00 "Earth Moving."

3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, nonpressure drainage piping according to the following:
 - 1. Install piping pitched down in direction of flow.
 - 2. Install piping at depth and pipe cover as indicated on Construction Documents.
 - 3. Install PVC sewer piping according to ASTM D 2321 and ASTM F 1668 and manufacturer's specifications.
 - 4. Install nonreinforced-concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."
 - 5. Install reinforced-concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."

3.3 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping according to the following:
 - 1. Join PVC sewer piping according to ASTM D 2321 for elastomeric-seal joints.
 - 2. Join nonreinforced-concrete sewer piping according to ASTM C 14 and ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
 - 3. Join reinforced-concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
 - 4. Join dissimilar pipe materials with nonpressure-type flexible couplings.

3.4 AREA DRAINS INSTALLATION

- A. Set frames and grates to elevations indicated.

3.5 DRAIN ROCK INSTALLATION

- A. Excavate drain rock trench to depth and width indicated on plans. Lay geotextile fabric at base of trench and along the sides. Place drain rock loosely in trench to depth indicated. Cover top of drain rock with remaining fabric with a minimum 12" overlap.

3.6 IDENTIFICATION

- A. Materials and their installation are specified in Section 31 20 00 "Earth Moving." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
 - 1. Use warning tape or detectable warning tape over ferrous piping.
 - 2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

3.7 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
 - 1. Submit separate reports for each system inspection.
 - 2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
 - 3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
 - 4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
 - 1. Do not enclose, cover, or put into service before inspection and approval.
 - 2. Test completed piping systems according to requirements of authorities having jurisdiction.
 - 3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
 - 4. Submit separate report for each test.
 - 5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
 - a. Exception: Piping with soil tight joints unless required by authorities having jurisdiction.
 - b. Option: Test plastic piping according to ASTM F 1417.

- c. Option: Test concrete piping according to ASTM C 924.
- C. Leaks and loss in test pressure constitute defects that must be repaired.
- D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

END OF SECTION 334100

SECTION 800 - PERMIT INFORMATION

1. **Erosion Control:** NPDES 1200-C PERMIT is applicable to this project.
 - Owner Shall apply and pay for the 1200-C permit.
 - The 1200-C permit and all responsibility for monitoring shall be transferred to the Contractor prior to mobilization.
 - Link to 1200-C drawing - [1200C Plan](#)
2. **Building Permit Application:** Owner or Owner's Representative shall complete the required building permit application(s) and file with authorities having jurisdiction within ten days of the date of execution of the Contract. The owner shall also pay all fees associated with obtaining such building permits.
3. **Specialty Permit Applications:** Contractor shall complete all specialty permit applications and file with authorities having jurisdiction. Owner shall pay all fees associated with specialty permits either directly to the authorities having jurisdiction or reimburse the Contractor for actual fees incurred for the specialty permit applications. Specialty Permits shall include but may not be limited to Mechanical, Plumbing, and Electrical permits.
4. **Utilities:** Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

SECTION 900
CONSTRUCTION DRAWINGS

DRAWINGS DATED April 17th, 2025

C-1- Cover Sheet

LA -0 -Existing Conditions Plan

LA -1 - Site Plan

LA -2 - Layout & Utility Plan

LA-3 - Grading & Drainage Plan [LA-3 Grading Plan For Bid - Standard.zip](#)

LA-4 - Site Details

LA-5 – Civil Site Details

LA-6 - Planting Plan and Details

LA-7 – Irrigation and Details

LA-8 – Iris Street Frontage