

SHELDON IRRIGATION PUMP AND MAINLINE REPLACEMENT

Issue Date: 23 April 2014

Bid date: 7 May 2014



Prepared For:

SCHOOL DISTRICT 4J

715 West Fourth Avenue, Eugene, Oregon 97402

Prepared By:

DLA Inc.

474 Willamette Street, Suite 305, Eugene, Oregon 97401

Project Number: 420.652.103

DOCUMENT 00 01 01
TITLE PAGE

PROJECT MANUAL:

Sheldon Irrigation Pump and Mainline Replacement
Irrigation System Improvements
Eugene Public School District 4J
Eugene, Oregon
C.I.P. Project No. 420.652.103

OWNER:

Eugene School District 4J
715 West 4th Ave.
Eugene, Oregon 97402

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Project Manager: Kirk Gebb
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DLA Inc.
474 Willamette Street, Suite 305
Eugene, OR 97401
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541-683-5803
541-683-8183

DATE: April 23, 2014

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SHELDON HIGH SCHOOL
IRRIGATION SYSTEM IMPROVEMENTS

C.I.P. PROJECT NO.: 420.652.103

DATE: April 23, 2014

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INVITATION TO BID

Sealed bids will be received by Kathi Hernandez, Facilities Management Assistant, for the Sheldon Irrigation Pump and Mainline Replacement project on May 7, 2014, until the Deadline for Bid Submission at 2:00 p.m., at the Eugene School District 4J Facilities Management Office, 715 West Fourth Avenue, Eugene, Oregon 97402. The Bids will be opened publicly and read aloud immediately after the deadline for submission of bids. Late Bids will not be considered.

Briefly, the work is described as irrigation system renovations, irrigation system improvements and site improvements at Sheldon Irrigation Pump and Mainline Replacement.

Bidding documents will be available online at <http://www.4j.lane.edu/bids/> beginning April 24, 2014. Bidders may obtain hard copy sets by paying the cost of reproduction Central Print and Reprographic Services, 47 W. 5th. Avenue, Eugene, OR 97401.

Sub-bidders and suppliers may obtain bidding documents online beginning April 24, 2014 or at Central Print and Reprographic Services, 47 W. 5th. Avenue, Eugene, OR 97401, by paying the cost of reproduction; however, it is the responsibility of those obtaining Bidding Documents in this manner to obtain any and all addenda. Addenda will be issued to Plan Centers only.

Bidding Documents may be examined at the following locations:

- Eugene Builder's Exchange, 2460 W. 11th, Eugene, OR 97402
- Central Oregon Builders Exchange, 1902 NE 4th Street, Bend, OR 97701
- McGraw Hill Construction, 3461 NW Yeon Ave. Portland, OR 97210
- Daily Journal of Commerce Plan Center, 921 S.W. Washington St., Ste 210, Portland, OR 97205-2810
- Douglas County Plan Center, 3076 NE Diamond Lake Blvd, Roseburg, OR 97470
- Oregon Contractor Plan Center, 5468 SE International Way, Milwaukie, OR 97222
- Reed Construction Data, 30 Technology Parkway South, Ste 500, Norcross, GA 90092
- Salem Contractor's Exchange, 2256 Judson Street SE, Salem, OR 97309
- Willamette Valley Bid Center, 32054 Old Hwy 34, Tangent, OR 97389

A mandatory pre-bid conference and walk-through has been scheduled for April 30, 2014, at 1:00 pm. The location of the conference will be Sheldon High School 2455 Willakenzie Road, Eugene, OR 97401. All Prime Bidders wishing to submit a bid are required to attend this conference. Statements made by the District's representatives at the conference are not binding upon the District unless confirmed by Written Addendum. Pre-qualification of bidders is not required.

Each Bid must be submitted on the prescribed form and accompanied by a Surety Bond, Cashiers Check, or Certified Check, executed in favor of Eugene School District 4J, in the amount not less than ten percent (10%) of the total bid, based upon the total bid amount for those items bid upon.

Either with the Bid or within two working hours of the Deadline for Submission of Bids, bidders shall submit, on the form provided, information first-tier subcontractors furnishing labor or labor and materials, as provided in ORS 279C.370. Bids for which disclosure forms are required, but not submitted, will be rejected.

No bid for a construction contract will be received or considered unless the Bidder is registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board at the time the Bid is made, as required by OAR 137-049-0230. [A license to work with asbestos-containing materials under ORS 468A.720 is not required for this project.]

For every bid \$100,000 or greater, all Contractors and Subcontractors shall have a public works bond, in the amount of \$30,000, filed with the Construction Contractors' Board (CCB), before starting work on the project, unless exempt.

Each Bid shall contain a statement indicating whether the Bidder is a "resident bidder", as defined in ORS 279A.120.

Each Bid shall contain a statement that the "Contractor agrees to be bound by and will comply with the provisions of ORS 279C.800 through 279C.870 regarding payment of Prevailing Wages".

Contractor shall certify nondiscrimination in obtaining required subcontractors, in accordance with ORS 279A.110(4).

School District 4J reserves the right to (1) reject any or all Bids not in compliance with all public bidding procedures and requirements, (2) postpone award of the Contract for a period not to exceed sixty (60) days from the date of bid opening, (3) waive informalities in the Bids, and (4) select the Bid which appears to be in the best interest of the District.

Date: 23 April 2014

By: Kathi Hernandez, Facilities Management Assistant

Published: Register Guard, Daily Journal of Commerce, ORPIN (Oregon Procurement Information Network)

Posted: School District 4J Administration Office
200 North Monroe
Eugene, OR 97403

DOCUMENT 00 21 13

INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

STANDARD FORM

Instructions to Bidders - AIA Document A701, 1997 Edition, immediately following are part of this Project Manual.

END OF DOCUMENT 00 21 13

DOCUMENT 00 22 13
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

The following Supplementary Instructions to Bidders modify, change from or add to AIA Document A701 Instruction To Bidders, 1997 Edition. Where any Article of the Instructions to Bidders is modified or any paragraph, subparagraph, or clause thereof is modified or deleted by these Supplementary Instructions to Bidders, the unaltered provisions of that Article, paragraph, subparagraph, or clause shall remain in effect.

1.1 ARTICLE 2 BIDDER'S REPRESENTATIONS

A. Add the following subparagraphs to 2.1.3:

2.1.3.1 Bidders are required to attend any mandatory pre-bid conferences or tours as stated in the Advertisement for Bids. Bidders not attending this pre-bid conference and tour shall be disqualified from bidding. Bidders will be required to sign in at the project site prior to the conference or tour.

2.1.3.2 Bidders are encouraged to visit the site(s) to become familiar with existing conditions. The Owner is not responsible and shall not bear financial burden for oversights made by the Bidder for failure to inspect sites prior to submitting a bid.

2.1.3.3 In all cases, persons wishing to examine the area of work must sign in at the school office prior to visiting the work area. Prior to leaving the school, sign-out at the office is required.

2.1.3.4 If access is required at times when the school office is not staffed, contact the Facilities Office, 687-3259, for assistance.

B. Add the following paragraph 2.1.5:

2.1.5 The Bidder certifies by signing the Bid that the Bidder has a drug-testing program in place for its employees that includes, at a minimum, the following:

- .1 A written employee drug-testing program,
- .2 Required drug testing for all new Subject Employees, or alternatively, requiring testing of Subject Employees every six months on a random selection basis,
- .3 Required testing of a Subject Employee when the Contractor has reasonable cause to believe the Subject Employee is under the influence of drugs, and
- .4 Required testing of a Subject Employee when the Subject Employee is involved in: (I) an incident causing an injury requiring treatment by a physician, or (ii) an incident resulting in damage to property or equipment.

A drug-testing program that meets the above requirements will be deemed a "Qualifying Employee Drug-testing Program". For purposes of this rule an employee is a "Subject Employee" only if that employee will be working on the Project job site; and

That if awarded the Public Improvement Contract, the Bidder will execute a contract in which the Contractor shall represent and warrant to the District that the Qualifying Employee Drug-testing Program is in place at the time of contract execution and will continue in full force and effect for the duration of the Public Improvement Contract; and that the Contract will condition the Agency's performance obligation upon the Contractor's compliance with this representation and warranty; and

That the Public Improvement Contract shall contain Contractor's covenant requiring each subcontractor providing labor for the Project to:

- .1 Demonstrate to the Contractor that it has a Qualifying Employee Drug-testing Program for the subcontractor's Subject Employees, and represent and warrant to the Contractor that the Qualifying Employee Drug-testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract; or
- .2 Require the subcontractor's Subject Employees to participate in the Contractor's Qualifying Employee Drug-testing Program for the duration of the subcontract.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – DOCUMENT 00 22 13

1.2 ARTICLE 3 BIDDING DOCUMENTS

A. 3.3 SUBSTITUTIONS

1. Add the following:

3.3.2.1 All requests for approval must be submitted in duplicate on "Substitution Request Form". Include a self-addressed stamped envelope. Requests received by Architect less than ten (10) days prior to bid will not be considered.

B. 3.4 ADDENDA

1. Delete paragraph 3.4.1 and substitute the following:

3.4.1 Addenda will be issued to plan centers listed in the Advertisement for Bids and all firms listed on the Planholder List.

1.3 ARTICLE 4 BIDDING PROCEDURES

A. 4.1 PREPARATION OF BIDS

1. Add the following Paragraphs:

4.1.8 Bidders shall certify to non-collusion practices on the form included as part of the Bid Form, to be submitted with the Bid Form.

.1 A Non-Collusion Affidavit is required for any contract awarded pursuant to the bid. According to the Oregon Public Contracts and Purchasing Laws, a public contracting agency may reject any or all bids upon a finding of the agency that it is in the public interest to do so (ORS 279C.395). This agency finds that it is in the public interest to require the completion of this affidavit by potential contractors.

.2 The Non-Collusion Affidavit must be executed by the member, officer or employee of the bidder who makes the final decision on prices and the amount quoted in the bid.

.3 Bid rigging and other efforts to restrain competition, and the making of false sworn statements in connection with the submission of bids are unlawful and may be subject to criminal prosecution. The person who signs the Affidavit should examine it carefully before signing and assure himself or herself that each statement is true and accurate, making diligent inquiry, as necessary, of all other persons employed by or associated with the bidder with responsibilities for the preparation approval or submission of the bid.

.4 In the case of a bid submitted by a joint venture, each party to the venture must be identified in the bid documents, and an Affidavit must be submitted separately on behalf of each party.

.5 The term "complementary bid" as used in the Affidavit has the meaning commonly associated with the term in the bidding process, and includes the knowing submission of bids higher than the bid of another firm, any intentionally high or noncompetitive bid, and any other form of bid submitted for the purpose of giving a false appearance of competition.

.6 Failure to file an Affidavit in compliance with these instructions will result in disqualification of the bid.

4.1.9 Bidders shall certify to non-discrimination in employment practices on the form, included as part of the Bid Form, to be submitted with the Bid Form. By submitting its bid, the Bidder certifies conformance to the applicable federal acts, executive orders, and Oregon statutes and regulations concerning affirmative action toward equal employment opportunities. All information and reports required by the federal or Oregon state governments having responsibility for the enforcement of such laws shall be supplied to the Owner in compliance with such acts, regulation, and orders.

4.1.10 Bidder shall indicate, on the Bid Form where provided, the bidder's status as a "resident" or "non-resident" in accordance with ORS 279C.365 and ORS 279A.120.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – DOCUMENT 00 22 13

4.1.11 First-Tier Subcontractor Disclosure:

.1 Within two working hours after the date and time of the deadline when the bids are due, a Bidder shall submit to the District a disclosure of the first-tier subcontractors that will be furnishing labor or will be furnishing labor and materials in connection with the public improvement; and will have a contract value that is equal to or greater than 5% of the project bid or \$15,000, whichever is greater, or \$350,000, regardless of the percentage of the total project bid.

.2 The disclosure of first-tier subcontractors shall include the name of each subcontractor, the category of work that the subcontractor would be performing, and the dollar value of each subcontract.

.3 The first-tier subcontractor disclosure applies only to public improvements with a contract value of more than \$100,000.

.4 The District will consider the bid of any contractor that does not submit a required subcontractor disclosure to the District to be a non-responsive bid. A non-responsive Bid will not be considered for Award.

.5 Contractor shall certify that all subcontractors performing Work are registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board in accordance with ORS 701.035 to 701.055 before the subcontractors commence work under the Contract.

B. 4.2 BID SECURITY

1. Delete paragraphs 4.2.2 and 4.2.3 and substitute the following:

4.2.2 Each Bid shall be accompanied by a surety bond, cashiers check, or certified check, executed in favor of Eugene School District 4J, in the amount not less than ten percent (10%) of the total bid, based upon the total bid amount for those items bid upon. Should the Bidder refuse to enter into such Contract or fail to furnish Performance and Labor and Materials Payment Bonds and Certificates of Insurance as required by the Supplementary Conditions within ten (10) working days after contract forms are provided to the Bidder, the amount of the Bid Security may be forfeited to the Owner as liquidated damages, not as a penalty.

.1 The Surety Bond shall be written by a Bonding Company authorized and licensed by the Oregon Insurance Commissioner. The bonding company must be listed on the most current US Government Treasury List, Department Circular 570, or approved PRIOR TO BID SUBMISSION by the Eugene School District 4J's Risk Manager. The Bond shall be on a AIA Document A310, most current edition. The Attorney-in-Fact who executes the Bond on behalf of the Surety shall affix to the Bond, a certified copy of a power of attorney.

.2 The Owner will have the right to retain the Bid Security of Bidders until either; a) the Contract has been executed and Bonds have been furnished, or b) the specified time has elapsed so that Bids may be withdrawn, or c) all Bids have been rejected.

C. 4.4 MODIFICATION OR WITHDRAWAL OF BID

1. Delete paragraph 4.4.1 and substitute the following:

4.4.1 A Bid may not be withdrawn or canceled by the Bidder following the time and date designated for the receipt of bids to the expiration of a 60 day period. The Bid for that sixty days is irrevocable and each Bidder so agrees in submitting a Bid.

1.4 ARTICLE 6 POST-BID INFORMATION

A. Delete Paragraph 6.1.

B. Modify paragraph 6.3.1 as follows:

In the first sentence delete the phrase "as soon as practicable" and add "within 48 hours."

C. Add the following:

6.3.1.4 Where asbestos abatement is required, Contractor or appropriate subcontractor shall be licensed by the Department of Environmental Quality to perform "asbestos abatement work", per OAR 340-248-0120,

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – DOCUMENT 00 22 13

Adopted 1/25/90, and meet requirements of AHERA as specified in the Federal Register, 40 CFR part 763. Bidder shall submit evidence of licensing to Owner.

1.5 ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

A. 7.1 BOND REQUIREMENTS

1. Delete paragraphs 7.1.1, 7.1.2 and 7.1.3 and add the following:

7.1.1 Unless otherwise stated in the solicitation document, the successful Bidder shall be required to provide the Owner with a Performance Bond and Labor and Material Payment Bond, **each** in an amount equal to one hundred (100%) of the contract sum. The Surety Company shall meet requirements as specified in the Supplementary Conditions.

7.1.2 The Labor and Material Payment Bond shall contain a clause specifically guaranteeing payment of all sums of money withheld from employees and payable to the Internal Revenue Service; and all contributions or amounts due to the State of Oregon from the General Contractor or subcontractor incurred in the performance of this contract.

7.1.3 The Bond shall be fully executed, payable to the Owner.

7.1.4 The cost of these bonds shall be included in the Bid.

1.6 7.2 TIME OF DELIVERY AND FORM OF BONDS

A. Delete paragraph 7.2.1 and substitute the following:

7.2.1 The successful Bidder will be provided with contract forms through the Architect. These forms shall be executed and delivered to the Owner, along with Performance Bond and Labor and Material Payment Bond, within ten (10) days after receiving forms.

B. Add the following article:

ARTICLE 9 MISCELLANEOUS PROVISIONS

9.1 ADMINISTRATIVE RULES

All bidders are required to comply with the provisions of Oregon Revised Statutes and 4J Board Policy. Attention is directed to ORS 244, Government Ethics; ORS 279A and 279C, Public Contracting Code; Oregon Administrative Rules, Chapter 137, Divisions 46, 48 and 49; and 4J Board Policy DJC.

9.2 PROTEST OF BID

Protests of bid specifications or contract terms shall be presented to the Owner in writing five (5) calendar days prior to bid opening. Such protest or request for change shall include the reason for protest or request, and any proposed changes to specifications or terms. No protest against award because of the content of bid specifications or contract terms shall be considered after the deadline established for submitting such protest.

9.3 PROTEST OF AWARD

Any actual bidder or proposer who is adversely affected by the Owner's notice of award of the contract to another bidder or proposer on the same solicitation shall have seventy two (72) hours from the notice of award to submit to the Owner, a written protest of the notice of award. In order to be an adversely affected or aggrieved bidder or proposer with a right to submit a written protest, a bidder or proposer must itself claim to be eligible for award of the contract as the lowest responsible bidder or best proposer and must be next in line for award.

9.4 FINAL AWARD

The written notice of award of the contract shall constitute a final decision of the Owner to award the contract if no written protest of the notice of award is filed with the Owner within the designated time.

END OF DOCUMENT 00 22 13

DOCUMENT 00 41 13
BID FORM

BID FOR: Sheldon Irrigation Pump and Mainline Replacement

CIP Number **420.652.103**

Submitted to: Facilities Management
Eugene School District 4J
715 West Fourth Avenue
Eugene, Oregon 97402

Bid Deadline: 2:00 p.m.
7 May 2014

Submitted by: _____
(Company Name)

BASE BID

The undersigned proposes to furnish all material, equipment, and labor required for the complete project, and to perform all work in strict accordance with the Contract Documents for the lump sum prices indicated below with completion occurring on or prior to the dates indicated:

BID SECURITY

Accompanying herewith is Bid Security, which is not less than ten percent (10%) of the total amount of the Base Bid plus additive alternates.

STIPULATIONS

The undersigned acknowledges the liquidated damages provision included in the Supplementary Conditions.

The undersigned agrees, if awarded the contract, to comply with the provisions of Oregon Revised Statutes 279C.800 through 279C.870 pertaining to the payment of prevailing rates of wage.

The undersigned agrees, if awarded the Contract, to execute and deliver to the Owner within ten (10) working days after receiving contract forms, an Agreement and a satisfactory Performance Bond and Payment Bond each in an amount equal to 100 percent (100%) of the Contract Sum.

For every bid \$100,000 or greater, all Contractors and Subcontractors shall have a public works bond, in the amount of \$30,000, filed with the Construction Contractors' Board (CCB), before starting work on the project, unless exempt.

The undersigned agrees that the Bid Security accompanying this proposal is the measure of liquidated damages which the Owner will sustain by the failure of the undersigned to execute and deliver the above named agreement and bonds; and that if the undersigned defaults in executing that agreement within ten (10) days after forms are provided or providing the bonds, then the Bid Security shall become the property of the Owner; but if this proposal is not accepted within sixty (60) days of the time set for the opening of bids, or if the undersigned executes and delivers said agreement and bonds, the Bid Security shall be returned.

By submitting this Bid, the Bidder certifies that the Bidder:

- a) has 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) has a satisfactory record of past performance;
- c) has a satisfactory record of integrity, and is not disqualified under ORS 279C.440;
- d) is qualified legally to contract with the Owner; and
- e) will promptly supply all necessary information in connection with any inquiry the Owner may make concerning the responsibility of the Bidder.

Prior to award of a Contract, the Bidder shall submit appropriate documentation to allow the Owner to determine whether or not the Bidder is "responsible" according to the above criteria.

The contractor agrees with the provisions of Oregon Revised Statutes 279C.505, which requires that the contractor shall demonstrate it has established a drug-testing program for employees and will require each subcontractor providing labor for the Project to do the same.

The undersigned has received addenda numbers _____ to _____ inclusive and has included their provisions in the above Bid amounts.

BID FORM – DOCUMENT 00 41 13

The undersigned has visited the site to become familiar with conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

The undersigned certifies that the Bidder is a _____ Bidder under ORS. ("Resident" or "Non-resident", to be filled in by Bidder)

Names of Firm: _____

Street Address: _____
(City) (State) (Zip)

Telephone Number: _____ FAX Number: _____

Email Address: _____

Signed By: _____ Printed Name: _____
(Signature of Authorized Official. If bid is from a partnership, one of the partners must sign bid).

Date Signed: _____

Official Capacity: _____

If corporation, attest: _____ Date: _____
(Secretary of Corporation)

SEAL (If Corporate)

_____ Corporation
_____ Partnership
_____ Individual

Enclosed: Bid Security

NON-DISCRIMINATION REQUIREMENT

Contractor certifies that the Contractor has not discriminated against minorities, women or emerging small business enterprises in obtaining any required subcontracts.

The Contractor agrees not to discriminate against any client, employee, or applicant for employment or for services, because of race, color, religion, sex, national origin, physical or mental handicap, sexual orientation or age, unless based upon bona fide occupational qualifications, and that they are otherwise in compliance with all federal, state and local laws prohibiting discrimination, with regard to, but not limited to, the following: Employment upgrading, demotion or transfer; Recruitment or recruitment advertising; Layoffs or termination; Rates of pay or other forms of compensation; Selection for training; Rendition of services. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the School District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely.

FIRM NAME: _____

ADDRESS: _____

TELEPHONE: _____

BY: _____
(Company or Firm Officer)

BY: _____
(Type or Print Name)

NON-COLLUSION AFFIDAVIT

STATE OF _____)

County of _____)

I state that I am _____ of _____
(Title) (Name of Firm)

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 disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.

(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 noncompetitive bid.

(5) _____, its affiliates, subsidiaries, officers, directors and
(Name of my Firm)

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
(Name of my Firm)

are material and important, and will be relied on by School District 4J 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 School District 4J of the true facts relating to the submission of bids for this contract.

(Authorized Signature)

Sworn to and subscribed before me this ____ day of _____, 20

(Notary Public for Oregon)

My Commission Expires: _____

END OF BID FORM

DOCUMENT 00 45 22
FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

PROJECT: Sheldon Irrigation Pump and Mainline Replacement **CIP NUMBER:** 420.652.103

TO: Kathi Hernandez, Facilities Management Assistant
Eugene School District 4J
715 West Fourth Avenue
Eugene, Oregon 97402

BID SUBMISSION DEADLINE: **Date:** _____ **Time:** _____

SUBMITTAL REQUIREMENTS

Subcontractor disclosure is required on all public improvement contracts greater than \$100,000.

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 will be furnishing labor or labor and materials, and 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.)

SUBCONTRACTOR	DOLLAR VALUE	CATEGORY OF WORK
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The above listed first- tier subcontractor(s) are providing labor, or labor and material, with a Dollar Value equal to or greater than:

- a) 5% of the total Contract Price, but at least \$15,000. [If the Dollar Value is less than \$15,000 do not list the subcontractor above.]
- b) \$350,000 regardless of the percentage of the total Contract Price

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:** _____

Signature: _____

END OF DOCUMENT 00 45 22

DOCUMENT 00 52 13
FORM OF AGREEMENT

PART 1 GENERAL

STANDARD FORM

The form of Agreement will be executed on AIA Form A 101, Standard Form of Agreement Between Owner and Contractor, 2007 edition, a copy of which is included by reference. Copies are available for review at the office of Facilities Management, School District 4J.

END OF DOCUMENT 00 52 13

**DOCUMENT 00 72 00
GENERAL CONDITIONS**

PART 1 GENERAL

STANDARD FORM

A General Conditions of the Contract for Construction@ AIA Document A-201, 2007 edition, immediately following, are part of these specifications.

The Contractor and all Subcontractors shall read and be governed by them.

CONFLICTS

In the case of conflicts between the A General Conditions@ and these Specifications, the Specifications govern.

END OF DOCUMENT 00 72 13

DOCUMENT 00 73 00
SUPPLEMENTARY CONDITIONS
FOR GENERAL CONDITIONS FOR THE CONTRACT FOR CONSTRUCTION

PART 1 GENERAL

The following supplements modify, change, delete from or add to AIA Document A201, General Conditions of the Contract for Construction 2007 Edition. Where any part of the AIA General Conditions is amended, voided, or superseded by the Supplementary Conditions, the unaltered provisions shall remain in effect.

1.1 ARTICLE 1 GENERAL PROVISIONS

A. BASIC DEFINITIONS

1. Add the following Subparagraphs:

1.1.9 ARCHITECT/ENGINEER

Where the term ARCHITECT is used in the Bidding documents, Contract documents, Addenda, Change Orders or other documents related to this contract it shall be defined as either "Architect" or "Engineer" depending upon which design professional has prepared the document in question. When the project has been designed and initiated under the direction of a licensed engineer, the term ENGINEER shall be substituted for the term "Architect" throughout all documents.

1.1.10 MISCELLANEOUS DEFINITIONS

- .1 "Provide:" Furnish and install, or furnish labor and materials required for installation, ready for use and in accordance with the Contract Documents.
- .2 "As shown:" As indicated, as detailed, as noted, or words of similar import refer to Contract Documents.
- .3 "Selected:" As selected by the Architect.
- .4 "Approved:" Approved by Architect.
- .5 "For Approval:" For the Architect's approval.

B. CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

1. Add the following to Subparagraph 1.2.1:

1.2.1.1 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities.

1. The Agreement.
2. Addenda, with those of later date having precedence over those of earlier date.
3. The Supplementary Conditions.
4. The General Conditions of the Contract for Construction.
5. Division 1 of the Specifications.
6. Drawings and Divisions 2- 49 of the Specifications.

In the case of conflicts or discrepancies between Drawings and Divisions 2- 49 of the Specifications or within either Document not clarified by Addendum, the Architect will determine which takes precedence in accordance with Subparagraph 4.2.11.

2. Add the following Subparagraphs:

1.2.4 If work is required in such a manner to make it impossible to produce first class work or should discrepancies appear among Contract Documents, request interpretation before proceeding with work. If Contractor fails to make such request, the Contractor will thereafter be expected to carry out work in satisfactory manner.

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1.2.5 Reference to codes, standard specifications, or other standards means and intends latest edition of such documents and/or adopted as of bid date. Where brand name products are specified and no installation instructions given herein, install product in accordance with the manufacturer's specifications and instructions, latest edition.

1.2.6 No provision of any reference standard specification, manual or code shall change the privileges or responsibilities of Owner, Architect, or Contractor, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Architect, or any of Architect's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the work or any duty or authority to undertake responsibility contrary to the provision of the Contract Documents.

1.2.7 Sections of Division 1, General Requirements govern the execution of all sections of the specifications.

1.2 ARTICLE 2 OWNER

A. 2.1 GENERAL

1. Add the following Subparagraph:

2.1.3 The Owner is the Eugene School District 4J, 200 North Monroe Street, Eugene, Oregon 97402, (541) 790-7417.

The Owner's representative is Dan Pacheco 541-790-7458; Kirk Gebb, (541) 790-7417, 715 West Fourth Avenue, Eugene, OR 97402.

B. INFORMATION AND SERVICES REQUIRED OF THE OWNER

1. Delete Subparagraph 2.2.5 and substitute the following:

2.2.5 The Contractor will be furnished free of charge up to [10] copies of the Contract Documents. The Owner will furnish additional copies requested by the Contractor at the cost of reproduction, postage and handling.

1.3 ARTICLE 3 CONTRACTOR

A. 3.1 GENERAL

1. Delete the second sentence to Subparagraph 3.1.1, and add the following:

The Contractor and each subcontractor shall maintain for the duration of the Project a registration with the Oregon State Construction Contractor's Board.

2. Add the following Subparagraph 3.1.4

3.1.4 The Contractor is required to demonstrate that an employee drug testing program is in place.

3. Add the following Subparagraph 3.1.5

3.1.5 The Contractor certifies that the Contractor is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in this Contract by any Federal department or agency. If requested by the Eugene 4J School District, the Contractor shall complete a Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion form. Any such form completed by the Contractor for this Contract shall be incorporated into this Contract by reference.

B. 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

1. Delete the last sentence to Subparagraph 3.2.4, and add the following:

If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, unless the Contractor recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Architect.

C. 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

1. Add the following Subparagraphs:

3.3.4 The Contractor shall review with all Subcontractors, construction means, methods and materials to be used to verify their compliance with all safety standards and laws and be responsible for compliance with same to insure safe, hazard free conditions for all persons visiting or working on the entire project.

3.3.5 The Contractor shall comply with the provisions of Oregon Revised Statutes and 4J Board Policy. Attention is directed to ORS 279A and 279C, Public Contracting Code.

D. 3.4 LABOR AND MATERIALS

1. Add the following Subparagraphs:

3.4.4 PAYMENT OF LABORERS AND MATERIALMEN, CONTRIBUTIONS TO INDUSTRIAL ACCIDENT FUND, LIENS AND WITHHOLDING TAXES: The Contractor shall: (1) Make payment promptly, as due, to all persons supplying to such contractor labor or material for the prosecution of the Work provided for in such contract. (2) Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of the contract. (3) Not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished. (4) Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

3.4.5 HOURS OF LABOR: No person shall be employed for more than ten hours in any one day, or 40 hours in any one week, except in the cases of necessity, emergency, or where the public policy absolutely requires it, and in such cases the person so employed shall be paid at least time and a half of the regular pay for all time worked.

.1 For all overtime in excess of eight hours a day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or

.2 For all overtime in excess of 10 hours a day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and

.3 For all work performed on Saturday and on any legal holiday specified in ORS 279C.540.

.4 Worker claims for overtime, in order to be considered, must be filed with the Contractor within 90 days from the completion of the contract, in accordance with ORS 279C.545.

The Contractor shall give notice to employees who work on a public 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 days per week the employees may be required to work.

3.4.6 PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION: The 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 the employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all moneys 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. All employers working under this contract are subject employers and must comply with ORS 656.017.

3.4.7 PREVAILING WAGE RATES: When the total price of the Project is \$50,000 or more, each worker in each trade or occupation employed in the performance of this Contract either by the contractor, subcontractor or other person doing or contracting to do contracting for the whole or any part of the Work on the Contract shall be paid not less than the applicable state or federal prevailing rate of wage. This provision applies to all contracts, regardless of the price of the individual contract, as long as the combined price of all contracts awarded on the Project is \$50,000 or more.

- a. The existing Oregon prevailing rate of wage in effect at the time the specifications are first advertised for bid solicitations is the applicable rate. The Owner will pay the public works fee to Oregon Bureau of Labor and

Industries.

b. Certification of rate or wage by Contractor or Subcontractor (ORS 279C.845):

.1 The contractor or the contractor's surety and every subcontractor or the subcontractor's surety shall file certified statements with the public agency in writing, on a form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker whom the contractor or the subcontractor has employed upon the public works, and further certifying that no worker employed upon the public works has been paid less than the higher of the applicable state or federal prevailing rate of wage or less than the minimum hourly rate of wage specified in the contract. The certificate and statement shall be verified by the oath of the contractor or the contractor's surety or subcontractor or the subcontractor's surety that the contractor or subcontractor has read the statement and certificate and knows the contents thereof and that the same is true to the contractor or subcontractor's knowledge. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid.

.2 If the Contractor does not file certified payroll as required (at least once per month) the Owner will withhold 25% of the amounts due the Contractor, in addition to any other required retainage.

.3 If a first-tier Subcontractor does not file certified payroll reports as required, the prime Contractor shall withhold 25% of amounts due the first-tier Subcontractor.

.4 Each certified statement required by subsection (1) of this section shall be delivered or mailed by the contractor or subcontractor to the public contracting agency. Certified statements shall be submitted to the public contracting agency once a month by the fifth business day of the following month, for each week workers are employed. Information submitted on certified statements may be used only to ensure compliance with the provisions of ORS 279C.800 to 279C.870.

.5 Each contractor or subcontractor shall preserve the certified statements for a period of three years from the date of completion of the contract.

.6 Certified statements received by a public agency are public records subject to the provisions of ORS 192.410 to 192.505. As such, they must be made available upon request.

d. For every bid \$100,000 or greater, all Contractors and Subcontractors shall have a public works bond, in the amount of \$30,000, filed with the Construction Contractors' Board (CCB), before starting work on the project, unless exempt.

e. Contractor shall include in every subcontract a provision requiring their Subcontractors to have a public works bond filed with the CCB before starting work on the project, unless exempt. Contractors shall verify that all of their subcontractors have filed a public works bond with the CCB.

3.4.8 PAYMENT OF CLAIMS BY PUBLIC OFFICERS: If the Contractor fails, neglects or refuses to make prompt payment of any claims for labor or services furnished to the Contractor or a subcontractor by any person in connection with this Contract as such claim becomes due, the Owner may pay such claim and charge the amount of the payment against funds due or to become due the Contractor by reason of this Contract.

3.4.9 PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION: The 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 the employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all moneys 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.

3.4.10 Any person owed for labor or material by a subcontractor or Contractor may file a complaint with the Construction Contractors Board in accordance with ORS 279C.515(3).

E. 3.7 PERMITS, FEES AND NOTICES

1. Delete Subparagraph 3.7.1, and substitute the following:

3.7.1 The OWNER will pay the plan check fee, building permit fee, and systems development charges

directly to the authority having jurisdiction.

The CONTRACTOR shall pay for all other permits, fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded. The Contractor shall pick up permits and call for inspections through final inspection, as required by the City Building Department.

F. 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1. Add the following to Subparagraph 3.12.5:

Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action.

2. Add the following to Subparagraph 3.12.9:

Shop drawings that are submitted to the Architect for review do not constitute "in writing" unless it is brought to the attention of the Architect, in written form, that specific changes are being suggested. In any event, changes to the contract documents by means of shop drawings become the responsibility of the person initiating such changes.

G. 3.18 INDEMNIFICATION

1. Delete Subparagraph 3.18.1, and substitute the following:

13.18.1 To the fullest extent of the law, the Contractor will defend, indemnify, hold harmless and reimburse the Eugene School District 4J (including its officers, board members, agents, and employees) from all claims, demands, suits, actions, penalties, and damage expenses, for liability of any kind including attorney's fees. To the extent that death or bodily injury to persons or damage to property arises out of the fault of the Contractor, the Contractor's indemnity obligation exists only to the extent that the death or bodily injury to persons or damage to property arises out of the fault of the Contractor, or the fault of the Contractor's agents, representatives or subcontractors, contributed to or caused such damage, whether or not such incidents are contributed to or caused in any part by Eugene School District 4J.

1.4 ARTICLE 4 ARCHITECT

A. 4.1 GENERAL

1. Modify Paragraph 4.1.1

- a. In the first sentence delete "shall retain" and insert "may have retained" in its place.
- b. Add sentence: "The term "Architect" means the Architect or the Architect's authorized representative."

2. Add the following to Subparagraph 4.1.2:

Written consent of the Contractor shall only apply to those items which directly or indirectly affect the work of the Contractor.

3. Add the following Subparagraph:

In the first sentence delete "shall" and insert "may" in its place.

4. Add the following Subparagraph:

4.1.4 The Architect is defined as:

Rex Redmon, DLA Inc., 474 Willamette St., Suite 305, Eugene, OR 97401

B. 4.2 ADMINISTRATION OF THE CONTRACT

1. Add the following sentence to 4.2.1:

The architect may be retained to administer the Contract through the specified period for correction of the Work described in Section 12.2

2. Add the following to Subparagraph 4.2.4:

4.2.4.1 The Owner may communicate directly with the Contractor when necessary or appropriate. The Owner may give direction to the Contractor in matters related to access to the site, coordination with Owner's occupancy and use by the public, use of parking and staging areas, use of potentially hazardous products, drug and alcohol policy, no smoking policy, appropriate dress and behavior, safety requirements and safe work practices, where appropriate. The Owner will advise the Architect regarding any communication with or direction given to the Contractor.

4.2.4.2 Representatives of the Owner, Contractor and Architect shall meet periodically at mutually agreed-upon intervals for the purpose of establishing procedures to facilitate cooperation, communication and timely responses among the participants. By participating in this arrangement, the parties do not intend to create additional contractual obligations or modify the legal relationships which may otherwise exist. Nothing in this agreement shall give the Architect the authority to make decisions or give direction without the Owner's concurrence.

3. Add the following to Subparagraph 4.2.9:

4.2.9.1 The Architect will make one inspection for the determination of Substantial Completion and one for determination of Final Acceptance. Such inspections will be made only after receipt of written notification of readiness for such inspections from Contractor.

4.2.9.2 Should additional inspections beyond those listed in 4.2.9.1 be required due to Contractor's failure to satisfactorily complete all work, the Contractor shall become responsible for all costs incurred by the Owner in conjunction with required re-inspections. A deductive Change Order shall be prepared using the following hourly rates as the basis for calculating the amounts to be deducted:

Architect/Engineer:	\$100 per hour
District 4J Personnel:	\$ 75 per hour

4.2.9.3 The amount to be deducted from the Contract shall be calculated by multiplying the hours expended in additional inspections and documentation by the hourly rates listed in 4.2.9.2.

4. Add the following sentence to Subparagraph 4.2.11:

The architect's response will be within 10 days of receipt of written requests from the Owner or Contractor.

5. Delete Subparagraph 4.2.13, and substitute the following:

4.2.13 Decisions on matters related to aesthetic effect will be made collaboratively between the Owner and the Architect. The final decision shall be the Owner's, if consistent with the intent expressed in the Contract Documents.

6. Add the following sentence to Subparagraph 4.2.14

The architect's response will be within 10 days of receipt of written requests from the Owner or Contractor.

1.5 ARTICLE 5 SUBCONTRACTORS

A. 5.3 SUBCONTRACTUAL RELATIONS

1. Add the following Subparagraphs:

5.3.1 The Contractor shall include in each subcontract for property or services entered into by the Contractor and a subcontractor, including a material supplier, for the purpose of performing a construction contract:

.1 A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract within 10 days out of such amounts as are paid to the Contractor by the owner under such contract; and

.2 An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment

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clause included in the subcontract pursuant to paragraph .1 of this section for the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; computed at the rate specified in ORS 279C.580.

5.3.2 The Contractor shall include in each of its subcontracts, for the purpose of performance of such contract condition, a provision requiring the subcontractor to include a payment clause and an interest penalty clause conforming to the requirements of Subparagraph 5.3.1 in each of its subcontracts and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

1.6 ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

No modifications.

1.7 ARTICLE 7 CHANGES IN THE WORK

A. 7.1 GENERAL

1. Paragraph 7.1.2, delete the following: “an order for minor changes in the Work can be issued by the Architect alone”.

2. Add the following Subparagraph 7.1.4 to Paragraph 7.1:

7.1.4 The combined overhead and profit included in the total cost or credit to the Owner of a change in the Work shall not exceed that stated in 7.1.4.4 below. In no case shall the Contractor’s or Subcontractors individual overhead and profit request exceed the following schedule:

.1 For the Contractor, for Work performed by the Contractor’s own forces, 15 percent of the cost.

.2 For the Contractor, for Work performed by the Contractor’s Subcontractors, 10 percent of the amount due the Subcontractors.

.3 For each Subcontractor involved, for Work performed by that Subcontractor’s own forces, 10 percent of the cost.

.4 The **Base Cost** to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.7., articles .1, .2, .3, .4, and .5. To this **Base Cost** is added the applicable overhead and profit. In no case shall the combined overhead and profit (including all Contractor and Subcontractor(s) overhead and profit) exceed 25 percent of this **Base Cost**.

.5 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including those applicable costs from paragraph 7.3.7, .1 - .5, and Subcontractor and Contractor overhead and profit as applicable.

.6 Cost of preparing change order shall not be included in cost of Change Order.

3. Add the following Subparagraph 7.1.5 to Paragraph 7.1:

7.1.5 A Change Order providing a CREDIT to the Owner shall include a credit for overhead and profit based on the following schedule:

.1 For the Contractor, 5 percent of the Cost to be credited.

.2 For each Subcontractor, 5 percent of the Cost to be credited.

.3 For each Sub-subcontractor, 5 percent of the Cost to be credited.

.4 All other provisions of Subparagraph 7.1.4 shall apply to Credit Change Orders.

B. 7.3 CONSTRUCTION CHANGE DIRECTIVES

1. Add the following to Subparagraph 7.3.1:

For the purposes of this Agreement, The Owner’s “CHANGE REQUEST/PROCEED ORDER” may be substituted for and used interchangeably with “CONSTRUCTION CHANGE DIRECTIVE”.

2. Modify Subparagraph 7.3.7 as follows:

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In the first sentence, delete the words "a reasonable amount." and substitute "an amount for overhead and profit in accordance with Paragraph 7.1.4 or 7.1.5."

3. Delete Subparagraph 7.3.7.1 and substitute the following:

7.3.7.1 The maximum allowable hourly wage rate for Changes to the Work shall be the appropriate Base Wage Rate plus Fringe Rate as listed for each occupation in the Prevailing Wage Rate for Public Works Contracts in Oregon manual issued by the Oregon Bureau of Industries; multiplied by 1.20. An amount for Overhead and Profit may be added in accordance with Paragraph 7.1.4 or 7.1.5.

4. Delete 7.3.7.3, and substitute the following:

7.3.7.3 Rental costs of machinery and equipment, exclusive of hand tools and motor vehicles, when rented from the Contractor or others;

5. Change the first sentence of Subparagraph 7.3.8 to read as follows:

The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost, including overhead and profit according to the schedule in Subparagraph 7.1.5 above.

6. Change the first sentence of Subparagraph 7.3.9 to read as follows:

Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in the Application for Payment accompanied by an executed Change Order indicating the parties' agreement with part or all of such costs.

1.8 ARTICLE 8 TIME

A. 8.2 PROGRESS AND COMPLETION

1. Add the following Subparagraph 8.2.4

8.2.4 The Contractor agrees that said work shall be executed regularly, diligently, at such a rate of progress as will insure Substantial Completion thereof within the time specified. It is expressly understood and agreed by and between the Contractor and the Owner that the time for the completion of the work described herein is reasonable taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

1.9 ARTICLE 9 PAYMENT AND COMPLETION

A. 9.2 SCHEDULE OF VALUES

1. Revise the first sentence of Subparagraph 9.2 to read as follows:

“... the Contractor shall submit to the Architect and the Owner,.....”

2. Add the following sentence to Paragraph 9.2:

Submit on AIA Document A703, latest edition.

B. 9.3 APPLICATIONS FOR PAYMENT

1. Add the following sentence to Subparagraph 9.3.1:

The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.

2. Delete Clause 9.3.1.1, and substitute the following:

9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, accompanied by an executed Change Order.

C. 9.5 DECISIONS TO WITHHOLD CERTIFICATION

1. Delete Subparagraph 9.5.3.

D. 9.6 PROGRESS PAYMENTS

1. Add the following Clause to Subparagraph 9.6.1:

9.6.1.1 After the Architect has issued a certificate for payment and it has been approved by the Owner, the Owner will pay the Contractor 95 percent (95%) of the total value of material and labor incorporated into the project as indicated on the Application for Payment less the aggregate of previous payments. Progress schedule update shall accompany each payment request.

9.6.1.2 Payment will be made within fifteen (15) days of approval of the Application for Payment by School District 4J (“Progress Payment Due Date”).

9.6.1.3 The first Application for Payment and each subsequent Application for Payment will not be considered complete unless it is accompanied by the certified payroll for the contractor and all subcontractors requesting payment.

2. Add the following Subparagraph to Paragraph 9.6:

9.6.8 In lieu of cash retainage to be held by the Owner, the Contractor may select one of the following options:

- .1 The Contractor may deposit bonds or securities with the Owner or in any bank or trust company to be held for the benefit of the Owner. In such event, the Owner shall reduce the retainage in an equal amount to the value of the bonds and securities.
- .2 Upon written request of the Contractor, the Owner will deposit any amounts withheld as retainage in an interest-bearing account in a bank, savings bank, trust company or savings association for the benefit of the Owner. Interest earned shall accrue to the Contractor.
- .3 If the Owner incurs additional costs as a result of the exercise of any of the options for retainage described herein, the Owner may recover such costs from the Contractor by reduction of final payment.

E. 9.8 SUBSTANTIAL COMPLETION

1. Delete Subparagraph 9.8.1 and substitute the following:

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can

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fully occupy and fully utilize the Work for its intended use with only minor corrective work remaining which can be accomplished without disruption of the occupants.

2. Delete the last two sentences to Subparagraph 9.8.5 and add the following:

9.8.5 Upon Substantial Completion of the Work, the Contractor may submit an application for payment in accordance with Subparagraph 9.3.1 in an amount sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum, less such amounts as the Architect determines for incomplete Work or unsettled claims.

F. 9.10 FINAL COMPLETION AND FINAL PAYMENT

1. Add the following Subparagraph to Paragraph 9.10:

9.10.6 The Contractor shall not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished in connection with the Work.

G. Add the following Paragraphs to Article 9:

1. 9.11 LIQUIDATED DAMAGES

9.11.1 The Owner will suffer financial loss if the Work is not Substantially Complete, as defined in Article 9.8.1 above, on the dates specified in Section 01 11 00. The Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum hereinafter stipulated as fixed, agreed, and liquidated damages for each calendar day of delay until the date established in the Certificate of Substantial Completion.

The agreed amount of liquidated damages is \$500,000.00 per each calendar day. The amount of liquidated damages may be reduced in cases of partial occupancy, at the sole discretion of the Owner.

2. 9.12 AGENCY PAYMENT FOR UNPAID LABOR OR SUPPLIES

9.12.1 Contract incomplete. If the Contract is still in force, the Agency may, in accordance with ORS 279C.515, pay a valid claim to the Entity furnishing the labor or services, and charge the amount against payments due or to become due to the Contractor under the Contract. If an Agency chooses to make such a payment as provided in 279C.515, the Contractor and the Contractor's surety shall not be relieved from liability for unpaid claims.

9.12.2. Contract completed. If the Contract has been completed and all funds disbursed to the prime Contractor, all claims shall be referred to the Contractor's surety for resolution. The Agency shall not make payments to subcontractors or suppliers for Work already paid for by the Agency.

1.10 ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

A. 10.1 SAFETY PRECAUTIONS AND PROGRAMS

1. Add the following sentence to Article 10.1

Where asbestos abatement is part of the Work, the Contractor or appropriate subcontractor shall be licensed by the Department of Environmental Quality to perform "asbestos abatement work", OAR 340-248-0120, Adopted January 25, 1990, and meet requirements of AHERA, as specified in Federal Register 40CFR, Part 763.

B. 10.3 HAZARDOUS MATERIALS

1. Delete Subparagraph 10.3.3.

1.11 ARTICLE 11 INSURANCE AND BONDS

A. 11.1 CONTRACTOR'S LIABILITY INSURANCE

1. Modify the second sentence of Subparagraph 11.1.2 as follows:

a. Delete the following: "...and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of coverage as specified in the Contract Documents."

2. Add the following Clause to Subparagraph 11.1.2:

.1. The Contractor shall provide and maintain in force for the duration of this agreement, the following:

.1 General Insurance:

The Contractor shall maintain in force for the duration of this agreement a Umbrella Insurance Policy with the limits not less than \$5,000,000, a Commercial General Liability, Automobile Liability (owned, non-owned and hired) Insurance policy(s) written on an occurrence basis with limits not less than \$1,000,000 per occurrence and \$3,000,000 in the aggregated naming the District, its employees, officials and agents as an additional insured as respects to work or services performed under this agreement. This insurance will be primary to any insurance the District may carry on its own. If the District requires Professional Liability coverage, the terms, conditions, and limits must be approved by the District's Risk Manager.

.2 Workers' Compensation:

Contractor shall provide and maintain workers' compensation coverage for its employees, officers, agents, or partners, as required by applicable workers' compensation laws.

.3 Evidence of Coverage:

Evidence of the above coverages issued by a company satisfactory to the District shall be provided to the District by way of a certificate of insurance before any work or services commence. A 30-day notice of cancellation or material change in coverage clause shall be included. It is the Contractor's obligation to provide the 30 days notice if not done so by the Contractor's insurance company(s). Failure to maintain the proper insurance shall be grounds for immediate termination of this Agreement.

.4 Subcontractors:

The Contractor shall require all subcontractors to provide and maintain general liability, auto liability, professional liability (as applicable) and Workers' Compensation insurance with coverage's equivalent to those required of the General Contractor in this Agreement. The Contractor shall require certificates of insurance from all subcontractors as evidence of coverage.

.5 Exceptions or Waivers:

Any exception or waiver of these requirements shall be subject to review and written approval from the Eugene School District Risk Manager.

3. Delete the third sentence of Subparagraph 11.1.3

B. 11.3 PROPERTY INSURANCE

1. Modify the first sentence of Subparagraph 11.3.1 as follows:

- a. Delete "Unless otherwise provided, the Owner" and substitute "The Contractor".
- b. Modify the last sentence by adding "Architect," after the word "Owner".

2. Add the following to Clause 11.3.1.1:

The form of policy for this coverage shall be Completed Value. If the Owner is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall bear all reasonable costs properly attributed thereto.

3. Delete Clause 11.3.1.2.

4. Modify Clause 11.3.1.3 by substituting "Contractor" for "Owner".

5. Delete Clause 11.3.1.4.

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

6. Modify the first sentence of Subparagraph 11.3.2 to read: “The Owner, at the Owner’s option, may purchase...”.
7. Delete Subparagraph 11.3.4.
8. Delete Subparagraph 11.3.6, and substitute the following:

11.3.6 Evidence of the above coverages issued by a company satisfactory to the District shall be provided to the District by way of a certificate of insurance before any work or services commence. A 30-day notice of cancellation or material change in coverage clause shall be included. It is the Contractor’s obligation to provide the 30 days notice if not done so by the Contractor’s insurance company(s). Failure to maintain the proper insurance shall be grounds for immediate termination of this Agreement.

9. Modify 11.3.7 by substituting “Contractor” for “Owner” at the end of the first sentence.
10. Modify the first sentence of Subparagraph 11.3.8 to read as follows:

11.3.8 A loss insured under the Contractor’s property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Contractor and Owner, as their interests may appear, subject to requirements of any applicable mortgagee clause.

11. Delete Subparagraph 11.3.9.
12. Modify the first sentence of Subparagraph 11.3.10 by substituting “Contractor” for “Owner” the first two times it occurs. Modify the last sentence by substituting “Contractor” for “Owner” the second time it occurs.
13. Add the following Subparagraph:

11.3.11 EQUIPMENT AND MATERIAL:

The Contractor shall be responsible for any loss, damage, or destruction of Contractor’s own property, equipment, and materials used in conjunction with the Work.

C. 11.4 PERFORMANCE BOND AND PAYMENT BOND

1. Delete 11.4.1 and substitute the following:

11.4.1 Unless otherwise stated in the solicitation document, the successful Contractor shall furnish the Owner with a Performance Bond and Labor and Material Payment Bond, covering faithful performance of the contract and payment of obligations arising hereunder. Bonds are to be obtained through a company that is on the US Government Treasury list for approved sureties and/or approved by School District 4J’s Risk Manager. The cost of the bond shall be included in the contract sum. The amount of each bond shall be equal to one hundred percent (100%) of the contract sum. Submit on AIA Document A312, latest edition.

- .1 The Contractor shall deliver the required bonds to the Owner with the executed Agreement to:

Kirk Gebb
Facilities Management Office
Eugene Public School District 4J
715 West Fourth
Eugene, Oregon 97402

- .2 The Contractor shall require the Attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of their power of attorney.

1.12 ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

A. 12.2 AFTER SUBSTANTIAL COMPLETION

1. Add the following sentence to Clause 12.2.2.1:

The correction period relating to faulty products and workmanship will begin on the date appearing on the Certificate of Substantial Completion, or if a Certificate of Substantial Completion is not issued, on the date appearing on the Final Certificate of Payment to the Contractor, whichever is earlier. The

Owner's use of the project will not alter the warranty period herein defined.

2. Add the following sentence to Clause 12.2.2.2:

The correction periods specified are an extension of the one-year correction period called for in the General Conditions and are in addition to any guaranty bond called for elsewhere.

1.13 ARTICLE 13 MISCELLANEOUS PROVISIONS

A. 13.1 GOVERNING LAW

1. Change Paragraph 13.1 to read as follows:

13.1 The Contract shall be governed by the law of the place where the Project is located.

- B. Add the following Subparagraph 13.1.1:

13.1.1 Contractor shall be in compliance with the Oregon Department of Revenue tax certification rules including OAR 150-305.385 (6)-A, (6)-B, (6)-C and (7).

- C. Revise Subparagraph 13.2.1 as follows:

Delete last two sentences, and replace with:

Contractor shall not assign, sell, dispose of, or transfer rights, nor delegate duties under the contract, either in whole or in part, without the Contracting Agency's prior written consent. Unless otherwise agreed by the Contracting Agency in writing, such consent shall not relieve the Contractor of any obligations under the contract. Any assignee or transferee shall be considered the agent of the Contractor and be bound to abide by all provisions of the contract. If the Contracting Agency consents in writing to an assignment, sale, disposal or transfer of the Contractor's rights or delegation of Contractor's duties, the Contractor and its surety, if any, shall remain liable to the Contracting Agency for complete performance of the contract as if no such assignment, sale, disposal, transfer or delegation had occurred unless the Contracting Agency otherwise agrees in writing, in accordance with ORS 279A.065.

- D. Delete Subparagraph 13.2.2

- E. Add the following Paragraphs to Article 13:

1. 13.8 ENVIRONMENTAL AND NATURAL RESOURCES LAWS AND RULES

13.8.1 The Contractor and subcontractors shall comply with federal, state, and local ordinances and regulations dealing with prevention of pollution and preservation of natural resources that affect Work of this project.

13.8.2 Pursuant to ORS 279C.525, If the Contractor is delayed or must undertake additional work by reason of existing regulation or ordinances of agencies not cited in the Contract Documents or due to the enactment of new or the amendment of existing statutes, ordinances, or regulations relating to the prevention of environmental pollution and the preservation of natural resources occurring after the Bid Date, the Owner will grant a time extension and issue a change order setting forth the additional work that must be undertaken. The change order shall not invalidate the contract and there shall be, in addition to a reasonable extension of the Contract time, a reasonable adjustment in the Contract price to compensate the successful bidder for all costs and expenses incurred, including overhead and profits, as a result of such delay or additional work.

2. 13.9 FOREIGN CONTRACTORS

In the event this Contract is awarded to a Contractor not domiciled in or registered to do business in the State of Oregon and the contract price exceeds \$10,000, the Contractor shall promptly report to the Department of Revenue the total price, terms of payment, length of contract, and such other information as the Department of Revenue may require before final payment can be received on the public contract. The Owner will satisfy itself that the requirement of this subsection has been complied with before it issues a Final Payment.

3. 13.10 EQUAL OPPORTUNITY

13.10.1 The Contractor shall maintain policies of employment as follows:

13.10.1.1 The Contractor and the Contractor's subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, national origin, physical or mental handicap, sexual orientation or age, unless based upon bona fide occupational qualifications; and that they are otherwise in compliance with all federal, state and local laws prohibiting discrimination. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the School District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination.

13.10.1.2 The Contractor and the Contractor's subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.

4. 13.11 DRUG-TESTING PROGRAM

13.11.1 The contractor agrees with the provisions of Oregon Revised Statutes 279C.505, which requires that the contractor shall demonstrate it has established a drug-testing program for employees and will require each subcontractor providing labor for the Project to do the same.

1.14 ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

No modifications.

1.15 ARTICLE 15 CLAIMS AND DISPUTES

A. 15 CLAIMS AND DISPUTES

1. Add the following to Clause 15.1.5.2

Abnormal weather conditions for the purposes of this agreement are defined as conditions more extreme than any conditions experienced within the general vicinity of the site for each project for a comparable period at any time within the past ten years.

2. Delete Subparagraph 15.1.6.

B. 15.2 INITIAL DECISION

1. Modify Subparagraph 15.2.1 as follows:

In the third sentence, change "30 days" to read "10 days" and add the following: The Initial Decision Maker shall review all submitted claims and render decisions as soon as possible.

2. Modify Clause 15.2.6.1 as follows:

In the first sentence, change the "30 days and "60 days" to read "10 days" and "30 days" respectively.

C. 15.3 MEDIATION

1. Delete Paragraph 15.3 MEDIATION, and substitute the following:

15.3 MEDIATION AND ARBITRATION

15.3.1 Parties shall attempt to resolve all disputes at the lowest possible level. Both parties to this Agreement agree to provide other resources and personnel to negotiate and find resolution to disputes that cannot be resolved at the Project Manager level. As a next step, claims, disputes or other matters in

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

question between the parties to this Agreement arising out of or relating to this Agreement or breach thereof shall be determined by mediation, arbitration or litigation. Disputes shall be initially submitted to mediation by a mediator chosen by the parties. The cost of mediation shall be borne equally by the parties. If the parties are unable to agree upon a mediator within five days or if mediation fails to resolve the dispute, either party may request that the dispute be submitted to arbitration before a single arbitrator agreed to by the parties in an additional five days. If both parties agree to arbitration but are unable to agree upon an arbitrator, each party shall select an arbitrator, the arbitrators so chosen shall select a third, and the decision of a majority of the arbitrators shall be final, binding the parties, and any judgment may be entered thereon. Unless the parties mutually agree otherwise, any arbitration proceeding shall be conducted in accordance with the currently in effect Construction Industry Arbitration Rules of the American Arbitration Association.

Notwithstanding the above, the Owner may, at the Owner's sole discretion, elect to resolve disputes in excess of \$50,000 by litigation, if mediation is not successful.

15.3.2 In the event of arbitration or litigation arising out of the execution of this Agreement, the prevailing party shall be entitled to recover from the adverse party, reasonable attorney fees and costs for the arbitration proceedings, trial court or any appellate proceeding, in the amount determined by the arbitrator or the court, as appropriate.

For the purposes of the above provisions referring to attorney fees and related costs, the prevailing party in an arbitration proceeding or trial shall be a claimant who receives an award or damages in excess of the adverse party's pretrial or prehearing offer made at least 10 days before trial or hearing. If the claimant receives an award of damages no greater than the adverse party's pretrial or prehearing offer, the adverse party shall be deemed to be the prevailing party. In the event both sides are awarded damages, the prevailing party shall be the party who recovers the net award, provided the recovery exceeds the adverse party's pretrial or prehearing offer. If the claimant net recovery is no greater than the adverse party's pretrial or prehearing offer, the adverse party shall be deemed the prevailing party.

D. 15.4 ARBITRATION

1. Delete Paragraph 15.4 ARBITRATION.

END OF DOCUMENT 00 73 00

DOCUMENT 00 73 43

PREVAILING WAGE RATES

PART 1 GENERAL

The Prevailing Wage Rates dated May 4, 2012, including any subsequent corrections or amendments issued by the Oregon Bureau of Labor and Industries, are included as a portion of the Contract Documents by reference. Copies are available for review at the office of Facilities Management, School District 4J, and can be viewed on line at www.boli.state.or.us. Click on Prevailing Wages, then PWR Rate Publications, and then Prevailing Wage Rates for Public Works Contracts in Oregon (subject only to state law).

END OF DOCUMENT 00 73 43

**SECTION 01 11 00
SUMMARY OF WORK**

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 this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of irrigation system improvements, well pump, well control system and mainline installation at Sheldon High School.
 - 1. Project Locations:
 - a. Sheldon High School 2455 Willakenzie Road, Eugene, OR 97401
 - 2. Owner: Eugene School District 4J, 715 West Fourth Avenue, Eugene, OR 97402.
- B. Architect Identification: The Contract Documents, dated 23 April, 2014, were prepared for Project by DLA Inc., 474 Willamette St., Suite 305, Eugene, OR 97401
- C. Project Manager: Dan Pacheco has been appointed by Owner to serve as Project Coordinator.

1.3 CONTRACT

- A. Project will be constructed under a general construction contract.
 - 1. Sheldon Irrigation Pump and Mainline Replacement 2014.

1.4 WORK SEQUENCE

- A. Do not commence Work until after execution of Agreement and receipt of Notice-to-Proceed from Owner.
- B. Perform work in order to achieve Substantial Completion by 18 June, 2014.
- C. Achieve Final Completion within seven (7) days following the date of Substantial Completion.

1.5 USE OF PREMISES

- A. Work Area Access: Buildings will be occupied during work. Access to the work area will be available on a week-day basis from approximately 7:00 am to 4:00 pm. Coordinate all other work hour schedules with Owner so as not to interfere with Owner's use of the building.
- B. Limit use of the premises to construction activities in areas indicated; allow for Owner occupancy and use by the public, subject to approval by a District Safety Specialist.
- C. Site Access: Maintain drives and building entrances and exits clear and protected at all times to Owner's, employees, and public access and for use by emergency personnel. Do not use these

areas for parking or storage. Schedule deliveries to minimize space and time requirements for storage of materials at site.

- D. Parking: Contractor may use existing parking areas as indicated on Drawings.
- E. Contractor Staging Areas: Limit staging to areas identified in field.
- F. Construction Operations: Limited to areas indicated on Drawings.

1.6 WORK UNDER SEPERATE CONTRACTS

- A. Separate Contract: Owner will award a separate contract for performance of certain construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract. This contract will include the following:
 - 1. Electrical connections to well.
- B. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

1.7 MISCELLANEOUS PROVISIONS

A. DRUG AND ALCOHOL POLICY

- 1. The possession, use, or distribution of illicit drugs and alcohol on school premises is prohibited. Prescription medications brought to the project site shall be in the original container bearing the name of the drug, the name of the physician and the prescribed dosage.

B. USE OF TOBACCO PRODUCTS

- 1. Smoking and the other use of tobacco products is prohibited on all school district property pursuant to OAR 581-021-0110.

C. SAFETY REQUIREMENTS

- 1. Safety must not be sacrificed for the sake of productivity or expedience. Safety of students, staff, and the public is critical. Take all reasonable precautions to prevent endangerment or injury. Advise and coordinate operations with the school office.
- 2. All contractors who perform work on District property, and their employees, are expected to know the District's expectations for safe work and to adhere to those expectations.
- 3. Contractor's are to adhere to the regulations of Oregon OSHA for all projects within the School District.

D. GENERAL SAFE WORK PRACTICES

- 1. Students, public and school staff shall not be put at risk by the activities of contractors or their employees.
- 2. Safe vehicle operation rules are to be followed at all times. These include positioning vehicles to minimize the necessity of backing and providing a "spotter", someone who will make sure that people do not run into the path of a vehicle when driving on a playground or field that is occupied by students.
- 3. Tools shall never be left out when an unsecured work area is vacated.
- 4. Ladders and scaffolding will be taken down when an unsecured work area is vacated.
- 5. Open holes and other tripping hazards shall be fenced or barricaded when an unsecured work area is vacated.

6. Operations resulting in vapors, emissions or flying objects shall be conducted in such a way as to prevent exposure to any unprotected parties or property.
7. "Secured Work Area" is defined as an area having a perimeter cyclone fence at least 6 feet in height, with gates which close and lock so that no casual entrance is possible by unauthorized adults or children.
8. Contractor to follow all OR-OSHA rules for Confined Spaces, where applicable.

E. COMMUNICATIONS REGARDING UNSAFE PRACTICES

1. Upon perceiving a problem, the District will immediately communicate the concern to the Contractor or Contractor's representative on the work site.
2. If agreement on correction of unsafe conditions cannot be reached, the concerns of the District shall prevail and safety concerns shall be addressed in accordance with the District requirements.

F. ELECTRICAL PANELS - LOCKOUT/TAGOUT

1. Contractor shall implement a Lockout/Tag-out program for his employees who take equipment out of service or place equipment back into service. Contractor shall review the District's Energy Control Program prior to commencing work. Rules applying to this procedure are Oregon Occupational Safety and Health Code OAR 437, Division 2, Subdivision J, General Environmental Controls Lockout/Tag-out (1919.147), or latest edition.

G. ARC FLASH – ELECTRICAL SAFETY

1. Contractor shall comply with NFPA 70E (Electrical Safety in the Workplace), current edition. Contractor shall comply with Oregon OSHA 1910.137 (Personal Protective Equipment). The Contractor shall review with the School District Project Manager the 'Eugene School District Electrical Safety Program' before any work commences. The Contractor shall comply with all 'Arc Flash' and 'Electrical Safety' protocols referenced in any and all NFPA, OSHA, OROSHA, NEC, NESC, UL, IBC, IFC and ANSI documents (current editions).

H. POTENTIALLY HAZARDOUS PRODUCTS

1. The District attempts to maintain a safe and healthy environment for students and staff. The Contractor is therefore required to follow District guidelines controlling the use of potentially hazardous products and to use these products in a safe manner. Guidelines include the use of materials (adhesives, coatings, carpeting, etc.) which are known to emit little or no airborne pollutants.
2. MSDS information is required for all potentially hazardous products. The Project Manager and a District Safety Specialist will review these and determine what, if any, mitigation procedures will be required.
3. Contractor is to maintain and post copies of all MSDS information at the project site and adhere to the required controls.
4. Contractor is to ensure that work area by students and teachers is restricted. The District will provide signage appropriate for this purpose. The Contractor is to construct and maintain appropriate barriers. This shall include provision of physical separation barriers between "construction" and "occupied" spaces.
5. Contractor to adopt means of maintaining the construction space in negative air pressure in relation to occupied spaces.
6. Where there is a new or existing ventilation system in an affected space, the system shall be adjusted to provide the maximum amount of outside air possible with the system.
7. Efforts shall be made to install and operate new ventilation systems as soon in the construction process as practical.

I. ASBESTOS CONTAINING MATERIALS WARNING

1. Asbestos containing materials are known to exist in areas of the Work. The Contractor shall not, in any way, disturb materials which are known to contain asbestos, assumed to contain asbestos, or otherwise have not been tested and confirmed to be asbestos free.
2. Where access to concealed spaces is required, or it is necessary to disturb building materials such as for drilling of holes, cutting, etc., notify the Owner so that proper investigation and/or removal procedures are followed.
3. Prior to commencing Work, the Contractor shall meet with the District Safety Specialist and review the Owner's Asbestos Management Plan for the locations of asbestos-containing materials and/or materials assumed to contain asbestos. After reviewing the Owner's Asbestos Management Plan, the Contractor is required to sign Form 01 11 00A, Asbestos-containing Materials Notification Statement, provided at the end of this Section.
4. Contractor must not install any asbestos-containing materials when performing the Work of this project. At the completion of the Work, Contractor will be required to furnish a statement stating that no asbestos-containing materials were installed during the course of the Work. Refer to Sample Form 01 11 00B at the end of this Section.

J. FULL TIME SUPERINTENDENT DISCLOSURE STATEMENT

1. Prior to or in conjunction with the Preconstruction Conference, the Contractor shall submit the disclosure statement which identifies the Full Time Superintendent for this Project. The form for this statement, Form 01 11 00C, is provided at the end of this Section.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - SCHEDULE OF PRODUCTS ORDERED IN ADVANCE

PART 5 - ASBESTOS FORMS

Form 01 11 00B

The Environmental Protection Agency (AHERA) rules require the School District obtain a signed statement from the Site Superintendent that, to the best of his/her knowledge, no asbestos-containing building materials were installed during the Work. Therefore, the following statement must be submitted on the Contractors letterhead prior to Project Closeout.

SAMPLE FORM

(To be submitted on the Contractor's letterhead)

ASBESTOS-CONTAINING MATERIALS STATEMENT

EUGENE SCHOOL DISTRICT 4J

(Name of Project and CIP Number)

We the undersigned, (Name of Company), hereby warrant that to the best of our knowledge all materials furnished for the above referenced project contain 0% asbestos.

(Name of Construction Company)

(Signature and Date)

Printed Name

Job Title

END OF SECTION 01 11 00

Form 01 11 00 C

FULL TIME SUPERINTENDENT DISCLOSURE STATEMENT

Prior to or in conjunction with the Preconstruction Conference, the Contractor shall submit this disclosure statement which identifies the Full Time Superintendent for this Project.

Project Title: North Eugene High School and Winston Churchill High School
Irrigation System and Site Improvements
Eugene School District 4J
Eugene, Oregon
CIP No.430 780 105

CONTRACTOR INFORMATION

Company Name: _____

Company Address: _____

City, State, Zip: _____

List below the name, address, telephone, cellular phone FAX numbers and e-mail address (if available) for the full time Superintendent for this Project:

Superintendent's Name: _____

Address: _____
(if different from Contractor's) _____

I

Phone: _____ Fax: _____

Cell: _____ e-mail _____

The undersigned acknowledges that this project requires and will provide a full-time superintendent throughout this project.

Signature: _____
Authorized Signature

Printed Name: _____

Title: _____

Signature Notarized by:

Subscribed and sworn before me this _____ day of _____, 20__.

Notary Public: _____
Signature

My commission expires: _____

SECTION 01 25 00
CONTRACT MODIFICATION PROCEDURES

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 this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 0 Document 00 52 13 “ Form of Agreement” for monetary values of established Unit Prices and Alternates.
 - 2. Division 0 Document 00 72 13 “General Conditions” for additional requirements for Changes in the Work, Contract Sum, and Contract Time.
 - 3. Division 1 Section 00 11 13 “Supplementary Conditions” for allowable percentages for Contractors’ Overhead and Profit.
 - 4. Division 1 Section 01 22 00 “Unit Prices” for administrative requirements for using unit prices.
 - 5. Division 1 Section 01 33 00“ Submittal Procedures” for Schedule of Values requirements.
 - 6. Division 1 Section 01 60 00 "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.
 - 7. Division 1 Section 01 78 39 “Project Record Documents” documentation requirements.

1.3 MINOR CHANGES IN THE WORK

- A. Architect, with the concurrence of the Owner, will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 CHANGE REQUEST/PROCEED ORDER (CONSTRUCTION CHANGE DIRECTIVE)

- A. Architect or Owner may issue a Change Request/Proceed Order on form included at end of Part 3.
 - 1. Change Request contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
 - 2. Proceed Order, when signed by the Owner, instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Proceed Order.

CONTRACT MODIFICATION PROCEDURES – SECTION 01 25 00

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
- C. Authorization Required: When a Change Request is approved and signed by the Owner, it becomes a Proceed Order authorizing the change requested. Do not proceed with any change without the Owner's signature on the Change Request/Proceed Order.
- D. Owner-Initiated Change Requests: Architect will issue a Change Request, which will include a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Change Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 2. Within time specified in Change Request after receipt of Change Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a complete cost breakdown including a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor, supervision, overhead, and profit directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- E. Contractor-Initiated Requests: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to the Architect.
1. Changes requested by the Contractor will be authorized only by signature of the Owner on the prescribed. Do not proceed with any changes without this authorization.
 2. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 3. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 4. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 5. Include costs of labor, supervision, overhead, and profit directly attributable to the change.
 6. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

CONTRACT MODIFICATION PROCEDURES – SECTION 01 25 00

7. Comply with requirements in Division 1 Section 01 60 00 "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

F. Change Request Form: Use forms provided by Owner. Sample copies are included at end of Section 3.

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Change Request, and at intervals to be determined, Architect will collect Change Requests and issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

CHANGE REQUEST/PROCEED ORDER
Eugene School District 4J

.....
CHANGE REQUEST NOTICE

Change Request No.: _____

Project No.: _____ Contract No.: _____ Date: _____

Project Title: _____

Contractor: _____

1. REQUEST INFORMATION

Estimated \$ _____ Time _____ Days _____ Initiated by _____

Reason for change: _____

2. DESCRIPTION

Describe changes: _____

Describe affected work: _____

List plan and spec sections: _____

Describe impacted activities: _____

Comment: _____

3. DATES

Need for change first known _____ By whom _____

Contractor first notified _____ How _____

Owner first notified _____

Date approved or rejected _____ By whom _____

4. RECOMMENDATION (cost and time) _____

.....
PROCEED ORDER

PROCEED ORDER NO.: _____

Date: _____

1. PAYMENT/COST

Actual amount of change \$ _____

The contract time will be:

Contractor amount \$ _____

() increased () decreased by _____ days

Subcontractor amount \$ _____

() will remain unchanged

Type of payment (LS/T&M) _____

2. MISCELLANEOUS

Subcontractors involved: _____

Major materials: _____

The cost is not to exceed \$ _____

Date: _____

3 CHANGE REQUEST ACCEPTED BY:

Contractor: _____

Date: _____

Architect: _____

Date: _____

4J CIP Project Manager: _____

Date: _____

4J CIP Program Manager: _____

Date: _____

4J Facilities Director: _____

Date: _____

Without the signature of Facilities Director, or the acting Director, this Proceed Order is neither accepted or authorized, except by written authorization of other specific delegation.

END OF SECTION 01250

SECTION 01 29 00
PAYMENT PROCEDURES

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 this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 25 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 1 Section 01 27 00 "Unit Prices" for administrative requirements governing use of unit prices.
 - 3. Division 1 Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.
 - 4. Division 1 Section 01 77 00 "Closeout Procedures" for final Application for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Contractor's Construction Schedule.
 - 2. Submit the Schedule of Values to Architect and Owner at earliest possible date but no later than seven days before the date scheduled for submittal of initial Application for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.

PAYMENT PROCEDURES – SECTION 10 29 00

1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Submit draft of AIA Document G703 Continuation Sheets.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.

PAYMENT PROCEDURES – SECTION 10 29 00

- C. **Application Preparation:** Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders issued before last day of construction period covered by application.
 3. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours.
- D. **Initial Application for Payment:** Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values (draft submitted previously).
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Products list.
 5. Schedule of unit prices.
 6. Submittals Schedule (based Architect's list or required submittals).
 7. List of Contractor's staff assignments.
 8. Initial progress report.
 9. Report of preconstruction conference.
- E. **Application for Payment at Substantial Completion:** After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- F. **Final Payment Application:** Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout procedures (See itemized list in Section 01 77 00 "Closeout Procedures").
 2. Updated final statement, accounting for final changes to the Contract Sum.
 3. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 4. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 5. AIA Document G707, "Consent of Surety to Final Payment."
 6. Evidence that claims have been settled.
 7. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 10 29 00

SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Administrative and supervisory personnel.
 - 2. Project meetings.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 32 00 "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 1 Section 01 73 00 "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Division 1 Section 01 77 00 "Closeout Procedures" for coordinating Contract closeout.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
 9. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.4 SUBMITTALS

- A. Key Personnel Names: Within 15 days of Notice-to-Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including pager, cell, and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.5 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Schedule meeting dates and times with Owner and Architect.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Architect will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, within three days of receiving them from the Architect.
- B. Preconstruction Conference: Owner's Project Manager will schedule a preconstruction conference before starting construction, no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Owner's Project Manager, Architect, and their consultants, as required; Contractor and its superintendent; major subcontractors; suppliers; and other concerned

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following (see sample agenda at the end of Part 3):

- a. Introduction of persons present.
- b. Tentative construction schedule.
- c. Phasing.
- d. Critical work sequencing and long-lead items.
- e. Designation of key personnel and their duties.
- f. Procedures for processing field decisions and Change Orders.
- g. Procedures for requests for interpretations (RFIs).
- h. Procedures for testing and inspecting.
- i. Procedures for processing Applications for Payment.
- j. Distribution of the Contract Documents.
- k. Communications.
- l. Role of District's Project Manager.
- m. Submittal procedures, including MSDS information.
- n. Energy design requirements.
- o. Preparation of Record Documents.
- p. Use of the premises and existing building.
- q. Work hours and restrictions.
- r. Owner's occupancy requirements.
- s. Responsibility for temporary facilities and controls.
- t. Construction waste management and recycling.
- u. Parking availability.
- v. Office, work, and storage areas.
- w. Equipment deliveries and priorities.
- x. Safety and first aid.
- y. Security.
- z. Progress cleaning.

3. Minutes: Architect will record and distribute meeting minutes.
4. Statements made by the Contracting Agency's representative at the pre-construction conference are not binding upon the Contracting Agency unless confirmed by Written Addendum.

- C. Preinstallation Conferences: When required by individual specification sections, conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Owner's Project Manager a minimum of four days prior to scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract documents.
 - b. Related requests for interpretations (RFIs).
 - c. Related Change Orders.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- d. Purchases.
 - e. Deliveries.
 - f. Submittals.
 - g. Possible conflicts.
 - h. Compatibility problems.
 - i. Time schedules.
 - j. Weather limitations.
 - k. Manufacturer's written recommendations.
 - l. Warranty requirements.
 - m. Compatibility of materials.
 - n. Acceptability of substrates.
 - o. Space and access limitations.
 - p. Regulations of authorities having jurisdiction.
 - q. Testing and inspecting requirements.
 - r. Installation procedures.
 - s. Coordination with other work.
 - t. Required performance results.
 - u. Protection of adjacent work.
3. Contractor to record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Distribute minutes of the meeting to each party present and to parties who should have been present, within three working days.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at weekly intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to the Owner's Project Manager and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of correction of deficient items.
 - 14) Field observations.
 - 15) Requests for interpretations (RFIs).
 - 16) Status of proposal requests.
 - 17) Pending changes.
 - 18) Status of Change Orders.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
3. Minutes: Architect will record and distribute to Contractor the meeting minutes.
 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PRECONSTRUCTION CONFERENCE AGENDA (SAMPLE)

Eugene School District 4J

[Enter Project Name]

[Date]

AGENDA

1. Introduction of Persons Present
 - District 4J
 - Consultants
 - Contractor (including job foreman)
 - Subcontractors

2. Availability of Contract Documents

3. Building Permit Status
 - Plan check and Building Permit paid by District
 - Pick up Permit at City of Eugene by Contractor
 - Location of site stored approved contract documents
 - Utility permits
 - LRAPA Permit

4. Prevailing Wage Requirements
 - Submittal schedule
 - Conformance with requirements

5. Communications
 - Notification of problems

6. Role of District's representative
 - Limits of authority
 - Visitation schedules

7. Work Description and Schedule
 - General work description
 - Proposed start date: _____
 - Proposed completion date: _____
 - Proposed project schedule and phasing
 - Progress schedule updates
 - Methods to be employed to maintain schedule
 - Work requiring Shop Drawings or submittals shall not commence until review is complete.

8. Submittals Required per Contract Documents
 - MSDS Information
 - Written proof of Asbestos Worker Certification
 - Name, Experience and Qualifications of Asbestos Supervisor
 - Copy of Contractor's Asbestos Abatement License
 - Other information as required by Section 01 31 00.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- Schedule of values
- List of subcontractors including name of contact person, telephone number, and address

- 9. Construction
 - Working hours
 - Use of premises/set up locations
 - Protection of existing facilities
 - Traffic and protection
 - Excavation and clean-up
 - Weather restrictions
 - Deviation from details and/or specifications

- 10. Correction of Defects
 - Daily and/or as observed

- 11. Weekly On-Site Progress Meetings
 - Establish day and time: Day _____ Time _____
 - Provide updated project schedules
 - Discuss project progress, problems, etc.
 - Review applications for payment
 - Required attendance
 - Observation report distribution

- 12. Change Order Requests and Change Order Procedures
 - Written Change Order requests required
 - Supporting back-up will be required for all Change Orders
 - Mark-up limitations on Change Orders
 - Contractor - 15 percent
 - Subcontractors - 10 percent
 - Progressive requests and Change Orders
 - Processing time required

- 13. Applications for Payment
 - Use AIA documents G702 and G703 latest edition
 - Provide 5 signed and notarized copies
 - Wage certifications to be attached

- 14. Safety and Emergency Procedures

- 15. Clean-up Daily
 - Project completion

- 16. Project Closeout
 - Inspections for
 - Air Clearance
 - AHERA Close Out Requirements
 - Substantial completion
 - Contractor provided list of items to be completed
 - Inspection with job foreman
 - Final Acceptance
 - Written notice from Contractor that all work is done and ready for inspection

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- Inspection with job foreman
- Responsibility for cost of additional inspections
- Submittals for Closeout
 - Final application for payment
 - Final set of wage certifications
 - Release of liens from all Subcontractors and general Contractor

17. Tour of Project Sites to Examine and Document Existing Conditions

18. Additional Comments

The undersigned acknowledges that the items listed above were discussed during this preconstruction conference and are fully understood.

Date:

A/E Firm:

Contractor:

Subcontractors:

END OF SECTION 01 31 00

SECTION 01 32 00
CONSTRUCTION PROGRESS DOCUMENTATION

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Preliminary Construction Schedule.
2. Contractor's Construction Schedule.
3. Submittals Schedule.

- B. Related Sections include the following:

1. Division 1 Section 01 29 00 "Payment Procedures" for submitting the Schedule of Values.
2. Division 1 Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
3. Division 1 Section 01 33 00 "Submittal Procedures" for submitting schedules and reports.
4. Division 1 Section 01 40 00 "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 SUBMITTALS

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format.

1. Scheduled date for first submittal.
2. Specification Section number and title.
3. Submittal category (action or informational).
4. Name of subcontractor.
5. Description of the Work covered.
6. Scheduled date for Architect's final release or approval.

- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

1.4 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

CONSTRUCTION PROGRESS DOCUMENTATION – SECTION 01 32 00

- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Initial Submittal: List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
- B. Activities: Treat each floor or separate area as a separately numbered activity for each principal element of the Work
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
- D. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 1 Section 01 11 00 "Summary of Work." Delivery dates indicated stipulate the earliest possible delivery date.
- E. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 1 Section 01 11 00 "Summary of Work." Delivery dates indicated stipulate the earliest possible delivery date.
- F. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- G. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.

CONSTRUCTION PROGRESS DOCUMENTATION – SECTION 01 32 00

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within 10 days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect Owner's Project Manager, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 32 00

SECTION 01 33 00
SUBMITTAL PROCEDURES

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, Information Submittals, Delegated Design and other submittals.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 1 Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 1 Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 1 Section 01 40 00 "Quality Requirements" for submitting test and inspection reports and for mockup requirements, if any.
 - 5. Division 1 Section 01 77 00 "Closeout Procedures" for submitting warranties.
 - 6. Division 1 Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 7. Division 1 Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 8. Divisions 2 through 49 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

SUBMITTAL PROCEDURES – SECTION 01 33 00

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
- B. Submittals Schedule: Comply with requirements in Division 1 Section 01 32 00 "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 14 calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
- D. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
- E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- F. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, if received from sources other than Contractor without prior consent.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Submittal and transmittal distribution record.
 - k. Remarks.
 - l. Signature of transmitter.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.

SUBMITTAL PROCEDURES – SECTION 01 33 00

3. Resubmit submittals until they are marked "Approved" or "Approved as Noted"
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Use only final submittals with mark indicating "Approved" or "Approved as Noted" taken by Architect.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Compliance with specified referenced standards.
 - j. Testing by recognized testing agency.
 - k. Application of testing agency labels and seals.
 - l. Notation of coordination requirements.
 - m. MSDS information, where applicable.
 4. Submit Product Data before or concurrent with Samples.
 5. Number of Copies: Submit the number required by the Contractor plus four (4) copies of Product Data, unless otherwise indicated. Architect will return two copies to Contractor and one to Owner. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.

SUBMITTAL PROCEDURES – SECTION 01 33 00

- c. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - d. Schedules.
 - e. Design calculations.
 - f. Compliance with specified standards.
 - g. Notation of coordination requirements.
 - h. Notation of dimensions established by field measurement.
 - i. Relationship to adjoining construction clearly indicated.
 - j. Seal and signature of professional engineer if specified.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
 3. Number of Copies: Submit four opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation and maintenance manuals. Architect will retain two copies, including one for the Owner's Project Manager; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor..
 - c. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.

SUBMITTAL PROCEDURES – SECTION 01 33 00

2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section 01 40 00 "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 1 Section 01 31 00 "Project Management and Coordination."
 - C. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section 01 32 00 "Construction Progress Documentation."
 - D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
 - E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
 - F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
 - G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
 - H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
 - I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
 - J. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
 - K. Schedule of Tests and Inspections: Comply with requirements specified in Division 1 Section 01 40 00 "Quality Requirements."
 - L. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
 - M. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

SUBMITTAL PROCEDURES – SECTION 01 33 00

- N. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- O. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 1 Section 01 78 23 "Operation and Maintenance Data."
- P. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Q. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- R. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- S. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.

2.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date

SUBMITTAL PROCEDURES – SECTION 01 33 00

of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. "Approved" or "Approved as Noted"
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

SECTION 01 40 00
QUALITY REQUIREMENTS

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 1 Section 01 32 00 "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Divisions 2 through 49 Sections for specific test and inspection requirements.

1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Payment for these services will be made by Owner.
 - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.

QUALITY REQUIREMENTS – SECTION 01 40 00

3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section 01 33 00 "Submittal Procedures."
- D. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. **Testing Agency Responsibilities:** Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

QUALITY REQUIREMENTS – SECTION 01 40 00

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.6 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of the Owner, described as follows:

<List Special Inspections Here>

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROL

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 this Section.

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 11 00 "Summary of Work" for limitations on utility interruptions and other work restrictions.
 - 2. Division 1 Section 01 33 00 "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - 3. Division 1 Section 01 77 00 "Execution Requirements" for progress cleaning requirements.
 - 4. Divisions 2 through 49 Sections for temporary heat, ventilation, and humidity requirements for products in those Sections.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.

1.5 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.6 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.7 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch , 0.148-inch- thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top rails.
- B. Portable Chain-Link Fencing: Minimum 2-inch , 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide concrete bases for supporting posts.
- C. Lumber and Plywood: Comply with requirements in Division 6

2.2 TEMPORARY FACILITIES

- A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Heating Equipment: Unless Owner authorizes use of permanent heating system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Electric Power Service: Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.
- E. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
- F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- G. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel.
 - 1. Provide superintendent with cellular telephone or portable two-way radio.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
 - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Arrange for temporary parking areas for construction personnel.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
- E. Project Identification and Temporary Signs: Provide Project identification and other signs as indicated on Drawings. Install signs where indicated to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
1. Provide temporary, directional signs for construction personnel and visitors.
 2. Maintain and touchup signs so they are legible at all times.
- F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 1 Section 01 77 00 "Execution Requirements" for progress cleaning requirements.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
1. Comply with work restrictions specified in Division 1 Section 01 11 00 "Summary of Work."
- B. Temporary Erosion and Sedimentation Control: Comply with requirements specified in Division 2 Section "Site Clearing", and requirements of authority having jurisdiction.
- C. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Tree and Plant Protection: Comply with requirements specified in Division 2 Section "Tree Protection and Trimming."
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Site Enclosure Fence: During construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from access to open trenches or other excavations.
- G. Trench and excavation cover: Where excavated areas are required to remain open, cover with plywood or other sturdy material to prevent access.
1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

- I. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
- J. Trenching cover: Cover trenches and holes when not actively working in area and at end of work period as necessary where not protected by fencing.
- K. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking in construction areas.
 - 2. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 - 3. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

END OF SECTION 01 50 00

SECTION 01 60 00
PRODUCT REQUIREMENTS

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 23 00 "Alternates" for products selected under an alternate.
 - 2. Division 1 Section 01 77 00 "Closeout Procedures" for submitting warranties for Contract closeout.
 - 3. Divisions 2 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Substitution Requests: Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period, in compliance with this Section.
- B. After execution of Agreement, the Owner may, at the Owner's option, consider formal requests from the Contractor for substitution of products for those specified. One or more of the following conditions must be documented:
 - 1. Compliance with final interpretation of code requirements or insurance regulations which require that the use of a substituted Product.
 - 2. Unavailability of a specified Product through no fault of the Contractor.

PRODUCT REQUIREMENTS – SECTION 01 60 00

3. Inability of specified Product to perform properly of fit in designated place.
 4. Manufacturer's or Fabricator's refusal or inability to certify or guarantee performance of a specified Product in the application intended.
- C. A Substitution Request constitutes a representation that the Bidder/Contractor:
1. Has investigated the proposed Product and determined that it meets or exceeds the quality level of the specified Product.
 2. Will provide the same warranty for the Substituted Product as for the specified Product.
 3. Will coordinate installation and make changes to the Work which may be required for the Work to be completed with no additional cost to the Owner.
 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 5. Will reimburse the Owner for review or redesign services associated with re-approval by authorities.
- D. Substitutions will not be considered when they are indicated or implied on Shop Drawings or Product Data Submittals, without separate request on the form provided, or when acceptance will require revision to the Contract Documents.
- E. Submit three copies of each request for consideration. Limit each request to one proposed Substitution. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Use form provided at end of Section.
 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Provide MSDS information to confirm that the product is no more harmful than the products specified.
 - f. Samples, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - j. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided

PRODUCT REQUIREMENTS – SECTION 01 60 00

within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

- k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Change Order.
 - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Store cementitious products and materials on elevated platforms.

PRODUCT REQUIREMENTS – SECTION 01 60 00

5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.
9. Provide bonded and insured off-site storage and protection when site does not permit on-site storage and protection.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Submittal Time: Comply with requirements in Division 1 Section 01 77 00 "Closeout Procedures."

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

PRODUCT REQUIREMENTS – SECTION 01 60 00

SUBSTITUTION REQUEST FORM

TO: Name of Architect
Street Address
City and State

DEADLINE: Date

PROJECT: Name of Project
CIP # _____.____.____
Eugene School District 4J

SPECIFIED ITEM: _____
Section No. Paragraph Description

The Undersigned requests consideration of the following substitution:

The Undersigned states that the following paragraphs are true, except where noted otherwise:

1. The function, appearance and quality of the proposed substitution are equivalent or superior to the specified item;
2. The proposed substitution does not affect dimensions shown on the Drawings;
3. The Undersigned will pay for changes to the building design, including engineering and design services, detailing and construction costs caused by the requested substitution;
4. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements;
5. Maintenance and service parts will be locally available for the proposed substitution;
6. The Undersigned has attached data concerning the proposed substitution, including: Manufacturers product description, specifications, drawings, photographs, performance and test data, adequate for evaluation of the request, with applicable portions of the data clearly indicated. Attachments also include description of changes to Contract Documents which the proposed substitution will require for its proper installation.

Submitted by: _____ Signature: _____ Firm: _____ Address: _____ _____ Date: _____ Tel: _____ Fax: _____ Attachments: _____ _____	For use by Architect: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as noted. <input type="checkbox"/> Not Approved <input type="checkbox"/> Received too late By: _____ Date: _____ _____ For use by 4J Project Manager: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as noted. <input type="checkbox"/> Not Approved <input type="checkbox"/> Received too late By: _____ Date: _____ _____
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END OF SECTION 01 60 00

PRODUCT REQUIREMENTS – SECTION 01 60 00

SECTION 01 73 00
EXECUTION REQUIREMENTS

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 this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

- 1. Construction layout.
- 2. Field engineering and surveying.
- 3. General installation of products.
- 4. Coordination of Owner-installed products.
- 5. Progress cleaning.
- 6. Starting and adjusting.
- 7. Protection of installed construction.
- 8. Correction of the Work.

- B. Related Sections include the following:

- 1. Division 1 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
- 2. Division 1 Section 01 33 00 "Submittal Procedures" for submitting surveys.
- 3. Division 1 Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.
- B. Final Property Survey: Submit 2 copies showing the Work performed and record survey data.

1.4 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 5. Proceed with installation only after unsatisfactory conditions have been corrected.
PROCEEDING WITH THE WORK INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility

EXECUTION REQUIREMENTS – SECTION 01 73 00

appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

- B. **Field Measurements:** Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. **Space Requirements:** Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. **Review of Contract Documents and Field Conditions:** Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

- A. **Verification:** Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Owner's Project Manager promptly.
- B. **Irrigation Improvements:** Locate and lay out irrigation improvements, including existing components, supply system and existing utilities.
- C. **Site Improvements:** Locate and lay out site improvements, including pavements, grading, fill and mow curb placement.
- D. **Record Log:** Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Owner's Project Manager.

3.4 FIELD ENGINEERING

- A. **Identification:** Owner will identify existing benchmarks, control points, and property corners.
- B. **Reference Points:** Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- C. **Benchmarks:** Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.

EXECUTION REQUIREMENTS – SECTION 01 73 00

3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated. Bring any conflicts to the Architect for review.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints where possible. Obtain Architect and Owner's Project Manager approval for all questionable conditions.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction forces.

EXECUTION REQUIREMENTS – SECTION 01 73 00

- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.
 - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - 2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to applicable regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for safety and proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- F. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

EXECUTION REQUIREMENTS – SECTION 01 73 00

- H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- I. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section 01 40 00 "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01 73 00

CUTTING AND PATCHING
SECTION 01 73 29

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 this Section.

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
 - 1. Division 1 Section 10 31 00 – “Project Management and Coordination” for pre-construction and pre-installation conferences.
 - 2. Division 2 Section "Selective Demolition" for demolition of selected portions of the building.
 - 3. Divisions 2 through 49 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a written request describing procedures prior to the time cutting and patching will be performed, requesting approval to proceed, for cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather-exposed or moisture-resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of site-exposed elements.
 - 5. Work of Owner or separate contractor.
- B. Include the following information:
 - 1. Identification of Project and CIP number
 - 2. Location and description of the affected Work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed Work and Products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on work of Owner or separate contractor.
 - 7. Written permission of affected separate contractor, if any.

8. date and time work will be executed.

1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
 1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 2. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- B. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

CUTTING AND PATCHING - SECTION 01 73 29

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01 73 29

SECTION 01 77 00
CLOSEOUT PROCEDURES

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

- B. Related Sections include the following:

1. Division 1 Section 01 29 00 "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
2. Division 1 Section 01 73 00 "Execution Requirements" for progress cleaning of Project site.
3. Division 1 Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
4. Division 1 Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
5. Divisions 2 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

CLOSEOUT PROCEDURES - SECTION 01 77 00

11. Advise Owner of changeover in utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect and Owner's Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit the following completed forms, items and documents:
 - a. AIA Document G706 Contractor's Affidavit of Payment of Debts and Claims.
 - b. AIA Document G706A Contractor's Affidavit of Release of Liens.
 - c. AIA Document G707 Consent of Surety Company to Final Payment.
 - d. Operation and Maintenance Manuals
 - e. Warranties and Bonds. Submit original documents, including Contractor's General Warranty,
 - f. Record Documents.
 - g. Keys.
 - h. Testing and Start-Up records.
 - i. Affidavit of Prevailing Wages paid.
 - j. Complete list of Contractor and all Subcontractors with address, phone numbers, and work
 - k. Asbestos-Containing Materials Statement.
 - l. Proof of final acceptance and compliance from governing authorities having jurisdiction.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect and Owner's Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Cost of additional re-inspections by Architect and Owner's Project manager will be deducted from Final Payment to the Contractor.

1.5 WARRANTIES

- A. **Submittal Time:** Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. **Partial Occupancy:** Submit properly executed warranties within 10 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. **Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.**
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

MATERIALS

- A. **Cleaning Agents:** Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. **General:** Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. **Cleaning:** Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

CLOSEOUT PROCEDURES - SECTION 01 77 00

- g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - j. Remove labels that are not permanent.
 - k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - l. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Replace parts subject to unusual operating conditions.
 - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - o. Clean exposed surfaces of diffusers, registers, and grills.
 - p. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Maintenance manuals for the care and maintenance of products, material, finishes, systems, and equipment.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 33 00 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
 - 2. Division 1 Section 01 77 00 "Closeout Procedures" for submitting operation and maintenance manuals.
 - 3. Division 1 Section 01 78 39 "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
 - 4. Divisions 2 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 SUBMITTALS

- A. Initial Submittal: Submit 2 draft copies of each manual at least 15 working days before requesting inspection for Final Completion. Include a complete operation and maintenance directory. Architect will return one copy of draft and mark whether general scope and content of manual are acceptable.
- B. Final Submittal: Submit one copy of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 15 days after final inspection.

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

1. Correct or modify each manual to comply with Architect's comments. Submit 3 copies of each corrected manual within 15 days of receipt of Architect's comments.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Organization: Include a section in the directory for each of the following:
 1. List of documents.
 2. List of systems.
 3. List of equipment.
 4. List of all subcontractors and material suppliers, including names, addresses and phone numbers.
 5. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 1. Title page.
 2. Table of contents.
 3. Manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

4. Date of submittal.
 5. Name, address, and telephone number of Contractor.
 6. Name and address of Architect.
 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include a Table of Contents for each volume with a list of products and major components of equipment included in the section on the face of each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software media for computerized electronic equipment.
 4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
 - 1. Type of emergency.
 - 2. Emergency instructions.
 - 3. Emergency procedures.

- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
 - 1. Water leak.
 - 2. Power failure.
 - 3. Water outage.
 - 4. System, subsystem, or equipment failure.

- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

- D. Emergency Procedures: Include the following, as applicable:
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits.
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 - 1. System, subsystem, and equipment descriptions.
 - 2. Performance and design criteria if Contractor is delegated design responsibility.
 - 3. Operating standards.
 - 4. Operating procedures.
 - 5. Operating logs.
 - 6. Wiring diagrams.
 - 7. Control diagrams.
 - 8. Piped system diagrams.
 - 9. Precautions against improper use.
 - 10. License requirements including inspection and renewal dates.

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- B. Descriptions: Include the following:
1. Product name and model number.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping.
 6. Normal shutdown instructions.
 7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.

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2. Schedule for routine cleaning and maintenance.
 3. Repair instructions.
 4. Contact information.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
1. Standard printed maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

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- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared Record Drawings in Division 1 Section 01 78 39 "Project Record Documents."

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- G. Comply with Division 1 Section 01 77 00 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

SECTION 01 78 39
PROJECT RECORD DOCUMENTS

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 this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 77 00 "Closeout Procedures" for general closeout procedures.
 - 2. Division 1 Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Divisions 2 through 49 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Final Submittal: Submit one set of marked-up Record Prints (not "Job Shack" set).
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.

PROJECT RECORD DOCUMENTS – SECTION 01 78 39

1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Locations of concealed internal utilities.
 - i. Changes made by Change Order.
 - j. Changes made following Architect's written orders.
 - k. Details not on the original Contract Drawings.
 - l. Field records for variable and concealed conditions.
 - m. Record information on the Work that is shown only schematically.
 3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
 3. Identification: As follows:
 - a. Project name.
 - b. Date.

PROJECT RECORD DOCUMENTS – SECTION 01 78 39

- c. Designation "PROJECT RECORD DRAWINGS."
- d. Name of Architect and Owner's Project Manager.
- e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's and Owner's Project Manager's reference during normal working hours.

END OF SECTION 01 78 39

**CONCRETE PAVING
SECTION 32 13 13**

PART 1 GENERAL

1.01 CONTRACT CONDITIONS

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

1.02 WORK INCLUDED

- A. Concrete sidewalks.
- B. Concrete mow strips.

1.03 RELATED SECTIONS

- A. Irrigation, Section 32 84 00

1.04 ALTERNATES (NOT USED)

1.05 REFERENCES

- A. ACI 301 - Specifications for Structural Concrete.
- B. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.
- C. ASTM A615 - Deformed and Plain Billet-Steel for Concrete Reinforcement.
- D. ASTM C33 - Concrete Aggregates.
- E. ASTM C94 - Ready Mix Concrete.
- F. ASTM C150 - Portland Cement
- G. ASTM C260 - Air-Entraining Admixtures for Concrete.
- H. ASTM C309 - Liquid Membrane-Forming Compounds for Curing Concrete.
- I. ASTM C494 - Chemical Admixtures for Concrete.
- J. ASTM D1751 - Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction.

1.06 SUBMITTALS FOR REVIEW

- A. Submit mix design from designated batch plant for each class of concrete for approval.
- B. Product Data: Provide data on joint filler, sealant, backer rod, admixtures and curing compounds.

1.07 QUALITY ASSURANCE

CONCRETE PAVING - SECTION 32 13 13

- A. Perform reinforcement work in accordance to CRSI Manual for Standard Practice.
- B. Obtain cementitious materials from same source throughout.

1.08 REGULATORY REQUIREMENTS

- A. Conform to City of Springfield Municipal standards for paving work on public property.

1.09 ENVIRONMENTAL/SITE WORKING CONDITIONS

- A. Weather: Concrete shall not be installed during rain, when the base course is frozen, or when expected weather conditions will prevent the proper handling, finishing or compaction of mixtures.
- B. Protection During Inclement Weather:
 - 1. Protect bearing surfaces from moisture by covering with impervious membrane or cessation of work for a minimum of 24 hours following rainy weather.
 - 2. Protect installed and finished concrete with impervious membrane, blocked and supported to remain free from contact with concrete surface for a minimum of 5 days following installation.
 - 3. Cold Weather:
 - a. Follow recommendations per ACI 306 – Recommended Practices for Cold Weather Concrete, when air temperature is expected to fall below 40 degrees F.
 - b. Protect concrete from physical and chemical damage or reduced strength caused by frost, freezing, or low temperatures.
 - c. Ensure forms, reinforcing steel, adjacent surfaces and free from frost, snow or ice.
 - d. Do not use frozen materials or materials containing ice or snow.

1.10 INSPECTIONS

- A. Request visitation by Landscape Architect minimum 48 hours in advance. The following is required:
 - 1. Base Course Readiness. Immediately prior to placement of concrete, Landscape Architect, upon notification, will review base course condition and will determine if condition is acceptable for concrete placement. Satisfactory compaction test results must be on hand prior to commencing installation.
 - 2. Formwork and Reinforcement. Immediately prior to placement of concrete, Landscape Architect, upon notification, will review formwork installation, including bracing, blocking, anchoring, reinforcement installation, and joint preparation and will determine if condition is acceptable for concrete placement.
 - 3. Concrete Installation. Following placement of each concrete installation, Landscape Architect, upon notification, will review work for installation, jointing, and finishing.
- B. Make any corrections identified during these reviews at no additional cost to Owner.

PART 2 PRODUCTS

CONCRETE PAVING - SECTION 32 13 13

2.01 FORM MATERIALS

- A. Wood form material, profiled to suit conditions. At concrete exposed to view, conform to PS-1.HDO grade, class I to eliminate grain form.
- B. Form files and embedded items: As needed for complete installation and as shown on drawings.
- C. Form treatment for plywood forms: Coat with approved stainless form oil, using minimum quantity for proper form removal.

2.02 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615; 40 ksi yield grade; deformed billet No. 4 steel bars; unfinished. See details for steel dowels.
- B. Reinforcing Accessories: Conform to CRSI, Manual of Standard Practice for Reinforced Concrete Construction. Include all devices needed for complete installation.

2.03 CONCRETE MATERIALS

- A. Portland Cement: ASTM C150, Type 1 – Normal, Portland type, gray color.
- A. Fine and Coarse Aggregates: ASTM C33, washed clean and free of mud, clay, soil and deleterious substances. Maximum size $\frac{3}{4}$ inch and not more than $\frac{1}{5}$ of narrowest space between forms, $\frac{1}{3}$ of slab depths nor $\frac{3}{4}$ of min. space between reinforcing bars.

2.04 ACCESSORIES

- A. Curing Compound: ASTM C309, Type 1 Class A or B; Kure N Seal manufactured by Sonneborne or approved.
- B. Joint Sealant and Backer Rod: As approved by Landscape Architect

2.05 CONCRETE MIX

- A. Mix concrete in accordance with ASTM C94.
- B. Provide concrete of the following characteristics for walks, curbs, walls, footings and all exterior concrete:
 - 1. Compressive strength 28 days – 3500 psi
 - 2. Maximum slump 4 inches
 - 3. Minimum sacks of cement per cubic yard 5 sacks
 - 4. Air Entrainment 4 percent
- C. Use accelerating admixtures in cold weather only when approved by Landscape Architect. Use of admixtures will not relax cold weather placement requirements.

2.06 SOURCE QUALITY CONTROL AND TESTS

- A. Testing and Laboratory Services by Owner Approved Agency

CONCRETE PAVING - SECTION 32 13 13

- B. Submit proposed mix design of each class of concrete for review and approved prior to commencement of work.
- C. Tests on cement and aggregates will be performed to ensure conformance with specified requirements.
- D. Test samples to be done by owners agent in accordance with ACI 301.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify base conditions under provisions of Section 02200.
- B. Verify compacted aggregate base is acceptable and ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.

3.02 PREPARATION

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Notify Landscape Architect/Engineer minimum 24 hours prior to commencement of concreting operations.

3.03 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.

3.04 REINFORCEMENT

- A. Place reinforcement as shown on drawings.

3.05 FORMWORK INSTALLATION

- A. Minimize form joints. Symmetrically align joints and make watertight to prevent leakage of material at exposed locations.
- B. Arrange and assemble formwork to permit dismantling and stripping, so that concrete is not damaged during formwork removal. Arrange forms to allow stripping without removal of shoring where required to remain in place.
- C. Provide bracing to ensure stability of formwork. Strengthen formwork to resist construction loads.
- D. Set forms flush with adjacent forms, so that joints will not be apparent in exposed concrete surfaces.
- E. Conform to shapes, sizes, lines and locations for concrete work shown on drawings.

CONCRETE PAVING - SECTION 32 13 13

- F. Apply form release agent on formwork in accordance to manufacturer's instructions. Apply prior to placement of reinforcement or embedded items.

3.06 PLACING CONCRETE

- A. Place concrete as specified herein and shown on drawings.
- B. Ensure reinforcement, inserts, embedded parts and formed joints are not disturbed during concrete placement.
- C. Place concrete continuously over the full width of the panel and between pre-determined construction joints. Do not break or interrupt successive pours such that cold joints occur.

3.07 COMPACTION

- A. Employ mechanical high frequency vibrators to consolidate concrete around reinforcements, into corners and angles of forms, and to exclude rock pockets, air bubbles and honeycomb formations.
- B. Hold mechanical vibrator in one spot no longer than 30 seconds, keep in constant motion, insert and withdraw at points approximately 18 inches on center. Maintain in vertical position when penetrating concrete.
- C. Transporting concrete with vibrator not permitted.
- D. Maintain spare vibrator on job site while placing concrete.

3.08 JOINTS

- A. Place expansion joints at base of wall locations only. Align curb, gutter, and sidewalk joints.
- B. Place joint filler between paving components and planter and seat walls. Recess top of filler 1/4 inch for sealant placement.
- C. Provide tooled scored joints intervals that equal the width of the sidewalk between sidewalks and curbs, unless shown otherwise on drawings.
- D. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing where indicated or if needed. Cut 1/3 into depth of slab.

3.09 FINISHING

- A. Sidewalk Paving: Light broom with trowel joint edges.
- B. Direction of Texturing: Transverse to pavement direction.
- C. Place curing compound, sealer on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

3.10 JOINT SEALING

- A. Separate pavement from vertical surfaces with 1/2 inch thick joint filler.

CONCRETE PAVING - SECTION 32 13 13

- B. Extend joint filler from bottom of pavement to within 1/2inch of finished surface. Apply joint sealant and backer rod in accordance to manufacturer specifications.

3.11 CURING

- A. Curing Period: Not less than 7 days at 50 degrees F. minimum.
- B. Exposed Slabs: Keep wet at least 14 days following concrete placement.

3.12 TOLERANCES

- A. Testing and Laboratory Services
- B. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.
- C. Maximum Variation From True Position: 1/4.

3.13 FIELD QUALITY CONTROL

- A. Testing and Laboratory Services
- B. Testing will be performed by independent agent selected and paid for by Owner. Notify Landscape Architect and testing agency 48 hours prior to need for testing.
- C. Testing laboratory will take cylinders and perform test in accordance with ACI 301. One additional test cylinder will be taken during cold weather and cured on site under same conditions as concrete it represents. One slump test will be taken for each set of cylinders taken.
- D. If test results indicate that paving does not meet specifications, remove, replace and retest work at no additional cost to Owner.

3.14 PROTECTION

- A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.
- B. Do not permit vehicular traffic over pavement until 75 percent design strength of concrete has been achieved.
- C. Protect work specified herein against damage and discoloration. Protect other work against damage and discoloration caused by work of this subsection.

3.15 DEFECTIVE WORK

- A. Remove, replace or repair when directed by Landscape Architect, surfaces which show excessive cracks, voids, air pockets; any slabs which do not drain properly, and other defective concrete.
- B. On surfaces scheduled to receive floor coverings, remove by grinding if necessary, defects of magnitude to show through covering.

CONCRETE PAVING - SECTION 32 13 13

- C. Remove honeycombed and other defective concrete down to sound concrete. If chipping is necessary, shape edges perpendicular to surface or slightly undercut. Feathered edges not permitted.

3.16 CLEANING AND REPAIRING

- A. Remove debris from project site upon work completion or sooner, if directed.
- B. Including work other sections, clean, repair, and touch-up, or replace when directed, products which have been soiled, discolored, or damaged by work of this section.

END OF SECTION 32 13 1

SECTION 32 84 00

IRRIGATION

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. Pressure-reducing valves.
5. Automatic control valves.
6. Transition fittings.
7. Dielectric fittings.
8. Miscellaneous piping specialties.
9. Sprinklers.
10. Controllers.
11. Centrally Controlled System Components.
12. Valve Boxes
13. Well Pump.
14. Well Controls.

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.

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.
 - 2. Record actual locations of all concealed components, piping system, sleeves, control wires, communication wires and drain valves. Indicate two dimensions for all valves (including quick coupling valves and drain valves), stub-outs, and main line T's, L's, and ends. Dimension mainline pipes and wire runs at the beginning, mid-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.
 - 4. **Record Drawings to be updated daily prior to backfilling.**
- C. 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: A Licensed Landscape Professional. A qualified professional landscape installer whose work has resulted in successful establishment of similar landscape installations.
 - 1. For irrigation work: Valid Oregon Landscape Professional's 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 Professional's License for irrigation and backflow or a valid Oregon Plumbing License.

3. For Rain Bird MAXICOM equipment installation: Rain Bird MAXICOM Installation Certification.

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 the following. Request inspections at the following times:

1. Upon excavation of supply areas for approval of Maxicom supply are components staking. Supply system components to be approved prior to installation.
2. Upon completion of the main line, with all valves installed, prior to backfilling.
3. At start and end of pressure test prior to backfilling.
4. System performance inspection upon completion of the entire system.
Provide 48 hour notice:
5. Prior to disruption of irrigation water to baseball field water supply.

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

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 if provided.
 - 1. (1) Sprinkler heads of each type and size.
 - 2. (2) Nozzles of each type and size.
 - 3. (2) Valve keys for manual valves.

4. (4) Valve Box Keys.
5. (1) 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-1785
- B. Lateral Lines: Polyvinyl Chloride (PVC) 1120, Schedule 40, ASTM D-1785
- C. Swing Joints at Spray Head Sprinklers: Triple elbow assembly using Rain Bird SA Series or Rain Bird SPX-100 flexible tubing. 18" minimum length, 30" maximum.
- D. Swing Joints at Rotary Head Sprinklers: Triple elbow assembly using Rain Bird TSJ Series or ASTM D-2466, Schedule 40 piping.
- E. Offsets at Quick Couplers: Triple elbow assembly using ASTM D-2466, Schedule 40 piping.
- F. Socket Type Fittings: ASTM D-2466, Schedule 40 P.V.C.
- G. Threaded Fittings: ASTM D-2464 Schedule 80 P.V.C.
- H. 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, stainless 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. Gate Valves:

1. 3" Main line and smaller: Nibco T-113.
 2. 4" Main line and larger: Kennedy model 8561ANSS
- B. 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.
- C. Master Shut-off Valve: Kennedy model 8561ANSS – Not Used
- D. Backflow Preventer: Wilkins 950-XLT, size indicated on drawings. – Not Used

2.4 AUTOMATIC CONTROL VALVES

- A. Plastic, Automatic Control Valves:
1. Pop-up Spray and Rotary Sprinkler Zones: Rain Bird PEB-PRSD – Not Used
- 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 MAXICOM SUPPLY AREA COMPONENTS

- A. Master Valve: Bermad IR-4"-410-G-I-PB-X.
- B. Flow Sensor: Rain Bird FS-300P

2.6 SPRINKLERS (If Needed)

- A. New to match existing.

2.7 QUICK COUPLERS (If Needed)

- A. Quick Coupling Valves: Rain Bird 44LRC or approved.
- B. Quick Coupling Valve Keys: Rain Bird 44K or approved

2.8 CONTROLS

- A. Automatic Controllers: Existing to Remain.
- B. Maxicom Control Components: Make and Models specified on drawings.

- C. Wire Conductors: 14 gauge, single strand. Color-coded: White - common, Red - zones, Black – spare, Yellow – master shut-off valve.
- D. Wire Connectors: DBY by 3M, Scotch Lok 3570 or approved.
- E. Maxicom Communication Cable (Exterior): PE-39
- F. Maxicom Communication Cable Splice Kit: Preformed Line Products, Super Serviseal Closure
- L. Conduit and Fittings:
 - 1. Under ground: Plastic, Class III, Federal Specification W-C-1094.
 - 2. Above ground: Aluminum, Federal Specification WW-G-540.
 - 3. Conduit Supports: Galvanized.

2.9 WELL

- A. Submersible Well Pump: Berkeley Model 6T15-225, Catalog Number B81328.

2.10 VARIABLE FREQUENCY DRIVE CONTROL ASSEMBLY

- A. TRA Precision Pumping Systems CT020-243-MTE-CIK-DPP-CH-U3R-U3F-SW-SLB-PLC2;
Phone: 208-323-5300 or Approved
 - 1. RED-e-VFD Pump Control Panel, 240v, 3-ph
 - 2. UL508A Listed and Labeled for Outdoor; NEMA 3R
 - 3. Free-Standing Steel Cabinet w/Stabilizer Bracket
 - a. 48"h x 36"w x 16"d + 12" Feet
 - 4. Dead-Front, Swing-Panel Enclosure Kit
 - 5. Filtered-Fan Cooling and Heating Package
 - 6. 80A Main Circuit Breaker Disconnect
 - 7. 20hp, 230v ABB ACS550 Series VFD
 - 8. 20hp Manual VFD Bypass Contactor w/Overload
 - 9. 20hp MTE Harmonic Filter w/Cap Bypass
 - 10. Digital Line Phase/Voltage Monitor
 - 11. Standard D50 Series Surge Arrestor; UL1449
 - 12. PLC2 Pump Logic Control with HMI Touchscreen
 - 13. Hand/Off/Auto Selector and Manual Speed Dial

2.11 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.

2.12 VALVE BOXES

- A. Automatic and Manual Control Valves: Rain Bird VB Series Standard Rectangular (VB-STD) w/ locking lid. Double box assembly, see details.
- B. Isolation Valves:
 - 1. 3" and smaller: Rain Bird VB Series 10" round w/ locking lid and "irrigation main" labeled on inside of lid.
 - 2. 4" and larger: Rain Bird VB Series Standard Rectangular (VB-STD) w/ locking lid. Double box assembly and "irrigation main" labeled on inside of lid.
- C. Manual Drain Valves: Rain Bird VB Series 10" round w/ locking lid and "irrigation main" labeled on inside of lid.
- D. Master Shut-off Valves: Rain Bird VB Series Standard Rectangular (VB-STD) w/ locking lid. Double box assembly, see details.
- E. Quick Coupling Valves: Rain Bird VB Series 10" round w/ locking lid.
- F. Flow Sensors: Rain Bird VB Series Standard Rectangular (VB-STD) w/ locking lid. Double box assembly, see details.
- G. Backflow Preventer: Rain Bird VB Series 'Jumbo' w/ locking lid. Double valve box assembly.
- H. Valve Box Lid Colors: Green.
- I. Drainage Backfill at Manual Drain Valves: (1) cu. foot cleaned ¾"-1" round rock with filter fabric surround.

2.13 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. Drain and Sump Areas: Pea gravel, ¾" - 1/2" washed round rock.

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."

- B. Provide minimum cover over top of underground piping according to the following:
1. Irrigation Main Piping: Minimum depth of 24" below finished grade to top of pipe.
 2. Circuit Piping: Minimum depth of 18" below finished grade to top of pipe.
 3. Sleeves: Minimum depth of 24" below finished grade to center of pipe.

3.2 PREPARATION

- A. Unearth existing supply area components and set stakes to identify locations of proposed supply system components. Obtain Architect's approval before installation.
- B. Set stakes to identify locations of proposed irrigation system. Obtain Architect's approval before excavation.
- C. 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 3" sand bedding below all main and lateral line piping.
- D. Provide 3" minimum debris free cover over all main and lateral line piping.
- E. Provide thrust blocks at all changes in direction of all piping 4" and larger.
- 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. No sleeving is known to exist in most locations. Bore beneath existing paving or use other methods as required to accomplish sleeving installation where necessary.
- B. If concrete is cut to install sleeving, paving must be cut to next logical joint and replacement paving surface finish to match existing. Cut paving with prior approval only. Concrete to be doweled both sides.
- C. Install sleeves under parking lots, roadways, sidewalks and elsewhere shown on drawings.
- D. Contractor responsible for installing sleeving in addition to that shown on drawings as necessary for complete installation of system as designed.
- E. Provide visible markers where sleeve ends are concealed.
- F. Extend sleeves a minimum of one-foot beyond sidewalks on each side.
- G. Run sleeves level and perpendicular to sidewalks and pavement unless shown otherwise on drawings.
- H. 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.
4. 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 48" 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 8" corrugated pipe from valve box elevation to drain valve.

C. Isolation Valves:

1. Install in 10" round valve box.
2. Provide 8" 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 18-inches finished grade to lateral pipe.
- C. Install (2) valve boxes for each control valve. Set one upside down and attach top box with (6) 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 (If Needed)

- 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 trenches in lawn and plant bed areas with approved topsoil to specified depth.
- G. Refill trenches that have settled with approved topsoil to bring them flush with the surrounding grades.

3.10 AUTOMATIC IRRIGATION-CONTROL SYSTEM INSTALLATION (If Needed)

A. Equipment Mounting:

1. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 2. Install anchor bolts to elevations required for proper attachment to supported equipment.
 3. Install controller power supply with hard wired connection enclosed in conduit.
 4. Provide conduit for wire runs from controller location to sleeve extending to building exterior.
 5. Provide conduit for wire runs from exterior controller location to specified stub-out location below grade.
 6. Secure conduits to wall using conduit supports.
- B. Extend metal conduits with sweep ells and pull wires from controller assembly to 18" below adjacent grade.
 - C. Install control cable in same trench as irrigation piping and at least 2 inches below or beside piping. Provide conductors of size not smaller than recommended by controller manufacturer. Install cable in separate sleeve under paved areas.

3.11 AUTOMATIC CONTROLLER WIRE INSTALLATION

- A. Install wire beneath main line pipe and coil 18" 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 wire in continuous runs with no splices unless approved.
- D. Ensure minimum additional 48-inches of wire above finished grade is coiled around ½-inch pipe in boxes.
- E. Make all splices in a valve box and note these on record drawing when approved. Control wiring runs to be continuous unless site conditions do not permit.

- F. 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
- G. Label wires on both sides of splice with permanent, water-proof tag.
- H. Install waterproof connections at the end of extra wires.
- I. 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 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 MAXICOM SUPPLY AREA COMPONENT INSTALLATION

- A. Install flow sensor with specified minimum clearances between components.
 - 1. Distance between master valve and flow sensor: 10 times pipe diameter minimum.
 - 2. Distance between flow sensor and any other downstream component: 5 times pipe diameter minimum.
- B. Install flow sensor and master shut-off valve in double valve box assembly as detailed on drawings.

3.14 WELL SYSTEM INSTALLATION

- A. Install well pump according to manufacturer's requirements.

3.15 VARIABLE FREQUENCY DRIVE CONTROL ASSEMBLY

- A. Install control assembly according to manufacturer's requirements.
- B. Control assembly to be installed by licensed, bonded and insured electrician.

3.16 CONNECTIONS

- A. Install piping adjacent to equipment, valves, and devices to allow service and maintenance.

- B. Connect wiring between controllers and automatic control valves.
- C. Connect PE-39 wire to flow sensor and provide 48" length loop in valve box.
- D. Extend (3) yellow wires to master shut-off valve and provide 48" length of wire coiled in valve box.
- E. Use specified splice kits only.

3.17 IDENTIFICATION

- A. Warning Tapes: Arrange for installation of continuous, underground, detectable warning tapes over underground piping during backfilling of trenches.
- B. Provide reduced, laminated copy of irrigation plan with valve schedule on each automatic controller.
- C. Provide permanent hang tags at automatic control valves indicating zone number and correlating to controller chart. Coordinate numbering with 4J staff. (Not Used)

3.18 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- B. Perform tests and inspections.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- C. Tests and Inspections:
 - 1. Leak Test:
 - a. Leak Test: After installation, 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. Test new areas of work using isolation valves to determine soundness of new work.
 - 2. Operational Test: After electrical circuitry has been energized, operate flow sensors, well, master valve and automatic control valves to confirm proper system operation.
 - 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls, wiring and equipment.
- D. Any irrigation product will be considered defective if it does not pass tests and inspections.
- E. Prepare test and inspection reports.

3.19 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.

3.20 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.

D. Coordinate with owner's system operator for Maxicom control system setup.

3.21 CLEANING

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

3.22 RESTORATION

A. Grade smooth all disturbed areas. Provide additional soil as necessary to provide smooth seed bed.

B. Re-seed as necessary to provide heathy full stand of grass

C. Replace any other plant material disturbed with new plant material to match existing.

3.23 DEMONSTRATION

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

END OF SECTION 328400