



CLACKAMAS COUNTY
NOTICE OF PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY

INVITATION TO BID #2017-51
ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE DISTRICT
AND KELLOGG CREEK WATER RESOURCE RECOVERY FACILITIES
June 29, 2016

Clackamas County ("County") on behalf of Clackamas County Service District No. 1 ("CCSD #1"), and Water Environment Services ("WES") through their Board of County Commissioners is accepting sealed bids for the **Access Gates and Supporting Conduits** Project until **August 2, 2017, 2:00 PM**, Pacific Time, ("Bid Closing") at the following location:

DELIVER BIDS TO: Clackamas County Procurement Division, Attention George Marlton, Director, Clackamas County Public Services Building, 2051 Kaen Road, Oregon City, OR 97045 or via email to procurement@clackamas.us.

Bid packets are available from 7:00 AM to 6:00 PM Monday through Thursday at the above address or may be obtained at the Clackamas County Procurement Website at <http://www.clackamas.us/bids/>.

Contact Information

Procurement Process and Technical Questions: Ryan Rice, rice@clackamas.us, 503-742-5446.

A **Mandatory Pre-Bid Conference** will be conducted on **July 17, 2017 at 9:00 AM**. Bidders shall meet with County representatives in the **Tri-City Wastewater Resource Recovery Facility Administration Building** Conference Room located at **15941 SE Agnes Ave, Oregon City OR 97045** for that purpose. Attendance will be documented through a sign-in sheet prepared by the County representative. Prime bidders who arrive more than ten (10) minutes after the start time of the meeting (as stated in the solicitation and by the County's watch) or after the discussion portion of the meeting (whichever comes first) shall not be permitted to sign in and will not be permitted to submit a bid on the project.

Bids will be opened and publicly read aloud at the above Delivery address after the Bid Closing. Bid results will also be posted to the Clackamas County Procurement Website shortly after the opening.

Prevailing Wage Rates requirements apply to this Project because the maximum compensation for all Owner-contracted Work is more than \$50,000. Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates. The Bureau of Labor and Industries (BOLI) wage rates and requirements set forth in the following BOLI booklet (and any listed amendments to that booklet), which are incorporated herein by reference, apply to the Work authorized under this Agreement:

PREVAILING WAGE RATES for Public Works Contracts in Oregon, January 1, 2017, as amended on April 1, 2017 which can be downloaded at the following web address: http://www.oregon.gov/boli/WHDPWR/Pages/pwr_state.aspx. The Work will take place in Clackamas County, Oregon.

Clackamas County encourages bids from Minority, Women, and Emerging Small Businesses.



CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY

Table of Contents

Section B-1.....	Notice of Public Improvement Contract Opportunity
Section B-2.....	Instructions to Bidders
Section B-3.....	Supplemental Instructions to Bidders
Section B-4.....	Bid Bond
Section B-5.....	Bid Form
Section B-6.....	Public Improvement Contract
Section B-7.....	Supplemental General Conditions
Section B-8.....	General Conditions
Section B-9.....	Performance Bond
Section B-10.....	Payment Bond
Section B-11.....	Project Information, Plans, Specifications and Drawings



CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT

INSTRUCTIONS TO BIDDERS

Clackamas County Local Contract Review Board Rules ("LCRB Rules") govern this procurement process. LCRB Rules may be found at: <http://www.clackamas.us/code/documents/appendixc.pdf>. The Instructions to Bidders is applicable to the procurement process for Clackamas County, or any component unit thereof identified on the Notice of Public Improvement Contract Opportunity, herein after referred to as the "Owner."

Article 1. Scope of Work

The work contemplated under this contract with the Owner, includes all labor, materials, transportation, equipment and services necessary for, and reasonably incidental to, the completion of all construction work in connection with the project described in the Project Manual which includes, but is not necessarily limited to, the Notice of Public Improvement Contract Opportunity, Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Bid Bond, Public Improvement Contract Form, Performance Bond, Payment Bond, Clackamas County General Conditions for Public Improvement Contracts (1/1/2017), Supplemental General Conditions, and Plans, Specifications and Drawings.

Article 2. Examination of Site and Conditions

Before making a Bid, the Bidder shall examine the site of the work and ascertain all the physical conditions in relation thereto. The Bidder shall also make a careful examination of the Project Manual including the plans, specifications, and drawings and other contract documents, and shall be fully informed as to the quality and quantity of materials and the sources of supply of the materials. Failure to take these steps will not release the successful Bidder from entering into the contract nor excuse the Bidder from performing the work in strict accordance with the terms of the contract at the price established by the Bid.

The Owner will not be responsible for any loss or for any unanticipated costs, which may be suffered by the successful Bidder, as a result of such Bidder's failure to be fully informed in advance with regard to all conditions pertaining to the work and the character of the work required, including site conditions. No statement made by an elected official, officer, agent, or employee of the Owner in relation to the physical or other conditions pertaining to the site of the work will be binding on the Owner, unless covered by the Project Manual or an Addendum.

Article 3. Interpretation of Project Manual and Approval of Materials Equal to Those Provided in the Specifications

If any Bidder contemplating submitting a Bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications or forms of contract documents, or detects discrepancies or omissions, such Bidder may submit to the Architect (read "Engineer" throughout in lieu of Architect as appropriate) a written request for an interpretation thereof at least ten (10) calendar days prior to the date set for the Bid Closing.

When a prospective Bidder seeks approval of a particular manufacturer's material, process or item of equal value, utility or merit other than that designated by the Architect in the Project Manual, the Bidder may submit to the Architect a written request for approval of such substitute at least ten (10) calendar days prior to the date set for the Bid Closing. The prospective Bidder submitting the request will be responsible for its prompt delivery.

Requests of approval for a substitution from that specified shall be accompanied by samples, records of performance, certified copies of tests by impartial and recognized laboratories, and such

other information as the Architect may request.

To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer's name, brand or item designation is given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether in fact they do so or not.

Any interpretation of the Project Manual or approval of manufacturer's material will be made only by an Addendum duly issued. All Addenda will be posted to the Clackamas County Procurement Website (www.clackamas.us/bid) will become a part of the Project Manual. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item for any Bidder.

When the Architect approves a substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

Article 4. Security to Be Furnished by Each Bidder

Each Bid must be accompanied by either 1) a cashier's check or a certified check drawn on a bank authorized to do business in the State of Oregon, or 2) a Bid bond described hereinafter, executed in favor of the Owner, for an amount equal to ten percent (10%) of the total amount Bid as a guarantee that, if awarded the contract, the Bidder will execute the contract and provide a performance bond and payment bond as required. The successful Bidder's check or Bid bond will be retained until the Bidder has entered into a contract satisfactory to Owner and furnished a one hundred percent (100%) performance bond and one hundred percent (100%) payment bond. The Owner

reserves the right to hold the Bid security as described in Article 10 hereof. Should the successful Bidder fail to execute and deliver the contract as provided for in Article 12 hereof, including a satisfactory performance bond and payment bond within twenty (20) calendar days after the Bid has been accepted by the Owner, then the contract award made to such Bidder may be considered canceled and the Bid security may be forfeited as liquidated damages at the option of the Owner. The date of the acceptance of the Bid and the award of the contract as contemplated by the Project Manual shall mean the date of acceptance specified in the Notice of Intent to Award.

Article 5. Execution of Bid Bond

Should the Bidder elect to utilize a Bid bond as described in Article 4 in order to satisfy the Bid security requirements, such form must be completed in the following manner:

- A. Bid bonds must be executed on the County forms, which will be provided to all prospective Bidders by the Owner.
- B. The Bid bond shall be executed on behalf of a bonding company licensed to do business in the State of Oregon.
- C. In the case of a sole individual, the bond need only be executed as principal by the sole individual. In the case of a partnership, the bond must be executed by at least one of the partners. In the case of a corporation, the bond must be executed by stating the official name of the corporation under which is placed the signature of an officer authorized to sign on behalf of the corporation followed by such person's official capacity, such as president, etc. The corporation seal should then be affixed to the bond.
- D. The name of the surety must be stated in the execution over the signature of its duly authorized attorney-in-fact and accompanied by the seal of the surety corporation.

Article 6. Execution of the Bid Form

Each Bid shall be made in accordance with: (i) the sample Bid Form accompanying these instructions; (ii) the appropriate signatures for a sole individual, partnership, corporation or limited liability corporation shall be added as noted in Article 5C above; (iii) numbers pertaining to base Bids shall be stated both in writing and in figures; and (iv) the Bidder's address shall be typed or printed.

The Bid Form relates to Bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished will be considered as the Bid. Each Bidder shall Bid upon the work exactly as specified and provided in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Contract. The Bidder shall Bid upon all alternates that may be indicated on the Bid Form. When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates are shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

Article 7. Prohibition of Alterations to Bid

Bids that are incomplete, or contain ambiguities or have differing conditions required by the Bidder, including requested changes or exceptions to the Public Improvement Contract form or other portions of the Project Manual, may be rejected in Owner's sole and absolute discretion.

Article 8. Submission of Bid

Each Bid shall be sealed in an envelope, properly addressed to the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Notice of Public Improvement Contract Opportunity.

Article 9. Bid Closing and Opening of Bids

All Bids must be received by the Owner at the place and time set for the Bid Closing. Any Bids received after the scheduled Bid Closing time for receipt of Bids will be rejected.

At the time of opening and reading of Bids, each Bid received will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Bids.

Generally, Bid results will be posted to the Procurement Website within a couple hours of the opening.

Article 10. Acceptance or Rejection of Bids by Owner

Unless all Bids are rejected, the Owner will award a contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the contract, it will be awarded to the next lowest responsible Bidder or Bidders in succession.

The Owner reserves the right to reject all Bids and to waive minor informalities. The procedures for contract awards shall be in compliance with the provisions of the LCRB Rules in effect at that time.

The Owner reserves the right to hold the Bid and Bid security of the three lowest Bidders for a period of thirty (30) calendar days from and after the time of Bid opening pending award of the contract. Following award of the contract the Bid security of the three lowest Bidders may be held twenty (20) calendar days pending execution of the contract. All other Bids will be rejected and Bid security will be returned.

In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

If no Bid has been accepted within thirty (30) calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted and request the return of the Bid security.

Article 11. Withdrawal of Bid

At any time prior to the Bid Closing, a Bidder may withdraw its Bid. This will not preclude the submission of another Bid by such Bidder prior to the time set for the Bid Closing.

After the time set for the Bid Closing, no Bidder will be permitted to withdraw its Bid within the time frames specified in Article 10 for award and execution, except as provided for in that Article.

Article 12. Execution of Contract, Performance Bond and Payment Bond

The Owner will provide the successful Bidder with contract forms within seven (7) calendar days after the completion of the award protest period. The Bidder is required to execute the contract forms as provided, including a performance bond and a payment bond from a surety company licensed to do surety business in the State of Oregon, within seven (7) calendar days after receipt of the contract forms. The contract forms shall be delivered to the Owner in the number called for and to the location as instructed by the Owner.

Article 13. Recyclable Products

Contractors will use recyclable products to the maximum extent economically feasible in the performance of the Contract.

Article 14. Clarification or Protest of the Solicitation Document or Specifications

Any request for clarification or protest of the solicitation document or specifications must be submitted in the manner provided for in the applicable section of the LCRB Rules to the Procurement Representative referenced in the Notice of Public

Clackamas Contract Form B-2 (1/2017)

Improvement Contract Opportunity.

A protest of the Solicitation Document must be received within seven (7) business days of the issuance of the Bid or within three (3) business days of issuance of an addendum.

Requests for clarification may be submitted no less than five (5) business days prior to the Bid Closing Date.

Article 15. Protest of Intent to Award

Owner will name the apparent successful Bidder in a "Notice of Intent to Award" letter. Identification of the apparent successful Bidder is procedural only and creates no right in the named Bidder to the award of the contract. Competing Bidders will be notified by publication of the Notice of Intent to Award on the Clackamas County Procurement Website of the selection of the apparent successful Bidder(s) and Bidders shall be given seven (7) calendar days from the date on the "Notice of Intent to Award" letter to review the file at the Procurement Division office and file a written protest of award, pursuant to C-049-0450. Any award protest must be in writing and must be delivered by hand delivery or mail to the Procurement Division Director at: Procurement Division, 2051 Kaen Road, Oregon City, OR 97045.

Article 16. Disclosure of First-Tier Subcontractors

Within two (2) working hours after the Bid Closing, all Bidders shall submit to the County a disclosure form identifying any first-tier subcontractors (those entities that would be contracting directly with the prime contractor) that will be furnishing labor and materials on the contract, if awarded, whose subcontract value would be equal to or greater than: (a) Five percent (5%) of the total contract price, but at least \$15,000; or (b) \$350,000, regardless of the percentage of the total contract price.

Disclosures may be submitted with the Bid or may be hand delivered to the Bid Closing address or emailed to procurement@clackamas.us.



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT**

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

**Project Name #2017-51
ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE
DISTRICT AND KELLOGG CREEK WATER RESOURCE RECOVERY
FACILITIES**

The following modify the Clackamas County “Instructions to Bidders” for this Project. Where a portion of the Instructions to Bidders has been modified by these Supplemental Instructions to Bidders, the unaltered portions shall remain in effect.

- 1. Mandatory Pre-Bid Conference** will be conducted on **July 17, 2017 at 9:00 AM**. Bidders shall meet with County representatives in the **Tri-City Wastewater Resource Recovery Facility Administration Building** Conference Room located at **15941 SE Agnes Ave, Oregon City OR 97045** for that purpose. Attendance will be documented through a sign-in sheet prepared by the County representative. Prime bidders who arrive more than ten (10) minutes after the start time of the meeting (as stated in the solicitation and by the County’s watch) or after the discussion portion of the meeting (whichever comes first) shall not be permitted to sign in and will not be permitted to submit a bid on the project.
- 2. Submission of Bids by email:** Complete Bids (including all attachments) may be emailed and must be electronically received by the closing time and date **2:00 p.m. Pacific Time, August 2, 2017**. If emailed, the Bid must be sent to: **Procurement@clackamas.us**.

The email subject line must read **“Bid for #2017-51 Access Gates for Tri-city and KCWRRF.”** Bidders are **strongly encouraged** to telephone and confirm electronic receipt of the complete emailed document(s) before the above time and date deadline. Bids delayed or lost by email system filtering or failures may be considered at Clackamas County’s sole and absolute discretion.

- 3. Good Faith Effort:** Clackamas County encourages participation in contracts by Historically Underrepresented Businesses. “Historically Underrepresented Businesses” are State of Oregon-certified and self-identified minority, women and emerging small business as well as firms that are certified federally or by another state or entity with substantially similar requirements as the State of Oregon.

Bidders must perform Good Faith Effort (defined below) and submit **Form 1 and Form 2** for the Bidders Bid to be considered responsive. **Form 1 and Form 2** must be submitted within **two (2) hours** after the Closing Date and Time. Form 1 and Form 2 may be submitted by hand delivery to the location the Bid was due or

may email the completed Forms to Procurement@clackamas.us. “Good Faith Effort” is a requirement of a prime contractor to reach out to at least three Historically Underrepresented Business Subcontractors for each division of work that will be subcontracted out and to complete the required forms. If fewer than three Historically Underrepresented Business Subcontractors are reasonably available for a particular division of work, the Bidder must specifically note the reason for there being fewer than three contacts. The outreach should be performed with sufficient time to give the subcontractors at least 5 calendar days to respond to the opportunity. Form 3, which documents the actual amount of subcontractors on the project, must be submitted with the project final pay application. Compliance with the Good Faith Effort and submission of Forms 1, 2 and 3 is a contractual requirement for final payment.

The sufficiency of the documentation or the performance of Good Faith Effort shall be in the sole and absolute determination of Clackamas County. Only those Bidders that Clackamas County has determined have not sufficiently performed Good Faith Effort shall have protest rights of the determination for such Bidder. No Bidder shall have protest rights of the sufficiency of any other Bidder completing Good Faith Effort.

**CLACKAMAS COUNTY
GOOD FAITH EFFORT
SUBCONTRACTOR AND SELF-PERFORMED WORK LIST
(FORM 1)**

Prime Contractor Name: 2017-51

Total Contract Amount:

Project Name: Access Gates and Supporting Conduits at Tri-City Service District
And Kellogg Creek Water Resource Recovery Facility

PRIME SELF-PERFORMING: Identify below **ALL** GFE Divisions of Work (DOW) to be self-performed. Good Faith Efforts are otherwise required.

<u>DOW BIDDER WILL SELF-PERFORM (GFE not required)</u>	

PRIME CONTRACTOR SHALL DISCLOSE AND LIST ALL SUBCONTRACTORS, including those Minority-owned, Woman-owned, and Emerging Small Businesses ("M/W/ESB") that you intend to use on the project. Hand delivery to Procurement, 2051 Kaen Road, Oregon City, OR 97045 or email to procurement@clackamas.us within 2 hours of the BID/Quote Closing Date/Time


<u>LIST ALL SUBCONTRACTORS BELOW</u> Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reporting MBE/WBE/ESB Subcontractor Check box		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GFE SUBCONTRACTOR AND SELF-PERFORMED WORK LIST (FORM 1) cont'd

Prime Contractor Name: 2017-51

Total Contract Amount:

Project Name: Access Gates and Supporting Conduits at
Tri-City Service District And Kellogg Creek Water Resource
Recovery Facility

LIST ALL SUBCONTRACTORS BELOW Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reporting MBE/WBE/ESB Subcontractor Check box 		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CLACKAMAS COUNTY
GOOD FAITH EFFORT
M/W/ESB CONTACT / BIDS RECEIVED LOG
(FORM 2)

Prime Contractor: 2017-51
Project: Access Gates and Supporting Conduits at Tri-City Service District
And Kellogg Creek Water Resource Recovery Facility

Prime Contractor must contact or endeavor to contact at least 3 M/W/ESB Subcontractors for each Division of Work. Prime Contractor shall record its contacts with M/W/ESB Subcontractors through use of this log (or equivalent) entering all required information. All columns shall be completed where applicable. Additional forms may be copied if needed.

NAME OF M/W/ESB SUBCONTRACTOR	Divisions of Work (Painting, electrical, landscaping, etc.)	Date Solicitation Letter / Fax Sent	PHONE CONTACT		BID ACTIVITY Check Yes or No				REJECTED BIDS (if bid received & not used)		Notes	
			Date of Call	Person Receiving Call	Will Bid	Bid Received	Bid Used	Bid Amount	Reason Not Used (Price, Scope or Other. If Other, explain in Notes>>)			
					<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>					
					<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>				
					<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>				
					<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>				
					<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>				
					<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>				
					<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div>				


**CLACKAMAS COUNTY
GOOD FAITH EFFORT
PROJECT COMPLETION REPORT
(FORM 3)**

Prime Contractor Name: 2017-51

Total Contract Amount:

Project Name: Access Gates and Supporting Conduits at Tri-City Service District
And Kellogg Creek Water Resource Recovery Facility

Complete this form and submit with your request for final payment upon the project completion. Please list all subcontractors used for the project. Use additional sheets as necessary.

LIST ALL SUBCONTRACTORS BELOW Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	FINAL DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reported MBE/WBE/ESB Subcontractor Check box 		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BY SIGNING BELOW, I HEREBY CERTIFY THAT THE ABOVE LISTED FIRMS HAVE BEEN UTILIZED BY OUR COMPANY IN THE AMOUNTS REPRESENTED ABOVE AND THAT THE INFORMATION CONTAINED HEREIN IS COMPLETE AND ACCURATE. .

Authorized Signature of Contractor Representative

Date



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT**

BID BOND

Project Name: #2017-51

**ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE DISTRICT AND
KELLOGG CREEK WATER RESOURCE RECOVERY FACILITIES**

We, _____, as "Principal,"
(Name of Principal)

and _____, an _____ Corporation,
(Name of Surety)

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto Clackamas County Service District No. 1 and Water Environment Services (collectively referred to as "Obligee") the sum of (\$_____) _____ dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document (No. 2017-51) for the project identified above which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten (10%) percent of the total amount of the bid pursuant to the procurement document.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this _____ day of _____, 20____.

Principal: _____ Surety: _____

By: _____ By: Attorney-In-Fact
Signature

_____ Name
Official Capacity

Attest: _____ Address
Corporation Secretary

City State Zip

Phone Fax



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT**

BID FORM

PROJECT: #2017-51 ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE DISTRICT AND KELLOGG CREEK WATER RESOURCE RECOVERY FACILITIES

BID CLOSING: August 2, 2017, 2:00 PM, Pacific Time

BID OPENING: August 2, 2017, 2:05 PM, Pacific Time

FROM: _____
Bidder's Name (must be full legal name, not ABN/DBA)

TO: Clackamas County
Procurement Division
Attention George Marlton, Director
2051 Kaen Road
Oregon City, OR 97045
procurement@clackamas.us

1. Bidder is *(check one of the following and insert information requested)*:

____ a. An individual; or

____ b. A partnership registered under the laws of the State of _____; or

____ c. A corporation organized under the laws of the State of _____; or

____ d. A limited liability corporation organized under the laws
of the State of _____;

and authorized to do business in the State of Oregon hereby proposes to furnish all material and labor and perform all work hereinafter indicated for the above project in strict accordance with the Contract Documents for the Basic Bid as follows:

_____ Dollars (\$_____)

and the Undersigned agrees to be bound by the following documents:

- Notice of Public Improvement Contract Opportunity
- Instructions to Bidders
- Bid Bond
- Performance Bond and Payment Bond
- Supplemental General Conditions
- Payroll and Certified Statement Form
- Supplemental Instructions to Bidders
- Public Improvement Contract Form
- Clackamas County General Conditions
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- ADDENDA numbered _____ through _____, inclusive *(fill in blanks)*

2. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items of work relating to the following Alternate(s) as designated in the Specifications: **N/A**

3. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items of work relating to the following Unit Price(s) as designated in the Specifications, for which any adjustments in the Contract amount will be made in accordance with Section D of the Clackamas County General Conditions: **N/A**

4. The work shall be completed within the time stipulated and specified in **PART 1 GENERAL**, Section 01.01 of the Specifications.

5. Accompanying herewith is Bid Security which is equal to ten percent (10%) of the total amount of the Basic Bid.

6. The Undersigned agrees, if awarded the Contract, to execute and deliver to Clackamas County, within twenty (20) calendar days after receiving the Contract forms, a Contract Form, and a satisfactory Performance Bond and Payment Bond each in an amount equal to one hundred percent (100%) of the Contract sum, using forms provided by the Owner. The surety requested to issue the Performance Bond and Payment Bond will be:

(name of surety company - not insurance agency)

The Undersigned hereby authorizes said surety company to disclose any information to the Owner concerning the Undersigned's ability to supply a Performance Bond and Payment Bond each in the amount of the Contract.

7. The Undersigned further agrees that the Bid Security accompanying the Bid is left in escrow with Clackamas County; that the amount thereof is the measure of liquidated damages which the Owner will sustain by the failure of the Undersigned to execute and deliver the above-named Contract Form, Performance Bond and Payment Bond, each as published, and that if the Undersigned defaults in either executing the Contract Form or providing the Performance Bond and Payment Bond within twenty (20) calendar days after receiving the Contract forms, then the Bid Security shall become the property of the Owner at the Owner's option; but if the Bid is not accepted within thirty (30) calendar days of the time set for the opening of the Bids, or if the Undersigned executes and timely delivers said Contract Form, Performance Bond and Payment Bond, the Bid Security shall be returned.

8. The Undersigned certifies that: (i) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (ii) the contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned or its surety on any Bond furnished with the Bid and will not be communicated to such person prior to the official opening of the Bid.

9. The undersigned ☐ **HAS**, ☐ **HAS NOT** (*check one*) paid unemployment or income taxes in Oregon within the past 12 months and ☐ **DOES**, ☐ **DOES NOT** (*check one*) a business address in Oregon. The undersigned acknowledges that, if the selected bidder, that the undersigned will have to pay all applicable taxes and register to do business in the State of Oregon before executing the Contract Form.

10. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

11. Contractor's CCB registration number is _____. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will make the bid unresponsive and it will be rejected, unless contrary to federal law.

12. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the contract.

13. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is _____, Policy No. _____, and that Contractor shall submit Certificates of Insurance as required.

14. Contractor's Key Individuals for this project (supply information as applicable):

Project Executive: _____,	Cell Phone: _____,
Project Manager: _____,	Cell Phone: _____,
Job Superintendent: _____,	Cell Phone: _____,
Project Engineer: _____,	Cell Phone: _____.

15. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

REMINDER: Bidder must submit the below First-Tier Subcontractor Disclosure Form.

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM _____

ADDRESS _____

TELEPHONE NO _____

EMAIL _____

SIGNATURE 1) _____

Sole Individual

or 2) _____

Partner

or 3) _____

Authorized Officer or Employee of Corporation

***** **END OF BID** *****

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM
PROJECT: #2017-51
ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE DISTRICT
AND KELLOGG CREEK WATER RESOURCE RECOVERY FACILITIES

BID OPENING: August 2, 2017, 2:00 PM, Pacific Time

Failure to submit this Form by the disclosure deadline will result in a nonresponsive bid.

INSTRUCTIONS:

This First-Tier Subcontractor Disclosure Form ("Form") must be submitted and received at the location specified in the Notice of Public Improvement Contract Opportunity on the advertised Bid Closing, and within two working hours after the advertised Bid Closing Time.

The Form may be mailed, hand-delivered or emailed to: Procurement@clackamas.us. It is the responsibility of Bidders to submit this Form and any additional sheets with the Project name clearly marked on the envelope or the subject line of the email.

Subcontractor lists may be submitted with the bid in the same envelope or email at the Bid Closing date and time. Subcontractor lists **MUST** be submitted within **two (2) hours** of the Bid Closing date and time.

List below the name of each subcontractor that will be furnishing labor, or labor and materials, for which disclosure is required, the category of work that the subcontractor will be performing, and the dollar value of the subcontract. Enter **"NONE"** if the value of the project bid is less than \$100,000 or there are no subcontractors that need to be disclosed. ATTACH ADDITIONAL SHEETS IF NECESSARY.

	SUBCONTRACTOR NAME	DOLLAR VALUE	CATEGORY OF WORK
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

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; or
- b) \$350,000 regardless of the percentage of the total Contract Price.

Firm Name: _____

Bidder Signature: _____ Phone # _____



WATER ENVIRONMENT SERVICES PUBLIC IMPROVEMENT CONTRACT

This Public Improvement Contract for the **ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE DISTRICT AND KELLOGG CREEK WATER RESOURCE RECOVERY FACILITIES** (the "Contract"), is made by and between the Clackamas County Service District No. 1 and Water Environment Services, both political subdivisions of the State of Oregon, hereinafter called "Owner," and Contractor Name (No DBA/ABN), hereinafter called the "Contractor" (collectively the "Parties"), shall become effective on the date this Contract has been signed by all the Parties and all County approvals have been obtained, whichever is later.

WITNESSETH:

1. Contract Price, Contract Documents and Work.

The Contractor, in consideration of the sum of _____ Dollars (\$) (the "Contract Price"), to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the Clackamas County General Conditions for Public Improvement Contracts (1/1/2017) ("General Conditions") referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. The Contract Price is the amount contemplated by the Base Bid, as indicated in the accepted Bid.

Also, the following documents are incorporated by reference in this Contract and made a part hereof:

- Notice of Contract Opportunity
- Supplemental Instructions to Bidders
- Public Improvement Contract Form
- Clackamas County General Conditions
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- Instructions to Bidders
- Bid Bond
- Performance Bond and Payment Bond
- Supplemental General Conditions
- Payroll and Certified Statement Form

2. Representatives.

Contractor has named _____ as its' Authorized Representative to act on its behalf. Owner designates, or shall designate, its Authorized Representative as indicted below (check one):

☒ Unless otherwise specified in the Contract Documents, the Owner designates Randy Rosane as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment, authorization, and to carry out the responsibilities of the Owner.

☐ Name of Owner's Authorized Representative shall be submitted by Owner in a separate writing.

3. Key Persons.

The Contractor's personnel identified below shall be considered Key Persons and shall not be replaced during the project without the written permission of Owner, which shall not be unreasonably withheld. If the Contractor intends to substitute personnel, a request must be given to Owner at least 30 days prior to the intended time of substitution. When replacements have been approved by Owner, the Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the project concurrently. Once a replacement for any of these staff members is authorized, further replacement shall not occur without the written permission of Owner. The Contractor's project staff shall consist of the following personnel:

Project Executive: _____ shall be the Contractor's project executive, and will provide oversight and guidance throughout the project term.

Project Manager: shall be the Contractor's project manager and will participate in all meetings throughout the project term.

Job Superintendent: shall be the Contractor's on-site job superintendent throughout the project term.

Project Engineer: shall be the Contractor's project engineer, providing assistance to the project manager, and subcontractor and supplier coordination throughout the project term.

4. Contract Dates.

COMMENCEMENT DATE: Upon Issuance of Notice to Proceed ("NTP")

SUBSTANTIAL COMPLETION DATE: 120 days from NTP

FINAL COMPLETION DATE: 150 days from NTP

Time is of the essence for this Contract. It is imperative that the Work in this Contract reach Substantial Completion and Final Completion by the above specified dates.

5. Insurance Certificates.

In accordance with Section G.3.5 of the General Conditions, Contractor shall furnish proof of the required insurance naming Clackamas County, Clackamas County Service District No. 1, and Tri-City Service District as additional insureds. Insurance certificates may be returned with the signed Contract or may emailed to Procurement@clackamas.us.

6. Tax Compliance.

Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of this Contract. Further, any violation of Contractor's warranty in this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Contract. Any violation shall entitle County to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to: (A) Termination of this Contract, in whole or in part; (B) Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to Owner's setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. Owner shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement performance. These remedies are cumulative to the extent the remedies are not inconsistent, and Owner may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

The Contractor represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Contract, has faithfully complied with: (A) All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318; (B) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor; (C) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and (D) Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

7. Confidential Information.

Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Contract, be exposed to or acquire information that is confidential to Owner. Any and all information of any form obtained by Contractor or its employees or agents in the performance of this Contract shall be deemed confidential information of Owner ("Confidential Information"). Contractor agrees to hold Confidential

Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purpose unless specifically authorized in writing under this Contract.

8. Counterparts.

This Contract may be executed in several counterparts, all of which when taken together shall constitute an agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of the Contract so executed shall constitute an original.

9. Integration.

All provisions of state law required to be part of this Contract, whether listed in the General or Special Conditions or otherwise, are hereby integrated and adopted herein. Contractor acknowledges the obligations thereunder and that failure to comply with such terms is a material breach of this Contract.

The Contract Documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract. Contractor, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

In witness whereof, Owner executes this Contract and the Contractor does execute the same as of the day and year first above written.

Contractor DATA:

(Insert Contractor Name & Address)

Contractor CCB #

Expiration Date:

Oregon Business Registry #

Entity Type:

State of Formation:

Payment information will be reported to the IRS under the name and taxpayer ID# provided by the Contractor. Information must be provided prior to contract approval. Information not matching IRS records could subject Contractor to 28 percent backup withholding.

Contractor Name (No DBA/ABN)

Clackamas County Service District No. 1

Signature

Date

Director

Date

Name / Title Printed

Water Environment Services

Director

Date

APPROVED AS TO FORM

County Counsel

Date



CLACKAMAS COUNTY GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS January 1, 2017

INSTRUCTIONS: The attached **Clackamas County General Conditions for Public Improvement Contracts ("County General Conditions")** apply to all designated Public Improvement contracts. Changes to the County General Conditions (including any additions, deletions or substitutions) should only be made by attaching Public Improvement Supplemental General Conditions. The text of these County General Conditions should not otherwise be altered.

TABLE OF SECTIONS

SECTION A - GENERAL PROVISIONS

- A.1 DEFINITION OF TERMS
- A.2 SCOPE OF WORK
- A.3 INTERPRETATION OF CONTRACT DOCUMENTS
- A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE
- A.5 INDEPENDENT CONTRACTOR STATUS
- A.6 RETIREMENT SYSTEM STATUS AND TAXES
- A.7 GOVERNMENT EMPLOYMENT STATUS

SECTION B - ADMINISTRATION OF THE CONTRACT

- B.1 OWNER'S ADMINISTRATION OF THE CONTRACT
- B.2 CONTRACTOR'S MEANS AND METHODS
- B.3 MATERIALS AND WORKMANSHIP
- B.4 PERMITS
- B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS
- B.6 SUPERINTENDENCE
- B.7 INSPECTION
- B.8 SEVERABILITY
- B.9 ACCESS TO RECORDS
- B.10 WAIVER
- B.11 SUBCONTRACTS AND ASSIGNMENT
- B.12 SUCCESSORS IN INTEREST
- B.13 OWNER'S RIGHT TO DO WORK
- B.14 OTHER CONTRACTS
- B.15 GOVERNING LAW
- B.16 LITIGATION
- B.17 ALLOWANCES
- B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES
- B.19 SUBSTITUTIONS
- B.20 USE OF PLANS AND SPECIFICATIONS
- B.21 FUNDS AVAILABLE AND AUTHORIZED
- B.22 NO THIRD PARTY BENEFICIARIES

SECTION C - WAGES AND LABOR

- C.1 MINIMUM WAGES RATES ON PUBLIC WORKS
- C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS, ADDITIONAL RETAINAGE
- C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS
- C.4 PAYMENT FOR MEDICAL CARE
- C.5 HOURS OF LABOR

SECTION D - CHANGES IN THE WORK

- D.1 CHANGES IN THE WORK
- D.2 DELAYS
- D.3 CLAIMS REVIEW PROCESS

SECTION E - PAYMENTS

- E.1 SCHEDULE OF VALUES
- E.2 APPLICATIONS FOR PAYMENT

- E.3 PAYROLL CERTIFICATION REQUIREMENT
- E.4 DUAL PAYMENT SOURCES
- E.5 RETAINAGE
- E.6 FINAL PAYMENT

SECTION F - JOB SITE CONDITIONS

- F.1 USE OF PREMISES
- F.2 PROTECTION OF WORKERS, PROPERTY, AND THE PUBLIC
- F.3 CUTTING AND PATCHING
- F.4 CLEANING UP
- F.5 ENVIRONMENTAL CONTAMINATION
- F.6 ENVIRONMENTAL CLEAN-UP
- F.7 FORCE MAJEURE

SECTION G - INDEMNITY, BONDING AND INSURANCE

- G.1 RESPONSIBILITY FOR DAMAGES/INDEMNITY
- G.2 PERFORMANCE AND PAYMENT SECURITY, PUBLIC WORKS BOND
- G.3 INSURANCE

SECTION H - SCHEDULE OF WORK

- H.1 CONTRACT PERIOD
- H.2 SCHEDULE
- H.3 PARTIAL OCCUPANCY OR USE

SECTION I - CORRECTION OF WORK

- I.1 CORRECTIONS OF WORK BEFORE FINAL PAYMENT
- I.2 WARRANTY WORK

SECTION J - SUSPENSION AND/OR TERMINATION OF THE WORK

- J.1 OWNER'S RIGHT TO SUSPEND THE WORK
- J.2 CONTRACTOR'S RESPONSIBILITIES
- J.3 COMPENSATION FOR SUSPENSION
- J.4 OWNER'S RIGHT TO TERMINATE CONTRACT
- J.5 TERMINATION FOR CONVENIENCE
- J.6 ACTION UPON TERMINATION

SECTION K - CONTRACT CLOSE-OUT

- K.1 RECORD DOCUMENTS
- K.2 OPERATION AND MAINTENANCE MANUALS
- K.3 COMPLETION NOTICES
- K.4 TRAINING
- K.5 EXTRA MATERIALS
- K.6 ENVIRONMENTAL CLEAN-UP
- K.7 CERTIFICATE OF OCCUPANCY
- K.8 OTHER CONTRACTOR RESPONSIBILITIES
- K.9 SURVIVAL

**CLACKAMAS COUNTY GENERAL CONDITIONS
FOR PUBLIC IMPROVEMENT CONTRACTS
("County General Conditions")**

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

APPLICABLE LAWS, means federal, state and local laws, codes, rules, regulations and ordinances applicable to the Work and to the Contract.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

CHANGE ORDER, means a written order which, when fully executed by the Parties to this Contract, constitutes a change to the Contract Documents. Change Orders shall be issued in accordance with the changes provisions in Section D and, if applicable, establish a Contract Price or Contract Time adjustment. A Change Order shall not be effective until executed as a Change Order.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these County General Conditions.

CONSTRUCTION CHANGE DIRECTIVE, means a written order by the Owner to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Public Improvement Contract, County General Conditions, Supplemental General Conditions if any, Plans, Specifications, Construction Change Directives, the accepted Offer, Solicitation Document and addenda thereto, Instructions to Offerors, and Supplemental Instructions to Offerors.

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Contract and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total price reflected in the Contract.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents: the cost of materials, including sales tax and the cost of

delivery; cost of labor which shall only include the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee) rate plus a maximum of a ten percent (10%) markup on the prevailing wage (but not the fringe benefit) to cover Contractor's labor burden including but not limited to social security, Medicare, unemployment insurance, workers' compensation insurance; substantiated project cost increases for specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater) or bond premiums; rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work; travel expense reimbursement only if specifically authorized and only to the extent allowable under the County Contractor Travel Reimbursement Policy, hereby incorporated by reference.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

OFFER, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals, or Solicitation Document. May also be referenced as "Bid", "Quote", or "Proposal" based on the type of Solicitation Document

OFFEROR, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals, or Solicitation Document. May also be referenced as "Bidder", "Quoter" or "Proposer" based on the type of Solicitation Document.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), labor rates and fringe benefits above the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee), Contractor's labor burden for fringe benefit if paid to the employee, expenses of Contractor's offices and supplies at the job site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the job site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means, Clackamas County or any component unit thereof including Clackamas County Development Agency, Clackamas County Service District No. 1, Surface Water Management Agency of Clackamas County, Tri-City Service District, North Clackamas Parks and Recreation District, Clackamas County Extension & 4-H Service District, and Library Service District of Clackamas County. Owner may elect, by written notice to Contractor, to delegate certain duties to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these County General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited

liability company or partnership, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, Construction Change Directives, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these County General Conditions, recording all Services performed.

SOLICITATION DOCUMENT, means Instructions to Bidders or Offerors or a Request for Proposal or a Request for Quotes or any other written document issued by Owner that outlines the required Specifications necessary to submit a Bid, Proposal, or other response.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor of any tier, to perform one or more items of the Work.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.3.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Substitutions also means the performance of the Work by a labor force other than what is submitted in the Offer. Approval of any substitute item shall be solely determined by the Owner. The decision of the Owner is final.

PUBLIC IMPROVEMENT SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these County General Conditions. Public Improvement Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

WORK, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

A.2 SCOPE OF WORK

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all

Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) Change Orders and Construction Change Directives, with those of later date having precedence over those of an earlier date;
- (b) The Supplemental General Conditions;
- (c) County General Conditions;
- (d) The Public Improvement Contract;
- (e) Construction Change Directive;
- (f) Division One (General Requirements) of the Specifications;
- (g) Detailed Schedules of finishes, equipment and other items included in the Specifications;
- (h) Plans and Specifications (other than Division One and the Detailed Schedules to the Specifications);
- (i) Large-scale drawings on Plans;
- (j) Small-scale drawings on Plans;
- (k) Dimension numbers written on Plans which shall prevail and take precedence over dimensions scaled from Plans;
- (l) The Solicitation Document, and any addenda thereto.

A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing.

A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).

A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be

suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained. Contractor shall at all times be responsible for all utility locates regardless of the ownership of such utility infrastructure or service.

A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.

A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner, including without limitation, any nonconformity with Applicable Laws.

A.4.4 If the Contractor believes that adjustments to cost or Contract Time is involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.

A.7.2 Contractor represents and warrants that Contractor is not an employee of the County for purposes of performing Work under this Contract.

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

B.1.1 The Owner shall administer the Contract as described in the Contract Documents (1) during construction (2) until final payment is due and (3) during the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.

B.1.2 The Owner will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.

B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

B.2 CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS

B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.

B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.

B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

- B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.
- B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.
- B.3.3 Work done and materials furnished may be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.
- B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.
- B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Public Improvement Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities.

B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS

- B.5.1 Contractor shall comply with Applicable Laws pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable and as may be amended from time to time: (i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended; (vi) all regulations and administrative rules established pursuant to the foregoing laws; and (vii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.
- B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and
- (a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.

- (b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or this Contract when performing the Work.

- B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor.
- B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to ORS 671.560.
- B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (877) 668-4001.
- B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.6 SUPERINTENDENCE

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

B.7 INSPECTION

- B.7.1 Owner shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.
- B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.
- B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.
- B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such

portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner, the uncovering and restoration will be paid for pursuant to a Change Order.

- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.
- B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations shall have the right to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SEVERABILITY

If any provision of this Contract is declared by a court to be unenforceable, illegal, or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

B.9 ACCESS TO RECORDS

- B.9.1 Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner access thereto.
- B.9.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

B.10 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

B.11 SUBCONTRACTS AND ASSIGNMENT

- B.11.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these County General Conditions, and to

assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.

- B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.
- B.11.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.12 SUCCESSORS IN INTEREST

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

B.13 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor shall coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

B.14 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this Contract. The Contractor of this Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

B.15 GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

B.16 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Clackamas County for the State of Oregon;

provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the County on any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

B.17 ALLOWANCES

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost of the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (2) changes in Contractor's costs under Section B.17.2(b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to

demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

B.18.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.

B.18.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Change Order or Construction Change Directive has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect/Engineer's review or approval thereof.

B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner and only in accordance with a Change Order or Construction Change Directive. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.20 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

B.21 FUNDS AVAILABLE AND AUTHORIZED

If Owner fails to receive funding, appropriations, allocations or other expenditure authority as contemplated by Owner's budget and Owner determines, in its assessment and ranking of the policy objectives explicit or implicit in Owner's budget, Owner may determine it is necessary to and may terminate the Public Improvement Contract.

B.22 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

SECTION C **WAGES AND LABOR**

C.1 MINIMUM WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Pursuant to ORS 279C.830(1)(d), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of

wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. 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. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.

C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

C.2.4 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:

C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.

C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.

C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.

C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

C.3.2 As a condition to Owner's performance hereunder, if Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the public contracting agency under such contract.

C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, 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, all sums of which the Contractor agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

SECTION D CHANGES IN THE WORK

D.1 CHANGES IN WORK

D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. A Change Order is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All changes to the Work shall be documented and Change Orders shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) Unit Pricing: Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) Fixed Fee: If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in D.1.3(c) shall be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) Time and Material: In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs.

Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. The Contractor or Subcontractor who performs the Work shall be allowed to add up to ten percent (10%) markup to the Direct Costs as full compensation for profit, Overhead and other indirect costs for Work performed with the Contractor's or Subcontractor's own forces

Each ascending tier Subcontractor or the Contractor that did not perform the Work, will be allowed to add up to five percent (5%) supplemental markup on the Direct Costs of the Work (but not the above allowable markups) covered by a Change Order. No additional markup shall be permitted for any third tier or greater descending Subcontractor.

Example: \$20,000 of Direct Costs Work performed by a 2nd Tier Subcontractor

	Markup	Allowed Total Fee Plus Markup
General Contractor	5%	\$1,000.00
1 st Tier Sub Contractor	5%	\$1,000.00
2 nd Tier Sub Contractor	10%	\$22,000.00

- (d) Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to a Change Order. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written authorization from Owner in the form of a Change Order. Contractor shall not be required to complete such additional Work without additional authorization.

- D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment.

Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor's requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

- D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under this Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time

to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- D.1.6 No request or Claim by the Contractor for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of final payment application under this Contract. Final payment application must be made by Contractor within the time required under Section E.6.4.

- D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made, unless and only to the extent otherwise provided in the Contract Documents, to the Contractor directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

- D.2.1 Delays in construction include "Avoidable Delays", which are defined in Section D.2.1.1, and "Unavoidable Delays", which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

- D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that:

- Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of neither other parts of the Work nor the completion of the whole Work within the Contract Time.
- Do not impact activities on the accepted critical path schedule.
- Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily

prevent the completion of the whole Work within the Contract Time.

D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) To the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) To the extent caused by any site conditions which differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor shall notify the Owner immediately of differing site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agrees that a differing site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.1.5 for adjustments to or deletions from Work. If the Owner disagrees that a differing site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.
- (c) To the extent caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (d) To the extent caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the project in a manner that could not be avoided by rescheduling the Work or by implementing measures to protect against the weather so that the Work could proceed. A rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:
 - (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty-five percent (25%) or more.
 - (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the project site shall be considered the official agency of record for weather information.

D.2.2 Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor shall submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2, then unless otherwise prohibited by law, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

- D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these County General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived by Contractor.
- D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.
- D.3.3 The Owner will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and

response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment, recommend approval of all or part of the Claim; or (5) propose an alternate resolution.

D.3.4 The Owner's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its request for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision. The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) Day period in order to preserve a cause of action, the parties agree that, notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the plaintiff shall promptly cause to be entered by the Court a stipulated general judgment of dismissal with prejudice, or other appropriate order limiting the scope of litigation as provided in the settlement.

D.3.6 Should the parties arrive at an impasse regarding any Claims or disputed Claims, it is agreed that the parties shall participate in mediation as specified in Section D.3.5. The mediation process will be considered to have been commenced as of the date one party delivers to the other its request in writing to mediate. The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to comply with Owner's administrative rules governing the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality rules. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

D.3.7 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or Delay Work, in whole or in part, without a written stop work order from the Owner.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, by or before the pre-construction conference, a schedule of values ("Schedule of Values") for the contracted Work. This schedule shall provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest for overdue invoices at the rate of two thirds of one percent per month on the progress payment, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within forty five (45) days from the latest of:

- (a) The date of the receipt of the accurate invoice;
- (b) The date Owner receives the correct application for payment if no invoice is received;
- (c) The date all goods and services have been received; or
- (d) The date a Claim is made certain by agreement of the parties or by operation of law.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers (EFT) through Automated Clearing House (ACH) payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall

aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____
Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the project site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.
- (f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material and/or equipment stored and of payment for the storage site.
- (g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under this Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.
- (h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents,
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to

Contractor and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.1);

- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Work, Owner or another contractor;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by a payment until the Contract Price has been adjusted by a Change Order;
- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of this Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed under this Contract from any state agency other than the agency that is a party to this Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in Local Contract Review Board Rules C-049-0820, or the applicable County standard.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to 100 percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 Contractor may request in writing:

- (a) to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds and securities of equal value with Owner or in a custodial account or other mutually agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner;
- (b) for construction projects over \$1,000,000, that retainage be deposited in an interest bearing account, established in a bank, savings bank, trust company or savings association for the benefit of Owner, with earnings from such account accruing to the Contractor; or
- (c) that the Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims in the manner and priority as set forth for retainage.

When the Owner has accepted the Contractor's election of option (a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (c), Contractor shall accept like bonds from Subcontractors and suppliers on the project from which Contractor has required retainages.

E.5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two thirds of one percent per month on the final payment due Contractor, interest to commence forty five (45) Days after the date which Owner receives Contractor's final approved application for payment and Work under the Contract has been completed and accepted and to run until the date when final

payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty five (45) Days after the end of the 15 Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the controller of the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.6 FINAL PAYMENT

E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to Contractor a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to final payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.

E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

SECTION F JOB SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.

F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the job site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Work site safety. Work site safety shall be the responsibility of the Contractor.

F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.

F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the site.

F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all

materials shall be conducted so no release will occur that may pollute or become hazardous.

F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.

F.2.7 Contractor shall comply with all Owner safety rules and regulations. Prior to commencement of any Work, Contractor and Subcontractors shall be required to complete an Owner Contractor Safety Orientation and submit all Owner required safety plans.

F.2.8 Contractor shall demonstrate that an employee drug testing program is in place.

F.3 CUTTING AND PATCHING

F.3.1 Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.

F.3.2 Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorney fees), or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of this Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably

similar terms are used in any Applicable Laws. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws, including but not limited to 40 CFR Part 302, Table 302.4 and in OAR 340-1420050, to applicable federal, state, and local regulatory and emergency response agencies. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law.)
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.
- (e) Summary of communications about the release between Contractor and members of the press or State, local or federal officials other than Owner.
- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or

wellbeing of Contractor's or any Subcontractor's work force, property or the environment.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 FORCE MAJEURE

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

SECTION G **INDEMNITY, BONDING, AND INSURANCE**

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner, Architect/Engineer, Architect/Engineer's consultants, and their respective officers, directors, agents, employees, partners, members, stockholders and affiliated companies (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses (including reasonable attorney fees), demands and actions of any nature whatsoever which arise out of, result from or are related to, (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1., (b) any accident or occurrence which happens or is alleged to have happened in or about the project site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects, (c) any failure of the Contractor to observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract, (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140), and (e) any lien filed upon the project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND

- G.2.1 When the Contract Price is \$50,000 or more, the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.
- G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.
- G.2.3 Before execution of the Contract the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Revised Statutes, Chapter 701, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

- G.3.1 Primary Coverage: Insurance carried by Contractor under this Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.
- G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.
- G.3.3 Builder's Risk Insurance:
- G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor if Contractor is negligent. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.
- G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at its sole and absolute discretion.
- G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.
- G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.
- G.3.4 General Liability Insurance:
- G.3.4.1 Commercial General Liability: Upon execution of a Contract, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Contract, Commercial General Liability Insurance ("CGL") covering bodily injury and property damage in the amount of not less than \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnities provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis written on ISO Form GC 00 01 (12 04 or later) or an equivalent form approved in advance by Owner. The CGL shall provide separation of insured language.
- G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on site.
- G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Contract.
- G.3.4.4 To the extent that the Contract Documents require the Contractor to provide professional design services, design-build, or certifications related to systems, materials, or equipment, the Contractor shall (1) purchase and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and (2) cause those Subcontractors (of any tier) who are providing professional design services including any design-build services to procure and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim.
- G.3.4.5 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of

"tail" coverage, provided its retroactive date is on or before the effective date of this Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).

G.3.4.6 Umbrella Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.

G.3.4.6 Pollution Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Pollution liability Insurance in minimum amounts of \$3,000,000 naming Owner as "additional insured," as noted in the "additional insured section below.

G.3.5 Additional Insured: The general liability insurance coverage, automobile liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under this Contract. The additional-insured endorsement for CGL insurance must be written on ISO Form CG 20 10 (10 01) and CG 20 37 (10 01), or their equivalent, but shall not use either of the following forms: CG 20 10 (10 93) or CG 20 10 (03 94).

If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000 limit per occurrence. This policy must be kept in effect for 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to this Contract, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Work site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees that Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by the Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for the contract. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a

certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Contract.

SECTION H SCHEDULE OF WORK

H.1 CONTRACT PERIOD

H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. If required by the Contract Documents, Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed otherwise.

H.1.2 Unless specifically extended by a Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the provisions of Section D.1.

H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by project components, labor trades, and long lead items broken down by building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.2.2 All Work shall be completed during normal weekdays (Monday through Friday) between the hours of 7:00 a.m. and 5:00 p.m. unless otherwise specified in the Contract Documents. Unless otherwise specified in the Contract Documents, no Work shall be performed during the following holidays:

- New Year's Day
- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Veterans Day
- Thanksgiving Day
- Christmas Day

When a holiday falls on a Sunday, the following Monday shall be recognized as a legal holiday. When a holiday falls on Saturday, the preceding Friday shall be recognized as a legal holiday.

H.3 PARTIAL OCCUPANCY OR USE

H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I CORRECTION OF WORK

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent reinspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for

latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its own forces. If Owner completes the repairs using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.

- I.2.2 Nothing in this Section I.2 provision shall negate guarantees or warranties for periods longer than one year including without limitation, such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.
- I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.
- I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.
- I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

SECTION J
SUSPENSION AND/OR TERMINATION OF THE WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:

- (a) Failure of the Contractor to correct unsafe conditions;
- (b) Failure of the Contractor to carry out any provision of the Contract;
- (c) Failure of the Contractor to carry out orders;
- (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
- (e) Time required to investigate differing site conditions;
- (f) Any reason considered to be in the public interest.

J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the Work in every respect as though its prosecution had been continuous and without suspension.

J.3 COMPENSATION FOR SUSPENSION

J.3.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

- (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;

- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
- (c) If a receiver should be appointed on account of Contractor's insolvency;
- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner; or
- (f) If Contractor is otherwise in breach of any part of the Contract.
- (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE

J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of Owner or the public.

J.5.2 The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

J.6 ACTION UPON TERMINATION

J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

J.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign to the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual

arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K

CONTRACT CLOSE OUT

K.1 RECORD DOCUMENTS

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire project to Owner. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver two (2) complete and approved sets of O & M Manuals in paper form and one (1) complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

- K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices must be signed and notarized by the Contractor and signed by the Architect/Engineer (if applicable) and Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.
- K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. The O & M Manual shall be used as a basis for training.

In addition to any off-site training required by the Contract Documents, training shall include a formal session conducted at the Work site after the equipment and/or system is completely installed and operational in its normal operating environment.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all property of Owner issued to Contractor during construction such as keys, security passes, site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

The Owner's property is drug free and weapons free areas and the use of tobacco products is only allowed in designated areas. Contractor shall be required to ensure that its employees, Subcontractors and agents shall comply with these requirements.

K.9 SURVIVAL

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract.



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
SUPPLEMENTAL GENERAL CONDITIONS**

**PROJECT: #2017-51
ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE
DISTRICT AND KELLOGG CREEK WATER RESOURCE RECOVERY
FACILITIES**

The following modifies the January 1, 2017 Clackamas County General Conditions for Public Improvement Contracts (“County General Conditions”) for this Contract. Except as modified below, all other terms and conditions of the County General Conditions shall remain in effect.

1. Good Faith Effort

As a condition of Contractor being awarded a Contract for this Project, Contractor must complete Good Faith Effort outreach and documentation as described in the Supplemental Instructions to Bidders of the Solicitation Document.

The Contractor may not change who is performing each Division of Work identified in Form 1 of the Good Faith Effort without the express written advance approval of Owner. This includes substituting identified subcontractors, self-performance of a Division of Work that was identified to be performed by a subcontractor, or the Contractor subcontracting a Division of Work that was identified to be self-performed by the Contractor.

Contractor shall be required to submit the completed Form 3 with its final pay application as a condition of final payment.



WATER ENVIRONMENT SERVICES PUBLIC IMPROVEMENT CONTRACT

PERFORMANCE BOND

Bond No.: _____
Solicitation: 2017-51
Project Name: Access Gates and Supporting Conduits

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
<i>* If using multiple sureties</i>	Total Penal Sum of Bond:	\$ _____

We, _____ as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Clackamas County Service District No. 1 and Water Environment Services (collectively referred to as "District"), the sum of (Total Penal Sum of Bond) \$ _____ (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in the above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless the District and Clackamas County and their elected officials, officers, employees and agents, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Principal or its subcontractors, and shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.

If the District determines that any of the above conditions have not been met, the District may require payment under this bond at its sole and absolute discretion and Surety shall issue prompt payment of the full value of this bond without set-off or dispute or requirement for an opportunity to cure.

Nonpayment of the bond premium will not invalidate this bond nor shall the District, be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____, 20____.

PRINCIPAL: _____

By: _____

Signature

Official Capacity

Attest: _____

Corporation Secretary

SURETY: _____

[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City

State

Zip

Phone

Fax



WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT

PAYMENT BOND

Bond No.: _____

Solicitation: #2017-51

Project Name: Access Gates and Supporting Conduits

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
* <i>If using multiple sureties</i>	Total Penal Sum of Bond:	\$ _____

We, _____, as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Clackamas County Service District No. 1 and Water Environment Services (collectively referred to as "District"), the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless the District and Clackamas County and their elected officials, officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against the District on account of any labor or materials furnished; and shall do all things required of

the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.

If the District determines that any of the above conditions have not been met, the District may require payment under this bond at its sole and absolute discretion and Surety shall issue prompt payment of the full value of this bond without set-off or dispute or requirement for an opportunity to cure.

Nonpayment of the bond premium will not invalidate this bond nor shall the District be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____, 20____.

PRINCIPAL: _____

By: _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

SURETY: _____
[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City State Zip

Phone Fax



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
PROJECT INFORMATION, PLANS, SPECIFICATIONS AND DRAWINGS**

**PROJECT: #2017-51
ACCESS GATES AND SUPPORTING CONDUITS AT TRI-CITY SERVICE DISTRICT AND
KELLOGG CREEK WATER RESOURCE RECOVERY FACILITIES**

ACCESS GATES AND SECURITY SYSTEM

SUMMARY OF WORK

Clackamas County Service District No. 1 and Water Environment Services (“Districts”) have identified the need for the replacement of two (2) site access gates and administration building doors in order to secure the facilities using a card access reader system to match the county standard system. The successful Contractor will install one (1) new gate at the Tri-City Service District and one (1) new gate at the Kellogg Creek Water Resource Recovery Facility. The successful Contractor will also install conduit to support the County Technical Services Department’s installation of security cameras and card readers for both locations. The County Technical Services Department will solicit bids from a separate contractor to install the security system and cameras that will allow staff to monitor and authorize admittance to visitors.

This contract consists of the installation of gates and conduit needed to support a County-purchased and installed security card reader system at the Tri-City and Kellogg Water Resource Recovery Facilities and other work required to properly complete the project in accordance with the Contract Documents.

The work will generally consist of the following items:

1. Selective demolition and removal of existing entry gates.
2. Purchase and installation of new sliding entry gates.
3. Installation of electrical conduits where shown on plans.
4. All other ancillary work necessary to support the County Technical Services efforts and complete the improvements.

MANDATORY PREBID CONFERENCE

July 17, 2017, 9:00AM at the Tri-City Wastewater Resource Recovery Facility Administration Building conference room located at 15941 SE Agnes Ave., Oregon City, Oregon, 97045.

OTHER REQUIREMENTS

Comply with ordinances and regulation of public authorities having jurisdiction, including, but not limited to following:

- a. Clackamas County
- b. State of Oregon Department of Environmental Quality

Contractor’s Normal work hours shall be limited to between 6:00 a.m. to 3:00 p.m., Monday through Friday excepting Owner legal holidays.

PROPOSAL ITEM MEASUREMENT AND PAYMENT

Tri City Water Resource Recovery Facility (“WRRF”) Access System - Measurement and payment for replacement of existing access gate and miscellaneous other improvements at Tri City WWRF will be

made on a lump sum not to exceed basis per approved Schedule of Values. The lump sum price shall be full payment for all work described under this Contract, for providing and installing a single UL 325 Class III compliant cantilever slide gate across an approximate 32'-6" wide opening including but not limited to mobilization, removal and disposal of the existing gate and appurtenances, furnishing and installing new chain link fence posts, removal of concrete slab and installation of new concrete where shown, miscellaneous concrete flat work, providing a temporary lockable gate approved by the Owner until the permanent gate is operating, installation of all electrical conduits, junction boxes, conductors required, trench excavation and backfill, surface restoration, all work to supply and install electrical conduits, junction boxes, power supply circuits within and outside the administration and testing laboratory buildings where shown. All work shall be coordinated with and subject to the operational needs of this active wastewater treatment plant.

Kellogg Water Resource Recovery Facility ("WRRF") Access System - Measurement and payment for replacement of existing access gates and miscellaneous other improvements at Kellogg WRRF will be made on a lump sum basis per approved Schedule of Values. The lump sum price shall be full payment for all work described under this Contract, for providing and installing a set of UL 325 Class III compliant double cantilever slide gates across an approximate 26' wide opening including but not limited to mobilization, removal and disposal of the existing gate and appurtenances, removal and disposal of existing chain link fence where shown, furnishing and installing new chain link fencing and posts with concrete pad parallel to and beneath fencing, removal of concrete slab and installation of new concrete where shown, miscellaneous concrete flat work, providing a temporary lockable gate approved by the Owner until the permanent gate is operating, installation of all conduits, junction boxes, conductors required, trench excavation and backfill, surface restoration, all work to supply and install electrical conduits, junction boxed, power supply circuits within and outside the administration building where shown. All work shall be coordinated with and subject to the operational needs of this active wastewater treatment plant.

Key Dates:

All Basic Bid Work may begin as soon as the Notice to Proceed is issued

Substantial Completion: 120 days from Notice to Proceed

Final Completion: 150 days from Notice to Proceed

The engineering estimate for this project is \$140,000.00.


Design Team: Century West is the architect/engineer of record for this Project.

The Scope further includes the following Plans, Specifications and Drawings:

- ACCESS GATES AND SECURITY SYSTEM FINAL SPECIFICATIONS dated June 8, 2017
- ACCESS GATES AND SECURITY SYSTEM DRAWING SET dated June 2017.
- Drawings include C-1 through C-8; E-1 through E-3; and E-5 through E-8.

**ACCESS GATES AND SECURITY SYSTEM
FINAL SPECIFICATIONS
JUNE 8, 2017**

CERTIFICATE OF ENGINEER

<p>Century West Engineering Ron C. Weigel</p>  <p>EXPIRES: 6-30-18</p>	<p>I certify the Specifications Sections listed below are applicable to the design for the subject project and were prepared by me or under my supervision.</p> <p>01010, 01025, 01040, 01090, 01140, 01195, 01200, 01300, 01310, 01500, 01560, 01600, 01700, 01738, 02221, 02500, 02815, 02820, 02935, 03300, 03350</p>
<p>R & W Engineering Gregg H. Scholz</p>	<p>I certify the Specifications Sections listed below are applicable to the design for the subject project and were prepared by me or under my supervision.</p> <p>16000, 16075, 16100</p>

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY

- A. This contract consists of installation of new and replacement of existing Access Gates and Security System at the Tri-City and Kellogg Water Resource Recovery Facilities and other work required to properly complete the project in accordance with the Contract Documents.
- B. The accomplishment of all of the above work, if awarded, shall meet the scheduled sequence, milestones, limitations and the final completion dates specified.
- C. All Work is to be substantially completed 120 days after issuance of Notice to Proceed and ready for final payment 150 days after issuance of Notice to Proceed.
- D. The estimated construction cost for Work scope is \$140,000.
- E. QUESTIONS ON TECHNICAL INFORMATION

Questions relating to materials in the Bid Proposal may be directed to:

Ryan Rice
Procurement Analyst
2051 Kaen Rd, Oregon City, OR 97045
Phone: 503-742-5446
rrice@clackamas.us

F. PERMITS

Contractor shall obtain and pay for all construction permits and licenses. District will assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary; for the prosecution of the Work which are applicable at the time of opening of Bids.

G. PREBID CONFERENCE

A mandatory pre-bid conference will be held on July 17, 2017, at the Tri-City Water facility and will commence at 9:00 A.M. Interested prospective prime BIDDERS must attend and participate in the conference and interested sub-bidders and suppliers are also encouraged to attend. Bids received from prime BIDDERS who did not attend the mandatory pre-bid conference will not be opened or considered. Representatives of the OWNER and ENGINEER will conduct the pre-bid conference and site tour and attend to receiving attendance sign-in from prospective prime Bidders.

The purpose of the pre-bid conference and site tour is to discuss the scope of the project and bidding requirements and to acquaint bidders with site conditions. Detailed technical questions may be submitted in writing but they will be answered, if warranted, by addenda later. Oral statements may not be relied upon and will not be binding or legally effective.

The pre-bid conference and site tour will commence at the Tri-City Water Pollution Control Plant Administration Building conference room located at 15941 SE Agnes Ave., Oregon City, Oregon, 97045.

H. SITE VISITS

Prospective BIDDERS and sub-bidders are required to become familiar with and satisfy themselves as to the general, local and site conditions that may affect the cost, progress, performance and furnishing of the Work. Appointments for site visits in addition to the mandatory pre-bid conference are not guaranteed to be possible. Prospective BIDDERS may contact Randy Rosane for additional access and site examinations after the mandatory pre-bid date identified in Paragraph H. above. OWNER will endeavor to provide alternative times upon request if possible but does not guarantee available access outside the previously identified pre-bid date. BIDDER must attend the pre-bid meeting in order to be eligible for bidding.

1.02 WORK OF THIS CONTRACT

A. The work generally consists of furnishing and installing the following:

1. Selective demolition and removal of existing entry gates.
2. Purchase and installation of new sliding entry gates and operating systems.
3. Installation of electrical conduits where shown on plans.
4. All other ancillary work necessary to complete the improvements.

B. Contractor Duties

1. Provide and pay for labor, materials, tools, equipment, superintendence, temporary facilities and services necessary for proper execution and completion of Work.
2. All required permits, governmental fees and licenses.
3. Comply with ordinances and regulation of public authorities having jurisdiction, including, but not limited to following:
 - a. Clackamas County
 - b. State of Oregon Department of Environmental Quality
4. Contractor's Normal work hours shall be limited to between 6:00 a.m. to 3:00 p.m., Monday through Friday excepting Owner legal holidays.

1.03 EXISTING UTILITIES

A. In general, the locations of existing major utilities, whether aboveground or underground, are indicated on the Drawings. This information has been obtained from utility maps and field surveys. Owner does not guarantee the accuracy or completeness of this information, and it is to be understood that other aboveground or underground facilities not shown on the Drawings may be encountered during the course of the work. In any case,

most minor lines such as individual services for water, gas and sprinkler irrigation lines are not indicated.

- B. Existing utilities, whether shown on the Drawings or not, shall be maintained, relocated, rerouted, removed and restored as may be necessary by the Contractor in a manner satisfactory to owners and operators of the utilities and to Owner in accordance with the provisions and to the satisfaction of the affected utility or local agency.

1.04 SPECIFICATION LANGUAGE

Portions of the Specifications are written in imperative and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words “shall be” shall be included by inference where a colon (:) is used within sentences or phrases. Example: Aggregate: ASTM C33.

Where the Bidding Documents define methods, materials, or equipment by specifying a trade name, manufacturer and model or catalog number, the intent is not to limit competition but to establish a standard of quality, features, workmanship, reliability, serviceability, compatibility, performance, etc. Unless the specification description expressly states that no substitutions or “equals” will be allowed, the words “or equal” shall be deemed inserted in each such instance.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 DESCRIPTION

- A. Measurement is described under each proposal item in Paragraph 01025-1.02.
- B. Payment for the various items on the Proposal, as further specified herein, shall be based on measurements of completed work in accordance with United States Standard Measures and shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto and including all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Act of the U.S. Department of Labor (OSHA) and Oregon State Department of Labor and Industries, also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the final acceptance by the Owner. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.
- C. Indirect costs, such as supervision and overheads, profit, the general conditions specified in the Contract, all shall be allocated to each proposal item as applicable for work defined in the proposal item. No separate payment will be made to the Contractor for these items.

1.02 PROPOSAL ITEM MEASUREMENT AND PAYMENT

- A. **Tri-City WRRF Access System** - Measurement and payment for replacement of existing access gate and miscellaneous other improvements at Tri-City WRRF will be made on a lump sum not to exceed basis per approved Schedule of Values. The lump sum price shall be full payment for all work described under this Contract, for providing and installing a single UL 325 Class III compliant cantilever slide gate across an approximate 32'-6" wide opening including but not limited to mobilization, removal and disposal of the existing gate and appurtenances, furnishing and installing new chain link fence posts, removal of concrete slab and installation of new concrete where shown, miscellaneous concrete flat work, providing a temporary lockable gate approved by the Owner until the permanent gate is operating, installation of all electrical conduits, junction boxes, conductors required, trench excavation and backfill, surface restoration, all work to supply and install electrical conduits, junction boxes, power supply circuits within and outside the administration and testing laboratory buildings where shown. All work shall be coordinated with and subject to the operational needs of this active wastewater treatment plant.
- B. **Kellogg WRRF Access System** - Measurement and payment for replacement of existing access gates and miscellaneous other improvements at Kellogg WRRF will be made on a lump sum basis per approved Schedule of Values. The lump sum price shall be full payment for all work described under this Contract, for providing and installing a set of UL 325 Class III compliant double cantilever slide gates across an approximate 26' wide opening

including but not limited to mobilization, removal and disposal of the existing gate and appurtenances, removal and disposal of existing chain link fence where shown, furnishing and installing new chain link fencing and posts with concrete pad parallel to and beneath fencing, removal of concrete slab and installation of new concrete where shown, miscellaneous concrete flat work, providing a temporary lockable gate approved by the Owner until the permanent gate is operating, installation of all conduits, junction boxes, conductors required, trench excavation and backfill, surface restoration, all work to supply and install electrical conduits, junction boxed, power supply circuits within and outside the administration building where shown. All work shall be coordinated with and subject to the operational needs of this active wastewater treatment plant.

END OF SECTION

SECTION 01040

COORDINATION AND PROJECT REQUIREMENTS

PART 1 GENERAL

1.01 PROJECT COORDINATION

- A. Coordinate scheduling, submittals and work of various Sections of the Specifications and subcontractors to assure efficient and orderly sequence of interdependent construction.

1.02 CONNECTIONS TO UNDERGROUND UTILITIES, CONDUITS, OR PROCESS PIPING

- A. Obtain best available current information on location, identification and marking of existing utilities, piping and conduits and other underground facilities before beginning any excavation. Contact Oregon Utility Notification center at 503-246-6699 for information at least 48 hours in advance of beginning work. Give Engineer 24 hours notice before beginning work.
- B. The location of existing utilities and underground facilities known to the Engineer are shown in their approximate location based on information available at the time of preparing the Drawings. The actual location, size type and number of utilities and underground facilities may differ from that shown and utilities or underground facilities may be present that are not shown. See General Conditions Article 4.03 and Bid Form Section 00301, Paragraph 3.I for the Contractor's responsibilities working around these facilities.
- C. Where connections to existing utilities or other underground facilities is required or where new piping or conduits may cross or interfere with existing utilities or underground facilities carefully excavate and uncover existing installations to a point 1 foot below the pipe or conduit to determine the actual elevation and alignment. Call the Engineer's attention to differing existing conditions that may require a clarification or change.

1.03 FIELD ENGINEERING AND LAYOUT

- A. See General Conditions, Article 4.05 regarding reference points provided on the plans and responsibilities of the Contractor to accurately layout the Work.

1.04 PRECONSTRUCTION MEETING

- A. Prior to beginning the Work, the Contractor and its key personnel and Subcontractors including the Contractor's Superintendent, Project Manager, and Field Engineer shall attend a meeting with the Owner and the Engineer to discuss the following:
 - 1. Name, Authority, and Responsibilities of Parties Involved
 - 2. Project Procedures:
 - a. Progress meetings
 - b. Correspondence
 - c. Notification
 - d. Submittal of Shop Drawing Samples, and Proposed Equivalents
 - e. Requests for Information

- f. Response to Requests for Information
- g. Work Directive Change
- h. Contractor Reporting requirements
- i. Change Orders
- 3. Temporary Schedule and Contractor's Construction Schedule
- 4. Maintenance of Record Drawings
- 5. Punch Lists and Project Closeout Procedures
- 6. Final Deliverables including Record Drawings

1.05 PROGRESS MEETINGS

- A. The Engineer will conduct progress meetings with Contractor and Owner at job site as necessary to insure project is on schedule. Contractor shall be prepared to attend up to five (5) interim meetings in addition to the Preconstruction conference and final walk through for acceptance of the project. Attendance required by Contractor's project manager, superintendent and affected Subcontractors and suppliers. The Engineer will prepare, maintain and distribute agenda and dated record of: (1) actions required and taken and (2) decisions needed and made.

1.06 MATERIALS

- A. General:
 - 1. Verify that products delivered meet requirements of Contract Documents and the requirements for approved submittals.
- B. Transportation and Handling:
 - 1. Transport and handle products in accordance with manufacturer's instructions.
 - 2. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
 - 3. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- C. Storage and Protection:
 - 1. Store and protect products in accordance with manufacturer's instructions. Seals and labels shall be intact and legible.
 - 2. Provide offsite storage and protection including insurance coverage when site does not permit onsite storage or protection.

1.07 SAFETY

- A. In accordance with generally accepted construction practice, applicable law and the General Conditions, paragraph 6.13, the Contractor shall be solely and exclusively responsible for:
 - 1. Construction means and methods.
 - 2. Safety of employees engaged in the work while on and off the site.
 - 3. Safety of the Owner, the Engineer, and others who may visit or be affected by the work.
 - 4. Safety of the work itself including material and equipment to be incorporated therein.
 - 5. Safety of other property at the site or adjacent thereto.
- 6. Safety programs, equipment and protective devices required to assure the safety of per-

sons and property for whom/which the Contractor is responsible.

- B. The duties of the Engineer in conducting review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's work methods, equipment, bracing, scaffolding or safety measures in, on, or near the construction site. See General Conditions, paragraph 6.13.
- C. The Contractor is hereby informed that work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instructions as required to prevent injury to personnel and damage to property, and to comply with all applicable laws and regulations including State OSHA, Federal OSHA, and other regulations referenced in these Contract Documents.
- D. The Contractor shall, at all times, maintain the job in a condition that is safe for the Owner, the Engineer and their Consultants to make site visits and to conduct construction reviews. If the Owner or the Engineer cannot allow personnel to visit the job because it is not safe, the Contractor is not providing required safe access to the Work as required by General Conditions, paragraph 13.02.
- E. The Contractor shall prepare a Safety Plan meeting the requirements of the Clackamas County Safety Officer and applicable regulations. As a minimum, the Contractor's Safety Plan shall set forth definite procedures for informing workers about safety, for instructing workers in safe practices, for assuring that workers are using appropriate safety equipment and safe work practices and for reporting accidents.
- F. Owner Safety Requirements: Before any Work at the site is started, Contractor and Owner safety representatives shall meet and review Owner's Contractor Notification Process document. The parties shall fill out, sign and submit two copies of the document for the Owner's project records. Contractor is responsible to convey the information in the Contractor Notification Process document to Contractor employees and subcontractors. All Contractor employees, subcontractors and manufacturer representatives shall view the Owner's "contractor orientation video" before starting work at the site.
- G. The Contractor shall acquire a "Hot-Work Permit" in accordance with the Hot Work Permit Policy of the Water Environment Services, a department of Clackamas County when engaged in an activity that may produce sparks, flame, heat or other ignition source.

1.08 CONTRACTOR'S QUALITY CONTROL

- A. The Contractor shall be fully responsible for inspecting the work of its suppliers and Subcontractors to assure that the work when completed will comply with the standards for materials and workmanship required by the Contract Documents. See General Conditions paragraph 6.06.
- B. Inspections, periodic observations and testing performed by the Owner or the Engineer are for the Owner's benefit and information only and shall not be construed as partial or incremental acceptance of the work and shall not be deemed to establish any duty on the part of the Owner or the Engineer to the Contractor, its subcontractors or suppliers. See General Condition's paragraphs 9.02 and 9.10.

- C. The Contractor shall:
 - 1. Monitor quality control over suppliers, manufacturer, products, services, site conditions, and workmanship, to produce work of specified quality.
 - 2. Comply fully with manufacturer's installation instructions, including performing each step in sequence as recommended by the manufacturer.
 - 3. Submit a Request for Information to Engineer before proceeding with work when manufacturers' instructions or reference standards conflict with Contract Documents.
 - 4. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
 - 5. Perform work by persons specializing in the specific trade and class of work required and qualified to produce workmanship of specified quality.
- D. If reference standards or manufacturers' instructions contain provisions that would alter or are at variance with relationships between the parties to the Contract set forth in the Contract Documents, the provisions in the Contract Documents shall take precedence.
- E. The Contractor shall provide assistance required by the Engineer to adequately inspect the Work including ladders, scaffolding, lighting, ventilation and other aids to facilitate access and provide a safe working environment.

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or Federal standards, comply with requirements of the standard, except when more rigid requirements are required by applicable codes or specified herein.
- B. Comply with issue of reference standard which is current at date of receipt of bids.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in a reference document.

1.02 SCHEDULE OF REFERENCES

AAN	American Association of Nurserymen 230 Southern Building Washington, DC 20001
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, NW, Suite 249 Washington, DC 20001
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI 48219
ANSI	American National Standards Institute, Inc. 11 W. 42 nd Street, 13th Floor New York, NY 10036
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103-1187
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
CWHSSA	Contract Work Hours & Safety Standards Act Department of Labor/WH Office of Contracting 200 Constitution Avenue NW Washington, DC 20210
EPA	United States Environmental Protection Agency 1200 Sixth Avenue Seattle, WA 98101

NESHAP	National Emission Standards for Hazardous Air Pollutants c/o Armina Nolan 1200 Sixth Avenue Seattle, WA 98101
NIOSH	National Institute of Occupational Safety and Health 4676 Columbia Parkway Cincinnati, OH 45226
OR-OSHA	Oregon Occupational Safety and Health Division of the Department of Insurance and Finance

1.03 ACRONYMS

Wherever used in the Contract Documents, the following acronyms will have the meaning listed:

UFC	Uniform Fire Code
BMPs	Best Management Practices
TESC	Temporary Erosion and Sedimentation Control

END OF SECTION

SECTION 01140

WORK RESTRICTIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for sequencing and scheduling the Work affected by existing site and facility, work restrictions, and coordination between construction operations and plant operations.
- B. Related sections:
 - 1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
 - 2. It is the CONTRACTOR's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of CONTRACTOR's Work.
 - 3. The following Sections are related to the Work described in this Section. This list of Related Sections is provided for convenience only and is not intended to excuse or otherwise diminish the duty of the CONTRACTOR to see that the completed Work complies accurately with the Contract Documents.
 - a. Section 01010 - Summary of Work.
 - b. Section 01500 – Temporary Construction Facilities.

1.02 GENERAL CONSTRAINTS ON SEQUENCE AND SCHEDULING OF WORK

- A. Wastewater projects:
 - 1. The Tri-City Water Resource Recovery Facility and the Kellogg Water Resource Recovery Facility provide treatment of domestic and industrial wastewater for Clackamas County prior to discharging to Willamette River. Impairing the operational capabilities of either treatment plant will result in serious environmental damage and monetary fines.
 - 2. Conduct work in a manner that will not impair the operational capabilities of essential elements of the treatment process or reduce the capacity of the entire treatment plant below levels sufficient to treat the quality of raw wastewater to the water quality limitations specified in the discharge permit.
 - 3. The status of the treatment plant shall be defined as "operational" when it is capable of treating the entire quantity of wastewater received to the water quality limits specified in the discharge permit.
- B. Work sequence and constraints:
 - 1. Utilize description of critical events in work sequence in this Section as a guideline for scheduling and undertaking the Work.
 - 2. Work sequence and constraints presented do not include all items affecting completion of the Work, but are intended to describe critical events necessary to minimize disruption of access into and out of the existing facilities. Refer to Paragraph 1.03.B.1 in this section for specific sequencing parameters for work.

1.03 CONSTRUCTION CONSTRAINTS

- A. CONTRACTOR and all employees must watch a safety training video approximately 30 minutes in length prior to commencing work inside the treatment plant areas
- B. The CONTRACTOR shall be completing work within the confines of an operating wastewater treatment facility and shall not impede on the daily maintenance and operation activities associated with this. CONTRACTOR must coordinate with plant operation staff the process of removing entry gates from each facility and insuring they are secured at the end of each day until the permanent system can be installed. CONTRACTOR shall submit a sequencing plan of action for all activities prior to commencing work for each treatment facility.
- C. CONTRACTOR shall be completing work within the confines of an operating wastewater treatment facility and shall not impede on the daily maintenance and operation activities associated with this. CONTRACTOR must coordinate with plant operation staff the process of taking

1.04 OPERATIONS AND MAINTENANCE ACCESS

- A. Provide safe, continuous access to process control equipment for plant operations personnel.

1.05 UTILITIES

- A. Provide advance notice to and utilize services of Underground Services Alert (U.S.A.) for location and marking of underground utilities operated by utility agencies other than the OWNER.

1.06 COORDINATION OF WORK

- A. Maintain overall coordination of the Work.
- B. Obtain construction schedules from subcontractors and suppliers, and assume responsibility for correctness.
- C. Incorporate schedules from subcontractors and suppliers into Progress Schedule to plan for and comply with sequencing constraints.
- D. The CONTRACTOR's normal work hours shall be limited to between 6:00 a.m. to 3:00 p.m., Monday through Friday excepting OWNER legal holidays. Work necessary to be performed outside normal work hours to meet the sequencing requirements and constraints of the Contract shall be coordinated with and require OWNER approval. The Contract may include limited work depending upon the proposed CONTRACTOR'S schedule that may need to be performed outside these hours and in some cases may occasionally require longer days to complete the work. All Work performed outside these hours, or on weekends, shall be performed at no additional cost to the OWNER. See also Section 00800 – Supplementary Conditions, for definition of "Working Day" and legal holidays observed by the OWNER. No Work shall be performed on legal holidays observed by the OWNER.

- E. The CONTRACTOR's use of the Site shall be limited to its construction operations, including on-Site storage of materials and a temporary field office brought in if requested.
- F. The CONTRACTOR shall use only portions of the site for staging as designated on the Drawings.
- G. The OWNER will utilize all of the existing Site and existing facilities during the entire period of construction for the conduct of the OWNER's normal operations. The CONTRACTOR shall cooperate and coordinate with the OWNER and ENGINEER to facilitate the OWNER's operations and to minimize interference with the CONTRACTOR's operations at the same time. In any event, the OWNER shall utilize the entire Site during the entire period of construction.

1.07 TEMPORARY SERVICES, MATERIALS, AND EQUIPMENT

- A. As specified in Section 01500.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01195

PROTECTION AND MAINTENANCE OF WORK AND PROPERTY

PART 1 GENERAL

1.01 DESCRIPTION

This section specifies the protection and maintenance of work and property as they are affected by the work.

1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 01560, *Environmental Controls*
- B. Section 02935, *Restoration of Landscaping*

1.03 PUBLIC AND PRIVATE PROPERTY

- A. Protect all public and private property, insofar as it may be endangered by Contractors' operations and take every reasonable precaution to avoid damage to such property.
- B. Restore and bear the cost of any public or private improvement facility, structure or land and landscaping within the project improvement limits which is damaged or injured directly or indirectly by or on account of an act, omission, or neglect in the execution of the Work. Restore to a condition substantially equivalent to that existing before such damage or injury occurred, by repairing, rebuilding, or otherwise affecting restoration thereof, or if this is not feasible, make a suitable settlement with the owner of the damaged property.

1.04 LOCATION OF EXISTING FACILITIES

- A. Pothole locations ahead of conduit construction to verify locations so as not to affect installation.
- B. It is to be understood that other aboveground or underground utilities not shown on the Drawings may be encountered during the course of the work.
- C. Use a pipe locator or hand excavation to determine the exact location of underground facilities in the interest of avoiding unnecessary damage, maintenance costs, and to ensure continuity of customer service.
- D. Contact all utility companies and departments having underground facilities within the construction area and request they locate and mark their utilities. In addition, verify the location of all buried utilities in the construction area 48 hours before contractor digs by calling the one-call locator service at 1-800-332-2344. The contractor shall comply with Oregon "locate law" ORS 757.541 to ORS 757.571.

1.05 UNDERGROUND UTILITIES WITHIN TRI-CITY AND KELLOGG FACILITIES

- A. Additional underground utilities which include irrigation systems and miscellaneous conduits may be present in the area. Owner does not guarantee the accuracy or completeness of this information and it is understood that other underground utilities not shown on the Drawings or described in the Specifications may be encountered during the course of the work. Repair and replacement of the utilities shall be incidental to the work and no further payments will be provided.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Requirements for conducting conferences and meetings for the purposes of addressing issues related to the Work, reviewing and coordinating progress of the Work and other matters of common interest, and includes the following:
 - 1. Qualifications of Meeting Participants.
 - 2. Preconstruction Conference.
 - 3. Progress Meetings.
 - 4. Pre-Installation Meetings.
 - 5. Post Construction Meeting.
- B. Related sections:
 - 1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
 - 2. It is the CONTRACTOR's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of CONTRACTOR's Work.

1.02 QUALIFICATIONS OF MEETING PARTICIPANTS

- A. Representatives of entities participating in meetings shall be qualified and authorized to act on behalf of entity each represents.

1.03 PRECONSTRUCTION CONFERENCE

- A. Upon issuance of Notice to Proceed, or earlier when mutually agreeable, ENGINEER will arrange preconstruction conference in convenient place for most persons invited, in accordance with the General Conditions.
- B. Attending Preconstruction Conference: CONTRACTOR's superintendent, OWNER, ENGINEER, and others involved in performance of the Work, and others necessary to agenda.
- C. Purpose of conference: To establish working understanding between parties and to discuss Construction Schedule, shop drawing and other submittals, cost breakdown of major lump sum items, processing of submittals and applications for payment, and other subjects pertinent to execution of the Work.
- D. Agenda will include:
 - 1. Adequacy of distribution of Contract Documents.
 - 2. Proposed progress schedules and critical construction sequencing.
 - 3. Project coordination.
 - 4. Designation of responsible personnel.
 - 5. Procedures and processing of:
 - a. Field decisions.

- b. Proposal requests.
 - c. Submittals.
 - d. Change Orders.
 - e. Applications for Payment.
 - f. Record Documents.
 - 6. Use of premises:
 - a. Office, construction, and storage areas.
 - b. OWNER's requirements.
 - c. Other ongoing or anticipated construction projects going on at the same time as this project.
 - 7. Construction facilities, controls, and construction aids.
 - 8. Temporary utilities.
 - 9. Safety and first aid procedures.
 - 10. Security procedures.
 - 11. Housekeeping procedures.
- E. OWNER will record minutes of meeting and distribute copies of minutes within 7 days of meeting to participants and interested parties.

1.04 PROGRESS MEETINGS

- A. Conduct progress meetings at least once every 2 weeks at Tri-City WRRF Administration Building, or other mutually agreed upon place.
- B. Distribute to each anticipated participant written notice and agenda of each meeting at least 2 days before meeting.
- C. Require attendance of CONTRACTOR's superintendent and subcontractors who are or are proximate to be actively involved in the Work, or who are necessary to agenda.
- D. Complete and bring Application for Payment and Progress Schedule to progress meeting.
- E. Purpose of progress meetings: To expedite work of subcontractors or other organizations that are not meeting scheduled progress, resolve conflicts, and coordinate and expedite execution of the Work.
- F. Review progress of the Work, Progress Schedule, narrative report, Application for Payment, record documents, and additional items of current interest that are pertinent to execution of the Work.
- G. Verify:
 - 1. Actual start and finish dates of completed activities since last progress meeting.
 - 2. Durations and progress of activities not completed.
 - 3. Reason, time, and cost data for Change Order Work that will be incorporated into Progress Schedule and application for payment.
 - 4. Percentage completion of items on Application for Payment.
 - 5. Reasons for required revisions to Progress Schedule and their effect on Contract Time and Contract Price.
- H. Discuss potential problems which may impede scheduled progress and corrective measures.

- I. OWNER will record minutes of meeting and distribute copies of minutes within 7 days of meeting to participants and interested parties.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01300

SUBMITTALS PROCEDURE

PART 1 GENERAL

1.01 DESCRIPTION

This Section specifies procedures for Contractor submittals. Where required by the Specifications, submit descriptive information that will enable the Engineer to assess whether the Contractor's proposed materials, equipment or methods of work are in general conformance to the design concept and in compliance with the Drawings and Specifications. The information to be submitted shall consist of drawings, specifications, descriptive data, certificates, samples, test results and such other information, all as specifically required in the Specifications.

PART 2 PRODUCTS

2.01 CONTRACTOR RESPONSIBILITIES

- A. Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall ensure that the material, equipment or method of work shall be as described in the submittal. Verify that the material and equipment described in each submittal conforms to the requirements of the Specifications and Drawings prior to transmittal to the Engineer. Ensure that there is no conflict with other submittals and notify the Engineer in each case where such submittal may affect the work of another contractor or Owner.
- B. If the Contractor's review determines that the information shows deviations from the Specifications or Drawings, submit a request for substitution.

PART 3 EXECUTION

3.01 TRANSMITTAL PROCEDURE

- A. General:
 - 1. Submittals regarding material and equipment shall be accompanied by Submittal/Transmittal Form. A separate form shall be used for each specific item, class of material, equipment, and items specified in separate, discrete sections for which the submittal is required. Submittals for various items shall be made with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.
 - 2. A unique number, sequentially assigned, shall be noted on the transmittal form accompanying each item submitted. Original submittal numbers shall have the following format: "XXX"; where "XXX" is the sequential number assigned by the Contractor. Resubmittals shall have the following format: "XXX-Y"; where "XXX" is the originally assigned submittal number and "Y" is a sequential letter

assigned for resubmittals, i.e., A, B or C being the 1st, 2nd and 3rd resubmittals, respectively. Submittal 25B, for example, is the second resubmittal of Submittal 25.

- B. Deviation from Contract: Submit a request for substitution for deviations from the Specifications or Drawings. Include the reason for the deviation and cost differential for the deviation. Deviations from the Contract shall be authorized by change order only.
- C. Submittal Completeness: Submittals which do not have all the information required to be submitted are not acceptable and will be returned without review.
- D. Submit to the Engineer the following items for review:
 - 1. Construction Schedule
 - 2. List of employees to be contacted in an emergency with their home phone numbers and cell numbers (available 24 hrs/day)
 - 3. List of subcontractors that will work on the project
 - 4. Erosion control plan
 - 5. Site Specific Safety Plan
 - 6. Drug Testing Plan
 - 7. Cantilever Slide Gates with Operating Systems
 - 8. Chain Link Fencing
 - 9. Demolition and sequencing plan for each gate
 - 10. Temporary access gate to maintain security at each facility
 - 11. Electrical and control conduits

The Engineer reserves the right to ask for additional SUBMITTALS that are not included on the above list. Review by the Engineer shall not relieve the Contractor from responsibility for error of omission. Obtain the Engineer's approval prior to beginning any fabrication or other work. No deviation from the reviewed drawings shall be allowed without approval from the Owner or Engineer.

3.02 REVIEW PROCEDURE

- A. For each required submittal, submit four (4) copies of all the submitted information. Two (2) will be returned to the contractor. Individual sheets shall not exceed 22 inches x 34 inches. Electronic copies may be substituted for hard copies.
- B. Unless otherwise specified, within 14 days after receipt of the submittal/resubmittal, the Engineer will review and return it to the Contractor. The returned material will consist of two (2) marked-up copies of the submittal. Electronic copies may be substituted by the Engineer as equivalent to hard copies. The returned submittal will indicate one of the following actions:
 - 1. If the review indicates that the material, equipment or work method is in general conformance with the Contract Drawings/Specifications, the submittal copies shall be marked "Approved." In this event, the Contractor may begin to incorporate the material/equipment/work method covered in the submittal.
 - 2. If the review indicates that the submittal is insufficient or that limited corrections are required, the submittal copies may be marked "Approved as Noted." The Contractor may begin to implement the work method or incorporate materi-

als/comments covered in the submittal in accordance with the corrections/comments noted.

3. If the review reveals the submittal is insufficient or contains incorrect data and the comments require revision and resubmittal, the submittal copies shall be marked "Not Approved, Resubmit." In this case, the Contractor shall not then undertake work covered by this submittal until the submittal has been revised, resubmitted and returned to the Contractor with a marking of "Approved" or "Approved as Noted."
4. If the review indicates that the submittal is incomplete or that additional information is required, the submittal copies may be marked "Submit Specified Item". In this case the Contractor shall not undertake work covered by this item until the submittal has been revised resubmitted and returned to the Contractor with a marking of "Approved" or "Approved as Noted."
5. If the review reveals the material, equipment, or work does not require submittal, then the submitted copies shall be marked "Review Not Required Per Contract Documents." In this event, the Contractors may begin to incorporate the material/equipment/work covered by the submittal and no further action is required.

3.03 EFFECT OF REVIEW OF CONTRACTOR'S SUBMITTALS

Review of drawings, methods of work or information regarding materials or equipment the Contractor proposes to provide shall not relieve the Contractor of his responsibility for errors therein, nor shall it be regarded as an assumption of risks or liability by the Engineer on behalf of Owner, or by any officer or employee of Owner. The Contractor shall have no claim under the Contract on account of the failure, or partial failure, of the method of work, material or equipment so reviewed. A mark of "Approved" or "Approved as Noted" shall mean the Owner has no objection to the Contractor, upon the Contractor's own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULE

PART 1 GENERAL

1.01 DESCRIPTION

- A. This Section specifies requirements and procedures for the Contractor in preparing a cost loaded construction schedule. The purpose of the schedule shall be to ensure adequate planning of the work by the Contractor, to establish the standard against which satisfactory completion of the project shall be judged, to assist the Engineer in monitoring progress, and to assess a change proposal's impact on the construction schedule.

1.02 SUBMITTALS

- A. Before starting work, the Contractor shall submit to the Engineer an overall contract construction schedule showing the proposed order of work and indicate the time required for completion of the major items and sub-items of work specific wet well rehab work. The schedule shall also show the critical path to accomplish all of the work. The format for the schedule shall be as a minimum a Gantt Chart format showing start and completion dates for the various work activities.

PART 2 PRODUCTS

2.01 CONSTRUCTION SCHEDULES

- A. Gantt Chart, Bar Chart, or equivalent as approved by the Engineer. Chart shall include but not be limited to specific sequencing for demolition and replacement of access gate at each facility.

PART 3 EXECUTION

3.01 SUBMISSION AND APPROVAL

- A. The schedule shall be realistic and definitive as to the amount of work which is to be accomplished within the time indicated and shall be updated monthly to reflect actual work progress. The schedule shall breakdown the project into activities corresponding to the plan sheets and will include major tasks to complete all phases of work within the aeration basins. It will be used as an indication of the sequence of the major construction operations and as a check on the progress of the work and may, at the sole discretion of the Engineer, be employed by the Engineer in determining delays and time extensions.
- B. If the Contractor wishes to make changes in the construction schedule, then to the maximum extent possible provide two (2) weeks notice to the Engineer, or secure the approval of the Engineer prior to performing such changes. Such schedule changes shall be strictly in accordance with the other requirements of this specification, and shall show the interrelationship between the original schedule and the proposed changes to the schedule.
- C. The Engineer's review of the original schedule shall not constitute a warranty or representation by the Owner that the Contractor can perform the work according to such schedule.

- D. Submission of a full updated schedule is required with each monthly progress payment invoice.

END OF SECTION

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Furnishing, maintaining, and removing construction facilities and temporary controls, including temporary utilities, construction aids, barriers and enclosures, security, temporary controls and removal after construction.
- B. Related sections:
 - 1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
 - 2. It is the CONTRACTOR's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of CONTRACTOR's Work.
 - 3. The following Sections are related to the Work described in this Section. This list of Related Sections is provided for convenience only and is not intended to excuse or otherwise diminish the duty of the CONTRACTOR to see that the completed Work complies accurately with the Contract Documents.
 - a. Section 01140 - Work Restrictions.
 - b. Section 01300 - Submittal Procedures.

1.02 REFERENCE

- A. Occupational Safety and Health Administration (OSHA).

1.03 SUBMITTALS

- A. General: For products specified to be furnished under this Section, submit product data as specified in Section 01300.

1.04 TEMPORARY UTILITIES

- A. Temporary sanitary facilities:
 - 1. Provide suitable and adequate sanitary facilities that are in compliance with applicable Laws and Regulations.
 - 2. At completion of the Work, remove sanitary facilities and leave site in neat and sanitary condition.

1.05 CONSTRUCTION AIDS

- A. Provide railings, kick plates, enclosures, safety devices, and controls required by Laws and Regulations and as required for adequate protection of life and property.
- B. Accident prevention:
 - 1. Exercise precautions throughout construction for protection of persons and property.
 - 2. Observe safety provisions of applicable Laws and Regulations.

3. Guard machinery and equipment, and eliminate other hazards.
 4. Make reports required by authorities having jurisdiction, and permit safety inspections of the Work.
 5. Before commencing construction work, take necessary action to comply with provisions for safety and accident prevention.
- C. Warning devices and barricades: Adequately identify and guard hazardous areas and conditions by visual warning devices and, where necessary, physical barriers:
1. Devices shall conform to minimum requirements of OSHA and State agency which administers OSHA regulations where Project is located.

1.06 SECURITY

- A. Make adequate provision for protection of the work area against fire, theft, and vandalism, and for protection of public against exposure to injury.

1.07 TEMPORARY CONTROLS

- A. Noise control:
1. In inhabited areas, particularly residential, perform operations in manner to minimize noise.
- B. Miscellaneous Conditions:
1. Maintain a clean orderly site during all phases of construction. Contractor working space is within confines of an operating wastewater treatment facility. See Section 01140, Paragraph 1.03 for further instructions.
 2. Temporary Parking for construction vehicles shall be coordinated with operators of the wastewater treatment facility before starting work.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01560

ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.01 DESCRIPTION

- A. This section specifies environmental mitigation and temporary environmental controls required to be maintained during construction. Nothing in this section shall relieve any person from the obligation to comply with the regulations or permits of any federal, state, or local authority.
- B. Related Sections: A list of sections most closely related to this section is provided for the convenience of the Contractor.
 - 1. Section 01500, *Temporary Construction Facilities*

1.02 SUBMITTALS

- A. Procedures: See Section 01300.
- B. Erosion Control Plan: Develop and maintain for the duration of the contract an Erosion Control Plan that will effectively incorporate and implement environmental protection precautions. The Contractor's Erosion Control Plan shall include methods and interim facilities to be constructed and/or used concurrently during construction to control erosion in such a manner as to ensure that sediment and sediment laden water does not enter any drainage system, roadways, or violate applicable water quality standards. Visible or measurable erosion which enters, or is likely to enter, a public storm and surface water system, wetland or stream is prohibited. The plan shall include the name of the Contractor's employee authorized to supervise and enforce compliance with the Erosion Control Plan and telephone number(s) to contact that person at any time.
- C. The Erosion Control Plan shall be submitted and approved in accordance with Section 01300 prior to initiating clearing activities.
- D. In the event a regulatory agency or jurisdiction determines the Erosion Control Plan to be inadequate to protect environment:
 - 1. The Contractor shall stop immediately the affected work in progress until adequate environmental protection measures are implemented.
 - 2. The Contractor shall modify the Erosion Control Plan to meet the requirements of said regulatory agencies, jurisdictions and provide the Engineer with the revisions to the Plan within five (5) calendar days of the notice of deficiency. Plan resubmittal will be in accordance with Section 01300.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 SITE MAINTENANCE

Dust shall be minimized by the Contractor to the extent practicable, utilizing all measures necessary as required by the Owner.

3.02 STREET CLEANING

- A. Prevent dirt, mud, and dust from escaping trucks departing the work site, by covering dusty loads and cleaning truck tires before leaving the construction site.

3.03 NOISE CONTROL

- A. Comply with all local controls and noise level rules, regulations and ordinances.
- B. Each internal combustion engine, used on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.
- C. Noise levels for all equipment shall not exceed 85 dBA. Equipment that cannot meet these levels shall be quieted by use of improved exhaust mufflers, noise attenuation barriers or other means.
- D. If special circumstances or emergency conditions require work beyond the hours as specified, the Contractor shall:
 - 1. Notify the Engineer and Owner 72 hours in advance of any proposed extended work hours for preauthorization. The Contractor's written request shall specify the work to be performed and the circumstances that warrant the request. The request shall include any additional measures to mitigate noise generated by this construction activity if deemed necessary by the Engineer.
 - 2. If an emergency situation occurs that warrants immediate extended hours, the Contractor shall notify the Engineer immediately upon determining the need for this work.

3.04 EROSION CONTROL

- A. Execute the approved Erosion Control Plan.
- B. The Contractor shall not drag, drop, track, or otherwise place or deposit, or permit to be deposited, mud, dirt, rock or other such debris into any part of the public storm or surface water system, or any part of a private storm or surface water system. Any such deposit of material shall be immediately removed by the Contractor at the Contractor's expense. No material shall be washed or flushed into any part of the storm or surface water system without erosion control measures installed to the satisfaction of the Engineer.

- C. The Contractor shall maintain the facilities and techniques contained in the approved Erosion Control Plan so as to continue to be effective during the construction or other permitted activity. If the facilities and techniques approved in an Erosion Control Plan are not effective or sufficient as determined by the Engineer, the Contractor shall revise the plan immediately upon notification by the Engineer. Upon approval of the revised plan by the Owner, the Contractor shall immediately implement the additional facilities and techniques. In cases where erosion is occurring, the Engineer may require the Contractor to install interim control measures prior to submittal of the revised Erosion Control Plan.
- D. The Contractor shall ensure that all necessary pollution control equipment, supplies, or materials are available to implement the Plan.

3.05 FINES

- A. Contractor shall be responsible for all fines incurred from non-compliance with regulations of governing authorities.

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Product requirements; product selection; product options and substitutions; quality assurance; delivery, handling, and storage; and manufacturer's instructions.
- B. Related section:
 - 1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
 - 2. It is the CONTRACTOR's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of CONTRACTOR's Work.
 - 3. The following Sections are related to the Work described in this Section. This list of Related Sections is provided for convenience only and is not intended to excuse or otherwise diminish the duty of the CONTRACTOR to see that the completed Work complies accurately with the Contract Documents.
 - a. Section 02820 – Cantilever Slide Gates.

1.02 DEFINITIONS

- A. Execution: Inclusive of performance, workmanship, installation, erection, application, field fabrication, field quality control, and protection of installed products.
- B. Products: Inclusive of material, equipment, systems, shop fabrications, mixing, source quality control.

1.03 PRODUCT REQUIREMENTS

- A. Comply with Specifications and referenced standards as minimum requirements.
- B. Provide products by same manufacturer when products are of similar nature, unless otherwise specified.

1.04 PRODUCT SELECTION

- A. When products are specified by standard or specification designations of technical societies, organizations, or associations only, provide products which meet or exceed reference standard and Specifications.
- B. When products are specified with names of manufacturers but no model numbers or catalog designations, provide:
 - 1. Products by 1 of named manufacturers which meets or exceeds Specifications.
 - 2. Accepted or equal.

- C. When products are specified with names of manufacturers and model numbers or catalog designations, provide:
 - 1. Products with model numbers or catalog designations by one of named manufacturers.
 - 2. Accepted or equal.
- D. When products are specified with names of manufacturers, but with brand or trade names, model numbers, or catalog designations by one manufacturer only, provide:
 - 1. Products specified by brand or trade name, model number, or catalog designation.
 - 2. Products by one of named manufacturers proven in accordance with requirements for or equals to meet or exceed quality, appearance and performance of specified brand or trade name, model number, or catalog designation.
 - 3. Accepted or equal.
- E. When Products are specified with only one manufacturer followed by "or Equal," provide:
 - 1. Products meeting or exceeding Specifications by specified manufacturer.
 - 2. Accepted or equal.

1.05 QUALITY ASSURANCE

- A. Employ entities that meet or exceed specified qualifications, to execute the Work.
- B. Inspect conditions before executing subsequent portions of the Work. Accept responsibility for correcting unsatisfactory conditions upon executing subsequent portions of the Work.

1.06 DELIVERY, HANDLING, AND STORAGE

- A. Prepare products for shipment by:
 - 1. Tagging or marking products to agree with delivery schedule or shop drawings.
 - 2. Including complete packing lists and bills of material with each shipment.
 - 3. Packaging products to facilitate handling and protection against damage during transit, handling, and storage.
- B. Transport products by methods that avoids product damage. Deliver products in undamaged condition in manufacturer's unopened containers or packaging.
- C. Upon delivery, promptly inspect shipments. Verify compliance with Contract Documents, correct quantities, and undamaged condition of products. Immediately store and protect products and materials until installed in Work.
- D. Provide access for inspection.

1.07 MANUFACTURER'S INSTRUCTIONS

- A. Deliver, handle, store, install, erect, or apply products in accordance with manufacturer's instructions, Contract Documents, and industry standards.
- B. Periodically inspect to assure products are undamaged and maintained under required conditions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SUMMARY

This Section includes a description of procedures to be followed and related work required to accomplish an orderly transfer of Project deliverables from the Contractor to the Owner.

1.02 DEFINITIONS

- A. Punch List: The stated qualification accompanying either the Engineer's Certificate of Substantial Completion or the Certificate of Final Payment, or any list of construction items found to be deficient or incomplete through review of the Work by Engineer and communicated in writing to Contractor at any time during the Contract Period.
- B. Substantial Completion: When the work is ready for its intended use.
- C. Record Drawings: Drawings showing changes made during actual construction.

1.03 SUBMITTALS

A. SUBSTANTIAL COMPLETION

- 1. Contractor to notify Engineer in writing that the Contractor considers the Work as a whole to be in Substantial Completion and request for a Substantial Completion inspection.
- 2. Record Drawings submitted to Engineer with accurate representation of all changes, as approved.

B. FINAL COMPLETION

- 1. Contractor to notify Engineer in writing that the Contractor considers the Work to have progressed to final completion.
- 2. Certification that all subcontractors and suppliers have been paid.
- 3. Submit to Engineer letter(s) from Contractor's bonding agent(s) authorizing Owner to make final payment to the Contractor identifying the bonding agent's full approval for such actions.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SUBSTANTIAL COMPLETION, ADJUSTMENT AND RELEASE OF RETAINAGE

- A. When the Work is found to be in a state of Substantial Completion with stated qualifications:
 - 1. Engineer will determine the value of the punch list work using either Project approved schedule of values or other method at its discretion.
 - 2. The value of incomplete work will be multiplied by two (2) and retainage reduced to that amount.
- B. No partial payments of the Substantial Completion retainage will be allowed.
- C. The Substantial Completion retainage will be released with final payment.

3.02 INSPECTION FOR FINAL ACCEPTANCE AND PAYMENT

- A. When the Work on the Punch List(s) have been completed, and Contractor considers the Work of the entire Project is complete, he shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Work is completed and ready for final inspection.
 - 5. Certification that all subcontractor and suppliers have been paid.
- B. Engineer will make an inspection with the Contractor to verify the status of completion within 5 calendar days after receipt of such certification.
- C. Should Engineer consider that the Work is incomplete or defective the following actions will occur:
 - 1. Engineer: Notify the Contractor in writing within 5 calendar days, listing the incomplete or defective work.
 - 2. Contractor: Remedy the stated deficiencies, and send a second written certification to Engineer that the Work is complete.
 - 3. Engineer will re-inspect the Work.
- D. When Engineer finds the Work acceptable in accordance with the Contract Documents: Engineer requests Contractor to make closeout submittals.

3.03 FINAL APPLICATION FOR PAYMENT

- A. Complete demobilization prior to submitting final application for payment.
- B. Submit final application for payment in accordance with procedures and requirements stated in the Conditions of the Contract.
- C. Submit Certificate of Compliance Form 1700-A.
- D. Engineer will review application and if approved recommend final payment within 5 calendar days of receipt of application.

01700-A
CERTIFICATE OF COMPLIANCE FORM

WRRF Access Entry Systems

TO: Clackamas County Service District No. 1 & Tri-City Service District

PROJECT NO: P xxxxxx

CONTRACT FOR (Revised Total):

CONTRACT DATE:

I (We) hereby certify that all work has been performed and materials supplied in accordance with the Plans, Specifications, and Contract Documents for the above work, and that:

- A. No less than prevailing rates of wages as ascertained by the governing body of the contracting agency have been paid to laborers, workmen, and mechanics employed on this work.
- B. There have been neither unauthorized substitutions of subcontractors nor have any subcontracts been entered into without the name of the subcontractors having been submitted to the Engineer prior to the start of such subcontractor work.
- C. No subcontract was assigned or transferred or performed by any subcontractor other than the original subcontractor, without prior notice having been submitted to the Engineer together with the names of all subcontractors.
- D. All claims for material and labor and other services performed in connection with these Specifications have been paid. No further claims will be made and all liens have been satisfied and lifted.
- E. All monies due the State Industrial Accident Funds, the State Unemployment Compensation Trust Fund, the State Tax Commission, hospital associations, and/or others have been paid.

CERTIFIED BY:

CONTRACTOR

DATE

END OF SECTION

SECTION 01738

SELECTIVE SITE DEMOLITION

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Removal of existing access gates, chain link fencing, concrete pads, and any associated materials necessary to install the new gates, electrical conduits, etc.
- B. Related sections:
 - 1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
 - 2. It is the CONTRACTOR's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of CONTRACTOR's Work.

1.02 SUBMITTALS

- A. Submittals for information only:
 - 1. Demolition procedures and operational sequence.

1.03 REGULATORY REQUIREMENTS

- A. Dispose of debris in accordance with governing regulatory agencies.
- B. Comply with applicable air pollution control regulations.

1.04 ENVIRONMENTAL REQUIREMENTS

- A. Do not interfere with use of adjacent buildings or facilities. Maintain free and safe passage to and from.
- B. Promptly repair damage.
- C. Provide erect and maintain barricades, lighting, guardrails, and protective devices as required to protect building occupants, workers, and adjoining property.

1.05 MAINTAINING TRAFFIC

- A. Conduct operations with minimum interference to roadways.
- B. Maintain access to sludge trucks that transport waste liquid from the Tri-City facility on a daily basis. At the Kellogg facility, there is only the single entry gate which will require the Contractor to coordinate all sequencing of demolition and installation with operations staff.

1.06 MATERIALS

- A. CONTRACTOR shall furnish all materials, tools, equipment, devices, appurtenances, facilities, and services required for performing selective demolition work:
- B. Provide and maintain protective devices to prevent injury from falling objects.
- C. Locate guardrails in accordance with OSHA where necessary to protect workers. Post clearly visible warning signs.
- D. Cause as little inconvenience to adjacent plant operating areas as possible.

1.07 DEMOLITION

- A. Demolish designated portions of structures and appurtenances in orderly and careful manner.
- B. Assume possession of demolished materials, unless specified otherwise.
- C. Prevent airborne dust. Use water or dust palliative when necessary. Provide and maintain hoses and connections to water main or hydrant.
- D. Remove demolished materials, tools, and equipment upon completion of demolition.

1.08 REPAIR

- A. Repair damage caused by demolition and installation of the slide gates.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 02221

TRENCHING, BACKFILLING, AND COMPACTING

PART 1 GENERAL

1.01 SUMMARY

This Section specifies requirements for trenching, backfilling, and compacting of trenches for conduit installation.

1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 16100, *Basic Materials and Methods*

1.03 REFERENCES

- A. AASHTO T-99
- B. Oregon Department of Transportation (ODOT), *Standard Specifications for Highway Construction*

PART 2 PRODUCTS

2.01 BEDDING AND BACKFILL MATERIALS

- A. Conduit Base and Pipe Zone: Clean approved sand.
- B. Select Material for Trench Backfill and Aggregate Base within pavement areas: 3/4-inch minus crushed gravel or rock, reasonably even graded from coarse to fine, in accordance with the Oregon State Highway Commission Standard Specification for Highway Construction for Aggregate and Aggregate base, Section 02630.10.

PART 3 EXECUTION

3.01 TRENCHING.

- A. Trench Width: Trench width at the ground surface shall kept to a minimum necessary to install the conduits in a safe manner.
- B. Trench Backfill at Pipe Zone: The pipe zone is defined as extending from the bottom of bedding in the trench (3 inches below invert) to a point 3 inches above the outside of the pipe, and for the full width of the trench. Backfill the entire pipe zone with clean sand.

3.02 BACKFILLING AND COMPACTION

- A. Trench Backfill Above Pipe Zone shall be $\frac{3}{4}$ inch minus to the base of the asphalt concrete trench patch. In lawn areas, backfill with clean sand to within 3" of the ground surface and install topsoil. .

3.03 EXCESS EXCAVATED MATERIAL

Haul and dispose of all excess excavated material. The Contractor shall make arrangements for the disposal of the excavated material and shall bear all costs and retain any profit incidental to such disposal. The Contractor shall comply with all provisions of any agency having jurisdiction.

3.04 GENERAL COMPACTION REQUIREMENTS

- A. Backfill within pavement areas shall be maintained at proper moisture content so that the material is within $5\% \pm$ of optimum moisture.
- B. Maximum density and optimum moisture will be determined using Method A of AASHTO T-99. All listed compaction levels are based on the T-99 compaction requirements unless otherwise stated.

3.05 MECHANICAL COMPACTION REQUIREMENT

- A. The method of compaction shall be at the Contractor's option, unless otherwise noted.
- B. Unless otherwise noted, the Contractor shall be responsible to provide the proper size and type of compaction equipment and select the proper method of utilizing said equipment to attain the required compaction density without damage to pipe, adjacent utilities and properties.

END OF SECTION

SECTION 02500

STREET RESTORATION

PART 1 GENERAL

1.01 DESCRIPTION

This Section specifies pavement patching within the limits of open cut improvements to install electrical or communication conduits across the streets that are currently paved with asphalt concrete. The work includes construction of aggregate base, sawcutting along trench edges, temporary asphalt concrete pavement and permanent asphalt concrete pavement.

1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 01300, *Submittals Procedure*
- B. Section 02221, *Trenching, Backfilling and Compaction*

1.03 REFERENCES

This Section incorporates by reference the following documents:

- A. ODOT/APWA, 2010 Standard Specifications for Construction.

1.04 SUBMITTALS

- A. Procedures: Section 01300.
- B. Shop drawings and equipment data required:
 - 1. Certified test results that show materials meet ODOT requirements.
 - 2. Manufacturer's product data showing conformance to the specified products.

1.05 QUALITY CONTROL

Testing will be conducted by the Contractor in accordance with ODOT/APWA 2010 Standard Specifications to determine compliance with the specified degree of compaction and asphalt content and compressive strength of the concrete.

1.06 GENERAL PAVING REQUIREMENTS

- A. Scope of Road Restoration:

1. Includes, but not limited to, cutting of trench with tee-cut, proper backfill and compaction of pavement and base, shaping and general restoration of the roadway including pavement and all other requirements of this section.

PART 2 PRODUCTS

2.01 AGGREGATE BASE

- A. Base Course Aggregate. Aggregate for the base course of the street shall be $\frac{3}{4}$ " – 0" and shall conform to the applicable portions ODOT/APWA 2010 Standard Specifications for course aggregate base material.

2.02 TACK COAT

Emulsified asphalt RS-1, CRS-1, or approved equal.

2.03 ASPHALT CONCRETE (TEMPORARY AND PERMANENT)

- A. Permanent trench patch using asphalt concrete shall be Level 2, 12.5 mm mix, Dense graded HMAC conforming to ODOT/APWA 2010 Standard Specifications.

PART 3 EXECUTION

3.01 PAVEMENT REMOVAL

A. General:

1. Conform to the requirements of the referenced standards.
2. Sawcut edges along trenches prior to pavement removal. Prior to placement of permanent trench patch, Contractor shall T-cut asphalt concrete a second time an additional 12-inches back from original cut using a mechanical sawing device requiring a blade with teeth. Final limits of second removal of asphalt shall be as determined by the Engineer and may be greater than 12-inches in places where the existing edges exhibit pavement failure.

3.02 AGGREGATE BASE PLACEMENT

Base Aggregate Course. Workmanship in manufacturing, placing, compacting, and maintaining base, shall be in conformance with the requirements of the ODOT/APWA 2010 Standard Specifications section 00749.

3.03 ASPHALT PAVEMENT PLACEMENT – (PERMANENT TRENCH PATCH)

- A. Asphalt concrete consisting of a permanent trench patch shall not be placed when the atmospheric temperature is lower than 50 degrees Fahrenheit, during rainfall, or when the surface is frozen or wet. Exceptions will be permitted only in special cases and only with prior written approval of the Engineer.
- B. Tack coat all surfaces of existing pavement along with edges of manhole and clean out frames, inlet boxes and like items. When rate is not specified, asphalt will be applied at the rate of 0.1 gallon per square yard.
- C. Contractor shall place the asphaltic concrete over the trench following preparation using a tee-cut to a minimum depth of 3-inches after removal and disposal of any temporary asphalt pavement. The Contractor shall spread and level the asphaltic concrete and compact it by rolling or by use of mechanical vibratory or impact tamper where rolling is impossible. Power rollers shall be capable of providing compression of 250 pounds per inch of width. The density of asphalt concrete shall be at least 92% of Rice theoretical maximum density.
- D. Meet lines shall be straight and the edges vertical where pavement is sawcut. The edges of all asphalt shall be painted with hot liquid asphalt at a rate of 0.06 to 0.12 gallons per square yard prior to placing asphalt concrete. Jagged edges from previously removed asphalt shall be removed through additional cutting in straight lines prior to final patching. Upon completion of patching, all joints shall be sealed with hot liquid asphalt and choked with sand.
- E. After completion of the paving, clean the entire roadway surface by brooming.
- F. Hot liquid asphalt and choke with sand all edges of asphalt concrete patch following installation of final lift.
- G. Match thickness of existing asphalt concrete section with a minimum thickness of 4 inches.

3.04 TEMPORARY TRENCH PATCH

Temporary asphalt concrete shall be placed over trenches at the end of the day when they are open to traffic or as required by the Engineer.

END OF SECTION

SECTION 02815
CHAIN-LINK FENCES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Steel chain-link fabric.

1.02 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Show locations, components, materials, dimensions, sizes, weights, finishes of components, installation and operational clearances and details of post anchorage and attachment and bracing. Fencing shall be standard 6'-0" height with barbed wire extension where shown on drawings.

1.03 RELATED SECTIONS

A list of section of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 02820, *Cantilever Slide Gates and Operators*
- B. Section 03300, *Cast-in-Place Concrete*

PART 2 - PRODUCTS

2.01 CHAIN-LINK FENCE FABRIC

- A. Steel Chain-Link Fence Fabric: Comply with Chain Link Fence Manufacturer's Institute's "Product Manual."
 - 1. Mesh and Wire Size: The woven wire fabric shall be 0.148-inch diameter galvanized steel wire conforming to the requirements of AASHTO M 279, Class 3 coating. Use No. 9 gauge x 2-inch mesh.
- B. Barbed Wire: The barbed wire shall be 3-strand with four-point barbs spaced at 5-inch intervals conforming to the requirements of AASHTO M 280. Galvanizing shall be Class 3. All barbed wire installed shall be new and the same diameter unless otherwise approved.

2.02 INDUSTRIAL FENCE FRAMING

- A. Round Steel Pipe: Standard weight, Schedule 40, galvanized steel pipe complying with ASTM F 1083. ASTM F 1043, Material Design Group 1A, external and internal coating

Type A, consisting of not less than 1.8-oz./sq. ft. zinc; and line, end, corner, and pull posts and top rail as required for Heavy Industrial Fence. Posts for support of the new gates shall be either 4-inch or 6-5/8" O.D Schedule 40 galvanized steel pipe where shown on the drawings. Line posts shall be 2-inch O.D. Schedule 40 galvanized steel pipe.

- B. Post Brace Rails: Match top rail for coating and strength and stiffness requirements. Provide brace rail with truss rod assembly for each gate, end, and pull post. Provide two brace rails extending in opposing directions, each with truss rod assembly for each corner post and for pull posts. Provide rail ends and clamps for attaching rails to posts.
- C. Top Rails: Fabricated for expansion-type coupling.
- D. Intermediate Rails: Match top rail for coating and strength and stiffness requirements.
- E. Bottom Rails: Match top rail for coating and strength and stiffness requirements.

2.03 CAST-IN-PLACE CONCRETE

- A. General: Comply with ACI 301 for cast-in-place concrete; materials consisting of Portland cement complying with ASTM C 150, aggregates complying with ASTM C33, and potable water. Concrete shall be not less than 3000 psi compressive strength (28 days), 3-inch slump and 1-inch maximum size aggregate.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated. Do not begin installation before final grading is completed, unless otherwise permitted by Engineer.
- B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacing indicated, in firm, undisturbed or compacted soil. Posts that are located within the new modular block wall shall be extended into native ground to provide a firm foundation. This will require drilling through the block wall to reach sufficient depth for placement of the concrete foundation.
- C. Post Setting: Hand-excavate holes for post foundations in firm, undisturbed or compacted soil. Minimum diameter of 12-inches, except gate hinge posts which shall be a minimum of 16-inches. Minimum footing depth shall be 36 inches. Concrete shall be worked thoroughly to remove voids and crowned to carry water away from the post. Verify that posts are set plumb, aligned and at correct height and spacing until concrete is sufficient cured.
- D. Terminal Posts: Locate terminal end, corner and gateposts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment.
- E. Line Posts: Space posts uniformly at 10 feet o.c. unless otherwise approved by Engineer.
- F. Intermediate Rails: Install in one piece at post-height center span, spanning between posts, using fittings, special offset fittings and accessories.

- G. Top and Bottom Rails: Install spanning between posts, using fittings and accessories.
- H. Barbed Wire: Attach barb wire to each post according to recognized standard practice for fence construction and as shown or directed.
- I. Tie Wires: Attach wire to chain-link fabric per ASTM F 626. Tie fabric to line posts at maximum interval of 12-inches o.c. and to braces at maximum interval of 24-inches o.c.

END OF SECTION

SECTION 02820

CANTILEVER SLIDE GATES

PART 1 - GENERAL:

1.01 DESCRIPTION

The work in this section shall include furnishing all labor, materials, equipment and appliances necessary to complete installation of an industrial cantilever slide gate system in strict accordance with this specification section and drawings for the Tri-City WRRF and Kellogg WRRF. The gate and operator are not required to be provided by a single manufacturer. Components (operator from one source and gate panel from another) assembled at the job site to form a system is acceptable.

1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- B. Section 02815, *Chain Link Fencing*
- C. Section 03300, *Cast-in-Place Concrete*
- C. Section 16000, *Electrical Service*

1.03 REFERENCES

- A. UL 325 Gate Operator Requirements. See 2.01 B.
 - 1. Automated / operated vehicular gates are not to be used for pedestrian traffic. Separate pedestrian gates must always be provided if pedestrian traffic is expected.
- B. ASTM F2200 – Standard Specification for Automated Vehicular Gate Construction. See 2.01 B.
- C. ASTM F 1184 – Standard Specification for Industrial and Commercial Horizontal Slide Gates, Type II, Class 2. See 3.02 B.
- D. American Welding Society AWS D1.2 Structural Welding Code.

1.04 SUBMITTAL

- A. Product Data:
 - 1. Provide manufacturer's catalog cuts with printed specifications and installation instructions.

2. Deliver two copies of operation and maintenance data covering the installed products. Manual to include parts list showing manufacturer's names and part numbers for the gate operator.
- B. Shop Drawings:
1. Supply shop drawings showing the relationship of operating systems with gate components, including details of all major components.
 2. Include complete details of gate construction, gate height and post spacing dimensions.
- C. Certification of Performance Criteria:
1. Manufacturer of gate system shall provide certification stating the gate system includes the following material components that provide superior performance and longevity. Alternate designs built to minimum standards that do not include these additional structural features shall not be accepted.
 - a. Gate track system shall be keyed to interlock into gate frame member (providing 200% additional strength when compared to weld only keyless systems). When interlocked with and welded to the "keyed" frame top member, gate track forms a composite structure.
 - b. Gate shall have a minimum counterbalance length of 50% opening width which provides a 36% increase in lateral resistance (when compared to ASTM minimum of 40% counterbalance). Counterbalance section shall be filled with fabric or other specified material if required to operate properly.
 - c. To provide superior structural integrity, intermediate vertical members shall be used - with spacing between verticals to be less than 50% of the gate frame height.
 - d. Entire gate frame (including counterbalance section) shall include 2 adjustable stainless or galvanized steel cables (minimum 3/16") per bay to allow complete gate frame adjustment (maintaining strongest structural square and level orientation).
 - e. Gate truck assemblies shall be tested for continuous duty and shall have precision ground and hardened components. Bearings shall be pre-lubricated and contain shock resistant outer races and captured seals.
 - f. Gate truck assemblies shall be supported by a minimum 5/8" plated steel bolt with self aligning capability, rated to support a 2,000 # reaction load.
 - g. Hanger brackets shall be hot dipped galvanized with a minimum 3/8" thickness that is also gusseted for additional strength.
- D. Certifications:
1. Gate in compliance with ASTM F 2200, Standard Specification for Automated Vehicular Gate Construction per section 1.03 B.
 2. The gate operator shall be in compliance with UL 325 as evidenced by UL listing label attached to gate operator. See 1.03 A

3. Gate manufacturer shall provide independent certification as to the use of a documented Welding Procedure Specification and Procedure Qualification Record to insure conformance to the AWS D1.2 welding code. See 1.03 D.
4. Manufacturer shall supply gate design performance certification as per section 1.04 C.

PART 2 - PRODUCTS

2.01 CANTILEVER SLIDE GATE SYSTEM MANUFACTURERS

- A. The cantilever sliding gate system shall be manufactured by Tymetal Corp., 678 Wilbur Avenue, Greenwich, NY 12834 - (800) 328 – 4283 , Ameristar, 1555 N. Mingo, Tulsa, Oklahoma - (888)333-3422 or approved equal.
- B. Gate manufacturer shall certify gate is manufactured in accordance with ASTM F2200, Standard Specification for Automated Vehicular Gate Construction and the operators are Post -2016 UL 325 compliant for a Class III System (i.e. Industrial/Limited Access Vehicular Gate Operator) These locations are not intended to service the General Public.

2.02 VEHICULAR SLIDE GATE OPERATOR

- A. The slide gate operator shall open and close cantilever gates, to provide convenience and security. This model is adapted to function with most accessories including: radio controls, electro-mechanical locks, single and three button control stations, digital keypads, coded cards, sensing loops, telephone entry systems, and revenue control equipment. The operators shall utilize 115 Volt AC single phase power. Control voltage in each case is 5 Volt DC.
- B. The gate operator for Tri-City shall be shall be a Model TYM – 2000 APeX Controller supplied by Tymetal, SlideDriver 15 by HySecurity or approved equal. The gate operator for Kellogg shall be a Model TYM-1000 APeX Controller supplied by Tymetal or Slidesmart DC15 with Smart DC Controller by HySecurity or approved equal.
- C. Capacity:
 1. The gate operator shall be capable of operating the final gates made for both Tri-City and Kellogg. Tri-City has 208 volt single phase power available and therefore gate manufacturer shall provide a suitably sized mechanism to open/close the gates.
- D. The gate operator shall be UL 325 compliant for Class III operation.
- E. Design Criteria:
 1. Operation for the Kellogg installation shall be by means of 1/2 horsepower single phase instant reversing motors, transferring power to a four inch diameter pulley, to a right angle oil bath gear reducer using another four inch diameter pulley and V-belt. Power is then transferred through a sliding collar disconnect system to the output drive shaft equipped with a #40 drive sprocket and roller chain which attaches to the gate with heavy-duty gate attachment brackets. Intermediate chain supports with anti-catch design shall also be supplied.
 2. Operation for the Tri-City installation shall be by means of 1 horsepower single phase instant reversing motor, transferring power to a four inch diameter pulley, to a right angle oil bath gear reducer using another four inch diameter pulley and V-belt.

Power is then transferred through a sliding collar disconnect system to the output drive shaft equipped with a #40 drive sprocket and roller chain which attaches to the gate with heavy-duty gate attachment brackets. Intermediate chain supports with anti-catch design shall also be supplied

3. The operator shall open the gate at a rate of approximately 1 foot per second.
4. The #40 roller chain shall be coated with zinc, nickel or other approved corrosive resistant chain coating.
5. Alternative operation for the Tri-City installation shall be by means of a 1 horsepower single phase motor operating a hydraulic system to slide the gate.

F. Components:

1. Standard mechanical components shall include as a minimum.
 - a. 3/16 inch thick, weather resistant UV-stabilized polyethylene one piece cover which is fully removable and lockable.
 - b. Heavy-duty, plated frame with mounting legs for pad mounting standard.
 - c. 20:1 right-angle oil bath gear reducer.
 - d. One inch solid steel output drive shaft.
 - e. Spring loaded manual disconnect.
 - f. Steel "critter" plate to prevent entry of ground pests.
2. Standard electrical components shall include as a minimum:
 - a. Appropriately sized motor with thermal overload protection to meet requirements for gate operation based upon weight of fabricated structure.
 - b. Solid state logic controls featuring 15 diagnostic L.E.D. indicators and auto-close timer (1 second to 9 minutes).
 - c. Inherent, fully adjustable motor over-current sensing to detect obstructions via precision 24 turn potentiometer, with separate adjustments for opening and closing directions.
 - d. Controller housed in zinc plated control box with separate box provided for connection of field power.
 - e. Power On/Off switch.
 - f. Contacts for opening, closing and reversing accessories, as well as contact and non-contact obstruction sensing devices. 24 VAC and 24 VDC available on terminal strip to power accessory devices, provided by non-circuit board mounted transformer with minimum 40VA rating.
 - g. Four adjustable limits with precision snap-action type limit switches to control gate position, mounted inside a separate four switch limit box.
 - h. Master/slave or stand alone capable with dip switch selection. Three wire twisted pair shielded cable required.

G. Access Control for Primary and Secondary Devices to meet UL 325 Entrapment Protection Device Monitoring

1. Provide one continuous length of 18GA XLP insulated vehicle detection loop, 19 strand wire through loop turns and lead-in. Machine twisted lead-in with a minimum of 12 turns per foot at Kellogg. Layout loop shall be based upon a roadway clear opening of 19 feet. Incorporate existing detection loop system at Tri-City into new gate system.
2. Provide Pressure Sensing Edge on all new gates at Kellogg and Tri-City. MillerEdge® Model #ME123 or approved.
3. Provide non-contact photoelectric sensor on each new gate at Kellogg and Tri-City. IRB-MON Safety Photo Beam by EMX Industries or approved.

2.03 CANTILEVER SLIDE GATE

A. Gate Width:

1. Gate width shall be as shown on the plans. This includes a clear opening of approximately 26' wide at Kellogg and approximately 32'-6" wide at Tri-City. Contractor to verify final widths in field before ordering gates.

B. Gate Frame:

1. The gate frame shall be fabricated from 6063-T6 aluminum alloy extrusions with a yield strength of 25,000 PSI. The top member shall be a 3" x 5" aluminum structural channel/tube extrusion weighing not less than 3.0 lb/lf. To maintain structural integrity this frame member shall be "keyed" to interlock with the "keyed" track member. If fabricated as a single horizontal piece, the bottom member shall be a 2" x 5" aluminum structural tube weighing not less than 2.0 lb/lf. If fabricated in two horizontal pieces, the bottom member shall be a 5" aluminum structural channel weighing not less than 2.6 lb/lf. When the gate frame is manufactured in two horizontal pieces or sections, they shall be spliced in the field (the gate frame shall be fabricated in one or multiple sections depending on size requirements or project constraints).
2. Vertical Members:
 - a. The vertical members at the ends of the gate frame for Kellogg shall be "P" shaped in cross section with a nominal base dimension of no less than 2" x 2" and weighing not less than 1.6 lb/lf. Major 2" x 2" vertical members weighing not less than 1.1 lb/lf shall separate each bay and shall be spaced at less than gate height intervals.
 - b. The vertical members at the ends of the opening portions of the frame for Tri-City shall be "P" shaped in cross section with a nominal base dimension of no less than 2" x 2" and weighing not less than 1.6 lb/lf. Major 2" x 2" vertical members weighing not less than 1.1 lb/lf shall separate each bay and shall be spaced at less than gate height intervals.
 - c. Intermediate 1" x 2" vertical members weighing not less than 0.82 lb/lf shall alternate between 2" x 2" major members.

C. Splicing:

1. A 1/4" x 5" x 24" galvanized steel splice plate shall be used to secure the two bottom channel members together utilizing eight (8) plated carriage bolts with lock nuts at Tri-City. The top members will be spliced together using a 1/4" x 2" x 24" aluminum splice plate secured with six (6) drive rivets on one side and welded to the top mem-

ber no the other side. The track is overlapped onto the opposing section in an alternating fashion, interlocking with the top primary member.

D. Gate Track:

1. The gate frame shall have a separate semi-enclosed “keyed” track, extruded from 6005A-T61 or 6105-T5 aluminum alloy, weighing not less than 2.9 lb/lf. The track member is to be located on only one side of the top primary for Kellogg. The track members are to be located on each side of the top member for Tri-City. When interlocked and welded to the “keyed” top member, it forms a composite structure with the top of the gate frame. Welds to be placed alternately along the top and side of the track at 9" centers with welds being a minimum of 2" long.

E. All welds on the gate frame shall conform to Welding Procedure Specification and Procedure Qualification Record to insure conformance to the AWS D1.2 Structural Welding Code. All individual welders shall be certified to AWS D1.2 welding code. See 1.02 D.

F. Gate Mounting:

1. The gate frame is to be supported from the track by two (2) swivel type, self-aligning, 4-wheeled, sealed lubricant, ball-bearing truck assemblies at Kellogg and four (4) swivel type, self-aligning 4-wheel, sealed lubricant ball-bearing truck assemblies at Tri-City.
2. The bottom of each support post shall have a bracket equipped with a pair of 3" UHMW guide wheels. Wheel cover protectors shall be included with bottom guides to comply with UL325.
3. Gap protectors shall be provided and installed, compliant with ASTM F 2200-05.

G. Diagonal Bracing:

1. Diagonal "X" bracing of 3/16" or 1/4" diameter galvanized steel cable shall be installed throughout the entire gate frame.

H. The gate shall be completed by installation of approved filler as specified.

1. Chain Link: 2" x 2" x 9 gauge aluminized steel chain link fabric shall extend the entire length of the gate (if operated gate, counterbalance must also have fabric to prevent reach through and comply with ASTM F2200, see 1.04 C.1) Fabric shall be attached at each end of the gate frame by standard fence industry tension bars and tied at each 2" x 2" vertical member with standard fence industry ties. ASTM F2200 requires attachment method that leaves no leading or bottom edge protrusions (cannot exceed 0.5 inch).

I. Posts:

1. Refer to drawings for location of support posts for Kellogg and Tri-City. Tri-City shall have minimum 4" O.D. round Schedule 40 steel posts and Kellogg shall have a 6 5/8" O.D. round Schedule 40 steel post. Gate posts shall be galvanized and supported in concrete footings.

J. Finish:

1. Gate to be mill finish aluminum.

2.04 WARRANTY

- A. The cantilever slide gate and operator system shall be warranted by the manufacturer against manufacturing defects for a period of (3) three years from date of sale. The truck assembly shall be warranted against manufacturing defects by the manufacturer for a period of (5) five years from date of sale.

PART 3 - EXECUTION

3.01 SITE INSPECTION

- A. Examine final grades and installation conditions.
- B. Do not begin work until all unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Install equipment of this section in strict accordance with the company's printed instructions unless otherwise shown on the contract drawings.
- B. The gate and installation shall conform to ASTM F 1184 standards for aluminum cantilever slide gates, Type II, Class 2. See 1.03 C.
- C. The gate system is to comply with ASTM F2200 and UL 325. See 1.03 B and 1.03 A.
- D. Obstruction Sensing Systems:
 - 1. The inherent motor current sensors are part of the gate operator system and may not be removed or bypassed.
 - 2. The installing contractor shall be responsible to ensure that appropriate external secondary entrapment protection devices be installed for the specific site conditions to protect against all potential entrapment zones for the identified Class III designation.

3.03 SYSTEM ACCEPTANCE & VALIDATION

- A. Acceptance Test:
 - 1. Test each system function.
 - 2. Supply all equipment necessary for system adjustment and testing.
- B. Test and Explain Safety Features:
 - 1. Each system feature and device is a separate component of the gate system.
 - 2. Read and follow all instructions for each component.
 - 3. Ensure that all instructions for mechanical components, safety devices and the gate operator are available for everyone who will be using the gate system.
 - 4. The warning signs shipped with the gate operator must be installed in prominent position on both sides of the gate.
- C. System Validation:
 - 1. The complete system shall be adjusted to assure it is performing properly.
 - 2. Ensure the owner is clear with regard to the safety points concerning the basic operational guidelines of the safety features of the gate operator system listed in the operator supplied manual.

END OF SECTION

SECTION 02935

RESTORATION OF LANDSCAPING

PART 1 GENERAL

1.01 DESCRIPTION

This section covers the work necessary for restoration within the project limits of grass establishment, including furnishing and delivering material, seeding, and maintenance of lawns. Provide all labor, materials, tools, and equipment as required to restore all disturbed areas by construction as called for on the drawings or as directed by the Engineer.

1.02 RELATED SECTIONS

- A. Section 02221, *Trenching, Backfilling and Compaction*.
- B. Section 02500, *Street Restoration*.

PART 2 PRODUCTS

2.01 GRASS SEED / FERTILIZER / MULCH

- A. Deliver all grass and legume seed in standard, sealed containers. Label each container with the following:
 - 1. The kind and variety of the seed.
 - 2. The kind and variety of each seed in a mixture, of 3% or more.
 - 3. Percent of germination (each kind).
 - 4. Percent of pure seed (each kind).
 - 5. Percent and kind of other crop.
 - 6. Percent of inert (not to exceed 1.5%)
 - 7. Percent of weed seed.
 - 8. Percent of noxious weed seed.
 - 9. Date of test.
- B. All grass and legume seed shall be tagged "Oregon Certified Seed" and shall be from the most recent crop available. Test and label each kind according to the Oregon Seed Law and Federal Seed Act. The seed shall have been tested within 9 months of the delivery date and shall not be sprouted, moldy, or show evidence of having been wet or otherwise damaged.
- C. The minimum requirements of Oregon certified seed are as published in the current year's Oregon Certified Seed Handbook available from County Extension Offices or Oregon State University. Seed that is not labeled or that does not conform to specifications will be rejected and shall be replaced at the Contractor's expense.

- D. Fertilizer shall be commercial grade 5-20-10.
- E. Bark mulch for hydroseeding shall be natural wood cellulose fiber, undyed, at the rate of 1500 pounds per acre.

PART 3 EXECUTION

3.01 GENERAL

- A. All work specified in this section shall be accomplished by an experienced Landscape Contractor.
- B. All lawn areas disturbed by the construction impacts shall be restored using seed (80% Perennial Ryegrass / 20% Creeping Red Fescue, or approved alternative mixture) and imported topsoil in the top 3 inches of the disturbed areas.
- C. For the seeding method used, the Contractor shall abide by the following criteria:
 - 1. Seeding: Not earlier than August 15th nor later than November 15th for establishment without supplemental water.
 - 2. Soil Preparation: The Contractor shall cultivate soil within lawn areas to a minimum depth of 2 inches and bring surface to a true and even grade as approved by the Engineer. Extraneous materials unearthed during cultivation shall be removed and disposed of. Seed bed shall be a minimum of one inch in depth, brought to a friable condition satisfactory for sowing seed. Seed beds shall be approved by the Engineer prior to seeding.
 - 3. Seeding and Fertilizing:
 - a. Lawn Areas - Seed mixture shall be evenly distributed over area at a rate of 8 pounds per 1,000 square feet, followed by an evenly spread application of fertilizer at rate of 15 pounds per 1,000 square feet.
 - 4. Mulching and Protection: The Contractor shall mulch all areas by spreading a uniform light cover of straw mulch over the seeded area at a rate of 50 pounds per 1,000 square feet. This work will also be required outside of the window of time allowed for seeding as a part of the erosion control plan.
 - 5. Hydroseeding may be applied as an alternative to hand application where accessible. Seed, fertilizer and mulch shall be applied in one application at the rates specified above. Add mulch and thoroughly mix with water prior to adding seed. Place the fertilizer in the hydroseeder tank no more than 30 minutes prior to application. Apply or spray the area thoroughly saturating the soil.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. All cast-in-place concrete including bases for mechanical and electrical equipment, sidewalks and walkways, and all manholes not specified to be precast.
2. Concrete shoring, formwork, patching, grouting, sealants and crack repair.
3. Concrete curing.

B. Related Sections:

1. Section 03350: Concrete Finishes

1.02 REFERENCES

A. American Concrete Institute (ACI):

- | | |
|---------|---|
| ACI 117 | Standard Tolerances for Concrete Construction and Materials |
| ACI 347 | Guide to Formwork for Concrete |
| ACI 350 | Environmental Engineering Concrete Structures |

B. American Society for Testing and Materials (ASTM) Standard Specification or Test Method:

- | | |
|------------|--|
| ASTM C33 | Concrete Aggregates |
| ASTM C39 | Compressive Strength of Cylindrical Concrete Specimens |
| ASTM C88 | Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate |
| ASTM C94 | Ready-Mixed Concrete |
| ASTM C136 | Sieve Analysis of Fine and Coarse Aggregates |
| ASTM C142 | Clay Lumps and Friable Particles in Aggregates |
| ASTM C143 | Slump of Hydraulic-Cement Concrete |
| ASTM C150 | Portland Cement |
| ASTM C156 | Water Retention by Concrete Curing Materials |
| ASTM C157 | Length Change of Hardened Hydraulic-Cement Mortar and Concrete |
| ASTM C172 | Sampling Freshly Mixed Concrete |
| ASTM C231 | Air Content of Freshly Mixed Concrete by the Pressure Method |
| ASTM C260 | Air-Entraining Admixtures for Concrete |
| ASTM C289 | Potential Alkali-Silica Reactivity of Aggregates (Chemical Method) |
| ASTM C309 | Liquid Membrane-Forming Compounds for Curing Concrete |
| ASTM C494 | Chemical Admixtures for Concrete |
| ASTM C618 | Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete |
| ASTM C881 | Epoxy-Resin-Base Bonding Systems for Concrete |
| ASTM C1077 | Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation |
| ASTM C1107 | Packaged Dry, Hydraulic-Cement Grout (Nonshrink) |
| ASTM C1240 | Use of Silica Fume as a Mineral Admixture in Hydraulic-Cement Concrete, Mortar, and Grout |
| ASTM D2419 | Sand Equivalent Value of Soils and Fine Aggregate |

C. Corps of Engineers (COE) Specifications:
COE CRD-C-572 Polyvinylchloride Waterstop

D. State of Oregon, Department of Transportation (ODOT) 2010 Standard Specifications:
Section 02001: Concrete

E. 1997 Uniform Building Code (UBC)

1.03 SUBMITTALS

A. Submit in accordance with Section 01300:

B. Product Data:

1. Concrete mix product certification: Submit certified laboratory test results that the mix proportions and materials comply with these Specifications.
 - a. Cementitious materials.
 - b. Coarse and fine aggregates.
 - c. Admixtures.
 - d. Water.
 - e. Ready-mix plant certification.
 - f. Mix designs.
 - g. Mix test results.
2. Formwork products:
 - a. Form coatings.
3. Miscellaneous products: Submit technical data including installation instructions, independent laboratory test reports (ICBO), and handling and storage instructions.
 - a. Curing materials and curing program.
 - b. Joint fillers.
 - c. Sealants.
 - d. Epoxy compounds, including adhesives and grouts.
 - e. Non-shrink grouts.
 - f. Methods and materials for concrete repairs.

1.04 QUALITY ASSURANCE

A. Construction Standard: Applicable requirements of the UBC, ACI 301, and recommendations of ACI 350.

B. Concrete Mix Designs: By an independent commercial testing laboratory, complying with ASTM C1077 and favorably reviewed by the Engineer. Concrete mix design proportions shall be established on the basis of field experience and trial mixtures with the materials to be employed in accordance with UBC Section 1905.

C. Concrete Mix Test Results:

1. Submit result statistics of satisfactory mix designs if available from prior projects. Comply with UBC Section 1905.3.

D. Concrete Tests, as Placed: None required

PART 2 - PRODUCTS

2.01 GENERAL

- A. Obtain materials from an established and experienced manufacturer or supplier. Provide new materials of first-class ingredients guaranteed to perform the service required.

2.02 CONCRETE MATERIALS

- A. Cementitious Materials:
 - 1. General: Use only one brand of each cementitious material. The color shall not significantly alter the typical grey concrete color.
 - 2. Portland Cement: ASTM C150, Type II. Comply with the requirements for low alkali cement in Table 2.
 - 3. Pozzolan: ASTM 618, Mineral Admixture Class N.
 - 4. Blended Cement: ASTM C595 Type 1P(MS).
 - 5. Flyash: ASTM C618, Class F, with the following restrictions:
 - a. Loss on Ignition: 4% maximum
 - b. SO₃ Content: 3% maximum
 - c. Moisture Content: 1% maximum
- B. Concrete Aggregates:
 - 1. General: ASTM C33:
 - a. Provide free from organic materials, waste products, clay balls, shale, and mica and thoroughly washed before use.
 - b. Provide 1-1/2-inch maximum size for all concrete on the project. For thin sections, such as slabs or walls 10 inches thick or less, or for sections that require special placement due to shape, form or congestion of reinforcing, provide 1-inch maximum size.
 - c. Provide aggregates that do not deleteriously react with the alkalis in the cement.
 - d. Grading: ASTM C136. Submit results of sieve analysis.
 - e. Reactivity: ASTM C289. Submit graphical data showing compliance.
 - 2. Coarse Aggregates:
 - a. Provide clean, hard, durable gravel, crushed gravel, crushed rock, or combinations.
 - b. Deleterious substances: Submit compliance with ASTM C33, Table 3 and as follows:
 - 1) Clay lumps and friable particles: ASTM C142. Not more than 5%.
 - 2) Abrasion: ASTM C131. Not more than 45%.
 - 3) Soundness: ASTM C88. Not more than 10%.
 - 4) Cleanness: CALTRANS Test 227. For three tests, not less than 70, with an average greater than 75.
 - c. Do not use aggregate containing more than 10% of inferior materials, flat or elongated particles, cracked or laminated rock, or rock that can be readily broken after immersion in water for one hour.
 - 3. Fine Aggregate:
 - a. Provide natural sand or a combination of natural and manufactured sand, of siliceous, granitic or igneous origin, hard and durable.
 - b. Deleterious substances: Submit compliance with ASTM C33 Table 1 and as follows:

- 1) Organic impurities: ASTM C87. Not less than 95% relative strength.
- 2) Sand equivalent: ASTM D2419 or CALTRANS Test 217. For three tests not less than 70, with an average greater than 75.

- C. Combined Aggregates: Provide a mixture of fine aggregate and coarse aggregate uniformly graded between the screen sizes specified below:

Sieve Size	Percentage Passing	
	1-1/2-Inch Maximum	1-inch Maximum
2"	100	--
1-1/2"	90-100	100
1"	50-96	90-100
3/4"	45-80	55-100
3/8"	38-55	45-75
No. 4	30-45	35-60
No. 8	23-38	27-45
No. 16	17-33	20-35
No. 30	10-22	12-25
No. 50	3-10	3-15
No. 100	0-3	0-5
No. 200	0-2	0-2

2.03 WATER

- A. Provide water for washing aggregates, for mixing concrete, for patching grout and for curing that is free from oil and contains not more than 1,000 parts per million (ppm) of chlorides as Cl, nor more than 1,300 ppm of sulfates as SO₄. Do not allow impurities that will cause a change in the setting time of the portland cement of more than 25%, nor a reduction in the compressive strength of mortar at 14 days of more than 5%, when compared to the results obtained with distilled water.
- B. Do not allow impurities that cause discoloration of the concrete or produce etching of the surface.

2.04 ADMIXTURES

- A. Air Entraining: ASTM C260.
- B. Accelerating: ASTM C494, Type C or E.
- C. Retarding: ASTM C494, Type D.
- D. Water Reducing: ASTM C494, Type A.
- E. Shrinkage Reducing: Eclipse by W.R. Grace, Tetraguard AS20 by Master Builders, or equal.

- F. Corrosion Inhibition and Permeability Reduction (Silica Fume): Force 10,000 or 10,000D (dry) by W.R Grace, Rheomac SF 100 (dry) or 110 by Master Builders, or equal.
- G. No admixture containing any chloride ions is acceptable.
- H. Manufacturers: WR Grace & Co., Master Builders, Inc., or equal.

2.05 CONCRETE MIX DESIGN

A. Mix Proportions:

Concrete Type	A
Specified 28-Day Compressive Strength (lb/in ²)	3,500
Maximum Coarse Aggregate Size (in)	1
Air Content at Point of Placement (%)	6
Maximum Water-Cementitious Material Ratio	0.45
Minimum Cementitious Material Content (lb/yd ³)	570

- B. Cementitious Material: Either portland cement, cement with fly ash, cement with natural Pozzolan, or blended cement.
- C. Pozzolan or Flyash: Optional. Not less than 10%, nor more than 20% of the weight of the cementitious materials. Do not use pozzolan or flyash as an admixture in concrete made with portland-pozzolan cement.

2.06 READY-MIX CONCRETE

- A. Supply concrete for the project using truck mixers and a ready-mix plant certified by the National Ready-Mix Concrete Association. Submit certification.
- B. Alternatively, qualify the supplier according to ASTM C94 Sections 8 through 11, inclusive.

2.07 DRY PACK GROUT

- A. Very stiff mix grout; one part portland cement to two parts sand (by weight) and water. Wet the mixture only sufficiently to moisten the materials to the point where they will ball when squeezed by hand.

2.08 CEMENT MORTAR

- A. For Repairs and Patching Concrete.
- B. One part portland cement, two parts fine sand (by weight) and water. Use only the amount of water needed to make the mix workable for the intended use.

- C. Provide a mixture of white and regular cements as required to make a mortar that after curing 28 days will match the adjacent concrete. Prepare several trial batches and make test samples in an inconspicuous location for review.
- D. When a mix has been selected for color match, batch all mortar by weight in accordance with the formula for the selected mix.

2.09 NON-SHRINK GROUT

- A. ASTM C1107, Grade C (precision) with no shrinkage as measured by ASTM C827. Furnish a premixed product, consisting of properly proportioned amounts of non-metallic, dimensionally stable material to which water is added.

2.10 EPOXY BONDING SYSTEM

- A. General: ASTM C881:
 - 1. Provide Type I for bonding hardened concrete to hardened concrete; Type II for bonding freshly mixed concrete to hardened concrete; and Type III as a binder in epoxy mortar or concrete, or for use in bonding skid-resistant materials to hardened concrete.
 - 2. Provide Grade 1 or 2 for horizontal surfaces and Grade 3 for vertical surfaces.
 - 3. Provide Class A if placement temperature is below 40°F; Class B if placement temperature is between 40 and 60°F; or Class C if placement temperature is above 60°F.
- B. Provide: Sikadur Epoxy adhesives manufactured by the Sika Chemical Corporation; Con-crete compounds manufactured by Master Builders, Inc., or equal.
- C. For bonding new to pre-existing concrete, provide Sika Armatex 110, or equal. Specifier knows of no equal.

2.11 CURING MATERIALS

- A. Cure by fog spray, or by one of the following methods after discontinuance of the fog spray. Slabs shall be continuously wet cured with sheet materials or wet blankets after discontinuance of the fog spray; liquid curing compound alone is insufficient.
- B. Liquid Curing Compound: A water-based membrane-forming resin suitable for exterior or interior use as a curing and hardening compound on freshly placed concrete.
 - 1. Provide an emulsion of synthetic resinous solids dispersed in water containing no waxes, paraffins or oils. Provide the fugitive type that will oxidize and disintegrate completely within 60 days when exposed to sunlight in exterior applications or that can be removed by washing with dilute muriatic acid or TSP in interior applications.
 - 2. Water retention requirements: ASTM C309, Type I or II, Class B, when tested in accordance with ASTM C156.
 - 3. Comply with the applicable local air quality district.
 - 4. Exterior surfaces: Aqua Resin Cure-White by Burke; 1200-White by W.R. Meadows; or equal.
- C. Sheet Materials: ASTM C171. Waterproof paper, plastic sheeting or white burlap-polyethylene sheet.
 - 1. Plastic sheeting: fungus-resistant, minimum 4 mil thick, clear and free of defects, having ASTM E96 perm rating of not more than 0.5.

2. Waterproof paper: Two layers of non-staining kraft paper laminated with latex adhesive and reinforced with glass in both directions. Seal joints with 2-inch-wide tape with water resistant adhesive.

PART 3 - EXECUTION

3.01 PROPORTIONING CONCRETE MATERIALS

- A. Place no concrete prior to favorable review of submittals for reinforcing steel, materials specified in this Section and the mix proposed. Unfavorable results of actual pours may require a redesign of mixes.
- B. Make no substitutions to the constituents tested in the design of concrete mixes without favorable review of the revised mix and the new test results.

3.02 BATCHING AND MIXING CONCRETE MATERIALS

- A. Ready or Transit Mixed Concrete:
 1. Deliver completely mixed to the project site.
 2. Do not add mixing water during hauling. Add water after delivery only when agreed by the Engineer. Should water be added, revolve the mixing drum not less than 30 revolutions at mixing speed after adding and before commencing discharge.
 3. Deliver each load at the job site accompanied by a ticket showing mix design number, volume of concrete, the weight of cement in pounds and the total weight of each ingredient in pounds. Also show the time at which the materials were batched and the reading of the revolution counter at the time the truck mixer was charged.
 4. No retempering of partially hardened material is permitted. Do not use partially hardened concrete in the work.
- B. Batching in Adverse Weather:
 1. Cold Weather: When the atmospheric temperature is below 40°F, or is likely to fall below 40°F during the 24-hour period after placing, heat the materials before mixing, so that the temperature of the mix when deposited shall be between 65° and 80°F. Do not heat the mixing water or the cement over 160°F. Remove lumps of frozen material and ice from the aggregates before they are placed in the mixer.
 2. Hot Weather: When temperatures are above 90°F, reduce the temperature of the concrete mix by using iced mixing water, and protecting aggregates and cement from direct rays of the sun. Do not place concrete exceeding 80°F.
 3. Should the provisions noted in 1. and 2. above not be possible or practicable, postpone the batching until favorable weather conditions prevail.

3.03 FORMS

- A. General:
 1. Take responsibility for adequacy of the form, bracing, and shoring. Satisfy ACI 347.
 2. Form all concrete unless specified otherwise.
 3. Construct forms confirming to the shape, line and grade specified.
 4. Provide tight seams, or seal with tape, to be mortar-tight.
 5. Brace and shore all forms properly to ensure stability against pressure from any source, without failure of any component part.

- B. Chamfers: 3/4-inch at all exposed outside corners, including the top edges of all walls, machinery bases and curbs. Use mill run chamfer strips surfaced all sides. Provide rounded top edges of sidewalks, walkways and where directed.

3.04 REMOVAL OF FORMS

- A. General: Remove without damage to the concrete and with complete safety of the structure. Ensure that the concrete has hardened sufficiently and the members have attained sufficient strength to safely support the imposed loads.
- B. Cold Weather: Engineer may increase the minimum form removal times if the temperature is 40°F or lower.

3.05 PLACING CONCRETE AND GROUT

A. Preliminary Work:

1. Remove hardened concrete and foreign materials from the inner surface of the mixing and conveying equipment. Remove all debris from the space to be occupied by the concrete.
2. Remove water from the space to be occupied by the concrete before concrete is deposited. Divert any flow of water into an excavation through proper site drainage to a sump, or by other methods. If required by the Engineer, grout up any water vent pipes and drains after the concrete has thoroughly hardened.

B. Embedded Items:

1. Place all equipment, bolts, anchors, sleeves, inserts, structural steel members, angles and similar items that require embedment in the concrete.
2. Move reinforcement bars as necessary to avoid interference with other reinforcing steel, conduits, or embedded items, but not so as to impair design strengths of the member. If bars are moved more than two bar diameters, submit the resulting arrangement of bars for review.
3. Inspect the installation of all embedded items and reinforcing.

C. Placing:

1. Transfer the concrete to the place of final deposit as rapidly as practicable by methods that prevent the separation or loss of ingredients. Under no circumstances deposit partially hardened concrete in the work. Deposit concrete in the forms as nearly as practicable in its final position to avoid rehandling. Maintain, until the completion of the pour, a plastic concrete surface, approximately horizontal.
2. Deposit concrete without segregation of the aggregate and without displacement of the reinforcement.
3. Use every means to secure a dense, impervious, homogeneous concrete, free from voids or pockets. If honeycomb, air, or rock pockets occur, repair the structure to the complete satisfaction of the Engineer, and modify the placing method or mix design, to prevent recurrence of deficient concrete. Provide such repairs and modifications at no additional cost. Extensive honeycomb or pockets may be cause for rejection of the work.

- D. Time Limit: Place all concrete in its final position in slab or forms within 1-1/2 hours of batching. Alternatively, as part of the mix design, provide admixtures that delay the initial set and state the proposed length of time in the submittal.

- E. Temperature Limits: Place all concrete in its final position in slab or forms at:
 - 1. Less than 90°F, measured in the mix.
 - 2. More than 40°F, measured both in the mix and in the air, with air temperature predicted to rise above 50°F.
 - 3. More than 50°F, measured in the mix, 40°F measured in the air, with air temperature falling.

3.06 VIBRATION

- A. Compact the concrete with high frequency, internal mechanical vibrating equipment, and when required, supplement by hand spading and tamping. Consolidate slabs 6 inches or less in depth by hand tampers, spreading and settling with a heavy leveling straightedge.
- B. Operate vibrators with vibratory element submerged in the concrete, with frequency between 8,000 and 12,000 impulses per minute when submerged.

3.07 CONCRETE JOINTS

- A. General:
 - 1. Provide joints as required for constructability

3.08 CURING AND PROTECTION

- A. General: Maintain concrete above 50°F and below 90°F in a moist condition and without external loadings for 14 days after placement. For slabs, after the specified initial moist cure, provide further moist curing, utilizing sheet materials or wet blankets for 14 days after placement. Apply liquid membrane curing after the 14-day wet curing period.
- B. Cold Weather Requirements: Provide adequate equipment for heating the placed concrete during freezing or near freezing weather:
 - 1. Whenever the surrounding air temperature is below 40°F, or may fall below 40°F within the 24-hour period after pouring of concrete, maintain all freshly poured concrete at not less than 50°F for 5 days.
 - 2. Keep the housing, covering, or other protection in place and intact at least 24 hours after the artificial heating is discontinued.
 - 3. Do not use manure, salt, calcium chloride, or other chemicals on the concrete to prevent freezing.

3.09 CONCRETE FINISHES

- A. Refer to Section 03350.

3.10 FIELD QUALITY CONTROL

- A. Concrete Placement:
 - 1. Verify that forms and reinforcement are accurately placed and secured in position. Confirm that both forms and reinforcement have been favorably reviewed.
 - 2. Verify that all sleeves, castings, pipes, conduits, bolts, anchors, and any other items required, are accurately and securely placed within or on the forms.
 - 3. Verify adequate vibrators are available.

4. Check that the mix design is compatible with the method of placement of the concrete, by pump or by batch.
 5. Verify the concrete delivered to site is satisfactory, including checks on the batch tickets, quality assurance tests and direct observation of the batches.
- B. Concrete Curing:
1. Verify procedures and equipment are available for controlling concrete temperature during hot and cold weather conditions.
 2. Verify actual time of application of evaporation retardant, fog spray and curing materials for each placement.
 3. Provide acceptable procedures prior to repairs. Repairs by painting or surface treatment will not be acceptable.

END OF SECTION

SECTION 03350

CONCRETE FINISHES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Concrete finishes for all horizontal and vertical concrete surfaces.
 - 2. Sealers, hardeners and curing compounds for concrete.
- B. Related Sections:
 - 1. Section 03300: Cast-in-Place Concrete

1.02 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. ASTM C156 Test Method for Water Retention by Concrete Curing Materials
 - 2. ASTM C171 Specifications for Sheet Materials for Curing Concrete
 - 3. ASTM C309 Specification for Liquid Membrane-Forming Compounds for Curing Concrete
 - 4. ASTM C1028 Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
 - 5. ASTM D882 Test Method for Tensile Properties of Thin Plastic Sheeting
 - 6. ASTM E96 Test Methods for Water Vapor Transmission of Materials
- B. Uniform Building Code (UBC).
- C. "Evaluation Reports" published by the International Conference of Building Officials.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01300.
- B. Product Data: Describe all products proposed for use.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable requirements in the Uniform Building Code, adopted edition, including without limitation Chapters 10, 11, 11A and 11B.

PART 2 - PRODUCTS

2.01 CURING COMPOUND

- A. Curing Compound:
 - 1. Water-based membrane forming water retaining curing compound for freshly placed concrete.

2. An emulsion of synthetic resinous solids containing no waxes, paraffins or oils.
3. Fugitive type that will oxidize and disintegrate completely within 90 to 120 days when exposed to sunlight or that can be removed by washing with dilute muriatic acid.
4. Meet the water retention requirements of ASTM C309 Type I or II Class A and B when tested in accordance with ASTM C156.
5. Comply with the regulations of the Air Quality Management District having jurisdiction and have a maximum volatile organic compound (VOC) level of 350.

B. Manufacturers:

1. Aqua Resin Cure by Burke;
2. Sealtite #1100 Clear by W. R. Meadows Inc.;
3. or equal.

2.02 SEALING COMPOUND

A. Sealing Compound:

1. Water-based alpha-methylstyrene curing, sealing and hardening compound.
2. Leave a protective clear transparent film on the concrete surface that is non-yellowing and resistant to deterioration due to exposure to ultraviolet light.
3. A good primer for paints, mastic adhesives and coatings.
4. Minimize dusting of concrete and deterioration of carpet backings.

B. Manufacturers:

1. Burke Spartan-Cote WB Cure/Seal/Hardener;
2. Vocomp 20 by W. R. Meadows Inc.;
3. or equal.

2.03 SURFACE RETARDER

- A. Liquid surface retarder: Formulate to retard the setting of the concrete to a depth of 3/16-inch for 10 days after placing. Use form grade Surface Retarder as a form coating to retard the surface set of formed cast-in-place concrete. Use top Surface Retarders applied to freshly poured concrete slabs to retard surface set.

B. Manufacturers:

1. Lithochrome Surface Retarder Form Grade or Top Surface Grade by L. M. Scofield Company;
2. Equivalent Conrad Sovig;
3. or equal.

PART 3 - EXECUTION

3.01 CONCRETE SURFACE FINISHES FOR SLABS

A. General:

1. Provide a surface finish on all exterior and interior horizontal concrete slabs that has a coefficient of friction when measured in accordance with ASTM C1028 not less than 0.60 for level surfaces and 0.80 for surfaces sloped 1:20 or more.
2. For all exterior paving surfaces provide a minimum slope of 1% (1/8-inch per foot) to drain surface water to catch basins, drains or edges of pavement adjacent to landscap-

ing and drainage swales. Review grades shown and recommend any adjustments necessary to achieve minimum specified slope.

3. Finish slabs so they do not deviate more than 1/4-inch (6.3 mm) in 10 feet from a straight edge. Finish elevations to within 1/8-inch (3.2 mm) elevations shown or required to match adjacent existing conditions. Provide "as-built" slopes for drainage no less than those shown or specified.
4. Finish edges and surfaces smooth, true and clean.
5. Apply finish to slabs as soon as the concrete can support the weight of the workmen.
6. Increase the humidity of the air directly above the concrete surface, prior to and during finishing operations by adding a fine fog mist of water to the air with mist nozzles when atmospheric conditions (temperature, humidity, and wind) are such that rapid evaporation of mixing water from the concrete is likely to occur.

B. WOOD OR MAGNESIUM FLOAT FINISH AND PRELIMINARY STEPS FOR OTHER FINISHES:

1. Applies to slab surfaces indicated to have a wood or magnesium Float finish. This finish is also the initial step for all other finishes.
2. Place and consolidate concrete.
3. Screed to grade using a strike-off board guided on accurately set screeds.
4. Work the surface with a bull or darby float to embed large aggregate, consolidate surface mortar and create a smooth true surface.
5. When surface has taken initial set and bleed water has disappeared work surface with wood floats followed by magnesium floats (if a magnesium float finish is called for) to even out slight irregularities and further consolidate surface.
6. When concrete has set further so that excess water and fine material will not be brought to the surface, either begin the first steel troweling if this is the preliminary step for other finishes or work the surface with magnesium or wood float if this is the final step in a Float finish. Work the surface sufficiently to consolidate the mortar and produce a finished surface at the proper grade that is free of voids, ripples or other defects. Apply a final swirl texture finish in a fan pattern with the wood or magnesium float. Retool slab edges and control joints. Leave a uniform smooth border around all slab edges and each side of control joints.

C. BROOM FINISH:

1. Applies to all slabs indicated to receive a Broom finish.
2. Complete work required under "Preliminary Steps for Other Finishes."
3. Apply a second and third steel troweling after the concrete has set sufficiently so mortar does not adhere to the edge of the trowel and sufficient pressure can be applied to further consolidate the surface.
4. Broom texture the surface of the slab at right angles to the normal direction of traffic. Use a stiff fiber bristled broom for Coarse Broom Finish and a fine hair broom for Fine Broom Finish. Match selected control sample.

END OF SECTION

SECTION 16000

ELECTRICAL GENERAL PROVISIONS

PART 1 - GENERAL

1.01 SCOPE

- A. This section includes furnishing all labor, materials, services, tools and other equipment necessary for the construction, installation, connection and testing of all electrical work for this project as shown on the drawings or specified herein.

1.02 INTENT OF DRAWINGS AND SPECIFICATIONS

- A. Riser and other diagrams are schematic only and shall not be used for obtaining quantities.
- B. The electrical drawings do not show complete details of the site conditions. The Contractor shall check actual conditions.

1.03 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of these Contract Documents and shall include the following:
 - 1. Submittals shall include information and literature as required for all equipment and materials provided under this and related sections.
 - 2. Shop Drawings: Shop drawings shall include the following along with any special requirements listed in the individual Specification Sections:
 - a. Installation instructions and drawings
 - b. Wiring schematics with termination point identification
 - c. Materials of construction
 - d. Manufacturer's name and model
 - e. Manufacturer's catalog data
 - f. Supplementary structural framing for electrical equipment including design loads, member size and location. When supplementary framing is indicated, verify that dimensions are suitable for the equipment furnished. Provide additional strength when equipment furnished is heavier than that specified.
 - 3. Manufacturers' Literature: Literature indicating the compliance of the products with the Specifications shall be included with all submittals. This shall include catalogs and other descriptive bulletins. Relevant portions of the literature shall be clearly identified by highlighting or underlining.
 - 4. Test Logs: The Contractor shall submit test logs as outlined below and as specified in subsequent electrical sections and drawings.
 - a. A log of the complete results of tests for shorts and grounds for each circuit. All circuits and tests shall be clearly identified.
 - b. A log of complete results of insulation resistance measurements of each circuit. All circuits and tests shall be clearly identified.
 - 5. Operation and maintenance information for all equipment furnished and/or installed.
- B. The Contractor shall indicate on the submittals all variances from the Specifications.

- C. Spare parts as specified in the individual sections herein.
- D. Final inspection certificates shall be submitted prior to final payment.

1.04 COORDINATION OF WORK

- A. The Contractor shall plan his work in coordination with the other trades.
- B. The Contractor shall field verify all dimensions of equipment to be installed or provided by others so that correct clearances and connections may be made between the work installed by the Contractor and equipment installed or provided by others.
- C. The Contractor shall arrange all conduit runs so that they do not interfere with piping, structural members, etc. Contractor shall arrange for utility locates and site piping locates before trenching.
- D. All working measurements shall be taken from the sites, checked with those shown on the drawings, and if they conflict, reported to the Engineer at once, and before proceeding with the work. Should the Contractor fail to comply with this procedure, he shall alter his work at his own expense as directed by the Engineer.
- E. No extra payments will be allowed where obstructions in the work of other trades, or work under this contract requires offsets to conduit runs.
- F. The Contractor is responsible for all alterations in the work to accommodate equipment differing in dimensions or other characteristics from that shown or specified.
- G. The Contractor shall provide all temporary power necessary for existing site equipment and for all construction needs.

1.05 SUPERVISION

- A. The Contractor shall maintain adequate supervision of the work and shall have a responsible person in charge at the site during all times that work under this contract is in progress, or when necessary for coordination with other work.

1.06 CODES

- A. Work shall conform to the National Electrical Code (NEC), and State codes and other applicable codes, even though not specifically mentioned for each item. These shall be regarded as the minimum standard of quality for materials and workmanship.

1.07 WORKMANSHIP

- A. All work shall be performed by personnel skilled in the particular trade. Workmanship shall conform to the standards of the NEC and all local codes and standards.

1.08 PERMITS, FEES AND SERVICE CHARGES

- A. The Contractor shall obtain all electrical permits required to complete the work and pay all fees.

1.09 CONTRACTOR'S RECORD DRAWINGS & AS-BUILTS

- A. The Contractor shall maintain a neatly marked set of record drawings showing the locations of all buried conduits and other utilities encountered or installed during construction. The locations of panels, field mounted instruments and panels, terminal boxes, junction boxes and other materials included in the work shall be shown. Drawings shall be kept current with the work as it progresses and shall be subject to inspection by the Owner's Representative at any time. Failure to keep field record drawings current may result in the issuance of a stop work order or delay in the processing of pay requests until the record drawings are made current.
- B. The Contractor shall provide one complete set of as-built electrical schematics for all panels and equipment provided, including panel elementary diagrams, and interconnecting wiring diagrams. These shall be in the same format and style as those in the Contract Documents and submittal requirements.
- C. All information shown on the Contractor's field record drawings and as-built schematics shall be subject to verification by the Owner's Representative. If significant errors or deviations are noted by the Owner's Representative, new as-builts shall be completed at the Contractor's expense.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. See subsequent electrical sections and the drawings for specified materials.

2.02 PORTABLE OR DETACHABLE PARTS

- A. The Contractor shall retain in his possession and shall be responsible for all portable and detachable parts or portions of installations such as fuses, key locks, adapters, blocking chips and inserts until completion of his work.
- B. These parts shall be delivered to the Engineer and an itemized receipt obtained. This receipt, together with 2 copies of the final permit inspection certificate, shall be attached to the Contractor's request for final payment.
- C. All equipment shall be demonstrated to operate in accordance with the requirements of this specification and the manufacturer's recommendations.

PART 3 – EXECUTION

3.01 TEMPORARY HEATING, LIGHTING AND POWER

- A. The Contractor shall provide all heat, lighting and power required to construct and protect the work until the work is placed in service by the Owner for beneficial use of the Owner.

Temporary heaters shall be provided as required to keep the work area and all new electrical components dry.

1. The source for temporary power shall be from the electric utility or Owner approved Contractor supplied auxiliary power units. The installation for electric power shall meet the requirements of local authorities and of OSHA.
2. The Contractor shall obtain all permits and pay all costs for connecting temporary power service at no expense to the Owner.

3.02 SUPPORT BACKING

- A. Provide any necessary backing required to properly support all fixtures and equipment installed under this contract.

3.03 CUTTING, PATCHING AND FRAMING

- A. The Contractor shall determine in advance the locations and sizes of all sleeves, chases, and openings necessary for the proper installation of his work.
- B. Whenever practical, inserts or sleeves shall be installed prior to covering work. Cutting and patching shall be held to a minimum. All required holes in concrete construction shall be made with a core drill and patched with non-metallic non-shrink grout.
- C. Cutting, fitting repairing and finishing of carpentry work, metal work, or concrete work, and the like, which may be required for this work shall be done by craftsmen skilled in their respective trades. When cutting is required, it shall be done in such a manner as not to weaken walls, partitions, or floors; and holes required to be cut in floors must be drilled without breaking out around the holes.

3.04 TESTS

- A. The Contractor shall furnish all labor, material, instruments and tools to make all connections for testing of the electrical and instrumentation installation. All equipment shall be demonstrated as operating properly prior to the acceptance of the work. All protective devices shall be operative during testing of equipment. The tests shall be made under the supervision of the Engineer. All deficiencies or unsatisfactory conditions as determined by the Engineer or inspecting authorities shall be corrected by the Contractor in a satisfactory manner at his own expense.
- B. After visual inspection of joints and connections and the application of tape and other insulating materials, all sections of the entire wiring system shall be thoroughly tested for shorts and grounds. A log of results for each circuit shall be kept by the Contractor and presented to the Engineer.
- C. A phase rotation check shall be made to demonstrate that all power receptacles, service feeders, main power feeders and auxiliary power generators have the same A-B-C phase rotation and ground relationships.
- D. Equipment shall be tested by operating all electric motors, relays, controls, switches, heaters, etc., sufficiently to demonstrate proper installation and electrical connections. Control and emergency conditions shall be artificially simulated where necessary for complete system or subsystem.

- E. Insulation resistance measurements of each circuit shall be made with loads connected and contactors, if any, blocked closed to give complete circuits. Insulation resistance of complete circuit shall be measured from the circuit breaker load terminals with the breaker open. A log of complete results shall be prepared by the Contractor and presented to the Engineer. Values of resistance shall be 10 megaohms or greater per National Electrical Testing Association standards.

END OF SECTION

SECTION 16075

IDENTIFICATION

Part 1 – GENERAL

1.01 SCOPE

- A. Engraved labels shall be provided for identification of electrical equipment enclosures, control devices, transformers, switches and elsewhere as specified herein or indicated on the drawings.

Part 2 – PRODUCTS

2.01 ENGRAVED LABELS

- A. Provide melamine plastic laminate engraved with Engraver's Standard Letter Style. 1.27 cm (3/8-inch) high letters, all capital letters. Plastic laminate shall be black with white core, 1.6 mm (1/16-inch) thick.
- B. Labels shall be attached with mechanical fasteners.
- C. For mechanical fastening, drill or punch labels. Fasteners shall be self tapping stainless steel screws. to be used for exterior applications or locations subject to corrosion or moisture.
- D. All cables shall be marked with an approved permanent means of identifications as specified in section 16100.

2.02 DEVICE PLATE LABELS

- A. Mechanically fastened, engraved nameplates same as specified in 2.1.

2.03 GRAPHICS

- A. Coordinate names, abbreviations and other designations used in the electrical identification work. Provide numbers, lettering and wording as indicated or recommended by manufacturers or as required for proper identification and operation of the electrical systems and equipment.

Part 3 – EXECUTION

3.01 COORDINATION

- A. Where identification is to be applied to surfaces that require finish, install label after completion of painting.

3.02 EQUIPMENT IDENTIFICATION LABELS

- A. Provide individual labels for each service feeder and distribution switch to clearly indicate the load served and equipment voltage. Similar signs on exterior of each panel.
- B. Identify all disconnects, junction boxes, end user devices, relays, contactors, starters, time switches, override switches, transformers, etc.

END OF SECTION

SECTION 16100

BASIC MATERIALS AND METHODS

PART 1 – GENERAL

1.01 SCOPE

- A. This section includes furnishing all labor, materials and equipment required for electrical work shown on the drawings and as further described in these specifications.

1.02 INTENT OF DRAWINGS AND SPECIFICATIONS

- A. The drawings are partly diagrammatic and do not necessarily show the physical arrangements of the conduit and equipment unless specifically dimensioned. Diagrams are schematic only and shall not be used for obtaining quantities of lineal runs of conduit.

1.03 EXCAVATION AND BACKFILL

- A. Perform all necessary excavation for buried conduits.
- B. No backfilling shall be done until all direct burial cables, conduits and penetrations to be covered have been inspected and approved.

1.04 RECORD DRAWINGS

- A. At the completion of construction, the Contractor shall provide one set of marked “as-built” drawings to the Engineer showing the location of buried conduits and all changes or deviations from the original drawings.

PART 2 – PRODUCTS

2.01 QUALITY OF MATERIALS

- A. All contract materials shall be new, of proven quality, without imperfections and blemishes. All material not specifically detailed in this specification required to accomplish the completion of this contract shall be of compatible quality to the items specified and be approved by the Engineer. All materials shall be products of manufacturers regularly engaged in production of such equipment and shall be of the manufacturer’s latest design.
- B. Where two (2) or more units of the same classes of equipment are required, these units shall be of the same manufacturer. All material and equipment shall be per NEMA, ANSI, IEEE or ICEA Standards as applicable, except as modified by these specifications. All material shall be UL labeled as applicable.

2.02 RACEWAYS

- A. All raceways shall be UL approved for the application.

- B. Rigid Steel-PVC coated Conduit: Conduit used in the coating process shall be hot dip galvanized inside and out in accordance with Federal Specification WW-C-581-E, ANSI Standard C-80.1, and UL Standard #6. Finished conduit shall conform to the current NEMA RN-1 Standard and shall have affixed label indicating compliance with UL Standard #6.
- C. Flexible Metallic Conduit:
 - 1. Provide liquid tight flexible conduit, zinc-coated steel core, extruded gray PVC cover, UL approved, Sealtite type "UA" or Liqueflex type "LA," or approved equivalent.
 - 2. Where permitted by local inspection authority, sizes larger than 3-inch shall be Sealtite type "EF," or Liqueflex type "LT," or approved equivalent.
- D. Rigid Steel Conduit: Provide zinc-coated rigid steel conduit conforming to Federal Specification WW-C-581.
- E. Rigid PVC Conduit: Provide rigid polyvinyl chloride (PVC) conduit, schedule 40, UL listed for concrete encased, direct burial underground, and exposed use. Rigid PVC conduit, including couplings, elbows and nipples, shall conform to the requirements of the latest edition of Federal Specification WW-C-1094, and NEC

2.03 CONDUIT FITTINGS

- A. Provide conduit fittings as follows unless otherwise noted or detailed. Catalog numbers shown are RACO/Appleton Electric Company unless otherwise noted. Equivalent products of other manufacturers are equally acceptable.
 - 1. Rigid Conduit Insulating Bushings: Series 1400//Series BBU
 - 2. Rigid Conduit Set Screw Fittings: 3010-3022, 3102-3116// Series SRNTC and SNTCC
 - 3. Flexible Metallic Conduit Fittings: Pylets (Pyle-National)//Unilets
 - 4. Expansion Joints: Adalet Type STR//OZ Type AX or TX
 - 5. Conduit Wall Entrance Sealing Fitting: OZ Type FSK-GALV

2.04 CONDUCTORS

- A. This specification covers all conductors not specified in other sections. All conductors and cable shall conform to UL, Federal Specification J-C-30, or ICEA as applicable. Provide new cable manufactured within one year of installation.
- B. 600 Volt Power, Lighting and Control Cable:
 - 1. Provide copper conductors unless otherwise specified, conforming to Federal Specification J-C-30.
 - 2. For cable type TW or THW, provide insulation conforming to Federal Specification J-C-30.
 - 3. For cable type THHN or THWN, provide insulation conforming to UL-83. For type RHW and RHH, provide insulation conforming to ICEA S-19081.
 - 4. For cable type XHHW, provide insulation conforming to ICEA S-66-524.
 - 5. Provide neoprene jacket on RHW-RR type cables in accordance with ICEA S-19-81 specifications.
 - 6. Provide control cable with 600 volt TW type insulation for all multi-conductor, Class 1 remote control and signal wiring unless otherwise specified. Provide

- overall jacket complying with ICEA S-61-402. Color code control cable in accordance with ICEA S-61-402, Table 5-1.
7. Provide twisted shielded paired instrumentation cable suitable for direct burial with stranded copper conductors, paired with aluminum/synthetic polymer shield and copper drain wire. Cable to be rated 600 V type TC for use on Class 1 remote control and signalling circuits.
 8. Provide Xylem/Flygt approved pump cables. Pump cables shall be sufficient length to reach from the final pump installed location to the pump disconnect enclosure as shown on the drawings.
- C. Minimum conductor size: Provide No. 12 AWG minimum branch circuit wire size. Provide No. 14 AWG control circuits unless otherwise specified or required by over-current protection. Provide smaller conductor sizes for specific application where shown on the drawings.

PART 3 – EXECUTION

3.01 CONDUIT INSTALLATION

- A. Conduit Buried in Earth: Install raceways to provide not less than 30 inches cover to finished grade. Grade trenches and place pipe bedding material to provide uniform trench bottom for raceway support. Buried raceway shall be Schedule 40 PVC unless otherwise shown or specified.
- B. Provide rigid steel-PVC coated conduit where exposed to the weather, in hazardous areas, for exposed installations where subject to damage, and in damp, wet or corrosive locations.
- C. Provide rigid steel conduit for raceways embedded in structural reinforced concrete, below floor slabs-on-grade, for sizes 1¼-inch and larger, and at all locations not otherwise specified
 1. Provide rigid intermediate steel or rigid steel conduit at the Contractor's option in furred spaces and above dropped ceilings. Provide rigid intermediate steel or rigid steel conduit at the Contractor's option in exposed interior locations, in masonry walls above grade, and in cement fill on roofs.
 2. Provide flexible metallic conduit connections at all motors and transformers plus other equipment connections subject to vibration. Utilize suitable fittings, keep route neat, at nominal right angles and in conformance with equipment lines.
- D. Exposed conduit shall be run in straight lines parallel to column lines, walls or beams. Where conduit is grouped, the bends and fittings shall be installed to present an orderly appearance. Unnecessary bending or crossing shall be avoided.
- E. Supports for exposed conduit runs shall be furnished and installed within 3 feet of each box. Supports shall be secured by means of expansion inserts in concrete or masonry.
- F. Conduit and fittings shall be properly protected during the construction period against mechanical injury from any cause. Conduit that extends out of floors, walls or slabs shall be boxed or otherwise protected and ends shall be capped with metal pipe plugs.

- G. Conduit joints and connections shall be made thoroughly watertight and rustproof by means of thread compound that will not insulate the joint. Each threaded joint shall be thoroughly cleaned to remove all the cutting oil before the compound is applied. Running threads will not be allowed. Erickson couplings may be used in dry and exposed locations provided that they are installed with fixed threaded connection at the top of vertical runs.
- H. Size: Use raceways no smaller than 3/4-inch.
- I. Where required for flexibility, provide liquid tight flexible conduit.

3.02 WIRE AND CABLE INSTALLATION

- A. Conduit shall be thoroughly cleaned of all foreign material just prior to pulling the wire or cable. Lubricants shall be compounds specifically prepared for cable pulling and shall not contain petroleum or other products that will affect cable insulation. Lubrications shall be UL approved.
- B. Splicing of conductors No. 8 AWG or smaller shall be by pre-insulated spring-pressure connectors, such as "Scotchlok" Types Y, R and B, Ideal "Wingnut" or approved equivalent. All uninsulated splices, joints and free ends of conductors shall be covered with rubber and friction tape or high-dielectric strength, plastic tape.
- C. Terminal strips in panels shall be identified throughout the equipment utilizing unique numbering systems.
- D. Wires terminating on terminal strips shall be tagged with the designation of the terminal strip and the number of the terminal to which they are connected. All wires shall be numbered with Brady sleeve type or clip on type wire markers at all accessible locations.
- E. Wiring diagrams shall show the terminal strips, terminals, and their identifying designations.
- F. Installation: Keep all conductors within the allowable tension limits during installation. Lubricants for wire pulling, if used, shall be approved for the insulation and raceway material. Observe cable manufacturer's and industry standard cable bending radius recommendations.
- G. Color Code:
 - 1. All secondary service, feeder, and branch circuit conductors shall be color coded to meet all NEC requirements:
 - 2. All No. 12 and No. 10 branch circuit conductors shall have solid color compound or solid color coating. All neutral sizes shall have solid color compound or solid color coating.
 - 3. No. 8 AWG and larger phase conductors shall have either:
 - a. Solid color compound or solid color coating.
 - b. Stripes, bands, or hashmarks or colors specified above.
 - c. Colored pressure-sensitive plastic tape. Tape shall be applied in half overlapping turns for a minimum of 3 inches for all terminal points, and in all junction boxes, pull boxes, troughs, manholes, and handholes. Tape shall be 3/4 inch wide with colors as specified above. The last two laps of tape shall be applied with no tension to prevent possible unwind-

ing. Where cable markings are covered by tape, apply tags to cable stating size and insulation type.

H. Wire Pulling:

1. Provide suitable installation equipment to prevent cutting or abrasion of conduits during pulling of feeder.
2. Ropes used for pulling feeders shall be made of suitable nonmetallic material.
3. Attach pulling lines for feeders by means of either woven basket grips or pulling eyes attached directly to the conductors, as approved by the Engineer.
4. All cables in a single conduit shall be pulled in together.
5. The cable jacket and/or conduit walls shall be completely lubricated when cable is pulled into conduit. The lubricant shall be applied immediately before or during a pull. Minimum quantities of lubricant are as follows:
 - a. One (1) quart of lubricant per 100 feet of 1-inch conduit.
 - b. Two (2) quarts of lubricant per 100 feet of 2-inch conduit.
 - c. Three (3) quarts of lubricant per 100 feet of 3-inch conduit.
 - d. One (1) gallon of lubricant per 100 feet of 4-inch conduit.
 - e. This quantity shall be increased as needed for difficult pulling situations (high temperatures, multiple bends, poorly placed conduit, etc.).

I. 600 Volt Conductors:

1. Provide one of the conductor types indicated for the function and location listed below unless otherwise indicated on the drawings or approved by the Engineer. Provide ground and neutral wires identical to circuit wires.
2. Observe code restrictions with respect to wet and dry locations. At the Contractor's option, conductors with insulation systems rated for high operating temperatures may be substituted for lower temperature rated conductors. However, no reduction in conductor size will be permitted from that indicated on the drawings. When using small diameter wire, do not reduce conduit size below that required for Type THW as shown in NEC.

Location	Insulation Type	
	THW, THWN	RHH, THHN, XHHW
Receptacle and Single-phase	X	
Motor Circuits		
• Polyphase Motor Circuits	X	
• Motor Controls	X	
Power Outlets	X	
Feeders		X
Underground in Raceway	X	

3.03 EQUIPMENT INSTALLATION

- A. Boxes and cabinets shall be installed on the surface level and plumb and affixed to the surface with expansion inserts in concrete and machine screws to tapped holes in metal surfaces.
- B. Interconnections between equipment shall be made per manufacturer's wiring diagrams. All wiring shall be clearly labeled and external connections in control panel and remote cabinet brought out to terminal blocks. All equipment connected to telephone lines shall be protected against voltage transients.

3.04 EQUIPMENT BASES

- A. Provide equipment bases for all floor-mounted electrical equipment. Unless otherwise indicated, bases shall be poured-in-place concrete, nominally four inches high, and be one inch larger on all exposed edges than the equipment to be mounted. Provide concrete pads and mounting provisions for all exterior equipment as indicated on the drawings or specified in other portions of the specifications.

END OF SECTION

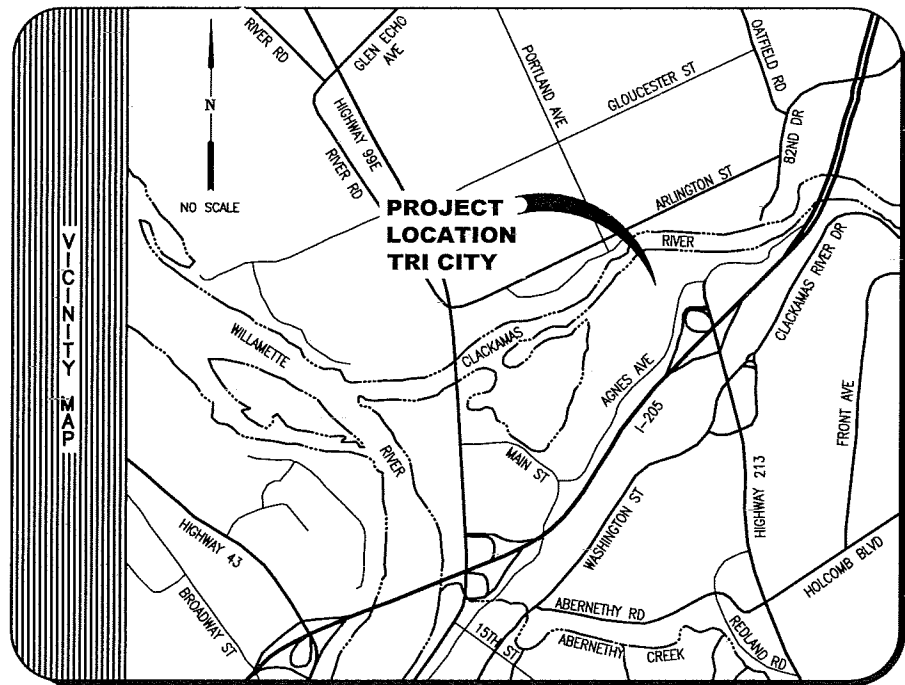
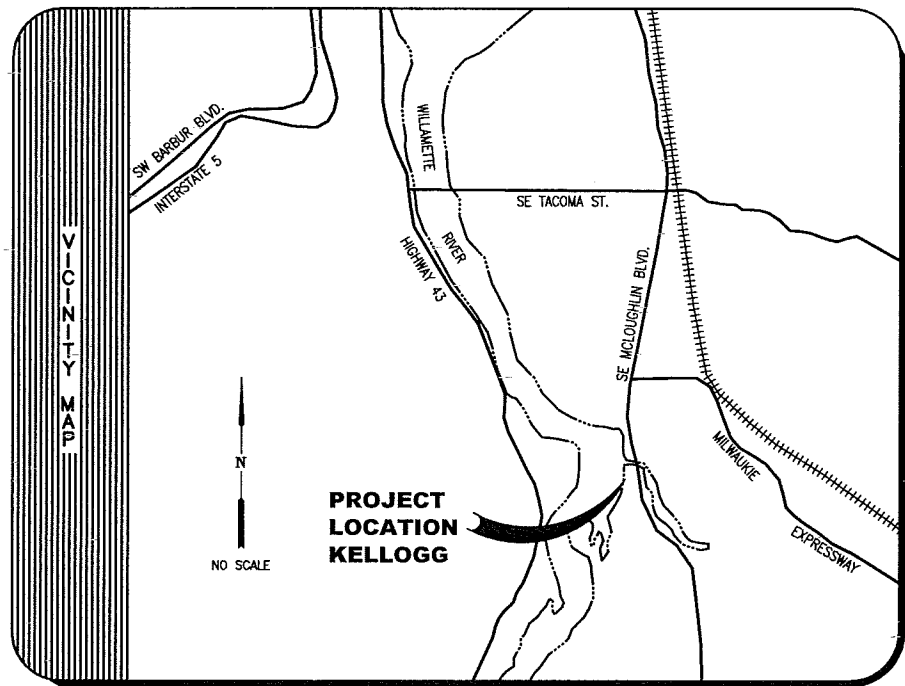
ACCESS GATES AND SECURITY SYSTEM

CLACKAMAS COUNTY SERVICE DISTRICT NO.1 / TRI-CITY SERVICE DISTRICT

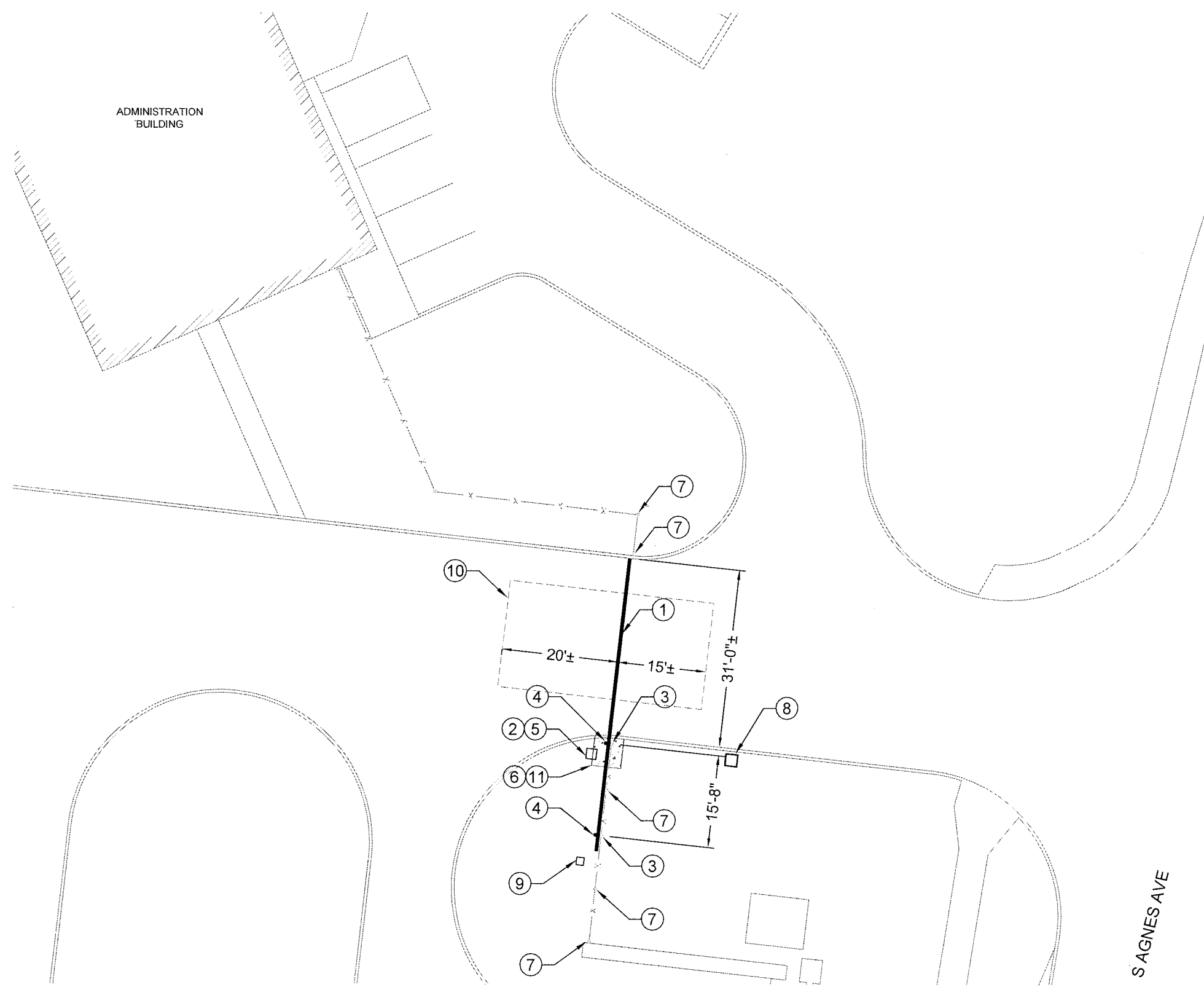
CLACKAMAS COUNTY, OREGON

PROJECT NO. 40748035.01

JUNE 2017



SHEET NO.	DRAWING NO.	INDEX
1	—	COVER SHEET
2	C-1	TRI CITY CANTILEVER SLIDE GATE SITE PLAN
3	C-2	KELLOGG CANTILEVER SLIDE GATE SITE PLAN
4	C-3	TRI CITY CANTILEVER SLIDE GATE PLAN/ELEVATION
5	C-4	TRI CITY CANTILEVER SLIDE GATE ASSEMBLY DETAILS
6	C-5	TRI CITY CANTILEVER SLIDE GATE OPERATOR DETAILS
7	C-6	KELLOGG CANTILEVER SLIDE GATE PLAN/ELEVATION
8	C-7	KELLOGG CANTILEVER SLIDE GATE ASSEMBLY DETAILS
9	C-8	KELLOGG CANTILEVER SLIDE GATE OPERATOR DETAILS
10	E-1	TRI CITY GATE PLAN
11	E-2	TRI CITY ADMINISTRATION BUILDING PLAN
12	E-3	ELECTRICAL TRI CITY DETAILS
13	E-4	TRI CITY LAB BUILDING PLAN
14	E-5	ELECTRICAL TRI CITY SCHEMATIC
15	E-6	KELLOGG GATE PLAN
16	E-7	KELLOGG ADMINISTRATION BUILDING SECURITY PLAN
17	E-8	ELECTRICAL KELLOGG SCHEMATIC



1 SITE PLAN
C-1 SCALE: 1" = 20'-0" (APPROX.)

KEY NOTES

- 1 NEW CANTILEVER SLIDE GATE, L=49'±. SEE SHEET C-3 FOR DETAILS.
- 2 REMOVE EXISTING GATE OPERATOR AND INSTALL NEW SYSTEM. SEE SHEET C-5 FOR DETAILS.
- 3 PROTECT EXISTING 4" DIAMETER POST. INSTALL GUIDE ASSEMBLY.
- 4 INSTALL NEW 4" DIAMETER POST FOR GUIDE ASSEMBLY. SEE SHEET C-4 FOR DETAILS.
- 5 REMOVE EXISTING GATE OPERATOR (NOT SHOWN).
- 6 PROVIDE NEW CONCRETE PAD FOR GATE OPERATOR, T=8" AND MINIMUM OF 1'-9" SQUARE. COORDINATE WITH SHEET E-1 FOR CONDUIT RUN. PROTECT EXISTING CONDUITS INTO JUNCTION BOX AND EXISTING GATE OPERATOR.
- 7 EXISTING POST REMAINS IN PLACE.
- 8 INSTALL NEW PEDESTAL PAD, T = 6" AND 2'-0" SQUARE. COORDINATE WITH SHEET E-1 FOR CONDUIT RUN.
- 9 INSTALL NEW HANDHOLE. COORDINATE LOCATION WITH SHEET E-1 TO MISS INTENTION LOOPS IN DRIVEWAY.
- 10 EXISTING INDUCTION LOOPS NOT SHOWN. CONTRACTOR SHALL PROTECT THIS AREA DURING INSTALLATION OF NEW CONDUITS SHOWN SHEET E-1.
- 11 REMOVE EXISTING CONCRETE BEHIND CURB. REPLACE WITH NEW 4" THICK SECTION (A = 12 FT² ±). INSTALL NEW OPERATOR PAD WITHIN THIS AREA AS DESCRIBED IN NOTE 6.

GENERAL NOTES

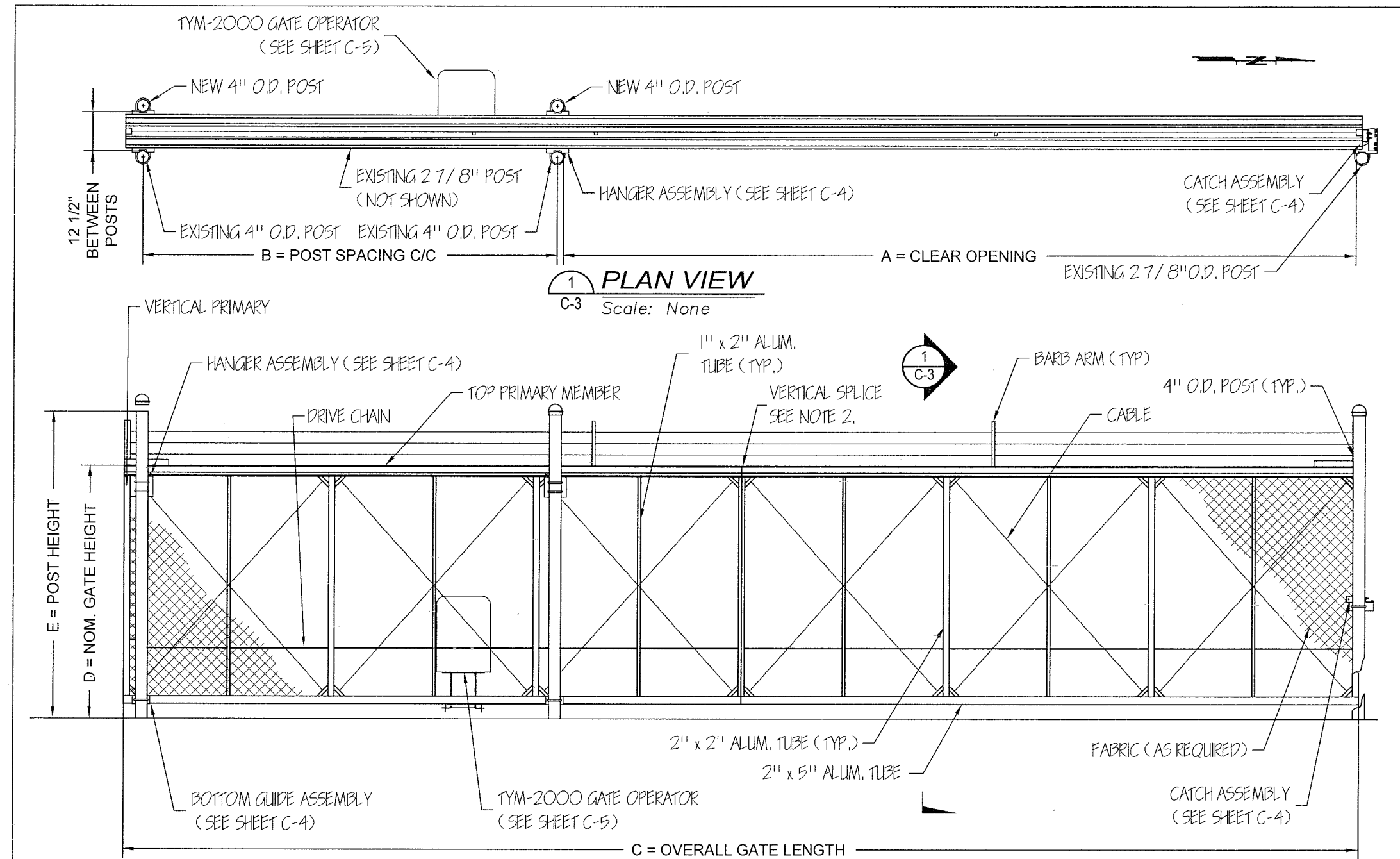
1. INSTALL NEW FENCE POSTS IN MINIMUM 1'-6" DIAMETER x 3'-0" DEEP BURIED CONCRETE (3,000 PSI MINIMUM).
2. REMOVE PART OF CONCRETE SURROUNDING EXISTING POST IF NECESSARY TO INSTALL FOOTING FOR NEW POST.



Digitally signed by 12677PE
Ron Weigel
Date: 2017.06.14
12:02:51 -07'00' OREGON

EXPIRES: 6-30-18

DRAWING NO.		SHEET NO.		DATE		PROJECT NO.		REVISIONS	
C-1		2 OF 17		JUNE 2017		40748035.01			
ACCESS GATES AND SECURITY SYSTEM		TRI CITY - KELLOGG							
TRI CITY CANTILEVER SLIDE GATE		SITE PLAN							
DESIGNED BY: CENTURY WEST ENGINEERING		DRAWN BY:		CHECKED BY:		SCALE: AS SHOWN			
PORTLAND OFFICE 5311 SW 10TH AVE, 2ND FLOOR SUNNYVALE, CA 94086 (415) 351-1100									



2 ELEVATION
C-3 Scale: None

NOTES:

1. ALL FITTINGS PROVIDED FOR 4" O.D. POSTS. OTHER SIZES ARE AVAILABLE UPON REQUEST.
2. FOR GATES THAT REQUIRE TWO PIECE FABRICATION, A 5" ALUMINUM CHANNEL WILL BE SUBSTITUTED FOR THE 2" x 5" ALUM. TUBE, AND A VERTICAL SPLICE WILL BE ADDED.

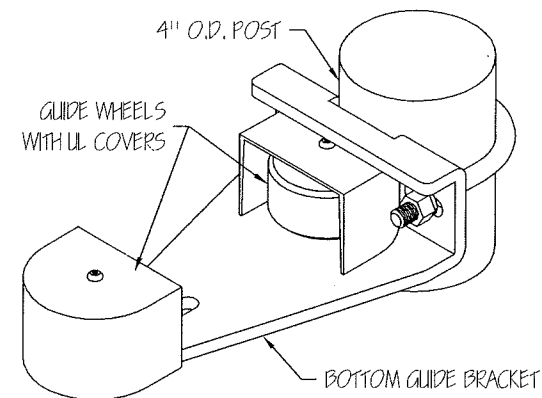
CRITICAL DIMENSION CHART

NOMINAL GATE SIZE	A	CLEAR OPENING	32'-6"	D	NOMINAL GATE HEIGHT	6'-0"
32'-6" x 6'-0"	B	POST SPACING C/C	15'-8"	E	POST HEIGHT	7'-6"
	C	OVERALL GATE LENGTH	48'-9"			




CENTURY WEST ENGINEERING 10000 SW 10TH AVE, SUITE 100 PORTLAND, OREGON 97205 503.281.1111		DESIGNED BY: [blank] DRAWN BY: [blank] CHECKED BY: [blank] SCALE: AS SHOWN	PROJECT NO: 40748035.01 DATE: JUNE 2017
ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG		TRI CITY CANTILEVER SLIDE GATE PLAN/ELEVATION	
DRAWING NO. C-3	SHEET NO. 4 OF 17	REVISIONS	

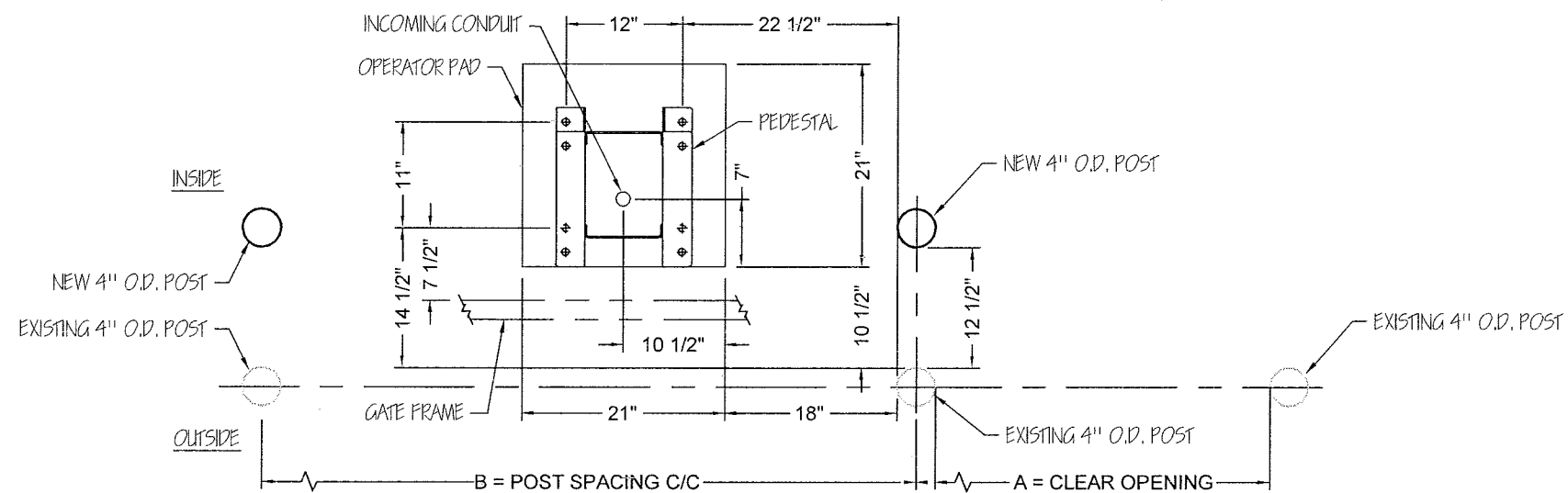
EXPIRES: 6-30-18



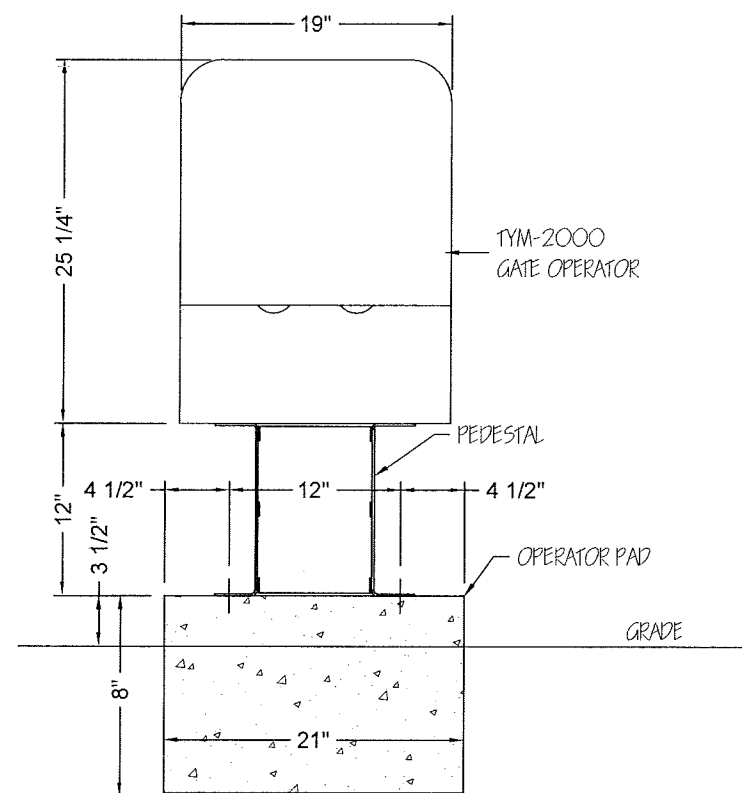
REGISTERED PROFESSIONAL
ENGINEER
12677PE
Ron C. Weigel
OREGON
JULY 13, 1984
RON C. WEIGEL

EXPIRES: 6-30-18

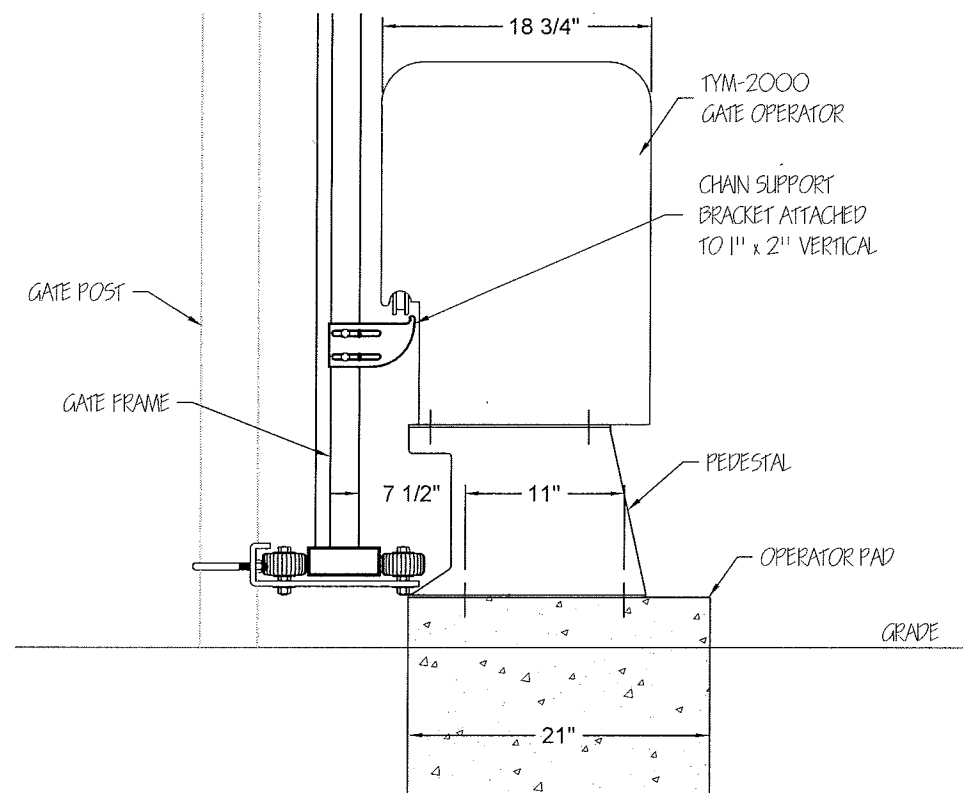
DRAWING NO. C-4	ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG		 <p> CENTURY WEST ENGINEERING PORTLAND OFFICE 5311 SW 94th AVE, #207 TIGARD, OR 97146-3209 503.641.9170 (OFFICE) 503.637.7150 (FAX) </p>	DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____ SCALE: AS SHOWN	DATE: JUNE 2017 PROJECT NO: 4074-8035-01	NO.	DATE	BY	REVISIONS
	SHEET NO. 5 OF 17	TRI CITY CANTILEVER SLIDE GATE ASSEMBLY DETAILS							



1 OPERATOR PAD LAYOUT PLAN
C-5 Scale: None

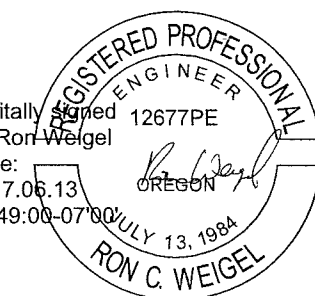


2 OPERATOR FRONT ELEVATION
C-5 Scale: None




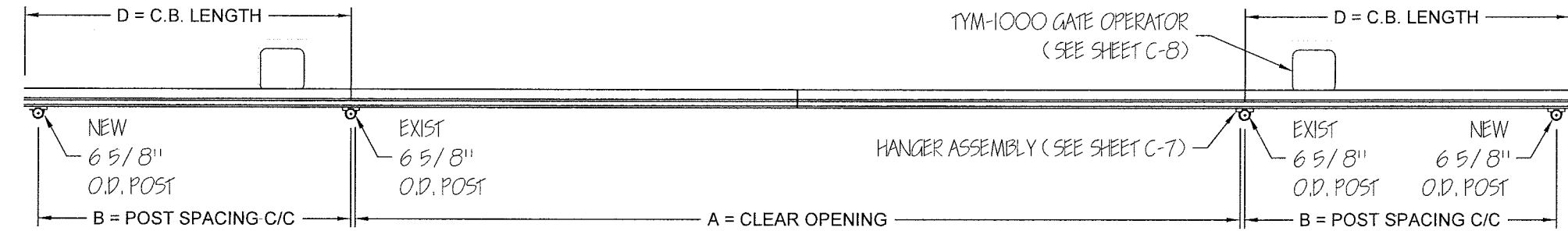
3 OPERATOR SIDE ELEVATION
C-5 Scale: None

Digitally signed
by Ron Weigel
Date:
2017.06.13
15:49:00 -0700

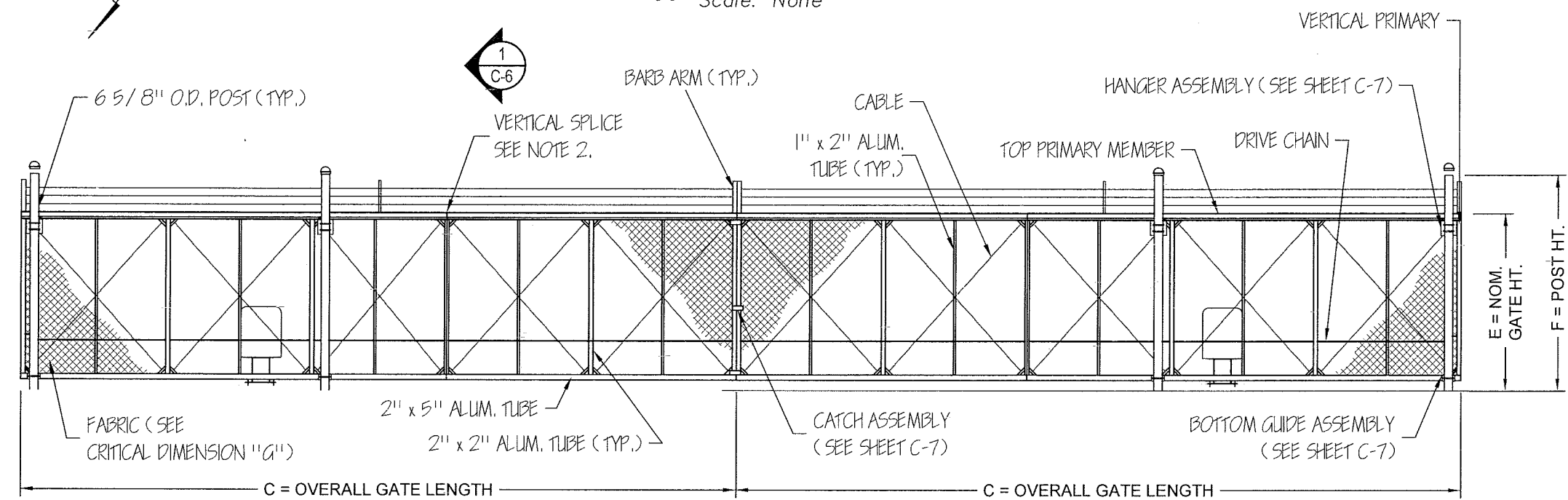


EXPIRES: 6-30-18

DRAWING NO. C-5	ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG	<div><div>CENTURY WEST ENGINEERING</div><div>PORTLAND OFFICE 5301 SW HADACRA AVE. #202 PORTLAND, OR 97207 503.432.2075 503.432.2076</div></div>	NO.	DATE	BY	REVISIONS
SHEET NO. 6 OF 17	TRI CITY CANTILEVER SLIDE GATE OPERATOR DETAILS	DESIGNED BY: DRAWN BY: CHECKED BY: SCALE: AS SHOWN				
		DATE: JUNE 2017 PROJECT NO: 40748035.01				



1 PLAN VIEW
C-6 Scale: None



2 ELEVATION
C-6 Scale: None

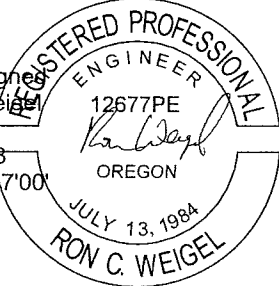
NOTES:

1. ALL FITTINGS PROVIDED FOR 6-5/8" O.D. POSTS. OTHER SIZES ARE AVAILABLE UPON REQUEST.
2. FOR GATES THAT REQUIRE TWO PIECE FABRICATION, A 5" ALUMINUM CHANNEL WILL BE SUBSTITUTED FOR THE 2" x 5" ALUM. TUBE AND A VERTICAL SPLICE WILL BE ADDED.
3. GATE ELEVATION IS VIEWED FROM OUTSIDE OF THE SECURE AREA LOOKING IN.

NOMINAL GATE SIZE
26' x 6' +1'

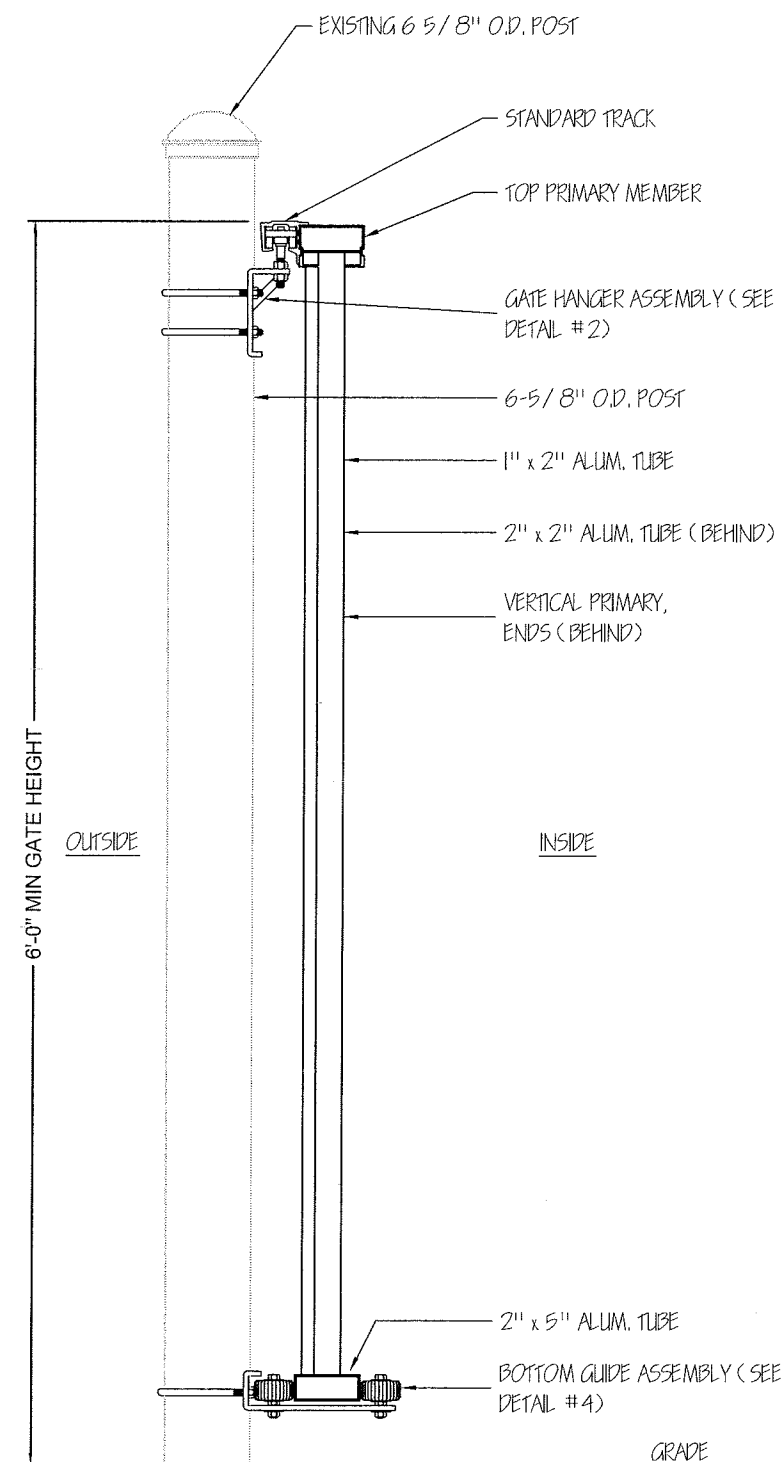
CRITICAL DIMENSION CHART					
A	CLEAR OPENING	26'-0"	E	NOMINAL GATE HEIGHT	6'-0"
B	COUNTERBALANCE POST SPACING C/C	5'-5"	F	POST HEIGHT	7'-6"
C	OVERALL GATE LENGTH	19'-6"	G	FABRIC HEIGHT	5'-0"
D	COUNTERBALANCE LENGTH	6'-6"			

Digitally signed
by Ron Weigel
Date:
2017.06.13
15:49:16-07'00'

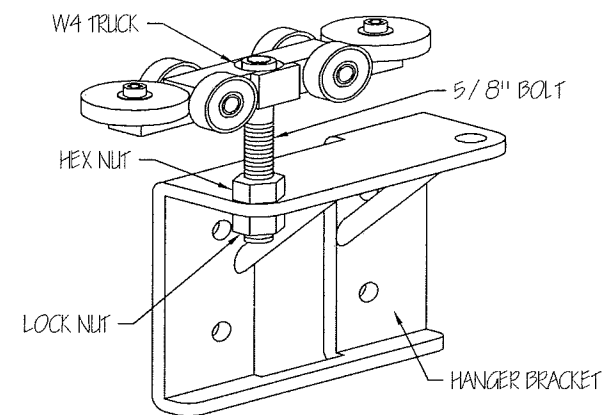


EXPIRES: 6-30-18

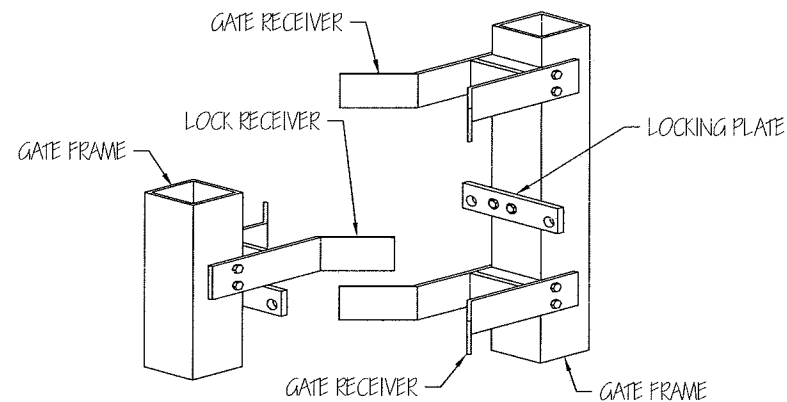
CENTURY WEST ENGINEERING PORTLAND OFFICE 2331 SW BARCLAY AVE., 400 SUITE 200 PORTLAND, OREGON 97201-3710 FAX 503.237.0100		DESIGNED BY: [] DRAWN BY: [] CHECKED BY: [] SCALE: AS SHOWN	PROJECT NO: 40748035.01 DATE: JUNE 2017
ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG		KELLOGG CANTILEVER SLIDE GATE PLAN/ELEVATION	
DRAWING NO. C-6	SHEET NO. 7 OF 17		



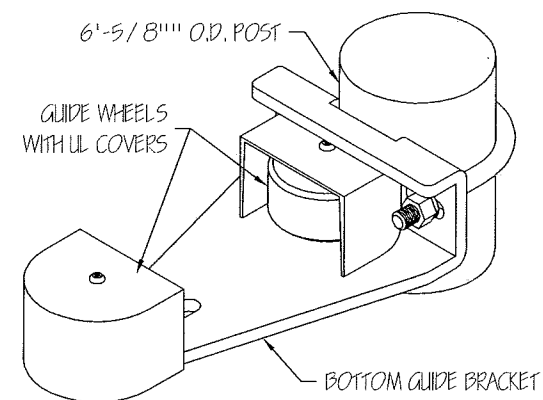
1 ASSEMBLY SECTION
C-7 Scale: None



2 **GATE HANGER**
C-7 Scale: None

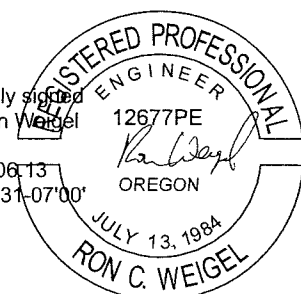


CATCH ASSEMBLY
C-7 Scale: None




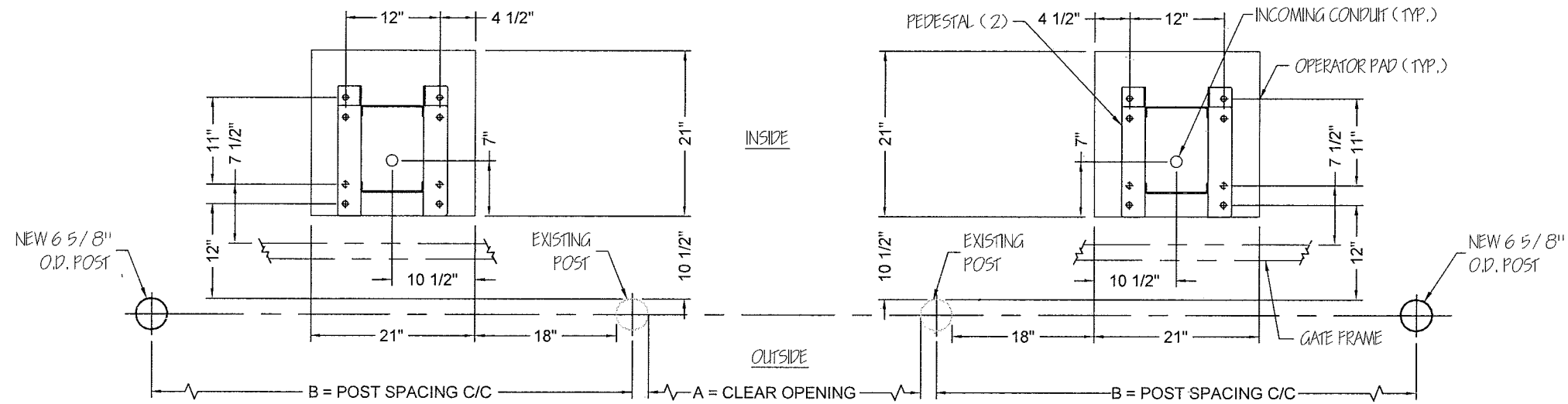
4 BOTTOM GUIDE
C-7 Scale: None

Digitally signed
by Ron Wengel
Date:
2017.06.13
15:49:31-07'00'

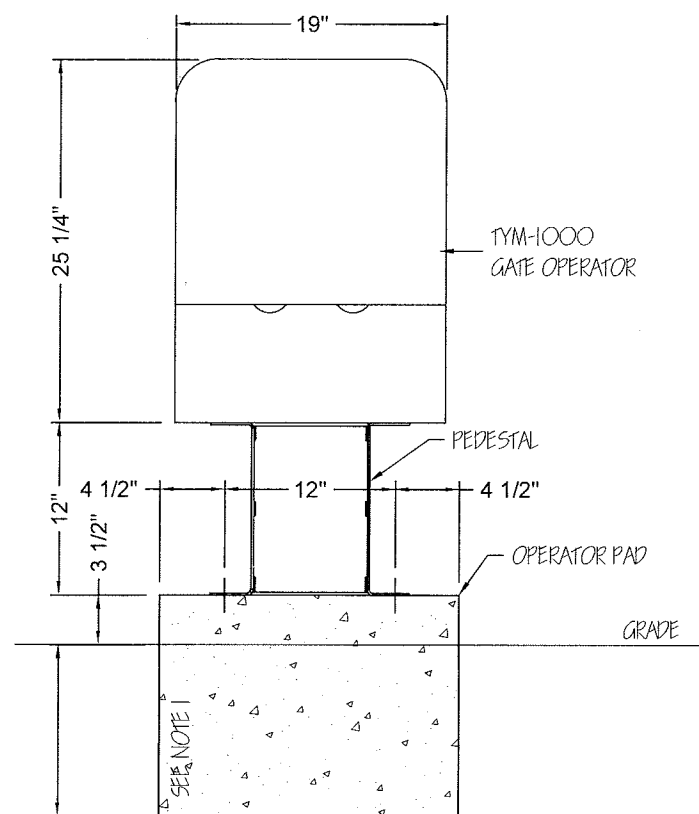


EXPIRES: 6-30-18

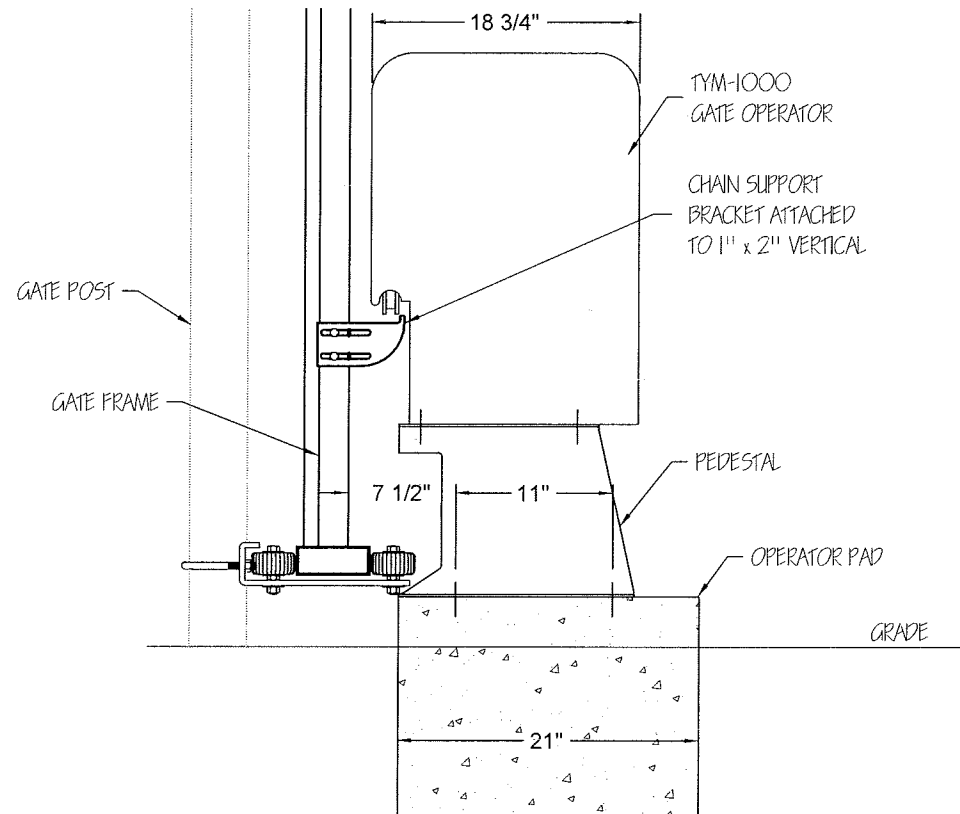
DRAWING NO. C-7	ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG		<div><div>CENTURY WEST ENGINEERING</div><div>10000 W. 10TH AVE. SUITE 100 PORTLAND, OR 97201 TEL: 503.282.2200 FAX: 503.282.2195</div></div>	NO.	DATE	BY	REVISIONS	
SHEET NO. 8 OF 17	KELLOGG CANTILEVER SLIDE GATE ASSEMBLY DETAILS		DESIGNED BY:		DRAWN BY:		CHECKED BY:	SCALE:
							PROJECT NO:	AS SHOWN
			DATE:		JUNE 2017		40748035.01	



1 OPERATOR PAD LAYOUT PLAN
C-8 Scale: None

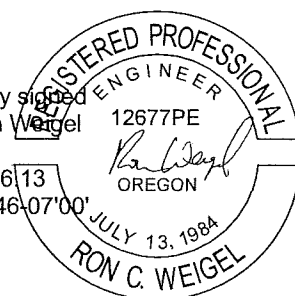


2 OPERATOR FRONT ELEVATION
C-8 Scale: None




3 OPERATOR SIDE ELEVATION
C-8 Scale: None

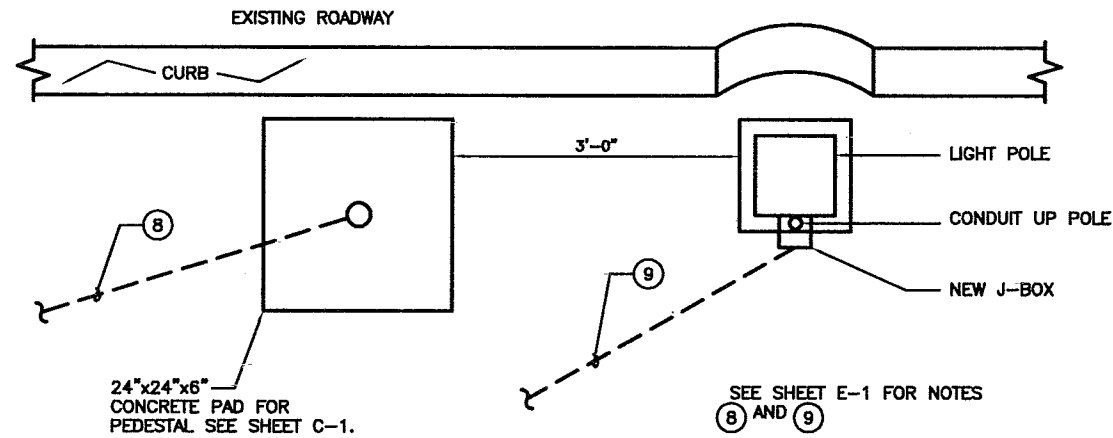
Digitally signed
by Ron Weigel
Date: 2017.06.13
15:49:46 -07'00'



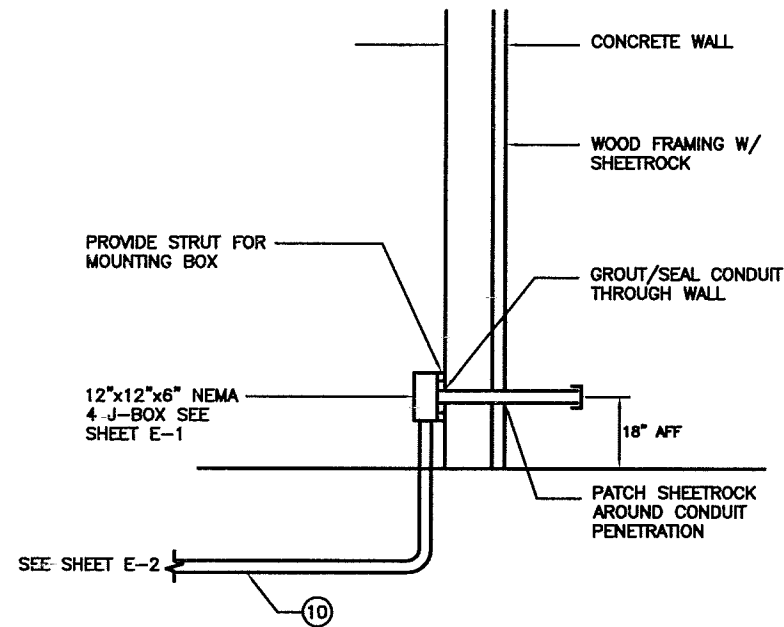
EXPIRES: 6-30-18

DRAWING NO. C-8	ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG	<div><div>CENTURY WEST ENGINEERING</div></div> <div>PORTLAND, OREGON 97208 503.682.7125 FAX 503.682.7125 FAX</div>	NO.	DATE	BY	REVISIONS
SHEET NO. 9 OF 17	KELLOGG CANTILEVER SLIDE GATE OPERATOR DETAILS	DESIGNED BY:	DRAWN BY:	CHECKED BY:	SCALE:	
					AS SHOWN	
		DATE:	JUNE 2017	PROJECT NO:	40748035.01	

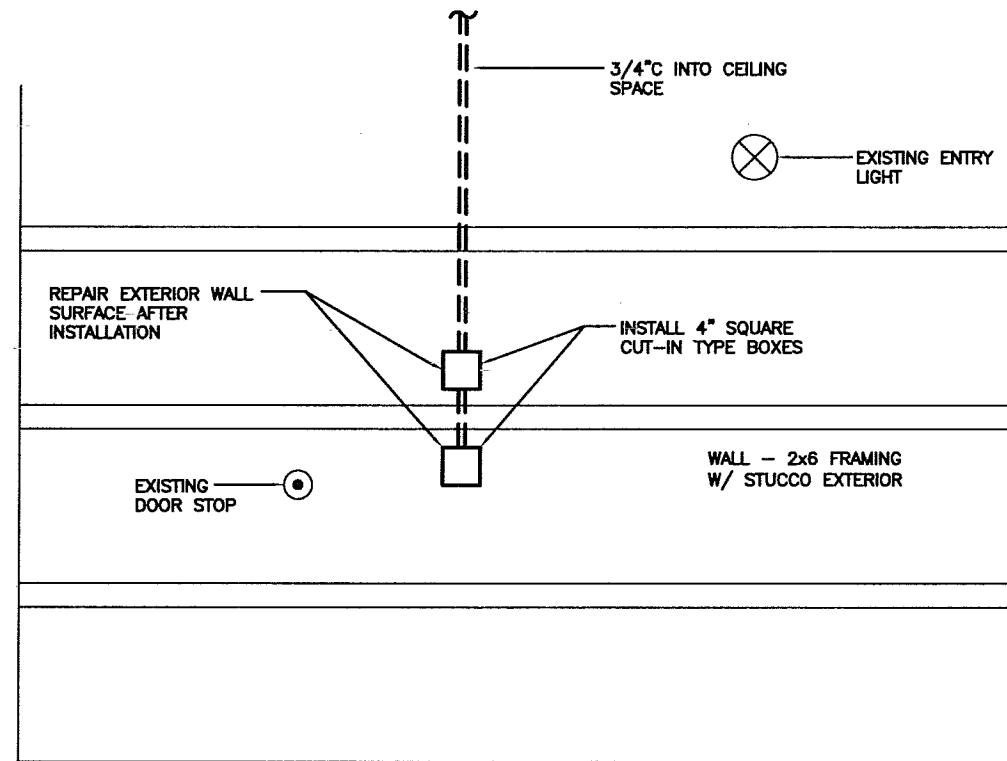
[illegible]



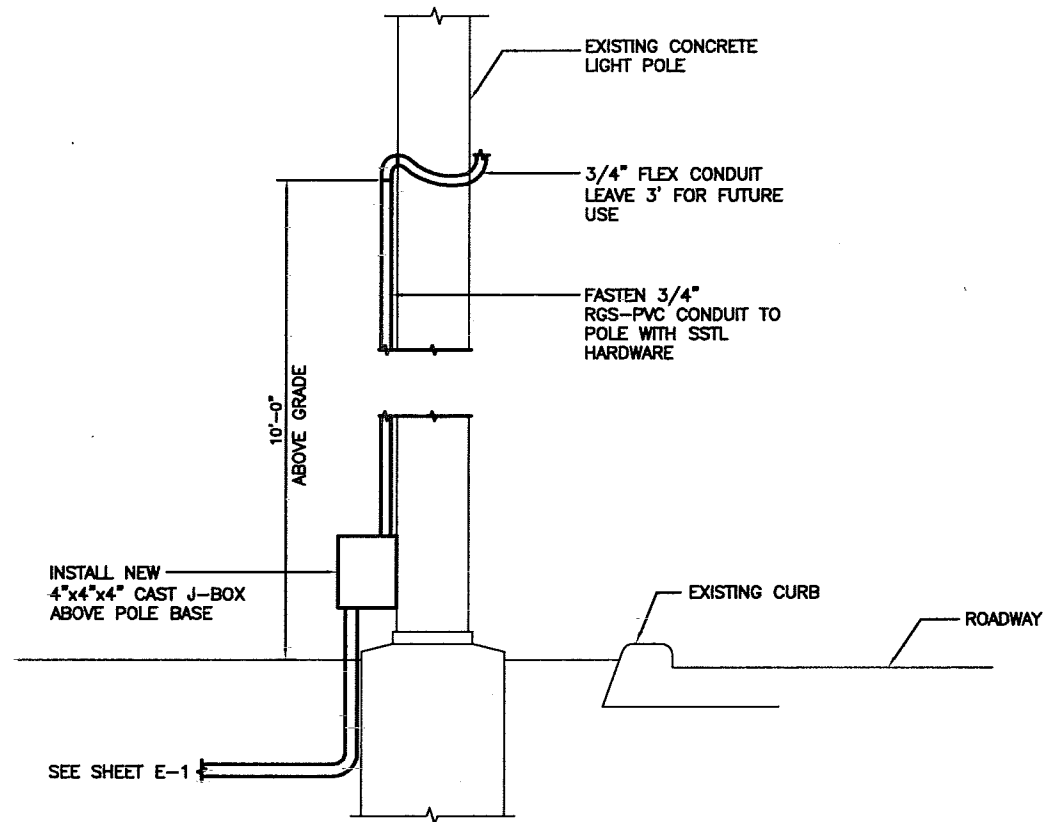
1 PEDESTAL DETAIL
E-3 SCALE: 1/2"=1'-0"



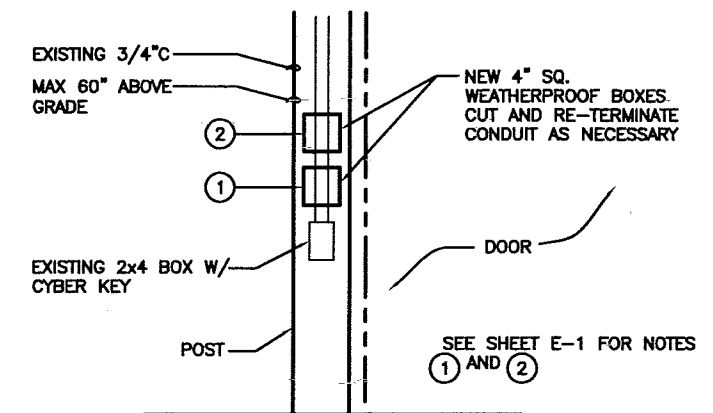
2 WALL ENTRY DETAIL
E-3 SCALE: 1/4"=1'-0"



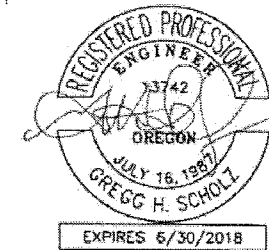
4 LAB BUILDING ENTRY DETAIL
E-3 NOT TO SCALE



3 POLE DETAIL
E-3 NOT TO SCALE




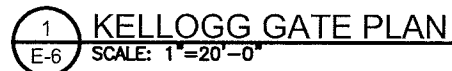
5 ENTRY DOOR DETAIL
E-3 NOT TO SCALE



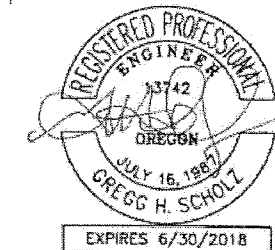
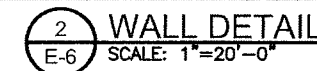
[2017.06.13 14:47:55-07'00']



E-3	SHEET NO. 12 OF 17	ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG	ELECTRICAL TRI CITY DETAIL	 CENTURY WEST ENGINEERING CORPORATION				<table><tr><td>DESIGNED BY: GHS</td><td>DRAWN BY: DPR</td><td>CHECKED BY: GHS</td><td>SCALE: AS SHOWN</td></tr><tr><td>DATE: JUNE 2017</td><td></td><td>PROJECT NO: 40748035.01</td><td></td></tr></table>				DESIGNED BY: GHS	DRAWN BY: DPR	CHECKED BY: GHS	SCALE: AS SHOWN	DATE: JUNE 2017		PROJECT NO: 40748035.01		<table><tr><td>NO.</td><td>DATE</td><td>BY</td><td>REVISIONS</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>				NO.	DATE	BY	REVISIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
				DESIGNED BY: GHS	DRAWN BY: DPR	CHECKED BY: GHS	SCALE: AS SHOWN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
DATE: JUNE 2017		PROJECT NO: 40748035.01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
NO.	DATE	BY	REVISIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				




- ① NEW GATE OPERATOR. CONNECT POWER, EXIT LOOP, AND OPEN SIGNAL FROM SECURITY PANEL. COORDINATE WITH OWNER. PROVIDE TEMPORARY GATE OPERATION FROM INSIDE BUILDING.
- ② NEW EXIT LOOP. CUT INTO EXISTING ASPHALT AND GROUT LOOP WIRING IN PLACE USING APPROVED SEALANT.
- ③ NEW PEDESTAL PAD. SEE SIMILAR DETAIL SHEET E1. OWNER TO INSTALL ACCESS PEDESTAL.
- ④ INSTALL NEW HANDHOLE, BROOKS PRODUCTS #38 OR EQUAL. ROUTE CABLES THROUGH BOX WITHOUT SPLICES.
- ⑤ INSTALL 2 INCH CONDUIT FROM PULL BOX TO ACCESSIBLE CEILING SPACE IN ADMINISTRATION BUILDING. SEE SHEET E-6 FOR ROUTE INSIDE BUILDING. OWNER TO INSTALL CABLE FROM ENTRY PEDESTAL AND CONTROL SIGNAL TO GATE OPERATORS.
- ⑥ GATE POWER SUPPLY. PROVIDE NEW 20A/1P CIRCUIT BREAKER IN PANEL B1. SQUARE D QO LOAD CENTER. SPACE 19. INSTALL NEW 1 INCH CONDUIT WITH 2 #12 AWG, 1 #12 AWG, GROUND TO GATE OPERATORS.
- ⑦ INSTALL 1 INCH CONDUIT FROM PULL BOX TO GATE OPERATOR FOR OWNER INSTALLED SIGNAL CABLE.
- ⑧ INSTALL 2 INCH CONDUIT FROM PEDESTAL PAD TO PULL BOX FOR OWNER INSTALLED CABLES.
- ⑨ CORE DRILL CONDUITS INTO STORAGE ROOM. SEE SHEET E-7 FOR LOCATION AND ROUTING INSIDE BUILDING. GROUT CONDUIT WATERTIGHT WITH NON-SHRINK CEMENT.
- ⑩ PROVIDE 4" SQ. WEATHERPROOF BOX ON ROOF FACIA FOR OWNER INSTALLED RECEIVER.
- ⑪ INSTALL NEW 1" CONDUIT AND GATE CONTROL CABLE FROM OPERATOR TO PHOTO EYE SENSORS. REPAIR ASPHALT AS REQUIRED.
- ⑫ PROVIDE FIRE DEPARTMENT ACCESS LOCKBOX PER LOCAL FIRE DEPARTMENT REQUIREMENTS.
- ⑬ 3/4 INCH CONDUIT WITH 2 #14 AWG TO GATE OPERATORS.

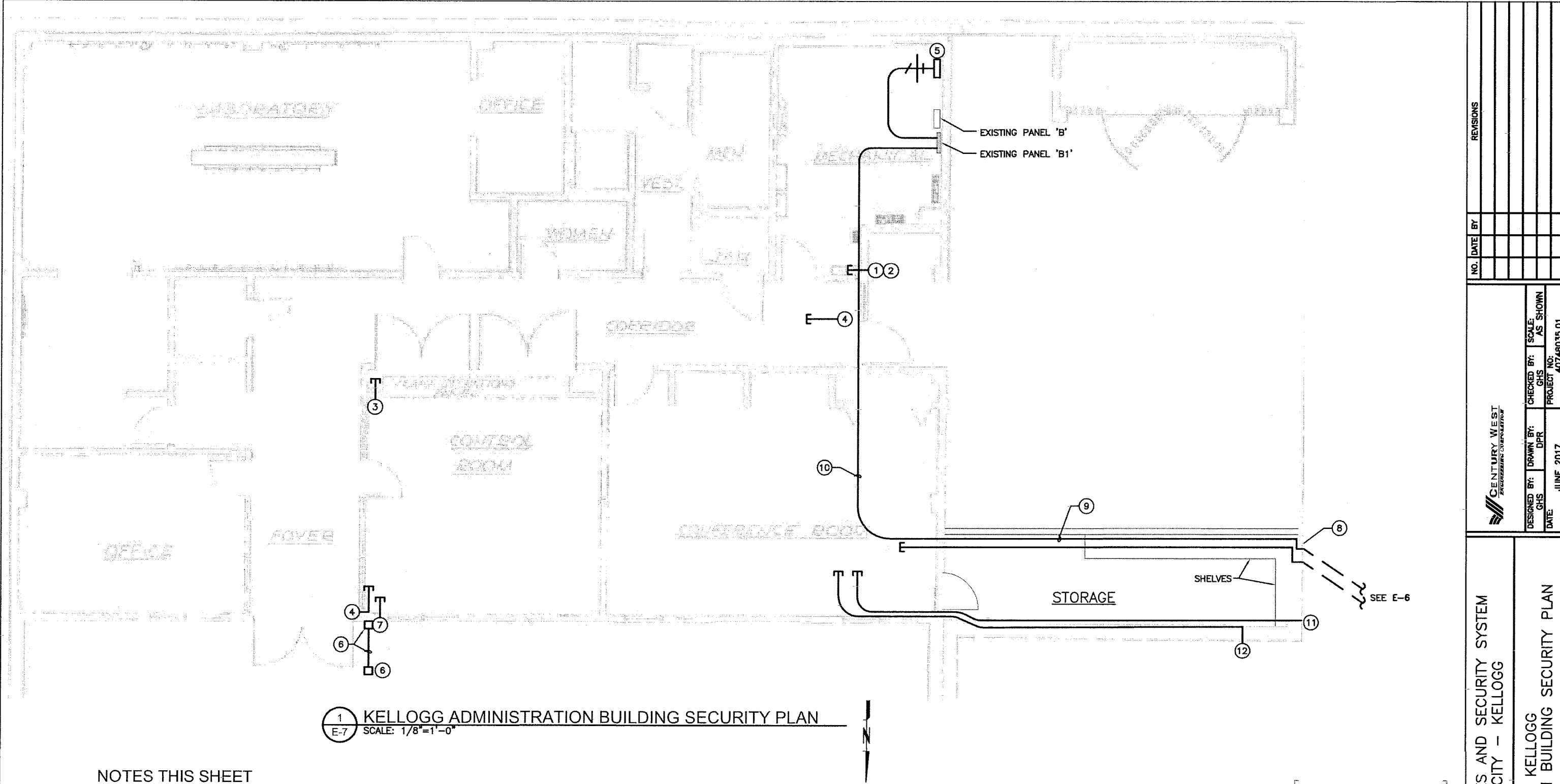


R&W
ENGINEERING, INC.
"Engineering Integrated Solutions"

9615 S.W. Allen Boulevard
Suite 107
Beaverton, Oregon 97005
Phone: (503) 726-3300
Fax: (503) 726-3326
E-mail: rweng@rweng.com

Project No.: 132.065.001 Contact: GREGG SCHOLZ

DRAWING NO. E-6	ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG		NO.	DATE	BY	REVISIONS
SHEET NO. 15 OF 17	KELLOGG GATE PLAN	DESIGNED BY: GHS DRAWN BY: DFR CHECKED BY: GHS SCALE: AS SHOWN DATE: JUNE 2017 PROJECT NO: 40748035.01				



1 KELLOGG ADMINISTRATION BUILDING SECURITY PLAN
E-7 SCALE: 1/8"=1'-0"

NOTES THIS SHEET

- 1 4 INCH SQUARE BOX FOR CARD READER/KEYPAD BY OWNER. 1 INCH CONDUIT TO ACCESSIBLE CEILING SPACE.

2 4-INCH SQUARE BOX FOR INTERCOM BY OWNER. CONNECT TO SAME CONDUIT AS NOTE 1 ABOVE.

3 SINGLE GANG, CUT-IN STYLE BOX WITH SINGLE HEAVYDUTY PUSHBUTTON. LABEL "GATE". 3/4 INCH CONDUIT TO ACCESSIBLE CEILING SPACE. REPAIR WALL SURFACE.

4 4 INCH SQUARE CUT-IN STYLE BOX NEAR CEILING FOR OWNER INSTALLED DOOR LOCKS. INSTALL 1 INCH CONDUIT TO ACCESSIBLE CEILING SPACE.

5 PROVIDE JUNCTION BOX WITH 12 INCHES OF SPARE CONDUCTOR FOR CONNECTION BY OWNER.
- 6 REMOVE EXISTING SURFACE BOX ON EAVE AND 1/2 INCH CONDUIT TO CYBERKEY.

7 ADD NEW 4 INCH WEATHERPROOF JUNCTION BOX FOR OWNER INSTALLED CARD READER ABOVE EXISTING CYBERKEY BOX. INSTALL NEW 3/4 INCH CONDUIT THROUGH EAVE INTO ACCESSIBLE ATTIC SPACE. SEAL AROUND CONDUIT.

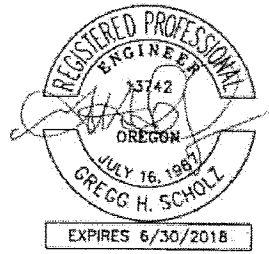
8 SEE E-6 FOR WALL PENETRATION DETAIL.

9 ROUTE 2 INCH SIGNAL AND 1 INCH POWER CONDUITS UP THROUGH CORNER OF EXISTING SHELVING. THEN ROUTE ALONG UPPER WALL BELOW BEAMS TO PENETRATION INTO ACCESSIBLE CEILING SPACE.

10 CONTINUE 1 INCH POWER CONDUIT THROUGH CEILING SPACE TO EXISTING PANEL B1 IN MECHANICAL ROOM.


11 PROVIDE 4 INCH SQUARE WEATHERPROOF JUNCTION BOX BELOW EAVE WITH WEATHERPROOF COVER FOR OWNER INSTALLED CAMERA. INSTALL 3/4 INCH CONDUIT THROUGH WALL INTO ACCESSIBLE CEILING SPACE. SEAL WALL PENETRATION.

12 PROVIDE 4" SQ. WEATHERPROOF BOX ON ROOF FACIA FOR OWNER INSTALLED RECEIVER.



2017.06.13 14:49:41-07'00'



DRAWING NO. E-7	ACCESS GATES AND SECURITY SYSTEM TRI CITY - KELLOGG	 CENTURY WEST ENGINEERING CORPORATION					NO.		DATE	BY	REVISIONS
SHEET NO. 6 OF 17	KELLOGG ADMINISTRATION BUILDING SECURITY PLAN		DESIGNED BY:		DRAWN BY:		CHECKED BY:		SCALE:		
			GHS		GHS		GHS		AS SHOWN		
			DATE:		JUNE 2017		PROJECT NO:		40748035.01		

