Request For Proposals
&
Contract Documents
for
Shirttail Creek Subdivision Sewer Project
in
Seneca, Oregon
August 2019

Engineer:
Sisul Engineering
A Division of Sisul Enterprises, Inc
158 E. Main Street, John Day, OR 97845
Phone: (541) 575-3777, Fax: (541) 575-3778

Bidders attention is called to the following forms which must be executed in full as required to submit a qualified bid:
Proposal, Bidder's Certification Statement, Bidder's Bond Statement, First-Tier Subcontractors Disclosure Form, and Bid Bond.

Bidders need to be aware that the City is only open
Monday thru Thursday 9:00am – 2:00pm.

City of Seneca
SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT

ADVERTISMENT FOR BIDS

Sealed bids for the "Shirttail Creek Subdivision Sewer Project" will now be received by the City of Seneca until 2:00 PM local time on September 24th, 2019. Bids will be opened and recorded at the above time and date at the City Hall, in Seneca, Oregon and be reviewed and awarded by the Seneca City Council.

The point of contact for this procurement will be the City Manager/Recorder, Raamin Burrell or Project Engineer, Sisul Engineering. All questions or issues that may arise regarding bidding, bid award process, or specifications shall be directed to the City Manager or Project Engineer. The official response to any questions or request will be through the addendum process outlined in the bid documents. To request bid packets or examine, contact the City of Seneca, PO Box 208 Seneca, OR 97873, phone 541-542-2161, website: www.senecaoregon.com, or email: admin@senecaoregon.com.

Proposals shall be clearly marked "Bid for Shirttail Creek Subdivision Sewer Project" along with time and date of bid opening and shall be delivered before the above hour and date to Seneca City Hall, 106 A Ave, Seneca, Oregon or mailed and received before the above hour and date to P.O. Box 208, Seneca, Oregon 97873 to the attention of Shirttail Creek Sewer Project. Bids may also be emailed to the above address with a signed original forthcoming.

The work consists of the following construction:

Schedule A includes all materials, labor, and equipment for excavation, installation, and fill of engineered sewer lines to the lots in the subdivision with an additional stub out for the existing property and connection by lift station into the new city sewer system.

Plans and specifications may be examined and picked up at: Seneca City Hall and at Sisul Engineering, 158 E. Main Street, John Day, Oregon 97845 Ph: (541) 575-3777. Any Addenda will be emailed with a conformation cover sheet to all potential bidders having contract documents.

All proposals shall be made on proposal forms, accompanied by completed Bidder's Certification Statements, Bidders Performance and Payment Bond Statement, First-Tier Subcontractor Disclosure Form (within two hours of bid closing), and accompanied by a bid bond equal to ten percent (10%) of the total bid to be forfeited to the Owner in the event of failure of the Contractor to execute the contract. A one hundred percent (100%) performance bond and payment bond will be required to guarantee the faithful performance of the contract.

The Contract is for public work subject to ORS 279.348 to 279.380.

The Owner reserves the right to reject any or all bids if it is in the public interest to do so, not in compliance with all bidding procedures and requirements, to postpone the award with notification, to delete certain items from the proposal, and to award the contract to the lowest possible bidder.

Released August 28, 2019.

TABLE OF CONTENTS

INFORMATION FOR BIDDERS

1. PROJECT DATA AND REQUIREMENTS

   a. Project Name: Shirttail Creek Subdivision Sewer Project

   b. Project Location: Seneca, Oregon

   c. Project Owner: City of Seneca

   d. Project Financing: This project is funded by the City of Seneca.

   e. Project Starting and Completion Times: Work is to commence within 10 days of the date of the Notice to Proceed and shall be completed within 60 calendar days of said Notice to Proceed. The Bidder must agree to also pay as liquidated damages, the sum of $100.00 for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

   f. Schedule of Prices: Work is offered on a unit price basis. Each item is to be bid. No substitutions, alternate bids, or partial bids are allowed, except as provided for by the schedule of prices or by written addenda from the Engineer.

   g. Owner's Engineer: Sisul Engineering, 158 E. Main Street, John Day, Oregon 97845. Telephone (541) 575-3777. Project Manager: Joe Hitz.

   h. Prevailing Wages: Contractors must pay the prevailing wage rates as established by the Bureau of Labor and in accordance with ORS 279C.800 to 279C.870.

   i. Right to Reject All Bids: The owner specifically reserves the right to reject all bids or to make contract awards considered to be in the best interests of the City including awarding the lowest bid.

   j. Bid Opening: Bids will be received by the City of Seneca until 2:00 P.M., September 24th, 2019. Proposals shall be clearly marked "*Bid for Shirttail Creek Subdivision Sewer Project*" and to the attention of *Shirttail Creek Sewer*. Bids will be opened publicly by the contracting agency immediately after the deadline for submission of bids. Within two working hours after the bid deadline, a bidder shall submit to the public contracting agency a disclosure of their first-tier subcontractors.

   k. Bid Bond: A 10% Bid Bond will be required on this project.

   l. Performance Bond: A 100% Performance Bond will be required to guarantee the faithful performance of the contract.

   m. Payment Bond: A 100% Payment Bond will be required to guarantee the faithful payment of all subcontractors, employees, suppliers, and other just debts related to performance of the contract.

n. Responsible Proposer: (Responsible Bidder or Responsible Offeror, as applicable) Is defined as an Entity that has submitted a Proposal and meets the standards set forth in OAR 137-047-0640 or 137-049-0390(2) and has not been disqualified by the Agency under OAR 137-049-0370 or 137-047-0575.

o. Responsive Proposal: (Responsive Bid or Responsive Offer, as applicable) Is a proposal that substantially complies with applicable solicitation procedures and requirements and the Solicitation Document.

INSTRUCTIONS TO BIDDERS

1. GENERAL

A general description of the work to be done is contained in the Advertisement for Bids and Information for bidders. The scope is indicated on the accompanying Plans and specified in applicable parts of these Contract Documents.

2. CONTRACT DOCUMENTS

The Contract Documents under which it is proposed to execute this work consist of the material bound herewith the Plans and addenda. These Contract Documents are intended to be mutually cooperative and to provide all details reasonably required for the execution of the proposed work. Any person contemplating the submission of a proposal and being in doubt as to the meaning or intent of said Contract Documents, should request the Engineer, in writing, to provide an interpretation thereof. Any interpretation or change in said Contract Documents will be made only in writing and a copy of such interpretation of change will be mailed or delivered to each person receiving a set of the Documents. The Owner will not be responsible for any other explanation or interpretations of said Documents.

3. TYPE OF PROPOSAL

The proposal for the work contemplated is to be submitted on a lump sum basis and/or unit price basis as shown on the Bid Schedules.

4. PREPARATION OF PROPOSALS

All blank spaces in the proposal form must be filled in, in ink, in both words and figures where required. No changes shall be made in the phraseology of the forms or in the items mentioned herein. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures.

Any proposal shall be deemed non-responsive which contains omissions, erasures, alterations, or additions of any kind, or items uncalled for, or in which any of the items are obviously unbalanced, or which in any manner shall fail to conform to the conditions of the published Invitation to Bid.

The Bidder shall sign his proposal in the blank space provided therefor. Proposals made by corporations or partnerships shall contain names and addresses of principal officer or partners. If the proposal is made by a corporation, it must be acknowledged by one of the principal officers thereof; if made by a partnership, by one of the partners.

5. SUBMISSION OF BIDS

Bids shall be submitted at the time and place indicated in the Advertisement for Bids and shall be included in an opaque sealed envelope, marked with the project title, name and address of bidder, and accompanied by bid security and other required documents.

6. **MODIFING OR WITHDRAWAL OF PROPOSAL**

Any proposal may be withdrawn prior to the scheduled time for the opening of proposals either by telefax or written request, or in person. Bids may be modified in writing prior to the time and date set for bid closing. Any modifications shall be prepared on the company letterhead or re-submit copies of orginal documents, signed by authorized personnel, state that the new document supersedes or modifies the prior bid and is to be submitted in a sealed envelope, appropriately marked. The Owner will not except telefax, electron mail, verbal, or other similar modification. No proposal may be withdrawn or modified after the time scheduled for the opening of proposals unless the time specified in paragraph 10 of this Instructions to Bidders has elapsed.

7. **BID SECURITY**

Proposals must be accompanied by a cashier's check drawn on a bank in good standing, or a bid bond issued by a surety company authorized to issue such bonds in the State of Oregon, in an amount of not less than ten percent (10%) of the total amount of proposal submitted. This check or bid bond shall be given as a guarantee that if awarded the contract, the successful bidder will execute the attached contract and furnish a properly executed Performance and Payment Bond in the full amount of the contract price within the time specified.

The Owner reserves the right to retain the bid security of the three lowest bidders until the successful bidder has signed and delivered the contract. Upon failure of the successful bidder to sign and deliver said contract and Performance and Payment Bond within the specified time, the next lowest bid may be accepted at the Owner's discretion whereupon the above instructions and requirements will apply to the said second bidder.

Bid security of all bidders, except the three lowest, will be returned promptly after the canvas of bids; bid security of the three lowest bidders will be returned within three (3) calendar days after the contract has been executed or other disposition made thereof in accordance with the provisions stated herein.

8. **CONDITIONS OF WORK**

Each bidder must inform himself/herself of the conditions relating to the regular execution of the work and it is assumed that he will inspect the site and make himself thoroughly familiar with all the Contract Documents. Failure to do will not relieve the successful bidder of his obligation to enter into a contract and complete the contemplated work in strict accordance with the Contract Documents.

Each bidder must inform himself of all laws and statutes, both federal and state, relative to the regular execution of the work, the employment of labor, protection of public health, the protection of private property, right-of-way, and access to the work, fire protection regulations and similar requirements.

9. **FINANCING**

Monthly payments for work performed will be made by the Owner as specified in the General Conditions.

10. **AWARD OF CONTRACT**

Within one (1) calendar day after the opening of proposals, the Owner will accept of the proposals or will act in accordance with paragraph 11 of this Instruction to Bidders. The acceptance of the proposal will be by notice in writing, emailed and mailed or delivered to the office designated in the proposal.

11. **BASIS OF AWARD**

The award will be made by the Owner on the basis of that proposal which, in its sole and absolute judgment, will best serve its interests. Evaluation of bids prices will be based the Schedule of Prices' Items.

The Owner reserves the right to accept or reject any or all proposals and to waive any informalities and irregularities in said proposals.

12. **EXECUTION OF CONTRACT**

The successful bidder shall, within ten (10) days after receiving Notice of Award, execute the contract hereto attached with the Owner.

13. **FAILURE TO EXECUTE CONTRACT AND FURNISH BOND**

Should the successful bidder fail or refuse to execute the Contract, then the bid security deposited by said bidder shall be retained as liquidated damages by the Owner and it is agreed that this said sum is a fair estimate of the amount of damages the Owner will sustain in case the bidder fails to enter into a contract and furnish bond as herein before provided. Bid security deposited in the form of a cashier's check shall be subject to the same requirements as a bid bond.

14. **TIME OF COMPLETION**

The time of completion of the work to be performed under this Contract is stated in the Information for Bidders. Delays and extensions of time may be allowed in accordance with the General Conditions.

PROPOSAL

City of Seneca
PO Box 208
Seneca, Oregon 97873

Ladies and Gentlemen:

The undersigned bidder declares that the only persons or parties interested in this proposal are those named herein; that this proposal is in all respects fair and without fraud and that it is made without collusion with any representatives of the Owner.

The bidder further declares that: a) he has examined the plans, specifications, and other proposed contract documents; b) he has determined the extent, character, and location of the proposed work; and c) he has personally inspected the site of the work and has satisfied himself as to the conditions of the work and materials as included herein is brief and is intended only to identify the said quantities with detailed requirements of the contract documents.

The bidder does hereby propose to furnish all materials (those not identified as being supplied by the City), tools, equipment, and appliances, and to perform all labor and work necessary to construct and complete the project entitled:

SHRITTAIL CREEK SUBDIVISION SEWER PROJECT

and all specified work appurtenant thereto, and connection with this project for the Owner with the time limit specified and in accordance with plans, specifications, and change order documents prepared by Sisul Engineering for the sums set forth in the following schedule of prices.

SCHEDULE OF PRICES

Schedule 'A'

DESCRIPTION	QUANTITY	UNITS		UNIT PRICE		TOTAL COST
Mobilization	1	LS		$		$
48" Manhole	3	EA		$		$
6" 3034 PVC Mainline Installed	1234	LF		$		$
6" Cleanout	1	EA		$		$
4" 3034 PVC Service Line Installed	220	LF		$		$
Lift Station	1	LS		$		$
Lift Station Electrical - Power Panel, Controls and all needed wiring	1	LS		$		$
2" Schedule 40 PVC Forcemain	340	LF		$		$
		Schedule 'A' TOTAL				**$**

The conditions or qualifications upon which the undersigned bidder will accept award of the Contract, are as follows:

_____

_____

_____

_____

_____

The undersigned agrees that, if awarded the Contract, he will commence work within 10 calendar days after the date of receipt of written Notice to Proceed and that he will complete the work within the specified number of days set forth in the Information for Bidders.

Enclosed is a bid guarantee consisting of bid bond drawn on_____
_____on the amount of $_____
_____.

The undersigned certifies that:

(a) He has examined the site of the work.
(b) He understands the manner of payment for the cost of the Project.
(c) He has received and duly considered the following Addenda to the specifications and the following revisions or additions to the plans:

Addenda: No._____ to No._____ inclusive.

Plan Revisions Sheets: Nos._____

Plan Addition Sheets: Nos._____

The undersigned agrees that upon written acceptance of this bid, he will, within ten (10) days of receipt of such notice, execute a formal contract agreement with the Owner in the form attached hereto, and that he will provide acceptable Performance Payment Bond. In case of default in execution of the contract or in delivery of an acceptable bond, the bid guarantee accompanying this Proposal shall be forfeited to, and remain the property of, the Owner.

The undersigned agrees that the prices in this bid are firm for a period of 30 days after the bid is opened prior to bid award.

In submitting this bid, it is understood that the Owner reserves the right to reject any and all bids, to adjust the scope of the work within reasonable limits, and to postpone award for reasonable time.

Dated at_____this_____day of_____

_____

Name of Firm

_____

Business Address

_____

Signature of Responsible Official

_____

Title

_____

State of Incorporation

_____

Names of Partners

BIDDER'S CERTIFICATION STATEMENTS

AS REQUIRED BY CERTAIN OREGON REVISED STATUES (ORS)

The Bidder, _____, certifies to the following:
(Company Name)

1. Bidder is registered with the Oregon Construction Contractors Registration Board in accordance with ORS 701.035 through 701.055. The Bidder certifies that CCB Registration Number _____Exp. Date_____ allows their company to perform work on Public Works Projects and that this registration is current and valid. The Bidder further certifies that if awarded the contract, all subcontractors performing work will be registered with the Construction Contractors Registration Board in accordance with ORS 701.035 through 701.055 before the subcontractors commence work under the contract.

2. On all public contracts exceeding $50,000 and not covered under the federal Davis-Bacon Act, Bidder will comply with the applicable provisions of the Oregon Prevailing Wage Law, ORS 279.348 through 279.380 which provides input for the payment of not less than the prevailing wage rates, including fringe benefits, the posting of wage rates on the jobsite, the furnishing of payroll certifications, and other requirements.

3. Bidder is in compliance with "Oregon Tax Laws" which means those programs listed in ORS 305.380(4).

4. Bidder, in accordance with ORS 279.111, does not discriminate against minorities, women, or emerging small business enterprises in obtaining any subcontracts.

5. Bidder is a *[Non-Resident Bidder]* or *[Resident Bidder]* (Underline correct designation) as defined in ORS 279.029 "Resident Bidder" means a bidder that has paid unemployment taxes or income taxes in the State of Oregon during the 12 calendar months immediately preceding submission of the bid and has a business address in the State of Oregon.

Project: **Shirttail Creek Subdivision Sewer Project**

_____
(Date)

_____
(Company Name)

_____
(Authorized Signature)

_____
(Title)

BIDDER'S PERFORMANCE AND PAYMENT STATEMENT

AS REQUIRED BY CERTAIN OREGON REVISED STATUES (ORS)

The Bidder, _____, is submitting a bid to
(Company Name)

the **City of Seneca, Oregon** pursuant the City's Advertisement for Bids for the **Shirttail Creek Subdivision Sewer Project**.

The Bidder certifies that if it is awarded the contract, the Bidder has the financial ability to obtain good and sufficient bonds issued by the surety to the Owner in sums equal to the amount of the bid providing for the faithful performance of the Contract and payment of subcontractors, supplies, labor, and materials.

The Bidder understands and agrees if the Bidder fails to provide the performance and payment bonds, the Owner may reject such a bid and the bid bond or security submitted with the subject bid may be forfeited.

The surety requested to issue the performance and payment bonds will be _____ _____. The Bidder hereby authorizes _____.
(Surety Company) *(Surety Company)*
to disclose any information to the Owner concerning the Bidder's ability to supply performance and payment bonds in the amount of the contract.

_____
(Company Name)

_____
(Authorized Signature)

_____
(Title)

SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT
SENECA, OREGON
BID BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

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

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

City of Seneca
(Name of Owner)

106 A Ave, PO Box 208, Seneca, OR 97873
(Address of Owner)

hereinafter called Owner in the penal sum of _____ Dollars ($_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firm by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the above bounded principle as aforesaid, is about to hand in and submit to the Owner a Bid or Proposal for the above titled project, in accordance with the contract documents, plans, and specifications filed in the office of the Owner and under the notice inviting proposals therefor.

NOW, THEREFORE, if the bid or proposal of said principal shall be accepted, and the contract for such work be awarded to the principal thereupon by the said Owner, and said principal shall enter into a contract (properly completed in accordance with the contract documents) and bond for the completion of said work as required by law, then this obligation to be null and void, otherwise to be and remain in full force and effect.

IN WITNESS WHEREOF, said Principal and said Surety have caused these presents to be duly signed and sealed this

Dated _____ day of _____, 20___.

_____
(Principal) (Seal)

By _____
(Signature)

_____
(Surety) (Seal)

By _____
(Attorney-in-Fact)

FIRST-TIER SUBCONTRACTORS DISCLOSURE FORM
SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT
CITY OF SENECA

All Bidders shall comply with ORS 279.027 subsection (3).

Project Name: _____

Bid Closing: Date: _____ Time: _____

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

List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. *(Attach additional sheets if needed)*

	Name	**Dollar Value**	**Category of Work**
1)	_____	$_____	_____
	_____	_____	_____
2)	_____	$_____	_____
	_____	_____	_____
3)	_____	$_____	_____
	_____	_____	_____
4)	_____	$_____	_____
	_____	_____	_____

Failure to submit this form by the disclosure deadline will result in a nonresponsive bid. A nonresponsive bid will not be considered for award.

Bidders Name: _____

Contact Name: _____ Phone No: _____

CITY OF Seneca OREGON

106 A Ave., PO Box 208
Seneca, OR 97873
(541) 542-2161
www.SenecaOregon.com

NOTICE OF AWARD

Description of work: Construction of **Shirttail Creek Subdivision Sewer Project** for the **City of Seneca** to _____.

The Owner represented by the undersigned has considered the Proposal submittal by you, for the above described work in response to its invitation for Bids dated August 28th, 2019.

It appears that it is the best interest of said Owner to accept your proposal in the amount of _____.

You are required by the Notice and Instructions to Bidders to execute the formal contract with the undersigned Owner and to furnish the required Contractor's Performance and Payment Bond including evidence of insurance coverage as set forth in the general conditions of the contract documents within ten days from the date of delivery of this Notice to you.

If you fail to execute said contract and furnish said bond within ten days for the date of delivery of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Proposal as abandoned and to award the work covered by your Proposal to another, or to re-advertise the work otherwise dispose thereof as the Owner may see fit.

Dated this 10th day of September, 2019.

City of Seneca

OWNER:

_____

BY: *SIGNATURE*

_____

PRINT NAME & TITLE

Acceptance of "Notice of Award"

Receipt of the above "Notice of Award" is hereby acknowledged by:

_____

CONTRACTOR:

_____

BY: *SIGNATURE*

_____

PRINT NAME & TITLE

Dated this _____ day of _____, 2019.

CONTRACT

THIS AGREEMENT, made on the _____day of _____, 2019, by and between City of Seneca, party of the first part, hereinafter called the Owner, and _____, party of the second part, hereinafter called the Contractor.

WITNESSETH, that the Contractor and the Owner, for the consideration hereinafter named, agree as follows:

ARTICLE I - Scope of the Work

The Contractor hereby agrees to furnish materials and labor as required and to perform all work shown on the drawings and described in the specifications for the project as prepared by Sisul Engineering, hereinafter referred to as Engineer, entitled:

Shirttail Creek Subdivision Sewer Project

The work shall include those items named in the Proposal and shall be in accordance with the requirements and provisions of the Contract Documents as defined in the "General Conditions" which Contract Documents are enclosed herewith and are hereby made a part of the Agreement.

The Contractor also agrees to comply with all applicable state laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over the construction, and specifically the applicable provisions of Oregon law relating to public contracts (ORS Chapter 279C) which by this reference are incorporated in the contract and made a part hereof.

ARTICLE II - Time of Completion

The work to be performed under this Contract shall be commenced within 10 calendar days after the date of written notice by the Owner to the Contractor to proceed. The work shall be completed within 60 calendar days of said notice to proceed, with such extensions of time as are provided for in the "General Conditions."

ARTICLE III - Payment

The Owner shall pay to the Contractor for the performance of the work the total amounts determined by the total number of each of the units of work actually completed as named in the Schedule of Prices shown in the Proposal and the unit prices stated thereafter. Based upon the estimated quantities and the stated unit prices, the total contract sum is; _____.

Progress payments shall be made in accordance with Section 21 of the "General Conditions."

IN WITNESS WHEREOF the parties hereto have executed this agreement the day and year first written above.

Contractor: _____ Owner: City of Seneca

By: _____ By: _____

Title: _____ Title: _____

SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT
SENECA, OREGON
PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

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

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

City of Seneca, Oregon
(Name of Owner)

106 A Ave., PO Box 208, Seneca, OR 97873
(Address of Owner)

hereinafter called Owner in the penal sum of _____ Dollars ($_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firm by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the ___ day of _____ 20___, a copy of which is hereto attached and made a part of hereof for the construction of: Shirttail Creek Subdivision Sewer Project.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner with or without notice to the Surety and during the one year guaranty period and if the Principal shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the Specifications accompanying same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the Specifications.

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

PROVIDE, FURTHER, if the principal herein shall pay all contributions or amounts due the State Industrial Accident Fund for said principal or subcontractors incurred in the performance of said contract, and pay all sums of money withheld from the employees of said principal and payable to the State Tax Commission pursuant to ORS 316.711, and shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical and hospital care or attention incident to sickness or injury to the employees of such principal; and shall pay all other just debts, dues and demands incurred in the performance of the said contract and shall pay the Owner, such damages as may accrue to the Owner under said contract and shall in all respects perform said contract according to law, then this obligation is to be void; otherwise to remain in full force and effect.

This bond is given and received under the authority of ORS Chapters 279C and 701, the provisions of which are hereby incorporated into this bond and made a part hereof.

PROVIDE, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary thereunder, whose claim may be unsatisfied.

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

Dated _____ day of _____, 2019.

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)

_____
(email)

SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT
SENECA, OREGON
PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

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

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

City of Seneca, Oregon
(Name of Owner)

106 A Ave., PO Box 208, Seneca, OR 97873
(Address of Owner)

hereinafter called Owner; in the penal sum of _____
_____ Dollars ($_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firm by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That, whereas the said principal herein has made and entered into a certain contract, a copy of which is attached hereto, with the Owner, which contract, together with Provisions, and schedule of contract prices, is by this referenced made a part hereof, whereby the said principal agrees to do in accordance with the terms, conditions, requirements, plans and specifications which set out in said contract the amount of the work and the amount of contract. Notice to the surety of any of the immediately foregoing are waived.

NOW, THEREFORE, if the principal herein shall make payment promptly, as due to all subcontractors and to all persons supplying to the Contractor or his subcontractors, equipment, supplies, labor and materials for the prosecution of work or any part thereof, provided for in said contract, and shall pay all contribution of amount due its workers compensation carrier and the State Unemployment Compensation Trust Fund form such Contractor or subcontractors incurred in the performance of said contract, and pay all sums of money withheld from the Contractor's employees and payable to the Oregon Department of Revenue, and shall pay all other just debts, dues and demands incurred in the performance of the said contract and shall pay the Owner, such damages as may accrue to the City under said contract, then this obligation is to be void, otherwise to remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the Owner, or the above-referenced agency (ies), be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapter 279C and 701, 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 REPRESNTATIVES:

Dated _____ 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)

_____
(email)

CERTIFICATE OF INSURANCE

This is to certify to the **City of Seneca, OR**, hereinafter called Owner, that the below described policy(ies) have been issued for _____.
(Contractor)

hereinafter called Contractor, by _____

_____.
(Insurance Company Name and Address)

hereinafter called Insurer.

In order to provide insurance coverage as required by the Contract Documents of the **SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT**.

Description of Policy(ies): *(Policy Number, Coverage, Limits, Expiration Date, etc.)*
(add more lines if needed)

1) _____

_____

2) _____

_____

********** **Attach standard ACCORD certification form(s)** **********

The Insurance Agent and the Contractor both hereby certify that the above-named Contractor does indeed have the full insurance coverage required by the project Contract Documents.

The Insurance Agent agrees that it will notify the Owner in writing of any material change, expiration, or cancellation of the above-described insurance not less than 30 days before such change, expiration, or cancellation becomes effective. It is further agreed that the above-named Owner, his officers, agents, and employees are included as additional named insureds, but only as respects the performance of the above-described contract.

_____ _____
(Insurance Company Name) *(Contractor)*

_____ _____
(Insurance Agent) *(Authorized Signature)* *(Date)*

_____
(Authorized Signature) *(Date)*

NOTICE TO PROCEED

To: ____

Project: **SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT**

You are hereby notified to proceed with the construction of the above project. Work is to commence on this project within ten days of the date of this notice and shall be completed within 60 consecutive calendar days after the date shown on this notice. The project is to be completed within the specified time, or authorized alterations thereof. All work for this project is to be completed by ___day of __________, 2019. If work is not completed, liquidated damages shall be applied against the contractor and shall accrue to the owner at the rate of $ 100.00 per day for each and every day that the project remains uncompleted beyond the completion date.

You are required to return an acknowledged copy of this NOTICE TO PROCEED to the OWNER.

DATED this _______ day of _________________, 2019.

____
(Owner)

By: ______________________________
(Sign)

Name: ____________________________
(Print)

Title: ____________________________

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by ____________

______________________________ this _______ day of _________________, 2019.

By: ______________________________
(Sign)

Name: ____________________________
(Print)

Title: ____________________________

Oregon Prevailing Wage Rates

The current version of the Oregon Prevailing Wage Rates was released on July 1st, 2019 and will be used for this project. If you need a copy of the current rates please try these options:

Online at: https://www.oregon.gov/boli/WHD/PWR/Pages/PWR-Rate-Publications---2019.aspx

Via Sisul Engineering at: 158 E Main St., John Day, OR 97845
Mon – Fri, 8am – 5pm

Via the City of Seneca at: 106 A Ave, Seneca, OR 97873
Mon – Thurs, 9am – 2 pm
Copy Fee: $5.00

GENERAL CONDITIONS

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GENERAL CONDITIONS

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GENERAL CONDITIONS

1. DEFINITIONS

Wherever used in these General Conditions or in the other contract documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Addenda - Written or graphic instruments issued prior to the opening of bids which clarify, correct or change the bidding documents are attached to the agreement and made a part thereof as provided therein.

Application For Payment - The form accepted by the engineer which is to be used by the contractor in requesting progress or final payment and which is to include such supporting documentation as is required by the contract documents.

Bid - The offer or proposal of the bidder, submitted on the prescribed form, setting forth the prices for the work to be performed.

Bonds - Bid, Performance and Payment bonds and other instruments of security.

Change Order - A written order to the contractor signed by the owner authorizing an addition, deletion or revision in the work, or an adjustment in the contract price of the contract time issued after the effective date of the agreement.

Contract Documents - The agreement, addenda (which pertain to the contract documents), contractor's bid (including documentation accompanying the bid and any post bid documentation submitted prior to the notice of award) when attached as an exhibit to the agreement, the bonds, these general conditions, the supplementary conditions, the specifications, the drawings, together with all modifications issued after the execution of the agreement.

Contract Price - The moneys payable by the owner to the contractor under the contract documents as stated in the agreement.

Contract Time - The number of days or the date stated in the agreement for the completion of the work.

Contractor - The person, firm or corporation with whom the owner has entered in to the agreement.

Day - A calendar day of twenty-four hours measured from midnight to the next midnight.

Defective - An adjective which when modifying the work, refers to work that is unsatisfactory, faulty or deficient, or does not conform to the contract documents or does not meet the requirements of an inspection, test or approval referred to in the contract documents, or has been damaged prior to the engineer's recommendation of final payment.

Drawings - The drawings which show the character and scope of the work to be performed and which have been prepared or approved by the engineer and are referred to in the contract documents.

Effective Date Of The Agreement - The date indicated in the agreement on which it becomes effective, but if no such date is indicated it means the date on which the agreement is signed and delivered by the last of the two parties to sign and deliver.

Engineer - The person, firm, or corporation named as such in the agreement.

Field Order - A written order issued by the engineer which orders minor changes in the work, but which does not involve a change in the contract price or the contract time.

Modification - A written amendment of the contract documents signed by both parties, a change order, or a field order. A modification may only be issued after the effective date of the agreement.

Notice of Award - The written notice by the owner to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the condition's precedent enumerated therein, with the time specified, the owner will sign and deliver the agreement.

Notice to Proceed - A written notice given by the owner to the contractor fixing the date on which the contract time will commence to run and on which the contractor will start to perform his obligation under the contract documents.

Owner - The public body or authority, corporation, association, partnership, or individual with whom the contractor has entered into the agreement and for whom the work is to be provided.

Project - The total constriction of which the work to be provided under the contract documents may be the whole, or a part as indicated elsewhere in the contract documents.

Resident Project Representative - The authorized representative of engineer who is assigned to the site of any part thereof.

Shop Drawings - All drawings, diagrams illustrations, schedules and other data which are specifically prepared by the contractor, a subcontractor, manufacturer, fabricator, supplier or distributor to illustrate some portion of the work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a manufacturer, fabricator, supplier or distributor and submitted by contractor to illustrate material or equipment for some portion of the work.

Specifications - Those portions of the contract documents consisting of written technical descriptions of materials, equipment, constriction systems, standards and

workmanship as applied to the work and certain administrative details applicable thereto.

Subcontractor - An individual, firm or corporation having a direct contract with the contractor or with any other subcontractor for the performance of a part of the work at the site.

Substantial Completion - The work (or a specified part thereof) has progressed to the point where, in the opinion of the engineer as evidenced by his definitive certificate of substantial completion, it is sufficiently complete, in accordance with the contract documents, so that the work (or specific part) can be utilized for the purposes for which it was intended; or if there by no such certificate issued, when final payment is due. The terms "substantially complete" and "substantially completed" as applied to any work refer to substantial completion thereof.

Work - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the contractor documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the contract documents.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

2.1 The Contractor may be furnished additional instructions and detail drawings by the Engineer, as necessary to carry out the work required by the contract documents.

2.2 The additional drawings and instructions thus supplied will become a part of the contract documents. The Contractor shall carry out the work in accordance with the additional detailed drawings and instructions.

3. SCHEDULES, REPORTS AND RECORDS

3.1 The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates records and other data where applicable as are required by the contract documents for the work to be performed.

3.2 Prior to the first partial payment estimate, the Contractor shall submit construction progress schedules showing the order in which the Contractor proposes to carry on the work, including dates at which the various parts of the work will be started estimated date of completion of each part and, as applicable:

3.2.1 The dates at which special detail drawings will be required; and

3.2.2 Respective dates for submission of shop drawings, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.

3.3 The Contractor shall also submit a schedule of payments that the Contractor anticipates will be earned during the course of the work.

4. DRAWINGS AND SPECIFICATIONS

4.1 The intent of the drawings and specifications is that the Contractor shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the work in accordance with the contract documents and all incidental work necessary to complete the project in an acceptable manner, ready for use, occupancy or operation by the Owner.

4.2 In case of conflict between the drawings and specifications, the specifications shall govern. Figure dimensions on drawings shall govern over general drawings.

4.3 Any discrepancies found between the drawings and specifications and site conditions or any inconsistencies or ambiguities in the drawings and specifications shall be immediately reported to the Engineer, in writing, who shall promptly connect such inconsistencies or ambiguities in writing. Work done by the Contractor after discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

5. SHOP DRAWINGS

5.1 The Contractor shall provide shop drawings as may be necessary for the prosecution of the work as required by the contract documents. The engineer shall promptly review all shop drawings. The Engineer's approval of any shop drawing shall not release the Contractor from responsibility for deviations from the contract documents. The approval of any shop drawing which substantially deviates from the requirement of the contract documents shall be evidenced by a change order.

5.2 When submitted for the Engineer's review, shop drawings shall bear the Contractor's certification that he has reviewed, checked and approved the shop drawings and that they are in conformance with the requirements of the contract documents. A minimum of three copies of the shop drawings shall be submitted by the Contractor to the Engineer for review. After review by the Engineer the dispersal of any shop drawing shall be as follows: one copy to be retained by the Engineer for his records, one copy shall be forwarded to the Owner by the Engineer, all remaining copies shall be returned to the Contractor.

5.3 Portions of the work requiring a shop drawing or sample submission shall not begin until the shop drawing or submission has been approved by the Engineer. A copy of each approved shop drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the Engineer and Owner.

6. MATERIALS, SERVICES AND FACILITIES

6.1 It is understood that, except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary constriction of any nature, and all other services and facilities of any nature within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located so as to facilitate prompt inspection.

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

6.4 Materials, supplies, and equipment shall be in accordance with samples submitted by the Contractor and approved by the Engineer.

6.5 Materials, supplies, or equipment to be incorporated into the work shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

6.6 Any work necessary to be performed after regular hours, Saturdays, Sundays or Legal Holidays shall be performed without additional expense to, and only with the written approval of the Owner.

7. INSPECTION AND TESTING

7.1 All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the contract documents.

7.2 The Owner shall provide all inspection and testing services not required by the contract documents.

7.3 The Contractor shall provide, at the Contractor's expense, the testing and inspection services required by the contract documents.

7.4 If the contract documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specially be inspected, tested, or approved by someone other than the Contractor, the Contractor will give the Engineer timely notice or readiness. The Contractor will then furnish the Engineer the required certificates of inspection, testing or approval.

7.5 Inspections, tests, or approvals by the Engineer or others shall not relieve the Contractor from the obligations to perform the work in accordance with the requirements of the contract documents.

7.6 The Engineer and the Engineer's representatives will all times have access to the work. In addition, authorized representative and agents of the Owner and any participating federal and state agency shall be permitted to inspect all work, materials, payrolls, records or personnel, invoices of materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the work and also for any inspection or testing thereof.

7.7 If any work is covered contrary to the written instructions of the Engineer it must, if requested by the Engineer, be uncovered for the Engineer's observation and replacement at the Contractor's expense.

7.8 If the Engineer considers it necessary or advisable that covered work be inspected or tested by others, the Contractor, at the Engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, if however, such work is not found to be defective, the Contractor will be allowed an increase in the contract price, or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and appropriate change order shall be issued.

8. **SUBSTITUTIONS**

8.1 Whenever a material, article, or piece of equipment is identified on the drawings or specifications by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the contract documents shall be appropriately modified by change order. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the contract price or contract time.

9. **PATENTS**

9.1 The Contractor shall pay all applicable royalties and license fees, and shall defend all suits or claims for infringement of any patent rights and save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for any such loss when a particular process, design, or product of a particular manufacturer or manufacturers is specified, however, if the Contractor had reason to believe that the design, process or product specified is an infringement of a patent, the Contractor shall be responsible for such loss unless the Contractor promptly gives such information to the Engineer.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The Owner shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the work together with a suitable number of bench marks adjacent to the work as shown on the contract documents. From the information provided by the Owner, unless otherwise specified in the contract documents, the Contractor shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, staking for pipe locations and other working points, lines, elevations and cut sheets.

10.2 The Contractor shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the Contractor unless otherwise stated in the Special Provisions to the General Conditions. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinance, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the contract documents are at variance therewith, the Contractor shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in Section 15, *Changes in Work.*

11. CONTRACTOR'S OBLIGATIONS

11.1 The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified in accordance with the provisions of this contract and said specification and in accordance with the plans and drawings covered by this contract and any and all supplemental plans and drawings, and in accordance with the directions of the Engineer as given from time to time during the progress of the work. He shall furnish, erect, maintain, and remove such temporary work as may be required. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Owner and Engineer.

11.2 The Contractor expressly undertakes at his own expense:

11.2.1 To take every precaution against injuries to persons or damages to property;

11.2.2 To store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractor;

11.2.3 To place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;

11.2.4 To clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;

11.2.5 Before final payment to remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations and to put the site in a neat, orderly condition;

11.2.6 To effect all cutting, fitting or patching of his work required to make the same to conform to the plans and specification and, except with the consent of the Engineer, not to cut or otherwise alter the work of any other Contractor.

11.3 The Contractor will pay all sales, consumer, use and other similar taxes required by the laws of the place where the work is performed. The Contractor shall also pay for all construction permit fees and other similar fees required by local or state agencies as may be required and necessary for construction of the project.

12. WEATHER CONDITIONS

12.1 In the event of temporary suspension of work, or during inclement weather, or whenever the Engineer shall direct, the Contractor will cause his subcontractors, to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors to so protect his work, such materials shall be removed and replaced at the expense of the Contractor.

13 PROTECTION OF WORK, PROPERTY, AND PERSONS

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

13.2 The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. The Contractor will erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. The Contractor will notify owners of adjacent utilities when prosecution of the work may affect them The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or part, by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone of whose acts any of them be liable, except damage or loss attributable to the fault of the contract documents or to the acts or omissions of the Owner, of the Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault of negligence of the Contractor.

13.3 The emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, the Contractor, without special instructions or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. The Contractor will give the Engineer prompt written notice of significant changes in the work or deviations from the contract documents caused thereby, and a change order shall thereupon by issued covering the changes and deviations involved.

14. SUPERVISION BY CONTRACTOR

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

15. CHANGES IN WORK

15.1 The Owner may at any time, as the need arises, order changes within the scope of work without invalidating the agreement. If such changes increase or decrease the amount due under the contract documents, or in the time required for performance of the work, and equitable adjustment shall be authorized by change order.

15.2 The Engineer, also, may at any time, by issuing a field order, make changes in the details of the work. The Contractor shall proceed with the performance of any changes in the work so ordered by the Engineer unless the Contractor believes that such field order entitles the Contractor to a change in the contract price or time, or both, in which event the Contractor shall give the Engineer written notice thereof within seven (7) days after the receipt of the ordered change. Thereafter the Contractor shall document the basis for the change in contract price or time within

(30) days. The Contractor shall not execute such changes pending the receipt of any executed change order or further instruction from the Owner.

16. CHANGES IN CONTRACT TIME

16.1 The contract price may be changed only by a change order. The value of any work covered by a change order or any claim for increase or decrease in the contract price shall be determined by one or more of the following methods in the order of precedence listed below:

16.1.1 Unit prices previously approved.

16.1.2 An agreed lump sum.

16.1.3 The actual cost of:

a) Labor, including foreman;

b) Materials entering permanently into the work;

c) The ownership or rental cost of construction plant and equipment during the time of use on the extra work;

d) Power and consumable supplies for the operation of power equipment;

e) Insurance;

f) Social Security and old age and unemployment contributions;

To the cost under 16.1.3 there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) of the estimated cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

17. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

17.1 The date of beginning and the time for completion of the work are essential conditions of the contract document and the work embraced shall be commenced on a date specified in the Notice to Proceed.

17.2 The Contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the contract time for the completion of the work described herein is reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

17.3 If the Contractor shall fail to complete the work within the contract time, or extension of time granted by the Owner, then the Contractor will pay to the Owner the amount for liquidated damages as specified in the bid for each calendar day that the Contractor shall be in default after the time stipulated in the contract documents.

17.4 The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following and the contractor has promptly given written notice of such delay to the Owner or Engineer:

17.4.1 To any preference, priority or allocation order duly issued by the Owner;

17.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

17.4.3 To any delays of Subcontractor occasioned by any of the causes specified in Paragraphs 17.4.1 and 17.4.2 of this article.

18. CORRECTION OF WORK

18.1 All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Engineer who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used.

18.2 The Contractor shall promptly remove from the premises all work rejected by the Engineer for failure to comply with the contract documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the Owner and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

18.3 All removal and replacement work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected work within ten (10) days after receipt of written notice, the Owner may remove such work and store the materials at the expense of the Contractor.

18.4 If, in the opinion of the Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the contract documents, the compensation to be paid to the Contractor thereunder shall be reduced by such amount as in the judgment of the Engineer shall be equitable.

19. SUBSURFACE CONDITIONS

19.1 The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by written notice of:

19.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents; or

19.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract documents.

19.2 The Owner shall promptly investigate the conditions, and if it is found that such conditions do so materially differ and cause an increase in the cost of, or in the time required for, performance of the work, and equitable adjustment shall be made and the contract documents shall be modified by a change order. Any claim of the Contractor for adjustment hereunder shall not be allowed unless the required written notice has been given; provided that the Owner may, in the Owner determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

20. SUSPENSION OF WORK, TERMINATION, AND DELAY

20.1 The Owner may suspend the work or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the Contractor, by written notice to the Contractor and the Engineer which shall fix the date on which work shall be resumed. The Contractor will resume that work on the date so fixed. The Contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to any suspension.

20.2 If the Contractor is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or is a trustee or receiver is appointed for the Contractor or for any of its property, or if the Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or repeatedly fails to supply sufficient skilled workman or suitable materials or equipment, or repeatedly fails to make prompt payments to Subcontractors or for labor, materials, or equipment or disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the work or disregards the authority of the Engineer, or otherwise violates any provisions of the contract documents, then the Owner may, without prejudice to any other right or remedy and after giving the Contractor and its surely a minimum of the ten (10) days from delivery of a written notice, terminate the services of the Contractor and take possession of the project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the work by whatever method the Owner may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of

completing the project, including compensation for additional professional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor will pay the difference to the Owner. Such costs incurred by the Owner will be determined by the Engineer and incorporated in a change order.

20.3 Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of moneys by the Owner due the Contractor will not release the Contractor from compliance with the contract documents.

20.4 After ten (10) days from delivery of the written notice to the Contractor and the Engineer, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case the Contractor shall be paid for all work executed and any expense sustained plus reasonable profit.

20.5 If, through no act or fault of the Contractor, the work is suspended for a period of more than ninety (90) days by the Owner or under an order of court or other public authority, or the Engineer fails to act on any request for payment within thirty (30) days after it is submitted, or the Owner fails to pay the Contractor substantially the sum approved by the Engineer or award by arbitrators within thirty (30) days of its approval and presentation, the Contractor may after ten (10) days from delivery of a written notice to the Owner and Engineer terminate the contract and recover from the Owner payment for all work executed and all expenses sustained. In addition and in lieu of terminating the contract, if the Engineer has failed to act on a request for payment or if the Owner has failed to make any payment as aforesaid, the Contractor may upon ten (10) days written notice to the Owner and the Engineer stop the work until paid all amounts then due, in which event and upon resumption of the work, change orders shall be issued for adjusting the contract price or extending the contract time or both to compensate for the costs and delays attributable to the stoppage of the work.

20.6 If the performance of all or any portion of the work is suspended, delayed, or interrupted as a result of a failure of the Owner or Engineer to act within the time specified in the contract documents, or if no time is specified, within a reasonable time, and adjustment in the contract price or an extension of the contract time, or both, shall be made by change order to compensate the Contractor for the costs and delays necessarily caused by the failure of the Owner or Engineer.

21. PAYMENT TO CONTRACTOR

21.1 At least ten (10) days before each progress payment fall due (but not more often than once a month), the Contractor will submit to the Engineer a partial payment estimate filled out and signed by the Contractor covering the work performed during the period covered by the partial payment estimate and supported by such data as the Engineer may reasonably require. If payment is requested on the basis

of materials and equipment not incorporated in the work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the Owner, as will establish the Owner's title to the material and equipment and protect the Owner's interest therein, including applicable insurance. The Engineer will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing approval of payment, and present the partial payment estimate to the Owner, or return the partial payment estimate to the Contractor indicating in writing the reasons for refusing to approve payment. In the latter case the Contractor may make the necessary corrections and resubmit the partial payment estimate. The Owner will within ten (10) days of presentation of an approved partial payment estimate, pay the Contractor a progress payment on the basis of the approved partial payment estimate less the retainage. The retainage shall be an amount equal to 5% of said estimate. At any time when the progress of the work is not satisfactory, additional amounts may be retained. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the work has been substantially completed except for work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the Owner are valid reasons for non-completion, the Owner may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed.

21.1.1 No payments will be made that would deplete the retainage nor place in escrow any funds that are required for retainage nor invest the retainage for the benefit of the Contractor.

21.2 The request for payment may also include an allowance for the cost of such materials and equipment which are suitably stored either at or near the site.

21.3 Prior to substantial completion, the Owner, with the approval of the Engineer and with the concurrence of the Contractor, may use any completed or substantially completed portions of the work. Such use shall not constitute and acceptance of such portions of the work.

21.4 The Owner shall have the right to enter the premises for the purpose of doing work not covered by the contract documents. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the work, or the restoration of any damaged work except such as may be caused by agents or employees of the Owner.

21.5 Upon completion and acceptance of the work, the Engineer shall issue a certificate attached to the final payment requesting that the work has been accepted under the conditions of the contract documents. The entire balance found to be due the Contractor, including the retained percentages, but except some sums as may be lawfully retained by the Owner, shall be paid to the Contractor within thirty (30) days of completion and acceptance of the work.

21.6 The Contractor will indemnify and save the Owner of the Owner's agents harmless from all claims growing out of the lawful demand of subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof,

equipment, tools and all supplies, incurred in the furtherance of the performance of the work. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so the Owner may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of the contract documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor, the Contractor's Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the Owner shall be considered as a payment made upon the contract documents by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments make in good faith.

21.7 If the Owner fails to make payment thirty (30) days after approval by the Engineer, in addition to other remedies available to the Contractor, there shall be added to each such payment interest at the rate of 1½% per month or the maximum legal rate permitted by law, whichever is less, commencing on the first day after said payment is due and continuing until the payment is received by the Contractor.

22 ACCEPTANCE OF FINAL PAYMENT AS RELEASE

22.1 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. Any payment, however, final or otherwise, shall not release the Contractor or its sureties from any obligations under the contract documents or the Performance and Payment bonds.

23 INSURANCE

23.1 The Contractor shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of, or result from, the Contractor's execution of the work, whether such execution be by the Contractor, and subcontractor, or by anyone directly employed by any of them, or by anyone for whose acts any of them may be liable:

23.1.1 Claims under workman's compensation, disability benefit and other similar employee acts;

23.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of employees;

23.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than employees;

23.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person; and

23.1.5 Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom;

23.2 Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the work. These Certificates shall contain a provision the coverage afforded under the policies will not be canceled unless at least fifteen (15) days prior written notice has been given to the Owner.

23.3 The Contractor shall procure and maintain, at the Contractor's own expense, during the contract time, liability insurance as hereinafter specified:

23.3.1 Contractor's General Public Liability and Property Damage Insurance including vehicle coverage issued to the Contractor and protecting the Contractor from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the contract documents, whether such operations be by the Contractor or by any subcontractor employed by the Contractor or anyone directly or indirectly employed by the Contractor or by a subcontractor employed by the Contractor. Insurance shall be written with a limit of liability of not less than $500,000 for all damages arising out of bodily injury, including death, at any time resulting therefore, sustained by any one person in any one accident; and a limit of liability of not less than $500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than $200,000 for all property damage sustained by any one person in any one accident; and a limit of liability on not less than $200,000 aggregate for such damage sustained by two or more persons in any one accident.

23.3.2 The Contractor shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the project to the full insurable value thereof for the benefit of the Owner, the Contractor, and subcontractors as their interest may appear. This provision shall in no way release the Contractor or Contractor's surety from obligations under the contract documents to fully complete the project.

23.4 The Contractor shall procure and maintain, at the Contractor's own expense, during the contract time, in accordance with the provisions of the law of the state in which the work is performed, Workman's Compensation Insurance, including occupational disease provisions, for all of the Contractor's employees at the site of the project and in case any work is sublet, the Contractor shall require such

subcontractor similarly to provide Workman's Compensation Insurance, including occupational disease provisions for all of the Contractor employees unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under Workman's Compensation statue, the Contractor shall provide, and shall cause each subcontractor to provide, adequate and suitable insurance for the protection of its employees not otherwise protected.

23.5 The Contractor shall secure if applicable, "All Risk" type Builder's Risk Insurance for work to be performed. Unless specifically authorized by the Owner, the amount of such insurance shall not be less than the contract price totaled in the bid. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the contract time, and until the work is accepted by the Owner. The policy shall name as the insured the Contractor, and the Owner.

24. CONTRACT SECURITY

24.1 The Contractor shall within the ten (10) days after the receipt of the Notice to Award, furnish the Owner with a Performance Bond and Payment Bond in penal sums equal to the amount of the contract price, conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of the contract documents, and upon the prompt payment by the Contractor to all persons supplying labor and materials in the prosecution of the work provided by the contract documents. Such bonds shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the state in which the work is to be performed. The expense of these bonds shall be borne by the Contractor. If at any time a surety on any such bond is declared a bankrupt or loses its right to do business in the state in which the work is to be performed, the Contractor shall within ten (10) days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such shall be made until the new surety or sureties shall have furnished an acceptable bond to the Owner.

25. ASSIGNMENTS

25.1 Neither the Contractor not the Owner shall sell, transfer, assign, or otherwise dispose of the contract or any portion thereof, or of any right, title or interest therein, or any obligations thereunder, without written consent of the other party.

26 INDEMNIFICATION

26.1 The Contractor will indemnify and hold harmless the Owner and the Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance

of the work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury or to destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the Contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

26.2 In any and all claims against the Owner or the Engineer, or any of their agents or employees, by any employees of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose act any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workman's compensation acts, disability benefit acts or other employee benefits acts.

26.3 The obligation of the Contractor under this article shall not extend to the liability of the Engineer, its agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change order, design or specifications.

27 **SEPARATE CONTRACTS**

27.1 The Owner reserves the right to let other contracts in connection with this project. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate the work with theirs. If the proper execution or results of any part of the Contractor's work depends upon the work of any other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for such proper execution and results.

27.2 The Owner may perform additional work related to the project or the Owner may let other contracts containing provision similar to these. The Contractor will afford the other contractors who are parties to such contracts (or the Owner, if the Owner is performing the additional work) reasonable opportunity for the introduction and storage of materials and equipment and the executing of work, and shall properly connect and coordinate the work with theirs.

27.3 If the performance of additional work by other Contractors or the Owner is not noted in the contract documents prior to the execution of the contract, written notice thereof shall be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the Owner or others involves it in additional expense or entitles it to an extension of the contract time, the Contractor may make a claim thereof as provided in Articles 16 and 17.

28 SUBCONTRACTING

28.1 The Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

28.2 The Contractor shall not award work to subcontractor(s), in excess of fifty (50%) percent of the contract price, without prior written approval of the Owner.

28.3 The Contractor shall be fully responsible to the Owner for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by the Contractor.

28.4 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.

28.5 Nothing contained in this contract shall create any contractual relationship between any subcontractor and the Owner.

29 ENGINEER'S AUTHORITY

29.1 The Engineer shall act as the Owner's representative during the construction period, shall decide questions which may arise as to quality and acceptability of materials furnished and work performed, and shall interpret the intent of the contract documents in a fair and unbiased manner. The Engineer will make visits to the site and determine if the work is proceeding in accordance with the contract documents.

29.2 The Contractor will be held strictly in the intent of the contract documents in regards to the quality of materials, workmanship, and execution of the work. Inspections may be made at the factory or fabrication plant of the source of material supply.

29.3 The Engineer will not be responsible for the construction means, controls, techniques, sequence, procedures, or construction safety.

29.4 The Engineer shall promptly make decision relative to interpretation of the contract documents.

30 LAND AND RIGHTS-OF-WAY

30.1 Prior to the issuance of the Notice of Proceed, the Owner shall obtain all land, easements and rights-of-way necessary for carrying out and for the completion of

the work to be performed pursuant to the contract document, unless otherwise mutually agreed.

30.2 The Owner shall provide to the Contractor information which delineates and describes the lands owned and easements and rights-of-way acquired.

30.3 The Contractor shall provide at its own expense and without liability to the Owner any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.

31 QUANTITIES OF ESTIMATE

31.1 Wherever the estimated quantities of work to be done and materials to be furnished on a unit price basis under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids, and the right is expressly reserved, except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

32 GUARANTEES

32.1 The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from the date of substantial completion. The Contractor warrants and guarantees for a period of one (1) year from the date of substantial completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

33 CONFLICTING CONDITIONS

33.1 If there be conflicting variance between the drawings and the specification, the provisions of the specification shall control. In case of conflict between the General Conditions of the contract or any modifications thereof and the Technical Specifications, the Technical Specifications requirements shall control.

33.2 Any discrepancies found between the drawings and the Technical Specification and the actual site conditions, or any errors or omissions in the drawings or Technical Specification, shall be immediately reported to the Engineer who shall promptly

correct such error or omission in writing. Any work done by the Contractor after his discovery of such discrepancies, errors or omissions shall be done at the Contractor's risk.

33.3 Responsibility for adequacy of the design and for sufficiency of the drawings and Technical Specifications shall be borne by the Owner. The complete requirements of the work to be performed under the contract shall be set forth in drawings and Technical specification to be supplied by the Owner through the Engineer, or by the Engineer as representative of the Owner. Drawings and Specifications furnished shall be in accordance with the contract documents and shall be true and accurate developments thereof.

34 **ARBITRATION BY MUTUAL AGREEMENT**

34.1 All claims, disputes, and other matters in question arising out of, or relating to, the contract documents or the breach thereof, except for claims which have been waived by making an acceptance of final payment as provided by Section 22, may be decided by arbitration if the parties mutually agree. Any agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

34.2 Notice of the request for arbitration shall be filed in writing with the other party to the contact documents and a copy shall be filed with the Engineer. Request for arbitration shall in no event be made on any claim, dispute, or other matter in question which would be barred by the applicable statute of limitations.

34.3 The Contractor will carry on the work and maintain the process schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

SPECIAL PROVISIONS TO THE GENERAL CONDITIONS

All numbers referenced in these Special Provisions shall be understood to refer to the subsection of the General Conditions bearing like numbers.

1. 21.1. Revise the noted sentence of the subsection as indicated below:

   "The retainage shall be an amount equal to 10% of said estimate."

2. Where a conflict exists between the technical specifications of these contract documents and the specifications noted on the construction plans, the specifications on the construction plans shall supersede.

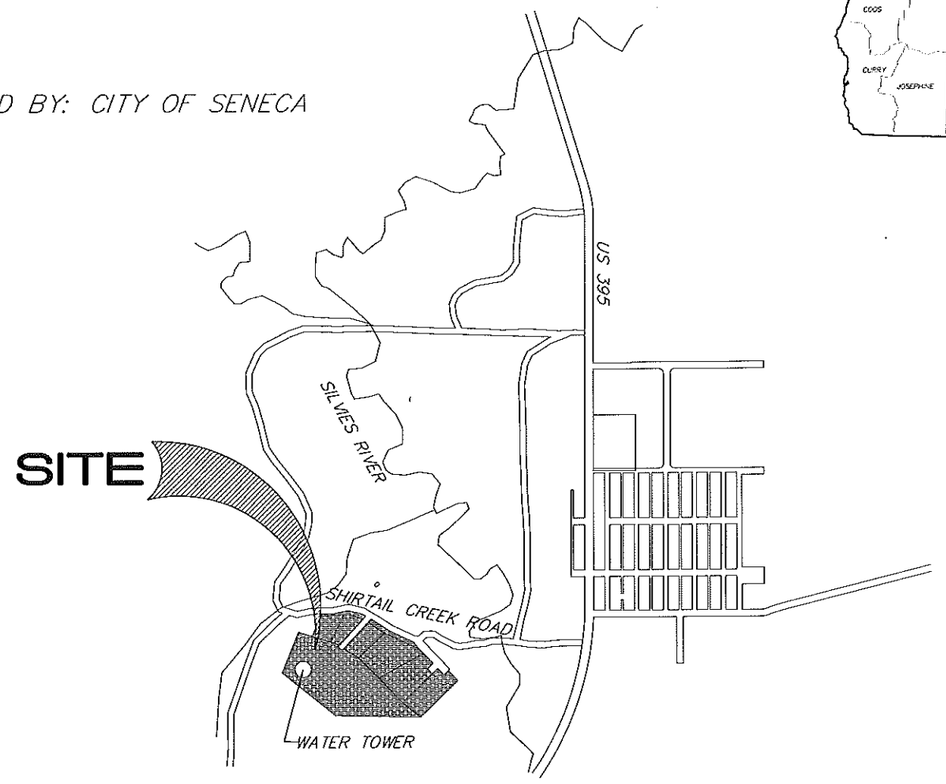
3. Note: For this project all units for the purpose of bidding, construction, and payment will be based on Standard English Units.

CITY OF SENECA
SHIRTAIL CREEK SUBDIVISION

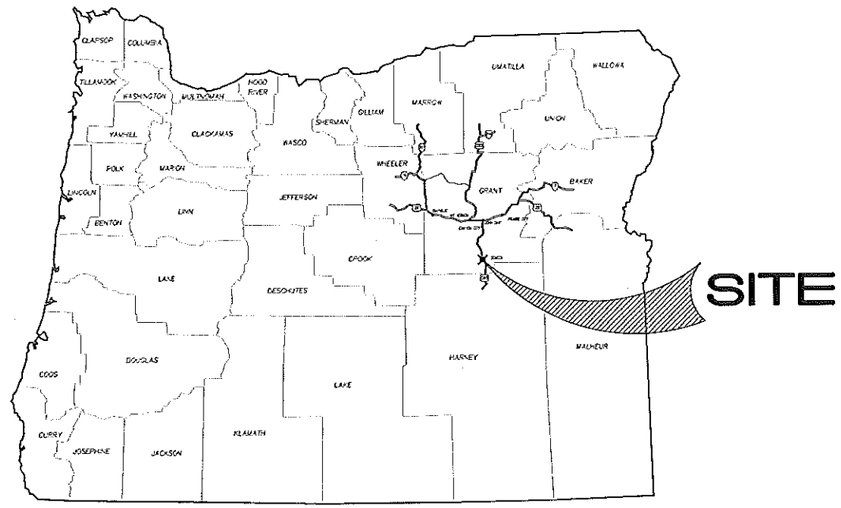
CONTACT:
CITY OF SENECA
PO. BOX 208
SENECA, OR 97873
(541) 542-2161
CONTACT: JOSH WALKER

PROJECT FUNDED BY: CITY OF SENECA

JUNE 2019



VICINITY MAP
NTS



OREGON VICINITY MAP

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REGISTERED PROFESSIONAL ENGINEER #18,536 OREGON APRIL 19, 1996 JOSEF K. HITZ 6-11-19

SIS'UL ENGINEERING
158 E. MAIN ST.
JOHN DAY, OR 97845
(541) 575-3777

MOST RECENT REVISION TO THIS SET OF PLANS:
6-11-19

Sanitary Sewer:

1. Pipe shall be PVC gravity sewer pipe conforming to ASTM D-3034 SDR 35. Minimum stiffness shall be 46 psi and joint type shall be elastomeric gasket conforming to ASTM D-3212. Pressurized PVC pipe shall be PVC Sch80 conforming to ASTM D 2467.
2. Manhole base shall be poured in place concrete base with a minimum compressive strength of 3000 psi, or precast base (see detail sheet). Manhole risers and tops shall be precast sections with a minimum compressive strength of 4000 psi. Tops shall be eccentric cones except where insufficient headroom requires flat tops. Inverts shall be constructed to provide smooth manhole by means of an elastomeric gasket, an approved waterstop or flexible sleeve. Cement grout for connecting PVC sewer pipe to manhole will not be permitted.
3. Cleanout pipe, fittings and joints shall be the same specifications as for pipe. Castings are as shown on detail and shall conform to ASTM A48 (Grade 30).
4. Granular backfill shall be compacted to 95% maximum dry density per AASHTO T-180 test method and native material shall be compacted to 90% maximum dry density per AASHTO T-180. Native material allowed in roadways or under sidewalk areas.
5. PVC service laterals shall be 4" pipe conforming to the same specifications as the sewer mains. Service laterals shall be installed to a point beyond the line of the sewer or utility easement as shown on the plan. The service lateral shall be plugged with a 4" rubber ring plug and the location of the lateral end shall be marked with a 2" x 4" board. The sanitary lateral shall have an identify tape laid with the lateral and tied to the 2"x4" board.
6. Sanitary sewer pipe and appurtenances shall be tested for leakage in accordance with APWA Division III requirements. Leakage tests will include required APWA air pressure test for sewer lines and required APWA vacuum test of the manholes. All sewer lines shall be tested for deflection with a mandrel equal to 95% of the pipe size being tested for deflection with a mandrel equal to 95% of the pipe size being tested per APWA Division III, Section 303.3.10. All tests shall be witnessed by the Engineer.
7. All materials, installation, tests, and inspections are to be made in strict accordance with APWA's Standard Specifications for Public Works Construction.

Lift Station Notes:

Design Information:

Maximum Users: = 6 Single Family Residents (assume 4 bedroom = 450 gpd)
(per OAR 340-071-0220 Table 2)
= 6 x 450 = 2700 gpd

Elevation Lift: = 3 ft to Forcemain Connection
= 13 ft to lagoon Discharge

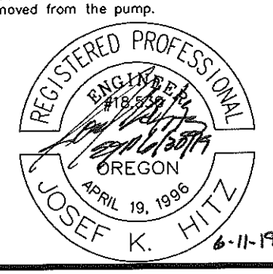
Maximum Pressure of Connection Point on Forcemain = 45 psi

General Notes:

1. Lift Station shall be Environment One Corporation package system or approved equal. It is recommended that any proposed alternatives are to be pre-approved before bidding.
2. The Manufacturer shall furnish complete factory-built and tested grinder pump units, each consisting of a grinder pump cores all suitably mounted on an integral stand of stainless steel, special polyethylene tank, electrical quick disconnect (NEMA 6P), pump removal harness, discharge assembly/shut-off valve, anti-siphon valve/check valve assembly, electrical alarm assembly and all necessary internal wiring and controls. For ease of serviceability, all pump motor/grinder units shall be of like type and horsepower throughout the system.
3. SUBMITTALS: After receipt of notice to proceed, the Manufacturer shall furnish a minimum of six sets of shop drawings detailing the equipment to be furnished including dimensional data and materials of construction. The Engineer shall promptly review this data, and return two copies as accepted, or with requested modifications. Upon receipt of accepted shop drawings, the Manufacturer shall proceed immediately with fabrication of the equipment.
4. Manufacturer: Grinder pump stations, complete with all appurtenances, form an integral system, and as such, shall be supplied by one grinder pump station manufacturer. The Contractor shall be responsible for the satisfactory operation of the entire system. The equipment specified shall be a product of a company experienced in the design and manufacture of grinder pumps for specific use in low pressure sewage systems. The company shall submit detailed installation and user instructions for its product, submit evidence of an established service program including complete parts and service manuals, and be responsible for maintaining a continuing inventory of grinder pump replacement parts. The Manufacturer shall provide, upon request, a reference and contact list from ten of its largest contiguous grinder pump installations of the type of grinder pumps described within this specification.
5. WARRANTY: The grinder pump Manufacturer shall provide a part(s) and labor warranty on the complete station and accessories, including, but not limited to, the panel for a period of 24 months after notice of OWNER'S acceptance, but no greater than 27 months after receipt of shipment. Any manufacturing defects found during the warranty period will be reported to the Manufacturer by the OWNER and will be corrected by the Manufacturer at no cost to the OWNER.

Equipment:

1. The pumps shall be capable of delivering 15 GPM against a rated total dynamic head of 0 feet (0 PSIG), 11 GPM against a rated total dynamic head of 92 feet (40 PSIG), and 7.8 GPM against a rated total dynamic head of 185 feet (80 PSIG). The pump(s) must also be capable of operating at negative total dynamic head without overloading the motor(s). Under no conditions shall in-line piping or valving be allowed to create a false apparent head.
2. The pump shall be designed, integral, vertical rotor, motor driven, solids handling pump of the progressing cavity type with a single mechanical seal. Double radial O-ring seals are required at all casting joints to minimize corrosion and create a protective barrier. All pump castings shall be cast iron, fully epoxy coated to 8-10 mil Nominal dry thickness, wet applied. The rotor shall be through-hardened, highly polished, precipitation hardened stainless steel. The stator shall be of a specificolly compounded ethylene propylene synthetic elastomer. This material shall be suitable for domestic wastewater service. Its physical properties shall include high tear and abrasion resistance, grease resistance, water and detergent resistance, temperature stability, excellent aging properties, and outstanding wear resistance. Buna-N is not acceptable as a stator material because it does not exhibit the properties as outlined above and required for wastewater service.
3. The grinder shall be placed immediately below the pumping elements and shall be direct-driven by a single, one-piece motor shaft. The grinder impeller (cutter wheel) assembly shall be securely fastened to the pump motor shaft by means of a threaded connection attaching the grinder impeller to the motor shaft. Attachment by means of pins or keys will not be acceptable. The grinder impeller shall be a one-piece, 4140 cutter wheel of the rotating type with inductively hardened cutter teeth. The cutter teeth shall be inductively hardened to Rockwell 50 - 60c for abrasion resistance. The shredder ring shall be of the stationary type and the material shall be white cast iron. The teeth shall be ground into the material to achieve effective grinding. The shredder ring shall have a staggered tooth pattern with only one edge engaged at a time, maximizing the cutting torque. These materials have been chosen for their capacity to perform in the intended environment as they are materials with wear and corrosive resistant properties.
4. This assembly shall be dynamically balanced and operate without objectionable noise or vibration over the entire range of recommended operating pressures. The grinder shall be constructed so as to minimize clogging and jamming under all normal operating conditions including starting. Sufficient vortex action shall be created to scour the tank free of deposits or sludge banks which would impair the operation of the pump. These requirements shall be accomplished by the following, in conjunction with the pump:
   a) The grinder shall be positioned in such a way that solids are fed in an upward flow direction.
   b) The maximum flow rate through the cutting mechanism must not exceed 4 feet per second. This is a critical design element to minimize jamming.
   c) The inlet shroud shall have a diameter of no less than 5 inches. Inlet shrouds that are less than 5 inches in diameter will not be accepted due to their inability to maintain the specified 4 feet per second maximum inlet velocity which by design prevents unnecessary jamming of the cutter mechanism and minimizes blinding of the pump by large objects that block the inlet shroud.
   d) The impeller mechanism must rotate at a nominal speed of no greater than 1800 rpm.
5. The grinder shall be capable of reducing all components in normal domestic sewage, including a reasonable amount of "foreign objects," such as paper, wood, plastic, gloss, wipes, rubber and the like, to finely-divided particles which will pass freely through the passages of the pump and the 1-1/4" diameter stainless steel discharge piping.
6. Electric Motor: As a maximum, the motor shall be a 1 HP, 1725 RPM, 240 Volt 60 Hertz, 1 Phase, capacitor start, ball bearing, air-cooled induction type with Class F installation, low starting current not to exceed 30 amperes and high starting torque of 8.4 foot pounds. The motor shall be press-fit into the casting for better heat transfer and longer winding life. Inherent protection against running overloads or locked rotor conditions for the pump motor shall be provided by the use of an automatic-reset, integral thermal overload protector incorporated into the motor. This motor protector combination shall have been specifically investigated and listed by Underwriters Laboratories, Inc., for the application. Non-capacitor start motors or permanent split capacitor motors will not be accepted because of their reduced starting torque and consequent diminished grinding capability. The wet portion of the motor armature must be 300 Series stainless. To reduce the potential of environmental concerns, the expense of handling and disposing of oil, and the associated maintenance costs, oil-filled motors will not be accepted.
7. Mechanical Seal: The pump/core shall be provided with a mechanical shaft seal to prevent leakage between the motor and pump. The seal shall have a stationary ceramic seat and carbon rotating surface with faces precision lapped and held in position by a stainless steel spring.
8. Tank: Polyethylen Construction - The tank shall be made of rotational molded polyethylene with high environmental stress cracking resistance. All seams created during tank construction are to be factory tested for leak tightness. The tank wall and bottom must withstand the pressure exerted by saturated soil loading at maximum burial depth. All station components must function normally when exposed to 150 percent of the maximum external soil and hydrostatic pressure.
9. The overall basin capacity shall be minimum of 450 gallons. The basin shall incorporate a tapered bottom with an inside diameter of no greater than 52 inches, reducing to a diameter of no greater than 42 inches to minimize the retained volume.
10. Lift Stations shall have a fiberglass accessway with a hinged, aluminum cover. The accessway shall be an extension of the wetwell assembly and shall include a lockable cover assembly, with vent, providing low profile mounting. The cover shall be aluminum, with a load rating of 300 pounds per square foot. The cover shall have an outside diameter of no greater than 50 inches. Accessway design and construction shall enable field extension of station height in 6-inch increments without the use of any adhesives or sealants requiring cure time before installation can be completed. The accessway wall must withstand the pressure exerted by saturated soil loading at maximum burial depth and must function normally when exposed to 150 percent of the maximum external soil and hydrostatic pressure.The tank and factory penetrations shall be factory tested and guaranteed to be watertight.
11. The tank shall be furnished with one EPDM grommet fitting to accept a 6" 3034 PVC piping. Tank dimensions shall be as shown on the contract drawings. The discharge bulkheads (manifolds) shall be factory installed and warranted by the manufacturer to be watertight.
12. Duplex Station: The tank shall have one stainless steel duplex discharge manifold terminating outside the tank wall with a 1-1/4" female NPT pipe thread.
13. Discharge Hose and Disconnect/Valve: All discharge fittings and piping shall be constructed of polypropylene, EPDM or PVC. The discharge hose assembly shall include a shut-off valve rated for 200 psi WOG and a quick disconnect feature to simplify installation and pump removal. The bulkhead penetration shall be factory installed and warranted by the manufacturer to be watertight.
14. Electrical Quick Disconnect: The grinder pump core shall include a factory-installed NEMA 6P electrical quick disconnect (EQD) for all power and control functions. The EQD will be supplied with 32' total, 25' of useable, electrical supply cable (ESC) to connect to the alarm panel. The EQD shall require no tools for assembly, seal against water before the electrical connection is made, and include radial seals to assure a watertight seal regardless of tightening torque. Plug-type connections of the power cable onto the pump housing will not be acceptable due to the potential for leaks and electrical shorts. Junction boxes are not acceptable due to the large number of potential leak points. The EQD shall be so designed to be conducive to field wiring as required.
15. Check Valve: The pump discharge shall be equipped with a factory installed, gravity operated, flapper-type integral check valve built into the discharge piping. The check valve will provide a full-ported passageway when open, and shall introduce a friction loss of less than 6 inches of water at maximum rated flow. Moving parts will be made of a 300 Series stainless steel and fabric reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, and fatigue strength. A nonmetallic hinge shall be an integral part of the flapper assembly providing a maximum degree of freedom to assure seating even at a very low back-pressure. The valve body shall be an injection molded part made of an engineered thermoplastic resin. The valve shall be rated for continuous operating pressure of 235 psi. Ball-type check valves are unacceptable due to their limited sealing capacity in slurry applications.
16. Anti-Siphon Valve: The pump discharge shall be equipped with a factory-installed, gravity-operated, flapper-type integral anti-siphon valve built into the discharge piping. Moving parts will be made of 300 Series stainless steel and fabric-reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, and fatigue strength. A nonmetallic hinge shall be an integral part of the flapper assembly, providing a maximum degree of freedom to ensure proper operation even at a very low pressure. The valve body shall be injection-molded from an engineered thermoplastic resin. Holes or ports in the discharge piping are not acceptable anti-siphon devices due to their tendency to clog from the solids in the slurry being pumped. The anti-siphon port diameter shall be no less than 60% of the inside diameter of the pump discharge piping.
17. Core Unit: The grinder pump station shall have an easily removable core assembly containing pump, motor, grinder, all motor controls, check valve, anti-siphon valve, electrical quick disconnect and wiring. The watertight integrity of the core unit shall be established by a 100% factory test at a minimum of 5 PSIG.
18. Controls: All necessary motor starting controls shall be located in the cast iron enclosure of the core unit secured by stainless steel fasteners. Wastewater level sensing controls shall be housed in a separate enclosure from motor starting controls. Level sensor housing must be sealed via a radial type seal; solvents or glues are not acceptable. Level sensing control housing must be integrally attached to pump assembly so that it may be removed from the station with the pump and in such a way as to minimize the potential for the accumulation of grease and debris accumulation, etc. Level sensing housing must be a high-impact thermoplastic copolymer over-molded with a thermo plastic elastomer.
19. Non-fouling wastewater level controls for controlling pump operation shall be accomplished by monitoring the pressure changes in an integral air column connected to a pressure switch. The air column shall be integrally molded from a thermoplastic elastomer suitable for use in wastewater and with excellent impact resistance. The air column shall have only a single connection between the water level being monitored and the pressure switch. Any connections are to be sealed radially with redundant O-rings. The level detection device shall have no moving parts in direct contact with the wastewater and shall be integral to the pump core assembly in a single, readily-exchanged unit. Depressing the push to run button must operate the pump even with the level sensor housing removed from the pump.



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SHIRTAIL SUBDIVISION
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SANITARY SEWER NOTES

SISUL ENGINEERING
158 E. MAIN STREET
JOHN DAY, OREGON 97845
(541) 575-0777
DRAWING: CORD SS PLAN.DWG

DATE MARCH 2019
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DRAWN JH
JOB 16-006
SHEET 01
OF 06 SHEETS

20. All fasteners throughout the assembly shall be 300 Series stainless steel. High-level sensing will be accomplished in the manner detailed above by a separate air column sensor and pressure switch of the same type. Closure of the high-level sensing device will energize an alarm circuit as well as a redundant pump-on circuit. For increased reliability, pump ON/OFF and high-level alarm functions shall not be controlled by the same switch. Float switches of any kind, including float trees, will not be accepted due to the periodic need to maintain (rinsing, cleaning) such devices and their tendency to malfunction because of incorrect wiring, tangling, grease buildup, and mechanical cord fatigue. To assure reliable operation of the pressure switches, each core shall be equipped with a factory installed equalizer diaphragm that compensates for any atmospheric pressure or temperature changes. Tube or piping runs outside of the station tank or into tank-mounted junction boxes providing pressure switch equalization will not be permitted due to their susceptibility to condensation, kinking, pinching, and insect infestation. The grinder pump will be furnished with a 6 conductor 14 gauge, type SJOW cable, pre-wired and watertight to meet UL requirements with a FACTORY INSTALLED NEMA 6P EQD half attached to it.
21. Stainless Steel Curb Stop/Check Valve Assembly (UNI-LATERAL): The curb stop shall be pressure-tight in both directions. The ball valve actuator shall include position stop features at the fully opened and closed positions. The curb stop/check valve assembly shall be designed to withstand a working pressure of 235 psi.The stainless steel check valve shall be integral with the curb stop valve. The check valve will provide a full-ported 1-1/4" passageway and shall introduce minimal friction loss at maximum rated flow. The flopper hinge design shall provide a maximum degree of freedom and ensure seating at low back pressure.
22. All plastic fitting components are to be in compliance with applicable ASTM standards.
23. All pipe connections shall be made using compression fitting connections including a Buna-N O-ring for sealing to the outside diameter of the pipe. A split-collet locking device shall be integrated into all pipe connection fittings to securely restrain the pipe from hydraulic pressure and external loading caused by shifting and settling.
24. Curb Boxes - Curb boxes shall be constructed of ABS, conforming to ASTM-D 1788. Lid top casting shall be cast iron, conforming to ASTM A-48 Class 25, providing magnetic detectability, and be painted black. All components shall be inherently corrosion-resistant to ensure durability in the ground. Curb boxes shall provide height adjustment downward (shorter) from their nominal height.
25. Pipe shall be have a working pressure of 160 psi minimum and shall be classified SDR per ASTM D 3035. PVC or HDPE Piping is acceptable.
26. The stainless steel, combination curb stop/check valve component shall be 100 percent hydrostatically tested to 150 psi in the factory.

ALARM PANELS shall be - DUPLEX PROTECT PLUS:

1. Each grinder pump station shall include a NEMA 4X, UL-listed alarm panel suitable for wall or pole mounting. The NEMA 4X enclosure shall be manufactured of thermoplastic to ensure corrosion resistance. The enclosure shall include a hinged, lockable cover with padlock, preventing access to electrical components, and creating a secured safety front to allow access only to authorized personnel. The standard enclosure shall not exceed 12.5" W x 16" H x 7.5" D.
2. The panel shall contain one 15-amp single pole circuit breaker for the alarm circuit and one 15-amp double pole circuit breaker per core for the power circuit. The panel shall contain a push-to-run feature, an internal run indicator, and a complete alarm circuit. All circuit boards in the alarm panel are to be protected with a conformal coating on both sides and the AC power circuit shall include an auto resetting fuse.
3. The visual alarm lamp shall be inside a red, oblong lens at least 3.75" L x 2.38" W x 1.5" H. Visual alarm shall be mounted to the top of the enclosure in such a manner as to maintain NEMA 4X rating. The audible alarm shall be externally mounted on the bottom of the enclosure, capable of 93 dB @ 2 feet. The audible alarm shall be capable of being deactivated by depressing a push-type switch that is encapsulated in a weatherproof silicone boot and mounted on the bottom of the enclosure (push-to-silence button).
4. The high-level alarm system shall operate as follows:
   a) The panel will go into alarm mode if either pump's alarm switch closes. During the initial alarm mode both pumps will run and the alarm light and buzzer will be delayed for a period of time based on user settings (default is 3-1/2 minutes). If the station is still in high-level alarm after the delay, the light and buzzer will be activated.
   b) The audible alarm may be silenced by means of the externally mounted push-to-silence button.
   c) The visual alarm remains illuminated until the sewage level in the wet well drops below the "off" setting of the alarm switch for both pumps.
5. The entire alarm panel, as manufactured and including any of the following options shall be listed by Underwriters Laboratories, Inc.
6. Alarm System Contains the following features:
   - Alarm Activated Dry Contacts - Normally open relay contact closes upon alarm activation.
   - Alarm Activated Contacts for Remote Indoor Alarm Module - Will work with or without power to the alarm panel and is designed to work with E/One's Remote Sentry.
   - Includes Inner Door Dead Front
   - Separate LED's for each condition
7. Provides protection from the following operating conditions:
   - Low Voltage (Brownout) Protection - A lockout cycle will prevent the motor from operating and will illuminate the Trouble LED if:
     o the incoming AC Mains voltage drops below a predetermined minimum, typically 12% of nameplate (211 volts for a 240 volt system) for 2 to 3 seconds, regardless of whether the motor is running
     o the lockout cycle will end if the incoming AC Mains voltage returns to a predetermined value, typically 10% of nameplate (216 volts for a 240 volt system).
   - The system continues to retest the voltage every second indefinitely. If the lockout cycle has been initiated and the voltage comes back above the predetermined starting voltage, the system will function normally. The Trouble LED remains illuminated during a Brownout condition and a corresponding Brownout message will be displayed on the LCD screen. The LED will turn off when the Brownout condition ends and the LCD message remains latched until the panel is reset. The audible and visual alarm will not be activated unless there is a high wastewater level in the tank.
   - Run Dry Protection - A 20-minute lockout cycle will prevent the motor from operating and will illuminate the Trouble LED when the wastewater level in the tank is below the pump inlet shroud. A corresponding Run Dry message will be displayed on the LCD screen. The condition is rechecked every 20 minutes and the LCD message remains latched. If the condition is satisfied, the pump is allowed to cycle normally and the Trouble LED will go out, but the LCD message remains latched. The LCD message will remain latched until the panel is reset. If the condition is not satisfied after 3 consecutive attempts, the visual alarm will be activated until the panel is reset or until there is one cycle of normal operation. If a high level condition is presented at any time, a pump run cycle will be activated.
   - High System Pressure Protection - A 20-minute lockout cycle will prevent the motor from operating and will illuminate the Trouble LED when the pressure in the discharge line is atypically high (closed valve or abnormal line plug). A corresponding Overpressure message will be displayed on the LCD screen. The condition is rechecked every 20 minutes. If the condition is satisfied, the pump is allowed to cycle normally and the Trouble LED will turn off, but the LCD message remains latched. The LCD message will remain latched until the panel is reset. If the condition is not satisfied after 3 consecutive attempts, the pump is locked out indefinitely and the audible and visual alarm will be activated. The LCD message and alarms will remain latched until the condition is removed and the panel is reset.

In all of the above cases, if more than one error condition is presented, the LCD message depicting the most recent error condition will be displayed.

PROTECT PLUS FEATURES:
- High/Low Voltage monitoring with Trouble indication
- High/Low Wattage (wattage is used instead of current because it is a better indicator of pump performance) monitoring with Trouble indication
- Extended Run Time monitoring with Trouble indication
- Cycle/Event Counter
- Run Time Counter (Hour Meter)
- Run Time Limit - time adjustable, user-selected options: 10 minutes (default) to 120 minutes in 1-minute intervals
- Power-up Delay - time adjustable, user-selected options: None (default), to 300 minutes in 1-minute intervals
- Alarm Delay - time adjustable, user-selected options: zero to 10 minutes in 30-second increments; 4 minutes is default
- System self-test diagnostic

8. Include a Generator Receptacle and Auto Transfere - The alarm panel shall include a 20 amp, 250 VAC generator receptacle with a spring-loaded, gasketed cover suitably mounted to provide access for connection of an external generator while maintaining a NEMA 4X rating. An automatic transfer switch shall be provided, which automatically switches from AC power to generator power. Power shall be provided to the alarm panel through the generator receptacle whenever power is present at the receptacle, allowing the audible and visual alarms to function normally in generator mode. When power is no longer applied to the generator receptacle, the panel is automatically switched back to the AC Mains power. (No manual switching within the panel enclosure is necessary to switch from generator power back to AC Mains, so the mode cannot be inadvertently left in the generator position after pumping down the station in generator mode as is the case with a manual transfer switch).
9. Include a Service Equipment/Main Service Disconnect Breaker - A separate, internal breaker rated and approved for use as "service equipment" and acts as a main service disconnect of the grinder pump station shall be provided.
10. Include a Remote Sentry Indoor Alarm Module - A separate, remote indoor alarm module shall be provided to indicate a high level alarm with or without AC power to the grinder pump station. The Remote Sentry indoor alarm module shall have an internal power source enabling its continued operation without AC power. The Remote Sentry shall have an audible alarm and a visual alarm, both of which shall automatically reset if the high level alarm condition is eliminated. The Remote Sentry indoor alarm module shall include a Silence button for the audible alarm and a Test button.
11. Include a Run-time/Hour Meter - A run-time or hour meter to display the total run-time or operation time for the pump core shall be provided.
12. Include a Event/Cycle Counter - An event or cycle counter to display the number of operations of the pump core shall be provided.
13. System is to provide connections so that all alarms can be relayed to the existing cellular dialing system the City has at the Well House. Contractor to provide conduit and all wiring to the Well House, the City's current provider will complete all the connections and programming.
14. Serviceablity: The grinder pump core, including level sensor assembly, shall have two lifting hooks complete with lift-out harness connected to its top housing to facilitate easy core removal when necessary. The level sensor assembly must be easily removed from the pump assembly for service or replacement. All mechanical and electrical connections must provide easy disconnect capability for core unit removal and installation. Each EQD half must include a water-tight cover to protect the internal electrical pins while the EQD is unplugged. A pump push-to-run feature will be provided for field trouble shooting. The push-to-run feature must operate the pump even if the level sensor assembly has been removed from the pump assembly. All motor control components shall be mounted on a readily replaceable bracket for ease of field service.
15. All maintenance tasks for the grinder pump station must be possible without entry into the grinder pump station (as per OSHA 1910.146 Permit-required confined spaces). *"Entry means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space."*
16. The grinder pump shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled and wired grinder pump station shall be listed by Underwriters Laboratories, Inc., to be safe and appropriate for the intended use. UL listing of components of the station, or third-party testing to UL standard are not acceptable.
17. The grinder pump shall meet accepted standards for plumbing equipment for use in or near residences, shall be free from noise, odor, or health hazards, and shall have been tested by an independent laboratory to certify its capability to perform as specified in either individual or low pressure sewer system applications. As evidence of compliance with this requirement, the grinder pump shall bear the seal of NSF International. Third-party testing to NSF standard is not acceptable.
18. Factory Test: Each grinder pump shall be submerged and operated for 1.5 minutes (minimum). Included in this procedure will be the testing of all ancillary components such as, the anti-siphon valve, check valve, discharge assembly and each unit's dedicated level controls and motor controls. All factory tests shall incorporate each of the above listed items. Actual appurtenances and controls which will be installed in the field shall be particular to the tested pump only. A common set of appurtenances and controls for all pumps is not acceptable. Certified test results shall be available upon request showing the operation of each grinder pump at two different points on its curve. Additional validation tests include: integral level control performance, continuity to ground and acoustic tests of the rotating components.
19. Delivery: All grinder pump core units, including level controls, will be delivered to the job site 100 percent completely assembled, including testing, ready for installation unless approved otherwise. Installing the cores and discharge piping/hose into the tanks is the only assembly step required. Grinder pump cores must be boxed for ease of handling.

INSTALLATION:

1. The Contractor shall be responsible for handling ground water to provide a firm, dry subgrade for the structure, and shall guard against flotation or other damage resulting from general water or flooding.
2. The grinder pump stations shall not be set into the excavation until the installation procedures and excavation have been approved by the City or Engineer. 3. Remove packing material. User instructions MUST be given to the City. Hardware supplied with the unit, if required, will be used at installation. The basin will be supplied with a standard 4" inlet grommet (4.50" OD) for connecting the incoming sewer line. Appropriate inlet piping must be used. The basin may not be dropped, rolled or laid on its side for any reason.
4. Installation shall be accomplished so that 1 inch to 4 inches of accessway, below the bottom of the lid, extends above the finished grade line. The finished grade shall slope away from the unit. The diameter of the excavated hole must be large enough to allow for the concrete anchor.
5. A 6" inch (minimum) layer of naturally rounded aggregate, clean and free flowing, with particle size of not less than 1/2" or more than 1 1/2" shall be used as bedding material under each unit.
6. A concrete anti-flotation collar, as detailed on the drawings, shall be required and shall be pre-cast to the grinder pump or poured in place. Each grinder pump station with its pre-cast anti-flotation collar shall have a minimum of three lifting eyes for loading and unloading purposes.
7. If the concrete is poured in place, the unit shall be leveled, and filled with water, to the bottom of the inlet, to help prevent the unit from shifting while the concrete is being poured. The concrete must be manually vibrated to ensure there are no voids. If it is necessary to pour the concrete to a level higher than the inlet piping, an 8" sleeve is required over the inlet prior to the concrete being poured.
8. The electrical enclosure shall be furnished, installed and wired to the grinder pump station by the Contractor.
9. The Contractor shall mount the alarm device in a conspicuous location, as per national and local codes. The alarm panel will be connected to the grinder pump station by a length of 6-conductor type TC cable. The power and alarm circuits must be on separate power circuits. The grinder pump stations will be provided with 32 feet total, 25 feet of useable, electrical supply cable to connect the station to the alarm panel. This cable shall be supplied with a FACTORY INSTALLED EQD half to connect to the mating EQD half on the core.
10. Lift Station shall be backfilled with ?"-0" crushed rock or Owner approved material. May not be native sand or clay soils. Back fill is to be compacted in 12" lifts and graded per plan.
11. All final grading and restoration will be the responsibility of the Contractor.
12. START-UP and FIELD TESTING: The Manufacturer shall provide the services of qualified factory trained technician(s) who shall inspect the placement and wiring of each station, perform field tests as specified herein, and instruct the City's personnel in the operation and maintenance of the equipment before the lift station is accepted by the City.
13. All equipment and materials necessary to perform testing shall be the responsibility of the Installing Contractor. This includes, as a minimum, a portable generator and power cable, water in each basin filled to a depth sufficient to verify the high level alarm is operating, and opening of all valves in the system.
14. MANUALS: The Manufacturer shall supply four copies of Operation and Maintenance Manuals to the Owner, and one copy of the same to the Engineer.

REGISTERED PROFESSIONAL ENGINEER #16,550 OREGON APRIL 19, 1996 JOSEF K. HITZ 6-11-19

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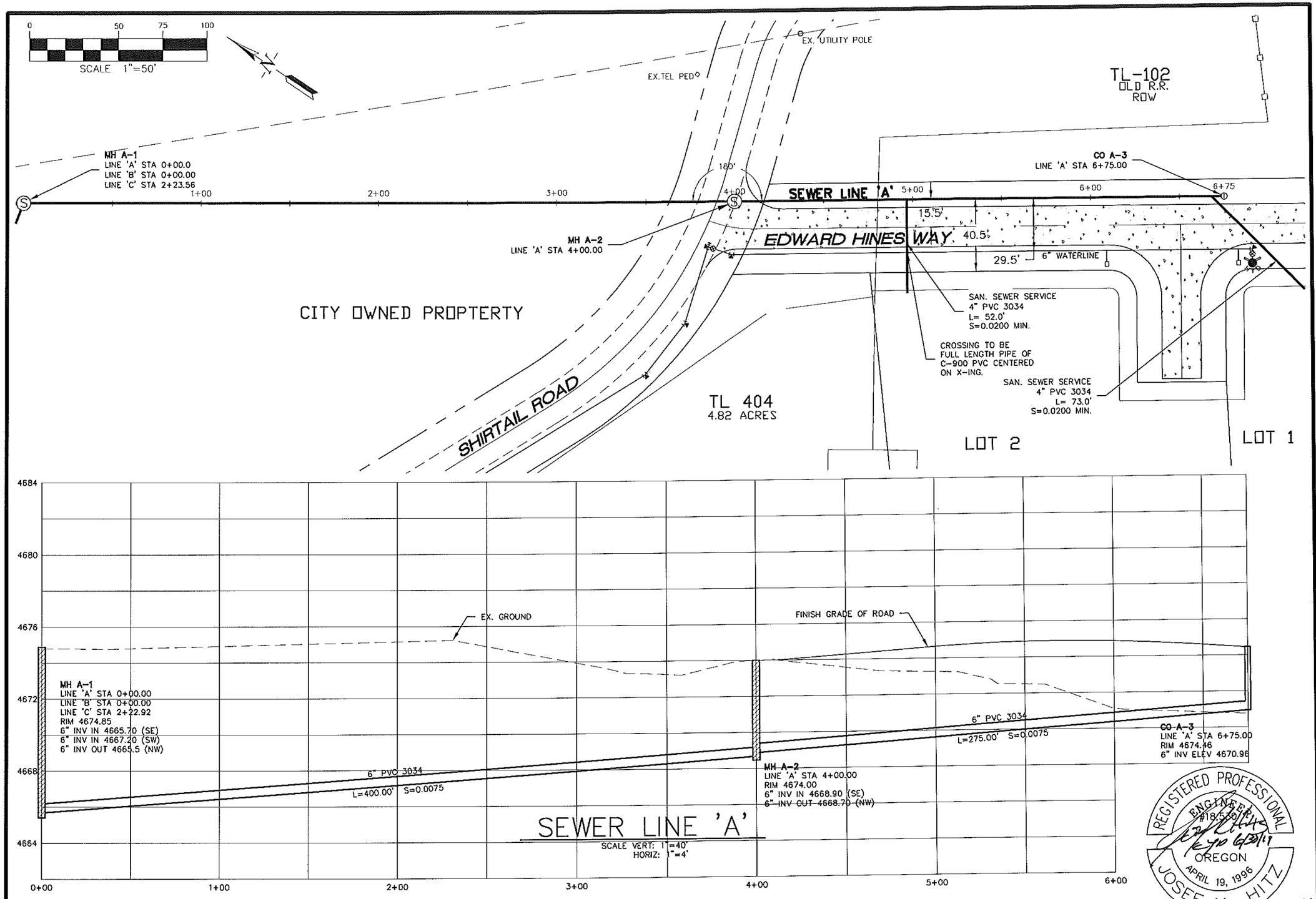
SHIRTAIL SUBDIVISION
CITY OF SENECA

SANITARY SEWER NOTES

BISUL ENGINEERING
158 E. MAIN STREET
JOHN DAY, OREGON 97845
(541) 575-1777
DRAWING: 2020 SS PLAN.DWG

DATE	MARCH 2019
SCALE	NOTED
DRAWN	JH
JOB	16-006
SHEET	02
OF	06 SHEETS



SEWER LINE 'A'

SCALE VERT: 1"=40'
HORIZ: 1"=4'

REGISTERED PROFESSIONAL ENGINEER #18,530 OREGON APRIL 19, 1996 JOSEF K. HITZ

6-11-19

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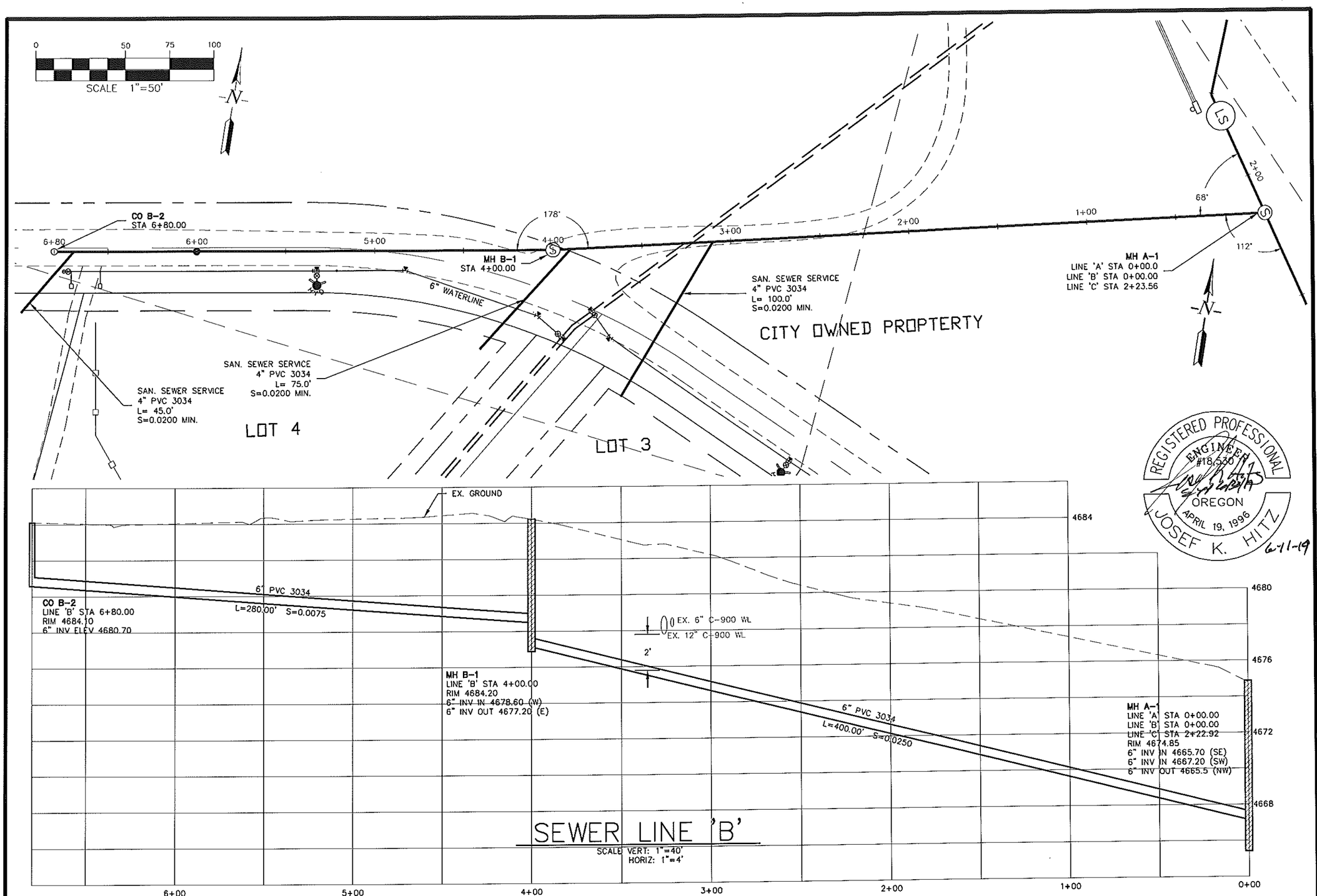
SHIRTAIL SUBDIVISION
CITY OF SENECA

SANITARY SEWER LINE 'A'
PLAN & PROFILE

ISUL ENGINEERING
158 E. MAIN STREET
JOHN DAY, OREGON 97845
(541) 575-3777

DRAWING GRID 15' PLAN.DWG

DATE MARCH 2019
SCALE NOTED
DRAWN JH
JOB 16-006
SHEET 03
OF 06 SHEETS



REGISTERED PROFESSIONAL ENGINEER #18,530 OREGON APRIL 19, 1996 JOSEF K. HITZ 6-11-19

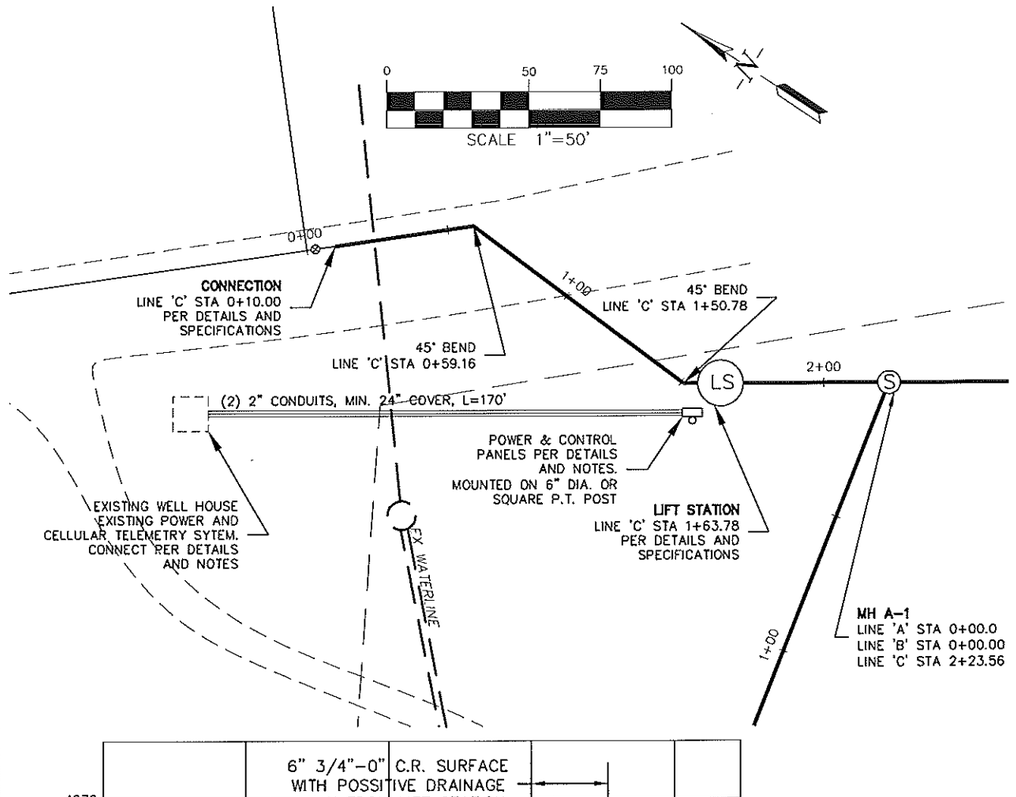
REVISIONS	BY

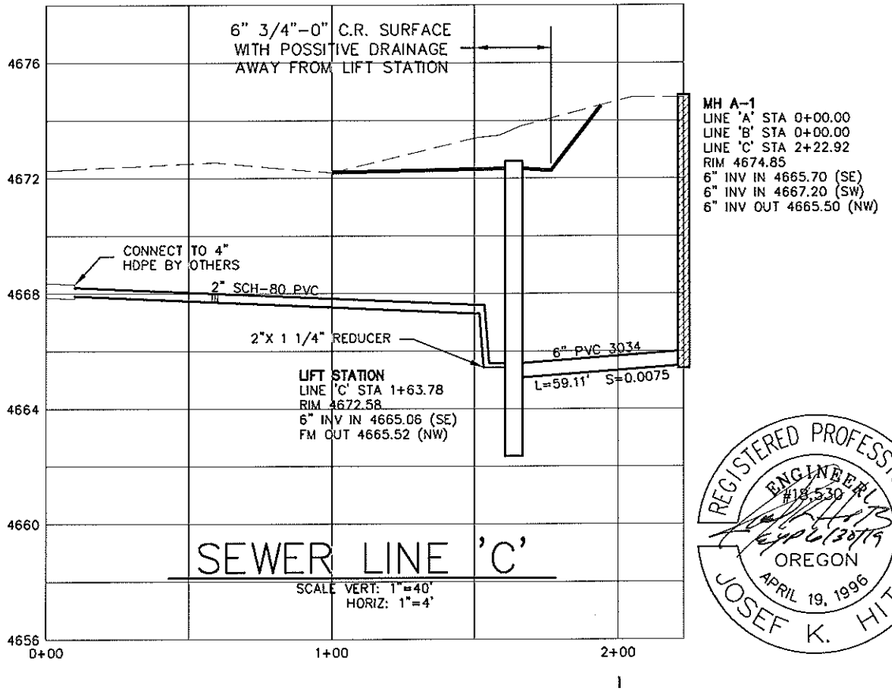
SHIRTAIL SUBDIVISION
CITY OF SENECA

SANITARY SEWER LINE 'B'
PLAN & PROFILE

ISUL ENGINEERING
158 E. MAIN STREET
JOHN DAY, OREGON 97845
(541) 575-2777
DRAWING: GRID SS PLAN.DWG

DATE	MARCH 2019
SCALE	NOTED
DRAWN	JH
JOB	16-006
SHEET	04
OF	06 SHEETS

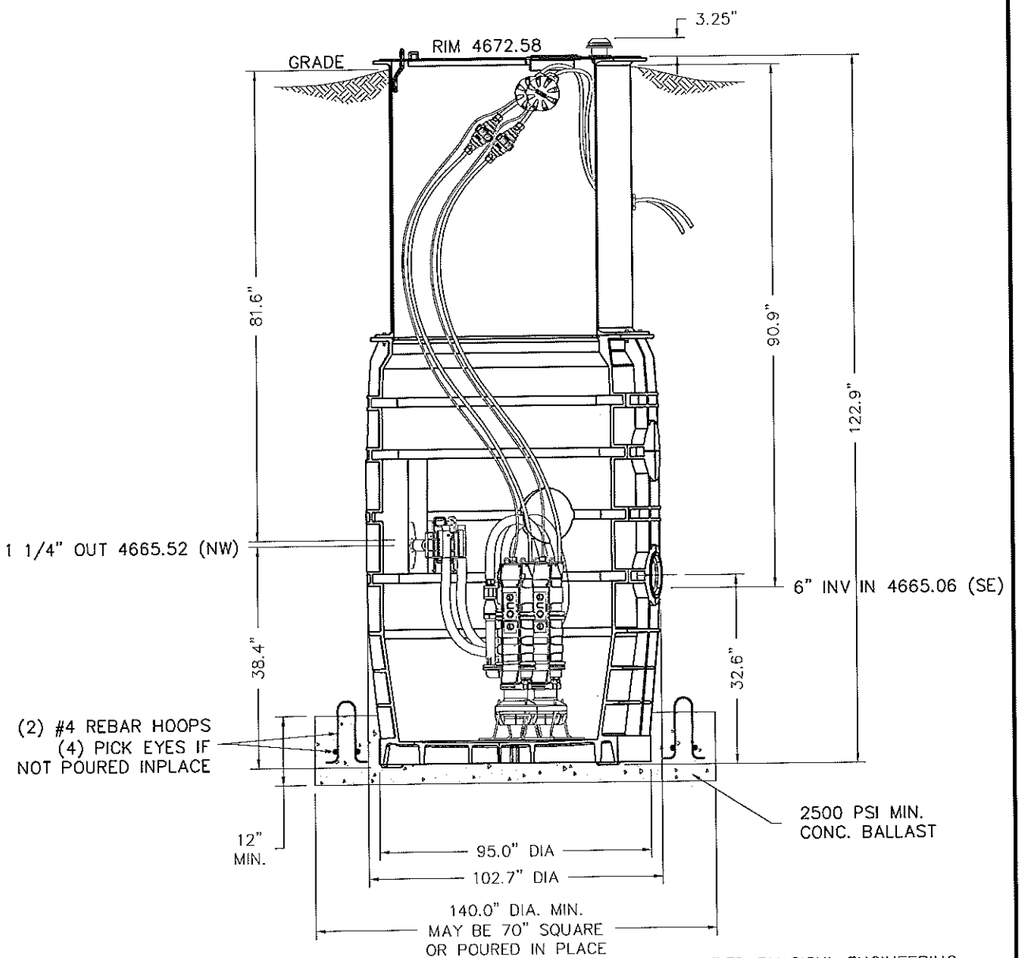




SEWER LINE 'C'

SCALE VERT: 1"=4'
HORIZ: 1"=4'

REGISTERED PROFESSIONAL ENGINEER #18530 EXPIRES:6/30/19 OREGON APRIL 19, 1996 JOSEF K. HITZ 6-11-19



DETAIL MODIFIED BY SISUL ENGINEERING
6-4-19 - JH

CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REFERENCE ONLY

SGS	PD	12/28/10	B	1/20
DR BY	CHK'D	DATE	ISSUE	SCALE

eone
SEWER SYSTEMS

MODEL WH482-122

NA0211P05

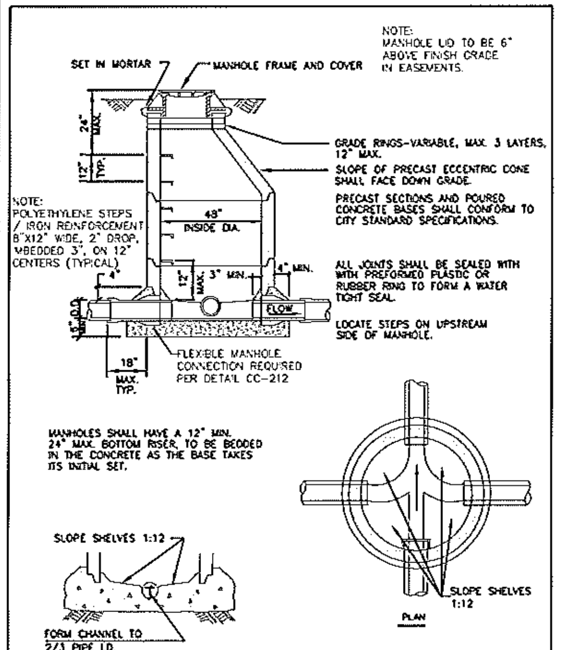
REVISIONS	BY
-	-

SHIRTAIL SUBDIVISION
CITY OF SENECA

SANITARY SEWER LINE 'C'
PLAN & PROFILE

SISUL ENGINEERING
158 E. MAIN STREET
JOHN DAY, OREGON 97845
(541) 575-0777
DRAWING GCRD SS PLAN.DWG

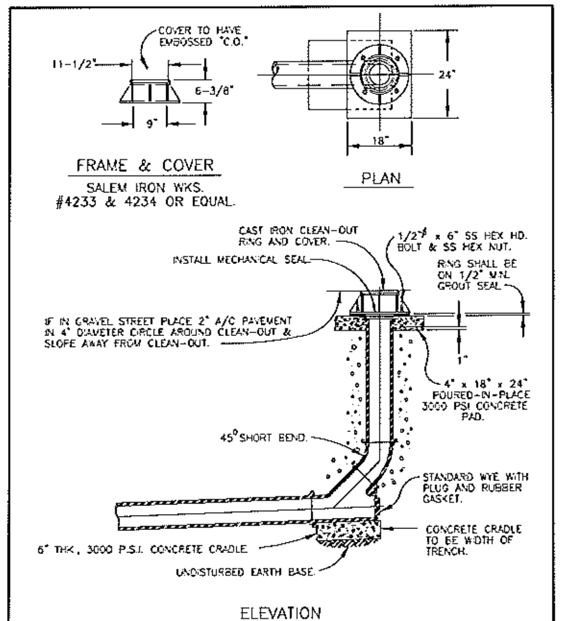
DATE MARCH 2019
SCALE NOTED
DRAWN JH
JOB 16-006
SHEET 05
OF 06 SHEETS



NOTE:
CHANNELS MUST BE ABLE TO PASS A 7"X30" CYLINDER INTO PIPES. SHELF SHALL NOT BE BELOW THE SPRING LINE OF THE PIPE.

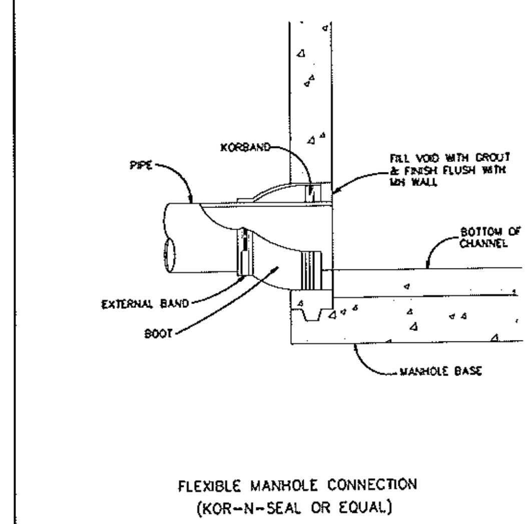
Standard Manhole for Less than 36" Pipe

DATE:	AUG. 2008
DRAWING NO.	CC-207
FILE NO.	08-048-207



Standard Clean Out

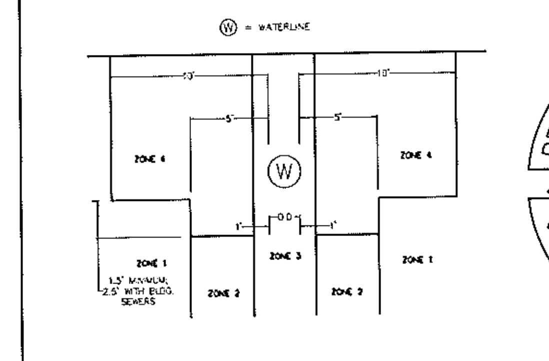
DATE:	AUG. 2008
DRAWING NO.	CC-206
FILE NO.	08-048-206



FLEXIBLE MANHOLE CONNECTION
(KOR-N-SEAL OR EQUAL)

Flexible Manhole Connection

DATE:	AUG. 2008
DRAWING NO.	CC-212
FILE NO.	08-048-212



SEWER LINE ZONES:

ZONE 1. SEWER LINE CAN BE LAID IN THIS AREA WITH NO SPECIAL REQUIREMENTS OF EITHER CONSTRUCTION OR MATERIALS.

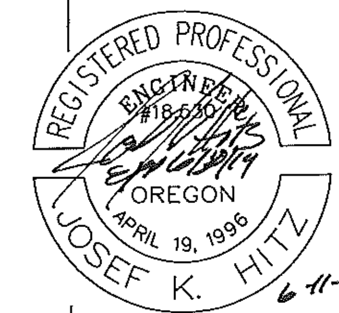
ZONE 2. INSTALLING A SEWER LINE IN THIS ZONE IS NOT ADVISABLE AND MUST BE JUSTIFIED IN EACH CASE. WATER LINE SHOULD BE LOCATED ON A BENCH OF UNDISTURBED EARTH WHEN CONSTRUCTED CONCURRENTLY IN A COMMON TRENCH WITH A SEWER LINE.

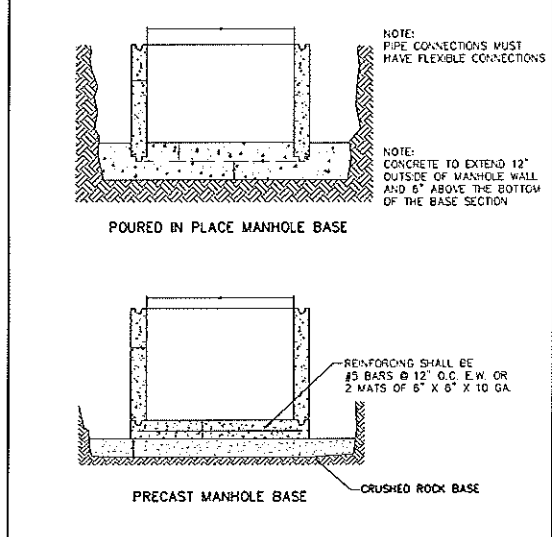
ZONE 3. INSTALLING A SEWER MAIN DIRECTLY OVER A WATER MAIN OR DIRECTLY UNDER A WATER MAIN IN THIS ZONE IS PROHIBITED SINCE TAPPING AND O. & M. OF EACH LINE WOULD BE IMPAIRED.

ZONE 4. SEWER LINE CONSTRUCTION IN THIS ZONE WOULD GENERALLY NOT BE PERMITTED. EACH INSTALLATION MUST BE JUSTIFIED. IF CONSTRUCTION WAS PERMITTED, PRESSURE PIPE MATERIALS FOR THIS SEWER LINE WOULD BE REQUIRED.

Separation of Parallel Water & Sewer Lines

DATE:	AUG. 2008
DRAWING NO.	CC-305
FILE NO.	08-048-305

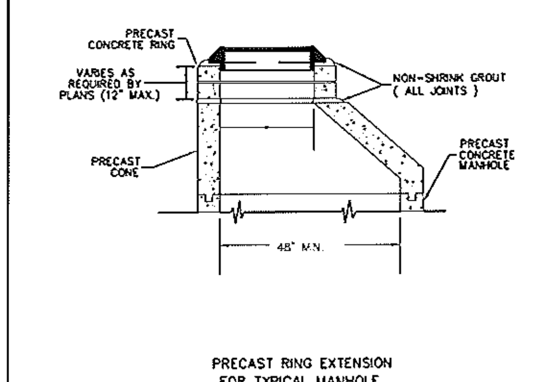




NOTE:
USE 3300 PSI CONCRETE FOR EITHER MANHOLE BASE.

Manhole Base

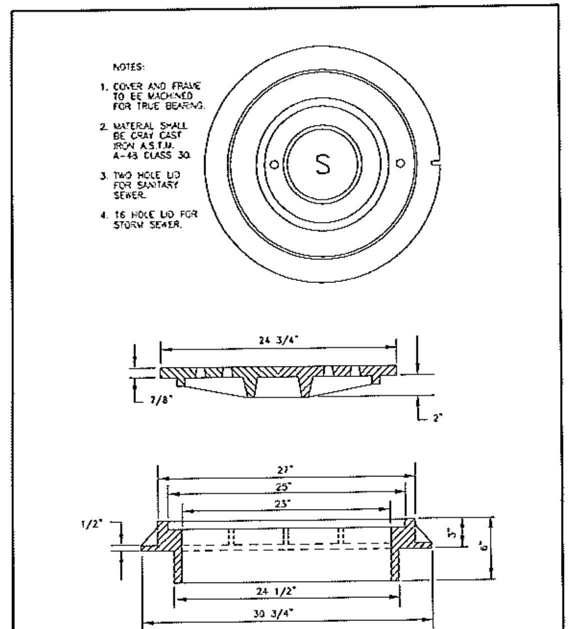
DATE:	AUG. 2008
DRAWING NO.	CC-211
FILE NO.	08-048-211



PRECAST RING EXTENSION
FOR TYPICAL MANHOLE

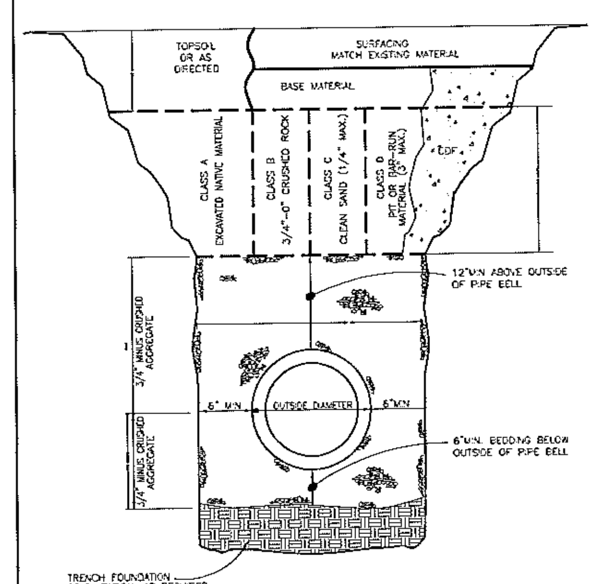
Precast Ring Extension

DATE:	AUG. 2008
DRAWING NO.	CC-213
FILE NO.	08-048-213



Suburban Manhole Frame and Cover 3" Depth

DATE:	AUG. 2008
DRAWING NO.	CC-300
FILE NO.	08-048-300



NOTE:
SURFACING OF PAVED AREAS SHALL COMPLY WITH STREET CUT STANDARD DRAWING.

TRENCH BACKFILL, BEDDING, AND PIPE ZONE

DATE	DRAWING NO.
AUG 1996	301

REVISIONS	BY

SHIRTAIL SUBDIVISION
CITY OF SENECA

SANITARY SEWER DETAILS

SISUL ENGINEERING
158 E. MAIN STREET
JOHN DAY, OREGON 97845
(541) 575-3777

DATE	MARCH 2019
SCALE	NOTED
DRAWN	JH
JOB	16-006
SHEET	06
OF 06	SHEETS

TECHNICAL SPECIFICATIONS

The technical specifications applicable to the work on this project are the 2015 edition of "OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION", Oregon Department of Transportation, additional specifications and special provisions provide hereafter.

Use appropriate units English or Metric for measurements, submittals, shop drawings, calculations, materials, certifications, delivery tickets, and all other documents submitted for work performed under this contract.

The Owner for this project is CITY OF SENECA

Per Special Provisions "Where a conflict exists between the technical specifications of these contract documents and the specifications noted on the construction plans, the specifications on the construction plans shall supersede."

210 MOBILIZATION

A. SCOPE

1. Includes but is not limited to preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, for the cost of offices, buildings, and other facilities necessary for the work, for premiums on bonds and insurance for the work, and for the operations performed or cost incurred before beginning work.

B. MEASUREMENT AND PAYMENT

1. When listed in the bid schedule, mobilization will be paid for on a lump sum basis for all required. Lump Sump for this item not to exceed 10% of the schedule cost.

2. When 10 percent of the contract amount has been earned by other bid items, 50 percent of the mobilization bid will be paid less retainage. Once 50 percent of the contract amount has been earned by other bid items the remaining mobilization will be paid less retainage.

3. When not listed in the bid schedule mobilization will be considered incidental work.

220 TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC

A. SCOPE

1. Includes but is not limited to furnishing, installing, moving, operating, and maintaining signs, barricades, and other traffic control devices throughout the area affected by the project.

B. MATERIALS

1. All materials used for protection and direction of traffic are to be in conformance with the ODOT Standard Specifications and the ODOT Short Term Traffic Control Handbook. All signs to be used at night shall have standard ODOT reflectorized backgrounds.

C. WORKMANSHIP

Shirttail Road is very low traffic. The Contractor is permitted to close streets provided there is a suitable detour. Any closed street or re-routing of traffic is to be approved by the City and Emergency Services must be notified prior.

1. General:

    a. Protective and directional devices shall be provided by the contractor.
    b. If the contractor fails to furnish and maintain appropriate protective and directional devices, the engineer may suspend the work and/or correct deficiency at the cost of the contractor.

2. Plan:

    a. The contractor is to develop a protective and directional plan with the City.
    b. The Contractor is to keep City and Emergency Services of any scheduled traffic diversions or street closures 24 hours in advance.
    c. The Contractor is to notify the City and Emergency Services as soon as possible of any unscheduled traffic diversions or street closures, but as a minimum by 3pm day.

3. Maintenance:

    a. The Contractor shall maintain all traffic devices in proper position, clean, and legible at all times.
    b. Prevent vegetative growth or other materials form obscuring clear vision of the devices.
    c. The effectiveness of installations shall be verified frequently both in daylight and dark, by actual travel by the contractor.
    d. Temporary devices are the property of the contractor and shall be removed once that portion of the project is completed and all shall be removed once work is completed, and the area restored to the original condition.

4. Street and Lane Closures:

    a. The Contractor shall obtain approval from the City and/or Engineer of proposed method and timing of any closures.
    b. The Contractor shall conduct work to assure the least possible obstruction to traffic.

D. MEASUREMENT AND PAYMENT

1. Temporary protection and direction of traffic will be paid on a lump sum basis for all required.

2. When not listed in the bid schedule, temporary protection and direction of traffic, or any specific items necessary in the work (i.e. signs, flags, flaggers, moving or reinstalling signs, barricades, attenuators, plastic drums, and delineators) required for construction will be considered incidental work.

290 POLLUTION CONTROL, ENVIROMENTAL PROTECTION, PERMITS, & SAFETY

A. SCOPE

A. The Contractor is to Comply with all applicable Federal, State, and Local environmental, health, safety, and other laws, acts, statutes, regulations, administrative rules, ordinances, orders, and permits, as they may be amended from time to time. (referred to in this Section as "Laws") Comply with all applicable Laws, whether or not specifically referenced in this Section or elsewhere in this Contract.

B. If any provisions of these specifications appear to conflict with one or more Laws, the more stringent requirement shall apply.

C. All penalties assessed against the Owner because of the Contractor's violation of Laws referenced above, or permits applicable to the Project, will be withheld from the progress and final payment(s).

D. No condition of the Contract releases the Contractor from any responsibility or requirement under any environmental or other Law.

E. Comply with all applicable Federal, State, and Local Laws as they pertain to storage, handling, management, transportation, disposal, and documentation of waste, hazardous waste, and hazardous substances. Keep copies of Material Safety Data Sheets (MSDS) for all hazardous substances stored or used on-site readily available for employees, subcontractors, and inspectors.

F. Store Fuel according to the current edition of the International Fire Code and applicable Federal, State, and Local Laws.

G. Reuse, Recycle, and Dispose of all waste materials according to all applicable Federal, State, and Local Laws. Do not dispose of any waste materials on Federal, State, or Grant School District No. 3 properties or leases unless approved in writing prior.

H. Comply with all applicable Federal, State, and Local Laws for the transportation of hazardous substances, hazardous waste, and explosives.

I. If, during construction, unanticipated hazardous substances are discovered that threaten the health and safety of workers, the public, or the environment; immediately remove all affected employees and secure the area to prevent access and notify the Grant School District No. 3 for instructions on how to proceed.

J. Comply with all applicable health and safety Laws.

K. Obtain all necessary permits and comply with the Laws of any authority having jurisdiction over work activities being performed.

L. Comply with and require that all the Contractor's employees, agents, and subcontractors on the project site comply with all Laws.

B. WORKMANSHIP

A. Provide Owner copies of all permits prior to start of work.

B. Provide copies of Material Safety Data Sheets (MSDS) for all hazardous substances stored or used on-site.

C. Properly dispose of all old equipment, debris, packaging, etc. according to all applicable Laws.

D. Comply with all rules, inspections, requirements, etc. of all reviewing and regulatory agencies.

C. MEASUREMENT AND PAYMENT

1. Temporary protection and direction of traffic will be paid on a lump sum basis for all required.

2. When not listed in the bid schedule, temporary protection and direction of traffic, or any specific items necessary in the work (i.e. signs, flags, flaggers, moving or reinstalling signs, barricades, attenuators, plastic drums, and delineators) required for construction will be considered incidental work.

310 CONSTRUCTION SURVEY WORK

A. SCOPE

1. Contractor to provide all survey staking for structures that require new locations, inverts etc., with a hub and offsets. Any additional or intermediate staking, re-staking due to damage during construction shall be the Contractors responsibility. Owner will provide Contractor with

B. MEASUREMENT AND PAYMENT

2. No measurement of quantities will be made for construction survey work.

3. No payment or additional payment will be made for field survey work, materials, equipment, preparing survey documents including but not limited to office time, preparing and checking survey notes, and all other related preparation work.

4. When not listed in the bid schedule mobilization will be considered incidental work.

610 REPAIRS OF EXISTING STREET

A. SCOPE

1. Includes excavation and repair of sections of Streets as identified on plans and in the field, with new surface aggregate.

B. MATERIALS

1. Surface Aggregate

    a. Provided 3/4”–0” Dense-Graded Base Aggregate per Section 02630 of ODOT Standard Specifications for Construction, 2015, to be used for aggregate base.

C. WORKMANSHIP

1. General

    a. Workmanship and materials to be follow applicable Sections of ODOT Standard Specifications for Construction, 2015 and the following specifications.

    b. Excavated material is to be properly disposed of or recycled by the Contractor off site.

    c. Protect existing facilities, adjacent properties and survey monuments from damage.

d. Cleanup adjacent work areas of all litter and debris resulting from contractor’s operations under this section.

D. MEASUREMENT AND PAYMENT

1. Temporary protection and direction of traffic will be paid on a lump sum basis for all required.

2. When not listed in the bid schedule, temporary protection and direction of traffic, or any specific items necessary in the work (i.e. signs, flags, flaggers, moving or reinstalling signs, barricades, attenuators, plastic drums, and delineators) required for construction will be considered incidental work.

405 DITCH EXCAVATION, TRENCH EXCAVATION, BEDDING AND BACKFILL

A. SCOPE

1. Work to include but not be limited to the following:

    a. Saw cut asphalt pavement as required.
    b. Contact all utilities for location of buried pipes and cables.
    c. Maintain barricades, warning signs and flagman for safety during construction.
    d. Excavate for pipe and appurtenances.
    e. Drain or dewater ditch.
    f. Place and compact backfill as designated.
    g. Grade, restore, trench as specified.
    h. Clean up work area.

B. MATERIALS

1. Classification of Excavated Materials

    a. Common excavation unclassified.

2. Common excavation to include all clay, silt, loam, sand, gravel, slate, pavement of all sorts, sandstone, loose stone, all boulders measuring less than 1 cubic meter (1 cubic yard) in volume, and any other material not, in the opinion of the Engineer, hard rock.

    a. Rock excavation to include:

3. Rock excavation shall consist only of that solid bedrock or ledge rock and boulders over .8 cubic meter (1 cubic yard) in volume which cannot be removed by dozers and rippers or other ordinary mechanical equipment, but which requires systematic drilling and blasting or the use of rock splitters, pneumatic hammers and wedges.

4. Trench Backfill Zones

    a. Trench backfill is segregated into the following zones. See pipe trench detail.

5. Pipe Bedding Material

    a. Class A, B, C, and D trench - ¾" minus crushed rock conforming to Section 02630 ODOT Specifications or as approved by Engineer.

6. Backfill Material in Pipe Zone

    a. Class I, II and III trench - ¾" minus crushed rock conforming to Section 02630 ODOT Specifications or as approved by the Engineer.

7. Backfill Material Above Pipe Zone

    a. Class of Backfill
        i. Class ‘A’ native backfill.
        ii. Native excavated material free of vegetable matter and debris.
        iii. Individual particles less than 1/3 trench width in greater dimension.
        iv. To be used unimproved or landscaped areas or as directed by the Engineer.

    b. Class ‘B’ granular backfill:
        i. ¾" - 0" crushed rock; conforming to Section 02630 ODOT specifications.
        ii. All materials to be approved by Engineer.
        iii. Engineer may visually reject material until tests are made.
        iv. Use under paved roadways, paved driveways, and gravel driveways, or as directed by the Engineer.

    c. Class ‘C’ select backfill:
        i. 1/4" - 0" clean sand.
        ii. All materials to be approved by Engineer.
        iii. Engineer may visually reject material until tests are made.
        iv. Use under paved roadways, paved driveways, and gravel driveways, or as directed by the Engineer.

    d. Class ‘D’ select backfill:
        i. 3" - 0" pit run or bar run well graded material.
        ii. All materials to be approved by Engineer.
        iii. Engineer may visually reject material until tests are made.
        iv. Use under paved roadways, paved driveways, and gravel driveways, or as directed by the Engineer.

e. Foundation stabilization
   i. Gravel or crushed aggregate or engineer approved clean, well graded granular material.

C. WORKMANSHIP

1. General

   a. Confine operations to right-of-way and easements provided. Avoid encroachment on, or damage to private property or existing utilities unless prior arrangements have been made with copy of said arrangement submitted to Engineer.
   b. Intent of specifications is that all streets, structures, and utilities be left in condition equal to or better than original condition.
   c. Where damage occurs and cannot be repaired or replaced, Contractor shall purchase and install new material which is satisfactory to Owner.
   d. Plans and/or specifications cover and govern replacement and restoration of foreseeable damage.
   e. Maintain street traffic at all times. The Contractor shall erect and maintain barricades, warning signs, traffic cones and other safety devices during construction in accordance with MUTCD, Part VI to protect the traveling public. Provide flaggers as required during active work on roadway areas.
   f. Trenches across roads and existing driveways shall not be left open at the close of any working day without permission.
   g. Uncover existing utilities well ahead of trenching so that conflicts can be avoided where possible by altering grades.

2. Excavation
   a. Cutting pavement
   b. Cut pavement prior to excavation.
   c. Cut asphalt and concrete pavement with saw wheel or approved cutting device.
   d. Remove cut or broken pavement from site during excavation.
   e. Width of pavement cut not less than 6" greater than trench width.

3. Locate existing utilities

   a. Before digging, locate all existing buried utilities and dig up, if necessary, to avoid damage during trench excavation. Coordinate with the public and private utilities.

4. Opening trenches

   a. Excavate to depth required for alignment and cover.
   b. Excavate to allow minimum of 4" of bedding beneath pipe where required.

5. Shoring and bracing

   a. Provide shoring and bracing where required to protect work, property utilities, pavements, etc., and to provide safe working conditions.
   b. Shall be of Contractor's design.
   c. Comply with local and state safety codes.
   d. Failure of shoring, sheeting and bracing resulting in damages shall be Contractor's responsibility.
   e. Shoring and bracing not a pay item.

6. Disposal of excavated materials

    a. Contractor to arrange for and dispose of all excess materials on City of Prairie City Site.
    b. Remove excavating materials unsuitable for backfill.
    c. Store materials suitable for backfill in neat pile adjacent to excavation where space allows.
    d. Interfere with traffic and land use as little as possible.
    e. Where trench is adjacent to road shoulder, place excavated materials on side of ditch away from road.

7. Foundation Stabilization

    a. If, in the judgment of the Engineer, material in the bottom of an excavated trench is unsuitable for pipe support, over excavate a directed backfill to required grade with foundation stabilization material.
    b. Compact in layers not exceeding 152.4mm (6 inches) deep to required density and grade.

8. Rock Excavation

    a. Where the bottom of the trench encounters ledge rock and/or boulders and large stones which in the opinion of the engineer requires, for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with power-operated tools, said rock shall be removed to provide six inches of clearance to each side and below all pipe and accessories.
    b. Excavations below subgrade in rock shall be backfilled to subgrade with approved bedding material and thoroughly compacted.
    c. Contractor to excavate and remove the over-burden exposing the rock surface, allowing the Engineer to profile the excavated trench for rock measurement. The profiling of the exposed rock surface shall be done prior to commencement of rock removal activities.
    d. The Contractor shall comply with the requirements for the use and security of explosives as specified in the special conditions.
    e. Whenever the use of explosives is required during the course of the work, the Contractor shall conform to the recommendations of the Manual of Accident Prevention in Construction published by AGC, in regard to Section 5, Explosives. Prior to commencing use of explosives, the Contractor shall submit a certificate on insurance showing coverage of blasting operations and blasting products liability to the limits required by the General Conditions. Coverage for this extra hazard shall be maintained during all blasting operations.
    f. The Contractor shall provide all necessary approved types of tools and devices required for loading and using explosives, blasting caps and accessories, and conform to and obey all federal, state and local laws that may be imposed by any public authority.
    g. When blasting rock in trenches, cover the area to be shot with blasting mats or other approved type of protective material that will prevent the scattering of rock fragments outside the excavation. The Contractor shall give ample warning to all persons within the vicinity before blasting station people and provide signals of danger in suitable places to warn people and vehicles before firing any blasts. Fire all blasts with an electric blasting machine which shall be connected to the circuit immediately prior to the time for firing and only by the person who will operate the blasting machine.
    h. The Contractor shall assume all liability and responsibility connected with or accruing from blasting, or the use of explosive or dangerous material of any kind whatsoever. Such liability shall extend to include, but not be limited to damage to work or adjacent property, injuries, lawsuits, complaints and all other adverse results, actual, alleged, inferred or implied.

9. Pipe Bedding

    a. Pipe Bedding material to extend across width of trench and from 4" below bottom of pipe barrel as shown on detailed plan.
    b. Pipe to be laid directly on Bedding materials.
    c. Place Bedding material in trench, compacting and shaping to provide continuous support for pipe between couplings.
    d. Dig coupling holes to permit assembly.
    e. After pipe is in place - place Bedding materials to one half pipe height and thoroughly compact by spading, tamping and walking material into place.

10. Trench Backfill in Pipe Zone

    a. Place selected material to limits shown on the detailed plans.
    b. Backfill simultaneously on both sides of pipe.
    c. Take care that compaction is sufficient to prevent lateral movement of pipe.

11. Trench Backfill Above Pipe Zone

    a. Class ‘A’ backfill

        i. Use under improved yard, road shoulders, etc., where approved.
        ii. Use Bedding and Pipe Zone material as specified and shown on plans.
        iii. Place native excavated material in ditch, do not let material fall directly into trench.
        iv. Compact by jetting, ramming, vibration, or a combination thereof, to obtain a relative dry density greater than 95% of the in place dry density of surrounding undisturbed soil.
        v. Grade to a neat appearing surface.
        vi. Road shoulders to be restored w/ shoulder rock as directed by the engineer.

    b. Class ‘B’, ‘C’, and ‘D’ backfill

        i. Use under paved roadways, paved/gravel drives and sidewalks or where directed by Engineer.
        ii. Place imported material in trench; do not let material fall directly into trench.
        iii. Compact by jetting and ramming or by mechanical compaction in 152.4mm (6") lifts or other approved method to a 95% maximum density per AASHTO T99 test method.

12. Maintenance of trench surface

    a. Restore ground surfaces to original condition and elevation.
    b. Road shoulders to be restored w/ shoulder rock as directed by the engineer.
    c. Maintain such surfaces to one year following acceptance of work.

13. Clean Up
    a. Clean up and remove all excess materials, construction materials, debris from construction, etc.
    b. Replace or repair any fences, mailboxes, signs, landscaping, or other facilities removed or damaged during construction.
    c. Replace all lawns, topsoil, shrubbery, flowers, etc., damaged or removed during construction. Contractor to be responsible for seeing that lawns, shrubs, etc., remain alive.
    d. Leave premises in condition equal to original condition before construction.

D. MEASUREMENT AND PAYMENT

1. General payment for work specified under excavation and backfill will be made at unit prices for piping and structures.

2. Foundation Stabilization

    a. Paid for on a cubic yard basis. Length and width measured horizontally along foundation stabilization material actually installed.
    b. Depth measured to actual depth installed below bottom of bedding. The average depth will be used with measurement intervals of 25 feet along centerline of trench. No payment will be made for unauthorized foundation stabilization.

3. Rock Excavation

    a. Rock excavation will be measured on a cubic meter (cubic yard) basis as follows:
        i. Length. The length will be the entire horizontal distance measured on a linear foot basis along the centerline of the trench.
        ii. Width. The width for measurement purposes shall be (12 inches) greater than the maximum outside diameter of the pipe.
        iii. Depth. The measurement for depth will be the vertical distance from the top of the rock to the depth shown on the plan. The depth will be measured at intervals of 25 feet along Other Compensation

4. Payment indicated to include complete compensation for all labor, equipment, material, and incidentals involved in the work specified under this section. No additional compensation to be allowed.

446 SANITARY SEWER PIPEWORK

A. SCOPE

1. Work shall include, but not be limited to, installation of sanitary sewer line, connections to existing sewer lines, valves, contact chamber, and manholes, and all related appurtenances to the limits shown on the plans.

B. MATERIALS

1. Polyvinyl Chloride (PVC) Pressure Pipe

    a. Conform to AWWA C900.
    b. Shall have elastomeric gasket joints conforming to ASTM D-3139
    c. Gaskets shall conform with ASTM F 477 and ASTM D 1869.
    d. All pipe shall be stored indoors after production at the manufacturing site until shipped from factory.

2. Fusible Polyvinylchloride Pipe
    a. Fusible polyvinylchloride pipe for non-potable water or pressurized wastewater shall conform to AWWA C900, ASTM D2241 or ASTM D1785 for standard dimensionality, as applicable. Testing shall be in accordance with the referenced AWWA standards.

b. Fusible polyvinylchloride pipe shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe.

c. Fusible polyvinylchloride pipe shall be manufactured in a standard 40' nominal length or custom lengths as specified.

d. Fusion Technician Requirements
   i. Fusion Technician shall be qualified by the pipe supplier to install fusible polyvinylchloride pipe of the type(s) and size(s) being used. Qualification shall be current as of the actual date of fusion performance on the project.

   ii. A Unless otherwise specified, fusible polyvinylchloride pipe lengths shall be assembled in the field with butt-fused joints. The fusion technician shall follow the pipe supplier's guidelines for this procedure. All fusion joints shall be completed as described in this specification.

3. Polyvinyl Chloride (PVC) Gravity Sewer Pipe

   a. Conform to ASTM D-3034 SDR bell and spigot with rubber gasket type joints.
   b. Joints to conform to ASTM D-3212.
   c. Couplings to be Ring-Tite or Fluid-Tite, manufactured by Johns Manville or Certain Teed or approved equal.
   d. All pipe shall be stored indoors after production at the manufacturing site until shipped from factory.
      1.
4. Ductile Iron Pipe

   a. Where indicated on the plans.
   b. Conform to AWWA C104, C110, and C151.
   c. Center one 6m (20 foot) length of DI pipe at point of crossing.

5. Fittings

   a. Pressure Pipe fittings shall be of a class and rating at least equal to the adjacent pipe unless specified otherwise. Joint materials shall be compatible with the adjacent pipe. All fittings shall be cast or ductile iron. Mechanical joint and push-on joint type coupling shall conform to AWWA Standard C-111-12. Other types of joints shall conform with Federal Specifications WW-P-421, for push-on joints. Flanged couplings shall be drilled and faced in accordance with ANSI B-16.1 or B-16.2. Rubber gasket type shall be U.S. Pipe, Tyton or approved equal. Ordinary cast iron fittings shall conform to the AWWA Standard C-110. Cast iron fittings for use with Federal Specifications Type II and Type III cast iron water pipe shall conform to the same specifications except that joints shall be mechanical type and include cast iron glands, plain rubber gaskets and T-head cast iron bolts and nuts per ANSI
   b. Pressure Pipe saddle shall be double strap with bronze or stainless-steel body, straps and nuts, FORD or approved equal.
   c. Thrust blocks shall be constructed of Portland cement concrete conforming to the requirements of ASTM C94. Compressive field strength shall be not less than 2,000 p.s.i. at 28 days. Maximum size of aggregate shall be 1½ inches. Thrust blocks shall be formed per details and specification and poured in place.
   d. Fittings means wyes, tees, valves, or other special connection as shown.

e. Fittings shall be of the same materials, type, class and grade as sewer pipeline in which installed.
f. Conform to same specifications as sewer pipe.
g. Joint materials shall be compatible with the adjacent pipe.
h. All valves shall be rated by manufacture for wastewater applications
i. Valve boxes shall be cast iron and shall conform with ASTM A 48.

6. Sewer Repairs and Connections to Existing.

   a. Romac Industries CB Sewer Saddle or approved equal. The saddle body is cast from ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12. Gasket is made from virgin Styrene Butadiene Rubber (SBR) compounded for water and sewer service in accordance with ASTM D 2000 MBA 710.Type 304 (18-8) Stainless Steel, 3 1/2 inches wide to spread out clamping forces on the pipe. M.I.G. and T.I.G welds. Passivated for corrosion resistance. Bolts Type 304 (18-8) Stainless Steel, passivated for resistance to corrosion. 1/2" National Coarse roll thread. Nuts coated to prevent galling.
   b. Controlled Density Fill (CDF) – a flowable mixture of Portland cement, fly ash, sand and/or aggregate for backfilling as shown on plans or specified. Meeting Oregon Standard Specifications for Construction, Section 00442.
   c. New sections of gravity collection lines shall be connected to existing with flexible couplers using stainless steel bands, Conforms to ASTM D 5926, C 1173 and CSA B602. Fernco Standard Couplers or approved equal.

C. WORKMANSHIP

1. Trench excavation and backfill is to conform to *Section 405*.

2. Tapping Existing Manholes:

   a. Drill or saw holes in manhole not more than (two inches) larger than the outside diameter of the pipe to be used.
   b. The space between inserted pipe and the hole shall be the same both horizontally and vertically during grouting and sealing process.
   c. The space shall be grouted with a non-shrinking or expanded grout. For PVC pipe installed in existing manholes, use a sand collar or installed rubber boot collar appropriately sized for pipe to be installed.

3. Handling Pipe and Accessories:

   a. Contractor is responsible to load and transport all pipe and accessories form the stockpile location.
   b. Handle with care to avoid damage. Do not drop or bump.
   c. Unload at site opposite or near place where pipe is to be laid.
   d. Engineer to reject any damaged pipe; rejected pipe shall be removed from the construction site during presence of the Engineer.
   e. Pipe or Accessories damaged by the contractor by because of error or mishandling to be replaced at the contractor's expense.

4. Line and Grade
   a. Engineer to set grade stakes on offset line at maximum spacing of (50 feet) and at alignment changes as needed.
   b. When connecting to existing structures the contractor is to expose the existing structure and pipe so that grades can be verified by engineer prior to installation of pipe.

c. Engineer to furnish Contractor with elevations and cuts from offset stakes.
d. Tolerable variance from established line and grade is (½") for line and (¼") for grade providing a level or reversed slope does not occur.

5. Laying Sewer Pipe

a. Lay no pipe before Engineer examines and passes it for use. Remove rejected pipe from site promptly.
b. Place bedding material prior to laying pipe.
c. Lower all pipe and fittings into trench in a manner to prevent damage to pipe.
d. Shape and grade trench to established line and grade.
e. Lay pipe on prepared bedding, begin pipe zone material up uniformly around and lay over pipe, and consolidate backfill as specified herein before.
f. Thoroughly compact 19mm - 0mm (3/4" - 0") crushed gravel under all tee and wye fittings. Crushed gravel support shall be laterally contained so as to prevent unraveling and subsequent loss of support for fittings.
g. Form bell holes properly in trench bottom so that pipe bears solidly upon entire length of barrel.
h. Lay pipe to uniform line and grade, bell ends upgrade.
i. Clean interior of pipe of foreign material before laying next pipe.
j. Do not lay pipe in water or on frozen trench bottom or when weather or trench conditions in the Engineer's opinion are unfavorable. Pipe floated out of place shall be removed and re-laid as the Engineer directs.
k. Plug all pipe openings when work is suspended.
l. Place pipe coupling not more than two feet out from the base of any manhole.

6. Sewer Pipe Repairs

a. Make repairs as shown in plans and details
b. Install Sewer Saddle per manufacturer’s instructions.
c. Connect existing and new sewer piping with flexible connector per manufacturer’s instructions.
d. Backfill repair or new saddle with CDF material per details.

7. Jointing

a. Comply with pipe and joint manufacture's recommendations.

8. Valves, Fittings, Plugs, and Caps

a. Valves, fittings, plugs, and caps shall be set and joined to pipe in manner specified.
b. Valves shall be supported by crushed rock or concrete pad so that the pipe will/does not support the weight of the valve.
c. Adjacent pipe shall be supported so as to prevent stress on valves and fittings.
d. Valves and Fittings shall not be used to bring misaligned pipe into alignment during installation.
e. Valve boxes shall be installed so as not to transmit shock or stress to valve or pipe, installed flush with surface, and the valve nut shall be readily accessible for operation through the opening of the box.
f. Thrust block shall be Portland cement, minimum 3000 psi, and installed per plan and per direction of Engineer.

9. Leakage Testing

    a. All pipe and manholes to be leak tested including portion installed by City of Seneca.
    b. Sewer pipe shall be tested in accordance with APWA, Oregon Chapter, 1990, Standard Specifications for Public Works Construction and its revisions according to Division III, Section 303.3.09C, Air Testing.
    c. Temporarily plug pipe as required for air test.
    d. Manholes to have no visible leakage under high groundwater conditions, and all manholes shall be leak tested. Testing shall conform to APWA, 1990, Division III, Section 306.03B Vacuum Testing.
    e. All testing must be witnessed and approved by the Engineer.

10. Deflection Testing

    a. All pipe to be tested for deflection not more than 45 days backfilling has been completed including portion installed by City of Seneca. A standard mandrel, 95 percent the inside diameter of the line being tested, will be drawn through the line between manholes. Should excessive deflection be found, the Contractor will uncover deflected pipe and correct problem area.
    b. All PVC shall be tested for deflection. Deflection testing shall be by mandrel per APWA, Division III, Section 303.3.10, Deflection Testing for Flexible Pipe.
    c. All testing must be witnessed and approved by the Engineer.

11. Surface Restoration is to conform to ***Section 610***.

12. Cleanup

    a. Cleanup of construction area is to closely follow pipe laying activities.
    b. Remove all excess materials, broken pavement, construction equipment, etc., within three days after pipe is laid in any area.
    c. Level and reseed lawn areas. Grade and gravel shoulder or parking areas. Replace all signs, mailboxes, etc., which were removed or damaged.
    d. Following construction, flush and clean all sewers, removing all foreign matter prior to final acceptance.

D. MEASUREMENT AND PAYMENT

1. General:

    a. Payment for work specified under pipework will be made at unit prices listed in proposal and included under items shown below.
    b. Quantities to be computed by Engineer or Owner from measurement of actual work done.

2. Payment to be made at unit prices names in proposal for each linear foot of each size and type of sanitary sewer pipe completely installed. Measure along the centerline of all pipe actually installed, without deducting for fittings or manhole dimensions.

3. Payment will be made for pipe fittings, joints, and valves when listed in the proposal per unit prices named, all other fittings, joints, valves need to complete the project will be considered incidental.

4. No payment will be made for pipe not meeting minimum leakage or deflection requirements.

5. Payment indicated to include complete compensation for all labor, equipment, materials, and incidentals involved in the work specified under this section. No additional compensation to be allowed.

471 SANITARY SEWER MANHOLES AND CLEANOUTS

A. SCOPE

1. Work to include, but not be limited to construction of manholes and cleanouts complete.

B. MATERIALS

1. Precast or monolithic cast-in-place concrete units allowed.

2. Precast sections shall conform to ASTM C478 specifications; cast-in-place units shall be equivalent as to concrete and reinforcement design and workmanship unless modified below.

   a. Concrete Base

      i. Cast-in-place monolithic concrete conforming to the following specifications:
         - Cement content minimum six sacks per cubic yard and minimum 28 days compressive strength of 20.7mpa (3000 psi).
         - Aggregate shall conform to ASTM C33, maximum size of 38mm (1½").
         - Portland cement shall conform to ASTM C150, Type II.
         - Water shall be fresh, clean, free of deleterious matter.
         - Proportioning, mixing and placing of concrete shall conform to ASTM C94.
         - Maximum water to cement radio, is to be 22.7 liter per sack (six (6) gallons per sack), slump not to exceed 101.6mm (four inches).
         - Admixtures shall conform to ASTM C260 or C494, do not use calcium chloride or any admixture not approved by the Engineer.

   b. Riser and Tops

      i. Precast reinforced concrete conforming to ASTM C478.
         - Risers to be 1.2m (48") diameter.
         - Tops to be eccentric cone except where insufficient headroom necessitates the use of flat tops.
         - Manhole steps shall be provided where precast riser sections are holed through for insertion of steps, upon installation of steps, thoroughly fill and compact hole with non-shrinking grout inside and out, so as to provide a non-leaking connection.

      ii. Mortar for Joint of manholes
         - Proportions shall be one-part Portland cement (Type II) and two parts clean, well graded, concrete sand of which 100 percent passes a #8 (U.S.) mesh sieve.
         - Use not more than 5 percent by weight cement hydrate lime of consistency to be readily applied.
         - Use no mortar mixed longer than 30 minutes.

      iii. Precast Ring Extensions
         - Use standard precast concrete rings.

iv. Manhole frames and covers
- As shown on plan details or as approved by Engineer.
- Iron castings conform to ASTM A48 (Grade 30).
- Castings to be planned and ground to insure flat and true surfaces at contact between cover and frame.
- Covers to be true within frame at all points.

c. Manhole steps

i. 19mm (¾") hot rolled-bar steel, ASTM A36.
- Hot galvanized after fabrication conforming to ASTM A123.

i. Steel reinforced polypropylene steps.
- Steel to meet ASTM A-615, Grade 60, 12.7mm (½") deformed steel rod.
- Polypropylene to meet ASTM 2146-78 Type II.

3. Cleanouts

a. Pipe, fittings, and joints same as specified for pipe.
b. Castings.
   i. As shown on standard details.
   ii. Conform to ASTM A48 (Grade 30).

C. WORKMANSHIP

1. Excavation and Backfill

a. Conform to applicable portions of Section 310.
b. Excavate sufficient to allow for minimum of 101.6mm (4") of compaction gravel under base.
c. Remove all unsuitable native material and replace with granular material.
d. Backfill to conform to trench backfill classification immediately adjacent.

2. Concrete Bases

a. Conform to dimension shown on plans for the specific type of manhole.
b. Minimum of 152.4mm (six inches) in thickness.
c. Minimum projection of 152.4mm (six inches) outside of outside diameter of riser.
d. Use walls of excavation covered with suitable waterproof membrane as form for base.
e. Keep excavation dewatered at all times while working on manhole bases.
f. Keep fresh concrete from contact with groundwater.
g. Forming with plywood or other forming material will be required if the Contractor cannot demonstrate ability to construct consistently watertight manhole bases by normal means.
h. Allow not more than 1.8m (six feet) free fall in-placement of concrete. Use elephant truck or approved baffles.
i. Adequately vibrate, spade, rod, walk, etc., wet concrete to obtain a dense and compact base.
j. Allow concrete to sure minimum of 24 hours in moist conditions prior to backfilling.
k. Channels
   i. Conform accurately to sewer grade.
   ii. Bring to well-rounded smooth junctions.
   iii. Carry sides of channels vertically to crown elevation of pipe and round lip.
   iv. Finish concrete shelf between channels smoothly and with sufficient slope to drain.
   v. Lay pipe through manhole where grades permit; break out top of pipe, mortar and finish smoothly.

3. Risers and Tops

   a. Set first section in fresh base concrete and work concrete to obtain a watertight seal between riser and base.
   b. Riser not to bear directly on any pipe.
   c. Wet thoroughly all joints or connections between precast elements, fill with mortar, and finish inside and out to insure water tightness.
   d. Place precast sections vertically so ladder rungs are aligned.
   e. Complete manhole rigid, true to dimension, and watertight.

4. Extension Rings

   a. Use precast extension rings on all manholes in streets, roads, where surface grade may change, or as Engineer directs.
   b. Construct in accordance with standard manhole details as to height determined by the Engineer.
   c. Not to exceed 304.8mm (12 inches) in height.

5. Manhole Frames and Covers

   a. Set in bed of mortar.
   b. Top of cover to conform accurately with surrounding grade unless otherwise directed by Engineer.
   c. Covers in roadway to be set and adjacent just prior to paving of streets.

6. Conform to plan details and requirements.

D. MEASUREMENT AND PAYMENT

1. Payment to be made at the unit price named in the proposal for each manhole and clean out installed complete.

2. Payment indicated to include complete compensation for all labor, equipment, material, and incidentals involved in the work specified under this section. No additional compensation to be allowed.

Partial Payment Request #

PROJECT: Shirttail Creek Subdivision Sewer Project
OWNER: **City of Seneca, OR**
CONTRACTOR:
DATE OF ESTIMATE: FROM TO

PROJECT SUMMARY -

Completion Date:		Contract Amounts:	
Original		Original	
Revised		Revised	
Completed		Final	

Schedule 'A'

ITEM NO.	DESCRIPTION	UNIT	QUANITY	UNIT PRICE	CONTRACT PRICE	PREVIOUS QUANTITY	PREVIOUS DOLLARS	THIS PERIOD QUANTITY	THIS PERIOD DOLLARS	TOTAL TO DATE QUANTITY	TOTAL TO DATE DOLLARS
1	Mobilization	LS	1	$0.00	$0.00	0	$0.00	0	$0.00	0	$0.00
2						0	$0.00	0	$0.00	0	$0.00
3						0	$0.00	0	$0.00	0	$0.00
4						0	$0.00	0	$0.00	0	$0.00
5						0	$0.00	0	$0.00	0	$0.00
6						0	$0.00	0	$0.00	0	$0.00
7						0	$0.00	0	$0.00	0	$0.00
8						0	$0.00	0	$0.00	0	$0.00
9						0	$0.00	0	$0.00	0	$0.00
				Total	$0.00		$0.00		$0.00		$0.00

I hereby certify that, to the best of my knowledge and belief, the quantities as indicated within are correct and that they represent the value of work accomplished in the stipulated periods of time.

Estimated percentage of job completed 10.0%
Percentage of contract time elapsed 30.0%

	PREVIOUS		THIS PERIOD		TOTAL TO DATE	
AMOUNT EARNED		$0.00		$0.00	$	$0.00
AMOUNT RETAINED	10.00%	$0.00	$(-)	$0.00	$(-)	$0.00
PREVIOUS PAYMENTS					$(-)	$0.00

AMOUNT DUE $0.00

Requested by Contractor

Date:

By:
(Name and Title)

Reviewed by Engineer

Date:

By:
(Name and Title)

Accepted by Owner

Date:

By:
(Name and Title)

CONTRACT CHANGE ORDER

Order No. 1 ____, 2019

Contract for: **SHIRTTAIL CREEK SUBDIVISION SEWER PROJECT**

Owner: **City of Seneca, Oregon**

To: _____: You are hereby requested to comply with the following changes from the contract plans and specifications:

Description of Changes	Change in Contract Price
C1)	***$*** _____
C2) .	***$*** _____
Net Change in Contract Price	**$** _____

Justification

C1)

C2)

The amount of the Contract will be increase/decrease by the Sum of: _____ _____ ($ 0.00)

The Contract Total including this and previous Change Orders for will be: _____ _____. ($0.00)

The Contract Period provided for Completion will be: same extended until oil-fuel is used or moved and weather has improved for outdoor concrete work

This document will become a supplement to the contract and all provisions will apply hereto.

_____ _____
Contractor Date

_____ _____
Engineer Date

_____ _____
Owner Date

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	City of Seneca, OR	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	Sisul Engineering	Engineer's Project No.:	09-030
Project:	Shirttail Creek Subdivision Sewer Project	Contract Name:	

This [preliminary] [final] Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities: ☐ None ☐ As follows

Amendments to Contractor's responsibilities: ☐ None ☐ As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____ (Authorized signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____