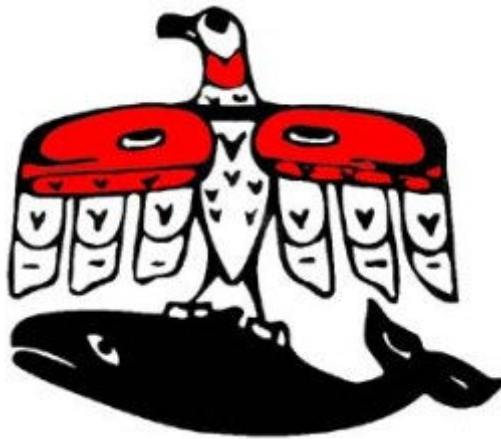


CARRIE DERNIER ON-SITE SEPTIC SYSTEM AND COMMUNITY WATER CONNECTION BID PACKAGE

MAKAH TRIBE & INDIAN HEALTH SERVICE

**11 SACREDLANDS DRIVE
NEAH BAY WA, 98357
MAKAH INDIAN RESERVATION**

**PORTION OF ALLOTMENT 108-184
SECTION 32 & 33, T33N R15W W.M.**



MAKAH TRIBE PROJECT MANAGER:

**PATTY MANUEL
GENERAL MANAGER
MAKAH TRIBE
360-645-3100
patty.manuel@makah.com**

IHS PROJECT ENGINEER:

**MADELINE KEEP
PROJECT ENGINEER
SANITATION FACILITIES CONSTRUCTION, PORT ANGELES FIELD OFFICE
360-536-3364
Madeline.Keep@ihs.gov**

APRIL 2025

CONTRACT DOCUMENTS FOR SANITATION FACILITIES CONSTRUCTION

INDIAN HEALTH SERVICE PROJECT PO-22-D05F

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MAKAH TRIBE & INDIAN HEALTH SERVICE

**11 SACREDLANDS DRIVE
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- III. STATEMENT OF WORK
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- 1. Aerial Home Location
- 2. Design
- 3. IHS Technical Provisions

END OF SECTION

I. INVITATION FOR BID

The Makah Tribe (Tribe) is soliciting bids for a construction project to install an on-site gravity septic system and a community water connection (CWC) at a residential home on the Makah Indian Reservation. The project site is located on Trust land. The proposed septic system is to consist of a 4" SDR 35 PVC solid sewer pipe with a doublesweep cleanout, a 1,000-gallon two-compartment concrete septic tank with effluent filter, effluent transport line, a distribution box, and a gravity gravel bed drainfield. The CWC shall include installation of a water meter and setter, 1 ½" HDPE SDR 9 water service line with 3" Schedule 40 PVC pipe sleeving under driveway and detectable warning tape, and a gate valve outside of home foundation per Design and local, state, and Tribal regulations.

Homeowner Name: **Carrie Dernier**

Project Location: **11 Sacredlands Drive
Neah Bay WA, 98357
Makah Indian Reservation**

Submit Bids to: **Patty Manuel
General Manager
Makah Tribe
P.O. Box 115
Neah Bay, WA 98357
patty.manuel@makah.com
P: (360) 645-3100**

Due Date: **June 9, 2025**

Bids received after that date and time may not be accepted. Bids will be received by email or mail. The Bid Schedule is attached. Contractors shall submit bid on attached Bid Schedule only.

This solicitation does not commit the Tribe to pay any costs incurred in preparation of a bid. The Tribe reserves the right to re-advertise when it's in the best interest of the Tribe.

The Tribe will give preference to Alaska Native and Indian owned Economic Enterprises so long as the bid by the enterprise does not exceed the lowest bid by 5% and proves not less than 51% ownership.

Minimum percentage of work to be completed by the prime Contractor is 33-1/3%.

The Contractor shall observe and comply with Federal, State, Tribal, City, and County laws and building codes. All permits that have been obtained by the government or the homeowner shall be included as part of the bid packet; any and all other required permits, certificates and licenses shall be obtained by and at the expense of the Contractor.

If a conflict occurs between the Technical Provisions and the Septic System/Water Service Design, defer to the Septic System/Water Service Design.

The Contractor shall be in compliance with the following labor regulations:

- Copeland "Anti-kickback" Act
- Sections 103 and 107 of the Contract Work Hours and Safety Standard Act
- Davis-Bacon Act
- OSHA Regulation 1926 – Safety and Health Regulations for Construction
- EPA 2022 NPDES Construction General Permit (CGP)

Contractor shall meet or exceed Clallam County Davis Bacon Wage Rates for residential construction. Wage decision is specified. Contractors shall submit certified payroll reports documenting that these wage requirements are met.

This is not a Federal Contract. The Tribe is responsible for compliance with and enforcement of the Contract. There shall be no contractual relationship either implied or expressed between the Indian Health Service (IHS) and the Contractor or any Subcontractor at any tier. The IHS is serving as a technical advisor and Construction Inspector for the Tribe, and will make visits to the site and determine if the work is proceeding in accordance with the contract documents.

Contractor and subcontractors shall be licensed and registered in the state of Washington for the work performed. The Contractor shall at a minimum be bonded to meet state of Washington requirements. All electrical work to be performed by licensed Electricians, and permitted by the State of Washington.

END OF SECTION

				Makah Tribe			
				II. BID SCHEDULE/ORDER/INVOICE			
DATE: _____				TRIBAL CONTACT: Patty Manuel		TELEPHONE: 360-645-3100	
DESCRIPTION OF New On-site Septic System and Community Water SERVICES: Connection				SITE NAME AND LOCATION: Carrie Dernier 11 Sacredlands Drive Neah Bay, WA 98357			
PERFORMANCE TIME: 30 CALENDAR DAYS FROM NOTICE TO PROCEED							
PRICING SECTION						INVOICE SECTION	
ITEM	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL PRICE	QTY INSTALLED	TOTAL PRICE
1	Mobilization and Demobilization	1	LS		\$ -		
2	4" SDR 35 PVC Solid Sewer Pipe	60	LF		\$ -		
3	Underground Cleanout, Doublesweep	1	EA		\$ -		
4	Septic Tank with Effluent Filter: 1000 Gallons, 2 Compartment	1	LS		\$ -		
5	Distribution Box with Speed Levelers	1	LS		\$ -		
6	Gravity Gravel Bed Drainfield with 4" PVC D2729 Perforated Laterals	470	SF		\$ -		
7	Water Meter Assembly with Pressure Reducing Valve	1	LS		\$ -		
8	1.5" HDPE SDR 9 Water Service Line with Tracer Wire and 3" Sch. 40 PVC Sleeving Under Driveway	250	LF		\$ -		
9	Tapping Saddle and 1" Water Main Tap	1	LS		\$ -		
10	Road Restoration	1	LS		\$ -		
TOTAL:					\$ -		
Notes: 1. Quantities are estimated. Payment will be per installed quantity. 2. Most recent applicable Davis-Bacon Wage Determination (Clallam County, Heavy Construction) applies to this pricing. 3. Each bidder is responsible for inspecting the site as needed prior to bid. 4. Any permits and fees must be incorporated into Mob/Deb. 5. By signing the Bid Schedule, the Contractor acknowledges receipt of the Invitation to Bid, Bid Schedule, Site Drawings, Measurement and Payment, Technical Provisions, Special Provisions, General Conditions and Labor Provisions. 6. Unit Costs and Total Bid Price shall include all applicable State and local taxes. Bidders should consult the Washington State Department of Revenue regarding tax exemptions for this work: https://dor.wa.gov/education/industry-guides/indian-tax-guide/construction-services-performed-indian-country .						CONTRACTOR REQUEST FOR PAYMENT: THE CONTRACTOR PRESENTS A RELEASE OF ALL CLAIMS AGAINST THE TRIBE ARISING BY VIRTUE OF THIS CONTRACT, OTHER THAN CLAIMS, IN STATED AMOUNTS, THAT THE CONTRACTOR HAS SPECIFICALLY EXCEPTED FROM THE OPERATION OF THE RELEASE.	
CONTRACTOR: _____						SIGNATURE: _____	
SIGNATURE: _____ DATE: _____						DATE: _____	
Tribal Contract Award/Notice to Proceed:							
TRIBAL CONTRACTING OFFICIAL NAME: _____							
SIGNATURE AND DATE: _____							

III. STATEMENT OF WORK

Project Name: Carrie Dernier: Individual Septic System and Community Water Connection

Project Location: 11 Sacredlands Drive
Neah Bay WA, 98357
Makah Indian Reservation

Homeowner Contact: Carrie Dernier
(206) 226-5372

Project No: PO-22-D05F

Designer/Project Engineer:

Project Engineer

Madeline Keep
Environmental Engineer
Division of Sanitation Facilities Construction
Indian Health Service, Port Angeles Field
Office
1601 E. Front St., Bldg B Suite C
Port Angeles, WA 98362
Madeline.Keep@ihs.gov
360-536-3364

Project Manager

Patty Manuel
General Manager
Makah Tribe
P.O. Box 115
Neah Bay, WA 98357
patty.manuel@makah.com
360-645-3100

Project Completion Time:

30 calendar days

A. Project Description

This project is for the installation of an individual septic system and community water system connection (CWC) on trust land (Tribal jurisdiction) within the Makah Reservation located in Clallam County. The proposed septic system is to consist of a solid sewer pipe with a doublesweep cleanout, a 1,000-gallon two-compartment concrete septic tank with effluent filter, effluent transport line, a distribution box with speed levelers and approximately 15 linear feet of feeder lines to lateral, 94 linear feet of two perforated laterals, and a 10' by 47' bed of gravel with 470 square feet of dispersal area. The CWC shall include installation of a water meter and setter, saw cutting of existing asphalt roadway, saddle tapping of water main, road restoration, approximately 250 feet of 1 ½" HDPE SDR 9 water service line, approximately 110 feet of 3" Schedule 40 PVC pipe sleeving under driveway, detectable warning tape along water service line, insulation of above-ground portion of water service line with preformed foam pipe, and a gate valve outside of home foundation per Design (Attachment: Design – Dernier) and local, state, and

Tribal regulations. Further investigation of the site before and after bidding is the responsibility of the Contractor. Any permits are the responsibility of the Contractor.

B. Ownership

This project will provide sanitation facilities to a private home owned by a member of the Makah Tribe. Upon completion, the facilities will be transferred to the homeowner. The system will be operated by the homeowner.

C. TERO & Other Fees

TERO fees apply. TERO fee is 1% for contracts under \$100,000.00.

Rose Jimmicum, TERO Compliance Officer, Makah Tribe

rosalee.jimmicum@makah.com

360-645-3101

D. Scope of Work

Work is to be completed on the Makah Indian Reservation, under the jurisdiction of the Makah Tribe. The Contractor must review site conditions, and report any concerns or discrepancies to the Tribe in writing prior to construction. In accordance with the Design (Attachment: Design – Dernier) and Technical Provisions (Attachment: IHS Technical Provisions - Dernier), the Contractor must:

D.1 Work Requirements:

1. Mobilize and demobilize.
2. Install 4" SDR 35 PVC solid sewer pipe per Design.
3. Install double sweep underground cleanout per Design.
4. Install 1,000 gallon 2-compartment concrete septic tank with filter per Design.
5. Install distribution box with speed levelers per Design.
6. Install gravity gravel bed drainfield with 4" PVC D2729 perforated laterals, cleanouts, and observation ports per Design.
7. Install water meter and setter with pressure-reducing valve per Design.
8. Install 1 ½" HDPE SDR 9 water service line with detectable warning tape and 3" Schedule 40 PVC pipe sleeving under driveway per Design.
9. Saw cut asphalt roadway to expose existing water main and perform 1" saddle tap per Design.
10. Restore asphalt roadway to existing condition.

E. Technical Requirements

E.1 Codes, References, and Standards

Work under this contract must be performed in compliance with the codes, references, and standards listed below. If conflicts exist between these references, consult the Tribe for direction.

1. WAC Chapter 246-272A, On-site Sewage Systems.
2. WAC Chapter 246-272C, On-site Sewage System Tanks.
3. WAC Chapter 51-56, State Building Code Adoption and Amendment of the 2018 Edition of the Uniform Plumbing Code.
4. Septic Design (Attachment: Design – Dernier)
5. Indian Health Service Technical Provisions (Attachment: IHS Technical Provisions – Dernier)

E.2 Submittals

The Contractor shall provide the Tribe with submittals on the items listed below. Submittal approval is required for variations from equipment and materials specified.

1. Pre-Construction (submit a minimum of five (5)-days prior to construction)
 - a. Manufacturer's product information for system components, including septic tank, washed gravel, pressure reducing valve, pipes, gate valve, tapping saddle, and water meter.
 - b. Equipment or material variations from those specified in the Design (Attachment: Design – Dernier) and Technical Provisions (Attachment: IHS Technical Provisions - Dernier)
2. Post-Construction (submit with payment invoice)
 - a. Product Warranties – Include the following information on the warranty:
 - i. Name and address of the dealer
 - ii. Model and serial number
 - iii. Date of installation
 - b. Operation and maintenance information
 - c. Manufacturer's product information
 - d. As-builts with swing-tie measurements for the tank riser cover centers and drainfield distal ends, in accordance with Washington Administrative Code (WAC 246-272A-0265 - Record drawings).

E.3 Material Specifications

- i. The Contractor must install materials as specified in sections D & E above and in the Design (Attachment: Design – Dernier) and Technical Provisions (Attachment: IHS Technical Provisions - Dernier).
- ii. Materials specified may be substituted with equals with written approval from the Tribe in accordance with submittal procedure E.2 a) ii above.

E.4 Work Execution Requirements

- i. The Contractor shall contact the Tribe at least 48 hours prior to mobilization.
- ii. The Contractor must attend a pre-construction meeting before beginning work under this contract, unless explicitly authorized by the Tribe.

- iii. The Contractor is responsible for determining the exact location of all utilities.
- iv. The Contractor is responsible for protecting utilities from damage during construction.
- v. A minimum of five (5)-days of continuous dry weather conditions is required prior to commencing work, unless explicitly waived by the Tribe.
- vi. The Contractor must comply with all instructions and notes on the Design (Attachment: Design – Dernier) including the status of soil moisture during installation, contacting the Tribe during wet weather season for approvals, and for notification of required inspections.
- vii. All debris generated during construction must be removed from site.
- viii. All areas disturbed by construction activities must be finish-graded.
- ix. The Contractor must not damage or disturb soils when clearing drainfield.
- x. The Contractor must notify and obtain approval from the Tribe before deviating from the Design (Attachment: Design – Dernier).
- xi. The Contractor must obtain approval from the Tribe prior to installing material quantities in excess of those specified on the bid schedule (Attachment: 2) Bid Schedule – Dernier).
- xii. The Contractor must notify and advise the Tribe on all work to be done or in progress sufficiently in advance so that proper inspection can be performed.
- xiii. The Contractor must contact the Tribe 24 hours prior to final backfill for a final inspection.

IV. MEASUREMENT AND PAYMENT FOR BID SCHEDULE LINE ITEMS

Completed items of work shall be measured and paid for in accordance to the items listed below. All work shall be done in accordance with the Specifications and Design. Payment shall be provided based on the actual quantities completed and shall represent full compensation under the contract. The price paid for the completed item of work shall include full compensation for furnishing all labor, materials, tools, equipment, site restoration and performing all work required by the provisions of the contract to furnish and install the item of work, complete in place. In all cases, the finished product shall be a complete, operational system or component. The price for the completed item of work shall include all applicable State, Federal, County, Tribal and local sales or other taxes, permits, and fees.

MOBILIZATION AND DEMOBILIZATION

Payment for mobilization and demobilization shall be made at the contract lump sum price for transportation of equipment, material, and personnel to and from the job site location (regardless of trips required), required permits and fees, taxes, and all other necessary items to complete the work.

4" SDR 35 PVC SOLID SEWER PIPE

Payment for solid sewer pipe shall be made at the contract unit price for the size of pipe listed based on the number of linear feet installed as specified on the Design. Compensation shall include payment for excavation, trenching, backfill and compaction; all pipe and fittings; connection of solid sewer pipe to the home sewer stub-out and to the septic tank inlet, connection of solid sewer pipe to the septic tank outlet to the distribution box, and connection of solid sewer pipe from the distribution box to the drainfield laterals as shown on the Design; resurfacing trenched areas to equal or better condition than existing; and all other necessary items for a complete and operational installation.

UNDERGROUND DOUBLESWEEP CLEANOUT

Payment for the underground doublesweep (two-way) cleanout in the location specified on the Design shall be made at the contract unit price for the number of underground cleanouts installed. Compensation shall include payment for trenching, backfilling and compaction; all pipe and fittings; and all other necessary items for a complete and operational installation. No payment shall be made for cleanouts installed above grade as part of the connection to existing house, or as part of drop manholes.

1,000 GALLON, 2 COMPARTMENT SEPTIC TANK WITH EFFLUENT FILTER

Payment for septic tank shall be made at the contract lump sum price based on a complete system for the size of tank listed. Compensation shall include payment for excavation, backfill, and compaction; gravel base (when required); dual compartment septic tank, two risers and lids, baffle, plumbing, 1/16th-inch effluent filter; filling tank to prevent floating; leak testing; resurfacing excavated areas to equal or better condition than existing and grading to direct surface runoff away from tank, and all other necessary items needed for a complete and operational installation.

DISTRIBUTION BOX WITH SPEED LEVELERS

Payment for distribution box as specified in the Design shall be made at the contract lump sum price based on a complete system to accommodate the number of drain lines listed. Payment shall include excavation, backfill, compaction, gravel base (when required), single-compartment distribution box with orifice levelers for each drain line, riser to grade with lid, plumbing, testing, and all other necessary items needed for a complete and operational installation.

GRAVITY GRAVEL TRENCH DRAINFIELD WITH 4" PVC D2729 PERFORATED LATERALS

Payment for a gravity gravel bed drainfield as specified in the Design shall be made at the contract unit price based on the number of linear feet of drainfield trench installed. Compensation shall include payment for excavation, trenching, and backfill; perforated laterals, cleanouts, observation ports, fittings, and connections; washed drainrock at the depth and thickness specified in the Design; geotextile filter drainage fabric; imported topsoil as needed to ensure a 12" topsoil cover over the drainage fabric is maintained across the entire length of the drainfield; final grading to direct surface water flows away from drainfield; resurfacing trenched areas to equal or better condition than existing, grass seed, mulch, and all other necessary items needed for a complete and operational installation.

WATER METER ASSEMBLY WITH PRESSURE REDUCING VALVE

Payment for water meter assembly as specified in the Design and Specification shall be made at the contract unit price based on the number of water meter assemblies installed. Compensation shall include payment for excavation, backfilling and compaction; corporation stop, water meter, copper setter with specified appurtenances, angle stop, pressure reducing valve and fittings set to pressure specified by the water system owner, meter box; and all other necessary items for a complete and operational installation.

1 ½" HDPE SDR 9 WATER SERVICE LINE WITH GATE VALVE, DETECTABLE WARNING TAPE, INSULATION, AND 3" PVC SLEEVING UNDER DRIVEWAY

Payment for the water service line shall be made at the contract unit price for the size of pipe listed based on the number of linear feet installed. Compensation shall include payment for excavation, backfilling and compaction; water line and all fittings; water line pipe sleeving under driveway; insulation of above-ground portion of water line with material that has a minimum thermal resistance of R-3; installation of detectable warning tape installed over all non-metallic water service line; an emergency shut-off outside of the home foundation wall using a single 1 ½" brass gate valve in an at-grade meter box; disinfection and leak testing; and all other necessary items for a complete and operational installation.

TAPPING SADDLE & WATER MAIN TAP

Payment for installation of the brass tapping saddle and connection to the existing water main shall be made at the contract lump sum price. Compensation shall include payment for excavation, bedding, backfilling and compaction; a 1" tap into the water main; a wide belt tapping saddle; connection of the saddle to the water service line; and all other necessary items for a complete and operational installation.

ROAD RESTORATION

Payment for road restoration shall be made at the contract lump sum price for all restoration of roads and driveways impacted by construction. Compensation shall include traffic control, saw cutting of existing asphalt roadway, disposal of removed pavement, compaction, gravel base, hot asphalt mix, gravel aggregate, grading, maintaining until final acceptance, and all other appurtenances required to complete the work as specified. Roads and driveways shall be restored with a material to match existing conditions.

V. GENERAL CONDITIONS

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04. Drawings and Specifications
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23. Separate Contracts
24. Time for Completion and Liquidated Damages
25. Progress Schedules and Requirements for Compliance
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27. Suspension of Work, Termination and Delay
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30. Changes in the Work
31. Changes in the Contract Price
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35. Measurement and Payment
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40. Acceptance of Final Payment as release
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42. Resolution of Disputes
43. Equal Employment Opportunity
44. Clean Air and Water
45. Indian Health Service

1. DEFINITIONS

- 1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:
- 1.2 ADDENDA -Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.
- 1.3 BID -The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.
- 1.4 BIDDER -Any person, firm or corporation submitting a BID for the WORK.
- 1.5 BONDS -Bid, Performance, and Payment Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.
- 1.6 CHANGE ORDER -A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.
- 1.7 CONTRACT DOCUMENTS -The contract, including Advertisement for Bids, Information for Bidders, Bid, Bid Bond, Agreement, General Provisions, Labor Provisions, Special Provisions, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, Technical Provisions, Submittal Requirements, and ADDENDA.
- 1.8 CONTRACT PRICE -The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.
- 1.9 CONTRACT TIME -The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.
- 1.10 CONTRACTING OFFICER -The person with the OWNER organization who is authorized to administer the contract for the OWNER.
- 1.11 CONTRACTING OFFICER'S REPRESENTATIVE - The representative of the CONTRACTING OFFICER authorized to deal with the CONTRACTOR at the site to administer the technical aspects of the CONTRACT, and to assure compliance with the drawings and specifications.
- 1.12 CONTRACTOR - The person, firm or corporation with whom the OWNER has executed the Agreement.
- 1.13 DRAWINGS - The part of the CONTRACT DOCUMENTS, which show the characteristics and scope of the WORK to be performed, and which have been prepared or approved by the ENGINEER.

- 1.14 ENGINEER - The person, firm or corporation named as such in the CONTRACT DOCUMENTS.
- 1.15 FIELD ORDER- A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- 1.16 INDIAN HEALTH SERVICE (IHS) - Federal agency which is providing funding and/or technical assistance to the Owner on this project.
- 1.17 NOTICE OF AWARD -The written notice of the acceptance of the Bid from the OWNER to the successful BIDDER.
- 1.18 NOTICE TO PROCEED -Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.
- 1.19 OWNER -A public or quasi-public body or authority, tribe, corporation, association, partnership, or individual for whom the WORK is to be performed.
- 1.20 PROJECT -The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- 1.21 RESIDENT PROJECT REPRESENTATIVE -The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.
- 1.22 SHOP DRAWINGS -All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.
- 1.23 SPECIFICATIONS -A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- 1.24 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.
- 1.25 SUBSTANTIAL COMPLETION -That date as certified by the ENGINEER when the construction of the PROJECT is sufficiently completed in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.
- 1.26 SPECIAL PROVISIONS -Modifications and additions to General Provisions which may be required by a Federal agency for participation in the PROJECT, or such requirements that may be imposed by applicable state or local laws, or the OWNER'S contracting practices.

- 1.27 SUPPLIER - ANY person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- 1.28 TRIBE -The governing body of the INDIAN TRIBE which has jurisdiction on the INDIAN RESERVATION on or near which the WORK will be performed.
- 1.29 WORK -All labor necessary to produce the construction required by the CONTRACT DOCUMENTS and all materials and equipment incorporated or to be incorporated in the PROJECT.
- 1.30 WRITTEN NOTICE -Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

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 instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. REPORTS AND RECORDS

- 3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.
- 3.2 The CONTRACTOR shall keep all records related to the CONTRACT for a minimum of three years after acceptance of the completed 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 scale dimensions, and detailed 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 or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the

CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

- 5.1 The CONTRACTOR will take steps necessary to ascertain the nature and location of the work, and investigate the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The CONTRACTOR also will observe and determine the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the OWNER, as well as from the drawings and specifications made a part of this contract. Any failure of the CONTRACTOR to take the actions described and acknowledged in this paragraph will not relieve the CONTRACTOR from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the OWNER.
- 5.2 The OWNER assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the OWNER. The OWNER does not assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its representatives before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

6. SHOP DRAWINGS

- 6.1 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.
- 6.2 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.
- 6.3 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.

7. MATERIALS, SERVICES AND FACILITIES

- 7.1 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 construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.
- 7.2 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.
- 7.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
- 7.4 Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.
- 7.5 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.

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 by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and 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. He 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 the product of a particular manufacturer or manufacturers is specified, however if the CONTRACTOR has reason to believe that the design, or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

10. SURVEYS, PERMITS, AND 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 benchmarks adjacent to the WORK as shown in 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, stakes for pile 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, he shall be charged with the resulting expense and shall be responsible for any mistakes 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 specified in the CONTRACT DOCUMENTS. 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, ordinances, 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, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 30 - "CHANGES IN THE WORK".

11. LAWS AND REGULATIONS AFFECTING WORK

- 11.1 The CONTRACTOR shall at all times observe and comply with Federal, State, City, County and Tribal laws, ordinances and regulations which in any manner affect the conduct of the work; and all such orders and decrees as exist at the present and which may be enacted later by legislative bodies or tribunals having legal jurisdiction or authority over the work. No pleas of misunderstanding or ignorance thereof will be considered. The CONTRACTOR shall be wholly responsible for any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree.

12. TAXES

- 12.1 The CONTRACTOR will pay all sales, consumer, use and other similar taxes required by the law of the place where the WORK is performed.

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. He 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.

14. PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS

- 14.1 The CONTRACTOR shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The CONTRACTOR shall remove trees only when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the CONTRACTOR shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the ENGINEER.
- 14.2 The CONTRACTOR shall protect from damage all existing improvements and utilities (1) on or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the CONTRACTOR. The existence and location of utilities are not guaranteed by the OWNER and shall be investigated and verified in the field by the CONTRACTOR before commencing construction activities in any particular area. The CONTRACTOR shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the CONTRACTOR fails or refuses to repair the damage promptly, the OWNER may have the necessary work performed and charge the cost to the CONTRACTOR.

15. OPERATIONS AND STORAGE AREAS

- 15.1 The CONTRACTOR shall confine all operations (including storage of materials) to areas authorized or approved by the OWNER. The CONTRACTOR shall hold and save the OWNER and its representatives, free and harmless from liability of any nature occasioned by the CONTRACTOR'S performance.
- 15.2 Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the CONTRACTOR only with the approval of the OWNER and shall be built with labor and materials furnished by the CONTRACTOR without expense to the OWNER. The temporary buildings and utilities shall remain the property of the CONTRACTOR and shall be removed by the CONTRACTOR at its expense upon completion of the work. Only with the written consent of the OWNER may the buildings and utilities be abandoned and not removed.
- 15.3 The CONTRACTOR shall use only established roadways, or use temporary roadways constructed by the CONTRACTOR when and as authorized by the OWNER. In such case, the CONTRACTOR shall minimize disruption and delays to traffic in the affected areas. When materials are transported in prosecuting the work vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the CONTRACTOR shall protect them from damage. The

CONTRACTOR shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

16. INSURANCE

- 16.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him 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 himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:
 - 16.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;
 - 16.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
 - 16.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
 - 16.1.4 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
 - 16.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.
- 16.2 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 that coverages afforded under the Policies will not be cancelled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.
- 16.3 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, liability insurance as hereinafter specified;
 - 16.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to any property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him, or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR under him. 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 therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$1,000,000 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 of not less than \$500,000 aggregate for any such damage sustained by two or more persons in any one accident.

16.3.2 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.

16.4 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the work is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the PROJECT and in case any work is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's 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 Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

16.5 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, the ENGINEER, and the OWNER.

17. INDEMNIFICATION

17.1 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 to or 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.

17.2 In any and all claims against the OWNER or the ENGINEER or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation 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 Workmen's Compensation Acts, disability benefit acts or other employee benefits acts.

- 17.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

18. CONTRACT SECURITY (For Contracts Greater than \$100,000.00)

- 18.1 The CONTRACTOR shall submit with the BID OFFER with a 5% Bid Bond.
- 18.2 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a Performance Bond and a 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 as 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 BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

19. ACCIDENT PREVENTION AND SAFETY PROGRAM

- 19.1 The CONTRACTOR shall be solely and completely responsible for conditions of the jobsite, including safety of all persons, including employees, and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U.S. Department of Labor (OSHA), and all other applicable Federal, State, County, and local laws, ordinances, codes, the requirements set forth below, and any regulations that may be detailed in other parts of these documents. Where any of these are in conflict, the more stringent requirement shall be followed. The CONTRACTOR's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.
- 19.2 The OWNER or his Representative will notify the CONTRACTOR of any observed non-compliance with the foregoing provisions and the action to be taken. The CONTRACTOR shall, upon receipt of such notice, immediately take corrective action. If the CONTRACTOR fails or refuses to comply promptly, the OWNER may issue an order stopping all or part of the WORK until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of claims for extension of time, or for excess costs or damages by the CONTRACTOR.
- 19.3 The CONTRACTOR shall develop and maintain for the duration of this Contract, a safety program that will effectively incorporate and implement all required safety

provisions. The CONTRACTOR shall appoint an employee who is qualified and authorized to supervise and enforce compliance with the safety program.

- 19.4 The CONTRACTOR as a part of his safety program, shall maintain at his office or other well-known place at the jobsite, safety equipment applicable to the WORK as prescribed by the aforementioned authorities, all articles necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons who may be injured on the jobsite.
- 19.5 If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the ENGINEER and OWNER. In addition, the CONTRACTOR must promptly report in writing to appropriate authorities and the OWNER'S representative all accidents whatsoever arising out of, or in connection with, the performance of the WORK whether on, or adjacent to, the site, giving full details and statements of witnesses. If a claim is made by anyone against the CONTRACTOR or any subcontractor on account of any accident, the CONTRACTOR shall promptly report the facts in writing to the OWNER giving full details of the claim.
- 19.6 The CONTRACTOR shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the WORK and safety of the public. Highways closed to traffic shall be protected by effective barricades, and obstructions shall be illuminated during the hours of darkness. Suitable warning signs shall be provided to control and direct traffic properly. The CONTRACTOR shall erect warning signs in advance of any place on the project where operations may interfere with the use of the road by traffic, and at all intermediate points where the new work crosses or coincides with an existing road.
- 19.7 Compliance with the requirements of this provision by subcontractors will be the responsibility of the CONTRACTOR.

20. TEMPORARY SANITARY FACILITIES

- 20.1 The CONTRACTOR shall provide and maintain necessary sanitary conveniences for the use of those employed on or about the WORK, properly secluded from public observation in such a manner and at such points as shall be approved by the OWNER'S representative, and their use shall be strictly enforced.

21. SUPERVISION BY CONTRACTOR

- 21.1 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 WORK 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.

22. SUBCONTRACTING

- 22.1 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.
- 22.2 The CONTRACTOR must perform at least thirty-three (33%) of the total amount of the WORK using the CONTRACTOR'S own work force and equipment. The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of sixty-seven (67%) percent of the CONTRACT PRICE, without prior written approval of the OWNER.
- 22.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- 22.4 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 DOCUMENT 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.
- 22.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

23. SEPARATE CONTRACTS

- 23.1 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 his 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.
- 23.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK. and shall properly connect and coordinate his WORK with theirs.
- 23.3 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 him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefore as provided in Sections 30 and 31.

24. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- 24.1 The TIME FOR COMPLETION of the WORK is an essential condition of the CONTRACT DOCUMENTS. The TIME FOR COMPLETION appears in the Special Provisions. The WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.
- 24.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the TIME FOR COMPLETION. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that TIME FOR COMPLETION of the WORK under the CONTRACT is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.
- 24.3 If the CONTRACTOR shall fail to complete the WORK within the TIME FOR COMPLETION, 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 Special Provisions for each calendar day that the work shall be incomplete after the date established by the TIME FOR COMPLETION.
- 24.4 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.
- 24.4.1 To any preference, priority or allocation order duly issued by the OWNER.
- 24.4.2 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
- 24.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 24.4.1 and 24.4.2 of this article.

25. PROGRESS SCHEDULES AND REQUIREMENTS FOR COMPLIANCE

- 25.1 The CONTRACTOR shall within 10 days of receipt of NOTICE TO PROCEED, submit to the OWNER through the ENGINEER for approval a practicable schedule, showing the order in which the CONTRACTOR proposes to carry on the WORK, the dates on which he will start the major items of work (including procurement of materials, plant and equipment) and the contemplated dates for completing the same. The schedule shall be prepared on the form entitled "Contract Progress Schedule," a copy of which is included in the contract.
- 25.2 If, in the opinion of the OWNER, the CONTRACTOR falls behind the progress schedule, the CONTRACTOR shall take such steps as may be necessary to assure performance

within the allowable TIME FOR COMPLETION. The CONTRACTOR may propose for approval by the OWNER measures such as increasing number of workers, number of shifts, or overtime operations, days of work, or the amount of construction plant, or all of them. The OWNER may require the CONTRACTOR to submit for approval such supplementary schedule or schedules necessary to demonstrate that the WORK shall be performed within the allowable TIME FOR COMPLETION, all without additional cost to the OWNER.

- 25.3 Failure of the CONTRACTOR to comply with the requirements of this provision shall be grounds for determination that the CONTRACTOR is not prosecuting the work with such diligence as will insure completion within the specified TIME FOR COMPLETION. Upon such determination the OWNER may terminate the CONTRACTOR'S right to proceed with the WORK, or any separable part thereof in accordance with Section 27 entitled "Suspension of Work, Termination and Delay".

26. LAND AND RIGHTS-OF- WAY

- 26.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.
- 26.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.
- 26.3 The CONTRACTOR shall provide at his 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.

27. SUSPENSION OF WORK, TERMINATION AND DELAY

- 27.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice 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.
- 27.2 If the CONTRACTOR is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK, or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of 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 he 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.

- 27.3 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 monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.
- 27.4 After ten (10) days from delivery of a 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. If this contract is terminated by the OWNER without cause, the rights, duties, and obligations of the parties, including compensation to the CONTRACTOR, shall be in accordance with Part 49 of the Federal Acquisition Regulation in effect on the date of this contract.
- 27.5 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 awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the 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 he has been 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 attributed to the stoppage of the WORK.
- 27.6 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, an 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.

28. INSPECTION AND TESTING

- 28.1 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.
- 28.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.
- 28.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.
- 28.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.
- 28.5 Inspections, tests or approvals by the ENGINEER or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.
- 28.6 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or state agency shall be permitted to inspect all work, materials, payrolls, records of 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.
- 28.7 If any WORK is covered contrary to the written instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR'S expense.
- 28.8 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 an appropriate CHANGE ORDER shall be issued.

29. CORRECTION OF WORK

- 29.1 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.

- 29.2 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.

30. CHANGES IN THE WORK

- 30.1 The OWNER may at any time, as the need arises, order changes within the scope of the 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, an equitable adjustment shall be authorized by CHANGE ORDER.
- 30.2 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 him to a change in CONTRACT PRICE or TIME, or both, in which event he 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 thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

31. CHANGES IN CONTRACT PRICE

- 31.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:
- a. Unit prices previously approved.
 - b. An agreed lump sum
 - c. The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work. In addition, there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the WORK to cover the cost of general overhead and profit.

32. DIFFERING SITE CONDITIONS

- 32.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:
- 32.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS; or
 - 32.1.2 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.

- 32.2 The OWNER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

33. USE AND POSSESSION PRIOR TO COMPLETION

- 33.1 The OWNER shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the OWNER shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the OWNER intends to take possession of or use. However, failure of the OWNER to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The OWNER'S possession or use shall not be deemed an acceptance of any work under the contract
- 33.2 While the OWNER has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting directly from the OWNER'S possession or use. If prior possession or use by the OWNER delays the progress of the work or causes additional expense to the Contractor, an adjustment shall be made in the contract price, the time of completion or both, and the contract shall be modified in writing accordingly.

34. CLEANUP AND FINISH GRADING

- 34.1 The CONTRACTOR shall restore all areas disturbed by construction to a condition at least equal to that existing prior to construction. Excess construction materials, equipment, tools, waste excavation, and rubbish shall be removed. Excavated areas shall be finish graded to provide drainage as required by the drawings and specifications, or in the absence of specific requirements, to provide drainage away from the facilities constructed and to restore original drainage patterns in existence prior to construction and to provide drainage away from excavated areas and installed facilities.

35. MEASUREMENT AND PAYMENT

- 35.1 Completed items of work shall be measured and paid for in accordance with the requirements listed in the Bid Schedule. Payment shall be based on the actual quantities completed and shall represent full compensation under the contract. The price paid for the completed item of work shall include full compensation for furnishing all labor, materials, (other than that furnished by the OWNER), tools, equipment, and performing all work required by the provisions of the contract to furnish and install the item of work, complete in place. In all cases, the finished product shall be a complete, operational system or component. The price for the completed item of work shall also include all applicable state and local sales and other taxes.

36. VARIATION IN ESTIMATED QUANTITIES

- 36.1 If the quantity of a unit-priced item in this CONTRACT is an estimated quantity and the actual quantity of the unit-priced item varies more than 25 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 125 percent or below 75 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the CONTRACTOR may request, in writing, an extension of time, to be received by the OWNER within 10 days from the beginning of the delay, or within such further period as may be granted by the OWNER before the date of final settlement of the CONTRACT. Upon the receipt of a written request for an extension, the OWNER shall ascertain the facts and make any appropriate adjustment for extending the completion date.

37. PAYMENTS TO CONTRACTOR

- 37.1 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. The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site. 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 his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his 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 twenty (20) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all work covered by the CONTRACT DOCUMENTS. The OWNER at any time, however, after fifty (50) percent of the WORK has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five (5%) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages less authorized deductions.
- 37.2 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK

- 37.3 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands 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, his 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 under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.
- 37.4 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 maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

38. ASSIGNMENTS

- 38.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the CONTRACT or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

39. GUARANTY

- 39.1 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 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 systems 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.

40. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

- 40.1 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 done 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 his sureties from any obligations under the CONTRACT DOCUMENTS or the performance BOND and Payment BONDS.

41. ENGINEER'S ROLE AND AUTHORITY

- 41.1 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He 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.
- 41.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard 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.
- 41.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.
- 41.4 The ENGINEER does not have authority to obligate the OWNER to changes in the terms of the CONTRACT without the approval of the OWNER.

42. RESOLUTION OF DISPUTES

- 42.1 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 the making and acceptance of final payment as provided by Section 40, shall be submitted to the tribal court.

43. EQUAL EMPLOYMENT OPPORTUNITY

- 43.1 During the performance of this contract, the CONTRACTOR agrees as follows:
 - 43.1.1 The CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.
 - 43.1.2 The CONTRACTOR shall take affirmative action to ensure the applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.
 - 43.1.3 The CONTRACTOR agrees to post in conspicuous places available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

- 43.1.4 The CONTRACTOR shall, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants shall receive consideration for employment without regard to race, color, religion, sex, or national origin.
- 43.1.5 The CONTRACTOR shall send, to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or workers' representative of the CONTRACTOR'S commitment under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.
- 43.1.5 The CONTRACTOR shall permit access to its books, records, and accounts by the OWNER or the Office of Federal Contract Programs (OFCCP) for the purposes of investigation to ascertain compliance with the applicable rules, regulations, and orders.
- 43.1.6 The CONTRACTOR shall include the terms and conditions of this clause in every SUBCONTRACT or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order No. 12246, as amended, so that such provisions will be binding upon each SUBCONTRACTOR or vendor.
- 43.1.7 The CONTRACTOR shall take such action with respect to any SUBCONTRACT or purchase order as the OWNER may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided that if the CONTRACTOR becomes involved in, or is threatened with litigation with a SUBCONTRACTOR or vendor as a result of such direction by the OWNER, the CONTRACTOR may request the OWNER and the United States to enter into such litigation to protect the interests of the United States.
- 43.1.8 Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

44. CLEAN AIR AND WATER

44.1 The CONTRACTOR agrees:

- 44.1.1 To comply with all the requirements of section 114 of the Clean Air Act (42 U.S.C. 7414) and section 308 of the Clean Water Act (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Clean Air Act and the Clean Water Act, and all regulations and guidelines issued to implement those acts before the award of this contract
- 44.1.2 That no portion of the WORK required by this prime contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this contract was awarded unless and until the EPA eliminates the name of the facility from the listing.

44.1.3 To use best efforts to comply with clean air standards and clean water standards at the facility in which the contract is being performed.

44.1.4 To insert the substance of this clause into any nonexempt SUBCONTRACT, including this subparagraph 44.1.4.

45. INDIAN HEALTH SERVICE

45.1 There shall be no contractual relationship either implied or express between the IHS and the CONTRACTOR or any SUBCONTRACTOR at any tier.

45.2 IHS representatives shall be afforded access to the site at all times during the construction period to observe the work and determine if the work conforms to the intent of the design.

45.3 IHS representatives shall not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

45.4 IHS representatives do not have authority to obligate the OWNER to changes in the terms of the CONTRACT nor to act as an agent of the OWNER in any manner. Inspections conducted by IHS representatives shall be for the sole benefit of the IHS and the OWNER and shall not relieve the CONTRACTOR of any contract requirements.

VI. SPECIAL PROVISIONS

SP-01 SITE CONDITIONS

Special site conditions to be noted by the CONTRACTOR are as follows:

- 1) The CONTRACTOR is responsible to verify the location of all utilities, including those not located or shown on the drawings.

SP-02 DAYS OF WORK AND WORK HOURS

Construction work shall not be normally permitted on Saturdays, Sundays, or Federal holidays. The CONTRACTOR may submit a written request to the Owner at least 48 hours in advance, for permission to work on any Saturday, Sunday, or Federal holiday. Written approval must be obtained before the CONTRACTOR may work on any such day. Work shall be performed between the hours of 7:00 AM and 5:00 PM.

SP-03 TIME FOR COMPLETION

In accordance with the NOTICE TO PROCEED, the TIME FOR COMPLETION (as described in GC 24.1) shall be 14 calendar days for all work.

SP-04 LICENSING

The General Contractor performing work shall be registered in the State of Washington for the type of construction and magnitude of construction being performed.

SP-05 INSURANCE

CONTRACTOR shall carry General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to any property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him, or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR under him. Insurance shall be written with a limit of liability of not less than \$1,000,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$2,000,000 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 of not less than \$500,000 aggregate for any such damage sustained by two or more persons in any one accident.

SP-06 ORDER OF PRECEDENCE

In the event of an inconsistency between provisions of this contract, the inconsistency shall be resolved by giving precedence in the following order:

- 1) Bid Schedule and Terms and Conditions of Contract.
- 2) Written bid instructions.
- 3) Special Provisions

- 4) General Conditions
- 5) Exhibits and other provisions of the contract, where incorporated by reference or otherwise
- 6) Technical Provisions
- 7) Drawings

SP-7 INDIAN OWNED PREFERENCE

Preference in the award of this CONTRACT shall be given to Indian and Alaskan Native organizations and economic enterprises. The OWNER shall give preference to a 51 percent Indian owned Economic Enterprise so long as the BID by this Enterprise does not exceed the lowest responsive bid submitted by more than ten (10) percent and is within the project budget.

In the purchase of goods and services, to the greatest extent feasible, preference shall be given to Indians, Indian Organizations or Indian-Owned economic businesses in the award of all contracts and subcontracts. In order to qualify as an Indian or Indian owned business, one must be an enrolled member of a Federally Recognized Indian tribe or the business must be majority owned by a federal recognized Tribe or tribal citizen.

Contracts shall be awarded to Indian or Indian owned businesses when it bid is responsive to all conditions and does not exceed the lowest bid by the following percentages, when the lowest bid is:

\$0 - \$100,000 – 5%
Over \$100,000 – 2%

Preference is not required to be given to businesses having a poor record of performance.

"Indian owned Economic Enterprise" means any Indian owned commercial, industrial, or business activity established or organized for the purpose of profit, provided that such Indian ownership shall constitute not less than 51 percent of the enterprise, and that ownership shall encompass active operation and control of the enterprise. All preferences shall be publicly announced at the bid opening. Any BIDDER claiming Indian preference shall complete and submit with the BID the attached form entitled "Indian Enterprise Qualification Statement" to support their claim. The BIDDER also agrees to give preference to Indian-owned economic enterprises in the awarding of any subcontracts, and the acquisition of materials, to the extent feasible and consistent with the efficient performance of this CONTRACT. Feasibility regards reasonable terms and conditions, including price, and the timely delivery of services and supplies.

SP-8 ADVERSE WEATHER

If in the opinion of the Contractor, adverse weather conditions prevent construction activities to proceed under this contract, the contractor may submit a written request to the Contracting Officer to suspend the contract performance period and construction activities until fairer seasonal weather returns. The Contracting Officer shall consider the request and if in agreement, issue a modification to the contract to suspend work due to adverse weather conditions and establish a date to resume work. The contract performance period shall remain unchanged by the modification and there will be no additional payment made. If the Contracting Officer disapproves the contractor's request, the contractor will be notified in writing. If the request is disapproved, the contractor shall proceed with work under the contract and no additional payment will be made.

END OF SECTION

VII. LABOR PROVISIONS

I. DAVIS-BACON ACT

(a) All laborers and mechanics employed or working upon the site of the WORK will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the CONTRACTOR and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause also, regular contributions made or costs incurred for more than a weekly period (but not less than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for classification of work actually performed without regard to skill, except as provided in the clause entitled "Apprentices" and "Trainees." Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the CONTRACTOR and its subcontractors at the site of the WORK in a prominent and accessible place where it can be easily seen by the workers.

(b) (1) The OWNER shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The OWNER shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The Classification is utilized in the area by the construction industry; and
- (ii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(1) If the CONTRACTOR and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the OWNER agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the OWNER to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator or an approved authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the OWNER or will notify the OWNER within a 30-day period of that additional time is necessary.

(2) In the event the CONTRACTOR, the laborers or mechanics to be employed in the classification or their representatives, and the OWNER do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the OWNER shall refer the questions, including the views of all interested parties and the recommendation of the OWNER, to the Administrator of the Wage and Hour Division for determination. The Administrator or an authorized representative, will issue a determination within 30 days of receipt and so advise the OWNER or will notify the OWNER within the 30-day period that additional time is necessary.

(3) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (b)(2) or (b)(3) of this clause, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the CONTRACTOR shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the CONTRACTOR does not make payments to a trustee or other third person, the CONTRACTOR may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, that the Secretary of Labor has found, upon the written request of the CONTRACTOR, that applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the CONTRACTOR to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION

(a) Overtime requirements: No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics (See Federal Acquisition Regulation 22.300) shall require or permit any such laborer or mechanic in any workweek in which individual is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(b) Violation, liability for unpaid wages, liquidated damages: In the event of any violation of the provisions set forth in paragraph (a) of this clause, the CONTRACTOR and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, employed in violation of the provisions set forth in paragraph (a) of this clause, in the sum of \$10 for each calendar day for which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the provisions set forth in paragraph (a) of this clause.

(c) Withholding for unpaid wages and liquidated damages: The Contracting officer shall upon his or her own action or written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the CONTRACTOR or subcontractor under any such contract or any other Contract with the same Prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same Prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of

such contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in paragraph (b) of this clause.

(d) Payrolls and basic records:

(1) The CONTRACTOR or subcontractor shall maintain payrolls and basic payroll records during the course of contract work and shall preserve them for a period of 3 years from the completion of the contract for all laborers and mechanics working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Nothing in this paragraph shall require the duplication of records required to be maintained for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The records to be maintained under paragraph (d)(1) of this clause shall be made available by the CONTRACTOR or subcontractor for inspection, copying, or transcription by authorized representatives of the OWNER or the Department of Labor. The CONTRACTOR or subcontractor shall permit such representatives to interview employees during working hours on the job.

(e) Subcontracts: The CONTRACTOR or subcontractor shall insert in any subcontracts the provisions set forth in paragraphs (a) through (d) of this clause and also a clause requiring the subcontractors to include these provisions any lower tier subcontracts. The Prime CONTRACTOR shall be responsible for compliance by any subcontractor or lower tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

3. APPRENTICES AND TRAINEES

(a) Apprentices: Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the Program but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeyman on the job site in any craft classification shall not be greater than the ratio permitted to the CONTRACTOR as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringes in accordance with the provisions of the apprenticeship program.

If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator

determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination.

In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the CONTRACTOR will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees: Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employee and Training Administration withdraws approval of a training program, the CONTRACTOR will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal Employment Opportunity: The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

4. PAYROLLS AND BASIC RECORDS

(a) Payrolls and basic records relating thereto shall be maintained by the CONTRACTOR during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the WORK. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates or wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deduction made and actual wages paid. Whenever the Secretary of Labor has found under paragraph (d) of the clause entitled "Davis-Bacon Act" that the wages of any Laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the CONTRACTOR shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence

of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b) (1) The CONTRACTOR shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the OWNER. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. The information may be submitted in any form desired. Optional Form WH-347 Federal stock number 029-005-00014-1 is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance" signed by the CONTRACTOR or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause entitled "Payrolls and Basic Records" and that such information is correct and complete.

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deduction as set forth in Regulations, 29 CFR Part 3 and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications may subject the CONTRACTOR or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 18 and Section 231 of Title 31 of the United States Code.

(c) The CONTRACTOR or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by authorized OWNER or representatives of the OWNER or the Department of Labor. The CONTRACTOR or subcontractor shall permit the OWNER or representatives of the OWNER or the Department of Labor to interview employees during working hours on the job. If the CONTRACTOR or subcontractor fails to submit the required records or to make them available, the OWNER may, after written notice to the CONTRACTOR, sponsor take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

5. COMPLIANCE WITH COPELAND ACT REQUIREMENTS

The CONTRACTOR shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. WITHHOLDING OF FUNDS

The OWNER shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the CONTRACTOR under this contract or any other Federal contract with the same Prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirement, which is held by the same Prime CONTRACTOR, so much of the accrued payment or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the CONTRACTOR or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of WORK, all or part of the wages required by the contract, the OWNER may, after written notice to the CONTRACTOR, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. SUBCONTRACTS (LABOR STANDARDS)

(a) The CONTRACTOR or subcontractor shall insert in any subcontracts the clauses entitled "Davis-Bacon Act", "Contract Work Hours and Safety Standards Act Overtime Compensation", "Apprentice and Trainees", "Payrolls and Basic Records", "Compliance With Copeland Act Requirements", "Withholding of Funds", "Subcontracts (Labor Standards)", "Contract Termination: Debarment", "Disputes Concerning Labor Standards", "Compliance with Davis-Bacon and Related Act Requirements", and "Certification of Eligibility", and such other clauses as the OWNER may by appropriate instruction require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b) (1) Within 14 days after of the contract, the CONTRACTOR shall deliver to the OWNER a completed Statement and Acknowledgment Form (SF-1413) for each subcontract, including the subcontractor's signed and dated acknowledgement that the clauses set forth in paragraph 7.1 of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the CONTRACTOR shall deliver to the OWNER an updated completed SF 1413 for such additional subcontract.

8. CONTRACT TERMINATION: DEBARMENT

A breach of the contract clauses entitled "Davis-Bacon Act", "Contract Work Hours and Safety Standards Act-Overtime Compensation", "Apprentices and Trainees", "Payrolls and Basic Records", "Compliance with Copeland Act Requirements", Subcontracts", (Labor Standards) "Compliance with Davis-Bacon and Related Act Requirements", and "Certification of Eligibility" may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

9. DISPUTES CONCERNING LABOR STANDARDS

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with the procedures and not the Disputes clause of this Contract. Disputes within the meaning of this clause

include disputes between the CONTRACTOR (or any of its subcontractors) and the OWNER, the U.S. Department of Labor, or the employees or their representatives.

10. COMPLIANCE WITH THE DAVIS-BACON AND RELATED ACT REQUIREMENTS

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

11. CERTIFICATION OF ELIGIBILITY

(a) By entering into this contract, the CONTRACTOR certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government assisted contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government assisted contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

END OF SECTION

VIII. PREVAILING WAGES

"General Decision Number: WA20250044 02/07/2025

Superseded General Decision Number: WA20240044

State: Washington

Construction Type: Heavy
including water and sewer line construction

County: Clallam County in Washington.

HEAVY CONSTRUCTION PROJECTS (including sewer/water construction).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025
1	02/07/2025

CARP0030-001 06/01/2021

	Rates	Fringes
CARPENTER.....	\$ 49.18	19.01

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - ALL CLASSIFICATIONS EXCEPT MILLWRIGHTS AND PILEDRIVERS

Hourly Zone Pay shall be paid on jobs located outside of the free zone computed from the city center of the following listed cities:

Seattle	Olympia	Bellingham
Auburn	Bremerton	Anacortes
Renton	Shelton	Yakima
Aberdeen-Hoquiam	Tacoma	Wenatchee
Ellensburg	Everett	Port Angeles
Centralia	Mount Vernon	Sunnyside
Chelan	Pt. Townsend	

Zone Pay:

0 -25 radius miles	Free
26-35 radius miles	\$1.00/hour
36-45 radius miles	\$1.15/hour
46-55 radius miles	\$1.35/hour
Over 55 radius miles	\$1.55/hour

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - MILLWRIGHT AND PILEDRIVER ONLY)

Hourly Zone Pay shall be computed from Seattle Union Hall, Tacoma City center, and Everett City center

Zone Pay:

0 -25 radius miles	Free
26-45 radius miles	\$.70/hour
Over 45 radius miles	\$1.50/hour

ELEC0046-006 08/05/2024

	Rates	Fringes
ELECTRICIAN.....	\$ 73.58	30.84

ENGI0302-001 06/01/2023

	Rates	Fringes
Power equipment operators:		
Group 1A.....	\$ 54.93	25.57
Group 1AA.....	\$ 55.75	25.57
Group 1AAA.....	\$ 56.54	25.57
Group 1.....	\$ 54.13	25.57
Group 2.....	\$ 53.42	25.57
Group 3.....	\$ 52.83	25.57
Group 4.....	\$ 49.40	25.57

Zone Differential (Add to Zone 1 rates):

Zone 2 (26-45 radius miles) - \$1.00

Zone 3 (Over 45 radius miles) - \$1.30

BASEPOINTS: Aberdeen, Bellingham, Bremerton, Everett, Kent,
Mount Vernon, Port Angeles, Port Townsend, Seattle,
Shelton, Wenatchee, Yakima

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1AAA - Cranes-over 300 tons, or 300 ft of boom
(including jib with attachments)

GROUP 1AA - Cranes 200 to 300 tons, or 250 ft of boom
(including jib with attachments); Tower crane over 175 ft
in height, base to boom; Excavator/Trackhoe, Backhoes: Over
90 metric tons

GROUP 1A - Cranes, 100 tons thru 199 tons, or 150 ft of boom
(including jib with attachments); Crane-overhead, bridge
type, 100 tons and over; Tower crane up to 175 ft in height
base to boom; Loaders-overhead, 8 yards and over;
excavator/Trackhoe, backhoes: over 50 metric tons to 90
metric tons

GROUP 1 - Cranes 45 tons thru 99 tons, under 150 ft of boom (including jib with attachments); Crane-overhead, bridge type, 45 tons thru 99 tons; Derricks on building work;; Excavator/Trackhoe, backhoes: over 30 metric tons to 50 metric tons; Loader- overhead 6 yards to, but not including 8 yards; Dozer D-10

GROUP 2 - Cranes, 20 tons thru 44 tons with attachments; Crane-overhead, bridge type-20 tons through 44 tons;; Excavator/Trackhoe, backhoe: 15 to 30 metric tons; Loaders-overhead under 6 yards; Mechanic; Drilling Machine; Grader (finishing)

GROUP 3 - Cranes-thru 19 tons with attachments; A-frame crane over 10 tons;; Dozers-D-9 and under; Roller-Plant Mix; Excavator/Trackhoe, backhoe: under 15 metric tons; Forklift: 3000 lbs and over with attachments; Oiler; Grader (non-finishing);Boom Truck over 10 tons

GROUP 4 - Cranes-A frame-10 tons and under; Roller-other than plant mix; Forklift: under 3000 lbs with attachments; Boom Truck 10 tons and under

IRON0086-012 01/01/2024		
	Rates	Fringes
Ironworker (REINFORCING & STRUCTURAL).....	\$ 53.45	34.02

LAB00252-002 06/02/2022

ZONE 1:

	Rates	Fringes
LABORER		
GROUP 2A.....	\$ 34.20	13.80
GROUP 3.....	\$ 42.86	13.80
GROUP 4.....	\$ 43.90	13.80
GROUP 5.....	\$ 44.62	13.80

ZONE DIFFERENTIAL (ADD TO ZONE 1 RATES):

ZONE 2 - \$1.00

ZONE 3 - \$1.30

BASE POINTS: BELLINGHAM, MT. VERNON, EVERETT, SEATTLE, KENT, TACOMA, OLYMPIA, CENTRALIA, ABERDEEN, SHELTON, PT. TOWNSEND, PT. ANGELES, AND BREMERTON

ZONE 1 - Projects within 25 radius miles of the respective city hall
 ZONE 2 - More than 25 but less than 45 radius miles from the respective city hall
 ZONE 3 - More than 45 radius miles from the respective city hall

LABORERS CLASSIFICATIONS

GROUP 2A: Flagger

GROUP 3: General or Common Laborer; Chipping Guns (Under 30 lbs)

GROUP 4: Chipping Guns (Over 30 lbs); Groutmen; Pipe Layer

GROUP 5: Mason Tender-Brick; Mason Tender-Cement/Concrete; Grade Checker

 PAIN0005-008 07/01/2024

	Rates	Fringes
PAINTER (Brush, Roller and Spray).....	\$ 34.44	10.66

* PLAS0528-004 06/01/2024

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 54.16	21.27

* TEAM0174-002 06/01/2024

	Rates	Fringes
Truck drivers:		
ZONE A:		
GROUP 1:.....	\$ 52.88	26.52
GROUP 2:.....	\$ 52.04	26.52

ZONE B (25-45 miles from center of listed cities*): Add \$.70 per hour to Zone A rates.
 ZONE C (over 45 miles from centr of listed cities*): Add \$1.00 per hour to Zone A rates.

*Zone pay will be calculated from the city center of the following listed cities:

BELLINGHAM	CENTRALIA	RAYMOND	OLYMPIA
EVERETT	SHELTON	ANACORTES	BELLEVUE
SEATTLE	PORT ANGELES	MT. VERNON	KENT
TACOMA	PORT TOWNSEND	ABERDEEN	BREMERTON

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Dump Trucks, side, end and bottom dump, including semi-trucks and trains or combinations thereof with 16 yards to 30 yards capacity: Over 30 yards \$.15 per hour additional for each 10 yard increment.

GROUP 2 - Dump trucks, side, end and bottom dump, including semi-trucks and trains or combinations thereof with less than 16 yards capacity.

HAZMAT PROJECTS

Anyone working on a HAZMAT job, where HAZMAT certification is required, shall be compensated as a premium, in addition to the classification working in as follows:

LEVEL C: +\$.25 per hour - This level uses an air purifying respirator or additional protective clothing.

LEVEL B: +\$.50 per hour - Uses same respirator protection as Level A. Supplied air line is provided in conjunction with a chemical "splash suit."

LEVEL A: +\$.75 per hour - This level utilizes a fully-encapsulated suit with a self-contained breathing apparatus or a supplied air line.

* SUWA2009-035 08/07/2009

	Rates	Fringes
LABORER: Landscape.....	\$ 14.67 **	0.00
PIPEFITTER.....	\$ 30.00	8.35
TRUCK DRIVER: Water Truck.....	\$ 24.36	8.30
TRUCK DRIVER: 10 Yard Truck.....	\$ 24.61	8.34

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example:

PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey

is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations

Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

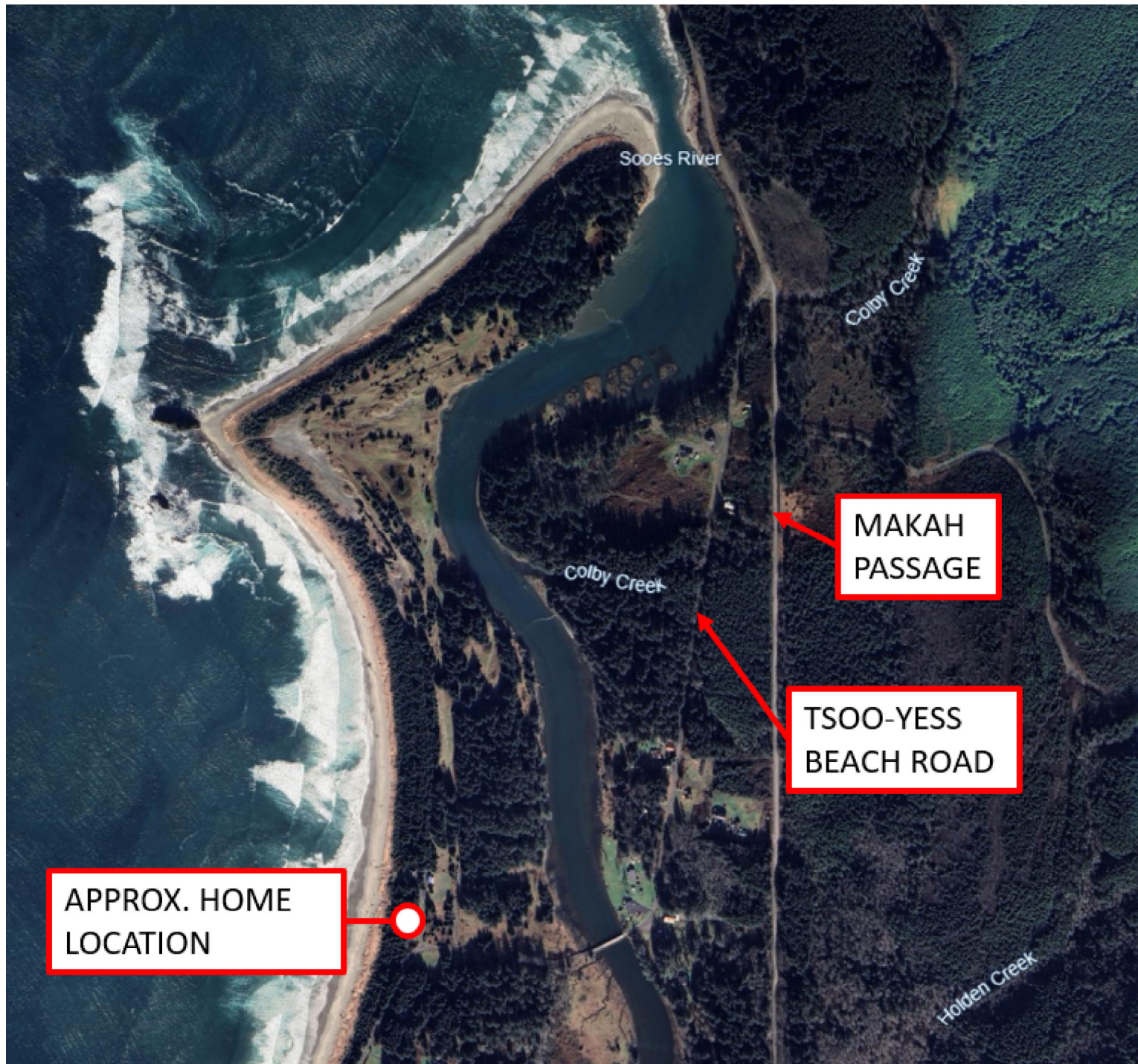
The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

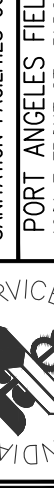




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- GENERAL NOTES: SEPTIC SYSTEM

11. THE BOTTOM OF THE DRAINFIELD BED SHALL BE A MAXIMUM OF 36 INCHES BELOW GRADE AND MUST BE LEVEL FROM FRONT TO BACK AND SIDE TO SIDE. 6 INCHES OF GRAVEL SHALL BE PLACED BENEATH THE DRAINLINES AND 2 INCHES OF GRAVEL SHALL BE PLACED ABOVE THE DRAINLINES. GRAVEL SHALL BE WASHED DRAINROCK WITH ½-INCH TO 2 ½-INCH DIAMETERS AND APPROVED FOR USE IN DRAINFIELDS BY CLALLAM COUNTY. DIRTY ROCK WILL BE REJECTED FOR USE OF INSTALLATION.
12. THE PERFORATED PIPE IN THE TRENCH MUST HAVE A GRADE OF 0 TO 3 INCHES PER 100 FEET. USE OF METAL SECURITY PINS, GRADE BOARDS, ETC. IS RECOMMENDED.
13. THE ENDS OF ALL PERFORATED PIPES MUST BE CAPPED, SOLVENT WELDED AND EXPOSED FOR INSPECTION.
14. MONITORING PORTS SHALL BE INCLUDED ON EVERY DRAINLINE WITHIN 10 FEET FROM THE END.
15. ALL PORTIONS OF THE SEWAGE DISPOSAL SYSTEM MUST BE INSPECTED AND APPROVED BEFORE IT IS COVERED WITH SOIL, OTHERWISE THE SYSTEM WILL BE UNCOVERED FOR VISUAL VERIFICATION THAT STANDARDS HAVE BEEN MET.
16. THE TOP LAYER OF THE GRAVEL BED SHALL BE COVERED WITH A GEOTEXTILE FILTER DRAINAGE FABRIC PRIOR TO BACKFILL. FILTER DRAINAGE FABRIC SHALL BE APPROVED BY PROJECT ENGINEER AND MEET THE STANDARDS OF THE WASHINGTON STATE DEPARTMENT OF HEALTH.
17. 12 INCHES OF COVER MATERIAL SHALL BE PLACED OVER GEOTEXTILE. COVER MATERIAL SHALL HAVE SUFFICIENT POROSITY TO ALLOW FOR AEROBIC EXCHANGE. COVER MATERIAL SHALL NOT CONSIST OF CLAYEY SOILS WITHOUT SUFFICIENT SAND CONTENT. IMPORT TOPSOIL AS NEEDED TO MAINTAIN 12" COVER ON DOWNSLOPE PORTION OF DRAINFIELD AND GRADE MOUND SIDES AT A SLOPE OF 3:1.
18. GRADE DRAINFIELD AND AREA AROUND DRAINFIELD AS NECESSARY SUCH THAT THE TOP OF THE DRAINFIELD IS LEVEL AND SURFACE WATER FLOWS AWAY FROM DRAINFIELD TO PREVENT PONDING.
19. UPON FINAL APPROVAL BY THE PROJECT ENGINEER, A TRACK VEHICLE OR OTHER LOW-IMPACT VEHICLE SHALL BE USED TO COVER THE SYSTEM (GROUND PRESSURE NOT TO EXCEED 7 P.S.I.).
20. DRAINFIELD AND REPLACEMENT AREA MUST BE PROTECTED FROM ENCROACHMENT OR DAMAGE BY: VEHICULAR AND EQUIPMENT TRAFFIC; HEAVY WEIGHTS OR OBJECTS, IMPERVIOUS COVERINGS (SUCH AS ASPHALT OR CONCRETE), OR ANYTHING WHICH CAN OBSTRUCT AERATION OF THE SYSTEM.

		<p>U.S. PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE SANITATION FACILITIES CONSTRUCTION</p>	
<p>PORT ANGELES FIELD OFFICE 1601 E FRONT ST., BLDG B, SUITE C PORT ANGELES, WA 98362 (360) 452-1196</p>		<p>U.S. PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE SANITATION FACILITIES CONSTRUCTION</p>	

THE MAKAH TRIBE

11 SACREDLANDS DR., NEAH BAY, WA 98357

NEW SEPTIC SYSTEM AND COMMUNITY WATER SERVICE CONNECTION

NOTES

DRAWN BY: H. ANDINA, 4/21/25

CHECKED BY: S. SCHATZ

APPROVED BY: R. HARGROVE

IHS PROJECT NO: P0-22-D05F

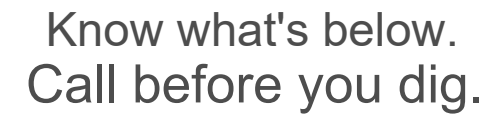
PROJ. ENG: M. KEEP

G-001

SHEET

1 OF 5































THIS IS NOT A SURVEY. PROPERTY LINES AND ELEVATIONS SHOWN ARE
ESTIMATED AND INTENDED ONLY FOR REFERENCE DURING THE
CONSTRUCTION OF THE PROPOSED FACILITIES OF THIS PROJECT.

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**U.S. PUBLIC HEALTH SERVICE
INDIAN HEALTH SERVICE
SANITATION FACILITIES CONSTRUCTION
PORT ANGELES FIELD OFFICE
1601 E FRONT ST., BLDG B, SUITE C
PORT ANGELES, WA 98362
(360) 452-1196**



INTENDED USE:	3-BDRM SFD @ 450 GPD
SOIL LOADING RATE:	0.8 GAL/SQ FT/DAY
SEPTIC TANK:	1000 GAL
DRAINFIELD:	10' X 47' GRAVEL BED
TRANSPORT PIPE:	4" SDR 35 PVC
LATERALS:	4" D2729 PVC

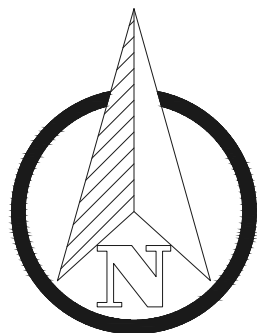
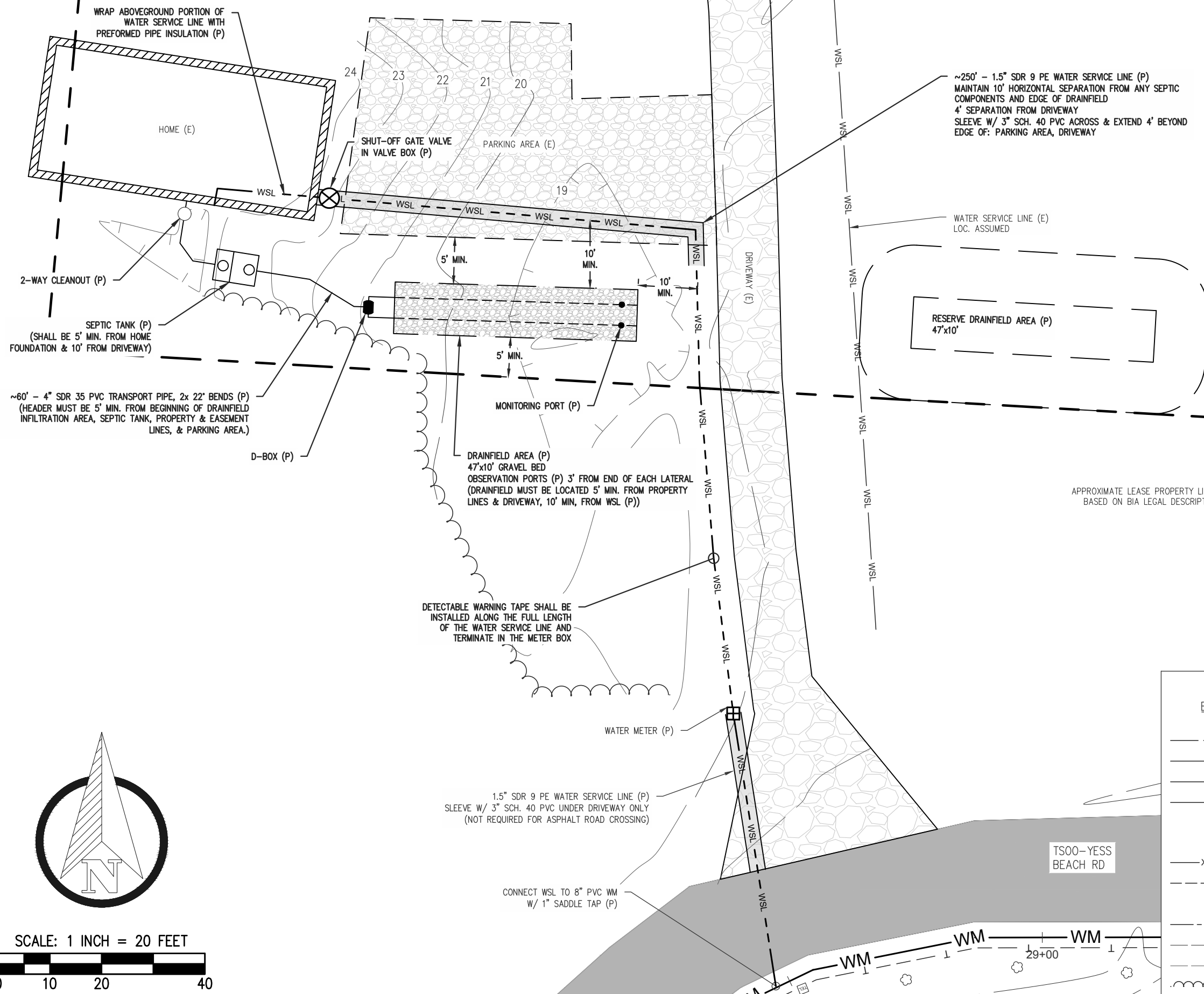
EXISTING	LEGEND	PROPOSED
 WM 	WATER MAIN	 W 
 WSL 	WATER SERVICE LINE	 WSL 
 S 	SEWER MAIN	 S 
 T 	TELEPHONE	 T 
 X 	FENCE (CHAINLINK)	 X 
	EASEMENT	
	PROPERTY LINE	
	RIGHT OF WAY	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	VEGETATION LINE	

THE MAKAH TRIBE
11 SACREDLANDS DR., NEAH BAY, WA 98357
NEW SEPTIC SYSTEM AND COMMUNITY WATER SERVICE CONNECTION
SITE PLAN

DRAWN BY:	H. ANDINA, 4/21/25	IHS PROJECT NO: PO-22-D05F
CHECKED BY:	S. SCHATZ	
APPROVED BY:	R. HARGROVE	
		PROJ ENG: M. KEEP

C-101

SHEET
2 OF 5

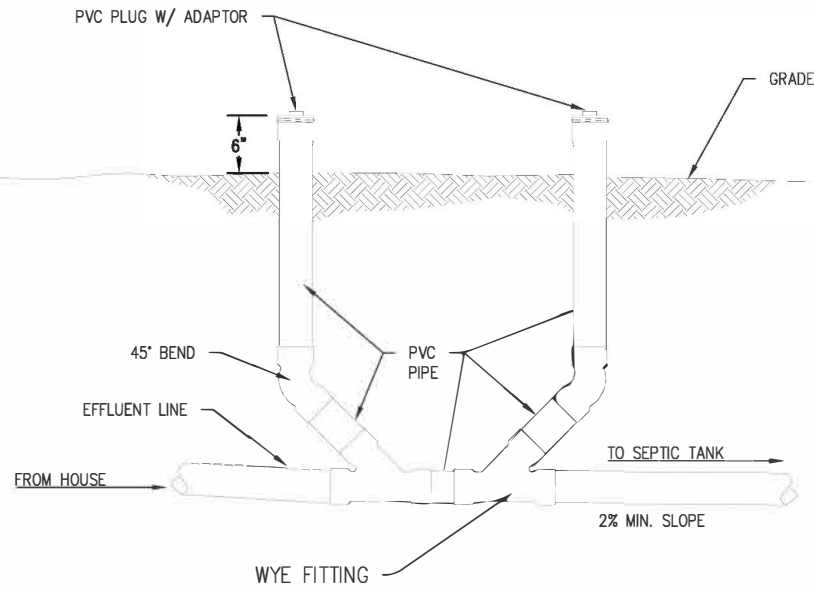


SCALE: 1 INCH = 20 FEET

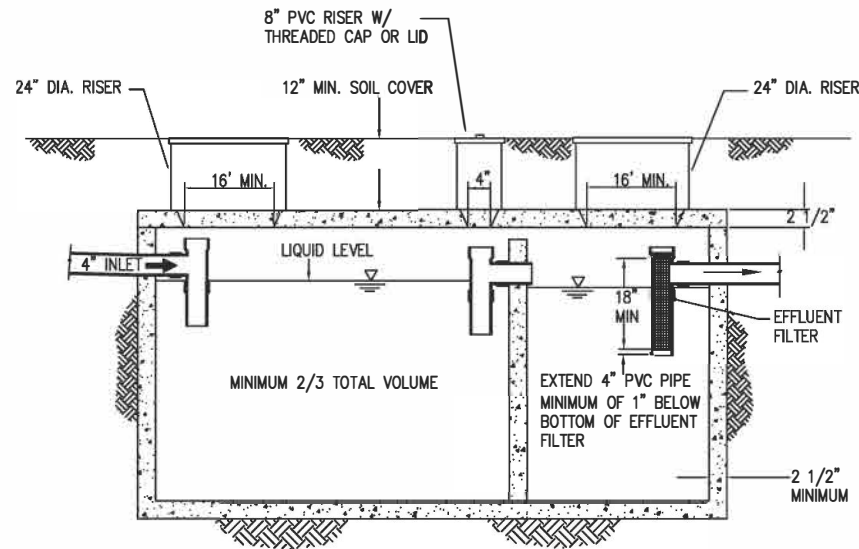


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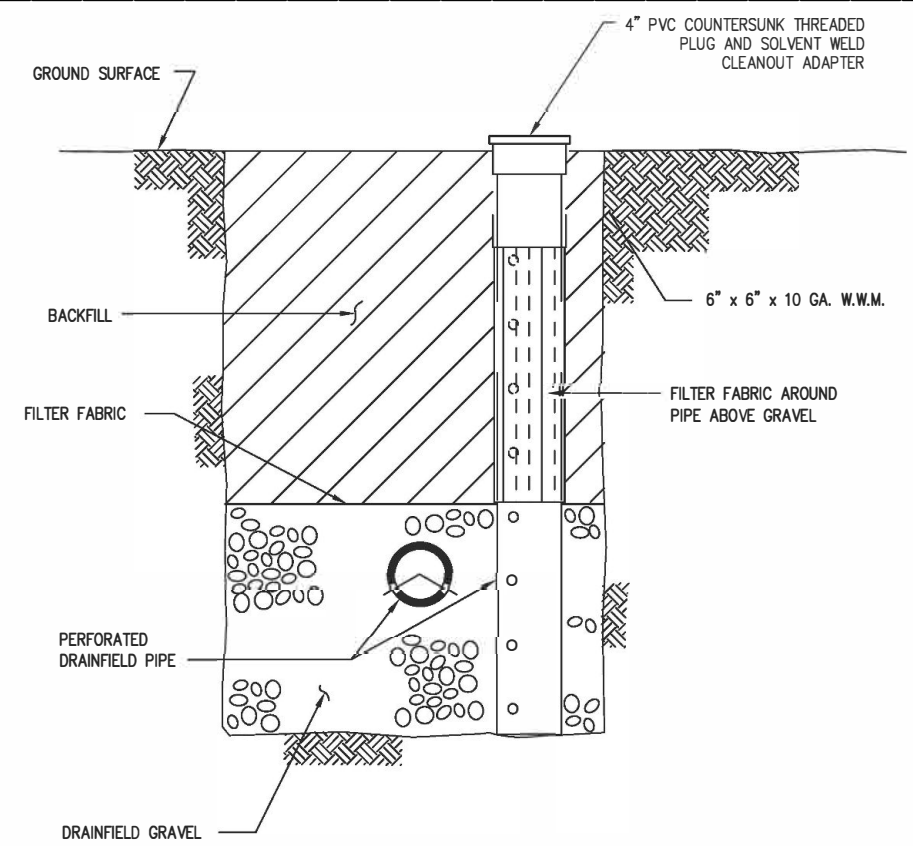
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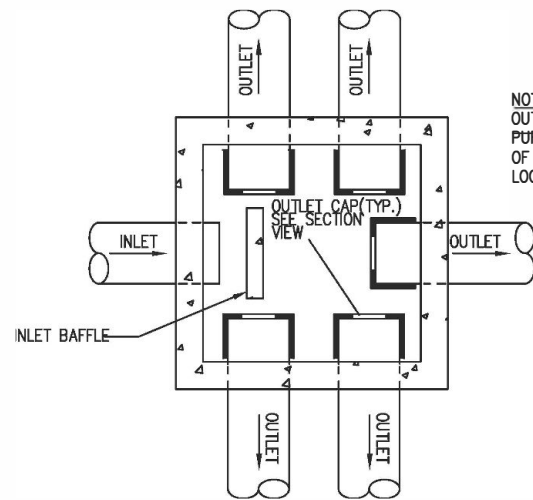
1 TWO-WAY CLEAN OUT
C-501 NO SCALE



2 1000 GALLON SEPTIC TANK WITH EFFLUENT FILTER
C-501 NO SCALE

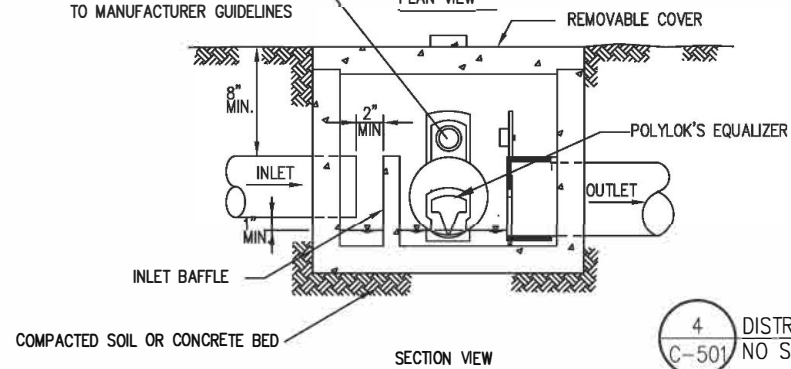


3 DRAINFIELD INSPECTION PORT
C-501 NO SCALE

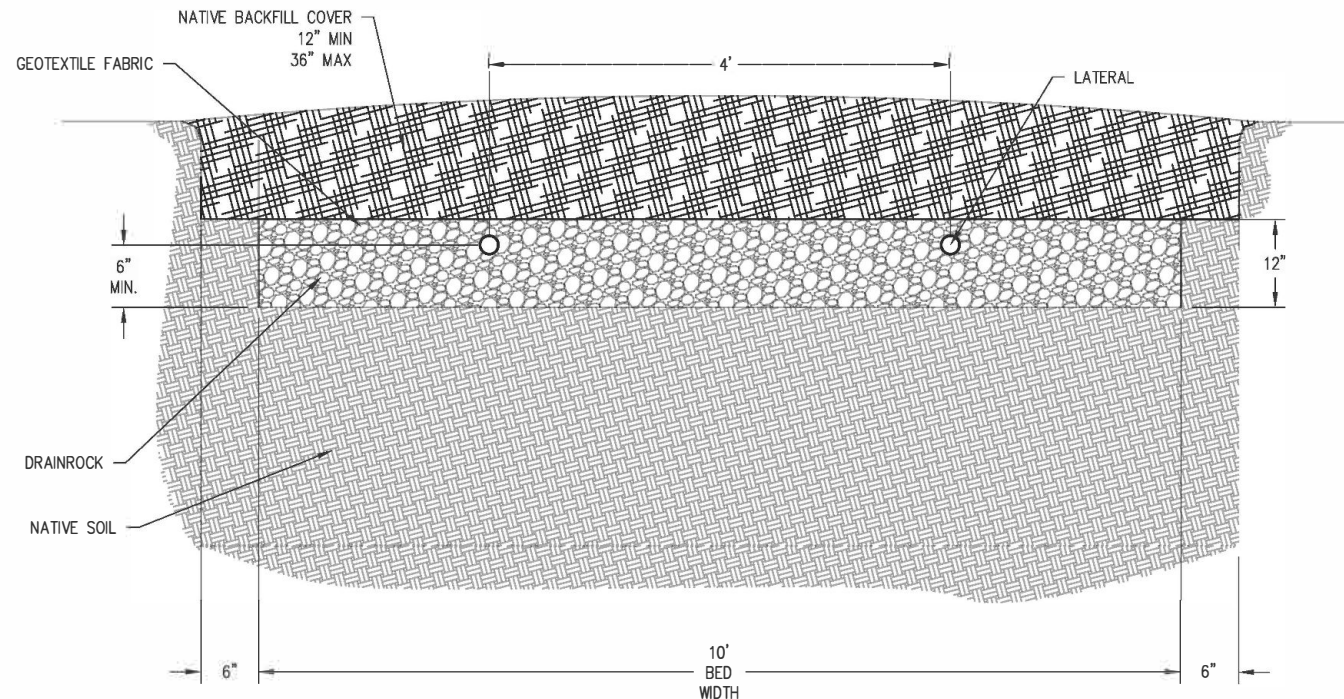


NOTE: THE LOCATION AND NUMBER OF OUTLETS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER OF OUTLETS REQUIRED AND THEIR LOCATION MAY VARY.

ADJUSTMENT IS EQUAL TO 1/16\"/>



4 DISTRIBUTION BOX
C-501 NO SCALE



5 GRAVEL BED DRAINFIELD DETAIL
C-501 NO SCALE

INIT.	REVISIONS	DATE

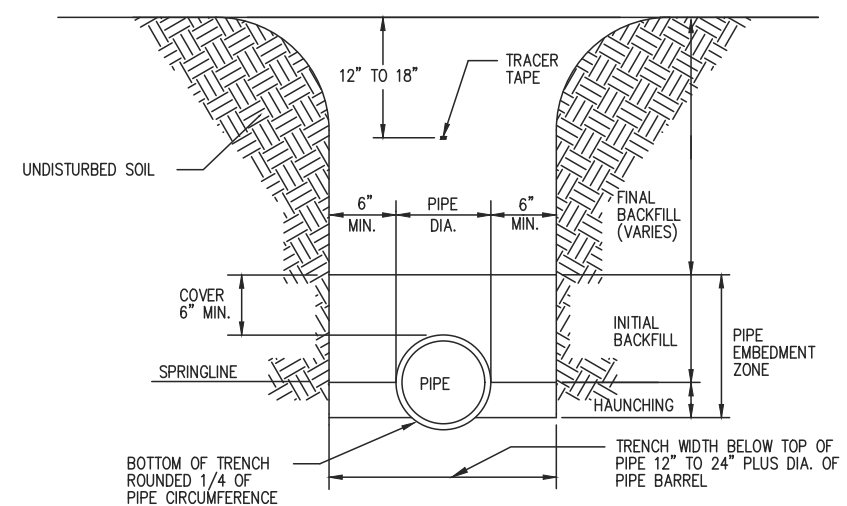
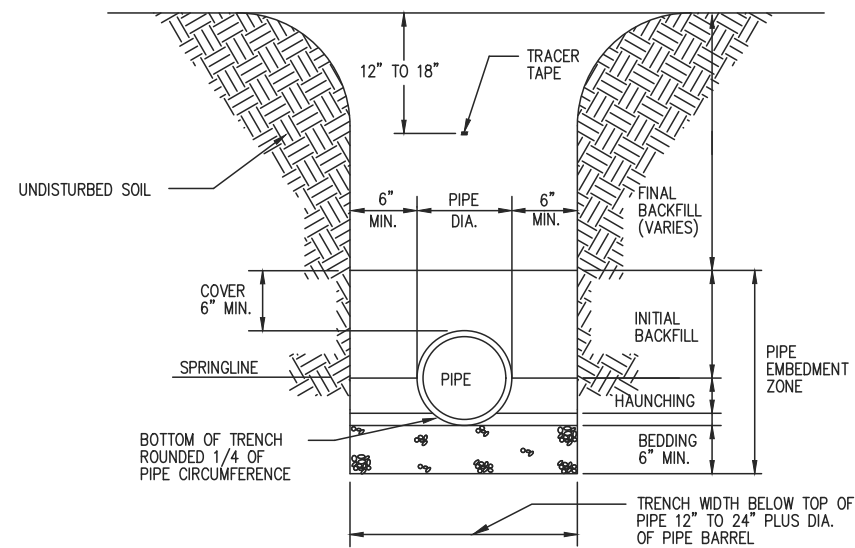
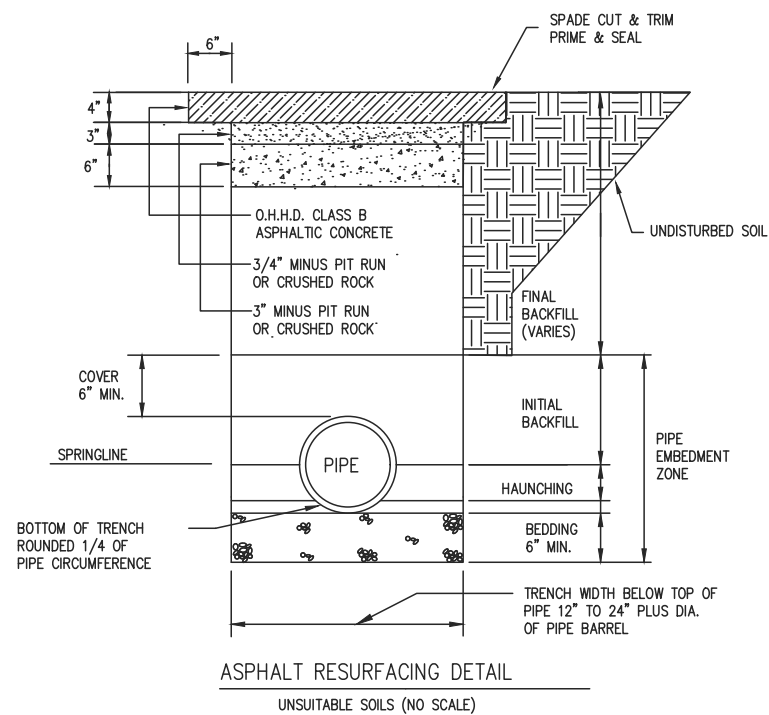
U.S. PUBLIC HEALTH SERVICE
INDIAN HEALTH SERVICE
SANITATION FACILITIES CONSTRUCTION
PORT ANGELES FIELD OFFICE
1601 E FRONT ST., BLDG B, SUITE C
PORT ANGELES, WA 98362
(360) 452-1196



THE MAKAH TRIBE
11 SACREDLANDS DR., NEAH BAY, WA 98357
NEW SEPTIC SYSTEM AND COMMUNITY WATER SERVICE CONNECTION
SEPTIC DETAILS
DRAWN BY: H. ANDINA, 4/21/25
CHECKED BY: S. SCHATZ
APPROVED BY: R. HARGROVE
IHS PROJECT NO: PO-22-D05F
PROJ ENG: M. KEEP

C-501

SHEET
3 OF 5

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U.S. PUBLIC HEALTH SERVICE
INDIAN HEALTH SERVICE
SANITATION FACILITIES CONSTRUCTION
PORT ANGELES FIELD OFFICE
1601 E FRONT ST., BLDG B, SUITE C
PORT ANGELES, WA 98362
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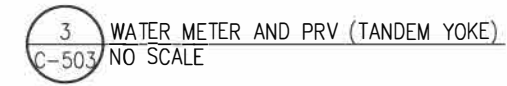
THE MAKAH TRIBE
11 SACREDLANDS DR., NEAH BAY, WA 98357
NEW SEPTIC SYSTEM AND COMMUNITY WATER SERVICE CONNECTION
TRENCHING DETAILS

DRAWN BY:	H. ANDINA, 4/21/25	IHS PROJECT NO: PO-22-D05F
CHECKED BY:	S. SCHATZ	
APPROVED BY:	R. HARGROVE	
		PROJ ENG: M. KEEP

C-502

SHEET
4 OF 5

1" COPPER PRESSURE REDUCING VALVE METER SETTER WITH ANGLE CHECK VALVE AND INVERTED KEY TYPE VALVE. ADD REDUCER AT THE PRESSURE REDUCING VALVE OUTLET TO ALLOW CONNECTION OF 1.5" PIPE"



C-503

SHEET
5 OF 5

TECHNICAL PROVISION 3.0

EXCAVATION, TRENCHING, AND BACKFILLING

3.01 Scope of Work

The work covered by this section includes the furnishing of all plant, labor, tools, equipment, and material, and performing all operations in connection with the excavation, trenching, and backfilling for the installation of all pipelines, structures, and accessories, all in accordance with these technical provisions and applicable drawings.

3.02 Protection of Excavation

In conformance with applicable safety regulations, the Contractor shall provide suitable shoring and sheeting to protect all excavations and provide safe working conditions for workers.

3.03 Excavation

3.03.01 General

All excavation required for the performance of this contract shall be made by open cut methods unless otherwise shown on the drawings, required by applicable encroachment permits, or approved in writing by the Project Manager.

3.03.02 Trench Excavation

The sides of all trenches for the installation of utility piping systems shall be as nearly vertical as soil conditions permit below the level of the top of the pipe. The width of the trench shall not be less than 12-inches or more than 24-inches wider than the outside diameter of the pipe barrel. Trench excavation shall be centered on pipe alignment such that a minimum clear space of 6-inches is provided on each side of the pipe. Trench width above the level of the top of the pipe may be as wide as necessary for shoring and sheeting, and for proper installation of the work.

The depth of all trenches shall be as indicated on the drawings. If not otherwise specified, the depth of all trenches shall be sufficient to provide a minimum cover of 24-inches at all locations after final backfilling.

Unless otherwise required by applicable permits to be less, the maximum length of trench that may be left open at any one time shall not exceed 500-feet. No trenches shall be left open unless otherwise permitted in writing by the Project Manager.

All trench excavation shall comply with Federal and local OSHA regulations for trench safety.

3.03.03 Pavement Cutting

Where it is necessary to remove sections of asphalt pavement, the asphalt shall be saw-cut with approved equipment in a neat line 6-inches back from the outside edge of the excavation in order to provide a key when restored, or as approved by BIA roads permit or Tribal Manager.

Where it is necessary to remove sections of concrete pavement, the concrete shall be saw-cut to a depth of not less than 2-inches with neat, vertical, true lines in such a manner that the adjoining surface will not be damaged.

3.04 **Placement and Compaction of Pipe Embedment and Backfill Material**

3.04.01 Pipe Embedment

Pipe embedment is defined as that material required to bring the trench bottom up to grade and that material placed alongside and above pipe to a level of at least 6 inches over the top of the pipe. The pipe embedment area is divided into three zones as defined below.

Bedding: Bedding is that portion of pipe embedment zone beneath the pipe. If the native soil is suitable for bedding the pipe without over- excavation, the bottom of the trench shall be accurately shaped such that one fourth of the pipe circumference is provided with uniform bearing and support for each section of the entire length of the pipe. Imported bedding material shall likewise be placed to provide uniform and adequate longitudinal support under the pipe. Bedding material shall be placed and compacted in lifts not to exceed 6-inches in loose measure.

Haunching: Haunching is that portion of the pipe embedment zone from the bottom of the pipe to the springline of pipe. Haunching material shall be placed and consolidated to provide adequate side support to the pipe while avoiding both vertical and lateral displacement of the pipe from proper alignment.

Initial Backfill: Initial backfill is that portion of the pipe embedment zone from the springline of the pipe to a minimum level of 6-inches over the top of the pipe. Initial backfill material shall be placed and compacted in lifts not to exceed 6 inches in loose measure. Compaction shall be performed in a manner to avoid damage and disturbance of the embedded pipe.

3.04.02 Compaction

Unless otherwise specified by applicable permits or roadway authority, bedding, haunching, initial backfill, final backfill, and gravel resurfacing shall be compacted to the following percent of the maximum density as determined by ASTM D1557. In-place densities of materials shall be determined by the sand-cone method, ASTM D1556 or by nuclear methods, ASTM D2922.

Percent of Maximum Density

Location	Bedding	Haunching	Initial Backfill	Final Backfill
Roadways and Driveways	95%	95%	95%	95%
Unimproved Surfaces, Fields, Etc.	90%	90%	70%	70%

3.05 Surface Restoration and Resurfacing

3.05.01 General

The inclusion of a bid item and estimated quantity for asphaltic, concrete, or gravel resurfacing in the Bid Schedule indicates that these items are probable. However, the exclusion of these items from the Bid Schedule does not preclude the possibility that they will be required, merely that they are not anticipated. If unanticipated resurfacing is required, unit prices will be negotiated between the Contractor and the Contracting Officer.

3.05.02 Surface Restoration

After the piping and structures have been installed and all backfilling has been completed, areas which were disturbed shall be brought to true grades. All slopes shall be trimmed and dressed, and all surfaces graded to maintain existing drainage. All streets, alleys, driveways, sidewalks, curbs, or other surfaces which have been disturbed or damaged shall be resurfaced with like materials to a condition equal to or better than the original condition. All excess excavated material shall be properly disposed of by the Contractor.

3.05.03 Asphaltic Resurfacing

At all locations where asphaltic resurfacing is required, a compacted gravel base, 6-inches in depth shall be placed prior to placement of the asphaltic wear course. This base course shall be 95 to 100 percent 3-inch minus gravel with not more than 40 percent passing a 0.0165 inch square opening (No. 40 sieve). Asphalt shall be plant mixed, with certification that the mix meets the requirements of the applicable roadway authority. Except where greater thickness is required by applicable roadway authority, the minimum thickness of the asphalt shall be the greater of 2-inches or that of the existing adjacent asphalt. Placement of asphalt shall be in lifts not exceeding 2-inches. Compaction shall be accomplished by pneumatic-tired or steel rollers throughout the spreading operation. Final rolling shall be by steel roller. No surfacing shall be placed while the subgrade is wet, if it is raining, or if the temperature is below 40 degrees F. All edges shall be clean and tack coated prior to placement of the patch.

3.05.04 Gravel Resurfacing

All gravel resurfacing shall be done on a properly compacted subgrade. The gravel shall be spread uniformly and compacted to a minimum thickness of 3-inches. The gravel shall conform to the following gradation requirement.

Sieve Size Square Opening	Percent Passing By Weight
3/4 inch	100
0.250 inch (No. 3 sieve)	50-65
0.0029 inch (No. 200 sieve)	5 max.

3.06 Open Cut Road Crossing for Water and Sewer Service Lines

Open cut water and sewer service line crossings shall be completed at all locations shown on the site plan. The Contractor is responsible to comply with all local, county, Tribal and BIA road crossing provisions whether a permit was issued or not. PVC encasement pipe shall be the diameter shown on the drawings and shall conform to material specification ASTM D1784, Type 1, Grade 1, manufacturing specification ASTM D2241, and the pipe shall be PVC schedule 80. All PVC pipe joints shall be rubber compression ring type with rubber gaskets conforming ASTM F477, and equal to J-M Ring Tite PVC Pressure Rated Pipe, or PWPipe TwinSeal PVC.

Steel encasement pipe and fittings shall be the diameter shown on the drawings and shall be Schedule 40 and shall conform to ASTM A120. The pipe shall be joined by the use of threaded steel couplings

3.07 Bored Type Road Crossing for Water and Sewer Service Lines

Water service lines crossing roads or rights-of-way (ROWs) which cannot be open cut, and if noted on the site plan, the crossing shall be bored. The Contractor shall bore the crossing by using a pneumatic or hydraulic boring machine such as a Hole Hog®, or other approved boring equipment. Minimum allowable encasement pipe diameter for the crossing shall be of sufficient size to allow the water or sewer service line to be easily slid into position. Casing pipe diameter and material shall be approved by the Project Manager prior to installation.

TECHNICAL PROVISION 11.0

INDIVIDUAL SEPTIC TANK

11.01 Scope of Work

The work covered by this section includes the furnishing of all plant, labor, tools, equipment, and material, and performing all operations in connection with the construction of individual septic tanks, including connection to building (house) drains, solid sewer pipe, cleanouts, abandonment of existing septic tanks, fittings, effluent filters, and appurtenances in accordance with these technical provisions and applicable drawings.

11.02 Permits and Approvals

The Owner shall secure the applicable site approvals and sewage disposal permits for the work specified herein.

11.03 Location of Facilities

The location of the facilities specified herein shall be as shown on the drawings and/or as staked in the field by the Project Manager. The Contractor shall not change the designated location of these facilities without the prior approval of the Project Manager.

11.04 Inspection of Installation

In addition to the applicable inspection requirements of the Tribe and/or County, the Contractor shall notify the Project Manager at least 2 working days prior to placing final backfill over the septic tank so that the Project Manager may inspect the installation.

11.05 Solid Sewer Pipe

The Contractor shall install a solid smooth pipe from the septic tank to the building (house) drain. Solid sewer pipe and fittings shall be 4-inch PVC plastic, ASTM 3034, SDR 35 sewer service lines. Installation shall be in accordance with all state and local and/or Tribal standards.

11.06 Effluent Filter

The Contractor shall install in the outlet tee of the septic tank a 1/16th-inch effluent filter cartridge equivalent to Orenco Biotube Residential Septic Tank Effluent Filter or Tuf-Tite EF-4 Residential Series. The outlet tee in the septic tank shall be of sufficient length to extend one (1) inch below the bottom of the filter cartridge (See detail drawings).

11.07 Septic Tank

11.07.01 Tank

The tank shall be precast, reinforced, **watertight** concrete as manufactured by an established firm specializing in concrete products conforming to ASTM 6913. Minimum liquid capacity below the outlet level shall be as specified on the drawing(s) and each tank shall have 2 compartments. The walls, floor & top shall have a minimum thickness of 2 ½-inches. Adequate steel reinforcement shall be provided. Each compartment shall be provided with adequate tees, elbows and baffles. The tank shall meet all state and local standards.

11.07.02 Access Riser

Each compartment of the septic tank shall be provided with a **watertight** access riser with a minimum dimension of 24-inches for inspection and sludge removal. The access riser on the second chamber shall be centered so as to provide access to the effluent filter. Access risers shall meet all state and local standards. Additional access ports, if required by local health codes, shall be installed by the Contractor at no additional expense to the Government. Risers shall be equal to Orenco systems lids and risers.

11.07.03 Septic Tank Installation

The septic tank shall be set in a hole excavated by the Contractor in accordance with all state and local standards.

11.08 Pump Existing Septic Tank

When included on the bid schedule, the Contractor shall pump existing septic tanks by pumping the liquid and solids out of the tank. The septic tank liquid and solids shall be disposed of as required by local health codes. Backfilling pumped liquid to agitate the accumulated solids in the septic tank is not allowed.

11.09 Abandon Existing Septic Tank

When included on the bid schedule, The Contractor shall abandon existing septic tanks by pumping out the liquid out of the tank, breaking open the cover of the tank, and backfilling the empty tank with approved borrow material. Backfilling shall be carefully placed to eliminate voids, and shall be mounted to allow for settlement. The septic tank liquid shall be disposed of as required by local health codes.

11.10 Underground Cleanout

Where required and as shown on the plans, the Contractor shall install a two-way underground cleanout on the solid sewer line. The cleanout shall have a threaded plug and be constructed as detailed in the drawings. The cleanout shall be extended so that the square nut on the threaded plug

is ½-inch below finished ground level. If indicated on the plans, a concrete pad 18-inches square and 4-inches deep shall be poured around each cleanout at the ground surface. This pad shall be reinforced with welded wire mesh with a minimum 1 1/2-inch concrete cover over mesh. The wire mesh shall be ASTM approved W1.4 (1/8-inch) wire mesh on 6-inch centers.

TECHNICAL PROVISION 13.0

INDIVIDUAL GRAVITY GRAVEL DRAINFIELDS (CONVENTIONAL, STEP-DOWN, AND SAND-LINED)

13.01 Scope of Work

The work covered by this section includes the furnishing of all plant, labor, tools, equipment, and material, and performing all operations in connection with the construction of an individual drainfield, including solid sewer pipe, perforated drainfield pipe, gravel, imported soil, inspection ports, distribution boxes, drop boxes, fittings, and appurtenances in accordance with these technical provisions and applicable drawings.

13.02 Inspection of Installation

The location of the facilities specified herein shall be as shown on the drawings and/or as staked in the field by the Project Manager. The Contractor shall not change the designated location of these facilities without the prior approval of the Project Manager.

13.03 Inspection of Installation

In addition to the applicable inspection requirements of the Tribe and/or County, the Contractor shall notify the Project Manager at least 2 working days prior to placing final backfill over the drainfield and other appurtenances so that the facilities may be inspected.

13.04 Elevation Control

In order to install the facilities specified herein at the optimum grade and elevation, the Contractor is required to utilize an accurate builder's level and rod, or approved equal, during construction. The level shall be mounted on a tripod and shall be on site at all times during installation.

13.05 Solid Sewer Pipe

The Contractor shall install a solid sewer pipe from the septic tank to the drainfield. Solid sewer pipe and fittings shall be 4-inch PVC plastic conforming to ASTM 3034, SDR 35. All joints and connections in the solid sewer pipe shall be watertight.

The solid pipe shall be laid in a trench at least 12-inches wide and at a uniform minimum slope of ¼-inch per foot. Care shall be taken to bed the pipe in a material that is free of rocks or otherwise unsuitable material. Backfill shall be compacted by hand from the bottom of the trench to a minimum of 8 inches over the top of the pipe for the full width of the trench. A minimum of 8 inches of cover is required over the top of the solid sewer pipe.

13.06 Drainfield

13.06.01 Perforated Drainfield Pipe and Gravel

Perforated drainfield pipe and fittings shall be 4-inch PVC plastic of the size indicated conforming to ASTM 3034 (or 2729). The perforated drainfield pipe shall have 2 rows of holes ½-inch in diameter on 5-inch centers maximum, and the rows shall be parallel to the axis of the pipe at 120 degrees apart. All elbows, tees, and fittings connected to PVC perforated drainfield pipe shall be glued by using the type of solvent cement recommended by the pipe manufacturer.

Drainfield gravel shall be clean, round, hard, strong and durable, and free from coal, clay, soft fragments, or other deleterious materials. The gravel shall be well graded and vary in size from ½-inch to 1½-inches, with not more than 10 percent fines below the ½ inch size. The top of the gravel shall be covered with a polyester polymer plastic filter drainage fabric having a nominal weight of 5 ounces per square yard.

13.06.02 Drainfield Installation

The Contractor shall excavate to the length, depth, and in the direction specified for the drainfield. If unanticipated conditions are encountered in the field which will adversely affect the performance of the drainfield system (clay, bedrock, hard pan, groundwater, etc.), the Project Manager shall be notified immediately. No modification shall be made without prior approval of the Project Manager.

The drainfield shall be located as shown in the drawings and at least 5 feet from the septic tank, lift station, distribution box, or drop box. Excavation in clay soils will not be permitted when the moisture content is above the soil's plastic limit. If a representative sample of soil forms a "wire" instead of crumbling when attempting to roll it between the hands, the moisture content is above the soil's plastic limit. The bottom and sidewalls of the excavation shall be left with a rough open surface. All smeared or compacted surfaces of the trench shall be raked to expose the natural texture of the soil. All loose material shall be removed from the trench. Open trenches shall be protected from surface water runoff by diversion ditches or other methods.

All width of drainfield trenches where gravel is used shall be as shown on the drawings. Gravel shall extend from 2 inches over the top of the drainfield pipe to the depth specified (6 inches minimum) below the bottom of the pipe for the full trench width. The drainfield gravel shall be placed carefully to avoid damage to the soil. The perforated drainfield pipe shall be installed with the holes down and centered in the trench. The bottom of the trench and the drainfield pipe shall be laid level to within ± 0.1 feet. A PVC cap shall be solvent cemented on the terminal ends of perforated drainfield pipe which is not looped or interconnected. The minimum distance allowed between the center of drainfield trenches is 8 feet, unless otherwise shown on the drawings.

All width of drainfield trenches where medium sand is used below gravel shall be as shown on the drawings. Medium sand shall extend from the bottom of the gravel bed to the depth specified (24 inches minimum) on the drawings. The bottom of the trench shall be laid level to within ± 0.1 feet.

The drainfield trench shall be carefully backfilled in a manner that will not damage the pipe. Excavation in excess of backfill requirements shall be spread over the drainfield area. The depth of cover on the top of the drainfield gravel shall be at least 6 inches and not more than 24 inches.

13.06.03 Drainfield Installation for Sloping Sites

When indicated on the drawings and where the site conditions entail predominantly sloping terrain (approximately 15 – 45% slope) a step-down drainfield shall be installed. The same installation measures shall prevail as in section 13.06.02. The Contractor shall excavate to the length, depth, and direction specified with the drainfield legs extending laterally across the sloping terrain, following the contours. The total drainfield shall be underground with a minimum of 6-inches of cover. The drainfield laterals shall be connected either in parallel or series, as specified on the drawings, with 4-inch PVC solid pipe. When specified, a drop-box shall be installed at each lateral leg entrance. The solid 4-inch PVC pipe connections shall allow enough slope for effluent flow from drop-box to drop-box. Drop-boxes shall be accessible from ground surface and fitted with a secure cap.

13.06.04 Drainfield Installation for Gravity Sand Lined Drainfield

The same installation measures prevail as in section 13.06.02. Additionally, Imported ASTM C-33 sand shall be placed at a two foot minimum depth below the drainfield gravel layer. Drawings shall specify drainfield profile dimensions. If specified by the Project Manager, a Medium Sand (Type 2B) shall be used in place of the ASTM C-33 sand.

The medium sand fill material shall meet the following particle size gradation (Source: ASTM C-33, Specification for Fine Aggregate):

Effective % Passing		
Sieve	Particle Size	by Weight
3/8 inch	9.50mm	100%
No. 4	4.75mm	95-100%
No. 8	2.36mm	80-100%
No. 16	1.18mm	50-80%
No. 30	0.60mm	25-60%
No. 50	0.30mm	10-30%
No. 100	0.15mm	2-10%

The sand shall be not more than 45% passing any one sieve and retained on the next consecutive sieve of those shown above.

The fineness modulus shall not be less than 2.3 nor more than 3.1. The fineness modulus is defined as the sum of the cumulative percentages retained in the sieve analysis, divided by 100, for the sieve sizes shown above. Each load of fill sand shall be approved by the Project Manager.

13.07 Imported Soil

When soil conditions or site topography make it necessary to keep the drainfield and related appurtenances elevated, and when authorized by the Project Manager, it may be necessary to import soil to provide the required minimum cover. The imported soil shall be reasonably clean of rocks, boulders, roots, and otherwise unsuitable materials and shall be approved by the Project Manager prior to placement.

13.08 Site Restoration, Grading, Ditching, and Marking

Site restoration shall be in accordance with TP 3.0. The Contractor will be held responsible for repairing trench settlement problems during the one-year warranty period. Excess excavated soil shall be distributed evenly around the site.

The Contractor shall provide grading and ditching around the completed drainfield to direct the flow of surface runoff away from the drainfield. The exact location of the ditch lines will be determined by the Project Manager after the drainfield installation is completed.

The Contractor shall avoid all unnecessary movement of equipment over the completed drainfield. The Contractor shall use construction stakes and yellow caution tape to visibly mark the perimeter of the completed drainfield area.

13.09 Submittals

The Contractor shall submit after construction an **as-built** detail drawing of the completed site as per the attached sample drawing.

TECHNICAL PROVISION 30.0

WATER SERVICE CONNECTIONS

30.01 Scope of Work

The work covered by this section includes the furnishing of all plant, labor, tools, equipment, and material, and performing all operations in connection with the construction of water service lines, including saddles, corporation stops, curb stops, water meters, coppersetters, meter boxes, fittings and appurtenances; and abandonment of existing wells; all in accordance with these technical provisions and applicable drawings.

30.02 Materials

30.02.01 Polyethylene (PE) Pipe

Polyethylene (PE) pipe shall be IPS size, 250 psi, SDR 9 in conformance with ANSI/AWWA C901, ASTM 2239, ASTM D2737, or ASTM D3035. The pipe shall be produced from high density, ultra-high molecular weight PE 4710, NSF approved resin. The pipe shall conform to the latest revision of ASTM 1248 and AWWA C-901; and shall be equal to Driscopipe 5100 Ultra-line or West Flex. The designation, PE 4710, shall be stamped on the pipe.

Fittings and connections for PE pipe shall be made with non-flare compression connections equal to Ford Pack Joint, Mueller Insta-Tite, or McDonald Mac-Pak.

30.02.02 Polyvinyl Chloride (PVC) Pipe

Polyvinyl chloride (PVC) pipe, Schedule 40, shall be at the size as specified in the Bid Schedule and drawings. Pipe shall be in conformance with ASTM D1785 and AWWA C-900. Any tees, connections, and changes in direction must be accurately marked for inclusion on as-builts.

30.02.03 Tracer Wire with Box

1. Wire: #10 AWG jacketed solid copper wire, type THHN/THWN.
2. Box: Provide 4-inch Schedule 40 PVC pipe and a 4-inch PVC threaded watertight plug as a box for terminations or junctions of tracer wire.
3. Splice kit: Use underground waterproof splice materials.

30.02.04 Saddles

Saddles shall be ductile iron, brass, bronze, or stainless steel with I. P. standard tapping and shall have rigid double straps or bale-type bottom connectors with a flattened surface.

The saddles shall be equal to Ford brass saddles, Mueller service clamps, or Romac style 202 saddles.

30.02.05 Corporation Stops

Corporation stops shall be bronze alloy with inlet I. P. standard thread and outlet thread compatible with the connecting piping, without the use of special adapters. They shall be equal to Ford or Mueller corporation stops.

30.02.06 Water Meters (if not supplied by the water utility)

Water meters shall be of cast bronze construction with inlet strainer magnetic drive and a hermetically sealed register. The meter shall read in gallons with a 6-digit totalizer, and accurately record flow from 1/4 to 20 GPM and conform to AWWA C-700. The meters shall be equal to Sensus SR Series or Precision Meter PMM.

30.02.07 Coppersetter

Coppersetters shall be all copper or bronze with horizontal inlet and outlet, locking stop at meter inlet, test valve, and adequate brace bars to support the meter in a horizontal position in a rigid manner. The coppersetter shall raise the meter above the normal service line bury depth so as to place the top of the meter and angle valve no less than 6 inches nor more than 10 inches below the top surface of the finished meter box. Tandem coppersetters are required for individual pressure reducing valve installations. The coppersetter shall be sized for 1" IPS PE pipe and 5/8" x 3/4" water meter, and shall be equal to Ford or McDonald.

30.02.08 Meter Boxes

The coppersetter, angle stop, test valve and meter idler shall be enclosed within a standard sized meter box of wire reinforced concrete or fiber reinforced plastic. All sections of boxes and lids shall be nested or otherwise interlock to prevent lateral movement. Sufficient sections shall be installed to provide a walled enclosure for a minimum depth of 18 inches below the top of the meter. Minimum cover opening dimensions shall be 10 inches x 16 inches, except for tandem coppersetter installations, which require a minimum dimension of 20 inches. Meter boxes shall be equal to Fog Tite concrete meter boxes or Brooks plastic meter boxes.

30.02.09 Individual Pressure Reducing Valves

Individual pressure reducing valves, when required, shall be installed on tandem coppersetters or in the house plumbing and shall be bronze body construction with stainless steel seat ring and strainer. They shall be equal to Watts Series 135 or Mueller Series E-9300. Reducer shall allow connection of 1 1/2" pipe at outlet of pressure reducing valve.

30.02.10 Water Service Line Installation

Water service lines and appurtenances shall be installed in accordance with Technical Provision 3.0, Excavation, Trenching, Backfilling, and all state and local standards.

A minimum of 2-feet of cover is required over the top of the water service lines. Actual bury depth shall be as specified by the Project Manager. Service lines shall be cut using a tool or tools specifically designed to leave a smooth, even and square end on the pipe. Cut ends shall be reamed to the full inside diameter of the pipe. Pipe ends to be connected using fittings which seal to the outside surface of the pipe shall be cleaned to a sound, smooth finish before installation. Splices shall be kept to a minimum and shall be made with compression type couplings. No splices shall be made within 10 feet of any sewer line.

Detectable warning tape shall be installed over all non-metallic lines per manufacturer's instructions. The tape shall be placed over the top of the pipe approximately 18 inches below finished grade and shall extend its full length. Detectable warning tape shall end in the meter box.

All service connections to water mains shall be made using the specified saddles. Particular care shall be exercised to assure that the main is not damaged by installation of the saddle. The saddle shall be aligned on the water main so that it is at a 45-degree angle above the springline of the pipe. Where required, the Contractor shall reconnect existing water service connections to new water mains using materials specified herein. The Contractor shall also connect the water service line to the existing water service line from the house or facility which is being served, if available. Otherwise this line shall be extended to with 5-feet of the proposed building (house) and the end plugged and the location marked. The Contractor shall provide approximately 10-feet of additional PE pipe and left in the trench of the service line extends only with 5-feet of the house.

Individual pressure reducing valves, where required, shall be installed on tandem coppersettlers housed in an appropriately sized meter box, or in the house plumbing as shown on the drawing or as determined by the COR.

Individual double check valve assemblies, where required, shall be housed in a separate (from the water meter) appropriately sized meter box, or in the house plumbing as shown on the drawing or as determined by the COR.

30.03 Encasement Pipe for Water Service Line

30.03.01 Encasement Pipe Material

PVC encasement pipe shall be the diameter shown on the drawings and shall conform to material specification ASTM D1784, Type 1, Grade 1, manufacturing specification ASTM D2241, and the pipe shall be PVC schedule 40. All PVC pipe joints shall be rubber

compression ring type with rubber gaskets conforming ASTM F477, and equal to J-M Ring Tite PVC Pressure Rated Pipe, or PWPipe TwinSeal PVC.

Steel encasement pipe and fittings shall be the diameter shown on the drawings and shall be Schedule 40 and shall conform to ASTM A120. The pipe shall be joined by the use of threaded steel couplings.

30.03.02 Encasement Installation

Where encasement pipe is required and the open cut method of installation is allowed, the Contractor shall install encasement pipe in accordance with Technical Provision 3.0, Excavation, Trenching, and Backfilling.

Water service lines crossing roads or rights-of-way which cannot be open cut shall be bored. The Contractor shall bore the crossing by using a pneumatic or hydraulic boring machine such as a Hole Hog, or shall use water jetting equipment. Minimum allowable encasement pipe diameter for the crossing shall be of sufficient size to allow the water service line to be easily slid into position.

30.04 Insulation for Water Service Line

30.04.01 Insulation Material

Pipe insulation shall be preformed foam pipe with a minimum thermal resistance (R-value) of R-3.

30.04.02 Insulation Installation

Preformed foam pipe insulation shall be installed on all sections of pipeline not buried below ground in accordance with the manufacturer's recommendations to prevent freezing of the pipe.

30.05 Flushing and Testing

Prior to installation of the meter and connection to the building or house, the entire water service line and appurtenances shall be flushed. Testing shall be accomplished by applying normal main pressure to the exposed water service line and inspecting all joints for leaks. All leaks shall be repaired. If a new water main is concurrently installed with the water service lines, then the service lines shall be tested concurrently with the main line with all joints exposed for leaks. No additional allowable leakage shall be allowed for the PE service lines.

30.06 Disinfection

Disinfection of the water service line shall be performed by the Contractor after the system is complete using liquid chlorine only with a minimum concentration of 50ppm. Use of HTH or other granular compounds will not be allowed. The chlorine solution will remain in the water

service line for a minimum of ½ hour. The water service line will then flushed until chlorine residual is eliminated. Care shall be taken by the Contractor to prevent any accidental water use by the homeowner during disinfecting. After the chlorine residual has been completely eliminated, the contractor shall take water samples from the house for bacteriological examination by an EPA certified laboratory. Sampling methods shall be in accordance with recommendations of the laboratory. Testing shall be done at the Contractor's expense. If unsafe bacteriological results are received, the Contractor shall re-chlorinate and flush as necessary until safe bacteriological test are obtained. Any re-chlorination and testing needed will be at the Contractor's expense.

TECHNICAL PROVISION 40.0

WATER MAINS AND APPURTENANCES

40.01 Scope of Work

The work covered by this section includes the furnishing of all plant, labor, tools, equipment, and material, and performing all operations in connection with the construction of water mains, including the placing of all necessary valves, hydrants, fittings and appurtenances in accordance with these technical provisions and applicable drawings.

40.02 Water Mains

40.02.01 Polyvinyl Chloride (PVC) Pipe and Fittings

PVC material shall conform to ASTM D1784, Type 1, Grade 1. PVC pipe shall conform to ASTM D2241 and the pipe shall be PVC 1120, SDR or pressure rating as specified in the Bid Schedule. All PVC pipe joints shall be rubber compression ring type with rubber gaskets conforming to ASTM D2672 and D3139, and equal to JM Ring Tite or Certain-Teed Fluid- Tite.

Fittings for PVC pipe shall be ductile iron or Class 250 gray iron conforming to AWWA C110 and C111 and shall be cement-mortar lined conforming to AWWA C104. Fittings for PVC pipe with a nominal diameter of 3 inches or less may be 200 psi rated PVC conforming to ASTM D1784, Type 1, Grade 1, and ASTM D2241.

40.02.02 Ductile Iron pipe and Fittings

Ductile iron pipe shall be centrifugally cast in 18-foot nominal lengths conforming to AWWA C151, shall have a cement-mortar lining conforming to AWWA C104, and shall be Standard Thickness Class 50. Non-restraining joints shall be rubber gasket, push-on type, or mechanical conforming to AWWA C111. Restrained joints shall be as specified in the drawings.

Fittings for ductile iron pipe shall be ductile iron or Class 250 gray iron conforming to AWWA C110 and C111 and shall be cement-mortar lined conforming to AWWA C104. Plain end fittings shall be ductile iron if mechanical joint retainer glands are installed on the plain end.

Ductile iron pipe and fittings shall be wrapped with 8 mil polyethylene in conformance with AWWA C105.

40.02.03 Water Main Installation

Pipe and fittings shall be installed in accordance with the manufacturer's printed specifications and instructions, to the standards of the AWWA for installing the type of pipe used, and in accordance with Technical Provision 3.0, Excavation, Trenching, and Backfilling.

Pipe and fittings shall be carefully handled to avoid damage. Damaged pipe and fittings will be rejected and shall be removed from the site within 24 hours. Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations, and any pipe or fitting that has been installed with dirt or foreign material shall be removed, cleaned, and re-laid. At times when pipe laying is not in progress, the open ends of the pipe shall be closed with a watertight plug.

Long radius curves, either horizontal or vertical, may be laid with standard pipe by deflecting the joints. The amount of deflection at each pipe joint shall not exceed the manufacturer's printed recommended deflections. When rubber gasketed pipe is laid on a curve, the pipe shall be jointed in a straight alignment and then deflected to the curved alignment. Trenches shall be made wider on curves for this purpose.

Metallic tracer tape shall be installed over all non-metallic lines. The tracer tape shall be placed over the top of the pipe approximately 18 inches below finished grade and shall extend its full length.

40.02.04 Connections To Existing Mains

Connections to an existing water main shall not be made without making the necessary arrangements with the Owner of the existing utility in advance. Work shall not be started until all the materials, equipment, and labor have been assembled on the site. When work is started on a connection, it shall proceed continuously without interruption, and as rapidly as possible until completed. If the connection to the existing system involves turning off the water, the Contractor shall be responsible for notifying the residents affected by the shutoff 24 hours in advance. No shutoff of mains will be permitted overnight, over weekends, or on Federal holidays.

Connections to existing water mains shall be made in a neat, workmanlike manner to suit actual conditions encountered at the existing main. Connections made by wet or dry tapping shall be done in strict accordance with the tapping machine manufacturer's recommendations. Cutting shall be done without damage to the pipe coating and so as to leave a smooth end at right angles to the axis of the pipe. Care shall be taken to prevent the existing main from being contaminated when making the connection. The Contractor shall conduct his operations in such a manner that no trench water, mud or other contaminating substances are allowed to enter the connection line or main at any time during the progress of the work.

40.03 Valves for Water Mains

40.03.01 Gate Valves

All gate valves shall conform to AWWA Specification C509, iron body, bronze mounted, resilient seat, counter clockwise opening, inside screw, non- rising stem with "O" ring seals, and 2-inch square wrench nut. Valve working pressure rating shall be 200 psi. The valves shall be Mueller, Kennedy AWWA, CLOW Eddy Iowa, Dresser, M&H, or equal.

40.03.02 Valve Boxes

Valve boxes shall be installed on all buried valves and shall be 5-inch nominal diameter shaft, 2 piece sliding type equal to Rich No. 920 or 925. The length of the box shall be sufficient to permit access to the valve at the specified depth of bury. Lids shall be vandal proof with 5/8-inch brass pentagon head locking bolt threading into a lug on the riser. The word "water" shall be cast into the lid.

40.03.03 Air Release Valve Assemblies

Air release valve assemblies (ARV) shall be constructed as shown on the drawings. Air release valves shall be cast iron, float operated, 1-inch inlet size. The valves shall be of standard manufacture for water service operating pressures up to 150 psi. The valve assembly shall be connected to the water main by using a 1 inch tapped double strap saddle with malleable iron or bronze body equal to Smith-Blair 313 or 323, Dresser 91, or Mueller double strap saddle. A bronze corporation stop shall be installed between the saddle and the valve equal to Ford F800 or F900.

The ARV shall be housed within an 18-inch diameter by 3-foot long fiberglass meter box or a galvanized or aluminum corrugated metal pipe. This box shall be set on at least 6 inches of coarse gravel. An additional 12 inches of coarse gravel shall be placed in the bottom of the box. The ARV cover shall be a double lid meter box cover with standard size pentagon bolt lock, Ford W32 or equal. The cover shall be set flush with finished surface grade.

40.03.04 Tapping Sleeve And Valve Assembly

Tapping valves shall be furnished with flanged inlet end connections having a machined projection on the flanges to mate with a machined recess on the outlet flanges of the tapping sleeves and crosses. The outlet ends shall conform in dimensions to the AWWA standards for hub or mechanical joint connections, except that the outside of the hub shall have a large flange for attaching a drilling machine. The seat opening of the valves shall be larger than nominal size to permit full diameter cuts. Tapping sleeves and valves shall be Mueller or equal.

40.03.05 Valve Installation

All valves shall be set and jointed to the pipe in the manner as set forth in the AWWA Standards for the type of connecting ends furnished. All valves shall be set on a concrete block with minimum dimensions of 12 inches by 12 inches by 4 inches. Valves and valve boxes shall be set plumb and valve boxes shall be placed over the valve or valve operator in such a manner that the valve box does not transmit shock or stress to the valve. The cast iron valve box cover shall be set flush with the finished grade. An 18-inch by 18-inch by 6-inch reinforced concrete pad shall be poured around each valve box. Before the concrete has hardened, the Contractor shall neatly scribe in the concrete pad the valve size and a line representing the alignment of the pipe through the valve.

A 42-inch valve marker post equal to Brooks 75 G-2 shall be furnished and installed with each

valve. The exact location of the valve marker posts shall be determined in the field and it shall be set such that 18 inches of the post is exposed above grade. The size of the valve and the distance from the post to the valve shall be stenciled with black paint on the face of the post.

40.04 Fire Hydrant Assembly

40.04.01 Fire Hydrant

Fire hydrants shall be of standard manufacture with the name of the manufacturer and direction of opening cast on the hydrant top. Fire hydrants shall conform to AWWA C502. The end connections shall be mechanical joint or flanged conforming to AWWA C110, C110a, and C111. The hydrants shall be equipped with a breakaway safety flange and safety stem coupling at or near the bury line, such that a heavy impact would minimize breakage of hydrant parts. The hydrants shall open counter clockwise, have a 5 inch or larger main valve opening, 6-inch inlet, and tapered pentagonal operating nut. Unless otherwise indicated on the drawings the hydrants shall be equipped with 2 hose nozzles 2-1/2 inches in diameter with National Standard hose threads and a 4-1/2 inch pumper nozzle.

40.04.02 Hydrant Connections And Auxiliary Gate Valves

An auxiliary gate valve and valve box shall be located adjacent to the fire hydrant. The pipe between the fire hydrant and the auxiliary gate valve (if used) and between the auxiliary gate valve and the main shall be 6-inch pipe of the same material as the main.

40.04.03 Fire Hydrant Installation

Hydrants shall be installed plumb with the pumper nozzle toward the street. Where grade is established, the hydrant shall be set to an elevation with the nozzles about 18 inches above the ground or sidewalk level. Where grades are not established, the hydrant shall be set to the elevation established by the Project Engineer. All hydrants shall be set on a concrete block with minimum dimensions of 12 inches by 12 inches by 4 inches. A minimum of 12 cubic feet of coarse gravel or crushed rock shall be provided at the base of each hydrant around the weep hole.

Each hydrant installed near traffic areas shall be provided with 2 guard posts. The posts shall be reinforced concrete 6 feet long by 9 inches in diameter as manufactured by the Fog-Tite Meter Seal Company or equal. They shall be set such that 3-1/2 feet of the post is above grade. A 3-inch wide band at the top of each post shall be painted with 2 coats of yellow reflectorized paint or tape.

40.05 Encasement Pipe For Water Mains

40.05.01 Encasement Pipe Material

Corrugated metal pipe for encasement shall be galvanized steel and shall have 1/2 inch by 2-2/3 inch corrugations and have a minimum thickness of 0.064 inches (16 gauge). 12-inch wide annular galvanized steel band couplers shall be used.

40.05.02 Encasement Installation

Where encasement pipe is required and the open-cut method of installation is allowed, the Contractor shall install encasement pipe in accordance with Technical Provision 3B - Excavation, Trenching, and Backfilling.

Where encasement pipe is required and the open-cut method of installation is not allowed, the Contractor shall install steel encasement pipe by jacking and/or boring. Jacking or boring shall conform with the specific requirements of the roadway or utility authority and any applicable permits or franchises. Jetting or drilling with water is not permitted. Boring pits shall be shored or braced in accordance with applicable OSHA standards. Excavations left open after working hours shall be covered with steel plating or fenced and barricaded.

Pipe shall be installed through the encasement pipe by winch-drawn cable or jacking. A minimum of 4 wooden skids are required on pipe 2 inches in diameter or larger and shall be equally spaced around the pipe and held securely in place with steel straps or cables and clamps. The skids shall be a minimum of 2 feet long and of sufficient thickness to prevent the pipe and couplings from resting on the encasement pipe. The maximum longitudinal spacing between skids shall be 5 feet. Pipe shall be installed through the encasement in such a manner as to avoid placing undue stress on the pipe or encasement. Lubricants (flax soap or drilling mud) may be used between the skids and casing to ease installation. Petroleum products shall not be used. Upon completion of the pipe installation and pressure testing of the pipe installed inside the encasement pipe, both ends of the encasement shall be sealed off by sacking. Burlap sacks filled with sand shall be loosely placed at the ends of the encasement pipe to prevent the backfill material from entering into the annular space between the pipe and the encasement, except that the areas between the bottom of the casing and the skids are to be left open, to allow for drainage.

40.06 Thrust Blocking

Thrust blocking as detailed in the drawings shall be placed at bends, tees, crosses, and fire hydrants. Blocking shall be concrete mix poured in place. Concrete blocking shall be bearing against solid undisturbed earth at the sides and bottom of the trench excavation and shall be shaped so as not to block weep holes or obstruct access to the joints of the pipe or fittings. A minimum of 4-1/2 cubic feet of concrete is required for each thrust block.

40.07 Testing

All water mains and appurtenances shall be tested in sections of 2,000 feet or less and all visible leaks and all leaks above the allowable maximum shall be repaired. The Contractor shall perform all work and provide all necessary equipment including but not limited to appropriate pump, water, pressure gauge, valve, necessary connections, saddle, corporation stops, plugs, and measuring equipment necessary for performing the test. The pipeline shall be backfilled sufficiently to prevent movement of the pipe under pressure. All thrust blocks shall be in place and time allowed for the concrete to cure before testing. Where permanent blocking is not required, the Contractor shall furnish and install temporary blocking and remove it after testing.

The section to be tested shall be slowly filled with water and allowed to stand under pressure a sufficient length of time to allow the escape of air and/or allow the lining of the pipe to absorb water. If necessary, the pipes shall be tapped at high points to vent the air. The portion to be tested shall be pumped up to 150 psi pressure measured at the high point. The pump shall be stopped and pressure and water loss shall be monitored for one hour. Any time the test pressure drops 5 psi, the pump shall be restarted to restore full test pressure, and the quantity of water used shall be recorded. During the test, the section being tested shall be observed to detect any visible leakage. A clean container shall be used for holding water for pumping up pressure on the main being tested. This makeup water shall be sterilized by the addition of chlorine to a concentration of 50 mg/l. The quantity of water required to restore the pressure shall be accurately determined by pumping through a positive displacement water meter with a sweep unit hand registering one (1) gallon per revolution. The meter shall be approved by the Project Manager. At the conclusion of the test period, the test section shall be pumped to full test pressure and the total water used during the test shall be totaled. During the test, the section being tested shall be observed to detect any visible leakage. The quantity of water required to restore the pressure shall be accurately determined by a method approved by the Project Manager. Allowable maximum leakage for various sizes of pipe is as follows.

<u>Nominal Pipe Size</u>	<u>Allowable Leakage (gallons per hour) per 1000 ft or 50 joints</u>
1 inch	0.08
2 inch	0.17
3 inch	0.25
4 inch	0.33
6 inch	0.50
8 inch	0.66
10 inch	0.83
12 inch	0.99

Should the tested section fail to meet the pressure test successfully as specified, the Contractor shall locate and repair the defects and then retest the pipeline.

Prior to calling out the Project Manager to witness the pressure test, the Contractor shall have all equipment set up completely ready for operation and shall have previously successfully performed the test to verify that the pipe is in a satisfactory condition.

All tests shall be made with the hydrant auxiliary gate valves open and pressure against the hydrant valve. After the test has been completed, each gate valve shall be tested by closing each in turn and relieving the pressure beyond. This test of the gate valve will be acceptable if there is no immediate loss of pressure on the gauge when the pressure comes against the valve being checked. The Contractor shall verify that the pressure differential across the valve does not exceed the rated working pressure of the valve.

40.08 Disinfection

A liquid chlorine solution shall be introduced continuously into one end of the system and allowed to

flow along and through all lines and appurtenances to be disinfected until a minimum of 50 ppm of chlorine is detected at representative points throughout the line. A contact period of 24 hours shall be maintained before the system is flushed out with clean water until a maximum of 0.4 ppm chlorine residual is detected. All valves shall be operated several times during the 24 hour contact period.

After disinfection, the Contractor shall collect bacteriological samples for testing in the presence of the Project Manager. The analysis shall be performed by a laboratory certified by the State Health Department. If a positive result (unsatisfactory bacteriological test) is obtained, the system shall be disinfected and retested again by the Contractor. This shall be repeated until a negative result (satisfactory bacteriological test) is obtained. The method of disinfecting and the chlorination materials used are subject to the approval of the Project Manager. Disinfection by introducing granular or tablet chlorine compounds in each pipe length is not an acceptable method of disinfection.