



Reichhardt & Ebe
ENGINEERING INC

TRANSMITTAL SHEET

Date sent: Friday, June 23, 2017
Sent to: All Planholders
Deliver to: Project Estimator
Transmission sent from: Reichhardt & Ebe Engineering
Number of pages including this page: 25

CONFIRMATION OF RECEIPT OF ADDENDUM

PROJECT: GATEWAY NORTH STORMWATER PROJECT
CITY PROJECT NUMBER SW2015-03

**Please complete the following form and
email back to Reichhardt & Ebe Engineering, Inc. at
officeadmin@recivil.com as soon as possible.**

**Have you received Addendum No. 1 for the above-mentioned
project?**

☐ **YES, we received Addendum No. 1**

Signed: _____ **Dated:** _____

Company name (Please Print): _____



Reichhardt & Ebe
ENGINEERING INC

TRANSMITTAL SHEET

TO:

ALL BIDDERS

FROM:

Luis Ponce, P.E.

COMPANY:

DATE:

June 23, 2017

ADDRESS:

TOTAL NO. OF PAGES INCLUDING COVER:

RE:

City of Ferndale
Addendum 1

GATEWAY NORTH STORMWATER PROJECT
CITY PROJECT NUMBER SW2015-03

NOTES/COMMENTS:

To the attention of all bidders for the above project:

Please find the enclosed Addendum for the above referenced project.

The enclosed ADDENDUM is to be considered as much a part of the Contract Documents as if it were included in the body of the plans and specifications, and will be incorporated in and made a part of the contract when awarded and when formally executed.

The Bidder shall acknowledge in writing, on the bid form, this addendum in order to have the bid considered.

Luis Ponce, P.E.



ADDENDUM NO. 1
To the Contract Provisions for
CITY OF FERNDAL, WASHINGTON

GATEWAY NORTH STORMWATER PROJECT
CITY PROJECT NUMBER SW2015-03

ITEM 1

The Bid Proposal Form is replaced in its entirety with the attached **REVISED BID PROPOSAL FORM**. Only bids submitted on the **REVISED BID PROPOSAL FORM** will be considered responsive.

Bid Proposal Form, ITEM NO. 7A, 'Roadway Excavation Including Haul', has been added to the Bid Proposal Form.

Bid Proposal Form, ITEM NO. 7B, 'Embankment Compaction', has been added to the Bid Proposal Form.

Bid Proposal Form, ITEM NO. 11, 'Controlled Density Fill', the quantity has been increased.

Bid Proposal Form, ITEM NO. 17, 'Corrugated Poly Storm Sewer Pipe, 60 In. Diam.', the quantity has been decreased.

Bid Proposal Form, ITEM NO. 24, 'Catch Basin Type 2, 96 In. Diam.', "Linear Foot" and "per LF" has been corrected.

Bid Proposal Form, ITEM NO. 35A, 'Seeding, Fertilizing, and Mulching – Construction Equipment', has been added to the Bid Proposal Form.

ITEM 2

Plan Sheet 5

- The screw anchor location was moved to match the detail sheet.

ITEM 3

Plan Sheet 7

- D7.1, Type 2 Frame & Cover was added.
- Storm sewer run between D7.1 to D7 was added to the Plan view.

ITEM 4

Plan Sheet 9

- The geotextile leader on the “Road Section At Wetland Crossing” was deleted and the dark line between the gravel base and quarry spalls was removed to prevent confusion.
- “Access Road Section” was modified as shown.

ITEM 5

Plan Sheet 10

- “Steel Sheet Install Detail” and “Outfall Maintenance Pad Detail” dimensions were corrected and other detail call outs were added.

ITEM 6

Plan Sheet 11

- “Outfall Anchor Detail” was added.

ITEM 7

1-07.6 Permits and Licenses

Section 1-07.6 is supplemented with the following:

The Contracting Agency is in the process of obtaining an HPA and a Corp permit for this project. The Contracting Agency anticipates acquiring these permits before any Work begins. The Contractor shall not proceed with any portion of the Work in the areas where the permits have not been acquired until the Engineer certifies to the Contractor that the permits have been received.

The following permit conditions will apply:

1. Work below ordinary high water line (OHWL) will be completed by August 31, 2017.
2. In order to isolate the Work area from the river, Contractor shall construct a barrier so that Work below the OHWL can be completed in the dry. Fish shall be excluded from the Work area and water may be pumped out as needed prior to any excavation. The Contractor shall notify the Engineer 5 working days prior to commencing this work so that the Contracting Agency can provide a qualified biologist who will ensure that all fish are herded out with seine nets before the area is completely isolated or remove fish with hand nets.
3. Any water pumped from the river will be discharged in a manner to ensure infiltration or treatment.
4. If high flow conditions that may cause siltation are encountered during this project, Work shall stop until the flow subsides.

5. Every effort shall be taken during all phases of this project to ensure that sediment-laden water is not allowed to enter the river. Erosion control methods shall be used to prevent silt-laden water from entering the river. These may include, but are not limited to, straw bales, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas.
6. Equipment used for this project may operate below the OHWL, provided the drive mechanisms (wheels, tracks, tires, etc.) shall not enter or operate below the OHWL.
7. Equipment used for this project shall be free of external petroleum-based products while working around the river. Equipment shall be checked daily for leaks and any necessary repairs shall be completed prior to commencing Work activities along the river.
8. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the river.
9. All forms used for concrete or concrete by-products shall be completely sealed to prevent the possibility of fresh concrete from getting into the river.
10. All staging and equipment wash out will be done at least 50 feet from OHWL of the river and will not be allowed to impact existing wetlands.
11. Wastewater from project activities and water removed from within-the Work area shall be routed to an area landward of the OHWL to allow removal of fine sediment and other contaminants prior to being discharged to the river.
12. Equipment crossings of the river are not authorized.
13. Excavation for the placement of the structure or armoring materials shall be isolated from the wetted perimeter, and located upland from the OHWL, which shall be clearly marked in the field prior to construction.
14. All waste material such as construction debris, silt, excess dirt or overburden resulting from this project shall be deposited above the limits of flood water in an approved upland disposal site.
15. Stockpiling will occur within the project footprint at least 50 feet from OHWL.
16. No stockpiling of material will be allowed within the wetlands.
17. Refueling operations will be conducted at least 50 feet from an open water body
18. Prior to releasing the water flow to the project area, all bank protection or armoring shall be completed.
19. Disturbance of the riverbed and banks shall be limited to that necessary to construct the outfall and any required channel modification associated with it. Within seven calendar days of project completion, all disturbed areas shall be protected from erosion using vegetation or other means.
20. Upon completion of the project, all material used in isolating the Work area shall be removed from the site and the site returned to pre-project or improved conditions.

ITEM 8

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.1 Description

Section 2-03.1 is supplemented with the following:

The work described in this section, regardless of the nature or type of the materials encountered includes excavating and grading the access roadway, excavating in borrow pits, excavating below grade, excavating channels, removing slide materials and disposing of all excavated material. This work also includes stockpiling, placing and compacting Engineer approved materials generated during roadway excavation at locations shown on the Plans or as directed by the Engineer. Any excavation or embankment required to maintain positive drainage to or from drainage ditches or swales will be considered incidental to this bid item.

Excess material shall become the property of the contractor for disposal. This work may include temporary stockpiling of material as dictated by the Contractors operations. No specific stockpile sites are provided within the project limits, however on-site stockpiling may be permitted as approved by the Engineer. The costs for stockpiling shall be included in the bid items in this section.

2-03.3(7)C Contractor-Provided Disposal Site

Section 2-03.3(7)C is supplemented with the following:

Before completing any filling outside of the project limits, the Contractor, or property owner desiring to receive the fill, shall acquire all permits and approvals required for the use of the disposal site.

2-03.3(10) Selected Material

Section 2-03.3(10) is supplemented with the following:

As indicated in the contract, existing suitable excavation materials, shall be used as embankment, unless otherwise directed by the Engineer.

2-03.3(14) Embankment Construction

Section 2-03.3(14) is supplemented with the following:

This item consists of compacting embankments constructed in accordance with Section 2-03.3(14) using excavated material. The Engineer shall approve all embankment material and compaction equipment prior to their use by the Contractor. Roadway Excavation material shall not be placed above subgrade anywhere within the roadway section unless approved by the Engineer.

2-03.3(14)C Compacting Earth Embankments

Section 2-03.3(14)C is supplemented with the following:

Only Method B is allowed.

2-03.3 (14)E Unsuitable Foundation Excavation

Section 2-03.3(14)E is supplemented with the following:

Prior to any backfilling, the Contractor shall proof roll the subgrade with a loaded dump truck, large self-propelled vibrating roller, or equivalent piece of equipment, to verify stability of the subgrade. The associated cost to proof roll the roadway will be considered incidental to the unit

contract prices of this Contract.

2-03.4 Measurement

Section 2-03.4 is supplemented with the following

Groundwater may be encountered within the project boundary. No payment will be made for dewatering or material replacement. When the Engineer requires excavated material to be removed, stockpiled, and moved again, the material will be measured to the neat line of that removed from the stockpile. No separate measurement or payment will be made for stockpiled materials.

Only one determination of the original ground elevation will be made on this project. Measurement for roadway excavation and embankment will be based on the original ground elevations recorded previous to the award of this contract. Control stakes will be set during construction to provide the Contractor with all essential information for the construction of excavation and embankments.

If discrepancies are discovered in the ground elevations which will materially affect the quantities of earthwork, the original computations of earthwork quantities will be adjusted accordingly.

Earthwork quantities will be computed, either manually or by means of electronic data processing equipment, by use of the average end area method or by the finite element analysis method utilizing digital terrain modeling techniques.

Copies of the ground cross-section notes will be available for the bidder's inspection, before the opening of bids, at the Engineer's office.

Upon award of the contract, copies of the original ground cross-sections will be furnished to the successful bidder on request to the Engineer.

"Embankment Compaction" includes loading, hauling, stockpiling, placing, grading, and compacting suitable excavated material generated under any roadway excavation within the Project limits.

2-03.5 Payment

Section 2-03.5 is supplemented with the following:

The unit contract price per cubic yard for "Roadway Excavation Including Haul" shall be compensation for all labor, materials, tools and equipment necessary to excavate, shape, load, stockpile for later embankment or otherwise dispose of surplus or unsuitable material off-site as specified herein. This item shall include the cost of compacting and proof rolling the subgrade.

"Embankment Compaction" includes loading, hauling, stockpiling, placing, grading, and compacting suitable excavated material generated under any roadway excavation within the Project limits.

ITEM 9

2-09.5 Payment

Section 2-09.5 is supplemented with the following:

“Controlled Density Fill”, per cubic yard.

The unit Contract price per cubic yard shall include all cost for providing and installing the wire mesh.

ITEM 10

7-04.3 Construction Requirements

Section 7-04.3 is supplemented with the following:

Checkmate In-Line Check Valve (Valve) shall be installed in accordance with manufacturer's written Installation and Operation Manual and approved submittals.

Valve shall be installed in the storm sewer pipe prior to installation of the storm sewer pipe.

The Valve should be lifted with either a sling or with supports around the outside diameter at each side of the Valve to ease the installation procedure. Do not place an object through the Valve in order to lift.

The Valve shall be installed into the Contracting Agency designated 20' stick of storm sewer pipe so that the final Valve location is at the Station noted in the Plans.

The Contractor shall coordinate and have the manufacturer's authorized representative available for customer service during the installation and start-up, and to train personnel in the operation, maintenance and troubleshooting of the Valve.

Manufacturer's authorized representative contact information is:

Matthew A Davidson - President
ANTEC CORPORATION
Box 1609, North Bend, WA 98045
Matthew@AntecCorporation.com
Office: 425-888-9090

ITEM 11

7-08.3(1)A Trenches

Section 7-08.3(1)A is supplemented with the following:

If any part of the gravel base or crushed surfacing top course used for the access road is excavated, the Engineer will require that such material, in the quantity required, be selectively removed,

stockpiled separately, and reused. If material so stockpiled becomes contaminated, the Contractor shall furnish suitable material in an amount equal to that lost by contamination at no expense to the Contracting Agency. All costs involved in storing, protecting, re-handling, and placing the material shall be included in other items of Work on the project.

ITEM 12

8-01.3(2) Seeding, Fertilizing, and Mulching

Section 8-01.3(2) is supplemented with the following:

“Seeding, Fertilizing, and Mulching – Construction Equipment” will be paid in the areas where construction equipment disturbs the existing vegetation.

The intent of “Seeding, Fertilizing, and Mulching – Construction Equipment” is to produce viable roadside vegetation toward the end of preventing erosion. If seeding has not germinated satisfactorily at the time of final acceptance, this work will be considered defective according to Section 1-05.7 of the Standard Specifications. The Engineer may require the Contractor to post security equal to 200% of the amount bid for “Seeding, Fertilizing, and Mulching – Construction Equipment” in order to secure performance of this germination specification. This security shall be in a form acceptable to the Contracting Agency and may be required prior to release of retainage of this project. Said security shall not be released until satisfactory germination has occurred. Any erosion, which in the opinion of the Engineer, occurs directly as a result of insufficient seed germination shall be repaired by the Contractor at no additional expense to the Contracting Agency. Any such repairs shall be completed prior to project acceptance or release of security as identified herein. Satisfactory germination is defined as a minimum of 300 stems per square foot. Any area in which two consecutive one square foot plots sampled fall below this standard will be considered defective and shall be corrected by the Contractor.

The dates for seeding outlined in Section 8-01.3(2)F of the Standard Specifications will be considered guidelines rather than requirements for this item. The Contractor shall use professional judgment and consider factors such as weather and soil moisture to obtain satisfactory germination.

Immediately after hydroseeding, the Contractor shall remove hydroseed overspray from all features other than the intended seeding area.

Binding Agents

Tacking agents and soil binders shall be provided in accordance with Section 8-01.3(2)E.

8-01.3(2)D Mulching

Section 8-01.3(2)D is supplemented with the following:

Wood Cellulose mulch shall be applied at a rate of 2,000 pounds per acre. To improve germination of seeds, this rate may be increased with approval by the Engineer.

8-01.4 Measurement

Section 8-01.4 is supplemented with the following:

No separate measurement will be made for fertilizer, mulch, soil amendments, binding agents, or water where applied for "Seeding, Fertilizing, and Mulching – Construction Equipment".

8-01.5 Payment

Section 8-01.5 is supplemented with the following:

The unit contract price per square yard for "Seeding, Fertilizing, and Mulching – Construction Equipment" shall be full compensation for all labor, materials (fertilizer, mulch, soil amendments, binding agents), and water, tools and equipment necessary to perform the work as specified herein. All other items in this Section, not specified on the Bid Proposal form shall be included in the cost of " Seeding, Fertilizing, and Mulching – Construction Equipment". The unit price shall be full compensation for multiple applications in areas required by the Engineer as the work progresses.

ITEM 13

The attached:

- Helical Piles and Anchors Details and Notes

are added to the Contract Documents.

ADDENDUM No. 1**CITY OF FERNDALE
GATEWAY NORTH STORMWATER PROJECT**

() SECTION REFERENCE

June 23, 2017

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
1	1 LUMP SUM	MOBILIZATION (1-09.7)		
			\$	\$
			per LS	
2	1 LUMP SUM	SPILL PREVENTION, CONTROL & COUNTERMEASURES PLAN (1-07)		
			\$	\$
			per LS	
3	1 EST	ARCHAEOLOGICAL AND HISTORICAL SALVAGE (1-07)		
			\$	\$
			5,000.00	5,000.00
			EST	
4	3 DAY	STANDBY TIME CAUSED BY ARCHAEOLOGICAL FINDINGS (1-07)		
			\$	\$
			per DAY	
5	1 LUMP SUM	PROJECT TEMPORARY TRAFFIC CONTROL (1-10)		
			\$	\$
			per LS	
6	1 LUMP SUM	CLEARING AND GRUBBING (2-01)		
			\$	\$
			per LS	
7	1 LUMP SUM	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (2-02)		
			\$	\$
			per LS	
7A	150 CUBIC YARD	ROADWAY EXCAVATION INCLUDING HAUL (2-02)		
			\$	\$
			per CY	
7B	40 CUBIC YARD	EMBANKMENT COMPACTION (2-02)		
			\$	\$
			per CY	
8	10 M GAL.	WATER (2-07)		
			\$	\$
			per M GAL.	

ADDENDUM No. 1

CITY OF FERNDALE GATEWAY NORTH STORMWATER PROJECT

() SECTION REFERENCE

June 23, 2017

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
9	2,800 SQUARE FOOT	SHORING OR EXTRA EXCAVATION CLASS B (2-09)		
			\$	\$
			per SF	
10	1 LUMP SUM	COFFERDAM CONSTRUCTION (2-09)		
			\$	\$
			per LS	
11	15 CUBIC YARD	CONTROLLED DENSITY FILL (2-09)		
			\$	\$
			per CY	
12	400 SQUARE YARD	CONSTRUCTION GEOTEXTILE FOR SUBGRADE SEPARATION (2-12)		
			\$	\$
			per SY	
13	4,300 TON	GRAVEL BASE (4-02)		
			\$	\$
			per TON	
14	300 TON	CRUSHED SURFACING TOP COURSE (4-04)		
			\$	\$
			per TON	
15	150 LINEAR FOOT	CORRUGATED POLY STORM SEWER PIPE, 12 IN. DIAM. (7-04)		
			\$	\$
			per LF	
16	760 LINEAR FOOT	CORRUGATED POLY STORM SEWER PIPE, 48 IN. DIAM. (7-04)		
			\$	\$
			per LF	
17	502 LINEAR FOOT	CORRUGATED POLY STORM SEWER PIPE, 60 IN. DIAM. (7-04)		
			\$	\$
			per LF	
18	48 LINEAR FOOT	CONTRACTING AGENCY SUPPLIED CORRUGATED POLY STORM SEWER PIPE 60 IN. DIAM. (7-04)		
			\$	\$
			per LF	

ADDENDUM No. 1**CITY OF FERNDALE
GATEWAY NORTH STORMWATER PROJECT**

() SECTION REFERENCE

June 23, 2017

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
19	1 EACH	CONTRACTING AGENCY SUPPLIED CHECKMATE INLINE CHECK VALVE (7-04)		
			\$	\$
			per EA	
20	4 EACH	PIPELINE SCREW ANCHOR (7-04)		
			\$	\$
			per EA	
21	1,412 LINEAR FOOT	TESTING STORM SEWER PIPE (7-04)		
			\$	\$
			per LF	
22	1 EACH	CATCH BASIN TYPE 2, 48 IN. DIAM. (7-04)		
			\$	\$
			per EA	
23	5 EACH	CATCH BASIN TYPE 2, 72 IN. DIAM. (7-04)		
			\$	\$
			per EA	
24	3 EACH	CATCH BASIN TYPE 2, 96 IN. DIAM. (7-04)		
			\$	\$
			per EA	
25	1 EACH	CONTRACTING AGENCY SUPPLIED CATCH BASIN TYPE 2, 96 IN. DIAM. (7-04)		
			\$	\$
			per EA	
26	1 LUMP SUM	ADJUSTMENTS TO FINISHED GRADE (7-04)		
			\$	\$
			per LS	
27	200 CUBIC YARD	REMOVAL OF UNSUITABLE MATERIAL INCL. HAUL (7-08)		
			\$	\$
			per CY	
28	210 SQUARE YARD	STABILIZED CONSTRUCTION ENTRANCE (8-01)		
			\$	\$
			per SY	

ADDENDUM No. 1

CITY OF FERNDALE GATEWAY NORTH STORMWATER PROJECT

() SECTION REFERENCE

June 23, 2017

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
29	2,500 LINEAR FOOT	SILT FENCE (8-01)		
			\$	\$
			per LF	
30	420 LINEAR FOOT	HIGH VISIBILITY SILT FENCE (8-01)		
			\$	\$
			per LF	
31	50 HOUR	STREET CLEANING (8-01)		
			\$	\$
			per HR	
32	1 FORCE ACCOUNT	EROSION/WATER POLLUTION CONTROL (8-01)		
			\$ 5,000.00	\$ 5,000.00
			FA	
33	1 LUMP SUM	ESC LEAD (8-01)		
			\$	\$
			per LS	
34	4 EACH	INLET PROTECTION (8-01)		
			\$	\$
			per EA	
35	950 SQUARE YARD	SEEDING, FERTILIZING, AND MULCHING (8-01)		
			\$	\$
			per SY	
35A	2,000 SQUARE YARD	SEEDING, FERTILIZING, AND MULCHING – CONSTRUCTION EQUIPMENT (8-01)		
			\$	\$
			per SY	
36	300 TON	QUARRY SPALLS (8-15)		
			\$	\$
			per TON	
37	4 EACH	POTHOLE EXISTING UNDERGROUND UTILITY (8-30)		
			\$	\$
			per EA	

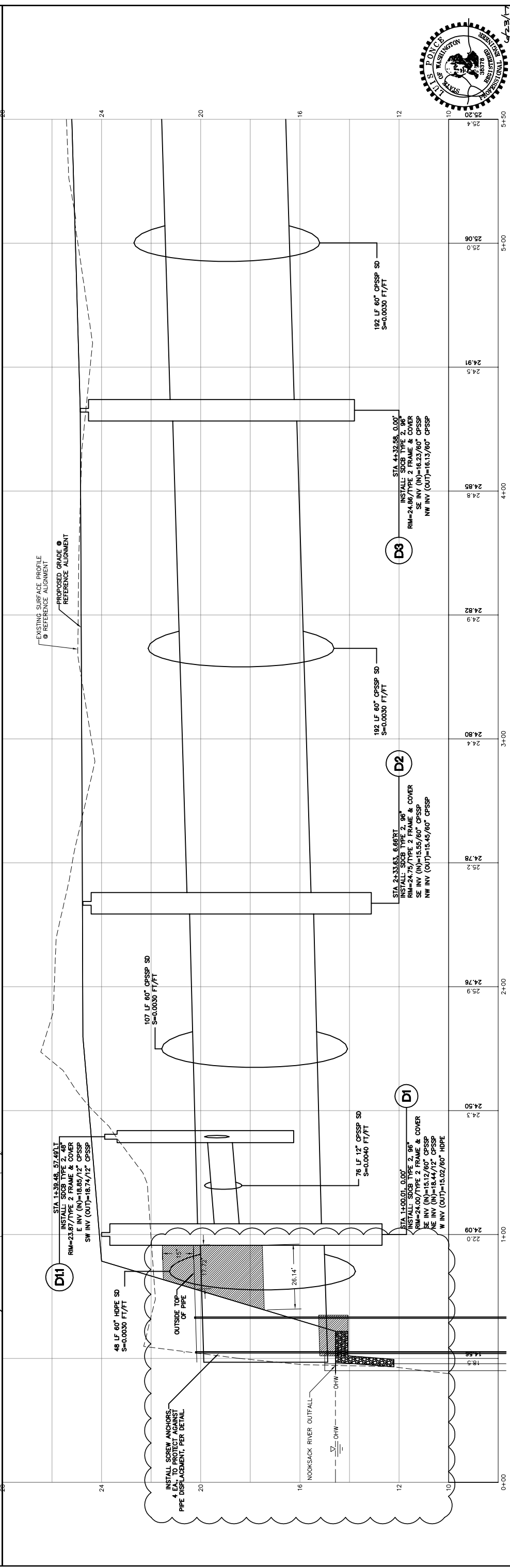
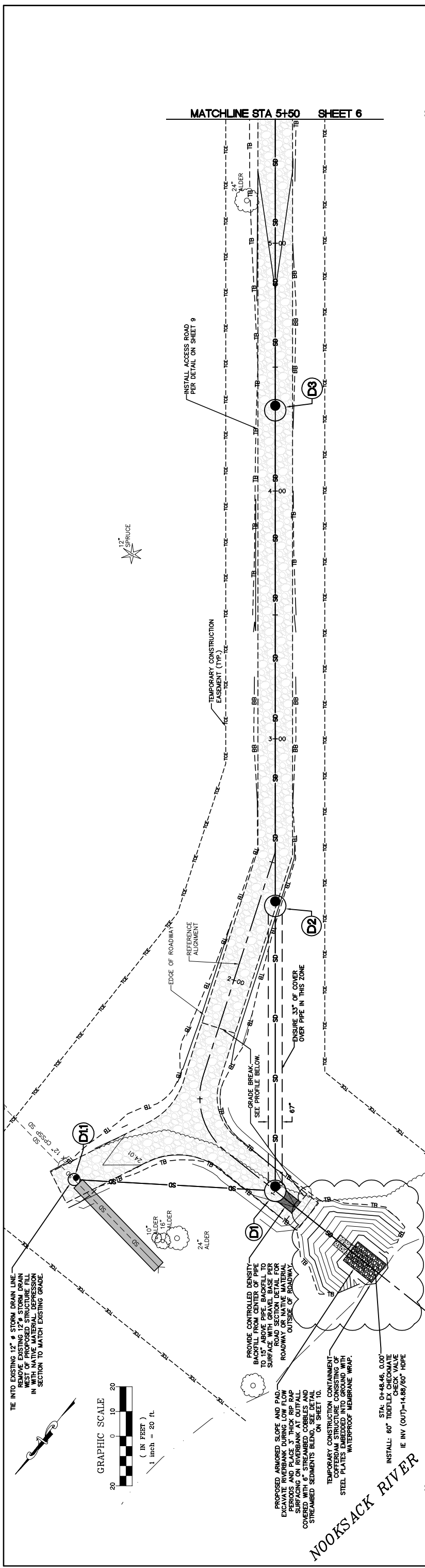
ADDENDUM No. 1

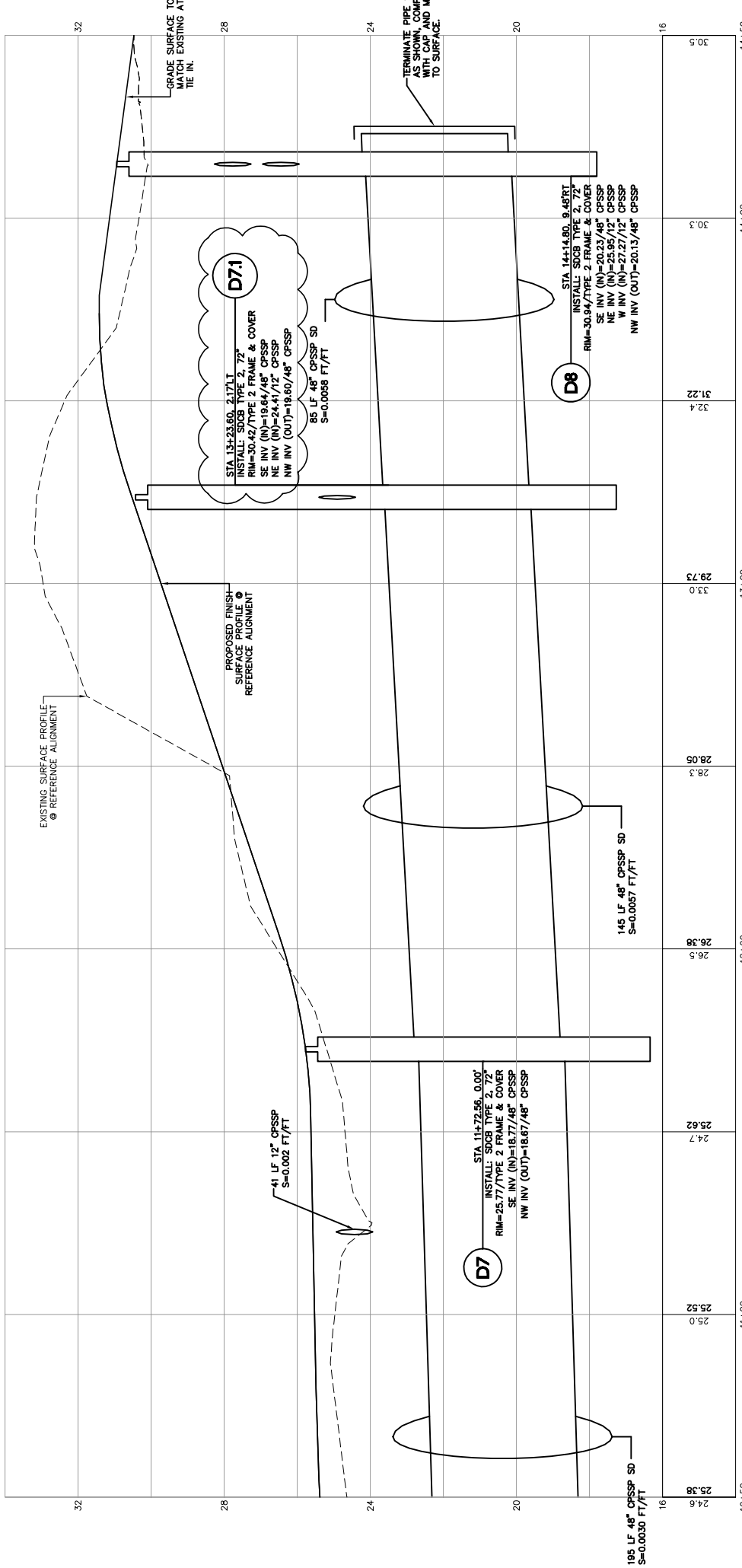
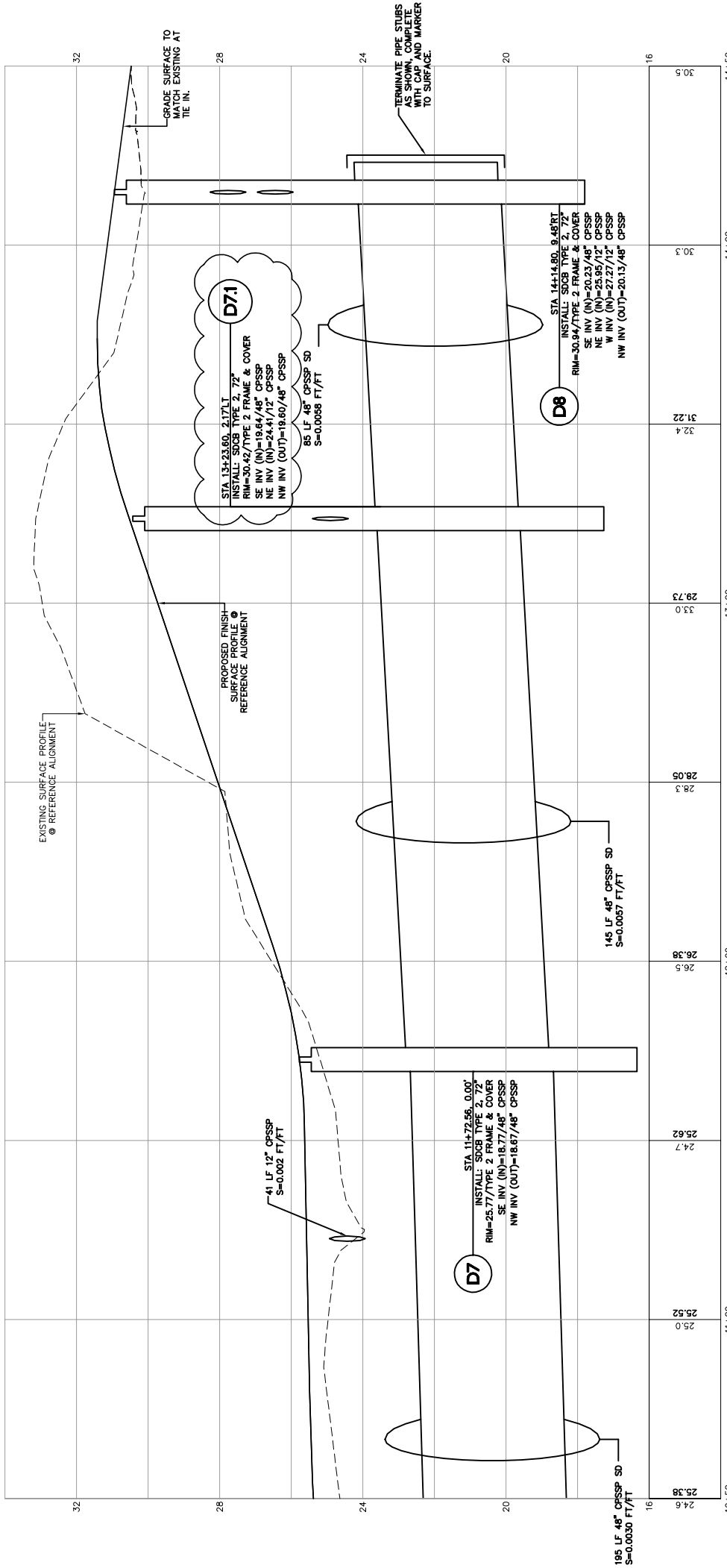
**CITY OF FERNDALE
GATEWAY NORTH STORMWATER PROJECT**

() SECTION REFERENCE June 23, 2017

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
38	1 FORCE ACCOUNT	REPAIR EXISTING PUBLIC & PRIVATE FACILITIES (8-31)		
			\$ 6,000.00	\$ 6,000.00
			FA	
39	1 FORCE ACCOUNT	UNANTICIPATED SITE WORK (8-32)		
			\$ 25,000.00	\$ 25,000.00
			FA	

TOTAL \$ _____

[illegible]

[illegible]

BID SET

DESIGN	 Reichhardt & Ebe ENGINEERING INC	P.O. Box 978, 423 Front Street, Lynden, WA 98264 (360) 354-3687
WON BY		813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1773
DRAWN		
CHECK		

[illegible]

**CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248**

GATEWAY NORTH DETAILS

DWG 15021 DETAILS-GW

DATE _____

SHEET 9 of 11

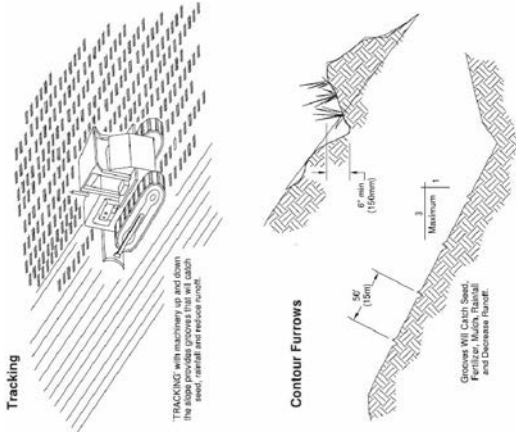
TESC GENERAL NOTES

- THIS PLAN REPRESENTS THE MINIMUM REQUIREMENTS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE ENGINEER AS ARE FOUND NECESSARY.
- THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO ALL OTHER SITE CONSTRUCTION. VEGETATION SHALL BE MAINTAINED AND NOT REMOVED UNLESS NECESSARY FOR CONSTRUCTION. ALL VEGETATION NOT IN THE CONSTRUCTION AREA SHALL BE LEFT UNDISTURBED.
- CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE ENGINEER OF ANY PROPOSED CHANGES IN PLAN PRIOR TO CONSTRUCTION OF THAT CHANGE. CONTRACTOR SHALL KEEP RECORD OF DEVIATIONS AND FORWARD TO THE ENGINEER.
- THE EROSION CONTROL AND SEDIMENTATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE CONSTRUCTED EROSION CONTROL MEASURES, AS SHOWN AND AS INSTALLED ON AN AS NEEDED BASIS.
- TO PERFORM ANY SITE GRADING OR CLEARING, THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING ANY SITE GRADING OR CLEARING.
- SURFACES OPEN ENOUGH TO BECOME SUSCEPTIBLE ON SITE AT ALL TIMES. CONTRACTOR WILL WATER AND HOLDAYS.
- CONTRACTOR SHALL PERFORM ALL STREET CLEANING BY HAND OR WITH A SELF-PROPELLED PICKUP STREET CLEANER. A SELF-PROPELLED STREET SWEEPER WILL NOT BE ALLOWED.
- CONTRACTOR SHALL MAINTAIN ALL DRIVEWAYS AND SIDEWALKS FREE OF DEBRIS. GRASS SEEDING SHALL BE BROADCAST IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL CUT AND FILL SLOPES SHALL BE SEEDED AND FERTILIZED FOR EROSION CONTROL. CONTRACTOR SHALL BE RESPONSIBLE FOR SLOPE EROSION UNTIL VEGETATION IS FULLY ESTABLISHED.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE PROJECT. CONTRACTOR SHALL BE CHARGED OF SEDIMENT AND DEBRIS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

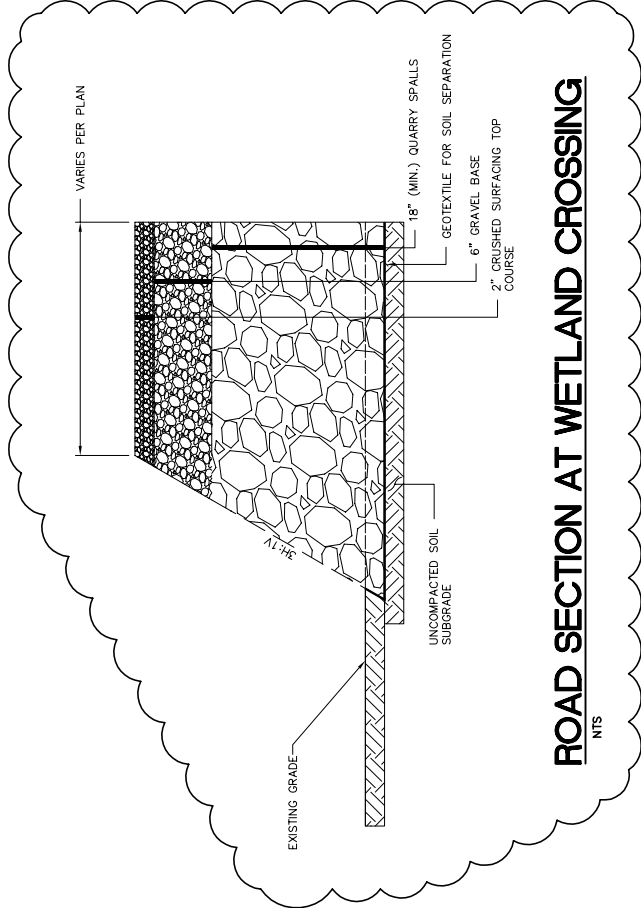
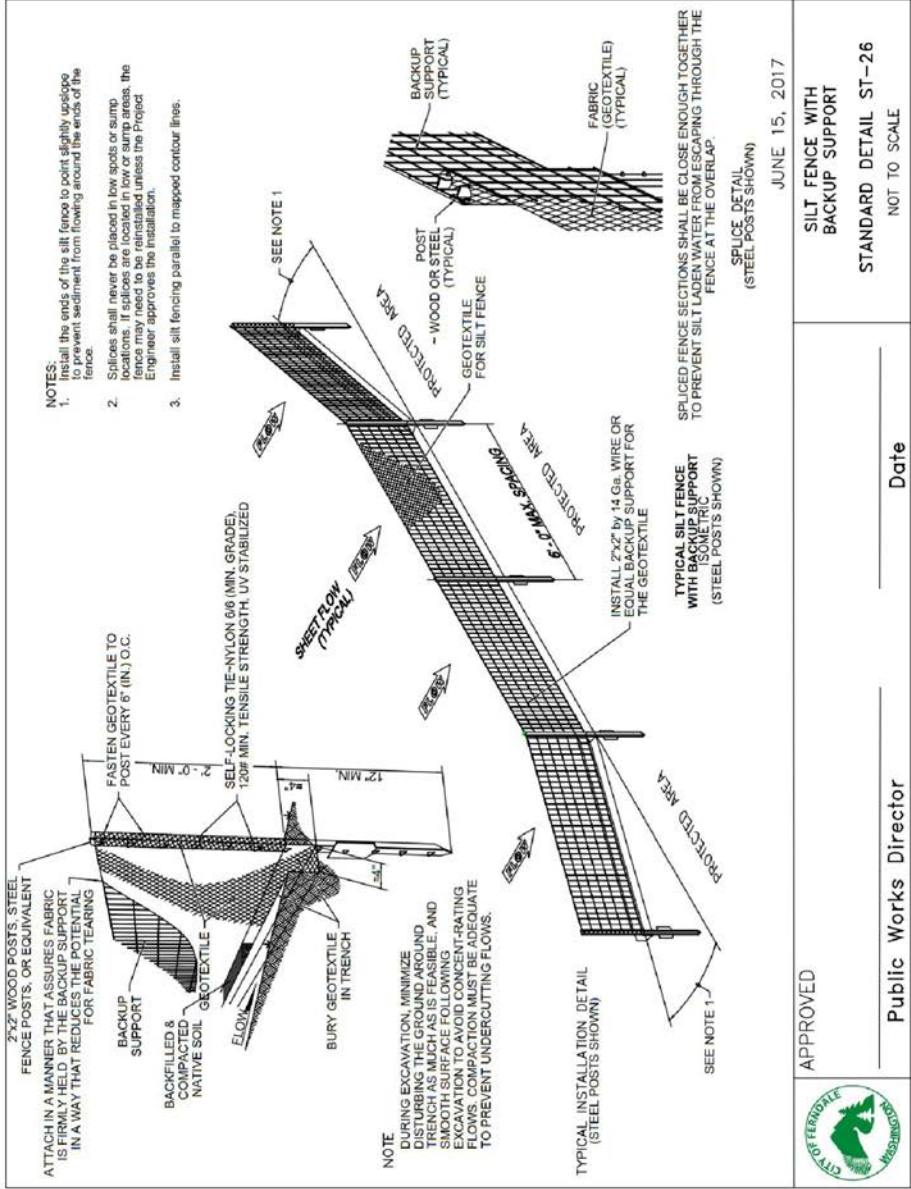
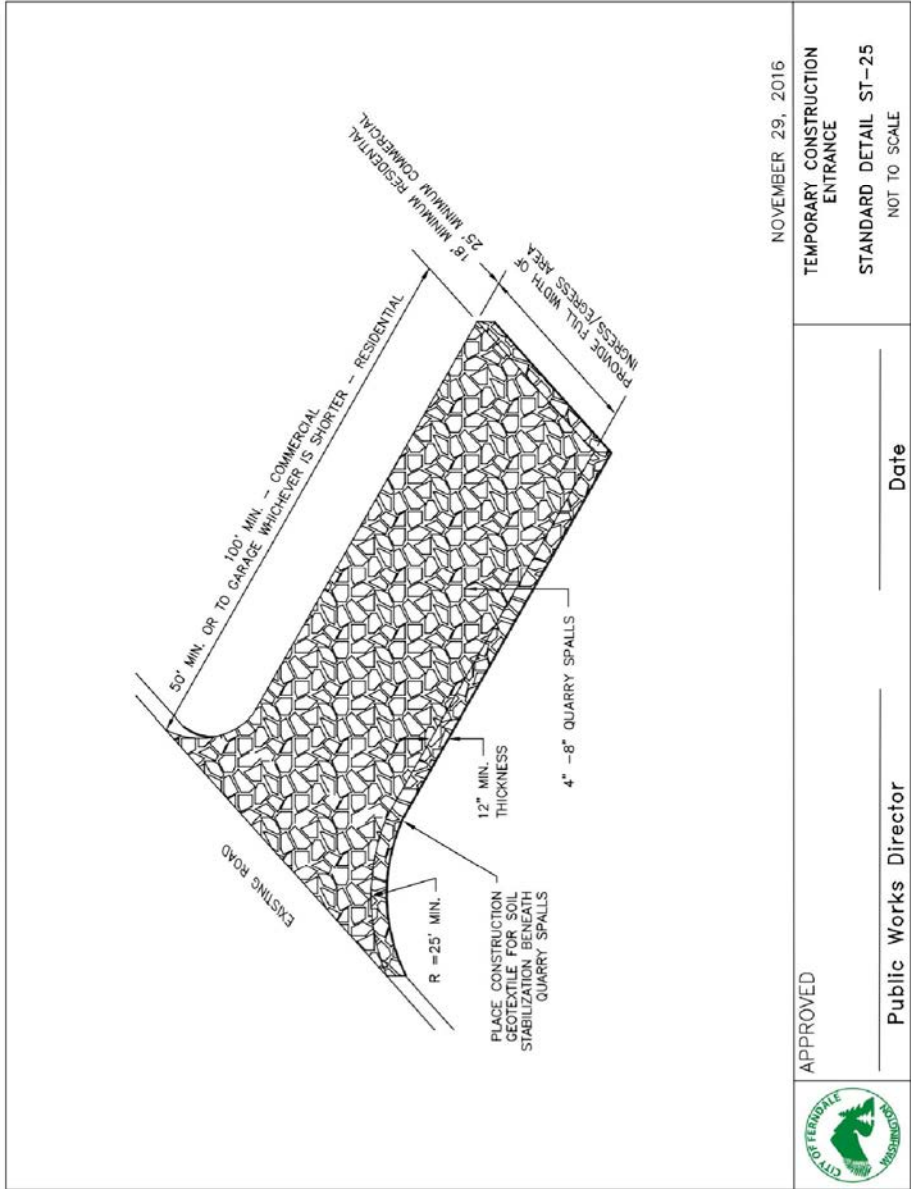
DUST CONTROL: CONTRACTOR SHALL LIMIT DUST GENERATION BY CLEARING ONLY THOSE AREAS WHERE IMMEDIATE EXCAVATION AND GRADING SHALL TAKE PLACE MAINTAINING THE ORIGINAL GROUND COVER AS LONG AS PRACTICAL. DUST CONTROL METHODS SHALL BE PERFORMED BY METHODS LISTED IN NOTE NUMBER EIGHT OF THE TESC GENERAL NOTES. SURFACES SHALL BE SPRAYED WITH WATER AS NEEDED IN ORDER TO ABATE DUST AS APPROVED BY THE ENGINEER.

STREET CLEANING:

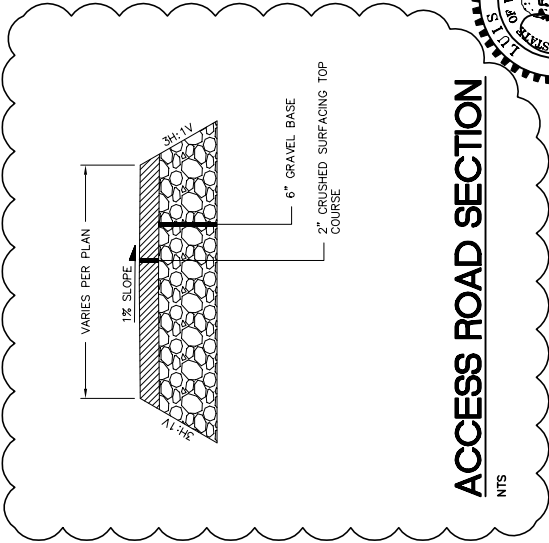
STREET CLEANING: CONTRACTOR SHALL PERFORM ALL STREET CLEANING AT A MINIMUM OF AT LEAST ONCE AT THE END OF EVERY DAY WORKED ON AND ON AN AS NEEDED BASIS BASED ON VEHICLE TRACK OUT. STREET CLEANING SHALL BE PERFORMED BY THE METHODS LISTED IN NOTE NUMBER 10 OF THE TSC GENERAL NOTES AND SHALL NOT ALLOW SEDIMENT INTO STORMWATER CONVEYANCE DITCHES OR STRUCTURES. STREET CLEANING METHODS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION.



SURFACE ROUGHENING



ROAD SECTION AT WETLAND CROSSING



ACCESS ROAD SECTION



BID SET

DESIGNED BY
REICHHARDT & EBE
ENGINEERING INC
P.O. Box 978 / 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

DRAWN BY
CHECKED BY

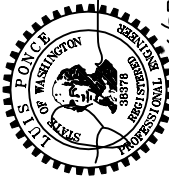
CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

GATEWAY NORTH
DETAILS
STORM DETAILS 2

DWG 15021 DETAILS-GW

DATE
6/15/17
SHEET
11
of 11

SCALE
H: N/A
V: N/A



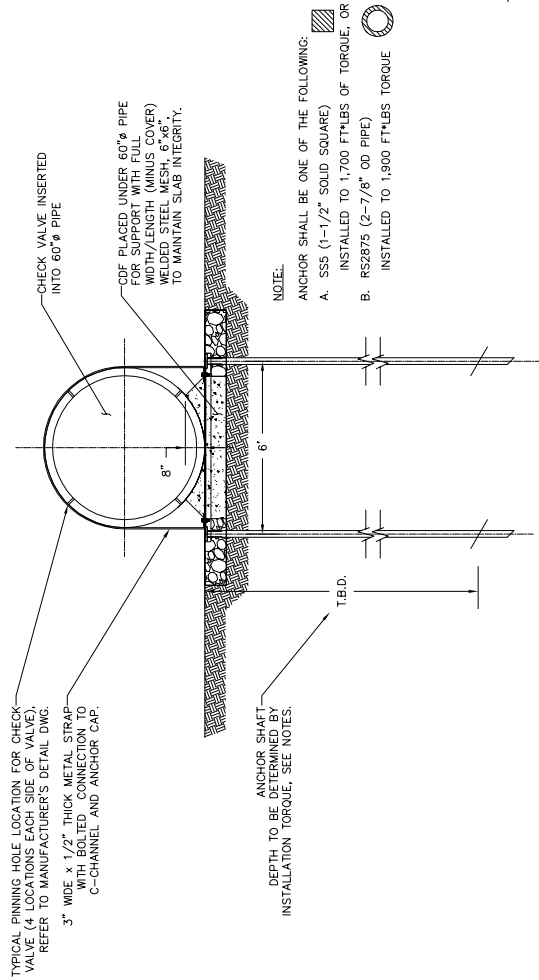
4/23/17

OUTFALL ANCHOR DETAIL

NTS

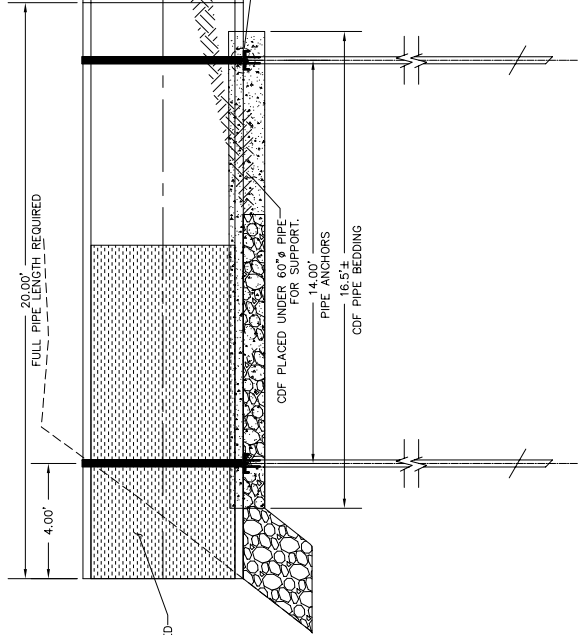
SIDE VIEW

END VIEW

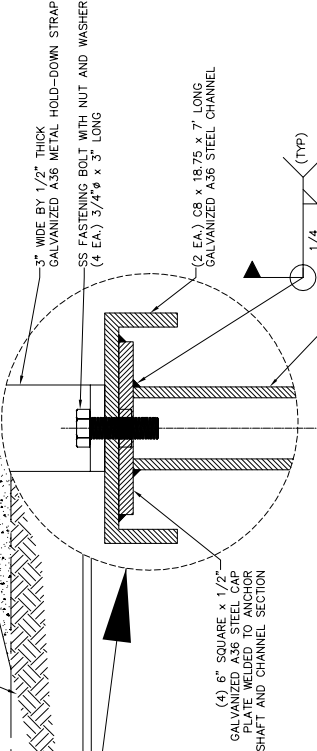


TYPICAL PINNING HOLE LOCATION FOR CHECK VALVE (4 LOCATIONS EACH SIDE OF VALVE), REFER TO MANUFACTURER'S DETAIL DWG.
3" WIDE x 1/2" THICK METAL STRAP WITH BOLTED CONNECTION TO C-CHANNEL AND ANCHOR CAP.

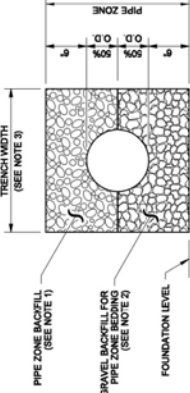
- NOTE:
ANCHOR SHALL BE ONE OF THE FOLLOWING:
A. SSS (1-1/2" SOLID SQUARE)
B. RS2875 (2-7/8" OD PIPE)
C. RS2875 (2-7/8" OD PIPE)
D. RS2875 (2-7/8" OD PIPE)
E. RS2875 (2-7/8" OD PIPE)
F. RS2875 (2-7/8" OD PIPE)
G. RS2875 (2-7/8" OD PIPE)
H. RS2875 (2-7/8" OD PIPE)
I. RS2875 (2-7/8" OD PIPE)
J. RS2875 (2-7/8" OD PIPE)
K. RS2875 (2-7/8" OD PIPE)
L. RS2875 (2-7/8" OD PIPE)
M. RS2875 (2-7/8" OD PIPE)
N. RS2875 (2-7/8" OD PIPE)
O. RS2875 (2-7/8" OD PIPE)
P. RS2875 (2-7/8" OD PIPE)
Q. RS2875 (2-7/8" OD PIPE)
R. RS2875 (2-7/8" OD PIPE)
S. RS2875 (2-7/8" OD PIPE)
T. RS2875 (2-7/8" OD PIPE)
U. RS2875 (2-7/8" OD PIPE)
V. RS2875 (2-7/8" OD PIPE)
W. RS2875 (2-7/8" OD PIPE)
X. RS2875 (2-7/8" OD PIPE)
Y. RS2875 (2-7/8" OD PIPE)
Z. RS2875 (2-7/8" OD PIPE)



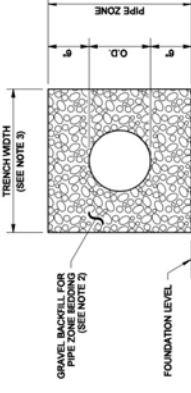
ENLARGED CAP DETAIL



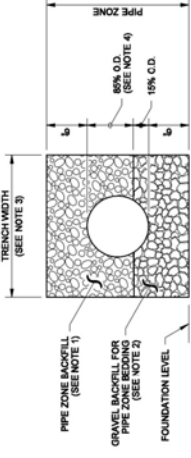
METAL PIPE



THERMOPLASTIC PIPE



CONCRETE AND DUCTILE IRON PIPE



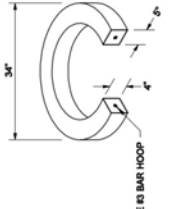
MISCELLANEOUS DETAILS FOR DRAINAGE STRUCTURES STANDARD PLAN B-30.90-01

APPROVED FOR PUBLICATION
PASCO BAKODICH III
SEATTLE, WASHINGTON
DATE: 09-20-07
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

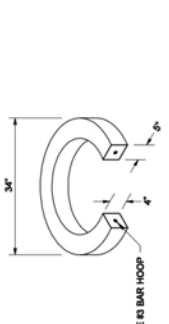


RECTANGULAR ADJUSTMENT SECTION

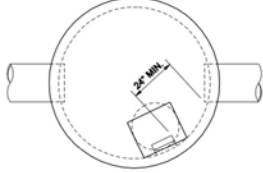
- As an acceptable alternative to rebar, wire mesh having a minimum area of 0.12 square inches per foot may be used for adjustment sections.



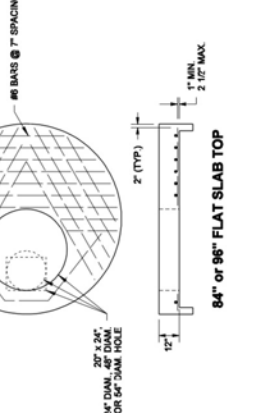
CIRCULAR ADJUSTMENT SECTION



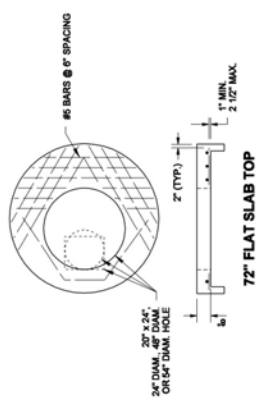
TYPICAL ORIENTATION FOR ACCESS AND STEPS



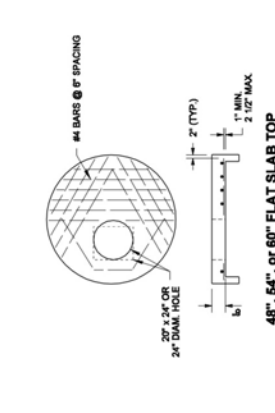
84" or 96" FLAT SLAB TOP



72" FLAT SLAB TOP

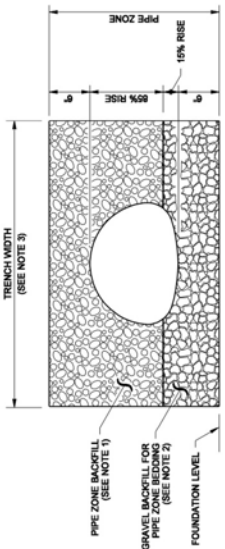


48", 54", or 60" FLAT SLAB TOP



NOTES

- See Standard Specifications Section 7.08.3(3) for Pipe Zone Backfill.
- See Standard Specifications Section 9.03.12(3) for Gravel Backfill for Pipe Zone Bedding.
- See Standard Specifications Section 2.09.4 for Measurement of Trench Width.
- For sanitary sewer installation, concrete pipe shall be bedded to spring line.



PIPE ARCHES

PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
PIPE ARCH (SPAN)	102" to 180"	48"
METAL ONLY	18" to 36"	12"
	45" to 142"	12"
	148" to 200"	48"

PIPE ZONE BEDDING AND BACKFILL STANDARD PLAN B-55.20-00

APPROVED FOR PUBLICATION
HAROLD J. PETERFESSO
SEATTLE, WASHINGTON
DATE: 06-01-08
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION



SS5 HELICAL PILES AND ANCHORS

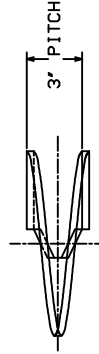
TORQUE STRENGTH RATING-5,700 FT-LB
ULTIMATE CAPACITY* (TENSION/COMPRESSION)-57 KIP
*BASED ON A TORQUE FACTOR (Kt)=10
PER ICC-ES AC308 SECTION 3.13.2
NOMINAL TENSION STRENGTH (COUPLING BOLT)-70 KIP

NOTES-

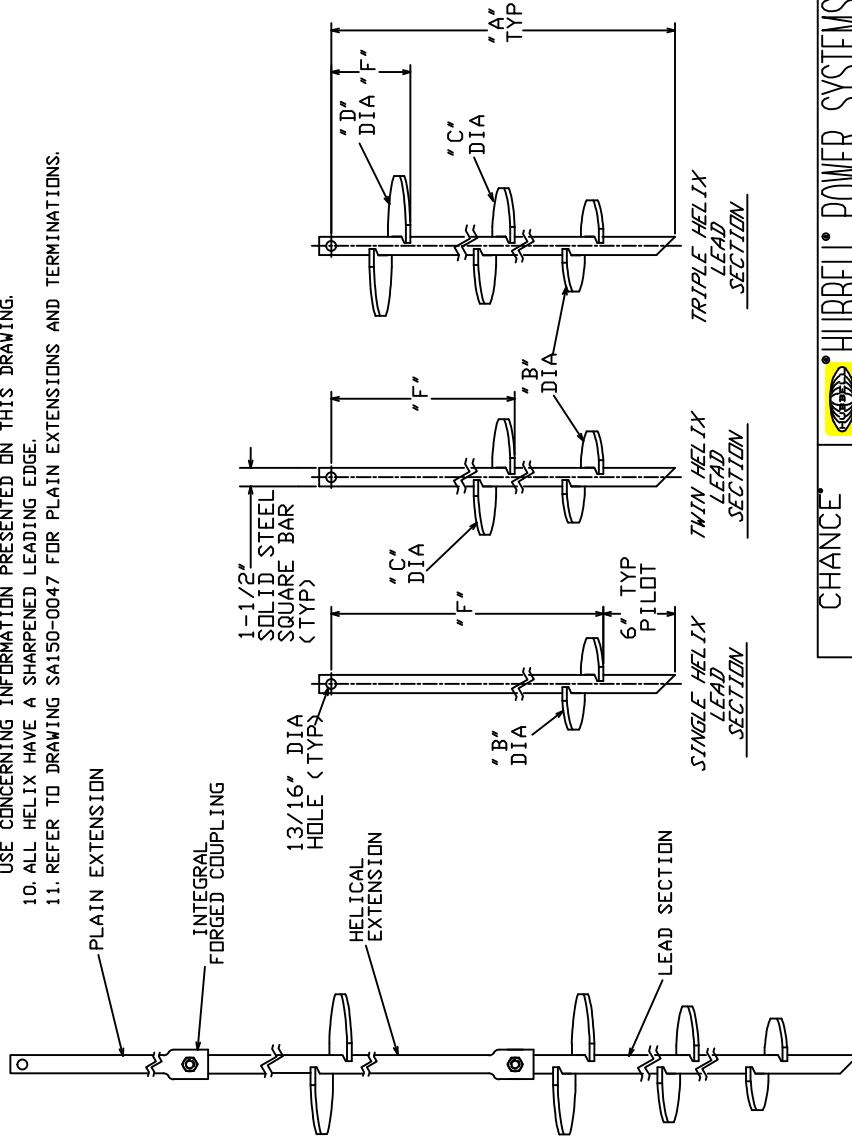
1. HOT DIP GALVANIZED PER ASTM A153-(LATEST REV.)
2. LEAD AND EXTENSION SECTION AND PILOT POINT LENGTHS ARE NOMINAL.
3. PILOT FOR T150-0000 AND C150-0156 IS 3.75" AND 2.5" RESPECTIVELY.
4. SHAFT MATERIAL-HOT ROLLED ROUND-CORNERED SQUARE (RCS) SOLID STEEL BARS PER ASTM A29, MINIMUM YIELD STRENGTH=70 KSI.
5. HELIX MATERIAL-HOT ROLLED LOW CARBON STEEL SHEET, STRIP, OR PLATE PER ASTM A572, OR A1018, OR A656, MINIMUM YIELD STRENGTH=50 KSI, 3/8" THICK.
6. COUPLING BOLTS: 3/4" DIAMETER X 3" LONG HEX HEAD PER ASTM A325 TYPE 1.
7. NOMINAL SPACING BETWEEN HELICAL PLATES IS THREE TIMES THE DIAMETER OF THE LOWER HELIX.
8. MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED WRITTEN QUALITY CONTROL FOR ALL MATERIALS AND MANUFACTURING PROCESSES.
9. ALL WELDING TO BE DONE BY WELDERS CERTIFIED UNDER SECTION 5 OF THE AWS CODE D1. 1.
10. SEE ICC EVALUATION SERVICE INC., EVALUATION REPORT NO. ESR-2794 FOR NOMINAL, DESIGN, AND ALLOWABLE STRENGTH VALUES AND/OR CONDITIONS OF USE CONCERNING INFORMATION PRESENTED ON THIS DRAWING.
11. ALL HELIX HAVE A SHARPENED LEADING EDGE.
12. REFER TO DRAWING SA150-0047 FOR PLAIN EXTENSIONS AND TERMINATIONS.

LEAD SECTION							ICC-ES LISTED ESR-2794
CAT. NO.	"A"	"B"	"C"	"D"	"F"		
C150-0001	82-1/4"	8"			76-1/4"		X
C150-0002	59"	8"			53"		X
C150-0003	82-1/4"	10"			76-1/4"		X
C150-0004	82-1/4"	12"			76-1/4"		X
C150-0005	82-1/4"	14"			76-1/4"		X
C150-0030	82-1/4"	6"	8"		58-1/4"		X
C150-0006	82-1/4"	8"	10"		52-1/4"		X
C150-0031	123"	8"	10"		93"		X
C150-0007	63-1/4"	8"	10"	12"	5-3/4"		X
C150-0058	59"	10"			53"		X
T150-0086	35-3/4"	6"	6"		11-3/4"		X
C150-0051	82-1/4"	10"	12"		46-1/4"		X
C150-0160	35-3/4"	8"	10"		5-3/4"		X
C150-0161	42"	10"	12"		6"		X
C150-0242	59"	12"			53"		X
C150-0243	59"	14"			53"		X
C150-0244	35-3/4"	6"	8"		11-3/4"		X
C150-0397	82-1/4"	8"	10"	12"	22-1/4"		X
C150-0398	123"	10"	12"	14"	51"		X
C150-0399	123"	12"	14"	16"	39"		X
C150-0489	82-1/4"	10"	12"	14"	10-1/4"		X
T150-0000*	82-1/4"	8"	10"	12"	6-1/2"		X
C150-0156	25"	8"			21-1/2"		X

* HELIX ARE SPACED 3' APART



HELIX MUST BE FORMED BY MATCHING METAL DIE
(SIDE VIEW OF TRUE HELICAL FORM)



TYPICAL ANCHOR/PILE ASSEMBLY

CHANCE

HUBBELL POWER SYSTEMS
POWER SYSTEMS, INC.

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ICC-ES LISTED
ESR-2794

TITLE
SS5 LEADS AND
HELICAL EXTENSIONS

SIZE
DWG NO.
SCI SA150-0001

REV
M

DATE
4/25/05

SHEET
1/2

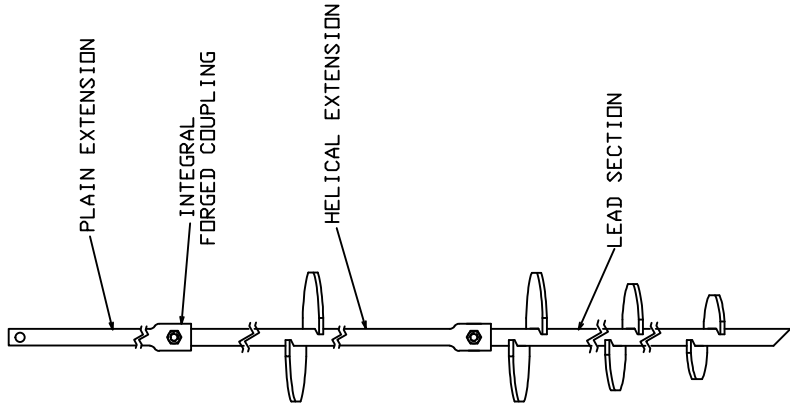
TORQUE STRENGTH RATING - 5,700 FT-LB
ULTIMATE CAPACITY*(TENSION/COMPRESSION)-57 KIP
* BASED ON A TORQUE FACTOR (Kt)=10
PER ICC-ES AC308 SECTION 3.13.2
NOMINAL TENSION STRENGTH (COUPLING BOLT)-70 KIP

SSS EXTENSIONS

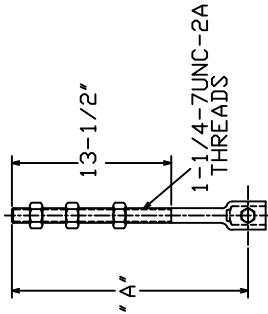
NOTES-

- HOT DIP GALVANIZED PER ASTM A153-(LATEST REV.)
- LEAD AND EXTENSION SECTION AND PILOT POINT LENGTHS ARE NOMINAL.
- SHAFT MATERIAL-HOT ROLLED ROUND-CORNERED-SQUARE (RCS) SOLID STEEL BARS PER ASTM A29; MINIMUM YIELD STRENGTH=70 KSI.
- COUPLING BOLTS: 3/4" DIAMETER X 3" LONG HEX HEAD PER ASTM A325 TYPE1.
- MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED WRITTEN QUALITY CONTROL FOR ALL MATERIALS AND MANUFACTURING PROCESSES.
- ALL WELDING TO BE DONE BY WELDERS CERTIFIED UNDER SECTION 5 OF THE AWS CODE D1. 1.
- SEE ICC EVALUATION SERVICE INC., EVALUATION REPORT NO. ESR-2794 FOR NOMINAL, DESIGN, AND ALLOWABLE STRENGTH VALUES AND/OR CONDITIONS OF USE CONCERNING INFORMATION PRESENTED ON THIS DRAWING.
- REFER TO SA150-0001 DRAWING FOR LEAD SECTIONS AND HELICAL EXTENSIONS.

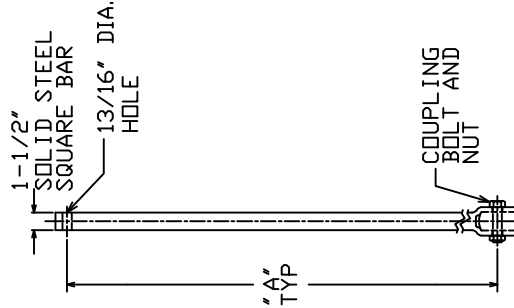
EXTENSION				
CAT. NO.	"A"	"B"	"E"	ICC-ES LISTED ESR-2794
C150-0159	57-1/2"	12"	27-1/2"	X
C150-0166	37-3/4"	14"	27-3/4"	X
C150-0167	57-1/2"	14"	27-1/2"	
C150-0158	58"	10"	8"	
T150-0440	59"	14"	4"	
C150-0047	37-3/4"			X
C150-0008	57-1/2"			X
C150-0009	80-1/2"			X
C150-0048	120"			X
C150-0032	20"			
C114-0009	11"			



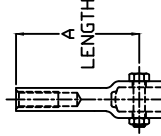
TYPICAL ANCHOR/PILE ASSEMBLY



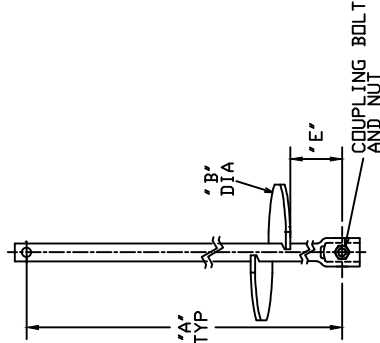
THREADED ADAPTER C150-0032 FOR 1-1/2" SHAFT



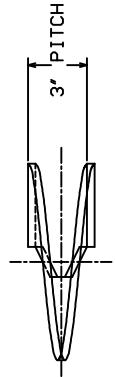
PLAIN EXTENSION



1" DYWIDAG ADAPTER C114-0009 FOR 1-1/2" SHAFT



SINGLE HELIX EXTENSION



CHANCE

ICC-ES LISTED
ESR-2794

HUBBELL POWER SYSTEMS
SS5 EXTENSIONS

SIZE DWG NO. CAT / PART / ASSY NO. REV
SC15A150-0047 SEE CHART E

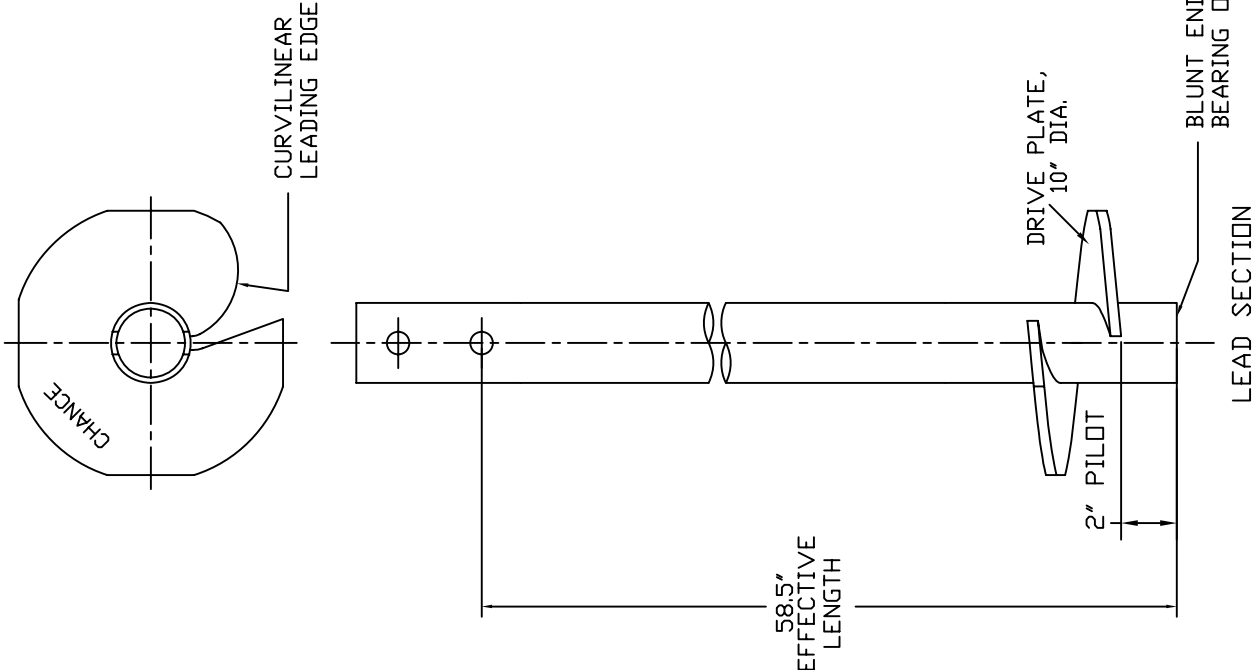
DO NOT SCALE THIS DRAWING DATE 4/25/05 SHEET 2/2

RS2875.203 LEADS

TORQUE STRENGTH RATING-5,500 FT-LB
ULTIMATE COMPRESSION STRENGTH-60 KIP

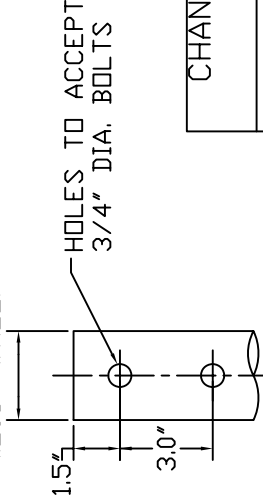
=NOTES=

1. HOT DIP GALVANIZED PER ASTM A153-(LATEST REVISION)
C278-4510 ONLY
2. LEAD EFFECTIVE AND PILOT POINT LENGTHS ARE NOMINAL.
3. PIPE SHAFT MATERIAL 2.5" NOMINAL, SCHEDULE 40 WALL
THICKNESS PER ASTM A500 GRADE B.
4. DRIVE PLATE SCREWS PIPE SHAFT DOWN TO ROCK
5. MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED
WRITTEN QUALITY CONTROL FOR ALL MATERIALS AND
MANUFACTURING PROCESSES.
6. ALL WELDING TO BE DONE BY WELDERS CERTIFIED UNDER
SECTION 5 OF THE AWS CODE D1.1.
7. FOR ADDITIONAL PIPE SHAFT LENGTH, REFER TO DRAWING
SA278-4500 LIFT PILE EXTENSIONS.



CATALOG NUMBER	DESCRIPTION
C278-4510	RS2875.203 LEAD, 58.5'
C278-4510NG	RS2875.203 LEAD, 58.5', NON-GALV

2-7/8" O.D. SCH. 40
(.203" WALL)



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SIZE SC SA278-4510	DWG NO. CAT / PART / ASST NO. SEE CHART
DO NOT SCALE THIS DRAWING	DRN BY KSH
DATE 2/14/05	SHEET 1/1

RS2875.203 EXTENSIONS

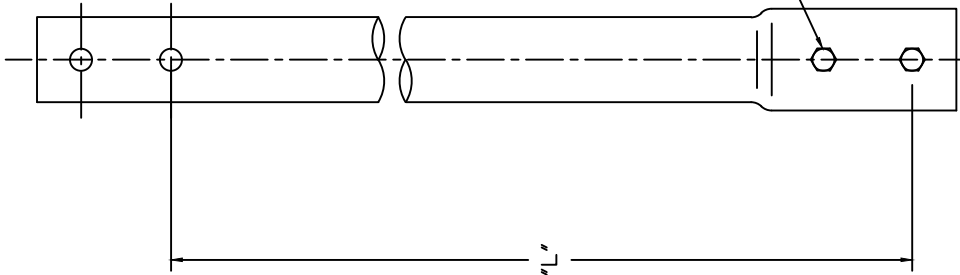
TORQUE STRENGTH RATING-5,500 FT-LB

ULTIMATE CAPACITY* (TENSION/COMPRESSION) 49 KIP

*BASED ON A TORQUE FACTOR OF (Kt)=9

NOTES-

1. HOT DIP GALVANIZED PER ASTM 153-(LATEST REVISION) C278-4500NG, AND C278-4700NG ARE NON-GALVANIZED.
2. EXTENSION SECTION LENGTHS ARE NOMINAL.
3. PIPE SHAFT MATERIAL 2.5" NOMINAL, SCHEDULE 40 WALL THICKNESS PER ASTM A500 GRADE B/C, MINIMUM YIELD STRENGTH OF PIPE SHAFT IS 50 KSI.
4. COUPLING BOLTS: 3/4" DIAMETER X 4.25" LONG HEX HEAD PER SAE J429 GRADE 5.
5. REFER TO SA278-4510 AND SA278-4510X37 FOR LEAD SECTION DRAWINGS.
6. MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED WRITTEN QUALITY CONTROL FOR ALL MATERIALS AND MANUFACTURING PROCESSES.
7. EXTENSIONS ARE FABRICATED WITH A HOT FORGED EXPANDED INTEGRAL COUPLING CONNECTION ON ONE END.



2-7/8" O.D. SCH. 40
(.203" WALL)

COUPLING BOLTS
AND NUTS

HOLES TO ACCEPT
3/4" DIA. BOLTS

1.5"
3.0"

EXTENSION

COUPLING BOLT
HOLE DETAIL

CATALOG NUMBER	DESCRIPTION	"L"
C278-4300	RS2875.203 PIPE SHAFT EXT.	30"
C278-4500	RS2875.203 PIPE SHAFT EXT.	57"
C278-4500NG	RS2875.203 PIPE SHAFT EXT. NON-GALV.	57"
C278-4700	RS2875.203 PIPE SHAFT EXT.	78"
C278-4700NG	RS2875.203 PIPE SHAFT EXT. NON-GALV.	78"
C278-41000	RS2875.203 PIPE SHAFT EXT.	114"



CHANCE
HELICAL



HUBBELL POWER SYSTEMS

TITLE

RS2875.203
PILE, EXTENSION

SIZE	DWG NO.	CAT / PART / ASSY NO.	REV
SCISA278-4500	SEE CHART		D

DO NOT SCALE THIS DRAWING

DRN BY KSH

DATE 9/6/05

SHEET 1/1

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HELICAL PIERS NOTES

1. Helical piers shall be manufactured by the A.B. Chance Co., Centralia, MO., or approved equal.
2. Piers shall be installed by an authorized A.B. Chance installing contractor who has satisfied the certification requirements relating to the technical aspects of the product and the ascribed installation techniques. Proof of current certification by the A.B. Chance Co. must be provided.
3. All works as described herein shall be performed in accordance with all applicable safety codes in effect at the time of installation.
4. Helical piers shall have ICC –ES Evaluation Report # ESR-2794.
5. The helical lead sections and extensions shall be solid steel, rounded corner, square shaft configuration, with one or more helical bearing plates welded to the shaft.
6. All piers shall be corrosion protected by hot dip galvanization per ASTM A153.
7. Installation units shall consist of a hydraulically driven rotary type torque motor with forward and reverse capabilities.
8. Installation units shall be capable of developing the minimum torque as required.
9. Installation units shall be capable of positioning the helical pier at the proper installation angle. This angle may vary between vertical and 5 degrees depending upon application and type of load transfer device specified or required.
10. Installation torque shall be monitored throughout the installation process.
11. Helical piers shall be installed to the minimum torque value required to provide Ultimate Load Capacities of piers.
12. The appropriate steel new construction load transfer device shall be used.
13. Additional Information Contact: Ian Romain, P.E. with Rocky Mountain Steel Foundations, Phone: 406-756-PIER (7437).