

Agenda Item: 9.

MEMORANDUM

TO: Programs, Projects, and Operations Subcommittee
FROM: Eric Williams, Natural Resources Planner
SUBJECT: Hell Creek Grade Control Stabilization, Change Order 1
DATE: August 5, 2016

The construction contract for Hell Creek Grade Control Stabilization near the confluence with West Papio was awarded to Valley Corporation, with notice to proceed on July 18, 2016. During preparation to order materials for construction, an adjustment to the quantity of sheetpile was identified by the contractor, and confirmed by FHU as the design engineer for the project. In addition, constructability analysis showed that depth of the sheetpile on the upstream side of the slab needs to be increased to meet the design specifications.

Analysis and discussion with Valley Corp and FHU have indicated that the construction timeline for the project needs to be adjusted in order to allow the materials to be manufactured and delivered to the site. Final completion will be extended from November 18, 2016 to April 30, 2017 to allow for plantings and seeding in the spring. This change in timeline has created a potential need for additional interim erosion protection to be installed before the end of the construction season this winter. A minor modification to the type and quantity of aggregate to be used under the slab is also included, and that results in a net decrease in construction costs.

The combined total of all items on Change Order #1 (attached) will exceed 110% of the original contract price and therefore requires approval by the Board of Directors.

Original Contract Amount	\$ 754,653.37
Change Order #1	\$ 129,339.86
New Contract Amount	\$ 883,993.23
New Contract, Compared to Original	117.1 %

It is Staff recommendation that the PPO Subcommittee recommend to the Board of Directors that the General Manager be authorized to execute the proposed Change Order to the Valley Corporation construction contract for the Hell Creek Grade Control Stabilization Project in the amount of \$ 129,339.86, bringing the total contract amount to \$ 883,993.23, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.

CHANGEDATE AUGUST 4, 2016**ORDER**OWNER PAPIO-MISSOURI RIVER NRDHELL CREEK GRADE CONTROL
STABILIZATION (AT CONFLUENCE WITH
PROJECT WEST PAPILLION CREEK)JOB NO. 115048-01CHANGE ORDER NO. 1CONTRACTOR: VALLEY CORPORATION
28001 IDA CIRCLE
VALLEY, NEBRASKA 68064

Under your contract with Papio-Missouri River Natural Resources District, Owner for Hell Creek Grade Control Stabilization (at Confluence with West Papillion Creek), near 110th and Harry Andersen Ave, we are authorized by the Owner to direct you to make the following changes:

REVISION TO THE CONTRACT BID ITEM

ITEM NO.	DESCRIPTION	APPROXIMATE QUANTITY		UNIT PRICE	AMOUNT
3	STRIP, STOCKPILE AND RESREAD TOPSOIL (110 CY X 2)	220	CY	\$23.57	\$5185.40

The contract bid item units have been changed to reflect those used in the description and as indicated in the SPECIFICATIONS. The contract unit price remains the same and there are no additions to the contract amount as a result of this revision.

REVISIONS TO CONTRACT APPROXIMATE QUANTITIES

The following bid items are represented in the original contract. They've been included in this change order because the revised quantities represent a substantial change to the original quantity as a whole (greater than 10 percent of the original contract amount).

The original approximate contract quantities are as follows:

ITEM NO.	DESCRIPTION	APPROXIMATE QUANTITY		UNIT PRICE	AMOUNT
14	CONSTRUCT FLOWABLE FILL – 100-125 PSI	500	CY	\$133.15	\$66,575.00
16	CONSTRUCT SHEET PILE (PZ-22)	1730	SF	\$56.48	\$97,710.40
17	CONSTRUCT SHEET PILE (PZ-35)	2740	SF	\$57.76	\$158,262.40
25	INSTALL ROLLED EROSION CONTROL	1400	SF	\$0.36	\$504.00
29	INSTALL STRAW WATTLES	650	LF	\$3.39	\$2203.50
	TOTAL				\$325,255.30

The revised approximate quantities are as follows:

ITEM NO.	DESCRIPTION	APPROXIMATE QUANTITY		UNIT PRICE	AMOUNT
14	CONSTRUCT FLOWABLE FILL – 100-125 PSI	300	CY	\$133.15	\$39,945.00
16	CONSTRUCT SHEET PILE (PZ-22)	2304	SF	\$56.48	\$130,129.92
17	CONSTRUCT SHEET PILE (PZ-35)	4014	SF	\$57.76	\$231,848.64
25	INSTALL ROLLED EROSION CONTROL	25,200	SF	\$0.36	\$9072.00
29	INSTALL STRAW WATTLES	1300	LF	\$3.39	\$4407.00
	TOTAL				\$415,402.56

Total addition to the Contract as a result of revisions to the approximate contract quantities is NINETY THOUSAND ONE HUNDRED FORTY SEVEN AND 26/100 DOLLARS (\$90,147.26).

ADD TO THE CONTRACT

ITEM NO.	DESCRIPTION	APPROXIMATE QUANTITY		UNIT PRICE	AMOUNT
31	BACKFILL AGGREGATE FOR CONCRETE SLAB (3")	475	TN	\$55.00	\$26,125.00
32	TIE-BACK CONNECTION MODIFICATIONS	1	LS	\$7,642.60	\$7,642.60
33	TIE BACK SYSTEM CORROSION PROTECTION	1	LS	\$5,425.00	\$5,425.00
	TOTAL ADDITIONS				\$39,192.60

Total addition to the Contract as a result of additions, in accordance with the Contract and Specification the sum of THIRTY-NINE THOUSAND, ONE HUNDRED NINETY-TWO AND 60/100 DOLLARS (\$39,192.60)

AMOUNT OF ORIGINAL CONTRACT			\$754,653.37
CHANGE ORDER NO.	TOTAL ADDITIONS	TOTAL DEDUCTIONS	NET CHANGE
1	\$129,339.86	\$0.00	\$129,339.86
CONTRACT AMOUNT TO DATE			\$883,993.23

TO THE PLANS

Revise the following drawings in the plan set:

General Notes and Tabulations (Sheet 2 of 14)
Site Plan and Profile (Sheet 5 of 14)
Bridge Structure, Other Details (Sheet 8 of 14)

Add the enclosed drawings to the plan set including:

Sheet Pile Tie Back and Connection Details (Sheet 1 of 1)

TO THE SPECIFICATIONS

Modify Section 01000 as follows:

2. CONTRACT TIME: The CONTRACTOR shall

- 1) Complete grading, grouted boulder structure work, bridge structure work, and bank stabilization by December 16, 2016
- 2) Complete all remaining work including channel seeding and matting, tree plantings, and live stakes by April 30, 2017

Add to Section 02010, the following:

15. BACKFILL AGGREGATE FOR CONCRETE SLAB: At the locations indicated on the PLANS, the CONTRACTOR shall provide and place a well-graded 3-inch minus limestone aggregate in accordance with City of Omaha Standard Specifications. Lifts should not exceed 8 inches and shall be compacted in place. Payment at the contract unit price per ton for "Backfill Aggregate for Concrete Slab" shall be full compensation for furnishing all labor, materials, equipment, tools and incidentals necessary to complete the work. Backfill aggregate will be paid for only by tickets presented to the ENGINEER's representative at the time of delivery of the rock.

16. TIE-BACK CONNECTION MODIFICATIONS: Payment at the contract lump sum for "Tie-Back Connection Modifications" shall be full compensation for furnishing all labor, materials, equipment, tools and incidentals to construct the proposed modifications to the tie-back system, including structural members, as indicated in the plans.

17. TIE-BACK SYSTEM CORROSION PROTECTION: The contractor shall apply corrosion protection to the tie back system as noted in the PLANS. Payment at the contract lump sum for "Tie-Back System Corrosion Protection" shall be full compensation for furnishing all labor, materials, equipment, tools and incidentals necessary to complete the work.

DATE APPROVED _____

DATE ACCEPTED _____

OWNER:

**PAPIO-MISSOURI RIVER
NATURAL RESOURCES DISTRICT**

CONTRACTOR:


VALLEY CORPORATION

BY _____

BY _____

Sincerely

FELSBURG, HOLT & ULLEVIG, INC

BY  _____
DAVID G. LAMPE, PE, CFM
Project Manager and Senior Water Resources Engineer

GENERAL NOTES

(R-1)

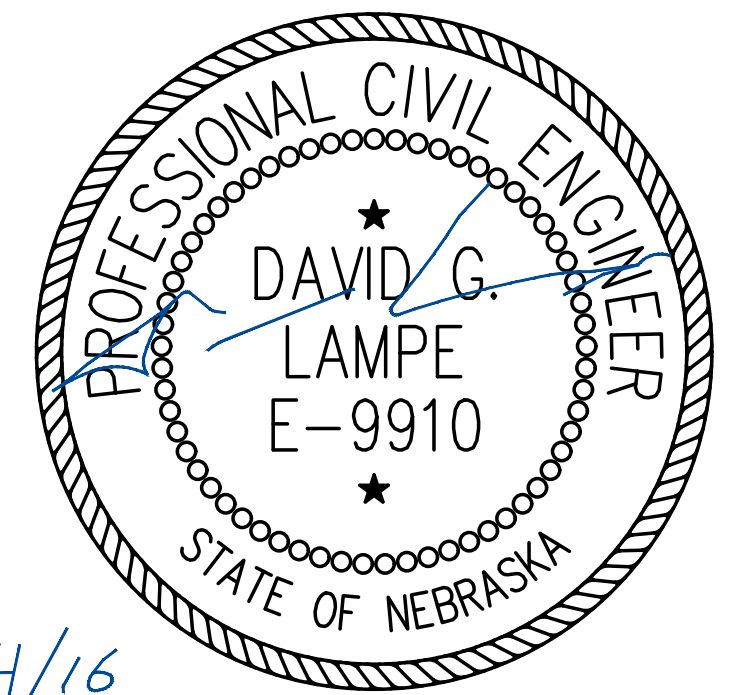
1. The time limit to complete work shall be as follows:
 - 1) Complete channel grading, grouted boulder structure work, bridge structure work, and bank stabilization by December 16, 2016.
 - 2) Complete all remaining work, channel seeding and matting, free plantings, and live stakes by April 30, 2017. Notice to proceed shall not be given until a Section 404 permit has been issued and easements are secured. The anticipated start date is June 27, 2016.
2. Unless otherwise specified, all site work shall be in accordance with "City of Omaha Standard Specifications for Public Works Construction, Current Edition" and any revisions or amendments thereto shall apply to this project.
3. The locations of all aerial and underground utility facilities may not be indicated in these plans. Existing utilities are shown as a convenience for the CONTRACTOR. Underground utilities, whether indicated or not, will be located and flagged by the utility companies at the CONTRACTOR'S request. The CONTRACTOR shall notify all utility companies 48 hours before work is started to verify utility locations. No excavation will be permitted in the area of the underground utilities until all facilities have been located and identified to the satisfaction of all parties and then only with extreme care to avoid any possibility of damages to facilities.
4. The ENGINEER/INSPECTOR must notify the following personnel 48 hours prior to the pre-construction meeting and 48 hours prior to the start of any construction:

Company/Utility	CONTACT	CONTACT INFO
Papio-Missouri River NRD	Eric Williams	ewilliams@papionrd.org (402)444-6222
City Of La Vista	John Kottmann	jkottmann@cityoflavista.org (402)331-8927
City Of Omaha - Public Works Dept.	James Theiler	james.theiler@cityofomaha.org (402)444-4911

(R-1)

6. The CONTRACTOR must notify the City of La Vista 48 hours prior to lane closures and 24 hours prior to lane restrictions. See above for contact information.
7. The CONTRACTOR is referred to the Special Conditions of the Specifications for further information.
8. Barricades shall conform to the Omaha Public Works "Barricading Standards Specifications, Methods, & Materials" and/or the "Manual on Uniform Traffic Control Devices".
9. Unless indicated in the plans, no tress shall be removed without approval of the ENGINEER.
10. The CONTRACTOR must maintain flow within Hell Creek at all times. CONTRACTOR may berm and divert flow from one side of the bridge structure to the other to for the staging of removals and construction while maintaining low flow. Pumping stream flow around or through the bridge structure and construction area is allowed. Excavating railroad embankment and diverting flow around the bridge structure through the embankment will not be allowed.
11. Elevations are referenced to N.A.V.D. 1988.
12. All fill and backfill shall be placed in lifts not to exceed 8 inches (measured loose) and compacted to 90% standard proctor (ASTM D698). Moisture content shall be -3/+5 percent of optimum moisture content.

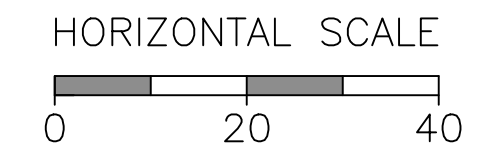
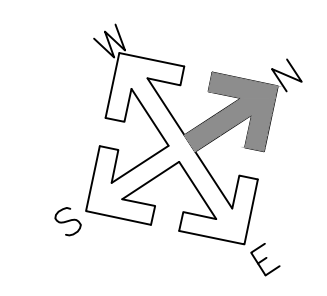
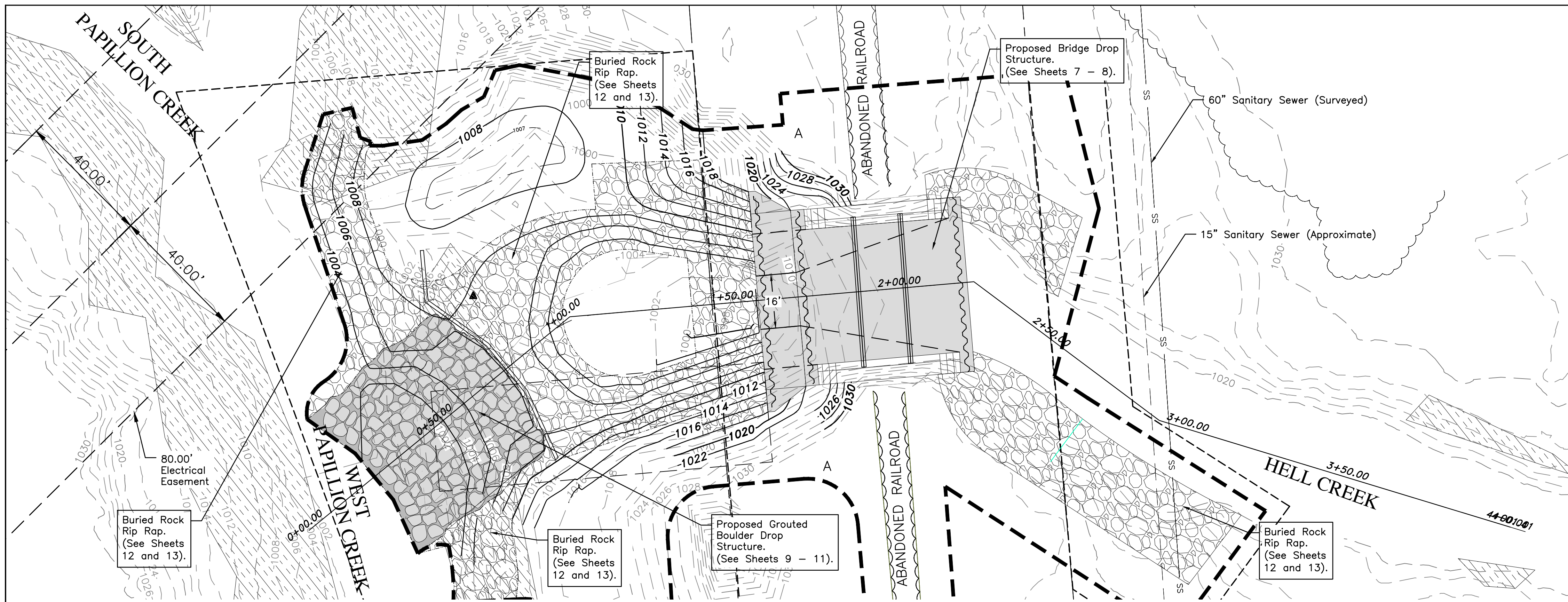
Bid Item Description	Approximate Quantity	Unit	
1. MOBILIZATION	1	LS	
2. CLEARING AND GRUBBING - GENERAL	1	LS	
3. STRIP, STOCKPILE AND RESPREAD TOPSOIL (110 CY X2)	220	CY	(R-1)
4. REMOVE AND SALVAGE EXISTING RIP RAP	1	LS	
5. FLOW MANAGEMENT	1	LS	
6. CONSTRUCT TEMPORARY EARTHEN RAMP	1	LS	
7. REMOVE PAVEMENT	200	SY	
8. REMOVE SHEET PILE WALL	1	LS	
9. REMOVE TIMBER PILES	4	EA	
10. EARTHWORK (EXCAVATION)	150	CY	
11. EARTHWORK (HAUL IN)	2,150	CY	
12. CONSTRUCT GEOGRID	30	SY	
13. INSTALL 3" ROCK STABILIZATION	20	TN	
14. CONSTRUCT FLOWABLE FILL - 100-125 PSI	300	CY	(R-1)
15. CONSTRUCT 8-INCH CONCRETE SLAB (TYPE L6)	330	SY	
16. CONSTRUCT SHEET PILE (PZ-22)	2,304	SF	
17. CONSTRUCT SHEET PILE (PZ-35)	4,014	SF	(R-1)
18. SEEDING - TYPE "WETLAND"	0.25	AC	
19. SEEDING - TYPE "BUFFER"	0.60	AC	
20. BUR OAK (2" CALIPER)	3	EA	
21. BLACK WALNUT (2" CALIPER)	2	EA	
22. HONEY LOCUST (2" CALIPER)	2	EA	
23. CONSTRUCT LIVE STAKES	80	EA	
24. INSTALL MULCHING	0.60	AC	
25. INSTALL ROLLED EROSION CONTROL	25,200	SF	(R-1)
26. CONSTRUCT TYPE C RIP-RAP	2,200	TN	
27. CONSTRUCT GROUTED BOULDER DROP STRUCTURE	1	LS	
28. INSTALL CONSTRUCTION ENTRANCE	1	EA	
29. INSTALL STRAW WATTLES	1,300	LF	(R-1)
30. CONSTRUCT CONCRETE WASHOUT	1	EA	



8/4/16

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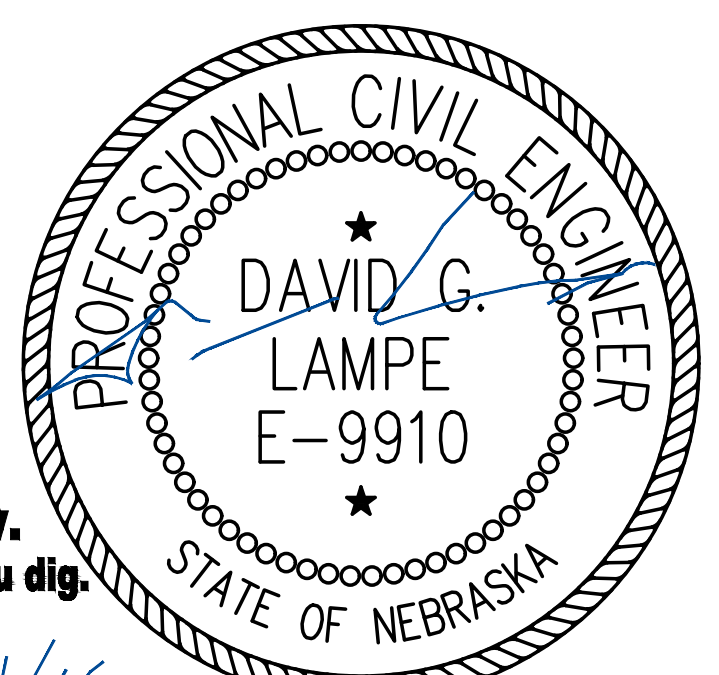
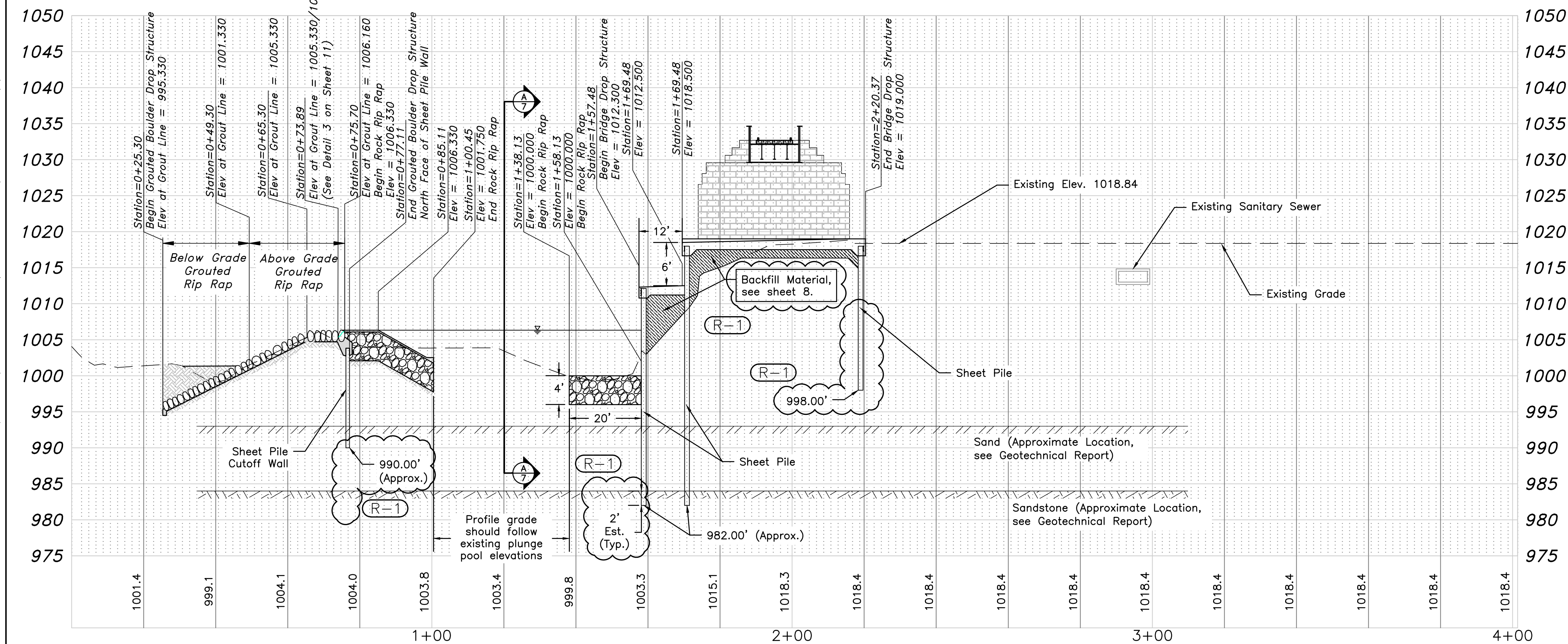
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	()				Detailer: LEK Numbers	
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Legend

- Property Line
- Limits Of Removals, Grading, Clearing and Grubbing, and Construction
- Existing Contour
- Temporary Construction Easement
- Existing Wetlands
- Proposed P.C. Concrete
- Proposed Grouted Boulder Drop Structure
- Proposed Buried Rock Rip Rap
- Proposed Flowable Fill
- Proposed Sheet Pile

PROPOSED HELL CREEK CHANNEL PROFILE



8/4/16

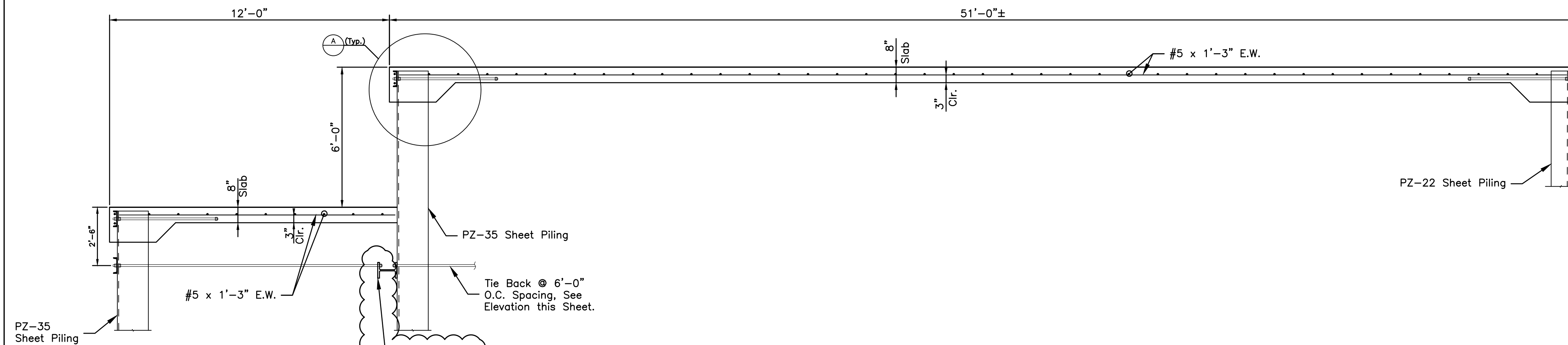
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FELSBURG HOLT & ULLEVIG
 11422 Miracle Hills Dr., Suite 115
 Omaha, NE 68154
 tel 402.445.4405
 fax 402.445.4394

Sheet Revisions			
(R-X)	Date	Comments	Initials
(R-1)	8/4/16	PLAN REVISION 1	LEK

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Revised:	Designer: DGL Detailer: LEK	Structure Numbers
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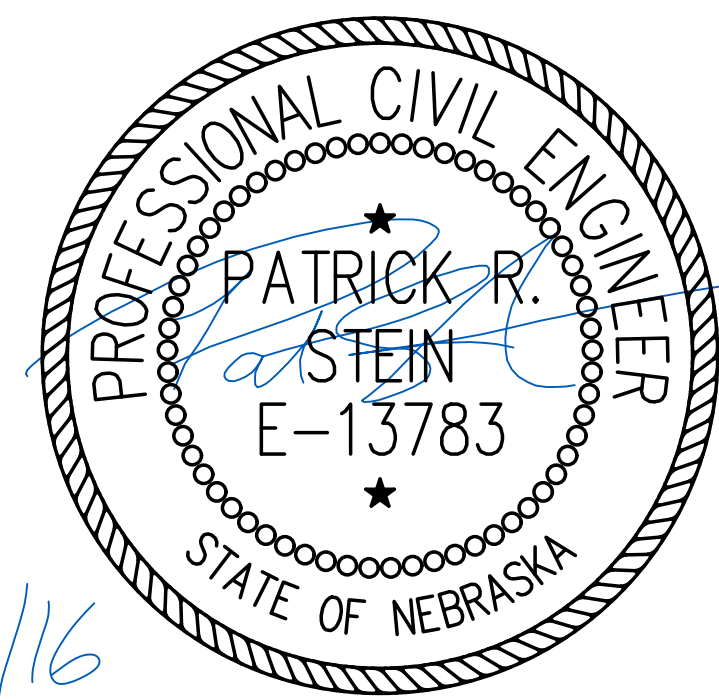
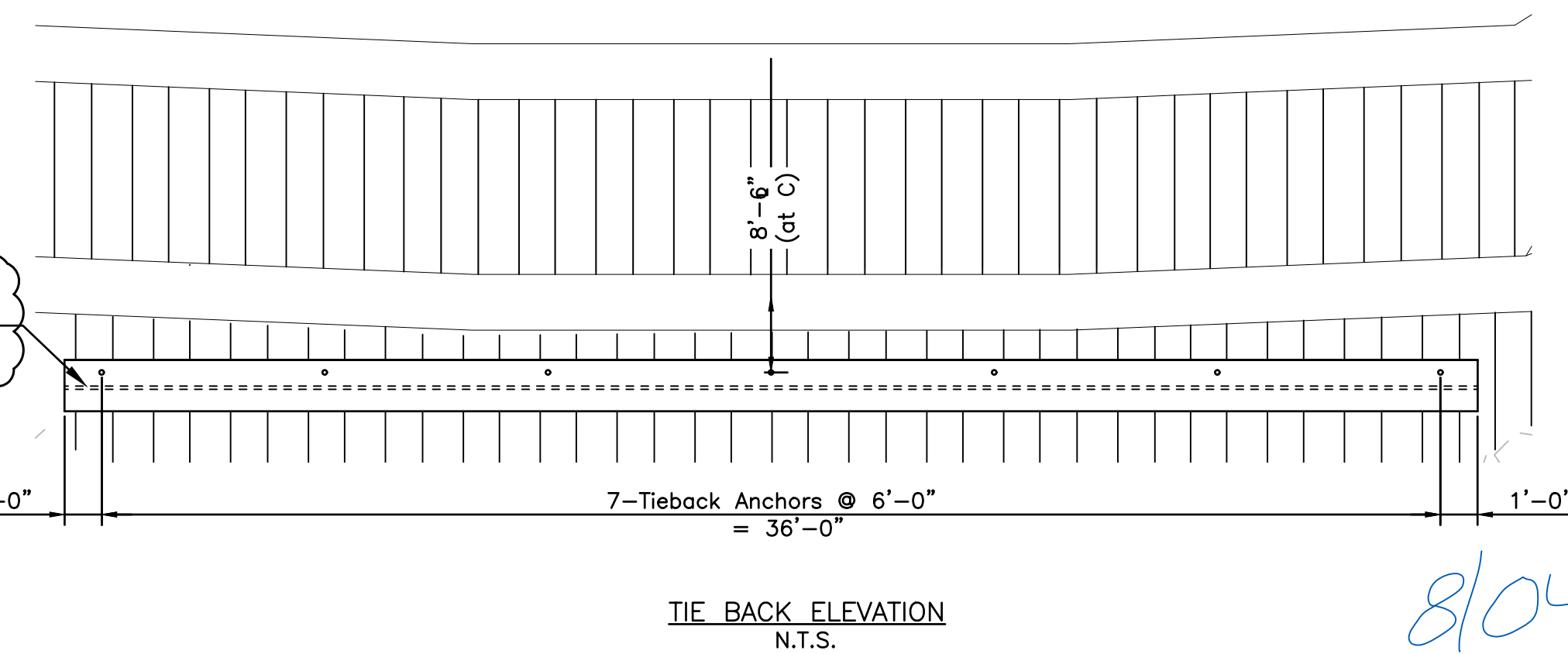
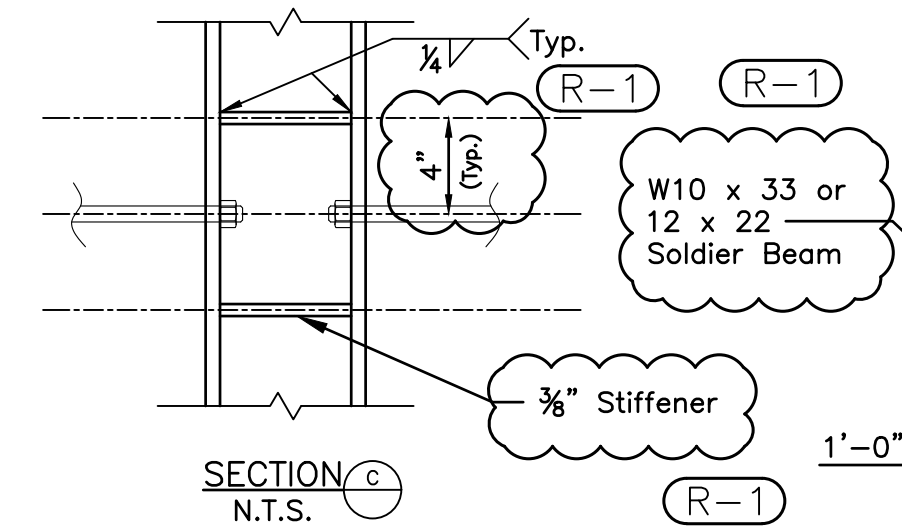
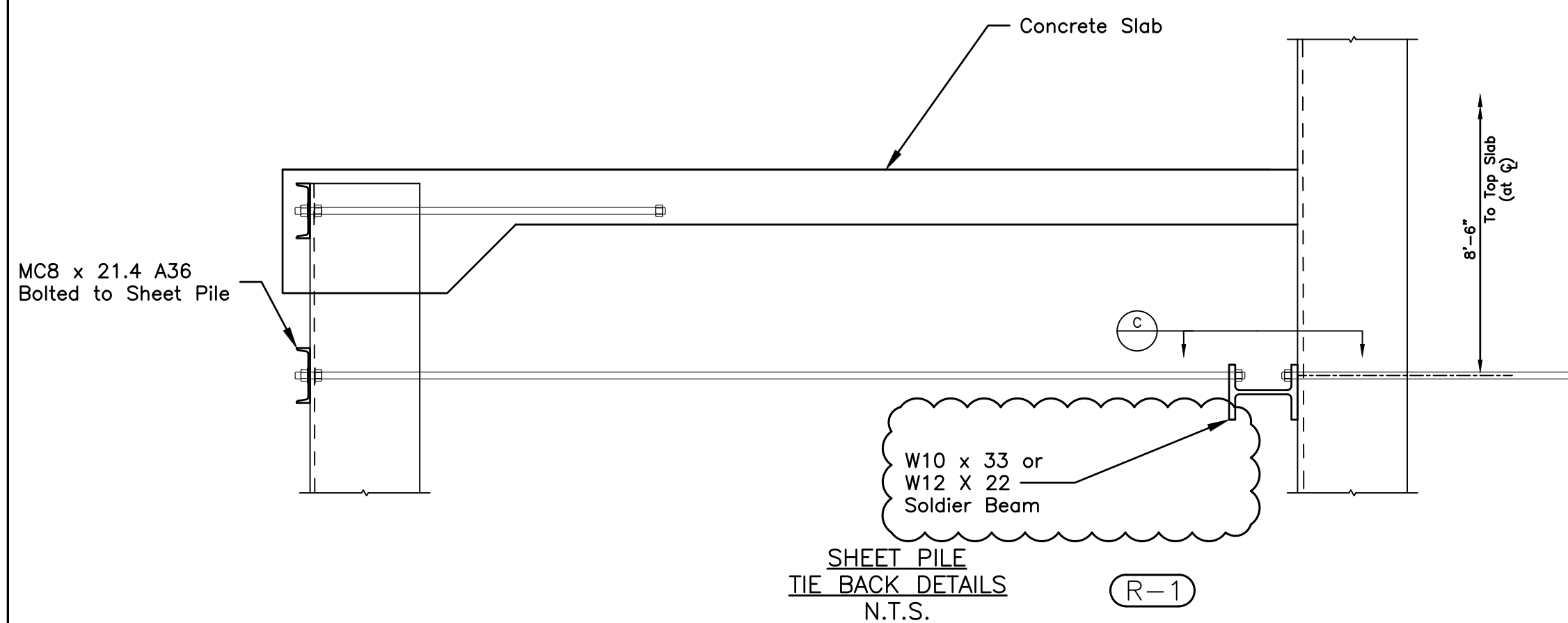
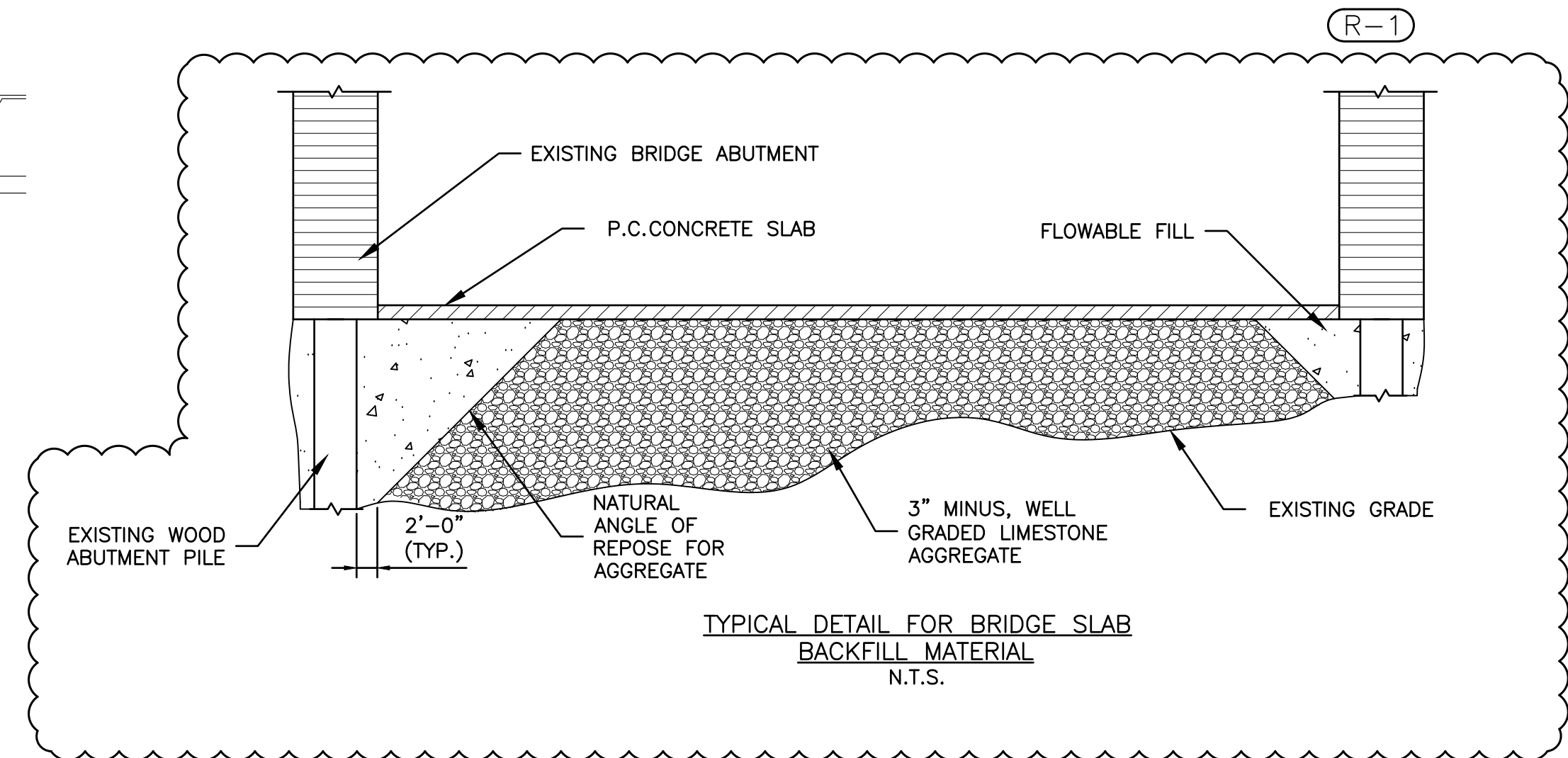
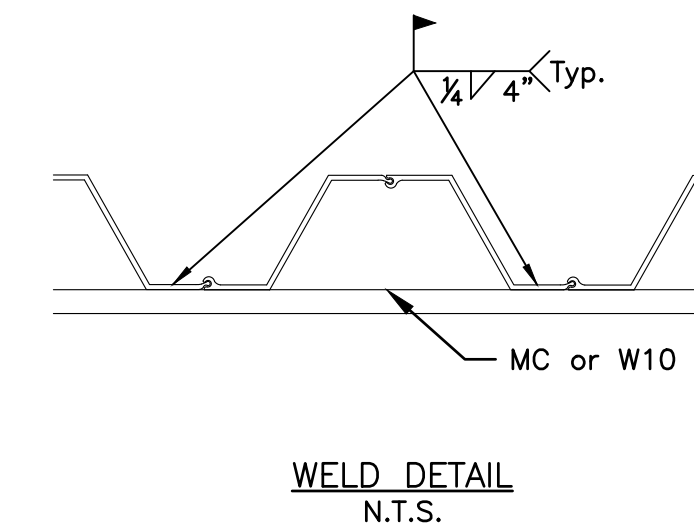
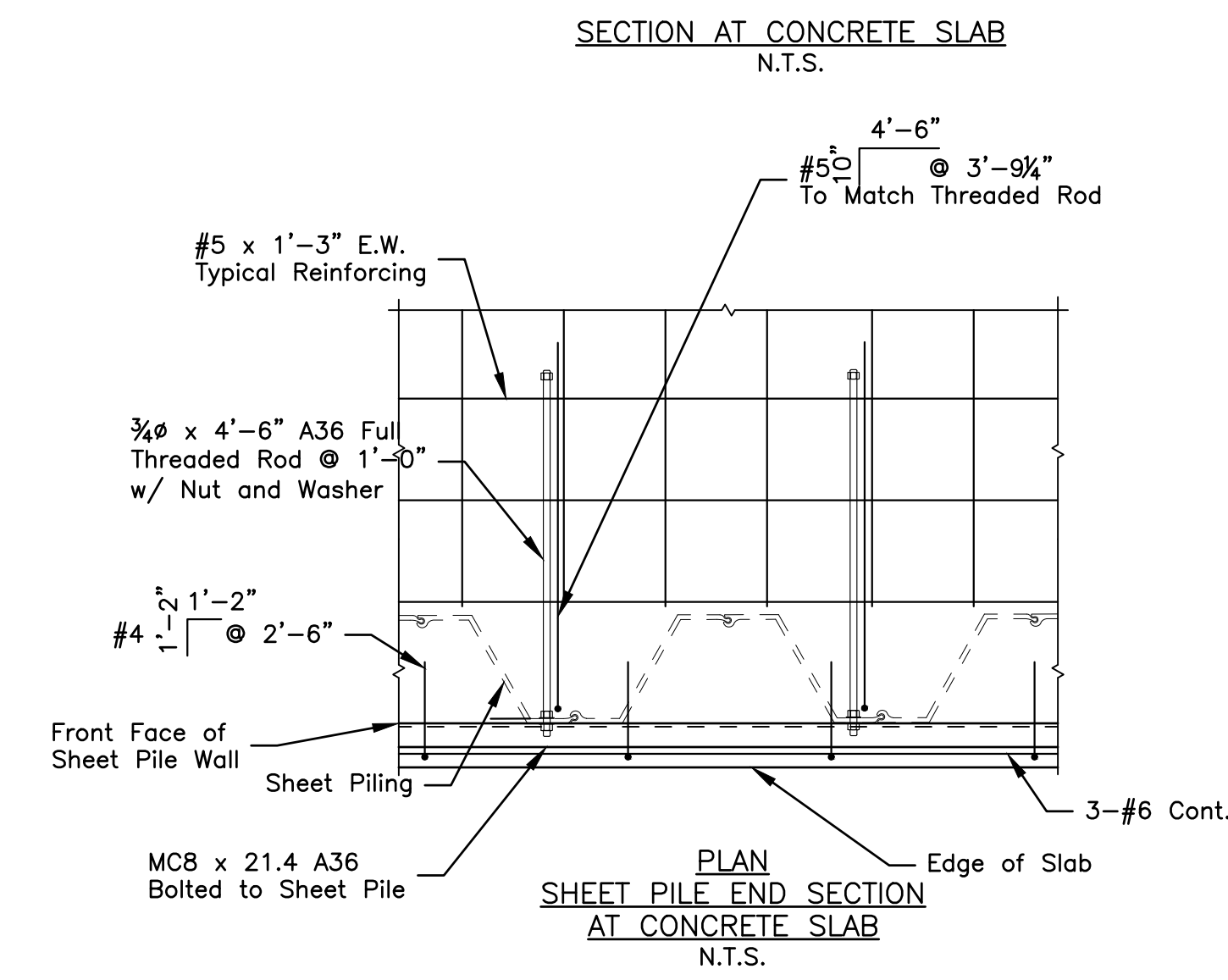
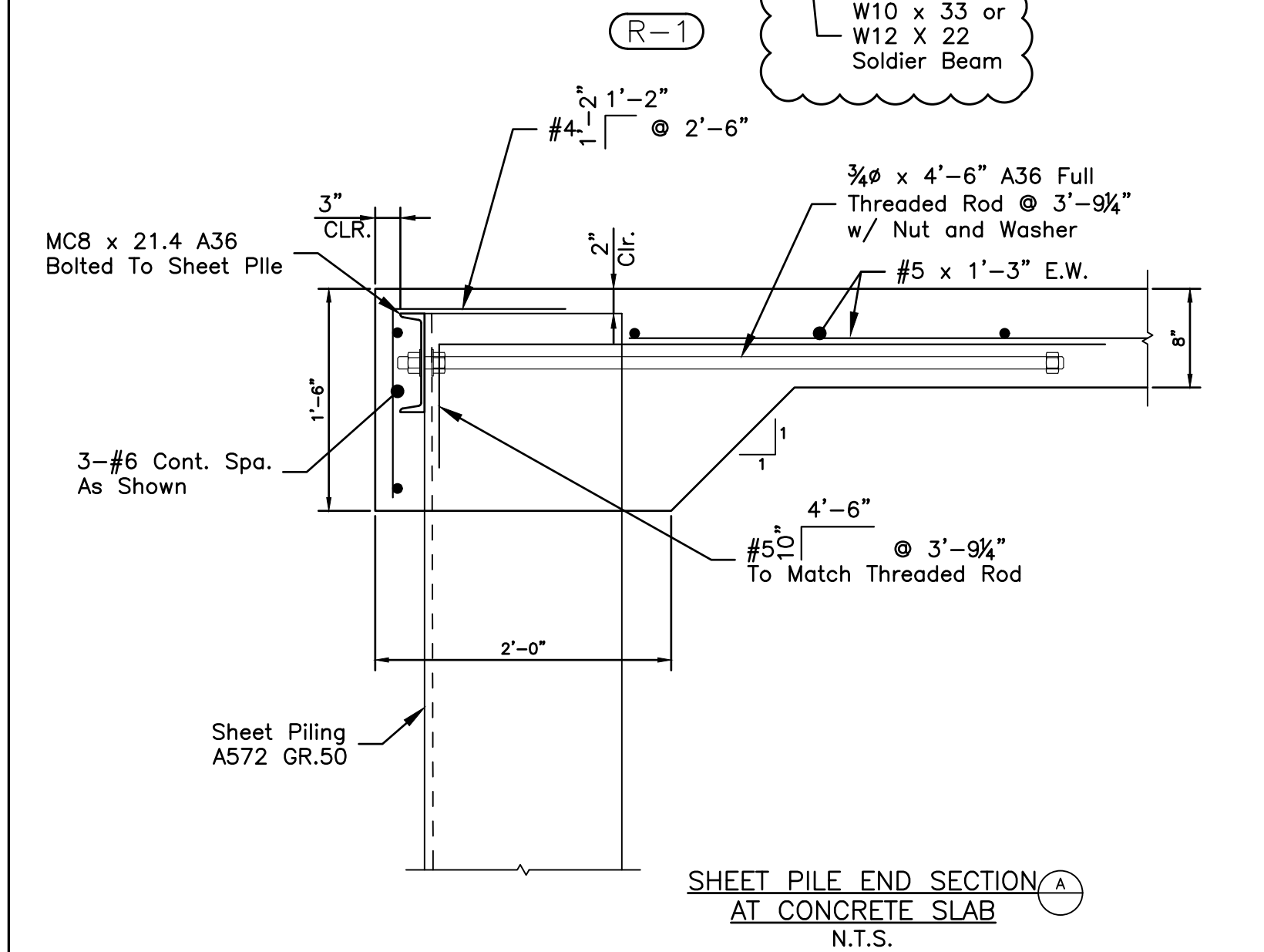
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NOTES:

1. Tie-backs shall have a capacity of 56 kips each. At the contractor's option, tie-backs may be connected to the upstream sheet pile. alternately, an intermediate dead-man anchor block may be installed, or other mechanical means as approved by the engineer.
2. See sheet 7 for additional notes.
3. Concrete slab construction joints shall extend slab reinforcing 1'-0" beyond bulkhead for future slab tie-in.
4. Provide beveled washers at tie-backs if tie rods are not set perpendicular to the face of the sheet pile.
5. All steel components of the tie-back system not embedded in concrete shall be hot-dip galvanized to a minimum zinc coating thickness of 6.0 mils. Galvanization shall take place after fabrication prior to erection. Inspect galvanization after erection and touch up with galvanizing spray as required. This includes but is not limited to anchor rods, soldier beams, walers, and tie-back connections.
6. After installation, exposed anchorage components shall be coated with coal tar epoxy.



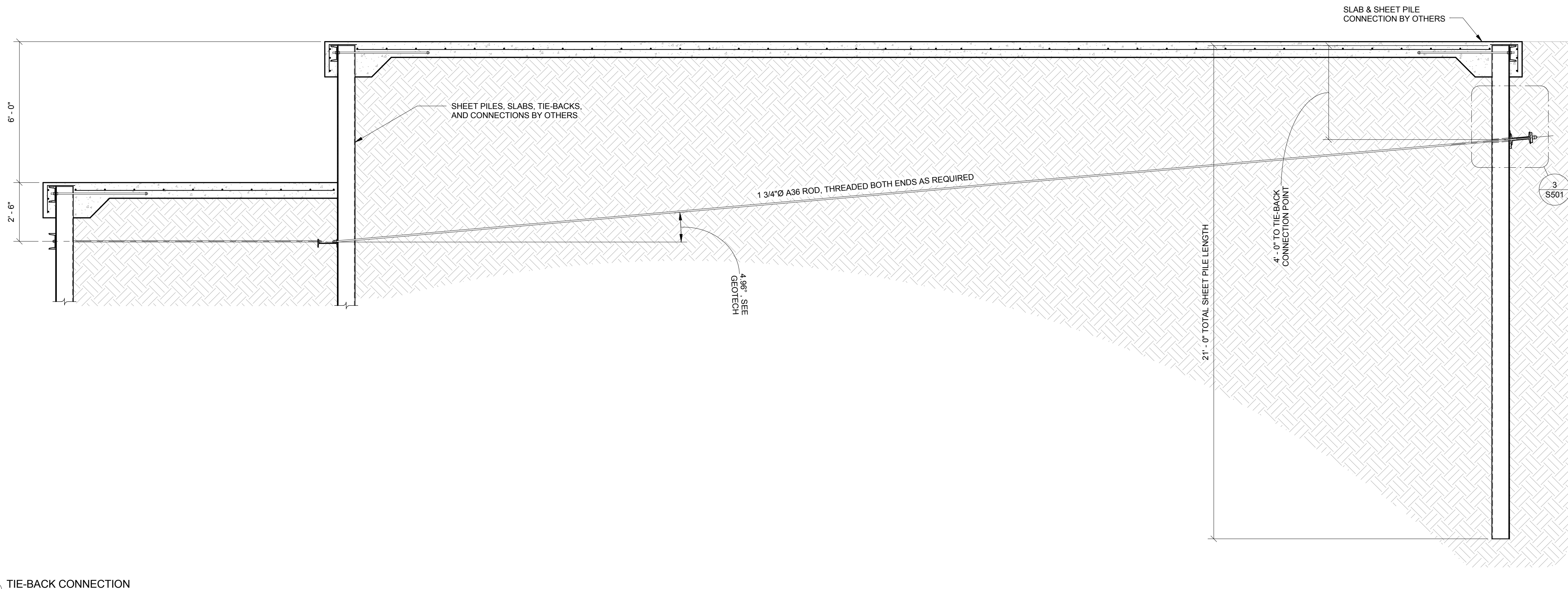
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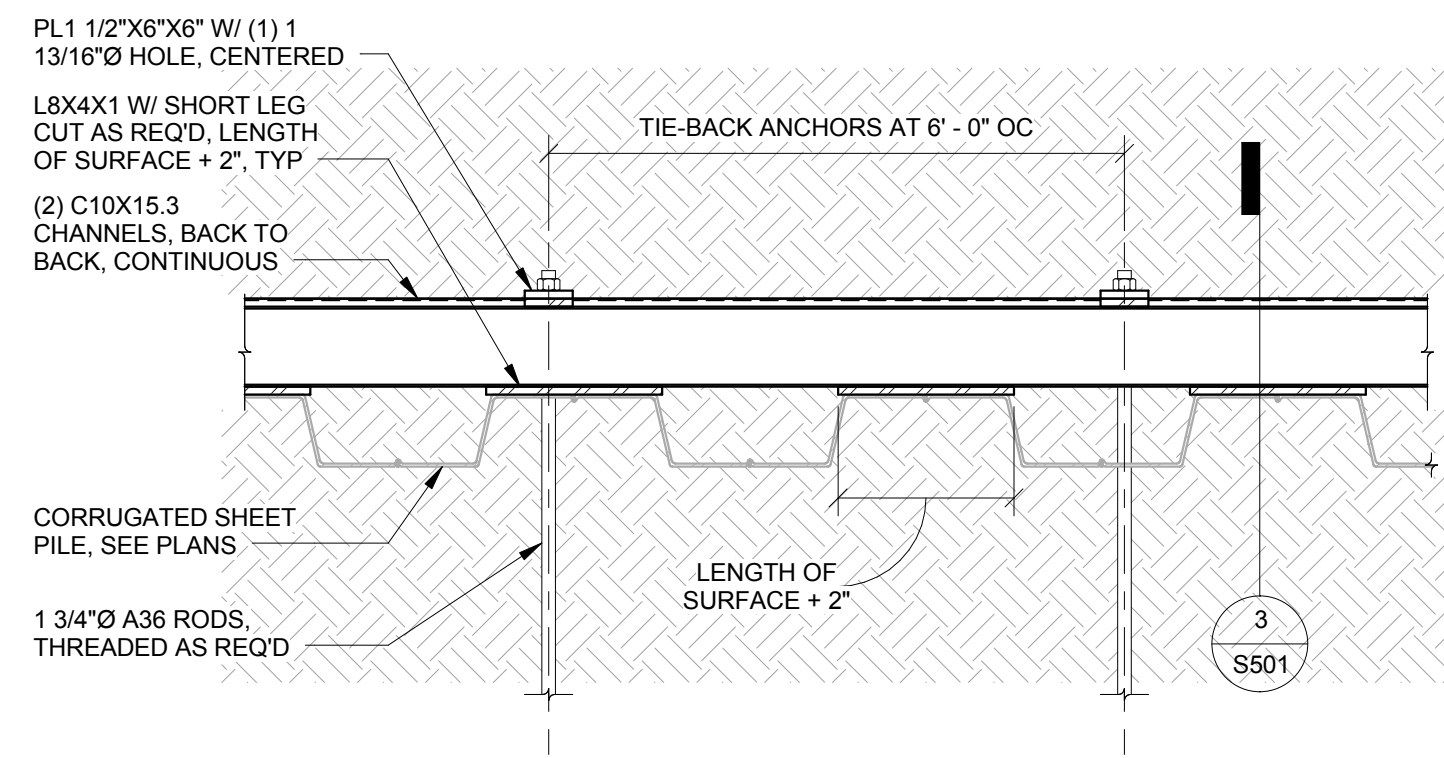
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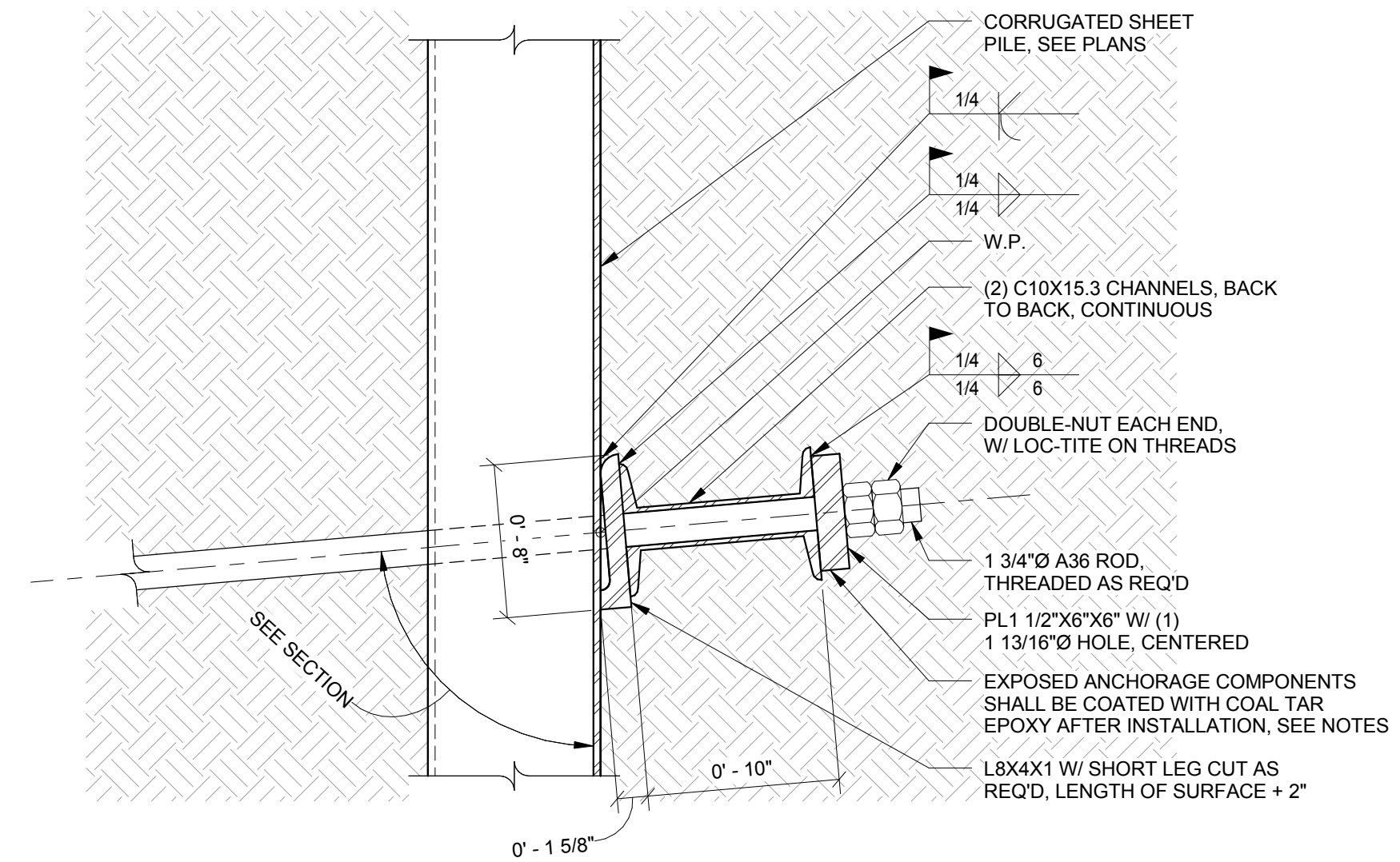
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Revised:	Designer:	DGL	Structure
Void:	Detailer:	LEK	Numbers
	Subset:		Sheets: 8 of 14
			Sheet Number 8



1 TIE-BACK CONNECTION
3/8" = 1'-0"



2 TIE-BACK CONNECTION PLAN
1/2" = 1'-0"

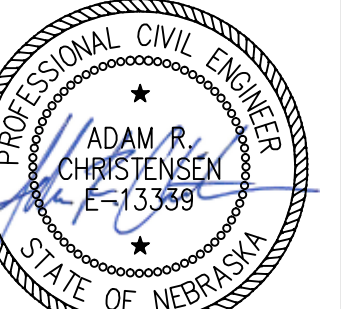


3 TIE-BACK CONNECTION DETAIL
1 1/2" = 1'-0"

GENERAL NOTES:

- ALL STEEL COMPONENTS OF TIE-BACK SYSTEM SHALL BE HOT-DIP GALVANIZED TO A MINIMUM ZINC COATING THICKNESS OF 6.0 MILS. GALVANIZATION SHALL TAKE PLACE AFTER FABRICATION, AND PRIOR TO ERECTION. INSPECT GALVANIZATION AFTER ERECTION AND TOUCH UP WITH GALVANIZING SPRAY AS REQUIRED.
- AFTER INSTALLATION, EXPOSED ANCHORAGE COMPONENTS SHALL BE COATED WITH COAL TAR EPOXY.
- STEEL GRADES FOR COMPONENTS ON THIS SHEET SHALL BE AS FOLLOWS:

ANGLES	ASTM A36 STEEL
CHANNELS	ASTM A36 STEEL
PLATES	ASTM A36 STEEL
NUTS	ASTM A563 STEEL
RODS	ASTM A36 STEEL



08-04-2016

REV	DATE	REVISION DESCRIPTION

REVISIONS

SHEET PILE TIE BACK AND CONNECTION DETAILS
 STRUCTURAL
 HELL CREEK GRADE CONTROL STABILIZATION
 PAPIILLION, NEBRASKA
 2016

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