

Request for Proposal (RFP)

Bid No: Bid 21-07-2523LE

Addendum No. 1

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**Date:** August 18, 2021

**To:** All Proposers

**Subject:** Addendum No. 1  
Consisting of Twenty-eight (28) Pages

**RFP No.:** Bid 21-07-2523LE

**Project Name:** N5012(1)1,2&4 Road Improvement Project in Sanostee, NM

**Owner:** Navajo Division of Transportation

Proposer shall make note of and/or incorporate all changes listed below into the requested Request for Proposal (RFP):

1. Mandatory Pre-Proposal Meeting Minutes and Sign-In Sheet from August 11, 2021 meeting that was held virtually. Meeting minutes include question(s) asked by attendees with Navajo DOT responses.
2. Revisions to sections of the RFP were made, the attached RFP pages shall be replaced in the original RFP document.
3. On Pages 13-14 of the RFP, Attachments, 1) Bid Schedule; the Bid Schedule has been revised and is attached to Addendum 1. The equivalent updated Contractors' excel file is posted as a separate file in the NDOT RFP site.
4. Sheets 2, 3, 5, 8, 11, 17, 18, 19, 38, 39, 40, 61A, 61B, 65 and 66 of the N5012(1) plans have been revised. Revisions included changing the class of riprap from "Class 2" to "Class 1" and adding in the subgrade stabilization notes from the Pre-Proposal Meeting Agenda.
5. It was noted that the N5012(1) plans (when the PDF file is downloaded from the NDOT google drive website) have some issues with clarity and some text not being readable. The Contractor may download an un-compressed version of the plans from the Wilson & Company secure FTP site information below.

<http://ftp.wilsonco.com>

or

<ftp://ftp.wilsonco.com>

FTP\_Site\_Username: N5012\_Bridge\_Sanostee

FTP\_Site\_Password: WilsonN5012

Request for Proposal (RFP)  
Bid No: Bid 21-07-2523LE  
Addendum No. 1

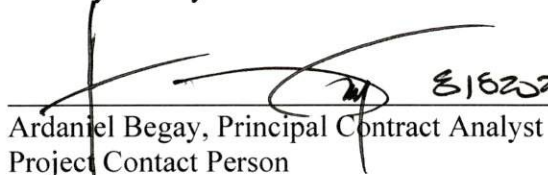
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6. The Navajo Division of Transportation has received the following question regarding this RFP and thereby issues the following response:

Question Submitted	Response Provided
For bid item 55901-0000 Membrane Waterproofing, quantity of 396 SY, is the quantity based on top of bridge deck (31' x 103.5') and the sides of the precast girders? Or only the bridge deck?	The quantity for bid item 55901-0000 Membrane Waterproofing is based on the exterior surface of the bridge from the top of the barrier to the bottom of the exterior girder including the overhang, abutment faces, and wingwalls.
Is there a borrow pit available for this project?	NDOT has not identified a specific borrow pit resource for this project. The Contractors are encouraged to contact the Sanostee Chapter (505-723-2702) and/or the NN Division of Natural Resources (Rowena Cheromiah, MINERALS Manager, 928-871-6588) to determine if any current borrow pits exist in the area.

**END OF ADDENDUM NO. 1**

Thank you for your interest!

  
Ardaniel Begay, Principal Contract Analyst  
Project Contact Person



Navajo Division of Transportation  
Bid No. 21-07-2523LE  
N5012(1)1,2&4 Road Improvement Project in Sanostee, NM  
VIRTUAL PRE-PROPOSAL MEETING  
August 11, 2021, 10:00 am

The purpose of this Mandatory Pre-Proposal Meeting is to receive presentations on the Project Scope of Work and the necessary items required to be submitted as part of the Request for Proposal (RFP). **Meeting notes in red.**

1. Introductions & Sign-In Sheet

- a. Sign-In Sheet – Please submit your contact information to Ardanial Begay via email at [abegay@navajodot.org](mailto:abegay@navajodot.org)

2. Welcome – Garret Silversmith, Division Director, Navajo DOT and Darryl Bradley, Principal Civil Engineer, Navajo DOT

3. General Announcements

- a. Information is available on the Navajo DOT website:  
<https://navajodot.org/rfp%2Frfq>
- b. Inquiries on this RFP must be submitted in writing via fax or email to Ardanial Begay, Principal Contract Analyst. The contact information is on Page 3 of the RFP.
- c. Contractors are encouraged to conduct a field review of the project site on their own. There is no formal field review scheduled.

4. Schedule of Activities

- a. The Schedule of Activities is shown on Page 3 of the RFP.
- b. Pre-Proposal Meeting today.
- c. Inquiry Timeline – all inquiries must be submitted in writing by 3:00 pm on August 20, 2021. Written responses to inquiries will be distributed through an Addendum by 10:00 am on August 23, 2021.
- d. Proposal due by 4:00 pm on September 2, 2021.
- e. Opening Proposals and Evaluation – between September 7 and 10, 2021.
- f. Selection of Contractor – Week of September 13, 2021
- g. Estimated Notice to Proceed Date – January 2022

5. Project Description & Scope of Work

- a. Project Plans, Roadway Cross-sections, Contract Book, and Geotechnical Report are available for download from the Navajo DOT website (<https://navajodot.org/rfp%2Frfq>).
- b. Funding Source is Federal Highway Administration (FHWA) Tribal Transportation Program funds.
- c. Scope of Work consists of: grading and subgrade; bridge construction; placement of aggregate base course and double chip seal pavement; installation of drainage structures and cattleguard; signs; striping; and other miscellaneous work along approximately 0.644 miles of BIA Route N5012 in Sanostee, NM. **There are two NTUA waterline crossings in the project limits. Both have steel casings and are noted as “Protect in Place.” One of the waterlines requires a concrete**



**Navajo Division of Transportation**  
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**N5012(1)1,2&4 Road Improvement Project in Sanostee, NM**  
**VIRTUAL PRE-PROPOSAL MEETING**  
**August 11, 2021, 10:00 am**

**slab be placed over it to provide additional erosion protection in the new bar ditch area.**

**d. Completion Time – Per Article 4.3 of the NDOT Contract - Agreement.**

The Work will be substantially completed within 200 working days after the date when the Contract Times commence (Notice to Proceed) to run as provided in Paragraph 2.3 of the General Conditions, and completed and ready for final acceptance in accordance with Paragraph 14.7 of the General Conditions within 220 working days after the date when the Contract Time commence to run.

Please note that the above durations do not take into consideration non-working days for weather conditions, shutdowns during winter suspension(s) and holidays. See Article 12.3 of Standard General Conditions, Exhibit A for requirements related to Delay claims.

**e. Bid Schedule/Item Changes –**

- **Water – the normal “Development of Water Supply” bid item has been removed from the bid schedule. Contractor will be responsible for computing his own water quantities and then basing his bid on his own computed quantities. No separate measurement or payment of water will be made. See Item 5, Exhibit C – Special Contract Requirements of the NDOT Contract.**
- **Contractor Quality Control – the Unit by which this item is paid has been changed from “Man Hr” to “Lump Sum.” The Contractor will be responsible for computing the necessary testing required per the specifications and determine a total project cost for this bid item.**
- **Flaggers and Temporary Raised Pavement Markers – The normal “Flagger” and “Temporary Traffic Control, Raised Pavement Markers” bid items have been removed from the bid schedule. Contractor will be responsible for computing his own hours/quantities/costs and then basing his “Temporary Traffic Control” bid item on his own computed quantities. No separate measurement or payment of flaggers and raised pavement markers will be made.**

**f. Subgrade Stabilization –**

- **No specific product name/type is called for. The contractor will be responsible for submitting a mix design (per the FP-14 spec) for the CM’s review and approval. Please note this needs to be done 30 days prior to starting production.**
- **The subgrade stabilization compressive strength requirement will be 200 psi @ 21 days using ASTM D1633, Method A per Table 213-1 of the FP-14 spec.**

**6. Coordination with BIA Navajo Region Branch of Transportation (NRBOT)**



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- a. Project was designed by Wilson & Company who will maintain the Engineer of Record responsibilities.
  - b. BIA permits will be required to gain access to the site and deliver girders to work location. **The project ROW is in the Navajo Nation's name, not the BIA.**
  - c. All coordination with the BIA NRBOT will be conducted by NDOT and/or the designated project Construction Manager (CM). **Mark Salazar is the CM.**
7. Utility Coordination – See Article 7.1 of the NDOT Contract – Exhibit A - Standard General Conditions and Section 107.02 of the FP-14 Specifications.
- a. NTUA water and sewer – concrete slab over existing waterline casing to be completed by Contractor with bid items in the plans.
  - b. NTUA power – overhead power lines were already relocated by NTUA.
8. Navajo Nation Business Regulatory Department – Ernie Pahe/Alvin Wauneka
- a. Navajo Business Opportunity Act
    - **The link to the NN site is below and also located on page 9 (Section B, subpart g).**
    - <http://www.navajobusiness.com/pdf/DngBus/BusRegultry/Opportunity%20Act.pdf>
  - b. Subcontracting Plan
9. Review of Request for Proposal
- a. Page 2 - proposals must be submitted to Navajo DOT at the address shown. Electronic proposals will not be accepted.
  - b. Page 5 - all work performed on this project is subject to the 6% Navajo Sales Tax.
  - c. Page 5 – evaluation procedure and criteria, including the scoring criteria.
  - d. Page 6 – the proposals will be opened and evaluated in accordance with the Navajo Nation Business Opportunity Act.
  - e. Page 7 to 11 – Outline of Request for Proposal
  - f. Proposal must be submitted in a sealed envelope.
  - g. Bid Schedule must be submitted in a separate sealed envelope clearly marked as “Bid Schedule – RFP #21-07-2523LE Project N5012(1)1,2&4”.  
An excel spreadsheet version of the Bid Schedule can be made available upon written request to Ardaniel Begay.
  - h. Prime Contractor requirements – Self-Perform 50% of the work. See Special Contract Requirement, Clause NN-236-1.
  - i. Davis Bacon Wage Rates (Exhibit H of the Contract Book) apply for this Project.
10. Addendum(s)
- a. Addendum(s) will be available for download from the Navajo DOT website. It is important that respondents check the Navajo DOT website for addendum(s). **Contractor is responsible for checking the NDOT website for Addendums.**



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b. Addendum Acknowledgement Form. **Must be included in Proposal responses.**

11. Any Questions?

1) In Exhibit C, Special Contract Requirements of the Contract Book, Item #9 indicates that an archeologist be present for monitoring of the cultural sites. Does the Contractor have to supply the archeologist?

**Response:** No, NDOT will supply an archeologist for this effort. The Contractor is only responsible for scheduling their activities near the sites and giving NDOT ample time to schedule the archeologist to be on site. This step has been forgotten on some of the current roadway projects.

2) Does the contract account for price escalation costs?

**Response:** No, NDOT does not include a clause in the contract for price escalation. The Contractor should anticipate the price of inflation based on the anticipated NTP date of January 2022 in the RFP and include this cost in their bids.

3) On page 9 (Section B, subpart g), the 3<sup>rd</sup> bullet asks for “lease agreements” for equipment suppliers. These agreements are not available until the contract is executed, how can we provide them?

**Response:** The RFP will be revised to list potential equipment suppliers instead.

4) Does the contract require a QCM?

**Response:** Yes, the supplemental specifications (Exhibit F – Section 153.02) require that the Contractor provide a QCM. This is a full-time requirement.

5) What is the \$100,000 value under Bid Item 10901-0000 Extra & Miscellaneous Work - Authorized under Suppl. Spec. 109.02(s) used for?

**Response:** This bid item/amount is established in the bid schedule for the Government/NDOT to use at their discretion to cover work/costs on the project that are outside of the current scope/bid items. NDOT and the Construction Manager would need to review and agree to use this bid item.

6) Is there a project budget that can be shared?

**Response:** No, NDOT prefers not to provide the project budget or engineer’s estimate until after the bid proposals from the Contractors are opened.

**Sanostee Chapter official comments:**

- Asked that the Contractors consider hiring local residents for the project (if possible).
- Warned the Contractors to be wary of their yard security and equipment safety as past contractors’ equipment have been vandalized and/or diesel fuel has been siphoned from the vehicles.
- Indicated that a new Frontier utility/overhead line (and 4 poles) were installed within the project area by the proposed bridge. This was done without their input or knowledge. Wilson will request as-built and easement data from Frontier to confirm location and ROW/prior rights.

# N5012 Sanostee Wash Bridge – VIRTUAL Pre-Proposal Meeting

## RFP #21-07-2523LE

### August 11, 2021 10:00 am Sign-In Sheet

NAME / TITLE	COMPANY NAME	PHONE NUMBER / EMAIL
Darryl Bradley, Principal Civil Engineer	Navajo Division of Transportation	505-371-8397 / <a href="mailto:dbradley@navajodot.org">dbradley@navajodot.org</a>
Ardaniel Begay, Principal Contract Analyst	Navajo Division of Transportation	505-371-8351 / <a href="mailto:abegay@navajodot.org">abegay@navajodot.org</a>
Manuel Sanchez, Sr Tribal Trans Prog Coor	FHWA Office of Tribal Transportation	202-308-6235 / <a href="mailto:manuel.sanchez@dot.gov">manuel.sanchez@dot.gov</a>
Derek Meier, Sr Project Manager	Wilson & Company	505-400-4618 / <a href="mailto:derek.meier@wilsonco.com">derek.meier@wilsonco.com</a>
Myra Candelaria, Project Engineer	Wilson & Company	505-348-4074 / <a href="mailto:myra.candelaria@wilsonco.com">myra.candelaria@wilsonco.com</a>
Raymond M. Salazar, Construction Manager	Wilson & Company	505-504-4597 / <a href="mailto:raymond.salazar@wilsonco.com">raymond.salazar@wilsonco.com</a>
Jon Romero, Construction Inspector	Wilson & Company	505-348-4000 / <a href="mailto:jon.romero@wilsonco.com">jon.romero@wilsonco.com</a>
Stephannie Begaye, Construction Inspector	Wilson & Company	505-348-4000 / <a href="mailto:stephannie.begaye@wilsonco.com">stephannie.begaye@wilsonco.com</a>
Ms. Jourdan Washburn, Chapter Secretary/Treasurer, other Sanostee Chapter Elected Officials and Roads Committee	Sanostee, NM	575-496-7735 / <a href="mailto:chelseamoore@navajochapters.org">chelseamoore@navajochapters.org</a>
Sarah Gray, Estimating Coordinator	FNF Construction Inc	480-929-6747 / <a href="mailto:sgray@fnfinc.com">sgray@fnfinc.com</a>
Jarret Nelson, Project Manager	FNF Construction Inc	408-784-2910 / <a href="mailto:jnelson@fnfinc.com">jnelson@fnfinc.com</a>
Joe Skipper, Project Manager	FNF Construction Inc	480-929-6745 / <a href="mailto:jskipper@fnfinc.com">jskipper@fnfinc.com</a>
Terry Gorsuch, Manager of Engineering	NECA	505-210-7070 / <a href="mailto:terry@navajo.net">terry@navajo.net</a>
Monica Redhouse, Estimator / Project Coor	NECA	505-210-7070 / <a href="mailto:monica@navajo.net">monica@navajo.net</a>

# N5012 Sanostee Wash Bridge – VIRTUAL Pre-Proposal Meeting

## RFP #21-07-2523LE

### August 11, 2021 10:00 am Sign-In Sheet

NAME / TITLE	COMPANY NAME	PHONE NUMBER / EMAIL
Ryan Gray, P.E., Water Resources Engineer	WCA Construction, LLC	970-564-4528 / <a href="mailto:rgray@wcaconstruction.com">rgray@wcaconstruction.com</a>
Joshuah Crooker-Flint, Chief Estimator	AUI, Inc	505-242-4848 x.3031 / <a href="mailto:joshc@uiinc.net">joshc@uiinc.net</a>
Richard Montoya, Vice President	FNF Construction, Inc.	505-490-7157 / <a href="mailto:rmontoya@fnfinc.com">rmontoya@fnfinc.com</a>
Curtis Rogers	Meridian Contracting, Inc	405-323-1589 / <a href="mailto:c.rogers@meridiancon.net">c.rogers@meridiancon.net</a>
Jen Gorenflo, Project Coordinator	CBKN Dirtworks, Inc	505-867-2801 / <a href="mailto:jen@cbkndirtworks.com">jen@cbkndirtworks.com</a>
Terry Borth, Project Estimator	Rock Gap Construction	480-834-5717 / <a href="mailto:terryb@rockgap.com">terryb@rockgap.com</a>
Jason Creach, Vice President	FNF Construction, Inc.	480-929-6704 / <a href="mailto:jcreach@fnfinc.com">jcreach@fnfinc.com</a>
Stanley Charley	NECA	505-210-7026 / <a href="mailto:stanley@navajo.net">stanley@navajo.net</a>
Sumit Ukirde, Estimator/Asst Project Mgr	Arrow Indian Contractors, Inc	480-749-6321 / <a href="mailto:sumit.ukirde@arrowindian.com">sumit.ukirde@arrowindian.com</a>
Desiree Jojola	Kimo Constructors, Inc	505-869-9311 x.102 / <a href="mailto:desiree@kimonm.com">desiree@kimonm.com</a>

NAVAJO D.O.T.



bonded and insured. Provide proof of your company's Certificate of Insurance and other insurances related to this project.

- f. Provide information regarding the financial capability of the Proposed Responder to successfully undertake projects of this type. Provide statements from bonding agencies and insurance carriers. The following bonds are required for the project:
- Bid Bond/Guarantee. Contractor shall provide to the Navajo Nation a Bid Bond/Guarantee as required by Special Contract Requirement Clause NN-228-1 Bid Guarantee. The amount of the bid guarantee shall be ten (10) percent of the bid price per 12 N.N.C. §341 Bid Security.
  - Performance Bond. The successful Contractor shall provide to the Navajo Nation a Performance Bond as required in Article 11.1 of the Navajo Nation Supplemental General Conditions, Exhibit B of Contract Book, as attached under the NDOT Contract Documents. For the Proposal, provide affidavit from surety indicating Contractor's ability to provide said bond.
  - Payment Bond. The successful Contractor shall provide to the Navajo Nation a Payment Bond as required in Article 11.2 of the Navajo Nation Supplemental General Conditions, Exhibit B of Contract Book, as attached under the NDOT Contract Documents. For the Proposal, provide affidavit from surety indicating Contractor's ability to provide said bond.
  - Lesser Bond amounts. Contractor shall refer to Article 11.3 of the Navajo Nation Supplemental General Conditions, Exhibit B of Contract Book, as attached under the NDOT Contract Documents for requirements regarding Lesser Bond amounts.
  - Bonding documentation required. The Navajo Nation's Representative must receive written documentation of all required bonds prior to the issuance of a Notice to Proceed for the Project, and Contractor shall not commence any work or services under this Contract until such documentation is received by the Navajo Nation.
- g. Prime Contractor shall submit a Subcontracting Plan that complies with the Navajo Nation Business Opportunity Act listing the following:
- Subcontractors and suppliers to be used by the Prime Contractor;
  - Procedures used in selecting subcontractors and suppliers; and
  - Subcontractors ~~or lease agreements~~ list for equipment to be used in performance of the contract.
  - For further information on the Navajo Business Opportunity Act is available at: <http://www.navajobusiness.com/pdf/DngBus/BusRegultry/Opportunity%20Act.pdf>
  - For further information on the Source List- Certified Navajo Businesses is available at: [http://navajobusiness.com/pdf/SourceList/Source\\_List.pdf](http://navajobusiness.com/pdf/SourceList/Source_List.pdf)

### C. EXPERIENCE WITH SIMILAR WORK:

Prospective Respondent shall demonstrate experience and quality of service rendered on road construction projects with similar scope, size and characteristics, especially if completed on the Navajo Nation, other Indian Reservations and rural communities. List and describe in detail at least

Communication Plan – Describe how Respondent will communicate with the Navajo DOT, Navajo Nation Mariano Lake Sanostee Chapter, and impacted residents on the progress of the project. Face-to-Face meeting is preferred when 30%, 60%, 90%, and 100% of the project is completed.

Describe your familiarity of constructing projects on the Navajo Nation. Emphasis is placed on the Respondent's ability to demonstrate sensitivity to Navajo cultural values, and the ability to work with the Navajo Nation government and its constituents at the local Mariano Lake Sanostee Chapter.

E. LITIGATIONS, JUDGMENTS & SURETY COMPANY CLAIMS:

Have any members of the Team been involved in any litigation with a project owner, municipality or other public agency in the last ten (10) years? If so, explain the circumstances, resolution, and current status.

Have primary members of the Team (i.e. Prime Respondent, Engineer, or Contractor) been involved in any construction-related litigation with any project owners in the last ten (10) years? If so, explain the circumstances, resolution, and current status.

Has a surety company finished a project of or paid a claim relative to any constructor identified in the RFP within the last ten (10) years? If so, explain the circumstances, resolution, and current status.

F. CERTIFIED NAVAJO BUSINESS:

Provide proof that business is currently certified by the Navajo Nation - Business Regulatory Department and prioritized under Navajo Nation Council Resolution CAP-37-02 and also under the Section 204 (A) (1) and (2) of the revised Navajo Nation Business Opportunity Act.

G. BID SCHEDULE / PROPOSAL COST:

In **a separate sealed envelope clearly marked** as "BID SCHEDULE – RFP Bid 21-07-2523LE Project N5012(1)1,2&4", and with Respondent's information. The sealed envelope should be included in the overall proposal envelope but will not be opened by the Review Team until after the proposals have been reviewed and ranked.

**End of RFP.**



**BID SCHEDULE  
NAVAJO NATION DIVISION OF TRANSPORTATION**

**PROJECT: N5012(1)2&4**

**Date: August 18, 2021**

**LENGTH: 0.644 miles**

ITEM	DESCRIPTION	Quantity	Units	Unit Bid Price	Total Price
10901-0000	Extra & Miscellaneous Work - Authorized under Suppl. Spec. 109.02(s)	All Required	Lump Sum	\$ 100,000.00	\$ 100,000.00
15101-0000	MOBILIZATION	1	LPSM	\$ -	\$ -
15201-0000	CONSTRUCTION SURVEY AND STAKING	1	LPSM	\$ -	\$ -
15301-0000	CONTRACTOR QUALITY CONTROL	1	LPSM	\$ -	\$ -
15701-0000	SOIL EROSION CONTROL, TEMPORARY	1	LPSM	\$ -	\$ -
20102-0000	CLEARING AND GRUBBING	1	LPSM	\$ -	\$ -
20304-1000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LPSM	\$ -	\$ -
20401-0000	ROADWAY EXCAVATION	9,600	CUYD	\$ -	\$ -
20410-0000	BORROW	4,900	CUYD	\$ -	\$ -
20801-0000	STRUCTURE EXCAVATION	288	CUYD	\$ -	\$ -
20803-0000	STRUCTURAL BACKFILL	596	CUYD	\$ -	\$ -
21301-0000	SUBGRADE STABILIZATION (12")	12,900	SQYD	\$ -	\$ -
25101-0100	PLACED RIPRAP, METHOD A, CLASS 1	42	CUYD	\$ -	\$ -
25112-2000	WIRE-ENCLOSED RIPRAP, CLASS 1	538	CUYD	\$ -	\$ -
30101-2000	AGGREGATE BASE, GRADING D	4,050	TON	\$ -	\$ -
40702-1100	CHIP SEAL, TYPE 2A	11,300	SQYD	\$ -	\$ -
41101-5000	ASPHALT PRIME COAT (PEP)	21	TON	\$ -	\$ -
55201-0100	STRUCTURAL CONCRETE CLASS A	34	CUYD	\$ -	\$ -
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	206	CUYD	\$ -	\$ -
55302-3300	PRECAST, PRESTRESSED CONCRETE AASHTO GIRDER	402	LNFT	\$ -	\$ -
55401-1000	REINFORCING STEEL	26,775	LBS	\$ -	\$ -
55401-2000	REINFORCING STEEL, EPOXY COATED	29,860	LBS	\$ -	\$ -
55502-0000	STRUCTURAL STEEL, FURNISHED, FABRICATED, AND ERECTED	2,530	LBS	\$ -	\$ -
55601-0500	BRIDGE RAILING, CONCRETE 42"	264	LNFT	\$ -	\$ -
55901-0000	MEMBRANE WATERPROOFING	396	SQYD	\$ -	\$ -
56501-0400	DRILLED SHAFT, 36-INCH DIAMETER	420	LNFT	\$ -	\$ -
56505-0000	CROSSHOLE SONIC LOGGING	8	EACH	\$ -	\$ -
60101-0000	CONCRETE	21	CUYD	\$ -	\$ -
60201-0800	24" CULVERT PIPE	38	LNFT	\$ -	\$ -
60210-0800	24" CULVERT PIPE END SECTION	2	EACH	\$ -	\$ -
60201-1000	36" CULVERT PIPE	118	LNFT	\$ -	\$ -
60210-1000	36" CULVERT PIPE END SECTION	4	EACH	\$ -	\$ -
60201-1200	48" CULVERT PIPE	140	LNFT	\$ -	\$ -
60210-1200	48" CULVERT PIPE END SECTION	2	EACH	\$ -	\$ -
60210-1250	END SECTION FOR 48-INCH PIPE CULVERT (WITH SAFETY BARS)	2	EACH	\$ -	\$ -



**BID SCHEDULE  
NAVAJO NATION DIVISION OF TRANSPORTATION**

**PROJECT: N5012(1)2&4**

**Date: August 18, 2021**

**LENGTH: 0.644 miles**

ITEM	DESCRIPTION	Quantity	Units	Unit Bid Price	Total Price
60201-1600	72" CULVERT PIPE	26	LNFT	\$ -	\$ -
60202-0400	28"Sx20" R(NOMINAL) CULVERT PIPE ARCH	32	LNFT	\$ -	\$ -
60210-1600	72" CULVERT PIPE END SECTION	2	EACH	\$ -	\$ -
60211-0800	28"Sx20" R(NOMINAL) CULVERT PIPE ARCH END SECTION	2	EACH	\$ -	\$ -
61701-5000	GUARDRAIL SYSTEM SGR-04b, TYPE PDE 02 WITH MSKT-TL3-8 END TERMINAL & THRIE BEAM TRANSITION	390	LNFT	\$ -	\$ -
61901-1000	FENCE, BARBED WIRE, 5 STRAND	6,660	LNFT	\$ -	\$ -
61902-1400	GATE, METAL, 16 FEET WIDTH	1	EACH	\$ -	\$ -
61902-2600	GATE, BARBED WIRE, 5-STRAND	4	EACH	\$ -	\$ -
61903-0300	CATTLE GUARD, 16 FEET	2	EACH	\$ -	\$ -
61903-0700	CATTLE GUARD, 24 FEET	1	EACH	\$ -	\$ -
61903-1100	CATTLE GUARD, 32 FEET	2	EACH	\$ -	\$ -
62101-0000	RIGHT OF WAY MONUMENTS	18	EACH	\$ -	\$ -
62102-0000	RIGHT OF WAY MARKERS	8	EACH	\$ -	\$ -
62510-1000	SEEDING, DRY METHOD	4.5	ACRE	\$ -	\$ -
63304-0400	SIGNS , STEEL PANELS, TYPE 9 SHEETING	200	SQFT	\$ -	\$ -
63305-0400	POSTS, STEEL, 2-INCH X 2-INCH	420	LNFT	\$ -	\$ -
63308-2000	OBJECT MARKER, TYPE 2	6	EACH	\$ -	\$ -
63308-3000	OBJECT MARKER, TYPE 3	4	EACH	\$ -	\$ -
63401-1500	PAVEMENT MARKINGS, TYPE H, SOLID	13,800	LNFT	\$ -	\$ -
63405-3101	PAVEMENT MARKINGS, TYPE H, "STOP BAR". 24" SOLID WHITE	3	EACH	\$ -	\$ -
63501-0000	TEMPORARY TRAFFIC CONTROL PLAN	1	LPSM	\$ -	\$ -

	Subtotal:	\$ -
<input style="width: 100%; height: 20px;" type="text"/> <b>Contractor Name</b>	Navajo Nation Tax (6%):	\$ -
	<b>Total Bid Price:</b>	\$ -

**SCOPE-OF-WORK**

The proposed work consists of furnishing all labor, material, equipment and incidentals necessary for construction of 0.644 miles of grading and subgrade, placement of aggregate base course, placement of double chip seal pavement, installation of drainage structures, fencing, cattleguards, gates, signs, striping and other miscellaneous work as called for in the design plans and specifications for this Project. The quantities listed for each item is estimated and the Unit Price is applicable to each as given in the Bid Schedule above. The final pay quantity measurements shall be rounded to the significant figures given in this bid schedule for the final pay estimate. Payment for work performed on Items furnished will be made in accordance with Sub-Section 109.05, Scope of Payment of FP-14. **The Unit Bid Price must include all overhead, profit, and bonding.**

**Addendum Acknowledgement**

**Addendum:**

In submitting this Bid, Respondent represents that: *Respondent has examined and carefully studied the RFP and attachments, and any data and reference items identified in the RFP documents, and hereby acknowledges receipt of the following Addenda:*

**Addendum No:**

**Addendum Date:**

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Respondent's Acknowledgement Signature:

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Name and Title

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Company Name

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Signature

## GENERAL NOTES:

- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-14), AND THE SUPPLEMENTAL SPECIFICATIONS FOR THIS PROJECT.
- ALL PERMANENT AND TEMPORARY ROADSIDE SIGNS, AND PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION) AND IN ACCORDANCE WITH THE DETAILS ON THESE PLANS. PLACEMENT OF "STOP" BAR, PERMANENT TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE FIELD ADJUSTED AS DIRECTED BY THE CONSTRUCTION MANAGER (CM), AT NO ADDITIONAL COST TO THE GOVERNMENT.
- THE TEMPORARY TRAFFIC CONTROL DETAILS SHOWN REFLECTS GENERAL REQUIREMENTS FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THESE DETAILS, TAKING INTO ACCOUNT THE CONTRACTOR'S CONSTRUCTION SEQUENCING PLAN, MUTCD, AND THE SUPPLEMENTAL SPECIFICATIONS FOR SECTION 63501-TEMPORARY TRAFFIC CONTROL. THE CONTRACTOR SHALL ALSO SUBMIT A COPY OF THIS TRAFFIC CONTROL PLAN TO THE CM (2)-WEEKS PRIOR TO START OF CONSTRUCTION.
- THE DESIGN FEATURES INCLUDING HORIZONTAL AND VERTICAL ALIGNMENTS, TYPICAL SECTIONS, AND OTHER DESIGN DETAILS SHOWN SHALL NOT BE ALTERED OR MODIFIED IN ANYWAY DURING CONSTRUCTION WITHOUT THE EXPRESSED WRITTEN DIRECTION AND WRITTEN APPROVAL OF THE ENGINEER OF RECORD THROUGH THE CM, UNLESS OTHERWISE NOTED IN THESE PLANS OR SPECIFICATIONS. DRAINAGE STRUCTURES AND TURNOUTS SHALL BE INSTALLED AS SHOWN WITH ONLY MINOR CORRECTIONS IN LOCATION, SKEW, AND/OR INVERT ELEVATIONS AS NEEDED TO FIT FIELD CONDITIONS. TURNOUTS MAY NOT BE SHIFTED MORE THAN 15 FEET FROM THE LOCATIONS SHOWN ON THE PLANS WITHOUT THE WRITTEN APPROVAL OF THE CM.
- THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND EXPENSE FOR DISPOSAL OF TRASH AND/OR CONSTRUCTION DEBRIS IN ACCORDANCE WITH SECTIONS 107 AND 203 OF THE FP-14 AS WELL AS ANY AND ALL PERMIT REQUIREMENTS. THIS WORK SHALL BE INCIDENTAL OBLIGATIONS OF THE CONTRACTOR.
- THE BIDDER SHALL READ AND MAKE CAREFUL EXAMINATION OF THE PLANS, SPECIFICATIONS, QUANTITIES, MATERIAL, SURVEYING REQUIREMENTS, AND VISIT THE SITE OF THE PROPOSED CONSTRUCTION TO BECOME FAMILIAR WITH THE SITE CONDITIONS AND LIMITATIONS BEFORE MAKING A PROPOSAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL ERRORS RESULTING FROM THE FAILURE TO MAKE SUCH AN EXAMINATION. ANY INFORMATION DERIVED FROM THE MAPS, PLANS, SPECIFICATIONS, PROFILES, DRAWINGS OR THE ENGINEER, SHALL NOT RELIEVE THE CONTRACTOR FROM ANY RISK OR FROM FULFILLING THE TERMS OF THE CONTRACT. THERE ARE SEVERAL AREAS WITH LIMITED WORKING ROOM WITHIN THE PROJECT RIGHT-OF-WAY, AND/OR WITH EXISTING FEATURES WITHIN OR NEAR THE PROJECT RIGHT-OF-WAY, THAT WILL REQUIRE 'SPECIAL' CONSTRUCTION PROCEDURES.
- THE CONTRACTOR IS REQUIRED TO SUBMIT A REVISED PIPE LIST TO THE CM BASED ON THE FIELD STAKING IN ACCORDANCE WITH SECTION 152 OF THE CONTRACT SUPPLEMENTAL SPECIFICATION. THE APPROVAL OF ANY AND ALL REVISED PIPE LISTS WITH ANY CHANGES TO DRAWINGS IS RENDERED AS A SERVICE ONLY AND IS NOT CONSIDERED A GUARANTEE OF MEASUREMENTS, QUANTITIES, INSTALLATION PROCEDURES, AND/OR DIMENSIONS, NOR SHALL IT BE CONSIDERED AS RELIEVING THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT SPECIFICATIONS AND DESIGN PLANS. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNDER NO CIRCUMSTANCE SHALL ANY DRAINAGE STRUCTURE(S) BE INSTALLED BELOW THE NATURAL FLOW LINE OF THE WASH, CHANNEL, ARROYO, OR DITCH LINE.
- NO WORK SHALL BE PERFORMED OR GROUND DISTURBED OUTSIDE OF THE DESIGNATED CONSTRUCTION LIMITS IN ACCORDANCE WITH SECTION 107 OF THE FP-14 WITHOUT WRITTEN APPROVAL BY THE CM UNLESS OTHERWISE SHOWN AND LABELED ON THESE PLANS AS "CONSTRUCTION ZONE". IN NO CASE SHALL ANY WORK BE PERFORMED OUTSIDE THE DESIGNATED RIGHTS-OF-WAY LIMITS WITHOUT WRITTEN APPROVAL FROM THE CM, UNLESS OTHERWISE SHOWN AND CALLED OUT ON THESE PLANS AS "CONSTRUCTION ZONE". THE CONSTRUCTION LIMIT IS THE CATCH POINT EARTHWORK LIMIT PLUS 10 FEET, NOT TO EXCEED THE RIGHT-OF-WAY LIMITS.
- THE DETAILS SHOWN ON THE STORM WATER POLLUTION AND EROSION/SEDIMENT CONTROL DETAILS ARE GENERAL REQUIREMENTS TO BE USED BY THE CONTRACTOR IN PREPARING A STORM WATER POLLUTION PREVENTION PLAN ALONG WITH THE REQUIREMENTS IN SECTION 157 OF THE SUPPLEMENTAL SPECIFICATION AND SPECIAL CONTRACT REQUIREMENTS. THE SWPPP IS ONLY REQUIRED AT THE DRAINAGE PIPE REPLACEMENT LOCATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT COURTESY COPY OF THE APPROVED SWPPP TO THE NAVAJO NATION WATER QUALITY EPA OFFICE.
- THE QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY AND TO COMPARE AND CANVAS BIDS. ACTUAL PAY QUANTITIES WILL BE DETERMINED IN THE FIELD FOR AUTHORIZED CHANGES THAT AFFECT THE QUANTITIES. ANY OVER-RUN OR UNDER-RUN OF QUANTITIES SHALL BE SUBJECT TO STANDARD GENERAL CONDITIONS, ARTICLE 11.3.D.4, VARIATION IN ESTIMATED QUANTITIES.
- ALL TURNOUT/DRIVEWAYS, AS CALLED FOR ON THESE PLANS, SHALL EITHER BE CONSTRUCTED, REBUILT, RESHAPED AND/OR REMOVED UP TO THE RIGHT-OF-WAY LIMITS. ALL TURNOUTS SHALL BE PAVED TO THE CATTLEGUARD, THEN FROM THE BACK OF CATTLEGUARD TO THE R/W LINE, PLACE AGGREGATE BASE, REQUIRED GRADING, SHAPING, AND EARTH COMPACTION OUTSIDE OF THE RIGHT-OF-WAY, TO CONNECT NEW TURNOUTS TO THE EXISTING ROADWAY/DRIVEWAY (AS SHOWN ON THE PLANS OR AS DIRECTED BY THE CM) SHALL BE INCIDENTAL TO BID ITEM 20401-0000. ANY REQUIRED AGGREGATE BASE AND/OR ASPHALT MATERIAL SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THIS WORK AS SHOWN IN THE BID SCHEDULE.
- THE CONTRACTOR SHALL BE REQUIRED TO OBLITERATE ALL EXISTING ABANDONED TURNOUTS AND ROADWAY WITHIN THE RIGHT-OF-WAY LIMITS, AND ANY EXISTING TURNOUTS/ROADWAY OUTSIDE OF THE RIGHT-OF-WAY THAT ARE DESIGNATED ON THE PLANS FOR OBLITERATION. OBLITERATION SHALL BE AS PER FP-14, METHOD 2. SCARIFICATION SHALL BE TO A DEPTH OF 12 INCHES, THE SCARIFIED SURFACE SHALL BE LEFT ROUGH, WITH 4 INCH TO 12 INCH HIGH RIDGES PERPENDICULAR TO THE EXISTING ROAD CENTERLINE. ROADWAY OBLITERATION INCLUDES GRADING DRAINAGE CHANNELS ACROSS THE OLD ROADBED, TO RE-ESTABLISH NATURAL DRAINAGE CHANNELS AND/OR TO OPEN CHANNELS FOR THE NEWLY INSTALLED (IN NEW ROADWAY) DRAINAGE STRUCTURES. THIS WORK TO BE INCLUDED IN THE BID ITEM 21102-2000. PERMANENT SEEDING AND STRAW MULCHING SHALL BE APPLIED TO ALL OBLITERATION AREAS, WITHIN THE CONSTRUCTION LIMITS. SEEDING AND MULCHING TO BE PAID UNDER ITEM 62510-1000.
- STRUCTURAL EXCAVATION AND BEDDING/BACKFILL OF ALL DRAINAGE STRUCTURES (CULVERTS AND CONCRETE HEAD/WING WALLS) SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF STRUCTURES. BEDDING AND BACKFILL MATERIAL SHALL MEET ALL REQUIREMENTS OF FP-14, SECTIONS 209 AND 704. APPROVED EXCESS EXCAVATION MATERIAL MAY BE USED TO REBUILD TURNOUTS, EARTHEN DITCH BLOCKS, AND/OR PLACED ALONG ROADWAY SHOULDERS AS EMBANKMENT IN AREAS ADJACENT TO THE REMOVAL AND AS DIRECTED BY THE CM.
- ALL FURROW AND DRAINAGE DITCHES SHALL BE STAKED AND GRADED TO DRAIN UP TO THE RIGHT-OF-WAY LIMITS. EARTHEN DITCH BLOCKS, DIKES AND DITCHES SHALL BE CONSTRUCTED AS SHOWN ON THESE PLANS AND/OR ADDED AT LOCATIONS DESIGNATED BY THE CM. ALL DITCH BLOCKS, DIKES AND FURROW DITCHES SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THIS WORK AS SHOWN IN THE BID SCHEDULE. AT ALL DRAINAGE PIPE REPLACEMENTS, INSTALLATIONS, EXTENSIONS, AND IN-PLACE PIPE CLEANING LOCATIONS, THE CONTRACTOR SHALL CLEAN, REGRADE, AND RESHAPE THE INLET AND OUTLET CHANNELS TO THE RIGHT-OF-WAY LINE AS DIRECTED BY THE CM. THIS WORK SHALL BE INCIDENTAL TO BID ITEMS FOR SECTIONS 602, 603, AND/OR 607.
- IMMEDIATELY PRIOR TO PLACING EMBANKMENT, AGGREGATE BASE AND/OR RECYCLED MATERIAL, THE TOP 6 INCHES OF THE ORIGINAL GROUND, OR FINISHED SUBGRADE (INCLUDING TURNOUTS) SHALL BE CHECKED FOR COMPACTION AND GRADE. IF COMPACTION DOES NOT MEET THE MINIMUM SPECIFIED COMPACTION AND TOLERANCE REQUIREMENTS, THE ORIGINAL GROUND AND/OR SUBGRADE SHALL BE RE-WATERED AND/OR SCARIFIED AS NEEDED AND RE-COMPACTED TO THE REQUIRED DENSITY AND TOLERANCE, AT THE CONTRACTOR'S EXPENSE. IN NO CASE SHALL ANY EMBANKMENT OR SURFACING MATERIAL BE PLACED ON FROZEN, MUDDY OR UNSTABLE NATURAL GROUND OR SUBGRADE. THIS WORK SHALL BE CONSIDERED AN INCIDENTAL OBLIGATION OF THE CONTRACTOR.
- THE EARTHWORK TABLE SHOWN IS TO ASSIST THE CONTRACTOR IN ESTABLISHING A BID UNDER THE EARTHWORK ITEMS SHOWN IN THE BID SCHEDULE. ANY BORROW MATERIAL CALLED FOR ON THE PLANS SHALL BE TAKEN FROM CONTRACTOR IDENTIFIED SOURCES OUTSIDE THE RIGHT-OF-WAY LIMITS. IT IS THE SOLE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR TO PROVIDE ANY NECESSARY BORROW MATERIAL FOR THIS PROJECT INCLUDING ALL NECESSARY PERMITS. ALL EXCAVATION, BORROW, WASTE AND EMBANKMENT MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS 20401-0000 AND 20410-0000. IF MATERIAL IS APPROVED, THE WASTE MATERIAL SHOWN ON THESE PLANS SHALL BE USED AS NECESSARY TO CONSTRUCT TURNOUTS, DITCH BLOCKS, AND/OR BE PLACED AS EMBANKMENT ALONG THE SHOULDERS IN AREAS AS DIRECTED BY THE CM. WASTE MATERIAL NOT USED WITHIN THE PROJECT LIMITS, SHALL BE DISPOSED OF AS PER FP-14, SECTION 204.14.
- AT ALL TOP EDGES OF CUT SLOPES 10 FEET OR HIGHER THAN THE DITCH FLOWLINE, THE CONTRACTOR SHALL REMOVE ALL LOOSE AND UNSTABLE ROCK OR ROCK THAT AS DETERMINED BY THE CM, MAY BECOME LOOSE WITHIN 15 FEET OF THE TOP CUT SLOPE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM 20401-0000, AND NO ADDITIONAL PAYMENT WILL BE MADE.
- THE LOCATION OF UTILITIES AS SHOWN IN THESE PLANS ARE APPROXIMATE AND ARE ONLY TO ASSIST THE CONTRACTOR IN COMPLETING THE WORK. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS PRIOR TO STARTING ANY CONSTRUCTION ACTIVITIES. SEE UTILITY CONTACT INFORMATION THIS SHEET. THE CONTRACTOR SHALL VERIFY ALL UTILITIES AND THEIR LOCATIONS WITH THE UTILITY OWNERS PRIOR TO CONSTRUCTION. ANY UTILITIES DAMAGED DUE TO NEGLIGENCE OF THE CONTRACTOR SHALL BE RESTORED TO CODE REQUIREMENTS AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL REMOVE, CLEAN, AND STOCKPILE ALL SALVAGEABLE EXISTING CULVERTS, GUARDRAIL, CATTLE GUARDS, FENCING MATERIALS, ETC. AS CALLED FOR ON THESE PLANS AND/OR SECTIONS 203 AND 607 IN A DESIGNATED LOCATION ADJACENT TO THE REMOVAL LOCATION BUT OUTSIDE OF THE RIGHT-OF-WAY. THE CM SHALL OFFER THIS SALVAGED MATERIALS TO THE COMMUNITY MEMBERS AND/OR PROPERTY OWNERS. IF THEY ACCEPT, THE MATERIALS MUST BE PICKED UP THAT SAME DAY. ANY PIPE MATERIALS DETERMINED TO BE UNSALVAGEABLE BY THE CM OR UNACCEPTABLE BY THE LAND OWNER / COMMUNITY MEMBERS SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH SECTIONS 107, AND 203. THE SALVAGE WORK SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE BID ITEMS FOR SECTIONS 203 AND/OR 607.
- THE CONTRACTOR SHALL BE REQUIRED TO REPAIR ALL DENTED, BENT OR OTHERWISE DAMAGED PIPE EDGES FOR THE SECTION AS CALLED FOR REPAIR WORK. THIS WORK SHALL MEET THE APPROVAL OF THE CM, AND IS EXPECTED TO INCLUDE STRAIGHTENING OF DENTED/BENT CULVERT EDGES, WELDING OF CUTS/TEARS IN THE EXISTING CULVERTS, TRIMMING BACK THE EXISTING CULVERT TO CREATE AN END SUITABLE FOR AN EXTENSION COLLAR, ETC. NO SEPARATE PAYMENT FOR THIS WORK WILL BE MADE. THE CONTRACTOR SHALL CONSIDER THESE REPAIRS INCIDENTAL TO THE DRAINAGE PIPE BID ITEMS UNDER SECTION 602, AND 603.
- THE ROADWAY TYPICAL SECTION SHOWN IS THE BASIC TEMPLATE TO WHICH THE PROJECT IS TO BE STAKED AND BUILT. HOWEVER, THERE WILL BE LOCATIONS WHERE, DUE TO EXISTING GROUND CONDITIONS, TURNOUTS, CULVERTS OR OTHER STRUCTURES, ETC., THE

## GENERAL NOTES CONTINUED:

- SHOWN TYPICAL SLOPES CANNOT BE CONSTRUCTED. IN THIS CASE, THE ENGINEER OF RECORD, THROUGH THE CM, SHALL BE CONSULTED FOR CHANGES IN THE TYPICAL SECTIONS, DESIGN SLOPES, AND/OR OTHER ADJUSTMENTS BEFORE PROCEEDING WITH THE WORK UNLESS NOTED OTHERWISE ON THE PLANS. THE FINAL CONSTRUCTED ROAD SECTION SHALL BE BASED ON THE GOVERNMENT FURNISHED CROSS SECTIONS AS ADJUSTED TO FIT FIELD CONDITIONS. THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF CONSTRUCTION, UNLESS OTHERWISE APPROVED. IN NO CASE SHALL THE CUT AND FILL BACK SLOPES BE BUILT STEEPER THAN THE MAXIMUM ALLOWED IN THE ROADWAY TYPICAL SECTION SHOWN.
- THE CONTRACTOR SHALL SAW CUT (FULL DEPTH) THE EXISTING ASPHALT PAVEMENT (INCLUDING TURNOUTS) WHERE NEW ASPHALT IS TO BE TIE INTO THE OLD ASPHALT PAVEMENT AT THE LOCATIONS NOTED ON THE PLANS. THE CONTRACTOR SHALL MATCH THE NEW ASPHALTIC CONCRETE PAVEMENT SURFACE TO EXISTING PAVEMENT SECTION TIE-IN POINTS AND TO PROVIDE FOR A SMOOTH TRANSITION AS DIRECTED BY THE CM. ALL SAWED PAVEMENT EDGES TO RECEIVE ASPHALT TACK COAT. THIS WORK SHALL BE INCIDENTAL TO BID ITEM 40201-0500 AS SHOWN IN THE BID SCHEDULE.
  - THERE ARE ARCHAEOLOGICAL SITES ALONG THE PROJECT CORRIDOR THAT REQUIRE AN ARCHAEOLOGIST PRESENT DURING CONSTRUCTION IN THE AREA AND OTHER SITES REQUIRING TEMPORARY ORANGE SAFETY FENCE TO BE PLACED BEFORE ANY WORK IN THE AREA CAN BEGIN. THE CONTRACTOR & CM SHALL COORDINATE THIS WORK WITH THE NDOT PROJECT MANAGEMENT OFFICE, TAFT BLACKHORSE (505-371-8394), OR ANJANETTE HAWK (505-371-8368). UNDER NO CIRCUMSTANCE CAN THE CONTRACTOR DO ANY CONSTRUCTION WORK IN AREAS REQUIRING THESE MITIGATION REQUIREMENTS UNTIL THE SAFETY FENCING AND/OR AN NDOT ARCHAEOLOGIST IS PRESENT.
- 24. NO SPECIFIC PRODUCT NAME/TYPE OF SUBGRADE TREATMENT IS CALLED FOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A MIX DESIGN (PER THE FP-14 SPEC) FOR THE CM'S REVIEW AND APPROVAL. PLEASE NOTE THIS NEEDS TO BE DONE 30 DAYS PRIOR TO STARTING PRODUCTION. THE FINISHED SUBGRADE SOIL CLASSIFICATION AND PI'S SHOULD BE INCLUDED IN THE MIX DESIGN. THE SUBGRADE STABILIZATION DEPTH OF TREATMENT IS 12 INCHES AND THE COMPRESSIVE STRENGTH REQUIREMENT WILL BE 200 PSI @ 21 DAYS USING ASTM D1633, METHOD A PER TABLE 213-1 OF THE FP-14 SPEC.**

## ENVIRONMENTAL MITIGATIONS:

- SITE NM-H-34-69 AND SITE NM-H-34-70:
  - CONSTRUCT CONSTRUCTION ACTIVITIES TO THE ROAD PRISM FOR THE LENGTH OF THE SITE BOUNDARY.
  - SITE BOUNDARY TO BE TEMPORARILY FENCED OR BARRICADED PRIOR TO CONSTRUCTION. SEE SHT 11 AND 12. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM 63501-0000 TEMPORARY TRAFFIC CONTROL PLAN.
  - MONITORING WITHIN 50 FEET OF SITE BOUNDARY BY AN NDOT QUALIFIED ARCHAEOLOGIST DURING CONSTRUCTION.
  - NO RUBBER-TIRED VEHICLES SHALL BE USED TO INSTALL ROW FENCE. FENCE SHALL BE INSTALLED BY HAND. SEE SHT 11 AND 12.

REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1),2&4	2	75

## UTILITY CONTACTS:

### WATER & WASTEWATER (SANITARY SEWER)

NAVAJO TRIBAL UTILITY AUTHORITY  
P.O. BOX 170  
FT. DEFIANCE, AZ 86504  
CONTACT PERSON: ADRIAN SHOWALTER  
PHONE: (928) 729-5721, EXT. 2340  
FAX: (928) 729-6240  
EMAIL: adrians@ntua.com

### TELECOMMUNICATIONS

FRONTIER COMMUNICATION  
STATE HIGHWAY 264  
ST. MICHAELS, ARIZONA 86511  
CONTACT PERSON: SHAWN MITCHELL  
PHONE: 928-871-5581  
FAX: -  
EMAIL: shawn.mitchell@str.com

### ELECTRIC POWER

NAVAJO TRIBAL UTILITY AUTHORITY  
HWY 4 12N  
FORT DEFIANCE, AZ 86504  
CONTACT PERSON: ART McCABE  
PHONE: (928) 729-5721  
EMAIL: artm@nuta.com

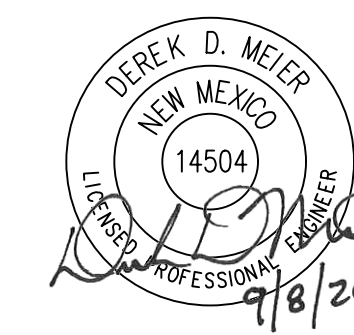
### NEW MEXICO ONE CALL

PH #811 OR (505)-260-1990

NAVAJO DIVISION OF  
TRANSPORTATION

## GENERAL NOTES AND UTILITY CONTACTS

Designed by: MKC	Date: 7/19
Drawn by: ELO	Date: 7/19
Checked by: DDM	Date: 7/19
File Name: 1709010_GEN_NTS_0.DWG	

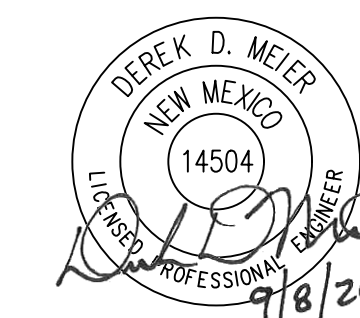


REVISED per ADDENDUM No. 1

REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1),2&4	3	75

SUMMARY OF QUANTITIES				
F.P. - 14 ITEM NO.	ITEM DESCRIPTION	UNIT	QUANT	AS-BUILT
	<b>N5012 ROADWAY</b>			
15101-0000	MOBILIZATION	LPSM	1	
15201-0000	CONSTRUCTION SURVEY AND STAKING	LPSM	1	
15301-0000	CONTRACTOR QUALITY CONTROL	LPSM	1	
15701-0000	SOIL EROSION CONTROL, TEMPORARY	LPSM	1	
20102-0000	CLEARING AND GRUBBING	LPSM	1	
20304-1000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LPSM	1	
20401-0000	ROADWAY EXCAVATION	CUYD	9,600	
20410-0000	BORROW	CUYD	4,900	
20801-0000	STRUCTURE EXCAVATION	CUYD	288	
20803-0000	STRUCTURAL BACKFILL	CUYD	596	
21301-0000	SUBGRADE STABILIZATION (12")	SGYD	12,900	
25101-0100	PLACED RIPRAP, METHOD A, CLASS 1	CUYD	42	
<del>25101-0200</del>	<del>PLACED RIPRAP, METHOD A, CLASS 2</del>	<del>CUYD</del>	<del>5</del>	
25112-2000	WIRE-ENCLOSED RIPRAP, CLASS 1	CUYD	538	
30101-2000	AGGREGATE BASE, GRADING D	TON	4,050	
40702-1100	CHIP SEAL, TYPE 2A	SGYD	11,300	
41101-5000	ASPHALT PRIME COAT (PEP)	TON	21	
55201-0100	STRUCTURAL CONCRETE CLASS A	CUYD	34	
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	CUYD	206	
55302-3300	PRECAST, PRESTRESSED CONCRETE AASHTO GIRDER	LNFT	402	
55401-1000	REINFORCING STEEL	LBS	26,775	
55401-2000	REINFORCING STEEL, EPOXY COATED	LBS	29,860	
55502-0000	STRUCTURAL STEEL, FURNISHED, FABRICATED, AND ERECTED	LBS	2,530	
55601-0500	BRIDGE RAILING, CONCRETE 42"	LNFT	264	
55901-0000	MEMBRANE WATERPROOFING	SGYD	396	
56501-0400	DRILLED SHAFT, 36-INCH DIAMETER	LNFT	420	
56505-0000	CROSSHOLE SONIC LOGGING	EACH	8	
60101-0000	CONCRETE	CUYD	21	
60201-0800	24" CULVERT PIPE	LNFT	38	
60210-0800	24" CULVERT PIPE END SECTION	EACH	2	
60201-1000	36" CULVERT PIPE	LNFT	118	
60210-1000	36" CULVERT PIPE END SECTION	EACH	4	
60201-1200	48" CULVERT PIPE	LNFT	140	
60210-1200	48" CULVERT PIPE END SECTION	EACH	2	
60210-1250	END SECTION FOR 48-INCH PIPE CULVERT (WITH SAFETY BARS)	EACH	2	
60201-1600	72" CULVERT PIPE	LNFT	26	
60202-0400	28"Sx20" R(NOMINAL)CULVERT PIPE ARCH	LNFT	32	
60210-1600	72" CULVERT PIPE END SECTION	EACH	2	
60211-0800	28"Sx20" R(NOMINAL)CULVERT PIPE ARCH END SECTION	EACH	2	
61701-5000	GUARDRAIL SYSTEM SGR-04b, TYPE PDE 02 WITH MSKT-TL3-8 END TERMINAL & THRIE BEAM TRANSITION	LNFT	390	
61901-1000	FENCE, BARBED WIRE, 5 STRAND	LNFT	6,660	
61902-1400	GATE, METAL, 16 FEET WIDTH	EACH	1	
61902-2600	GATE, BARBED WIRE, 5-STRAND	EACH	4	
61903-0300	CATTLE GUARD, 16 FEET	EACH	2	
61903-0700	CATTLE GUARD, 24 FEET	EACH	1	
61903-1100	CATTLE GUARD, 32 FEET	EACH	2	
62101-0000	RIGHT OF WAY MONUMENTS	EACH	18	
62102-0000	RIGHT OF WAY MARKERS	EACH	8	
62510-1000	SEEDING, DRY METHOD	ACRE	4.5	
63304-0400	SIGNS , STEEL PANELS, TYPE 9 SHEETING	SGFT	200	
63305-0400	POSTS, STEEL, 2-INCH X 2-INCH	LNFT	420	
63308-2000	OBJECT MARKER, TYPE 2	EACH	6	
63308-3000	OBJECT MARKER, TYPE 3	EACH	4	
63401-1500	PAVEMENT MARKINGS, TYPE H, SOLID	LNFT	13,800	
63405-3101	PAVEMENT MARKINGS, TYPE H, "STOP BAR". 24" SOLID WHITE	EACH	3	
63501-0000	TEMPORARY TRAFFIC CONTROL PLAN	LPSM	1	

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NAVAJO DIVISION OF TRANSPORTATION		
SUMMARY OF QUANTITIES		
Designed by: MKC	Date: 7/19	
Drawn by: ELO	Date: 7/19	
Checked by: DDM	Date: 7/19	
File Name: 1709010_S00.DWG		

REVISED per ADDENDUM No. 1

**ESTIMATED DRAINAGE STRUCTURE QUANTITIES**

DS-XX	STATION	TO	STATION	LOC	SKEW	60201-0800	60210-0800	60201-1000	60210-1000	60201-1200	60210-1200	60210-1250	60201-1600	60210-1600	60202-0400	60211-0800	25112-2000	NOTES
						24" CULVERT PIPE	24" CULVERT PIPE END SECTION	36" CULVERT PIPE	36" CULVERT PIPE END SECTION	48" CULVERT PIPE	48" CULVERT PIPE END SECTION	48" CULVERT PIPE END SECTION (WITH SAFETY BARS)	72" CULVERT PIPE	72" CULVERT PIPE END SECTION	28" Sx20" R(NOMINAL) CULVERT PIPE ARCH	28" Sx20" R(NOMINAL) CULVERT PIPE ARCH END SECTION	WIRE-ENCLOSED RIPRAP, CLASS 1	
LF	EA	LF	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	CY	
	42+00.00		44+88.00	LT													134	27' x 268' x 0.5'
	44+88.00		44+91.50	LT													2.1	37.5' x 3' x 0.5'
	44+99.00		45+10.00	LT													7.5	37' x 11' x 0.5'
	45+09.99		45+28.22	LT													3.1	10' x 17' x 0.5'
DS-01	47+60.57			LT/RT	8° RT FWD			88	2									
TDS-01	49+97.42			LT	NORMAL TO TO-01			30	2								1.8	5' x 9.5' x 1'
DS-02	55+03.57			LT/RT	10° LT FWD								26	2				
DS-03	59+23.75			LT/RT	30° LT FWD					140	2	2					53.0	2 x 10' x 28' x 1'; 21' x 41.5' x 1'
TDS-02	59+74.99			RT	13° RT FWD	38	2										1.5	5' x 8' x 1'
TDS-03	64+70.00			RT	NORMAL TO TO-03										32	2	1.5	5' x 8' x 1'
<b>SUBTOTAL</b>						38	2	118	4	140	2	2	26	2	32	2	204.5	
<b>PROJECT USE</b>						38	2	118	4	140	2	2	26	2	32	2	205	

**EARTHWORK SUMMARY**

STATION	TO	STATION	LOCATION	20401-0000	EMBANKMENT*	SHRINK (15%)	20410-0000	NOTES
				ROADWAY EXCAVATION			SELECT BORROW	
				CU YD	CU YD	CU YD	CU YD	
<b>N5012</b>								
40+00.00		45+21.80	LT & RT	122	2,500	375	2,753	
45+21.80		46+25.30	LT & RT	0	0	0	0	BRIDGE LIMITS
46+25.30		74+00.00	LT & RT	9,449	9,657	1,449	1,657	
TURNOUTS			LT & RT	6	382	57	433	
<b>SUBTOTAL</b>				<b>9577</b>			<b>4842</b>	
<b>PROJECT USE</b>				<b>9600</b>			<b>4900</b>	

\*FOR CONTRACTORS INFORMATION ONLY

**CONCRETE SLAB/BLANKET FOR WATERLINE ESTIMATED QUANTITIES**

STATION	OFFSET	LOC	55401-1000	60101-0000	NOTES
			REINFORCING STEEL	CONCRETE	
LB	CY				
62+21.00	19' TO 59'	LT	267.20	7.41	10'x40'x0.5' CONCRETE SLAB/BLANKET FOR 6" WATERLINE
<b>SUBTOTAL</b>			267.20	7.41	
<b>PROJECT USE</b>			270	8	

\*NOTE: WATERPROOF PLASTIC POLY SHEET 10MIL SHALL BE CONSIDERED INCIDENTAL TO BID ITEM 60101-0000, CONCRETE.

**ITEM NO. 62510-1000- SEEDING, DRY METHOD**

STATION	TO	STATION	LOCATION	AREA (ACRES)	COMMENTS
<b>N5012</b>					
40+00.00		74+00.00	LT & RT	4.1	
<b>SUBTOTAL</b>				4.1	
<b>PROJECT USE</b>				4.5	

NOTE: SEED MIX REQUIRES NDOT APPROVAL

**ITEM NO. 25101-0100- PLACED RIPRAP, METHOD A, CLASS 1**

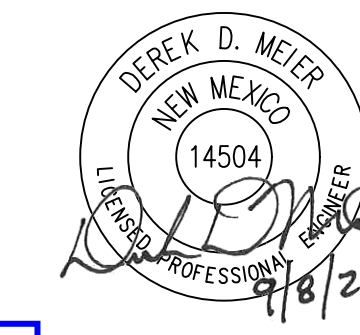
STATION	TO	STATION	LOCATION	CUYD	COMMENTS
<b>N5012</b>					
43+62.32			LT	2.36	CHECK DAM
44+87.00			LT	2.36	CHECK DAM
<b>SUBTOTAL</b>				4.72	
<b>PROJECT USE</b>				5.0	

NOTE: SEE DETAILS ON SHEET 8.

NAVAJO DIVISION OF  
TRANSPORTATION

**MISCELLANEOUS QUANTITIES**

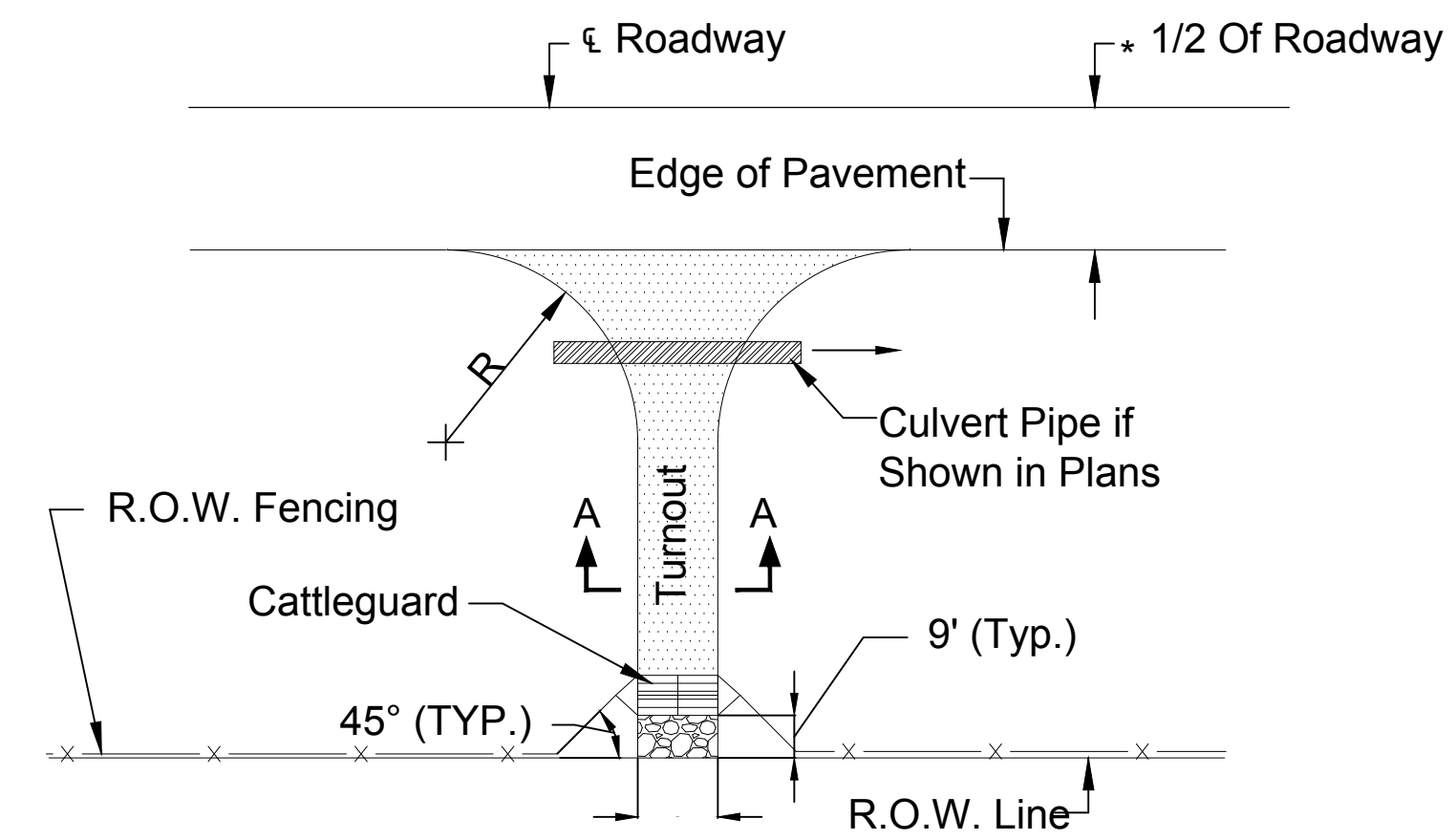
Designed by: MKC	Date: 7/19
Drawn by: ELO	Date: 7/19
Checked by: DDM	Date: 7/19
File Name: 1709010_MQ.DWG	



**REVISED per ADDENDUM No. 1**



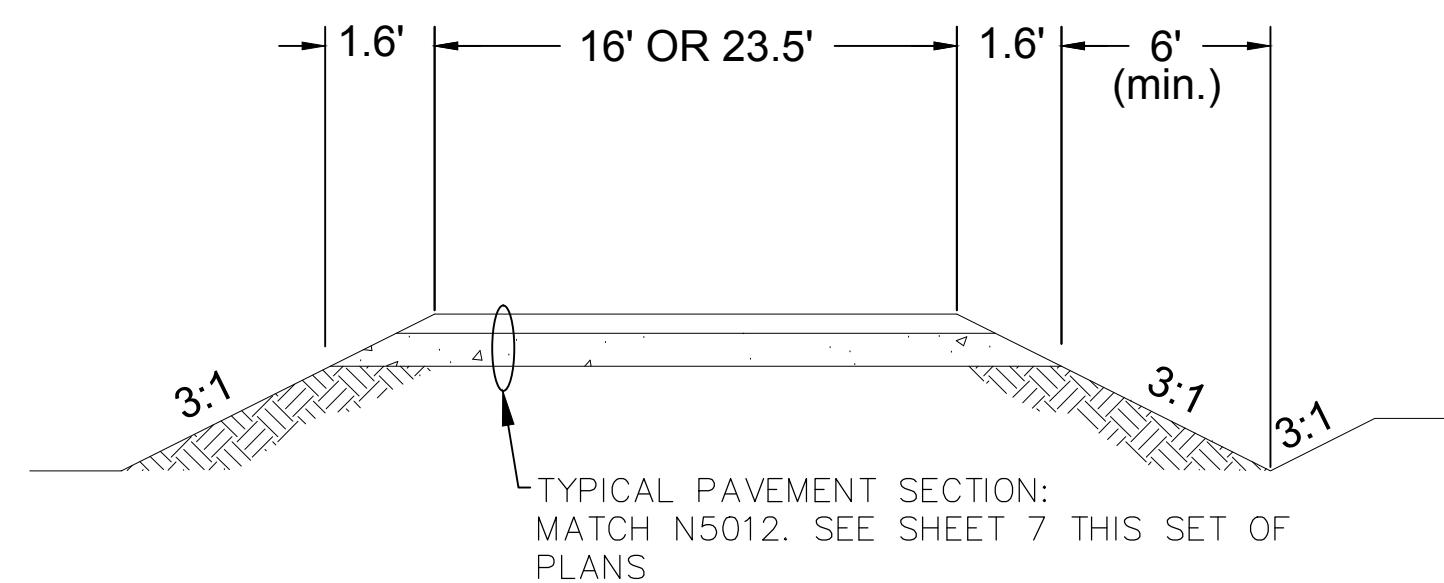
REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1),2&4	8	75



\*See Typical Sections

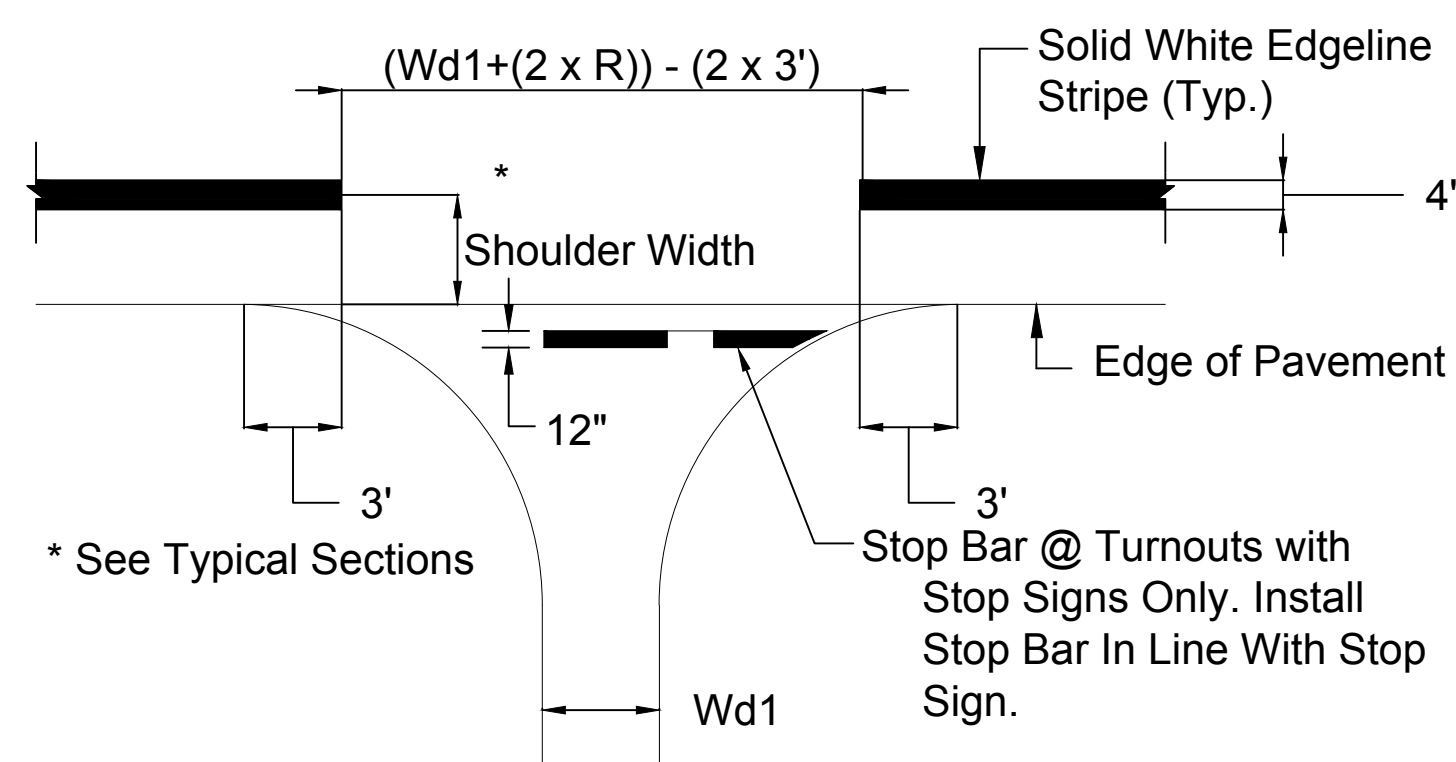
### TYPICAL TURNOUT

Note: In The Event the Turnout Cattleguard is Located Within the Turnout Radii, So That the Asphalt/Gravel/Dirt Width is Narrower on the Back Side of the Cattleguard Than on the Front Side, the Asphalt/Gravel/Dirt Width on the Back Side Shall be Widened to Match the Width on the Front Side and Tapered Back to the Standard Roadway/Driveway Width in 16'. This Work Shall be Included in the Earthwork, Gravel, Asphalt, etc. Bid Items as Appropriate.

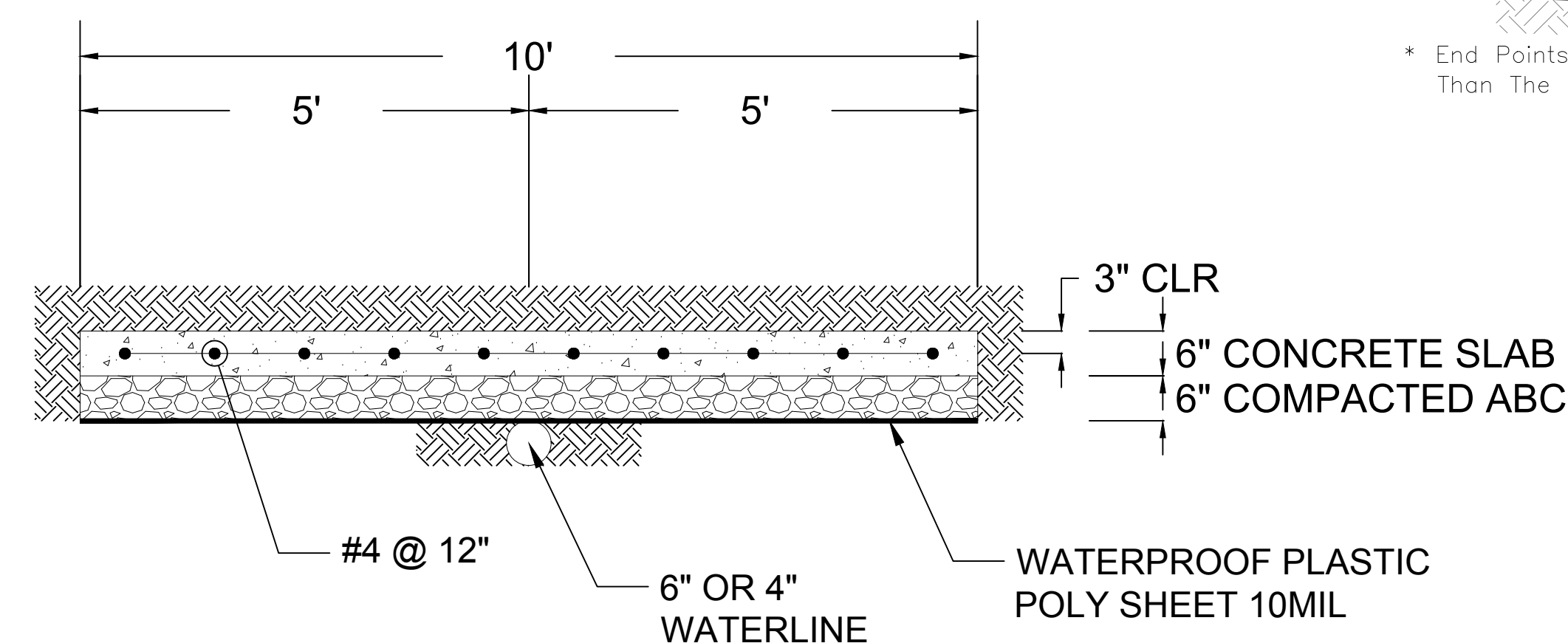


### SECTION A-A

NOTE: TYPICAL TURNOUT DIMENSIONS AND STRUCTURAL SECTION UNLESS NOTED OTHERWISE ON THE PLANS



### TYPICAL PAVEMENT MARKING @ TURNOUT

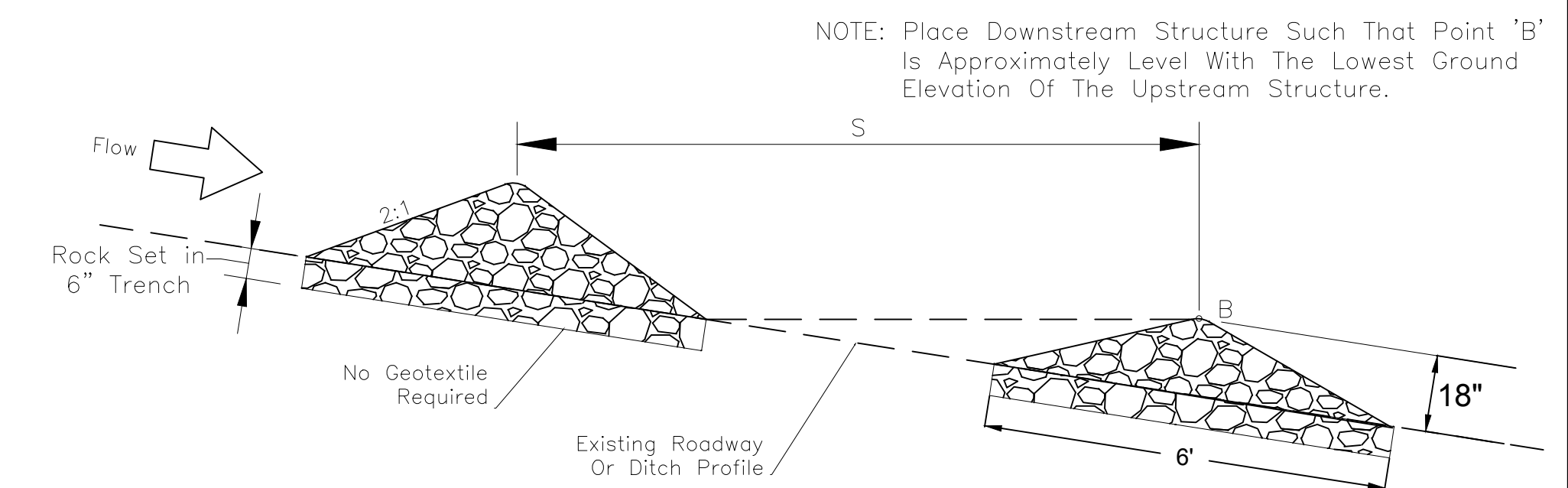


### 40' X 10' TYPICAL CONCRETE SLAB/BLANKET FOR 6" WATERLINE

NOTE: WATERLINE CROSSING CONCRETE SLAB IS 40-FEET IN WIDTH. SEE SHEET 12.

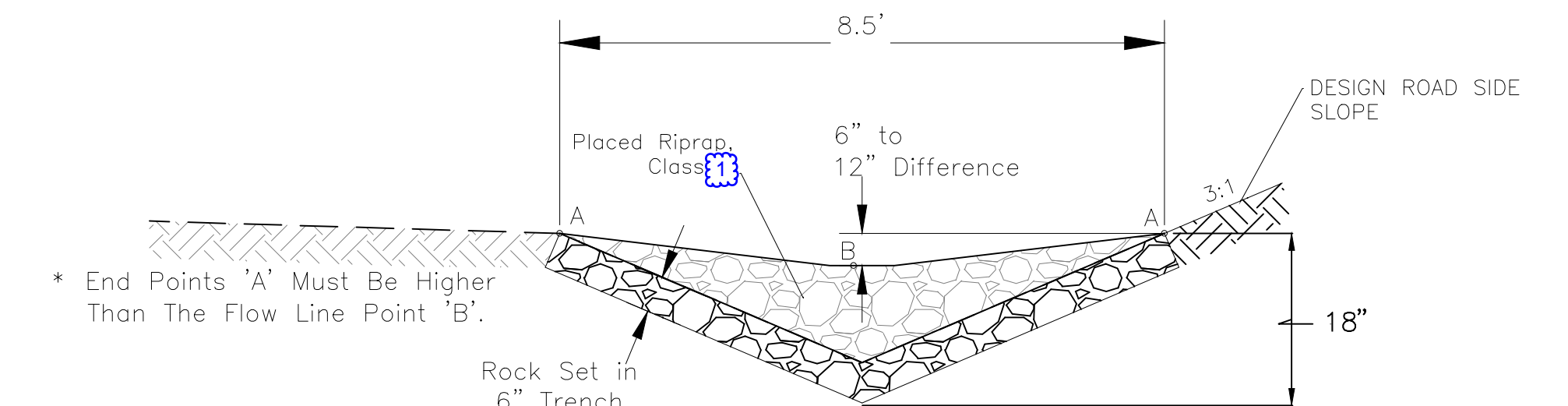
### CHECK DAM NOTES

1. Workmanship And Materials Shall Conform To The Standard Specifications For Construction Of Roads And Bridges On Federal Highway Projects (FP-14) Along With All Supplemental Specifications For This Project.
2. Riprap Check Dams Shall Be Placed Prior To Cross Scarifying The Existing Road Bed To Prevent Recompressing The Road Bed During Check Dam Placement. The Check Dam Stations Given Are Approximate. The CM Shall Adjust As Necessary To Fit Field Conditions.
3. If In The Opinion Of The CM, The Existing Road Bed (During Scarfying) Is Rock Material And Not Prone To Erosion, The Check Dams May Be Deleted Or Relocated To More Erosive Sections Of The Existing Road Bed. All Riprap Field Adjustments Are Incidental Obligations Of The Contractor.
4. Check Dam Riprap Quantities Shown Are Approximate. Actual Quantities Shall Be Determined By Field Measurement.
5. Ditches And Backslope Reshaping, Cleaning, And Excavation Shall Be Done In Accordance With The Plans And As Determined By The CM. All Ditch Excavation, Cleaning, And Reshaping Shall Be Considered Incidental To Completion Of The Structure.
6. All Stone For Placed Riprap To Be Class B Meeting The Grading Requirements Of Table 705-1, And Section 251 Of The FP-14.



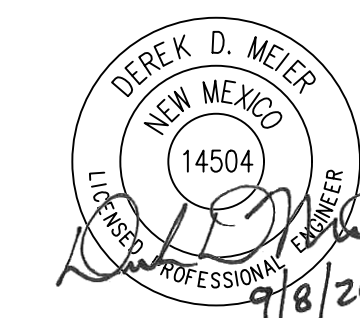
### CHECK DAM SPACING GUIDELINES

S = 130'



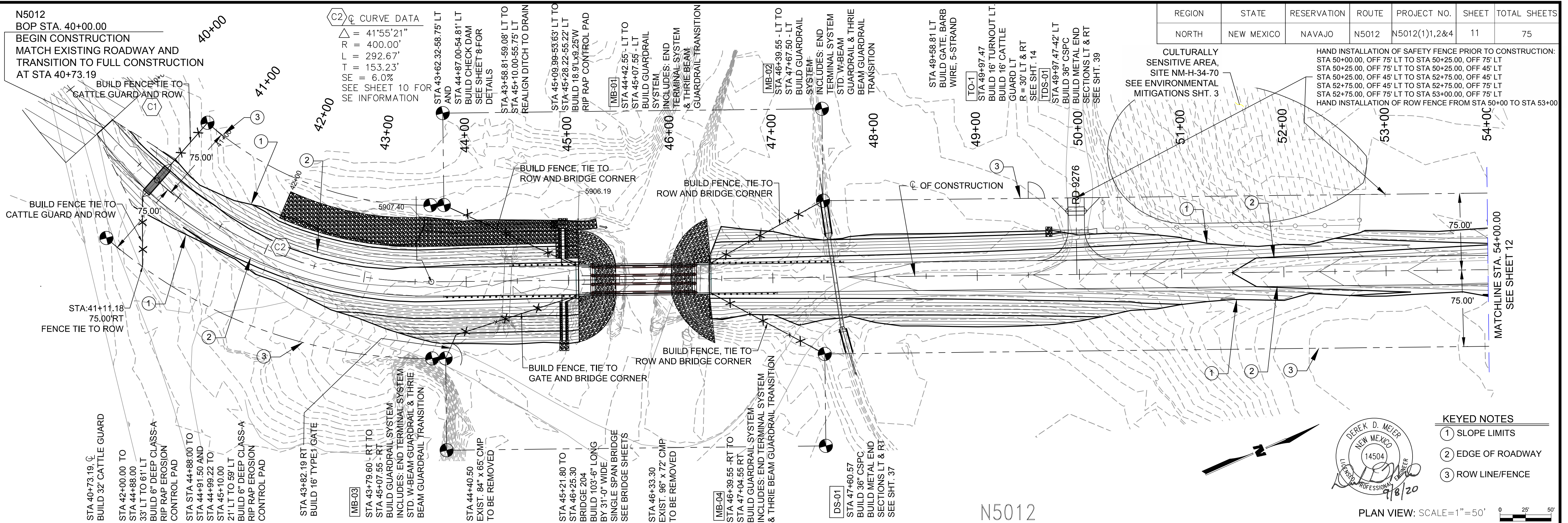
### CROSS SECTION DETAILS FOR V DITCH

\*If required to maintain the 6" minimum height of the top edge of the check dam (at back slopes) above the check dam flow line, the Contractor shall place embankment material as directed by the CM. This work shall be incidental to the riprap bid items and no additional payment will be made.



NAVAJO DIVISION OF TRANSPORTATION		
TURNOUT AND MISCELLANEOUS DETAILS		
Designed by: MKC	Date: 7/19	
Drawn by: ELO	Date: 7/19	
Checked by: DDM	Date: 7/19	
File Name: 1709010_TYP_SEC_DWG		

REVISED per ADDENDUM No. 1



REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1),2&4	11	75

CULTURALLY SENSITIVE AREA, SITE NM-H-34-70 SEE ENVIRONMENTAL MITIGATIONS SHT. 3

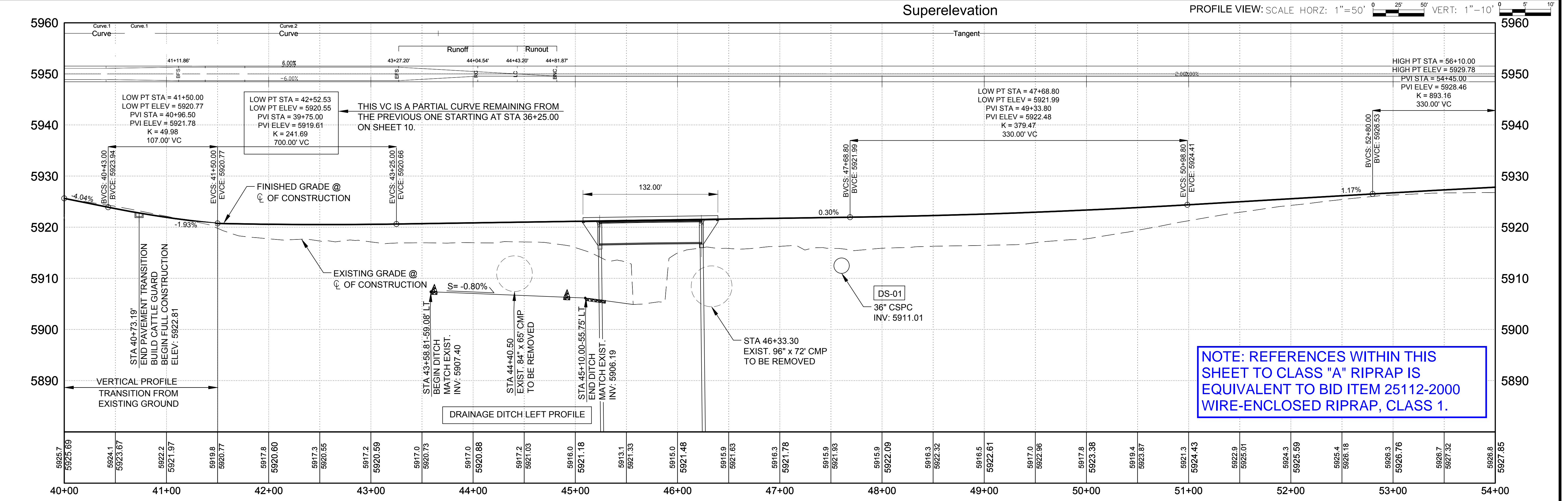
HAND INSTALLATION OF SAFETY FENCE PRIOR TO CONSTRUCTION:  
 STA 50+00.00, OFF 75' LT TO STA 50+25.00, OFF 75' LT  
 STA 50+25.00, OFF 75' LT TO STA 50+25.00, OFF 45' LT  
 STA 50+25.00, OFF 45' LT TO STA 52+75.00, OFF 45' LT  
 STA 52+75.00, OFF 45' LT TO STA 52+75.00, OFF 75' LT  
 STA 52+75.00, OFF 75' LT TO STA 53+00.00, OFF 75' LT  
 HAND INSTALLATION OF ROW FENCE FROM STA 50+00 TO STA 53+00

**KEYED NOTES**

- ① SLOPE LIMITS
- ② EDGE OF ROADWAY
- ③ ROW LINE/FENCE

DEREK D. MEIER  
 NEW MEXICO  
 14504  
 LICENSED PROFESSIONAL ENGINEER  
 9/8/20

PLAN VIEW: SCALE=1"=50'

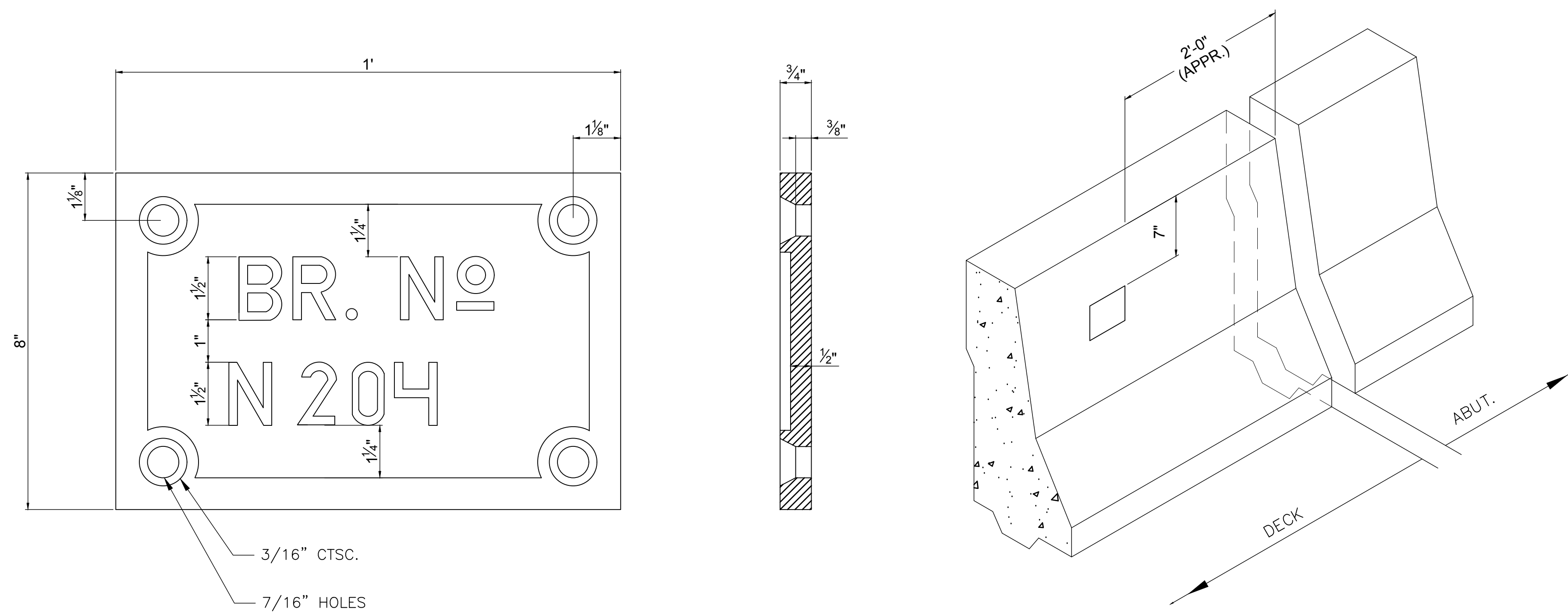


NOTE: REFERENCES WITHIN THIS SHEET TO CLASS "A" RIPRAP IS EQUIVALENT TO BID ITEM 25112-2000 WIRE-ENCLOSED RIPRAP, CLASS 1.

REVISED per ADDENDUM No. 1

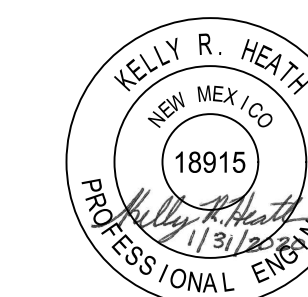
ESTIMATED QUANTITIES								
ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER STRUCTURE	SUBSTRUCTURE		APPR. SLABS	EMBANKMENT PROTECTION (RUNDOWNS)	TOTAL QUANTITY
				ABUTMENT NO.1	ABUTMENT NO.2			
				20801-0000	STRUCTURE EXCAVATION			
20803-0000	STRUCTURAL BACKFILL	CU.YD.		295	301			596
25101-0100	PLACED RIPRAP, METHOD A, CLASS 1	CU.YD.					37	37
25112-2000	WIRE ENCLOSED RIPRAP, CLASS 1	CU.YD.		159	167		7	333
55201-0100	STRUCTURAL CONCRETE, CLASS A	CU.YD.		17	17			34
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	CU.YD.	161			45		206
55302-3300	PRECAST, PRESTRESSED CONCRETE AASHTO GIRDER	LIN.FT.	402					402
55401-1000	REINFORCING STEEL	LBS.		13695	12810			26505
55401-2000	REINFORCING STEEL, EPOXY COATED	LBS.	21280			8580		29860
55502-0000	STRUCTURAL STEEL, FURNISHED, FABRICATED, AND ERECTED	LBS.	2530					2530
55601-0500	BRIDGE RAILING, CONCRETE 42"	LIN.FT.	264					264
55901-0000	MEMBRANE WATERPROOFING	SQ.YD.	396					396
56501-0400	DRILLED SHAFT, 36-INCH DIAMETER	LIN.FT.		220	200			420
56505-0000	CROSSHOLE SONIC LOGGING	EACH		4	4			8
60101-0000	CONCRETE	CU.YD.					13	13

### BRIDGE NUMBER PLATE DETAILS



**NOTES:**

- TWO (2) PLATES WITH GALVANIZED FLAT HEAD BOLTS IN EXPANSION SHIELDS ARE REQUIRED. THE PLATES SHALL BE GALVANIZED CAST IRON WITH RAISED BLOCK LETTERS OF NEAT SQUARE CUT DESIGN. GRIND FACE OF LETTERS AND BORDERS SMOOTH. BRONZE PLATES AND BOLTS MAY BE SUBSTITUTED FOR GALVANIZED CAST IRON.
- EACH PLATE IS TO BE PLACED AT EACH END OF THE BRIDGE ON THE ROADWAY FACE OF THE CONCRETE BARRIER RAILING AT THE END OF DECK AND LOCATED ON THE RIGHT-HAND SIDE AS ONE APPROACHES BRIDGE.

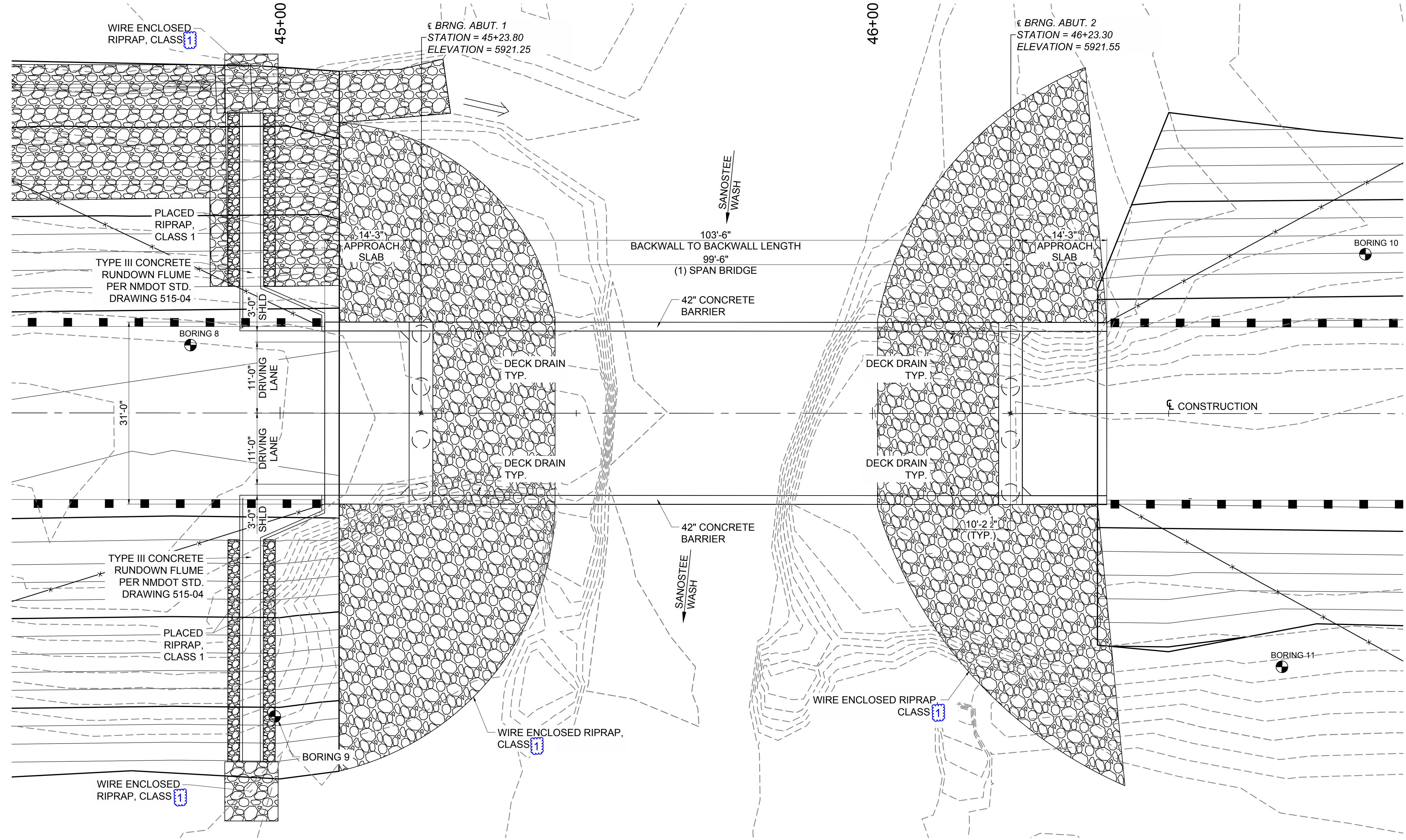


NAVAJO DIVISION OF TRANSPORTATION	
BRIDGE ESTIMATED QUANTITIES	
Designed by: KRH	Date: 10/19
Drawn by: GMG	Date: 10/19
Checked by: DDM	Date: 10/19
File Name: QUANTITIES.DWG	



REVISED per ADDENDUM No. 1

REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1)1,2&4	18	75



**PLAN ALONG  $\phi$  CONSTRUCTION**  
SCALE: 1:10

M:\TRN\17-100-090-10\2\_DISCIPLINES\SHEETS4\_SHEETS - STRUCTURAL\STRUCTURE PLAN AND PROFILE.DWG  
1/30/2020 5:14 PM

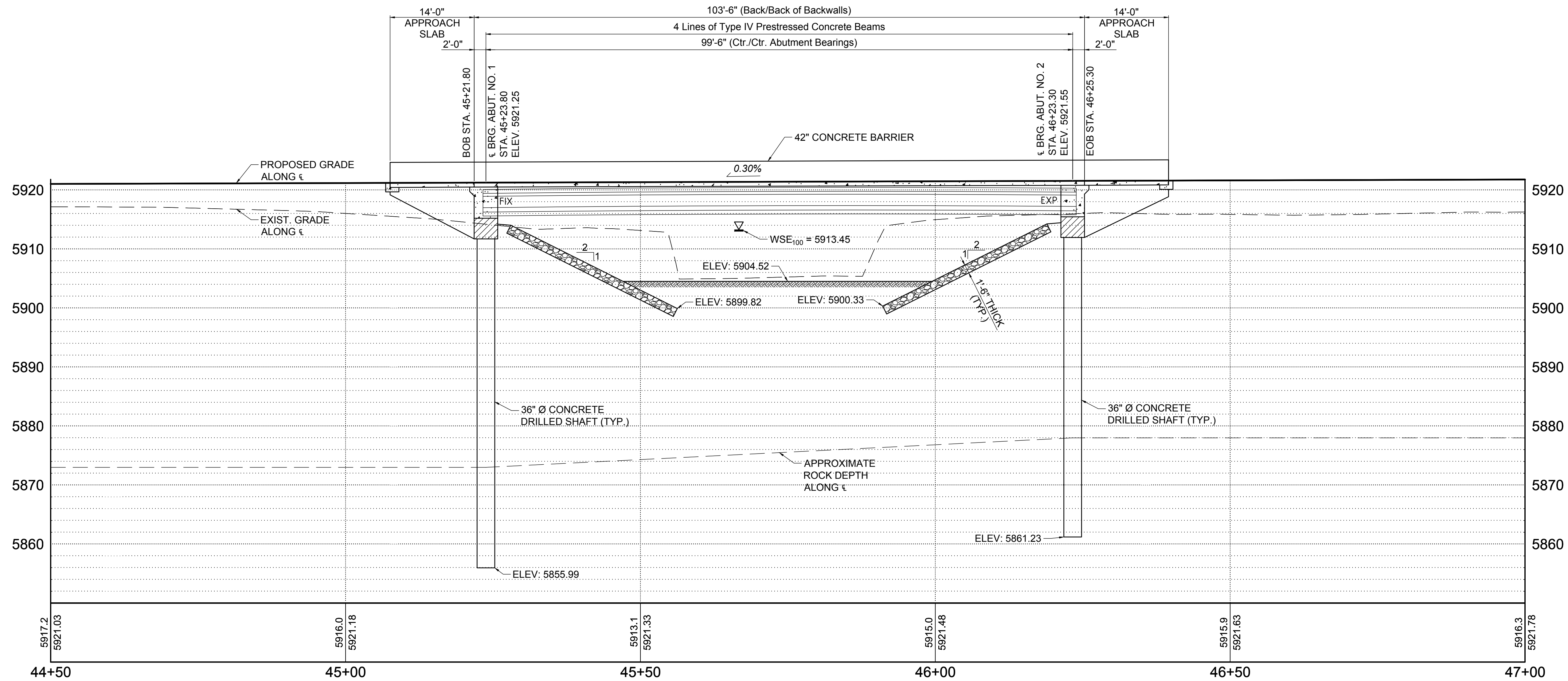


NAVAJO DIVISION OF TRANSPORTATION	
BRIDGE PLAN	
Designed by: KRH	Date: 10/19
Drawn by: GMG	Date: 10/19
Checked by: DDM	Date: 10/19
File Name: STRUCTURE PLAN AND PROFILE.DWG	



**REVISED per ADDENDUM No. 1**

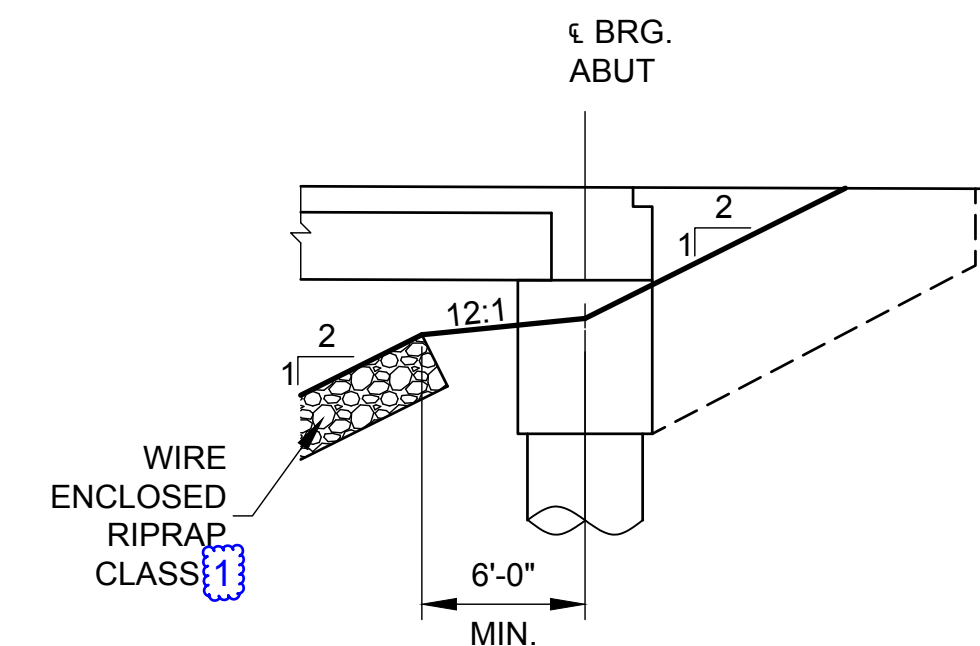
REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1)1,2&4	19	75



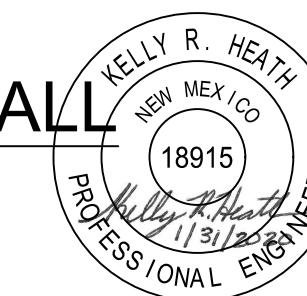
PROFILE ALONG C CENTERLINE CONSTRUCTION  
SCALE: 1:10

**WATERWAY DATA:**

WATERWAY:	SANOSTEE WASH
DRAINAGE AREA:	61.53 SQ. MILE
Q <sub>100</sub> :	5840.4 CFS
Q <sub>500</sub> :	9012.7 CFS
V <sub>100</sub> :	13.32 FT/S
V <sub>500</sub> :	14.83 FT/S
WSE <sub>100</sub> :	5913.45 FT
WSE <sub>500</sub> :	5917.39 FT
100 YEAR SCOUR:	6.82 FT
FREEBOARD:	2.00 FT



**GRADING AT ABUTMENT WINGWALL**



NAVAJO DIVISION OF  
TRANSPORTATION

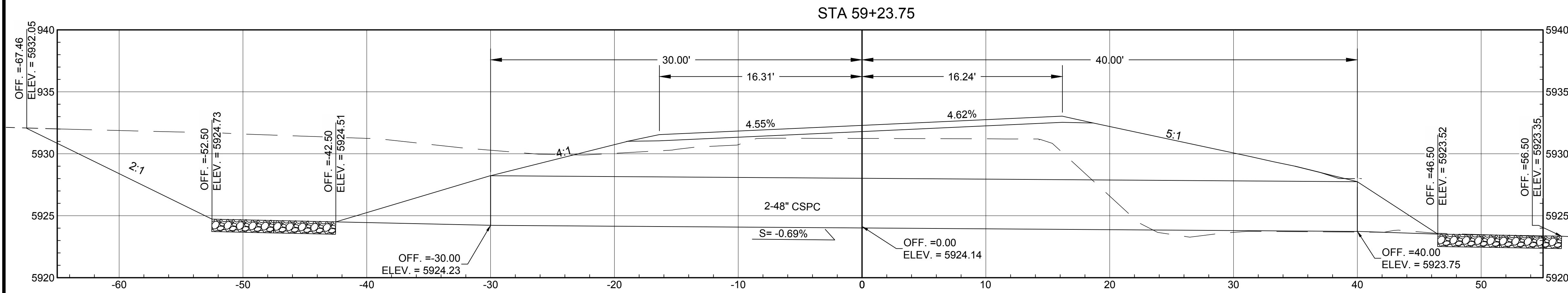
**BRIDGE PROFILE**

Designed by: KRH	Date: 10/19
Drawn by: GMG	Date: 10/19
Checked by: DDM	Date: 10/19
File Name: STRUCTURE PROFILE.DWG	



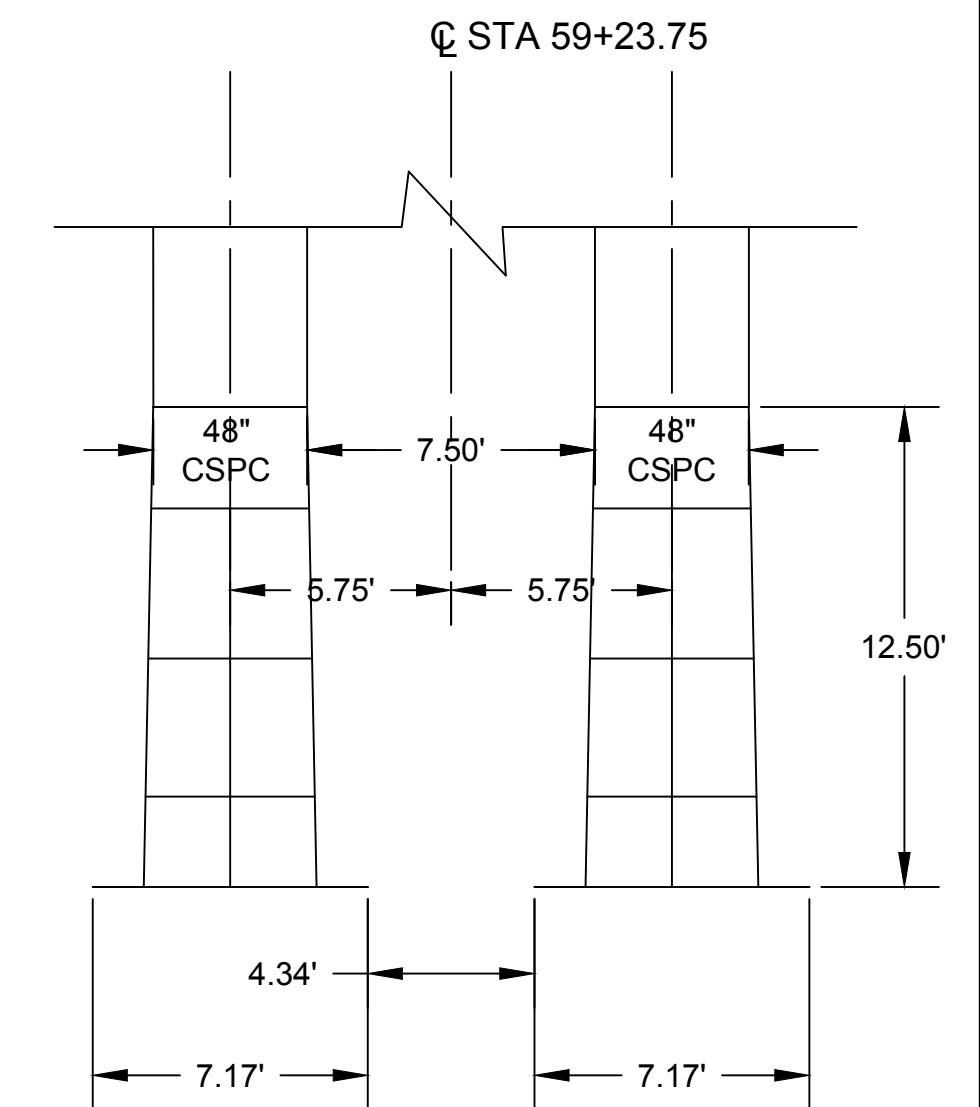
REVISED per ADDENDUM No. 1

REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1)1,2&4	38	75

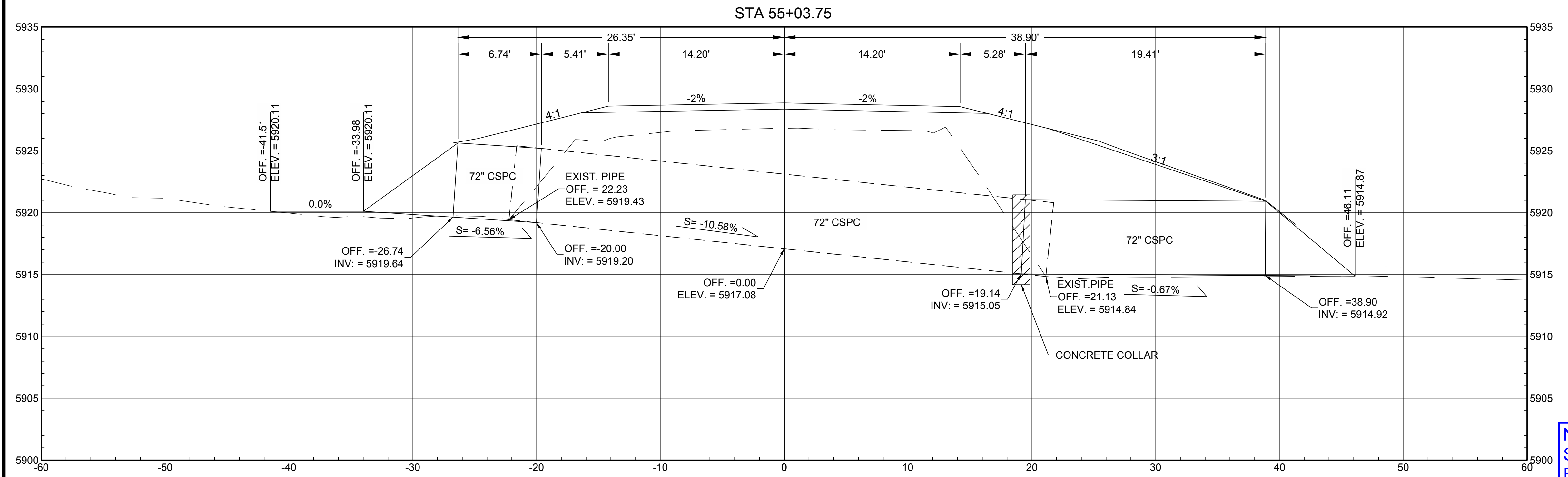


GRADE INLET DITCH NORTH TO  
STA 60+50.00 TO MATCH 30' WIDE  
INV:5929.94 ROADSIDE CHANNEL SECTION  
SEE SHT 7 FOR MORE INFORMATION  
SLOPE = +5.12%.

DS-03 STA 59+23.75  
EXISTING 2-24"x40' CMP'S TO BE REMOVED  
BUILD 2-48"x70' CSCP'S SKEWED @ 30° LT FWD;  
BUILD METAL END SECTIONS WITH SAFETY BARS LT PER STD 602-9 (SHEET 62)  
BUILD METAL END SECTIONS RT  
BUILD RIP RAP CLASS A EROSION CONTROL PADS LT & RT



STRUCTURE PLACEMENT DETAIL  
METAL END SECTIONS W/SAFETY  
BARS LT.



DS-02 STA 55+03.57  
EXISTING 72" CSCP SKEWED @ 10° LT FWD;  
SAWCUT & REMOVE 2 LF OF CSCP LT & RT  
CONNECT TO EXISTING 72" CSCP LT & RT AND PROVIDE CONCRETE COLLAR AT 19.5' RT  
EXTEND LT w/72"x6.74' CSCP SKEWED @ 10° LT FWD;  
EXTEND RT w/72"x19.41' CSCP SKEWED @ 10° LT FWD;  
BUILD METAL END SECTIONS LT & RT

NOTE: REFERENCES WITHIN THIS  
SHEET TO CLASS "A" RIPRAP IS  
EQUIVALENT TO BID ITEM 25112-2000  
WIRE-ENCLOSED RIPRAP, CLASS 1.

NAVAJO DIVISION OF  
TRANSPORTATION

STRUCTURE PLACEMENTS

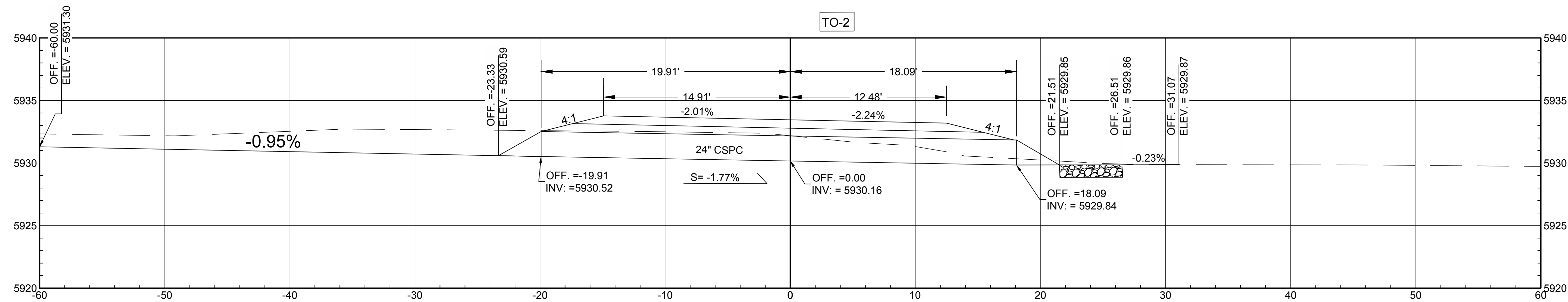
Designed by: MKC	Date: 7/19
Drawn by: ELO	Date: 7/19
Checked by: DDM	Date: 7/19
File Name: PIPE BASE.DWG	



REVISED per ADDENDUM No. 1

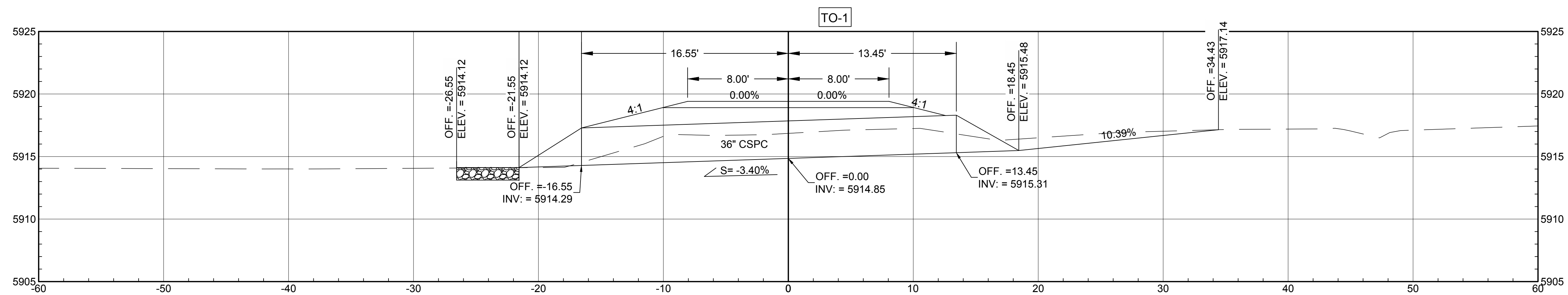
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REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1),2&4	39	75



GRADE INLET DITCH NORTH TO  
STA 60+50.00 TO MATCH 30' WIDE  
INV: 5931.57 ROADSIDE CHANNEL SECTION  
SEE SHT 7 FOR MORE INFORMATION  
SLOPE = +0.95%.

**TDS-02** N5012 STA 59+74.99-35.55' RT  
BUILD 1-24"x38' CSCP'S SKEWED @ 13° RT. FWD. ;  
BUILD METAL END SECTIONS LT & RT  
BUILD RIP RAP CLASS A EROSION CONTROL PAD RT



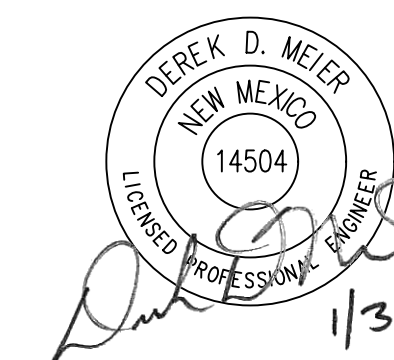
**TDS-01** N5012 STA 49+97.47-42.00' LT  
BUILD 1-36"x30' CSCP'S NORMAL IN PLACE;  
BUILD METAL END SECTIONS LT & RT  
BUILD RIP RAP CLASS A EROSION CONTROL PAD LT

**NOTE: REFERENCES WITHIN THIS SHEET TO CLASS "A" RIPRAP IS EQUIVALENT TO BID ITEM 25112-2000 WIRE-ENCLOSED RIPRAP, CLASS 1.**

NAVAJO DIVISION OF  
TRANSPORTATION

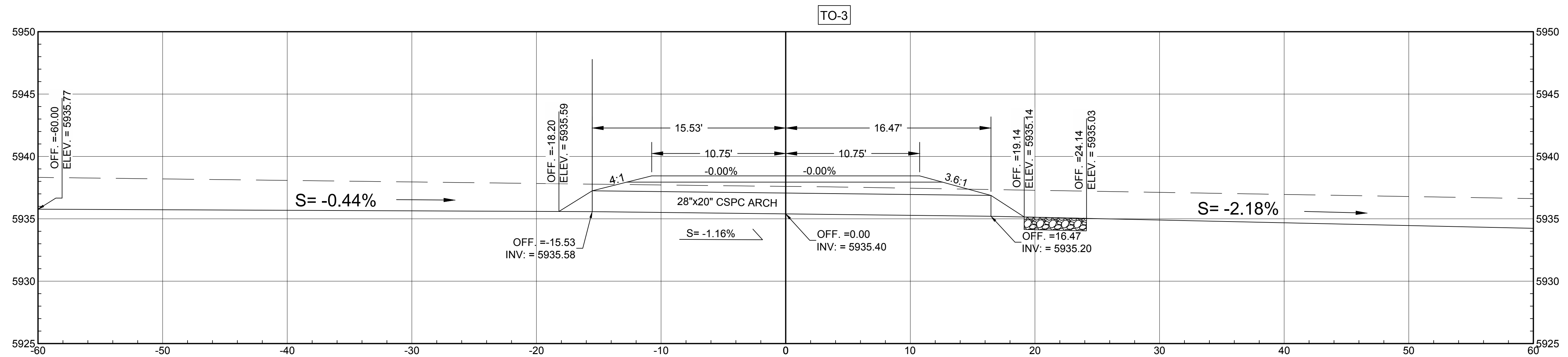
STRUCTURE PLACEMENTS

Designed by: MKC	Date: 7/19
Drawn by: ELO	Date: 7/19
Checked by: DDM	Date: 7/19
File Name: PIPE BASE.DWG	



**REVISED per ADDENDUM No. 1**

REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1)1,2&4	40	75



GRADE INLET DITCH NORTH TO STA 65+50.00 TO MATCH 30' WIDE INV:5935.86 ROADSIDE CHANNEL SECTION SEE SHT 7 FOR MORE INFORMATION SLOPE = +0.44%.

**TDS-03** N5012 STA 64+70.00-31.44' RT BUILD 1-28"x20"x32' ARCH CSCP NORMAL IN PLACE; BUILD METAL END SECTIONS LT & RT BUILD RIP RAP CLASS A EROSION CONTROL PAD RT

GRADE OUTLET DITCH SOUTH TO STA 64+00.00 TO MATCH 30' WIDE INV:5934.01 ROADSIDE CHANNEL SECTION SEE SHT 7 FOR MORE INFORMATION SLOPE = -2.18%.

**NOTE: REFERENCES WITHIN THIS SHEET TO CLASS "A" RIPRAP IS EQUIVALENT TO BID ITEM 25112-2000 WIRE-ENCLOSED RIPRAP, CLASS 1.**

NAVAJO DIVISION OF TRANSPORTATION

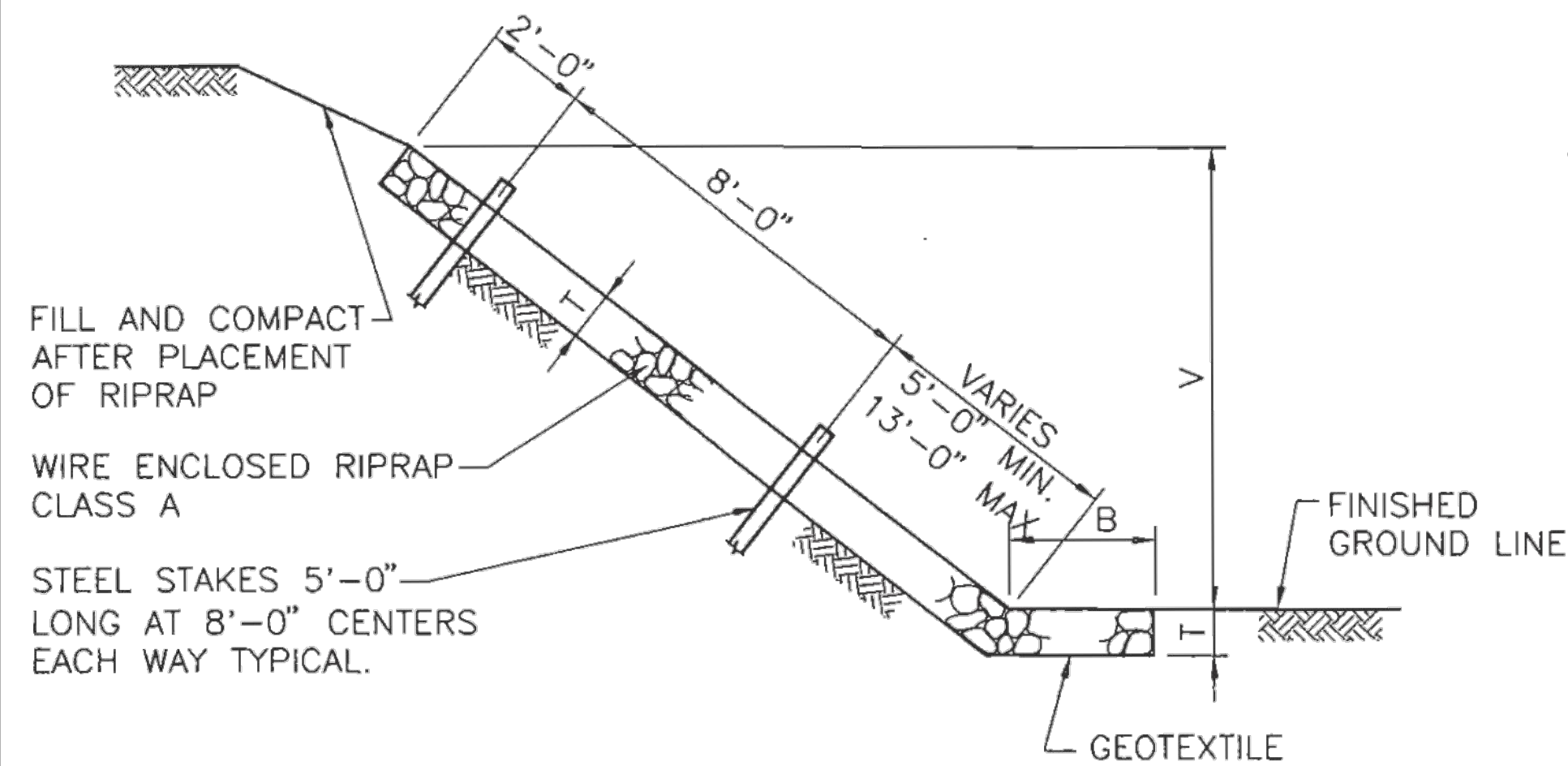
STRUCTURE PLACEMENTS

Designed by: MKC	Date: 7/19
Drawn by: ELO	Date: 7/19
Checked by: DDM	Date: 7/19
File Name: PIPE BASE.DWG	

DEREK D. MEYER  
NEW MEXICO  
14504  
LICENSED PROFESSIONAL ENGINEER  
1/31/20

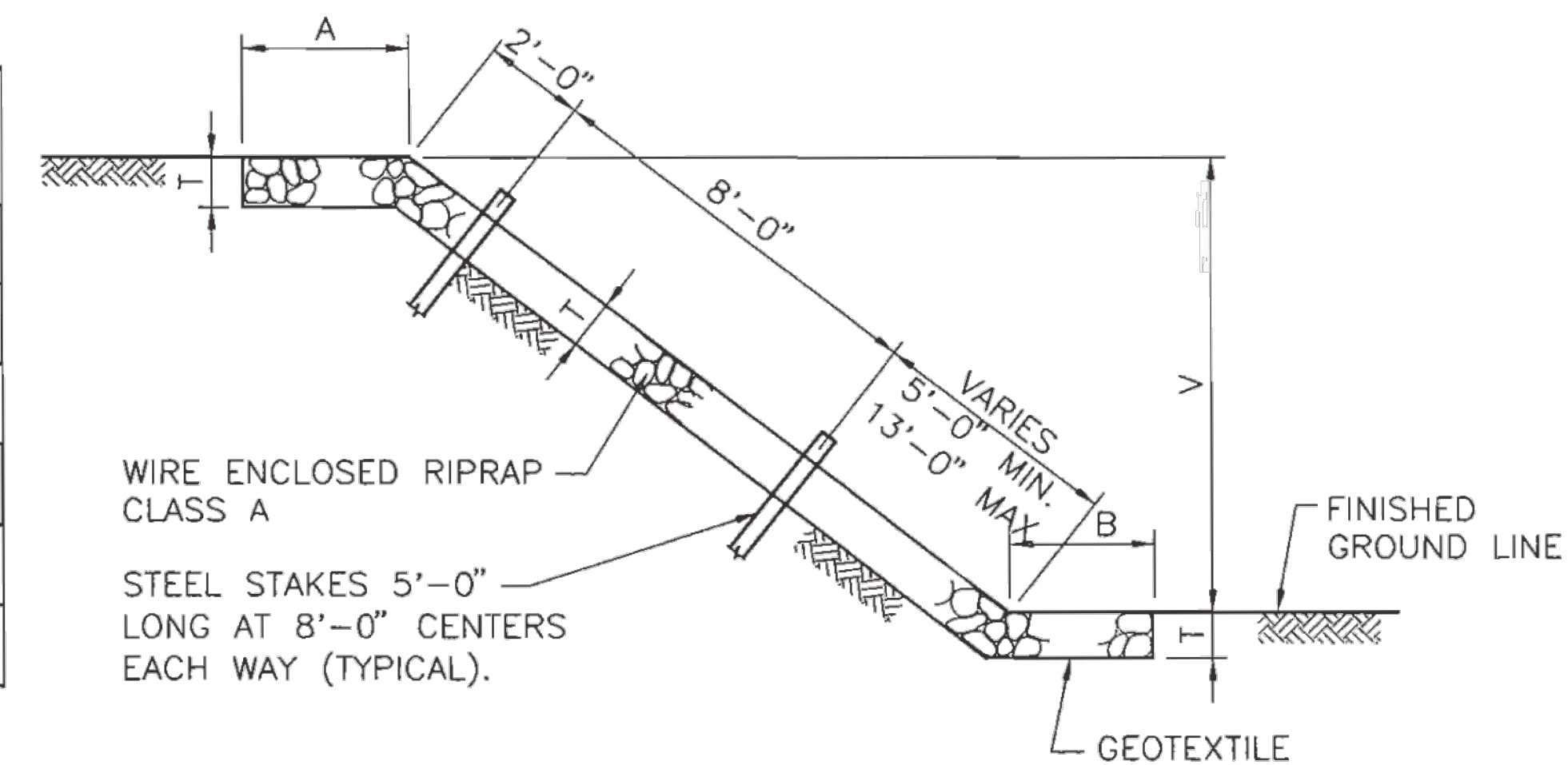
**REVISED per ADDENDUM No. 1**





SECTION TYPE I

QUANTITIES PER LINEAR FOOT	
SLOPE	RIPRAP (CU. YDS.)
1.5 : 1	$\frac{T}{27} (B + 1.803 V + 0.303 T)$
1.75 : 1	$\frac{T}{27} (B + 2.016 V + 0.266 T)$
2 : 1	$\frac{T}{27} (B + 2.236 V + 0.236 T)$
3 : 1	$\frac{T}{27} (B + 3.162 V + 0.162 T)$
4 : 1	$\frac{T}{27} (B + 4.123 V + 0.123 T)$



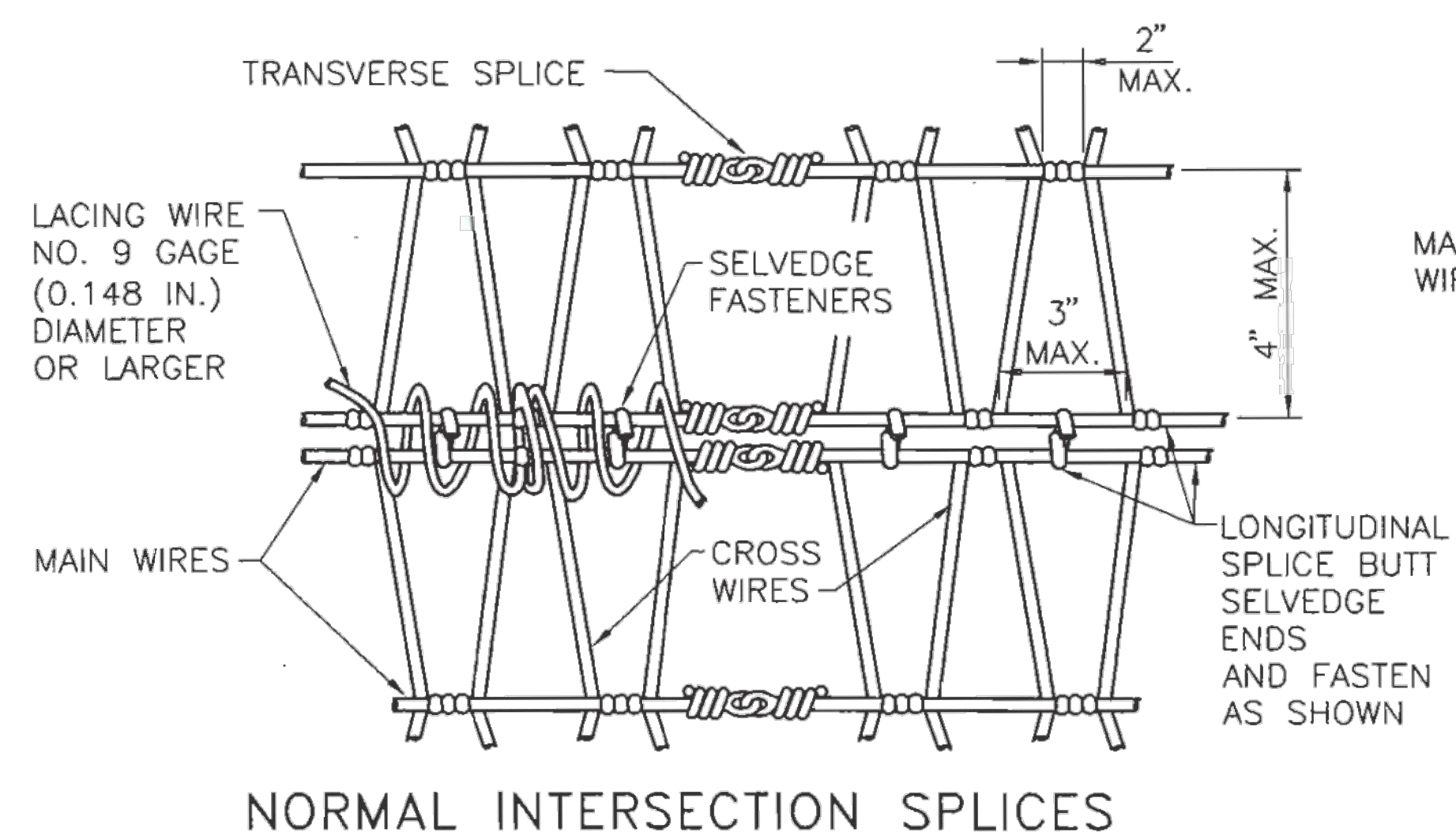
SECTION TYPE II

QUANTITIES PER LINEAR FOOT	
SLOPE	RIPRAP (CU. YDS.)
1 : 1	$\frac{T}{27} (A + B + 1.414V)$
1.5 : 1	$\frac{T}{27} (A + B + 1.803V)$
1.75 : 1	$\frac{T}{27} (A + B + 2.016V)$
2 : 1	$\frac{T}{27} (A + B + 2.236V)$
3 : 1	$\frac{T}{27} (A + B + 3.162V)$
4 : 1	$\frac{T}{27} (A + B + 4.123V)$

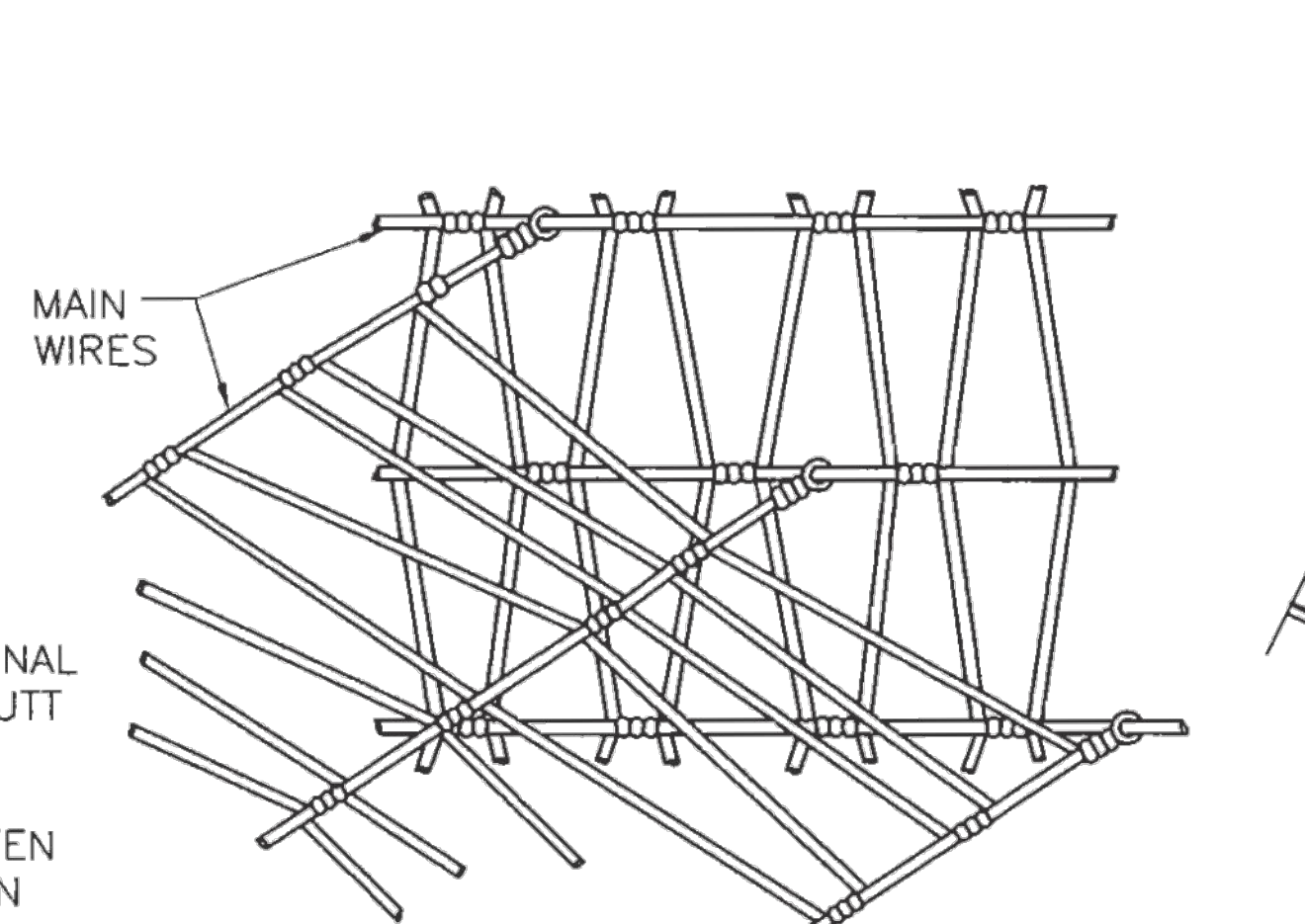
GENERAL NOTES

1. WIRE FABRIC FOR RIP RAP SHALL BE "W" OR HEXAGONAL MESH AND MEET THE REQUIREMENTS LISTED IN SECTION 602 OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION.
2. STEEL STAKES MAY BE RAILROAD RAILS WEIGHING NOT LESS THAN 30 LBS. PER YARD, 4" NOMINAL DIAMETER STANDARD STRENGTH GALVANIZED STEEL PIPE, OR L 4" x 4" x 3/8" STEEL ANGLES. STEEL STAKES SHALL PROJECT 6" ABOVE TOP OF RIPRAP. STEEL STAKES ARE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE WORK AND NO DIRECT MEASUREMENT OR PAYMENT WILL BE MADE THEREFORE.
3. IF LENGTH OF SLOPE IS 15 FEET OR LESS, ONLY ONE ROW OF STEEL STAKES 2 FEET FROM THE TOP EDGE OF RIPRAP WILL BE REQUIRED UNLESS OTHERWISE NOTED ON PLANS.
4. FOR DIMENSIONS A, B, V, & T. SEE BRIDGE OR ROADWAY PLANS.
5. T=12" UNLESS OTHERWISE SHOWN ON PLANS; T=18" AT BRIDGES.
6. FASTENERS FOR SPLICES AND/OR SELVEDGE END CONNECTORS MAY BE WIRE TIES, INTERLOCKING WIRE CLIPS, HOG RINGS, OR LACING WIRE. ONLY FASTENERS WHICH APPEAR ON THE DEPARTMENT'S "APPROVED PRODUCTS LIST" MAY BE USED.
7. LACING SHALL BE CONTINUOUS AS FAR AS IS PRACTICAL AND SHALL PASS THROUGH EACH MESH OPENING.
8. WHERE SPLICING IS NECESSARY, AN OVERLAP OF LACING OF AT LEAST 1 FOOT SHALL BE PROVIDED.

**NOTE: REFERENCES WITHIN THIS DETAIL TO CLASS "A" RIPRAP IS EQUIVALENT TO BID ITEM 25112-2000 WIRE-ENCLOSED RIPRAP, CLASS 1**

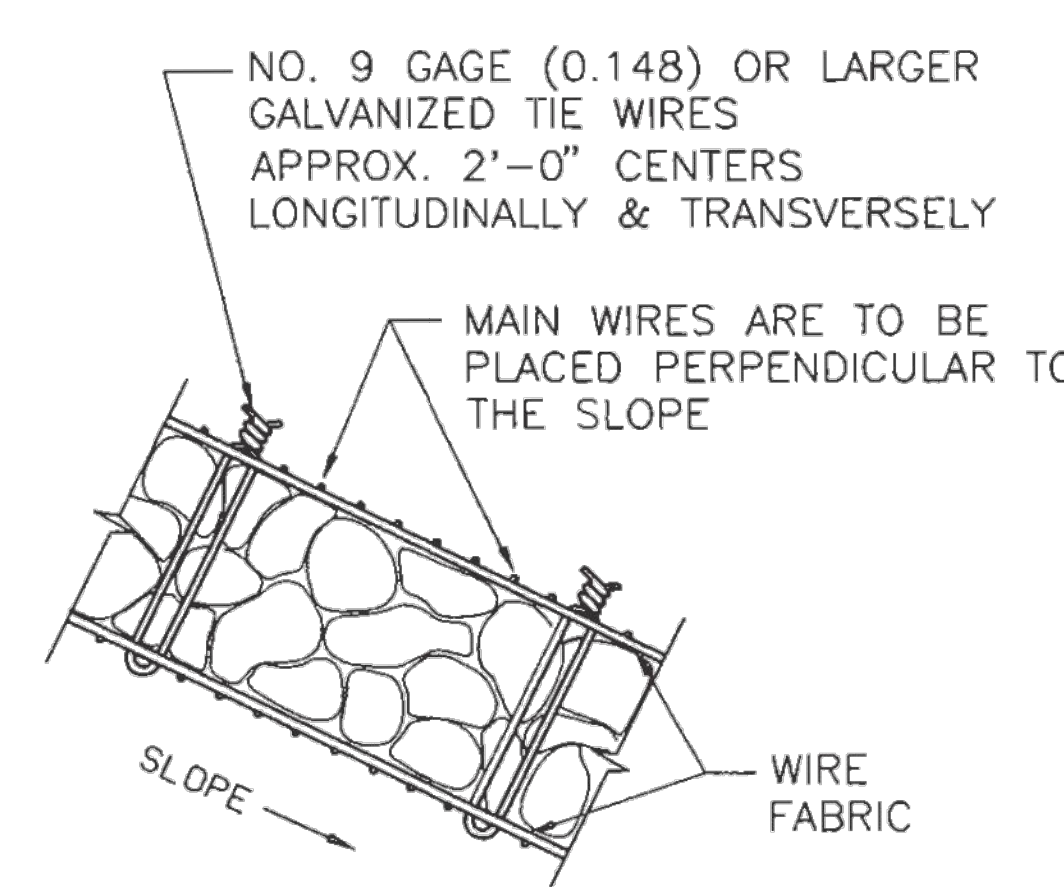


NORMAL INTERSECTION SPLICES

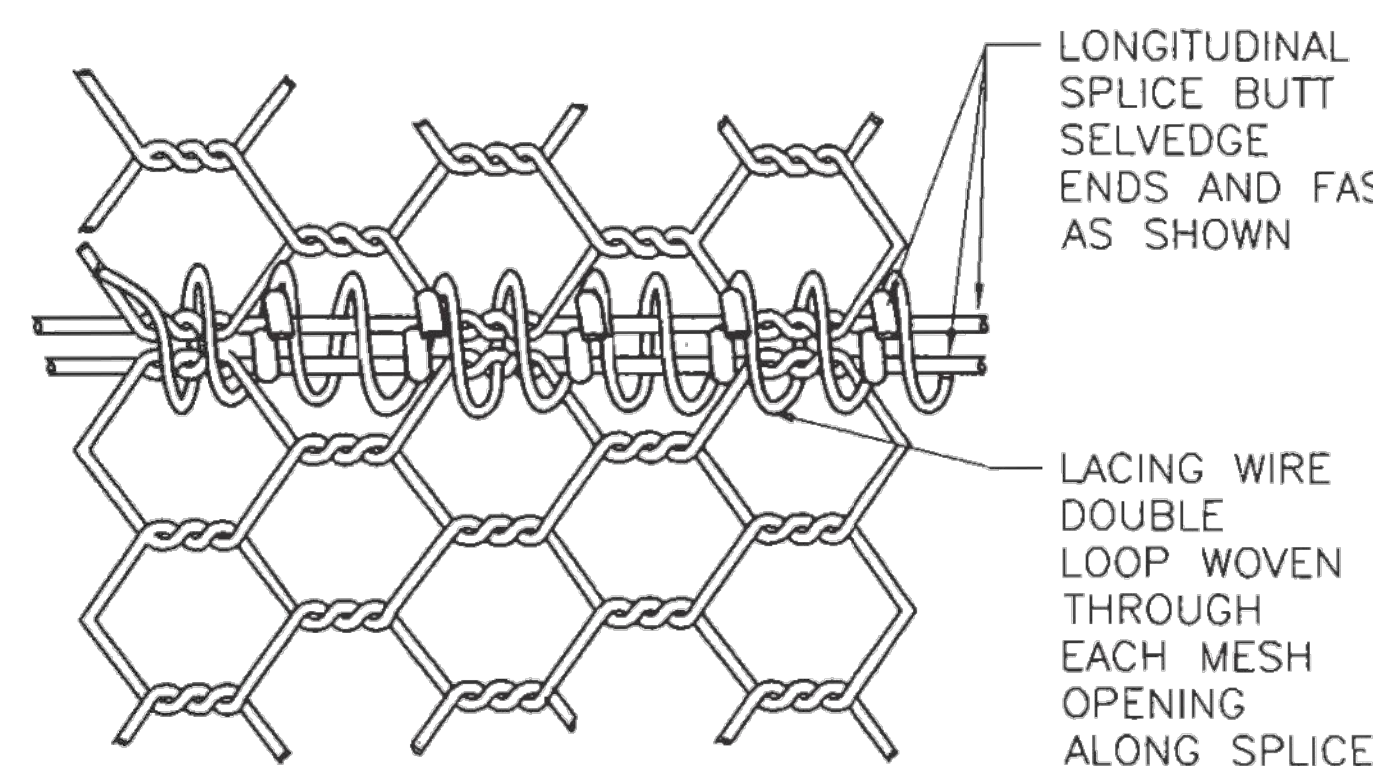


SKEWED INTERSECTION SPLICE

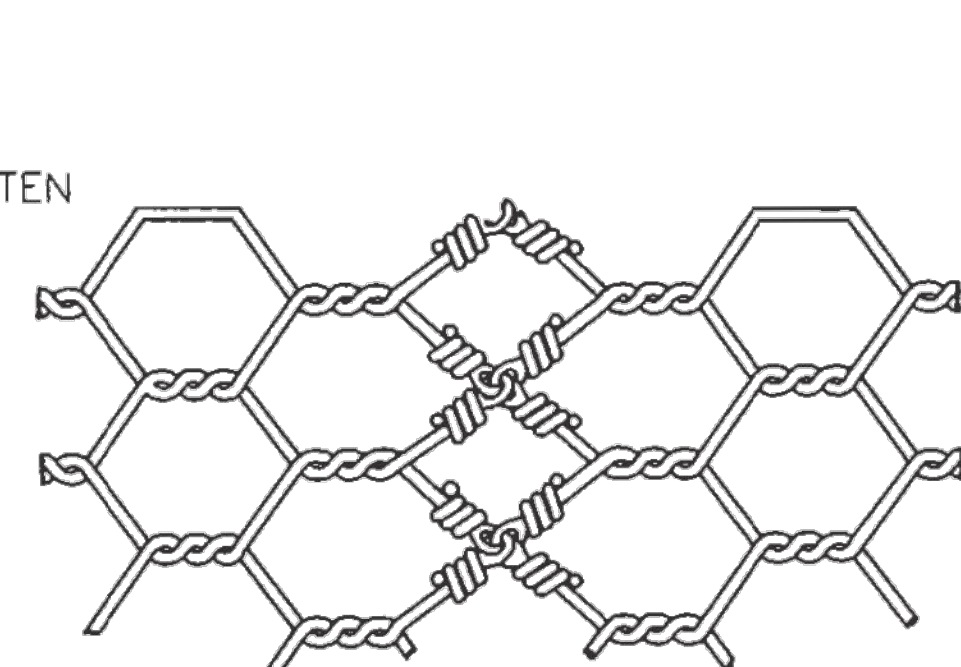
"W" MESH



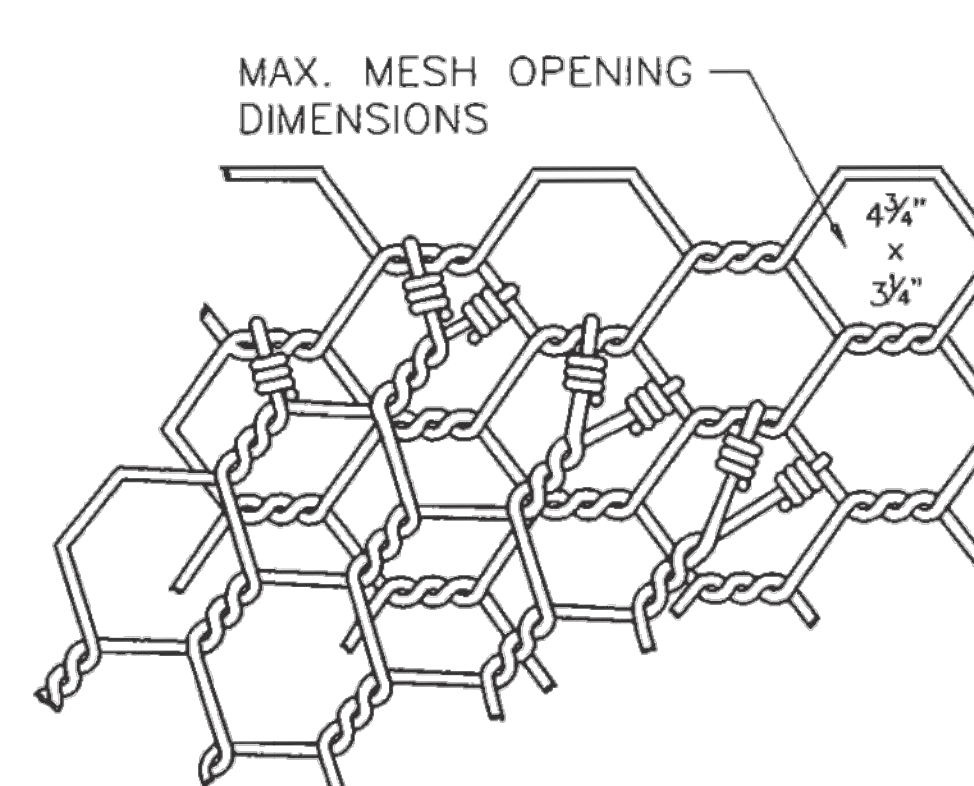
TYPICAL SECTION



NORMAL INTERSECTION SPLICE



TRANSVERSE SPLICE  
HEXAGONAL MESH



SKEWED INTERSECTION SPLICE



NAVAJO DIVISION OF TRANSPORTATION	
WIRE ENCLOSE RIPRAP CLASS "A" NMDOT 602-01 1/1	
Designed by: MKC	Date: 7/19
Drawn by: ELO	Date: 7/19
Checked by: DDM	Date: 7/19
File Name: c:\nmdot\std\N5012.DWG	

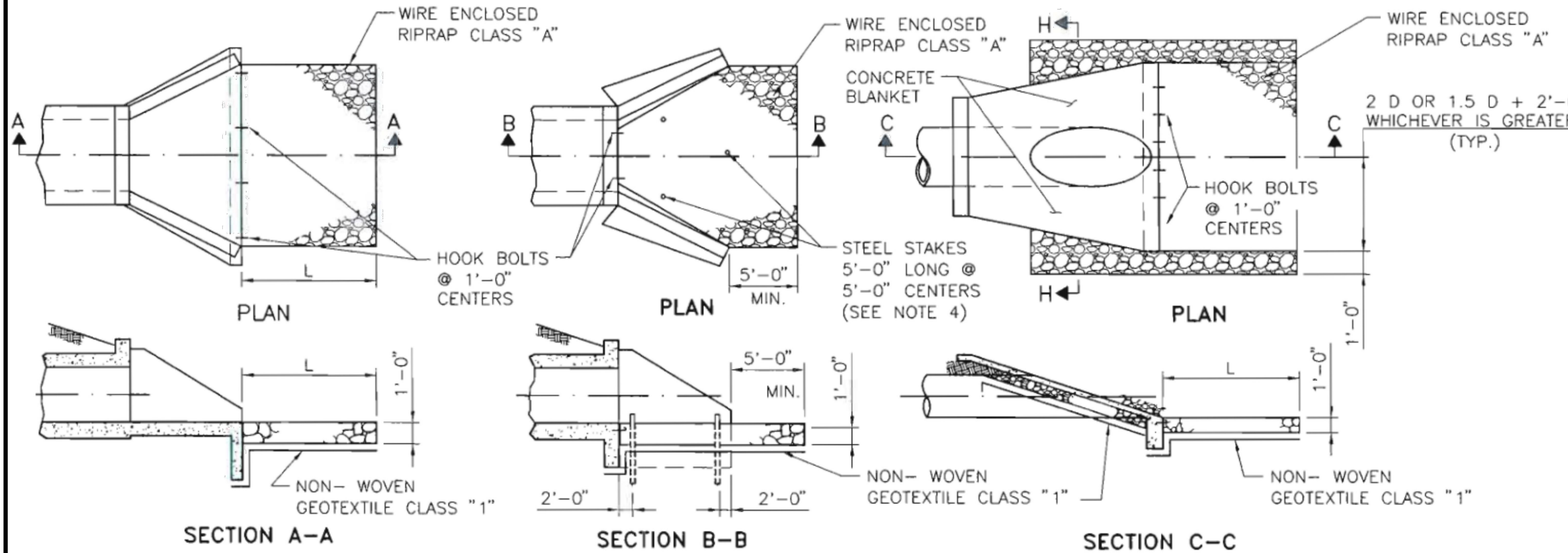


REVISED per ADDENDUM No. 1

REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1)1,2&4	61B	75

### GENERAL NOTES

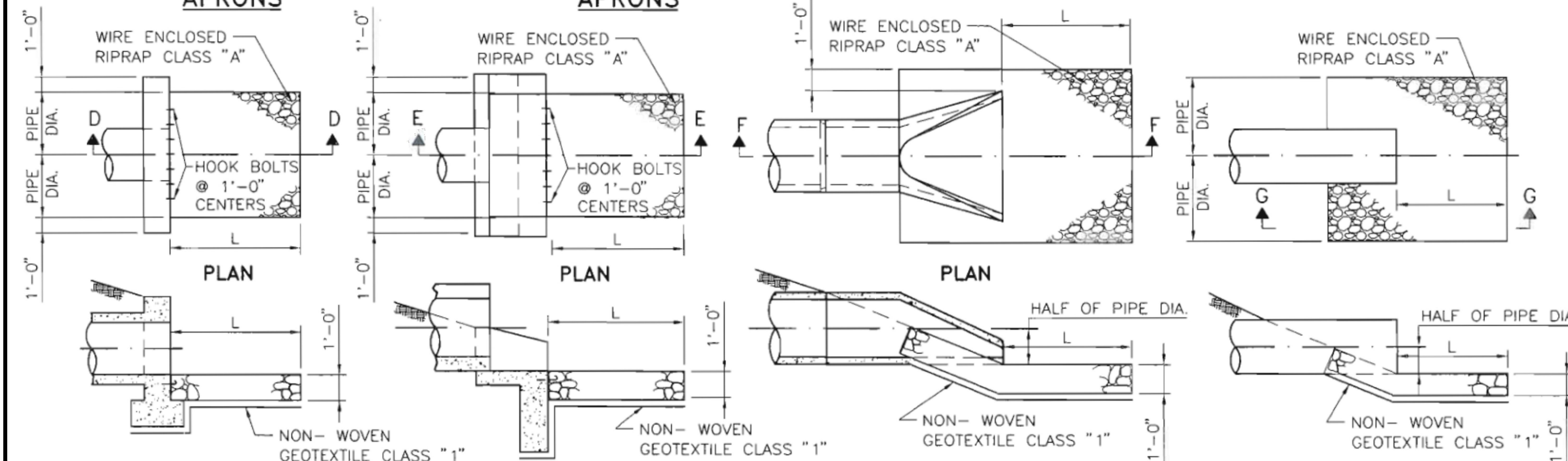
1. ALL RIPRAP SHALL BE CLASS "A" UNLESS SPECIFIED OTHERWISE IN THE PLANS. DIMENSIONS OF RIPRAP CLASS "A" SHALL BE VERIFIED IN FIELD.
2. RIPRAP ON THIS STANDARD IS SHOWN FOR SINGLE PIPES AND CULVERTS ONLY. FOR MULTIPLE PIPE AND CULVERT INSTALLATIONS, EXTEND RIPRAP BEYOND OUTLET OPENING AS SHOWN IN PLAN DETAILS AND PLACE RIPRAP BETWEEN OUTLET OPENINGS AS SHOWN IN ELEVATION DETAILS.
3. SERIAL 602-02-1/1 MAY BE REFERENCED FOR DESCRIPTIONS OF WIRE MESH AND ALTERNATE PATTERNS.
4. STEEL STAKES MAY BE RAILROAD RAILS WEIGHING NOT LESS THAN 30 LBS. PER YARD, 4" NOMINAL DIAMETER STANDARD STRENGTH GALVANIZED STEEL PIPE, OR L 4" X 4" X 3/8" STEEL ANGLES. STEEL STAKES SHALL PROJECT 6" ABOVE TOP OF RIPRAP. STEEL STAKES ARE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE WORK AND NO DIRECT MEASUREMENT OR PAYMENT WILL BE MADE THEREFORE.
5. CONTRACTOR MAY SUBSTITUTE CONCRETE CHEMICAL ANCHORS WITH HOOK GEOMETRY SHOWN, WHICH MEET REQUIREMENTS OF SECTION 522.
6. TOE-IN OR PLACE EROSION CONTROL GEOTEXTILE UNDER FOOTINGS OR CUT-OFF WALL.
7. L (MIN.) = 10'-0" OR 1.5 x DIAMETER OR RISE, WHICHEVER IS GREATER.



#### BOX CULVERTS WITH APRONS

#### BOX CULVERTS WITHOUT APRONS

#### CONCRETE BLANKETS

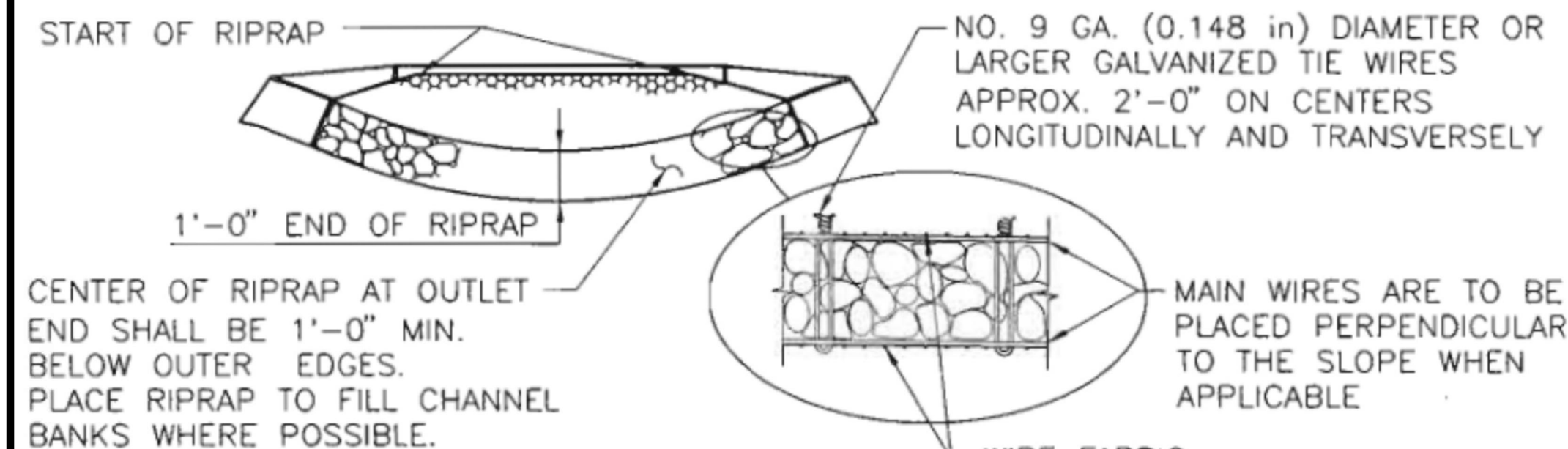


#### SECTION D-D H-1 HEADWALL

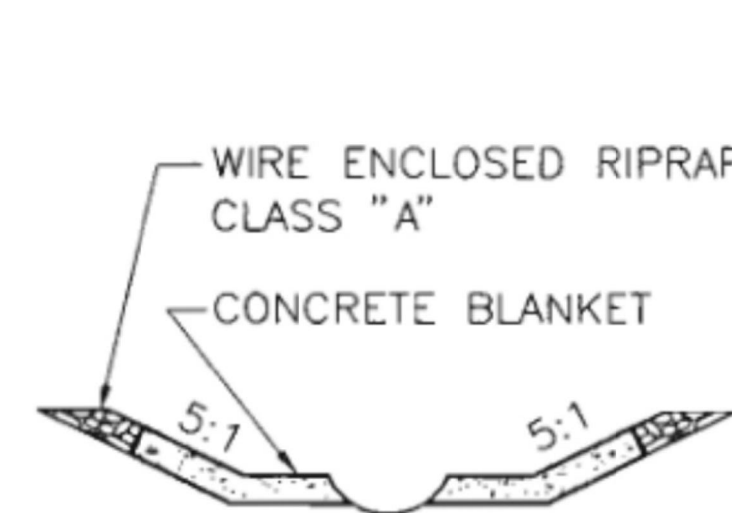
#### SECTION E-E H-2 HEADWALL

#### SECTION F-F PIPE WITH END SECTIONS

#### SECTION G-G PIPE WITHOUT HEADWALLS

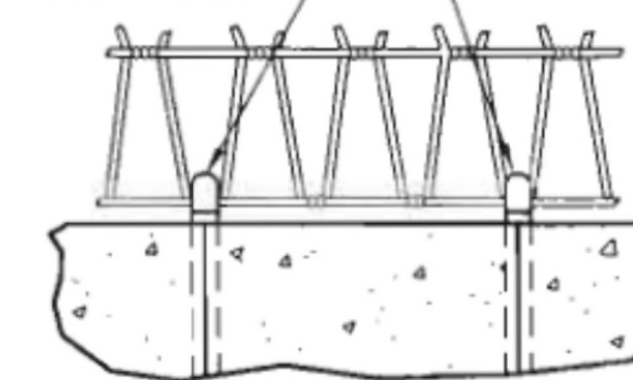


#### TYPICAL SECTION AT END OF RIPRAP



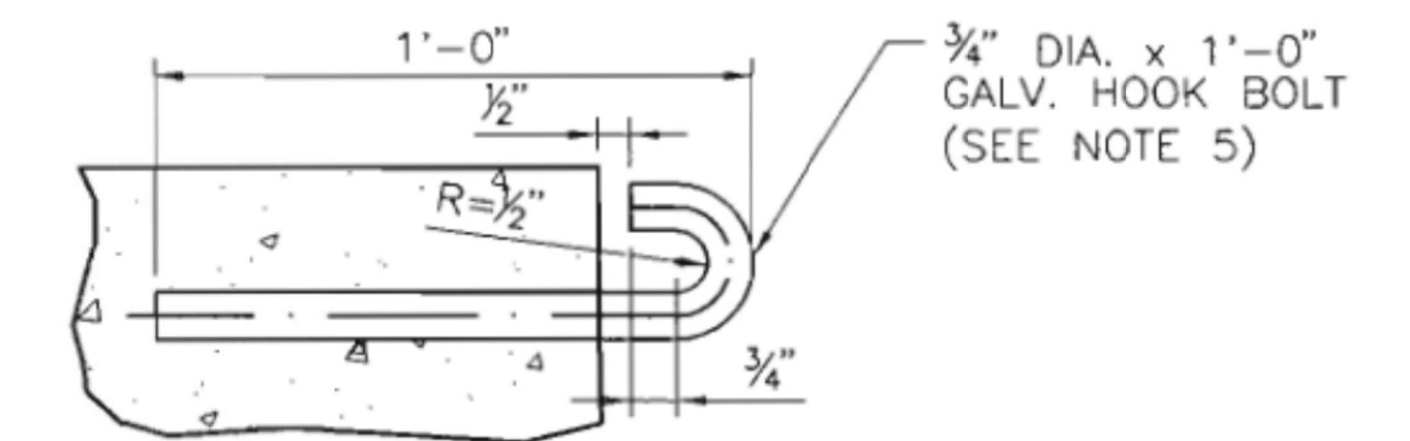
#### SECTION H-H

TIE WIRE MESH TO HOOK BOLTS WITH GALVANIZED NO. 9 GA. (0.148 in.) OR LARGER DIA. WIRE.

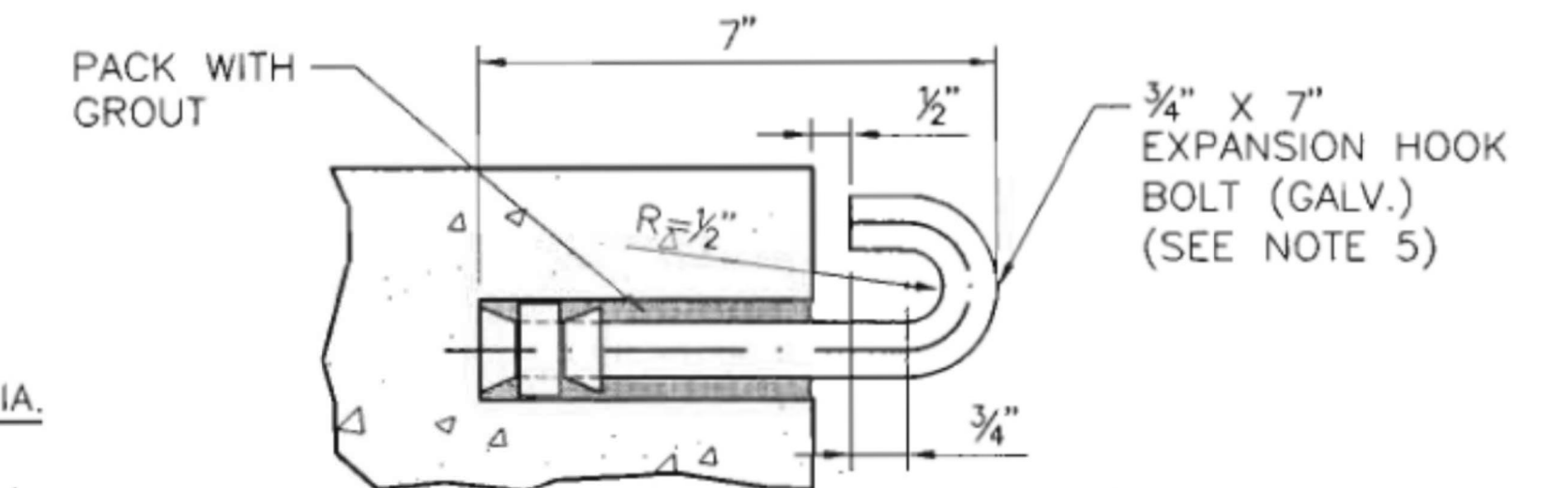


#### WIRE MESH ANCHOR

NOTE: SEE SHEET 602-01-1/1 FOR WIRE MESH SPLICE DETAILS.



#### ANCHOR TO NEW STRUCTURE



#### ANCHOR TO EXISTING STRUCTURE

#### HOOK BOLT DETAILS

COST OF HOOK BOLT IN PLACE TO BE INCLUDED IN UNIT BID PRICE FOR RIPRAP.

**NOTE: REFERENCES WITHIN THIS DETAIL TO CLASS "A" RIPRAP IS EQUIVALENT TO BID ITEM 25112-2000 WIRE-ENCLOSED RIPRAP, CLASS 1**



NAVAJO DIVISION OF TRANSPORTATION

EROSION CONTROL AT CULVERT OUTLETS NMDOT 602-02 1/1

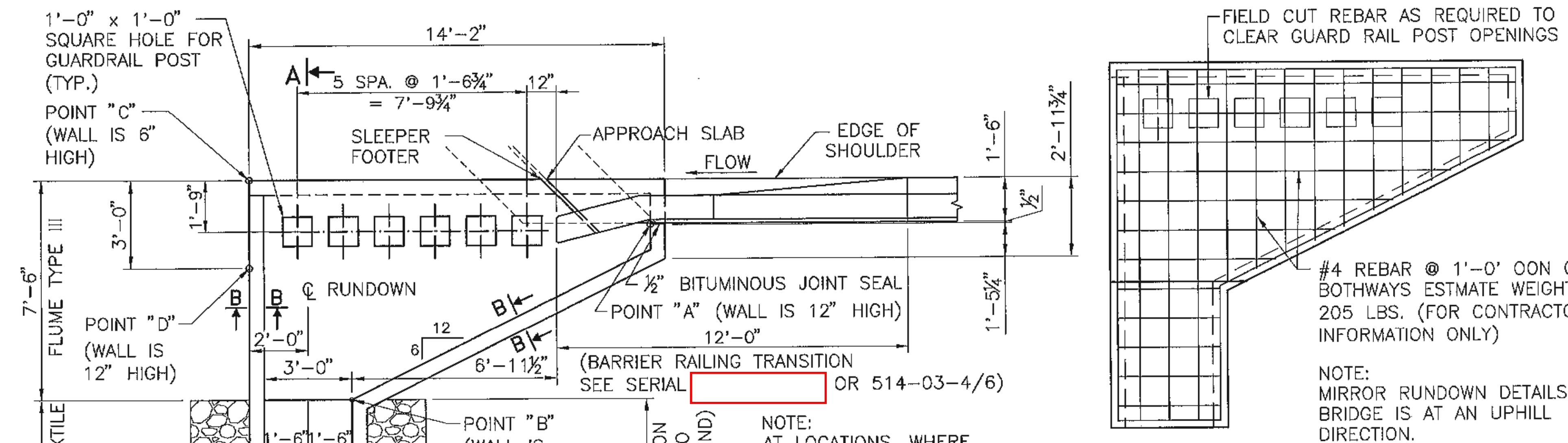
Designed by: MKC	Date: 7/19
Drawn by: ELO	Date: 7/19
Checked by: DDM	Date: 7/19



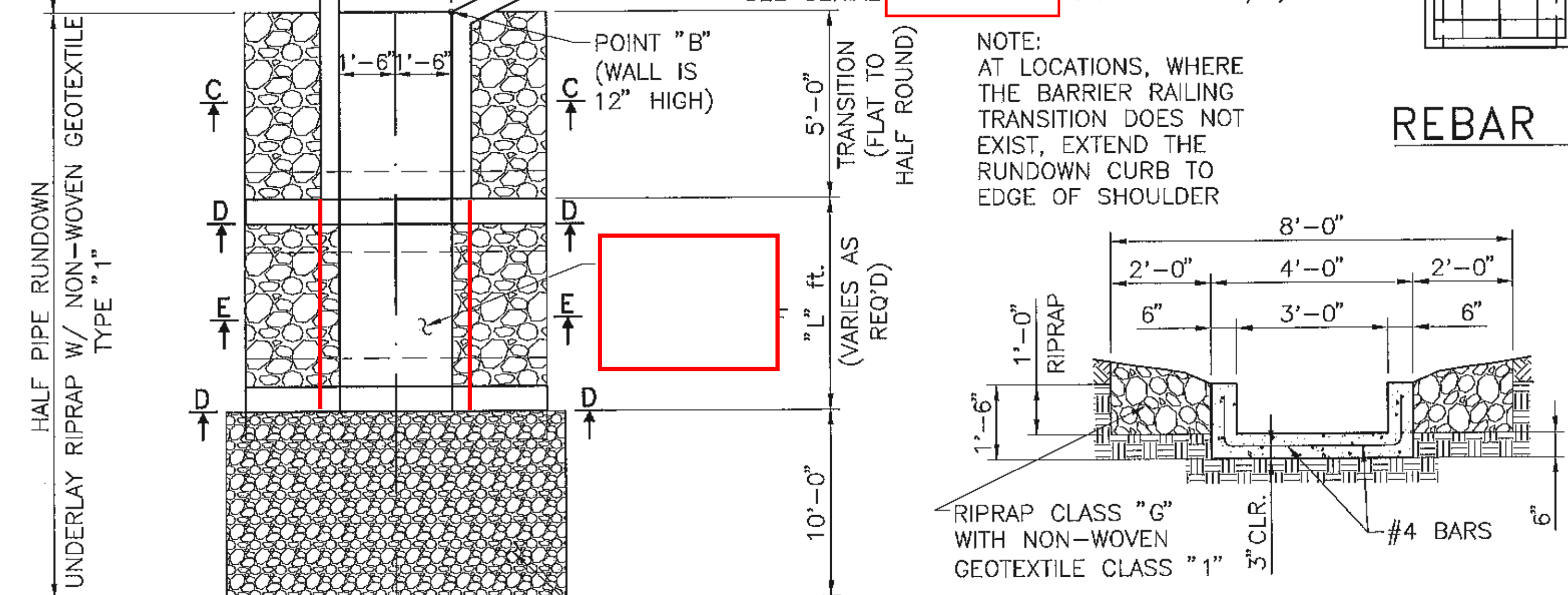
REVISED per ADDENDUM No. 1

Name: C-NMDOT-STD N5012.DWG

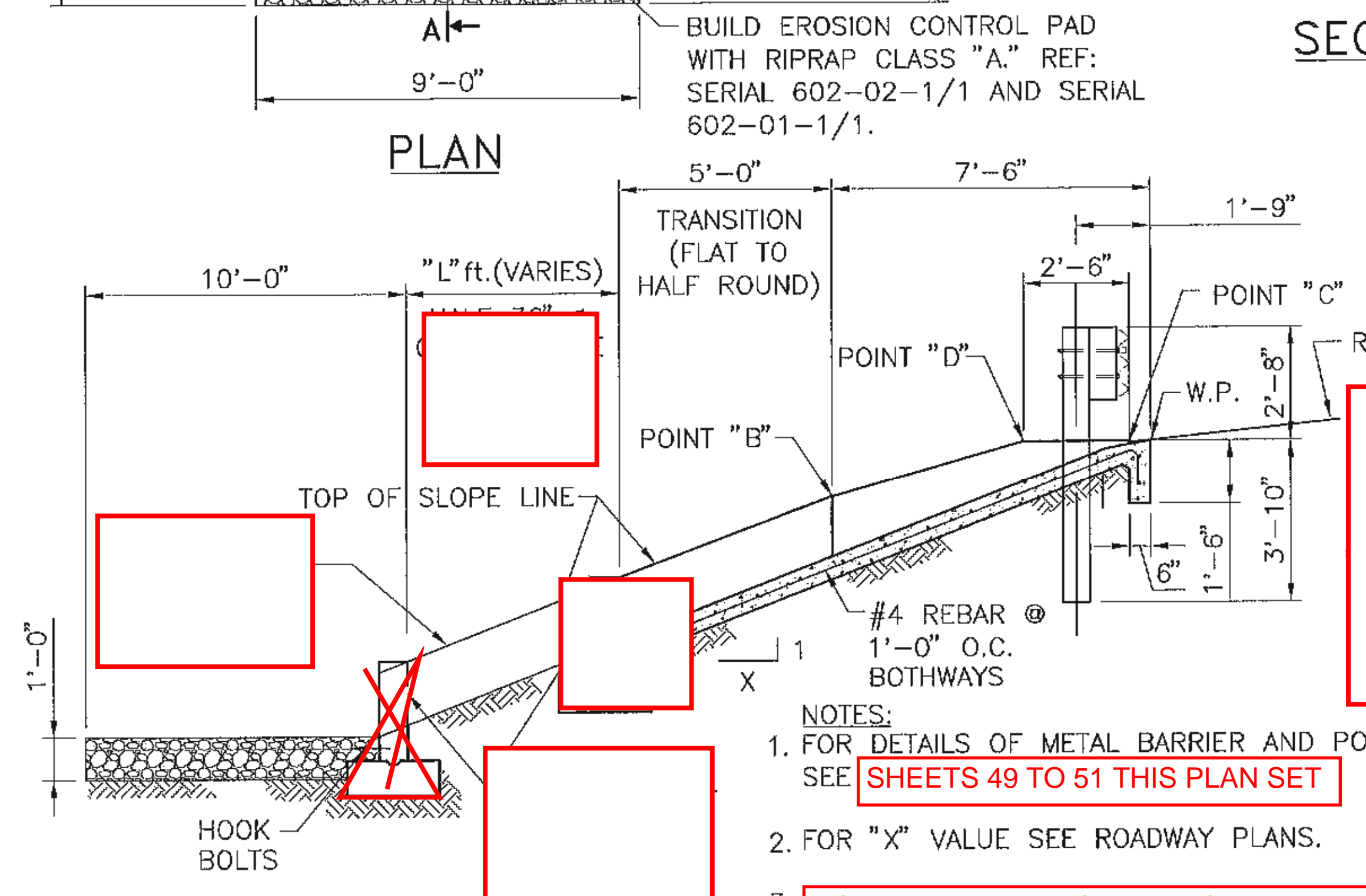
REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1),2&4	65	75



**REBAR PLACING PLAN**



**SECTION C-C**

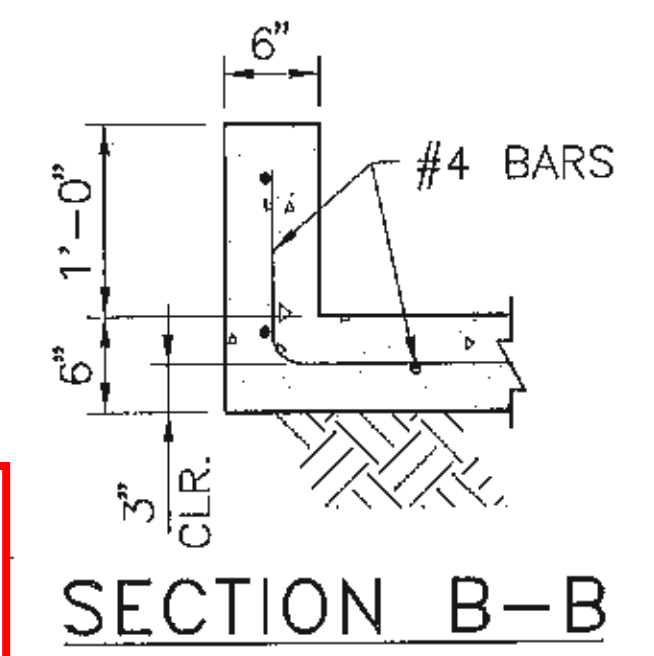


**SECTION A-A**

NOTES:  
 1. FOR DETAILS OF METAL BARRIER AND POST, SEE SHEETS 49 TO 51 THIS PLAN SET  
 2. FOR "X" VALUE SEE ROADWAY PLANS.  
 3. NOTE DELETED FROM PLANS

**SECTION D-D**

NOTE:  
 1. QUANTITIES FOR [REDACTED] RIPRAP CLASS "A" OR "G" VARY DEPENDING UPON WHETHER THE RUNDOWN IS LOCATED AT PROTECTED OR UNPROTECTED SLOPES. SEE ROADWAY PLANS FOR QUANTITIES AND LOCATIONS.  
 2. NOTE DELETED FROM PLANS



**SECTION B-B**

NOTE:  
 1. QUANTITIES FOR [REDACTED] RIPRAP CLASS "A" OR "G" VARY DEPENDING UPON WHETHER THE RUNDOWN IS LOCATED AT PROTECTED OR UNPROTECTED SLOPES. SEE ROADWAY PLANS FOR QUANTITIES AND LOCATIONS.  
 2. NOTE DELETED FROM PLANS

**GENERAL NOTES**

- STRUCTURAL CAST-IN-PLACE CONCRETE SHALL BE CLASS "A." CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".
- ALL REINFORCING BARS SHALL CONFORM TO AASHTO SPECIFICATION M 31, GRADE 60.
- FIELD CUT AND BEND REINFORCING BARS AS REQUIRED FOR THE STRUCTURE.
- INSTALLATION AS SHOWN IS TYPICAL AND DETAILS MAY BE VARIED TO FIT LOCATION. QUANTITIES WILL BE ADJUSTED IN THE FIELD.
- RUNDOWN FLUMES WILL BE PAID FOR UNDER THE PAY ITEMS LISTED ON SHEET 17 OF THIS PLAN SET
- CONCRETE PORTION OF FLUMES OR RUNDOWNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR [REDACTED] "MINOR CONCRETE STRUCTURES" - SECTION 601 OF THE FP-14 SPECIFICATIONS
- STEEL STAKES FOR ANCHORING RIPRAP ARE ONLY REQUIRED FOR THE RIPRAP RUNDOWN WITH CLASS "A" RIPRAP.
- NOTE DELETED FROM PLANS
- THE BRIDGE JOINT STRIP SEAL SHALL DRAIN WATER INTO THE RUNDOWN AS SHOWN ON THE BRIDGE PLAN DETAILS. THE 1/2" BITUMINOUS JOINT FILLER SHALL BE LOCATED BETWEEN THE RUNDOWN, APPROACH SLAB, AND ASPHALT PAVING WHERE APPLICABLE. THE 1/2" BITUMINOUS JOINT FILLER SHALL BE CONSIDERED INCIDENTAL TO THE RUNDOWN FLUME.
- EXCAVATION, ANCHOR BOLTS, AND HOOK BOLTS FOR RUNDOWN SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT PAYMENT WILL BE MADE THEREFORE. NON-WOVEN GEOTEXTILE CLASS "1" SHALL BE INCLUDED IN THE UNIT BID PRICE FOR RIPRAP CLASS "A" AND RIPRAP CLASS "G."



DATE	BY	DESCRIPTION
2/02/12	TM	GENERAL NOTES
4/24/07	TM	GENERAL REVISIONS

REVISIONS (OR CHANGE NOTICES)

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**

**RUNDOWN FLUMES TYPE III FOR BRIDGES**

DESIGNED BY: DRAWN BY: SKL CHECKED BY: YML/TM  
**515-04-1/2** 1 of 2

REVISED per ADDENDUM No. 1

REGION	STATE	RESERVATION	ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
NORTH	NEW MEXICO	NAVAJO	N5012	N5012(1),2&4	66	75

TABLE A (FOR CONTRACTOR'S INFORMATION ONLY)

ESTIMATED QUANTITIES OF FLUME STRUCTURES						
PAY ITEM	PAY UNIT	STRUCTURE TYPES OF FLUME				
REINFORCED CONCRETE FOR MINOR STRUCTURES	CU. YD.	<table border="1"> <tr> <td></td> <td>FLUME TYPE III FOR BRIDGES</td> </tr> <tr> <td></td> <td><math>0.38 + 1.73 \frac{(\sqrt{X^2 + 1})}{X}</math></td> </tr> </table>		FLUME TYPE III FOR BRIDGES		$0.38 + 1.73 \frac{(\sqrt{X^2 + 1})}{X}$
	FLUME TYPE III FOR BRIDGES					
	$0.38 + 1.73 \frac{(\sqrt{X^2 + 1})}{X}$					

(FOR THE DETAILS OF FLUME STRUCTURES, SEE SERIAL [REDACTED] 515-04-1/2)

TABLE B (FOR CONTRACTOR'S INFORMATION ONLY)

ESTIMATED QUANTITIES OF RUNDOWN STRUCTURES						
PAY ITEM	PAY UNIT	STRUCTURE TYPES OF RUNDOWN				
REINFORCED CONCRETE FOR MINOR STRUCTURES	CU. YD.	<table border="1"> <tr> <td></td> <td>CONCRETE RUNDOWN</td> </tr> <tr> <td></td> <td><math>0.56 + 0.11(L) \frac{(\sqrt{X^2 + 1})}{X}</math></td> </tr> </table>		CONCRETE RUNDOWN		$0.56 + 0.11(L) \frac{(\sqrt{X^2 + 1})}{X}$
	CONCRETE RUNDOWN					
	$0.56 + 0.11(L) \frac{(\sqrt{X^2 + 1})}{X}$					
36" Ø CULVERT PIPE	FT.					
24" Ø CULVERT PIPE	FT.					
RIPRAP "A"	CU. YD.	3.33				
RIPRAP "G"	SD. YD.	$(2.22 + 0.44L) \frac{(\sqrt{X^2 + 1})}{X}$				

[REDACTED]

TABLE C (FOR CONTRACTOR'S INFORMATION ONLY)

ESTIMATED QUANTITIES OF VARIOUS STRUCTURAL COMBINATIONS	
[REDACTED]	

RUNDOWN FLUME TYPE III (SERIAL 515-04-1/2)	
CONBINATION WITH RUNDOWN OPTIONS	CONC. RUNDOWN
EST. QUANTITIES FROM TABLE A & B	COLUMN ③ + COLUMN ③

NOTE: REFERENCES WITHIN THIS SHEET TO CLASS "A" RIPRAP IS EQUIVALENT TO BID ITEM 25112-2000 WIRE-ENCLOSED RIPRAP, CLASS 1.

NOTE: REFERENCES WITHIN THIS SHEET TO CLASS "G" RIPRAP IS EQUIVALENT TO BID ITEM 25101-0100 PLACED RIPRAP, METHOD A, CLASS 1.

NOTES

1. QUANTITIES FOR [REDACTED] RIPRAP CLASS "A" OR "G" VARY DEPENDING UPON WHETHER THE RUNDOWN IS LOCATED AT PROTECTED OR UNPROTECTED SLOPES. SEE ROADWAY PLANS FOR QUANTITIES AND LOCATIONS.
2. QUANTITIES FOR "REINFORCED CONCRETE FOR MINOR STRUCTURES" INCLUDE THE FLUME AND TWO HALF HEADWALLS OR TWO HEADWALLS WITH FOOTINGS.
3. REFER TO SERIAL [REDACTED] 515-04-1/2 FOR RUNDOWN DETAILS
4. THE ESTIMATED QUANTITY CALCULATIONS OF TABLE A AND TABLE B ARE BASED ON X:1 EMBANKMENT SLOPE SHOWN ON ROADWAY PLANS. ALSO, THE "L" VALUE IS TO BE FIGURED BY "X" VALUE OF EMBANKMENT SLOPE.
5. NOTE DELETED FROM PLANS

[REDACTED]



DATE	BY	DESCRIPTION
2/02/12	TM	GENERAL REVISIONS
REVISIONS (OR CHANGE NOTICES)		

NEW MEXICO  
DEPARTMENT OF TRANSPORTATION  
STANDARD DRAWING

ESTIMATED QUANTITIES FOR RUNDOWN FLUMES

DESIGNED BY: \_\_\_\_\_ DRAWN BY: SKL CHECKED BY: YML/TM  
515-04-2/2 2 of 2