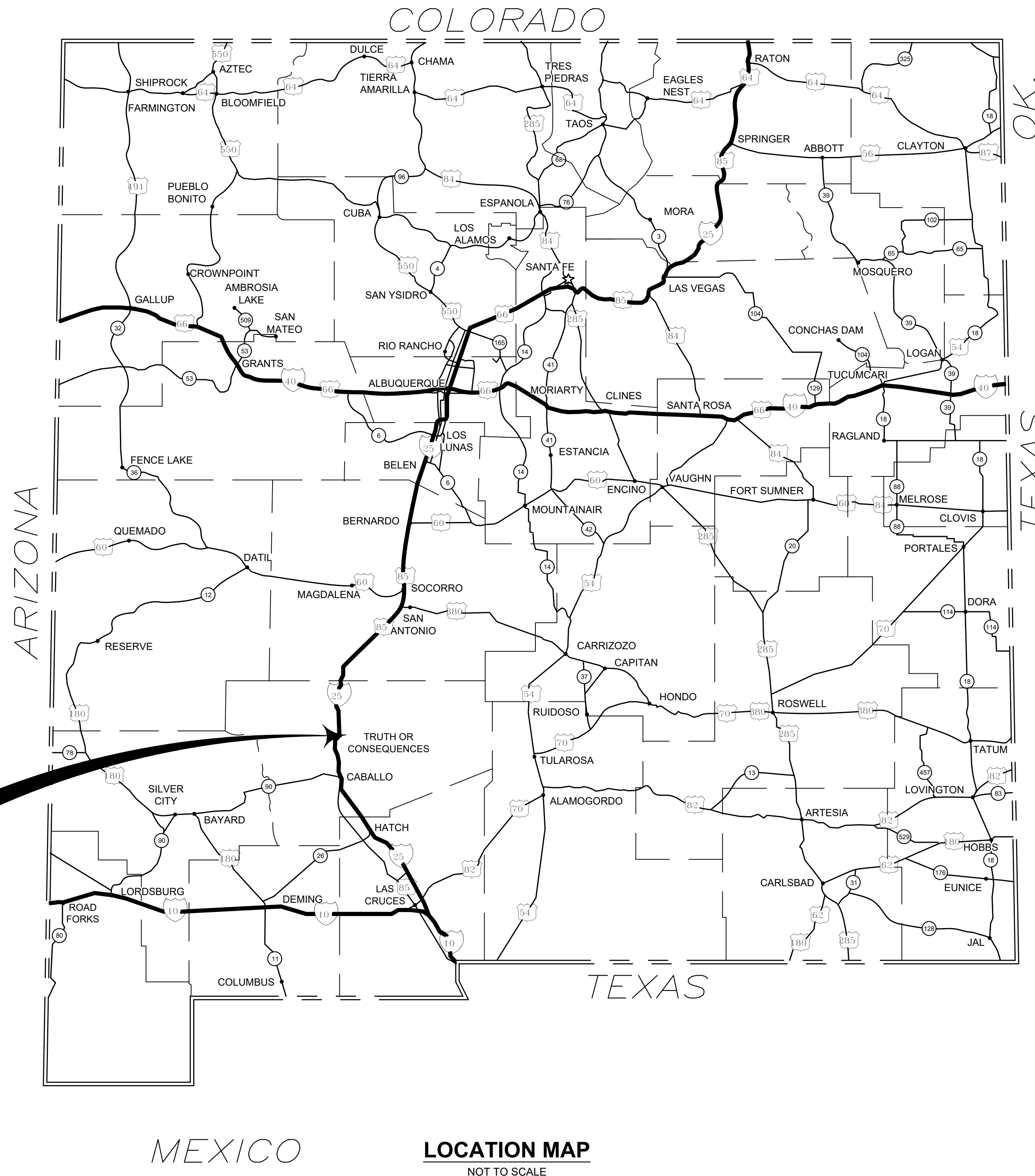


# CUCHILLO NEGRO ARROYO

## BANK STABILIZATION SIERRA COUNTY, NEW MEXICO DECEMBER, 2017



**PROJECT  
LOCATION**

**LOCATION MAP**  
NOT TO SCALE



THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

### FLOOD NOTE

THIS PROJECT IS LOCATED IN A "ZONE A" WITH NO BASEFLOOD ELEVATIONS AS SHOWN ON FEMA FIRM MAP NUMBER 3500730005C WITH AN EFFECTIVE DATE OF JULY 16, 1996

**PETTIGREW & ASSOCIATES PA**  
ENGINEERING | SURVEYING | TESTING  
DEFINING QUALITY SINCE 1965  
100 E. Navajo Drive Suite 100 Hobbs New Mexico 88240  
T 575 393 9827 F 575 393 1543  
Pettigrew.us



2/14/19

### CONTACTS

**OWNER**  
SIERRA COUNTY PUBLIC WORKS  
855 VAN PATTERN  
TRUTH OR CONSEQUENCES, NM 87901  
(575) 740-1247  
TRAVIS ATWELL, FLOOD DIRECTOR

**CIVIL ENGINEERING**  
PETTIGREW & ASSOCIATES, P.A.  
100 E NAVAJO DRIVE, SUITE 100  
HOBBS, NM 88240  
(575) 393-9827  
TEODORO CANO-MOTA, P.E.

**FEMA OVERSIGHT**  
KING INDUSTRIES CORPORATION  
1210 MECHEM DRIVE  
RUIDOSO, NM 88345  
(575) 336-7906  
JADY KING

**ENVIROMENTAL COMPLIANCE**  
MARRON AND ASSOCIATES  
7511 FOURTH STREET  
ALBUQUERQUE, NM 87107  
(505) 898-8848  
HEATHER PARMETER

### LAND OWNERS

**PRIVATE LANDOWNER**  
BAXTER B. BROWN AND SHERRY L. FLETCHER  
602 BROADWAY  
TRUTH OR CONSEQUENCES, NM 87901

### REVISIONS

No.	DATE	DESCRIPTION

### COVER SHEET

CUCHILLO NEGRO  
ARROYO  
BANK STABILIZATION

SIERRA COUNTY  
NEW MEXICO

PROJECT NUMBER:  
2016.1125

SHEET:  
C-001



COORDINATE SYSTEM: NAD83 NEW MEXICO STATE PLANE- CENTRAL ZONE - FOOT

ROAD ALIGNMENT LINE TABLE				
LINE #	BEGINNING STA	LENGTH (FT)	LINE/CORD DIRECTION (DEG. MIN. SEC.)	
L5	0+00.00	551.72	N58°35'12"W	

ROAD ALIGNMENT HORIZONTAL CONTROL TABLE				
POINT #	NORTHING	EASTING	DESCRIPTION	STATION
1006	783254.44'	1343089.46'	BOP	0+00.00
1007	783311.05'	1343040.25'	EOP	5+51.72

SHEET PILE LINE TABLE				
LINE #	BEGINNING STA	LENGTH (FT)	LINE/CORD DIRECTION (DEG. MIN. SEC.)	
L1	0+37.21	75.00	N41°00'00"W	
L2	1+08.70	200.00	N54°28'18"W	
L3	3+08.19	125.00	N62°46'13"W	
L4	4+32.85	120.83	N68°56'55"W	

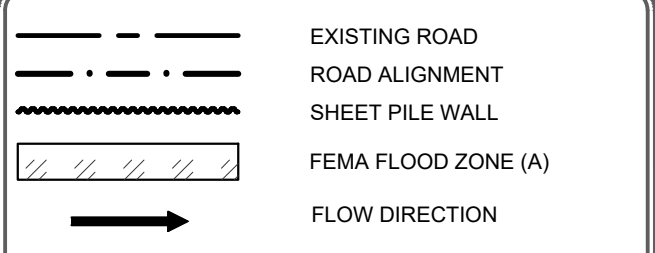
  

SHEET PILE HORIZONTAL CONTROL TABLE				
POINT #	NORTHING	EASTING	DESCRIPTION	STATION
1001	783254.44'	1343089.46'	PI-1	0+37.21
1002	783311.05'	1343040.25'	PI-2	1+08.70
1003	783427.26'	1342877.49'	PI-3	3+08.19
1004	783484.46'	1342766.34'	PI-4	4+32.85
1005	783527.86'	1342653.57'	PI-5	5+51.71

**PETTIGREW & ASSOCIATES PA**  
 ENGINEERING | SURVEYING | TESTING  
 DEFINING QUALITY SINCE 1965  
 100 E. Navajo Drive Suite 100 Hobbs New Mexico 88240  
 T 575 393 9827 F 575 393 1543  
 Pettigrew.us



PROJECT ENGINEER: Teodoro Cano-Mota, P.E.  
 PROJECT DESIGNER: Teodoro Cano-Mota, P.E.  
 DRAWN BY: TCM



REVISIONS		
No.	DATE	DESCRIPTION

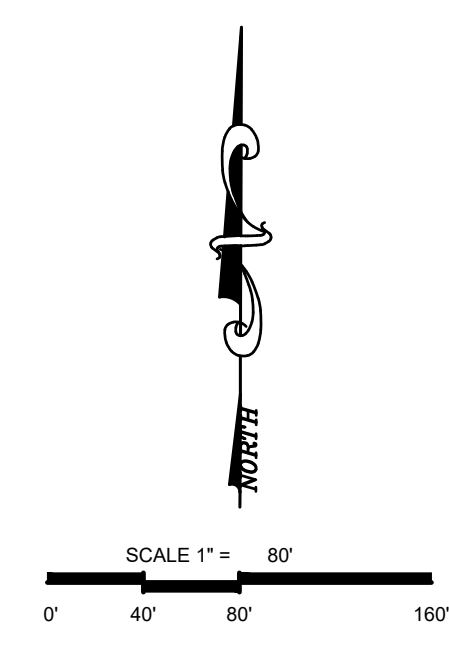
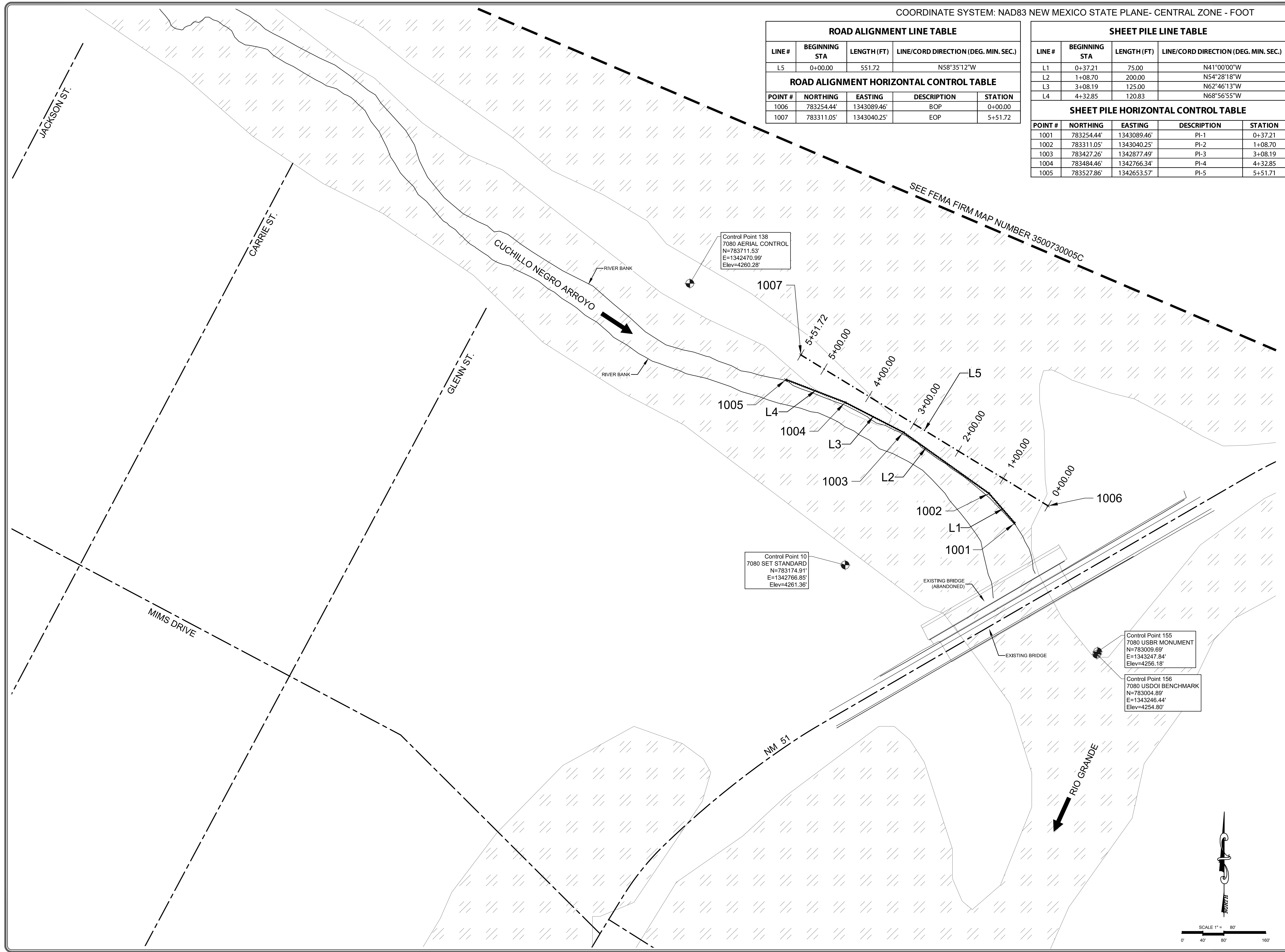
OVERALL SITE LAYOUT AND CONTROL PLAN

CUCHILLO NEGRO ARROYO BANK STABILIZATION

SIERRA COUNTY NEW MEXICO

PROJECT NUMBER: 2016.1125

SHEET: C-002





**CONSTRUCTION NOTES**

- UNITED STATES DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS FP-14 AND THE NEW MEXICO DEPARTMENT OF TRANSPORTATION (NMDOT) STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION 2014 EDITION SHALL APPLY TO THIS PROJECT.
- CONTACT NEW MEXICO ONE-CALL AT 811 OR 1800 321 2537 TWO DAYS PRIOR TO ANY EXCAVATION.
- ALL DATA SHOWN HEREIN CONCERNING EXISTING PRIVATE AND/OR PUBLIC OWNED UTILITIES HAVE BEEN OBTAINED FROM THE OWNERS' RECORDS AND/OR FIELD OBSERVATION. THESE MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR IS CAUTIONED THAT HE IS RESPONSIBLE FOR THE EXACT LOCATION AND PROTECTION OF ALL LINES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL CONFINE THEIR OPERATIONS TO THE CONSTRUCTION LIMITS OF THIS PROJECT AND WILL BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED BY THEIR EQUIPMENT TO PUBLIC OR PRIVATE PROPERTY.
- THE CONTRACTOR SHALL OBTAIN PERMISSION FROM NMDOT TO STORE EQUIPMENT OR MATERIAL WITHIN HIGHWAY NM 51 RIGHT OF WAY.
- THE CONTRACTOR SHALL, AT THEIR EXPENSE, REFERENCE AND RESET ACCIDENTALLY DESTROYED ROW MONUMENTS AND/OR PROPERTY CORNERS IN ACCORDANCE WITH GOVERNMENT REGULATIONS AND STATE LAW.
- THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS.
- THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY TO KEEP IT FROM WASHING OFF THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT (CGP) OF THE EPA, THE STORM WATER POLLUTION PREVENTION PLAN SHALL INCLUDE DEVELOPING, PERMITTING, INSTALLING AND MAINTAINING SWPPP BMP'S AS WELL AS PERMANENT SEEDING WHEN THE PROJECT IS COMPLETED. THE CONTRACTOR SHALL PROVIDE AN ELECTRONIC COPY OF THE SWPPP TO THE OWNER AND SHALL KEEP A COPY OF THE SWPPP ONSITE AT ALL TIMES.
- UNSUITABLE CONSTRUCTION MATERIALS AND DEBRIS FROM CLEARING AND GRUBBING ARE TO BE DISPOSED BY THE CONTRACTOR IN ACCORDANCE WITH SUB-SECTION 107.14.8 - DISPOSAL OF OTHER MATERIALS AND DEBRIS OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION 2014 EDITION. NO SEPARATE PAYMENT WILL BE MADE FOR DISPOSED MATERIALS AND SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- PROTECTION OF WORK.** THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF THEIR WORK FROM RAINFALL, STORM DRAINAGE, OR FLOOD SO THAT IT DOES NOT DELAY CONSTRUCTION OR DAMAGE COMPLETED WORK OR DOWNSTREAM PROPERTIES.
- STEEL SHEET PILING:** SHEET PILES SHALL BE NEW PZC-18 SECTIONS (ASTM A572) GRADE 50, 30 FEET LONG.
  - NO MATERIAL SHALL FALL BELOW THE ORDINARY HIGH WATER MARK SHOWN ON SHEET C-201.
  - METHOD OF INSTALLATION: THE PILING SHALL BE DRIVEN IN A MANNER THAT ENSURES PERFECT INTERLOCKING THROUGHOUT THE ENTIRE LENGTH OF EACH PILE. THE PILES SHALL BE HELD IN PROPER ALIGNMENT DURING DRIVING BY ASSEMBLING FRAMES OR OTHER SUITABLE TEMPORARY GUIDE STRUCTURES. TEMPORARY GUIDE STRUCTURES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR PURPOSE. DRIVE STEEL SHEET PILING AND CUT OFF TRUE TO LINE AND GRADE (PLUS OR MINUS 2 INCHES) AS SHOWN ON SHEETS C-301 AND C-302. INSTALL STEEL SHEET PILING WITH A SUITABLE HAMMER. REMOVE AND REPLACE ANY SECTION DAMAGED DURING HANDLING AND INSTALLATION AT NO ADDITIONAL EXPENSE TO THE COUNTY.
    - ANYTIME THE FORWARD EDGE OF THE SHEET PILE WALL IS FOUND TO BE OUT OF CORRECT ALIGNMENT.
      - THE PILING ALREADY ASSEMBLED AND PARTLY DRIVEN SHALL BE DRIVEN TO THE REQUIRED DEPTH.
      - TAPER PILES SHALL THEN BE DRIVEN TO BRING THE FORWARD EDGE INTO CORRECT ALIGNMENT BEFORE ADDITIONAL REGULAR PILING IS ASSEMBLED AND DRIVEN. THE MAXIMUM PERMISSIBLE TAPER IN A SINGLE PILE SHALL BE 0.25 INCH PER FOOT OF LENGTH.
    - IF THE SHEET PILE HITS REFUSAL AND CANNOT BE SET TO GRADE BY DRIVING, THE PROJECT ENGINEER SHALL BE CONTACTED IMMEDIATELY.
  - STORAGE AND HANDLING:** HANDLE AND STORE ALL SHEET PILES IN A MANNER TO PREVENT DAMAGE. HANDLE LONG SHEET PILES WITH FABRIC SLINGS OR BRAIDED WIRE ROPE CONSTRUCTED OF SIX OR MORE WIRE ROPES PLACED AT APPROPRIATE LIFT POINTS TO PREVENT DAMAGE DUE TO EXCESSIVE BENDING.
  - REPLACING PILES: IN THE EVENT A PILE IS BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR TO THE EXTENT THAT THE DAMAGE IS IRREPARABLE, IN THE OPINION OF THE ENGINEER, THE CONTRACTOR SHALL EXTRACT AND REPLACE THE PILE AT NO ADDITIONAL EXPENSE TO THE COUNTY. IN THE EVENT THAT A PILE IS MISLOCATED BY THE CONTRACTOR, THE CONTRACTOR SHALL EXTRACT AND REPLACE THE PILE AT NO EXPENSE TO THE COUNTY EXCEPT WHEN A DESIGN CHANGE PROPOSED BY THE CONTRACTOR IS APPROVED BY THE COUNTY.
  - THE BASIS FOR PAYMENT FOR SHEET PILE IS PER SQUARE FOOT COMPLETE IN PLACE, INCLUDING PILE CUTOFF.
- CLEARING AND GRUBBING:** DEBRIS FROM CLEARING AND GRUBBING IS TO BE DISPOSED BY THE CONTRACTOR IN ACCORDANCE WITH SUB-SECTION 107.14.8 OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION 2014 EDITION. THE BASIS OF PAYMENT FOR CLEARING AND GRUBBING IS PER LUMP SUM.
- WATER:** THE CONTRACTOR SHALL SECURE AND SUPPLY WATER FOR THE PROJECT. THIS ITEM SHALL BE INCIDENTAL TO THE PROJECT.
- BASE COURSE:** BASE COURSE SHALL BE CONTRACTOR FURNISHED, HAULED AND INSTALLED. USE BASE COURSE TYPE II IN ACCORDANCE WITH SECTION 303 OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION 2014 EDITION. CONTRACTOR FURNISHED AND INSTALLED.
- MATERIAL PITS:** NO MATERIAL PITS HAVE BEEN DESIGNATED FOR THIS PROJECT. THE CONTRACTOR SHALL OBTAIN MATERIAL FROM ANY ACCEPTABLE SOURCE AS LONG AS MATERIAL REQUIREMENTS ARE MET.
- BORROW:** BORROW SHALL BE CONTRACTOR FURNISHED, PROCESSED, HAULED, HANDLED, AND INSTALLED. SUB-SECTION 203.3.5.1 OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION 2014 EDITION SHALL APPLY TO THIS ITEM. THE BASIS OF PAYMENT FOR THIS ITEM SHALL BE IN CUBIC YARDS COMPLETE IN PLACE.
- EARTHWORK AND GRADING:** THE CONTRACTOR SHALL GRADE THE SITE TO THE DESIGN ELEVATIONS AS SHOWN ON THE PLANS. THE BASIS OF PAYMENT FOR THIS ITEM SHALL BE IN SQUARE YARDS, COMPLETE IN PLACE.
- SEDIMENT/SILT CLEAN UP REMEDIATION:** THE CONTRACTOR SHALL CLEAN UP EXISTING SEDIMENT PER THE AREA AND LOCATION AS SHOWN ON THE PLANS. THE BASIS OF PAYMENT FOR THIS ITEM SHALL BE IN SQUARE YARDS, COMPLETE IN PLACE.
- INCIDENTAL CONSTRUCTION.** THERE WILL BE NO MEASUREMENT OR PAYMENT FOR ANY ITEMS OF WORK NOT SPECIFICALLY LISTED IN THE BID PROPOSAL. ALL OTHER ITEMS OR WORK OR MATERIALS SHOWN AS REQUIRED TO COMPLETE THE PROJECT SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OR TO OTHER ITEMS OF WORK.
- TESTING. A PROFESSIONAL ENGINEERING TESTING FIRM SHALL PERFORM ALL QUALITY ASSURANCE TESTING. THE COUNTY SHALL PAY FOR THE FIRST TEST ON EACH MATERIAL AS REQUIRED. ANY RETESTING DUE TO THE INITIAL TEST FAILING SHALL BE PAID FOR BY THE CONTRACTOR, WHETHER THE RETEST IS PASSING OR FAILING. ANY ITEM INSTALLED WITHOUT BEING TESTED OR CERTIFIED SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE. TESTING FREQUENCY SHALL BE IN ACCORDANCE WITH NMDOT MINIMUM TESTING REQUIREMENTS.
- SURVEYING.** A PROFESSIONAL SURVEYING FIRM SHALL ESTABLISH HORIZONTAL AND VERTICAL CONTROL FOR ROAD ALIGNMENT AND SHEET PILE WALL LAYOUT.
- WARRANTY.** BIDDER WILL BE REQUIRED TO GUARANTEE MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR.
- CONSTRUCTION PRACTICES.**
  - AVOID EQUIPMENT REFUELING, MAINTENANCE OR STORAGE WITHIN FLOODPLAINS OR WITHIN 200 FEET OF A WATERCOURSE.
  - CLEAN HEAVY EQUIPMENT USED IN THE PROJECT AREA PRIOR TO THE ONSET OF CONSTRUCTION AND INSPECT EQUIPMENT DAILY FOR LEAKS.
  - AVOID DISCHARGING CHEMICAL SUBSTANCES ARISING FROM CONSTRUCTION OR EXCAVATION ACTIVITY INTO SURFACE WATERS OR SOILS.
- RE-VEGETATION.** RE-VEGETATE OPEN DISTURBED SOILS WITH CERTIFIED WEED-FREE NATIVE SEED APPROPRIATE FOR THE AREA.

**DESIGN NOTES**

- WETLANDS AND ORDINARY HIGH WATER MARKS WERE OBTAINED FROM MARRON AND ASSOCIATES FIELD OBSERVATIONS AND SURVEYS ON SEPTEMBER 2016.
- THE DESIGN OF THE STEEL SHEET PILE IS BASED ON ENGINEERING PARAMETERS OBTAINED FROM THE SOILS INVESTIGATION REPORT LAB NO. 16 5364 NOVEMBER 21, 2016 PREPARED BY PETTIGREW AND ASSOCIATES, P.A.

SHEET INDEX	
SHEET NO.	DESCRIPTION
<b>SECTION C-0</b>	
C-001	COVER SHEET
C-002	OVERALL SITE LAYOUT AND CONTROL PLAN
C-003	SHEET INDEX, CONSTRUCTION NOTES AND SUMMARY OF QUANTITIES
SHEET SUB TOTAL-3	
<b>SECTION C-1</b>	
C-101	SEDIMENT CONTROL AND EROSION PROTECTION PLAN
C-102	NMDOT COORDINATION (SPUR DIKES AND RIPRAP)
SHEET SUB TOTAL-2	
<b>SECTION C-2</b>	
C-201	PLAN AND PROFILE STATION 0+00.00 TO STATION 5+51.72
SHEET SUB TOTAL-1	
<b>SECTION C-3</b>	
C-301	DETAILS AND SECTIONS
C-302	DETAILS AND SECTIONS

SUMMARY OF QUANTITIES				
ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	FINAL QUANTITY
1	MOBILIZATION	L. S.	1	
2	NPDES PROTECTION	L. S.	1	
3	CONSTRUCTION STAKING	L. S.	1	
4	CLEARING AND GRUBBING	L. S.	1	
5	PZC-18 STEEL SHEET PILING (30' LONG SHEET) COMPLETE IN PLACE	SQ. FT.	16,375	
6	EARTHWORK AND GRADING, COMPLETE IN PLACE	SQ. YD.	1,850	
7	BORROW (CONTRACTOR FURNISHED, HANDLED, HAULED, AND INSTALLED) COMPLETE IN PLACE	CU. YD.	400	
8	BASE COURSE TYPE II (CONTRACTOR FURNISHED, HANDLED, HAULED, AND INSTALLED) COMPLETE IN PLACE	CU. YD.	180	



PROJECT ENGINEER: Teodoro Cano-Mota, P.E.  
 PROJECT DESIGNER: Teodoro Cano-Mota, P.E.  
 DRAWN BY: TCM

**REVISIONS**

No.	DATE	DESCRIPTION

**SHEET INDEX,  
CONSTRUCTION NOTES  
AND  
SUMMARY OF QUANTITIES**

**CUCHILLO NEGRO  
ARROYO  
BANK STABILIZATION**

SIERRA COUNTY  
NEW MEXICO

PROJECT NUMBER:  
**2016.1125**

SHEET:  
**C-003**





2/14/19

PROJECT ENGINEER: Teodoro Cano-Mota, P.E.  
PROJECT DESIGNER: Teodoro Cano-Mota, P.E.  
DRAWN BY: TCM

**LEGEND**

	EXIST. GRADE 10.0' CONTOUR
	EXIST. GRADE 2.0' CONTOUR
	RIGHT OF WAY
	ROAD CENTER LINE
	SHEET PILE WALL
	EXISTING ROAD
	BARBED WIRE FENCE
	ACCESS GATE
	SHEET METAL FENCE
	SILT FENCE
	FLOW DIRECTION
	WETLANDS
	EXISTING BRIDGE
	PROPOSED ROAD
	CONSTRUCTION ENTRANCE

**TYPICAL ABBREVIATIONS**

PI	POINT OF INTERSECTION
BOP	BEGINNING OF PROJECT
EOP	END OF PROJECT

**REVISIONS**

No.	DATE	DESCRIPTION

**SEDIMENT CONTROL AND EROSION PROTECTION PLAN**

**CUCHILLO NEGRO ARROYO BANK STABILIZATION**

SIERRA COUNTY  
NEW MEXICO

PROJECT NUMBER:  
**2016.1125**

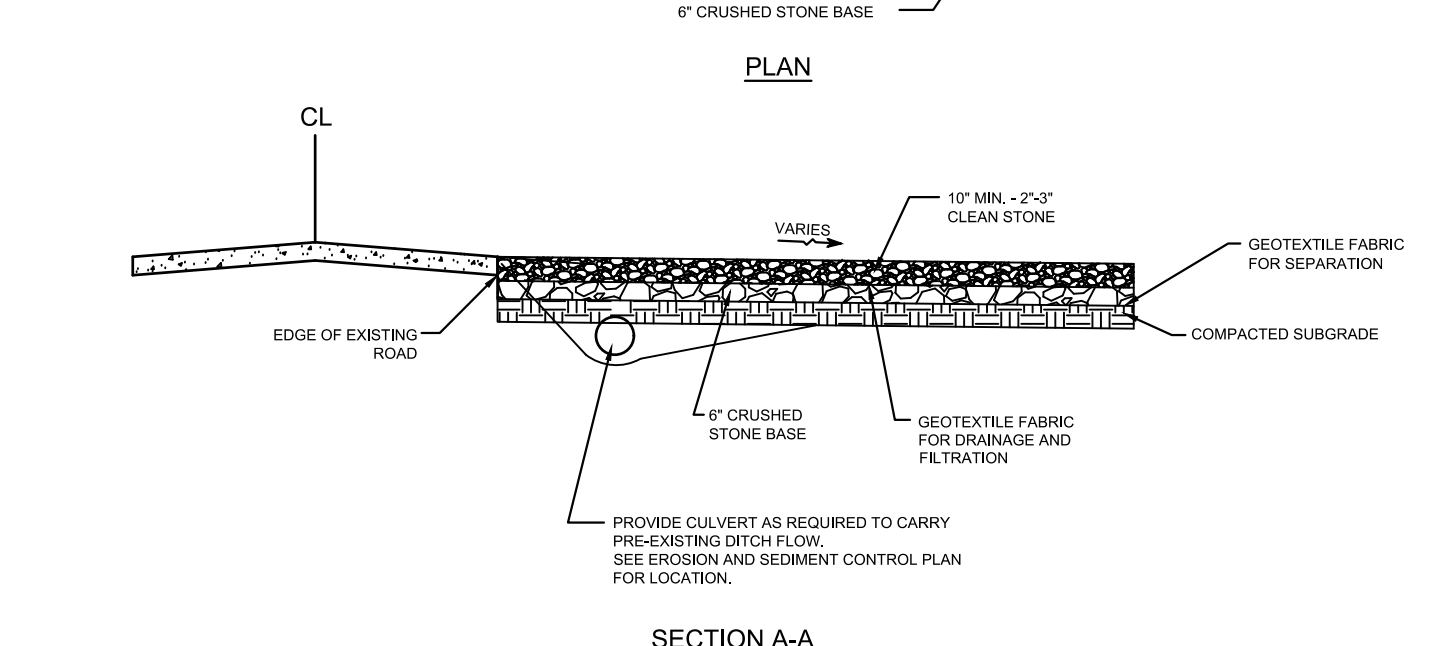
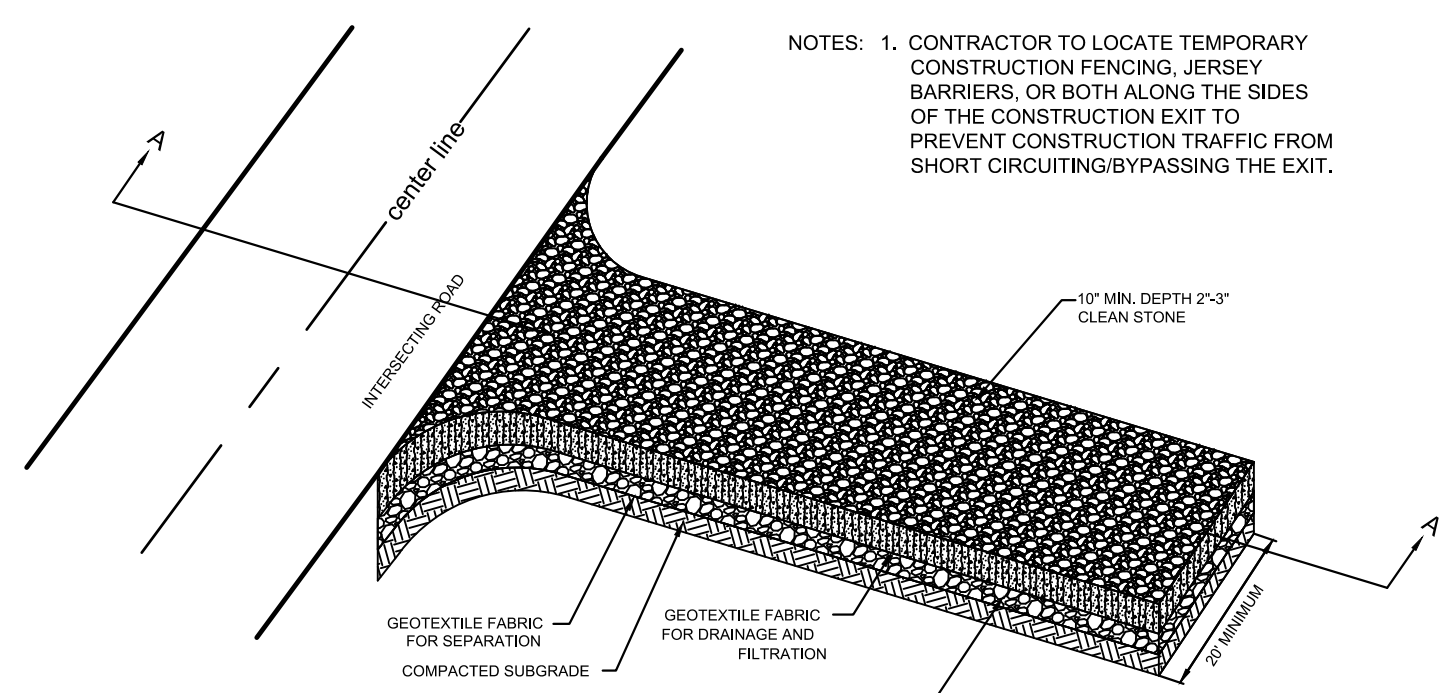
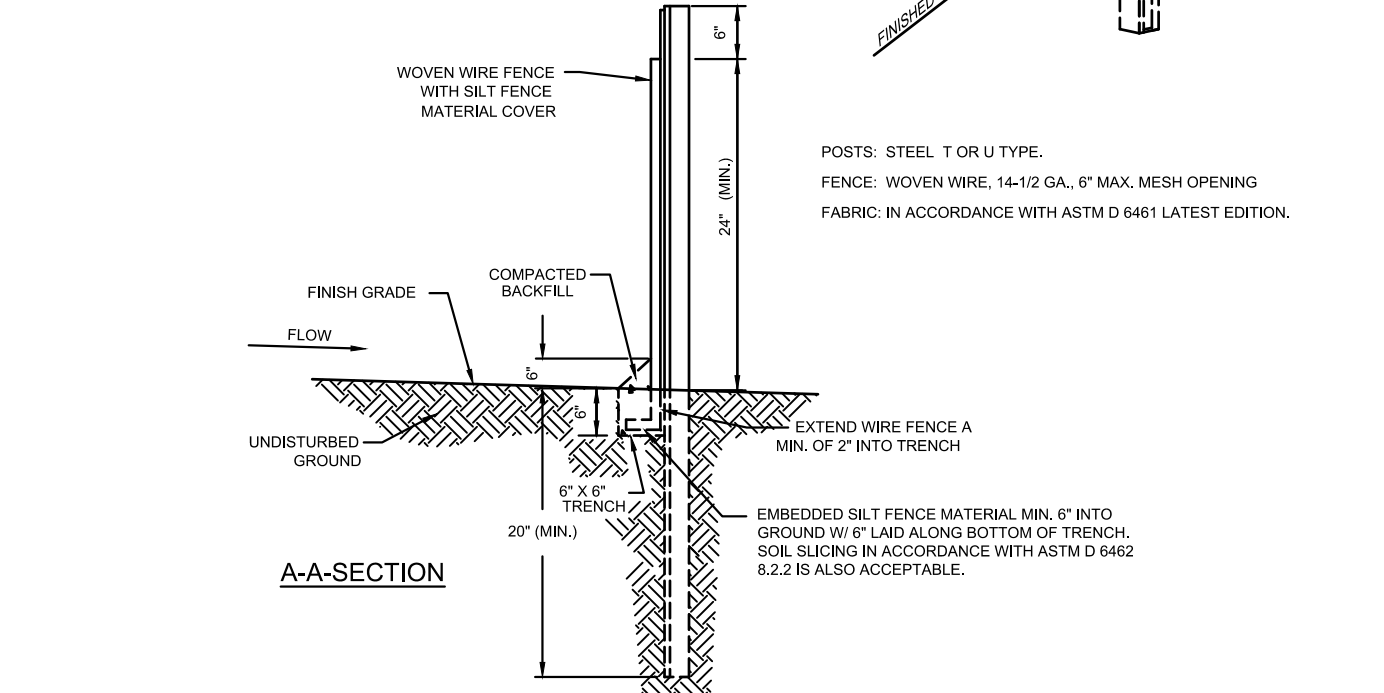
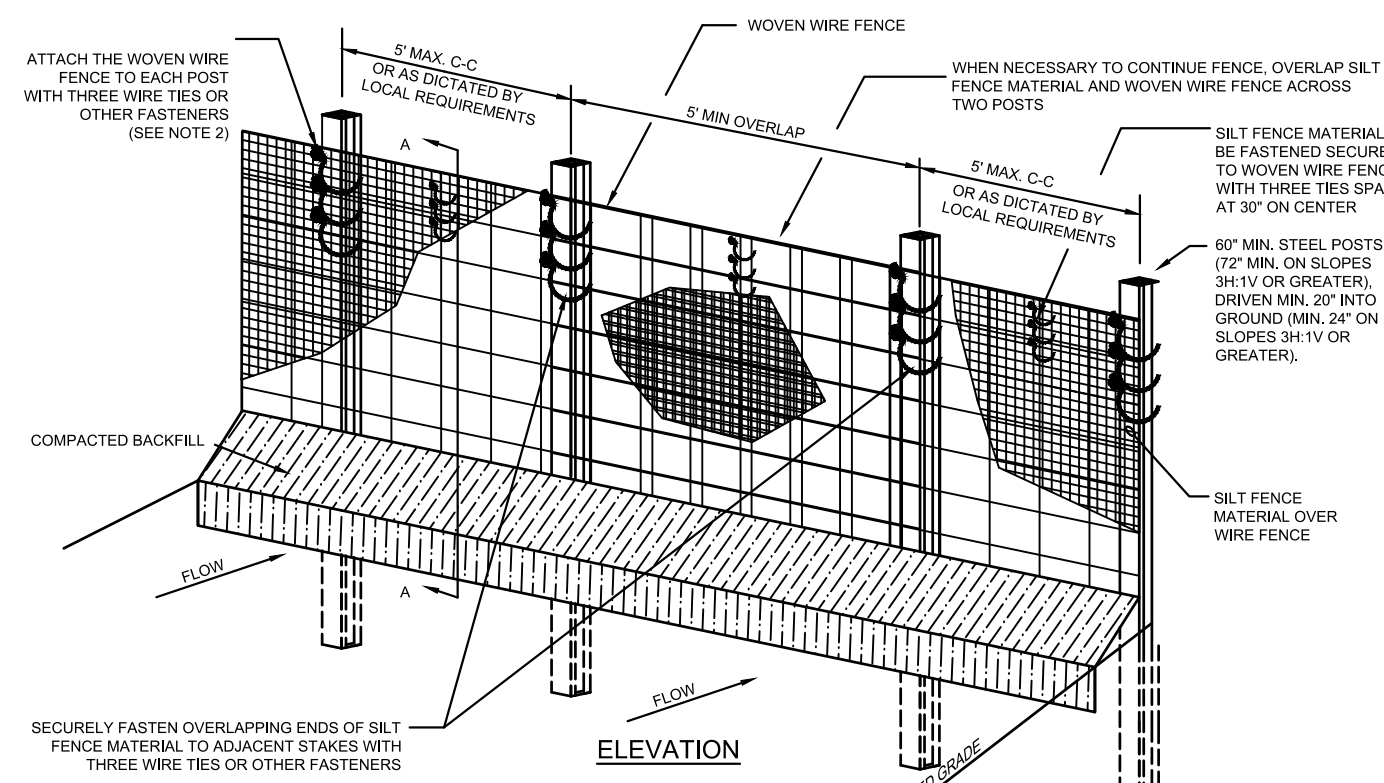
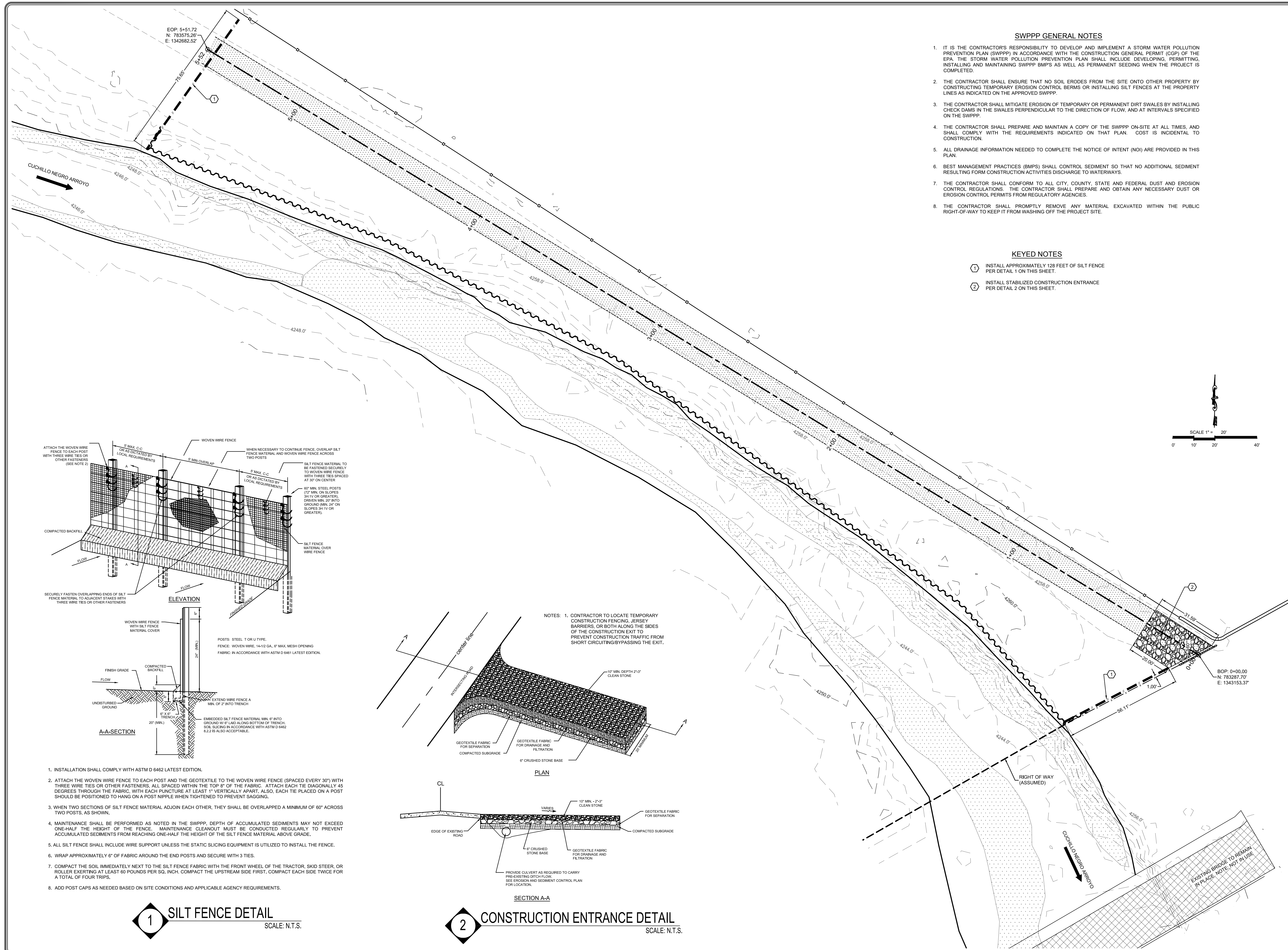
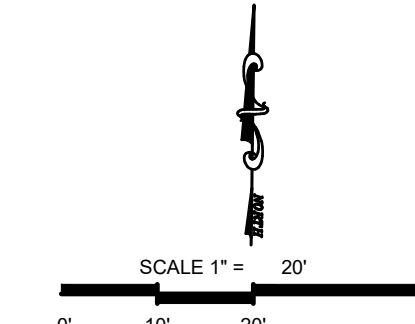
SHEET:  
**C-101**

**SWPPP GENERAL NOTES**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT (CGP) OF THE EPA. THE STORM WATER POLLUTION PREVENTION PLAN SHALL INCLUDE DEVELOPING, PERMITTING, INSTALLING AND MAINTAINING SWPPP BMP'S AS WELL AS PERMANENT SEEDING WHEN THE PROJECT IS COMPLETED.
- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO OTHER PROPERTY BY CONSTRUCTING TEMPORARY EROSION CONTROL BERMS OR INSTALLING SILT FENCES AT THE PROPERTY LINES AS INDICATED ON THE APPROVED SWPPP.
- THE CONTRACTOR SHALL MITIGATE EROSION OF TEMPORARY OR PERMANENT DIRT SWALES BY INSTALLING CHECK DAMS IN THE SWALES PERPENDICULAR TO THE DIRECTION OF FLOW, AND AT INTERVALS SPECIFIED ON THE SWPPP.
- THE CONTRACTOR SHALL PREPARE AND MAINTAIN A COPY OF THE SWPPP ON-SITE AT ALL TIMES, AND SHALL COMPLY WITH THE REQUIREMENTS INDICATED ON THAT PLAN. COST IS INCIDENTAL TO CONSTRUCTION.
- ALL DRAINAGE INFORMATION NEEDED TO COMPLETE THE NOTICE OF INTENT (NOI) ARE PROVIDED IN THIS PLAN.
- BEST MANAGEMENT PRACTICES (BMP'S) SHALL CONTROL SEDIMENT SO THAT NO ADDITIONAL SEDIMENT RESULTING FROM CONSTRUCTION ACTIVITIES DISCHARGE TO WATERWAYS.
- THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM REGULATORY AGENCIES.
- THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY TO KEEP IT FROM WASHING OFF THE PROJECT SITE.

**KEYED NOTES**

- INSTALL APPROXIMATELY 128 FEET OF SILT FENCE PER DETAIL 1 ON THIS SHEET.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 2 ON THIS SHEET.



- INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION.
- ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. ALSO, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
- WHEN TWO SECTIONS OF SILT FENCE MATERIAL ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 60" ACROSS TWO POSTS, AS SHOWN.
- MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE FENCE. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF THE SILT FENCE MATERIAL ABOVE GRADE.
- ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS THE STATIC SLICING EQUIPMENT IS UTILIZED TO INSTALL THE FENCE.
- WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
- COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH, COMPACT THE UPSTREAM SIDE FIRST, COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.
- ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS.

**1 SILT FENCE DETAIL**  
SCALE: N.T.S.

**2 CONSTRUCTION ENTRANCE DETAIL**  
SCALE: N.T.S.



ROAD ALIGNMENT LINE TABLE				
LINE #	BEGINNING STA	LENGTH (FT)	LINE/CORD DIRECTION (DEG. MIN. SEC.)	
L5	0+00.00	551.72	N58°35'12"W	

ROAD ALIGNMENT HORIZONTAL CONTROL TABLE				
POINT #	NORTHING	EASTING	DESCRIPTION	STATION
1006	783254.44'	1343089.46'	BOP	0+00.00
1007	783311.05'	1343040.25'	EOP	5+51.72

SHEET PILE LINE TABLE				
LINE #	BEGINNING STA	LENGTH (FT)	LINE/CORD DIRECTION (DEG. MIN. SEC.)	
L1	0+37.21	75.00	N41°00'00"W	
L2	1+08.70	200.00	N54°28'18"W	
L3	3+08.19	125.00	N62°46'13"W	
L4	4+32.85	120.83	N68°56'55"W	

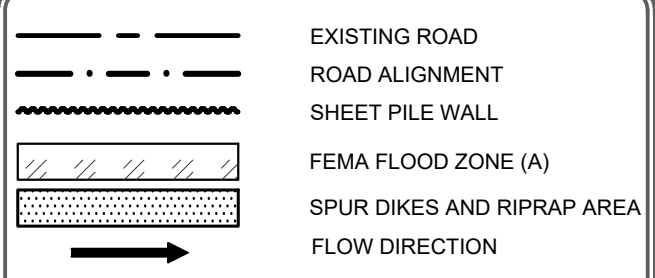
  

SHEET PILE HORIZONTAL CONTROL TABLE				
POINT #	NORTHING	EASTING	DESCRIPTION	STATION
1001	783254.44'	1343089.46'	PI-1	0+37.21
1002	783311.05'	1343040.25'	PI-2	1+08.70
1003	783427.26'	1342877.49'	PI-3	3+08.19
1004	783484.46'	1342766.34'	PI-4	4+32.85
1005	783527.86'	1342653.57'	PI-5	5+51.71

**PETTIGREW & ASSOCIATES PA**  
 ENGINEERING | SURVEYING | TESTING  
 DEFINING QUALITY SINCE 1965  
 100 E. Navajo Drive Suite 100 Hobbs New Mexico 88240  
 T 575 393 9827 F 575 393 1543  
 Pettigrew.us



PROJECT ENGINEER: Teodoro Cano-Mota, P.E.  
 PROJECT DESIGNER: Teodoro Cano-Mota, P.E.  
 DRAWN BY: TCM



REVISIONS		
No.	DATE	DESCRIPTION

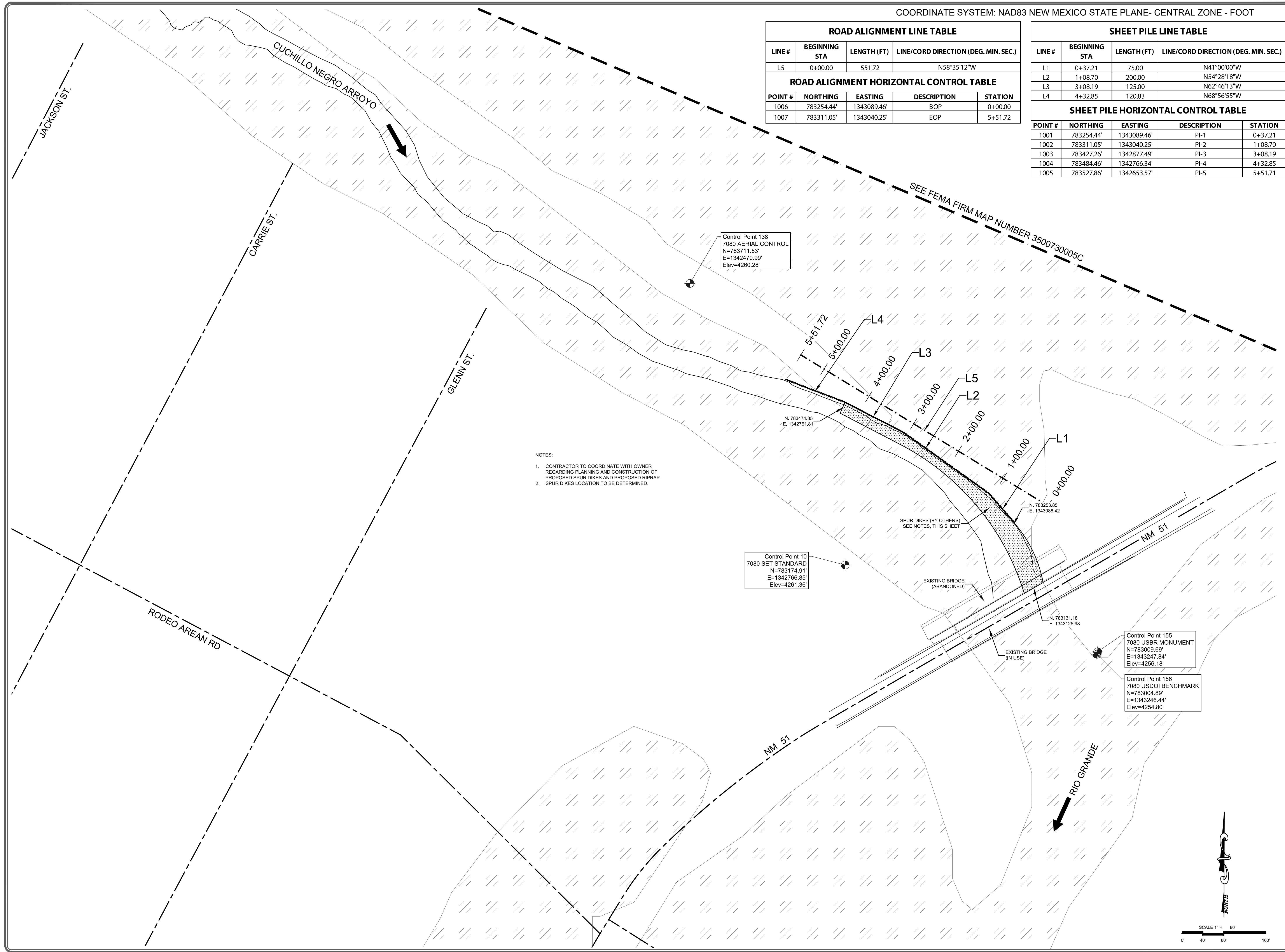
NMDOT  
 COORDINATION  
 (SPUR DIKES AND RIPRAP)

CUCHILLO NEGRO  
 ARROYO  
 BANK STABILIZATION

SIERRA COUNTY  
 NEW MEXICO

PROJECT NUMBER:  
 2016.1125

SHEET:  
 C-102



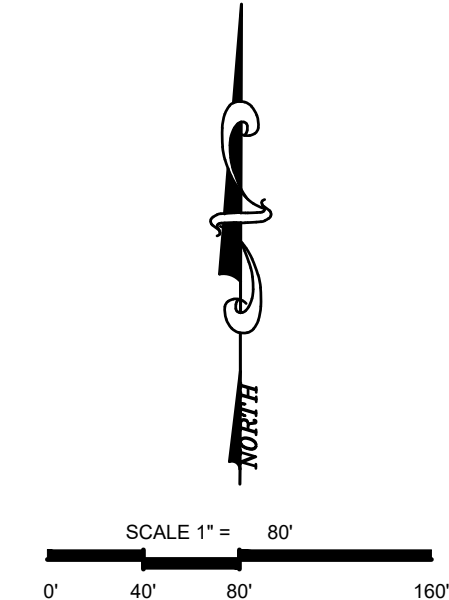
- NOTES:
- CONTRACTOR TO COORDINATE WITH OWNER REGARDING PLANNING AND CONSTRUCTION OF PROPOSED SPUR DIKES AND PROPOSED RIPRAP.
  - SPUR DIKES LOCATION TO BE DETERMINED.

Control Point 138  
 7080 AERIAL CONTROL  
 N=783711.53'  
 E=1342470.99'  
 Elev=4260.28'

Control Point 10  
 7080 SET STANDARD  
 N=783174.91'  
 E=1342766.85'  
 Elev=4261.36'

Control Point 155  
 7080 USBR MONUMENT  
 N=783009.69'  
 E=1343247.84'  
 Elev=4256.18'

Control Point 156  
 7080 USDOI BENCHMARK  
 N=783004.89'  
 E=1343246.44'  
 Elev=4254.80'







2/14/19

PROJECT ENGINEER: Teodoro Cano-Mota, P.E.  
 PROJECT DESIGNER: Teodoro Cano-Mota, P.E.  
 DRAWN BY: TCM

**LEGEND**

	EXIST. GRADE 10' CONTOUR
	EXIST. GRADE 2' CONTOUR
	RIGHT OF WAY
	ROAD ALIGNMENT
	EXISTING ROAD
	EDGE OF ROAD
	PZC 18 STEEL SHEET PILE
	PROPOSED ROAD
	WETLANDS
	SHEET METAL FENCE
	BARBED WIRE FENCE
	ACCESS GATE
	ORDINARY HIGH WATER MARK

**TYPICAL ABBREVIATIONS**

PI	POINT OF INTERSECTION
BOP	BEGINNING OF PROJECT
EOP	END OF PROJECT

**REVISIONS**

No.	DATE	DESCRIPTION

**PLAN AND PROFILE**  
 STA: 00+00.00  
 TO  
 STA: 5+51.72

**CUCHILLO NEGRO ARROYO BANK STABILIZATION**

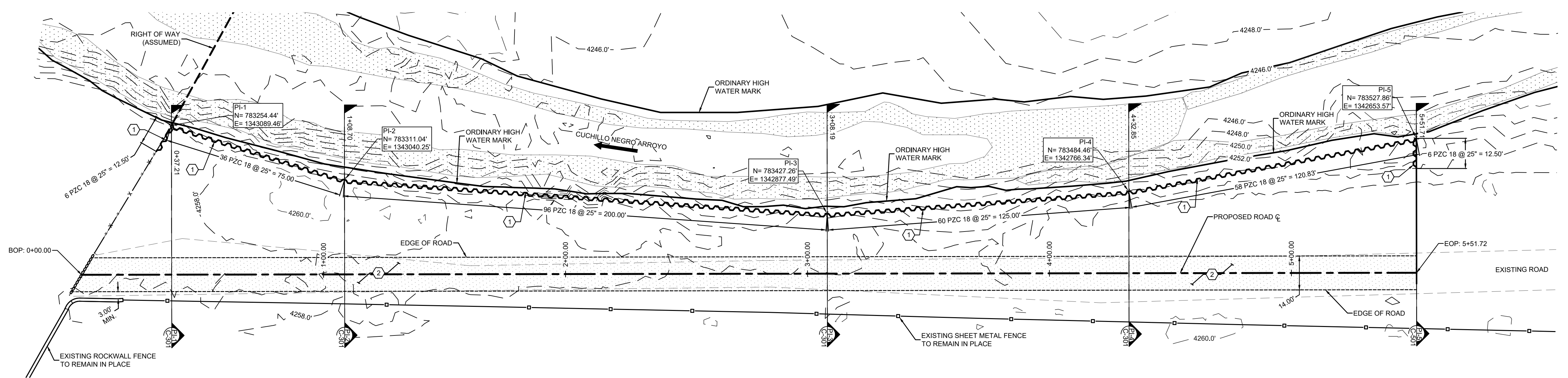
SIERRA COUNTY  
 NEW MEXICO

PROJECT NUMBER:  
**2016.1125**

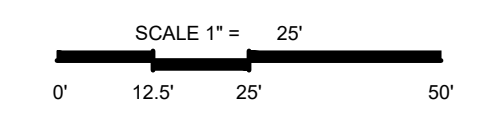
SHEET:  
**C-201**

STA: 0+00.00  
 CONSTRUCT ROAD PER TYPICAL SECTION 1, SHEET C-301, INCLUDING FOUND ELEVATION AND PROVIDE A SMOOTH DRIVING TRANSITION AND RESET EXISTING FENCE AND ACCESS GATE

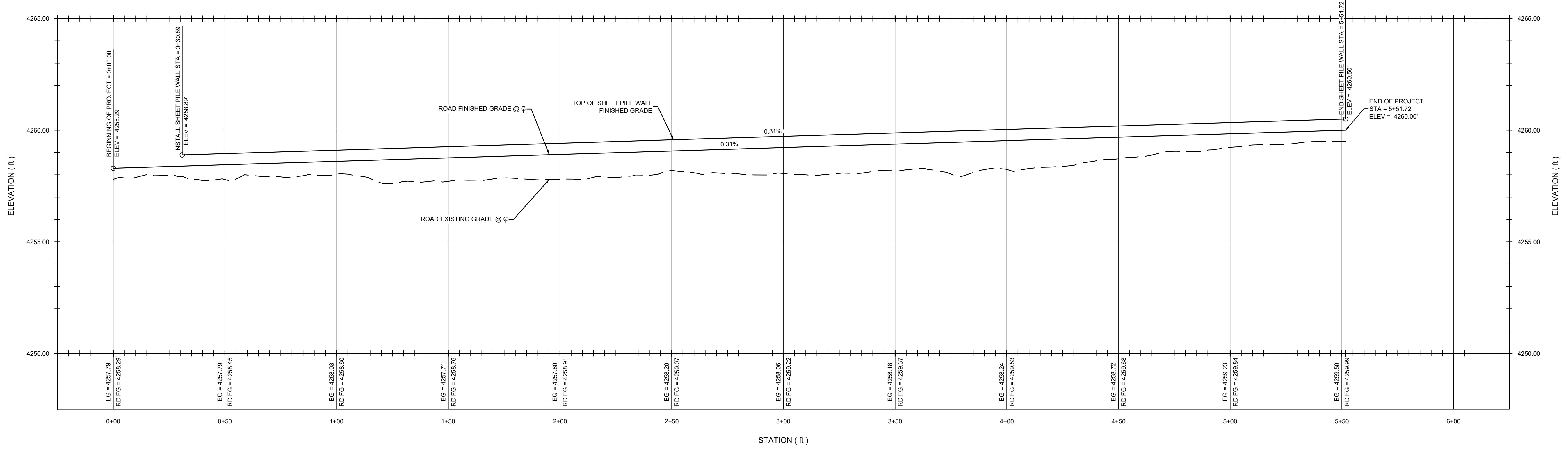
STA: 0+50.89, 50.94 LT TO  
 INSTALL SHEET PILE WALL PER DETAILS 1, 2, 3, 4, 5, 6, SHEET C-301 AND DETAILS 1, 2, 3, 4, SHEET C-302



- KEYED NOTES**
- INSTALL APPROXIMATELY 546 LINEAR FEET OF SHEET PILE PZC 18 ASTM A572 GRADE 50 PER DETAILS 1, 2, 3, 4, 5, 6 ON SHEET C-301 AND DETAILS 1, 2, 3, 4 ON SHEET C-302
  - CONSTRUCT ROAD PER DETAIL 1 ON SHEET C-301.



**PROFILE VIEW**  
 STA: 00+00.00 TO STA: 5+51.72



HORIZONTAL SCALE: 1" = 25'  
 VERTICAL SCALE: 1" = 2.5'



2/14/19

PROJECT ENGINEER: Teodoro Cano-Mota, P.E.

PROJECT DESIGNER: Teodoro Cano-Mota, P.E.

DRAWN BY: TCM

REVISIONS

No.	DATE	DESCRIPTION

DETAILS AND SECTIONS

CUCHILLO NEGRO ARROYO BANK STABILIZATION

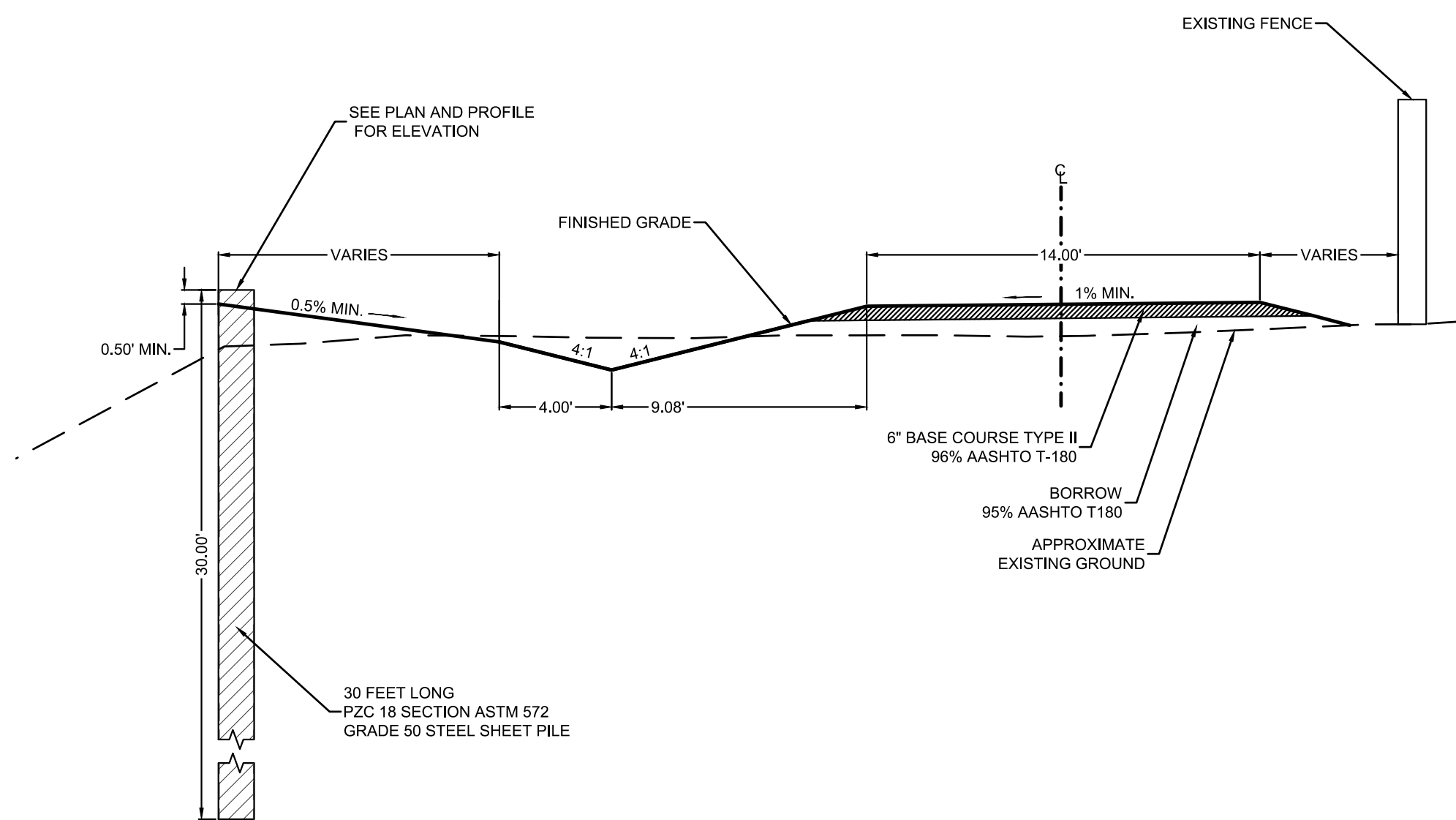
SIERRA COUNTY NEW MEXICO

PROJECT NUMBER:

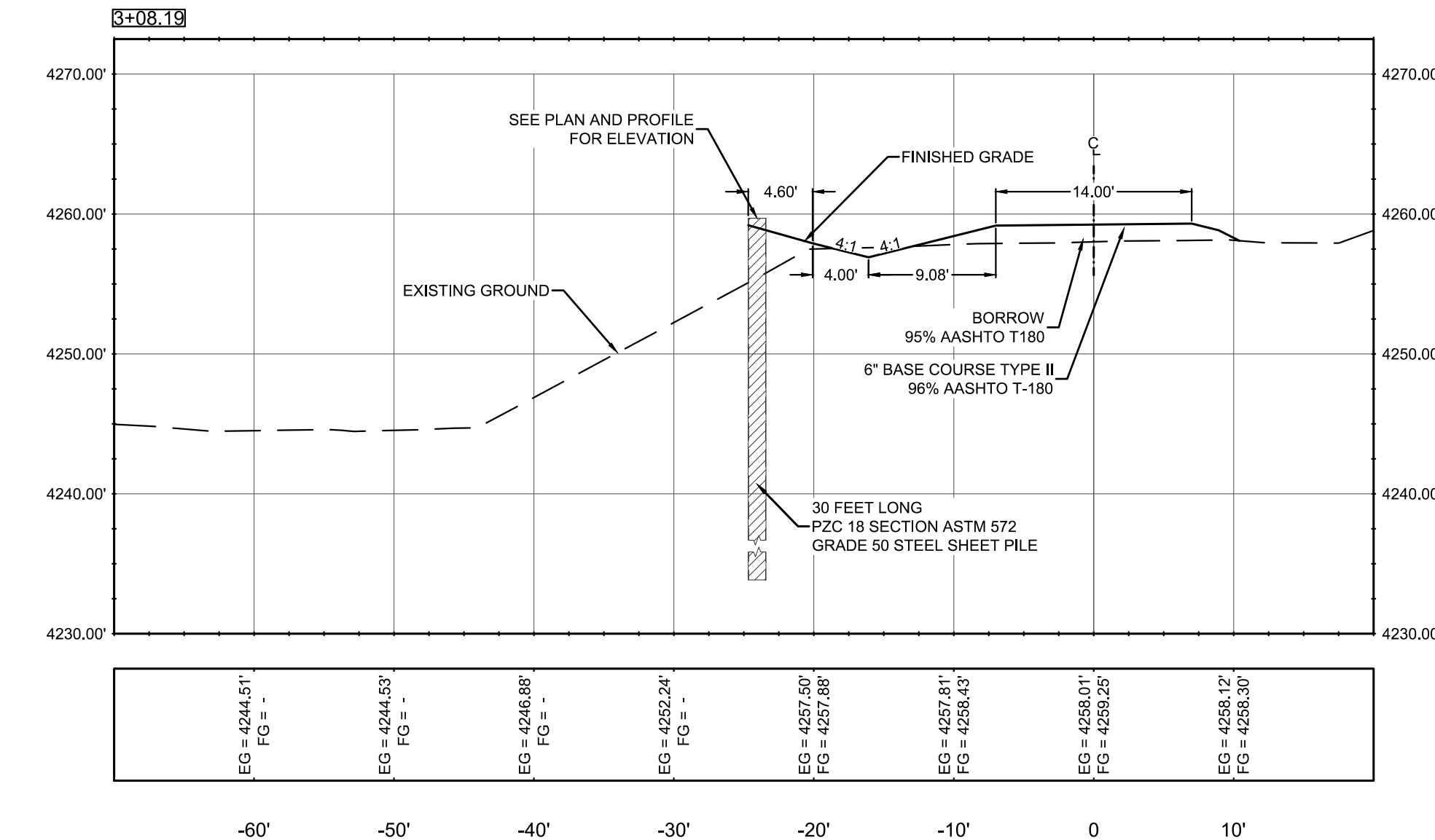
2016.1125

SHEET:

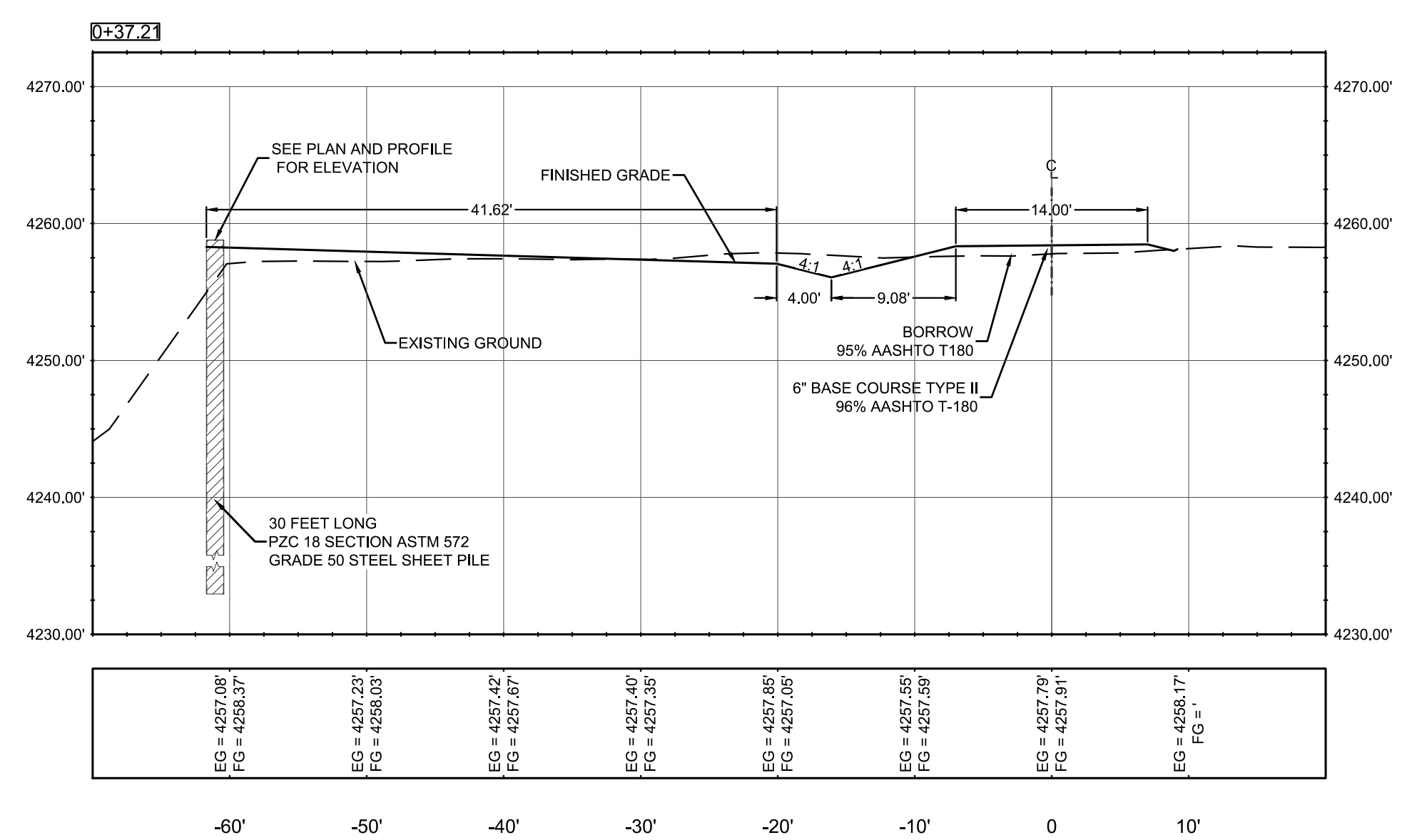
C-301



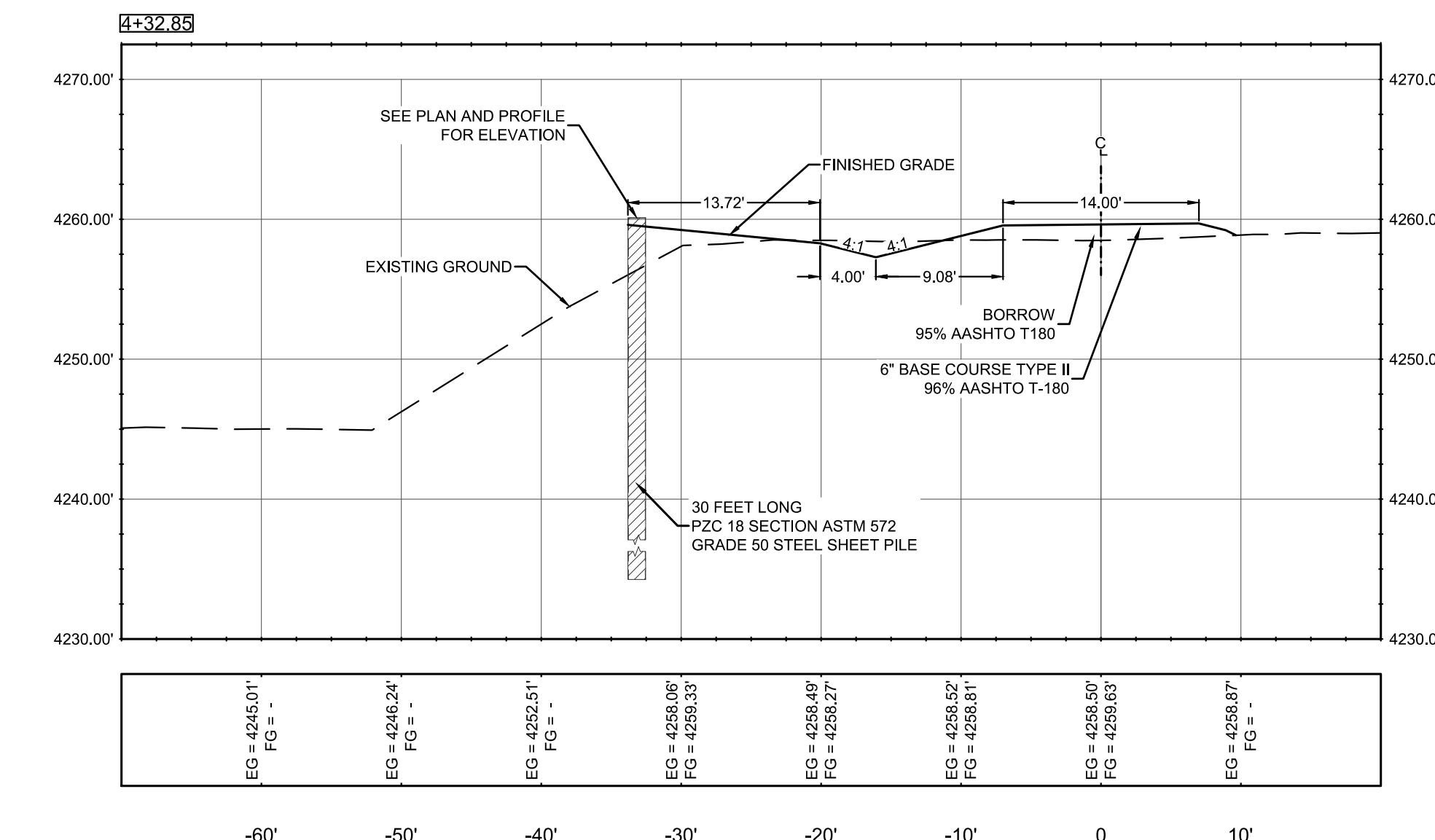
**1** TYPICAL ROADWAY SECTION 1  
SCALE: 1" = 5'



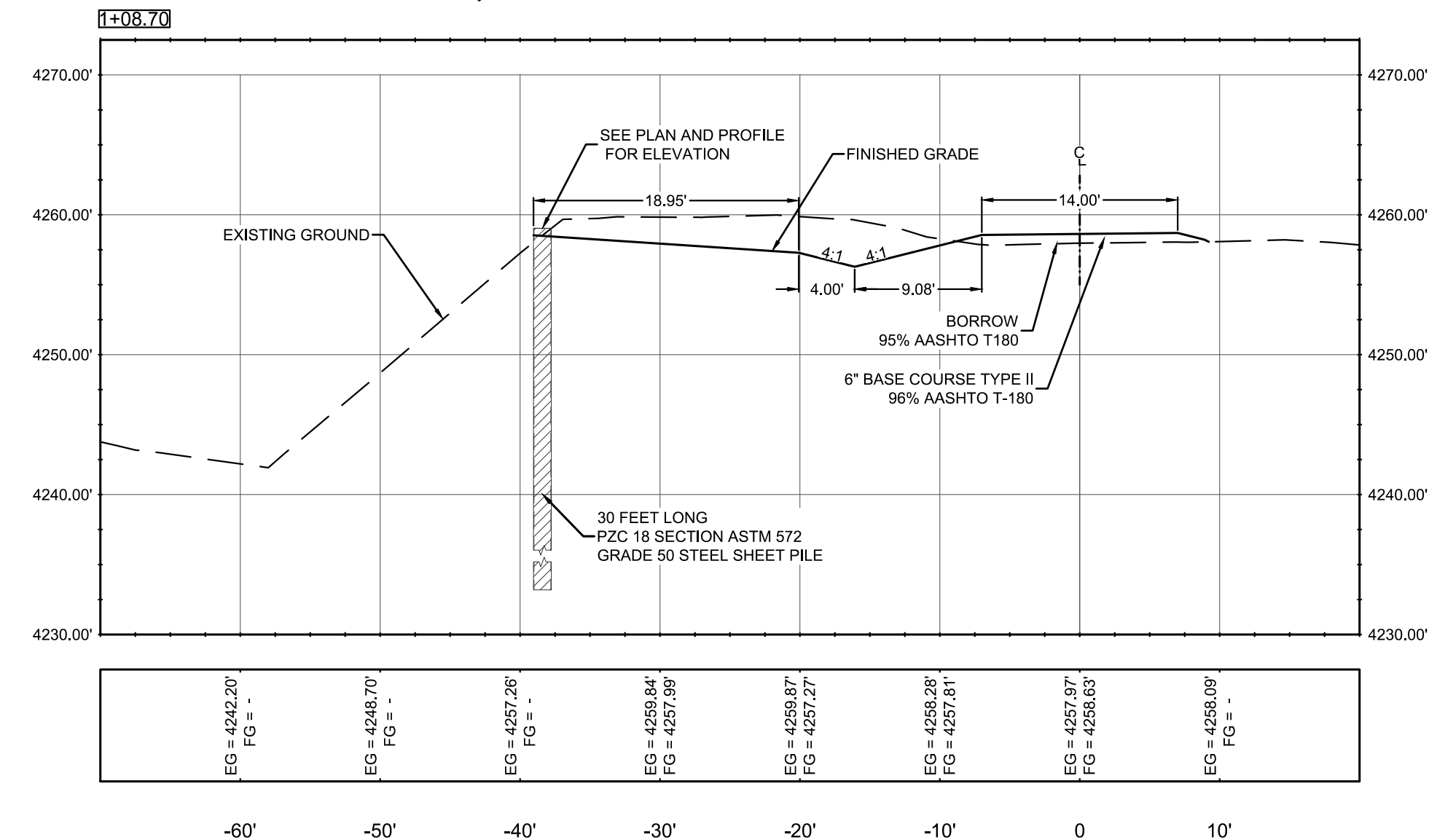
**4** PI-3 CROSS SECTION  
STA:3+08.19  
SCALE: 1" = 10'



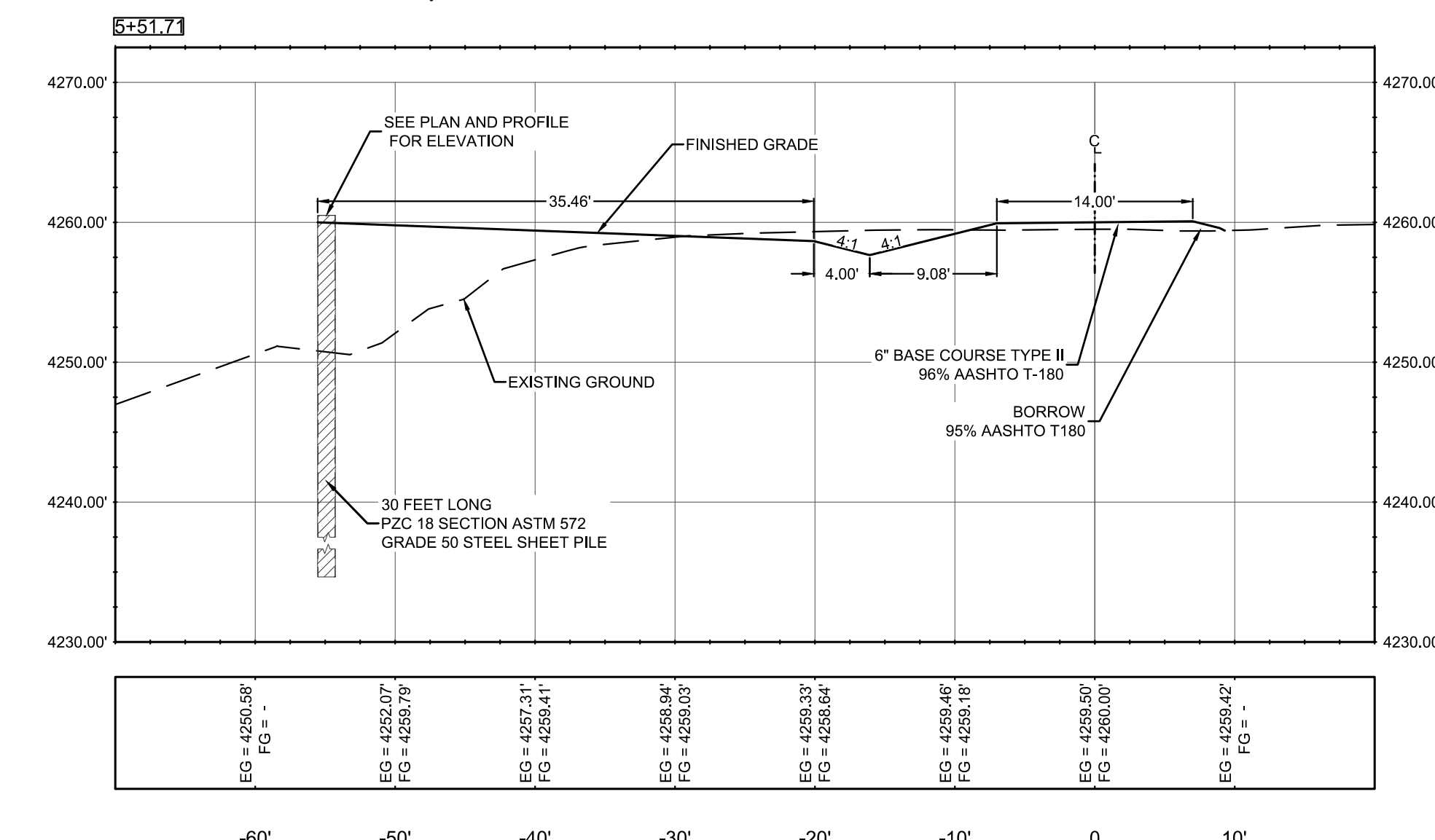
**2** PI-1 CROSS SECTION  
STA:0+37.21  
SCALE: 1" = 10'



**5** PI-4 CROSS SECTION  
STA:4+32.85  
SCALE: 1" = 10'



**3** PI-2 CROSS SECTION  
STA:1+08.70  
SCALE: 1" = 10'



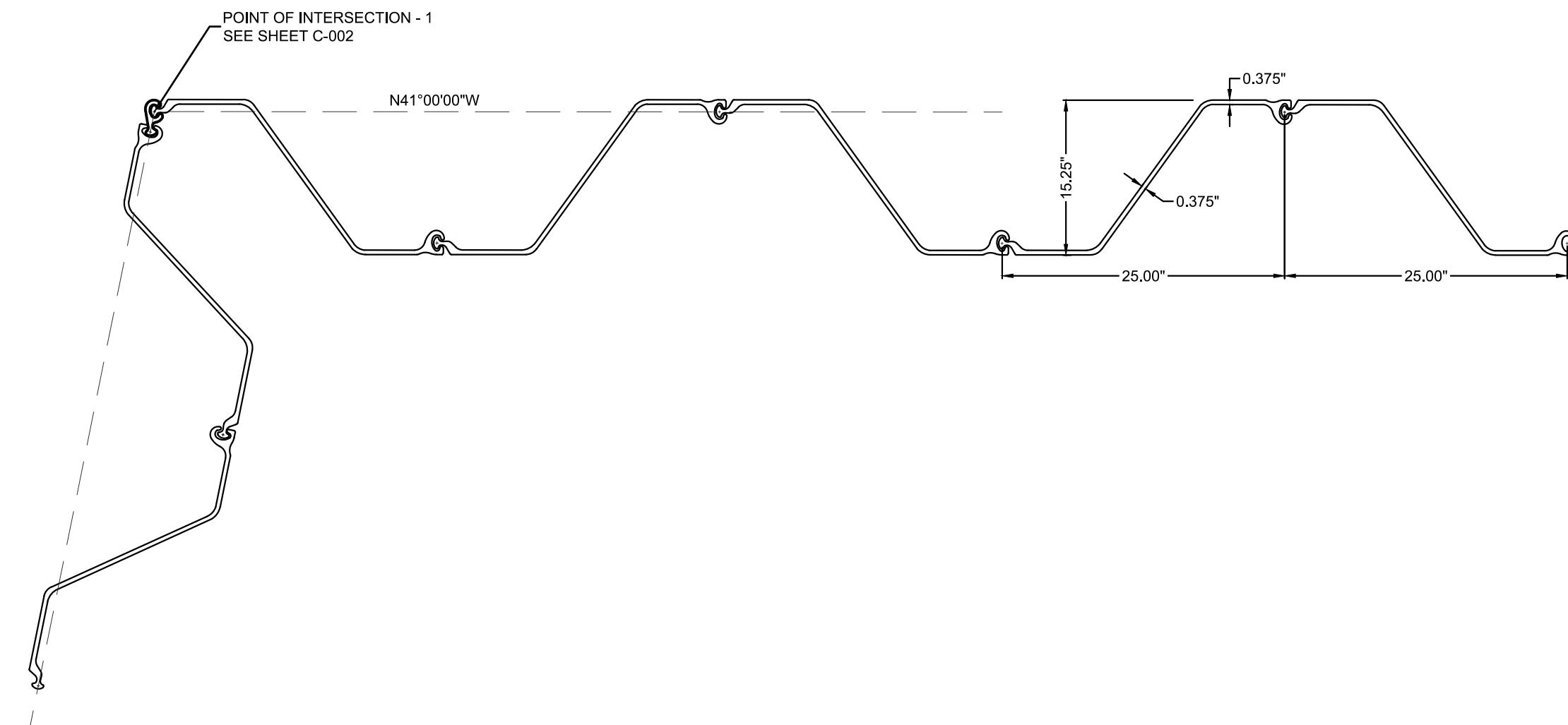
**6** PI-5 CROSS SECTION  
STA:5+51.71  
SCALE: 1" = 10'



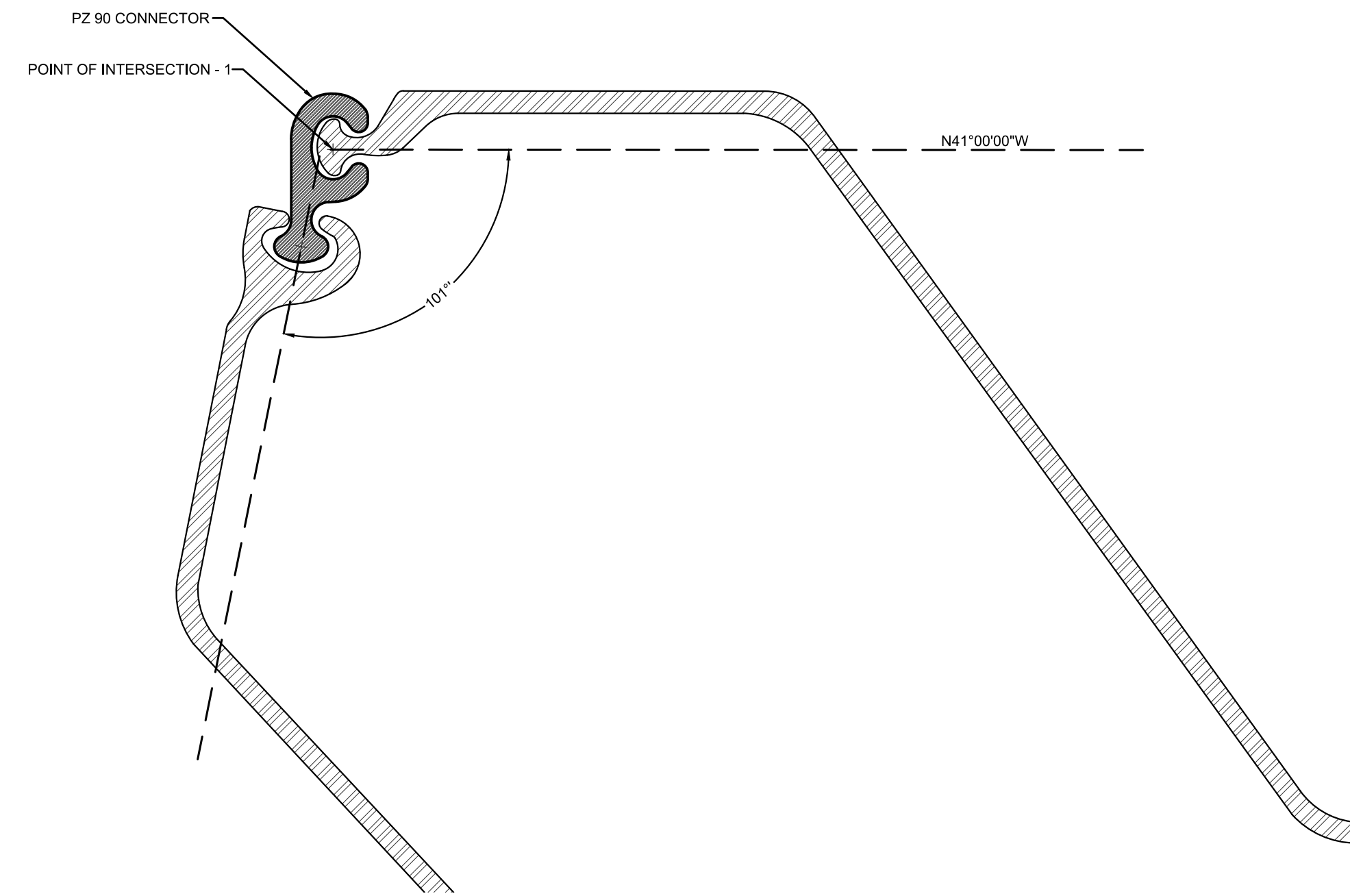


*Teodoro Cano-Mota* 2/14/19

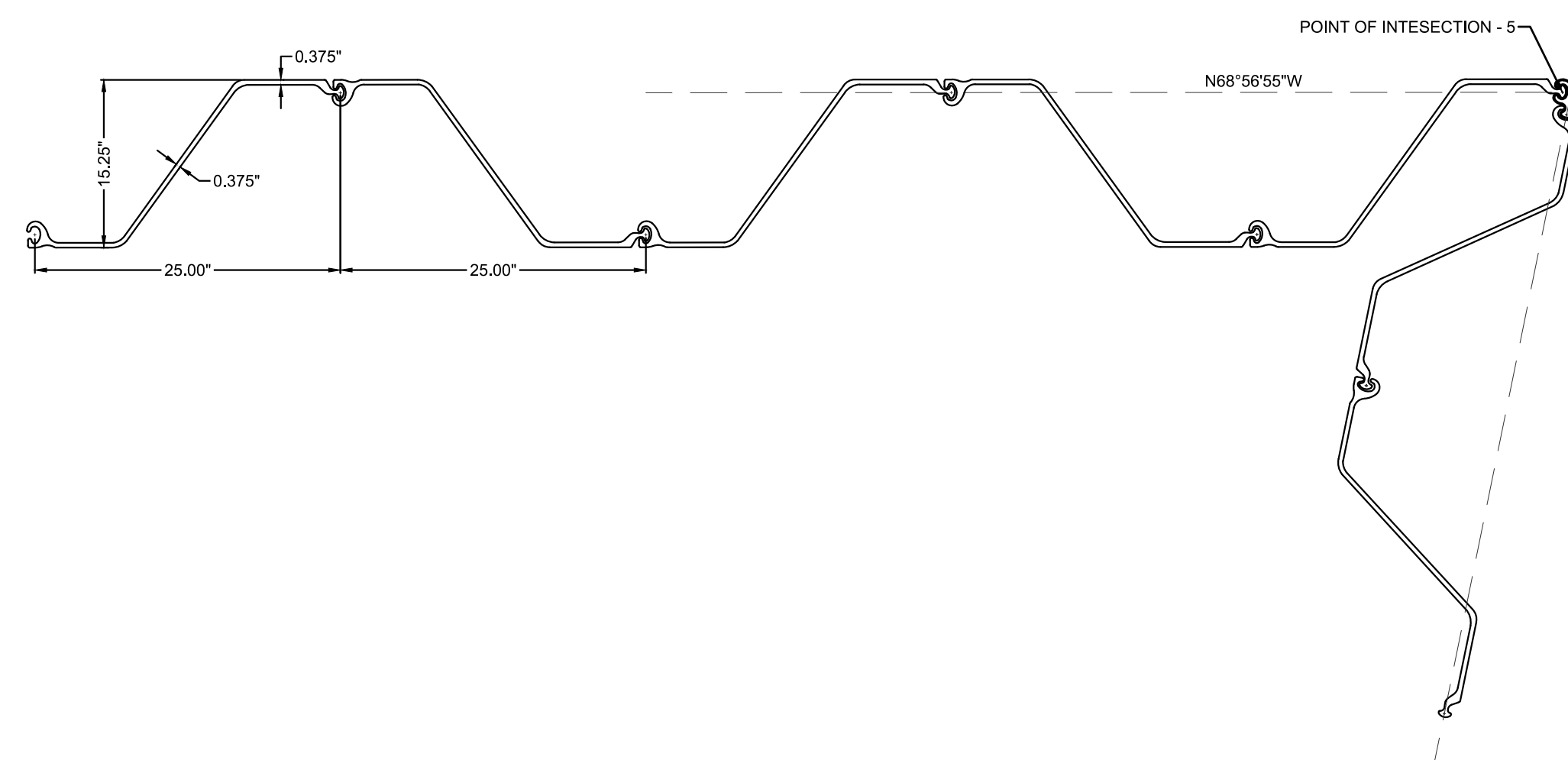
PROJECT ENGINEER: Teodoro Cano-Mota, P.E.  
PROJECT DESIGNER: Teodoro Cano-Mota, P.E.  
DRAWN BY: TCM



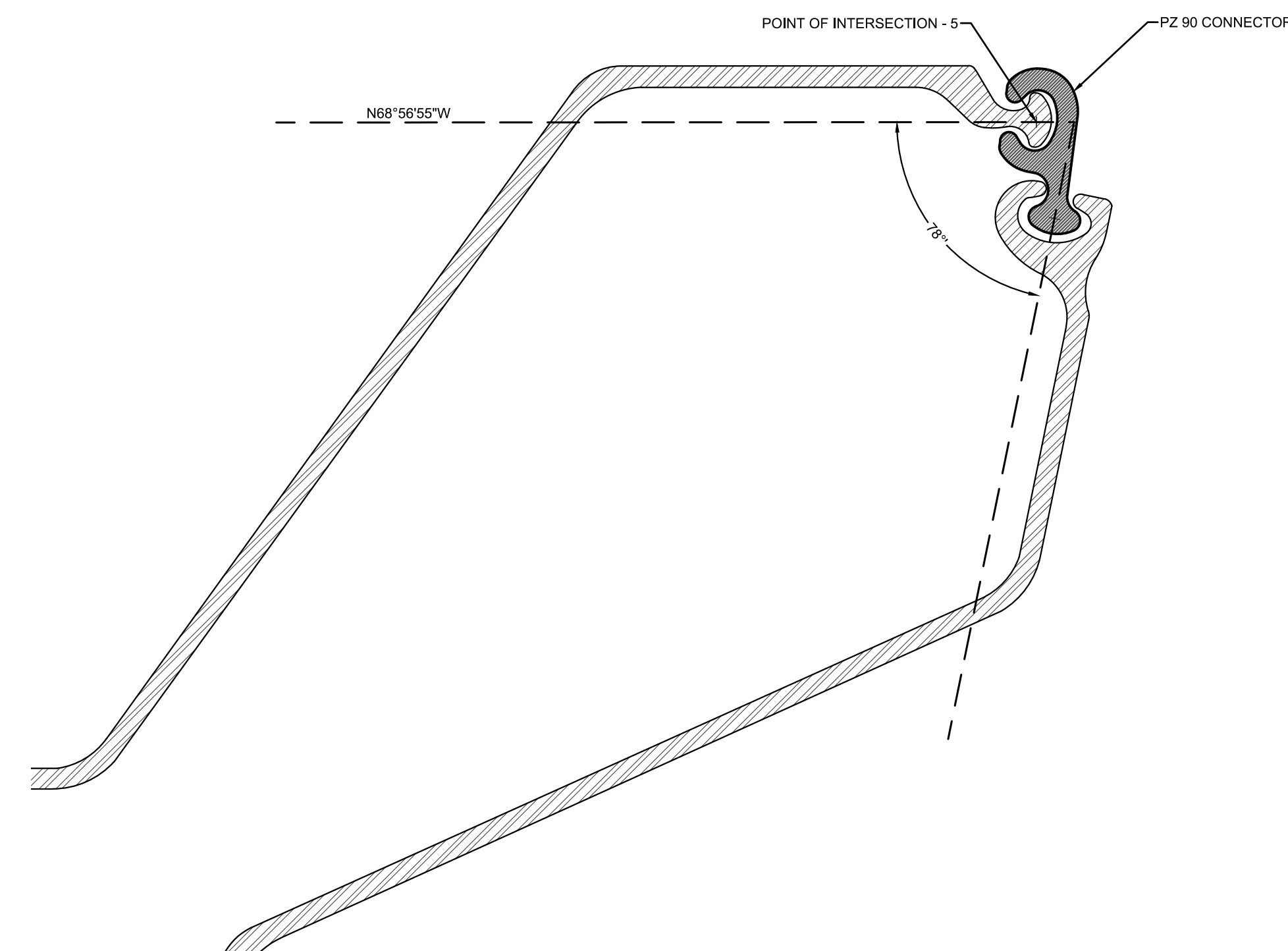
**1** LAYOUT DETAIL  
PI-1 NTS



**3** CONNECTOR DETAIL  
PI-1 NTS



**2** LAYOUT DETAIL  
PI-5 NTS



**4** CONNECTOR DETAIL  
PI-5 NTS

REVISIONS		
No.	DATE	DESCRIPTION

DETAILS  
AND  
SECTIONS

CUCHILLO NEGRO  
ARROYO  
BANK STABILIZATION

SIERRA COUNTY  
NEW MEXICO

PROJECT NUMBER:  
2016.1125

SHEET:  
C-302