

to avoid spills, and to provide a continuous zone of passage for aquatic life through or around the project area in which the water quality meets all applicable criteria including turbidity.

7. All asphalt, concrete, drilling fluids and muds, and other construction materials must be properly handled and contained to prevent releases to surface water. Poured concrete must be fully contained in mortar-tight forms and/or placed behind non-erodible cofferdams to prevent contact with surface or ground water. Appropriate measures must be used to prevent wastewater from concrete batching, vehicle wash-down, or aggregate processing entering the watercourse. Dumping of any waste materials in or near watercourses is prohibited.
8. Protective measures must be used to prevent blast, ripped or excavated soil or rock from entering surface water. Construction excavation dewatering discharges are to be uncontaminated and include all practicable erosion control measures and turbidity control techniques.
9. Work or the use of heavy equipment in wetlands must be avoided or minimized unless the impacts are to be mitigated. Construction activities in wetlands must be scheduled during low water or winter (frozen) conditions. Unless otherwise approved by NMED, wetland crossings must be restricted to a single location and constructed perpendicular to and at a narrow point of the wetland. Requests for such approval of deviations must include descriptions of planned methods to minimize turbidity and avoid spills. Wetland vegetation and excavated material (top soil) must be retained and reused to improve seeding success. Permeable fills should be designed and installed when practicable, and flows to wetlands must not be permanently disrupted. Fill materials must be clean and consist of coarse material with minimal fines. Ditches or culverts in wetlands must have properly designed, installed and maintained siltation or sedimentation structures at the outfall.
10. During repair, demolition, treatments, or cleaning activities of bridges or associated structures (e.g., deck, pier, abutment, and wing walls), materials must be kept out of the channel. Before removing a bridge or related structures, impermeable containment material (e.g., plastic sheet, canvas, tarpaulins or other catchment devices) must be secured under the bridge and on the banks to capture any debris that may fall into the stream channel. Sandblasting operations must include vacuum systems on the bridge and associated structures must be completely bagged to collect all lead paint and concrete debris. Any debris that falls onto the containment area or channel must be properly disposed in accordance with the New Mexico Solid Waste Regulations (20.9.1 NMAC). Applicable Material Safety Data Sheets of water repellants and surface finish treatments must be maintained at the project area.
11. Bridges, culverts and structures at stream crossings must be properly designed, installed and maintained to allow passage of sediment, bedload, and woody debris, and to prevent erosion problems or diversion of the stream from its natural channel. Unless otherwise approved by NMED, projects must not alter the natural stream channel size or shape (width, depth, gradient, direction or meander pattern), streamflow velocity (sediment transport rates), or water flow capacity. Requests for such approval of deviations must include descriptions of

planned methods to minimize turbidity and avoid spills, as well as to stabilize modified hydraulic geometry.

12. Culverts at stream crossings must be designed and installed to prevent upstream headcutting, downstream channel incision, and erosion of the streambanks or the crossing. Culverts should be designed to pass 100-year flow events. Culvert design must allow for the passage of fish and other aquatic organisms. The road grade at culvert stream crossings must prevent the diversion of the stream from its channel in the event of culvert failure due to plugging or the exceedance of capacity. If the flow overtops the road, it must return to its natural channel instead of running down the road into a new channel.
13. Excavated trenches must be backfilled and compacted to match the bulk density and elevation of the adjacent undisturbed soil.
14. Unless otherwise approved by NMED, all areas adjacent to the watercourse that are disturbed because of the project, including temporary access roads, stockpiles and staging areas, must be restored to pre-project elevations. Disturbed areas outside the channel that are not otherwise physically protected from erosion must be reseeded or planted with native vegetation. Stabilization measures including vegetation are required at the earliest practicable date, but by the end of first full growing season following construction. Native woody riparian and/or wetland species must be used in areas that support such vegetation. Measures to prevent damage by beavers, wildlife, or livestock are required until trees are established. Plantings must be monitored and replaced for an overall survival rate of at least 80 percent by the end of the second growing season. Once established, native plants adapted to the site must be able to thrive with no supplemental water or treatment. Requests for approval of deviation from this condition must include descriptions of planned methods to minimize turbidity and avoid spills, as well as final grading plans.
15. A copy of this Certification must be kept at the project site during all phases of construction. All contractors involved in the project must be provided a copy of this certification and made aware of the conditions prior to starting construction.
16. The NMED must be notified at least five days before starting construction to allow time to schedule monitoring or inspections. The NMED must be notified immediately if the project results in an exceedance of applicable Standards.

#### **Denial of Certification of NWPs**

NMED denies Certification of NWP for any activities in Outstanding National Resource Waters (ONRW) designated in 20.6.4.9 NMAC, and NWP 16 (Return Water From Upland Contained Disposal Areas). Although state WQS provide for temporary and short-term degradation of water quality in an ONRW under very limited circumstances if approved by the Water Quality Control Commission as specified at 20.6.4.8.A NMAC, the approval process required for these activities does not lend itself for use for projects covered under these NWP. This condition is necessary to ensure that no degradation is allowed in ONRWs by requiring proposed discharges

Mr. Allan Steinle  
April 13, 2012  
Page 5

of dredged or fill material to be reviewed under the individual permit process. Also, in accordance with General Condition 25 of the Nationwide Permits, a project-specific Certification must be obtained (see 33 CFR 330.4(c)) for discharges authorized under NWP 16 prior to construction. The NMED requires a complete CWA §404 application prior to commencing the water quality certification review in these cases. This certification process will be conducted pursuant to NMAC 20.6.2.2002.

Please contact Neal Schaeffer of my staff at (505)476-3017 should you have any question.

Sincerely,



James P. Bearzi  
Chief  
Surface Water Quality Bureau

JPB: cns

xc: Tom Nystrom, Wetlands, Region 6, USEPA  
Jill Wick, New Mexico Department of Game and Fish  
U.S. Fish and Wildlife Service  
401 Certification File 897



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS  
4101 JEFFERSON PLAZA NE  
ALBUQUERQUE, NM 87109  
505-342-3262  
FAX 505-342-3498

May 1, 2014

Regulatory Division

SUBJECT: Nationwide Permit Verification – Action No. SPA-2013-00225-ABQ, Santa Fe County Road 54 Low Water Crossing, Arroyo de Los Chamisos, Santa Fe County, New Mexico

Santa Fe County Public Works  
Attn: Paul Kavanaugh  
901 West Alameda Suite 20C  
Santa Fe, NM 87501

Dear Mr. Kavanaugh:

I am writing this letter in response to the February 26, 2014 application for the proposed County Road 54 replacement crossing located at approximately latitude 35.59102, longitude -106.09313, in Santa Fe County, New Mexico. The work, as described in your application, will consist of replacing the existing low-water crossing with three concrete box culverts (14' x 12' x 28'), a downstream concrete apron and wire-wrapped rock rip rap upstream with a total proposed acreage of impact of 0.133-acre. Your project purpose is to alleviate flooding concerns with the existing low flow crossing. We have assigned Action No. SPA-2013-00225-ABQ to this project. Please reference this number in all future correspondence concerning the project.

Based on the information provided, we have determined that the project is authorized by Nationwide Permit 14 for linear transportation projects. A summary of this permit and the New Mexico Regional Conditions are available on our website at [www.spa.usace.army.mil/reg/nwp](http://www.spa.usace.army.mil/reg/nwp). Please refer to our website at [www.spa.usace.army.mil/reg/wqc](http://www.spa.usace.army.mil/reg/wqc) for specific information regarding compliance with water quality certification (WQC) requirements. Santa Fe County shall ensure that the work complies with the terms and conditions of the permit, including New Mexico Regional Conditions and conditions of the WQC.

Our review of this project also addressed its effects on threatened and endangered species and historic properties in accordance with general conditions 18 and 20. Based on the information provided, we have determined that this project will not affect any federally listed threatened or endangered species. Consultation with the State Historic Preservation Officer (SHPO) was conducted for the crossing. The SHPO concurred with our determination that the bridge was not listed or eligible for listing, in the National Register of Historic Places on August 11, 2013. However, please note that Santa Fe County is responsible for meeting the requirements of general condition 18 on endangered species and general condition 20 on historic properties.

This letter does not constitute approval of the project design features, nor does it imply that the construction is adequate for its intended purpose. This permit does not authorize any injury to property or invasion of rights or any infringement of federal, state or local laws or regulations. Santa Fe County

and/or any contractors acting on behalf of Santa Fe County must possess the authority and any other approvals required by law, including property rights, in order to undertake the proposed work.

This permit verification is valid until March 18, 2017 (33 CFR 330.6), unless the nationwide permit is modified, suspended, revoked or reissued prior to that date. Continued confirmation that an activity complies with the terms and conditions, and any changes to the nationwide permit, is the responsibility of BNSF. Activities that have commenced, or are under contract to commence, in reliance on a nationwide permit will remain authorized provided the activity is completed within 12 months of the date of the nationwide permits expiration, modification, or revocation.

Within 30 days of project completion, Santa Fe County must fill out the enclosed Certification of Compliance form and return it to our office. The landowner must allow Corps representatives to inspect the authorized activity at any time deemed necessary to ensure that it is being, or has been, accomplished in accordance with the terms and conditions of the nationwide permit.

I am forwarding a copy of this letter to Neal Schaeffer, NMED. If you have any questions, please contact me at 505-342-3280 or by e-mail at [Deanna.L.Cummings@usace.army.mil](mailto:Deanna.L.Cummings@usace.army.mil). At your convenience, please complete a Customer Service Survey on-line available at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=regulatory\\_survey](http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey).

Sincerely,

Deanna L. Cummings  
Senior Regulatory Project Manager

**Certification of Compliance  
with Department of the Army Nationwide Permit**

Action Number: SPA-2013-00225-ABQ  
Name of Permittee: Santa Fe County, Paul Kavanaugh  
Nationwide Permit: 14, Linear Transportation Projects

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

Deanna Cummings  
Albuquerque District, U.S. Army Corps of Engineers  
4101 Jefferson Plaza NE  
Albuquerque, NM 87109  
505-342-3280

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Please enclose photographs showing the completed project (if available).

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Date Work Started \_\_\_\_\_

Date Work Completed \_\_\_\_\_

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date

## **NOTICE TO CONTRACTORS**

**February 25, 2014**

### **Traffic Control Management**

The following items will be included in the price for bid item 618000 – Traffic Control Management.

The contractor shall meet the requirements of Ordinance 2003-1. Contact Johnny Baca, (505) 992-3020, for a permit prior to construction. The permit fee will be waived.

Two portable message boards shall be set up two weeks prior to construction to notify the public. Locations shall be coordinated with the owner's representative.

The contractor shall notify Ken Martinez of the Regional Emergency Communication Center, (505) 992-3096, 48 hours in advance of all closures.

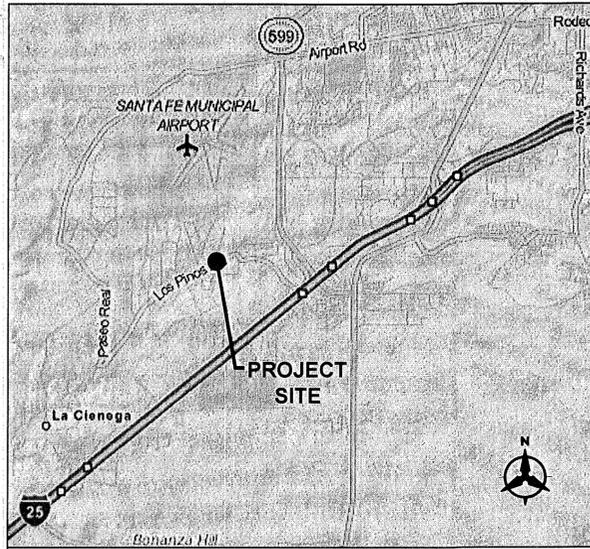
Temporary concrete wall barrier shall be used in locations adjacent to traffic if the metal barrier is not installed. Attenuators will be placed on both ends of all temporary concrete wall barriers.

Contractor shall maintain regulatory signs during construction. Conflicting signs shall be covered and the contractor shall maintain the cover as long as the sign is in-place.

Signs to remain in-place more than three days shall be placed on permanent posts.

**APPENDIX E**  
**PLANS AND SPECIFICATIONS**

# SANTA FE COUNTY - NEW MEXICO



## ROADWAY IMPROVEMENTS FOR LOS PINOS RD (CR 54)

MAY, 2017

APPROVED FOR CONSTRUCTION:

  
Santa Fe County Public Works 6/8/17  
Date

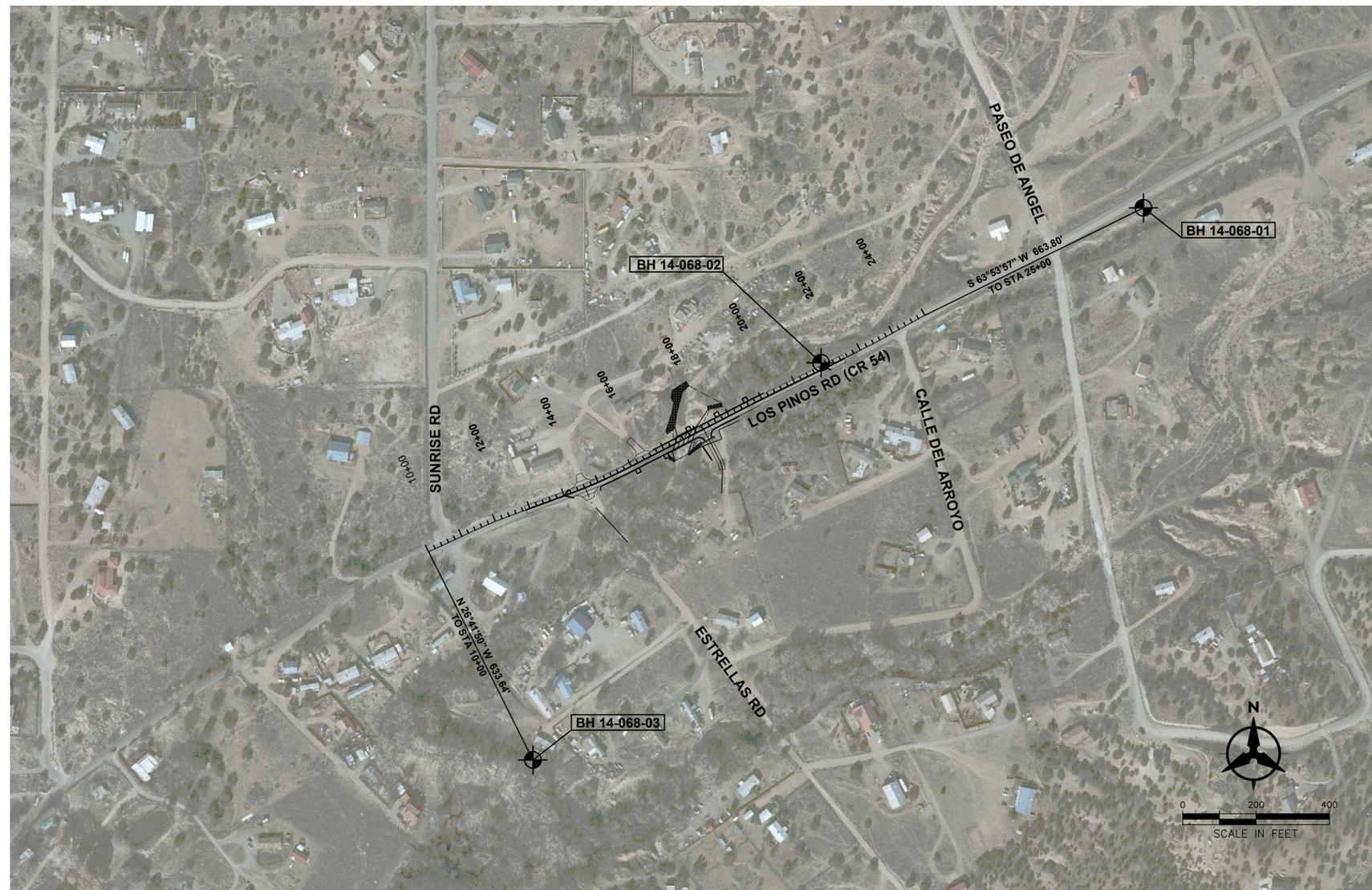
  
Santa Fe County Utilities 6/8/17  
Date

  
Santa Fe County Land Use Department 6-22-17  
Date

NO.	SHEET TITLE
1	TITLE SHEET
2	VICINITY MAP
9	GENERAL NOTES
4	ENVIRONMENTAL REQUIREMENTS
5	SUMMARY OF QUANTITIES
6	TYPICAL SECTIONS
7-8	ROADWAY PLAN & PROFILE SHEETS
9	DEMOLITION PLAN
10	DRAINAGE STRUCTURE SECTIONS
11	TURNOUT PROFILES
12	SUGGESTED SEQUENCE OF CONSTRUCTION & DETOUR PLAN
13	MISCELLANEOUS DETAILS
14-26	NMDOT SERIAL DRAWINGS
27	DETOUR PLAN



SHEET NO. 1



**EMERGENCY RESPONSE CONTACTS**

REGIONAL EMERGENCY COMMUNICATION CENTER KEN MARTINEZ 505-992-3096  
 SANTA FE COUNTY SHERIFF 505-986-2455  
 ST. VINCENT REGIONAL MEDICAL CENTER 505-983-3361  
 SANTA FE COUNTY FIRE DEPARTMENT 505-992-3070  
 SANTA FE COUNTY PUBLIC INFORMATION OFFICER KRISTINE MIHELIC 505-986-6224

**UTILITY CONTACTS**

CENTURY LINK DOUG DALE 505-473-2194  
 PNM DON FERRIS 505-280-9693  
 LA CIENEGA WATER ASSOCIATION REYNALDO ROMERO 505-690-0603, 471-0361  
 NM GAS CLAIRE CONLON 505-473-7210, 505-382-5414

**CONTROL INFORMATION**

<b>Control Station Data</b>		<b>Bohannon &amp; Huston</b>	
Name of Station:	<b>BH 14-068-01</b>	State:	NM
County:	SANTA FE	Section:	28
Establishing Group:	BOHANNAN HUSTON, INC.	Township:	16N
Date:	03-JUN-13	Range:	8E
BST Project #:	20140068.001.01	Station Height: 0.0'	
Type/Composition:	SET ALUMINUM CAP	Stamping: BH 14-068-01	
<b>Horizontal Data</b>		<b>** MODIFIED COORDINATES **</b>	
Horizontal Datum:	NAD83	Projection:	NMPS CENTRAL ZONE
Method:	RTK	Northing:	1,671,721.498 USFT
Latitude:	N 35° 35' 33.83"	Easting:	1,688,982.148 USFT
Longitude:	W 106° 5' 19.983"	Orthometric Height:	6,151.760 USFT
Ellipsoid Height:	NOT SHOWN	Project Combined Factor: 0.99960545	
GRID Northing:	1,671,061.92	Point Scale Factor: NOT SHOWN	
GRID Easting:	1,688,315.76	Point Aa: NOT SHOWN	
<b>Vertical Data</b>		Geoid: 12A	
Vertical Datum:	NAVD88	Location Description:	
Method:	RTK	See Vicinity Map	
Geoid:	12A		

**CONTROL INFORMATION**

<b>Control Station Data</b>		<b>Bohannon &amp; Huston</b>	
Name of Station:	<b>BH 14-068-02</b>	State:	NM
County:	SANTA FE	Section:	28
Establishing Group:	BOHANNAN HUSTON, INC.	Township:	16N
Date:	03-JUN-13	Range:	8E
BST Project #:	20140068.001.01	Station Height: 0.0'	
Type/Composition:	SET ALUMINUM CAP	Stamping: BH 14-068-02	
<b>Horizontal Data</b>		<b>** MODIFIED COORDINATES **</b>	
Horizontal Datum:	NAD83	Projection:	NMPS CENTRAL ZONE
Method:	RTK	Northing:	1,671,300.480 USFT
Latitude:	N 35° 35' 29.682"	Easting:	1,688,103.091 USFT
Longitude:	W 106° 5' 30.631"	Orthometric Height:	6,139.684 USFT
Ellipsoid Height:	NOT SHOWN	Project Combined Factor: 0.99960545	
GRID Northing:	1,670,641.07	Point Scale Factor: NOT SHOWN	
GRID Easting:	1,687,437.05	Point Aa: NOT SHOWN	
<b>Vertical Data</b>		Geoid: 12A	
Vertical Datum:	NAVD88	Location Description:	
Method:	RTK	See Vicinity Map	
Geoid:	12A		

**CONTROL INFORMATION**

<b>Control Station Data</b>		<b>Bohannon &amp; Huston</b>	
Name of Station:	<b>BH 14-068-03</b>	State:	NM
County:	SANTA FE	Section:	28
Establishing Group:	BOHANNAN HUSTON, INC.	Township:	16N
Date:	03-JUN-13	Range:	8E
BST Project #:	20140068.001.01	Station Height: 0.0'	
Type/Composition:	SET ALUMINUM CAP	Stamping: BH 14-068-03	
<b>Horizontal Data</b>		<b>** MODIFIED COORDINATES **</b>	
Horizontal Datum:	NAD83	Projection:	NMPS CENTRAL ZONE
Method:	RTK	Northing:	1,670,220.196 USFT
Latitude:	N 35° 35' 25.532"	Easting:	1,687,317.421 USFT
Longitude:	W 106° 5' 40.149"	Orthometric Height:	6,132.874 USFT
Ellipsoid Height:	NOT SHOWN	Project Combined Factor: 0.99960545	
GRID Northing:	1,670,220.20	Point Scale Factor: NOT SHOWN	
GRID Easting:	1,670,220.20	Point Aa: NOT SHOWN	
<b>Vertical Data</b>		Geoid: 12A	
Vertical Datum:	NAVD88	Location Description:	
Method:	RTK	See Vicinity Map	
Geoid:	12A		

**REVISIONS (OR CHANGE NOTICES)**

NO.	DESCRIPTION	DATE
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**LOS PINOS ROADWAY IMPROVEMENTS**

**VICINITY MAP**







## SUMMARY OF QUANTITIES

ITEM SPECIFICATIONS				
NUMBER	DESCRIPTION	UNIT	ESTIMATE	FINAL
201000	CLEARING AND GRUBBING	LS	LS	
203000	UNCLASSIFIED EXCAVATION	CY	2265	
203100	BORROW	CY	3050	
207000	SUBGRADE PREPARATION	SY	3800	
304000	BASE COURSE	T	710	
405001	DETOUR, COMPLETE IN PLACE	LS	LS	
408100	PRIME COAT MATERIAL	T	6	
416000	MINOR PAVING	SY	2750	
511000	STRUCTURAL CONCRETE CLASS A	CY	10	
511030	STRUCTURAL CONCRETE CLASS AA	CY	316	
540060	REINFORCING BARS GRADE 60	LBS	94000	
541200	STRUCTURAL STEEL FOR MISCELLANEOUS STRUCTURES	LBS	910	
570024	24" CULVERT PIPE	LF	32	
570025	24" CULVERT PIPE END SECTION	EA	2	
601000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	LS	
601110	REMOVAL OF SURFACING	SY	2360	
602000	RIPRAP CLASS A	CY	40	
603261	MULCH SOCKS	LF	1925	
603280	SWPPP MANAGEMENT	LS	LS	
606001	SINGLE FACE W-BEAM GUARDRAIL	LF	350	
606011	SINGLE FACE THRIE-BEAM GUARDRAIL	LF	237.5	
606052	END TREATMENT TL-2 END TERMINAL	EA	3	
606110	METAL BARRIER END TRTMNT (ANCHRG) TYPE B	EA	3	
607014	WOVEN WIRE FENCE 4'	LF	120	
607316	STANDARD GATE 16'	EA	1	
618000	TRAFFIC CONTROL MANAGMENT	LS	LS	
621000	MOBILIZATION	LS	LS	
632000	CLASS A SEEDING	AC	0.5	
663727	REMOVE & REPLACE WATER LINE	ALLOW	1	
667001	REMOVE & RESET MAILBOX	EA	3	
701000	PANEL SIGNS	SF	10	
701100	STEEL POST & BASE POST FOR ALUMINUM PANEL SIGNS	LF	14	
702000	CONSTRUCTION SIGNING	SF	105	
702100	POSTS FOR CONSTRUCTION SIGNING	LF	210	
702238	BARRICADE, TYPE III - 8'	EA	6	
702610	PORTABLE CHANGEABLE MESSAGE BOARDS	EA	2	
703003	OBJECT MARKER TYPE 3	EA	2	
704000	RETROREFLECTORIZED PAINTED MARKINGS - 4"	LF	11550	
709040	RIGID ELECTRICAL CONDUIT 4" (DIA.)	LF	48	
801000	CONSTRUCTION STAKING BY THE CONTRACTOR	LS	LS	
901001	MATERIALS TESTING	LS	LS	

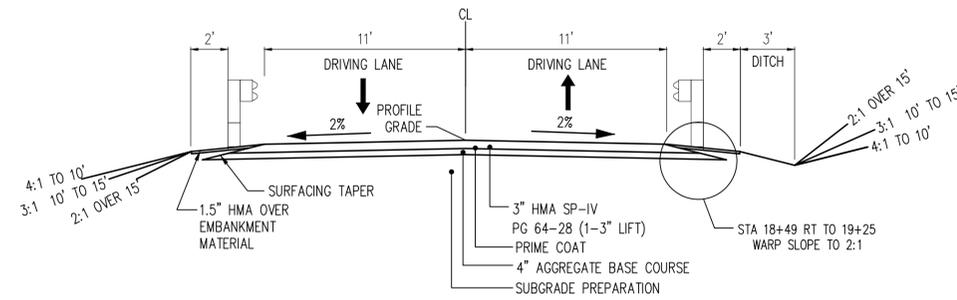
REVISIONS (OR CHANGE NOTICES)

5									
	4	3	2	1	NO.				
DRAWN BY: LAH		DATE: 10/2013		CHECKED BY: JAW		DATE: 10/2013			

LOS PINOS ROADWAY IMPROVEMENTS

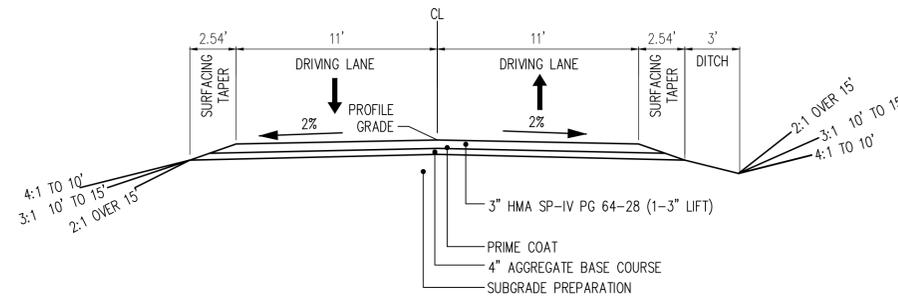
### SUMMARY OF QUANTITIES





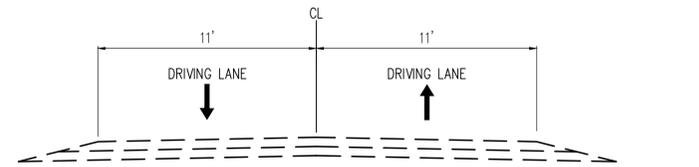
**TYPICAL SECTION B**

STA 15+05.46 TO STA 18+05.46 RT  
STA 16+73.26 TO STA 20+10.76 LT  
STA 18+49 RT TO 19+25 RT



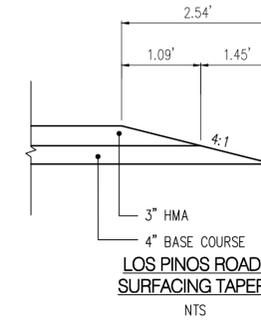
**TYPICAL SECTION A**

STA 12+89.34 TO STA 16+73.26 LT  
STA 12+89.34 TO STA 15+05.46 RT  
STA 20+10.76 TO STA 22+50.73 LT  
STA 19+25.00 TO STA 22+50.73 RT

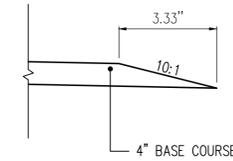


**EXISTING TYPICAL SECTION**

AVERAGE CORE THICKNESS  
5.33" HMA OVER 4" BASE



**LOS PINOS ROAD SURFACING TAPER**  
NTS



**TURNOUTS**  
NTS

REVISIONS (OR CHANGE NOTICES)

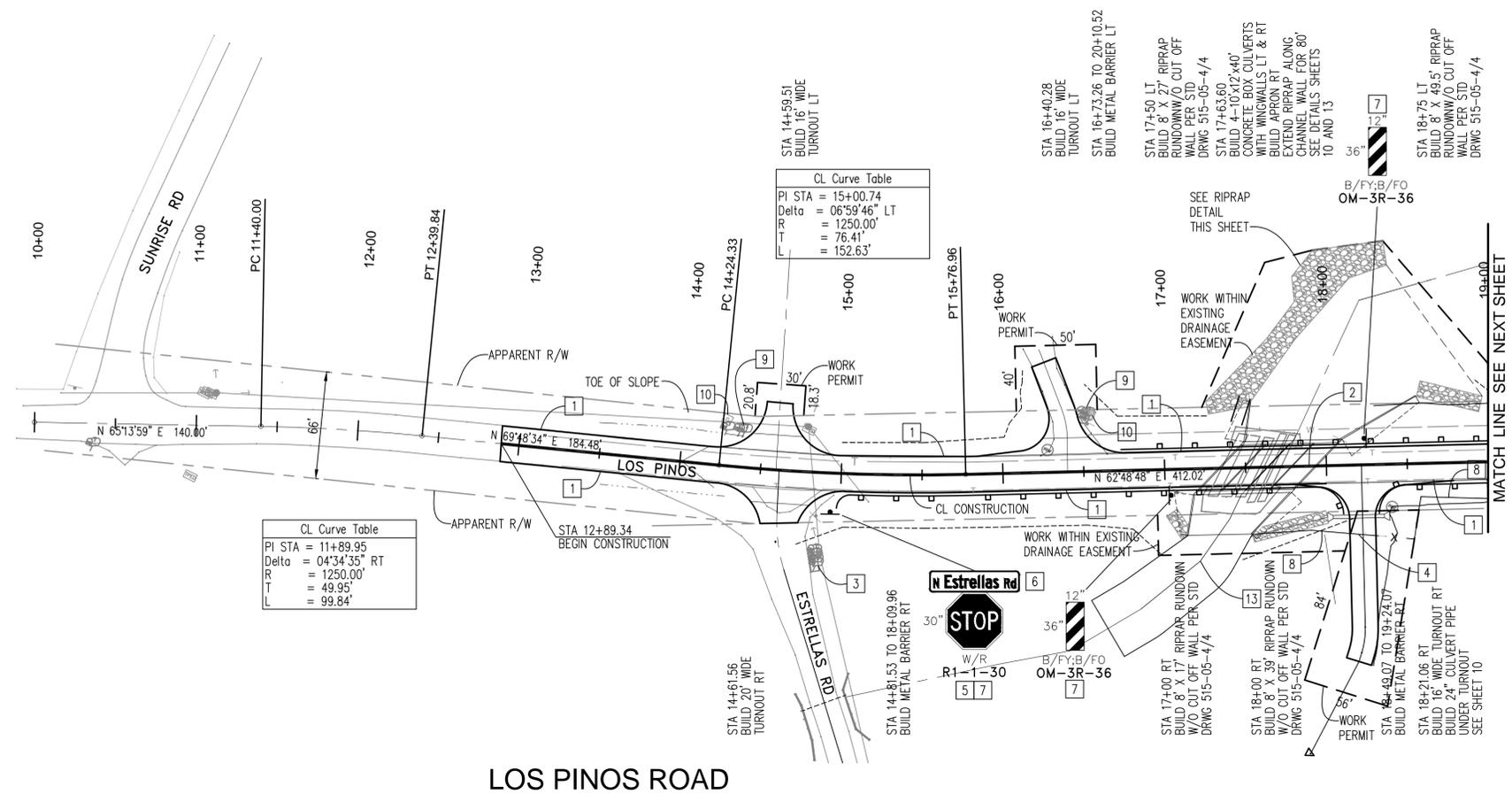
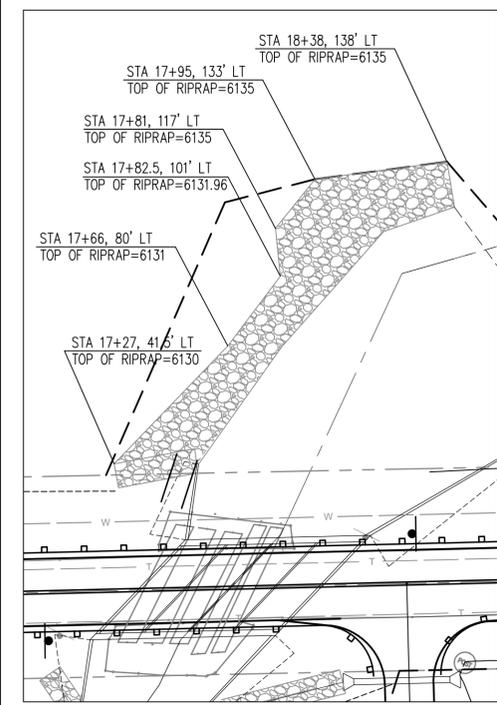
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<b>CHECKED BY:</b> JAW	<b>DATE:</b> 10/2013

LOS PINOS ROADWAY IMPROVEMENTS

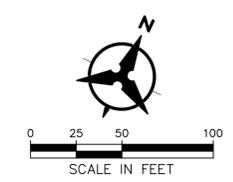
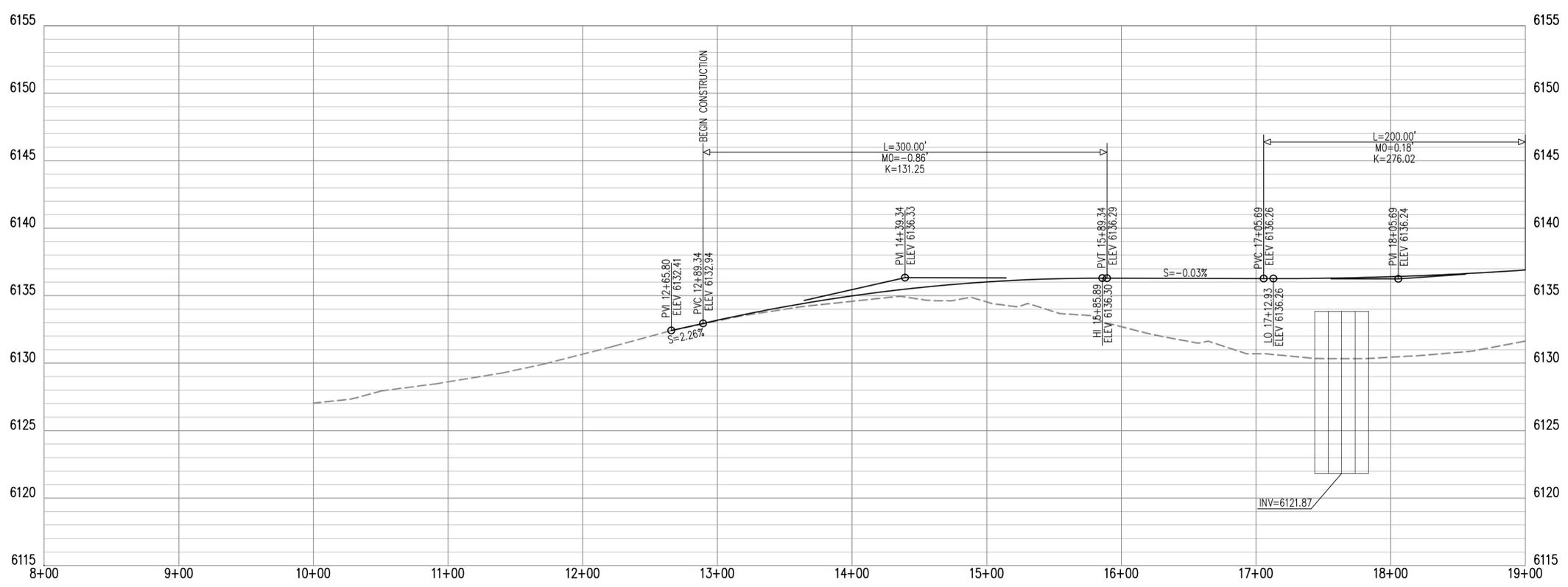
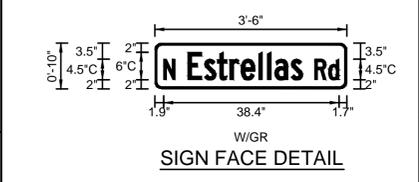
TYPICAL SECTIONS





**KEYED NOTES**

- REFLECTORIZED PAINTED MARKING - 4" SOLID WHITE
- REFLECTORIZED PAINTED MARKING - 4" SOLID DOUBLE YELLOW
- EXISTING MAILBOXES TO REMAIN
- INSTALL 16" STANDARD GATE
- INSTALL NEW SIGN AND POST. POSTS SHALL BE BLACK U-CHANNEL POSTS. STREET NAME BRACKETS ARE INCIDENTAL TO THE SIGN.
- INSTALL STREET NAME SIGN ON NEW STOP SIGN
- SALVAGE EXISTING SIGN
- NEW WOVEN WIRE FENCE. PLACE AT SAME HORIZONTAL OFFSET AS EXISTING FENCE. EXTEND TO WINGWALL.
- REMOVE & RESET MAILBOXES
- EXISTING GAS METER TO REMAIN
- RAISE EXISTING GAS METER (BY OTHERS)
- RELOCATE TELEPHONE PEDESTAL BY OTHERS
- EXCAVATE DOWNSTREAM CHANNEL 40' WIDE X 90' LONG WITH 2:1 SIDE SLOPES



**REVISIONS (OR CHANGE NOTICES)**

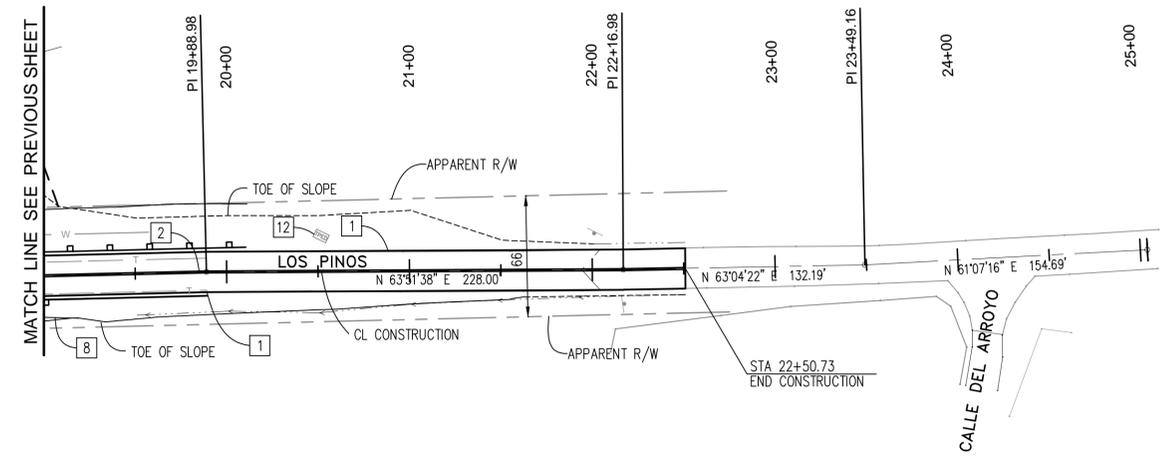
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DRAWN BY: LAH	DATE: 10/2013
CHECKED BY: JAW	DATE: 10/2013

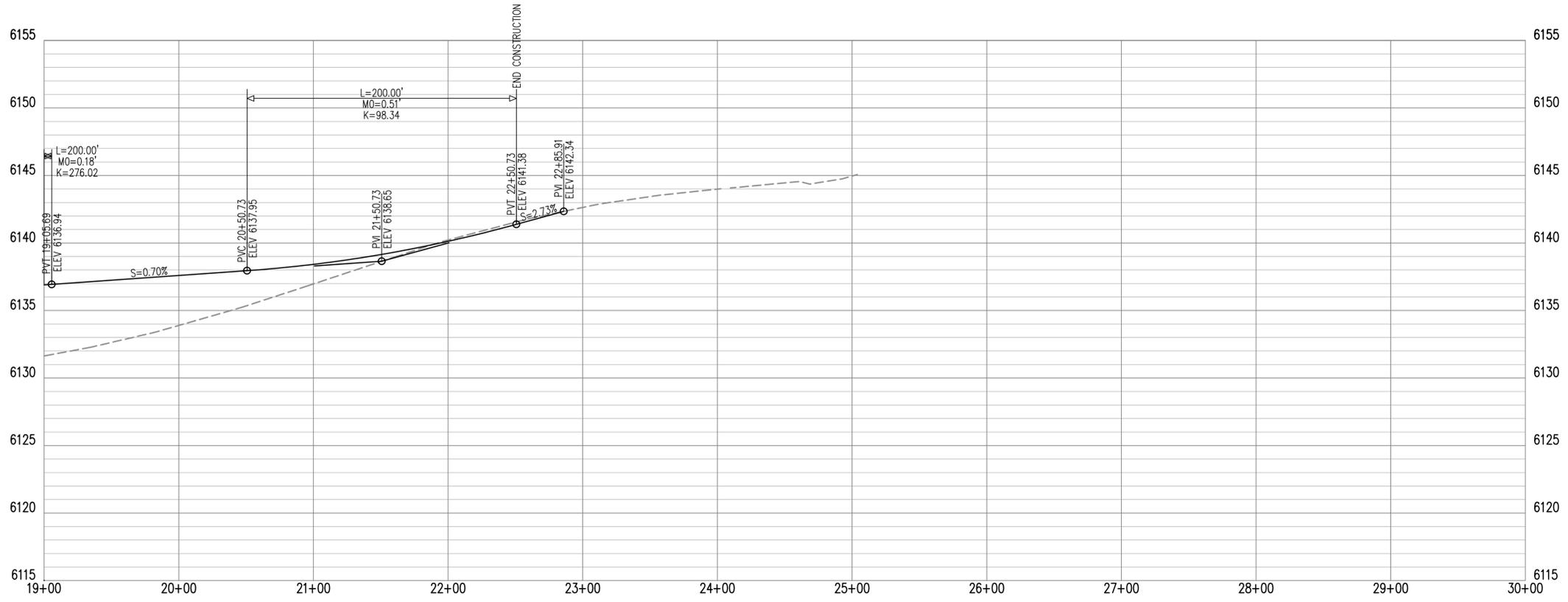
**LOS PINOS ROADWAY IMPROVEMENTS**

**PLAN & PROFILE**





**LOS PINOS ROAD**



**KEYED NOTES**

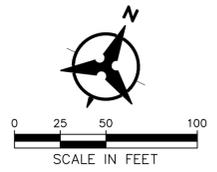
- 1 REFLECTORIZED PAINTED MARKING - 4" SOLID WHITE
- 2 REFLECTORIZED PAINTED MARKING - 4" SOLID DOUBLE YELLOW
- 3 EXISTING MAILBOXES TO REMAIN
- 4 INSTALL 16' STANDARD GATE
- 5 INSTALL NEW SIGN AND POST. POSTS SHALL BE BLACK U-CHANNEL POSTS. STREET NAME BRACKETS ARE INCIDENTAL TO THE SIGN.
- 6 INSTALL STREET NAME SIGN ON NEW STOP SIGN
- 7 SALVAGE EXISTING SIGN
- 8 NEW WOVEN WIRE FENCE. PLACE AT SAME HORIZONTAL OFFSET AS EXISTING FENCE. EXTEND TO WINGWALL.
- 9 REMOVE & RESET MAILBOXES
- 10 EXISTING GAS METER TO REMAIN
- 11 RAISE EXISTING GAS METER (BY OTHERS)
- 12 RELOCATE TELEPHONE PEDESTAL BY OTHERS

NO.	DESCRIPTION	DATE BY
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<b>DRAWN BY:</b> LAH	<b>DATE:</b> 10/2013
<b>CHECKED BY:</b> JAW	<b>DATE:</b> 10/2013

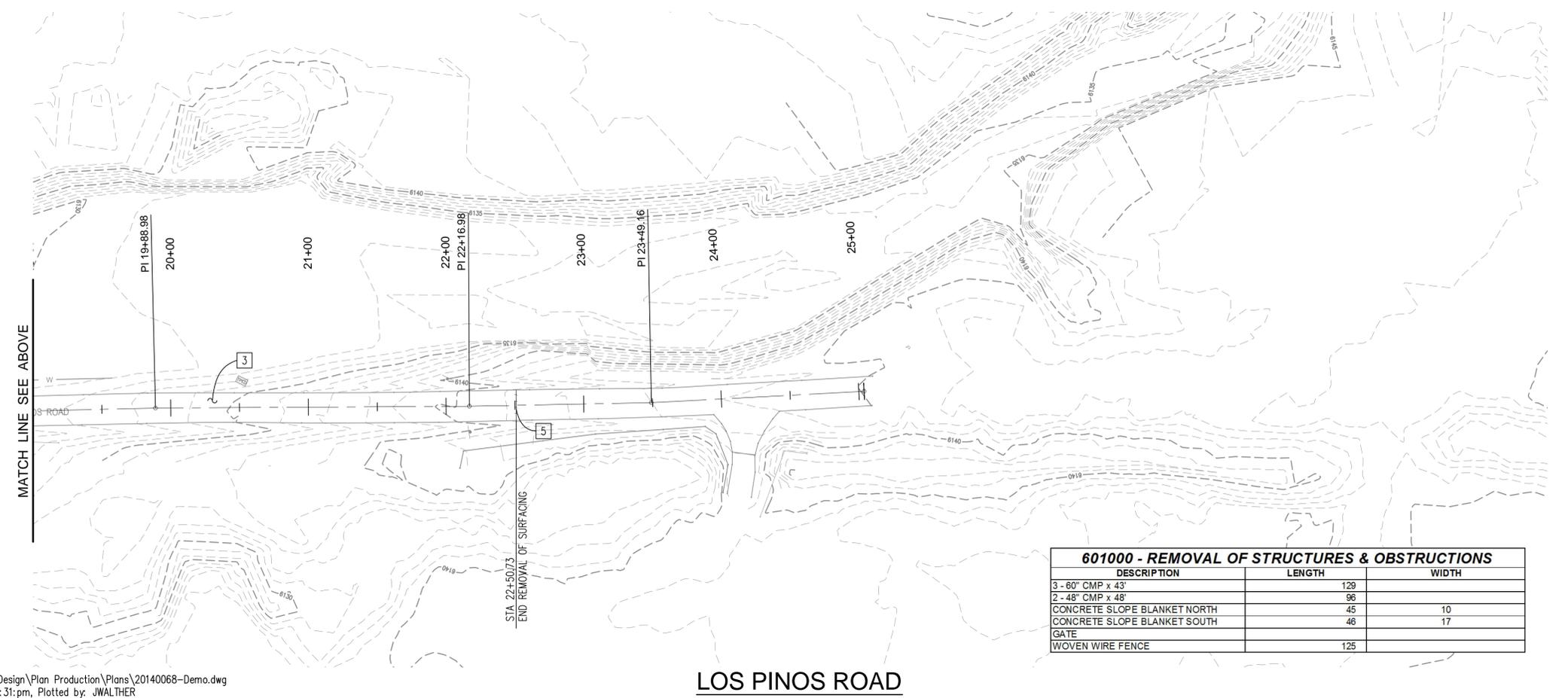
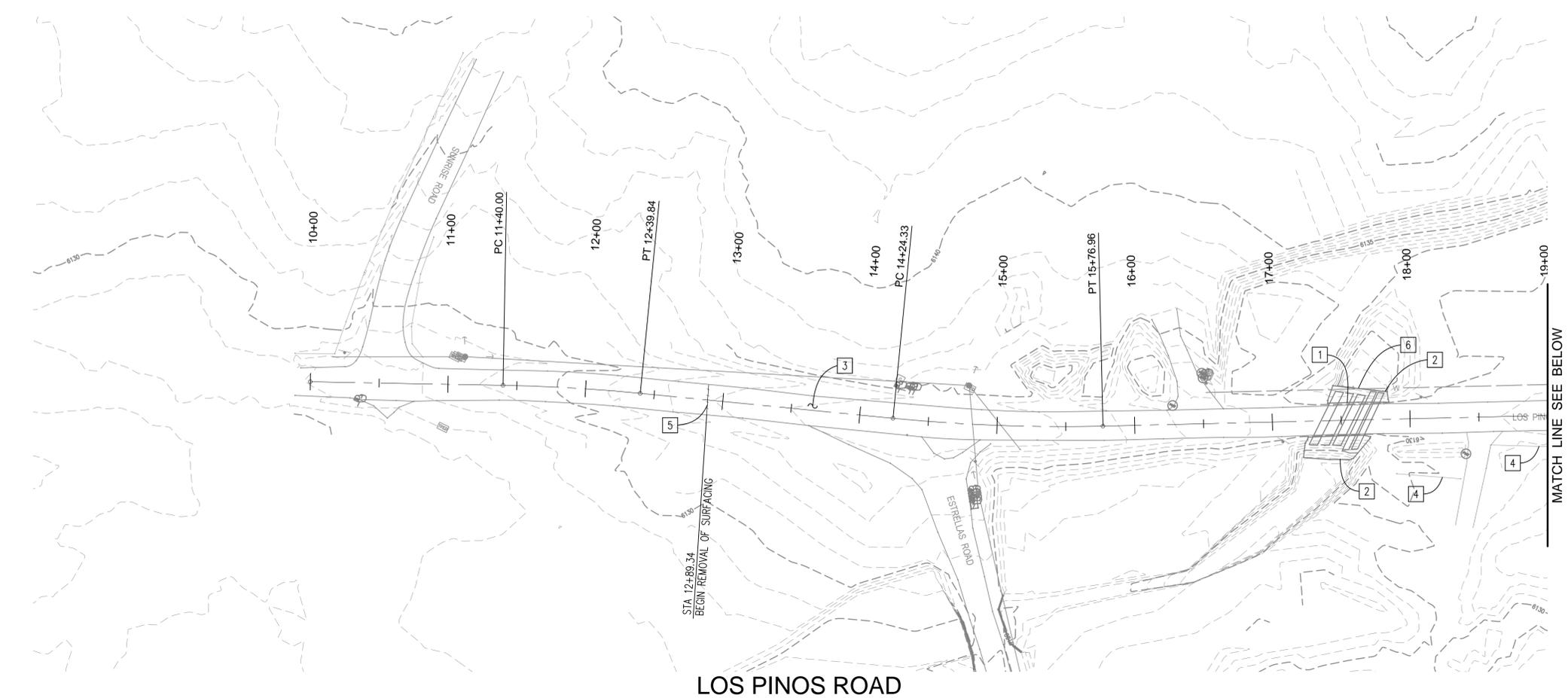
**LOS PINOS ROADWAY IMPROVEMENTS**

**PLAN & PROFILE**

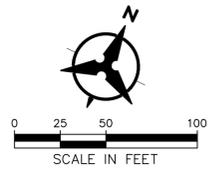


**KEYED NOTES**

- 1 REMOVE EXISTING STRUCTURES
- 2 REMOVE CONCRETE SLOPE BLANKETS
- 3 REMOVE EXISTING SURFACING
- 4 REMOVE EXISTING FENCE. CONTRACTOR SHALL SURVEY LOCATION OF FENCE FOR PLACING NEW FENCE. REMOVE & DISPOSE OF EXISTING GATE
- 5 SAWCUT LINE
- 6 PROTECT 6" WATERLINE WITH CONCRETE COVER IN-PLACE



601000 - REMOVAL OF STRUCTURES & OBSTRUCTIONS		
DESCRIPTION	LENGTH	WIDTH
3 - 60" CMP x 43"	129	
2 - 48" CMP x 48"	96	
CONCRETE SLOPE BLANKET NORTH	45	10
CONCRETE SLOPE BLANKET SOUTH	46	17
GATE		
WOVEN WIRE FENCE	125	



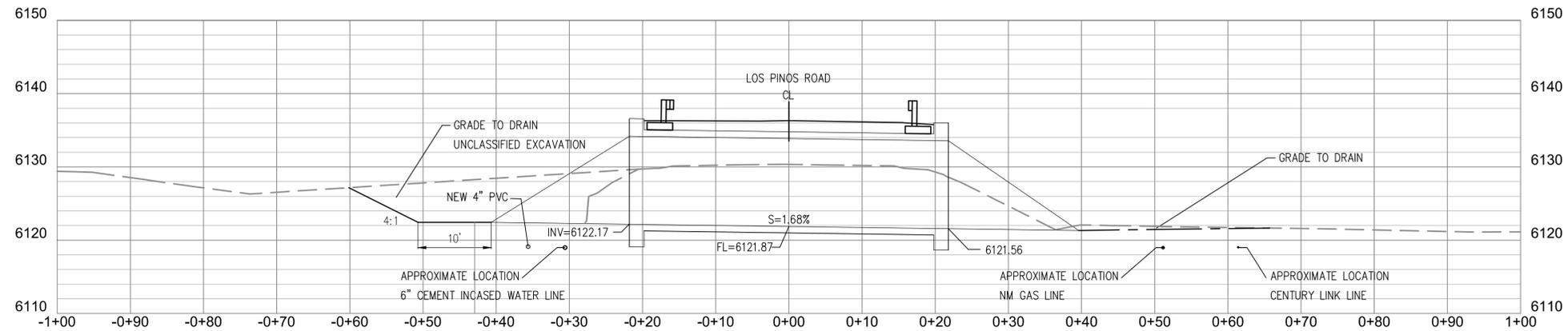
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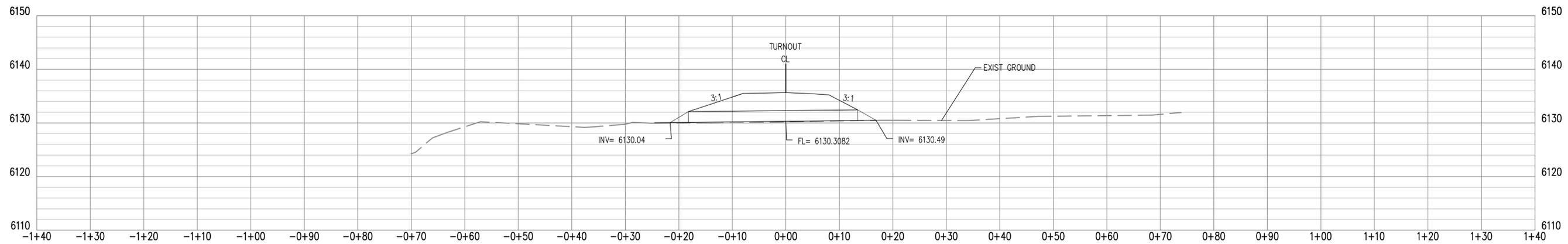
**LOS PINOS ROADWAY IMPROVEMENTS**  
**DEMOLITION PLAN**



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Thu, 1-Jun-2017 - 2:31:pm, Plotted by: JWALTHER



**STA 17+63.60 LOS PINOS ROAD**  
REMOVE EXISTING 3 - 66" & 2 - 48" CULVERT PIPES  
BUILD 4- 10' X 12' X 40" CONCRETE BOX CULVERTS 45 DEG SKEW LF DESIGN FILL A  
W/ WINGWALLS LT & RT AND APRON RT  
INSTALL 48" 4" PVC SCHEDULE 40 SLEEVE FOR FUTURE UTILITY ON NORTH SIDE OF CBC  
SERIALS: 511-59-1/1, 2/2, 511-64-1/3, 3/3, 511-66-1/6, 2/6, 6/6, WSP-45-1/3, 2/3, 3/3, 606-03-1/1



**STA 18+21.60 TURNOUT, 30' RT**  
BUILD 24" X 32' CULVERT PIPE UNDER TURNOUT  
WITH END SECTION LT & RT  
SERIALS: 206-01-1/1, 206-03-1/1, 206-05-1/1, 206-07-1/1, 206-10-1/1, 570-02-1/2, 2/2

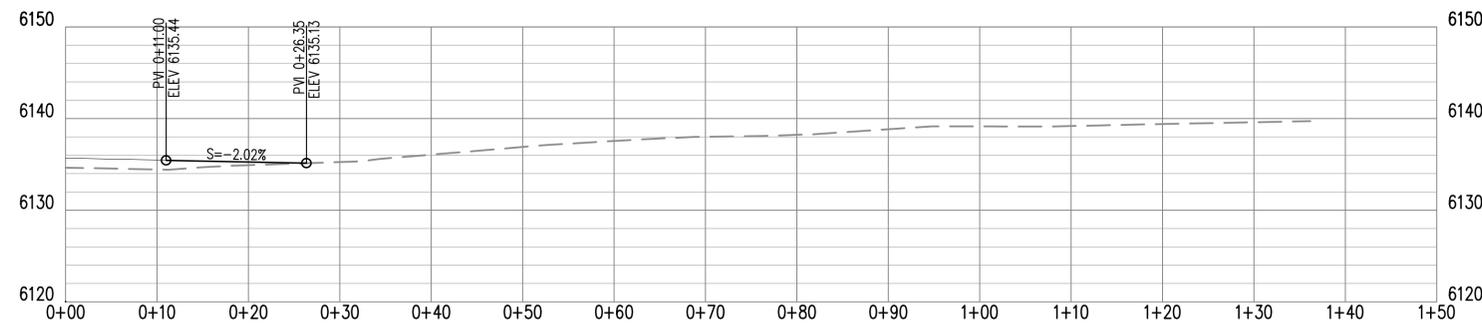
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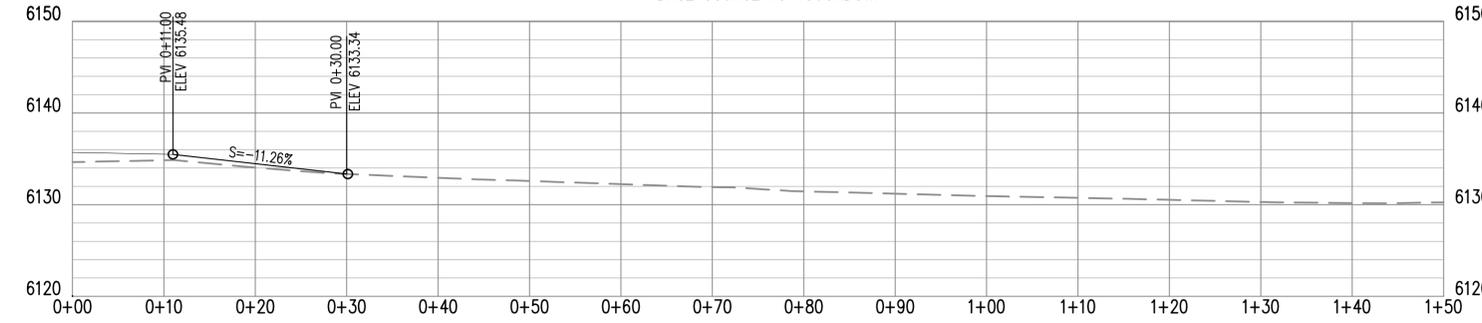
**LOS PINOS ROADWAY IMPROVEMENTS**

**STRUCTURE SECTIONS**

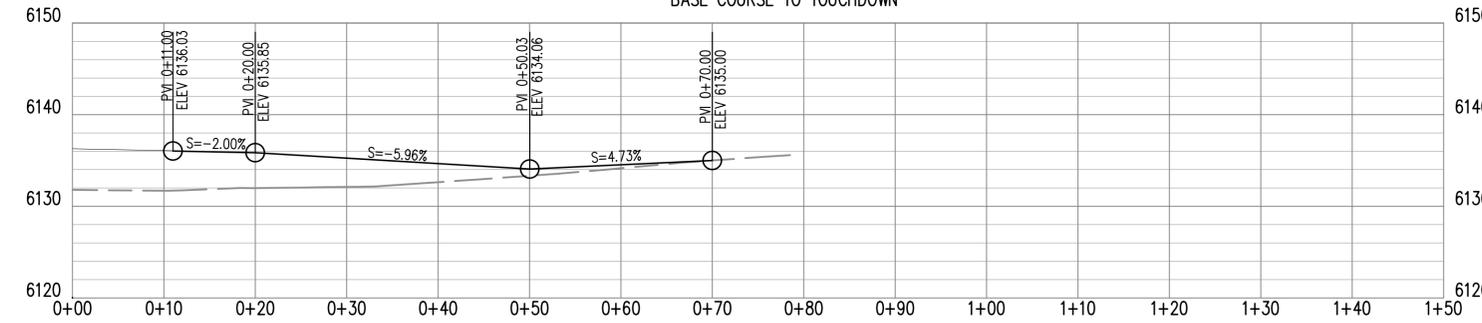




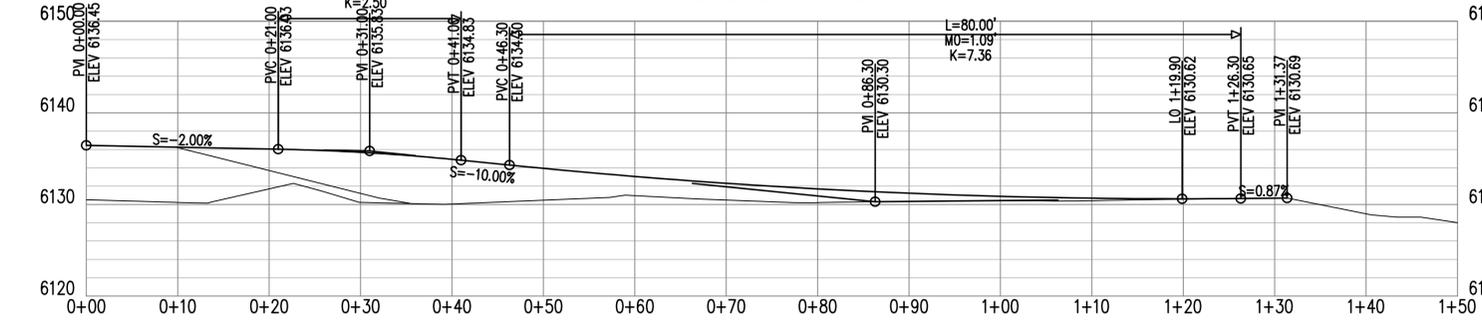
STATION 14+59.51 LT, N. ESTRELLAS ROAD TURNOUT  
BUILD 16' WIDE TURNOUT  
PAVE FIRST 10'  
BASE COURSE TO TOUCHDOWN



STATION 14+61.56 RT, ESTRELLAS ROAD  
BUILD 20' WIDE TURNOUT  
PAVE FIRST 10'  
BASE COURSE TO TOUCHDOWN



STATION 16+40.28 LT, WEST TURNOUT  
BUILD 16' WIDE TURNOUT  
PAVE FIRST 10'  
BASE COURSE TO TOUCHDOWN



STATION 18+61.20 RT, EAST TURNOUT  
BUILD 16' WIDE TURNOUT  
PAVE FIRST 10'  
BASE COURSE TO TOUCHDOWN

NO.	DESCRIPTION	DATE BY
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DRAWN BY: LAH	DATE: 10/2013
CHECKED BY: JAW	DATE: 10/2013

LOS PINOS ROADWAY IMPROVEMENTS  
TURNOUT PROFILES



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Thu, 1-Jun-2017 - 2:32:pm, Plotted by: JWALTHER

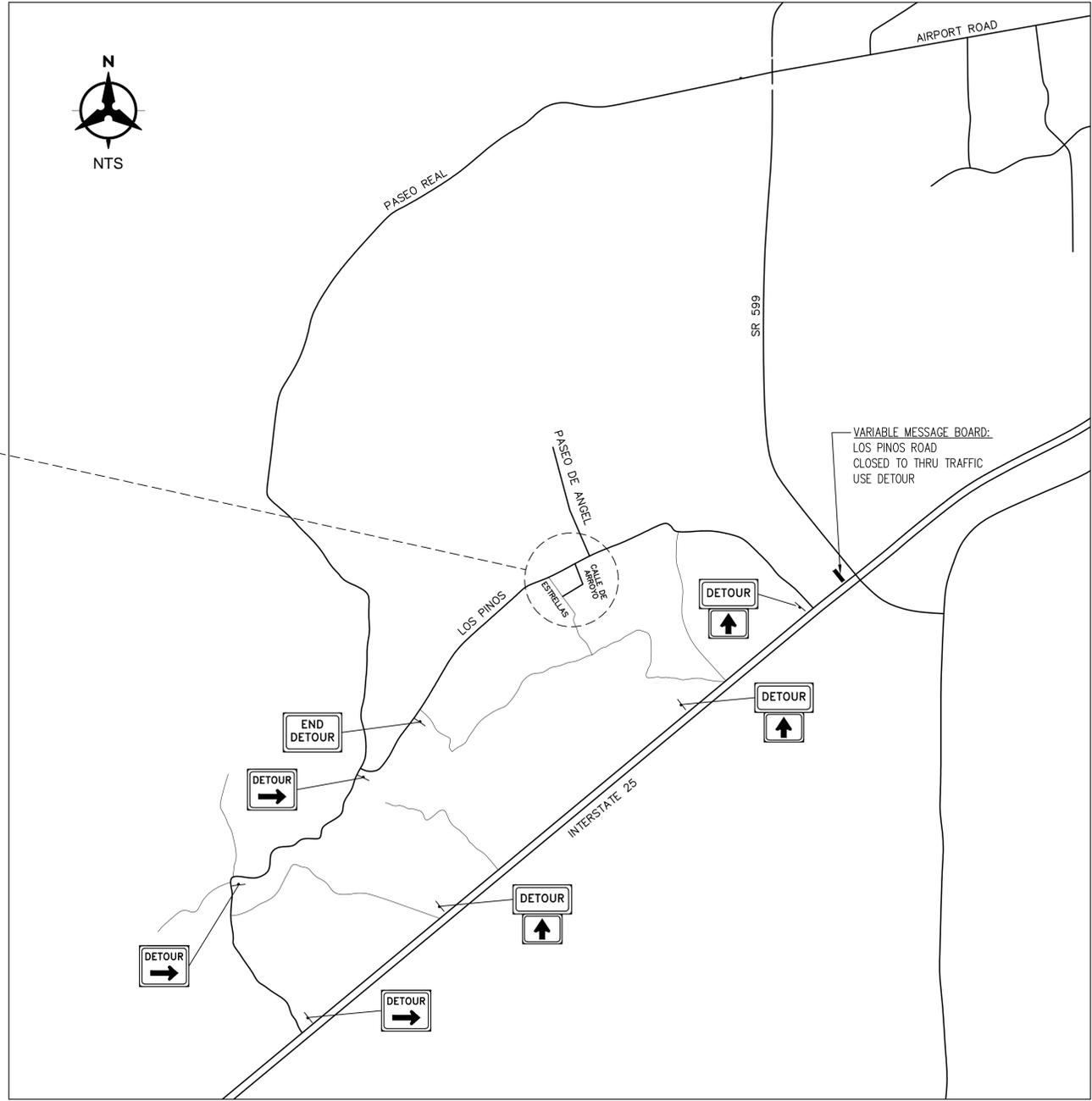
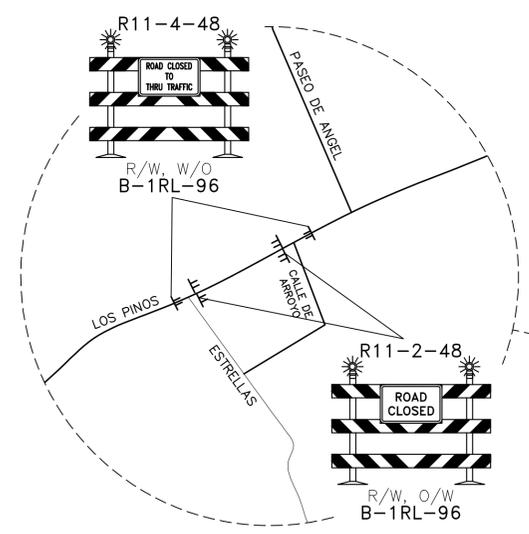
**NOTES**

1. THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF ORDINANCE 2003-1. CONTACT JOHNNY BACA, 505-992-3020, FOR A PERMIT PRIOR TO CONSTRUCTION. THE PERMIT FEE WILL BE WAIVED.
2. TWO PORTABLE MESSAGE BOARDS SHALL BE SET UP TWO WEEKS PRIOR TO CONSTRUCTION TO NOTIFY THE PUBLIC. LOCATIONS SHALL BE COORDINATED WITH THE OWNERS REPRESENTATIVE.
3. THE CONTRACTOR SHALL INFORM KRISTINE MIHELIC OF SANTA FE COUNTY AND KEN MARTINEZ OF THE REGIONAL EMERGENCY COMMUNICATION CENTER, 505-992-3096, 48 HOURS IN ADVANCE OF ALL CLOSURES.
4. SIGNS TO REMAIN IN-PLACE FOR MORE THAN 3 DAYS SHALL BE PLACED ON PERMANENT POSTS.
5. ACCESS SHALL BE MAINTAINED TO RESIDENTIAL DRIVEWAYS. CONTRACTOR SHALL COORDINATE TEMPORARY CLOSURES WITH RESIDENTS.
6. CONTRACTOR SHALL INSTALL ADVANCE WARNING SIGNS PER MUTCD.

**SUGGESTED SEQUENCE OF CONSTRUCTION**

- PHASE 1**
1. CONSTRUCT DOWNSTREAM DETOUR. SEE SHEET 27.
  2. DEMOLISH EXISTING DRAINAGE STRUCTURE.
  3. CONSTRUCT NEW CBCs AND UPSTREAM WINGWALLS.
- PHASE 2**
1. PLACE TEMPORARY CONCRETE WALL BARRIER OR METAL BARRIER OVER CBCs.
  2. SHIFT TRAFFIC TO ROADWAY ALIGNMENT.
  3. CONSTRUCT DOWNSTREAM WINGWALLS AND APRON.
- PHASE 3**
1. USE TOTAL ROAD CLOSURE OR FLAGGERS TO COMPLETE ROADWAY IMPROVEMENTS.

REVISIONS (OR CHANGE NOTICES)	NO.	DESCRIPTION	DATE	BY
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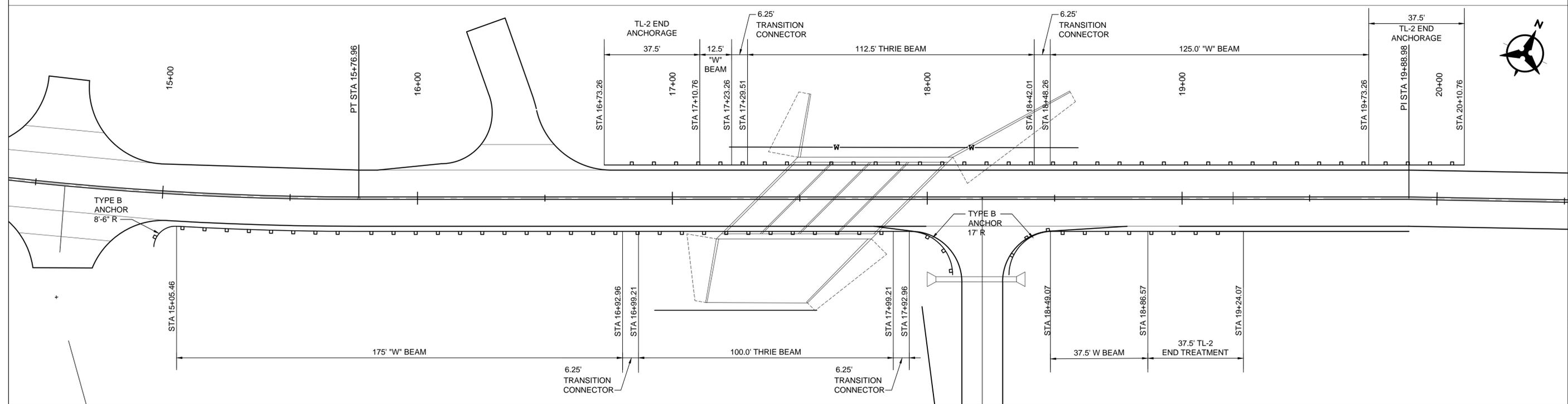


**PHASE 3 TOTAL ROAD CLOSURE DETAIL**

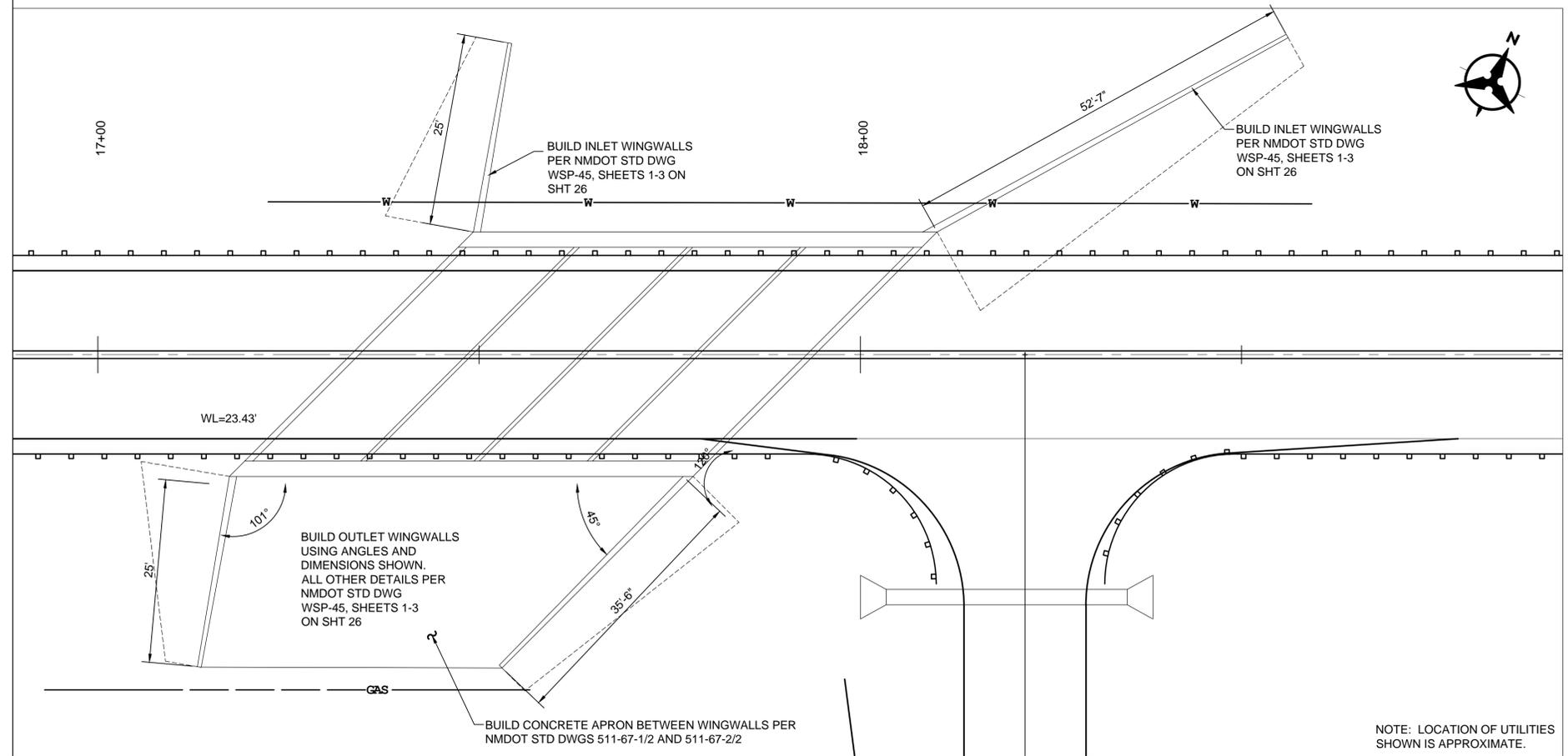
<b>DRAWN BY:</b> LAH	<b>DATE:</b> 10/2013
<b>CHECKED BY:</b> JAW	<b>DATE:</b> 10/2013

**LOS PINOS ROADWAY IMPROVEMENTS**  
**SUGGESTED SEQUENCE OF CONSTRUCTION & TOTAL CLOSURE SIGNING PLAN**

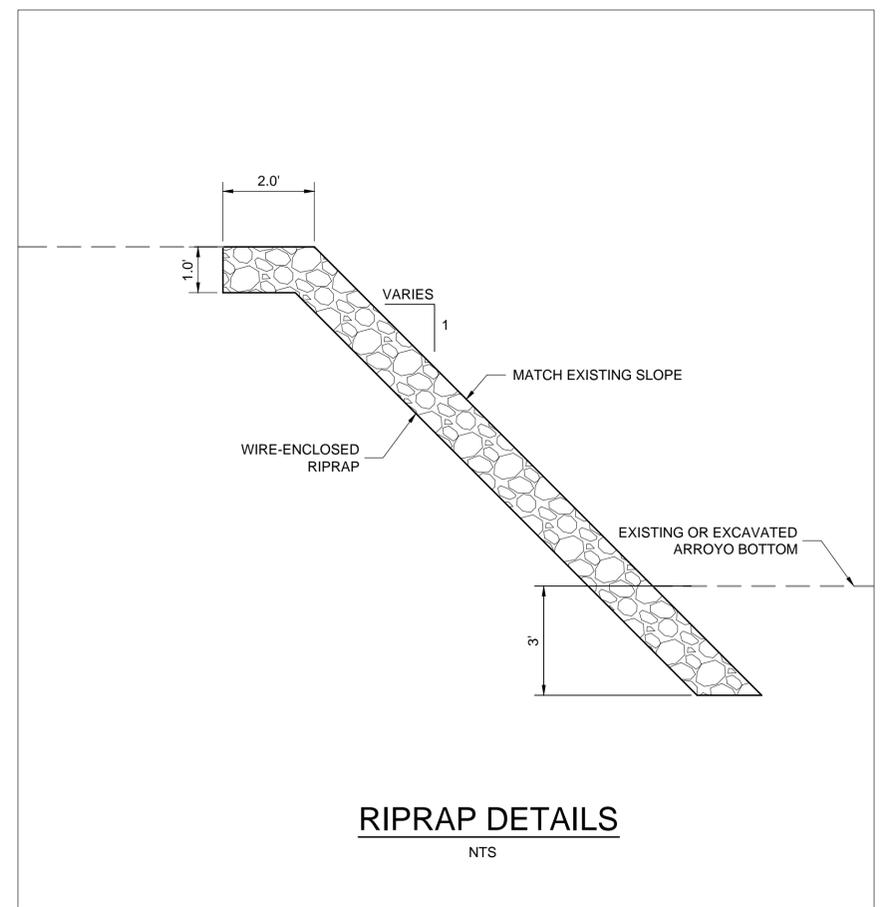




**METAL BARRIER DETAIL**  
SCALE: 1"=20'



**CBC WINGWALL DETAIL**  
SCALE: 1"=10'



**RIPRAP DETAILS**  
NTS

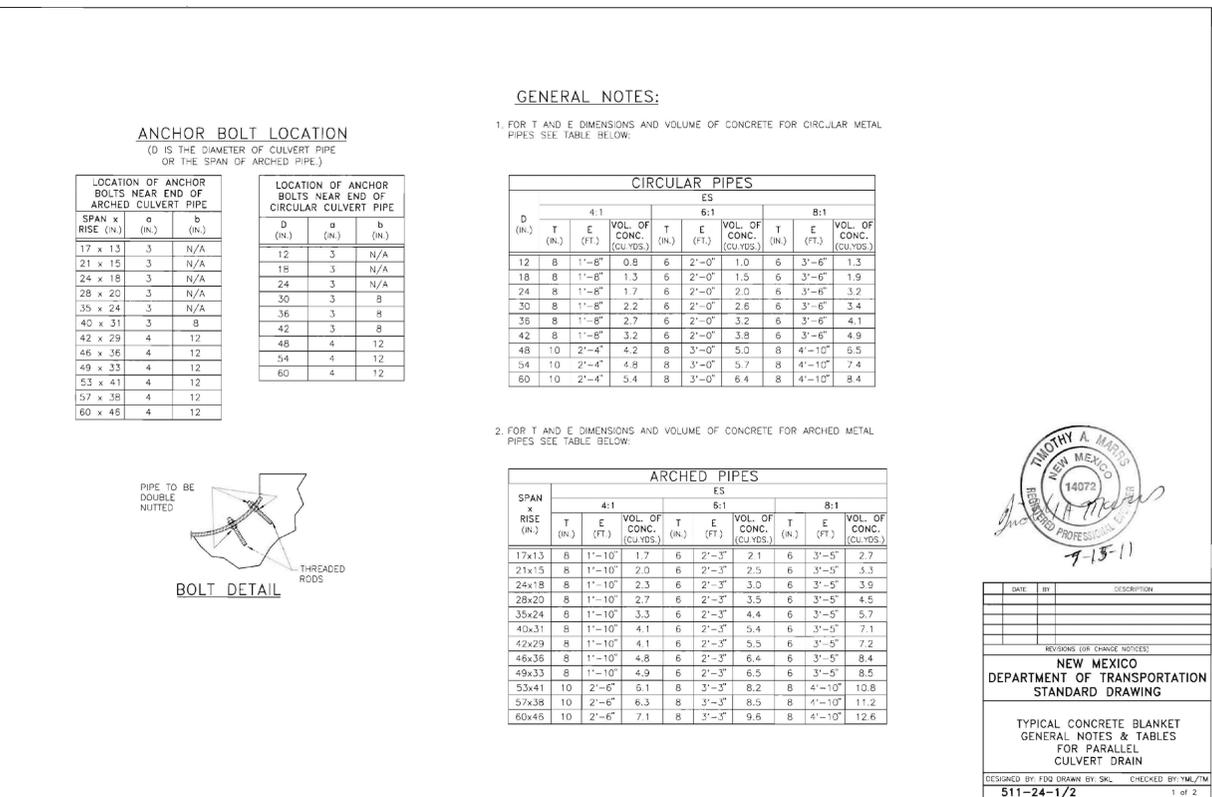
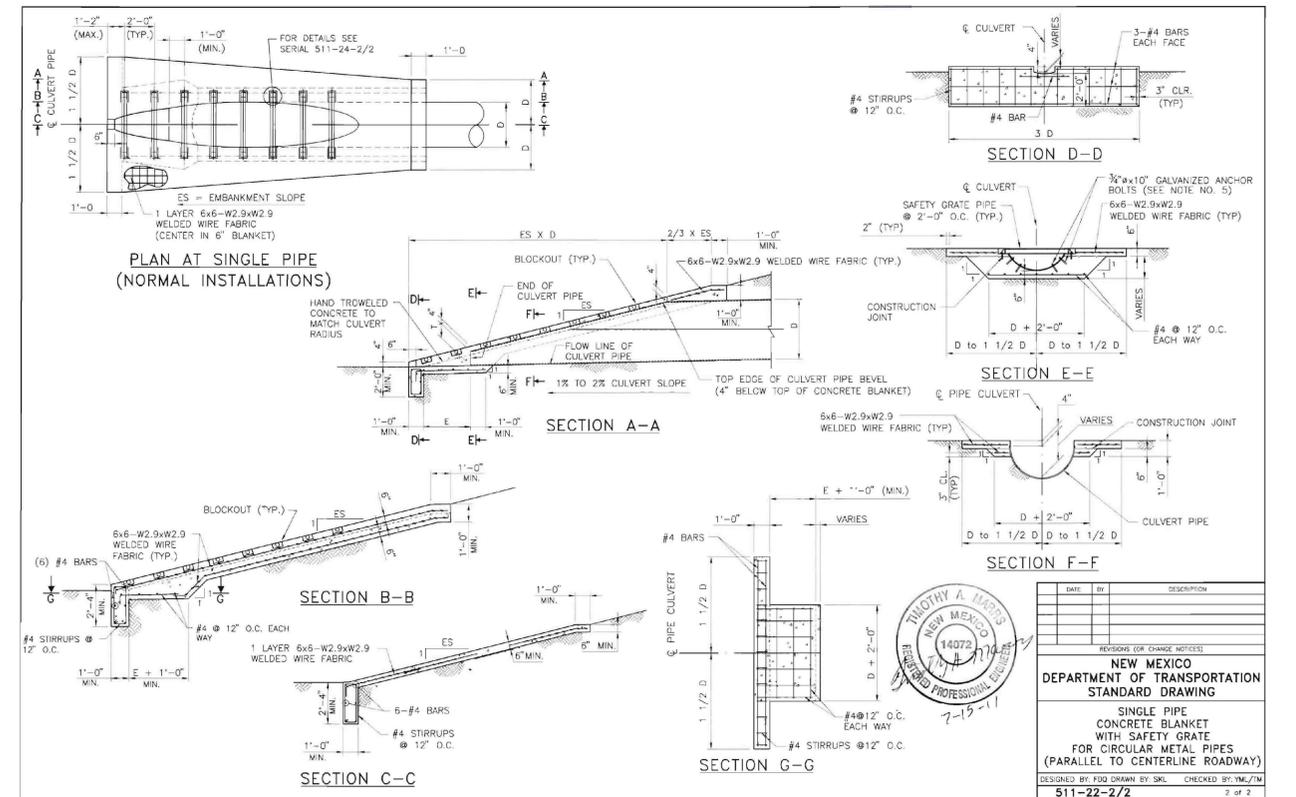
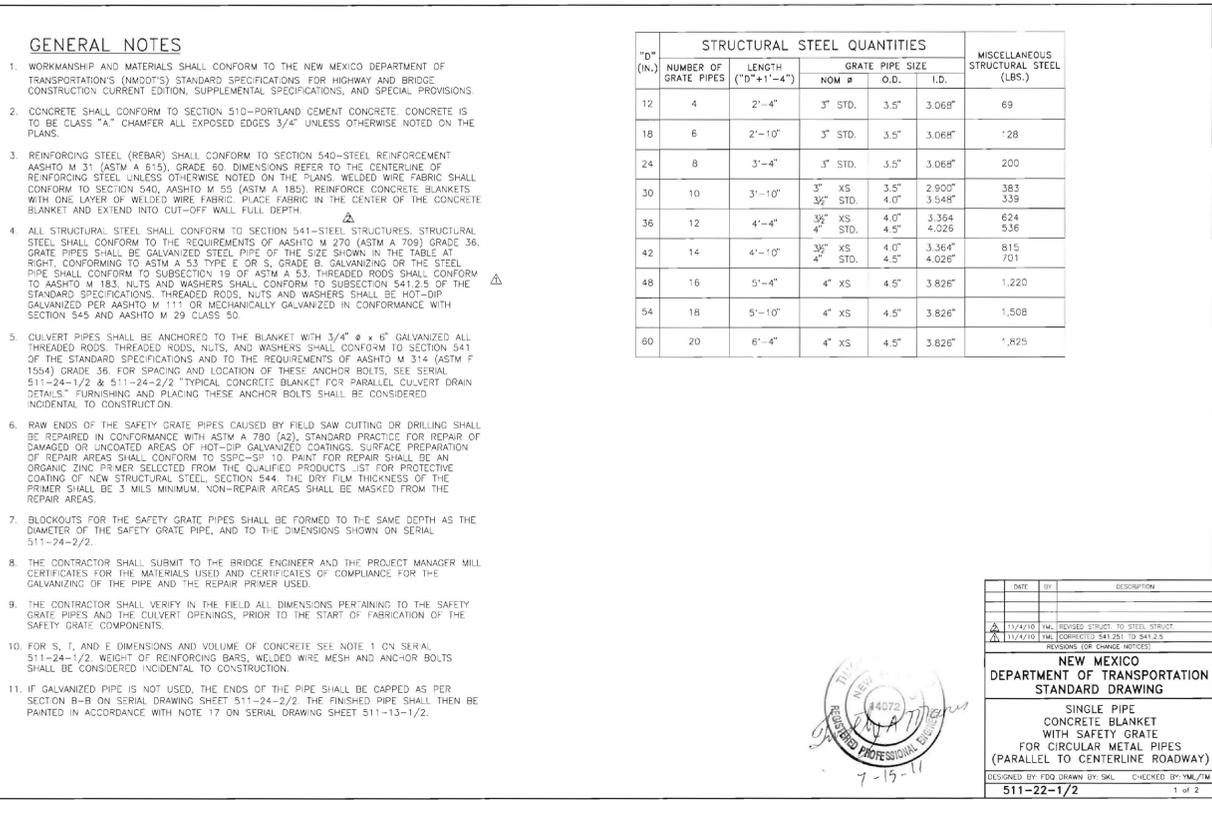
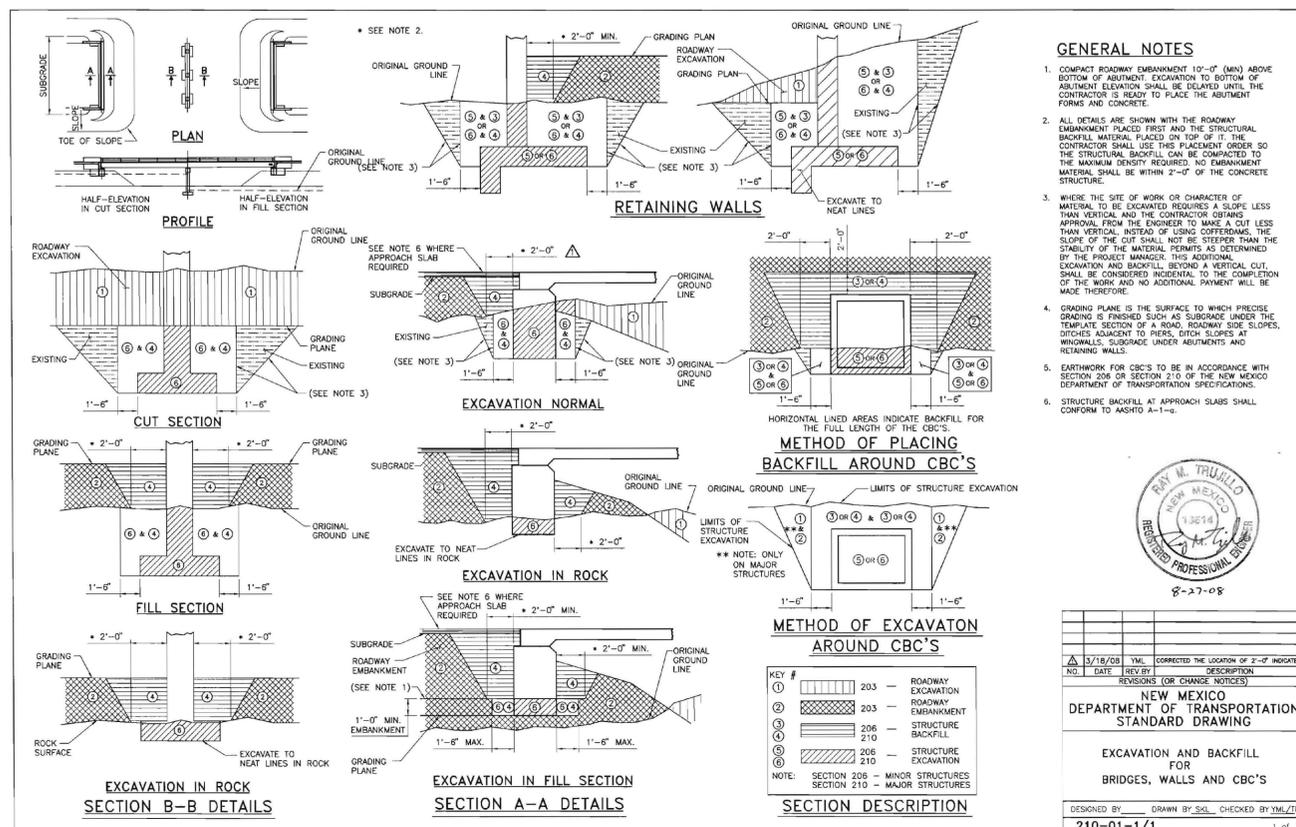
**REVISIONS (OR CHANGE NOTICES)**

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**LOS PINOS ROADWAY IMPROVEMENTS**

**MISCELLANEOUS DETAILS**





REVISIONS (OR CHANGE NOTICES)

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LOS PINOS ROADWAY IMPROVEMENTS

NMDOT SERIAL DRAWINGS

DRAWN BY: LAH DATE: 10/2013  
CHECKED BY: JAW DATE: 10/2013



TRIPLE OPENING BOX CULVERT STRUCTURE DIMENSIONS										GRADE 60 REINFORCING BAR SCHEDULE (BAR SIZE, SPACING AND LENGTH DIMENSIONS)											
0-10 FT BURIAL DESIGN FILL "A"																					
DIM	SPAN "S" INSIDE		HEIGHT "H" INSIDE		TOP SLAB "T"		BOTTOM SLAB "B"		WALLS OUTER		WALLS INTERIOR		WALLS INTERIOR		WALLS INTERIOR		WALLS INTERIOR		WALLS INTERIOR		
	SPAN	HEIGHT	TOP SLAB	BOTTOM SLAB	WALLS OUTER	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	
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14'	8'	14.0'	15.0'	11.0'	7.0'	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"
14'	9'	14.0'	15.0'	11.0'	7.0'	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"
14'	10'	14.0'	15.0'	11.0'	7.0'	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"
14'	11'	14.0'	15.0'	11.0'	7.0'	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"
14'	12'	14.0'	15.0'	11.0'	7.0'	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"
14'	13'	14.0'	15.0'	11.0'	7.0'	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"
14'	14'	14.0'	15.0'	11.0'	7.0'	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"	#4	12"

FOR EXTENSIONS OF EXISTING CBC'S OF S=5', S=7', AND S=9' SIZE SPANS NOT INCLUDED IN THIS TABLE. USE DIMENSIONS FOR NEXT GREATER SPAN TO BUILD. FOR EXAMPLE, FOR S=5' USE DESIGN DIMENSIONS FROM THE TABLE FOR S=6'. ALSO REDUCE THE S=6' TABLE LENGTH OF BARS "bb", "cc" AND "dd" BY ONE FOOT TO ACCOMMODATE THE SHORTER SPAN. SEE DETAILS ON SHEET 511-66-4/8. ANY OTHER SIZES OF BOX EXTENSIONS NOT COVERED BY THIS MODIFICATION SHALL BE DONE THROUGH SPECIAL DESIGNS INCLUDED IN THE PROJECT PLANS.

\*\* TOTAL LENGTH OF "gg" BARS IS TABLE LENGTH PLUS TWO STANDARD 90° HOOKS AND OPTIONAL 40 BAR LAP IF NECESSARY.

EXAMPLE OF USE OF THIS TABLE:  
PROPOSED STRUCTURE - TRIPLE BARREL, 10 FT. SPAN/7 FT. HEIGHT, CBC WITH 2 FT. DEPTH OF COVER.  
USE THE FOLLOWING BUILD INFORMATION FROM THE TABLE ABOVE:

DIM	SPAN "S" INSIDE		HEIGHT "H" INSIDE		TOP SLAB "T"		BOTTOM SLAB "B"		WALLS OUTER		WALLS INTERIOR									
	SPAN	HEIGHT	TOP SLAB	BOTTOM SLAB	WALLS OUTER	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR	WALLS INTERIOR
10'	7'	11.0'	10.5'	7.5'	6.0'	#4	12"	#												

**DETAIL FOR PLACING GUARDRAIL POST IN CONCRETE BLOCK**  
PLACE ANCHOR BLOCKS AT LOCATIONS INDICATED ON ROADWAY PLANS.

NEW MEXICO DEPARTMENT OF TRANSPORTATION  
STANDARD DRAWING  
GUARDRAIL POST ANCHOR ATTACHMENT TO CONCRETE BOX CULVERT TOP SLAB

DESIGNED BY: TLB, DRAWN BY: SGL, CHECKED BY: HDR  
511-66-6/6 6 of 6

**WINGWALL DIMENSIONS**

WINGS A AND B	0° SKEW	15° SKEW	30° SKEW	45° SKEW
WLL	WLS	WWS	WLL	WLS
2'-0"	0'-0"	6'-0"	8'-0"	8'-0"
3'-0"	0'-0"	7'-0"	10'-0"	10'-0"
4'-0"	0'-0"	8'-0"	11'-0"	11'-0"
5'-0"	0'-0"	9'-0"	12'-0"	12'-0"
6'-0"	0'-0"	10'-0"	13'-0"	13'-0"
7'-0"	0'-0"	11'-0"	14'-0"	14'-0"
8'-0"	0'-0"	12'-0"	15'-0"	15'-0"
9'-0"	0'-0"	13'-0"	16'-0"	16'-0"
10'-0"	0'-0"	14'-0"	17'-0"	17'-0"
11'-0"	0'-0"	15'-0"	18'-0"	18'-0"
12'-0"	0'-0"	16'-0"	19'-0"	19'-0"
13'-0"	0'-0"	17'-0"	20'-0"	20'-0"
14'-0"	0'-0"	18'-0"	21'-0"	21'-0"
15'-0"	0'-0"	19'-0"	22'-0"	22'-0"
16'-0"	0'-0"	20'-0"	23'-0"	23'-0"
17'-0"	0'-0"	21'-0"	24'-0"	24'-0"
18'-0"	0'-0"	22'-0"	25'-0"	25'-0"
19'-0"	0'-0"	23'-0"	26'-0"	26'-0"
20'-0"	0'-0"	24'-0"	27'-0"	27'-0"
21'-0"	0'-0"	25'-0"	28'-0"	28'-0"
22'-0"	0'-0"	26'-0"	29'-0"	29'-0"
23'-0"	0'-0"	27'-0"	30'-0"	30'-0"
24'-0"	0'-0"	28'-0"	31'-0"	31'-0"
25'-0"	0'-0"	29'-0"	32'-0"	32'-0"
26'-0"	0'-0"	30'-0"	33'-0"	33'-0"
27'-0"	0'-0"	31'-0"	34'-0"	34'-0"
28'-0"	0'-0"	32'-0"	35'-0"	35'-0"
29'-0"	0'-0"	33'-0"	36'-0"	36'-0"
30'-0"	0'-0"	34'-0"	37'-0"	37'-0"
31'-0"	0'-0"	35'-0"	38'-0"	38'-0"
32'-0"	0'-0"	36'-0"	39'-0"	39'-0"
33'-0"	0'-0"	37'-0"	40'-0"	40'-0"
34'-0"	0'-0"	38'-0"	41'-0"	41'-0"
35'-0"	0'-0"	39'-0"	42'-0"	42'-0"
36'-0"	0'-0"	40'-0"	43'-0"	43'-0"
37'-0"	0'-0"	41'-0"	44'-0"	44'-0"
38'-0"	0'-0"	42'-0"	45'-0"	45'-0"
39'-0"	0'-0"	43'-0"	46'-0"	46'-0"
40'-0"	0'-0"	44'-0"	47'-0"	47'-0"
41'-0"	0'-0"	45'-0"	48'-0"	48'-0"
42'-0"	0'-0"	46'-0"	49'-0"	49'-0"
43'-0"	0'-0"	47'-0"	50'-0"	50'-0"
44'-0"	0'-0"	48'-0"	51'-0"	51'-0"
45'-0"	0'-0"	49'-0"	52'-0"	52'-0"
46'-0"	0'-0"	50'-0"	53'-0"	53'-0"
47'-0"	0'-0"	51'-0"	54'-0"	54'-0"
48'-0"	0'-0"	52'-0"	55'-0"	55'-0"
49'-0"	0'-0"	53'-0"	56'-0"	56'-0"
50'-0"	0'-0"	54'-0"	57'-0"	57'-0"
51'-0"	0'-0"	55'-0"	58'-0"	58'-0"
52'-0"	0'-0"	56'-0"	59'-0"	59'-0"
53'-0"	0'-0"	57'-0"	60'-0"	60'-0"

NOTE: TABLE DIMENSIONS SHOWN ARE FOR SLOPES OF 1.5 TO 1. FOR OTHER SLOPES MULTIPLY TABLE VALUES OF "WLS" AND "WWS" BY (SLOPE/1.5).

NEW MEXICO DEPARTMENT OF TRANSPORTATION  
STANDARD DRAWING  
CONCRETE BOX CULVERT WINGWALL & OUTLET APRON ALL SKEWS PLAN, PERSPECTIVE & DIMENSIONS

DESIGNED BY: TLB, DRAWN BY: SGL, CHECKED BY: HDR  
511-67-1/2 1 of 2

**CBC PERSPECTIVE**

NEW MEXICO DEPARTMENT OF TRANSPORTATION  
STANDARD DRAWING  
CONCRETE BOX CULVERT WINGWALL & OUTLET APRON ALL SKEWS PLAN, PERSPECTIVE & DIMENSIONS

DESIGNED BY: TLB, DRAWN BY: SGL, CHECKED BY: HDR  
511-67-1/2 1 of 2

**FOOTING PLAN**

**WINGWALL ELEVATION**

CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL BAR LENGTH DIMENSIONS FOR THE WINGWALL REINFORCEMENT IN ACCORDANCE WITH DRAWINGS 511-67-1/2 AND 511-67-2/2.

NEW MEXICO DEPARTMENT OF TRANSPORTATION  
STANDARD DRAWING  
CONCRETE BOX CULVERT WINGWALL & OUTLET APRON ALL SKEWS STRUCTURAL SECTIONS AND REBAR

DESIGNED BY: JB, DRAWN BY: SGL, CHECKED BY: HDR  
511-67-2/2 2 of 2

**PLAN**

**SECTION A-A**

NOTES:

- THE RUNDOWN SHOULD BE EXTENDED TO THE BOTTOM OF THE SLOPE AND SKEWED TO MEET FIELD CONDITIONS.
- THE MAXIMUM DESIGN FLOW IS 12 CFS.
- USE T = 1'-0" CLASS "A" WIRE ENCLOSED RIPRAP WITH NON-WOVEN GEOTEXTILE CLASS "1". CONTRACTOR MAY SUBSTITUTE LOOSE RIPRAP AND ELIMINATE THE CUT-OFF WALL ON FLATTER SLOPES AS APPROVED BY THE PROJECT MANAGER OR AS SHOWN IN THE PLANS.
- THE GEOTEXTILE SHOULD BE PLACED BETWEEN THE SOIL AND THE WIRE ENCLOSED RIPRAP AS SHOWN TO PREVENT PIPING AND EXTEND HALFWAY UP THE SIDE OF THE RIPRAP CHANNEL. USE THE DIMENSIONS SHOWN UNLESS OTHERWISE CALLED FOR IN THE CONTRACT.
- THE WIRE ENCLOSED RIPRAP IS TO BE TIED VIA HOOKS TO THE CONCRETE WALL AT A MAXIMUM OF 2 FEET ON-CENTER.
- CONCRETE SHALL CONFORM TO SECTION 510 AND SHALL BE CLASS "A" REINFORCING STEEL SHALL CONFORM TO SECTION 540 AND SHALL CONFORM TO AASHTO M-31, GRADE 60.
- DESIGN ACCORDING TO AASHTO SPECIFICATIONS AND NEW MEXICO STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION.
- STAKES SHALL BE PLACED 12" FROM THE EDGES OF RIPRAP.
- AFTER PLACEMENT OF RIPRAP, SPREAD ENOUGH NATIVE SOIL OVER THE ENTIRE SURFACE OF THE RUNDOWN TO FILL THE Voids IN THE RIPRAP, THEN COMPACT THE BACKFILL SOIL AND SEED. THE COST SHALL BE INCIDENTAL TO THE RIPRAP.

NEW MEXICO DEPARTMENT OF TRANSPORTATION  
STANDARD DRAWING  
CUT OFF WALL WITH RIPRAP RUNDOWN TYPE III FOR ROADSIDE DITCH

DESIGNED BY: TLM, DRAWN BY: SGL, CHECKED BY: HDR  
515-05-4/4 4 of 4

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CHECKED BY: JAW	DATE: 10/2013

LOS PINOS ROADWAY IMPROVEMENTS		NMDOT SERIAL DRAWINGS
SHEET NO. 17		

**SECTION TYPE I**

**SECTION TYPE II**

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	$\frac{T}{27} (B + 4.123 V + 0.123 T)$

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**

- 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.
- 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 ANGLE. 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.
- 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.
- FOR DIMENSIONS A, B, V, & T. SEE BRIDGE OR ROADWAY PLANS.
- T=12' UNLESS OTHERWISE SHOWN ON PLANS; T=18' AT BRIDGES.
- 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.
- LACING SHALL BE CONTINUOUS AS FAR AS IS PRACTICAL AND SHALL PASS THROUGH EACH MESH OPENING.
- WHERE SPLICING IS NECESSARY, AN OVERLAP OF LACING OF AT LEAST 1 FOOT SHALL BE PROVIDED.

**"W" MESH**

**HEXAGONAL MESH**

**TYPICAL SECTION**

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
WIRE ENCLOSE RIPRAP CLASS "A"  
DESIGNED BY: \_\_\_\_\_ DRAWN BY: SKL CHECKED BY: YML  
602-01-1/1 1 of 1

**TEMPORARY EROSION & SEDIMENT CONTROL MEASURES (T.E.S.C.M.)**

**GENERAL NOTES**

- THE SOIL RETENTION BLANKET INSTALLATION DETAILS SHOWN FOR CULVERT PROTECTION SHALL BE USED FOR ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES UTILIZING SOIL RETENTION BLANKETS UNLESS OTHERWISE NOTED.
- ROCK PLATING USED IN THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THESE SHEETS SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES UNLESS OTHERWISE INDICATED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES PLACED WITHIN THE CONSTRUCTION CLEAR ZONE SHALL BE INSTALLED WITH 8:1 SLOPES PARALLEL TO TRAFFIC AND 4:1 SLOPES PERPENDICULAR TO TRAFFIC.
- SEDIMENT TRAPS SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN APPROXIMATELY 50% FILLED.
- CHECK DAMS SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN THE DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE CHECK DAM.
- CULVERT PROTECTIONS SHALL BE INSTALLED UPON INITIATION OF EARTH WORK ACTIVITIES AND MAINTAINED AS MUCH AS PRACTICAL UNTIL STABILIZATION IS COMPLETED AND ACCEPTED. CULVERT PROTECTIONS MAY BE REMOVED FOR PERIODS OF TIME AS REQUIRED DURING CONSTRUCTION TO COMPLETE ADJACENT IMPROVEMENTS.
- THE CONTRACTOR MAY CONSTRUCT AN EARTH DIKE AS SHOWN, OR RELOCATE THE CHECK DAMS AS CONSTRUCTION PROGRESSES. NO DIRECT PAYMENT SHALL BE MADE FOR RELOCATION OF THE CHECK DAMS.
- STRAW BALES ARE NOT INTENDED FOR USE ON NEW MEXICO DEPARTMENT OF TRANSPORTATION PROJECTS.

**TYPICAL USAGE OF SELECTED EROSION AND SEDIMENT CONTROL MEASURES**

**STANDARD SYMBOLS FOR EROSION AND SEDIMENT CONTROL MEASURES**

SILT FENCE	PIPE SLOPE DRAIN	SEDIMENT TRAP, BERM
STRAW BALE	DROP INLET PROTECTION	SEDIMENT TRAP, EXCAVATED
EARTH DIKE	CULVERT PROTECTION	SEDIMENT BASIN
DIVERSION CHANNEL (SWALE)	CHECK DAM	TRIANGULAR SEDIMENT FILTER DIKE
		TSFD

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
TEMPORARY EROSION & SEDIMENT CONTROL MEASURES  
SILT FENCE  
DESIGNED BY: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
603-01-1/7 SERIAL 1 OF 7

**TYPE III (STRAW BALE)**

**TYPE II (STONE DAM)**

**TYPE I SILT FENCE**

**TYPE II STRAW BALE OPTION**

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
TEMPORARY EROSION & SEDIMENT CONTROL MEASURES  
CHECK DAMS  
DESIGNED BY: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
603-01-2/7 SHEET 2 OF 7

**TYPE II STRAW BALE OPTION**

**TYPE I SILT FENCE**

**NOTES: SILT FENCE AND CHECK DAM**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE POST SPACING FOR SILT FENCES TO MINIMIZE MAINTENANCE.

- POST SPACING SHALL BE 4 FT. MAXIMUM WITHOUT SUPPORTING FENCE; 10 FT. MAXIMUM WITH SUPPORTING FENCE.
- POSTS FOR 4 FT. MAXIMUM POST SPACING SHALL BE 2 INCH SQUARE NOMINAL SIZE OR HEAVIER WOOD POSTS, OR STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 2 LBS. PER LINEAL FOOT.
- POSTS FOR 10 FT. MAXIMUM POST SPACING SHALL BE 4 INCH SQUARE NOMINAL SIZE OR HEAVIER WOOD POSTS, OR STEEL POSTS AS SPECIFIED ABOVE.
- SUPPORTING FENCE SHALL BE WIRE MESH (14 GA. MIN., 1 INCH MAX. MESH OPENINGS), SNOW FENCE, PLASTIC FENCE OR APPROVED.
- SUPPORTING FENCE SHALL BE FASTENED SECURELY TO POSTS WITH STAPLES OR WIRE TIES. GEOTEXTILE FABRIC SHALL BE FASTENED SECURELY TO SUPPORTING FENCE WITH WIRE TIES SPACED AT 2 FT. CENTERS ALONG THE TOP AND MID-SECTION. WHEN A SUPPORTING FENCE IS NOT USED, GEOTEXTILE FABRIC SHALL BE SECURELY FASTENED TO POSTS WITH STAPLES OR WIRE TIES.
- WHEN SILT FENCE IS USED FOR CHECK DAMS INSTALLED IN DITCHES, A SUPPORTING FENCE SHALL BE PROVIDED, WITH MAXIMUM POST SPACING OF 10 FT.
- STANDARD "T" OR "U" SECTION STEEL POSTS SHALL NOT BE USED WITHIN THE CONSTRUCTION CLEAR ZONE RECOVERY AREA.
- STRAW BALES ARE NOT INTENDED FOR USE ON NEW MEXICO DEPARTMENT OF TRANSPORTATION PROJECTS.

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
TEMPORARY EROSION & SEDIMENT CONTROL MEASURES  
SILT FENCE  
DESIGNED BY: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
603-01-3/7

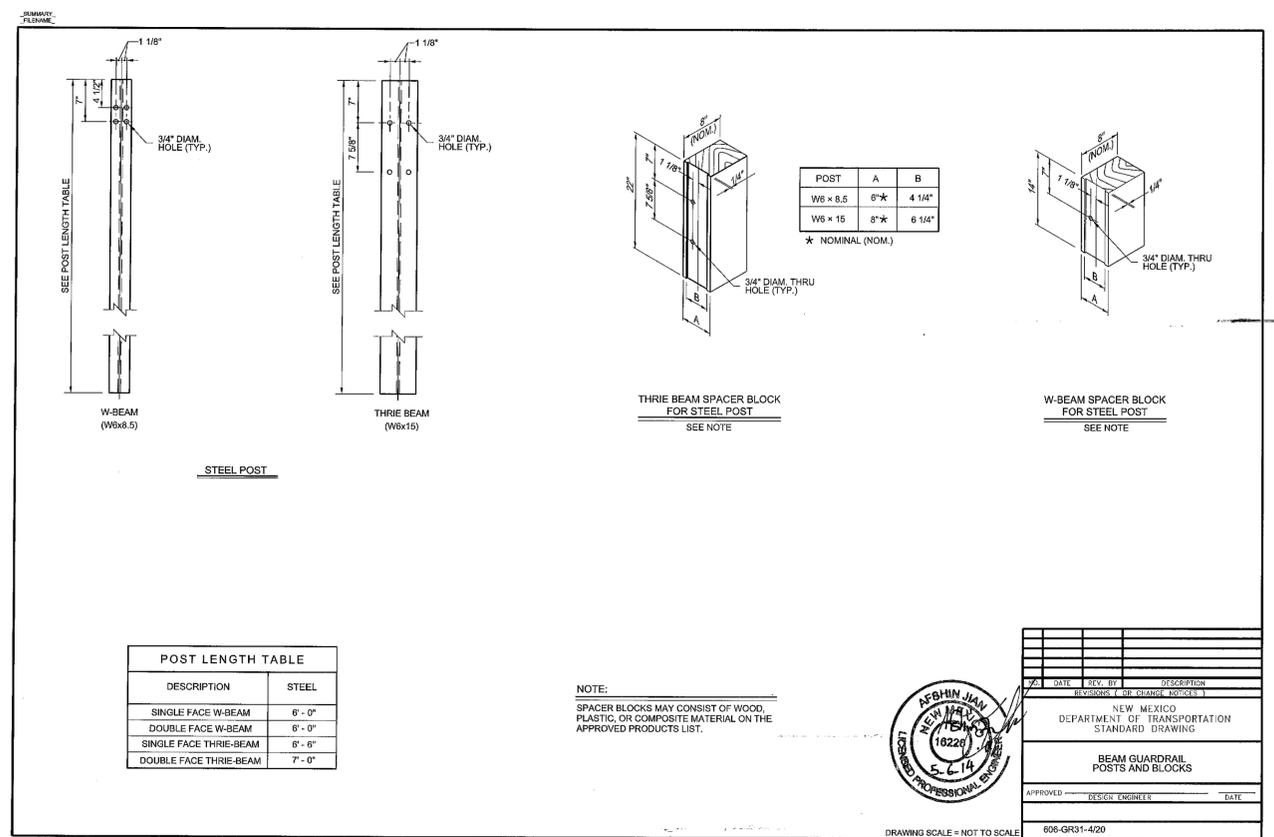
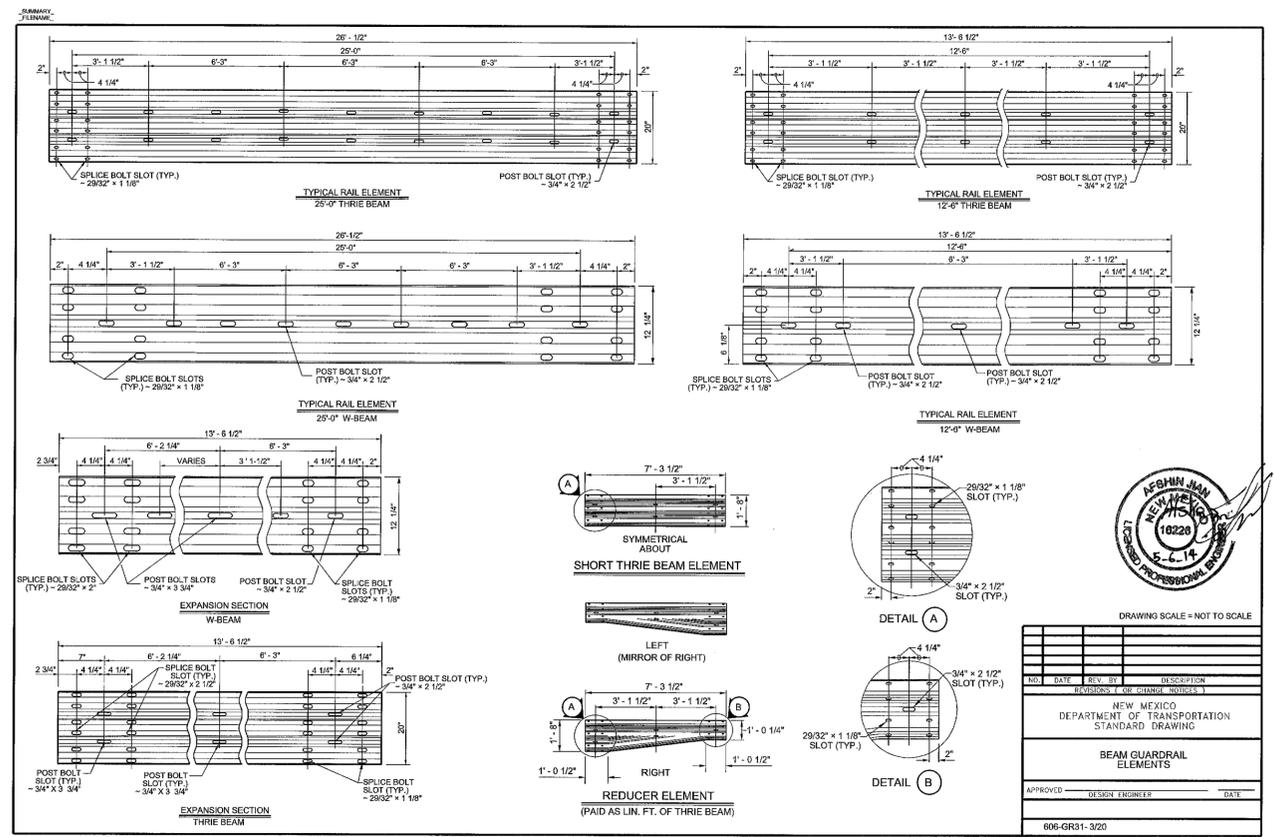
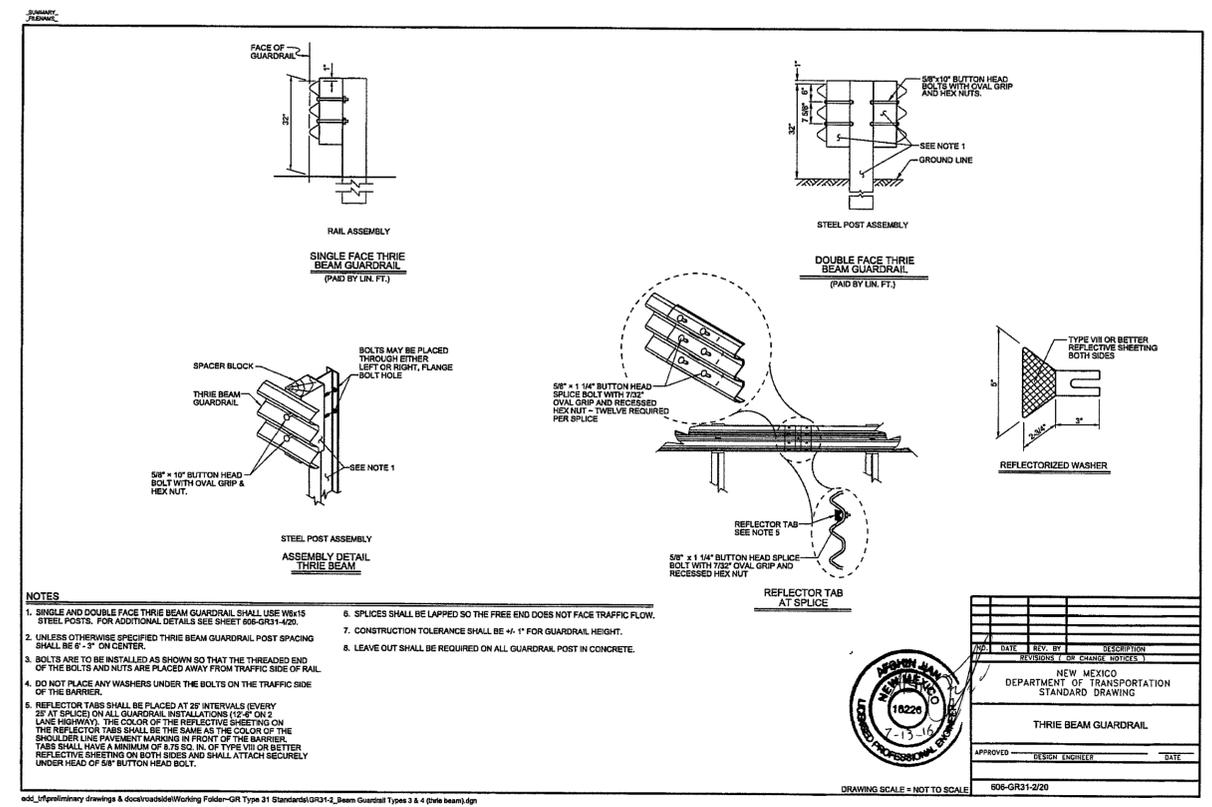
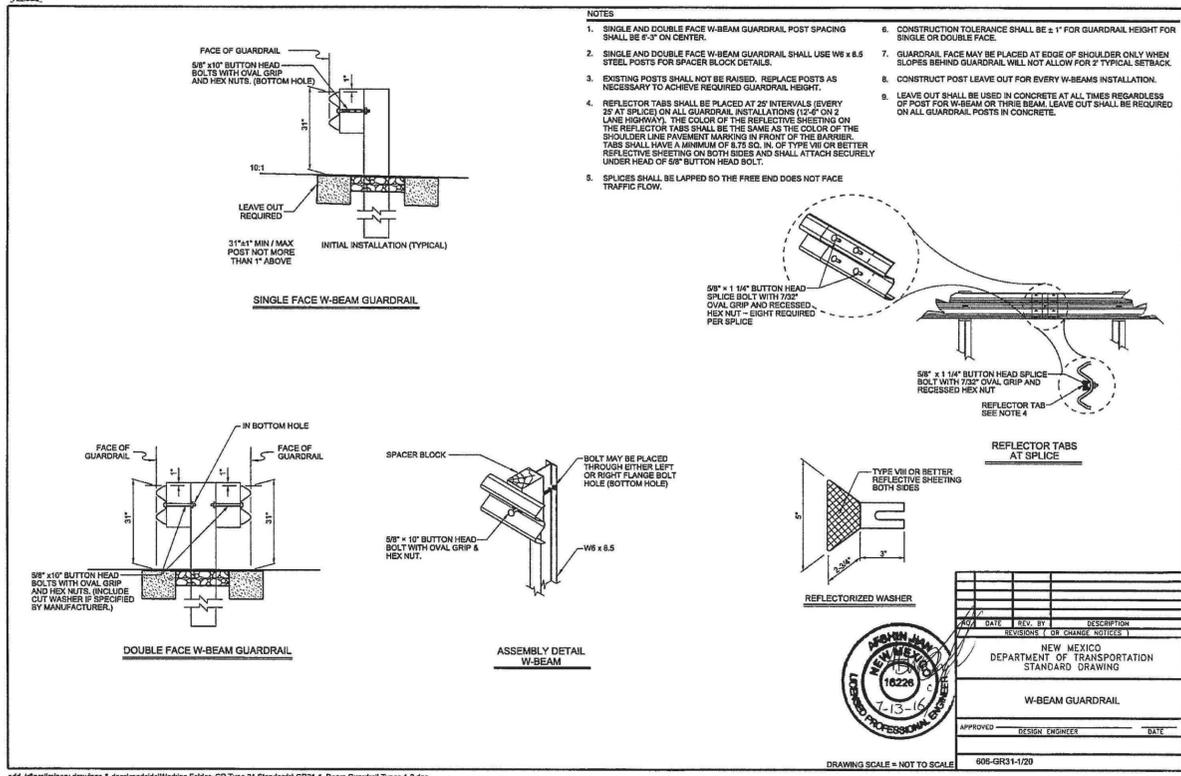
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**LOS PINOS ROADWAY IMPROVEMENTS**

**NMDOT SERIAL DRAWINGS**

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
TEMPORARY EROSION & SEDIMENT CONTROL MEASURES  
SILT FENCE  
DESIGNED BY: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
603-01-3/7

**SHEET NO. 18**



REVISIONS (OR CHANGE NOTICES)

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DATE: 10/2013  
CHECKED BY: JAW  
DATE: 10/2013

LOS PINOS ROADWAY IMPROVEMENTS

NMDOT SERIAL DRAWINGS

**W-BEAM GUARDRAIL POST RESTRAINED IN PAVEMENT DETAIL**

**STEEL POST DETAIL**

**WOOD POST DETAIL**

**NOTE:**  
1. CONSTRUCTION OF LEAVE-OUTS SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL.

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
**W-BEAM GUARDRAIL POST DETAILS IN PAVEMENT**

APPROVED: [Signature] DESIGN ENGINEER DATE: [Date]

DRAWING SCALE = NOT TO SCALE 606-GR31-5A20

**REINFORCING BAR SCHEDULE**

**GENERAL NOTES:**

- WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION.
- ALL CONCRETE TO BE CLASS "A" CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED ON THE DETAILS.
- ALL REINFORCING BARS SHALL CONFORM TO ASTM A 36, GRADE 60 AND DIMENSIONS REFER TO THE CENTERLINE OF BARS UNLESS NOTED OTHERWISE ON THE DETAILS.
- STRUCTURAL STEEL TO BE CARBON STEEL CONFORMING TO ASTM A 36. SHOP PLANS MUST BE APPROVED BY THE BRIDGE ENGINEER BEFORE FABRICATION IS STARTED.
- CONTRACTOR SHALL VERIFY IN THE FIELD ALL DIMENSIONS, ELEVATIONS, AND DETAILS PERTAINING TO THE STRUCTURE WHICH WILL BE INVOLVED PRIOR TO CONSTRUCTION.
- POST SHALL BE SET VERTICAL AND ACCURATELY ALIGNED. FINAL POSITION SHALL BE SECURED BY COMPLETELY FILLING THE SPACE BETWEEN THE POST AND SLEEVE WITH SAND.
- EITHER WOOD POSTS OR STEEL POSTS MAY BE USED EXCEPT THAT ONLY ONE TYPE OF POST SHALL BE USED ON ANY ONE INSTALLATION.
- THESE LENGTH OF THE FOOTING SHALL BE SUFFICIENT TO ALLOW ONE POST AT EACH END TO BE INSTALLED TO THE FULL EMBEDMENT DEPTH REQUIRED FOR METAL BARRIER POSTS. THESE END POSTS ARE TO BE INSTALLED THROUGH THE SLEEVE IN THE FOOTING TO THIS REQUIRED DEPTH AND SECURED IN THE SLEEVE IN THE SAME MANNER AS REQUIRED FOR THE SHORTER LENGTH POSTS.
- THE MINIMUM FOOTING IS TO SUPPORT 4 POSTS AND BE 14'-4 1/2" LONG. THE LENGTH OF THE FOOTING IS TO BE INCREASED IN THE INCREMENTS OF 3'-1 1/2".
- SEE SERIAL 606-01-1/4 THRU 606-01-4/4 FOR METAL BARRIER MATERIALS AND PLACEMENT PROCEDURES.

**ESTIMATED QUANTITIES**  
(FOR ONE FOOTING "L" = 14'-02")

ITEM	UNIT	FOR MINIMUM FOOTING	FOR EACH INCREMENT
STRUCTURAL CONCRETE CLASS "A"	CU YDS.	2.0	0.41
REINFORCING BARS GRADE 60	LBS.	255	58.0
STRUCTURAL STEEL FOR MISC. STRUCTURES ASTM A36	LBS.	165 FOR WOOD POSTS 115 FOR STEEL POSTS	41.37 FOR WOOD POSTS 28.61 FOR STEEL POSTS

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
**METAL BARRIER POST FOOTING**

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]

606-03-1/1 1 of 1

**W-BEAM GUARDRAIL STANDARD INSTALLATION AND SURFACING DETAILS**

**THREE BEAM GUARDRAIL STANDARD INSTALLATION AND SURFACING DETAILS**

**W-BEAM GUARDRAIL AT FACE OF CURB ALL DESIGN SPEEDS**

**W-BEAM GUARDRAIL AWAY FROM CURB FACE DESIGN SPEEDS LESS THAN 45 MPH AND 45 TO 50 MPH**

**NOTES:**

- STANDARD BEAM GUARDRAIL POST SPACING FOR SINGLE AND DOUBLE FACE W-BEAM AND THREE BEAM SHALL BE 6'-0" ON CENTER.
- FOR POST AND BLOCK DETAILS, SEE SHEET 606-GR31-4/20.
- CONSTRUCTION TOLERANCE SHALL BE ± 1/2" FOR GUARDRAIL HEIGHT.
- GUARDRAIL FACE MAY BE PLACED AT EDGE OF SHOULDER WHEN SLOPES BEHIND GUARDRAIL WILL NOT ALLOW FOR 2" TYPICAL SETBACK WHILE MAINTAINING THE MINIMUM Z DISTANCE FROM THE SLOPE HINGE POINT.
- POST LEAVE OUT SHALL BE OBSERVED WHEN POSTS ARE RESTRAINED BY ROCK, ASPHALT OR CONCRETE. SEE SHEET 606-GR31-5/20.
- SINGLE FACE GUARDRAIL CAN BE USED WITH ANY COMBINATION OF SLOPING FACED CURB THAT IS 6" OR SHORTER IF INSTALLED FLUSH WITH THE FACE OF THE GUARDRAIL ON ROADS WITH DESIGN SPEEDS UP TO 50 MPH. FOR DESIGN SPEEDS FROM 50 MPH TO 60 MPH A 4" OR SHORTER SLOPING CURB IS RECOMMENDED FOR INSTALLATION WHERE THE FACE OF THE CURB IS FLUSH WITH THE FACE OF THE GUARDRAIL. FOR DESIGN SPEEDS ABOVE 60 MPH THE SLOPING FACE OF THE CURB SHALL BE 1/8" OR FLATTER AND NO TALLER THAN 4" HIGH. THE GUTTER LINE OF THE CURB SHALL BE CONSIDERED TO BE THE SAME LOCATION AS THE FACE OF THE CURB AND SHALL ALSO BE THE LOCATION FROM WHERE GUARDRAIL HEIGHT IS MEASURED.
- SINGLE FACE GUARDRAIL MAY BE USED WITH 8" HIGH OR SHORTER SLOPING FACED CURB AS LONG AS THE FACE OF THE GUARDRAIL IS LOCATED AT LEAST 8" FT. BEHIND THE FACE OF THE CURB ON ROADS WHERE THE DESIGN SPEED IS UP TO 45 MPH. FOR DESIGN SPEEDS FROM 45 TO 50 MPH GUARDRAILS MAY BE USED WITH 4" HIGH OR SHORTER SLOPING CURBS AS LONG AS THE FACE OF THE METAL BARRIER IS LOCATED AT LEAST 15 FT. BEHIND THE CURB. THE GUTTER LINE OF THE CURB SHALL BE WHERE OFFSET TO RAIL FACE AND RAIL HEIGHT IS MEASURED.

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
**TYPICAL INSTALLATION AND SURFACING DETAILS**

APPROVED: [Signature] DESIGN ENGINEER DATE: [Date]

DRAWING SCALE = NOT TO SCALE 606-GR31-6/20

**PLAN**

**DETAIL A**

**ELEVATION**

**DETAIL B**

**NOTES:**

- ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE N.M.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION (CURRENT EDITION).
- ALL HARDWARE SHALL MEET FHWA CROWTHORNSNESS REQUIREMENTS AS PER NCHRP 350 GUIDELINES AND SHALL BE ON THE DEPARTMENT'S APPROVED PRODUCT LIST.
- SEE SERIAL 606-01-1/2 AND 606-02-1/1 FOR W-BEAM GUARDRAIL.
- SEE SPECIAL ANCHOR, SERIAL 606-06-3/3, FOR SOIL PLATE AND BEARING PLATE DETAILS.
- ATTACH W-BEAM TO STEEL PIPE WITH BUTTON HEAD BOLT WITH NO WASHER. NO CONNECTION TO POST IS REQUIRED.
- BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 563 AND NUTS TO THE REQUIREMENTS OF ASTM A 563, GRADE A OR BETTER, AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.
- WIRE ROPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 30 AND SHALL BE 3/4" INCH PREFORMED, 6X19, WIRE STRAND CORE OR INDEPENDENT WIRE ROPE CORE, GALVANIZED, RIGHT REGULAR LAY, MANUFACTURED OF IMPROVED FLOW STEEL WITH MINIMUM BREAKING STRENGTH OF 42,800 POUNDS.
- ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 36 AND STRUCTURAL TUBING TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. NO PUNCHING, DRILLING, CUTTING, OR WELDING WILL BE PERMITTED AFTER GALVANIZING.
- THE YELLOW REFLECTIVE SHEETING SHALL CONSIST OF AN 8" X 12" STRIP OF YELLOW REFLECTIVE SHEETING THAT CONFORMS TO THE SHAPE SHOWN. THIS ITEM IS INCIDENTAL TO METAL BARRIER ANCHORAGE AND NO SEPARATE PAYMENT WILL BE MADE.
- THE TYPE "B" END ANCHORAGE SHALL ONLY BE USED ON LOW SPEED ROADWAYS (45 MPH OR LESS).
- REFER TO "A" GUIDE TO STANDARDIZED BARRIER HARDWARE AN AASHTO, ACO, AND ARBA TASK FORCE REPORT FOR SPECIFIC HARDWARE DETAILS.

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
**CURVED GUARD RAIL TYPE B END ANCHORAGE**

APPROVED: [Signature] DESIGN ENGINEER DATE: [Date]

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]

606-06-2/3 SHEET 2 OF 3

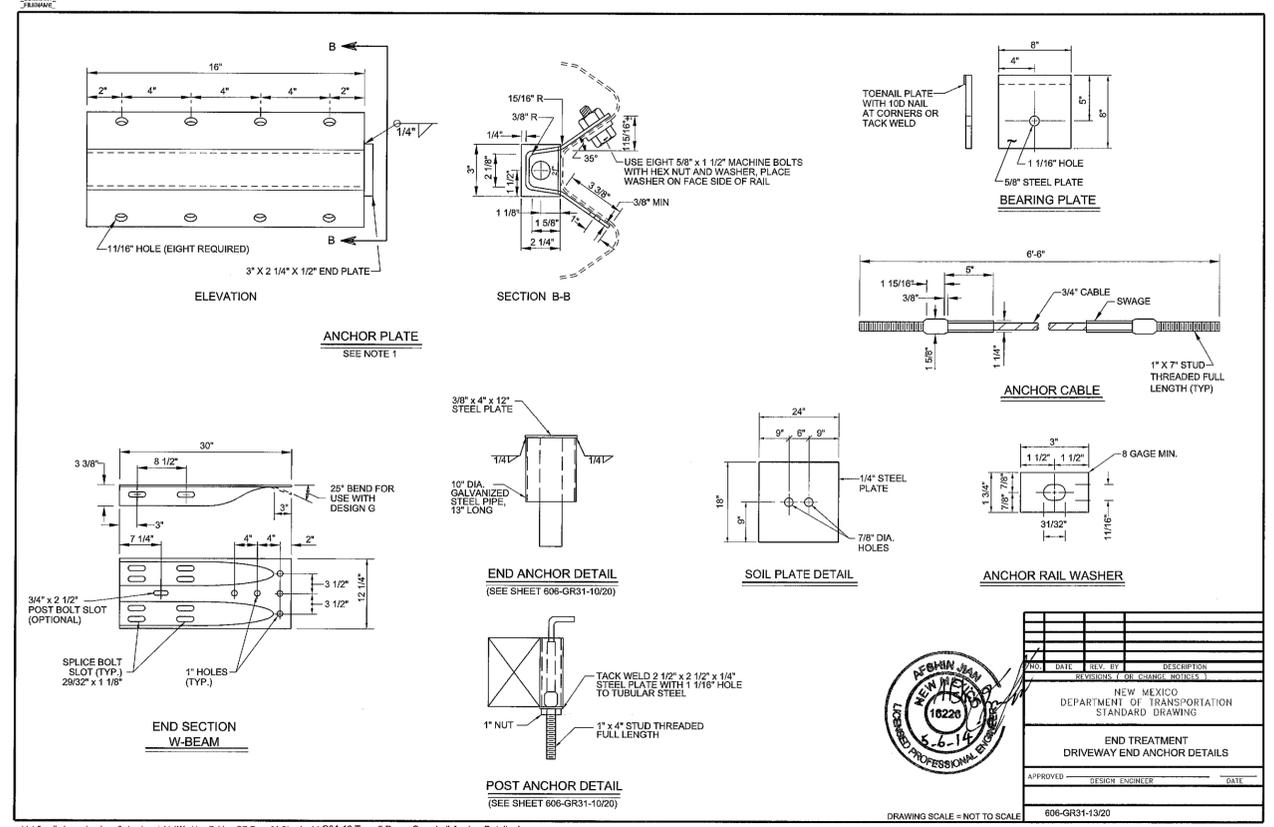
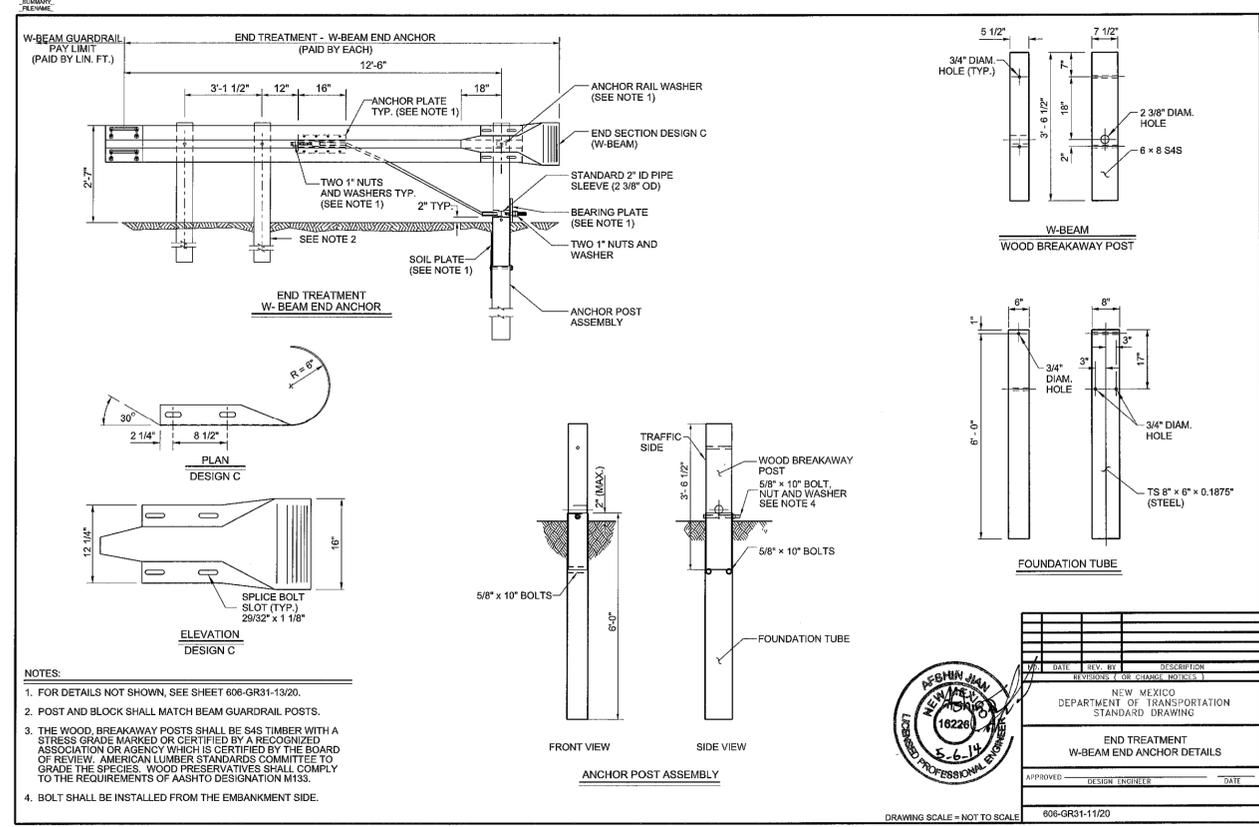
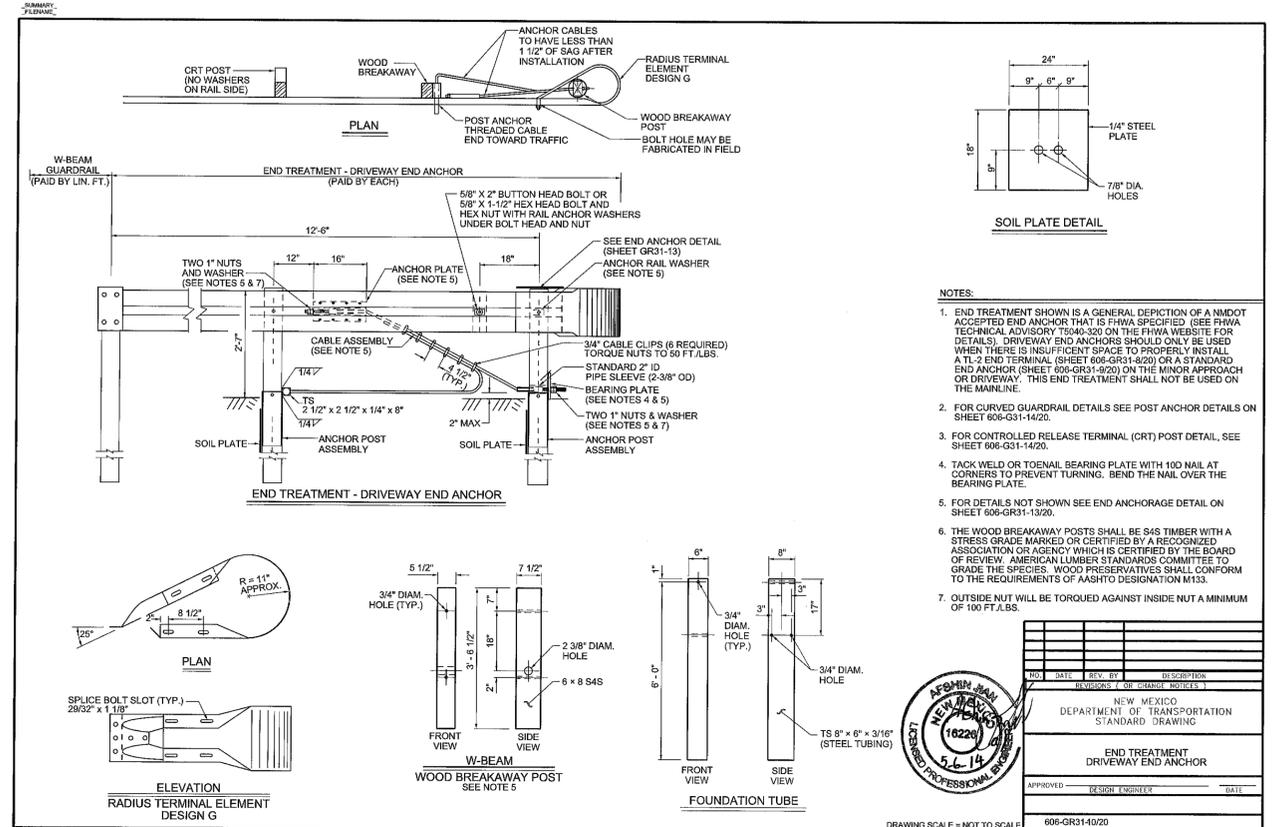
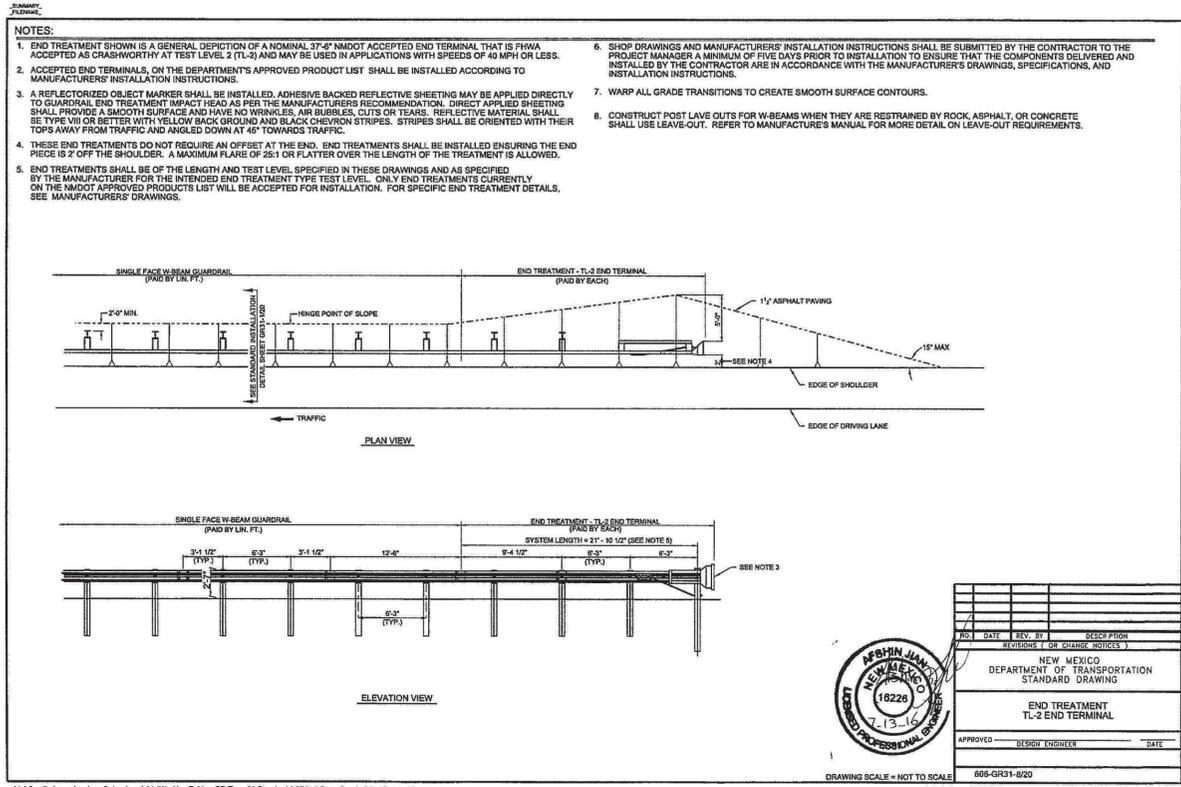
REVISIONS (OR CHANGE NOTICES)

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DRAWN BY: LAH  
DATE: 10/2013  
CHECKED BY: JAW  
DATE: 10/2013

LOS PINOS ROADWAY IMPROVEMENTS

NMDOT SERIAL DRAWINGS



**SUMMARY:**  
7. DRAWING

**NOTES:**

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION (CURRENT EDITION).
- ALL HARDWARE SHALL MEET FHWA CRASH-WORTHINESS REQUIREMENTS AS PER NCHRP 350 AND MASH GUIDELINES AND SHALL BE ON THE DEPARTMENT'S APPROVED PRODUCT LIST.
- THE RAIL IS NOT BOLTED TO THE CRT POST AT THE CENTER OF THE NOSE FOR THE 9'-6" RADIUS INSTALLATION ONLY.
- NO WASHERS ARE USED ON THE 5/8" BUTTON HEAD BOLTS CONNECTING THE RAIL TO THE CRT POSTS.
- THE CURVED GUARDRAIL SECTION SHALL BE SHOP FABRICATED.
- THE SLOPE IN FRONT OF THE CURVED GUARDRAIL SHOULD NOT EXCEED 15:1.
- CURVED GUARDRAIL SHALL ONLY BE USED ON OPERATING SPEEDS OF 60 MPH OR LESS. 35' RADIUS CURVED GUARDRAIL SHOULD ONLY BE USED ON OPERATING SPEEDS OF 50 MPH OR LESS.
- CURVED GUARDRAIL SHALL BE PAID AS SINGLE FACE W-BEAM GUARDRAIL.

RADIUS	NO. OF CRT POINTS	NOMINAL LENGTH OF BENT RAIL	REQUIRED AREA FREE OF FIXED OBJECTS
8'-6"	5	12'-6"	25' X 15'
17'	6	25'	30' X 15'
25'-6"	8	37'-6"	40' X 20'
35'	11	50'	50' X 20'

**SECTION A-A**  
1 1/2" WASHER  
3/4" HOLE WITH SNUG FITTING INSERT, 3/8" I.D. 7 1/2" LONG

**SECTION B-B**  
CONTROLLED RELEASING TERMINAL POST (CRT)

**SECTION C-C**  
WEX8.5 STEEL POST

**APPROVED:** [Signature] DESIGN ENGINEER DATE: 5-6-14

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
606-GR31-1420

DRAWING SCALE = NOT TO SCALE

**SUMMARY:**  
7. DRAWING

**NOTES:**

- END SECTION DESIGN C SHALL BE USED EXCEPT WHERE NOTED ON THE PLANS OR CONTRACT.
- ATTACH GUARDRAIL TO BRIDGE RAIL OR CONCRETE BARRIER WITH 7/8" DIAMETER BOLTS (FIVE MINIMUM) WITH THIN SLAB FERRULE INSERTS OR RESIN BONDED ANCHORS. SEE THE CONTRACT PLANS.
- A SINGLE PIECE HAVING SIMILAR DIMENSIONAL SHAPE TO DESIGN G AND MATING WITH THE W-BEAM GUARDRAIL IS AN ACCEPTABLE ALTERNATE.
- IN CASES WHERE DESIGN "F" END SECTION IS LAPPED ON THE OUTSIDE OF THE GUARDRAIL, A GALVANIZED 1" ID, 2" OD, 0.134" THICK, NARROW TYPE A PLAIN WASHER OR AN ANCHOR RAIL WASHER SHALL BE PLACED UNDER THE SPLICE BOLT HEADS.

**APPROVED:** [Signature] DESIGN ENGINEER DATE: 5-6-14

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
606-GR31-2020

DRAWING SCALE = NOT TO SCALE

**GENERAL NOTES:**

- DRAWINGS APPLY TO EITHER STRUCTURAL ANGLES OR TUBULAR POSTS.
- SEE TABLE FOR METAL TUBULAR POST DIMENSIONS.

TYPE	O.D. INCHES	WT. LBS./LN. FT.
BRACE POSTS	1.66	2.27
INTERMEDIATE POSTS	2.875	5.79
CORNER POSTS	4.00	9.11
GATE POSTS, UP TO 18 FEET	4.00	9.11

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
607-01-114

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 1/12/14

SHEET 1 OF 4

**BRACE ATTACHMENT DETAIL**  
TOP VIEW  
FRONT ELEVATION

**ALTERNATE BRACE ATTACHMENT DETAIL**  
TOP VIEW  
FRONT ELEVATION

**TYPICAL INTERMEDIATE INSTALLATION**

**TYPICAL PLAN VIEW ILLUSTRATING METHOD OF PLACING FENCE**

**TYPICAL CORNER BRACE INSTALLATION**

**TYPICAL FENCE INTERSECTION INSTALLATION**

**NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING**  
607-01-2/4

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 1/12/14

SHEET 2 OF 4

**REVISIONS (OR CHANGE NOTICES)**

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**DRAWN BY:** LAH  
**DATE:** 10/2013  
**CHECKED BY:** JAW  
**DATE:** 10/2013

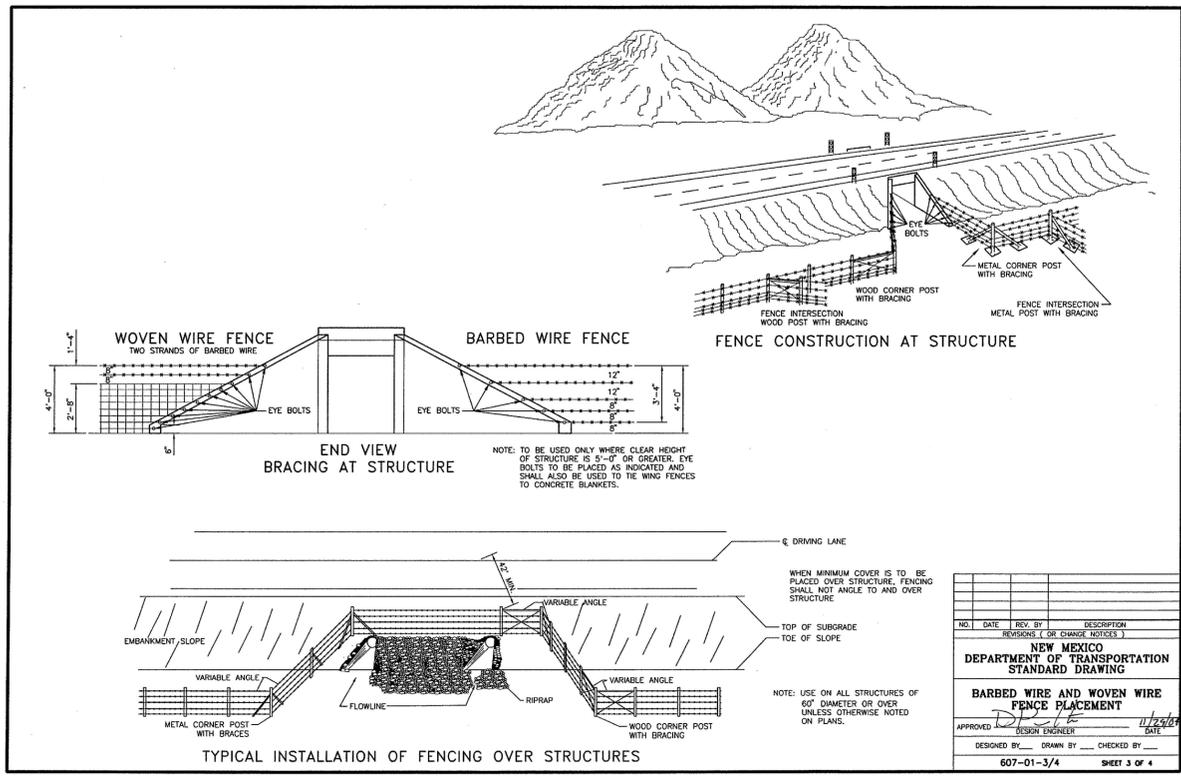
**LOS PINOS ROADWAY IMPROVEMENTS**

**NMDOT SERIAL DRAWINGS**

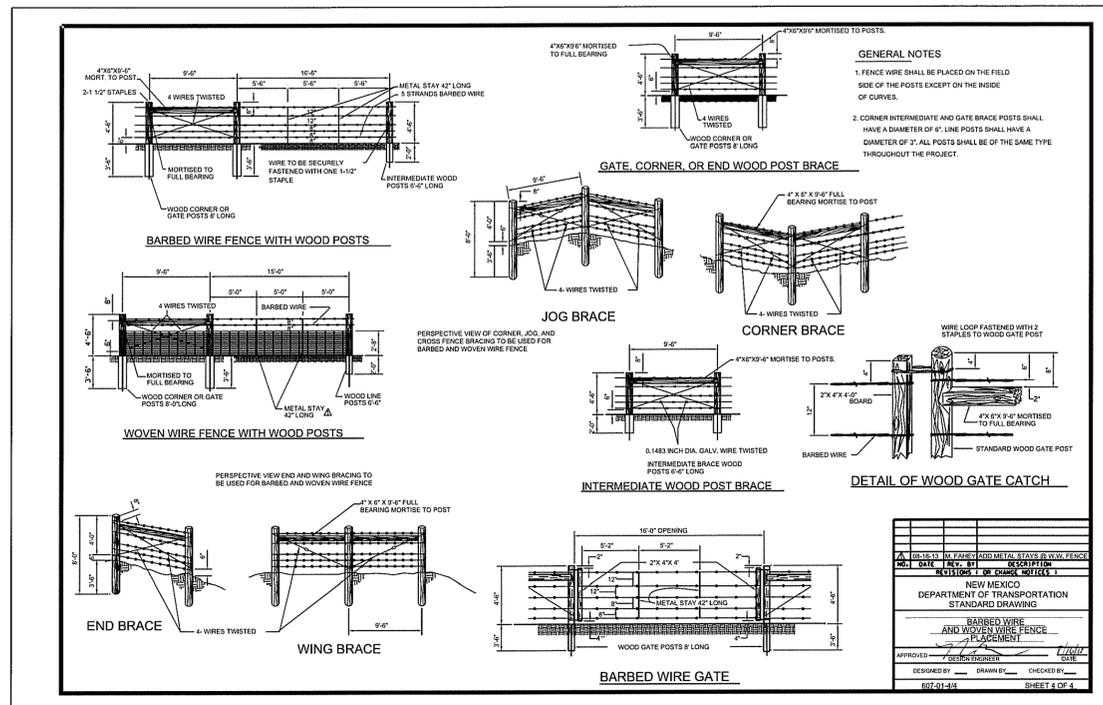
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607-01-2/4

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 1/12/14

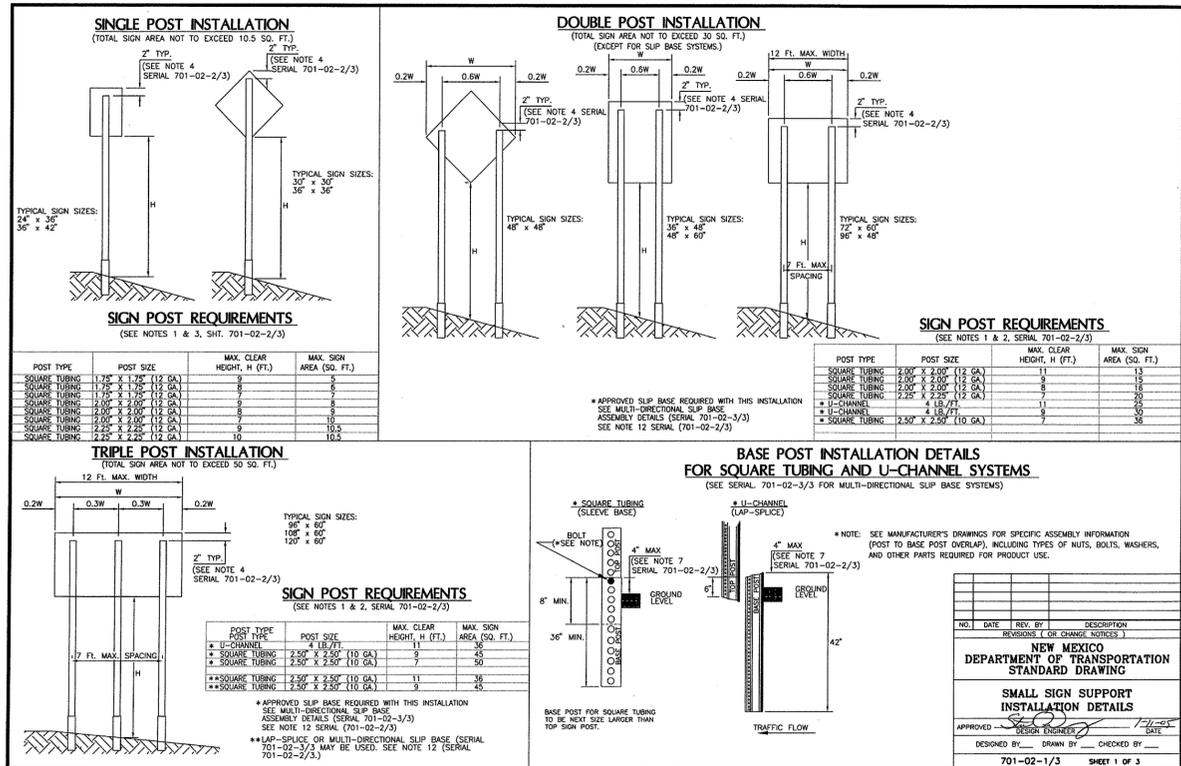
SHEET 2 OF 4



NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
<b>BARBED WIRE AND WOVEN WIRE FENCE PLACEMENT</b>			
APPROVED	DESIGN ENGINEER	DATE	
DESIGNED BY	DRAWN BY	CHECKED BY	
607-01-3/4		SHEET 3 OF 4	



NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
<b>BARBED WIRE AND WOVEN WIRE FENCE PLACEMENT</b>			
APPROVED	DESIGN ENGINEER	DATE	
DESIGNED BY	DRAWN BY	CHECKED BY	
607-01-1/4		SHEET 4 OF 4	



### MULTI-DIRECTIONAL SLIP BASE DETAILS

SEE APPROVED PRODUCT LIST FOR APPROVED EQUALS.

#### SQUARE TUBING SLIP BASE

DETAIL "A" - CONCRETE ANCHOR  
(NOT TO EXCEED 4" ABOVE GROUND LEVEL)

DETAIL "B" - SOIL ANCHOR  
(NOT TO EXCEED 4" ABOVE GROUND LEVEL)

ANCHOR TOP VIEW

NOTES:  
1. CONCRETE SHOULD BE A MINIMUM OF 12" IN DIAMETER AND 30" DEEP.  
2. CLASS "A" CONCRETE SHALL BE USED. THE COST SHALL BE INCIDENTAL TO THE PRICE OF STEEL POSTS & BASE POSTS FOR ALUMINUM PANEL SIGNS.

#### U-CHANNEL SLIP BASE

NOTE: BOLTS SHOULD BE TIGHTENED 1/2 TO 3/4 TURN AFTER SNUG.

NOTE: TIGHTEN NUT 1/3 TO 1/2 TURN AFTER SNUG.

NO.	DATE	REV. BY	DESCRIPTION
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
MULTI-DIRECTIONAL SLIP BASE POST DETAILS			
APPROVED:	DESIGN ENGINEER	DATE	
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
701-02-3/3		SHEET 3 OF 3	

### MULTI-DIRECTIONAL SLIP BASE DETAILS (Continued)

#### TYPICAL (SEE NOTES)

SQUARE TUBING POSTS

U CHANNEL SUPPORT POSTS

#### ALTERNATE (SEE NOTES)

SQUARE TUBING POSTS

I-BEAM SUPPORT POSTS

**GENERAL NOTES:**

- BACKING ZEE SHALL BE ALUMINUM ALLOY 6061-T6. EACH ZEE SHALL BE PROVIDED WITH A 9/16" X 2" HORIZONTAL SLOT FOR EACH POST MOUNTING BOLT.
- BACKING ZEE SHALL BE FASTENED TO THE SIGN BLANK WITH 1/4" - 20 X 3/4" FLAT HEAD COUNTER SUNK MACHINE SCREWS WITH NUT AND LOCK WASHER (CADMIUM OR GALVANIZED OR 2024-T4 ALUMINUM-ALLOY) FASTENERS AT 9" +/- 1/2" INTERVALS.
- BACKING ZEE WITH SIGN FACES SHALL BE FASTENED TO THE SIGN SUPPORT POST WITH 5/16" CARRIAGE BOLT, TAMPER RESISTANT NUT & TWO WASHERS GALVANIZED OR CADMIUM PLATED TO ASTM B-766 SPECIFICATION.
- BACKING ZEE IS NOT NEEDED WHERE SIGN IS TO BE MOUNTED ON ONE POST AND IS APPROXIMATELY TEN AND A HALF (10.5) SQUARE FEET OR LESS.
- ALTERNATE BACKING MAY BE 1-1/2" PERFORATED SQUARE TUBING AND ASSOCIATED HARDWARE, DESCRIBED IN SERIAL 701-02-1/2 AND 701-02-2/2.
- ALUMINUM PANEL SIGNS UNDER 24" IN WIDTH SHALL BE 0.007" MINIMUM THICKNESS 6061-T6 OR 5052-H38 ALUMINUM ALLOY. ALUMINUM PANEL SIGNS 24" AND OVER IN WIDTH SHALL BE SINGLE SHEET 6061-T6 OR 5052-H38 ALUMINUM ALLOY 1/8" MINIMUM THICKNESS.
- BACKING ZEES SHALL BE 3" X 2-3/4" X 1/4" AT 2.33 LBS. PER FT. FOR 6061-T6 ALUMINUM.
- EXPOSED BOLT HEADS ON THE FACE OF THE SIGN SHALL BE COLORED AND REFLECTORIZED TO MATCH THE SURROUNDING COLOR.

NO.	DATE	REV. BY	DESCRIPTION
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
ALUMINUM SIGN PANEL DETAILS			
APPROVED:	DESIGN ENGINEER	DATE	
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
701-03-1/2		SHEET 1 OF 2	

### MULTI-DIRECTIONAL SLIP BASE DETAILS (Continued)

#### TYPICAL BACKING ZEE SPACING

#### TYPICAL HORIZONTAL SEAM CLOSURE

**GENERAL NOTES:**

- BACKING ZEE SHALL BE ALUMINUM ALLOY 6061-T6. EACH ZEE SHALL BE PROVIDED WITH A 9/16" X 2" HORIZONTAL SLOT FOR EACH POST MOUNTING BOLT.
- BACKING ZEE SHALL BE FASTENED TO THE SIGN BLANK WITH 1/4" - 20 X 3/4" FLAT HEAD COUNTER SUNK MACHINE SCREWS WITH NUT AND LOCK WASHER (CADMIUM OR GALVANIZED OR 2024-T4 ALUMINUM-ALLOY) FASTENERS AT 9" +/- 1/2" INTERVALS.
- BACKING ZEE WITH SIGN FACES SHALL BE FASTENED TO THE SIGN SUPPORT POST WITH 5/16" CARRIAGE BOLT, TAMPER RESISTANT NUT & TWO WASHERS GALVANIZED OR CADMIUM PLATED TO ASTM B-766 SPECIFICATION.
- BACKING ZEE IS NOT NEEDED WHERE SIGN IS TO BE MOUNTED ON ONE POST AND IS APPROXIMATELY TEN AND A HALF (10.5) SQUARE FEET OR LESS.
- ALTERNATE BACKING MAY BE 1-1/2" PERFORATED SQUARE TUBING AND ASSOCIATED HARDWARE, DESCRIBED IN SERIAL 701-02-1/2 AND 701-02-2/2.
- ALUMINUM PANEL SIGNS UNDER 24" IN WIDTH SHALL BE 0.007" MINIMUM THICKNESS 6061-T6 OR 5052-H38 ALUMINUM ALLOY. ALUMINUM PANEL SIGNS 24" AND OVER IN WIDTH SHALL BE 1/8" MINIMUM THICKNESS 6061-T6 OR 5052-H38 ALUMINUM ALLOY.
- BACKING ZEES SHALL BE 3" X 2-3/4" X 1/4" AT 2.33 LBS. PER FT. FOR 6061-T6 ALUMINUM.
- EXPOSED BOLT HEADS ON THE FACE OF THE SIGN SHALL BE COLORED AND REFLECTORIZED TO MATCH THE SURROUNDING COLOR.

NO.	DATE	REV. BY	DESCRIPTION
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
ALUMINUM SIGN PANEL DETAILS			
APPROVED:	DESIGN ENGINEER	DATE	
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
701-03-2/2		SHEET 2 OF 2	

### SIGN FACE DETAILS

FOR CONSTRUCTION / MAINTENANCE

- SIGNS SHALL MEET SPECIFICATIONS IN THE STANDARD HIGHWAY SIGNS MANUAL AND CURRENT EDITION OF THE MUTCD.
- SEE CURRENT EDITION OF MUTCD FOR ADDITIONAL SIGNS.
- ALL SIGNS SHALL COMPLY WITH SHEETING REQUIREMENTS AS SPECIFIED IN STANDARD DRAWING 702-01-3/3.
- SIGN SIZES MAY BE ADJUSTED PER MUTCD RECOMMENDATIONS.

**WARNING SIGNS:**

ALL WARNING SIGNS ARE BLACK/FLUORESCENT ORANGE UNLESS OTHERWISE SPECIFIED.

W1-2L-48	W1-2R-48	W1-4L-48	W1-4R-48	W1-4BL-48	W1-4BR-48
W1-4CL-48	W1-4L-48	W1-6R-48	W1-8L-48	W3-4-48	W3-5-48
W4-2R-48	W4-2L-48	W5-1-48	W6-3-48	W8-1-48	W8-3-48
W8-7-48	W11-1-48	W11-2-48	W13-1-24-XX	W13-2-36-XX	W13-3-36-XX
W13-2-48-XX	W13-3-48-XX	W20-7-48			
M4-9R-30	M4-9L-30	G20-1-48-24	G20-2-48	G20-4-36	

\* THESE SIGNS REQUIRE APPROPRIATE DISTANCE INDICATION (1/2 MILE, 1 MILE, 1500 FT., 750 FT., 500 FT., 350 FT.)

W8-6-48-XX	W20-1-48-XX	W20-2-48-XX	W20-4-48-XX
W20-5L-48-XX	W20-5R-48-XX	W21-50-48-XX	W24-MM-17-48-XX

**REGULATORY SIGNS:**

R1-1-36	R1-2-36	R2-1-36-XX	R2-1-48-XX	SP-10R-48	SP-10L-48
WIR, RL-RB	WIR	BW	BW	WB, RB/RL	WB, RB/RL
R11-AM-2-48	R11-2-48	R11-3-60	R11-4-60		
B/W	B/W	B/W	B/W		

**8 FT. TYPE III BARRICADES**

**BARRICADE SYMBOL**

R11-2-48	R11-2-48	R11-2-48	R11-2-48
ROAD CLOSED	ROAD CLOSED	ROAD CLOSED	ROAD CLOSED
W13-48 OR	W13-48 OR	W13-48 OR	W13-48 OR
M4-10L-48	M4-10L-48	M4-10L-48	M4-10L-48
R11-2-48	R11-2-48	R11-2-48	R11-2-48
ROAD CLOSED	ROAD CLOSED	ROAD CLOSED	ROAD CLOSED
B1-1 (RL)-98	B1-1 (RL)-98	B1-1 (RL)-98	B1-1 (RL)-98
(NO TURNS AVAILABLE)	(NO TURNS AVAILABLE)	(NO TURNS AVAILABLE)	(NO TURNS AVAILABLE)
			(LEFT & RIGHT TURNS AVAILABLE)

NO.	DATE	REV. BY	DESCRIPTION
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
CONSTRUCTION & MAINTENANCE SIGN FACE DETAILS			
APPROVED:	DESIGN ENGINEER	DATE	
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
702-01-3/5		SHEET 1 OF 5	

NO.	DATE	DESCRIPTION	DATE BY
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REVISIONS (OR CHANGE NOTICES)

LOS PINOS ROADWAY IMPROVEMENTS

NMDOT SERIAL DRAWINGS

DRAWN BY: LAH

DATE: 10/2013

CHECKED BY: JAW

DATE: 10/2013

SHEET NO. 24

**TRAFFIC CONTROL GENERAL NOTES:**

- Traffic Control:** All Temporary Traffic Control (TTC) shall be placed in accordance with the NMDOT Standard Specifications for Highway and Bridge Construction (latest edition) and the Manual on Uniform Traffic Control Devices (latest edition) and current revisions with the following constraints:
  - No substitutions will be allowed for channelization devices type drum unless otherwise noted in the plans.
  - Temporary portable sign stands are an unnecessary hazard when not in use. Unused temporary sign stands shall be removed from the roadway. If temporary sign stands are staged for future use (approved by the project manager) they shall be folded up and stored away from the paved shoulder.
  - Use of Type I or II barricades on roadways with speed limit greater than 40 mph is strictly prohibited.
  - The work zone shall comply with, but not limited to, NCHRP 476 Guidelines for Design and Operation of Nighttime Traffic Control.
- BOP and EOP Signage:** BOP and EOP signing in accordance with Standard Drawing 702-03-1/1 shall be placed at the project limits prior to construction operations commencing and shall remain in place throughout the duration of the project or as directed by the project manager. Advance warning signs shall be placed at all side streets.
- FLAGGING:** Flagging shall be provided for safety per the plan or as directed by the project manager and shall conform to the MUTCD latest edition. The flaggers, applicable signs and other related items shall be considered incidental to the completion of the project and no separate measurement or payment will be made.
  - All flaggers shall be certified and shall have their certification available for review at all times when on duty.
  - Flagging operations shall adhere to NCHRP 476 Guidelines for Design and Operation of Nighttime Traffic Control. Flaggers shall wear high-visibility safety apparel that meets Performance Class 2 or 3.
- INGRESS AND EGRESS:** The contractor shall provide ingress and egress to local residences and businesses for the duration of the project. If access closure is required, the contractor shall request the closure through the project manager. Upon approval, the contractor shall coordinate such closure with the property owners and the project manager at least 48 hours in advance. All work associated with this shall be considered incidental to the completion of the project and no separate payment or measurement will be made.
- PORTABLE CHANGEABLE MESSAGE SIGNS:** The contractor shall supply Portable Changeable Message signs which will be retained by the contractor. The message boards shall be utilized to convey messages, expected delays, and detours to motorists as directed by the contractor. Messages should be designed by the contractor and approved by the project manager. Two Weeks prior to start of construction, name locations, and dates of message signs to be placed.
- TRAFFIC CONTROL PLANS:** This traffic control plan (TCP) represents a suggested method for traffic control during construction. Adjustments to the details of this TCP and requirements within the plan may be necessary due to construction activities, or as directed by the project manager. If the contractor elects to make any changes to the TCP or sequence of construction, the contractor shall submit four (4) 11" X 17" copies of the proposed TCP to the project manager at least two (2) weeks prior to implementation. The TCP shall conform to the current editions of the MUTCD, NMDOT Standard Specifications and AASHTO Roadside Design Guide. The TCP shall be in computer drafted format and shall be designed, stamped, and revised as necessary by a current New Mexico Licensed professional engineer and submitted to the Project Manager for approval. All costs associated with developing the TCP and any additional devices associated with the TCP shall be incidental to Item No. 618000, "Traffic Control Management," and no separate measurement or payment will be made, unless otherwise noted in the contract.
- TRAFFIC CONTROL PLANS:** The Contractor / TCP firm shall contact the District Public Information Officer, through the district office, to confirm the actual start dates of the construction and the contractor's schedule a minimum of 48 hours before any work listed in the TCP is performed.
- REMOVAL OF CONSTRUCTION SIGNAGE:** All temporary traffic control signs, sign posts and post bases installed with the construction project shall be removed by the contractor at the completion of the project. Removal shall consist of complete extraction of the bases from the ground. This work shall be incidental to the completion of the project and no separate measurement or payment will be made.
- CONFLICTING SIGNS:** All Conflicting Signs within or in advance of the work zone shall be covered completely with an opaque non-light transmitting material so as not to damage the sign. The contractor is to use an approved method of covering existing signs so as not to damage the sign sheeting or markings. The contractor shall not place tape directly on the face of the sign. Failure to adhere to this requirement will result in the Contractor replacing the sign at no cost to the NMDOT.
- TEMPORARY STRIPING:** The use of black paint to cover existing lane lines or symbols is strictly prohibited. All temporary striping shall be removed by the contractor at the completion of the project. This work shall be incidental to the MUTCD and the approved traffic control plan. This work shall be included in Item No. 704100, "Removable Marking Tape" and no separate measurement or payment will be made, unless otherwise noted in the contract.

**11. CONSTRUCTION SIGNING:** All construction signing shall meet retroreflectivity requirements listed in section 702.2.1 "Construction Signing" of the NMDOT Standard Specifications.

- All construction signing on the interstate and on high speed (greater or equal to 45 MPH) multilane divided facilities shall be double indicated (left and right shoulders).
- All signs that are part of work zone that are in place for more than 3 days shall be placed on breakaway posts. If there are physical restrictions at the site that prohibit the sign from being placed on posts, the contractor shall notify the District Traffic Engineer and obtain a waiver.
- All warning and regulatory signs shall meet the following size requirements:
 

Interstate:	Warning sign 48"x48"	Regulatory 48"x60"
Non-Interstate:	Warning sign 36"x36"	Regulatory 36"x42"

SIGN	SIGN CODE	COLOR	LETTER SHEETING	BACKGROUND SHEETING
APPROACH SIGN	W02-XX	BLK/FLUORESCENT ORANGE	---	TYPE VII, IX, XI
CHEVRONS	W1-4	BLK/FLUORESCENT ORANGE	---	TYPE VII, IX, XI
CURVES	W1-2	BLK/FLUORESCENT ORANGE	---	TYPE VII, IX, XI
REVERSE CURVE	W1-4	BLK/FLUORESCENT ORANGE	---	TYPE VII, IX, XI
MERGE	W6-1	BLK/FLUORESCENT ORANGE	---	TYPE VII, IX, XI
NO PASSING ZONE	W14-3	BLK/FLUORESCENT ORANGE on 3/8" x 1/8" RED on 3/8" x 1/8" WHITE	---	TYPE VII, IX, XI
FLAGGER PADDOLE	---	WHITE/FLUORESCENT ORANGE	---	TYPE VII, IX, XI
ALL OTHERS	---	BLK/FLUORESCENT ORANGE	---	TYPE VII, IX, XI

The following reflectivity material shall be used on all construction signing placed on NMDOT roadways.

- REMOVAL OF TEMPORARY STRIPING:** All relevant temporary striping shall be removed upon completion of each phase of construction. The only approved method of stripe removal is water blasting. The contractor is to ensure that there is no conflicting striping through the work zone or through detours. This work shall be included in Item No. 618000, "Traffic Control Management," and no separate measurement or payment will be made, unless otherwise noted in the contract.
- SATISFACTORY WORKING CONDITION:** All traffic control devices used on this project shall be in satisfactory working condition and shall function equivalent to new equipment in accordance with the MUTCD (latest edition). Traffic control work zone shall comply with requirements of FHWA 23CFR 630 Subpart K for traffic control devices. At the beginning of the project 100% of signs/devices shall be in acceptable condition (new or like new). After 2 weeks all no time shall less than 75% of devices be in acceptable condition. All traffic devices shall be kept clean throughout the duration of the project. Any sign that is tagged by graffiti shall be cleaned (as long as it does not affect the reflective sheeting) within 24 hours or removed and replaced.
- TRAFFIC CONTROL FIELD ADJUSTMENTS:** Location of device spacing shall be field verified to account for existing roadway features which may obstruct placement and/or view of devices. Any changes to the traffic control plan should be approved by the District Traffic Engineer or his/her designee. All field adjustments of signs should be approved by the District Traffic Engineer. This work shall be considered incidental to Item No. 618000 "Traffic Control Management" and no additional measurement or payment will be made, unless noted in the contract.
- PEDESTRIANS:** Routes/paths shall not be closed without providing a detour. ADA requirements shall be adhered to; ADA compliant devices shall be used for channelization.
- BICYCLING:** Shall be accommodated or rerouted per MUTCD recommendations.

NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
TEMPORARY TRAFFIC CONTROL GENERAL NOTES			
APPROVED:	A. Huston		12/10/15
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
702-01-1/5			

**TRAFFIC CONTROL GENERAL NOTES (CONTINUED):**

- TEMPORARY CONCRETE WALL BARRIER (CWB):** When facing the leading end of a Temporary Wall Barrier (CWB) within a construction work zone, the flare rate shall be done in accordance with the rates shown in the table below. (NMDOT Standard Drawing 606-20-6/5)

Roadway Speed Limit	Minimum Taper Flare Rate	Desirable Taper Flare Rate
Less than 45 MPH	8:1	18:1
Between 45 MPH and 55 MPH	10:1	24:1
Greater than 55 MPH	15:1	30:1

- When temporary wall barrier is placed in a construction work zone, a 5' clear area is required between the CWB and the work zone to accommodate barrier deflection. When a 5' clear area is not attainable, CWB shall be anchored to the pavement surface.
- Temporary CWB shall be provided with reflective barrier delineators as indicated in NMDOT standard drawing 606-21-1/1.

- CRASH ATTENUATORS:** The crash cushion attenuators shall be designed as per the District Traffic Engineer's recommendations. The District may elect to either utilize the pre-construction posted speed, or the 85% speed in the layout of the crash cushion attenuators within the work zone.

- DROP OFF POLICY:** In the areas of pavement operations or other activities within the traveled way and adjacent to the existing traveled lane, the contractor shall ensure that no pavement drop-offs are left exposed during non-working hours. The contractor shall initiate corrective means as per "the New Mexico Department of Transportation Pavement Drop-off Guideline" to achieve a minimum 6:1 slope between traveled lanes and a minimum 3:1 slope adjacent to the existing traveled lane with two 11-foot driving lanes as shown in the detail below. (AD24)



- Lane Closures:** The Contractor/TCP firm shall not place a lane closure taper along a horizontal curve. The taper shall be placed in advance of the horizontal curve so that it is visible to all oncoming traffic. On crest vertical curves, the Contractor/TCP firm shall place lane closures in advance of, or at the beginning of the curve to enhance visibility of the lane closure to oncoming traffic.

- Sequential Arrow Display:** Placement of the sequential arrow shall be at or near the beginning of the lane closure taper. In areas of insufficient pavement width, the sequential arrow may be placed within the taper, but not to exceed 1/2 the taper length. In all cases, the sequential arrow shall be placed behind the channelization devices. The shoulder shall be closed in advance of the taper to direct vehicular traffic to remain within the traveled way. (MUTCD 6F 61)

- ADDITIONAL SIGNS:** "BUMP", "LOOSE GRAVEL", "LANE DROP-OFF SIGN" sign placement. The contractor shall place W8-1 sign ("BUMP", "BIF", W8-7 sign ("LOOSE GRAVEL", "BIF) and/or W8-17 signs ("SHOULDER DROP-OFF" - BIF) in advance of bridge approaches or other locations during cold milling and overlay operations as needed or as directed by the project manager.

- CLEAR ZONE:** All stationary objects within clear zone shall be properly shielded and outlined with drums mounted with Type "A" warning lights. Use of vertically mounted retro-reflective material in lieu of a Type A warning light is strictly prohibited.
  - Equipment, materials, or vehicles stored within Right-of-way (ROW) shall be outside of clear zone (based on existing posted speed).
  - Equipment, material or vehicles stored within clear zone shall be properly shielded.
  - Materials, work activities, equipment, and vehicles shall not be stored within the established buffer space of the project work zone.
  - All construction equipment, vehicles and materials shall remain behind traffic control devices.

- TRAFFIC CONTROL MANAGEMENT:** The contractor or the traffic control subcontractor shall provide a Traffic Control Supervisor on site during working hours for response within 1 hour to traffic control issues/concerns.

**25. INCIDENT MANAGEMENT:** Contractor is required to comply with requirements of FHWA CFR 630 Subpart J for Work Zone Safety and Mobility which shall include an Incident Management Plan to be utilized for the entire duration of the project. The Incident Management Plan shall contain a method to address traffic flow through the work zone during incidents. The Incident Management Plan must be reviewed and approved by the District Traffic Engineer. The plan shall contain the following as a minimum:

- Contacts for the contractor, local enforcement, safety agencies, municipal agencies, public information officer and NMDOT.
- Steps to be followed during incidents.
- Method of recording and reporting incidents.

**26. LIST OF INCIDENTALS - No Additional Payment Associated**  
LIST OF INCIDENTALS FOR Temporary Traffic Control MAINTENANCE OF TEMPORARY PAVEMENT MARKINGS FOR PROJECT DURATION

LIST OF INCIDENTALS FOR Temporary Traffic Control	
A.	MAINTENANCE OF TEMPORARY PAVEMENT MARKINGS FOR PROJECT DURATION

NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
TEMPORARY TRAFFIC CONTROL GENERAL NOTES			
APPROVED:	A. Huston		12/10/15
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
702-01-2/5			

**TRAFFIC MARKERS - OBJECT MARKERS**

TYPE I	TYPE 2	TYPE 3	END OF ROAD MARKER
DM1-1, DM1-2	DM2-1V, DM2-1H	DM3-3L, DM3-3R	DM4-1, DM4-2
2 LB/FT STEEL U-CANNEL W/ BREAKAWAY BASE POST	1.12 LB/FT STEEL U-CANNEL	2 LB/FT STEEL U-CANNEL OR 1.5" X 1.5" X 12 GA. SQUARE TUBING W/ BREAKAWAY BASE POST	2 LB/FT STEEL U-CANNEL W/BREAKAWAY BASE POST

**TRAFFIC MARKERS - DELINEATORS**

SINGLE	DOUBLE	1/10 MILE DELINEATOR
A1, C1, A1/A1, A1/C1, A1/A1, C1/A1	A2, C2, A2/A2, A2/C2, A2/R2, C2/C2, C2/R2	
1.12 LB/FT STEEL U-CANNEL	FLEXIBLE (YELLOW OR WHITE) TUBULAR FLEXIBLE (Y OR W)	1.12 LB/FT STEEL U-CANNEL FLEXIBLE (WHITE OR BROWN)

**REFLECTOR UNIT TYPES**

TYPE	DESCRIPTION
A1	SINGLE YELLOW REFLECTOR
A2	DOUBLE YELLOW REFLECTOR
A3	TRIPLE YELLOW REFLECTOR (TYPE 2 OBJECT MARKER)
C1	SINGLE WHITE REFLECTOR
C2	DOUBLE WHITE REFLECTOR
A1/C1	1 EACH
A1/R1	1 EACH
C1/C1	1 EACH
C1/R1	1 EACH
A2/A2	2 EACH
A2/C2	2 EACH
A2/R2	2 EACH
C2/C2	2 EACH
C2/R2	2 EACH
A3/A3	3 EACH (TYPE 2 OBJECT MARKER)

**HEIGHT AND LATERAL LOCATIONS OF SIGNS - TYPICAL INSTALLATIONS**

AREA	HEIGHT	LATERAL LOCATION
RURAL AREA	6' to 12'	Center of Road
BUSINESS, COMMERCIAL OR RESIDENTIAL AREA (WITHOUT CURB)	7' MIN.	Center of Road

**NOTE:** ALL DEVICES USED ON MMDOT ROADWAYS SHALL BE ON THE APPROVED PRODUCTS LIST.

\* WARNING LIGHT (OPTIONAL)  
\*\* NOMINAL DIMENSIONS ARE SATISFACTORY FOR BARRICADE RAIL WIDTH DIMENSIONS.  
\*\*\* RAIL STRIPE WIDTHS SHALL BE 6 INCHES. EXCEPTION: WHERE RAIL LENGTHS ARE LESS THAN 36 INCHES. THEN 4 INCH WIDE STRIPES MAY BE USED.

THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES. VERTICAL PANELS AND BARRICADES USED ON HIGH-SPEED ROADWAYS, EXPRESSWAYS, AND FREEWAYS SHALL HAVE A MINIMUM OF 270 SQUARE INCHES OF RETROREFLECTIVE AREA FACING TRAFFIC.

DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)		
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING		
CHANNELIZATION DEVICES FOR CONSTRUCTION, MAINTENANCE, UTILITY & INCIDENT MANAGEMENT OPERATIONS		
APPROVED:	A. Huston	
DESIGNED BY:	DRAWN BY:	CHECKED BY:
702-01-4/5		

**TRAFFIC MARKERS - OBJECT MARKERS**

TYPE I	TYPE 2	TYPE 3	END OF ROAD MARKER
DM1-1, DM1-2	DM2-1V, DM2-1H	DM3-3L, DM3-3R	DM4-1, DM4-2
2 LB/FT STEEL U-CANNEL W/ BREAKAWAY BASE POST	1.12 LB/FT STEEL U-CANNEL	2 LB/FT STEEL U-CANNEL OR 1.5" X 1.5" X 12 GA. SQUARE TUBING W/ BREAKAWAY BASE POST	2 LB/FT STEEL U-CANNEL W/BREAKAWAY BASE POST

**TRAFFIC MARKERS - DELINEATORS**

SINGLE	DOUBLE	1/10 MILE DELINEATOR
A1, C1, A1/A1, A1/C1, A1/A1, C1/A1	A2, C2, A2/A2, A2/C2, A2/R2, C2/C2, C2/R2	
1.12 LB/FT STEEL U-CANNEL	FLEXIBLE (YELLOW OR WHITE) TUBULAR FLEXIBLE (Y OR W)	1.12 LB/FT STEEL U-CANNEL FLEXIBLE (WHITE OR BROWN)

**REFLECTOR UNIT TYPES**

TYPE	DESCRIPTION
A1	SINGLE YELLOW REFLECTOR
A2	DOUBLE YELLOW REFLECTOR
A3	TRIPLE YELLOW REFLECTOR (TYPE 2 OBJECT MARKER)
C1	SINGLE WHITE REFLECTOR
C2	DOUBLE WHITE REFLECTOR
A1/C1	1 EACH
A1/R1	1 EACH
C1/C1	1 EACH
C1/R1	1 EACH
A2/A2	2 EACH
A2/C2	2 EACH
A2/R2	2 EACH
C2/C2	2 EACH
C2/R2	2 EACH
A3/A3	3 EACH (TYPE 2 OBJECT MARKER)

**TYPICAL 1/10 MILE DELINEATOR INSTALLATION**

**PRISMATIC REFLECTOR**  
REFLECTIVE AREA - 750 IN.  
COLORS: YELLOW (AMBER), WHITE (CRYSTAL), RED

**PANEL REFLECTOR**  
D10-7-4, 1/10 MILE  
COLORS: WHITE SHEETING OR GREATER INTENSITY, YELLOW (AMBER) SHEETING OR GREATER INTENSITY, RED SHEETING OR GREATER INTENSITY

**PANEL REFLECTOR**  
COLORS: WHITE SHEETING OR GREATER INTENSITY, YELLOW (AMBER) SHEETING OR GREATER INTENSITY, RED SHEETING OR GREATER INTENSITY

**NOTE:** ALL HARDWARE SHALL MEET FHWA CRASHWORTHINESS REQUIREMENTS AS PER NCHRP 350 GUIDELINES AND SHALL BE ON THE DEPARTMENT'S APPROVED PRODUCT LIST.

2. SEE DEPARTMENT'S APPROVED PRODUCTS LIST FOR APPROVED U-CANNEL & SQUARE TUBING, FLEXIBLE & TUBULAR TRAFFIC MARKER REFLECTOR MANUFACTURERS.

3. DELINEATOR POST & REFLECTOR UNIT COLOR SHALL CONFORM TO THE COLOR OF EDGE LINES.

4. BREAKAWAY BASE POST SYSTEMS FOR TYPE 1, TYPE 3 & END OF ROAD OBJECT MARKERS REQUIRED. SEE APPROVED PRODUCT LIST FOR APPROVED SYSTEMS & MANUFACTURER'S RECOMMENDATIONS.

5. STANDARD DELINEATORS ARE NOT TO CONFLICT WITH 1/10 MILE DELINEATORS. WHEN THE TWO COINCIDE, 1/10 MILE DELINEATORS WILL BE USED.

6. SEE SECTION 703 OF THE NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION FOR ADDITIONAL INFORMATION.

7. FOR SQUARE TUBING WITH BREAKAWAY BASE POST SEE STANDARDS 701-82-1/3, 701-82-2/3 AND 701-82-3/3.

8. 1/10 MILE DELINEATORS SHALL BE USED ON INTERSTATE ROADWAYS AND MAY BE USED ON HIGH SPEED 4-LANE DIVIDED ROADWAYS.

NO.	DATE	REV. BY	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING			
ROAD OBJECT MARKER DETAILS			
APPROVED:	A. Huston		12/10/15
DESIGNED BY:	DRAWN BY:	CHECKED BY:	
702-01-1/3 SHEET 1 OF 3			

REVISIONS (OR CHANGE NOTICES)	NO.	DESCRIPTION	DATE BY
5	4		
4	3		
3	2		
2	1		
		DRAWN BY: LAH	DATE: 10/2013
		CHECKED BY: JAW	DATE: 10/2013
		NMDOT SERIAL DRAWINGS	
		LOS PINOS ROADWAY IMPROVEMENTS	
		SHEET NO. 25	