New Mexico Department of Transportation
Standard Drawings for Highway and Bridge Construction

Disclaimer

These Standard Drawings are for use only on NMDOT Projects. Others who use the NMDOT Standard Drawings do so at their own risk and accept the responsibility of determining their applicability and any resulting liability.

2019 Standard Drawings for Highway and Bridge Construction UPDATE (Effective October 2023 Letting)

2019 Edition

In accordance with the Notice to Contractors for the 2019 Standard Drawings for Highway and Bridge Construction Update (Effective October 2023 Letting).

The 2019 Edition of the New Mexico Department of Transportation Standard Drawings for Highway and Bridge Construction shall apply in addition to the following:

Delete the following 2019 Standard Drawings for Highway and Bridge Construction:

Standard Section 210 – Excavation and Backfill for Major Structures

- 210-01-1/1, Excavation and Backfill for Bridges, Walls and CBC's (8-27-08)

Standard Section 450 – Portland Cement Concrete Pavement (PCCP) (QLA)

- 450-01-1/2, PCCP Joint Details (1-28-15)
- 450-01-2/2, PCCP Joint Details (1-28-15)

Standard Section 511 – Concrete Structures

- 511-65-2/3, Concrete Box Culvert Triple Opening – Design Fills B, C, D, E Dimensions and Rebar Schedule (4-9-07)

Standard Section 514 – Concrete Barrier Railing for Bridges

- 514-01-1/6, 32" Concrete Bridge Barrier Railing General Details (4-3-12)
- 514-01-2/6, 32" Concrete Bridge Barrier Railing General Details (4-3-12)
- 514-01-3/6, 32" Concrete Bridge Barrier Railing Standard Section and Details (4-3-12)
- 514-01-4/6, 32" Concrete Bridge Barrier Railing Transition Section and Details (12-27-12)
- 514-01-5/6, 32" Concrete Bridge Barrier Railing Details at Joint Seals (4-3-12)
- 514-01-6/6, 32" Dowel Assembly for Expansion Joints in Concrete Wall Barrier and Concrete Bridge Barrier Railing (4-3-12)
- 514-03-1/6, 42" Concrete Bridge Barrier Railing General Details (4-3-12)
- 514-03-2/6, 42" Concrete Bridge Barrier Railing General Details (4-3-12)
- 514-03-3/6, 42" Concrete Bridge Barrier Railing Standard Section and Details (4-3-12)
- 514-03-4/6, 42" Concrete Bridge Barrier Railing Transition Section and Details (12-27-12)
- 514-03-5/6, 42" Concrete Bridge Barrier Railing Details at Joint Seals (4-3-12)
- 514-03-6/6, Dowel Assembly for Expansion Joints in 42" Concrete Wall Barrier and Concrete Bridge Barrier Railing (4-3-12)
- 514-10-1/1, Bridge Number Plate, Tag, and Survey Marker (12-16-19)

Standard Section 515 – Reinforced Concrete for Minor Structures

- 515-02-1/2, Rundown Flume Type I for Modified or Pinned Curb with Half Pipe Rundown (4-3-12)
- 515-02-2/2, Alternate Rundown for Rundown Flumes Type I, Type II, Type III Full Pipe, Concrete and Riprap (4-3-12)
- 515-03-1/1, Rundown Flume Type II (SAG) for Modified or Pinned Curb (4-3-12)
- 515-04-1/2, Rundown Flumes Type III for Bridges (4-3-12)
- 515-04-2/2, Estimated Quantities for Rundown Flumes (4-3-12)

Standard Section 543 – Metal Railing

- 543-02-1/1, Metal Railing Type "A" (11-13-09)
- 543-03-1/2, Metal Railing Type "D" (11-13-09)
- 543-03-2/2, Metal Railing Type "D" Details (11-13-09)
- 543-06-1/4, Metal Railing NM Type A32 Details of Post on Bridge, Wingwalls and Approach Slab (4-20-21)
- 543-06-2/4, Metal Railing NM Type A32 Railing Elevation and Bridge Rail Joint Details (4-20-21)
- 543-06-3/4, Metal Railing NM Type A32 General Notes and Details of Rail to Post Connection and Gutter Detail (4-20-21)
- 543-06-4/4, Metal Railing NM Type A32 Rail to Thrie Beam Connection (4-20-21)
- 543-07-1/4, Metal Railing NM Type A42 Details of Posts on Bridge, Wingwalls and Approach Slab (4-20-21)
- 543-07-2/4, Metal Railing NM Type A42 Railing Elevation and Railing Elevation Rail Expansion Joint Detail (4-20-21)
- 543-07-3/4, Metal Railing NM Type A42 General Notes and Details of Rail to Post Connection and Gutter Detail (4-20-21)
- 543-07-4/4, Metal Railing NM Type A42 Rail to Thrie Beam Connection (4-20-21)
- 543-08-1/4, Side Mounted Bridge Railing Details (4-8-13)
- 543-08-2/4, Side Mounted Bridge Railing Details (4-8-13)
- 543-08-3/4, Side Mounted Bridge Railing Details (4-8-13)
- 543-08-4/4, Side Mounted Bridge Railing Details (4-8-13)
- 543-09-1/1, Bridge Number Plate, Tag, and Survey Marker (12-16-19)

Standard Section 562 – Bridge Joint Strip Seals

- 562-01-1/3, System 1 Bridge Joint Strip Seal General (8-17-12)
- 562-01-2/3, System 1 Bridge Joint Strip Seal Type "A" Installation (4-3-12)
- 562-01-3/3, System 1 Bridge Joint Strip Seal Type "B" Installation (4-3-12)

Standard Section 564 – Preformed Closed Cell Foam Bridge Joint Seals

- 564-01-1/1, Preformed Closed Cell Foam Bridge Joint Seal (6-24-13)

Standard Section 602 – Slope and Erosion Protection Structures

- 602-01-1/1, Wire Enclose Riprap Class "A" (11-16-09)
- 602-05-1/2, Gabion Basket Details (1-9-13)
- 602-05-2/2, Gabion Retaining Wall Details (1-9-13)
- 602-08-1/2, Wire Enclosed Tire Bales for Erosion Control or Earth Retaining (1-9-12)
- 602-08-2/2, Wire Enclosed Tire Bales for Erosion Control or Earth Retaining (1-9-12)

Standard Section 606 – Metal Barrier, Cable Barrier and Concrete Wall Barrier

- 606-GR31-17/20, Transition – Metal Barrier to Rigid Barrier (5-6-14)
- 606-15-1/7, Concrete Wall Barrier Type 32 General Notes, Quantities and Rebar Schedule (1-30-14)
- 606-15-2/7, Concrete Wall Barrier Type 32 (1-30-14)
- 606-15-3/7, 32" Dowel Assembly for Expansion Joints in Concrete Wall Barrier and Concrete Barrier Railing (1-30-14)
- 606-15-4/7, Concrete Wall Barrier Type 32 Transition Details (1-30-14)
- 606-15-5/7, Concrete Wall Barrier Type 32 Transition (1-30-14)
- 606-15-6/7, Concrete Wall Barrier Type 32 at Column and Sign Pedestals (1-30-14)
- 606-15-7/7, Concrete Wall Barrier Type 32 Over Culvert (1-30-14)

- 606-17-1/7, Concrete Wall Barrier Type 42 General Notes, Quantities and Rebar Schedule (1-30-14)
- 606-17-2/7, Concrete Wall Barrier Type 42 (1-30-14)
- 606-17-3/7, 42" Dowel Assembly for Expansion Joints in Concrete Wall Barrier and Concrete Barrier Railing (1-30-14)
- 606-17-4/7, Concrete Barrier Wall Type 42 Transition Details (1-30-14)
- 606-17-5/7, Concrete Wall Barrier Type 42 Transition (1-30-14)
- 606-17-6/7, Concrete Wall Barrier Type 42 at Column and Sign Pedestals (1-30-14)
- 606-17-7/7, Concrete Wall Barrier Type 42 Over Culvert (1-30-14)
- 606-22-1/4, 20' Concrete Barrier General Notes & Reinforcing Schedule (1-26-17)
- 606-22-2/4, 20' Concrete Barrier Fabrication and Reinforcement Details (1-26-17)
- 606-22-3/4, 20' Concrete Barrier Staking & Anchoring Details (1-26-17)
- 606-22-4/4, 20' Concrete Barrier Staking & Connection Details (1-26-17)

Standard Section 607 – Fence
- 607-08-3/6, Game Fence Details at Game Guard Locations (6-18-21)
- 607-15A-1/2, Pedestrian Screening Fence Type 1 with Embedded Sleeve (5-8-13)
- 607-15A-2/2, Pedestrian Screening Fence Type 1 with Base Plates and Bolts (5-8-13)

Standard Section 610 – Cattle Guards
- 610-01-1/3, Cattle Guard Plan and Steel Grid Unit (4-5-18)
- 610-01-2/3, Cattle Guard Precast Concrete Base and Details (4-5-18)
- 610-01-3/3, Cattle Guard Post and Brace Assembly Details (4-5-18)
- 610-02-1/2, Game Guard Plan and Elevation (4-20-21)
- 610-02-2/2, Metal Grate Plan and Misc Details (4-20-21)

Standard Section 701 – Traffic Signs and Sign Structures
- 701-20-1/1, Official Median Crossover (6-18-05)

Standard Section 702 – Construction Traffic Control Devices
- Delete all 702 Standard Drawings

Standard Section 707 – Signal and Lighting Standards
- 707L-08-1/7, High Mast Luminaire Support Structures Type VI (12-15-08)
- 707L-08-2/7, High Mast Luminaire Support Structures Type VI (12-15-08)
- 707L-08-3/7, High Mast Luminaire Support Structures Type VI (12-15-08)
- 707L-08-4/7, High Mast Luminaire Support Structures Type VI (12-15-08)
- 707L-08-5/7, High Mast Luminaire Support Structures Type VI (12-15-08)
- 707L-08-6/7, High Mast Luminaire Support Structures Type VI (12-15-08)

Add the following Standard Drawings to the 2019 Standard Drawings for Highway and Bridge Construction:

Standard Section 206 – Excavation and Backfill for Culverts and Minor Structures
- 206-11-1/1, Fill Heights for HDPE and PP Pipe Excavation Details (2-19-20)

Standard Section 210 – Excavation and Backfill for Major Structures
- 210-01-1/3, Excavation for Bridges and Walls (1-3-22)
- 210-01-2/3, Backfill for Bridges and Walls (1-3-22)
- 210-01-3/3, Excavation and Backfill for CBC's (1-3-22)

Standard Section 450 – Portland Cement Concrete Pavement (PCCP) (QLA)
- 450-01-1/3, PCCP Joint Details (10-26-21)
- 450-01-2/3, PCCP Joint Details (10-26-21)
- 450-01-3/3, PCCP Joint Details (10-26-21)

Standard Section 511 – Concrete Structures
- 511-65-2/3, Concrete Box Culvert Triple Opening - Design Fills B, C, D, E Dimensions and Rebar Schedule (2-19-19)

Standard Section 514 – Concrete Barrier Railing for Bridges
- 514-01-1/5, 32 Inch Concrete Bridge Barrier Railing General Details (6-24-21)
- 514-01-2/5, 32 Inch Concrete Bridge Barrier Railing Transition Section and Details (6-24-21)
- 514-01-3/5, 32 Inch Concrete Bridge Barrier Railing General Details (6-24-21)
- 514-01-4/5, 32 Inch Concrete Bridge Barrier Railing Standard Section and Details (6-24-21)
- 514-01-5/5, 32 Inch Concrete Barrier Details at Expansion Joint (6-24-21)
- 514-03-1/5, 42 Inch Concrete Bridge Barrier Railing General Details (6-24-21)
- 514-03-2/5, 42 Inch Concrete Bridge Barrier Railing General Details (6-24-21)
- 514-03-3/5, 42 Inch Concrete Bridge Barrier Railing Transition Section and Details (6-24-21)
- 514-03-4/5, 42 Inch Concrete Bridge Barrier Railing Standard Section and Details (6-24-21)
- 514-03-5/5, 42 Inch Concrete Bridge Barrier Railing Details at Joint Seals (6-24-21)
- 514-10-1/1, Bridge Number Plate (4-24-20)

Standard Section 515 – Reinforced Concrete for Minor Structures
- 515-02-1/3, Rundown Flume Type 1 for Roadway (10-5-21)
- 515-02-2/3, Rundown Flume Type 2 (SAG) for Roadway (10-5-21)
- 515-02-3/3, Rundown Flume Type 3 for Bridges (10-5-21)
- 515-03-1/1, Rundown Flume Type 1 and 2 Retrofit Installation for Sloping Faced Curb in Front of Existing Guardrail (10-5-21)
- 515-04-1/3, Rundown Options for Rundown Flume Type 1, Type 2, Type 3 (8-17-23)
- 515-04-2/3, Rundown Options for Rundown Flume Type 1, Type 2, Type 3 (8-17-23)
- 515-04-3/3, Estimated Quantities for Rundown Flumes (8-17-23)

In accordance with the Notice to Contractors for the 2019 Standard Drawings for Highway and Bridge Construction Update (Effective October 2023 Letting).

Standard Section 543 – Metal Railing

- 543-06-1/4, Metal Railing NM Type A32 Details of Posts on Bridge, and Approach Slabs (8-7-23)
- 543-06-2/4, Metal Railing NM Type A32 Railing Elevation and Rail Expansion Joint Details (8-7-23)
- 543-06-3/4, Metal Railing NM Type A32 General Notes and Details of Rail to Post Connection and Gutter Detail (8-7-23)
- 543-06-4/4, Metal Railing NM Type A32 Rail to Thrie Beam Connection (8-7-23)
- 543-07-1/4, Metal Railing NM Type A42 Details of Posts on Bridge, and Approach Slabs (8-7-23)
- 543-07-2/4, Metal Railing NM Type A42 Railing Elevation and Rail Expansion Joint Detail (8-7-23)
- 543-07-3/4, Metal Railing NM Type A42 General Notes and Details of Rail to Post Connection and Gutter Detail (8-7-23)
- 543-07-4/4, Metal Railing NM Type A42 Rail to Thrie Beam Connection (8-7-23)
- 543-09-1/1, Bridge Number Plate (4-25-20)

Standard Section 562 – Bridge Joint Strip Seals

- 562-01-1/3, Bridge Joint Strip Seal (8-16-23)
- 562-01-2/3, Bridge Joint Strip Seal Type “A” Installation (8-16-23)
- 562-01-3/3, Bridge Joint Strip Seal Type “B” Installation (8-16-23)

Standard Section 602 – Slope and Erosion Protection Structures

- 602-01-1/2, Wire Enclosed Riprap Class “A” (10-5-21)
- 602-01-2/2, Wire Enclosed Bridge Abutment Riprap Class “A” (10-5-21)
- 602-05-1/1, Gabion Retaining Wall Details (7-26-21)

Standard Section 606 – Metal Barrier, Cable Barrier and Concrete Wall Barrier

- 606-GR31-17/20, Guardrail Connection Details (7-13-21)
- 606-17-1/9, Concrete Wall Barrier Type 42 General Notes and Rebar Schedule (7-21-21)
- 606-17-2/9, Concrete Barrier Wall Type 42 (7-21-21)
- 606-17-3/9, Concrete Barrier Wall Type 42 Over Culvert (7-21-21)
- 606-17-4/9, Concrete Wall Barrier Type 42 Sections (7-21-21)
- 606-17-5/9, 42” Dowel Assembly for Expansion Joints in Concrete Wall Barrier and Concrete Barrier Railing (7-21-21)
- 606-17-6/9, Concrete Barrier Wall Type 42 Transition Details (7-21-21)
- 606-17-7/9, Concrete Barrier Wall Type 42 Transition Details (7-21-21)
- 606-17-8/9, Concrete Barrier Wall Type 42 Transition Details (7-21-21)
- 606-17-9/9, Concrete Wall Barrier Type 42 at Column and Sign Pedestals (7-21-21)
- 606-19-1/4, 54” Concrete Wall Barrier and Transition to 42” General Notes and Reinforcing Schedule (6-24-21)
- 606-19-2/4, 54” Concrete Wall Barrier and Transition to 42” Plan & Elevation (6-24-21)
- 606-19-3/4, 54” Concrete Wall Barrier and Transition to 42” Elevation and Section (6-24-21)
- 606-19-4/4, 54” Concrete Wall Barrier and Transition to 42” Elevation and Section (6-24-21)
- 606-22-1/4, 20’ Concrete Barrier General Notes & Reinforcing Schedule (12-17-19)
- 606-22-2/4, 20’ Concrete Barrier Fabrication and Reinforcement Details (12-17-19)
- 606-22-3/4, 20’ Concrete Barrier Staking & Anchoring Details (12-17-19)
- 606-22-4/4, 20’ Concrete Barrier Staking & Connection Details (12-17-19)

Standard Section 607 – Fence

- 607-08-1/6, Game Fence General Notes & Overall Plan (6-18-21)
- 607-08-2/6, Game Fence Bracing and Typical Installation (6-18-21)
- 607-08-3/6, Game Fence Details at Game Guard Locations (2-22-22)
- 607-08-4/6, Escape Ramp Plan and Profile (6-18-21)
- 607-08-5/6, Game Fence Vehicle Gate Detail and Gap Closures (6-18-21)
- 607-08-6/6, Game Fence Pedestrian Gate Detail (6-18-21)
- 607-15A-1/2, Pedestrian Screening Fence Type 1 with Embedded Sleeve (12-15-21)
- 607-15A-2/2, Pedestrian Screening Fence Type 1 with Base Plates and Bolts (12-15-21)

Standard Section 610 – Cattle Guards

- 610-01-1/3, Cattle Guard Plan and Steel Grid Unit (2-22-22)
- 610-01-2/3, Cattle Guard Precast Concrete and Steel Base Details (2-22-22)
- 610-01-3/3, Cattle Guard Post and Brace Assembly Details (2-22-22)
- 610-02-1/2, Game Guard Plan and Elevation (4-26-22)
- 610-02-2/2, Metal Grate Plan and Misc Details (4-26-22)

Standard Section 635 – Bat Box

- 635-01-1/2, Bat Box Girder Mounting Assembly (3-1-22)
- 635-01-2/2, Bat Box Girder Mounting Assembly (3-1-22)
- 635-02-1/2, Bat Box Slab Mounting Assembly (3-1-22)
- 635-02-2/2, Bat Box Slab Mounting Assembly (3-1-22)

Standard Section 701 – Traffic Signs and Sign Structures

- 701-20-1/1, Official Median Crossover (2-17-20)

Standard Section 702 – Construction Traffic Control Devices

- 702-01-1/1, Traffic Control General Notes (12-11-19)
- 702-02-1/1, Temporary Traffic Markings for Construction (12-11-19)
- 702-03-1/4, Double Fines in Work Zones Signing Layout (2-19-20)
- 702-03-2/4, Double Fines in Work Zones Sign Face Details (2-19-20)
- 702-03-3/4, Project Limit Signing (2-19-20)
- 702-03-4/4, B.O.P and E.O.P (Approach and Departure) Sign Face Details (2-19-20)
- 702-04-1/2, 4 Lane, Interstate/Non-Interstate, Typical Crossover Signing (12-11-19)
- 702-04-2/2, 4 Lane, Interstate/Non-Interstate, Typical Crossover Signing (12-11-19)
- 702-05-1/1, Inside/Median and Outside Lane Operations for Divided Interstates & Non-Interstates (12-11-19)
- 702-06-1/1, Examples of Temporary Pedestrian Detour Routing for Roadways with Posted Speeds of 40 MPH or Less (12-11-19)

In accordance with the Notice to Contractors for the 2019 Standard Drawings for Highway and Bridge Construction Update (Effective October 2023 Letting).

Standard Section 707 – Signal and Lighting Standards

- 707L-08-1/9, High Mast Luminaire Support Structures Type VI (12-8-11)
- 707L-08-2/9, High Mast Luminaire Support Structures Type VI (12-8-11)
- 707L-08-3/9, High Mast Luminaire Support Structures Type VI (12-8-11)
- 707L-08-4/9, High Mast Luminaire Support Structures Type VI (12-8-11)
- 707L-08-5/9, High Mast Luminaire Support Structures Type VI (12-8-11)
- 707L-08-6/9, High Mast Luminaire Support Structures Type VI (12-8-11)
- 707L-08-7/9, High Mast Luminaire Support Structures Type VI (12-8-11)

Standard Section 730 – Weigh-In-Motion System and Continuous Count Station

- 730-01-1/3, Weigh-In-Motion (WIM) Undivided Section Details (12-17-19)
- 730-01-2/3, Weigh-In-Motion (WIM) Divided Section Details (12-17-19)
- 730-01-3/3, Weigh-In-Motion (WIM) 6-Lane Section Details (12-17-19)
- 730-02-1/3, Continuous Count Station (CCS) Undivided Section Details (12-17-19)
- 730-02-2/3, Continuous Count Station (CCS) Divided Section Details (12-17-19)
- 730-02-3/3, Continuous Count Station (CCS) 6-Lane Section Details (12-17-19)
- 730-03-1/2, Radar Continuous Count Station 1 to 4 Lanes Single Sensor (12-17-19)
- 730-03-2/2, Radar Continuous Count Station 5 to 8 Lanes Dual Sensors (12-17-19)

Standard Section 750 – Intelligent Transportation Systems (ITS)

- 750-01-1/2, Typical Conduit Trench and Installation Details (ITS) (12-10-21)
- 750-01-2/2, Conduit Expansion Coupling and Two Hole Clamp (12-10-21)
- 750-02-1/1, ITS Pull Box Installation Detail (7-21-21)*
- 750-03-1/2, ITS Manhole Installation Details (7-21-21)*
- 750-03-2/2, ITS Manhole Installation Details (7-21-21)*
- 750-05-1/1, ITS Equipment Cabinet Details (7-21-21)

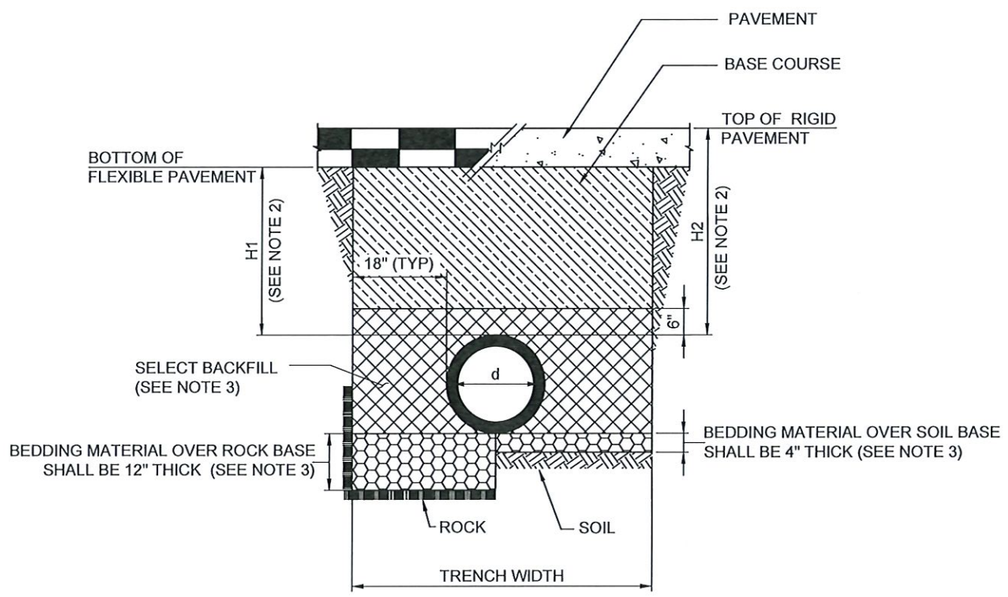
*Standard Drawings included in the Index of 2019 Standard Drawings book. However, Standard Drawings were inadvertently omitted from the Standard Drawings book.

The added Standard Drawings are available at the following link:

https://dot.state.nm.us/content/nmdot/en/Standards.html

FILL HEIGHTS FOR HIGH DENSITY POLYETHYLENE (HDPE) AND POLYPROPYLENE (PP) PIPE						
PIPE DIAMETER	POLYETHYLENE CORRUGATED DOUBLE WALL PIPE			POLYPROPYLENE CORRUGATED DOUBLE WALL PIPE		
	A-1, A-2-4, OR FLOWABLE FILL*	A-1 OR FLOWABLE FILL*	A-2-4	A-1, A-2-4, OR FLOWABLE FILL*	A-1 OR FLOWABLE FILL*	A-2-4
d, (IN)	H, MINIMUM COVER (FT)	H, MAXIMUM COVER (FT)	H, MAXIMUM COVER (FT)	H, MINIMUM COVER (FT)	H, MAXIMUM COVER (FT)	H, MAXIMUM COVER (FT)
12	1	35	17	1	39	21
15	1	38	18	1	41	21
18	1	36	17	1	36	19
24	1	30	15	1	30	16
30	1	28	14	1	30	16
36	1	26	13	1	28	14
42	1	23	11	1	30	15
48	1	25	12	1	29	14
54	2	22	11	N/A	N/A	N/A
60	2	25	12	2	29	14

* FOR FLOWABLE FILL, MAXIMUM COVER SEE NOTE 5



PIPE INSTALLATION DETAIL

NOTES:

1. HDPE AND PP PIPE SHALL CONFORM TO NMDOT SPECIFICATION 570 - PIPE CULVERT. PP PIPE SHALL MEET ALL REQUIREMENTS OF AASHTO SPECIFICATION M 330.
2. MINIMUM COVER FOR FLEXIBLE PAVEMENT (H1) SHALL BE MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT. MINIMUM COVER FOR RIGID PAVEMENT (H2) SHALL BE MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE RIGID PAVEMENT. FOR MINIMUM COVERS A MINIMUM 6" CUSHION OF BACKFILL MATERIAL SHALL BE PROVIDED BETWEEN THE BOTTOM OF THE RIGID PAVEMENT AND THE TOP OF THE PIPE.
3. PROVIDE SELECT BACKFILL AND BEDDING MATERIAL IN ACCORDANCE WITH SECTION 206.2. -EXCAVATION AND BACKFILL FOR CULVERTS AND MINOR STRUCTURES OF NMDOT STANDARD SPECIFICATION OR PROVIDE FLOWABLE FILL. MAXIMUM FILL HEIGHT COVER FOR FLOWABLE FILL IS THE SAME AS SOIL CLASSIFICATION A-1. THE PIPE MUST BE ANCHORED DOWN PROPERLY TO PREVENT FLOTATION.
4. THE MIDDLE 8" OF THE BEDDING SHALL BE LOOSELY PLACED WITH THE REMAINDER COMPACTED IN ACCORDANCE WITH SPECIFICATION 206 - EXCAVATION AND BACKFILL FOR CULVERTS AND MINOR STRUCTURES.
5. IF ENCOUNTERED, UNSUITABLE MATERIALS SHALL BE HANDLED AND PAID FOR IN ACCORDANCE WITH SECTION 206 - EXCAVATION AND BACKFILL FOR CULVERTS AND MINOR STRUCTURES OF NMDOT STANDARD SPECIFICATIONS.
6. ALL BACKFILL MATERIAL SHALL MEET THE ELECTROMECHANICAL CRITERIA SPECIFIED IN THE CONTRACT
7. PROJECT SPECIFIC PIPE DIAMETER (d) AND COVER AND TRENCH WIDTH (H) SHALL BE ESTABLISHED IN THE PROJECT PLANS

NO	DATE	BY	DESCRIPTION

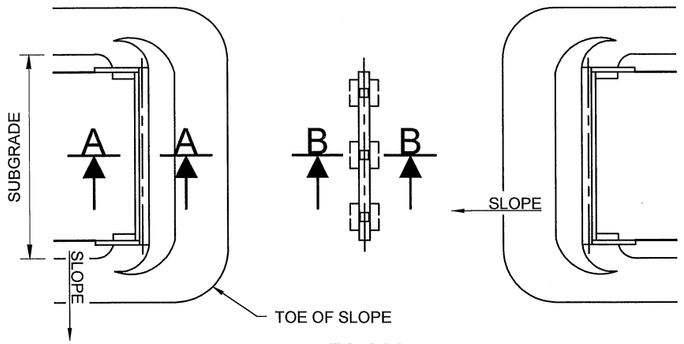
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

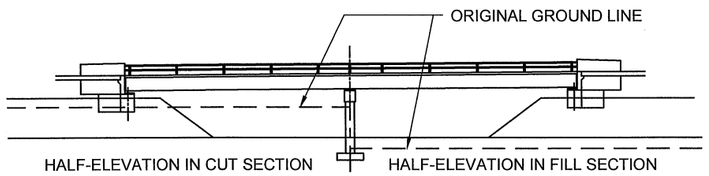
FILL HEIGHTS FOR HDPE AND PP PIPE EXCAVATION DETAILS

206-11-1/1

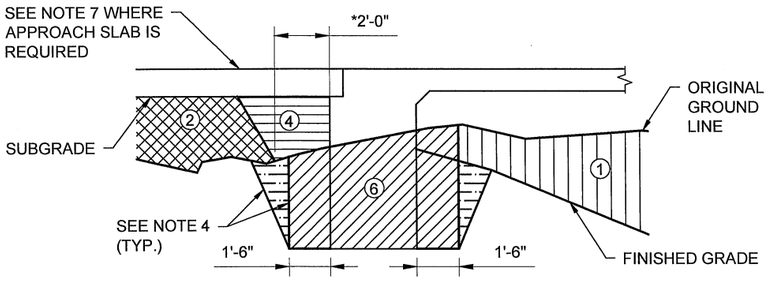
DESIGNED BY: OB DRAWN BY: TB CHECKED BY: OB



PLAN

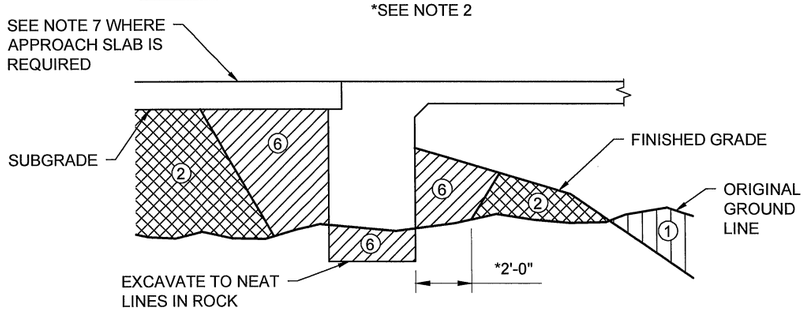


PROFILE



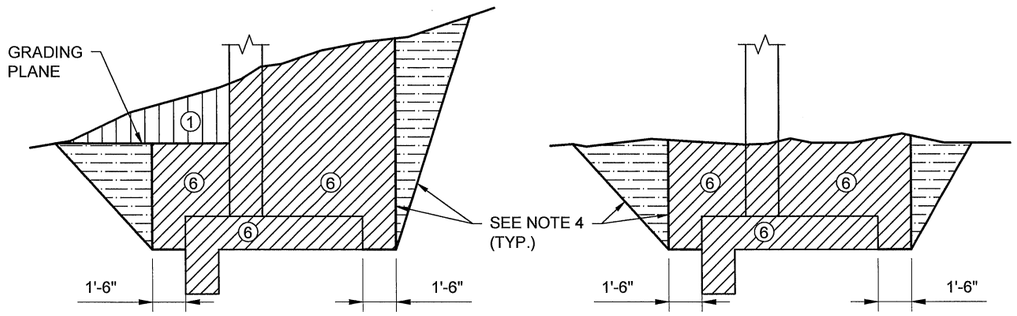
EXCAVATION IN SECTION A-A: NORMAL

*SEE NOTE 2

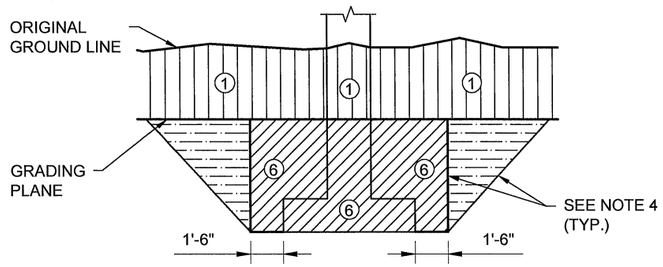


EXCAVATION IN SECTION A-A: IN ROCK

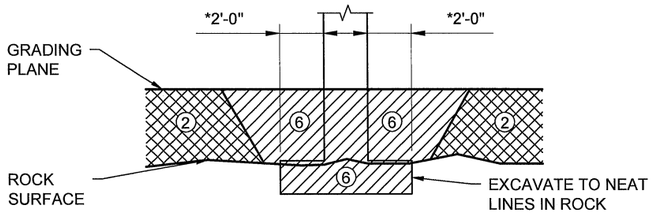
*SEE NOTE 2



EXCAVATION FOR RETAINING WALLS



EXCAVATION IN SECTION B-B: NORMAL



EXCAVATION IN SECTION B-B: IN ROCK

*SEE NOTE 2

HATCH LEGEND

		—	EXISTING SOIL
①	203	—	ROADWAY EXCAVATION
②	203	—	ROADWAY EMBANKMENT
③ ④	206 210	—	STRUCTURAL BACKFILL
⑤ ⑥	206 210	—	STRUCTURAL EXCAVATION

NOTE: SECTION 206 - MINOR STRUCTURES
SECTION 210 - MAJOR STRUCTURES

GENERAL NOTES

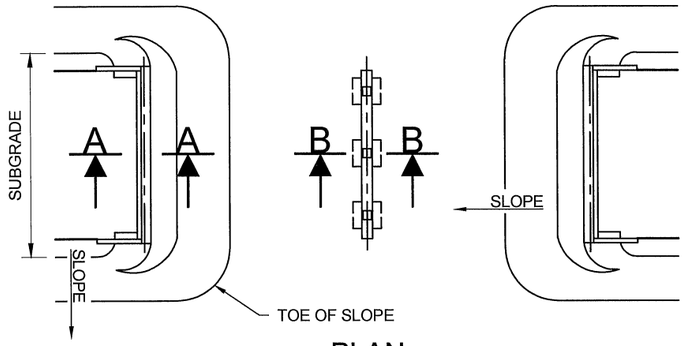
1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. COMPACT ROADWAY EMBANKMENT 10'-0" (MIN.) ABOVE BOTTOM OF ABUTMENT TO FINISH GRADE. EXCAVATION TO BOTTOM OF ABUTMENT ELEVATION SHALL BE DELAYED UNTIL THE CONTRACTOR IS READY TO PLACE ABUTMENT FORMS AND CONCRETE.
3. ALL DETAILS ARE SHOWN WITH THE ROADWAY EMBANKMENT PLACED FIRST AND THE STRUCTURAL BACKFILL MATERIAL PLACED ON TOP OF IT. THE CONTRACTOR SHALL USE THIS PLACEMENT ORDER TO THE STRUCTURAL BACKFILL CAN BE COMPACTED TO THE MAXIMUM DENSITY REQUIRED. NO EMBANKMENT MATERIAL SHALL BE WITHIN 2'-0" OF THE CONCRETE STRUCTURE.
4. WHERE PRACTICAL ALL SUBSTRUCTURES SHALL BE CONSTRUCTED IN OPEN EXCAVATION AND, WHERE NECESSARY, THE EXCAVATION SHALL BE SHORED, BRACED, OR PROTECTED BY COFFER DAMS. THE SLOPE OF THE CUT SHALL NOT BE STEEPER THAN THE STABILITY PERMITTED BY THE MATERIALS AS DETERMINED BY OSHA AND/OR THE PROJECT MANAGER.
5. GRADING PLANE IS THE SURFACE TO WHICH PRECISE GRADING IS FINISHED SUCH AS SUBGRADE UNDER THE TEMPLATE SECTION OF A ROAD, ROADWAY SIDE SLOPES, DITCHES ADJACENT TO THE FOUNDATIONS, DITCH SLOPES AND WINGWALLS, SUBGRADE UNDER ABUTMENTS, AND RETAINING WALLS.
6. EARTHWORK FOR CBCs SHALL BE IN ACCORDANCE WITH SECTION 206 FOR MAJOR STRUCTURES OR SECTION 210 FOR MINOR STRUCTURES OF THE NMDOT SPECIFICATIONS.
7. STRUCTURE BACKFILL AT APPROACH SLABS SHALL CONFORM TO AASHTO A-1-a OR BASE COURSE.

NO.	DATE	BY	DESCRIPTION

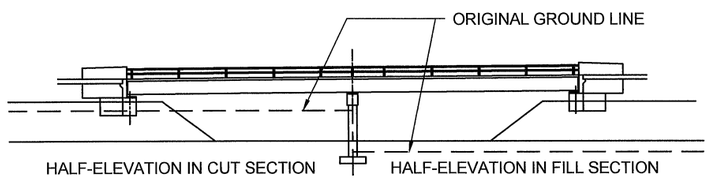
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

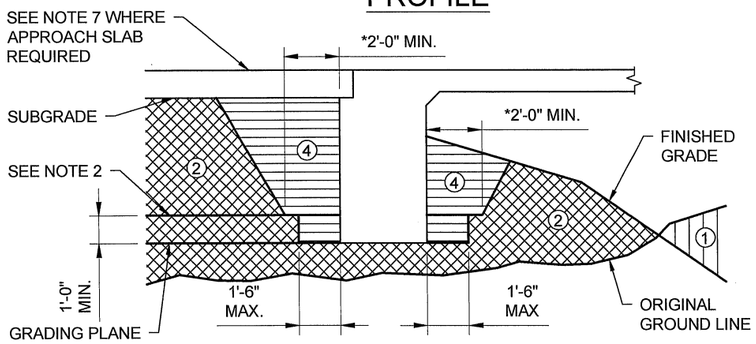
EXCAVATION FOR BRIDGES AND WALLS



PLAN

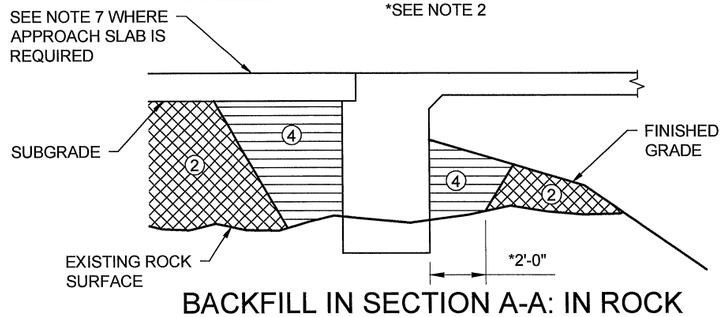


PROFILE



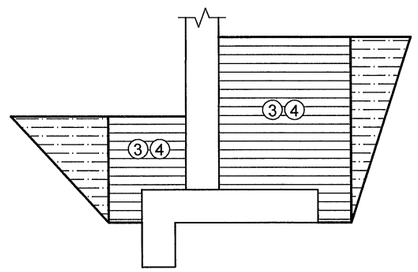
BACKFILL IN SECTION A-A: NORMAL

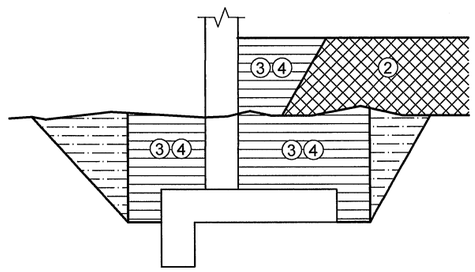
*SEE NOTE 2



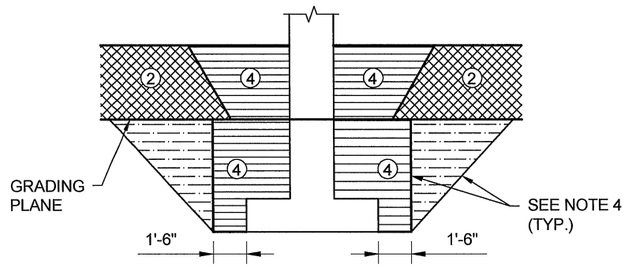
BACKFILL IN SECTION A-A: IN ROCK

*SEE NOTE 2

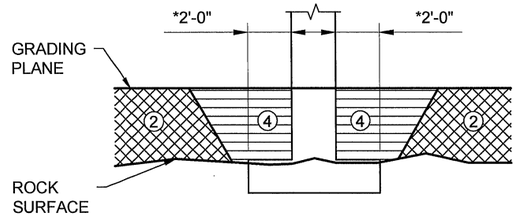




BACKFILL FOR RETAINING WALLS



BACKFILL IN SECTION B-B: NORMAL



BACKFILL IN SECTION B-B: IN ROCK

*SEE NOTE 2

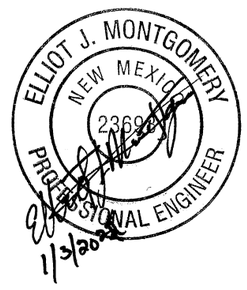
HATCH LEGEND

		—	EXISTING SOIL
①	203	—	ROADWAY EXCAVATION
②	203	—	ROADWAY EMBANKMENT
③ ④	206 210	—	STRUCTURAL BACKFILL
⑤ ⑥	206 210	—	STRUCTURAL EXCAVATION

NOTE: SECTION 206 - MINOR STRUCTURES
SECTION 210 - MAJOR STRUCTURES

GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. COMPACT ROADWAY EMBANKMENT 10'-0" (MIN.) ABOVE BOTTOM OF ABUTMENT TO FINISH GRADE. EXCAVATION TO BOTTOM OF ABUTMENT ELEVATION SHALL BE DELAYED UNTIL THE CONTRACTOR IS READY TO PLACE ABUTMENT FORMS AND CONCRETE.
3. ALL DETAILS ARE SHOWN WITH THE ROADWAY EMBANKMENT PLACED FIRST AND THE STRUCTURAL BACKFILL MATERIAL PLACED ON TOP OF IT. THE CONTRACTOR SHALL USE THIS PLACEMENT ORDER TO THE STRUCTURAL BACKFILL CAN BE COMPACTED TO THE MAXIMUM DENSITY REQUIRED. NO EMBANKMENT MATERIAL SHALL BE WITHIN 2'-0" OF THE CONCRETE STRUCTURE.
4. WHERE PRACTICAL ALL SUBSTRUCTURES SHALL BE CONSTRUCTED IN OPEN EXCAVATION AND, WHERE NECESSARY, THE EXCAVATION SHALL BE SHORED, BRACED, OR PROTECTED BY COFFER DAMS. THE SLOPE OF THE CUT SHALL NOT BE STEEPER THAN THE STABILITY PERMITTED BY THE MATERIALS AS DETERMINED BY OSHA AND/OR THE PROJECT MANAGER.
5. GRADING PLANE IS THE SURFACE TO WHICH PRECISE GRADING IS FINISHED SUCH AS SUBGRADE UNDER THE TEMPLATE SECTION OF A ROAD, ROADWAY SIDE SLOPES, DITCHES ADJACENT TO THE FOUNDATIONS, DITCH SLOPES AND WINGWALLS, SUBGRADE UNDER ABUTMENTS, AND RETAINING WALLS.
6. EARTHWORK FOR CBCs SHALL BE IN ACCORDANCE WITH SECTION 206 FOR MAJOR STRUCTURES OR SECTION 210 FOR MINOR STRUCTURES OF THE NMDOT SPECIFICATIONS.
7. STRUCTURE BACKFILL AT APPROACH SLABS SHALL CONFORM TO AASHTO A-1-a OR BASE COURSE.

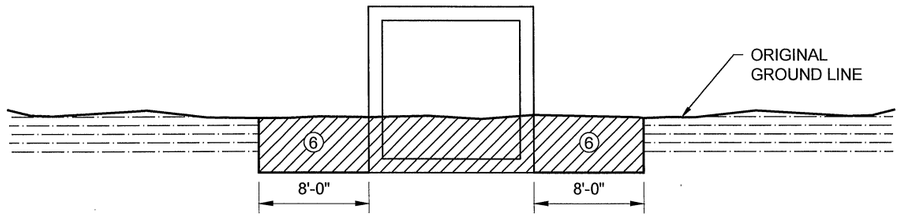


NO.	DATE	BY	DESCRIPTION

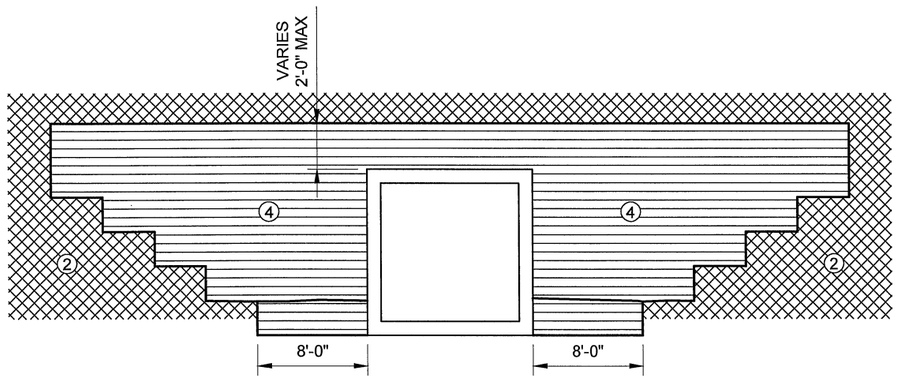
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

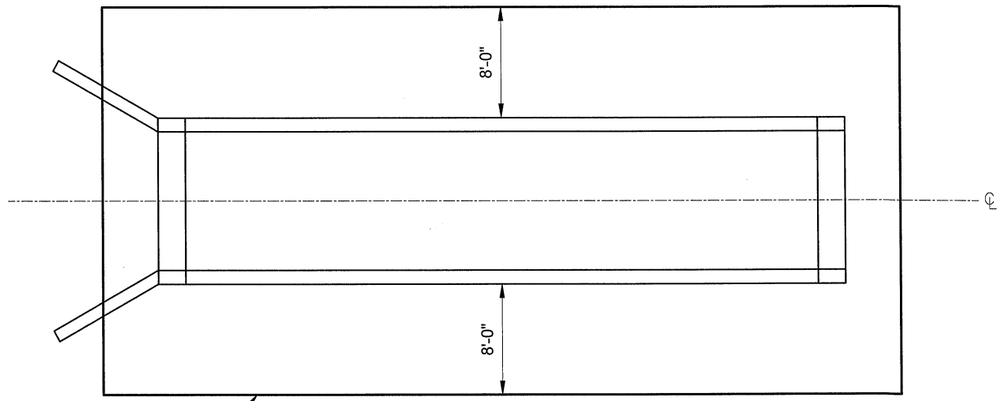
BACKFILL FOR BRIDGES AND WALLS



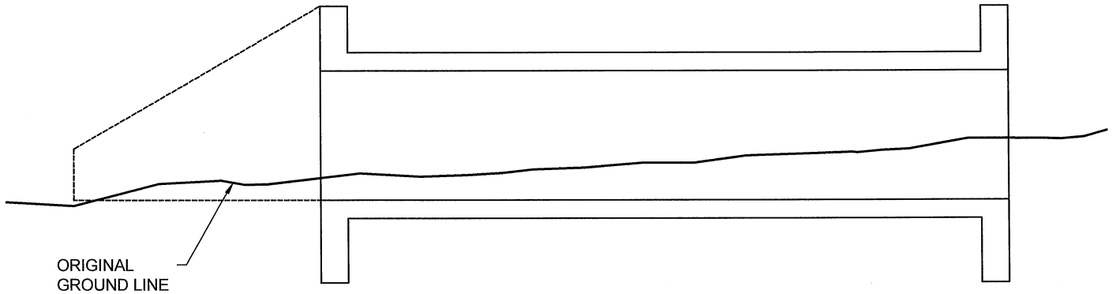
EXCAVATION FOR CBCs



BACKFILL FOR CBCs



PLAN



ELEVATION

HATCH LEGEND

		—	EXISTING SOIL
①	203	—	ROADWAY EXCAVATION
②	203	—	ROADWAY EMBANKMENT
③ ④	206 210	—	STRUCTURAL BACKFILL
⑤ ⑥	206 210	—	STRUCTURAL EXCAVATION

NOTE: SECTION 206 - MINOR STRUCTURES
SECTION 210 - MAJOR STRUCTURES

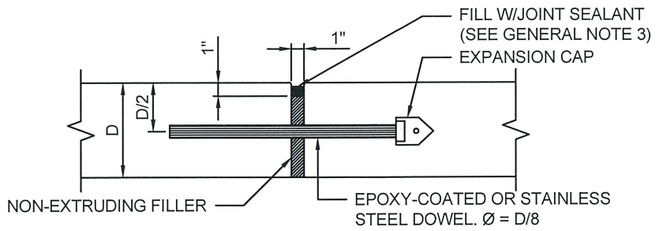
ELLIOT J. MONTGOMERY
NEW MEXICO
23688
PROFESSIONAL ENGINEER
1/3/20

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

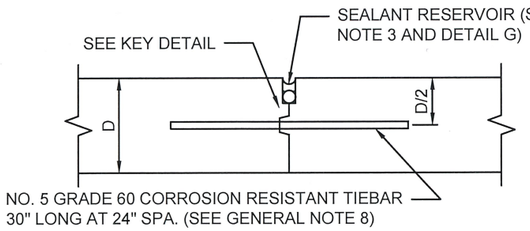
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

EXCAVATION AND BACKFILL FOR CBCs



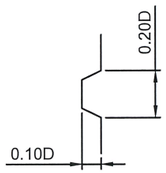
JOINT TYPE "A"

ISOLATION JOINT (DOWELED /NON- DOWELED)
USE DOWELS ONLY WHEN BUTTING AGAINST EXISTING CONCRETE STRUCTURES SUCH AS BRIDGES. DOWELS FOR ISOLATION JOINTS ARE NOT REQUIRED WHEN BUTTING AGAINST DRAINAGE INLETS, MANHOLE COVERS, LIGHTING STRUCTURES.

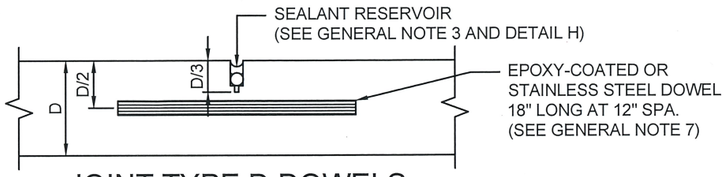


JOINT TYPE B TIEBARS

KEYED LONGITUDINAL CONSTRUCTION JOINT WITH TIEBARS
(SEE DETAILS I & J)

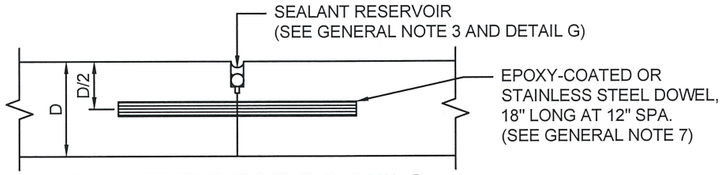


KEY DIMENSIONS



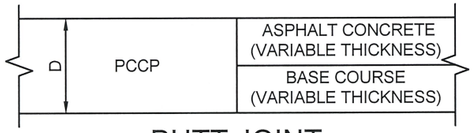
JOINT TYPE D DOWELS

TRANSVERSE DOWELED SAWED CONTRACTION JOINT



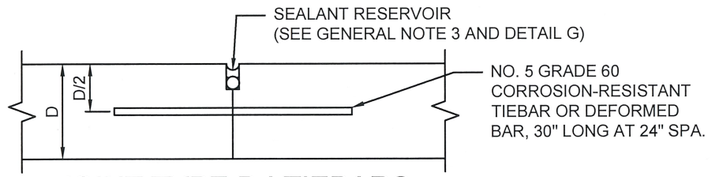
JOINT TYPE E&F DOWELS

TRANSVERSE DOWELED CONSTRUCTION AND/OR EMERGENCY JOINT
JOINT E - TRANSVERSE DOWELED PLANNED CONSTRUCTION JOINT
JOINT F - TRANSVERSE DOWELED EMERGENCY JOINT



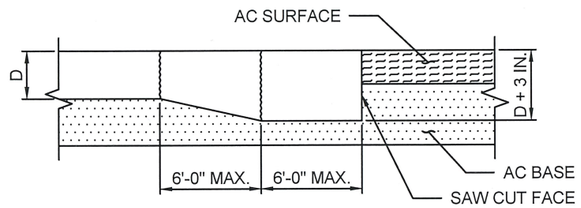
BUTT JOINT

CONCRETE TO ASPHALT

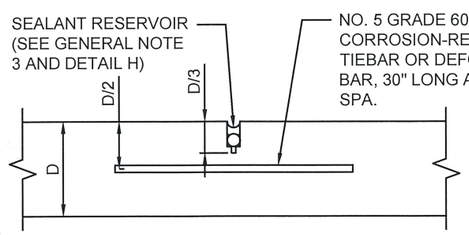


JOINT TYPE B-I TIEBARS

LONGITUDINAL CONSTRUCTION JOINT WITH TIEBARS

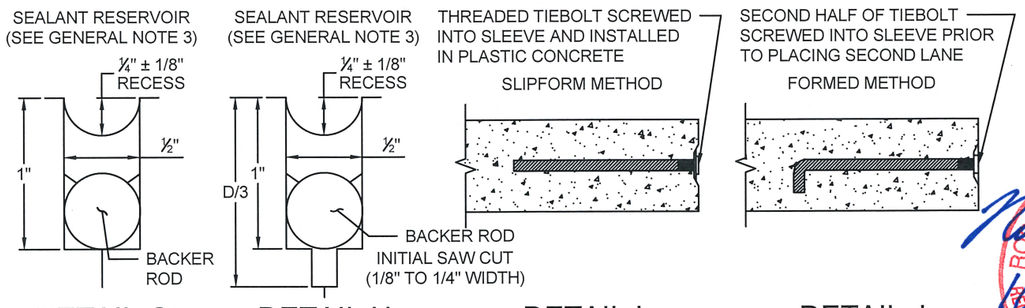


TRANSITION JOINT



JOINT TYPE C TIEBARS

SAWED LONGITUDINAL JOINT WITH TIEBARS



DETAIL G DETAIL H DETAIL I DETAIL J

KEYED JOINTS WITH TWO PART THREADED TIEBAR SPLICED COUPLER SYSTEM

KEYED JOINTS W/ TIE BOLTS MAY BE USED IN LIEU OF KEYED JOINTS W/ TIE BARS

GENERAL NOTES:

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. DOWELED ISOLATION JOINTS SHALL ONLY BE USED WHEN BUTTING AGAINST A CONCRETE STRUCTURE. UNDOWELED ISOLATION JOINTS SHALL BE USED WHEN BUTTING AGAINST DRAINAGE INLETS, MANHOLES, AND LIGHTING STRUCTURES UNLESS OTHERWISE NOTED IN THE CONTRACT.
3. SEALANT RESERVOIR, JOINT SHAPE FACTOR, BACKER ROD, AND NON-EXTRUDING FILLER SHALL BE PLACED IN ACCORDANCE WITH SECTION 452 - SEALING AND RESEALING CONCRETE PAVING JOINTS. WHEN USING SILICONE SEALANT, A MINIMUM SHAPE FACTOR (RATIO OF SEALANT DEPTH TO WIDTH) OF 1:2 IS RECOMMENDED. THE MAXIMUM SHAPE FACTOR SHALL NOT EXCEED 1:1. THE MINIMUM WIDTH OF SEALANT SHALL BE 3/8". THE SURFACE OF SEALANT SHALL BE RECESSED 1/4" ± 1/8" BELOW THE PAVEMENT SURFACE. BACKER ROD SHALL BE A CLOSED-CELL POLYURETHANE FOAM ROD HAVING A DIAMETER APPROXIMATELY 25% GREATER THAN THE WIDTH OF THE JOINT.
4. NON-EXTRUDED FILLER MATERIAL SHALL CONSIST OF A NON-ABSORBENT, NON-REACTIVE, NON-EXTRUDING MATERIAL TYPICALLY MADE FROM EITHER A CLOSED CELL FOAM OR A BITUMEN-TREATED FIBER BOARD.
5. NO ADJUSTMENTS OF THE APPROVED JOINT LAYOUT PLAN SHALL BE DONE WITHOUT APPROVAL BY THE PROJECT ENGINEER.
6. ALL APPLICABLE BRIDGE JOINT DETAILS SHALL APPLY WHEN THE PCCP ABUTS AGAINST A BRIDGE DECK OR BRIDGE APPROACH AND DEPARTURE SLAB.
7. SEE TABLE BELOW FOR DOWEL DIAMETER BASED ON CONCRETE PAVEMENT THICKNESS.
8. KEYED LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE USED WHEN THE PAVEMENT THICKNESS IS LESS THAN 10".
9. JOINT SPACING AND CONFIGURATIONS SHALL BE PER CURRENT NMDOT SPECIFICATIONS.
10. THESE JOINT DETAILS AND GENERAL NOTES DO NOT APPLY TO THIN CONCRETE BONDED OVERLAYS.

DOWEL DIAMETER TABLE	
CONCRETE PAVEMENT THICKNESS, INCHES	DOWEL DIAMETER, INCHES
< 8	1.00
8 ≤ T < 10	1.25
≥ 10	1.50

NO.	DATE	BY	DESCRIPTION

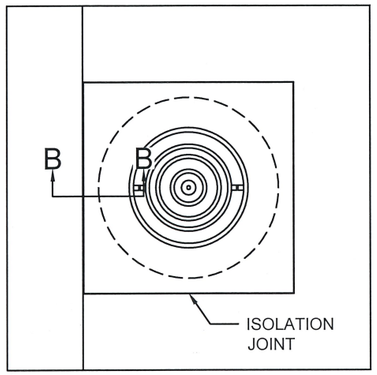
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

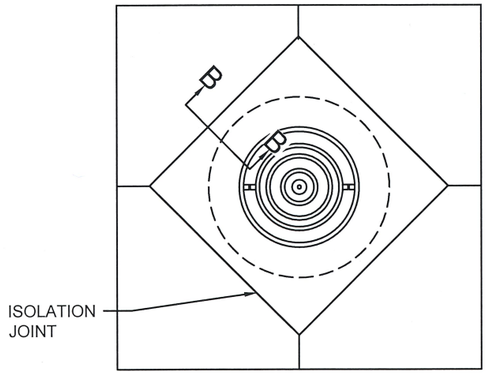
PCCP JOINT DETAILS

450-01-1/3

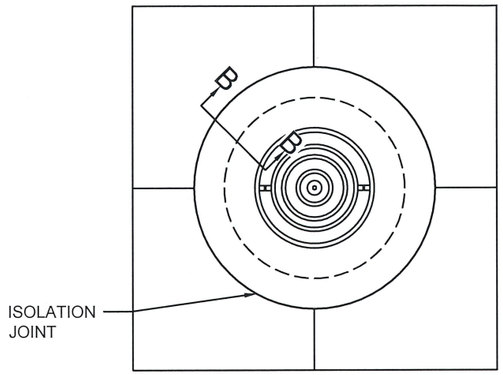
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____



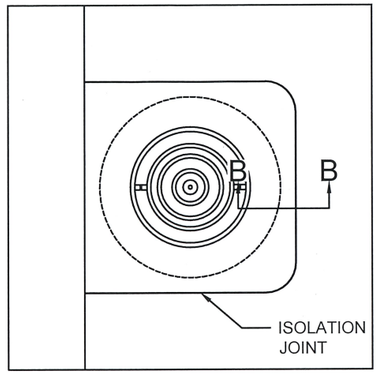
SQUARE MANHOLE BOXOUT



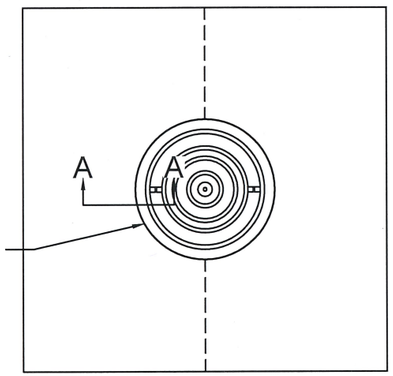
DIAGONAL MANHOLE BOXOUT



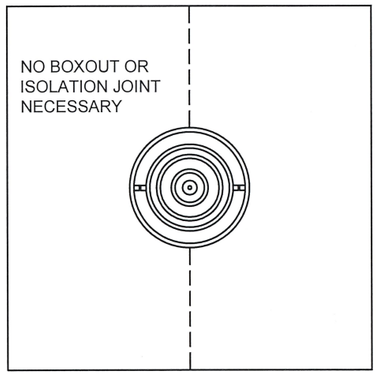
CIRCULAR MANHOLE BOXOUT



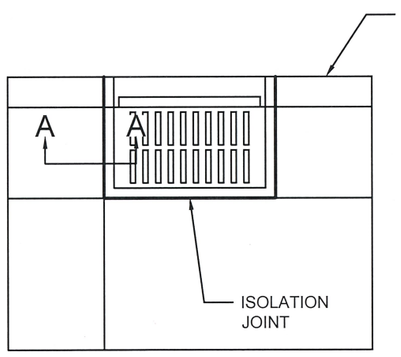
SQUARE BOXOUT WITH FILLETS



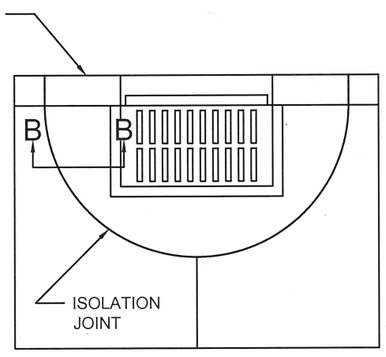
MANHOLE (NO BOXOUT)



TELESCOPING MANHOLE

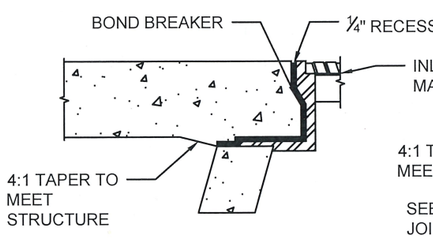


SQUARE INLET (NO BOXOUT)

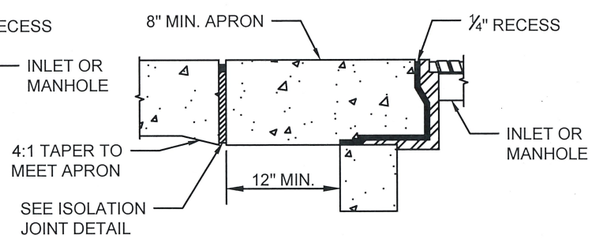


ROUND INLET BOXOUT

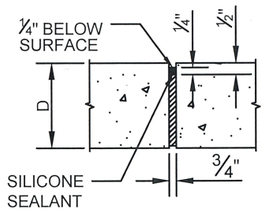
ISOLATION JOINTS FOR EMBEDDED STRUCTURES



SECTION A-A



SECTION B-B



ISOLATION JOINT

ROBERT STEPHEN YOUNG
NEW MEXICO
13562
REGISTERED PROFESSIONAL ENGINEER

10/26/2021

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

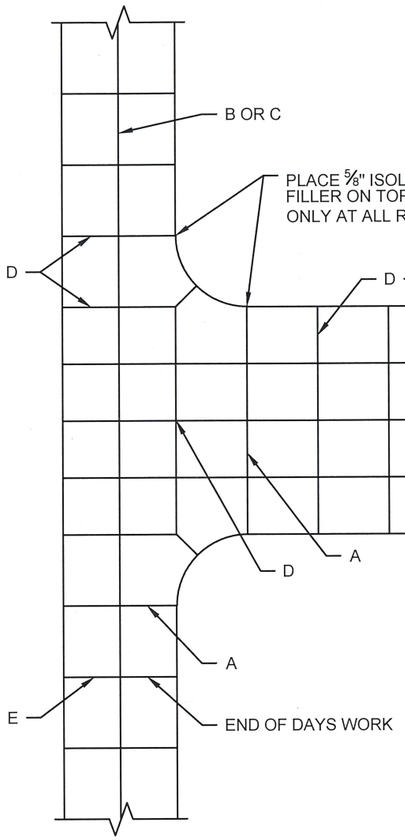
REVISIONS (OR CHANGE NOTICES)

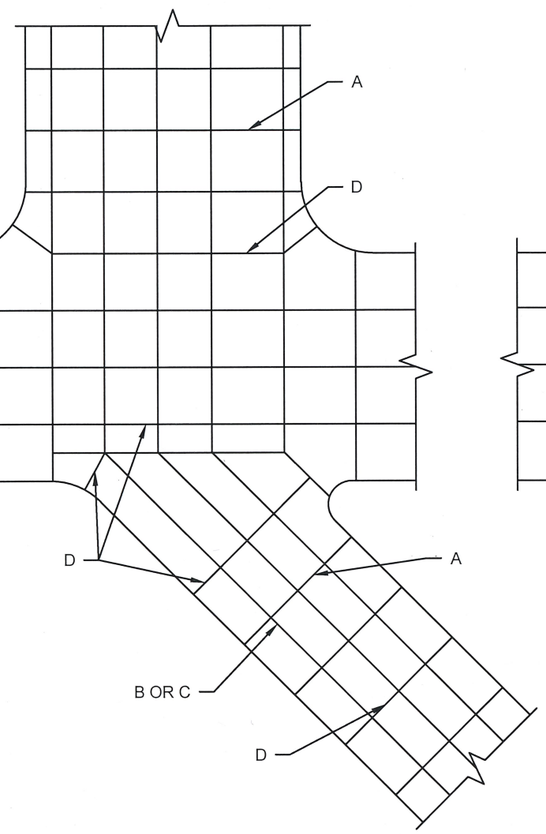
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

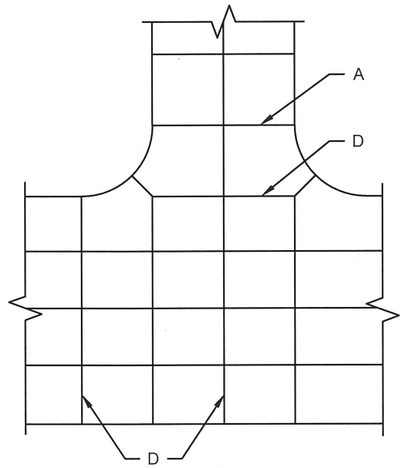
PCCP JOINT DETAILS

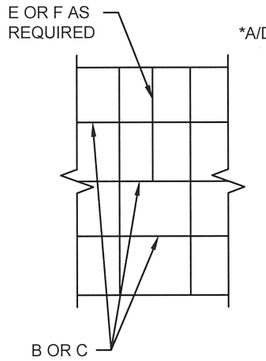
450-01-2/3

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

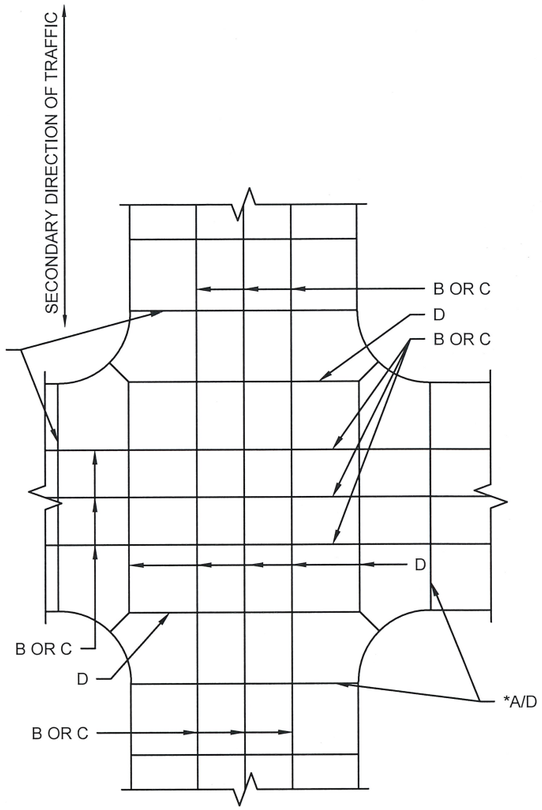








PRIMARY DIRECTION OF TRAFFIC



SEE SHEET 450-01-1/3 FOR JOINT DETAILS.

JOINT TYPE KEY

A - ISOLATION JOINT

B - LONGITUDINAL CONSTRUCTION JOINT

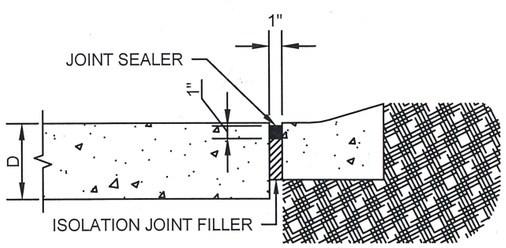
C - LONGITUDINAL CONTRACTION JOINT

D - TRANSVERSE CONTRACTION JOINT

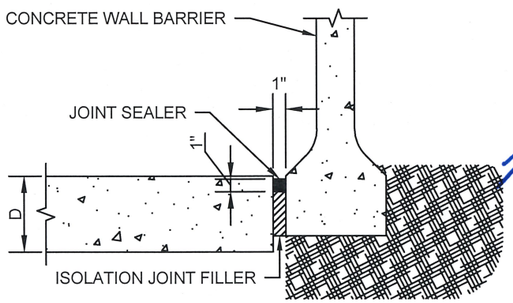
E - PLANNED TRANSVERSE CONSTRUCTION JOINT

F - EMERGENCY TRANSVERSE CONSTRUCTION JOINT

* IF PAVEMENT THICKNESS OF ADJACENT SLAB AT JOINT ARE THE SAME, USE JOINT TYPE D. IF PAVEMENT THICKNESS IS NOT THE SAME, USE JOINT TYPE A.



CURB JOINT DETAIL



CWB JOINT DETAIL

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PCCP JOINT DETAILS

450-01-3/3

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

TRIPLE OPENING BOX CULVERT STRUCTURE DIMENSIONS

GRADE 60 REINFORCING BAR SCHEDULE (BAR SIZE, SPACING AND LENGTH DIMENSIONS

DIM		10–15 FT BURIAL DESIGN FILL "B"				15–20 FT BURIAL DESIGN FILL "C"				20–25 FT BURIAL DESIGN FILL "D"				25–30 FT BURIAL DESIGN FILL "E"				"aa"		"ee"		"aa" & "ee"	"bb"		"cc"		"dd"		"bb" & "cc", & "dd"				"ff"		"gg"		"ff" & "gg" **				"hh"						"jj"		"kk"	
SPAN "S" INSIDE	HEIGHT "H" INSIDE	TOP SLAB "TT"	BOTTOM SLAB "TB"	WALLS OUTER "WO"	WALLS INTERIOR "WI"	TOP SLAB "TT"	BOTTOM SLAB "TB"	WALLS OUTER "WO"	WALLS INTERIOR "WI"	TOP SLAB "TT"	BOTTOM SLAB "TB"	WALLS OUTER "WO"	WALLS INTERIOR "WI"	TOP SLAB "TT"	BOTTOM SLAB "TB"	WALLS OUTER "WO"	WALLS INTERIOR "WI"	SIZE	SPACING	SIZE	SPACING	LENGTH	NO. OF BARS	SIZE	SPACING	SIZE	SPACING	LENGTH FOR 10–15 FT. FILL	LENGTH FOR 15–20 FT. FILL ⚠1	LENGTH FOR 20–25 FT. FILL	LENGTH FOR 25–30 FT. FILL	SIZE	SPACING	SIZE	SPACING	LENGTH FOR 10–15 FT. FILL	LENGTH FOR 15–20 FT. FILL	LENGTH FOR 20–25 FT. FILL	LENGTH FOR 25–30 FT. FILL	SIZE	SPACING	"CH" LENGTH	"CV" LENGTH FOR 10–15 FT. FILL	"CV" LENGTH FOR 15–20 FT. FILL	"CV" LENGTH FOR 20–25 FT. FILL	"CV" LENGTH FOR 25–30 FT. FILL	SIZE	STAGGERED SPACING	SIZE	STAGGERED SPACING
4'	2'	8.0"	8.5"	8.0"	6.0"	8.0"	9.5"	7.0"	6.0"	8.5"	10.0"	8.0"	6.0"	10.0"	11.5"	9.0"	6.0"	#6	16"	#6	16"	5'–7"	2	#6	16"	#8	16"	#8	16"	14'–0"	13'–10"	14'–0"	14'–2"	#8	16"	#4	12"	2'–11"	3'–0"	3'–1"	3'–4"	#7	12"	38"	31"	31"	32"	33"	#4	6"	#4	6"
4'	3'	8.0"	8.5"	8.0"	6.0"	8.0"	9.5"	7.0"	6.0"	8.5"	10.0"	8.0"	6.0"	10.0"	11.5"	9.0"	6.0"	#6	16"	#6	16"	5'–7"	2	#6	16"	#8	16"	#8	16"	14'–0"	13'–10"	14'–0"	14'–2"	#8	16"	#4	12"	3'–11"	4'–0"	4'–1"	4'–4"	#7	12"	38"	37"	37"	38"	39"	#4	6"	#4	6"
4'	4'	8.0"	8.5"	8.0"	6.0"	8.0"	9.5"	7.0"	6.0"	8.5"	10.0"	8.0"	6.0"	10.0"	11.5"	9.0"	6.0"	#6	16"	#6	16"	5'–7"	2	#6	16"	#8	16"	#8	16"	14'–0"	13'–10"	14'–0"	14'–2"	#8	16"	#4	12"	4'–11"	5'–0"	5'–1"	5'–4"	#7	12"	38"	43"	43"	44"	45"	#4	6"	#4	6"
6'	2'	9.0"	9.5"	8.0"	6.0"	10.0"	11.0"	8.0"	6.0"	11.5"	12.5"	9.0"	6.0"	14.0"	15.5"	10.5"	6.0"	#6	12"	#6	12"	6'–7"	2	#6	12"	#7	12"	#7	12"	20'–0"	20'–0"	20'–2"	20'–5"	#8	18"	#4	12"	3'–1"	3'–4"	3'–7"	4'–0"	#6	6"	37"	29"	31"	32"	35"	#4	6"	#4	6"
6'	3'	9.0"	9.5"	8.0"	6.0"	10.0"	11.0"	8.0"	6.0"	11.5"	12.5"	9.0"	6.0"	14.0"	15.5"	10.5"	6.0"	#6	12"	#6	12"	6'–7"	2	#6	12"	#7	12"	#7	12"	20'–0"	20'–0"	20'–2"	20'–5"	#8	18"	#4	12"	4'–1"	4'–4"	4'–7"	5'–0"	#6	6"	37"	35"	37"	38"	41"	#4	6"	#4	6"
6'	4'	9.0"	9.5"	8.0"	6.0"	10.0"	11.0"	8.0"	6.0"	11.5"	12.5"	9.0"	6.0"	14.0"	15.5"	10.5"	6.0"	#6	12"	#6	12"	6'–7"	2	#6	12"	#7	12"	#7	12"	20'–0"	20'–0"	20'–2"	20'–5"	#8	18"	#4	12"	5'–1"	5'–4"	5'–7"	6'–0"	#6	6"	37"	41"	43"	44"	47"	#4	6"	#4	6"
6'	5'	9.0"	9.5"	8.0"	6.0"	10.0"	11.0"	8.0"	6.0"	11.5"	12.5"	9.0"	6.0"	14.0"	15.5"	10.5"	6.0"	#6	12"	#6	12"	6'–7"	2	#6	12"	#7	12"	#7	12"	20'–0"	20'–0"	20'–2"	20'–5"	#8	18"	#4	12"	6'–1"	6'–4"	6'–7"	7'–0"	#6	6"	37"	47"	49"	50"	53"	#4	6"	#4	6"
6'	6'	9.0"	9.5"	8.0"	6.0"	10.0"	11.0"	8.0"	6.0"	11.5"	12.5"	9.0"	6.0"	14.0"	15.5"	10.5"	6.0"	#6	12"	#6	12"	6'–7"	2	#6	12"	#7	12"	#7	12"	20'–0"	20'–0"	20'–2"	20'–5"	#8	18"	#4	12"	7'–1"	7'–4"	7'–7"	8'–0"	#6	6"	37"	53"	55"	56"	59"	#4	6"	#4	6"
6'	7'	9.0"	9.5"	8.0"	6.0"	10.0"	11.0"	8.0"	6.0"	11.5"	12.5"	9.0"	6.0"	14.0"	15.5"	10.5"	6.0"	#6	12"	#6	12"	6'–7"	2	#6	12"	#7	12"	#7	12"	20'–0"	20'–0"	20'–2"	20'–5"	#8	18"	#4	12"	8'–1"	8'–4"	8'–7"	9'–0"	#6	6"	37"	59"	61"	62"	65"	#4	6"	#4	6"
8'	4'	10.0"	11.0"	9.0"	6.5"	12.0"	13.5"	10.0"	6.5"	14.5"	15.5"	12.0"	6.5"	17.5"	18.5"	13.5"	6.5"	#7	12"	#7	12"	8'–6"	2	#7	12"	#6	6"	#8	12"	26'–3"	26'–5"	26'–9"	27'–0"	#7	12"	#4	12"	5'–4"	5'–8"	6'–0"	6'–7"	#6	6"	42"	43"	45"	47"	50"	#4	6"	#4	6"
8'	5'	10.0"	11.0"	9.0"	6.5"	12.0"	13.5"	10.0"	6.5"	14.5"	15.5"	12.0"	6.5"	17.5"	18.5"	13.5"	6.5"	#7	12"	#7	12"	8'–6"	2	#7	12"	#6	6"	#8	12"	26'–3"	26'–5"	26'–9"	27'–0"	#7	12"	#4	12"	6'–4"	6'–8"	7'–0"	7'–7"	#6	6"	42"	49"	51"	53"	56"	#4	6"	#4	6"
8'	6'	10.0"	11.0"	9.0"	6.5"	12.0"	13.5"	10.0"	7.0"	14.5"	15.5"	12.0"	7.0"	17.5"	18.5"	13.5"	7.0"	#7	12"	#7	12"	8'–6"	2	#7	12"	#6	6"	#8	12"	26'–3"	26'–6"	26'–10"	27'–1"	#7	12"	#4	12"	7'–4"	7'–8"	8'–1"	8'–7"	#6	6"	42"	55"	57"	59"	62"	#4	6"	#4	6"
8'	7'	10.0"	11.0"	9.0"	7.0"	12.0"	13.5"	10.0"	7.5"	14.5"	15.5"	12.0"	7.5"	17.5"	18.5"	13.5"	7.5"	#7	12"	#7	12"	8'–6"	2	#7	12"	#6	6"	#8	12"	26'–4"	26'–7"	26'–11"	27'–2"	#7	12"	#4	12"	8'–4"	8'–8"	9'–1"	9'–7"	#6	6"	42"	61"	63"	65"	68"	#4	6"	#4	6"
8'	8'	10.0"	11.0"	9.0"	7.0"	12.0"	13.5"	10.0"	8.0"	14.5"	15.5"	12.0"	8.0"	17.5"	18.5"	13.5"	8.0"	#7	12"	#7	12"	8'–6"	2	#7	12"	#6	6"	#8	12"	26'–4"	26'–8"	27'–0"	27'–3"	#7	12"	#4	12"	9'–4"	9'–8"	10'–1"	10'–7"	#6	6"	42"	67"	69"	71"	74"	#4	6"	#4	6"
10'	3'	12.0"	12.5"	9.0"	7.0"	14.5"	15.5"	10.0"	7.5"	17.0"	18.5"	11.0"	7.5"	21.0"	22.0"	12.5"	7.5"	#8	12"	#8	12"	10'–10"	2	#8	12"	#6	6"	#6	6"	32'–4"	32'–7"	32'–9"	33'–0"	#7	6"	#4	12"	4'–7"	5'–0"	5'–6"	6'–1"	#7	6"	49"	41"	44"	46"	50"	#5	6"	#4	6"
10'	4'	12.0"	12.5"	9.0"	7.0"	14.5"	15.5"	10.0"	8.0"	17.0"	18.5"	11.0"	8.0"	21.0"	22.0"	12.5"	8.0"	#8	12"	#8	12"	10'–10"	2	#8	12"	#6	6"	#6	6"	32'–4"	32'–8"	32'–10"	33'–1"	#7	6"	#4	12"	5'–7"	6'–0"	6'–6"	7'–1"	#7	6"	49"	47"	50"	52"	56"	#5	6"	#4	6"
10'	5'	12.0"	12.5"	9.0"	7.0"	14.5"	15.5"	10.0"	8.0"	17.0"	18.5"	11.0"	8.0"	21.0"	22.0"	12.5"	8.0"	#8	12"	#8	12"	10'–10"	2	#8	12"	#6	6"	#6	6"	32'–4"	32'–8"	32'–10"	33'–1"	#7	6"	#4	12"	6'–7"	7'–0"	7'–6"	8'–2"	#7	6"	49"	53"	56"	58"	62"	#5	6"	#4	6"
10'	6'	12.0"	12.5"	9.0"	7.0"	14.5"	15.5"	10.0"	8.0"	17.0"	18.5"	11.0"	8.0"	21.0"	22.0"	12.5"	8.0"	#8	12"	#8	12"	10'–10"	2	#8	12"	#6	6"	#6	6"	32'–4"	32'–8"	32'–10"	33'–1"	#7	6"	#4	12"	7'–7"	8'–1"	8'–6"	9'–2"	#7	6"	49"	59"	62"	64"	68"	#5	6"	#4	6"
10'	7'	12.0"	12.5"	9.0"	7.5"	14.5"	15.5"	10.0"	8.5"	17.0"	18.5"	11.0"	8.5"	21.0"	22.0"	12.5"	8.5"	#8	12"	#8	12"	10'–10"	2	#8	12"	#6	6"	#6	6"	32'–5"	32'–9"	32'–11"	33'–2"	#7	6"	#4	12"	8'–7"	9'–1"	9'–6"	10'–2"	#7	6"	49"	65"	68"	70"	74"	#5	6"	#4	6"
10'	8'	11.5"	12.0"	11.0"	8.0"	14.5"	15.5"	12.5"	8.5"	17.0"	18.5"	17.0"	8.5"	21.0"	22.0"	20.5"	8.5"	#8	12"	#8	12"	10'–11"	2	#8	12"	#6	6"	#6	6"	32'–10"	33'–2"	33'–11"	34'–6"	#8	12"	#4	12"	9'–6"	10'–1"	10'–6"	11'–2"	#7	6"	57"	70"	74"	76"	80"	#5	6"	#4	6"
10'	9'	11.5"	12.0"	11.0"	8.5"	14.5"	15.5"	12.5"	9.0"	17.0"	18.5"	17.0"	9.0"	21.0"	22.0"	20.5"	9.0"	#8	12"	#8	12"	10'–11"	2	#8	12"	#6	6"	#6	6"	32'–11"	33'–3"	34'–0"	34'–7"	#8	12"	#4	12"	10'–6"	11'–1"	11'–6"	12'–2"	#7	6"	57"	76"	80"	82"	86"	#5	6"	#4	6"
10'	10'	11.5"	12.0"	11.0"	9.0"	14.5"	15.5"	12.5"	9.5"	17.0"	18.5"	17.0"	9.5"	21.0"	22.0"	20.5"	9.5"	#8	12"	#8	12"	10'–11"	2	#8	12"	#6	6"	#6	6"	33'–0"	33'–4"	34'–1"	34'–8"	#8	12"	#4	12"	11'–6"	12'–1"	12'–6"	13'–2"	#7	6"	57"	82"	86"	88"	92"	#5	6"	#4	6"
10'	11'	11.5"	12.0"	11.0"	9.0"	14.5"	15.5"	12.5"	9.5"	17.0"	18.5"	17.0"	9.5"	21.0"	22.0"	20.5"	9.5"	#8	12"	#8	12"	10'–11"	2	#8	12"	#6	6"	#6	6"	33'–0"	33'–4"	34'–1"	34'–8"	#8	12"	#4	12"	12'–6"	13'–1"	13'–6"	14'–2"	#7	6"	57"	88"	92"	94"	98"	#5	6"	#4	6"
10'	12'	11.5"	12.0"	11.0"	10.0"	14.5"	15.5"	12.5"	9.5"	17.0"	18.5"	17.0"	9.5"	21.0"	22.0"	20.5"	9.5"	#8	12"	#8	12"	10'–11"	2	#8	12"	#6	6"	#6	6"	33'–2"	33'–4"	34'–1"	34'–8"	#8	12"	#4	12"	13'–6"	14'–1"	14'–6"	15'–2"	#7	6"	57"	94"	98"	100"	104"	#5	6"	#4	6"
12'	6'	14.0"	13.5"	11.0"	10.0"	17.5"	18.0"	12.5"	8.5"	21.0"	21.0"	17.0"	8.5"	25.5"	25.5"	19.5"	8.5"	#9	12"	#8	12"	13'–5"	2	#9	12"	#6	6"	#6	6"	39'–2"	39'–2"	39'–11"	40'–4"	#8	12"	#4	12"	7'–10"	8'–6"	9'–1"	9'–10"	#8	6"	66"	64"	68"	72"	76"	#5	6"	#4	6"
12'	7'	14.0"	13.5"	11.0"	10.0"	17.5"	18.0"	12.5"	10.0"	21.0"	21.0"	17.0"	10.0"	25.5"	25.5"	19.5"	10.0"	#9	12"	#8	12"	13'–5"	2	#9	12"	#6	6"	#6	6"	39'–2"	39'–5"	40'–2"	40'–7"	#8	12"	#4	12"	8'–10"	9'–6"	10'–1"	10'–10"	#8	6"	67"	70"	74"	78"	82"	#5	6"	#4	6"
12'	8'	14.0"	13.5"	11.0"	10.0"	17.5"	18.0"	12.5"	10.0"	21.0"	21.0"	17.0"	10.0"	25.5"	25.5"	19.5"	10.0"	#9	12"	#8	12"	13'–5"	2	#9	12"	#6	6"	#6	6"	39'–2"	39'–5"	40'–2"	40'–7"	#8	12"	#4	12"	9'–10"	10'–6"	11'–1"	11'–10"	#8	6"	67"	76"	80"	84"	88"	#5	6"	#4	6"
12'	9'	14.0"	13.5"	11.0"	10.0"	17.5"	18.0"	12.5"	10.0"	21.0"	21.0"	17.0"	10.0"	25.5"	25.5"	19.5"	10.0"	#9	12"	#8	12"	13'–5"	2	#9	12"	#6	6"	#6	6"	39'–2"	39'–5"	40'–2"	40'–7"	#8	12"	#4	12"	10'–10"	11'–6"	12'–1"	12'–10"	#8	6"	67"	82"	86"	90"	94"	#5	6"	#4	6"
*12'	10'	14.0"	13.5"	11.0"	10.5"	17.5"	18.0"	12.5"	11.0"	21.0"	21.0"	17.0"	11.0"	25.5"	25.5"	19.5"	11.0"	#9	12"	#8	12"	13'–5"	2	#9	12"	#6	6"	#6	6"	39'–3"	39'–7"	40'–4"	40'–9"	#8	12"	#4	12"	11'–10"	12'–6"	13'–1"	13'–10"	#8	6"	67"	88"	92"	96"	100"	#5	6"	#4	6"
12'	12'	14.0"	13.5"	11.0"	10.5"	17.5"	18.0"	12.5"	11.0"	21.0"	21.0"	17.0"	11.0"	25.5"	25.5"	19.5"	11.0"	#9	12"	#8	12"	13'–5"	2	#9	12"	#6	6"	#6	6"	39'–3"	39'–7"	40'–4"	40'–9"	#8	12"	#4	12"	13'–10"	14'–6"	15'–1"	15'–10"	#8	6"	67"	100"	104"	108"	112"	#5	6"	#4	6"
14'	8'	14.5"	16.0"	12.5"	10.0"	19.5"	20.5"	14.5"	11.0"	23.5"	24.5"	20.5"	11.0"	28.5"	30.0"	24.5"	11.0"	#9	12"	#9	12"	14'–5"	2	#9	12"	#7	6"	#7	6"	45'–5"	45'–11"	46'–11"	47'–7"	#8	12"	#4	12"	10'–1"	10'–11"	11'–7"	12'–5"	#8	6"	74"	78"	83"	87"	92"	#5	6"	#5	6"
14'	9'	14.5"	16.0"	12.5"	10.0"	19.5"	20.5"	14.5"	11.0"	23.5"	24.5"	20.5"	11.0"	28.5"	30.0"	24.5"	11.0"	#9	12"	#9	12"	14'–5"	2	#9	12"	#7	6"	#7	6"	45'–5"	45'–11"	46'–11"	47'–7"	#8	12"	#4	12"	11'–1"	11'–11"	12'–7"	13'–5"	#8	6"	74"	84"	89"	93"	98"	#5	6"	#5	6"
14'	10'	14.5"	16.0"	12.5"	10.0"	19.5"	20.5"	14.5"	11.0"	23.5"	24.5"	20.5"	11.0"	28.5"	30.0"	24.5"	11.0"	#9	12"	#9	12"	14'–5"	2	#9	12"	#7	6"	#7	6"	45'–5"	45'–11"	46'–11"	47'–7"	#8	12"	#4	12"	12'–1"	12'–11"	13'–7"	14'–5"	#8	6"	74"	90"	95"	99"	104"	#5	6"	#5	6"
14'	11'	14.5"	16.0"	12.5"	10.0"	19.5"	20.5"	14.5"	11.5"	23.5"	24.5"	20.5"	11.5"	28.5"	30.0"	24.5"	11.5"	#9	12"	#9	12"	14'–5"	2	#9	12"	#7	6"	#7	6"	45'–5"	46'–0"	47'–0"	47'–8"	#8	12"	#4	12"	13'–1"	13'–11"	14'–7"	15'–5"	#8	6"	74"	96"	101"	105"	110"	#5	6"	#5	6"
14'	12'	14.5"	16.0"	12.5"	10.5"	19.5"	20.5"	14.5"	12.0"	23.5"	24.5"	20.5"	12.0"	28.5"	30.0"	24.5"	12.0"	#9	12"	#9	12"	14'–5"	2	#9	12"	#7	6"	#7	6"	45'–6"	46'–1"	47'–0"	47'–9"	#8	12"	#4	12"	14'–1"	14'–11"	15'–7"	16'–5"	#8	6"	74"	102"	107"	111"	116"	#5	6"	#5	6"
14'	13'	14.5"	16.0"	12.5"	10.5"	19.5"	20.5"	14.5"	12.0"	23.5"	24.5"	20.5"	12.0"	28.5"	30.0"	24.5"	12.0"	#9	12"	#9	12"	14'–5"	2	#9	12"	#7	6"	#7	6"	45'–6"	46'–1"	47'–0"	47'–9"	#8	12"	#4	12"	15'–1"	15'–11"	16'–6"	17'–5"	#8	6"	74"	108"	113"	117"	122"	#5	6"	#5	6"
14'	14'	14.5"	16.0"	12.5"	12.0"	19.5"	20.5"	14.5"	13.5"	23.5"	24.5"	20.5"	13.5"	28.5"	30.0"	24.5"	13.5"	#9	12"	#9	12"	14'–6"	2	#9	12"	#7	6"	#7	6"	45'–9"	46'–4"	47'–4"	48'–0"	#8	12"	#4	12"	16'–1"	16'–11"	17'–6"	18'–5"	#8	6"	74"	114"	119"	123"	128"	#5	6"	#5	6"

* EXAMPLE OF USE OF THIS TABLE:
PROPOSED STRUCTURE – TRIPLE BARREL, 12 FT. SPAN/10 FT. HEIGHT, CBC WITH 10 FT. DEPTH OF COVER.
USE THE FOLLOWING BUILD INFORMATION FROM THE TABLE ABOVE:

DIM		10–15 FT BURIAL DESIGN FILL "B"				"aa"		"ee"		"aa" & "ee"	"bb"		"cc"		"dd"		"bb", "cc" & "dd"	"ff"		"gg"		"ff" & "gg"	"hh"				"jj"		"kk"	
SPAN "S" INSIDE	HEIGHT "H" INSIDE	TOP SLAB "TT"	BOTTOM SLAB "TB"	WALLS OUTER "WO"	WALLS INTERIOR "WI"	SIZE	SPACING	SIZE	SPACING	LENGTH	NUMBER OF BARS	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	LENGTH FOR 10–15 FT. FILL	SIZE	SPACING	SIZE	SPACING	LENGTH FOR 10–15 FT. FILL	SIZE	SPACING	"CH" LENGTH	"CV" LENGTH FOR 10–15 FT. FILL	SIZE	STAGGERED SPACING	SIZE	STAGGERED SPACING
12'	10'	14.0"	13.5"	11.0"	10.5"	#9	12"	#8	12"	13'–5"	2	#9	12"	#6	6"	#6	6"	39'–3"	#8	12"	#4	12"	11'–10"	#8	6"	67"	88"	#5	6"	#4	6"

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 511–66–4/6. 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 ø LAP IF NECESSARY.

NO.	DATE	REV. BY	DESCRIPTION
⚠1	2/19/19	OB	REVISED LENGTH FOR 15–20 FT FILL
			REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE BOX CULVERT TRIPLE OPENING – DESIGN FILLS B, C, D, E DIMENSIONS AND REBAR SCHEDULE

APPROVED _____ DESIGN ENGINEER _____ DATE 2/19/19

DESIGNED BY TLB DRAWN BY SGL CHECKED BY HDR

511–65–2/3

GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.

2. BRIDGE BARRIER RAILING SHALL BE PER SECTION 514 - CONCRETE BARRIER RAILINGS FOR BRIDGES.

3. REINFORCING BARS SHALL BE THE SAME TYPE OF REINFORCEMENT FOR BRIDGE BARRIER RAILING AS IS USED IN DECK.

4. FOR EXPANSION JOINT DETAILS SEE STANDARD DRAWING 514-01-5/5. EXPANSION JOINTS SHALL BE PLACED ANYWHERE THERE IS A BRIDGE EXPANSION JOINT OR AS SHOWN ON THE PLANS.

5. FOR CRACK CONTROL JOINT DETAILS SEE STANDARD DRAWING 514-01-3/5. CRACK CONTROL JOINTS SHALL BE PLACED AT EQUALLY SPACED INTERVALS WITH A MAXIMUM SPACING OF 15 FEET. CRACK CONTROL JOINTS SHALL ALSO BE PLACED BETWEEN THE DECK AND THE APPROACH SLAB.

6. STRUCTURAL STEEL SHALL BE PER SECTION 541 - STEEL STRUCTURES. REMOVABLE COVER PLATES SHALL BE HOT-DIPPED GALVANIZED AND MATCH COLOR OF BRIDGE BARRIER RAILING.

7. CHAMFER EXPOSED EDGES OF STRUCTURES ¾ INCH UNLESS NOTED OTHERWISE.

KATHY CROWELL
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6/24/21

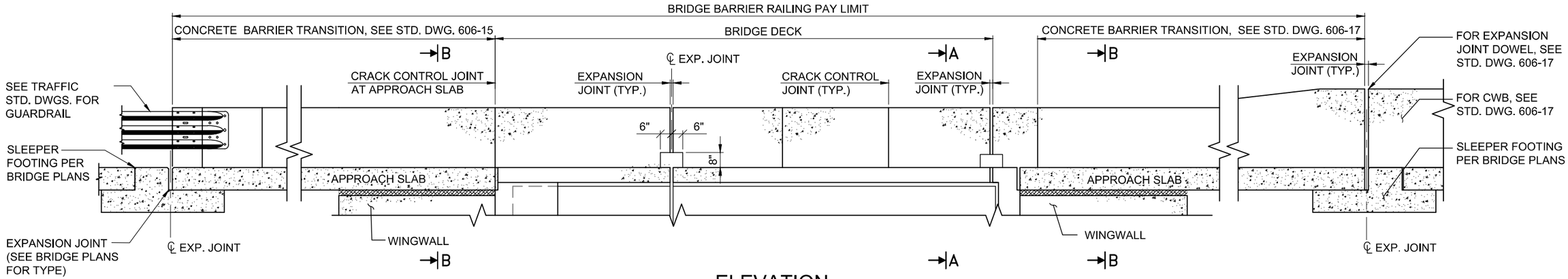
DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

NO.	DATE	BY	DESCRIPTION

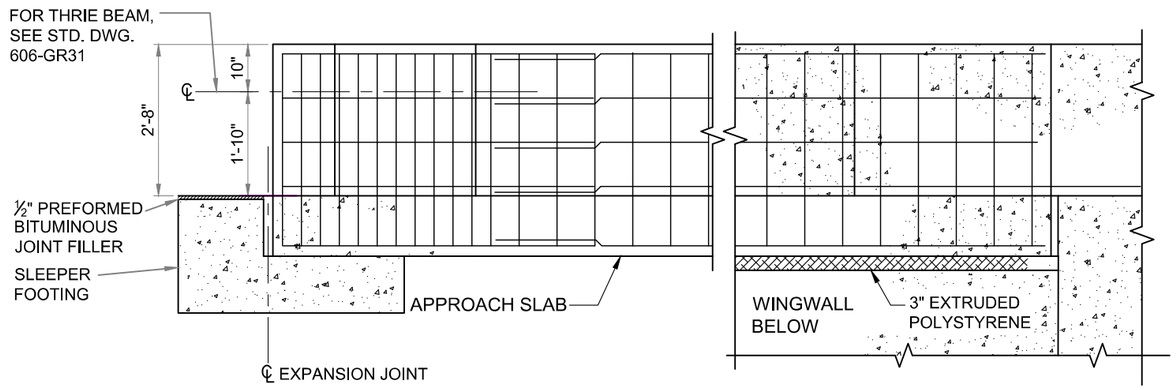
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

32 INCH CONCRETE BRIDGE BARRIER RAILING GENERAL DETAILS



ELEVATION



ELEVATION AT TRANSITION TO GUARDRAIL

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

KATHY CROWELL
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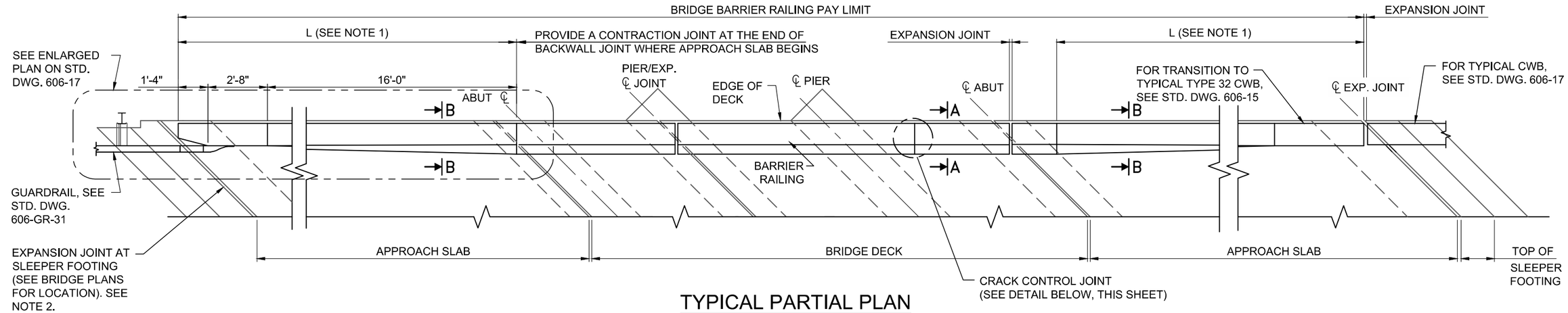
6/24/21

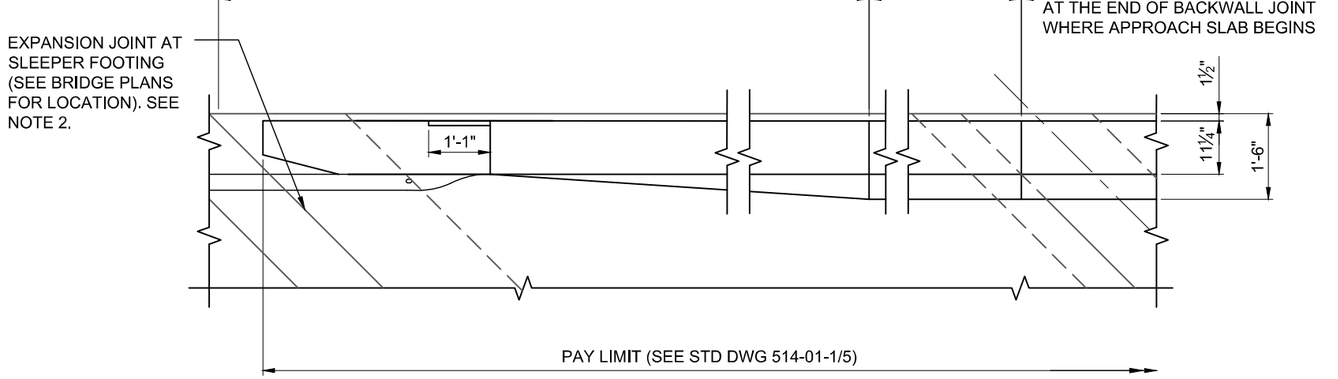
32 INCH CONCRETE
BRIDGE BARRIER RAILING
TRANSITION SECTION
AND DETAILS

514-01-2/5

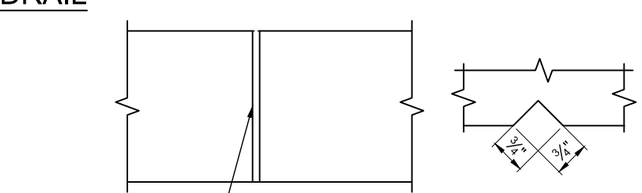
DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC



TYPICAL PARTIAL PLAN



ENLARGED PLAN AT TRANSITION TO GUARDRAIL



ELEVATION GROOVE DETAIL

CRACK CONTROL JOINT DETAIL

PROVIDE CRACK CONTROL JOINTS AT EQUALLY SPACED INTERVALS 15 FT. MAX AND AT JOINT BETWEEN DECK AND APPROACH SLAB.

NOTES:

1. SEE BRIDGE PLAN FOR APPROACH SLAB LENGTHS (L).
2. FOR EXPANSION JOINT DETAILS SEE STANDARD DRAWING 514-01-5/5.
3. FOR CRACK CONTROL JOINT DETAILS SEE DETAIL THIS SHEET.
4. SEE BRIDGE PLANS FOR OVERALL BARRIER RAIL LENGTH (X).

KATHY CROWELL NEW MEXICO 22934 PROFESSIONAL ENGINEER 6/24/21

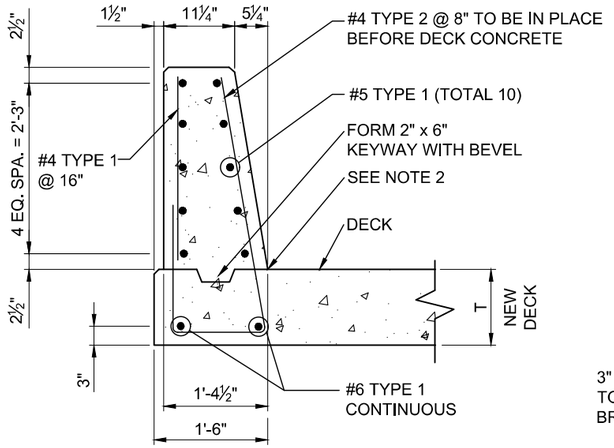
DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

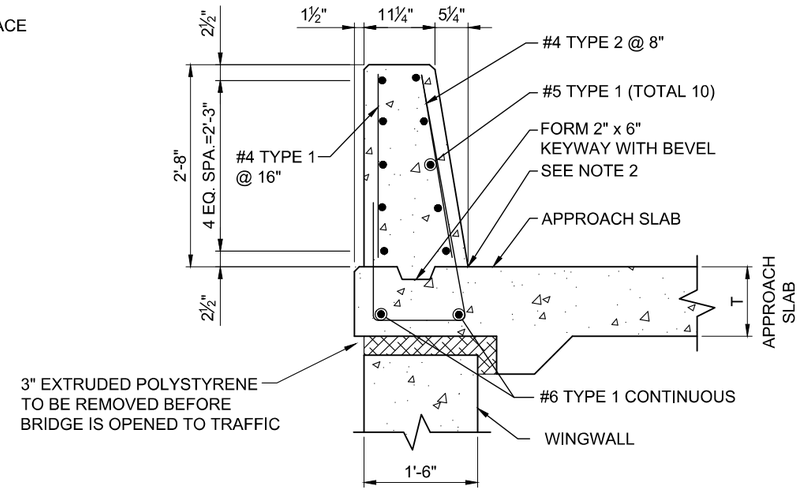
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

32 INCH CONCRETE BRIDGE BARRIER RAILING GENERAL DETAILS



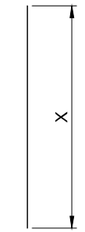
TYPE 32A

SECTION A-A

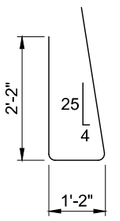


SECTION B-B

(FOR USE ABOVE WINGWALLS)

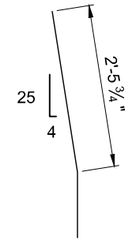


TYPE 1



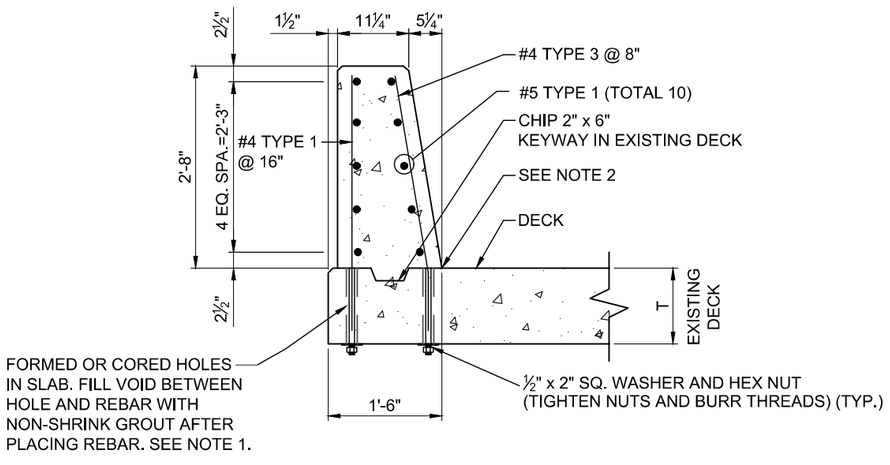
TYPE 2

L= 5' -9 ¾" +2T
USE APPROPRIATE
"T" OF DECK OR
APPROACH SLAB



TYPE 3

L= 2' -8 ¾" +T
(WITH THREADED END)
USE APPROPRIATE
"T" OF DECK OR
APPROACH SLAB



TYPE 32B

SECTION A-A

NOTES:

1. MATERIAL TO BE USED FOR GROUTING SHALL COMPLY WITH SECTION 521 - NON-SHRINK GROUT, GROUTED DOWELS AND ANCHORS, AND SHALL BE APPROVED BY THE PROJECT MANAGER.

2. SEAL BARRIER RAIL TO DECK JOINT WITH SPECIFICATION 535 - CRACK SEALING USING LOW VISCOSITY, GRAVITY FED SEALERS.

3. HWHM PER SPECIFICATION 535 - CRACK SEALING USING LOW - VISCOSITY, GRAVITY FED SEALERS. EXTRUDED POLYSTYRENE AND PREFORMED BITUMINOUS JOINT FILLER WILL BE INCIDENTAL TO THE COMPLETION OF THE WORK AND WILL NOT BE PAID FOR SEPARATELY.

4. WASHERS AND HEX NUTS SHALL BE PER 542-HIGH STRENGTH BOLTS AND SHALL BE GALVANIZED.

5. TYPE 32-A SHALL BE USED FOR ALL NEW CONSTRUCTION. TYPE 32-B SHALL BE USED FOR EXISTING DECKS OR WHEN SHOWN IN THE CONTRACT DOCUMENTS.

6. SECTION B-B SHALL BE USED OVER ALL APPROACH SLABS.

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6/24/21

NO.	DATE	BY	DESCRIPTION

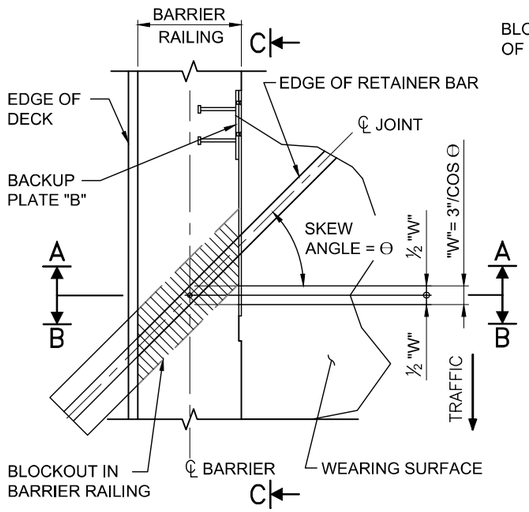
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

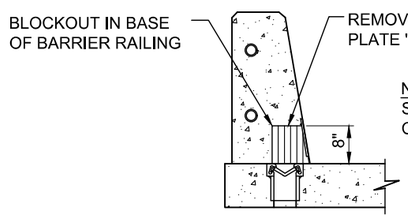
32 INCH CONCRETE BRIDGE BARRIER RAILING STANDARD SECTION AND DETAILS

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

514-01-4/5

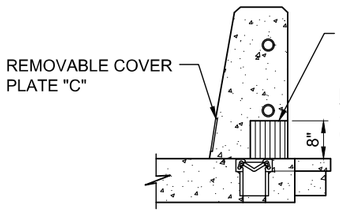


PART PLAN-SKEW JOINT AT CONCRETE BARRIER RAILING



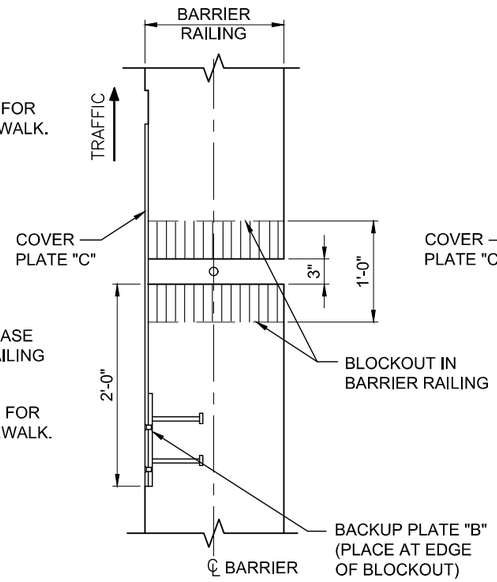
NOTE:
SIMILAR DETAIL FOR CURB AND SIDEWALK.

SECTION A-A

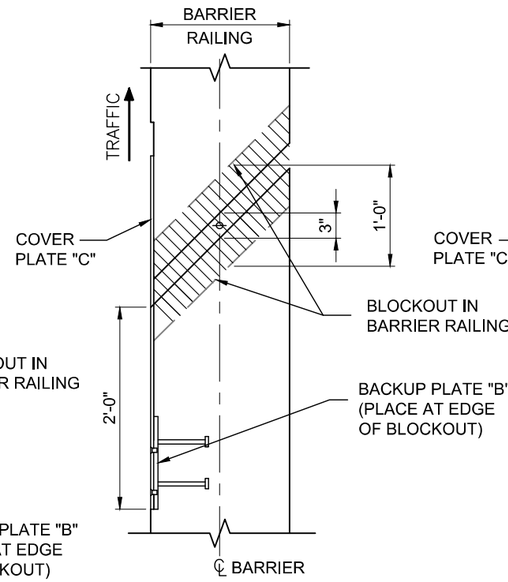


NOTE:
SIMILAR DETAIL FOR CURB AND SIDEWALK.

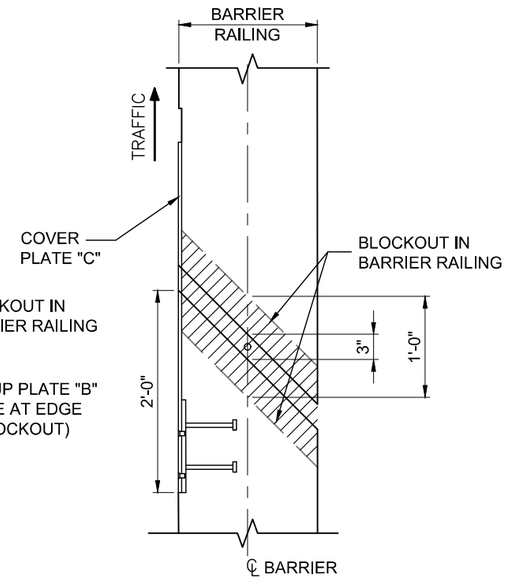
SECTION B-B



NORMAL

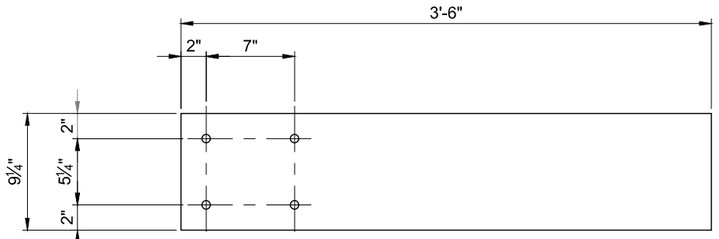


RF SKEW

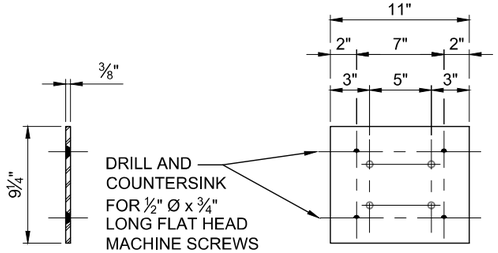


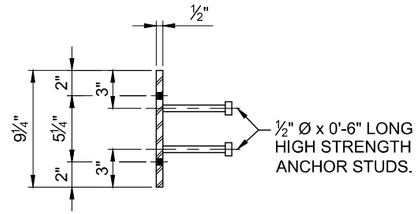
LF SKEW

BACKUP PLATE "B" LOCATIONS IN PLAN VIEW



REMOVABLE COVER PLATE "C"

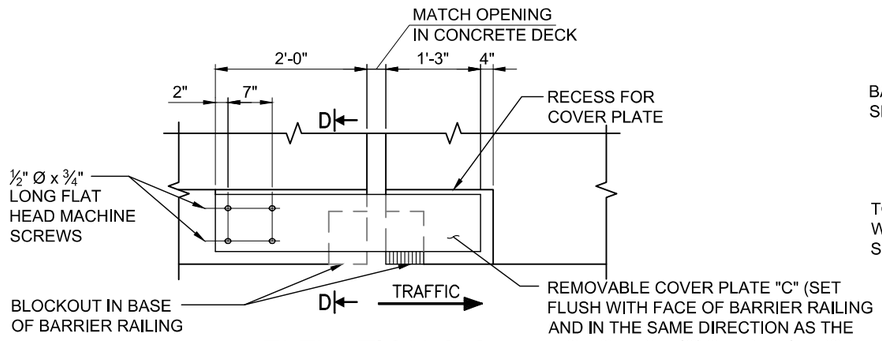




BACKUP PLATE "B"

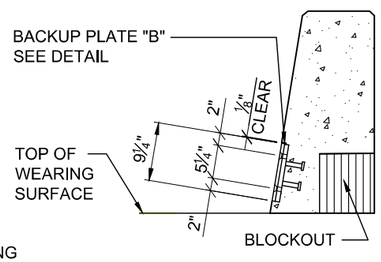
NOTES:

1. APPLICABLE FOR SKEWS UP TO 45 DEGREES. IF THE SKEW IS LARGER THAN 45 DEGREES THEN THE PROJECT MANAGER MUST ENSURE THAT THE STUDS ON THE BACKUP PLATE HAVE ADEQUATE CONCRETE COVER.



ELEVATION C-C

PROVIDE EXPANSION JOINT IN BARRIER RAILING AT EACH BRIDGE EXPANSION JOINT.



SECTION D-D

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

32 INCH CONCRETE BARRIER DETAILS AT EXPANSION JOINT

514-01-5/5

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.

2. BRIDGE BARRIER RAILING SHALL BE PER SECTION 514 - CONCRETE BARRIER RAILINGS FOR BRIDGES.

3. REINFORCING BARS SHALL BE THE SAME TYPE OF REINFORCEMENT FOR BRIDGE BARRIER RAILING AS IS USED IN DECK.

4. FOR EXPANSION JOINT DETAILS SEE STANDARD DRAWING 514-03-5/5. EXPANSION JOINTS SHALL BE PLACED ANYWHERE THERE IS A BRIDGE EXPANSION JOINT OR AS SHOWN ON THE PLANS.

5. FOR CRACK CONTROL JOINT DETAILS SEE STANDARD DRAWING 514-03-3/5. CRACK CONTROL JOINTS SHALL BE PLACED AT EQUALLY SPACED INTERVALS WITH A MAXIMUM SPACING OF 15 FEET. CRACK CONTROL JOINTS SHALL ALSO BE PLACED BETWEEN THE DECK AND THE APPROACH SLAB.

6. STRUCTURAL STEEL SHALL BE PER SECTION 541 - STEEL STRUCTURES. REMOVABLE COVER PLATES SHALL BE HOT-DIPPED GALVANIZED AND MATCH COLOR OF BRIDGE BARRIER RAILING.

7. CHAMFER EXPOSED EDGES OF STRUCTURES ¾ INCH UNLESS NOTED OTHERWISE.

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PROFESSIONAL ENGINEER
6/24/21

NO.	DATE	BY	DESCRIPTION

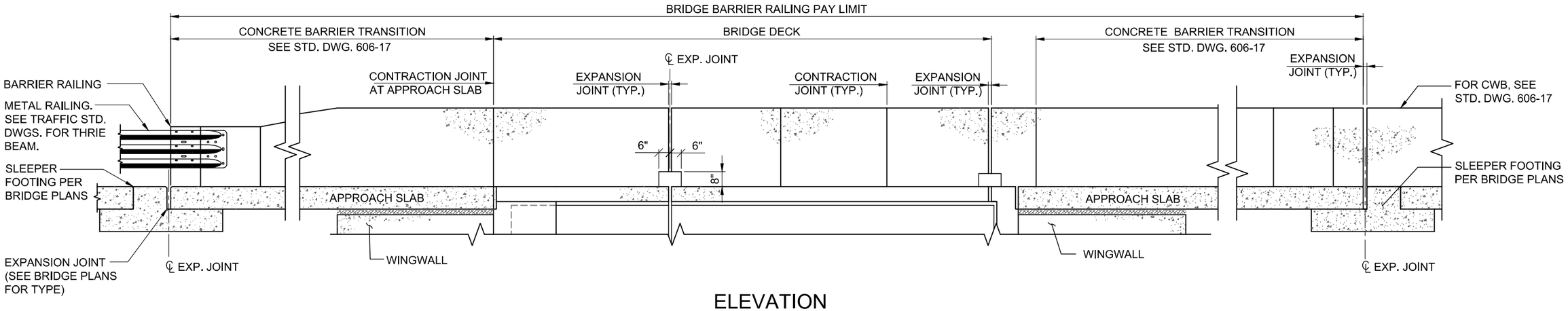
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

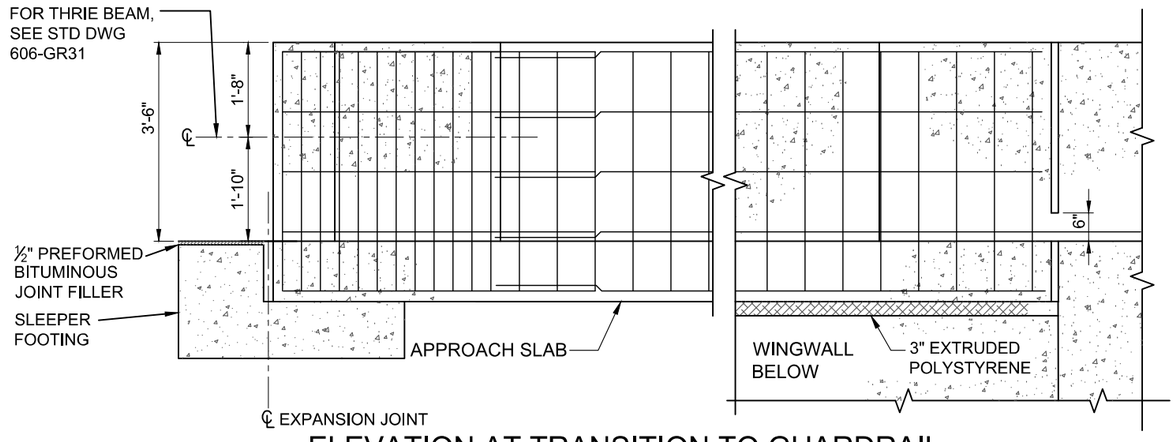
42 INCH CONCRETE BRIDGE BARRIER RAILING GENERAL DETAILS

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

514-03-1/5



ELEVATION



ELEVATION AT TRANSITION TO GUARDRAIL

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

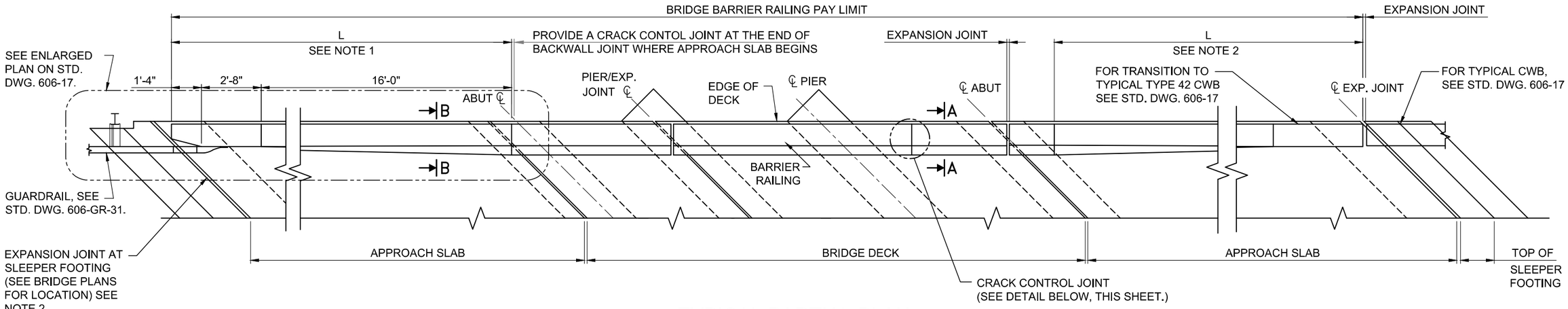
KATHY CROWELL
NEW MEXICO
22934
PROFESSIONAL ENGINEER
6/24/21

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

42 INCH CONCRETE BRIDGE
BARRIER RAILING
GENERAL DETAILS

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

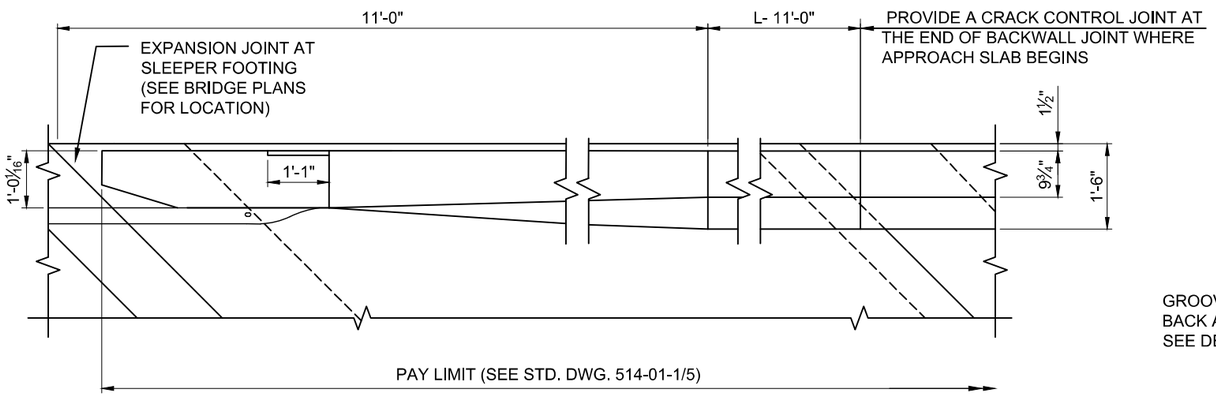
514-03-2/5



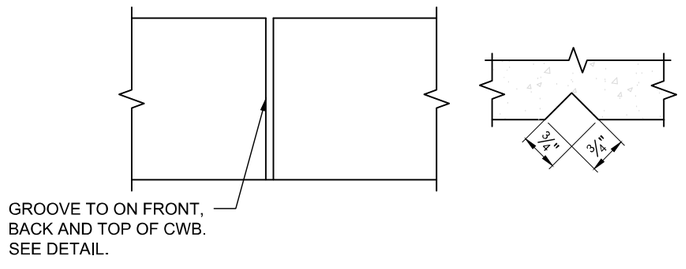
TYPICAL PARTIAL PLAN

NOTES:

1. SEE BRIDGE PLAN FOR APPROACH SLAB LENGTHS (L)
2. FOR EXPANSION JOINT DETAILS SEE STANDARD DRAWING 514-03-5/5.
3. FOR CRACK CONTROL JOINT DETAILS SEE DETAIL THIS SHEET.
4. SEE BRIDGE PLANS FOR OVERALL BARRIER RAIL LENGTH (X).



ENLARGED PLAN AT TRANSITION TO GUARDRAIL



ELEVATION GROOVE DETAIL

CRACK CONTROL JOINT DETAIL

PROVIDE CRACK CONTROL JOINTS AT EQUALLY SPACED INTERVALS 15 FT. MAX AND AT JOINT BETWEEN DECK AND APPROACH SLAB.

KATHY CROWELL NEW MEXICO 22934 PROFESSIONAL ENGINEER 6/24/21

NO.	DATE	BY	DESCRIPTION

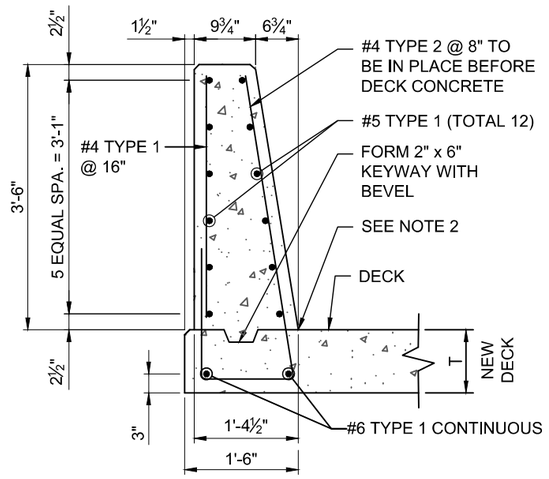
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

42 INCH CONCRETE BRIDGE BARRIER RAILING TRANSITION SECTION AND DETAILS

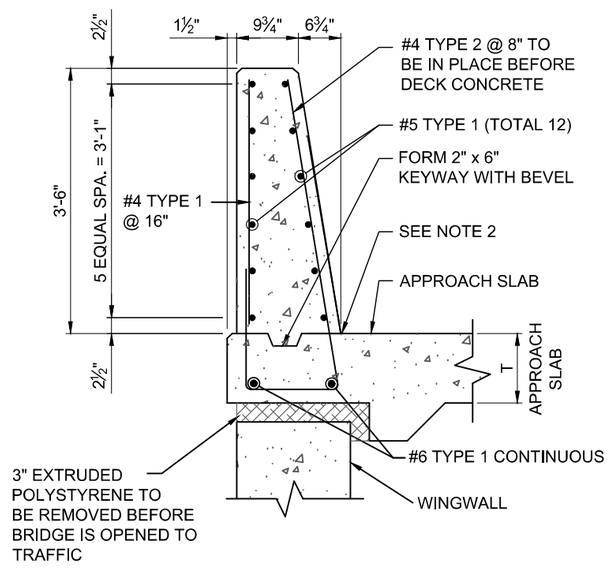
514-03-3/5

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC



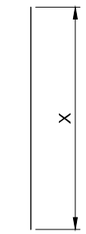
TYPE 42A

SECTION A-A

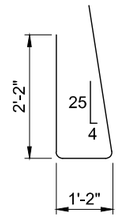


SECTION B-B

(FOR USE ABOVE WINGWALLS)

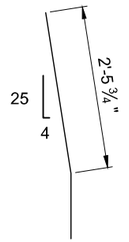


TYPE 1



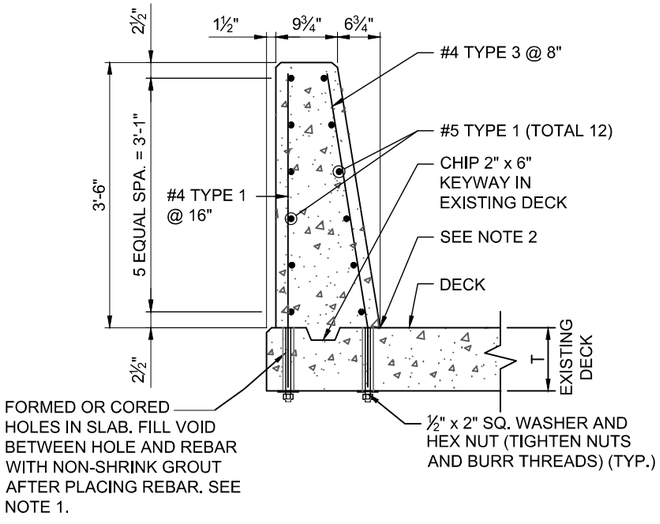
TYPE 2

L= 6' -8" +2T
USE APPROPRIATE "T" OF DECK OR APPROACH SLAB



TYPE 3

L= 3' -7"+T
(WITH THREADED END)
USE APPROPRIATE "T" OF DECK OR APPROACH SLAB



TYPE 42B

SECTION A-A

NOTES:

1. MATERIAL TO BE USED FOR GROUTING SHALL COMPLY WITH SECTION 521 - NON-SHRINK GROUT, GROUTED DOWELS AND ANCHORS, AND SHALL BE APPROVED BY THE PROJECT MANAGER.
2. SEAL BARRIER RAIL TO DECK JOINT WITH SPECIFICATION 535- CRACK SEALING USING LOW VISCOSITY, GRAVITY FED SEALERS.
3. HWHM PER SPECIFICATION 535 - CRACK SEALING USING LOW - VISCOSITY, GRAVITY FED SEALERS. EXTRUDED POLYSTYRENE AND PREFORMED BITUMINOUS JOINT FILLER WILL BE INCIDENTAL TO THE COMPLETION OF THE WORK AND WILL NOT BE PAID FOR SEPARATELY.
4. WASHERS AND HEX NUTS SHALL BE PER 542-HIGH STRENGTH BOLTS AND SHALL BE GALVANIZED.
5. TYPE 42-A SHALL BE USED FOR ALL NEW CONSTRUCTION. TYPE 42-B SHALL BE USED FOR EXISTING DECKS OR WHEN SHOWN IN THE CONTRACT DOCUMENTS.
6. SECTION B-B SHALL BE USED OVER ALL APPROACH SLABS.

NO.	DATE	BY	DESCRIPTION

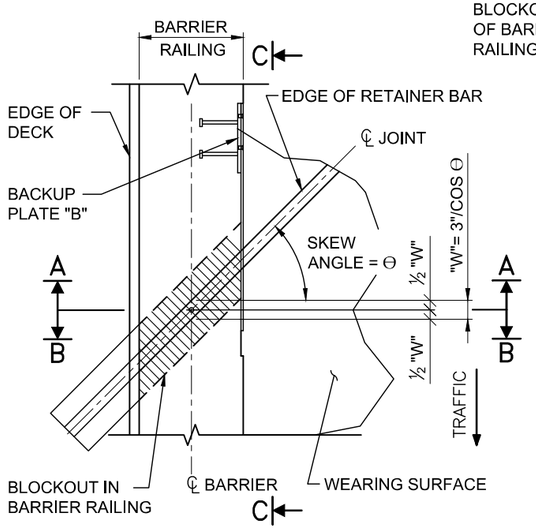
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

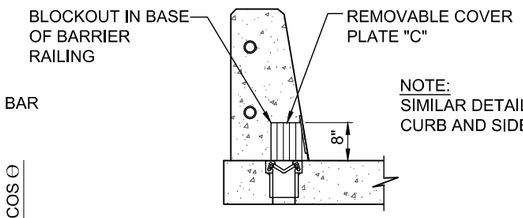
42 INCH CONCRETE
BRIDGE BARRIER RAILING
STANDARD SECTION
AND DETAILS

514-03-4/5

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

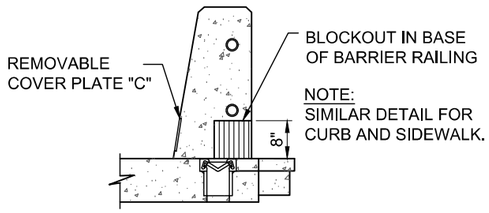


PART PLAN-SKEW JOINT AT CONCRETE BARRIER RAILING



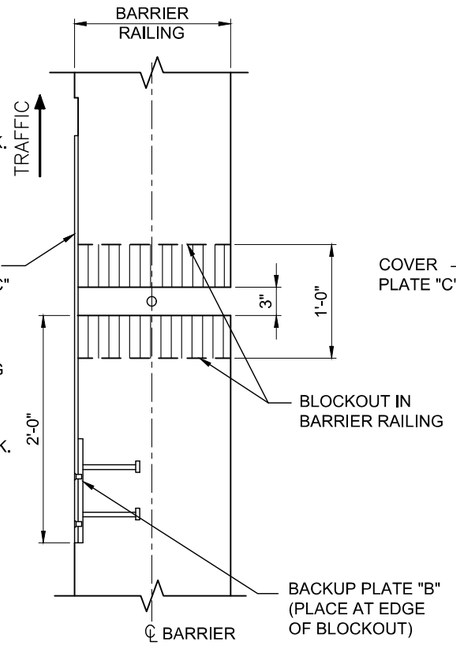
NOTE:
SIMILAR DETAIL FOR CURB AND SIDEWALK.

SECTION A-A

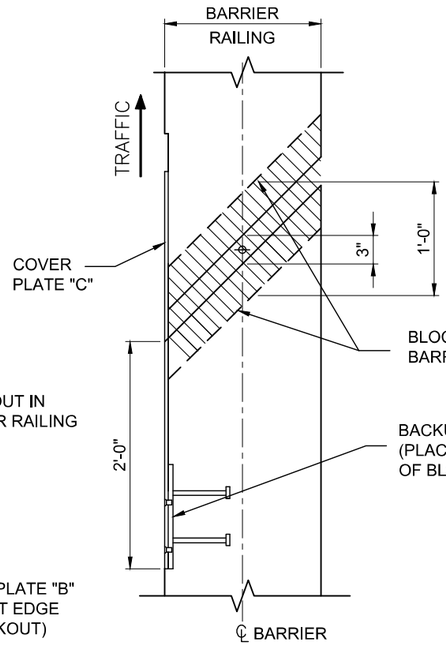


NOTE:
SIMILAR DETAIL FOR CURB AND SIDEWALK.

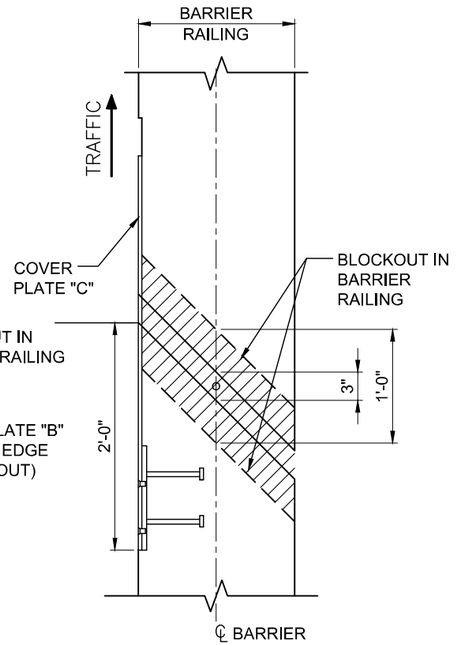
SECTION B-B



NORMAL

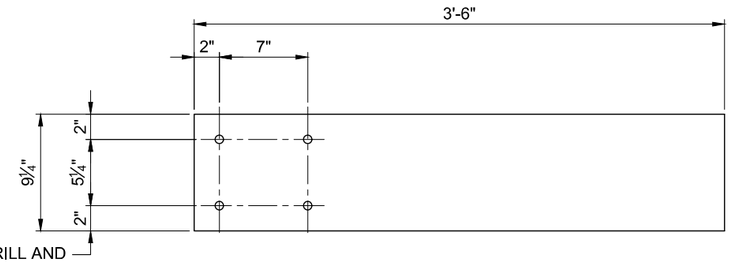


RF SKEW

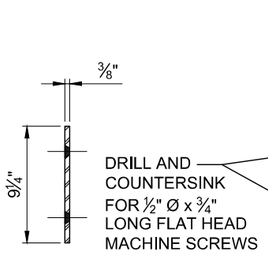


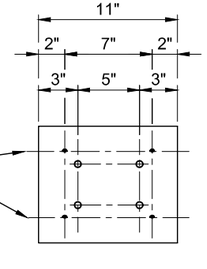
LF SKEW

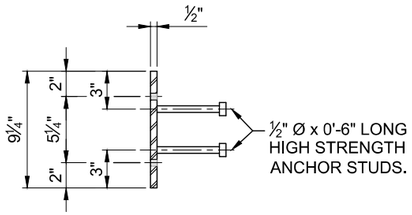
BACKUP PLATE "B" LOCATIONS IN PLAN VIEW



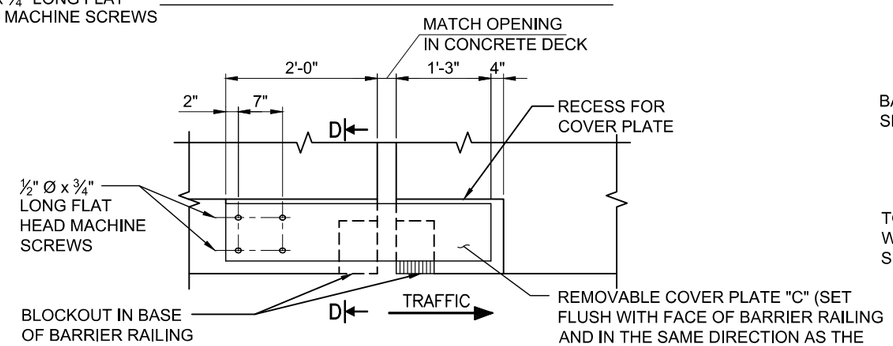
REMOVABLE COVER PLATE "C"





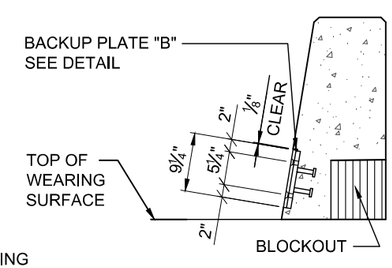


BACKUP PLATE "B"



ELEVATION C-C

PROVIDE EXPANSION JOINT IN BARRIER RAILING AT EACH BRIDGE EXPANSION JOINT.



SECTION D-D

NOTES:

1. APPLICABLE FOR SKEWS UP TO 45 DEGREES. IF THE SKEW IS LARGER THAN 45 DEGREES THEN THE PROJECT MANAGER MUST ENSURE THAT THE STUDS ON THE BACKUP PLATE HAVE ADEQUATE CONCRETE COVER.

NO.	DATE	BY	DESCRIPTION

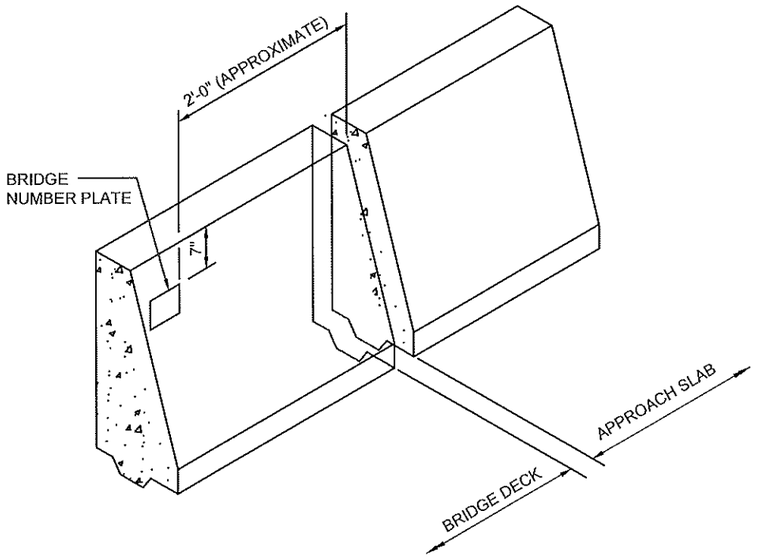
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

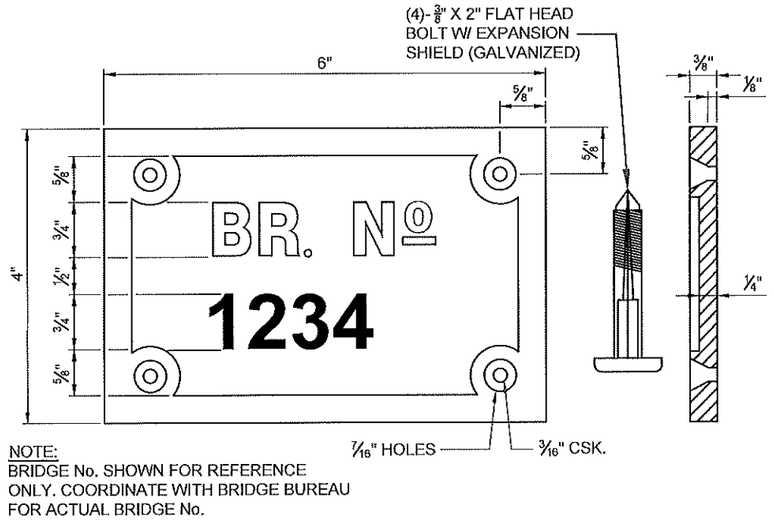
42 INCH CONCRETE BRIDGE BARRIER RAILING DETAILS AT JOINT SEALS

514-03-5/5

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC



CONCRETE BARRIER RAILING



NOTE:
BRIDGE No. SHOWN FOR REFERENCE ONLY. COORDINATE WITH BRIDGE BUREAU FOR ACTUAL BRIDGE No.

BRIDGE NUMBER PLATE DETAILS

GENERAL NOTES:

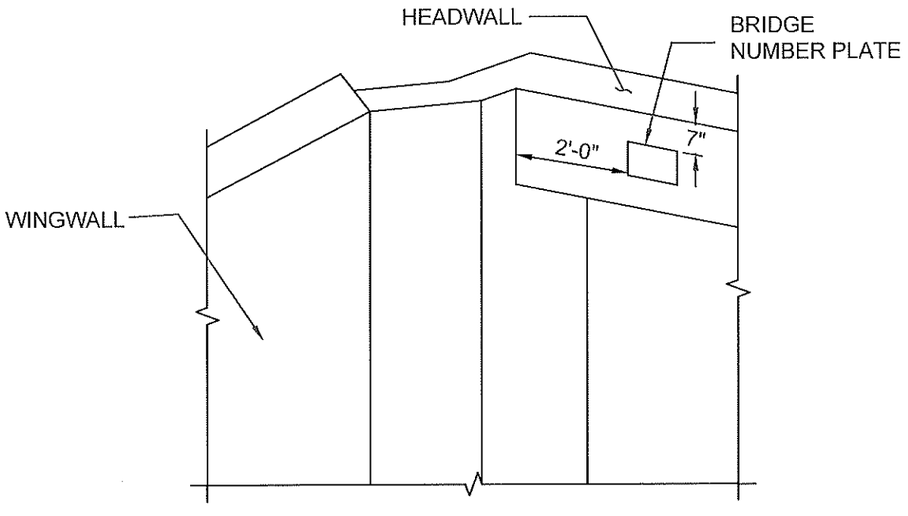
1. WITH APPROVAL OF THE PROJECT MANAGER, THE CONTRACTOR MAY SALVAGE AND REUSE THE EXISTING BRIDGE NUMBER PLATE. IF DAMAGED DURING REMOVAL, THE CONTRACTOR SHALL FURNISH A NEW REPLACEMENT BRIDGE NUMBER PLATE AT NO ADDITIONAL COST. THE COST SHALL BE INCIDENTAL TO THE COST OF THE CONCRETE BRIDGE RAIL, ITEM
2. TWO BRIDGE No. PLATES ARE REQUIRED ON EACH NEW BRIDGE. THE BRIDGE No. PLATES SHALL BE GALVANIZED CAST IRON WITH RAISED BLOCK LETTERS OF NEAT SQUARE CUT DESIGN. GRIND FACE OF LETTERS AND BORDERS SMOOTH. BRONZE PLATE AND BOLTS MAY BE SUBSTITUTED.
3. LOCATE BRIDGE No. PLATES ON THE RIGHT-HAND SIDE OF THE ROAD AS ONE APPROACHES THE BRIDGE.

CONCRETE BARRIER RAILING

BRIDGE No. PLATE SHALL BE FLUSH WITH OR ⅜" BELOW CONCRETE BARRIER RAILING SURFACE IN ⅜" TO ½" X 4 ¼" X 6 ¼" RECESS. ATTACH USING CHEMICAL ADHESIVE ANCHOR PER NMDOT SPEC 522 OR GALVANIZED FLAT HEAD BOLTS AND NUTS.

CBCs AND CMPs

2 BRIDGE No. PLATES ARE REQUIRED ON THE HEADWALLS. BRIDGE No. PLATES SHALL BE PLACED ON THE VERTICAL FACE OF THE HEADWALLS AT EACH END OF CBC'S AND CMP'S. THE COST OF THE BRIDGE No. PLATES SHALL BE INCIDENTAL TO THE COST OF THE CONCRETE BRIDGE RAIL.



CONCRETE BOX CULVERT

4/24/20

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

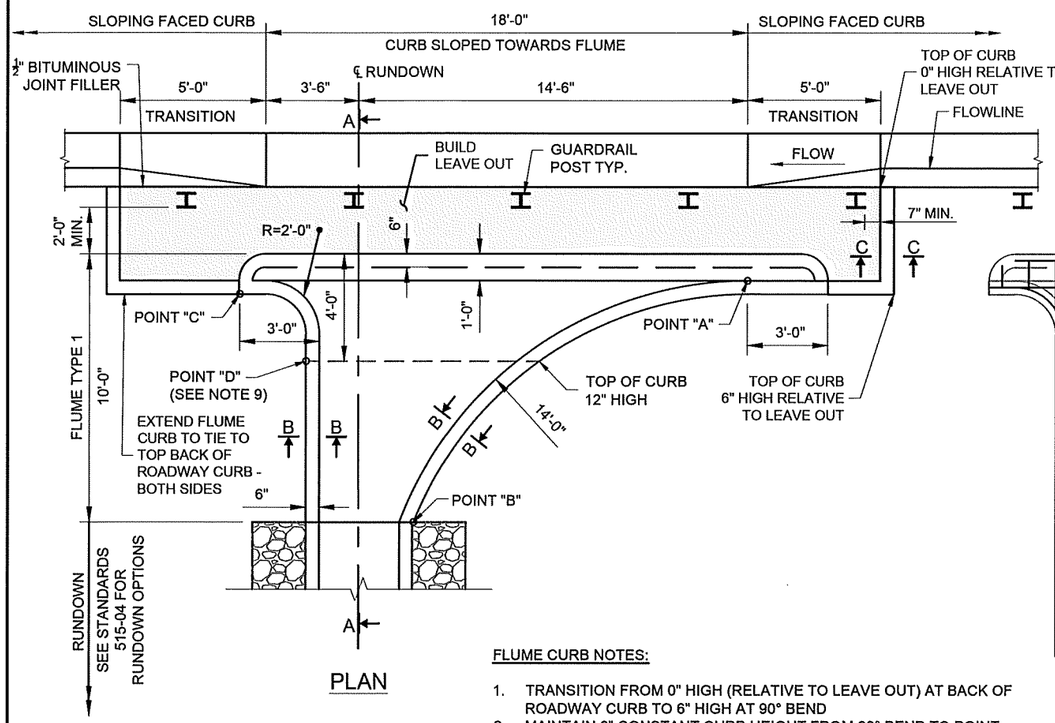
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

BRIDGE NUMBER PLATE

514-10-1/1

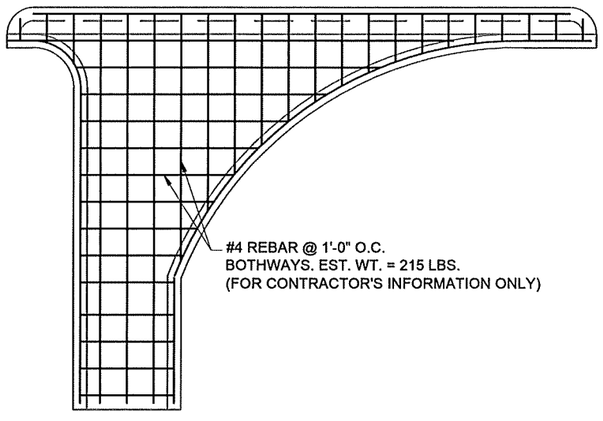
DESIGNED BY: OB DRAWN BY: TB CHECKED BY: OB



PLAN

FLUME CURB NOTES:

1. TRANSITION FROM 0" HIGH (RELATIVE TO LEAVE OUT) AT BACK OF ROADWAY CURB TO 6" HIGH AT 90° BEND
2. MAINTAIN 6" CONSTANT CURB HEIGHT FROM 90° BEND TO POINT "A" AND "C"
3. TRANSITION FROM 6" HIGH AT POINT "A" AND "C" TO 12" HIGH FOUR FEET FROM EDGE OF RUNDOWN AS SHOWN. CORRESPONDS TO POINT "D" ON LEFT SIDE OF RUNDOWN.



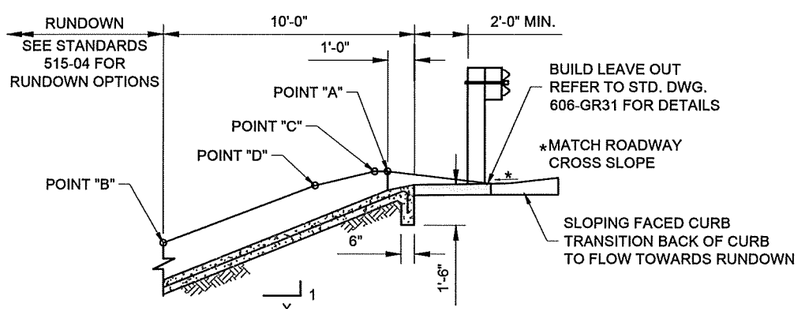
REBAR PLACING PLAN

GENERAL NOTES

1. STRUCTURAL CAST-IN-PLACE CONCRETE SHALL BE CLASS "A." CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".
2. ALL REINFORCING BARS SHALL CONFORM TO SECTION 540 - STEEL REINFORCEMENT.
3. FIELD CUT AND BEND REINFORCING BARS AS REQUIRED FOR THE STRUCTURE.
4. INSTALLATION AS SHOWN IS TYPICAL AND DETAILS MAY BE VARIED TO FIT LOCATION. QUANTITIES WILL BE ADJUSTED IN THE FIELD.
5. RUNDOWN FLUMES WILL BE PAID FOR UNDER THE PAY ITEMS LISTED BELOW. SEE SHEET 515-05-1/1 FOR QUANTITIES.

ITEM	PAY UNIT
REINFORCED CONCRETE FOR MINOR STRUCTURES	CU. YDS.
24" Ø CULVERT PIPE	LIN. FT.
36" Ø CULVERT PIPE	LIN. FT.
RIPRAP CLASS "A"	CU. YDS.
RIPRAP CLASS "G"	SQ. YDS.

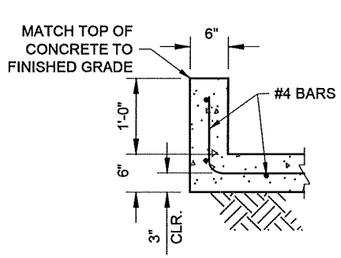
6. CONCRETE PORTION OF FLUMES OR RUNDOWNS SHALL BE CONSTRUCTED IN ACCORDANCE TO SECTION 515 - REINFORCED CONCRETE FOR MINOR STRUCTURES.
7. GENERAL NOTES AND ESTIMATED QUANTITIES SHALL BE USED ON STANDARDS 515-02-1/3 AND 515-02-2/3. SEE 515-05-1/1 FOR QUANTITIES.
8. THE ½" BITUMINOUS JOINT FILLER SHALL BE LOCATED BETWEEN THE RUNDOWN AND BACK OF CURB AND RUNDOWN AND LEAVE OUT PAVING WHERE APPLICABLE. THE ½" BITUMINOUS JOINT FILLER SHALL BE CONSIDERED INCIDENTAL TO THE RUNDOWN FLUME.
9. WHEN POINT "D" IS WITHIN THE ROADWAY CLEAR ZONE, THE ENTIRE FLUME STRUCTURE SHALL BE SHIELDED WITH METAL BARRIER AND SHALL NOT BE CONSTRUCTED WITHIN 50' OF THE METAL BARRIER END TREATMENT HEAD OR TERMINAL CAP.
10. EXCAVATION, ANCHOR BOLTS, AND HOOK BOLTS FOR RUNDOWN SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT PAYMENT WILL BE MADE THEREFORE. NON-WOVEN GEOTEXTILE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR RIPRAP CLASS "A" AND RIPRAP CLASS "G."
11. WIDTH OF RUNDOWN OPENING TO BE VERIFIED BY DESIGNER TO ENSURE ADEQUATE CONVEYANCE OF ROADWAY FLOWS.
12. SEE STANDARDS 515-04-1/2 AND 515-04-2/2 FOR RUNDOWN DETAILS.
13. SEE STANDARD 606-GR31 FOR GUARDRAIL DETAILS. SEE ROADWAY PLANS IF GUARDRAIL IS REQUIRED.



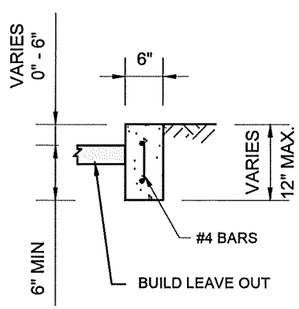
SECTION A-A

NOTE:

SEE ROADWAY PLANS FOR "X" VALUE



SECTION B-B



SECTION C-C

NO.	DATE	BY	DESCRIPTION

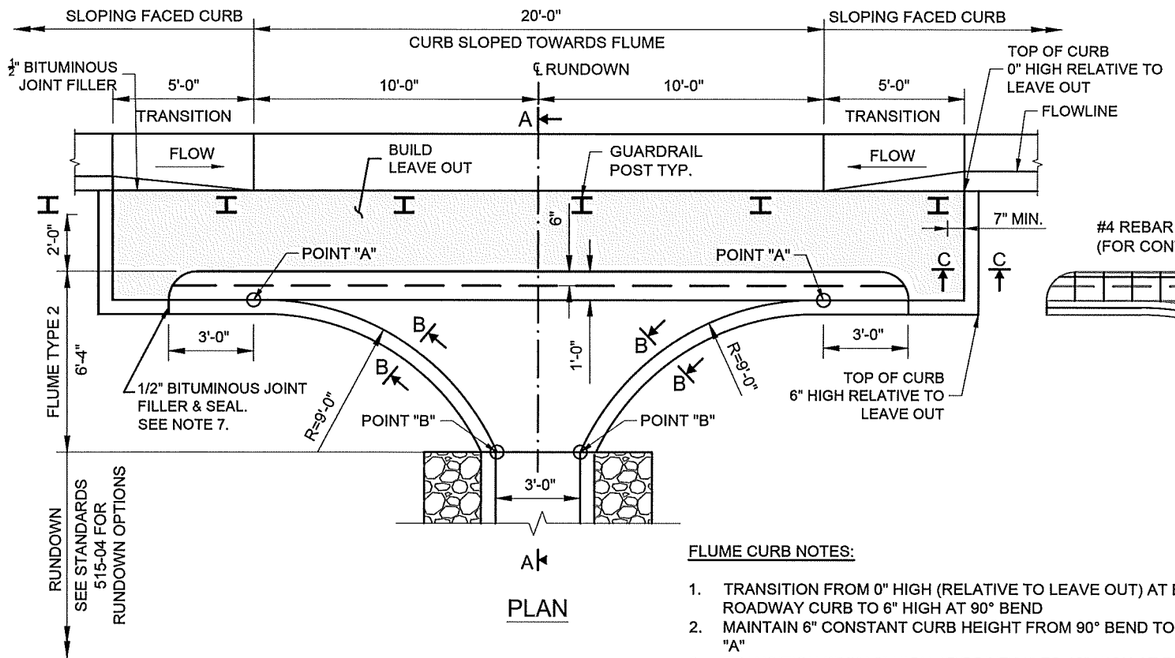
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

RUNDOWN FLUME TYPE 1 FOR ROADWAY

515-02-1/3

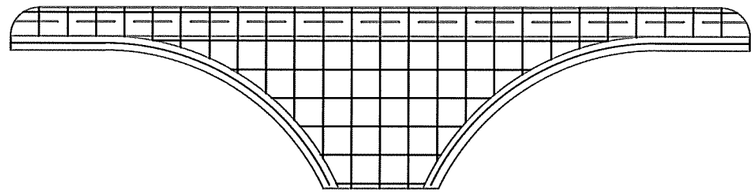
DESIGNED BY:____ DRAWN BY:_____ CHECKED BY:_____



PLAN

FLUME CURB NOTES:

1. TRANSITION FROM 0" HIGH (RELATIVE TO LEAVE OUT) AT BACK OF ROADWAY CURB TO 6" HIGH AT 90° BEND
2. MAINTAIN 6" CONSTANT CURB HEIGHT FROM 90° BEND TO POINT "A"
3. TRANSITION FROM 6" HIGH AT POINT "A" TO 12" HIGH AT POINT "B".

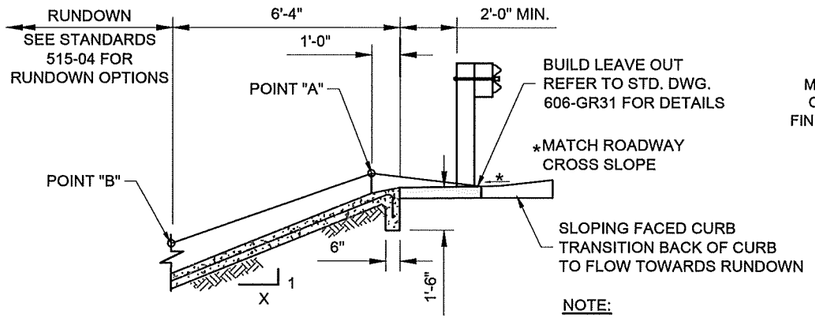


#4 REBAR @ 1'-0" ON CENTER BOTH WAYS. ESTIMATED WEIGHT = 385 LBS. (FOR CONTRACTOR'S INFORMATION ONLY).

REBAR PLACING PLAN

GENERAL NOTES

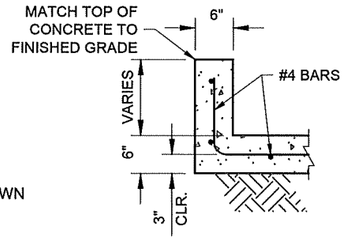
1. STRUCTURAL CAST-IN-PLACE CONCRETE SHALL BE CLASS "A." CHAMFER ALL EXPOSED EDGES OF CONCRETE ¾".
2. ALL REINFORCING BARS SHALL CONFORM TO SECTION 540 - STEEL REINFORCEMENT.
3. FIELD CUT AND BEND REINFORCING BARS AS REQUIRED FOR THE STRUCTURE.
4. INSTALLATION AS SHOWN IS TYPICAL AND DETAILS MAY BE VARIED TO FIT LOCATION. QUANTITIES WILL BE ADJUSTED IN THE FIELD.
5. RUNDOWN FLUMES WILL BE PAID FOR UNDER THE PAY ITEMS AND QUANTITIES LISTED ON STANDARD 515-05-1/1.
6. CONCRETE PORTION OF FLUMES OR RUNDOWNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR REINFORCED CONCRETE FOR MINOR STRUCTURES - SECTION 515, OF THE NEW MEXICO STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION.
8. THE ½" BITUMINOUS JOINT FILLER SHALL BE LOCATED BETWEEN THE RUNDOWN AND BACK OF CURB AND RUNDOWN AND LEAVE OUT PAVING WHERE APPLICABLE. THE ½" BITUMINOUS JOINT FILLER SHALL BE CONSIDERED INCIDENTAL TO THE RUNDOWN FLUME.
9. WIDTH OF RUNDOWN OPENING TO BE VERIFIED BY DESIGNER TO ENSURE ADEQUATE CONVEYANCE OF ROADWAY FLOWS.
10. SEE STANDARDS 515-04-1/2 AND 515-04-2/2 FOR RUNDOWN DETAILS.
11. SEE STANDARD 606-GR31 FOR GUARDRAIL DETAILS. SEE ROADWAY PLANS IF GUARDRAIL IS REQUIRED.



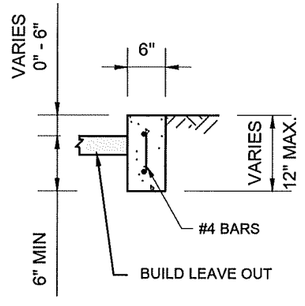
NOTE:

SEE ROADWAY PLANS FOR "X" VALUE

SECTION A-A



SECTION B-B



SECTION C-C

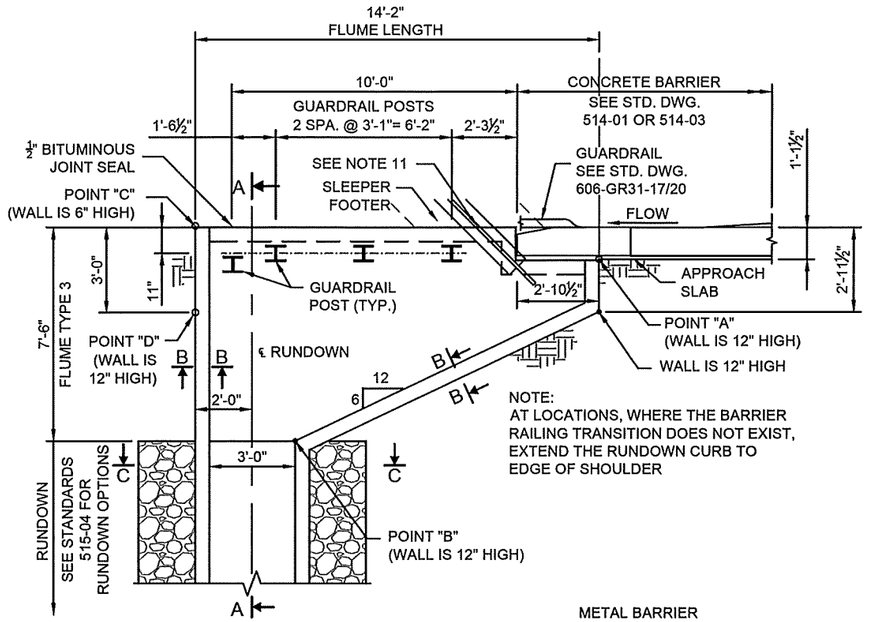
NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

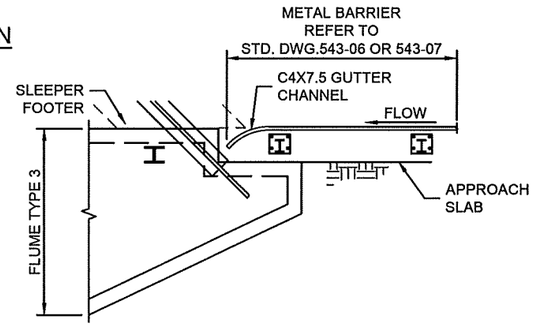
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

RUNDOWN FLUME TYPE 2
(SAG)
FOR ROADWAY

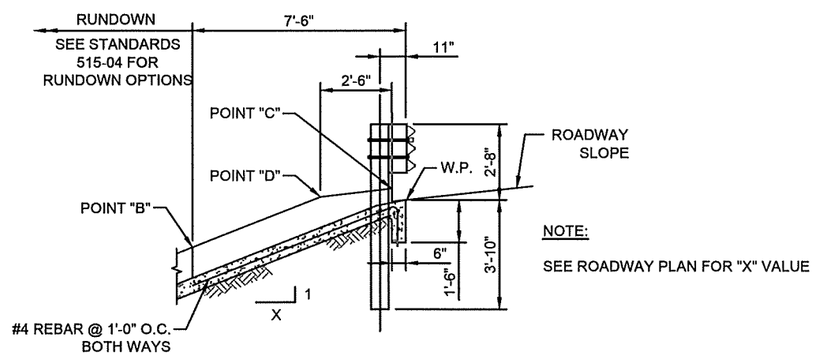
DESIGNED BY:____ DRAWN BY:_____ CHECKED BY:_____



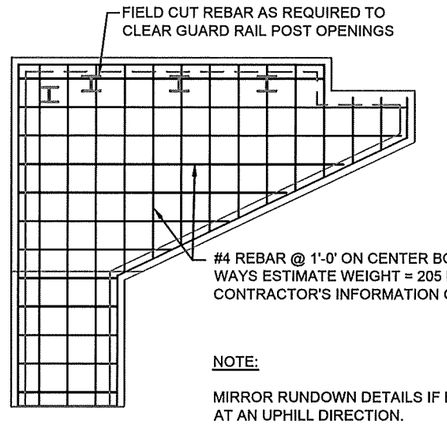
PLAN



METAL BARRIER
TRANSITION TO FLUME



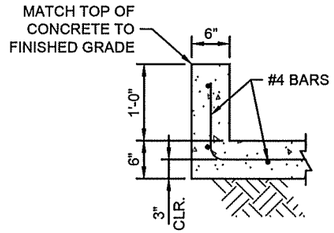
SECTION A-A



NOTE:

MIRROR RUNDOWN DETAILS IF BRIDGE IS AT AN UPHILL DIRECTION.

REBAR PLACING PLAN



SECTION B-B

GENERAL NOTES

1. STRUCTURAL CAST-IN-PLACE CONCRETE SHALL BE CLASS "A." CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".
2. ALL REINFORCING BARS SHALL CONFORM TO SECTION 540 - STEEL REINFORCEMENT.
3. FIELD CUT AND BEND REINFORCING BARS AS REQUIRED FOR THE STRUCTURE.
4. INSTALLATION AS SHOWN IS TYPICAL AND DETAILS MAY BE VARIED TO FIT LOCATION. QUANTITIES WILL BE ADJUSTED IN THE FIELD.
5. RUNDOWN FLUMES WILL BE PAID FOR UNDER THE PAY ITEMS LISTED BELOW. SEE SHEET 515-05-1/1 FOR QUANTITIES.

ITEM	PAY UNIT
REINFORCED CONCRETE FOR MINOR STRUCTURES	CU. YD.
24"Ø CULVERT PIPE	LIN. FT.
36"Ø CULVERT PIPE	LIN. FT.
RIPRAP CLASS "A"	CU. YD.
RIPRAP CLASS "G"	SQ. YD.

6. CONCRETE PORTION OF FLUMES OR RUNDOWNS SHALL BE CONSTRUCTED IN ACCORDANCE TO SECTION 515 - REINFORCED CONCRETE FOR MINOR STRUCTURES OF THE NMDOT STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION.
7. STEEL STAKES FOR ANCHORING RIPRAP ARE ONLY REQUIRED FOR THE RIPRAP RUNDOWN WITH CLASS "A" RIPRAP.
8. WHEN THE 24" CULVERT PIPE, OR 36" HALF PIPE EXCEEDS 50 FEET IN LENGTH, THE CONTRACTOR SHALL CONSTRUCT A HALF HEADWALL WITHOUT FOOTING AT EVEN INCREMENTS, NOT TO EXCEED 50 FEET OVER THE TOTAL LENGTH OF CULVERT PIPE. COST FOR THIS CONSTRUCTION SHALL BE PAID FOR UNDER THE APPROPRIATE ITEM FOR REINFORCED CONCRETE FOR MINOR STRUCTURES. APPROXIMATE CONCRETE VOLUME PER HALF HEADWALL WITHOUT FOOTING - 0.67 CU. FT. APPROXIMATE REBAR WEIGHT = 70 LBS.
9. THE BRIDGE JOINT STRIP SEAL SHALL DRAIN WATER INTO THE RUNDOWN AS SHOWN ON THE BRIDGE PLAN DETAILS. THE 1/2" BITUMINOUS JOINT FILLER SHALL BE LOCATED BETWEEN THE RUNDOWN, APPROACH SLAB, AND ASPHALT PAVING WHERE APPLICABLE. THE 1/2" BITUMINOUS JOINT FILLER SHALL BE CONSIDERED INCIDENTAL TO THE RUNDOWN FLUME.
10. EXCAVATION, ANCHOR BOLTS, AND HOOK BOLTS FOR RUNDOWN SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT PAYMENT WILL BE MADE THEREFORE. NON-WOVEN GEOTEXTILE CLASS "1" SHALL BE INCLUDED IN THE UNIT BID PRICE FOR RIPRAP CLASS "A" AND RIPRAP CLASS "G."
8. WIDTH OF RUNDOWN OPENING TO BE VERIFIED BY DESIGNER TO ENSURE ADEQUATE CONVEYANCE OF ROADWAY FLOWS.
9. SEE STANDARDS 515-04-1/2 AND 515-04-2/2 FOR RUNDOWN DETAILS.
10. SEE STANDARD 606-GR31 FOR GUARDRAIL DETAILS.
11. NOTCH FLUME TO DAYLIGHT JOINT SEAL STRIP

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

BURKE P. LOKEY
NEW MEXICO
24135
LICENSED PROFESSIONAL ENGINEER

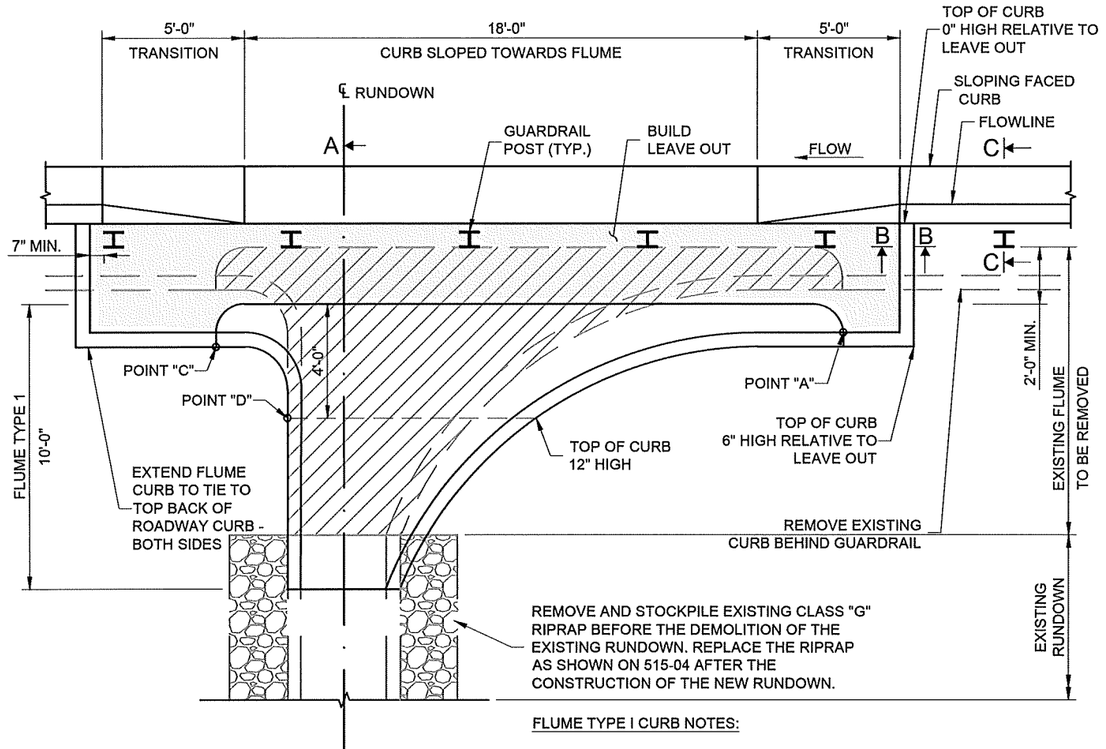
10/5/21

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

RUNDOWN FLUME TYPE 3 FOR BRIDGES

DESIGNED BY:____ DRAWN BY:_____ CHECKED BY:_____

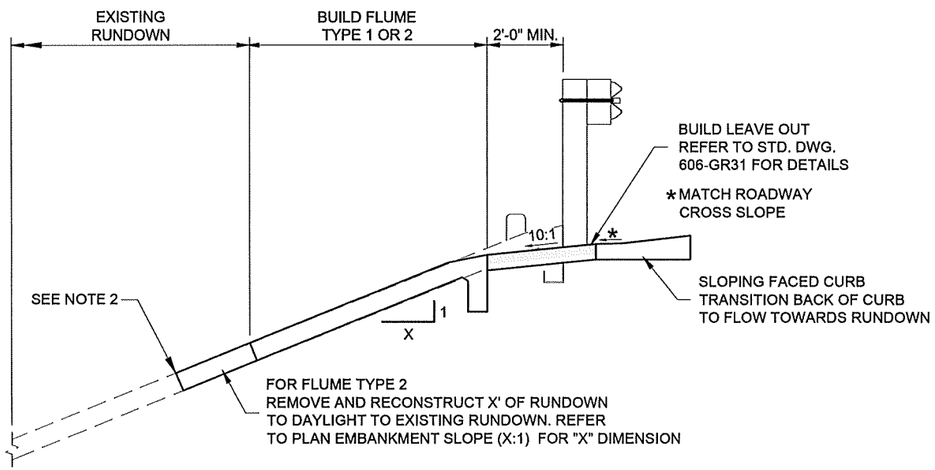
515-02-3/3



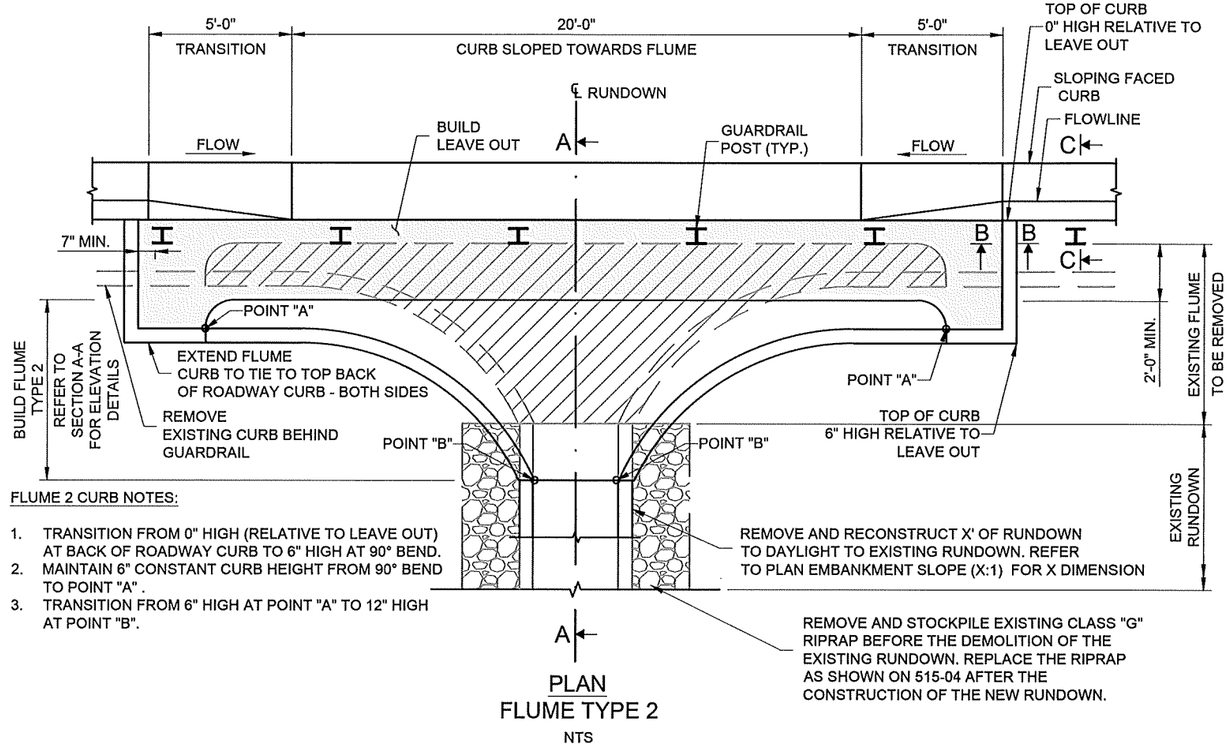
PLAN
FLUME TYPE 1
NTS

FLUME TYPE I CURB NOTES:

1. TRANSITION FROM 0" HIGH (RELATIVE TO LEAVE OUT) AT BACK OF ROADWAY CURB TO 6" HIGH AT 90° BEND.
2. MAINTAIN 6" CONSTANT CURB HEIGHT FROM 90° BEND TO POINT "A" AND "C".
3. TRANSITION FROM 6" HIGH AT POINT "A" AND "C" TO 12" HIGH FOUR FEET FROM EDGE OF RUNDOWN AS SHOWN. CORRESPONDS TO POINT "D" ON LEFT SIDE OF RUNDOWN.



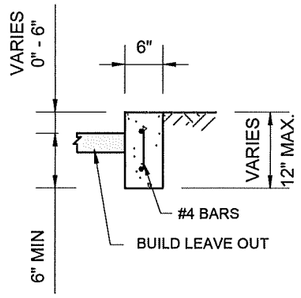
SECTION A-A
NTS



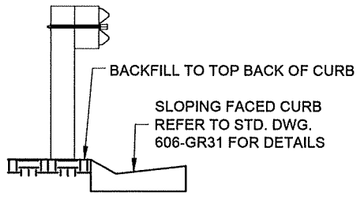
PLAN
FLUME TYPE 2
NTS

FLUME 2 CURB NOTES:

1. TRANSITION FROM 0" HIGH (RELATIVE TO LEAVE OUT) AT BACK OF ROADWAY CURB TO 6" HIGH AT 90° BEND.
2. MAINTAIN 6" CONSTANT CURB HEIGHT FROM 90° BEND TO POINT "A" .
3. TRANSITION FROM 6" HIGH AT POINT "A" TO 12" HIGH AT POINT "B".



SECTION B-B
NTS



SECTION C-C
NTS

GENERAL NOTES

1. REFER TO STD. DWG. 515-02-1/3 FOR FLUME CONSTRUCTION DETAILS.
2. WHEN ATTACHING NEW RUNDOWN TO EXISTING RUNDOWN, INSTALL EPOXY ANCHORS PER SPEC 522 CHEMICAL ADHESIVE ANCHORS AT 12"O.C. EMBED ANCHORS A MINIMUM OF 6" INTO EXISTING AND EXTEND A MINIMUM OF 2' INTO NEW. POUR CONCRETE DIRECTLY AGAINST EXISTING. TREAT THE CONSTRUCTION JOINT WITH SECTION 535, "CRACK SEALING USING LOW-VISCOSITY, GRAVITY-FED SEALERS".
3. CONSTRUCTION OF THE RUNDOWNS, LEAVE OUTS, EPOXY ANCHORS, AND GRAVITY-FED SEALER SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE LAYDOWN CURB.

NO.	DATE	BY	DESCRIPTION

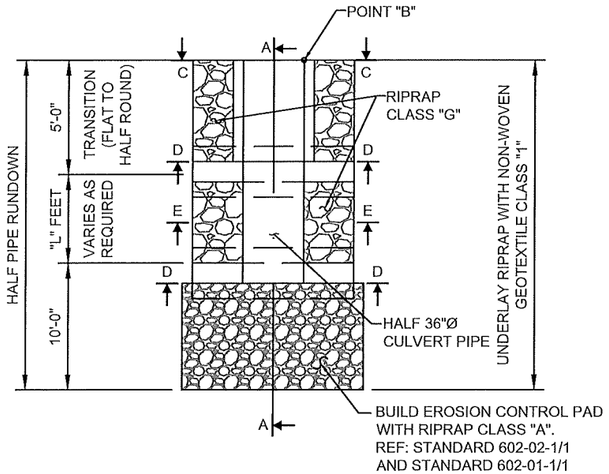
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

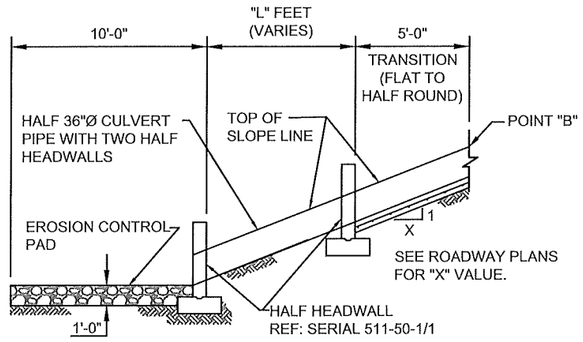
RUNDOWN FLUME TYPE 1 AND 2 RETROFIT INSTALLATION FOR SLOPING FACED CURB IN FRONT OF EXISTING GUARDRAIL

515-03-1/1 1 of 1

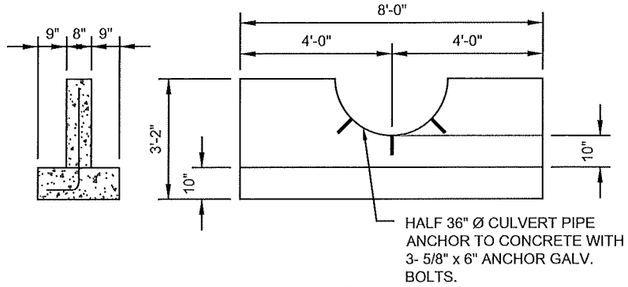
DESIGNED BY:____DRAWN BY:_____CHECKED BY:_____



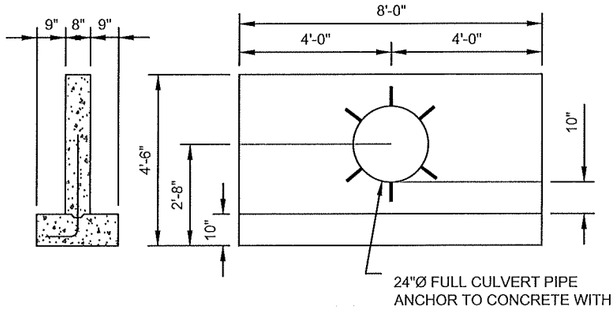
HALF PIPE OPTION - PLAN



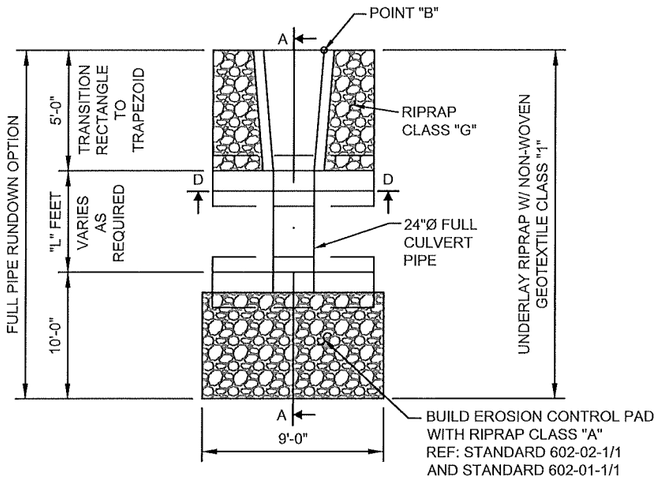
HALF PIPE OPTION
SECTION A-A



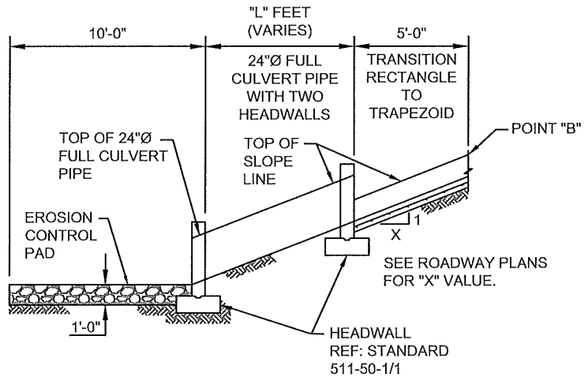
HALF PIPE OPTION
SECTION D-D



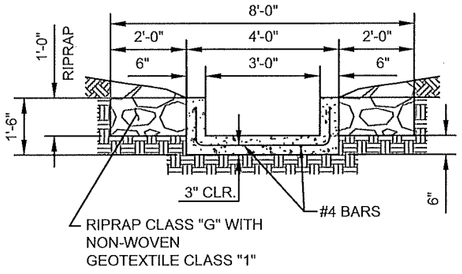
FULL PIPE OPTION
SECTION D-D



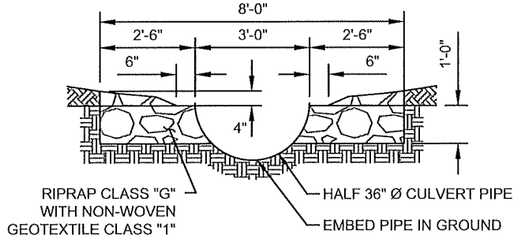
FULL PIPE OPTION - PLAN



FULL PIPE OPTION
SECTION A-A



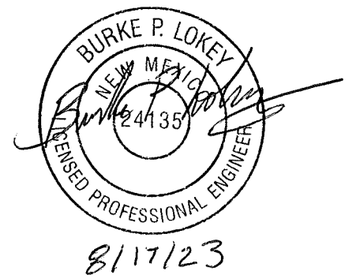
SECTION C-C



SECTION E-E

GENERAL NOTE

WHEN THE 24" FULL CULVERT PIPE, OR 36" HALF PIPE EXCEEDS 50 FEET IN LENGTH, THE CONTRACTOR SHALL CONSTRUCT A HALF HEADWALL WITHOUT FOOTING AT EVEN INCREMENTS, NOT TO EXCEED 20 FEET OVER THE TOTAL LENGTH OF CULVERT PIPE. COST FOR THIS CONSTRUCTION SHALL BE PAID FOR UNDER THE APPROPRIATE ITEM FOR REINFORCED CONCRETE FOR MINOR STRUCTURES. APPROXIMATE CONCRETE VOLUME PER HALF HEADWALL WITHOUT FOOTING = 0.67 CU.YD. APPROXIMATE REBAR WEIGHT = 70 LBS.



NO.	DATE	BY	DESCRIPTION

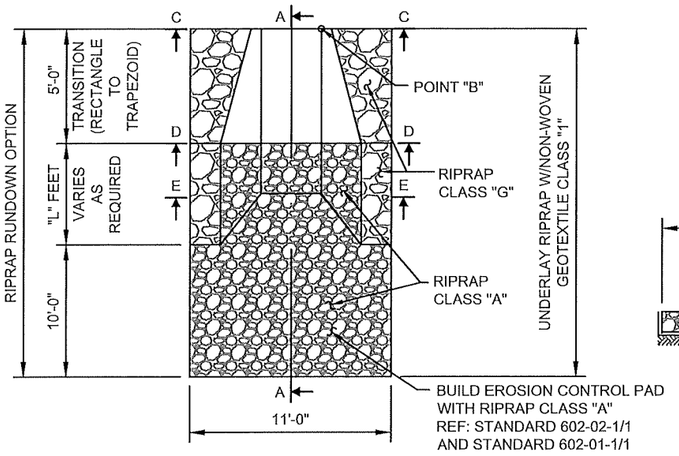
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

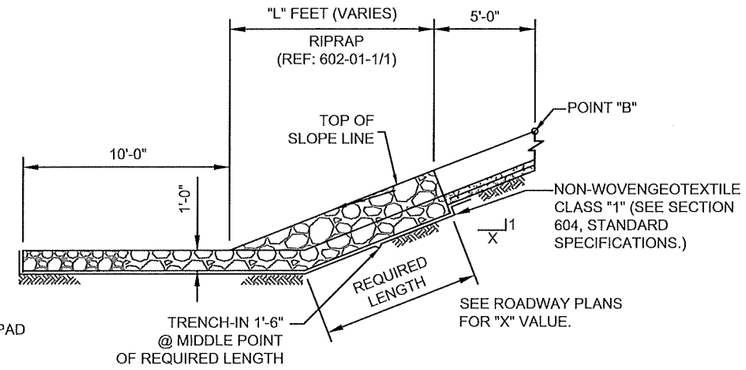
RUNDOWN OPTIONS FOR RUNDOWN FLUME TYPE 1, TYPE 2, TYPE 3

515-04-1/3

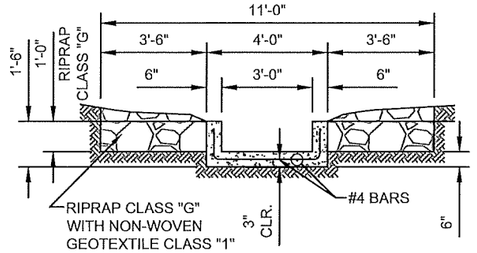
DESIGNED BY:_____ DRAWN BY:_____ CHECKED BY:_____



RIPRAP OPTION-PLAN



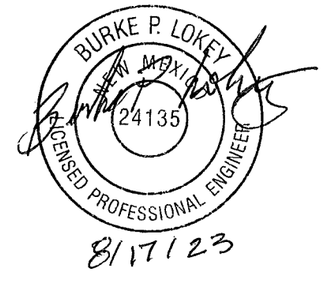
RIPRAP OPTION-SECTION A-A

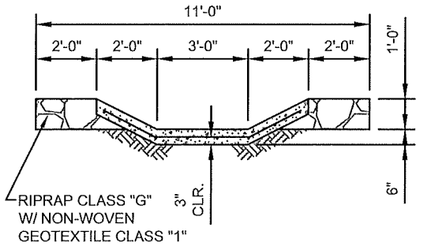


RIPRAP OPTION SECTION C-C

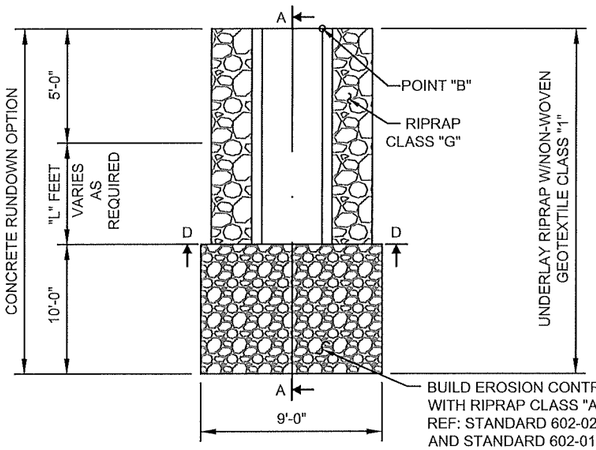
GENERAL NOTES

1. STEEL STAKES FOR ANCHORING RIPRAP ARE ONLY REQUIRED FOR THE RIPRAP RUNDOWN WITH CLASS "A" RIPRAP.
2. 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.

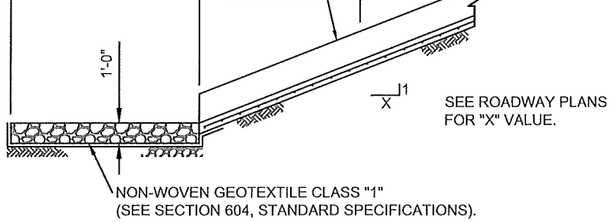




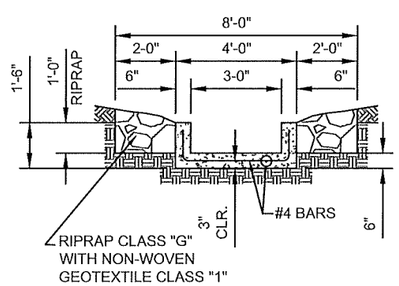
RIPRAP OPTION SECTION D-D



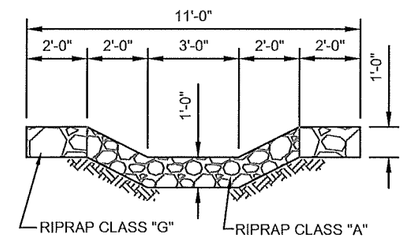
CONCRETE OPTION-PLAN



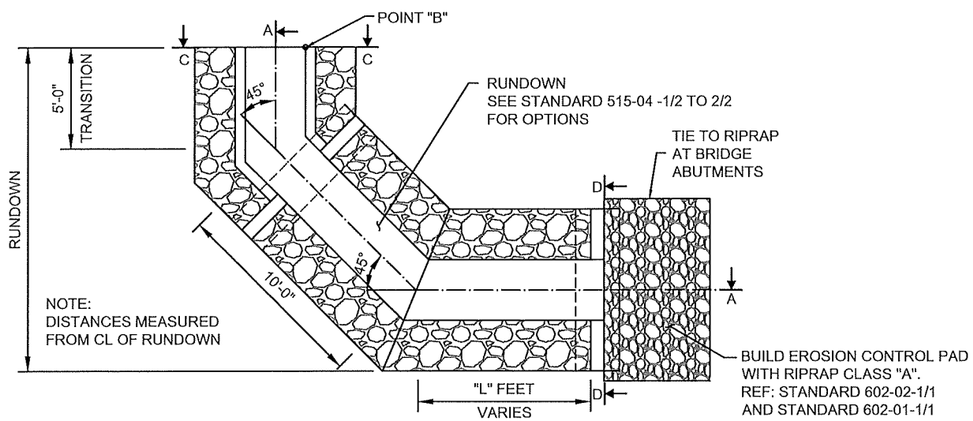
CONCRETE OPTION-SECTION A-A



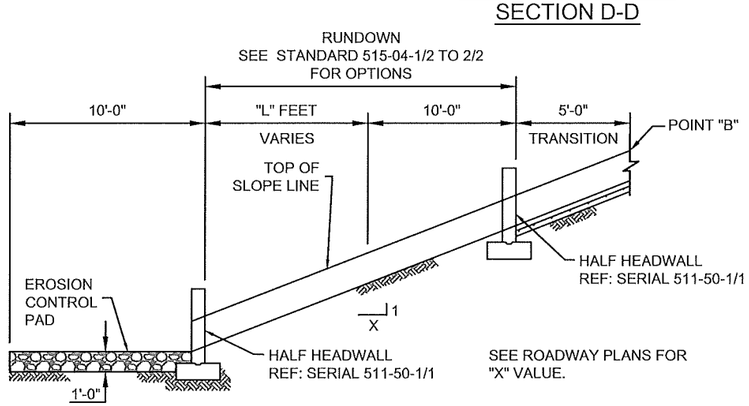
CONCRETE OPTION SECTION D-D



RIPRAP OPTION SECTION E-E



ANGLED ABUTMENT RUNDOWN OPTION - PLAN



ANGLED ABUTMENT RUNDOWN OPTION SECTION A-A

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

RUNDOWN OPTIONS
FOR RUNDOWN FLUME
TYPE 1, TYPE 2, TYPE 3

DESIGNED BY:____ DRAWN BY:_____ CHECKED BY:_____

TABLE A (FOR CONTRACTOR'S INFORMATION ONLY)

ESTIMATED QUANTITIES OF FLUME STRUCTURES

PAY ITEM	PAY UNIT	STRUCTURE TYPES OF FLUME		
		FLUME TYPE I FOR ROADWAY ⓐ	FLUME TYPE II FOR ROADWAY ⓑ	FLUME TYPE III FOR BRIDGES ⓒ
REINFORCED CONCRETE FOR MINOR STRUCTURES	CU. YD.	$0.71 + 1.71 \left(\frac{\sqrt{X^2+1}}{X}\right)$	$0.81 + 1.29 \left(\frac{\sqrt{X^2+1}}{X}\right)$	$0.38 + 1.73 \left(\frac{\sqrt{X^2+1}}{X}\right)$

(FOR THE DETAILS OF FLUME STRUCTURES, SEE STANDARDS 515-02-1/3, 515-02-2/3, 515-02-3/3)

TABLE B (FOR CONTRACTOR'S INFORMATION ONLY)

ESTIMATED QUANTITIES OF RUNDOWN STRUCTURES

PAY ITEM	PAY UNIT	STRUCTURE TYPES OF RUNDOWN			
		HALF PIPE RUNDOWN ①	FULL PIPE RUNDOWN ②	CONCRETE RUNDOWN ③	RIPRAP RUNDOWN ④
REINFORCED CONCRETE FOR MINOR STRUCTURES	CU. YD.	$1.82 + 0.56 \left(\frac{\sqrt{X^2+1}}{X}\right)$	$2.29 + 0.51 \left(\frac{\sqrt{X^2+1}}{X}\right)$	$0.58 + 0.11(L) \left(\frac{\sqrt{X^2+1}}{X}\right)$	$0.63 \left(\frac{\sqrt{X^2+1}}{X}\right)$
36" Ø CULVERT PIPE	FT.	$(0.67 + L) \left(\frac{\sqrt{X^2+1}}{X}\right)$			
24" Ø CULVERT PIPE	FT.		$(0.67 + L) \left(\frac{\sqrt{X^2+1}}{X}\right)$		
RIPRAP "A"	CU. YD.	3.11	3.11	3.33	$4.07 + 0.27(L) \left(\frac{\sqrt{X^2+1}}{X}\right)$
RIPRAP "G"	SD. YD.	$(1.82 + 0.56L) \left(\frac{\sqrt{X^2+1}}{X}\right)$	$(2.5) \left(\frac{\sqrt{X^2+1}}{X}\right)$	$(2.22 + 0.44L) \left(\frac{\sqrt{X^2+1}}{X}\right)$	$3.06 + 0.43(L) \left(\frac{\sqrt{X^2+1}}{X}\right)$

(FOR THE DETAILS OF RUNDOWN STRUCTURES, SEE STANDARD 515-02-2/2)

DESIGNED BY:____ DRAWN BY:_____ CHECKED BY:_____

NOTES

1. QUANTITIES FOR 36" OR 24" CULVERT PIPE AND RIPRAP CLASS "A" OR "G" VARY DEPENDING UPON WHETHER THE RUNDOWN IS LOCATED AT PROTECTED OR UNPROTECTED SLOPES. SEE ROADWAY PLANS FOR QUANTITIES AND LOCATIONS.
2. QUANTITIES FOR "REINFORCED CONCRETE FOR MINOR STRUCTURES" INCLUDE THE FLUME AND TWO HALF HEADWALLS OR TWO HEADWALLS WITH FOOTINGS.
3. REFER TO STANDARD DRAWINGS 515-02-1/2, 515-02-2/2, 515-03-1/1 AND 515-04-1/2 FOR RUNDOWN OPTIONS
4. THE ESTIMATED QUANTITY CALCULATIONS OF TABLE A ARE BASED X:1 EMBANKMENT SLOPE SHOWN ON ROADWAY PLANS. ALSO, THE "L" VALUE IS TO BE FIGURED BY "X" VALUE OF EMBANKMENT SLOPE AND IS ALWAYS IN UNITS OF FEET.

BURKE P. LOKEY NEW MEXICO 24135 LICENSED PROFESSIONAL ENGINEER

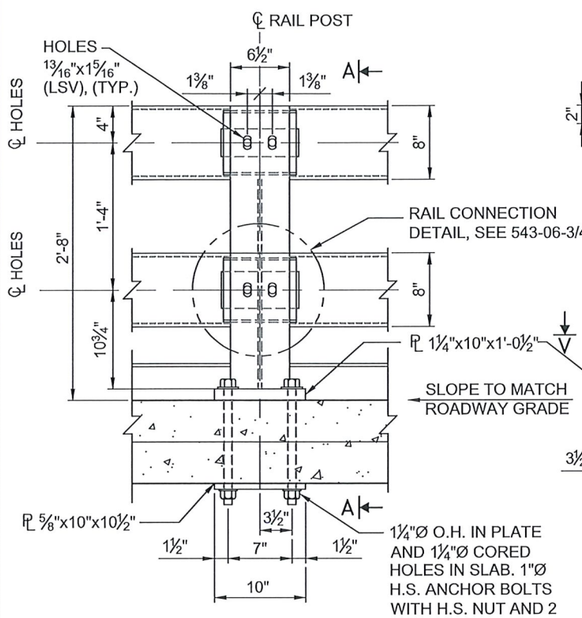
8/27/23

NO.	DATE	BY	DESCRIPTION

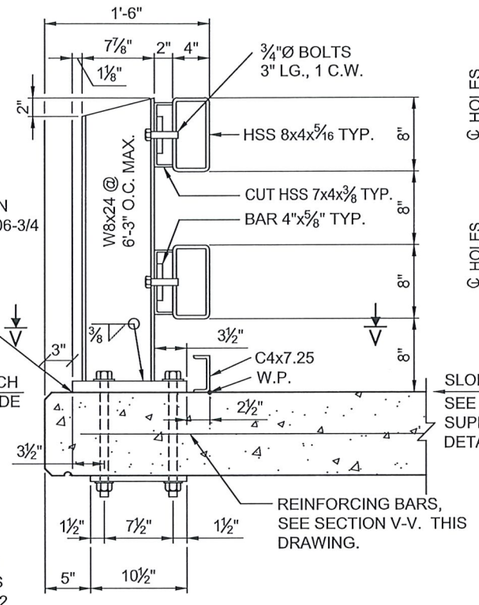
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

ESTIMATED QUANTITIES
FOR RUNDOWN FLUMES

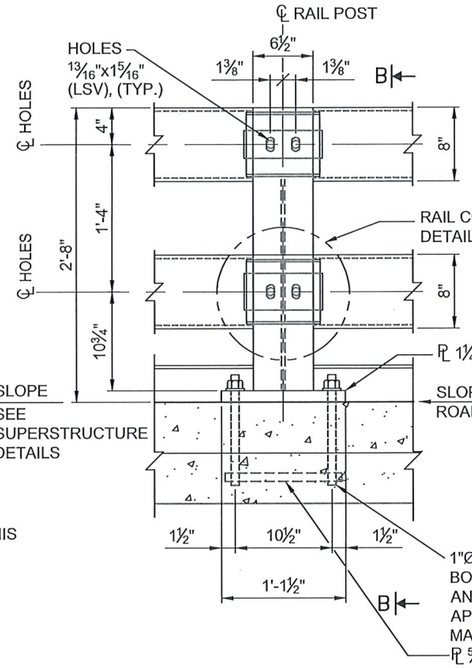


ELEVATION
(FOR POST ON BRIDGE DECK)

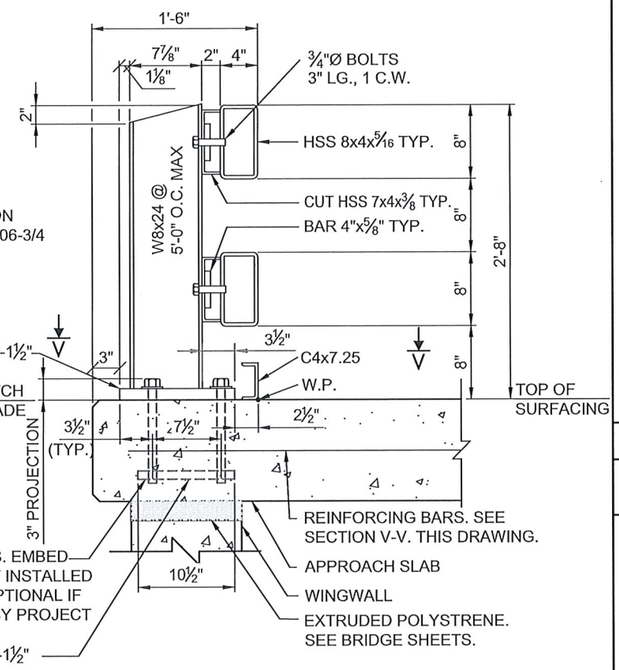


SECTION A-A
(FOR POST ON BRIDGE DECK)

SLOPE SEE SUPERSTRUCTURE DETAILS

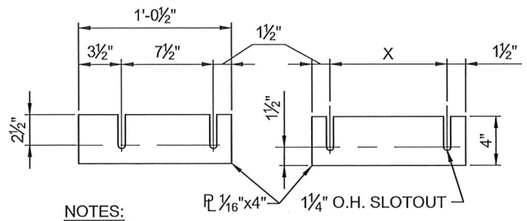


ELEVATION
(FOR POST ON APROACH SLAB)



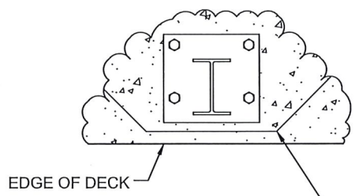
SECTION B-B
(FOR POST ON APROACH SLAB)

NOTE:
USE BEVEL WASHERS WITH 5% SLOPE WHEN TOP AND BOTTOM OF CONCRETE DIVERGE BY MORE THAN 3%. IF THE DIVERGENCE EXCEEDS 7% SPECIAL DETAILS WILL BE SHOWN ON BRIDGE PLANS.



NOTES:
1. POST SHIMS ARE TO BE USED BETWEEN POST AND CONCRETE WHERE NECESSARY TO ALIGN POSTS. REQ'D ONE SHIM EACH PER POST.
2. X= 0'-7" FOR W8x24 ON BRIDGE DECK
   X=0'-10 ½" FOR W8x24 ON WINGWALL/ APPROACH SLAB

POST SHIMS



SECTION V-V

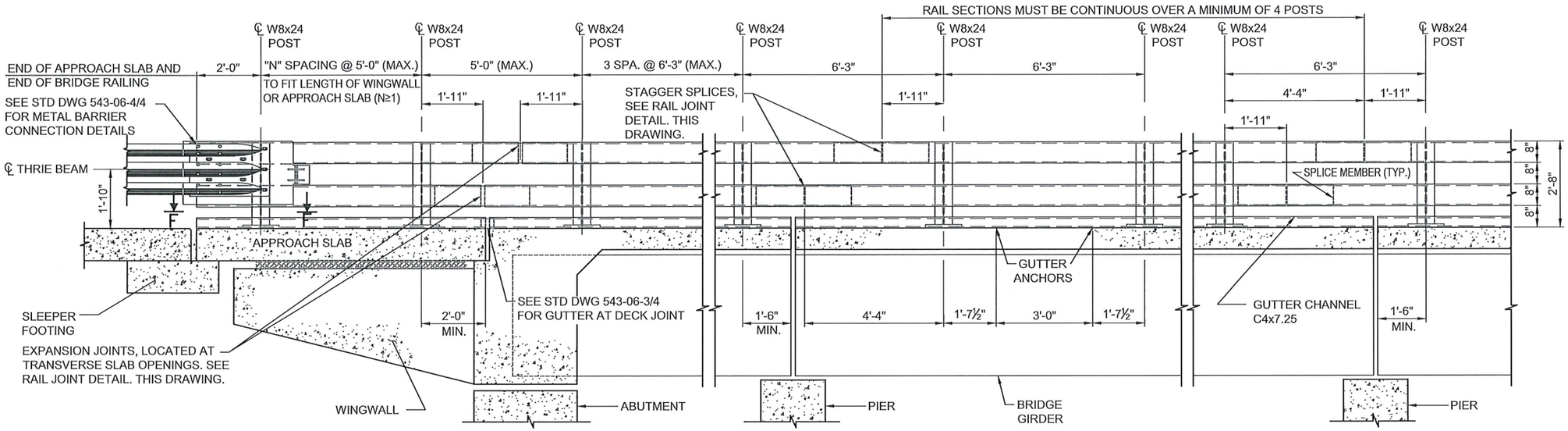
NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

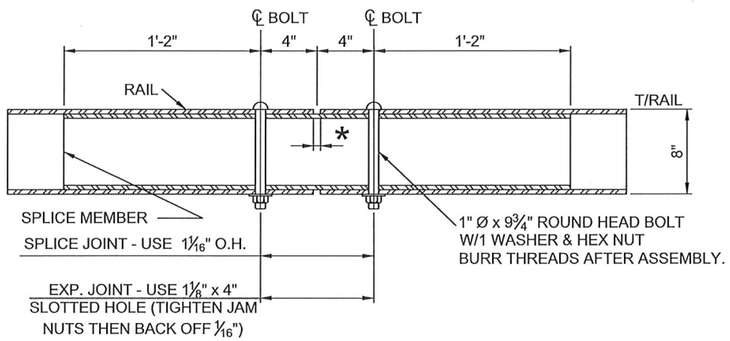
NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

METAL RAILING NM TYPE A32
DETAILS OF POSTS ON BRIDGE, AND APPROACH SLABS

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD

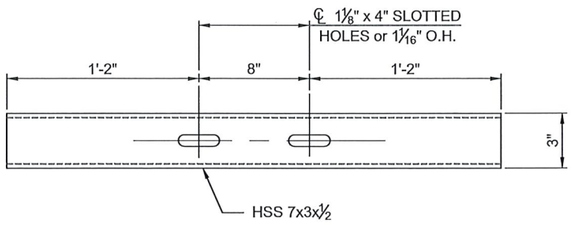


ELEVATION OF RAILING LAYOUT

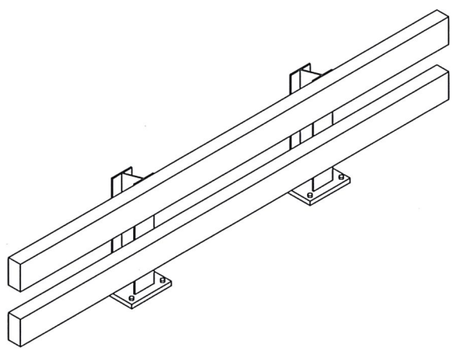


* - SPLICE JOINT DIM. = ⅜"
EXP. JOINT DIM. = TRANSVERSE SLAB OPENING

RAIL JOINT DETAIL



SPLICE MEMBER FOR HSS 8 x 4 x 5/16 RAIL



RAILING - 3D VIEW

NOTES:

1. A MINIMUM OF TWO POSTS ARE REQUIRED ON EACH APPROACH SLAB.
2. RAIL EXPANSION JOINT. PLACE NEAR ALL PIERS FOR SIMPLE SPAN BRIDGE. PLACE AT ENDS OF CONTINUOUS SPAN UNITS. RAIL OPENING TO EQUAL SLAB OPENINGS.
3. PROVIDE WATERPROOF SEAL WITH CAULKING COMPOUND BETWEEN SLAB AND BASE PLATE (TYP. @ ALL POSTS).

NMDOT

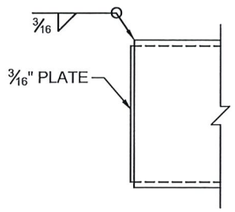
NEW MEXICO DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

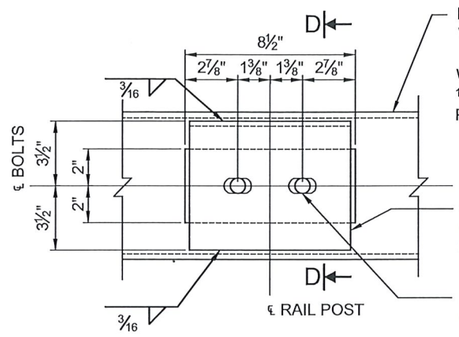
METAL RAILING NM TYPE A32
RAILING ELEVATION AND RAIL
EXPANSION JOINT DETAIL

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD

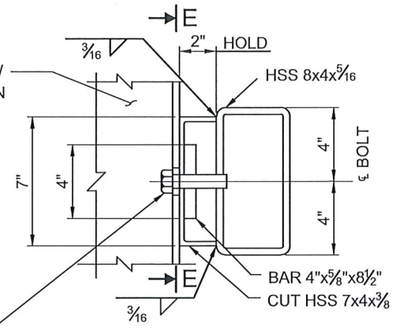
BLOOM, THEODORE, DOT
29-Jun-23
Drawing File: J:\22 - STANDARD DRAWINGS\543 - METAL RAILING FOR BRIDGES\06 TYPE 32\15-UPDATE IN PROGRESS\543-06-2 OF 4.DWG
9:52 AM



END PLATE DETAIL

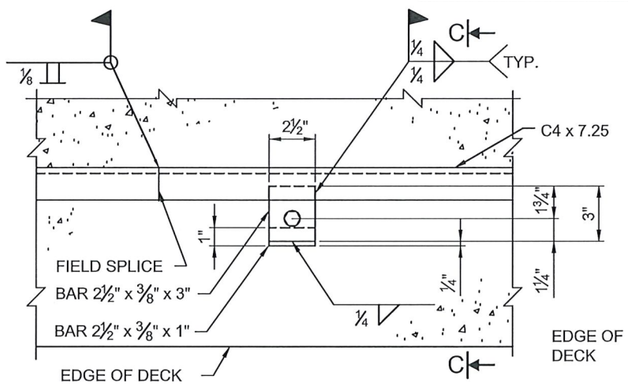


SECTION D-D

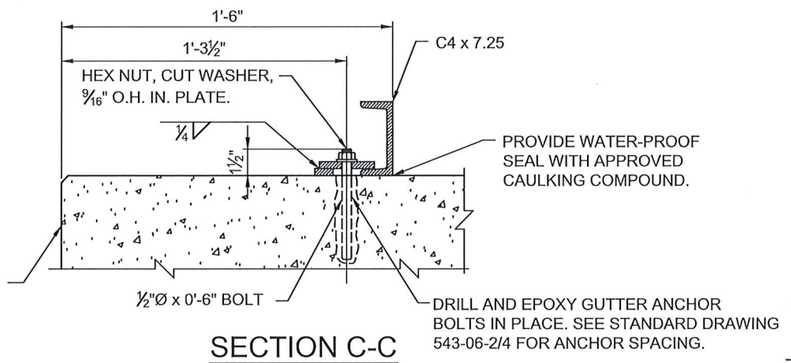


SECTION E-E

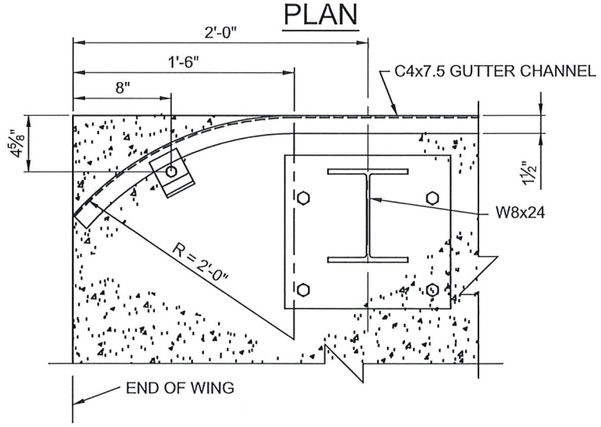
RAIL TO POSTS CONNECTION



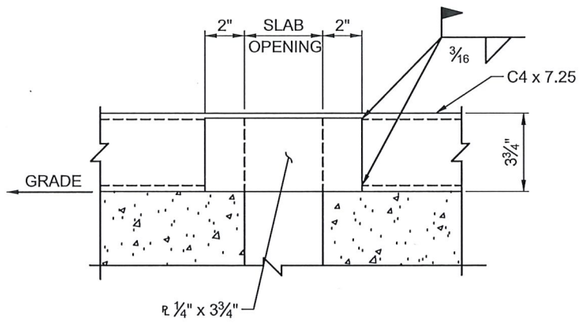
PLAN



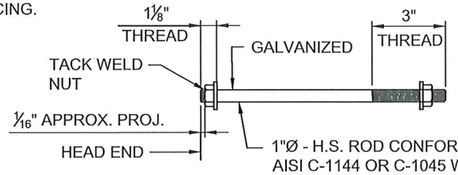
SECTION C-C



SECTION F-F (SEE SHEET 2 of 4)
(GUTTER DETAIL)



DETAIL OF GUTTER
AT DECK JOINT



ALTERNATE POST
ANCHOR BOLT DETAIL
(IF ANCHOR BOLTS ARE TO BE FABRICATED)

NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. ALL RAILS TO BE PARALLEL TO GRADE UNLESS OTHERWISE SHOWN.
3. SEE ELEVATION OF RAILING LAYOUT ON STD. DWG. 543-06-2/4 FOR MAX POST SPACING.
4. STEEL RAIL TUBES SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 500. POST SPACING SHOWN ON THE PLANS IS BASED ON THE USE OF HSS 8x4x5/16 CONFORMING TO THE REQUIREMENTS OF ASTM DESIGNATION A 500 GRADE B.
5. METAL RAILING WILL BE PAID FOR AT THE UNIT PRICE PER FOOT.
6. GUTTER CHANNEL REQUIRED ONLY WHEN CALLED FOR ON THE PROJECT PLANS. OMIT OTHERWISE. PAYMENT TO FURNISH AND INSTALL THE GUTTER CHANNEL SHALL BE CONSIDERED INCIDENTAL TO THE METAL BRIDGE RAILING
7. TERMINAL CONNECTORS SHALL BE AASHTO - ARBA STANDARD HM-TF-13/RE-67 WITH CLASS B THICKNESS, AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO SPECIFICATIONS M 180. SEE STD. DWG. 606-GR31-17/20 FOR CONNECTOR DETAILS.
8. STRUCTURAL STEEL, CONNECTION BOLTS, NUTS, WASHERS, AND ANCHOR BOLTS SHALL CONFORM TO SECTION 543 OF THE NMDOT STANDARD SPECIFICATIONS. UNLESS OTHERWISE NOTED, ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.
9. CONNECTOR PLATES SHALL BE CONSIDERED INCIDENTAL TO THE METAL BRIDGE RAILING.
10. CAULKING COMPOUND USED UNDER GUTTER CHANNELS AND RAIL POST BASE PLATES SHALL BE A SINGLE COMPOUND COLD APPLIED, NONSAGGING COMPOUND HAVING EITHER A SILICONE RUBBER BASE OR A SYNTHETIC RUBBER BASE OF THE CHEMICALLY CURING TYPE AND SHALL CONFORM TO THE REQUIREMENTS OF NMDOT SPEC 563 POLYMER BRIDGE JOINT SEAL.
11. LAP METAL BARRIER AND TERMINAL CONNECTOR SO THAT THE PROJECTING EDGE FACES AWAY FROM APPROACHING TRAFFIC.

WILLIAM DAVID KESSLER
NEW MEXICO
25646
PROFESSIONAL ENGINEER
8-1-2023

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

METAL RAILING NM TYPE A32
GENERAL NOTES AND DETAILS
OF RAIL TO POST CONNECTION
AND GUTTER DETAIL

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD

MARTINEZ, JASAMAINE, DOT
19-Jul-23

Drawing File: J:\22 - STANDARD DRAWINGS\543 - METAL RAILING FOR BRIDGES\06 TYPE 32\15-UPDATE IN PROGRESS\543-06-3 OF 4.DWG
3:05 PM

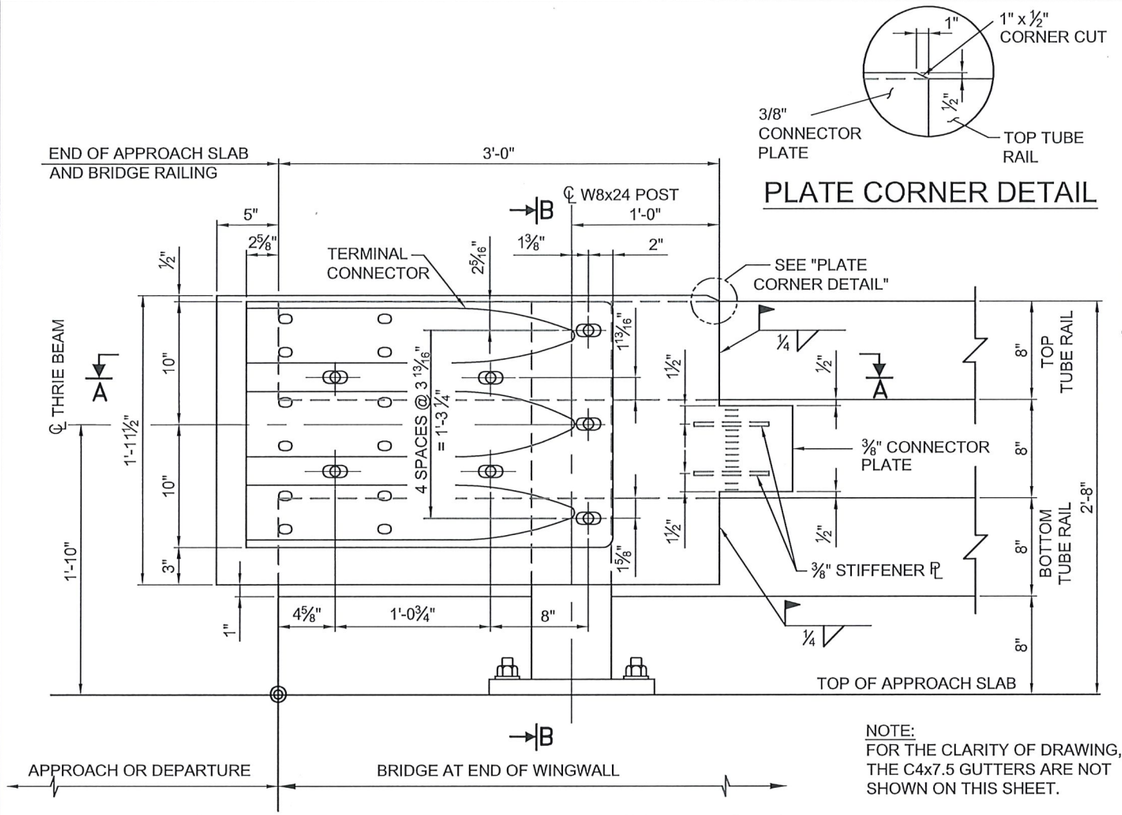
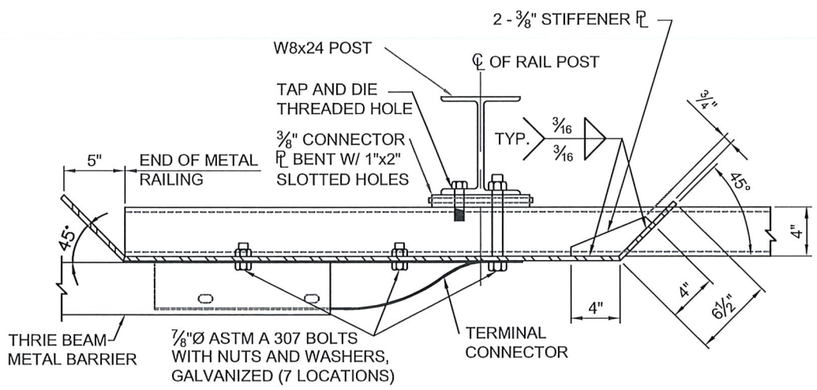
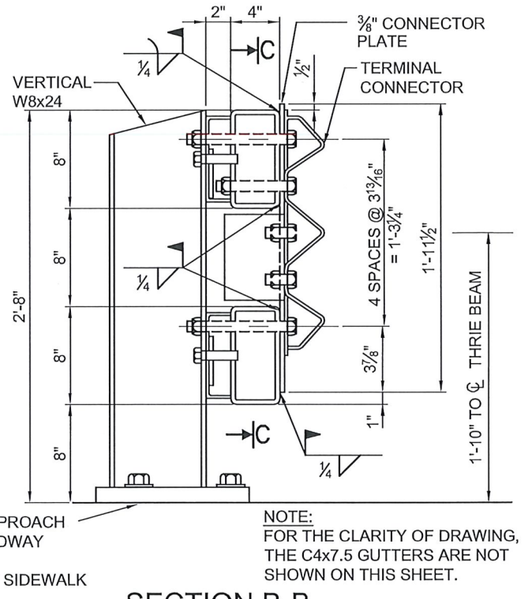


PLATE CORNER DETAIL

THRIE BEAM METAL BARRIER CONNECTION TO TYPE A32 BRIDGE RAILING

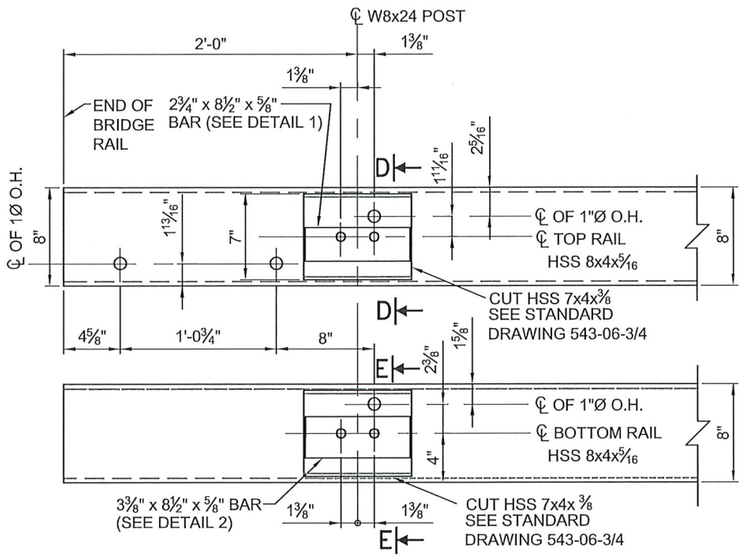


SECTION A-A

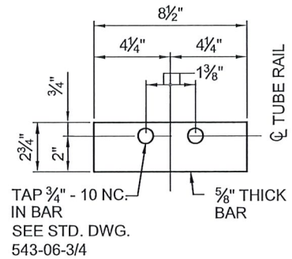


NOTE:
FOR THE CLARITY OF DRAWING, THE C4x7.5 GUTTERS ARE NOT SHOWN ON THIS SHEET.

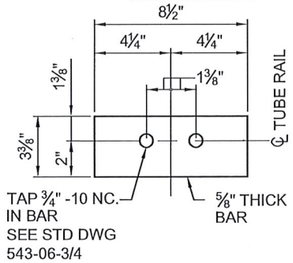
SECTION B-B



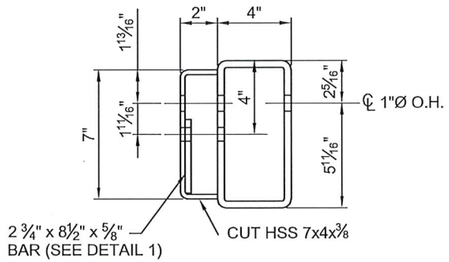
SECTION C-C



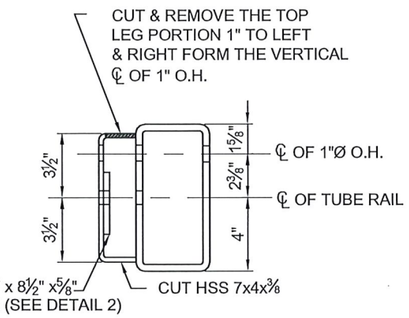
DETAIL 1



DETAIL 2



SECTION D-D



SECTION E-E

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
1			
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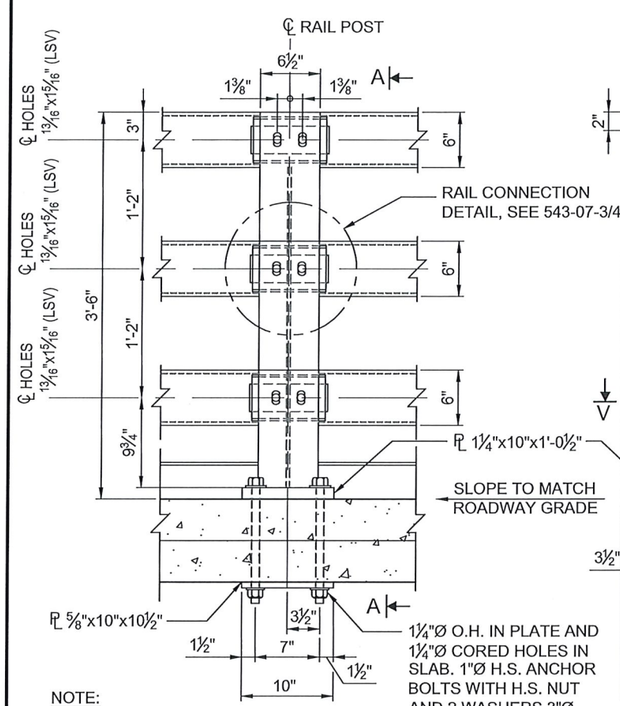
3			
4			

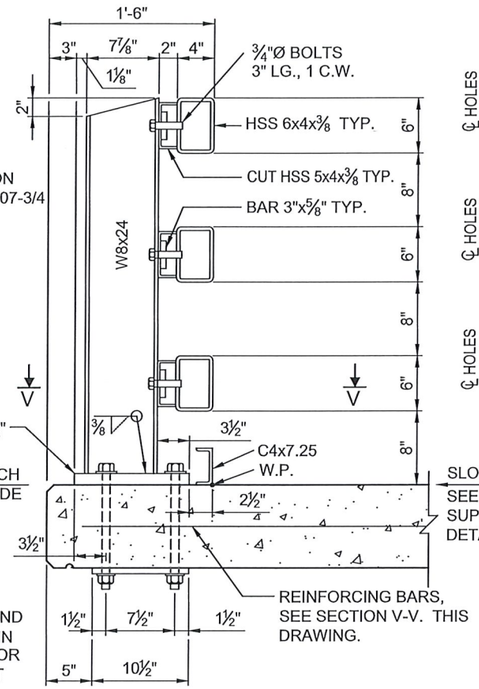
METAL RAILING NM TYPE A32
RAIL TO THRIE BEAM CONNECTION

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD



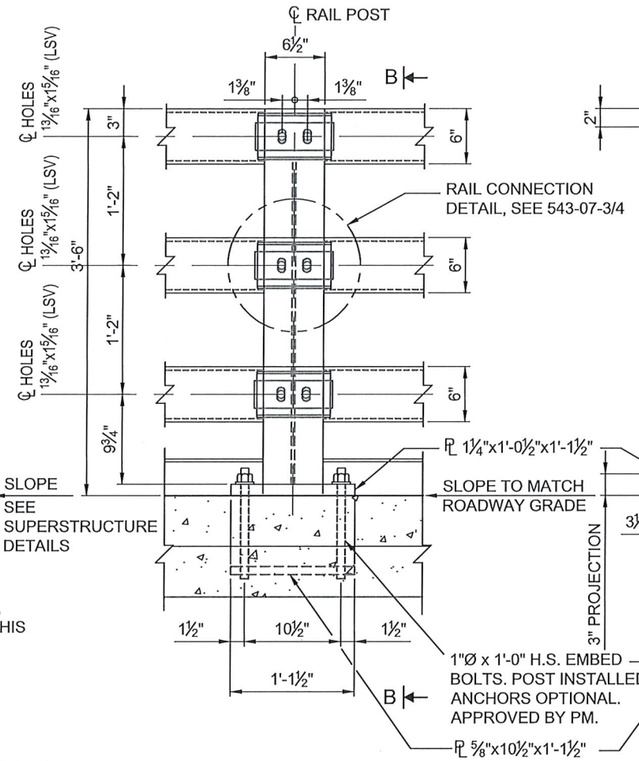
NOTE:
USE BEVEL WASHERS WITH 5% SLOPE WHEN TOP AND BOTTOM OF CONCRETE DIVERGE BY MORE THAN 3%. IF THE DIVERGENCE EXCEEDS 7% SPECIAL DETAILS WILL BE SHOWN ON BRIDGE PLANS.

ELEVATION

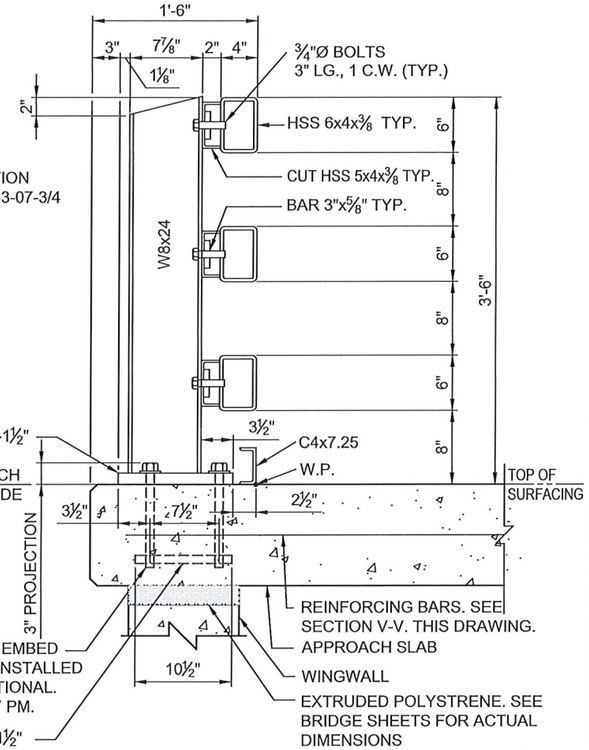


NOTE:
LSV- LONG SLOTTED VERTICAL
LSH- LONG SLOTTED HORIZONTAL

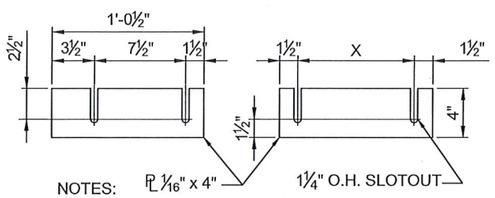
SECTION A-A
(FOR POST ON BRIDGE DECK)



ELEVATION

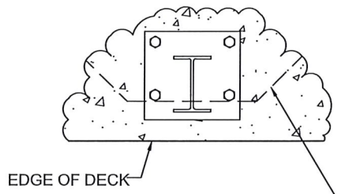


SECTION B-B
(FOR POST ON APROACH SLAB)



NOTES:
1. POST SHIMS ARE TO BE USED BETWEEN POST AND CONCRETE WHERE NECESSARY TO ALIGN POSTS. REQ'D ONE SHIM EACH PER POST.
2. X= 0'-7" FOR W8x24 ON BRIDGE DECK
   X=0'-10 ½" FOR W8x24 ON APPROACH SLAB

POST SHIMS



REINFORCING BAR SIZE AND LENGTH SHALL BE SPECIFIED BY BRIDGE ENGINEER AND INCLUDED IN BRIDGE DESIGN SHEETS

VIEW V-V

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
1			
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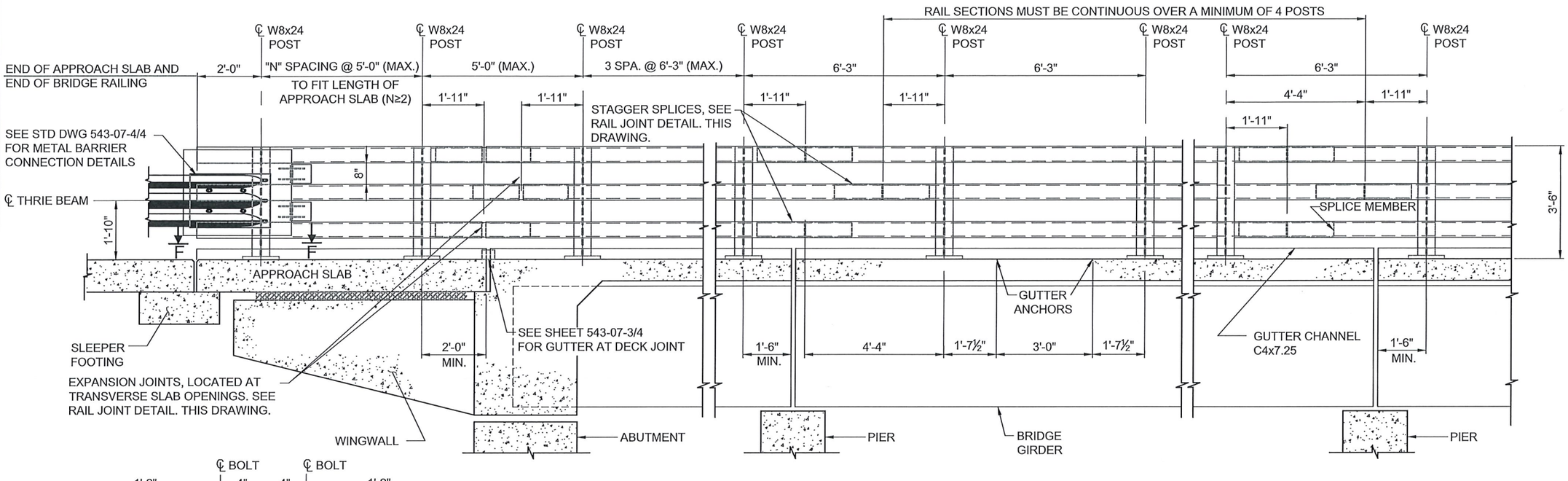
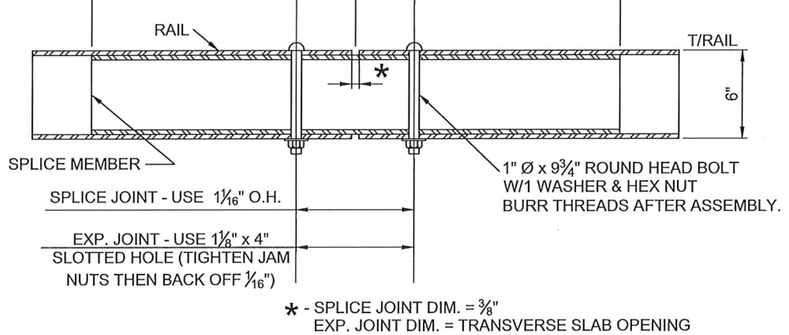
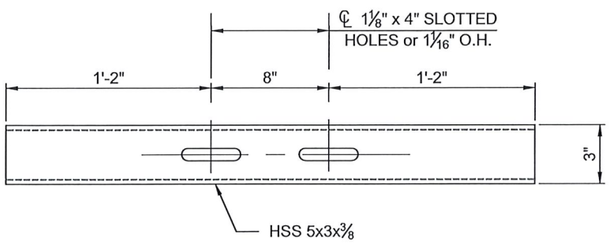
METAL RAILING NM TYPE A42
DETAILS OF POSTS ON BRIDGE, AND APPROACH SLABS



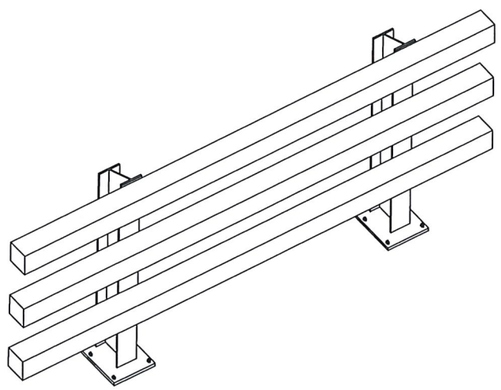
ELEVATION OF RAILING LAYOUT



RAIL JOINT DETAIL



SPLICE MEMBER FOR HSS 6x4x3/8 RAIL



RAILING - 3D VIEW

NOTES:

1. A MINIMUM OF TWO POSTS ARE REQUIRED ON EACH APPROACH SLAB.
2. RAIL EXPANSION JOINT. PLACE NEAR ALL PIERS FOR SIMPLE SPAN BRIDGE. PLACE AT ENDS OF CONTINUOUS SPAN UNITS. RAIL OPENING TO EQUAL SLAB OPENINGS.
3. RAIL EXPANSION JOINT OPENING IS EQUAL TO SLAB OPENING.
4. PROVIDE WATERPROOF SEAL WITH CAULKING COMPOUND BETWEEN SLAB AND BASE PLATE (TYP. @ ALL POSTS).

WILLIAM DAVID KESSLER
NEW MEXICO
25646
PROFESSIONAL ENGINEER
8-7-2023

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
4			
3			
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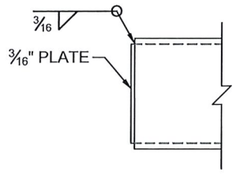
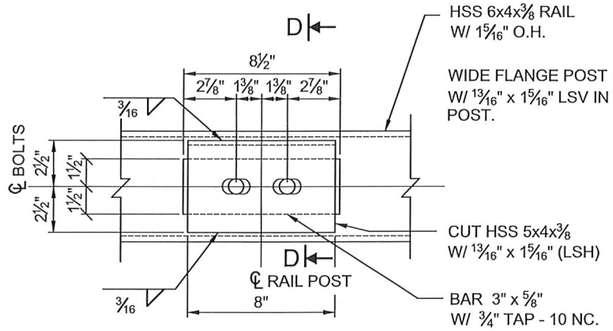
METAL RAILING NM TYPE A42
RAILING ELEVATION AND RAIL EXPANSION JOINT DETAIL

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD

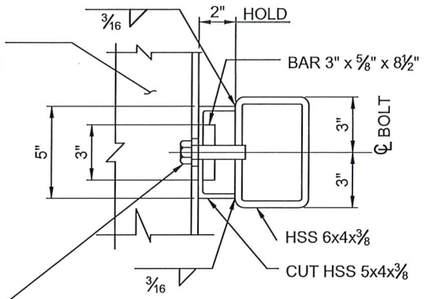
BLOOM, THEODORE, DOT
7-Aug-23
Drawing File: J:\22 - STANDARD DRAWINGS\543 - METAL RAILING FOR BRIDGES\07 TYPE 42\10-CURRENT\CAD\543-07-2 OF 4.DWG
1:32 PM



END PLATE DETAIL

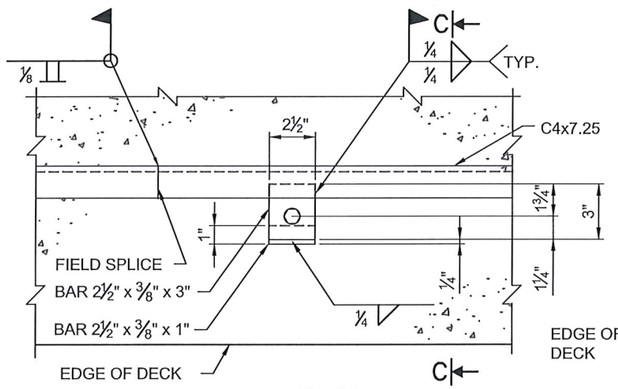


ENLARGED RAIL POST CONNECTION

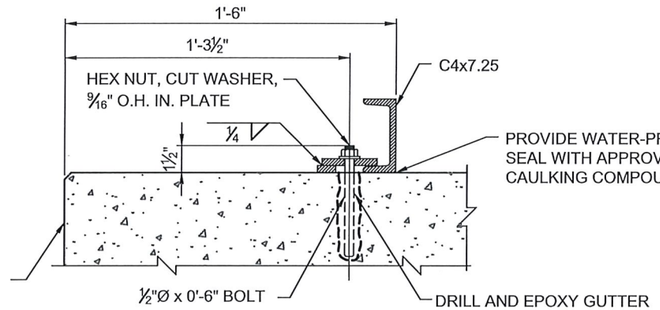


SECTION D-D

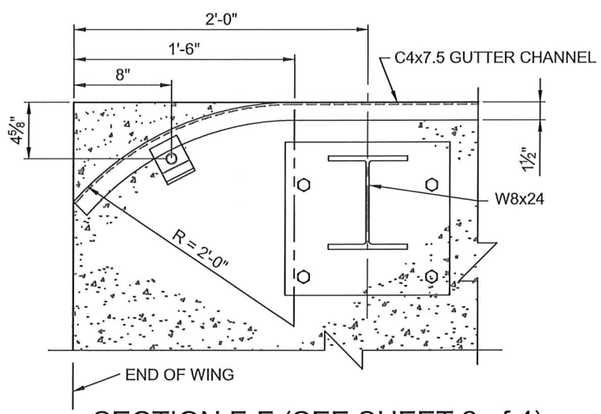
RAIL TO POSTS CONNECTION



PLAN

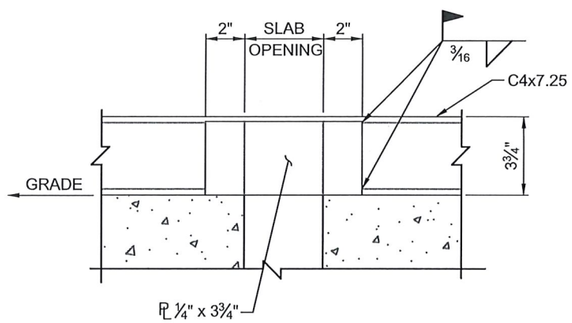


SECTION C-C

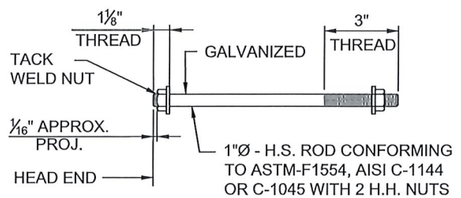


SECTION F-F (SEE SHEET 2 of 4) (GUTTER DETAIL)

(USE WHEN CALLED FOR ON BRIDGE PLANS)



DETAIL OF GUTTER AT DECK JOINT



ALTERNATE POST ANCHOR BOLT DETAIL

(IF BOLTS ARE NOT USED)

GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. ALL RAILS TO BE PARALLEL TO GRADE UNLESS OTHERWISE SHOWN.
3. SEE ELEVATION OF RAILING LAYOUT ON STD. DWG. 543-07-2/4 FOR MAX POST SPACING.
4. STEEL RAIL TUBES SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 500. POST SPACING SHOWN ON THE PLANS IS BASED ON THE USE OF HSS 6x4x3/8 CONFORMING TO THE REQUIREMENTS OF ASTM DESIGNATION A 500 GRADE B.
5. METAL RAILING WILL BE PAID FOR AT THE UNIT PRICE PER FOOT.
6. GUTTER CHANNEL REQUIRED ONLY WHEN CALLED FOR ON THE PROJECT PLANS. OMIT OTHERWISE. PAYMENT TO FURNISH AND INSTALL THE GUTTER CHANNEL SHALL BE CONSIDERED INCIDENTAL TO THE METAL BRIDGE RAILING
7. TERMINAL CONNECTORS SHALL BE AASHTO - ARBA STANDARD HM-TF-13/RE-67 WITH CLASS B THICKNESS, AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO SPECIFICATIONS M 180.
8. STRUCTURAL STEEL, CONNECTION BOLTS, NUTS, WASHERS, AND ANCHOR BOLTS SHALL CONFORM TO SECTION 543 OF THE NMDOT STANDARD SPECIFICATIONS. UNLESS OTHERWISE NOTED, ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.
9. CONNECTOR PLATES SHALL BE CONSIDERED INCIDENTAL TO THE METAL BRIDGE RAILING.
10. CAULKING COMPOUND USED UNDER GUTTER CHANNELS AND RAIL POST BASE PLATES SHALL BE A SINGLE COMPOUND COLD APPLIED, NONSAGGING COMPOUND HAVING EITHER A SILICONE RUBBER BASE OR A SYNTHETIC RUBBER BASE OF THE CHEMICALLY CURING TYPE AND SHALL CONFORM TO THE REQUIREMENTS OF NMDOT SPEC 563 POLYMER BRIDGE JOINT SEAL.
11. LAP METAL BARRIER AND TERMINAL CONNECTOR SO THAT THE PROJECTING EDGE FACES AWAY FROM APPROACHING TRAFFIC.

WILLIAM DAVID KESSLER
NEW MEXICO
25646
PROFESSIONAL ENGINEER
8-7-2023

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

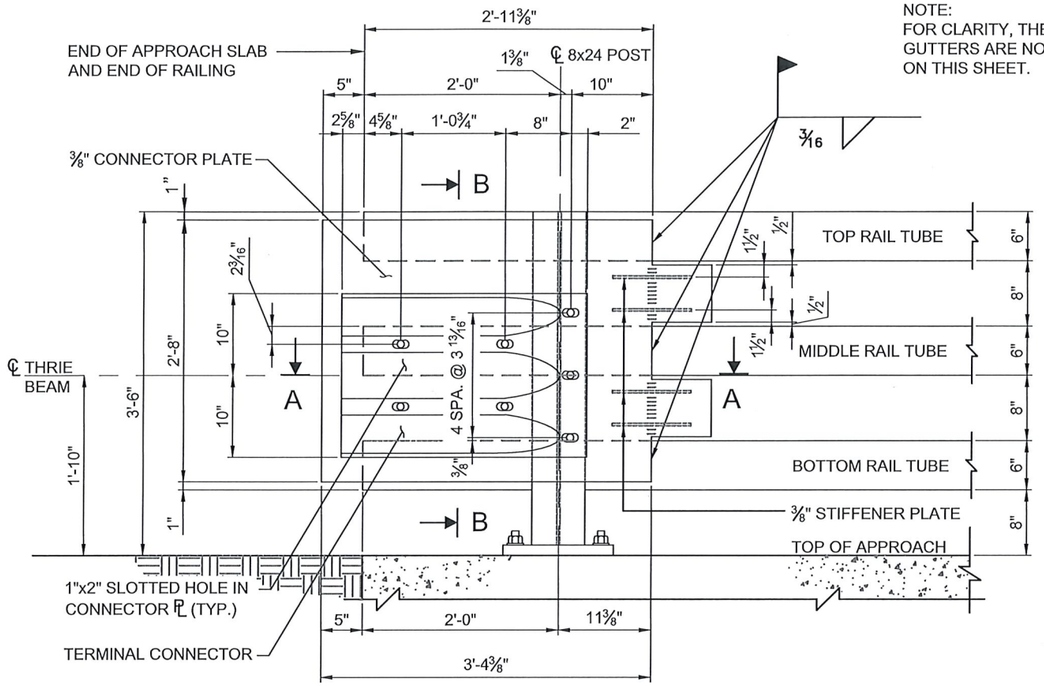
METAL RAILING NM TYPE A42
GENERAL NOTES AND DETAILS
OF RAIL TO POST CONNECTION
AND GUTTER DETAIL

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD

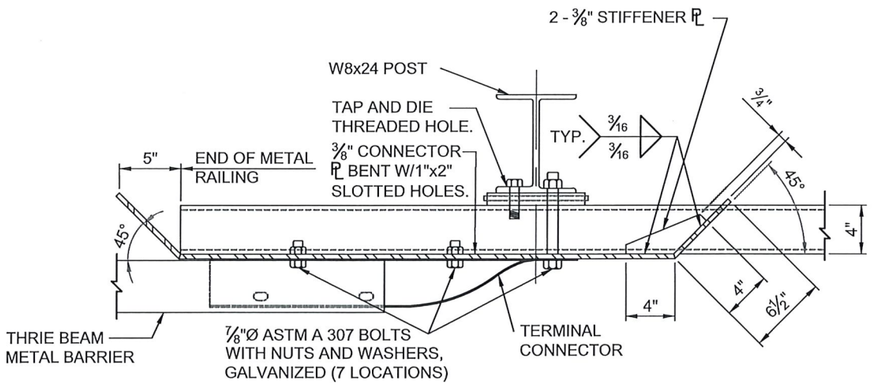
BLOOM, THEODORE, DOT
7-Aug-23

Drawing File: J:\22 - STANDARD DRAWINGS\543 - METAL RAILING FOR BRIDGES\07 TYPE 42\10-CURRENT\CAD\543-07-3 OF 4.DWG
1:33 PM

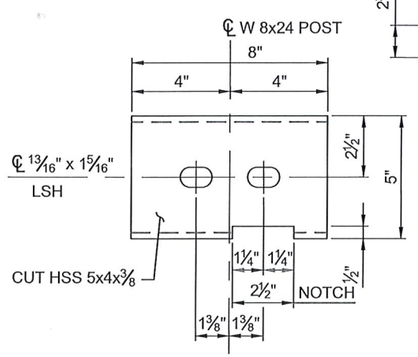
NOTE:
FOR CLARITY, THE C4x7.5 GUTTERS ARE NOT SHOWN ON THIS SHEET.



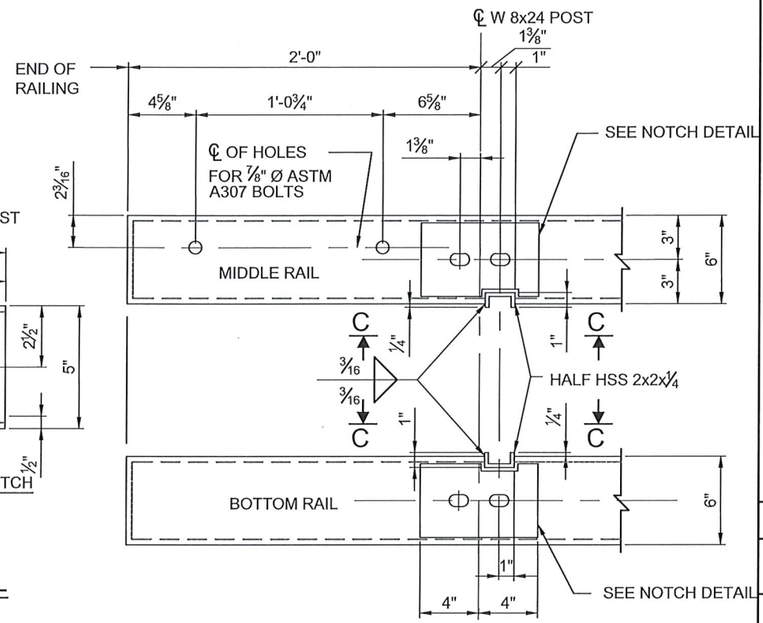
THRIE BEAM METAL BARRIER CONNECTION TO TYPE A42 BRIDGE RAILING



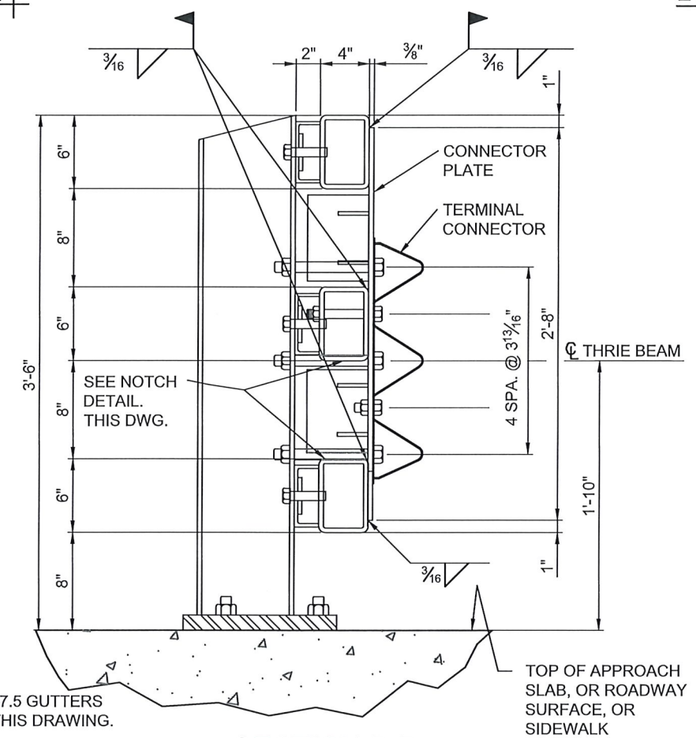
SECTION A-A



NOTCH DETAIL

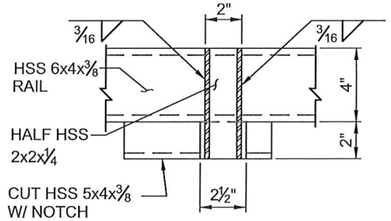


LOCATION OF HOLES AND NOTCHES ON RAIL TUBES



NOTE:
FOR CLARITY, THE C4x7.5 GUTTERS ARE NOT SHOWN ON THIS DRAWING.

SECTION B-B



VIEW C-C

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

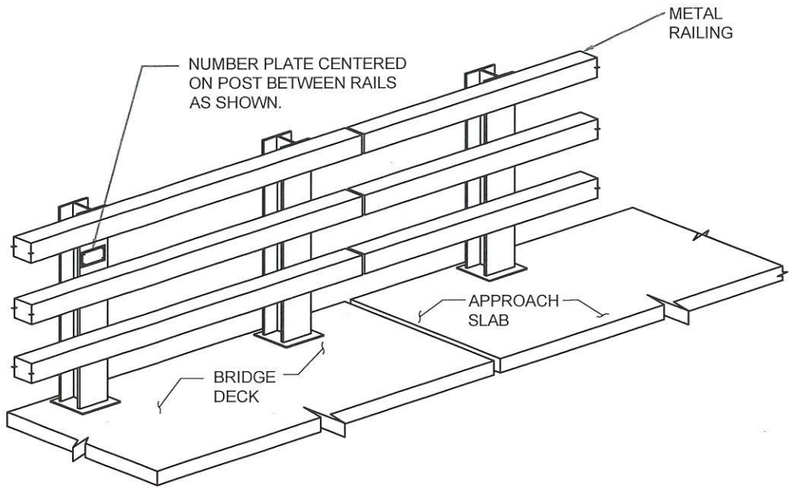
METAL RAILING NM TYPE A42
RAIL TO THRIE BEAM CONNECTION

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: VMD

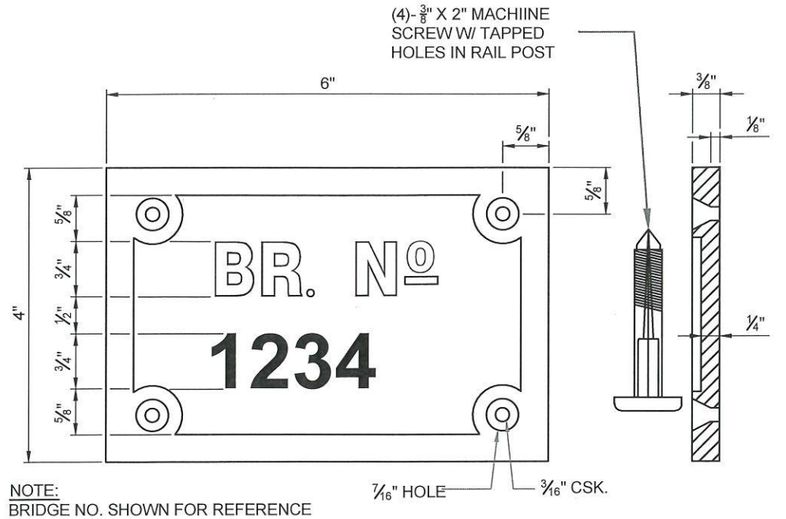
BLOOM, THEODORE, DOT
7-Aug-23

Drawing File: J:\22 - STANDARD DRAWINGS\543 - METAL RAILING FOR BRIDGES\07 TYPE 42\10-CURRENT\CAD\543-07-4 OF 4.DWG
1:33 PM

543-07-4/4



METAL RAILING



NOTE:
BRIDGE NO. SHOWN FOR REFERENCE ONLY. COORDINATE WITH BRIDGE BUREAU FOR ACTUAL BRIDGE NO.

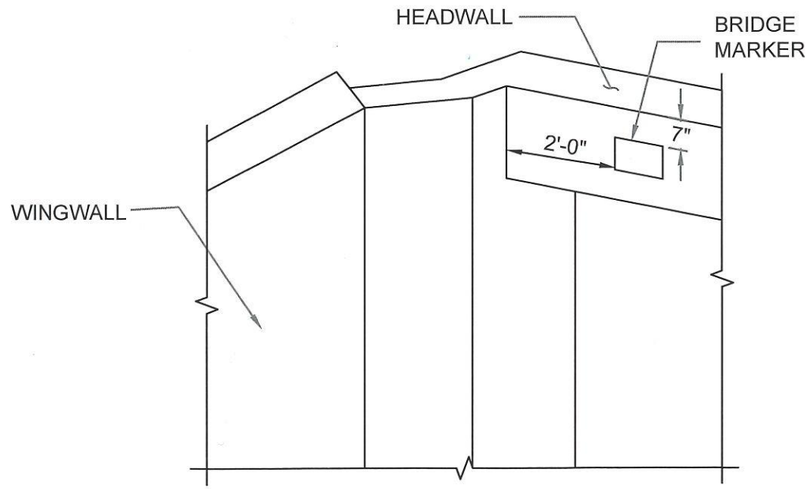
BRIDGE NUMBER PLATE DETAILS

GENERAL NOTES:

1. WITH APPROVAL OF THE PROJECT MANAGER, THE CONTRACTOR MAY SALVAGE AND REUSE THE EXISTING BRIDGE NUMBER PLATE. IF DAMAGED DURING REMOVAL, THE CONTRACTOR SHALL FURNISH A NEW REPLACEMENT BRIDGE NUMBER PLATE AT NO ADDITIONAL COST. THE COST SHALL BE INCIDENTAL TO THE COST OF THE METAL RAILING.
2. TWO BRIDGE No. PLATES ARE REQUIRED ON EACH NEW BRIDGE. THE BRIDGE No. PLATES SHALL BE GALVANIZED CAST IRON WITH RAISED BLOCK LETTERS OF NEAT SQUARE CUT DESIGN. GRIND FACE OF LETTERS AND BORDERS SMOOTH. BRONZE PLATE AND BOLTS MAY BE SUBSTITUTED.
3. LOCATE BRIDGE No. PLATES ON THE RIGHT-HAND SIDE OF THE ROAD AS ONE APPROACHES THE BRIDGE.

CBCs AND CMPs

2 BRIDGE No. PLATES ARE REQUIRED ON THE HEADWALLS. BRIDGE No. PLATES SHALL BE PLACED ON THE VERTICAL FACE OF THE HEADWALLS AT EACH END OF CBC'S AND CMP'S. THE COST OF THE BRIDGE No. PLATES SHALL BE INCIDENTAL TO THE COST OF THE THE METAL RAILING.



CONCRETE BOX CULVERT OR CORRUGATED PIPE CULVERT

OCTAVIO BURROLA
NEW MEXICO
22269
LICENSED PROFESSIONAL ENGINEER
4/25/20

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

BRIDGE NUMBER PLATE

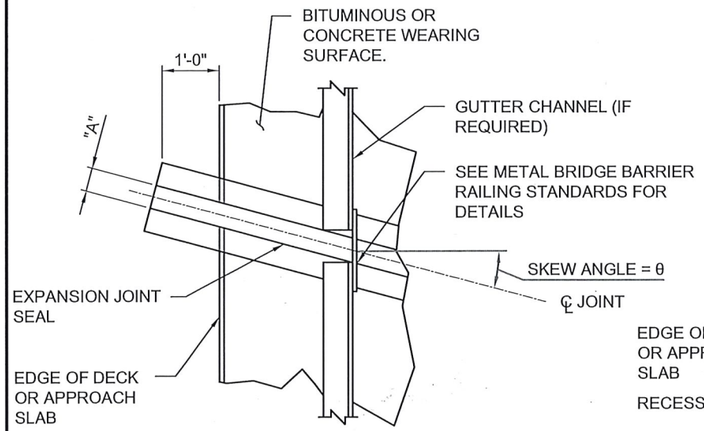
DESIGNED BY: OB DRAWN BY: TB CHECKED BY: OB

543-09-1/1

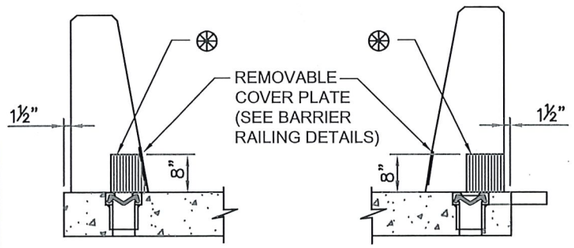
ALLOWABLE MOVEMENT LENGTHS

SKEW	MOVEMENT LENGTH (FEET) CONCRETE BRIDGE: ELEVATION GREATER THAN 4,500 FEET (0° TO 80° F) T_o = 40° F	CONCRETE BRIDGE: ELEVATION LESS THAN 4,500 FEET (10° TO 90° F) T_o = 50° F	STEEL BRIDGE: ELEVATION GREATER THAN 4,500 FEET (-20° TO 110° F) T_o = 45° F	STEEL BRIDGE: ELEVATION LESS THAN 4,500 FEET (0° TO 120° F) T_o = 60° F	JOINT MOVEMENT (INCHES)
0° to 15°	0 - 429	0 - 429	0-328	0-356	0 TO 4
15° to 30°	0 - 444	0 - 444	0-340	0-368	0 TO 4
30° to 45°	0 - 496 *	0 - 496 *	0-379 *	0-411 *	0 TO 4 *

* - RACKING (PARALLEL TO JOINT DISPLACEMENT) SHALL BE CHECKED FOR SKEW ANGLES GREATER THAN 30° AND LESS OR EQUAL TO 45°. FACTORED TOTAL RACKING DISPLACEMENT SHALL NOT BE MORE THAN 60% OF THE ELASTOMER'S JOINT MOVEMENT RANGE.



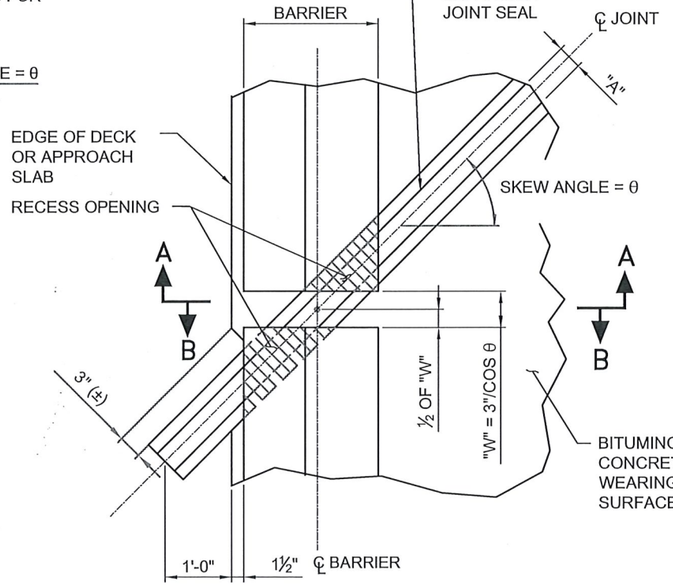
PART PLAN - SKEWED JOINT WITH METAL RAILING



SECTION A-A SECTION B-B

SIMILAR DETAIL FOR CURB AND SIDEWALK.

⊛ RECESS IN BASE OF WALL BARRIER.



PART PLAN-SKEWED JOINT WITH CONCRETE BARRIER RAILING

GENERAL NOTES:

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NEW MEXICO DEPARTMENT OF TRANSPORTATION (NMDOT) STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION CURRENT EDITION.
2. WHEN EXPANSION LENGTH ≤ 200'-0", THE JOINT OPENING SHALL BE SET TO DIMENSION "A" LISTED IN THE JOINT DATA TABLE. WHEN EXPANSION LENGTH > 200'-0", THE DESIGNER SHALL PROVIDE A TABLE IN THE BRIDGE PLANS LISTING JOINT SETTING OPENINGS FROM 40°F TO 90°F IN 10° INCREMENTS. THE DESIGNER SHALL ACCOUNT FOR SHORTENING DUE TO PRESTRESSED GIRDER SHRINKAGE AND CREEP WHEN DETERMINING THIS TABLE. JOINT OPENINGS SHALL BE GIVEN NORMAL TO JOINT. IF THE ANTICIPATED INSTALLATION TEMPERATURE <40°F OR >90°F, AS DEFINED IN NOTE 3, THE CONTRACTOR SHALL NOTIFY THE PM TO DETERMINE IF AN ADJUSTMENT NEEDS TO BE MADE TO THE JOINT SETTING "A" DIMENSION.
3. UNLESS A MORE PRECISE MEASUREMENT IS USED THE SETTING TEMPERATURE SHALL BE TAKEN AS THE AIR TEMPERATURE AVERAGED OVER THE 24 HOURS DIRECTLY PRECEDING THE SETTING OF THE JOINT.
4. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE SEALING ELEMENT IN ONE (1) CONTINUOUS PIECE AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE CONTRACTOR SHALL NOT FIELD SPLICE THE SEALING ELEMENT UNLESS OTHERWISE APPROVED BY THE PROJECT MANAGER. PARTIAL LENGTH ELEMENTS USED DURING PHASED CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH FULL LENGTH ELEMENTS AT COMPLETION OF CONSTRUCTION.
5. STRIP SEAL EXTENSION SHALL NOT BE EMBEDDED IN OTHER BRIDGE ELEMENTS OR HAVE ITS MOVEMENT OBSTRUCTED BY BRIDGE ELEMENTS. WHERE CONFLICTS EXIST, THE CONTRACTOR SHALL PROPOSE AND PROJECT MANAGER SHALL APPROVE A FIELD FIT THAT ALLOWS 75% OF THE FULL JOINT MOVEMENT IN EITHER DIRECTION.

JOINT DATA TABLE

MANUFACTURER	ELASTOMER MODEL #	JOINT MOVEMENT RANGE (IN)	*"A" DIMENSION AT MID TEMP T_o (IN)	MINIMUM JOINT OPENING (IN)
WATSON BOWMAN (WABO STRIP SEAL)	SE-400	0" TO 4"	2"	0"
DS BROWN (STEELFLEX)	L2-400	0" TO 4"	2"	0"

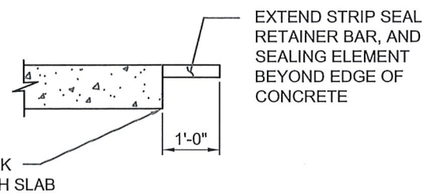
DESIGN DATA:

TEMPERATURE RANGE AS SHOWN ON ALLOWABLE MOVEMENT LENGTHS TABLE

SHORTENING DUE TO CREEP AND SHRINKAGE (CONCRETE) . . . . . 0.0002 FT/FT

COEFFICIENT OF THERMAL EXPANSION (α)
STEEL: . . . . . 0.000078 IN/FT * °F
CONCRETE: . . . . . 0.000072 IN/FT * °F

THERMAL DEFORMATION LOAD FACTOR (γ_{TU}): 1.2



STRIP SEAL RETAINER BAR SECTION

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
1			
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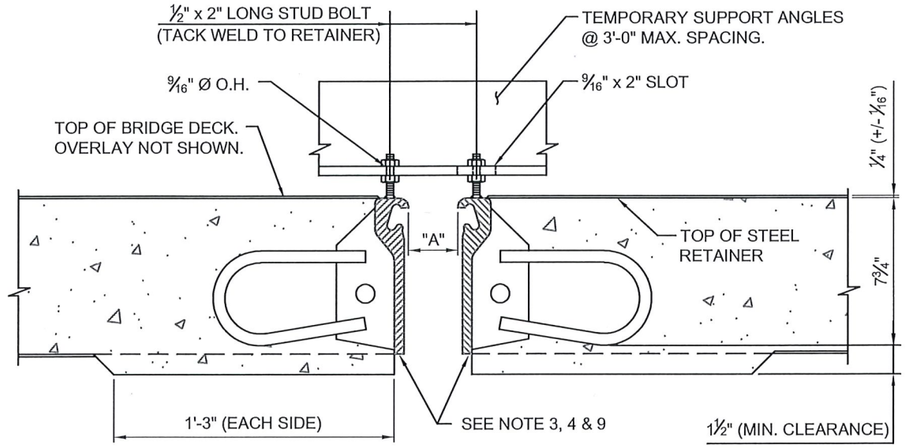
3			
4			

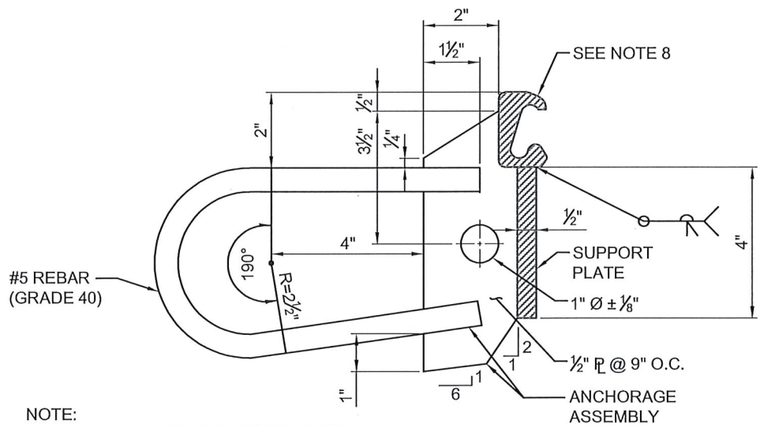
BRIDGE JOINT STRIP SEAL

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: TNC



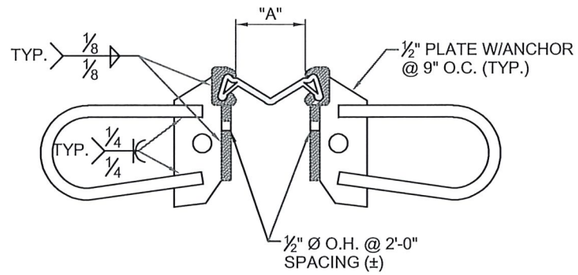
ERECTION DETAIL

ACTUAL DETAIL PROVIDED BY
MANUFACTERER



NOTE:
MANUFACTURERS' COMPONENTS MAY
VARY IN DIMENSION AND SHAPE

RETAINER BAR, SUPPORT PLATE & ANCHORAGE ASSEMBLY DETAIL



TYPICAL SECTION

NOTES:

1. INSTALLATION SHALL CONSIST OF A STEEL RETAINER BAR, SUPPORT PLATE, JOINT ELASTOMER AND ANCHORAGE SYSTEM. THE ANCHORAGE SYSTEM SHALL BE OF A CONTINUOUS LOOP TYPE.
2. SEE STANDARD 562-01-1/3 FOR DIMENSION "A."
3. IF NEEDED, THE ANCHORAGE MAY BE ALTERED TO BETTER FIT THE STEEL RETAINER PROVIDED. THE ENGINEER OF RECORD SHALL BE NOTIFIED OF THE CHANGE.
4. WATSON BOWMAN TYPE "P" RETAINER BAR SHOWN, D.S. BROWN TYPE "SSPA" SIMILAR. DIMENSIONS MAY VARY.
5. THE TEMPORARY SUPPORT ANGLE SHALL BE SECURED IN POSITION SO AS TO PROVIDE FOR LATERAL AND VERTICAL ADJUSTMENT OF THE RETAINER BARS AND PERMIT FINAL FINISHING OF THE CONCRETE SURFACE. REMOVE TEMPORARY ANGLES AFTER CONCRETE REACHES FINAL SET TO AVOID DAMAGE TO RETAINER BAR OR ANCHORAGE DUE TO THERMAL MOVEMENT OF DECK.
6. THE RETAINERS SHALL NOT INTERFERE WITH THE GIRDERS, NOTCH TO CLEAR THE GIRDERS.
7. ANCHORAGE ASSEMBLY SHALL BE OMITTED OVER SECTIONS OF STRIP SEAL EXTENDED BEYOND THE BRIDGE DECK OR APPROACH SLAB. ONLY THE RETAINER BAR, SUPPORT PLATE AND JOINT ELASTOMER SHALL EXTEND BEYOND THE EDGE OF CONCRETE.
8. WATSON BOWMAN TYPE "A" RETAINER BAR SHOWN, D.S. BROWN TYPE "SSA" SIMILAR. DIMENSIONS MAY VARY.
9. IF THE RETAINER BAR AND SUPPORT PLATE ARE FORMED FROM A SINGLE PIECE OF METAL, MODIFICATIONS TO THE RETAINER MAY BE NECESSARY WHERE THE STRIP SEAL EXTENSION OVERHANGS THE BRIDGE RUNDOWN FLUME.

NMDOT

NEW MEXICO DEPARTMENT
OF TRANSPORTATION
STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
4			
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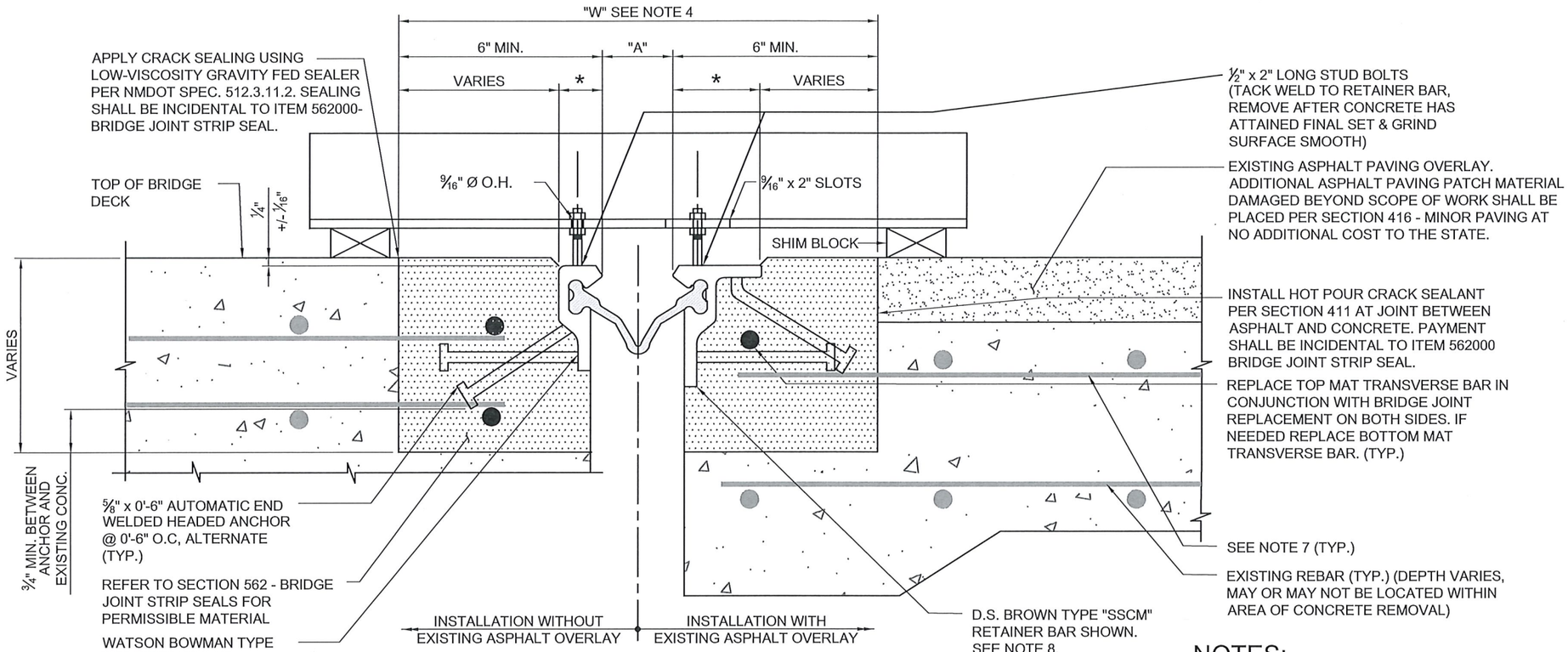
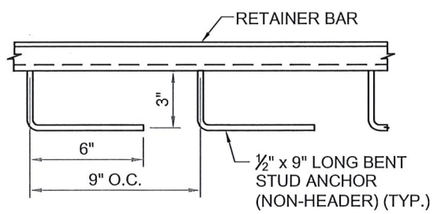
BRIDGE JOINT STRIP SEAL
TYPE "A" INSTALLATION

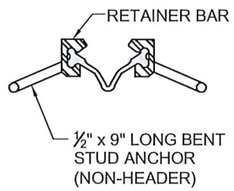
DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: TNC



* - DIMENSION VARIES BASED ON MANUFACTURERS' DATA

ERECTION DETAIL





PERMISSIBLE ALTERNATE ANCHOR DETAILS

NOTES:

1. TYPE "B" INSTALLATION SHALL BE FOR PRESERVATION OR REHABILITATION CONSTRUCTION. INSTALLATION SHALL CONSIST OF A STEEL RETAINING BAR, JOINT ELASTOMER, ELASTOMERIC CONRETE AND ANCHORAGE SYSTEM. THE ANCHORAGE SYSTEM SHALL BE A HEADED ANCHOR STUD TYPE OR PERMISSIBLE ALTERNATE ANCHOR.
2. SEE STANDARD DRAWING 562-01-1/3 FOR DIMENSION "A."
3. THE TEMPORARY SUPPORT ANGLE SHALL BE SECURED IN POSITION SO AS TO PROVIDE FOR LATERAL AND VERTICAL ADJUSTMENT OF THE RETAINER BARS AND PERMIT FINAL FINISHING OF THE CONCRETE SURFACE. REMOVE TEMPORARY CONCRETE SUPPORT ANGLES AFTER CONCRETE REACHES FINAL SET TO AVOID DAMAGE TO RETAINER BAR OR ANCHORAGE DUE TO THERMAL MOVEMENT OF DECK.
4. WHEN OLDER BOLT-DOWN JOINT SEALS ARE BEING REPLACED, THE DIMENSION "W" SHALL BE EQUAL TO THE OLD JOINT BLOCKOUT DIMENSIONS, OR THE MINIMUM DIMENSIONS SHOWN, WHICHEVER IS GREATER; PLUS ANY ADDITIONAL AMOUNTS NEEDED TO REPLACE SPALLED OR DETERIORATED CONCRETE AT THE EDGES OR UNDERNEATH THE OLD JOINT SEAL BLOCKOUT. ISOLATED AREAS REQUIRING EVEN GREATER WIDTHS DUE TO DETERIORATED CONCRETE SHALL BE IDENTIFIED ON THE PLANS. FOR NEW CONCRETE WHERE A NOSING MATERIAL IS REQUIRED, THE DIMENSIONS "A" AND "W" SHALL BE CALLED OUT ON THE PLANS.
5. ROUGHEN EXISTING CONCRETE WHERE IT MEETS NEW MATERIAL.
6. ANCHORAGE SYSTEM SHALL BE OMMITED OVER SECTIONS OF STRIP SEAL EXTENDED BEYOND THE BRIDGE DECK OR APPROACH SLAB. ONLY THE RETAINER BAR, SUPPORT PLATE AND JOINT ELASTOMER SHALL EXTEND BEYOND THE EDGE OF CONCRETE.
7. LEAVE EXISTING LONGITUDINAL REINFORCING EXTENDED INTO JOINT CONCRETE.
8. DIMENSIONS WILL VARY BY MANUFACTURER. IF TOP OF STEEL RETAINER BAR IS WIDER THAN 3", ½" Ø O.H. VENT HOLES @ 2'-0" SPANCING WILL BE REQUIRED.

WILLIAM DAVID KESSLER NEW MEXICO 25646 PROFESSIONAL ENGINEER
8-16-2023

NMDOT

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

NO.	DESCRIPTION	DATE	BY
4			
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BRIDGE JOINT STRIP SEAL TYPE "B" INSTALLATION

DESIGNED BY: WDK DRAWN BY: TB CHECKED BY: TNC

BLOOM, THEODORE, DOT
16-Aug-23

Drawing File: J:\22 - STANDARD DRAWINGS\562 - BRIDGE JOINT STRIP SEALS\10-CURRENT\CAD\562-01-3OF4.DWG
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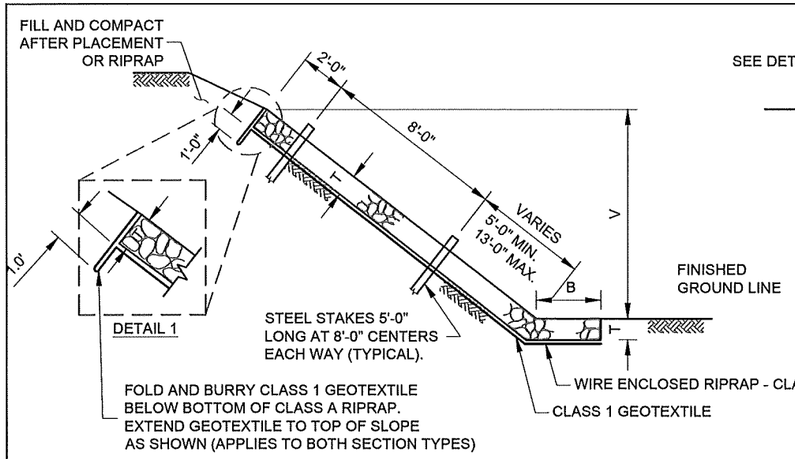
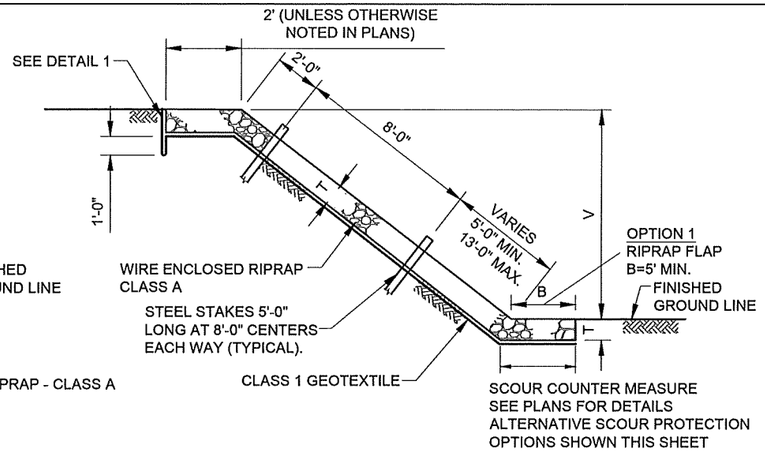
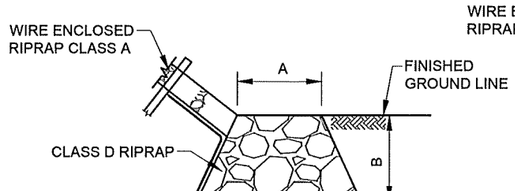


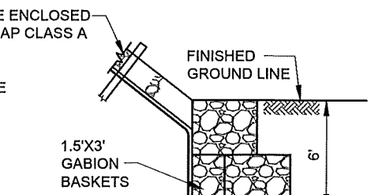
SECTION TYPE I



SECTION TYPE II



OPTION 2 - CLASS D RIPRAP

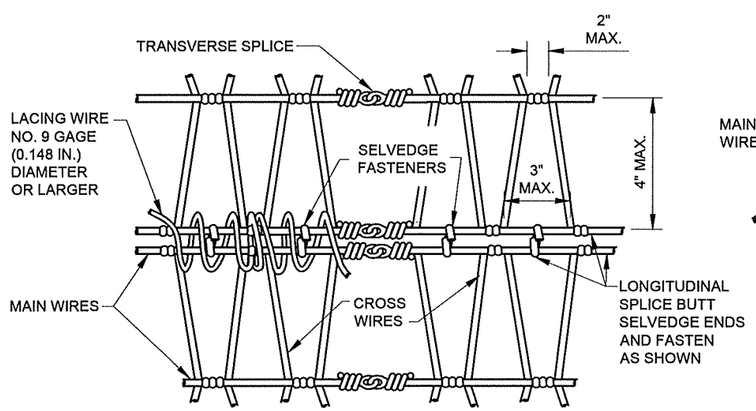


OPTION 3 - GABION BASKETS

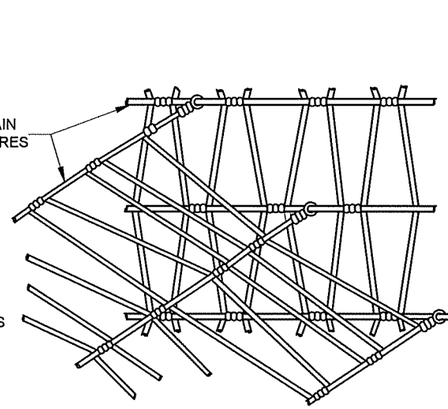
SCOUR COUNTER MEASURE OPTIONS

GENERAL NOTES

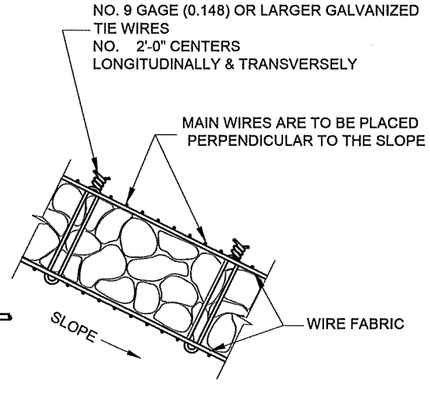
1. WIRE FABRIC FOR RIP RAP SHALL BE "W" OR HEXAGONAL MESH AND MEET THE REQUIREMENTS LISTED IN SECTION 602 OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION.
2. STEEL STAKES MAY BE RAILROAD RAILS WEIGHING NOT LESS THAN 30 LBS. PER YARD, 4" NOMINAL DIAMETER STANDARD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



NORMAL INTERSECTION SPLICES

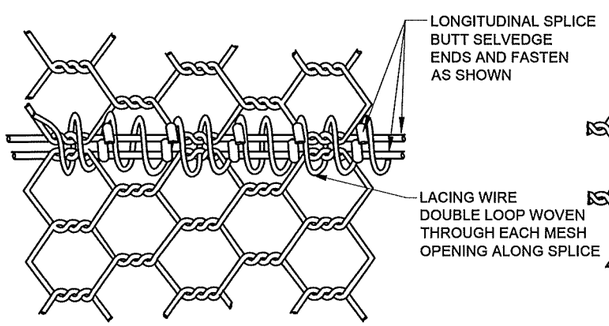


SKEWED INTERSECTION SPLICE

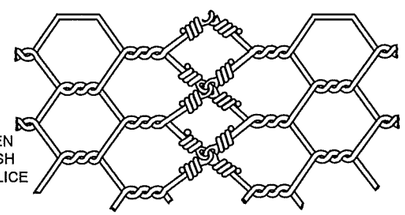


"W" MESH

TYPICAL SECTION

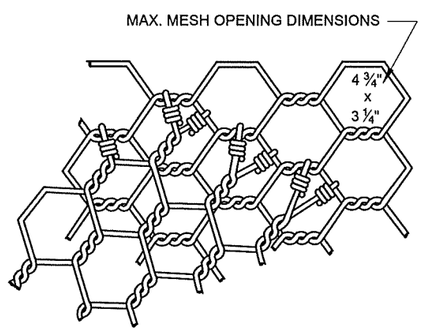


NORMAL INTERSECTION SPLICE



TRANSVERSE SPLICE

HEXAGONAL MESH



SKEWED INTERSECTION SPLICE

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

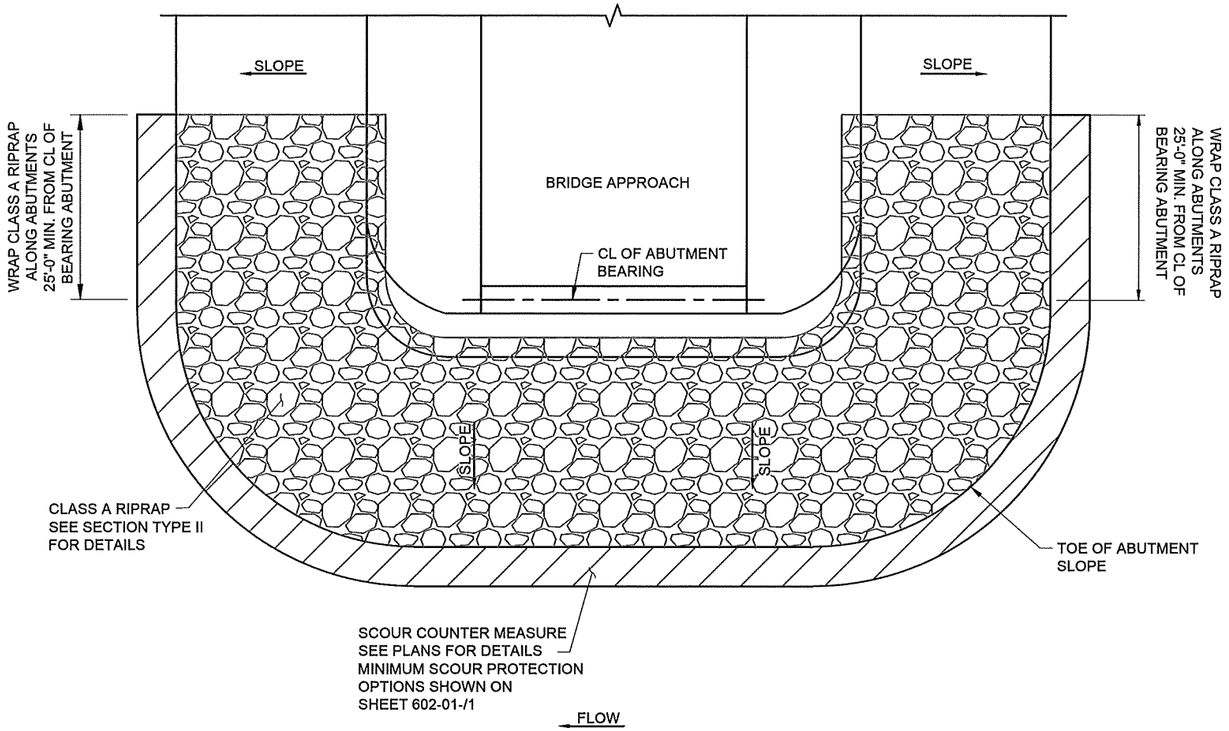
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

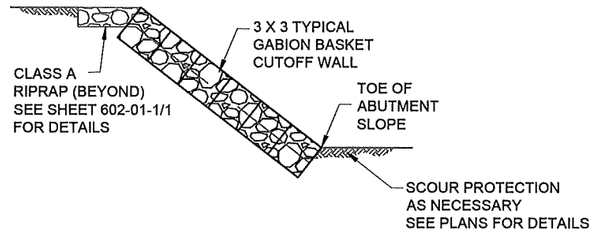
WIRE ENCLOSED RIPRAP
CLASS "A"

602-01-1/2

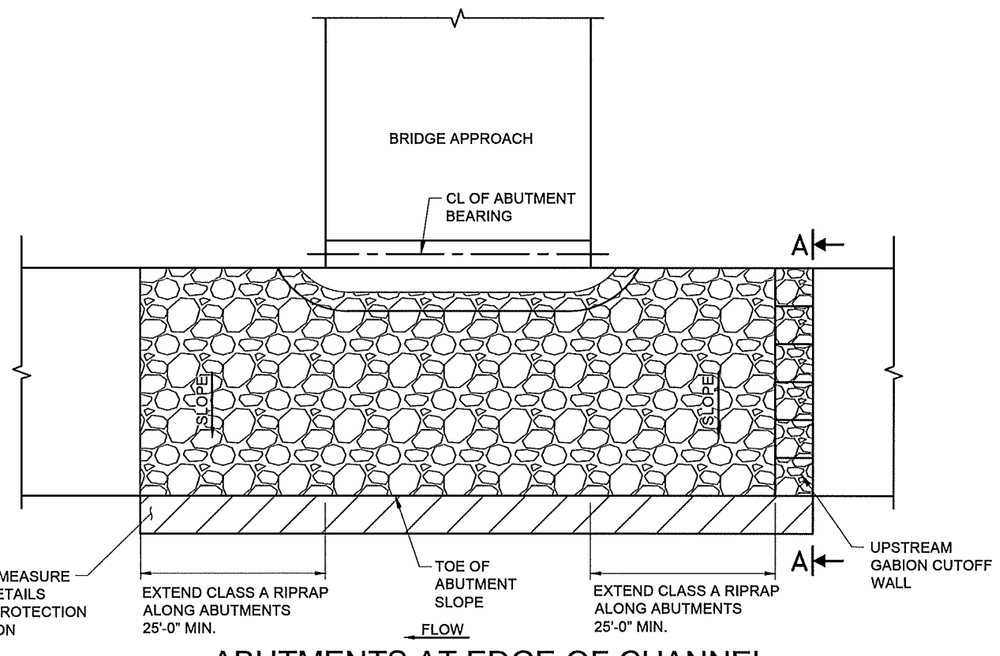
DESIGNED BY:____ DRAWN BY:_____ CHECKED BY:_____



ABUTMENTS SET BACK FROM CHANNEL



SECTION A-A



ABUTMENTS AT EDGE OF CHANNEL

10/5/21

DESIGNED BY:____ DRAWN BY:_____ CHECKED BY:_____

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

WIRE ENCLOSED BRIDGE ABUTMENT RIPRAP CLASS "A"

602-01-2/2

GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. QUANTITIES FOR GABION BASKETS SHALL BE SHOWN ON THE PLANS.
3. THE BASE OF THE GABION WALL SHALL BE CONSTRUCTED A MINIMUM OF 2 FEET BELOW THE PERMANENT GROUND LINE. WHEN GABION WALLS ARE TO BE INSTALLED IN STREAMBED, MEASURES TO PROTECT THE WALL AGAINST UNDERMINING SHALL BE SHOWN ON THE PROJECT SPECIFIC DRAWINGS.
4. ALL FOUNDATION SOILS SHALL BE ANALYZED TO ENSURE ADEQUATE BEARING PRESSURE. SOILS THAT DO NOT MEET THE DESIGN BEARING PRESSURE SHALL BE STABILIZED ACCORDING TO THE RECOMMENDATIONS OF THE NEW MEXICO STATE DEPARTMENT OF TRANSPORTATION'S FOUNDATION ENGINEER PRIOR TO THE START OF CONSTRUCTION.
5. VERIFY INTERNAL FRICTION ANGLE OF RETAINED BACKFILL IN ACCORDANCE WITH SECTION 506- MECHANICALLY STABILIZED EARTH RETAINING STRUCTURES, OF THE NMDOT STANDARD SPECIFICATIONS EXCEPT THAT THE FRICTION ANGLE SHALL NOT BE LESS THAN THAT SHOWN IN THE TABLE ON THIS SHEET.
6. GABION BASKETS SHALL BE CONSTRUCTED PER MANUFACTURERS RECOMMENDATIONS. CONNECTIONS BETWEEN GABION BASKETS SHALL BE DESIGNED BY MANUFACTURER. MANUFACTURER DESIGN DETAILS SHALL BE SUBMITTED TO THE PM FOR ACCEPTANCE BY THE EOR.
7. FOR WALL TYPE A: IF "H" EQUAL TO OR LESS THAN 9'-0", NO GEOTECHNICAL INVESTIGATION IS REQUIRED. FOR WALL TYPE B: IF "H" EQUAL TO OR LESS THAN 6'-0", NO GEOTECHNICAL INVESTIGATION IS REQUIRED.
8. REMOVE THE UNSUITABLE FOUNDATION MATERIAL, WHERE ENCOUNTERED, AND PREPARE THE FOUNDATION IN ACCORDANCE WITH SECTION 602 - SLOPE AND EROSION PROTECTION STRUCTURES.

GABION RETAINING WALL				
WALL HEIGHT "H"	BASE "B"	NO. OF COURSES	QTY. CU. YD. PER LIN. FT.	SOIL BEARING CAPACITY (PSF)
6'-0"	6'-0"	2	1.167	1025
9'-0"	7'-6"	3	2	1625
12'-0"	9'-0"	4	3	2225
15'-0"	10'-6"	5	4.167	3000

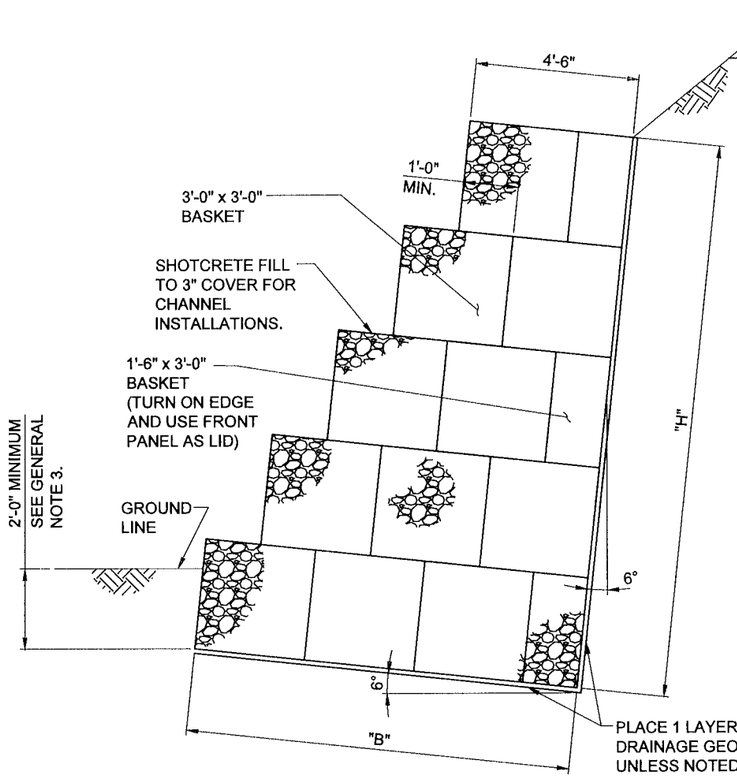
DESIGN DATA

BACKFILL SOIL FRICTION ANGLE, TYPE A, δ	0.5 Φ'f
BACKFILL SOIL FRICTION ANGLE, TYPE B, δ	0.75 Φ'f
BACKFILL SOIL FRICTION ANGLE	SEE BACKFILL TABLE BELOW
FOUNDATION SOIL FRICTION ANGLE, φf	30° FOR WALLS<12', 31° FOR WALLS>12'
WALL BATTER	NEGATIVE 6 DEGREES
BACKFILL SLOPE ANGLE, β	SEE BACKFILL TABLE BELOW
SOIL BACKFILL DENSITY	120 LBS./ CU. FT.
GABION FILL DENSITY	100 LBS./ CU. FT.
LIVE LOAD SURCHARGE	2'-0"
SURCHARGE PRESSURE (LEVEL BACKFILL)	2 FT. x 120 LBS./CU. FT. x 1.25 = 300 LBS./SQ. FT.

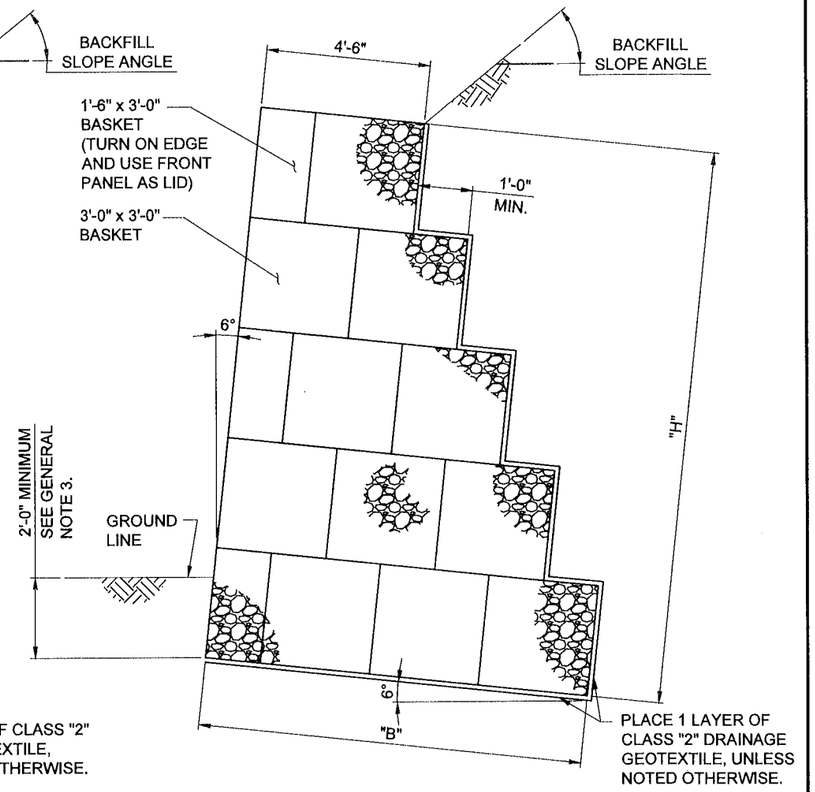
BACKFILL TABLE	
BACKFILL SLOPE ANGLE, β	FRICTION ANGLE OF BACKFILL, Φ'f
0°	30°
9.5°	30°
18.4°	30°
26.6°	33°

DESIGNED BY: EM DRAWN BY: TB CHECKED BY: VD

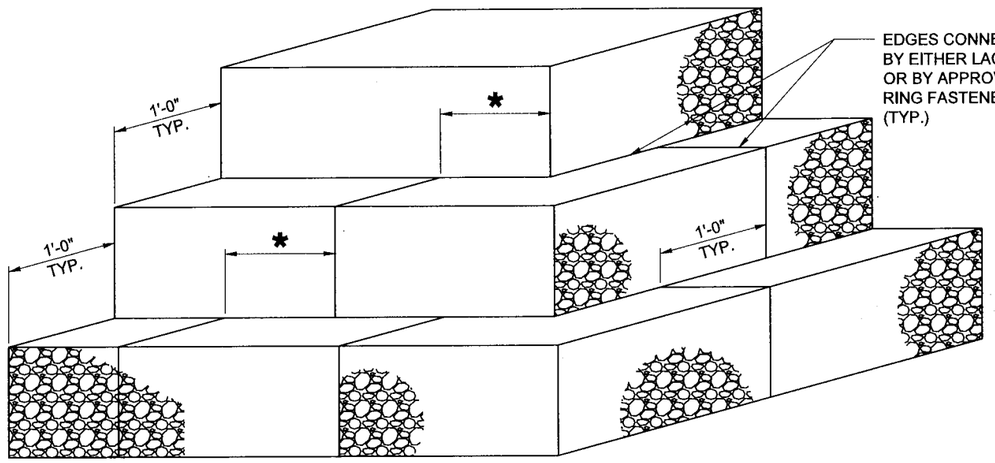
ELLIOT J. MONTGOMERY NEW MEXICO 23698 PROFESSIONAL ENGINEER



TYPICAL CROSS SECTION FOR TYPE "A" STANDARD RETAINING WALL



TYPICAL CROSS SECTION FOR TYPE "B" STANDARD RETAINING WALL



TYPICAL VIEW OF GABION RETAINING WALL

* NOTE: STAGGER JOINTS AT 3'-0"

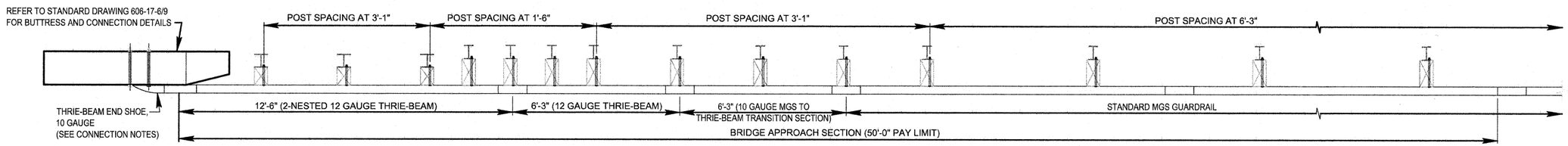
NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

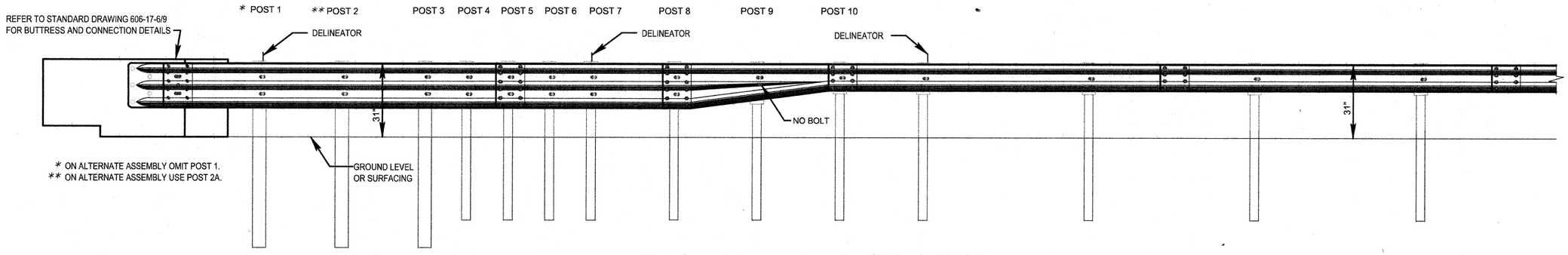
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

GABION RETAINING WALL DETAILS

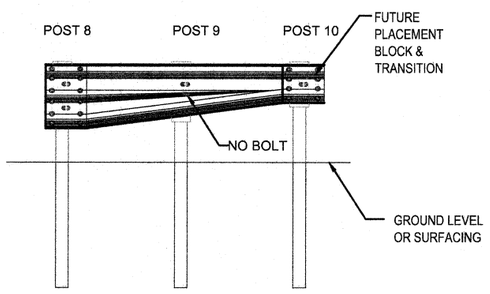
602-05-1/1 1 of 1



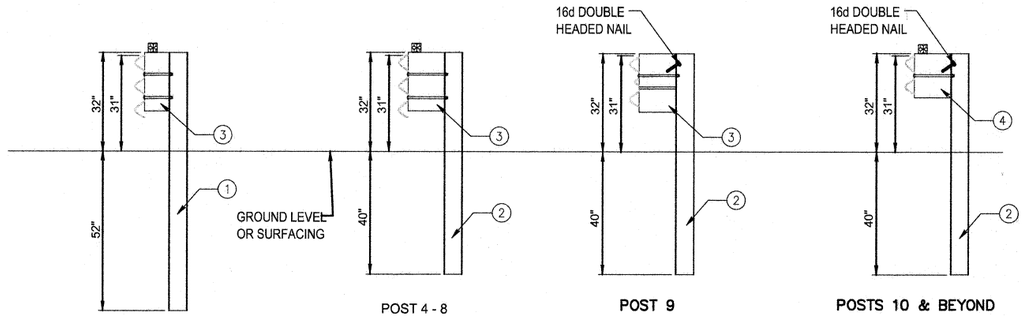
PLAN VIEW



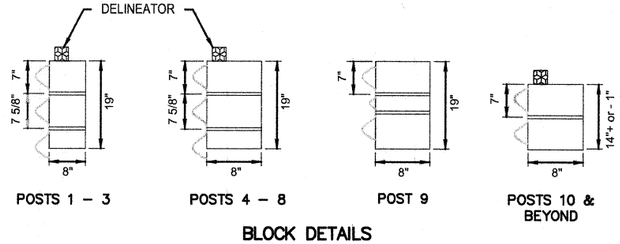
31" ELEVATION STANDARD INSTALLATION (ASYMMETRICAL SHAPE)



STANDARD 31" INSTALLATION USING
ASYMMETRICAL SHAPE TRANSITION



POSTS FOR ASYMMETRICAL SHAPE



BLOCK DETAILS

NOTES:

BUTTON HEAD BOLT 5/8" DIA. x LENGTH AS REQUIRED,
SECURED WITH HEX NUT.

ALL STEEL MEMBERS SHALL BE GALVANIZED IN ACCORDANCE
WITH THE STANDARD SPECIFICATIONS.

LEGEND:

① W6X15 - 7' LONG
② W6X8.5 - 6' LONG
③ 6" x 8" x 19" OFFSET BLOCK
④ 6" x 8" x 14" OFFSET BLOCK

CONNECTION NOTES:

FOR DIVIDED ROADWAY

INSTALL THRIE-BEAM END SHOE,
BETWEEN NESTED GUARDRAIL ELEMENTS.

TRAFFIC FLOW

FOR 2-LANE ROADWAY

FOR APPROACHING TRAFFIC
INSTALL THRIE-BEAM END SHOE,
BETWEEN NESTED GUARDRAIL ELEMENTS.

FOR DEPARTING TRAFFIC
INSTALL THRIE-BEAM END SHOE,
OUTSIDE OF THE NESTED GUARDRAIL ELEMENTS.

AFSHIN JIAN
NEW MEXICO
16226
7-13-21
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GUARDRAIL CONNECTION DETAILS

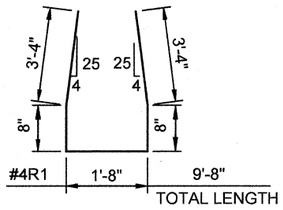
606-GR31-17/20

DESIGNED BY: TTSB

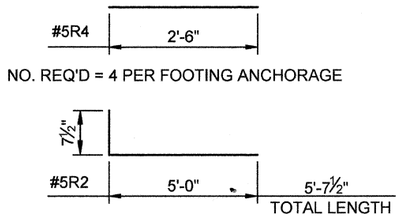
DRAWING SCALE: NTS

GENERAL NOTES:

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NEW MEXICO DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, (CURRENT EDITION) AND ALL APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
2. REINFORCING STIRRUP, R3 IS NOT REQUIRED FOR VERTICAL ROADWAY OFFSETS LESS THAN 1 FOOT, FOR OFFSETS LESS THAN 1 FOOT, WALL BARRIERS SHALL BE CAST MONOLITHIC.
3. CHAMFER ALL EXPOSED EDGES 3/4 INCH.
4. CONCRETE COVER FOR REINFORCING BARS SHALL BE A MINIMUM OF 2 INCHES CLEAR.
5. PROVIDE CRACK CONTROL JOINTS AT 15 FOOT INTERVALS. CRACK CONTROL JOINTS. SHALL BE MADE USING A CONSTRUCTION JOINT OR A SAW CUT JOINT.
6. ADDITIONAL STEEL REINFORCING REQUIRED BY THE CONTRACTOR FOR CONSTRUCTION OF THE CONCRETE BARRIER WALL SHALL BE INCIDENTAL TO THE UNIT PRICE FOR CONCRETE BARRIER WALL.
7. CONCRETE WALL BARRIER SHALL BE INSTALLED BY EITHER SLIP-FORMING OR CASTING-IN-PLACE. PRECAST SECTION INSTALLATION IS NOT PERMITTED.
8. 3/8" DIAMETER, ASTM A416 GRADE 270, AASHTO M 203M, UNCOATED SEVEN (7)-WIRE STRANDS MAY BE SUBSTITUTED FOR THE AASHTO M31, GRADE 60 DEFORMED BARS PROVIDED THAT THE STEEL STRANDS ARE UNCOATED, CLEAN AND FREE FROM DIRT, LOOSE RUST, OIL, GREASE OR OTHER DELETERIOUS MATERIAL, FOR SLIP-FORMED CWB.

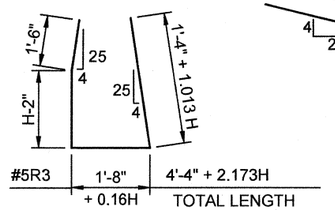


NO. REQ'D = 6 PER END ANCHORAGE
6 PER FOOTING ANCHORAGE
6 PER CONNECTON TO
CONCRETE WALL BARRIER END SECTION

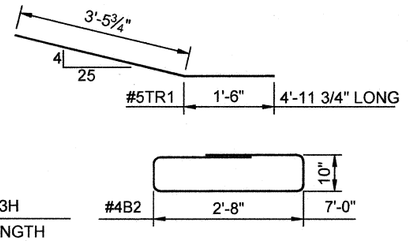


NO. REQ'D = 4 PER FOOTING ANCHORAGE

NO. REQ'D = 4 PER END ANCHORAGE
4 PER CONNECTION TO STRUCTURE

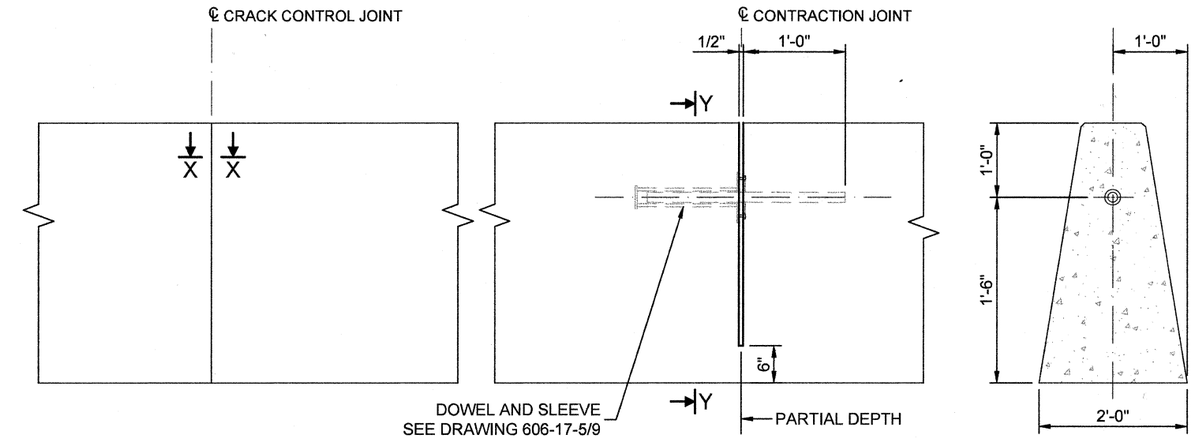


NO. REQ'D = 0.67 PER FOOT



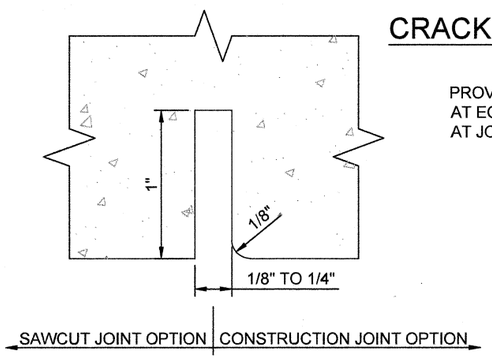
NO. REQ'D = 1 PER FOOT

REBAR SCHEDULE



ELEVATION

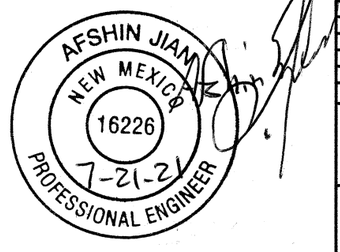
SECTION Y-Y



SECTION X-X

CRACK CONTROL AND CONTRACTION JOINT DETAILS

PROVIDE CONTRACTION JOINTS ON BRIDGE DECKS AT EQUALLY SPACED INTERVALS (15 FT. MAX) AND AT JOINT BETWEEN DECK AND APPROACH SLAB



NO.	DESCRIPTION	DATE	BY
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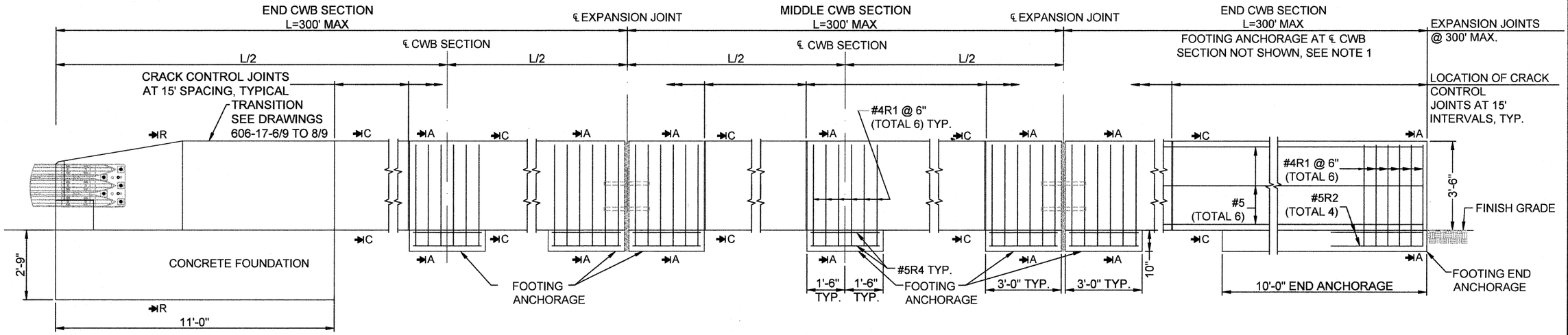
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE WALL BARRIER TYPE 42
GENERAL NOTES AND
REBAR SCHEDULE

606-17-1/9 1 OF 9

DESIGNED BY: Parametrix



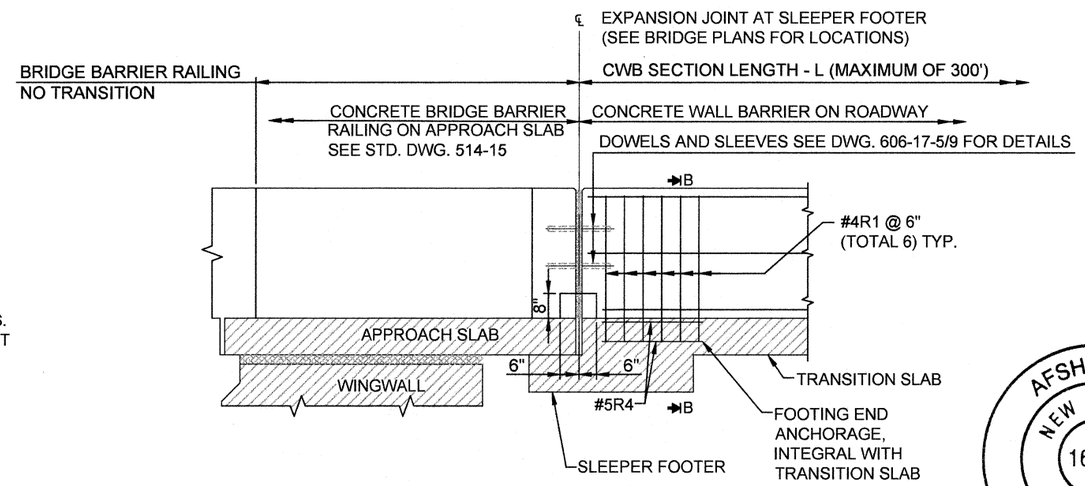
CWB END TRANSITION

TYPICAL LAYOUT & DETAIL OF FOOTING ANCHORAGE FOR CWB SECTIONS

END ANCHORAGE OF CWB END SECTIONS

GENERAL NOTES

1. CONCRETE WALL BARRIERS SHALL HAVE ANCHORS OR FOUNDATIONS AT ENDS AND INTERMEDIATE FOOTING ANCHORS AT THE CENTERLINE OF CWB SECTION AT A MAXIMUM SPACING OF L/2 OR 150' AS SHOWN. INTERMEDIATE FOOTING ANCHORS SHALL BE OMITTED WHEN THE SECTION L<150'.
2. IF CONCRETE WALL BARRIER IS LOCATED ON CONCRETE PAVEMENT, EXPANSION AND CRACK CONTROL JOINTS SHALL BE LOCATED AT THE CONCRETE PAVEMENT JOINTS. JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR 1/2 INCH MINIMUM.
3. HORIZONTAL BARS IN WALL BARRIER ARE NOT SHOWN FOR CLARITY.
4. SEE BRIDGE PLANS FOR SLEEPER AND TRANSITION SLAB DETAILS.



CONNECTION OF CWB TO BRIDGE BARRIER RAILING

BLOCKOUT RECESS AND COVER PLATE NOT SHOWN FOR CLARITY

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16226
7-21-21
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	BY
4			
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1			

REVISIONS (OR CHANGE NOTICES)

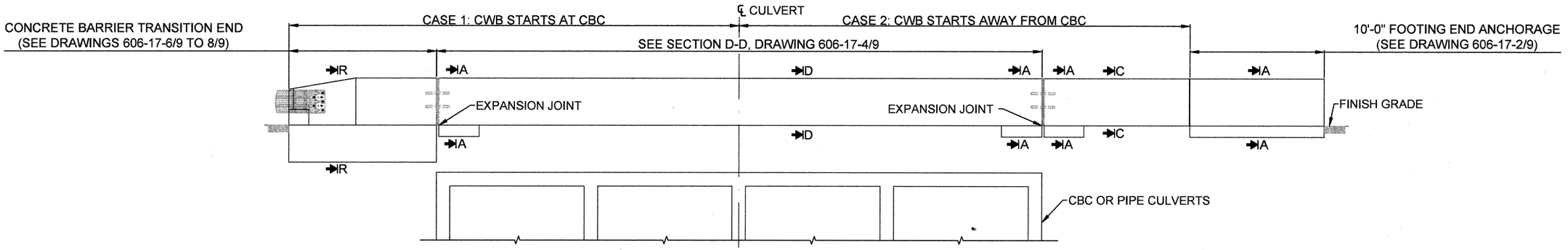
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE BARRIER WALL
TYPE 42

606-17-2/9

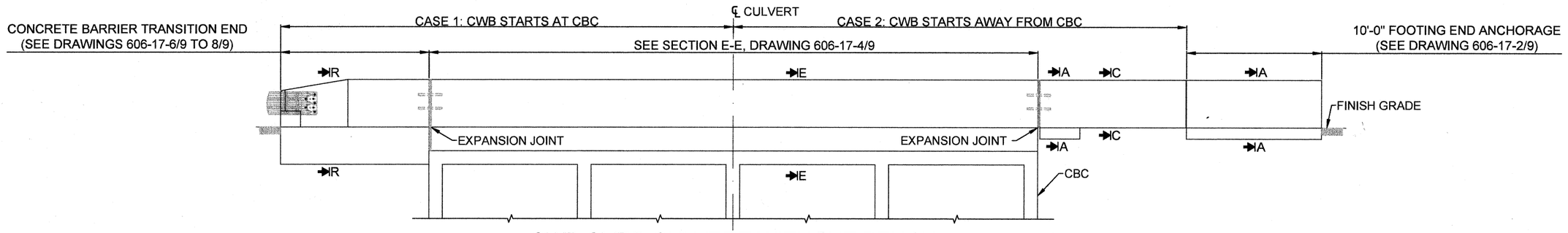
DESIGNED BY: Parametrix

DRAWING SCALE: NTS



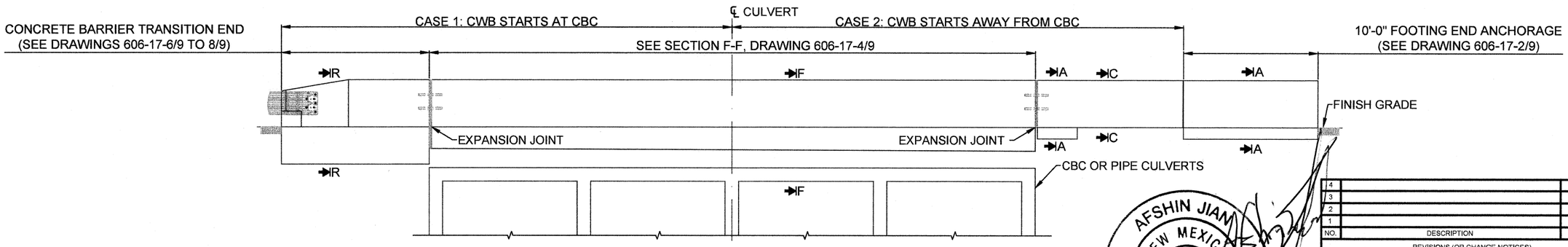
CWB OVER CULVERT WITH BENCH
ANY FILL HEIGHT

SEE DRAWING 606-17-4/9, SECTION D-D FOR BENCH DETAIL



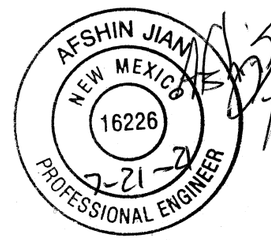
CWB OVER CULVERT WITHOUT BENCH
0' TO 1'-9" FILL

NOTE: SECTION E-E APPLIES ACROSS THE ENTIRE CBC



CWB OVER CULVERT WITHOUT BENCH
1'-9" TO 3'-0" FILL

NOTE: SECTION F-F APPLIES ACROSS THE ENTIRE CBC



NO.	DESCRIPTION	DATE	BY
4			
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REVISIONS (OR CHANGE NOTICES)

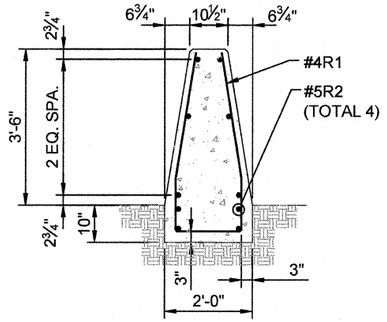
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE BARRIER WALL
TYPE 42
OVER CULVERT

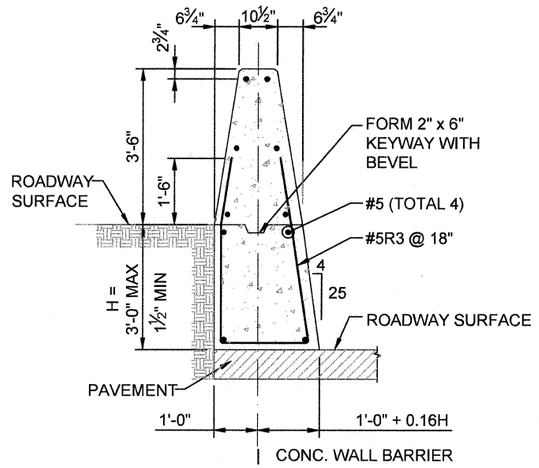
606-17-3/9 3 OF 9

DESIGNED BY: Parametrix

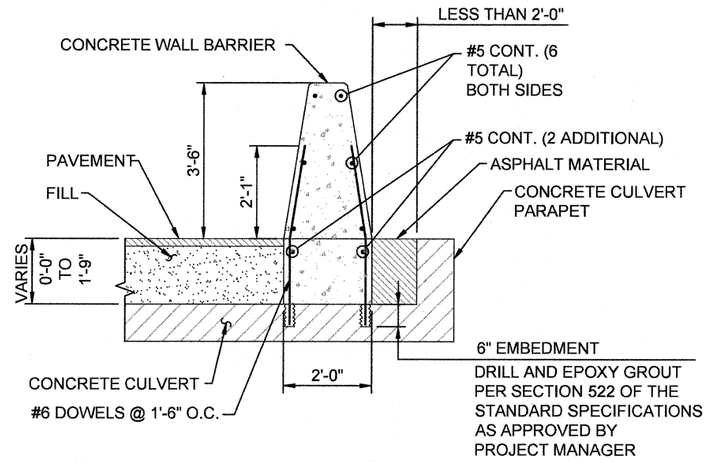
DRAWING SCALE: NTS



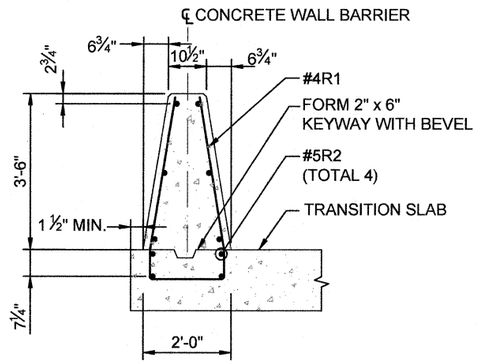
SECTION A-A



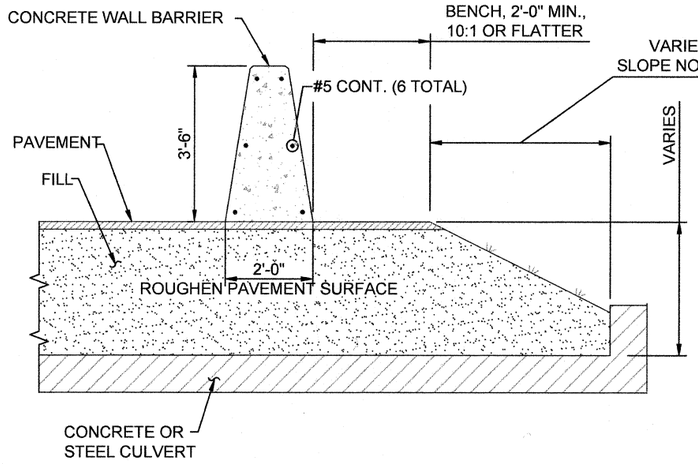
TYPICAL SECTION FOR VERTICAL ROADWAY OFFSETS



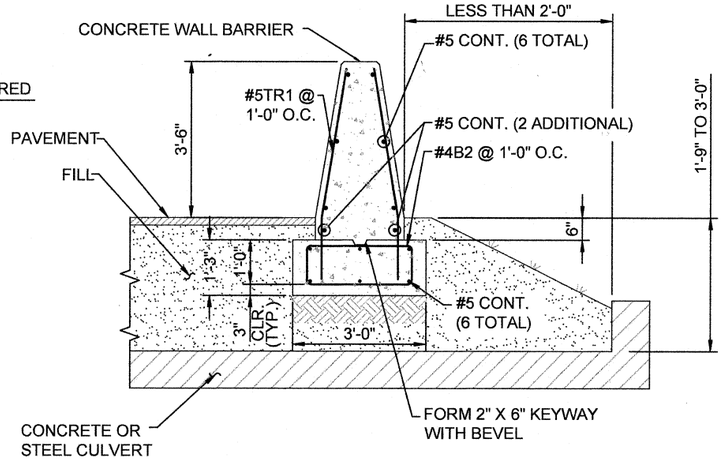
SECTION E-E CWB OVER CBC WITHOUT BENCH FOR 0'-0" TO 1'-9" FILL



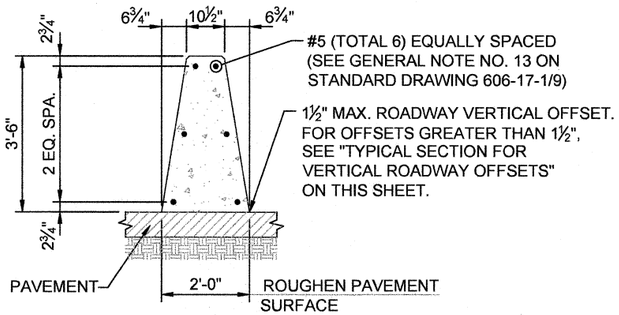
SECTION B-B



SECTION D-D CWB OVER CULVERT WITH BENCH FOR ANY FILL HEIGHT



SECTION F-F CWB OVER CBC WITHOUT BENCH FOR 1'-9" TO 3'-0" FILL



SECTION C-C
(TYPICAL SECTION)

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

AFSHIN JIAN
NEW MEXICO
16226
1-21-22
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	BY
4			
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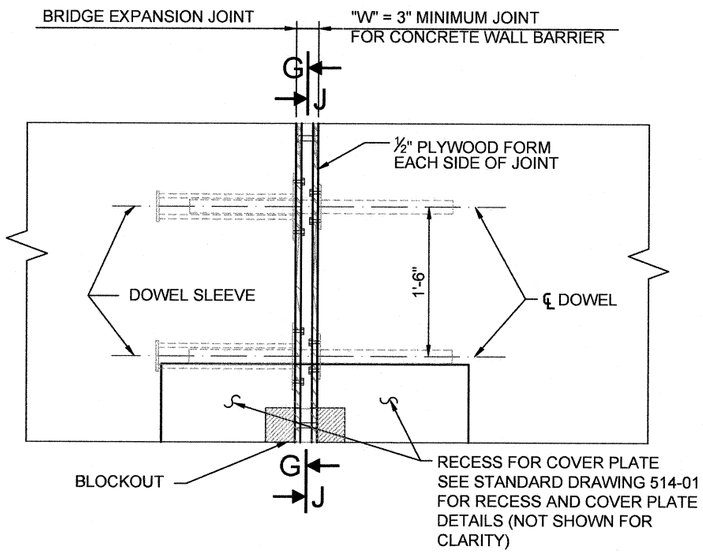
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

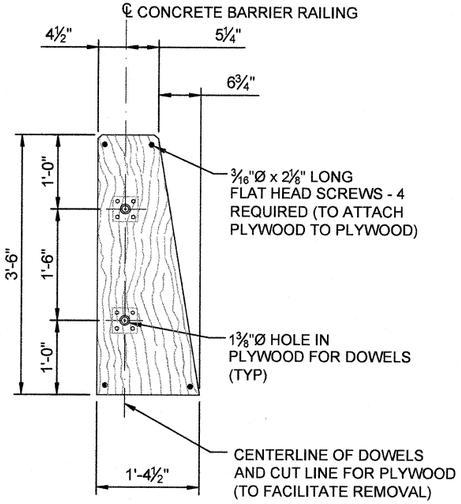
CONCRETE WALL BARRIER
TYPE 42
SECTIONS

606-17-4/9 4 OF 9

DESIGNED BY: Parametrix

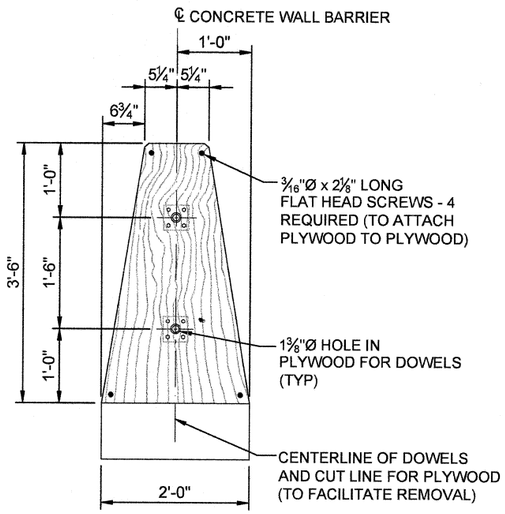


ASSEMBLY DETAIL



SECTION G-G

BRIDGE BARRIER RAILING

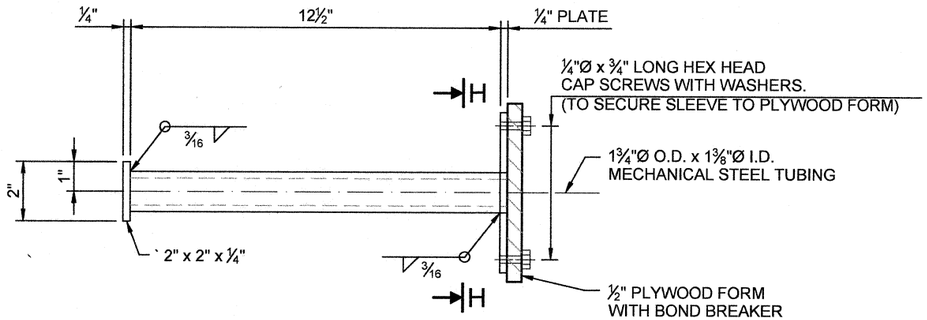


SECTION J-J

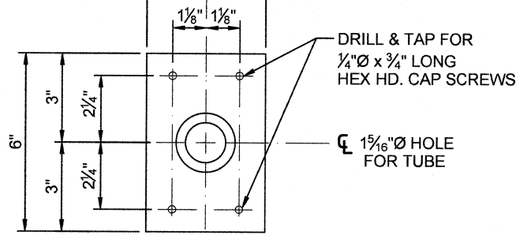
CONCRETE WALL BARRIER

GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NEW MEXICO DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, (CURRENT EDITION) AND ALL APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
2. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270, GRADE 50 UNLESS OTHERWISE NOTED ON THE DETAILS, AND SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 545 OF THE STANDARD SPECIFICATIONS.
3. THE SLEEVE ASSEMBLY SHALL BE SET PARALLEL TO THE ROADWAY GRADE AND THE OUTSIDE FACE OF THE CONCRETE WALL BARRIER.
4. PLYWOOD FORMS AND STYROFOAM FILLER SHALL BE CUT TO THE CROSS SECTION OF THE CONCRETE WALL BARRIER. PLYWOOD FORMS SHALL BE COATED WITH AN APPROVED BOND-BREAKER.
5. AFTER CONCRETE HAS TAKEN INITIAL SET, REMOVE STYROFOAM FILLER AND PLYWOOD FORMING FROM THE JOINT.
6. FOR MOVEMENT LENGTHS IN EXCESS OF 300 FEET, INCREASE JOINT OPENING ("W") AS REQUIRED.
7. THE COST OF ALL MATERIALS AND INSTALLATION FOR THE JOINTS SHALL BE CONSIDERED INCIDENTAL TO THE COST TO THE CONCRETE WALL BARRIER. NO DIRECT PAYMENT WILL BE MADE.
8. HOT-DIP GALVANIZE DOWEL AND DOWEL SLEEVE ASSEMBLY.

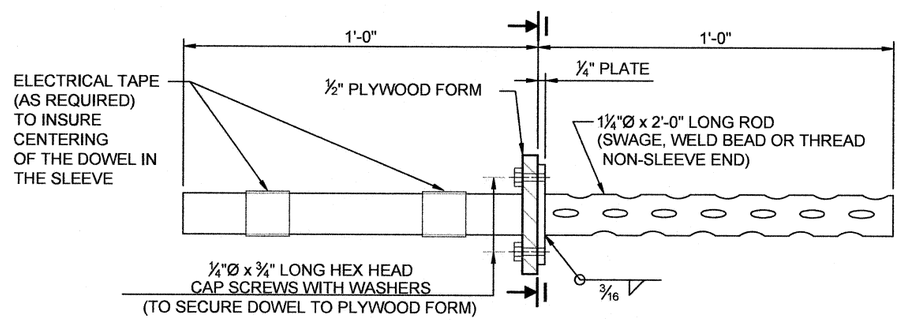


DOWEL SLEEVE DETAIL

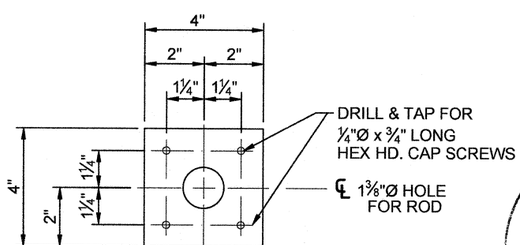


SECTION H-H

1/4 IN. THICK PLATE

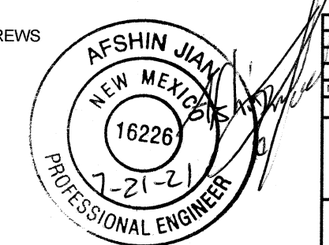


DOWEL DETAIL



SECTION I-I

1/4 IN. THICK PLATE



THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DESCRIPTION	DATE	BY
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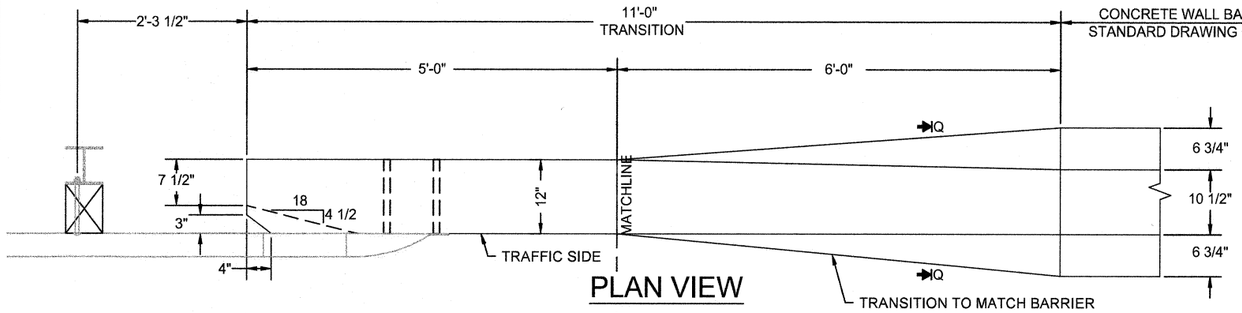
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

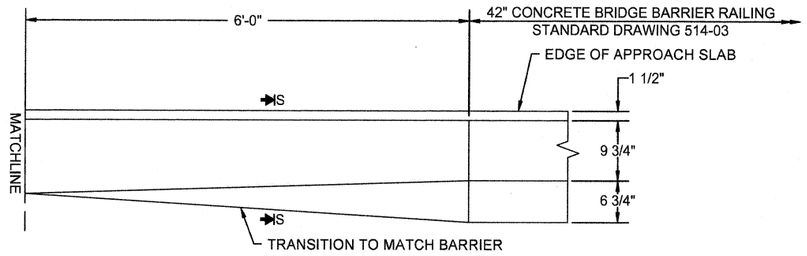
42" DOWEL ASSEMBLY FOR EXPANSION JOINTS IN CONCRETE WALL BARRIER AND CONCRETE BARRIER RAILING

606-17-5/9

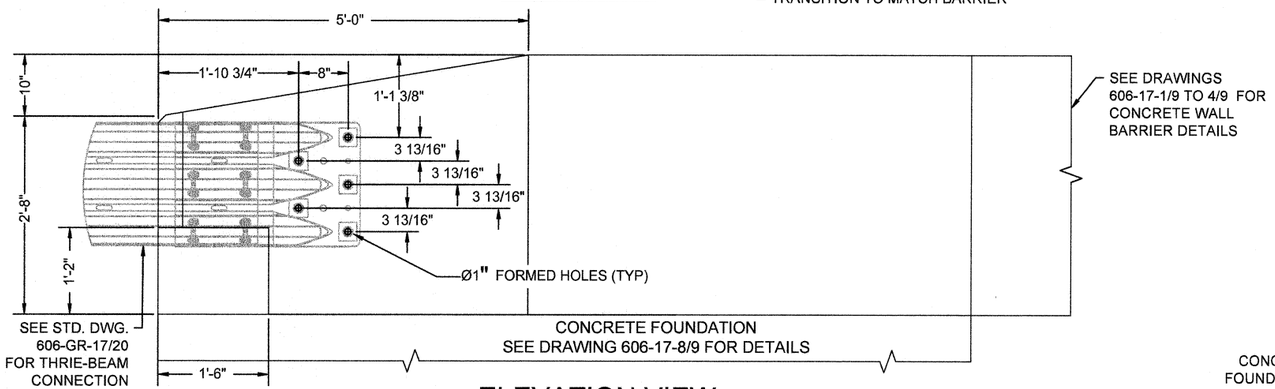
DESIGNED BY: NMDOT



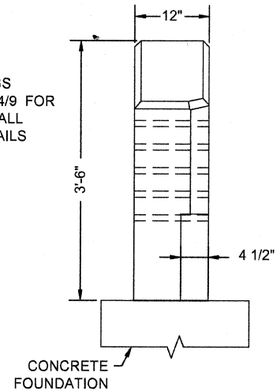
PLAN VIEW



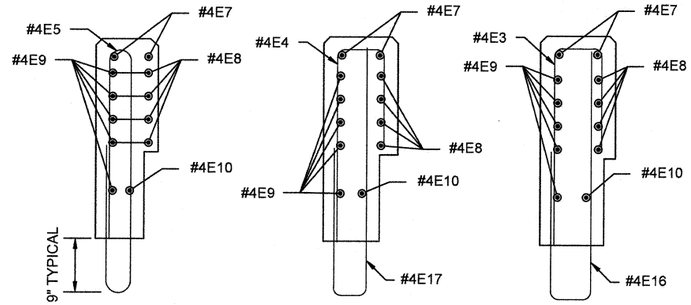
PLAN VIEW DETAIL - BRIDGE BARRIER TRANSITION



ELEVATION VIEW



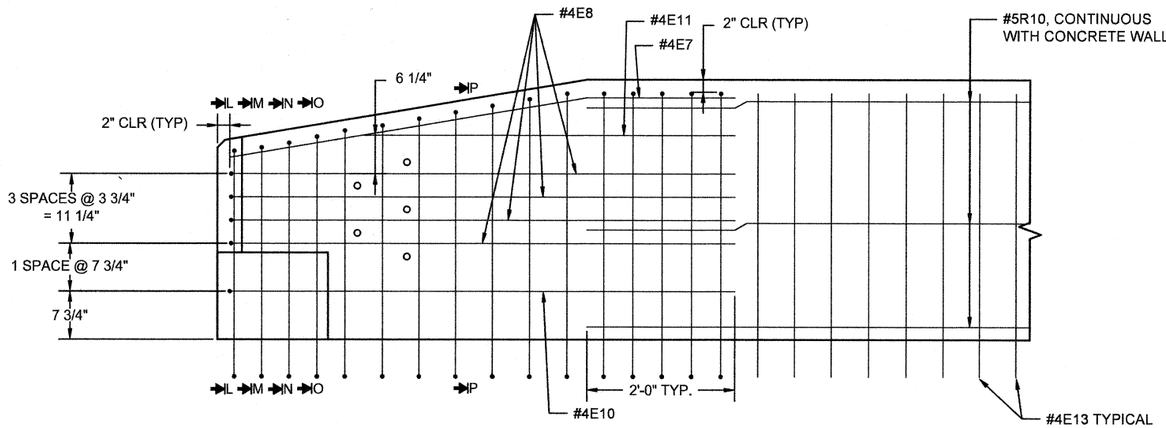
PROFILE VIEW



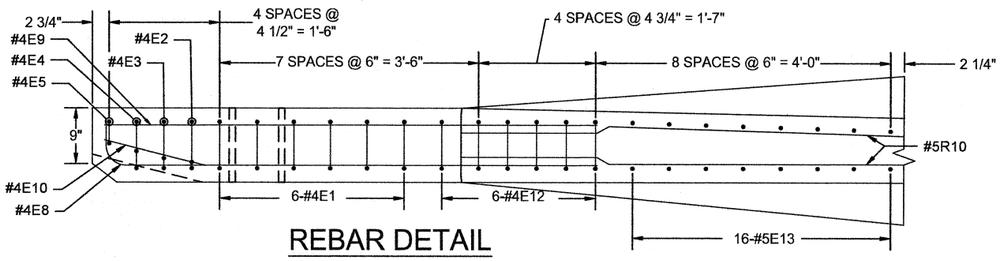
SECTION L-L

SECTION M-M

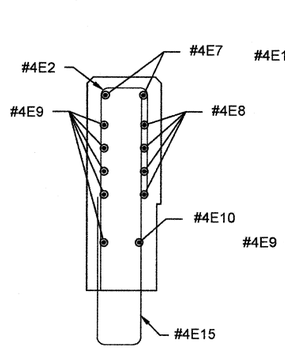
SECTION N-N



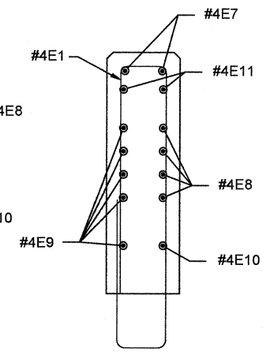
REBAR DETAIL



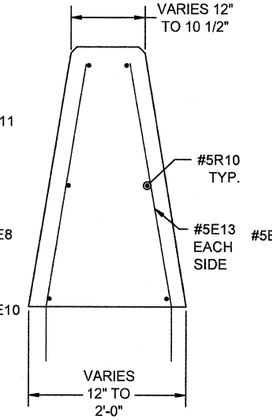
REBAR DETAIL



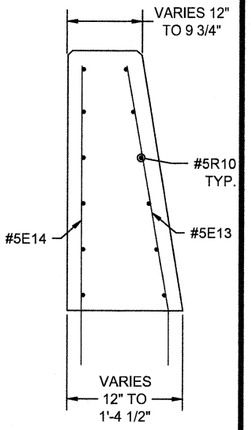
SECTION O-O



SECTION P-P



SECTION Q-Q



SECTION S-S

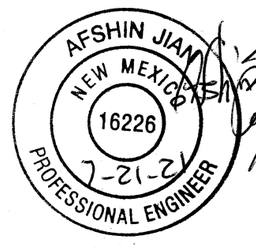
GENERAL NOTES:

1. CONCRETE SHALL BE CLASS AA (4,000 PSI MINIMUM).

2. CHAMFER EXPOSED EDGES 3/4" UNLESS NOTED OTHERWISE.

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

DRAWING SCALE: NTS



NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

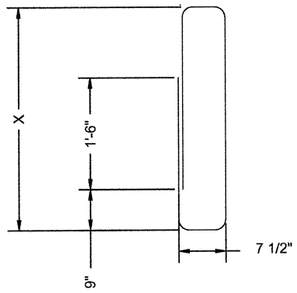
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE BARRIER WALL
TYPE 42
TRANSITION DETAILS

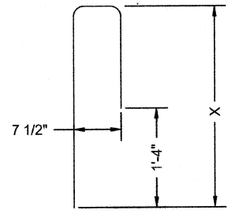
606-17-6/9

6 OF 9

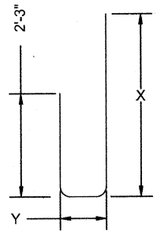
DESIGNED BY: Parametrix



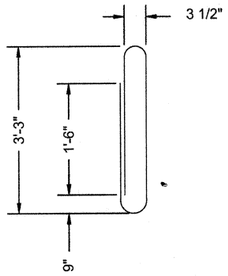
BAR E1, E12



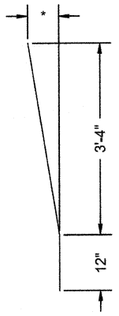
BARS E2, E3, E4



BARS E15, E16, E17

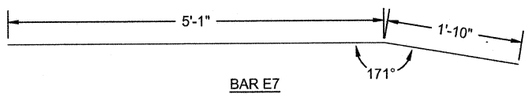


BAR E5

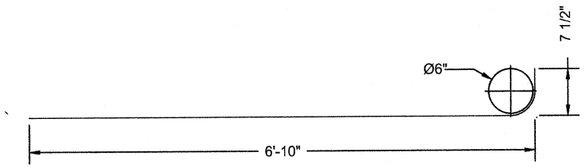


BAR E13

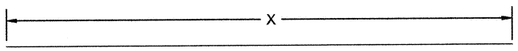
* = VARIES FROM 3 1/4" TO 6 3/4" IN 7 EQUAL INCREMENTS



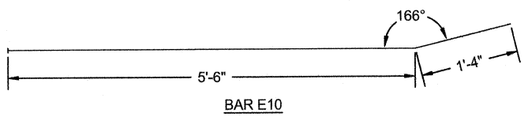
BAR E7



BAR E8



BAR E9, E11, E14



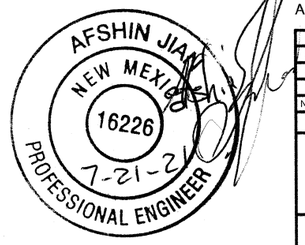
BAR E10

REINFORCING BAR LIST

BAR I.D.	SIZE	X	Y	LENGTH	NO. REQ'D
E1	#4	VARIES FROM 3'-6 1/2" TO 4'-0" IN (6) 1" INCREMENTS	--	VARIES FROM 9'-10" TO 10'-9"	6
E2	#4	2'-8 1/2"	--	4'-8 1/2"	1
E3	#4	2'-7 3/4"	--	4'-7"	1
E4	#4	2'-7"	--	4'-5 1/2"	1
E5	#4	--	--	8'-7"	1
E7	#4	--	--	6'-11"	2
E8	#4	--	--	7'-5 1/2"	4
E9	#4	6'-10"	--	6'-10"	5
E10	#4	6'-10"	--	6'-10"	1
E11	#4	5'-5"	--	5'-5"	2
E12	#4	4'-1"	--	10'-11"	6
E13	#5	--	--	4'-4 1/2"	16 OR 8**
E14	#5	4'-4"	--	4'-4"	8**
E15	#4	3'-4"	6 1/2"	6'-1 1/2"	1
E16	#4	3'-4"	5 7/8"	6'-0 7/8"	1
E17	#4	3'-4"	4 3/4"	5'-11 3/4"	1
R10	#5	--	--	CONTINUE INTO CWB	6 OR 12**

** FOR TRANSITION TO BRIDGE BARRIER RAILING ONLY

REBAR SCHEDULE



NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

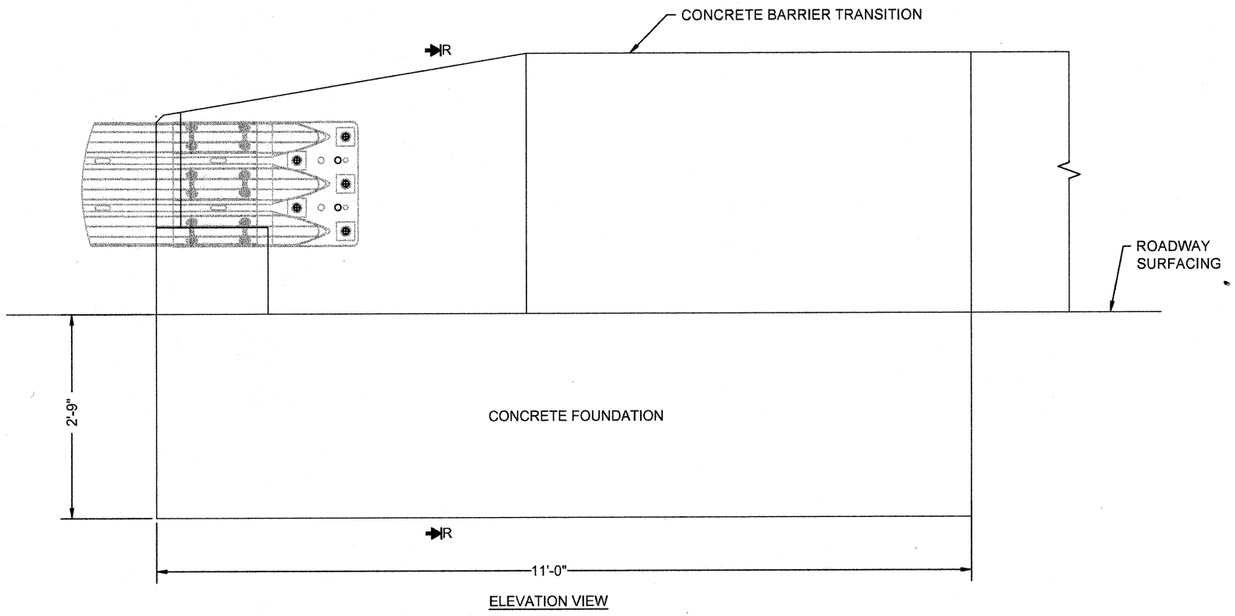
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE BARRIER WALL
TYPE 42
TRANSITION DETAILS

606-17-7/9 7 OF 9

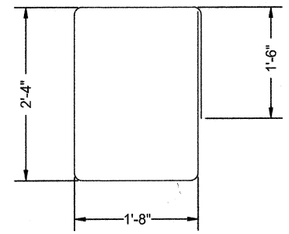
DESIGNED BY: Parametrix

DRAWING SCALE: NTS

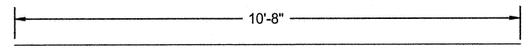


ELEVATION VIEW

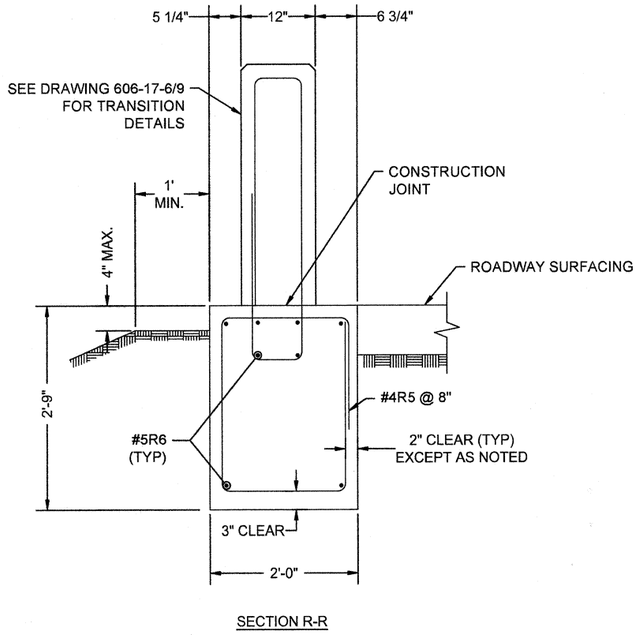
REINFORCING BAR LIST			
BAR I.D.	SIZE	LENGTH	NO. REQ'D
R5	#4	9'-6"	17
R6	#5	10'-8"	8



BAR R5



BAR R6



SECTION R-R

GENERAL NOTES:

1. CONCRETE SHALL BE CLASS AA (4,000 PSI MINIMUM).

2. CHAMFER EXPOSED EDGES 3/4" UNLESS NOTED OTHERWISE.

FOUNDATION DESIGN DATA:

DESIGN ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFCATIONS, 8TH EDITION, 2017.

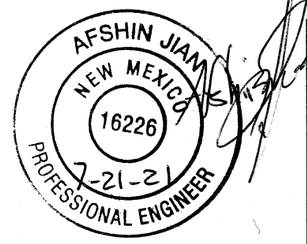
TL-3 DESIGN FORCE, EQUIVALENT HORIZONTAL STATIC LOAD = 10 KIPS ASSUMED

HORIZONTAL EARTH PRESSURE = 36 LBS./CU. FT. EQUIVALENT FLUID PRESSURE

UNIT WEIGHT OF BACKFILL = 120 LBS./CU. FT

UNIT WEIGHT OF CONCRETE = 145 LBS./CU. FT.

ANGLE OF INTERNAL FRICTION OF SOIL = 29°



NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

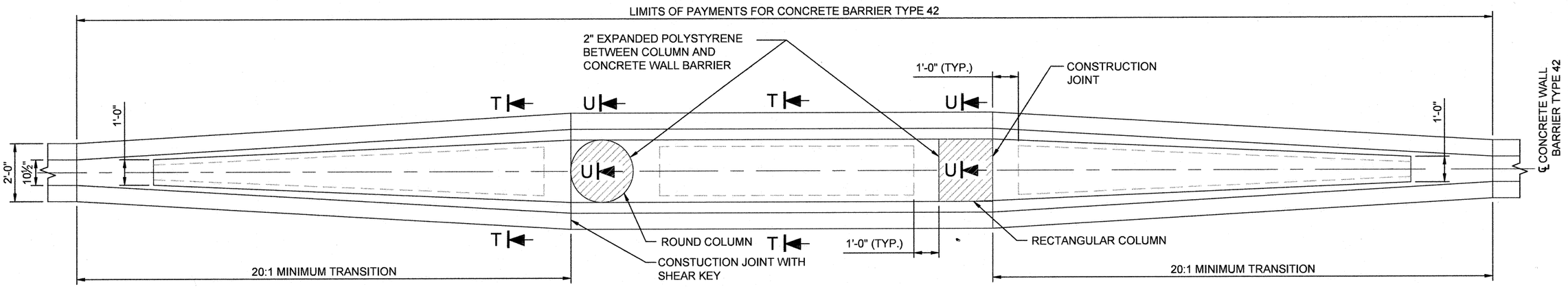
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE BARRIER WALL TYPE 42 TRANSITION DETAILS

606-17-8/9

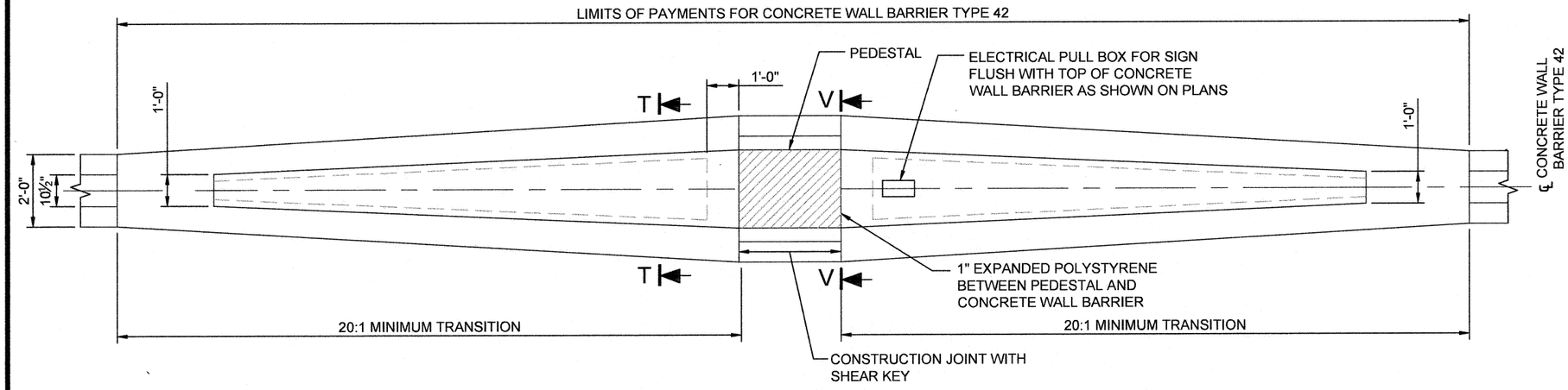
DESIGNED BY: Parametrix

DRAWING SCALE: NTS



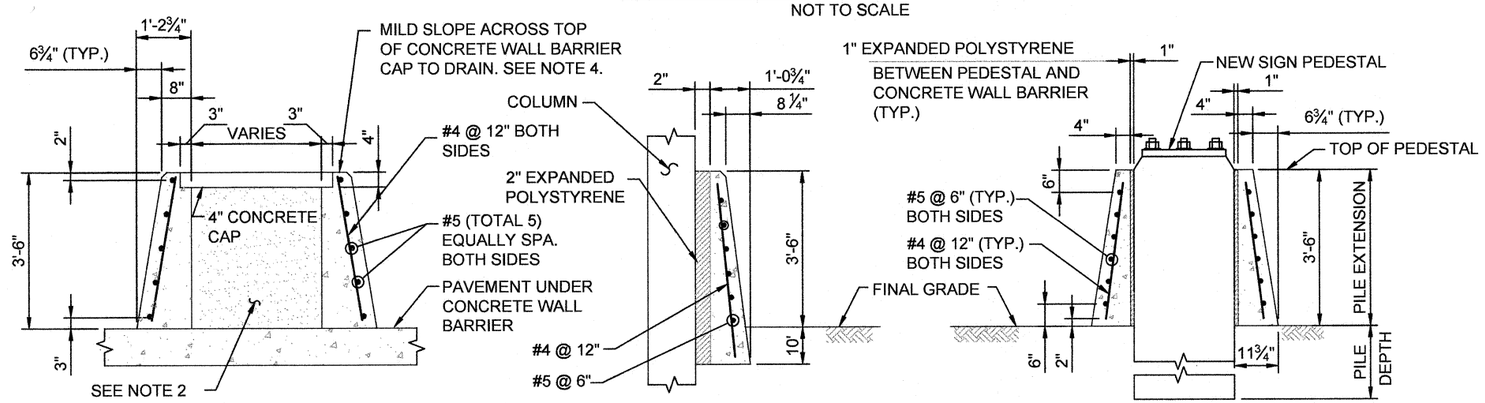
TRANSITION AT BRIDGE COLUMNS

NOT TO SCALE



TRANSITION AT SIGN PEDESTAL

NOT TO SCALE



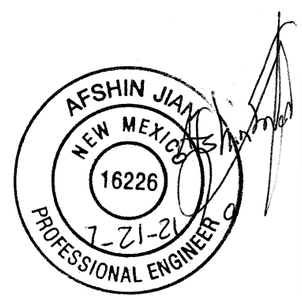
SECTION T-T
NOT TO SCALE

SECTION U-U
NOT TO SCALE

SECTION V-V
NOT TO SCALE

GENERAL NOTES:

1. SEE STANDARD PLAN FOR CONCRETE WALL BARRIER TYPE 42.
2. PLACE GRANULAR MATERIAL FROM BASE TO BOTTOM OF 4 INCH CAP.
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE WALL BARRIER ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE WALL BARRIER CAP.
5. CHAMFER ALL EXPOSED EDGES 3/4 INCHES.
6. CONCRETE COVER FOR REINFORCING BARS SHALL BE A MINIMUM OF 2 INCHES CLEAR.
7. CONCRETE WALL BARRIER TYPE 42 AT COLUMN AND SIGN PEDESTALS SHALL BE PAID PER LINEAR FOOT PER COMPLETE INSTALLATION, WHICH INCLUDES BOTH SIDES OF THE OBSTRUCTION.



NO.	DESCRIPTION	DATE	BY
4			
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REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONCRETE WALL BARRIER
TYPE 42 AT COLUMN AND
SIGN PEDESTALS

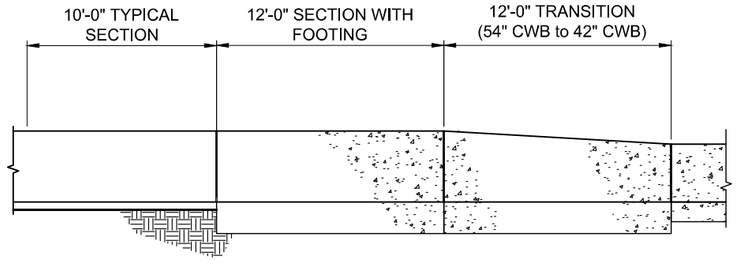
606-17-9/9 9 OF 9

DESIGNED BY: NMDOT

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. ALL ASSOCIATED WORK PAID FOR UNDER BID ITEM NO. 606554 - CONCRETE WALL BARRIER 54".
3. FOR CONNECTION DETAILS OF METAL GUARDRAIL TO 42" CWB, SEE NMDOT STANDARD DRAWING 606-17.
4. PROVIDE CONTROL JOINTS AT 15 FOOT MAXIMUM INTERVALS. CONTROL JOINTS SHALL BE MADE USING A CONSTRUCTION JOINT OR A SAW CUT JOINT.
5. THIS STANDARD DRAWING SHALL ONLY BE APPLICABLE FOR CONCRETE WALL BARRIER LENGTH OF 300' OR LESS.
6. PLACEMENT OF THE 54" BARRIER RAIL SHALL BE DIMENSIONED IN THE CONTRACT DOCUMENTS. THE FOLLOWING MUST BE TAKEN INTO ACCOUNT: THE DIMENSION FROM THE TOPMOST SURFACE OF THE IMPACT-SIDE OF THE BARRIER TO PROTECTED ELEMENT MUST BE A MINIMUM OF 14" TO ALLOW FOR LATERAL INTRUSION OF THE IMPACTING VEHICLE'S TRAILER.

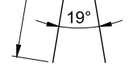
54" CWB AND TRANSITION SECTION REINFORCEMENT SCHEDULE					
MARK	SIZE	TYPE	LENGTH	No. REQ:D	REMARKS
54" CONCRETE WALL BARRIER (12' SECTION WITH FOOTING, BOTH SIDES)					
#5H1	#5	1	23'-6"	26	REBAR CONTINUES INTO TYPICAL SECTION
#5H3	#5	1	5'-0"	13	
54" CONCRETE WALL BARRIER (TYPICAL 10' SECTION)					
#5H1	#5	1	*	26	* TOTAL LENGTH OF TYPICAL SECTION
#6H2	#6	1	23'-8"	28	
#5V1	#5	2	8'-6"	1	a = 48 1/2"
#5V2	#5	2	12'-5"	28	a = 72 1/2"
#6V3	#6	3	11'-6"	56	a = 44"; b = 19"
#8P2	#8	1	1'-6"	7	
TRANSITION SECTION 42" CWB TO 54" CWB					
#5H4	#5	1	14'-6"	10	
#5H5	#5	1	7'-2"	2	
#5H7	#5	4	22'-6"	1	a = 20'-0"; b = 2'-6"
#5V4	#5	2	10'-6 1/2"	1	a = 4'-9"
#5V5	#5	2	10'-7 1/8"	1	a = 4'-9 3/8"
#5V6	#5	2	10'-7 3/4"	1	a = 4'-9 7/8"
#5V7	#5	2	10'-8 3/8"	1	a = 4'-10 1/4"
#5V8	#5	2	10'-9 3/8"	1	a = 4'-11"
#5V9	#5	2	10'-10 3/8"	1	a = 4'-11 7/8"
#5V10	#5	2	10'-11 1/4"	1	a = 5'-0 1/4"
#5V11	#5	2	11'-0 1/4"	1	a = 5'-0 7/8"
#5V12	#5	2	11'-1 1/8"	1	a = 5'-1 1/2"
#5V13	#5	2	11'-3 1/8"	1	a = 5'-2 7/8"
#5V14	#5	2	11'-5"	1	a = 5'-4 1/4"
#5V15	#5	2	11'-8 7/8"	1	a = 5'-6 7/8"
#5V16	#5	2	12'-0 1/2"	1	a = 5'-9 1/2"
#5V17	#5	2	12'-4 1/2"	1	a = 6'-0 1/8"
#5H8	#5	1	6'-0"	8	



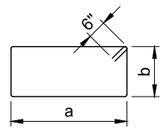
REINFORCING SCHEDULE LEGEND

BAR BENDING DIAGRAM

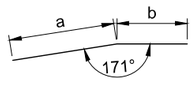
TYPE 1



TYPE 2



TYPE 3



TYPE 4

NOTE: BAR BEND RADIUS SHALL BE PER CRSI STANDARD BEND RADIUS

DESIGN DATA

CONCRETE: CLASS AA - 4,000 PSI @ 28 DAYS

REINFORCEMENT: GRADE 60 - f_y = 60 ksi

NO.	DATE	BY	DESCRIPTION

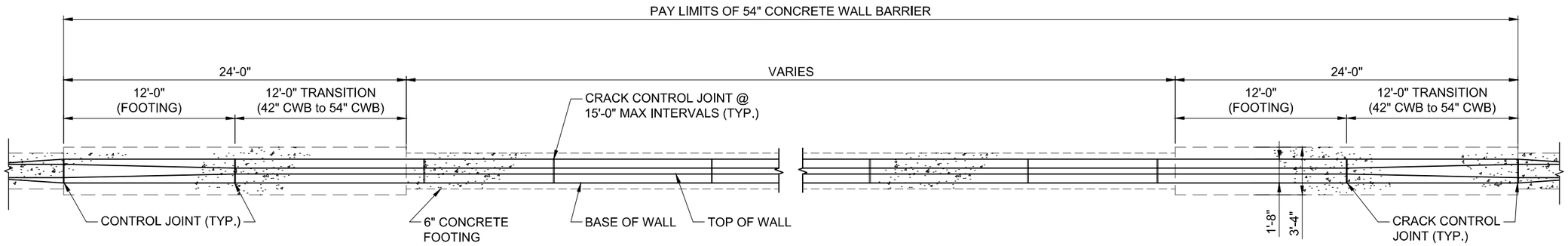
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

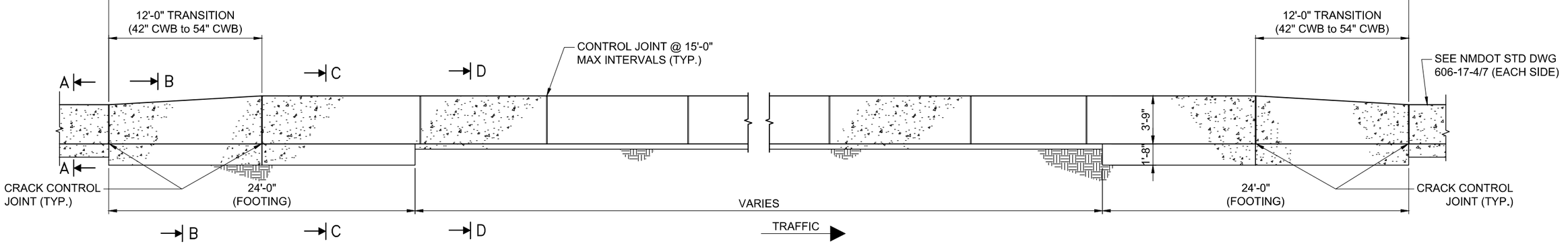
54" CONCRETE WALL BARRIER AND TRANSITION TO 42" GENERAL NOTES AND REINFORCING SCHEDULE

606-19-1/4

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC



PLAN



ELEVATION

NOTES:

1. CONTRACT DOCUMENTS SHALL INCLUDE TOTAL LENGTH OF 54" CONCRETE WALL BARRIER, INCLUDING LENGTH OF REQUIRED TRANSITION SECTION.
2. TRANSITION AND 42" GUARDRAIL SECTION AT DEPARTURE SHALL ONLY BE REQUIRED WHEN SHOWN ON CONTRACT DOCUMENTS.

NO.	DATE	BY	DESCRIPTION

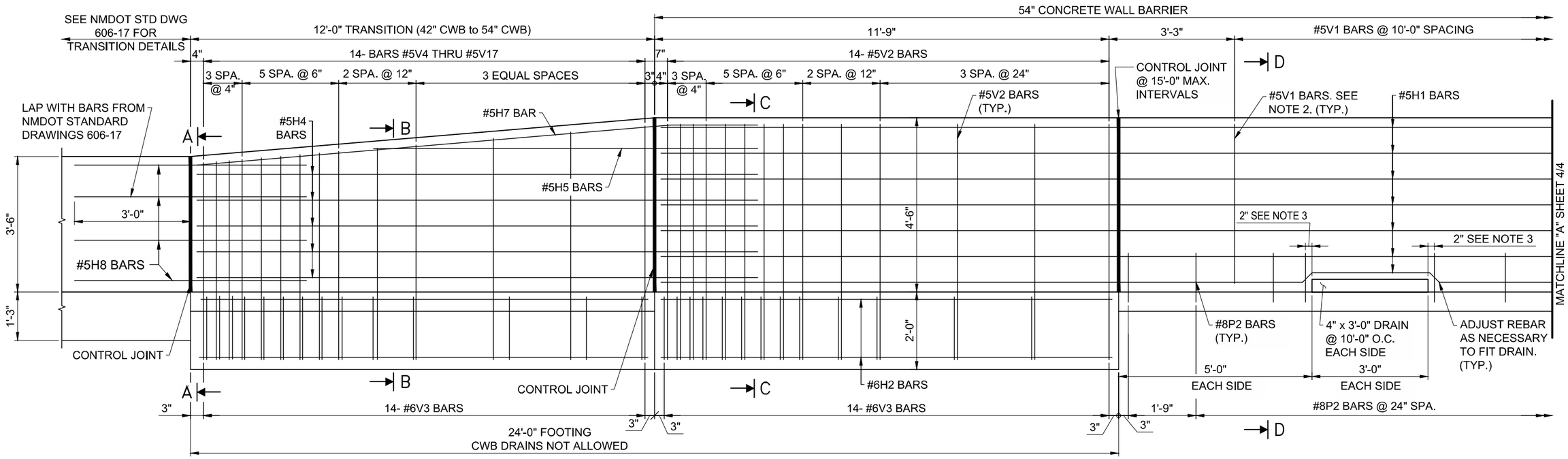
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

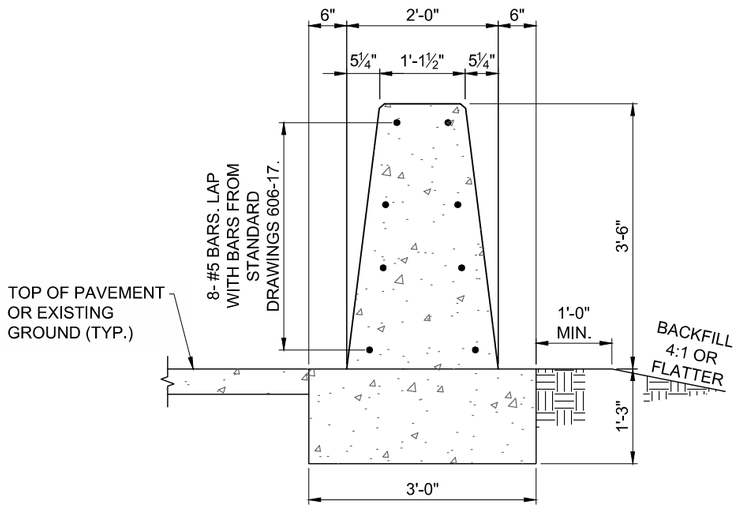
54" CONCRETE WALL BARRIER AND TRANSITION TO 42" PLAN & ELEVATION

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

606-19-2/4

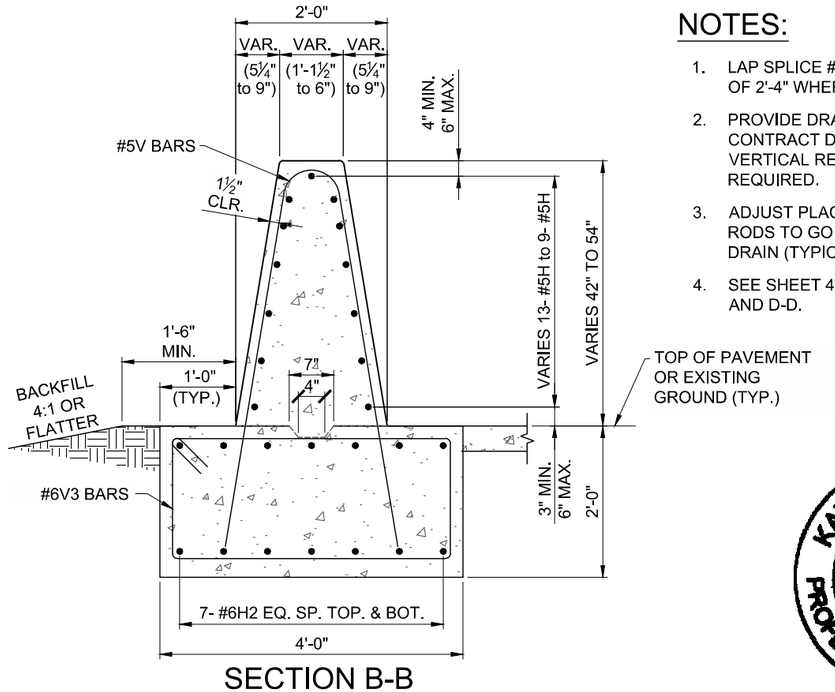


ELEVATION - TRANSITION 42" CWB TO 54" CWB



SECTION A-A

SEE NMDOT STD. DWG 606-17 FOR DETAILS AND REINFORCEMENT



SECTION B-B

NOTES:

1. LAP SPLICE #5H BARS A MINIMUM OF 2'-4" WHERE NECESSARY.
2. PROVIDE DRAINS AS SHOWN IN CONTRACT DOCUMENTS. ADJUST VERTICAL REINFORCING AS REQUIRED.
3. ADJUST PLACEMENT OF DOWEL RODS TO GO ON EACH SIDE OF DRAIN (TYPICAL).
4. SEE SHEET 4/4 FOR SECTIONS C-C AND D-D.

KATHY CROWELL NEW MEXICO 22934 PROFESSIONAL ENGINEER 6/21/21

NO.	DATE	BY	DESCRIPTION

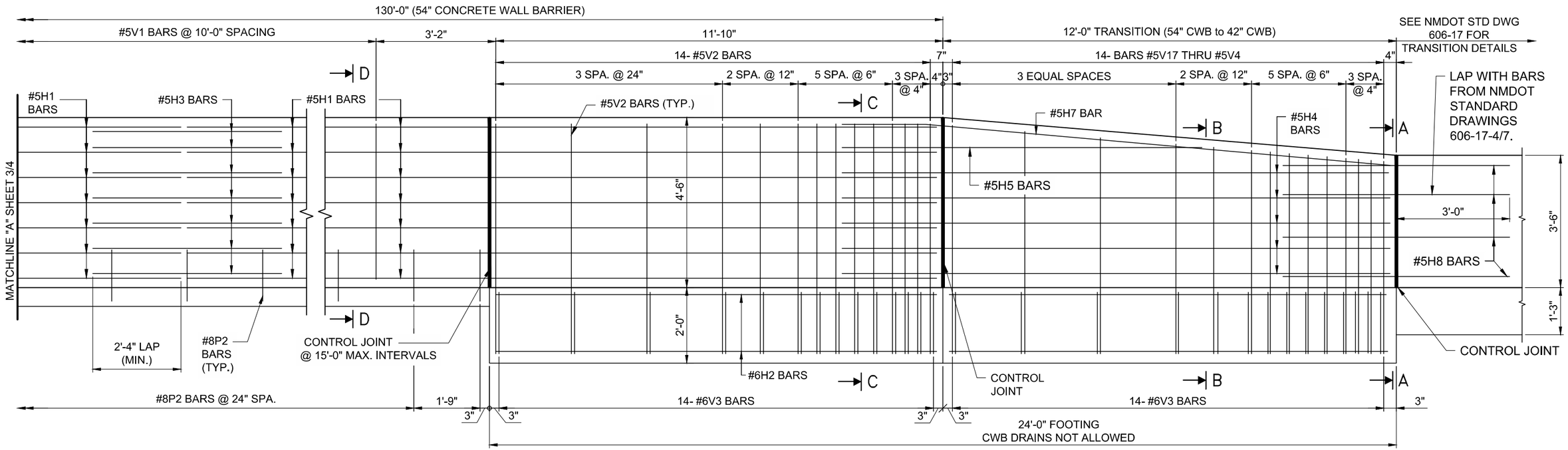
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

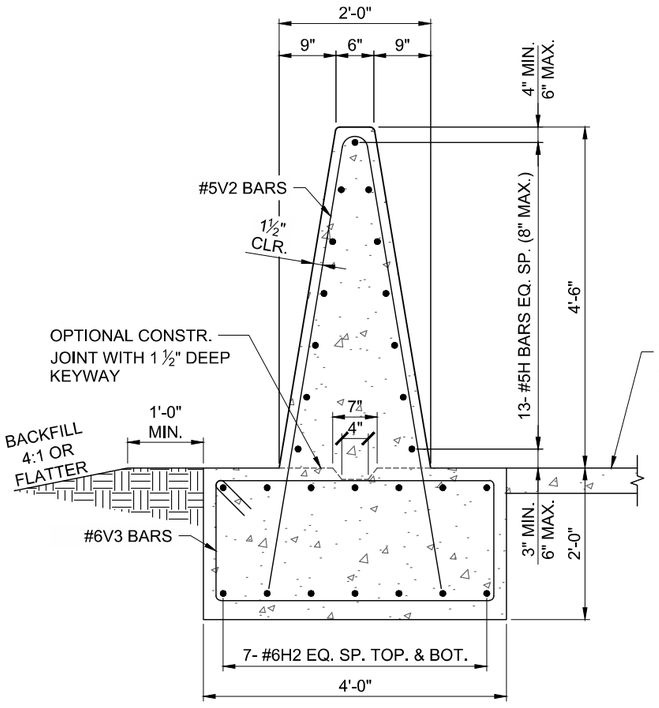
54" CONCRETE WALL BARRIER AND TRANSITION TO 42" ELEVATION AND SECTION

606-19-3/4

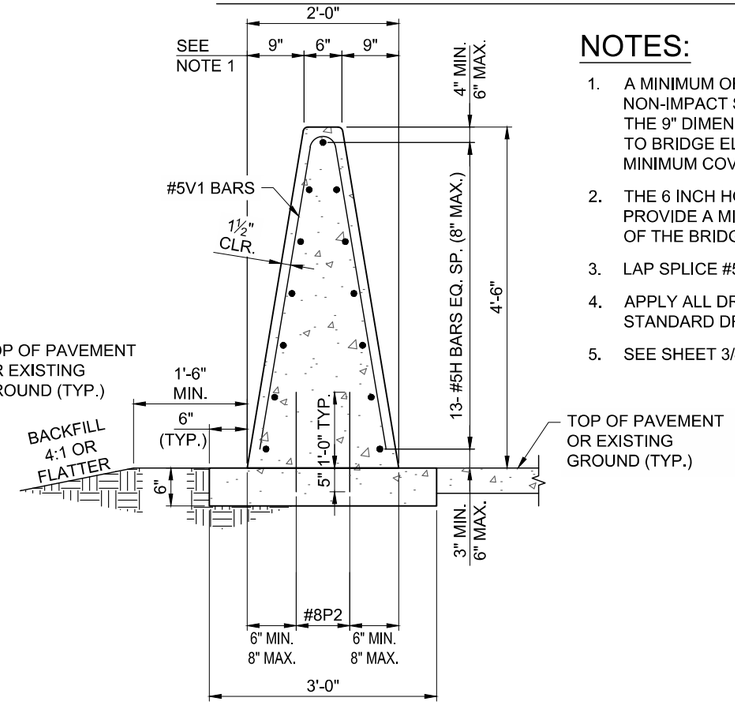
DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC



ELEVATION - TRANSITION 54" CWB TO 42" CWB



SECTION C-C



SECTION D-D

NOTES:

1. A MINIMUM OF 2" CLEARANCE IS REQUIRED BETWEEN THE NON-IMPACT SIDE OF THE CWB AND THE PROTECTED ELEMENT. THE 9" DIMENSION MAY BE REDUCED TO 7" DIRECTLY ADJACENT TO BRIDGE ELEMENT. ADJUST REINFORCEMENT TO PROVIDE MINIMUM COVER.
2. THE 6 INCH HORIZONTAL DIMENSION MAY BE REDUCED TO PROVIDE A MINIMUM 2 INCH CLEARANCE AROUND THE PERIMETER OF THE BRIDGE PIER COLUMNS ONLY.
3. LAP SPLICE #5H BARS A MINIMUM OF 2'-4" WHERE NECESSARY.
4. APPLY ALL DRAIN NOTES, DIMENSIONS AND COMPONENTS FROM STANDARD DRAWING 606-19-3/4. DRAIN NOT SHOWN FOR CLARITY.
5. SEE SHEET 3/4 FOR SECTION B-B.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

KATHY CROWELL NEW MEXICO 22934 PROFESSIONAL ENGINEER 6/24/21

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

54" CONCRETE WALL BARRIER AND TRANSITION TO 42" ELEVATION AND SECTION

606-19-4/4

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

GENERAL NOTES

1. Workmanship and Materials shall conform to the New Mexico Department of Transportation's Standard Specifications for Highway and Bridge Construction current edition, Supplemental Specifications and Special Provisions.
2. Concrete shall conform to Section 510, "Portland Cement Concrete." Concrete is to be Class "A." Chamfer all exposed edges ¾" unless otherwise noted on the Plans.
3. Reinforcing steel (rebar) shall conform to Section 540, "Steel Reinforcement" AASHTO M 31 (ASTM A 615), Grade 60. Dimensions refer to the centerline of reinforcing steel unless otherwise noted on the Plans.
4. Terminate the barriers in accordance with Section 720, "Vehicular Impact Attenuator Units."
5. Anchor bolts embedded in concrete shall conform to Section 522, "Chemical Adhesive Anchors" or Section 523, "Cementitious Grouted Dowels and Anchors" as applicable.
6. For temporary concrete wall barrier (CWB) layout, see 606-20-5/5.
7. For temporary CWB mount for square post, see 606-20-4/5
8. Drawings are not to scale.

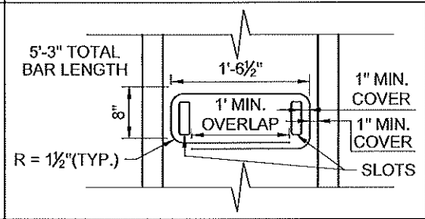
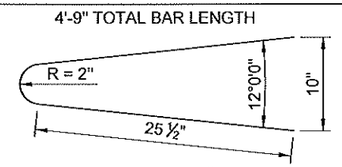
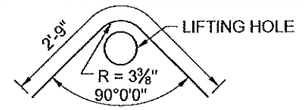
BARRIER FABRICATION NOTES:

9. If lifting coils are to be used, they must be designed and stamped by a Professional Engineer licensed in the State of New Mexico.
10. 4" PVC sleeve may be used to form the lifting holes. If used, leave the PVC sleeve in place.
11. Triangular space in base of barrier is typical. Circular arch shape will be permitted.

CONNECTION AND ANCHORING NOTES:

12. Consecutive lengths of temporary CWB shall always be connected by utilizing the connecting pin assembly included here in.
13. Anchors shall be used when specified in the Plans and/or when a clear area of 44" behind the temporary concrete wall barrier cannot be maintained.
14. The barrier can be installed with or without anchors. However, anchors must always be used at Bridge edge of deck.
    A. When installed without anchors, allow for 44" of deflection behind the barrier.
    B. When installed as a Median barrier (between two-way traffic) on Highways with less than 24" between the edge of Traveled Way and the barrier, use four anchors in every other panel with end panels anchored.
    C. When placed 3" to 24" from the edge of an excavation or Shoulder hinge point, use two anchors per panel along the traffic side.
    D. On Bridge decks, use threaded anchor bolts or deck through-bolts. Use four bolts per barrier segment. Ensure that anchor bolts are embedded a minimum depth of 6" or per the installation instructions of the bonding Material. Coat bolts used with the adhesive bonding anchoring system with a debonding agent so the anchors can be easily removed. Do not reduce the strength of the anchor system with the debonding agent. Once removed, completely fill anchor holes with an approved non-shrink, non-metallic grout, or as directed by Project Manager.
    E. Do not stake or bolt barrier units that extend across Bridge expansion joints.
15. The following apply when stakes, anchor bolts, or deck bolts are used:
    A. Ensure that the stakes or bolts do not protrude beyond the exterior face of the barrier surface.
    B. Do not drill anchor holes into prestressed concrete deck panels.
    C. Non-impact tools shall be utilized to drill and/or core holes. Ensure that Bridge deck and anchor holes are drilled or cored smooth and round.
    D. Do not use expansion anchors.
    E. Tighten anchors "snug fit". Turn threaded rods at least 1 full turn of threads extending above the nut, do not protrude the top of the anchor above the side of the barrier.

BARRIER REINFORCING STEEL TABLE (SEE NOTE NO. 3)

MARK	LOCATION	BAR SIZE	NUMBER OF BARS	SKETCH
H-1	HORIZONTAL BAR. TIED INSIDE V-1 BARS.	NO. 5	6	19'-3"
H-2	HORIZONTAL BAR. 3 CENTERED ABOVE EACH SCUPPER.	NO. 5	6	6'-6"
H-3	HORIZONTAL BAR. 1 AROUND EACH SLOTS BETWEEN V-1 BARS.	NO. 4	2	
V-1	VERTICAL BAR. 3 AT EACH END AND SPACED 18„" THEREAFTER	NO. 5	16	
V-2	VERTICAL BAR. 1 OVER EACH LIFTING HOLE.	NO. 4	2	

12/17/2019

NO.	DATE	BY	DESCRIPTION

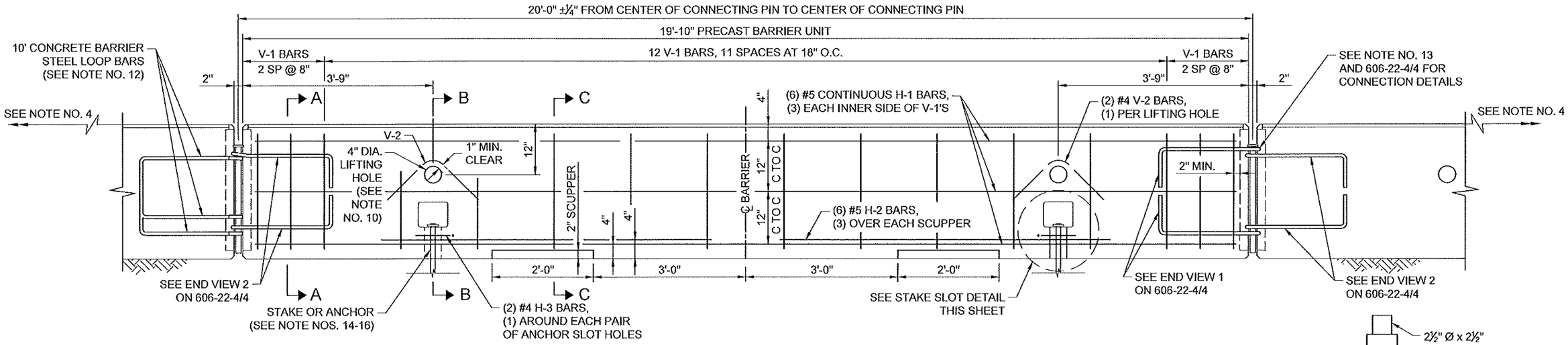
REVISIONS (OR CHANGE NOTICES)

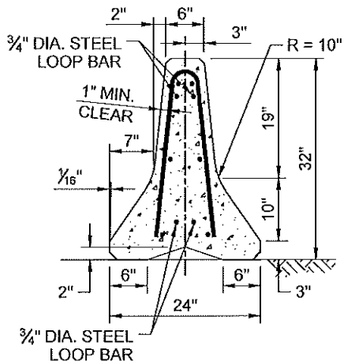
NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

20' CONCRETE BARRIER GENERAL NOTES & REINFORCING SCHEDULE

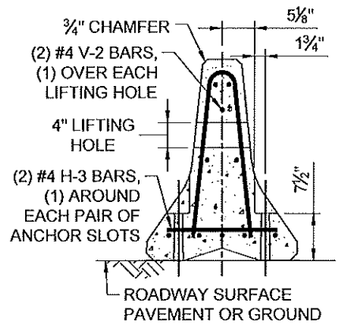
DESIGNED BY: ____ DRAWN BY: MAV CHECKED BY: FOQ

606-22-1/4

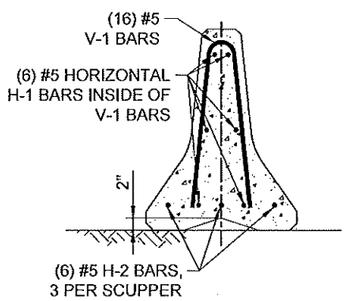




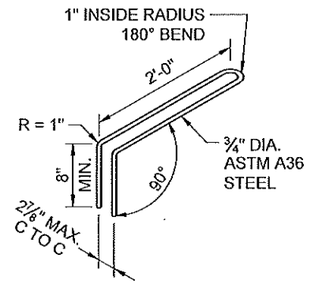
SECTION A-A



SECTION B-B

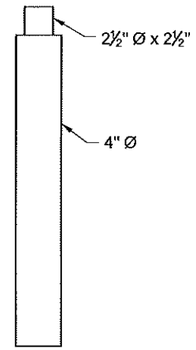


SECTION C-C

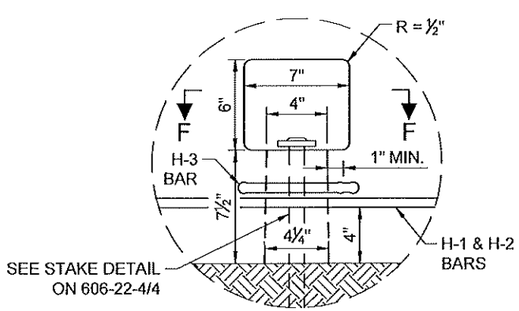


STEEL LOOP BAR DETAIL

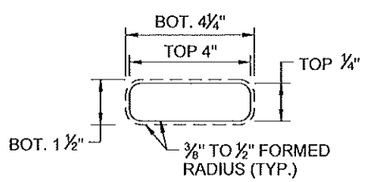
ISOMETRIC VIEW



FORM DETAIL



STAKE SLOT DETAIL



SECTION F-F

CARLOS OSWALDO ORTEGA RODRIGUEZ
NEW MEXICO
20680
PROFESSIONAL ENGINEER

12/17/2019

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

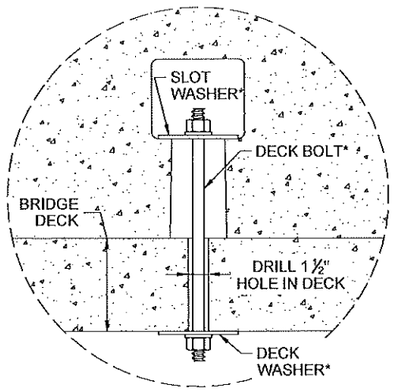
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

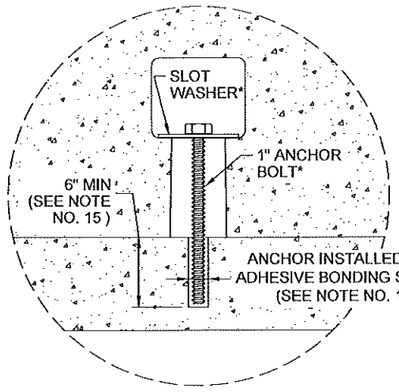
20' CONCRETE BARRIER FABRICATION AND REINFORCEMENT DETAILS

606-22-2/4 2 OF 4

DESIGNED BY: ____ DRAWN BY: MAV CHECKED BY: FOO



DECK BOLT ASSEMBLY

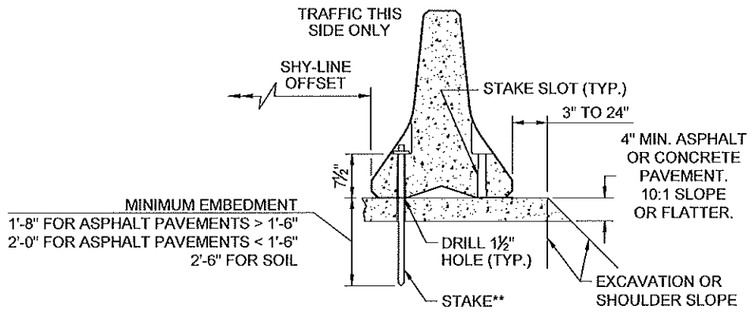


ANCHOR BOLT ASSEMBLY

BRIDGE DECK ANCHOR DETAILS

(SEE NOTE NOS. 14-16)

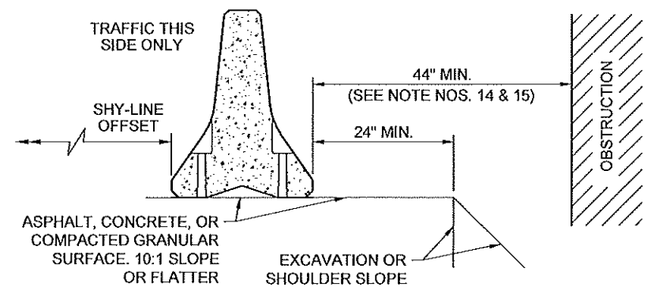
* SEE 606-22-4/4 FOR DECK BOLT, ANCHOR BOLT, AND WASHER DETAILS



STAKED SHOULDER BARRIER

SEE STAKING CONFIGURATION ADJACENT TO AN EXCAVATION OR SHOULDER SLOPE - THIS SHEET (SEE NOTE NOS. 14-16)

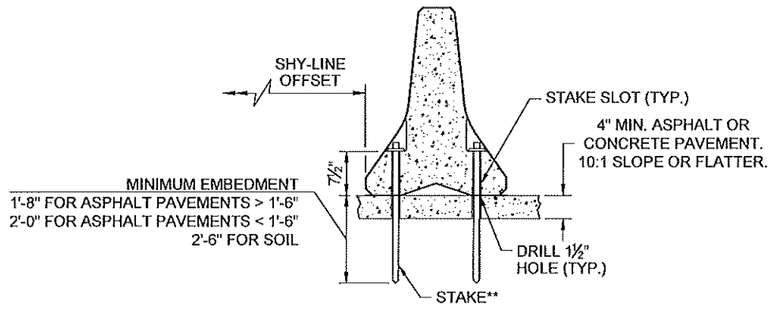
** SEE 606-22-4/4 FOR STAKE DETAILS



NON-STAKED BARRIER

SHOWN ADJACENT TO EXCAVATION OR SHOULDER SLOPE - THIS SHEET (SEE NOTE NOS. 14-16)

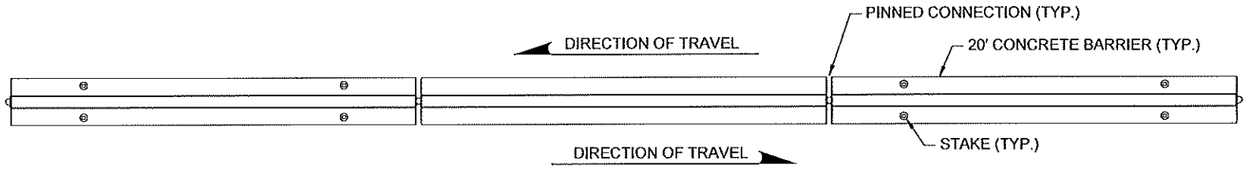
DETAIL SHALL NOT BE APPLIED AT BRIDGE EDGE OF DECK.



STAKED MEDIAN BARRIER

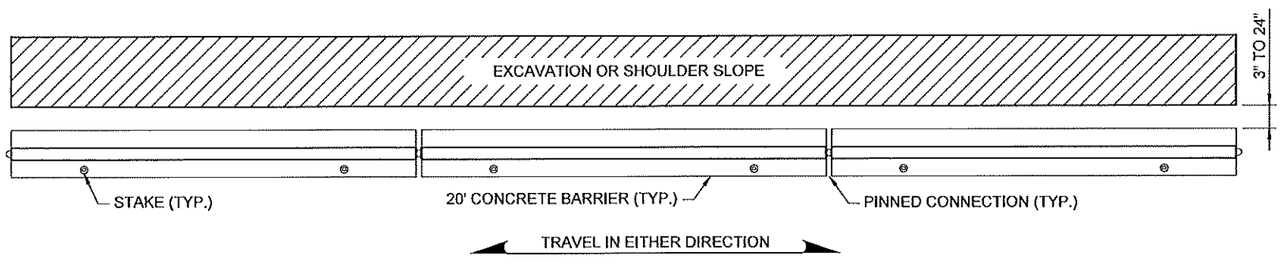
SEE STAKING CONFIGURATION FOR TWO-WAY TRAFFIC - THIS SHEET (SEE NOTE NOS. 14-16)

** SEE 606-22-4/4 FOR STAKE DETAILS



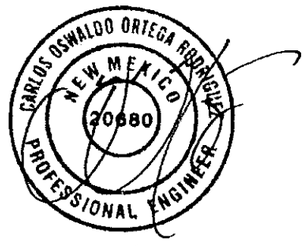
STAKING CONFIGURATION FOR TWO-WAY TRAFFIC

(SEE NOTE NOS. 14-16)



STAKING CONFIGURATION ADJACENT TO AN EXCAVATION OR SHOULDER SLOPE

(SEE NOTE NOS. 14-16)



12/17/2019

NO.	DATE	BY	DESCRIPTION

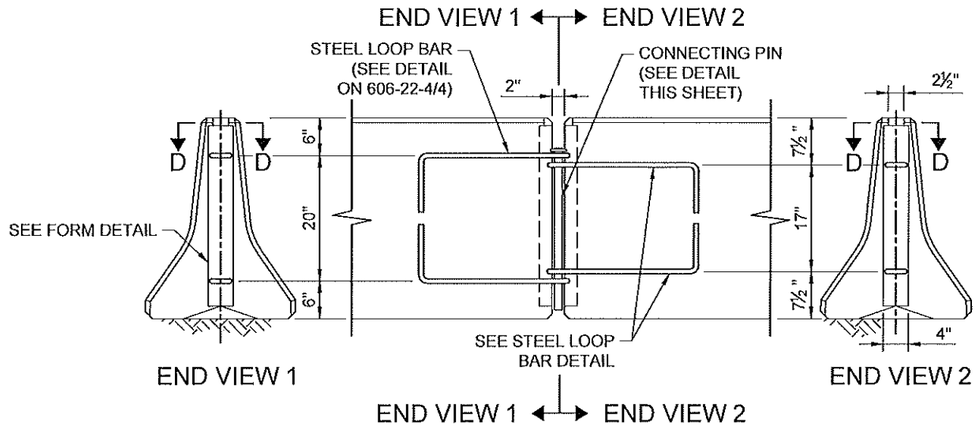
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

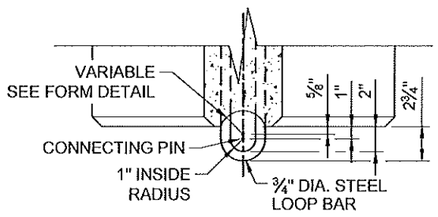
20' CONCRETE BARRIER STAKING & ANCHORING DETAILS

606-22-3/4

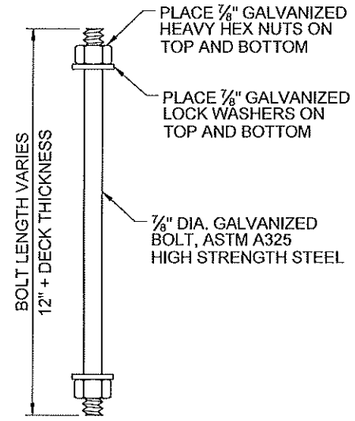
DESIGNED BY: ____ DRAWN BY: MAV CHECKED BY: FOQ



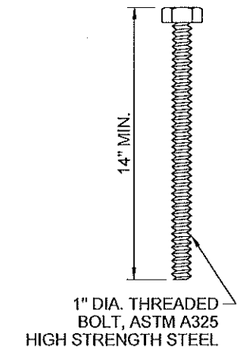
CONNECTION LOOP DETAIL



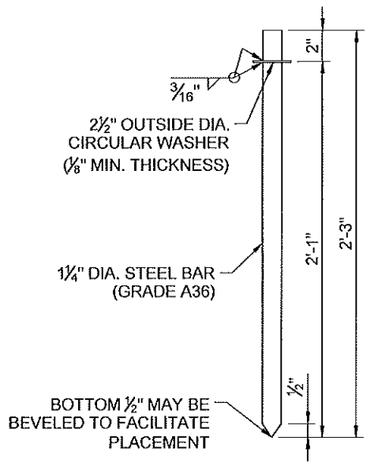
SECTION D-D



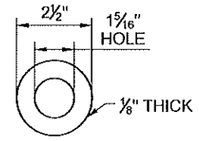
DECK BOLT



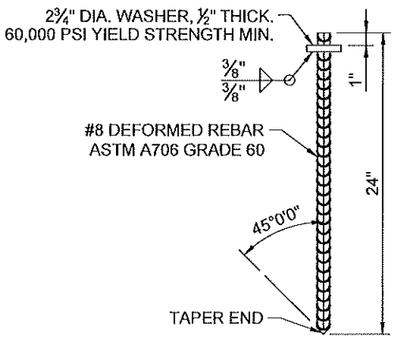
ANCHOR BOLT



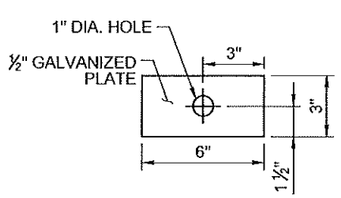
CONNECTING PIN DETAIL



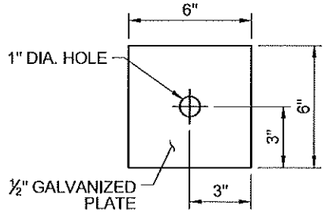
PLAIN GALVANIZED STEEL WASHER FOR 1¼" PIN



STAKE DETAIL



SLOT WASHER



DECK WASHER

WASHER DETAILS

12/17/2019

NO.	DATE	BY	DESCRIPTION

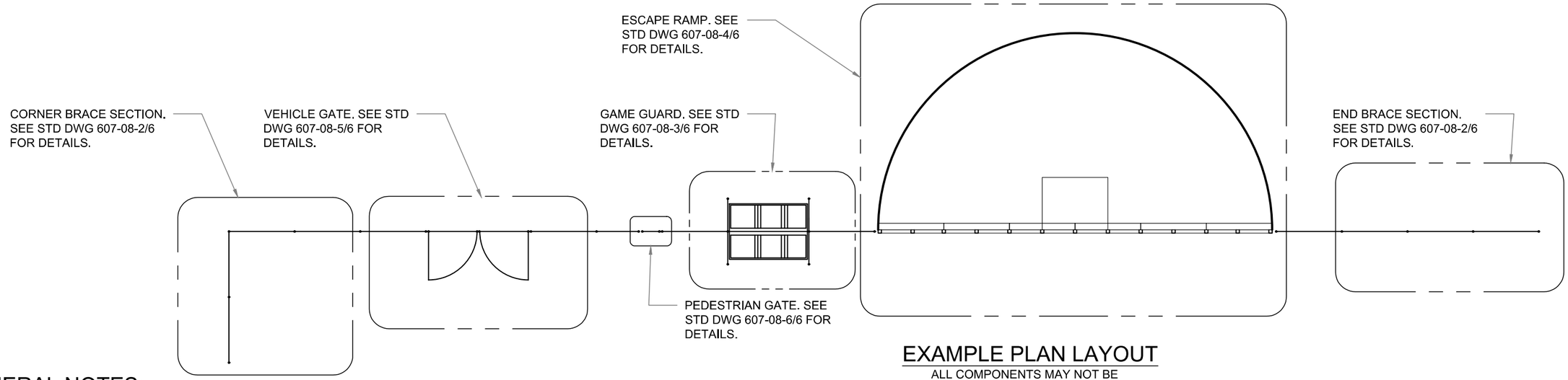
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

20' CONCRETE BARRIER STAKING & CONNECTION DETAILS

606-22-4/4 4 OF 4

DESIGNED BY: ____ DRAWN BY: MAV CHECKED BY: FOQ



EXAMPLE PLAN LAYOUT

ALL COMPONENTS MAY NOT BE REQUIRED FOR EVERY PROJECT

GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. ALL WORK AND MATERIAL ASSOCIATED WITH CONSTRUCTION OF GAME FENCE INCLUDING GAP CLOSURES SHALL BE INCLUDED IN THE COST OF THE GAME FENCE, ITEM NO. 607012 - "GAME FENCE".
3. ALL WORK AND MATERIAL ASSOCIATED WITH CONSTRUCTION OF VEHICLE CHAIN LINK GATES, INCLUDING HARDWARE SHALL BE INCLUDED IN ITEM NUMBER 607455 - "CHAIN LINK GATE, 8'S X8'R." ASSOCIATED FENCE POSTS AND FOUNDATION SHALL BE INCLUDED IN BID ITEM 607012 GAME FENCE.
4. ALL WORK AND MATERIAL ASSOCIATED WITH CONSTRUCTION OF PEDESTRIAN CHAIN LINK GATES, INCLUDING HARDWARE AND SIGNAGE SHALL BE INCLUDED IN ITEM NUMBER 607308 - "STANDARD GATE, 8'0"." ASSOCIATED FENCE POSTS AND FOUNDATION SHALL BE IN INCLUDED IN BID ITEM 607012 GAME FENCES.
5. LINE BRACE POSTS SHALL BE PLACED AT 330' INTERVALS, WHERE FENCING IS CONTINUOUS AND WHERE, END, CORNER AND LINE BRACE POSTS ARE NOT SPECIFIED.
6. ALL LINE POSTS SHALL BE 2 7/8" MIN. IN DIAMETER AND 12' LONG. ALL END, CORNER AND LINE BRACE POSTS SHALL BE 6" MIN. IN DIAMETER AND 12' LONG.
7. ALL PIPE CAPS MUST BE STEEL AND FULLY WELDED ON TO THE TOP OF THE POSTS.
8. FENCE WIRE SHALL BE PLACED ON EITHER THE ROAD SIDE OR THE FIELD SIDE OF POSTS. DEPENDING ON LOCAL CONDITIONS: I.E. ON CURVES. THE WIRE SHALL BE PLACED ON THE SIDE WHICH WOULD RESULT IN THE LEAST AMOUNT OF TENSION ON THE TIE WIRE. THIS SHALL ALSO APPLY WHERE WIND DRIFT OR OTHER CONDITIONS WOULD EXERT UNUSUAL PRESSURE AGAINST THE WIRE.
9. ALL FENCE WIRE TIES, BRACE WIRES AND OTHER WIRE APPURTENANCES SHALL BE GALVANIZED.
10. GAME FENCE FABRIC SHALL CONFORM TO A HIGH TENSILE 12.5 GA. WIRE WITH A CLASS III COATING. DESIGN No. 2096-6-12.5.
11. GAME FENCE WILL BE TIED TO EVERY LINE POST WITH 9 GA. GALVANIZED WIRE AT A MAX SPACING OF 16".
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEYING AND STAKING PROPOSED ESCAPE RAMP AND GATE LOCATIONS. ONCE STAKED, THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT MANAGER TO FIELD REVIEW AND APPROVE THE LOCATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED BID ITEM.
13. ALL FENCE HARDWARE SHALL BE INCIDENTAL TO THE COST OF THE GAME FENCE, ITEM NO. 607012 - "GAME FENCE".
14. ALL FOOTING FOR END,CORNER AND LINE BRACE POSTS SHALL BE CLASS "A" CONCRETE. THE COST INVOLVED SHALL BE INCLUDED IN THE BID PRICE ITEM FOR THE GAME FENCE ITEM No.607012 - "GAME FENCE".
15. ALL GATE OPENINGS REQUIRE AN END BRACE SECTION ON EACH SIDE.

DESIGNED BY: OB DRAWN BY: TB CHECKED BY: KHC

KATHY CROWELL NEW MEXICO 22934 PROFESSIONAL ENGINEER 6/18/21

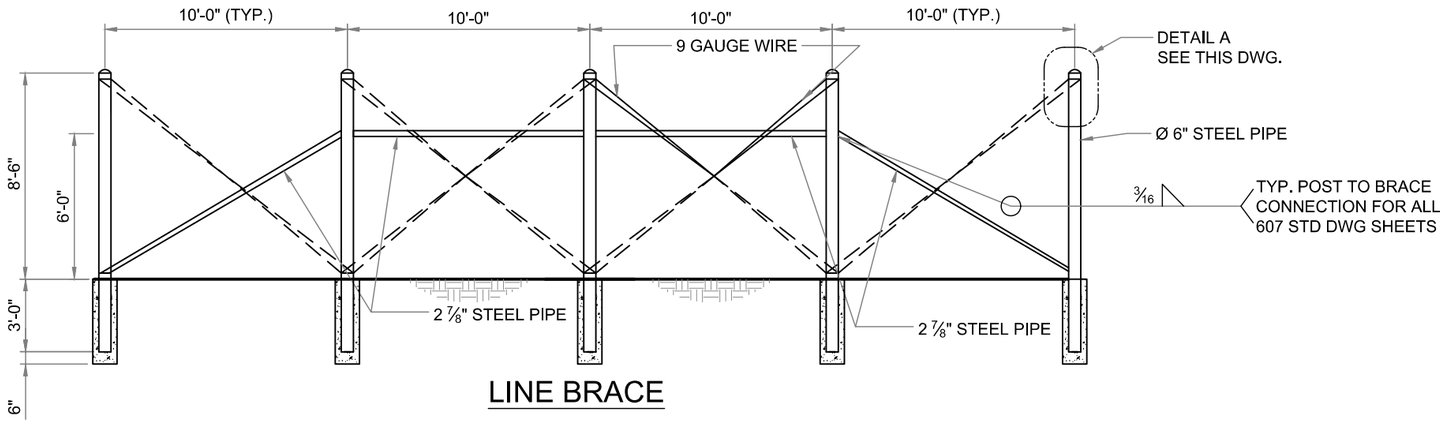
NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

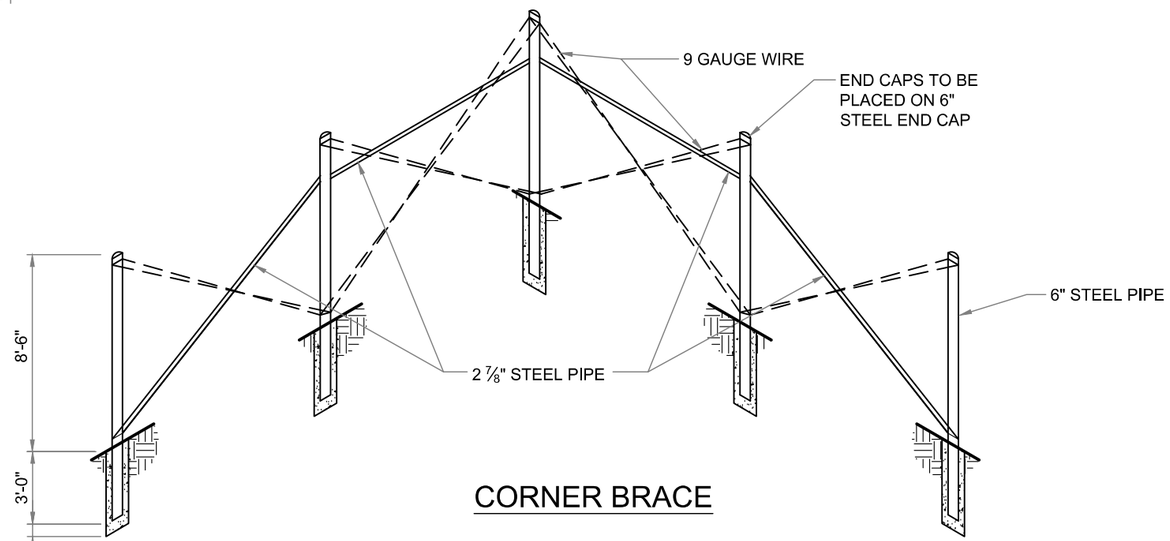
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GAME FENCE
GENERAL NOTES & OVERALL PLAN

607-08-1/6

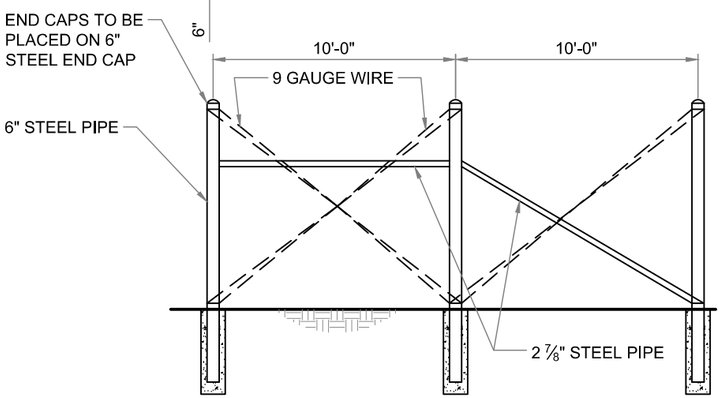


LINE BRACE

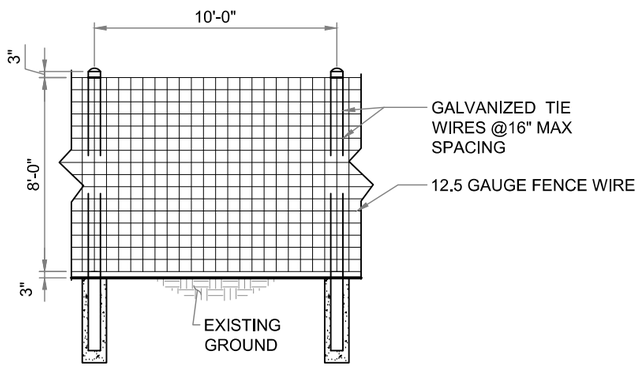


CORNER BRACE

DETAIL A



END BRACE



8' FENCE TYPICAL INSTALLATION

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

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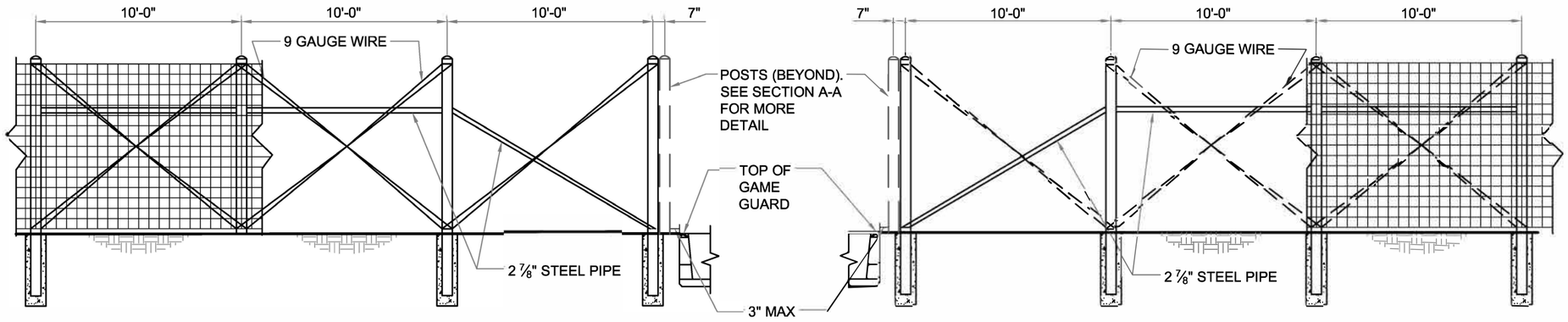
NEW MEXICO
22934
6/16/21
PROFESSIONAL ENGINEER

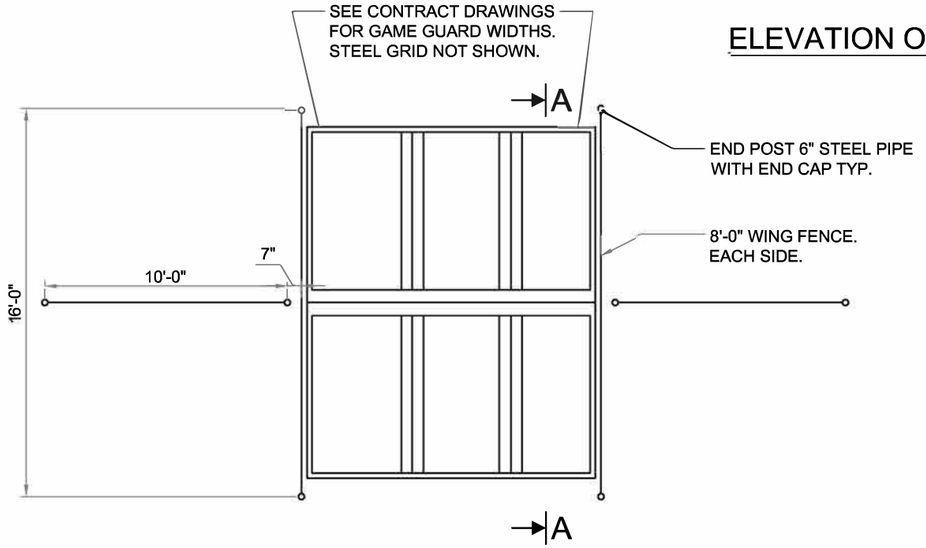
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

GAME FENCE
BRACING AND TYPICAL INSTALLATION

DESIGNED BY: TAM DRAWN BY: SKL/BEE CHECKED BY: KHC

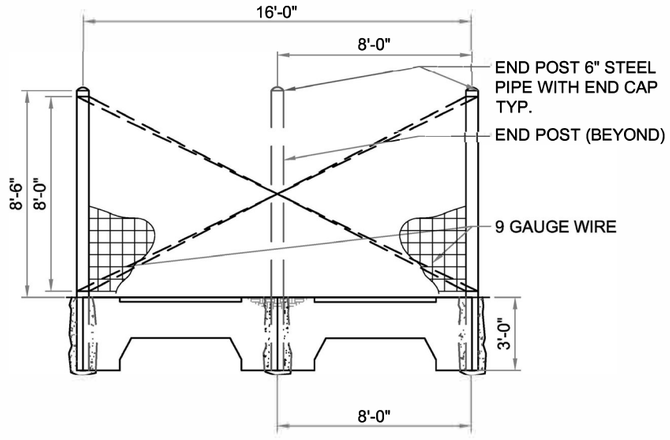


ELEVATION ON GAME GUARD



GAME GUARD PLAN

SEE STANDARD DRAWINGS 610-02
FOR GAME GUARD DETAILS



SECTION A-A

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

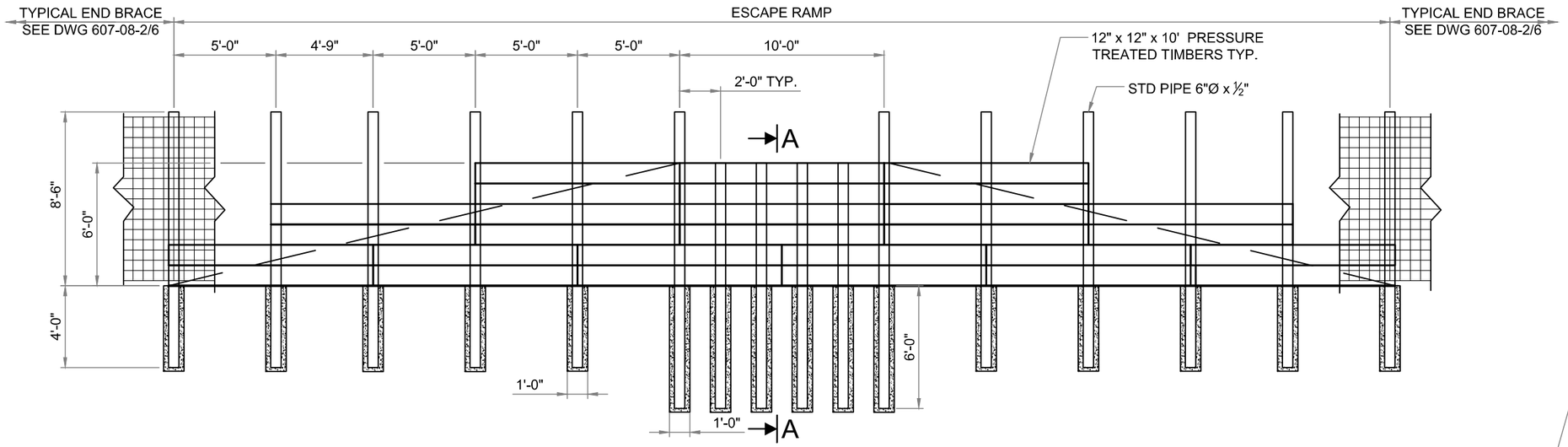
KATHY CROWELL
NEW MEXICO
22934
PROFESSIONAL ENGINEER
2/22/22

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

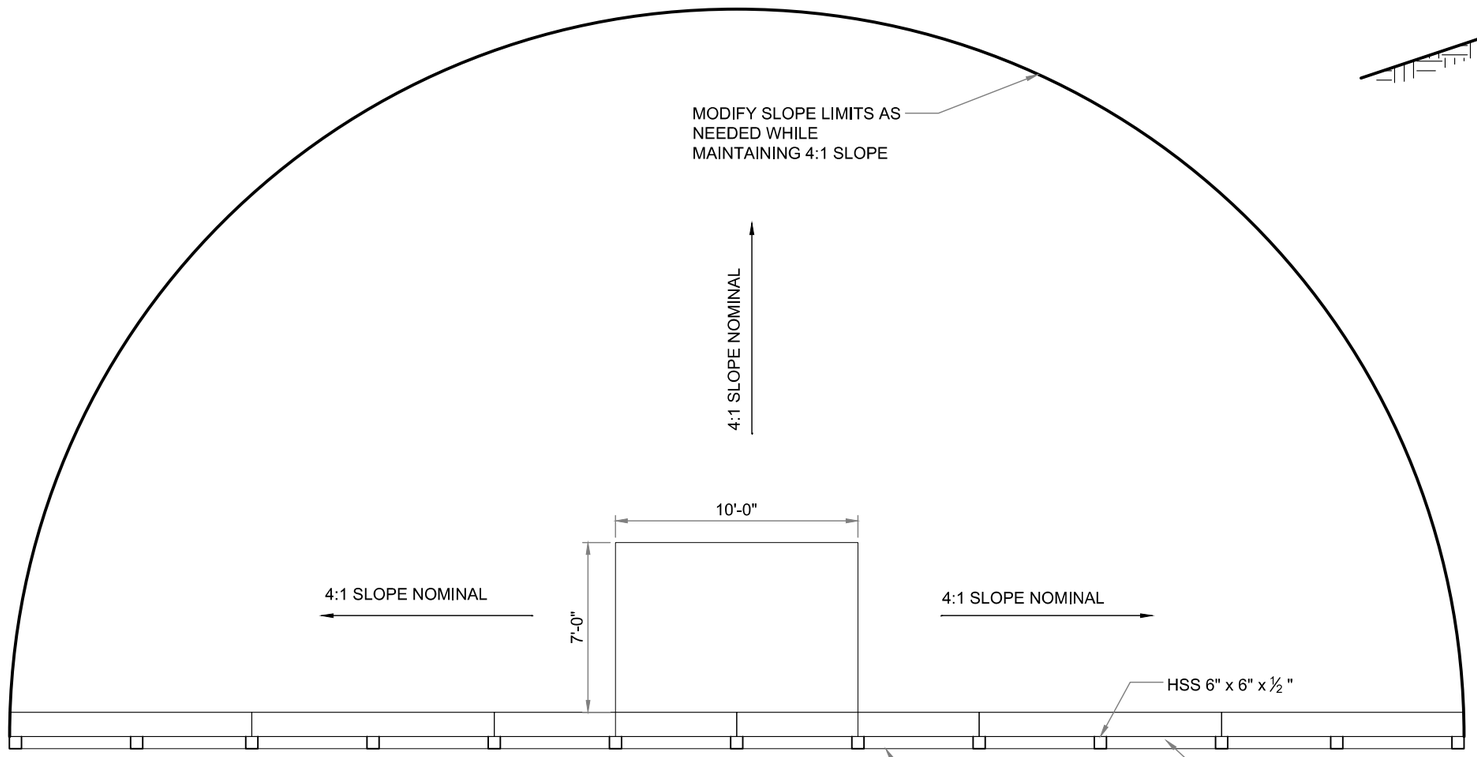
GAME FENCE DETAILS
AT GAME GUARD LOCATIONS

DESIGNED BY: WCM DRAWN BY: TB CHECKED BY: OB

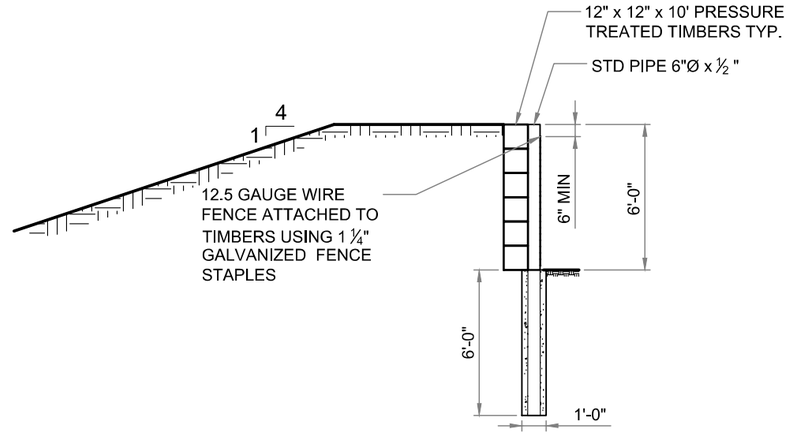
607-08-3/6



PROFILE



PLAN



SECTION A-A

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

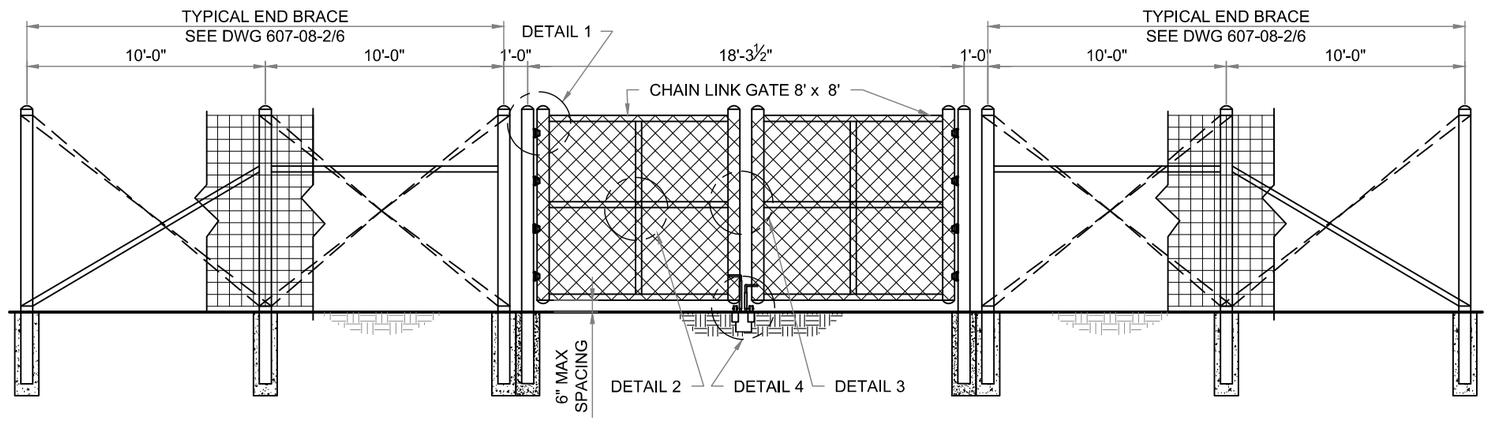
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

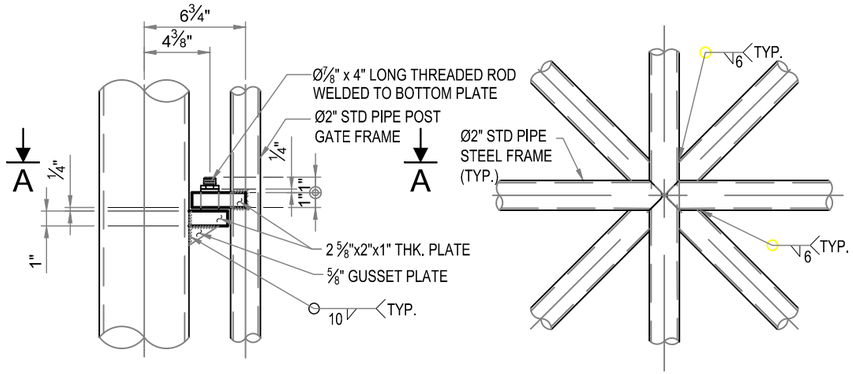
KATHY CROWELL
NEW MEXICO
22934
PROFESSIONAL ENGINEER
6/18/21

ESCAPE RAMP
PLAN AND PROFILE

DESIGNED BY: WCM DRAWN BY: TB CHECKED BY: OB

607-08-4/6

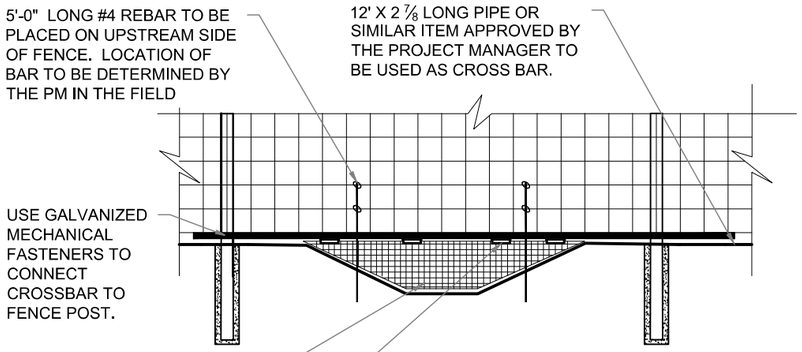


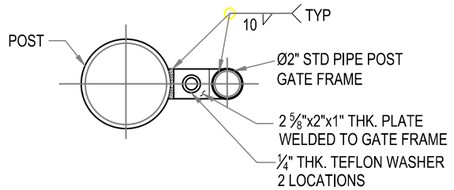


DETAIL 1

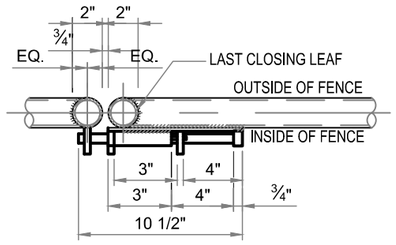
DETAIL 2

VEHICLE GATES WITHIN GAME FENCE LIMITS

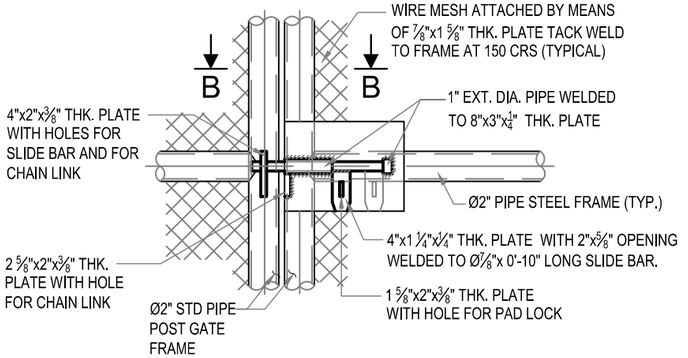




SECTION A-A

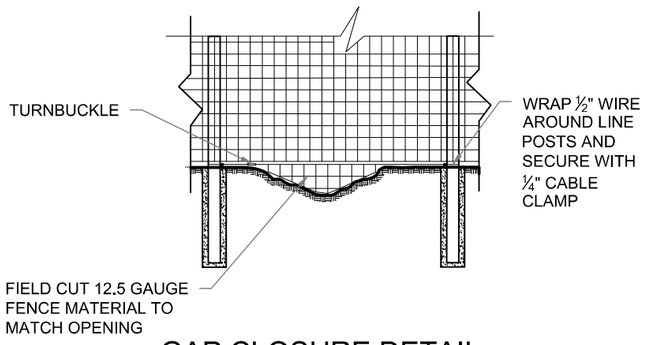


SECTION B-B

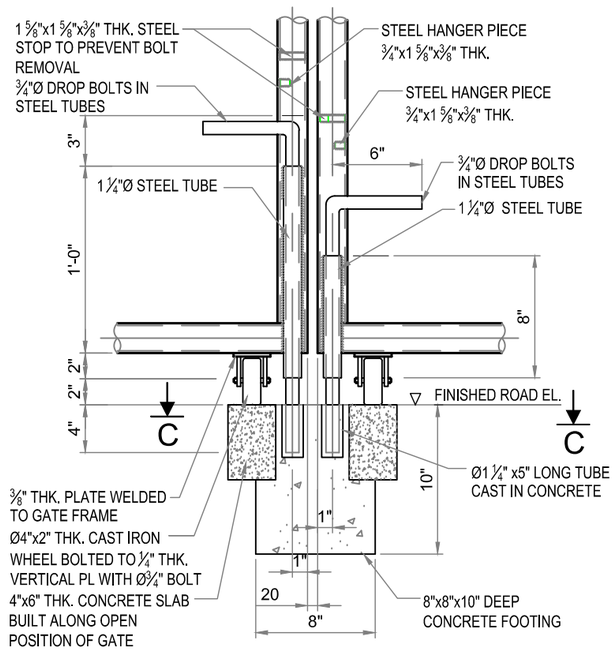


DETAIL 3

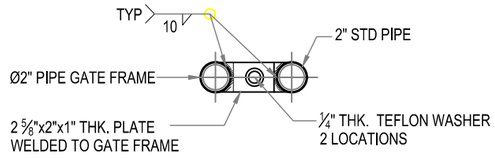
GAP CLOSURE AT DRAINAGE STRUCTURE DETAIL



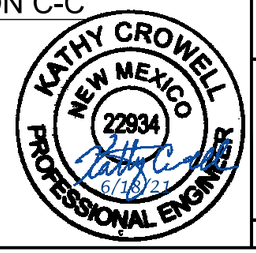
GAP CLOSURE DETAIL



DETAIL 4



SECTION C-C



THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

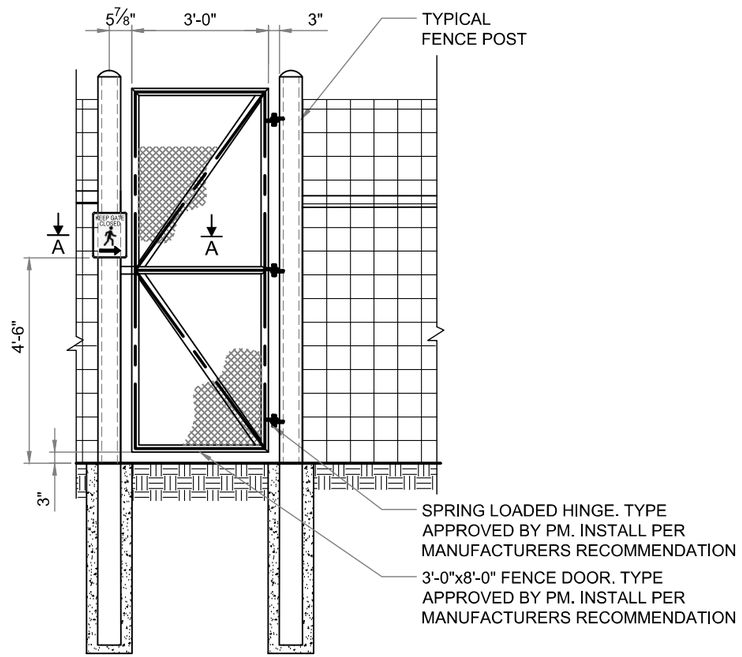
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

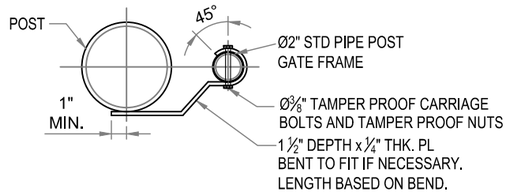
GAME FENCE VEHICLE GATE DETAIL AND GAP CLOSURES

607-08-5/6

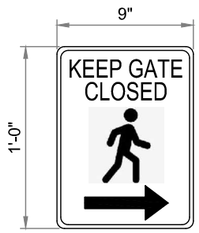
DESIGNED BY: WCM DRAWN BY: TB CHECKED BY: OB



PEDESTRIAN GATE ELEVATION



SECTION A-A



SIGN DETAIL

NOTES:

1. A PEDESTRIAN GATE IN A GAME FENCE SHALL BE PROVIDED AT LOCATIONS SHOWN IN THE DRAWING SET.

2. SIGNAGE AS SHOWN SHALL BE INSTALLED ON BOTH SIDES OF THE PEDESTRIAN GATE. SIGNAGE IS INCIDENTAL TO THE PEDESTRIAN GATE.

KATHY CROWELL
NEW MEXICO
22934
6/18/21
PROFESSIONAL ENGINEER

NO.	DATE	BY	DESCRIPTION

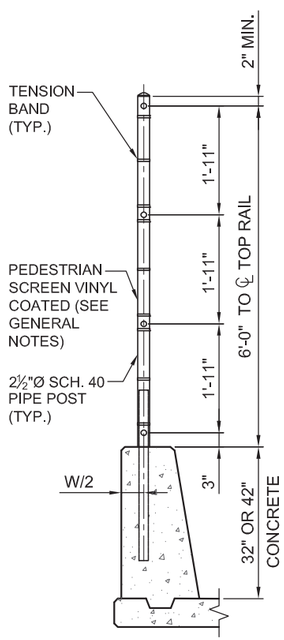
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

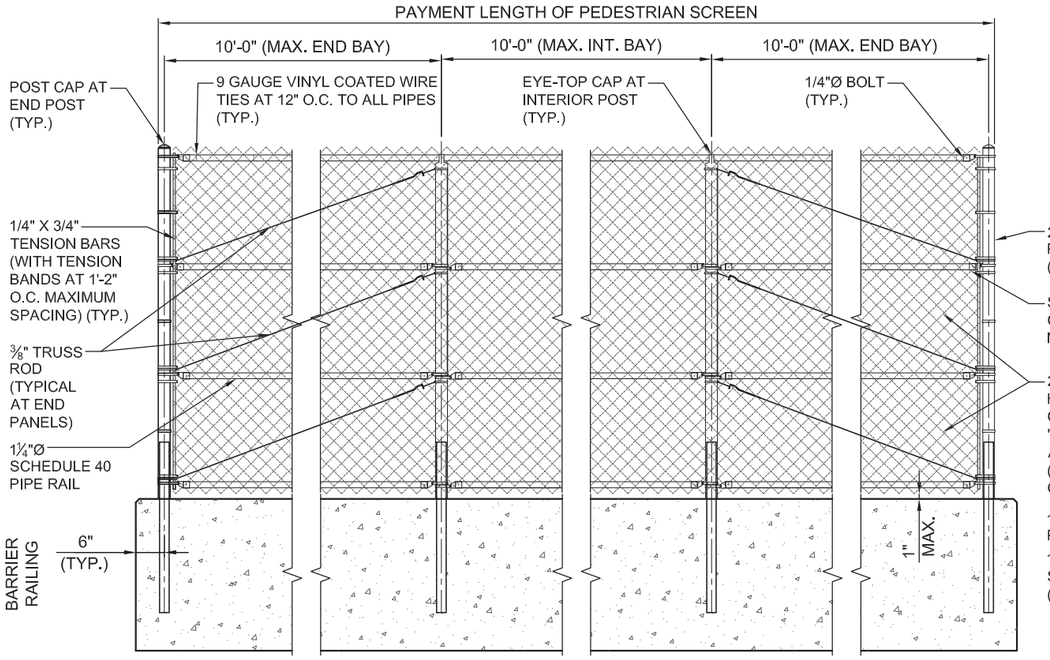
GAME FENCE
PEDESTRIAN GATE DETAIL

607-08-6/6

DESIGNED BY: WCM DRAWN BY: TB CHECKED BY: OB



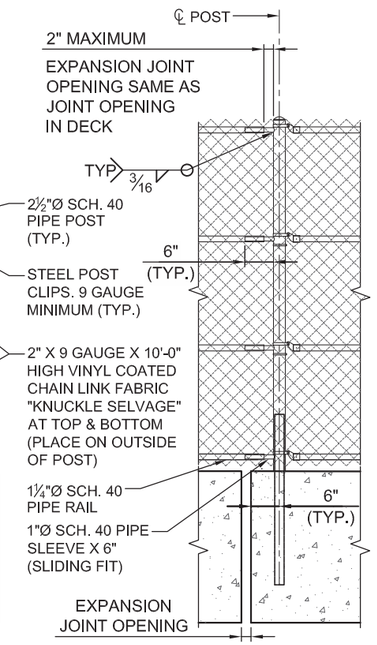
TYPICAL SECTION



END POST

INTERIOR POST ELEVATION

END POST

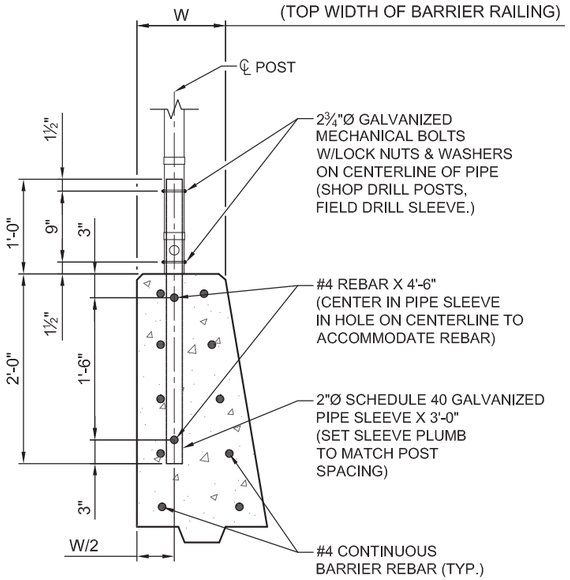


POST AT EXPANSION JOINT

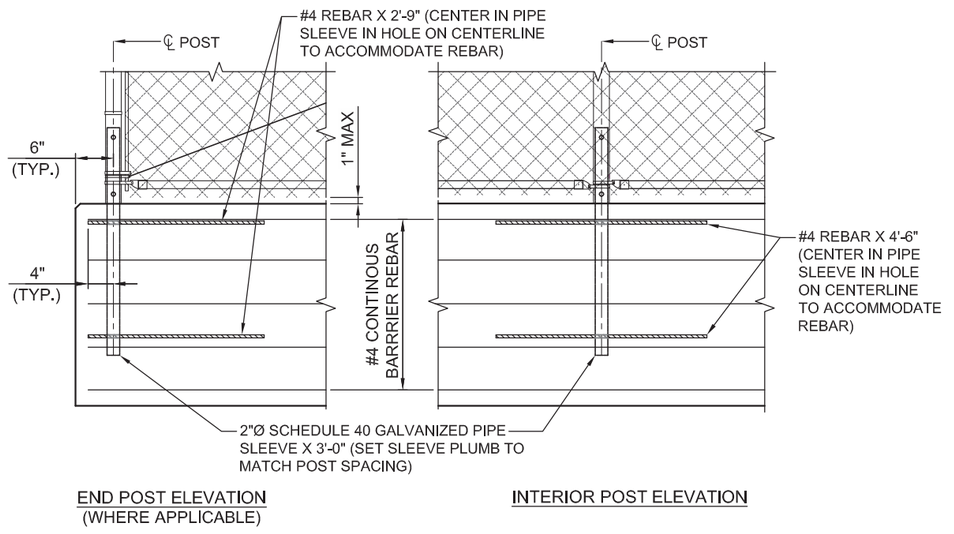
GENERAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. THE COLOR OF THE VINYL COATING SHALL BE AS SPECIFIED ON THE CONTRACT DOCUMENTS. EXPOSED PORTIONS OF THE BOLTS, NUTS AND WASHERS SHALL BE FIELD PAINTED AFTER ERECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 545. THE COLOR OF THE PAINT SHALL MATCH THE COLOR OF THE VINYL COATING. IN LIEU OF PAINTING, BOLTS, NUTS AND WASHERS MAY BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH AASHTO M 298, CLASS "50."
3. TUBULAR STEEL RAILS, TUBULAR STEEL POSTS AND STEEL SLEEVES FOR TUBULAR RAILS SHALL CONFORM TO ASTM F 1083. HIGH STRENGTH BOLTS, THREADED RODS, NUTS AND WASHERS SHALL CONFORM TO AASHTO M 164, M 292 AND M 293. BARS AND PLATES SHALL CONFORM TO ASTM A 36. ASSEMBLY HARDWARE SHALL CONFORM TO ASTM A 307.
4. CAULK AROUND THE PERIMETER OF THE BASE OF ALL POSTS OR BASE PLATES WITH A COLD APPLIED NON-SAGGING COMPOUND CONFORMING TO THE REQUIREMENTS OF FEDERAL SPECIFICATIONS TT-S-001543A OR TT-S-230C.
5. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE CONTRACTOR HAS THE OPTION OF THE EMBEDDED SLEEVE SYSTEM OR THE BASE PLATE AND BOLTS SYSTEM.
6. UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS, THE END POST SHALL BE LOCATED NEAR THE THRIE BEAM TERMINAL CONNECTOR TO THE WALL BARRIER CONNECTION POINT.
7. FURNISHING AND INSTALLATION OF THE CEMENTITIOUS GROUTED DOWELS SHALL CONFORM TO SECTION 523 "CEMENTITIOUS GROUTED DOWELS AND ANCHORS" OF THE NMDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT EDITION.
8. W = TOP WIDTH OF BARRIER RAILING.

NOTES: PROVIDE CHAIN LINK FABRIC FULL HEIGHT WITH NO HORIZONTAL SPLICES.



SECTION AT POSTS



END POST ELEVATION (WHERE APPLICABLE)

INTERIOR POST ELEVATION

POST ANCHOR DETAILS (EMBEDDED PIPE SLEEVE)

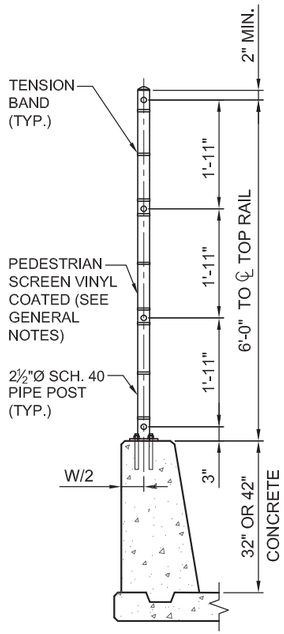
NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

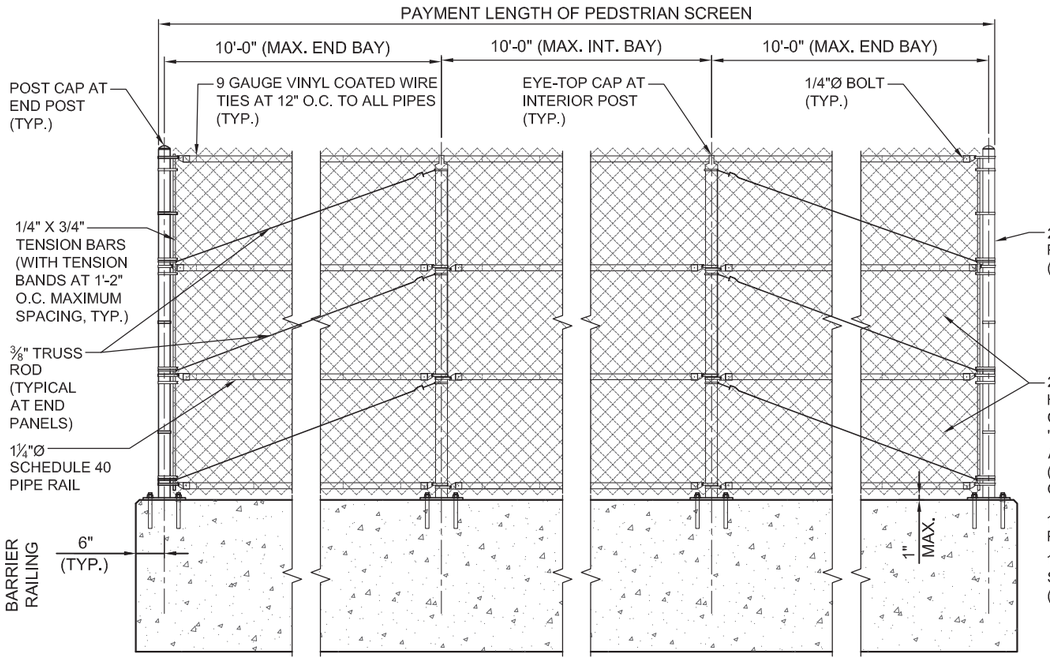
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PEDESTRIAN SCREENING FENCE
TYPE I
WITH EMBEDDED SLEEVE

607-15A-1/2



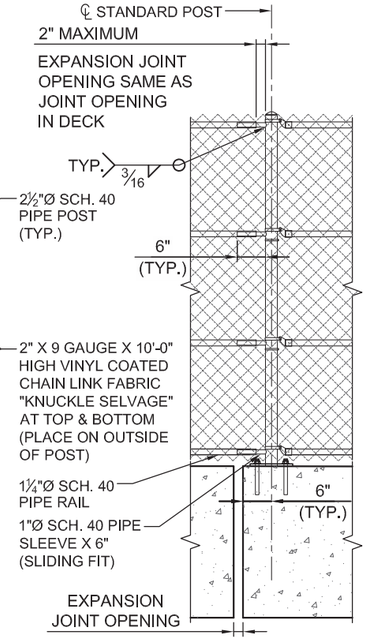
TYPICAL SECTION



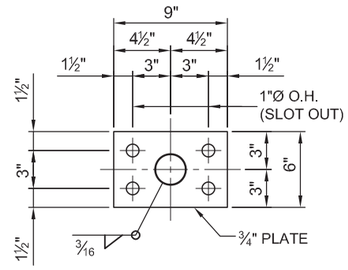
END POST

INTERIOR POST ELEVATION

END POST

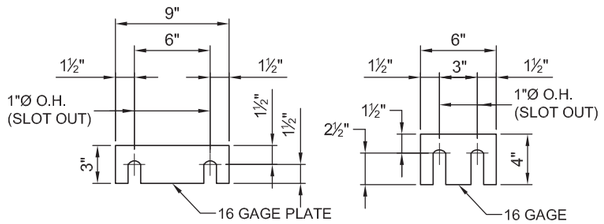


POST AT EXPANSION JOINT



VIEW A-A

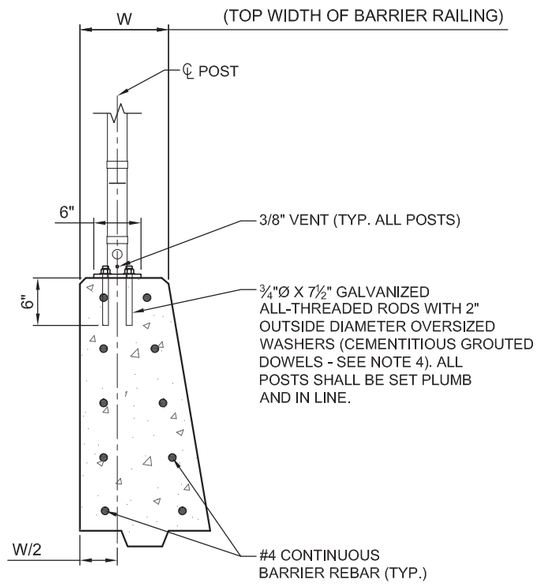
NOTE: GALVANIZED, SLOPE PLATE TO MATCH ROADWAY GRADE.



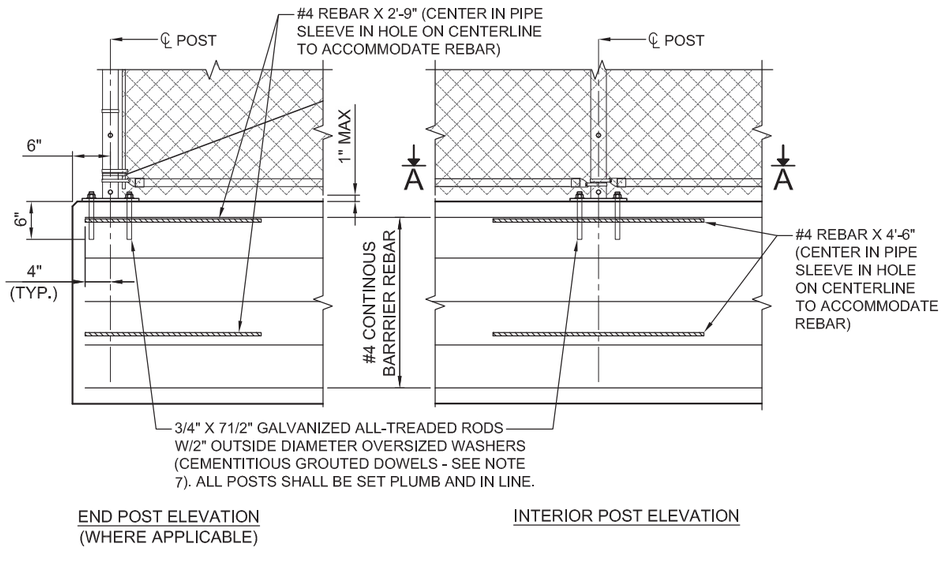
SHIM PLATES

NOTE: PROVIDE TWO OF EACH PLATE PER POST (USE AS REQUIRED).

NOTES: PROVIDE CHAIN LINK FABRIC FULL HEIGHT WITH NO HORIZONTAL SPLICES.



SECTION AT POST



END POST ELEVATION (WHERE APPLICABLE)

INTERIOR POST ELEVATION

POST ANCHOR DETAILS (BASE PLATES AND BOLTS)

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

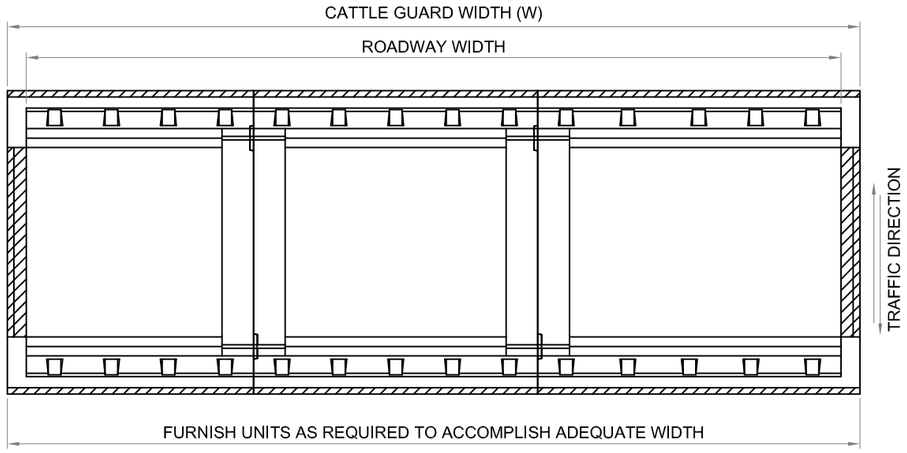
NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

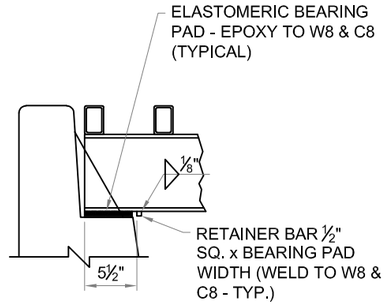
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PEDESTRIAN SCREENING FENCE
TYPE I
WITH BASE PLATES AND BOLTS

607-15A-2/2



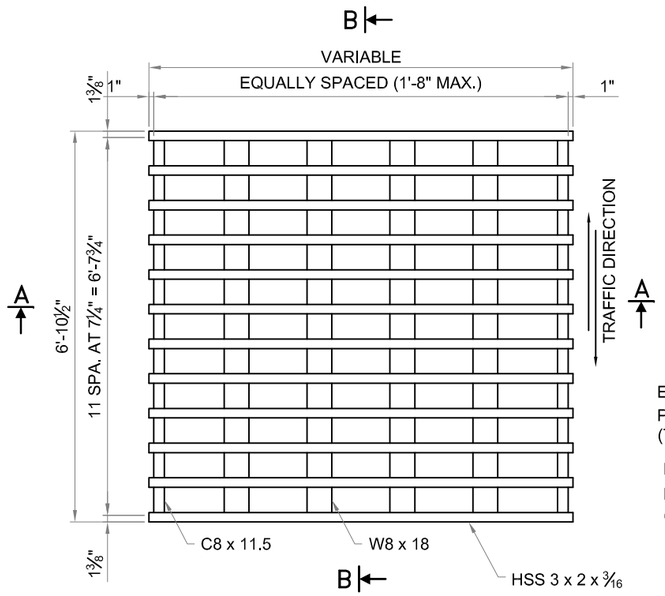
PLAN



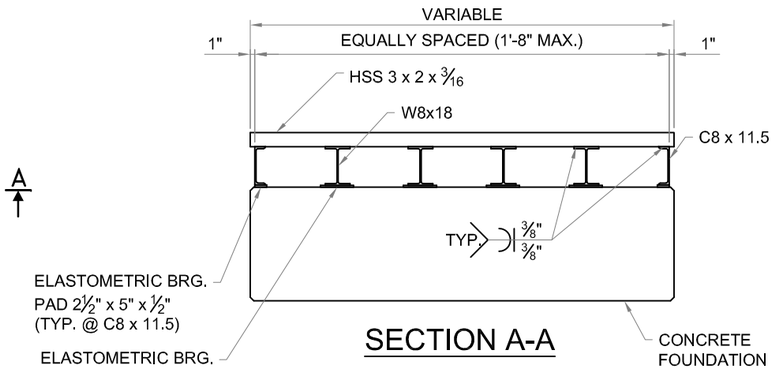
BEARING PAD DETAILS
CONCRETE FOUNDATION

GENERAL NOTES

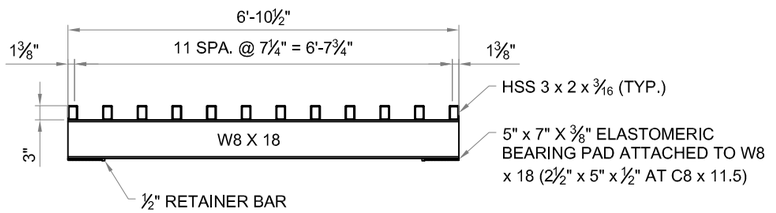
1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. STEEL STRUCTURES SHALL CONFORM TO NMDOT SECTION 541 - "STEEL STRUCTURES" OF THE STANDARD SPECIFICATIONS AND AASHTO M270, GRADE 50. TUBING SHALL CONFORM TO ASTM 500, GRADE B.
3. BOLTS, NUT, AND WASHERS SHALL BE GALVANIZED PER SECTION 542 - "HIGH-STRENGTH BOLTS".
4. WELDING SHALL MEET THE REQUIREMENTS OF THE ANSI/AWS D1.1 STRUCTURAL WELDING CODE, AND SECTION 541 - "STEEL STRUCTURES" OF THE STANDARD SPECIFICATION.
5. PAINTING OF STRUCTURAL STEEL SHALL CONFORM TO SECTION 545 OF THE STANDARD SPECIFICATIONS "PROTECTIVE COATING OF MISCELLANEOUS STRUCTURAL STEEL". COLOR SHALL BE "SAFETY YELLOW."
6. SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH 610 - "CATTLE GUARDS". THE CONTRACTOR MAY SUBSTITUTE FLOWABLE FILL FOR THE SUBGRADE PREPARATION. NO ADDITIONAL PAYMENT SHALL BE MADE.
7. THE CONTRACTOR SHALL SLOPE THE BASES OF THE CATTLE GUARDS AS REQUIRED TO PROVIDE ROADWAY CROWNS OR SUPERELEVATION.
8. STEEL GRID UNITS:
   -WIDTH MUST BE CONSISTENT WITH THE OVERALL CATTLE GUARD WIDTH.
   -SPACING OF STEEL COMPONENTS MAY BE REDUCED BUT MAY NOT EXCEED SPACING SHOWN.
9. MODIFICATIONS OF MINOR DIMENSIONS TO ACCOMMODATE FABRICATION PREFERENCES MAY BE PERMITTED AT THE DISCRETION OF THE PROJECT MANAGER.
10. ONE PAIR OF CATTLE GUARD POST AND BRACE ASSEMBLIES ARE REQUIRED AT EACH CATTLE GUARD LOCATIONS. SEE STD. DWG. 610-01-3/3.
11. TYPICAL BUTT JOINT DESIGN IS SHOWN ON SECTION C-C ON STD. DWG. 602-02-2./2.
12. FOR ALL PRECAST BASE DESIGN REQUIREMENTS, SEE STANDARD DRAWING 610-01.



PLAN VIEW - STEEL GRID UNIT



SECTION A-A



SECTION B-B

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

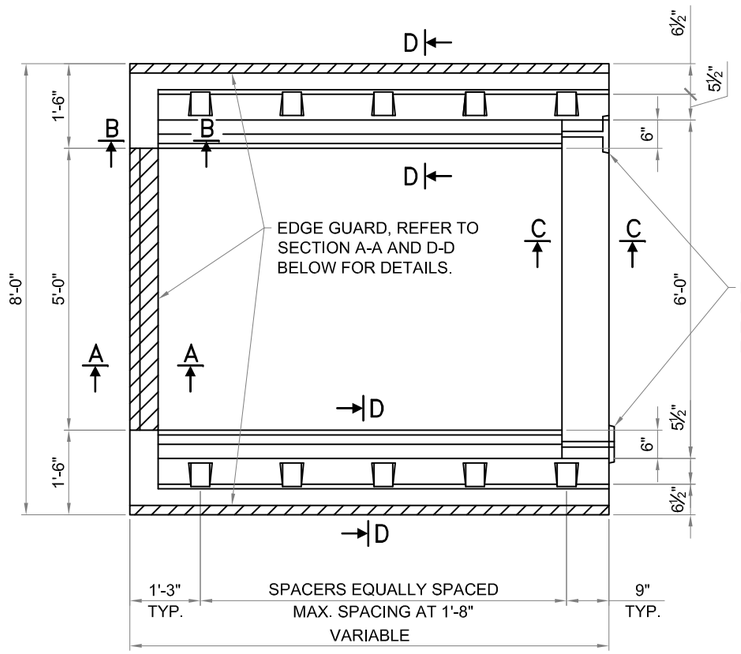
KATHY CROWELL
NEW MEXICO
22934
PROFESSIONAL ENGINEER
2/22/22

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CATTLE GUARD PLAN
AND STEEL GRID UNIT

DESIGNED BY: KHC DRAWN BY: TB CHECKED BY: SK

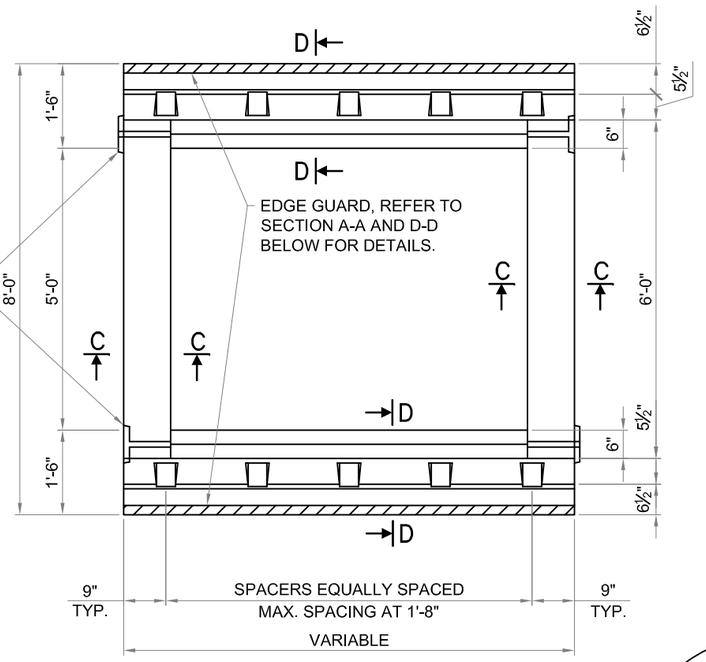
610-01-1/3



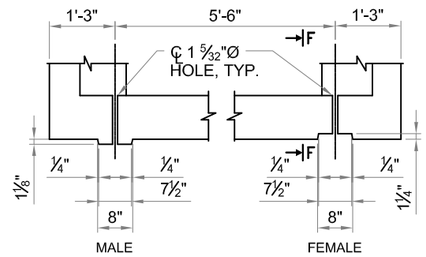
PLAN VIEW - END UNITS

TRAFFIC DIRECTION

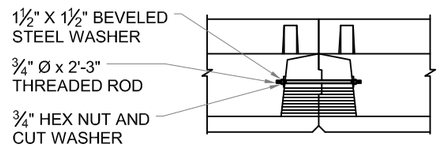
MALE/FEMALE KEYED END, REFER TO TYPICAL KEYED END DETAILS AT RIGHT.



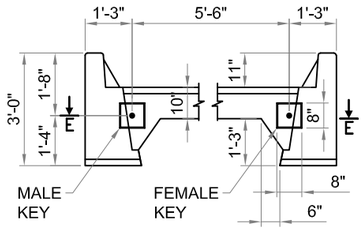
PLAN VIEW - INTERMEDIATE UNITS



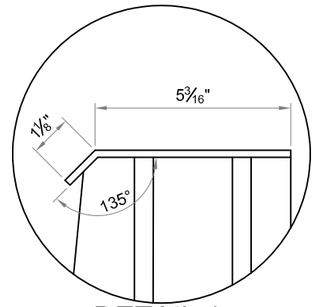
SECTION E–E



SECTION F–F



TYP. KEYED END

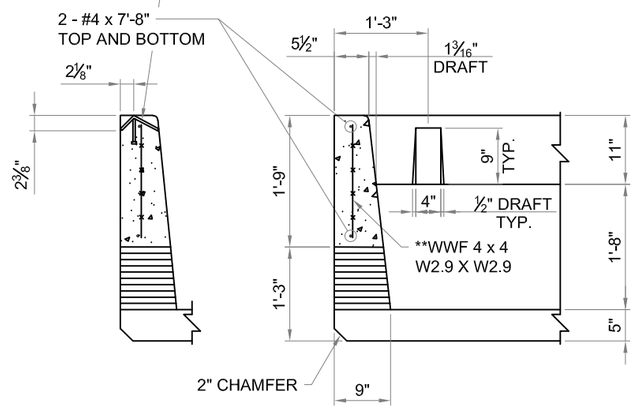


DETAIL 1

* IT IS ACCEPTABLE TO SUBSTITUTE ANGLE IN LIEU OF BENT ℄

* BENT ℄ (3" x 4" x ⅜") 1'-6" FROM EACH END W/ ⅜" x 4" H.A.S. AT 8" O.C.

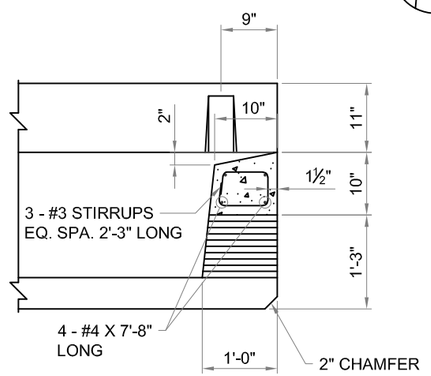
2 - #4 x 7'-8" TOP AND BOTTOM



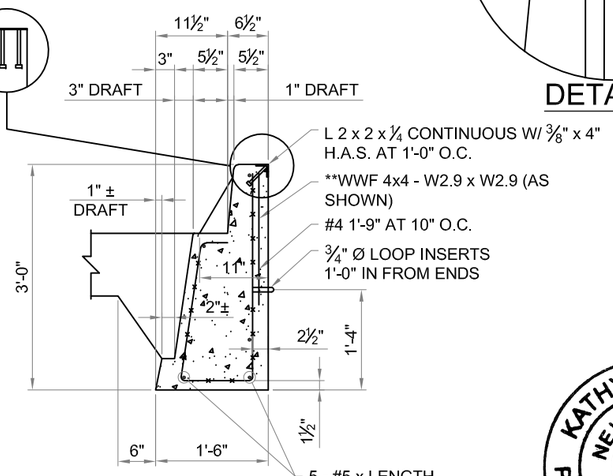
SECTION A–A SECTION B–B

* *FABRICATOR MAY BE PERMITTED TO SUBSTITUTE REINFORCING STEEL IN LIEU OF WWF 4 x 4 W2.9 x W2.9 AT THE DISCRETION OF THE PROJECT MANAGER

ALTERNATE - BENT PLATE 3/16" x 6 5/16" x WIDTH OF UNIT W/ ½"Ø x 6⅞" STUDS AT 24" O.C. EACH SIDE. SEE DETAIL 1.



SECTION C–C



SECTION D–D

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

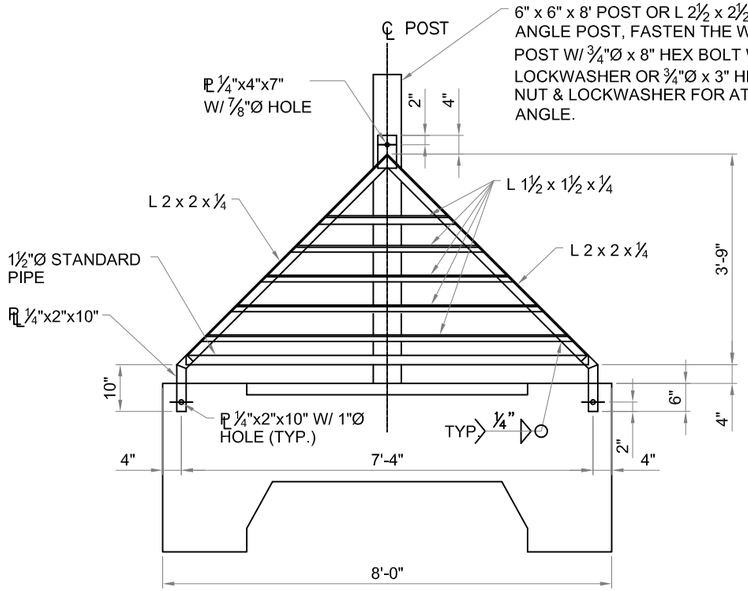
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

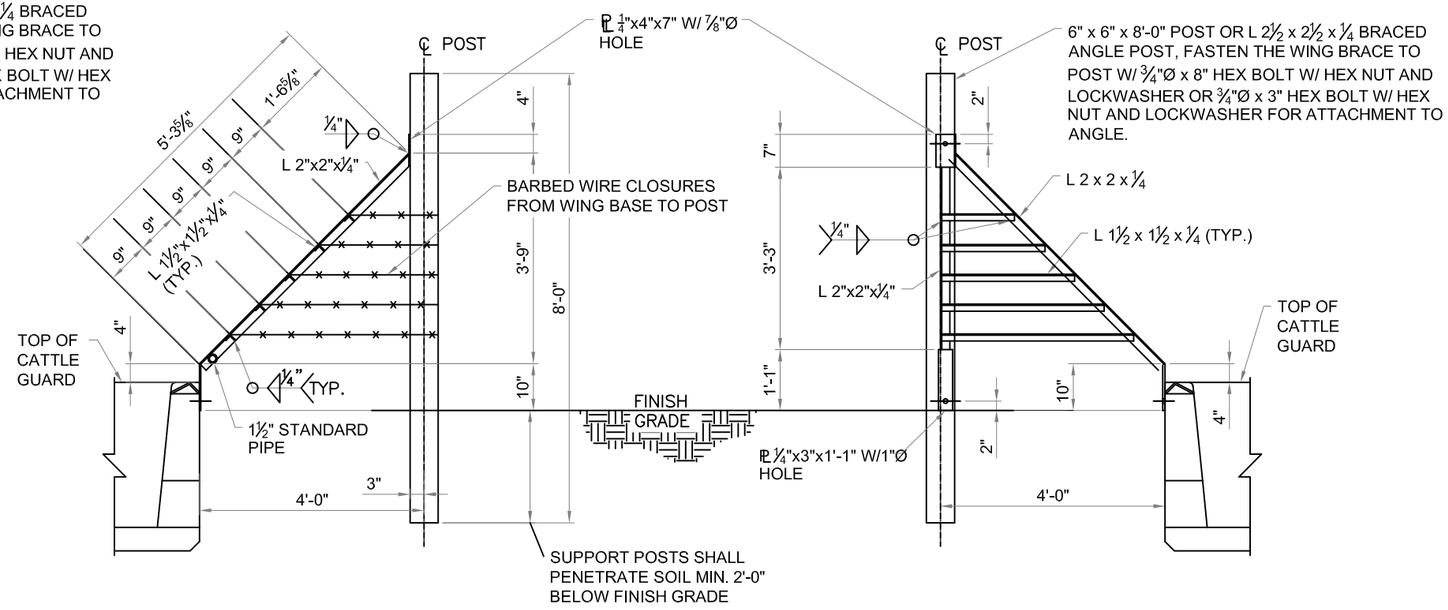
CATTLE GUARD PRECAST
CONCRETE AND STEEL BASE DETAILS

610–01–2/3 2 OF 3

DESIGNED BY: KHC DRAWN BY: TB CHECKED BY: SK



FRONT ELEVATION

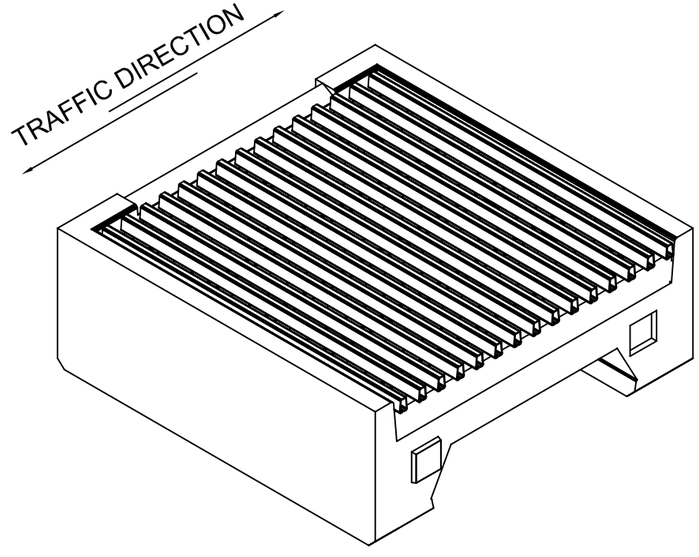


SIDE ELEVATION

SIDE ELEVATION

ALTERNATE POST AND BRACE ASSEMBLY

POST AND BRACE ASSEMBLY



ISOMETRIC VIEW OF END UNIT

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

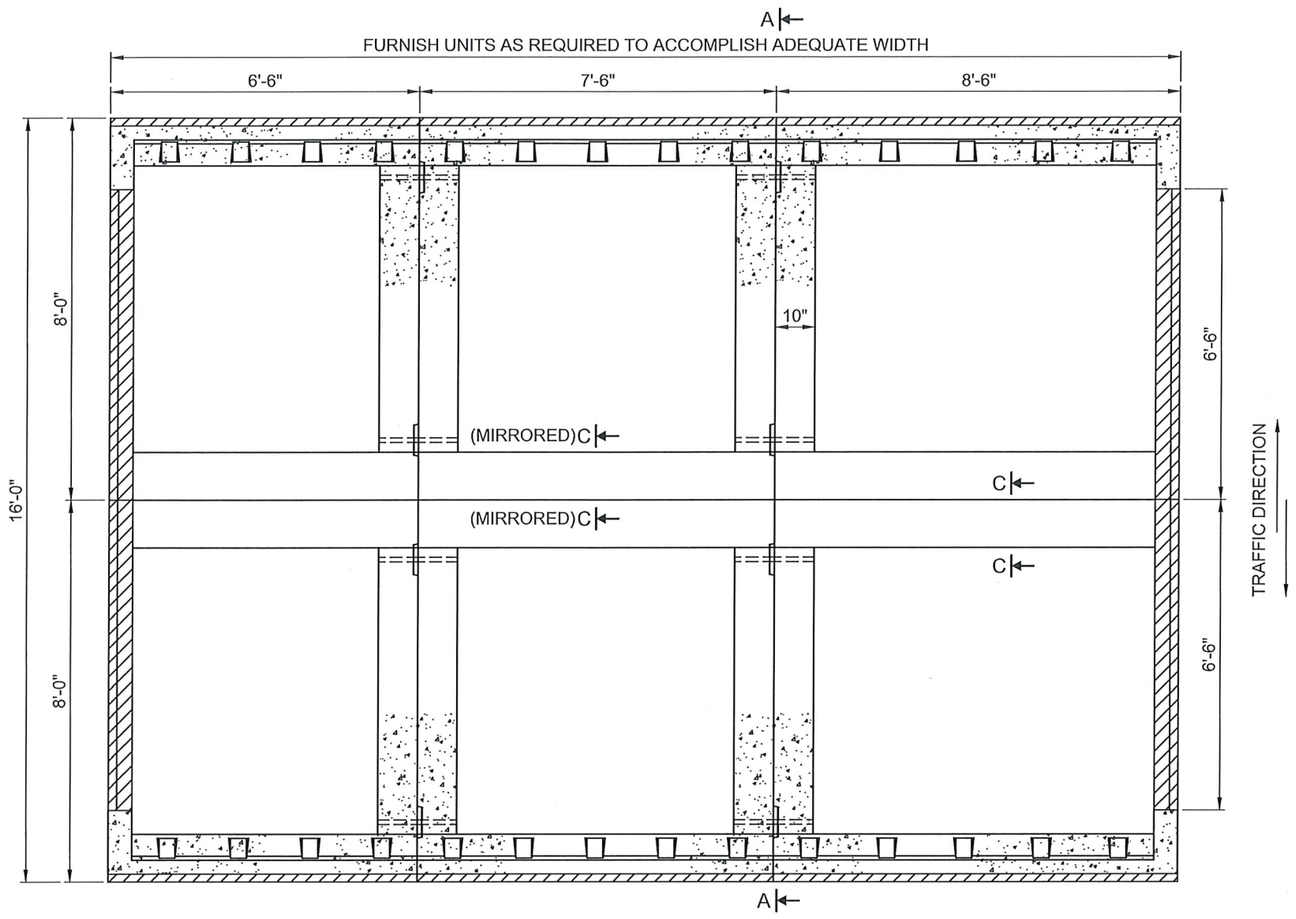
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

KATHY CROWELL
NEW MEXICO
22934
PROFESSIONAL ENGINEER
2/22/22

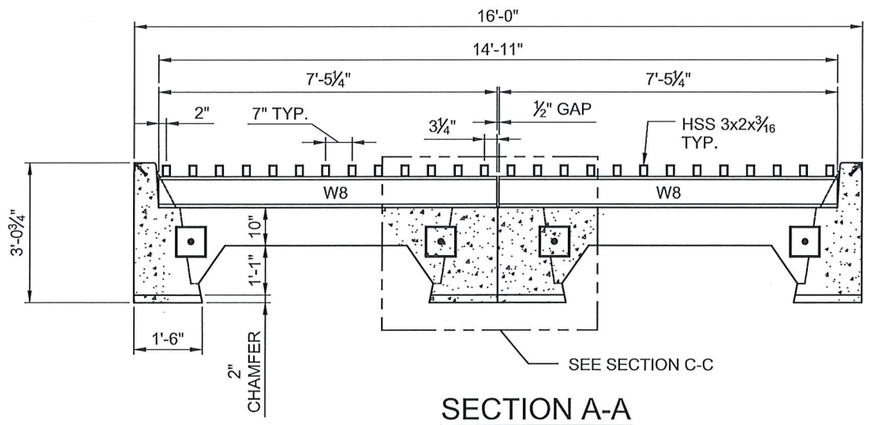
CATTLE GUARD POST
AND BRACE ASSEMBLY DETAILS

DESIGNED BY: KHC DRAWN BY: TB CHECKED BY: SK

610-01-3/3



PLAN



SECTION A-A

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
2. STEEL STRUCTURES SHALL CONFORM TO NMDOT SECTION 541 - "STEEL STRUCTURES" OF THE STANDARD SPECIFICATIONS AND AASHTO M270, GRADE 36. TUBING SHALL CONFORM TO ASTM 500, GRADE B.
3. BOLTS, NUT, AND WASHERS SHALL BE GALVANIZED PER SECTION 542 - "HIGH-STRENGTH BOLTS".
4. WELDING SHALL MEET THE REQUIREMENTS OF THE ANSI/AWS D1.1 STRUCTURAL WELDING CODE, AND SECTION 541 - "STEEL STRUCTURES" OF THE STANDARD SPECIFICATION.
5. PAINTING OF STRUCTURAL STEEL SHALL CONFORM TO SECTION 545 OF THE STANDARD SPECIFICATIONS "PROTECTIVE COATING OF MISCELLANEOUS STRUCTURAL STEEL". COLOR SHALL BE "SAFETY YELLOW."
6. SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH 610 - "CATTLE GUARDS". THE CONTRACTOR MAY SUBSTITUTE FLOWABLE FILL FOR THE SUBGRADE PREPARATION. NO ADDITIONAL PAYMENT SHALL BE MADE.
7. THE CONTRACTOR SHALL SLOPE THE BASES OF THE GAME GUARDS AS REQUIRED TO PROVIDE ROADWAY CROWNS OR SUPERELEVATION.
8. STEEL GRID UNITS:
   - WIDTH MUST BE CONSISTENT WITH THE OVERALL GAME GUARD WIDTH.
   - SPACING OF STEEL COMPONENTS MAY BE REDUCED BUT MAY NOT EXCEED SPACING SHOWN.
9. MODIFICATIONS OF MINOR DIMENSIONS TO ACCOMMODATE FABRICATION PREFERENCES MAY BE PERMITTED AT THE DISCRETION OF THE PROJECT MANAGER.
10. ONE PAIR OF CATTLEGUARD POST AND BRACE ASSEMBLIES ARE REQUIRED AT EACH GAMEGUARD LOCATIONS. SEE STD. DWG. 610-01-3/3.
11. TYPICAL BUTT JOINT DESIGN IS SHOWN ON SECTION C-C ON STD. DWG. 602-02-2./2.
12. FOR ALL PRECAST BASE DESIGN REQUIREMENTS, SEE STANDARD DRAWING 610-01.

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

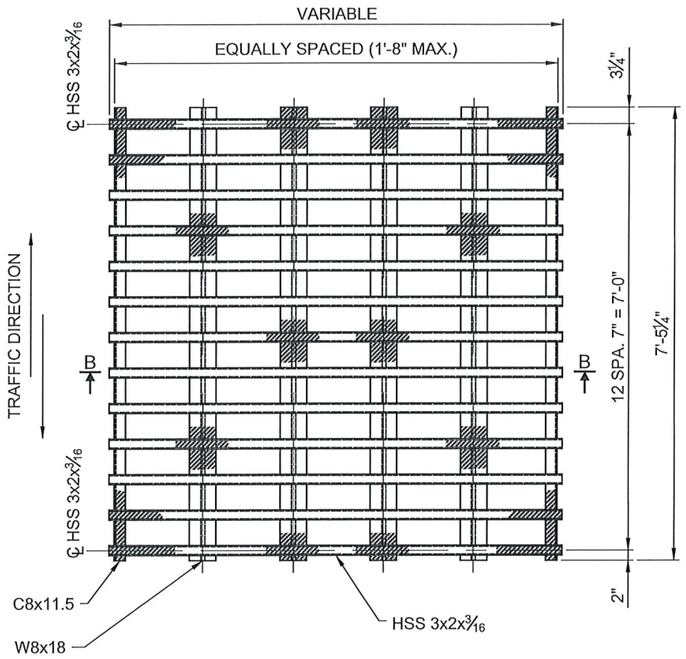
WILLIAM DAVID KESSLER
NEW MEXICO
25646
PROFESSIONAL ENGINEER
4-26-2022

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

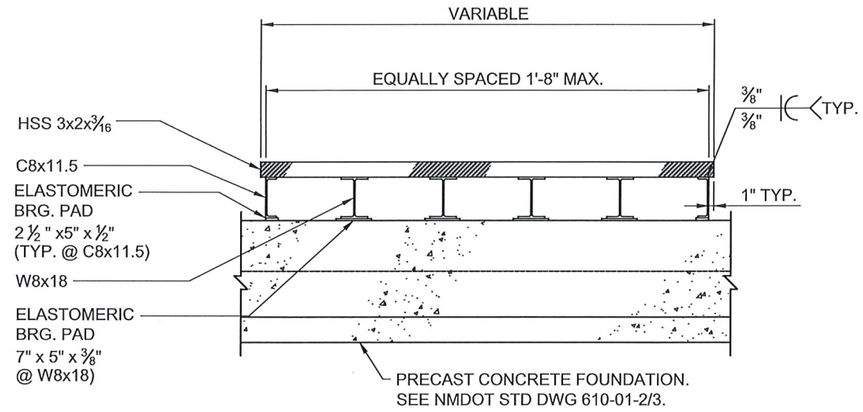
GAME GUARD PLAN
AND ELEVATION

DESIGNED BY: WM DRAWN BY: TB CHECKED BY: OB

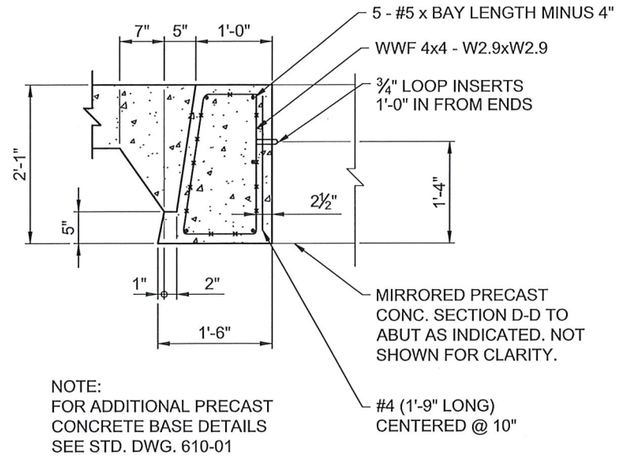
610-02-1/2



PLAN

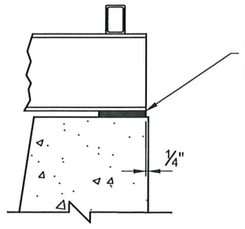


SECTION B-B



NOTE:
FOR ADDITIONAL PRECAST
CONCRETE BASE DETAILS
SEE STD. DWG. 610-01

SECTION C-C



NOTE:
SEE SECTION C-C FOR
REINFORCING.

BEARING PAD DETAILS
CONCRETE FOUNDATION

WILLIAM DAVID KESSLER
NEW MEXICO
25646
PROFESSIONAL ENGINEER
4-26-2022

THIS STANDARD DRAWING IS FOR USE ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	BY	DESCRIPTION

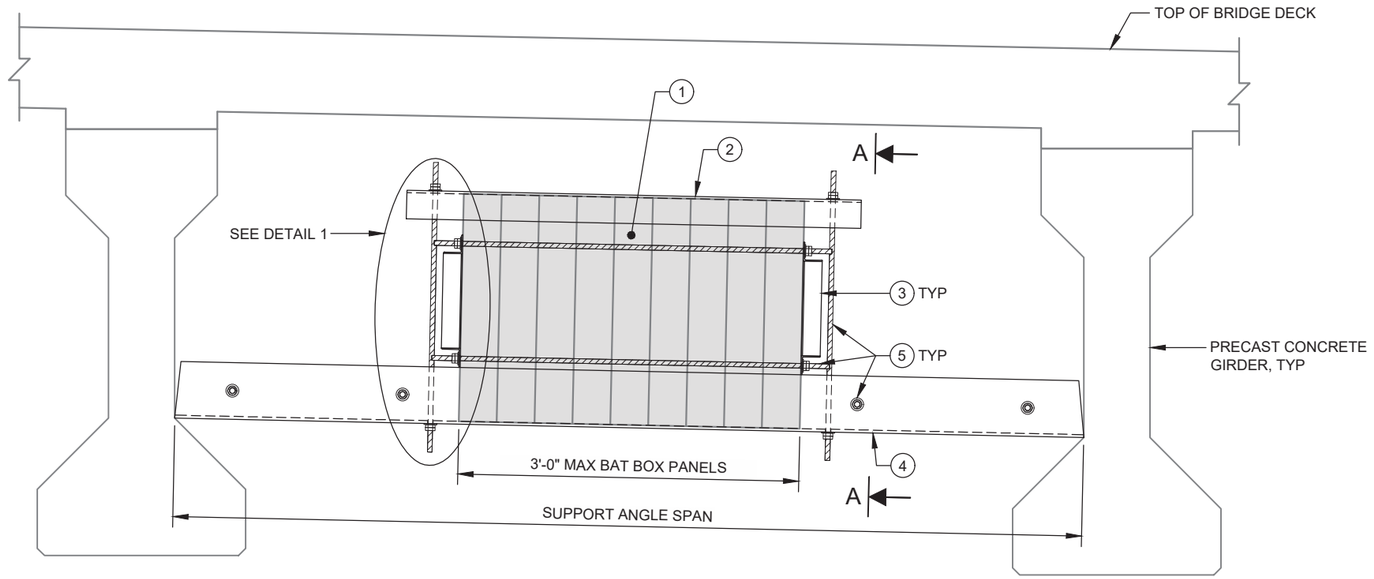
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

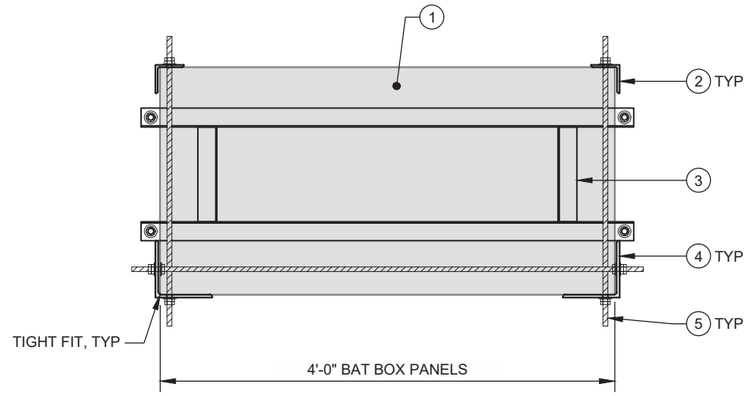
METAL GRATE PLAN
AND MISC DETAILS

DESIGNED BY: WM DRAWN BY: TB CHECKED BY: OB

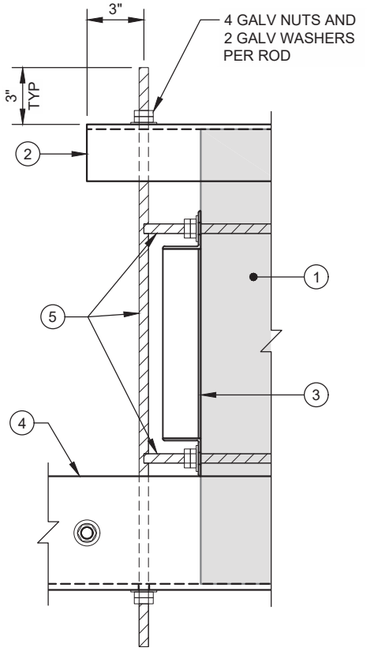
610-02-2/2



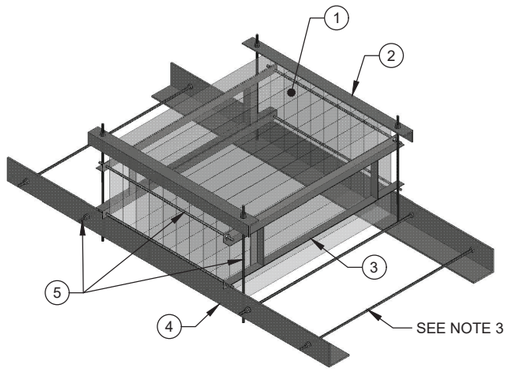
BAT BOX GIRDER MOUNTING RACK ASSEMBLY



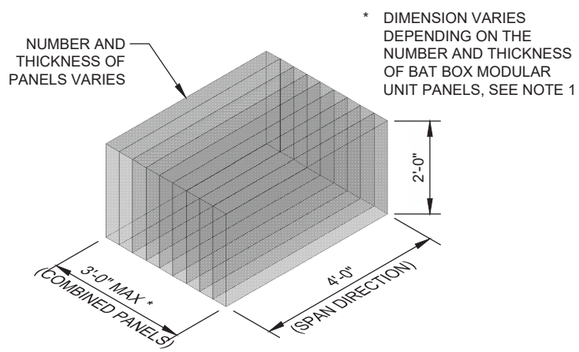
SECTION A-A



DETAIL 1



ISOMETRIC VIEW
BAT BOX GIRDER MOUNTING RACK ASSEMBLY



ISOMETRIC VIEW
(1) BAT BOX MODULAR UNIT PANELS

NOTES

1. THE DIMENSIONS ON THIS SHEET SUPPORT THE DESIGN WEIGHT OF 1775 LBS. IT IS ACCEPTABLE FOR THIS DESIGN TO BE USED WITH SMALLER DIMENSIONS AND LESSER WEIGHTS.
2. LOCATION(S) OF BAT BOX(ES) AND THE CONFIGURATION OF MODULAR BAT UNIT PANELS SHALL BE PROVIDED IN THE PLANS.
3. TIGHTEN NUTS FOR THREADED RODS AT THE SUPPORT ANGLES PRIOR TO INSTALLING MODULAR BAT UNIT PANELS.
4. ALL NUTS SHALL BE INSTALLED SNUG TIGHT, DO NOT OVERTIGHTEN.

DESIGN DATA

DESIGNED IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.

DESIGN STRESSES:
STRUCTURAL STEEL:
AASHTO M-270, Fy = 36,000 PSI (ANGLES, PLATE)

DEAD LOAD: 1175 LBS (MAXIMUM) TOTAL PANELS

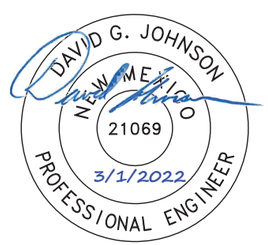
LIVE LOAD:
250 LB EVENLY DISTRIBUTED LIVE LOAD FOR BATS AND GUANO
250 LB POINT MAINTENANCE LIVE LOAD

MAXIMUM WEIGHT OF BAT BOX FRAME AND MODULAR UNIT PANELS (FOR INFORMATION ONLY)

COMPONENT	DESCRIPTION OF COMPONENT	STEEL WEIGHT (LBS)	COMPONENT WEIGHT (LBS)
1	BAT BOX MODULAR UNIT PANELS	-	1775 (MAX)
2	TOP CLAMP ANGLES	39	-
3	ANGLE WELDMENTS	34	-
4	SUPPORT ANGLES	298 (MAX)	-
5	1/2" DIA GALVANIZED ALL-THREAD RODS WITH GALVANIZED WASHERS AND NUTS	25	-
MOUNTING RACK STEEL WEIGHT		396 (MAX)	-
TOTAL WEIGHT OF BAT BOX WITH MOUNTING RACK		2171 (MAX)	

NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

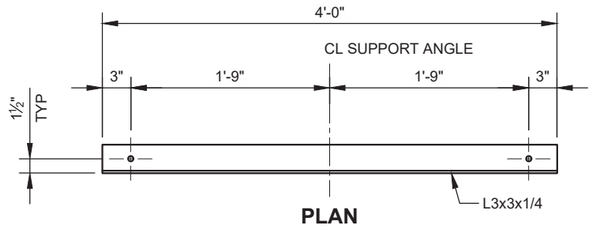


NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

BAT BOX
GIRDER MOUNTING ASSEMBLY

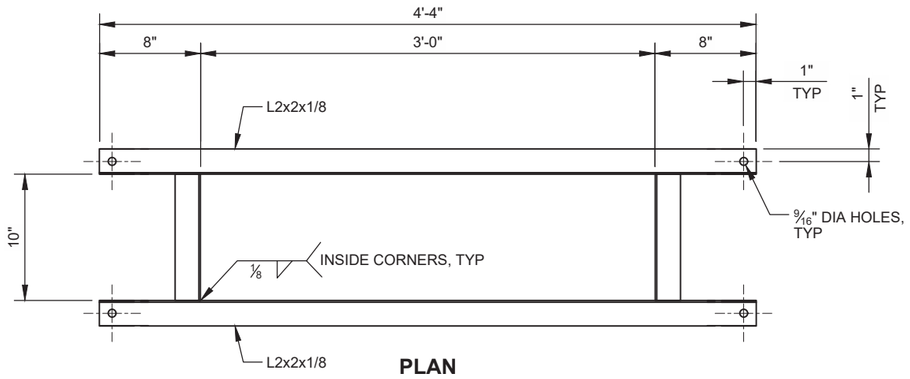
DESIGNED BY: DGJ DRAWN BY: JKP CHECKED BY: KHC

635-01-1/2

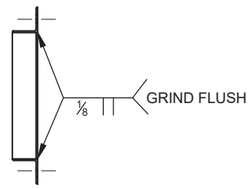


PLAN

② TOP CLAMP ANGLE DETAIL

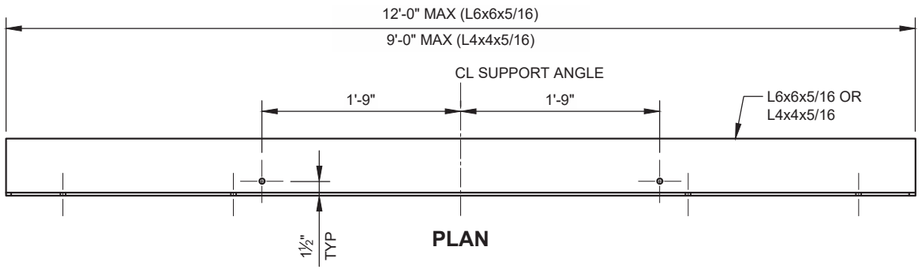


PLAN

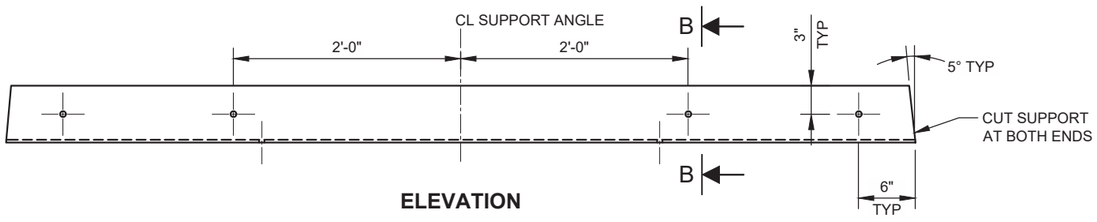


SIDE

③ ANGLE WELDMENT DETAIL

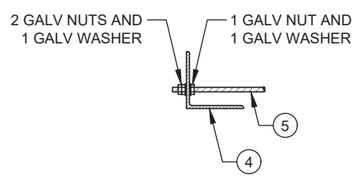


PLAN



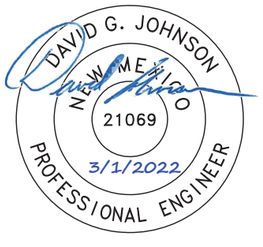
ELEVATION

④ SUPPORT ANGLE DETAIL



SECTON B-B

DESIGNED BY: DGJ DRAWN BY: JKP CHECKED BY: KHC



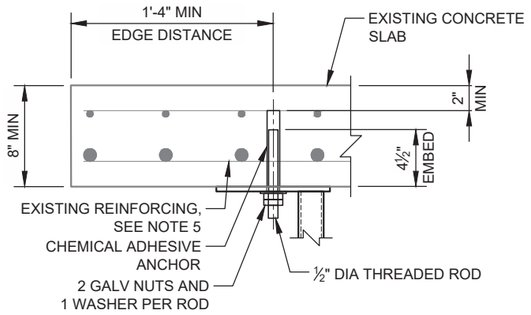
NO.	DATE	BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

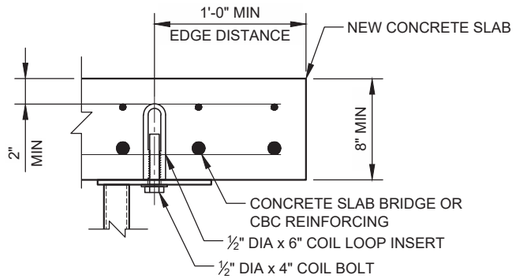
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

BAT BOX
GIRDER MOUNTING ASSEMBLY

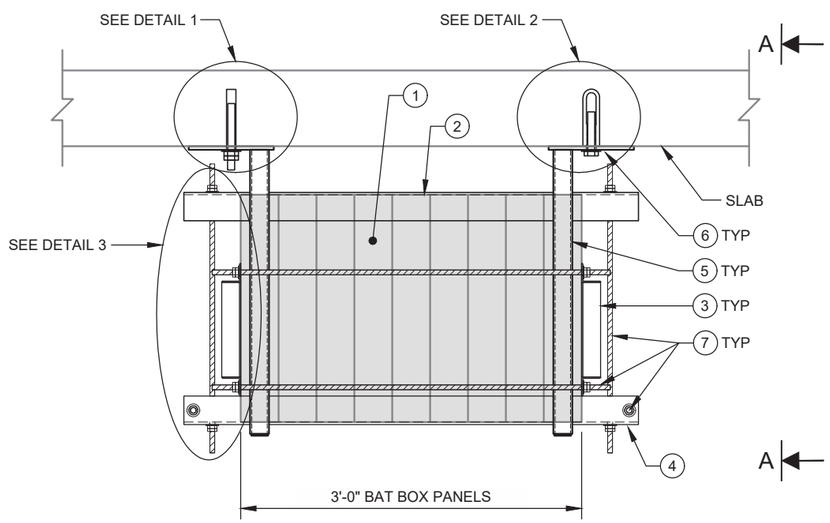
635-01-2/2



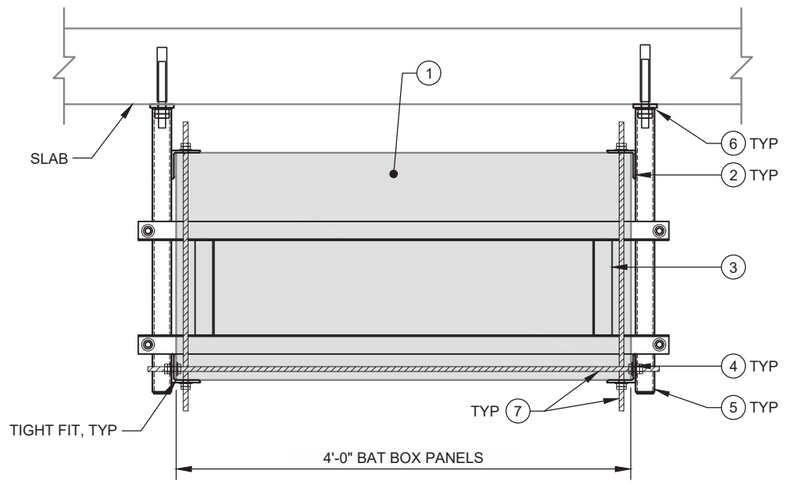
DETAIL 1
EXISTING SLAB



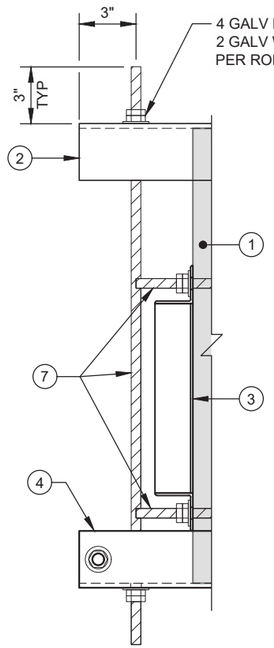
DETAIL 2
NEW SLAB



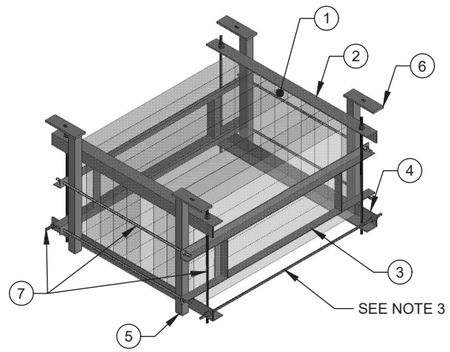
SLAB MOUNTING RACK ASSEMBLY



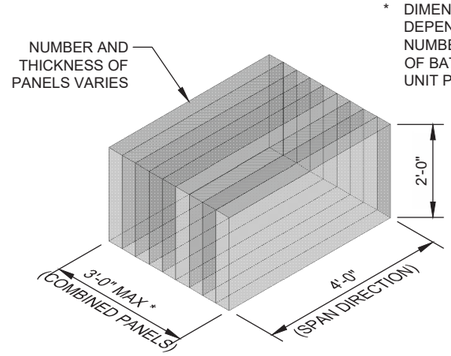
SECTION A-A



DETAIL 3



ISOMETRIC VIEW
SLAB MOUNTING RACK ASSEMBLY



ISOMETRIC VIEW
(1) BAT BOX MODULAR UNIT PANELS

* DIMENSION VARIES DEPENDING ON THE NUMBER AND THICKNESS OF BAT BOX MODULAR UNIT PANELS, SEE NOTE 1

MAXIMUM WEIGHT OF BAT BOX FRAME AND MODULAR UNIT PANELS (FOR INFORMATION ONLY)

COMPONENT	DESCRIPTION OF COMPONENT	STEEL WEIGHT (LBS)	COMPONENT WEIGHT (LBS)
1	BAT BOX MODULAR UNIT PANELS	-	1775 (MAX)
2	TOP CLAMP ANGLES	39	-
3	ANGLE WELDMENTS	37	-
4	SUPPORT ANGLES	39	-
5	HSS TUBING, VERTICAL POSTS	43	
6	STEEL FOOT PLATE	13	-
7	1/2" DIA GALVANIZED ALL-THREAD RODS WITH GALVANIZED WASHERS AND NUTS	19	
MOUNTING RACK STEEL WEIGHT		190	-
TOTAL WEIGHT OF BAT BOX WITH MOUNTING RACK			1965 (MAX)

NOTES

1. THE DIMENSIONS ON THIS SHEET SUPPORT THE DESIGN WEIGHT OF 1775 LBS. IT IS ACCEPTABLE FOR THIS DESIGN TO BE USED WITH SMALLER DIMENSIONS AND LESSER WEIGHTS.
2. LOCATION(S) OF BAT BOX(ES) AND THE CONFIGURATION OF MODULAR BAT UNIT PANELS SHALL BE PROVIDED IN THE PLANS.
3. TIGHTEN NUTS FOR THREADED RODS AT THE SUPPORT ANGLES PRIOR TO INSTALLING MODULAR BAT UNIT PANELS.
4. ALL NUTS SHALL BE INSTALLED SNUG TIGHT, DO NOT OVERTIGHTEN.
5. FIELD LOCATE EXISTING REINFORCING USING NON-DESTRUCTIVE METHOD APPROVED BY THE PROJECT MANAGER PRIOR TO DRILLING INTO EXISTING CONCRETE. POSITION ANCHORS TO AVOID EXISTING REINFORCING.

DESIGN DATA

DESIGNED IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.

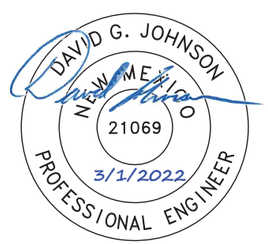
DESIGN STRESSES:
REINFORCED CONCRETE:
f'c = 3,000 PSI AT 28 DAYS (MINIMUM)

STRUCTURAL STEEL:
AASHTO M-270, Fy = 36,000 PSI (ANGLES, PLATE)
ASTM A500 GR B, Fy = 46,000 PSI (HSS TUBES)

DEAD LOAD: 1175 LBS (MAXIMUM) TOTAL PANELS

LIVE LOAD:
250 LB EVENLY DISTRIBUTED LIVE LOAD FOR BATS AND GUANO
250 LB POINT MAINTENANCE LIVE LOAD

ANCHOR BOLT TENSION:
Nu = 2300 LB (FACTORED LOAD)



NO.	DATE	BY	DESCRIPTION

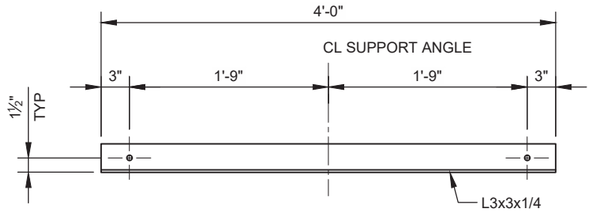
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

BAT BOX
SLAB MOUNTING ASSEMBLY

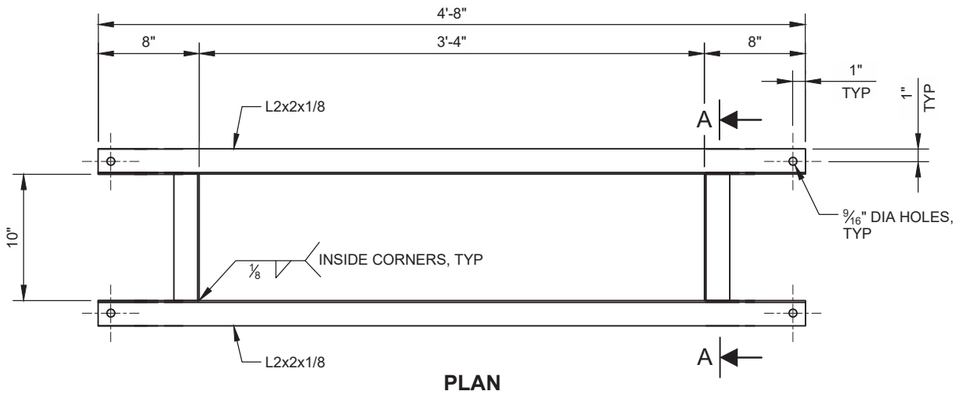
635-02-1/2

DESIGNED BY: DGJ DRAWN BY: JKP CHECKED BY: KHC



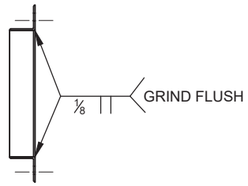
PLAN

② TOP CLAMP ANGLE DETAIL

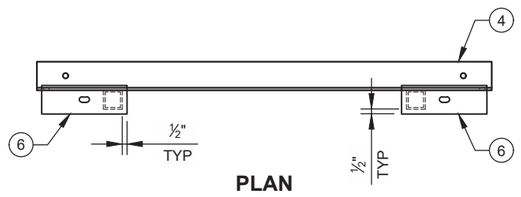


PLAN

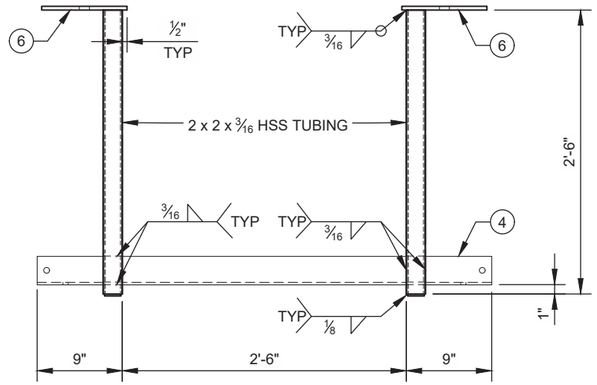
③ ANGLE WELDMENT DETAIL



SECTON A-A

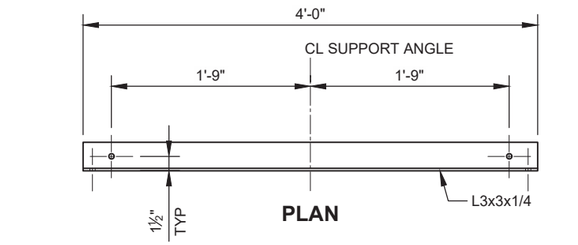


PLAN

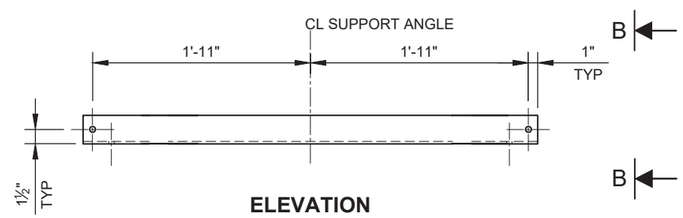


ELEVATION

⑤ SUPPORT FRAME DETAIL

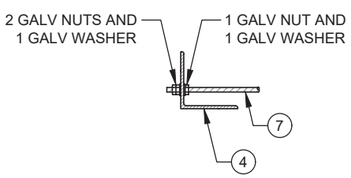


PLAN

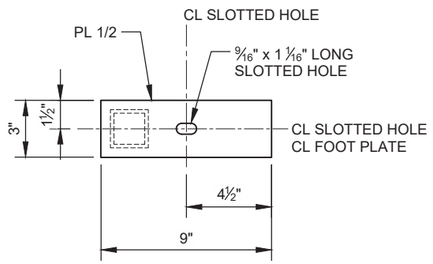


ELEVATION

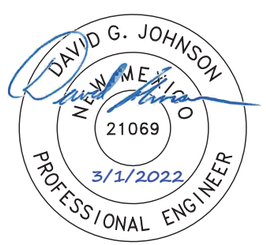
④ SUPPORT ANGLE DETAIL



SECTON B-B



⑥ FOOT PLATE DETAIL



NO.	DATE	BY	DESCRIPTION

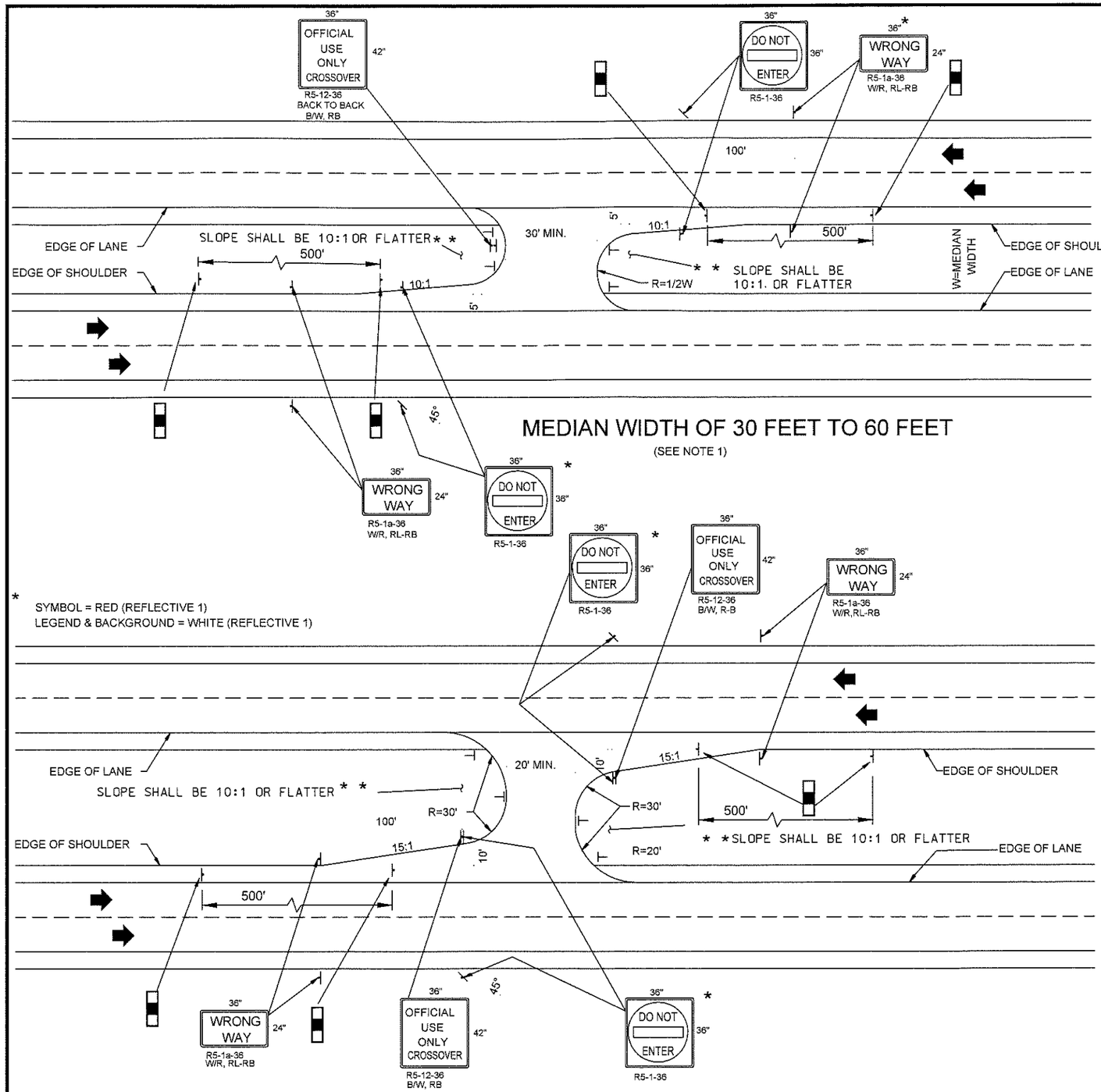
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

BAT BOX
SLAB MOUNTING ASSEMBLY

635-02-2/2

DESIGNED BY: DGJ DRAWN BY: JKP CHECKED BY: KHC

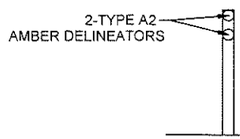


MEDIAN WIDTH OF 30 FEET TO 60 FEET

(SEE NOTE 1)

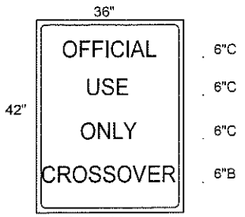
MEDIAN WIDTH GREATER THAN 60 FEET

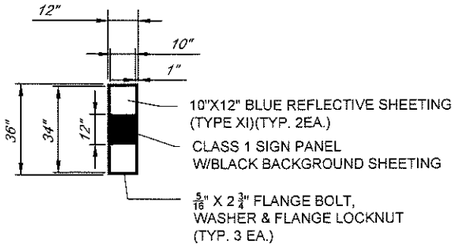
* * SLOPE SHALL BE 20:1 OR FLATTER WHERE SPEED LIMIT IS 70 MPH OR HIGHER



DELINEATOR DETAIL

⊣ = TYPE A2 DOUBLE AMBER DELINEATOR - REFLECTOR (REFLECTIVE LENSES FACING TRAFFIC SEE DETAIL).





NOTES:

1. CROSSOVERS WITH WIDTHS LESS THAN 30 FEET SHOULD BE DESIGNED ON A PROJECT SPECIFIC BASIS.

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

AFSHIN JIAN NEW MEXICO 16226 2-17-22 PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

OFFICIAL MEDIAN
CROSSOVER

APPROVED: _____ DESIGN ENGINEER DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

701-20-1/1

TRAFFIC CONTROL GENERAL NOTES

1. **TRAFFIC CONTROL PLAN:** THIS TRAFFIC CONTROL PLAN REPRESENTS A SUGGESTED METHOD FOR TRAFFIC CONTROL DURING CONSTRUCTION. ADJUSTMENTS TO THE DETAILS OF THIS TRAFFIC CONTROL PLAN 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 TRAFFIC CONTROL PLAN OR SEQUENCE OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT AT LEAST ONE (1) 11"X17" COPY OF THE PROPOSED TRAFFIC CONTROL PLAN TO THE PROJECT MANAGER AT LEAST TWO (2) WEEKS PRIOR TO IMPLEMENTATION. THE TRAFFIC CONTROL PLAN SHALL CONFORM TO THE CURRENT EDITIONS OF THE MUTCD, NMDOT STANDARD SPECIFICATIONS AND AASHTO ROADSIDE DESIGN GUIDE. THE TRAFFIC CONTROL PLAN 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 TRAFFIC CONTROL PLAN AND ANY ADDITIONAL DEVICES ASSOCIATED WITH THE TRAFFIC CONTROL PLAN SHALL BE INCIDENTAL TO ITEM NUMBER 618000, "TRAFFIC CONTROL MANAGEMENT".

2. **TRAFFIC CONTROL:**

   A. THE CONTRACTOR SHALL NOT USE TYPE I OR TYPE II BARRICADES ON ROADWAYS WITH SPEED LIMIT GREATER THAN 40 MPH.

   B. THE WORK ZONE SHALL COMPLY WITH, BUT NOT LIMITED TO MUTCD AND NCHRP 476 GUIDELINES FOR DESIGN AND OPERATION OF NIGHTTIME TRAFFIC CONTROL.

3. **PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS):** ALL PCMS MESSAGES SUBMITTED PRIOR TO OR DURING CONSTRUCTION SHALL BE APPROVED BY THE PROJECT MANAGER.

4. **TEMPORARY STRIPING:** THE CONTRACTOR SHALL PLACE ALL TEMPORARY STRIPING, MARKINGS, TAPE BEFORE OPENING ANY WORK ZONE OR PORTION OF A WORK ZONE IN ACCORDANCE WITH THE MUTCD AND THE APPROVED TRAFFIC CONTROL PLAN.

5. **CLEAR ZONE:** THE CONTRACTOR SHALL PROPERLY SHIELD AND OUTLINE ALL STATIONARY OBJECTS WITHIN THE CLEAR ZONE WITH DRUMS MOUNTED WITH TYPE "A" WARNING LIGHTS. THE TYPE "A" WARNING LIGHTS SHALL BE MOUNTED AND OPERATED PER MUTCD. CONTRACTOR SHALL NOT USE VERTICALLY MOUNTED RETRO-REFLECTIVE MATERIAL IN LIEU OF TYPE "A" WARNING LIGHTS.

AFSHIN JIANG
NEW MEXICO
16226
12/11/2019
PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

TRAFFIC CONTROL
GENERAL NOTES

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

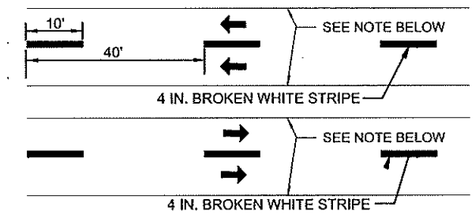
702-01-1/1

FIGURE 1

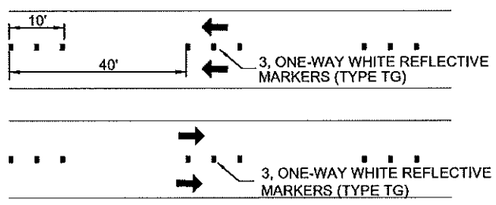
SHORT TERM WORK ZONE INTERIM MARKINGS (IN PLACE FOR LESS THAN 14 CALENDAR DAYS)
(MINIMUM OF 2 COATS OR AS DIRECTED BY THE PROJECT MANAGER)

4 LANE DIVIDED ROADWAY

PAINTED MARKINGS OR MARKING TAPE

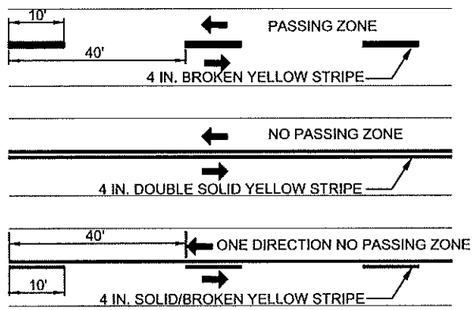


TEMPORARY REFLECTIVE RAISED PAVEMENT MARKERS

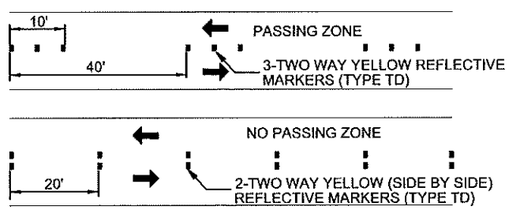


2 LANE TWO-WAY ROADWAY

PAINTED MARKINGS OR MARKING TAPE



TEMPORARY REFLECTIVE RAISED PAVEMENT MARKERS



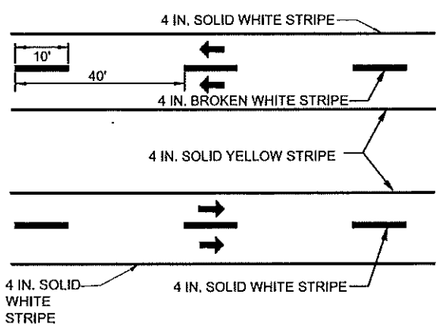
NOTE: EDGE LINES SHALL BE ADDED IF SHOWN IN THE CONSTRUCTION SIGNING AND STRIPING PLANS.

FIGURE 1A

STANDARD WORK ZONE INTERIM MARKINGS (IN PLACE FOR 14 CALENDAR DAYS OR MORE)
(MINIMUM OF 2 COATS OR AS DIRECTED BY THE PROJECT MANAGER)

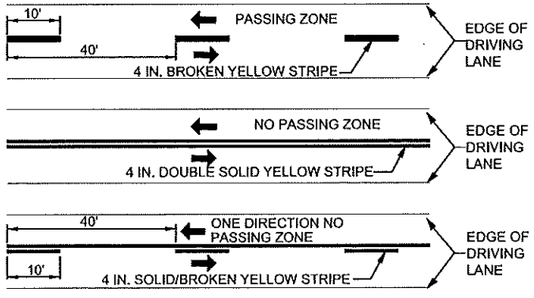
4 LANE DIVIDED ROADWAY

PAINTED MARKINGS OR MARKING TAPE



2 LANE TWO-WAY ROADWAY

PAINTED MARKINGS OR MARKING TAPE



NOTE: EDGE LINES SHALL BE ADDED IF SHOWN IN THE CONSTRUCTION SIGNING AND STRIPING PLANS.

GENERAL NOTES

WORK ZONE INTERIM MARKINGS:

1. THE CONTRACTOR SHALL PLACE TEMPORARY REFLECTORIZED PAINTED MARKINGS ON EACH LANE OF EACH INTERMEDIATE LIFT OF SURFACING OR MILLED SURFACE AT THE END OF THE DAILY SURFACING OR MILLING OPERATION. THESE MARKINGS SHALL BE PLACED IN ACCORDANCE WITH FIGURE 1 OR FIGURE 1A ON THIS SHEET, OR AS DIRECTED BY THE PROJECT MANAGER.
2. IN THE EVENT TEMPORARY REFLECTORIZED PAINTED MARKINGS CANNOT BE PLACED AS DESCRIBED ABOVE, THE CONTRACTOR SHALL, WITH THE APPROVAL OF THE PROJECT MANAGER, PLACE TEMPORARY MARKING TAPE.
3. THE CONTRACTOR SHALL PLACE REMOVABLE MARKING TAPE OR TEMPORARY REFLECTIVE RAISED PAVEMENT MARKERS AFTER PLACEMENT OF THE FINAL LIFT OF SURFACING. IF PERMANENT MARKINGS ARE NOT PLACED DURING THE SAME WORKING DAY, THESE MARKINGS SHALL BE PLACED IN ACCORDANCE WITH FIGURE 1 OR FIGURE 1A ON THIS SHEET, OR AS DIRECTED BY THE PROJECT MANAGER.
4. GORE AREA STRIPING IS REQUIRED FOR ANY CONSTRUCTION PHASE LASTING 14 DAYS OR LONGER.

AFSHIN JIAN NEW MEXICO 16226 12-11-2019 PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

TEMPORARY TRAFFIC
MARKINGS FOR CONSTRUCTION

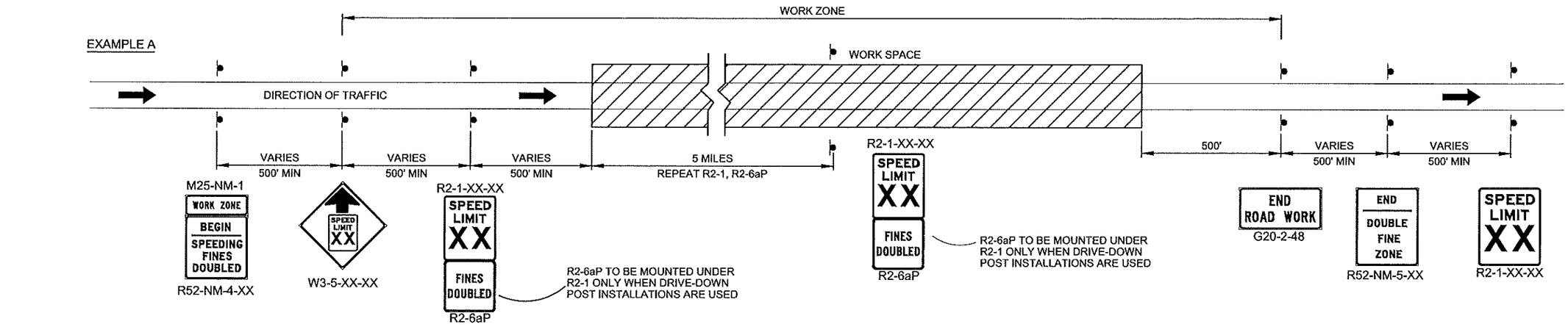
APPROVED: _____ DESIGN ENGINEER _____ DATE

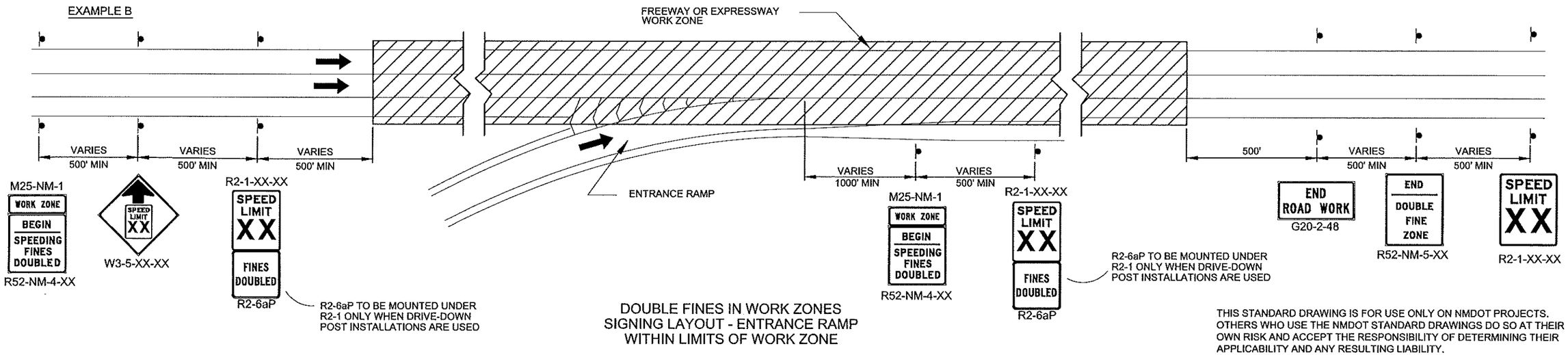
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-02-1/1

DAVID BARBOZA
11-Dec-19

Drawing File: O:\PRELIMINARY DRAWINGS & DOCS\CONSTRUCTION_TRAFFIC_CONTROL\PSE\702-02-1OF1.DWG
9:57 AM





DOUBLE FINES IN WORK ZONES
SIGNING LAYOUT - ENTRANCE RAMP
WITHIN LIMITS OF WORK ZONE

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NOTES

1. DOUBLE FINE AND SPEED LIMIT SIGNS (R52-NM-4, R52-NM-5, R2-1) PLACED ON STEEL SIGN POST/BASE POST SIGN SUPPORTS SHALL BE REMOVED OR COVERED PROMPTLY ONCE WORK ACTIVITIES ARE COMPLETED.
2. DOUBLE FINE SIGNS AND SPEED LIMIT SIGNS (R52-NM-4, R52-NM-5, R2-1) INSTALLED ON PORTABLE SIGN SUPPORTS SHALL ONLY UTILIZE SUPPORTS APPROVED BY THE DEPARTMENT. SIGNS SHALL BE PLACED NO MORE THAN TWO HOURS BEFORE WORK ACTIVITIES ARE TO BEGIN AT THE START OF EACH WORK DAY AND SHALL BE REMOVED AT THE END OF EACH WORK DAY WHEN WORKERS ARE NO LONGER PRESENT.
3. DOUBLE FINE SIGNS (R52-NM-4, R52-NM-5, R2-6aP) SHALL NOT BE USED WHEN WORK ACTIVITIES ARE OUTSIDE THE CLEAR ZONE, FOR SHORT DURATION OPERATIONS (WORK OCCUPYING A LOCATION FOR 1 HOUR OR LESS) AND MOBILE OPERATIONS (WORK MOVING INTERMITTENTLY OR CONTINUOUSLY). SEE THE MUTCD (CURRENT EDITION) FOR MORE INFORMATION.
4. DRAWING IS INTENDED TO SHOW SEQUENCE OF DOUBLE FINE SIGNING ONLY AND IS NOT INTENDED TO BE A COMPLETE CONSTRUCTION SIGNING PLAN. SIGNS SHOWN MAY BE COMBINE WITH OTHER WORK ZONE SIGNING THAT MAY INCLUDE BUT IS NOT LIMITED TO ADVANCE WARNING SIGNS, BOP/EOP SIGNING, SPEED REDUCTION SIGNS, LANE CLOSURES, ETC. SPACING SHALL CONFORM TO THE RECOMMENDATIONS OF THE MOST CURRENT EDITION OF THE MUTCD.
5. DOUBLE FINE SIGNING SEQUENCE SHALL BE REPEATED AT FIVE MILE INTERVALS AND/OR AFTER LOCATIONS WHERE A MAJOR INTERSECTION OR ENTRANCE RAMP OCCURS WITHIN THE LIMITS OF A WORK ZONE.
6. PLACEMENT OF SIGNS IS REQUIRED ON EITHER SIDE OF DIVIDED HIGHWAYS AND FREEWAYS WITH TWO OR MORE LANES EACH DIRECTION.
7. SPEEDS, DISTANCES AND SIGN SIZES MAY VARY IN ACCORDANCE WITH GUIDELINES IN PART 6 OF THE MUTCD OR AS SHOWN ON THE TRAFFIC CONTROL PLANS.

AFSHIN JIAN NEW MEXICO 16226 2-19-20 PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION
1	MAY 2017	P.C.	GENERAL REVISIONS

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

DOUBLE FINES IN WORK ZONES
SIGNING LAYOUT

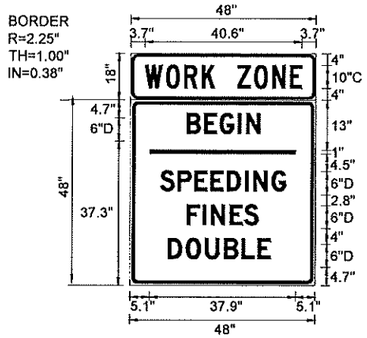
APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-03-1/4

M25-NM-1-48

B/FO

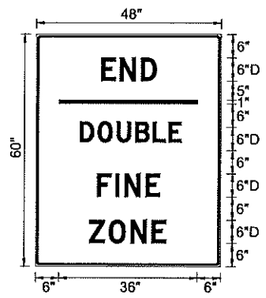


R52-NM-4-48

B/W

BORDER
R=1.5"
TH=0.63"
IN=0.38"

R52-NM-5-48

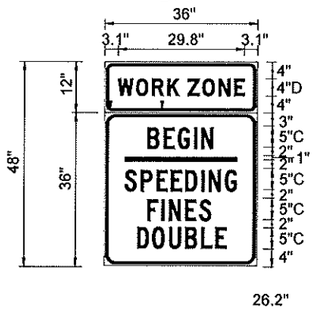


B/W

BORDER
R=3.00"
TH=1.25"
IN=0.75"

M25-NM-1-36

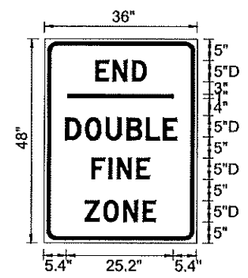
B/FO



R52-NM-4-36

B/W

BORDER
R=2.25"
TH=0.88"
IN=0.63"



R52-NM-5-36

B/W

BORDER
R=2.25"
TH=0.88"
IN=0.63"

NOTE:
REDUCED SIZE M25-NM-1-XX, R52-NM-4-XX AND R52-NM-5-XX SIGNS MAY BE USED IN MULTILANE URBAN AREAS WITH LIMITED SPACE. CONTRACTOR SHALL OBTAIN APPROVAL FOR USE FROM DISTRICT TRAFFIC ENGINEER.

AFSHIN JIAN
NEW MEXICO
16226
2-19-20
PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION
1	MAY 2017	P.C.	Added SP-1a & SP-2a. Removed R2-6aP

REVISIONS (OR CHANGE NOTICES)

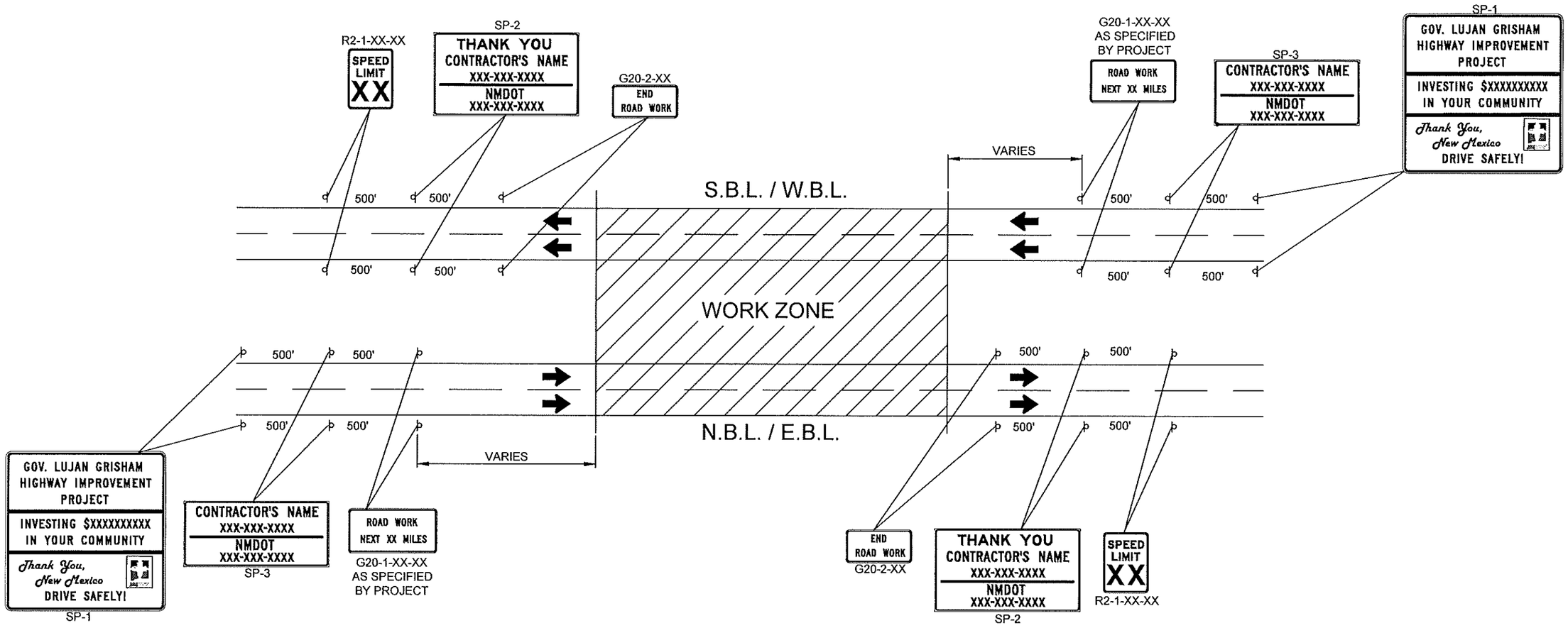
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

DOUBLE FINES IN WORK ZONES SIGN FACE DETAILS

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-03-2/4



NOTES:

1. SIGNS G20-1-XX, G20-2-48, R2-2-XX-XX, SP-1, SP-2 AND SP-3 (OR SP-1a, SP-2a AND SP-3a) SHALL BE IN PLACE IN ADVANCE OF THE PROJECT LIMITS AND SHALL REMAIN IN PLACE THROUGH THE DURATION OF THE PROJECT OR AS DIRECTED BY THE PROJECT MANAGER. THESE SHALL BE MOUNTED ON A STEEL POST(S) AND BASE BREAKAWAY SYSTEM, PER THE 701-02 STANDARD DRAWINGS.
2. SEE THE 701-02 STANDARD DRAWINGS FOR SIGN SUPPORT DETAILS.
3. FOR 2-LANE HIGHWAYS, SIGNS ARE ONLY REQUIRED ON THE RIGHT SIDE OF THE HIGHWAY. FOR INTERSTATES AND 4-LANE DIVIDED HIGHWAYS (AS SHOWN) SIGNS ARE REQUIRED ON RIGHT AND LEFT HAND SIDES OF THE HIGHWAY.
4. DRAWING IS INTENDED TO SHOW SEQUENCE OF PROJECT LIMIT SIGNING ONLY AND IS NOT INTENDED TO BE A COMPLETE CONSTRUCTION SIGNING PLAN. SIGNS SHOWN MAY BE COMBINED WITH OTHER WORK ZONE SIGNING THAT MAY INCLUDE BUT IS NOT LIMITED TO ADVANCE WARNING SIGNS, DOUBLE FINE SIGNING, SPEED REDUCTION SIGNS, LANE CLOSURES, ETC. SPACING SHALL CONFORM TO THE RECOMMENDATIONS OF THE MOST CURRENT EDITION OF THE MUTCD.

AFSHIN JIAN
NEW MEXICO
16226
2-19-20
PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

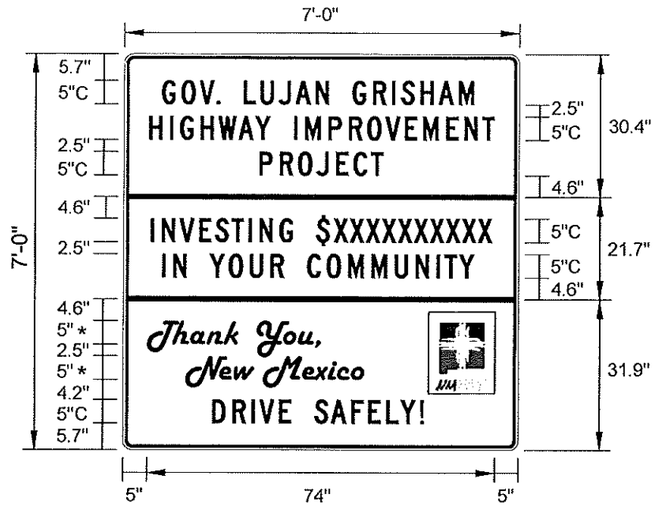
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PROJECT LIMIT SIGNING

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

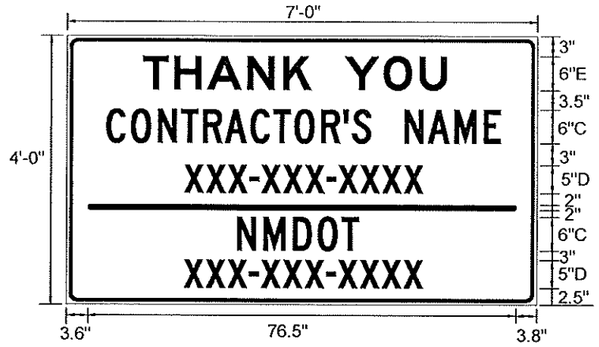
702-03-3/4



SP-1

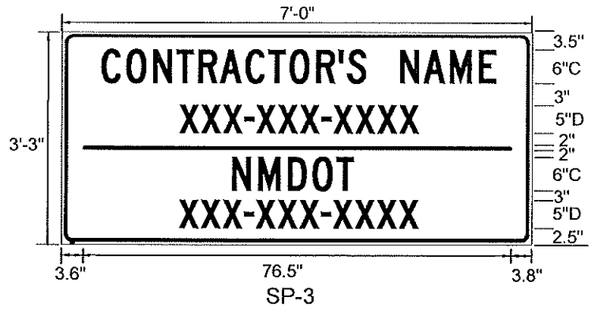
* HARLOW SOLID ITALIC

BORDER THICKNESS=1"
RADIUS=1"
INSET=0
BLACK/FL. ORANGE
NMDOT LOGO: RED/BLUE/YELLOW/WHITE/BLACK



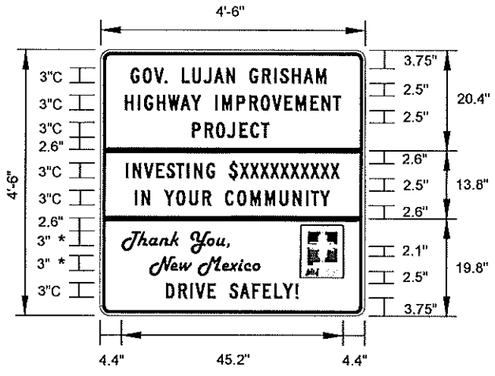
SP-2

BORDER THICKNESS=1"
RADIUS=1"
INSET=0
BLACK/FL. ORANGE



SP-3

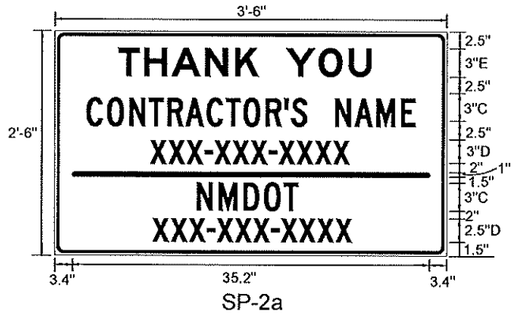
BORDER THICKNESS=1"
RADIUS=1"
INSET=0
BLACK/FL. ORANGE



SP-1a

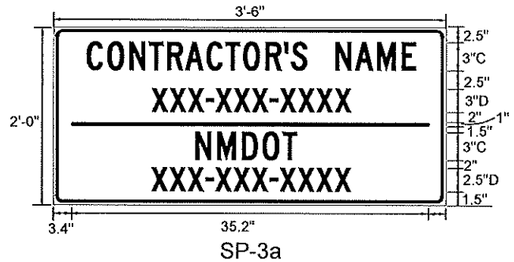
* HARLOW SOLID ITALIC

BORDER THICKNESS=1"
RADIUS=1"
INSET=0
BLACK/FL. ORANGE
NMDOT LOGO: RED/BLUE/YELLOW/WHITE/BLACK



SP-2a

BORDER THICKNESS=1"
RADIUS=1"
INSET=0
BLACK/FL. ORANGE



SP-3a

BORDER THICKNESS=1"
RADIUS=1"
INSET=0
BLACK/FL. ORANGE

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NOTE:
SP-1a, SP-2a AND SP-3a MAY BE USED IN PLACE OF SP-1, SP-2 AND SP-3 SIGNS WHEN CONSTRUCTION IS IN URBAN AREAS WITH LIMITED SPACE FOR INSTALLATION. CONTRACTOR SHALL OBTAIN APPROVAL FOR USE FROM DISTRICT TRAFFIC ENGINEER.

NO.	DATE	REV. BY	DESCRIPTION
1	MAY 2017	P.C.	Added SP-1a & SP-2a. Removed R2-6aP

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

B.O.P AND E.O.P (APPROACH AND DEPARTURE) SIGN FACE DETAILS

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-03-4/4

RUBEN J. MAEZ
19-Feb-20

Drawing File: X:\PRELIMINARY DRAWINGS & DOCS\MAINTENANCE_TRAFFIC_CONTROL\NON-PSE\702-03-4OF4.DWG
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NOTES: APPLIES TO BOTH 702-04-1/2, 702-04-2/2

1. CURVE RADIUS LESS THAN MINIMUM REQUIRES WRITTEN JUSTIFICATION FROM DISTRICT TRAFFIC ENGINEER.
2. SPEED REDUCTION UP TO 20 (TWENTY) MPH OF THE POSTED SPEED LIMIT IS RECOMMENDED DUE TO THE RESTRICTIVE FEATURES PRESENTED BY THE CROSSOVER.
3. DETAILS SHOWN ON THIS DRAWING DEPICT CONSTRUCTION SIGNING, STRIPING AND CHANNELIZATION ONLY. HORIZONTAL AND VERTICAL CURVE DESIGN DATA SHALL BE SHOWN ON A SEPARATE PLAN AND PROFILE DRAWING SIGNED AND SEALED BY A NEW MEXICO LICENSED PROFESSIONAL ENGINEER.
4. SIGN INFORMATION AND SPACING VARY WITH SPEED LIMIT, SEE MUTCD CURRENT EDITION FOR MORE INFORMATION.
5. TEMPORARY WALL BARRIER IS TO BE PLACED AT THE DISCRETION OF THE DESIGN TEAM ON TANGENTS. BLUNT ENDS SHALL BE PROTECTED BY ADDITIONAL ATTENTUATORS.
6. TEMPORARY CONCRETE WALL BARRIER (TCWB) IS A MANDATORY 100 FEET MINIMUM BEYOND POINT OF CURVATURE (P.C.) AND POINT OF TANGENCY (P.T.) OF CROSSOVER CURVES.
7. CONTRACTOR SHALL USE GLARE SHIELDS WHEN TEMPORARY CONCRETE WALL BARRIER IS USED.
8. CONTRACTOR SHALL USE BOTH 702-04-1/2 AND 2/2 FOR TYPICAL CROSSOVER SIGNING.
9. CONTRACTOR SHALL USE RAISED PAVEMENT MARKERS (RPM) @ 80 FOOT SPACING: USE AT TANGENT ROADWAY SECTIONS, INCLUDING BUFFER ZONES.
10. CONTRACTOR SHALL USE RAISED PAVEMENT MARKERS (RPM) @ 40 FOOT SPACING: USE AT TAPERS, AND CROSSOVER CURVE SECTIONS.
11. CONTRACTOR SHALL USE YELLOW RPM's ALONG EITHER SIDE OF CONCRETE WALL BARIER (CWB) AND LEFT EDGE OF TRAVEL LANE AS SHOWN.
12. CONTRACTOR SHALL USE WHITE RPM's EITHER SIDE OF PAVEMENT ALONG EDGE OF TRAVEL LANES AS SHOWN.
13. CONTRACTOR SHALL STRIPE FOR ONLY ONE PAIR OF CROSSOVERS AT A TIME. STRIPING FOR ADJACENT CROSSOVERS IN SUBSEQUENT PHASES NOT ALLOWED.

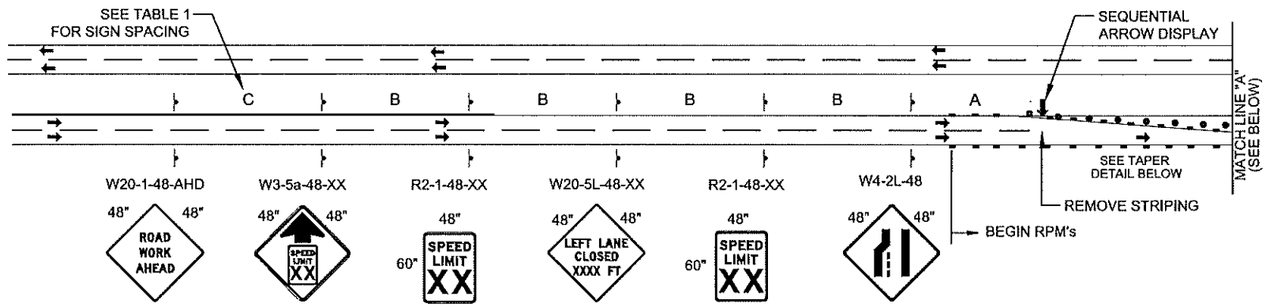
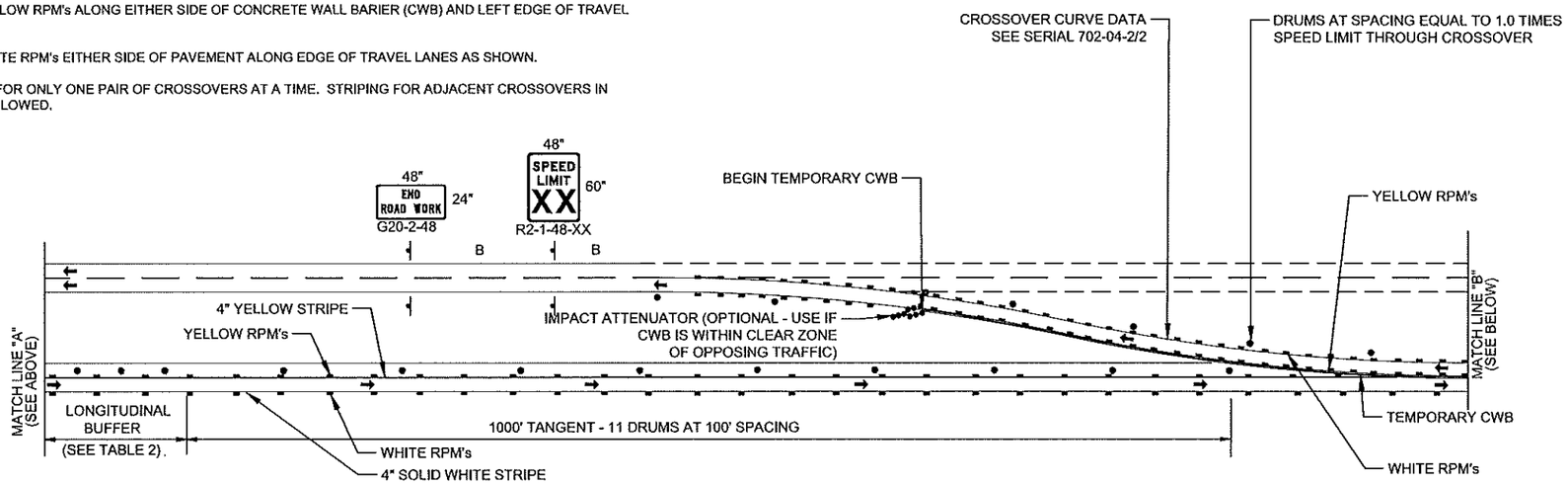


TABLE 2: BUFFER ZONE LENGTH: DISTANCE AS A FUNCTION OF SPEED	
SPEED	DISTANCE
25 MPH	155 FEET
30 MPH	200 FEET
35 MPH	250 FEET
40 MPH	305 FEET
45 MPH	360 FEET
50 MPH	425 FEET
55 MPH	495 FEET
60 MPH	570 FEET
65 MPH	645 FEET
70 MPH	730 FEET
75 MPH	820 FEET

- POSTED SPEED, OR OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING.
- MAXIMUM DRUM SPACING EQUAL TO 2.0 TIMES THE SPEED LIMIT.
- STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED.



NOTE: USE BOTH 702-04-1/2 AND 2/2 FOR TYPICAL CROSSOVER SIGNING.

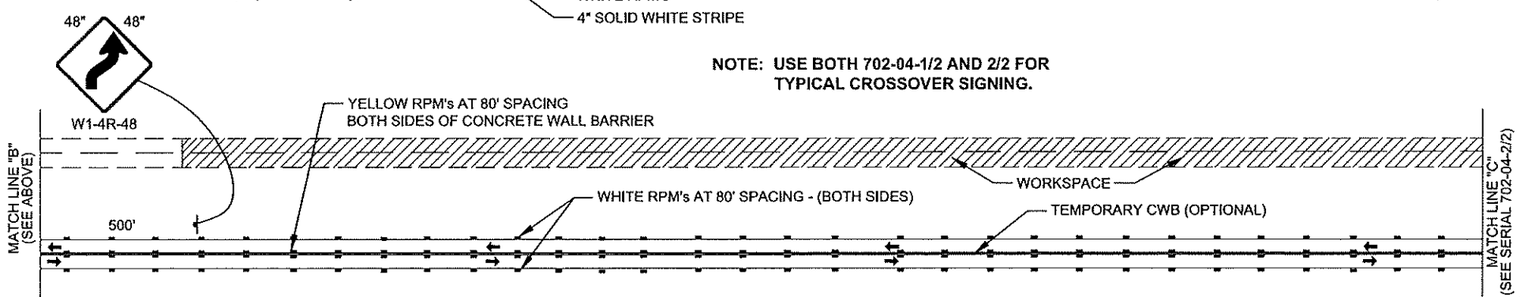
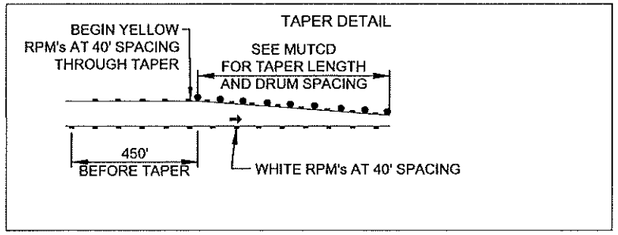


TABLE 1: MEANING OF LETTER CODES ON INTERSTATE AND NON-INTERSTATE CROSSOVERS			
	MINIMUM DISTANCE BETWEEN SIGNS (FEET)		
ROAD TYPE	A	B	C
NON-INTERSTATE	500	500	500
INTERSTATE	1000	1000	1000
BASED ON TABLE 6C-1. RECOMMENDED ADVANCE WARNING SIGN MINIMUM SPACING FROM MUTCD.			



THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

AFSHIN JIAN NEW MEXICO 16226 12-11-2019 PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION
2	APR 2017	P.C.	Combined w/ previous 702-06-1/2

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

4 LANE, INTERSTATE / NON-INTERSTATE, TYPICAL CROSSOVER SIGNING

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-04-1/2

DAVID BARBOZA
11-Dec-19

Drawing File: O:\PRELIMINARY DRAWINGS & DOCS\CONSTRUCTION_TRAFFIC_CONTROL\PSE\702-04-1OF2.DWG
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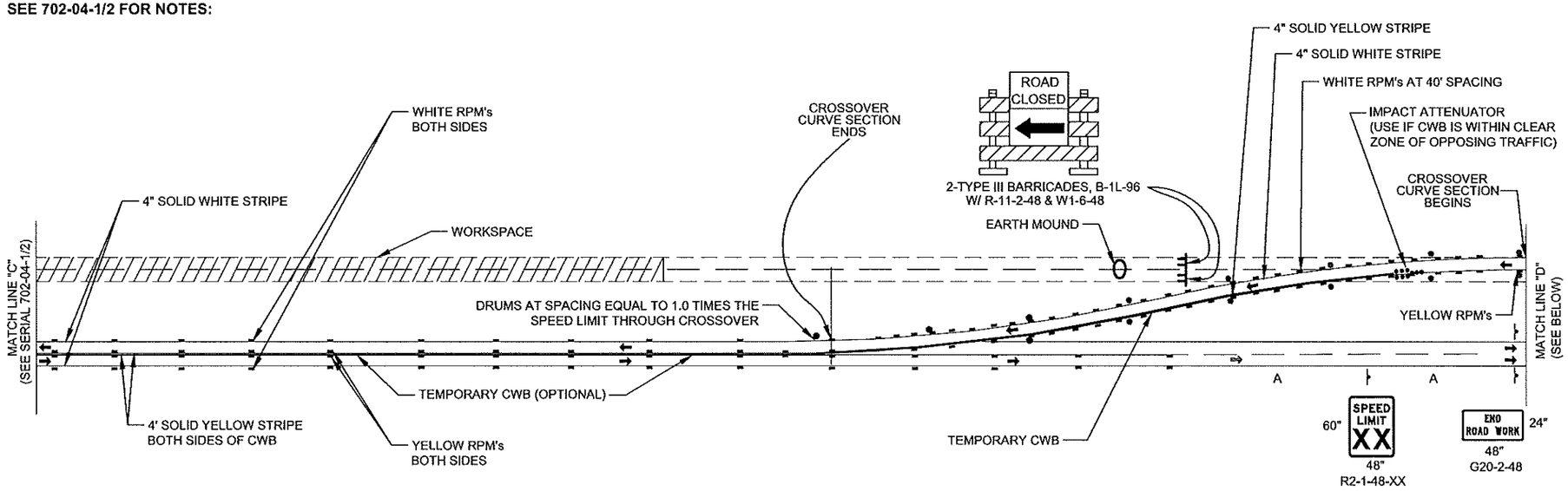
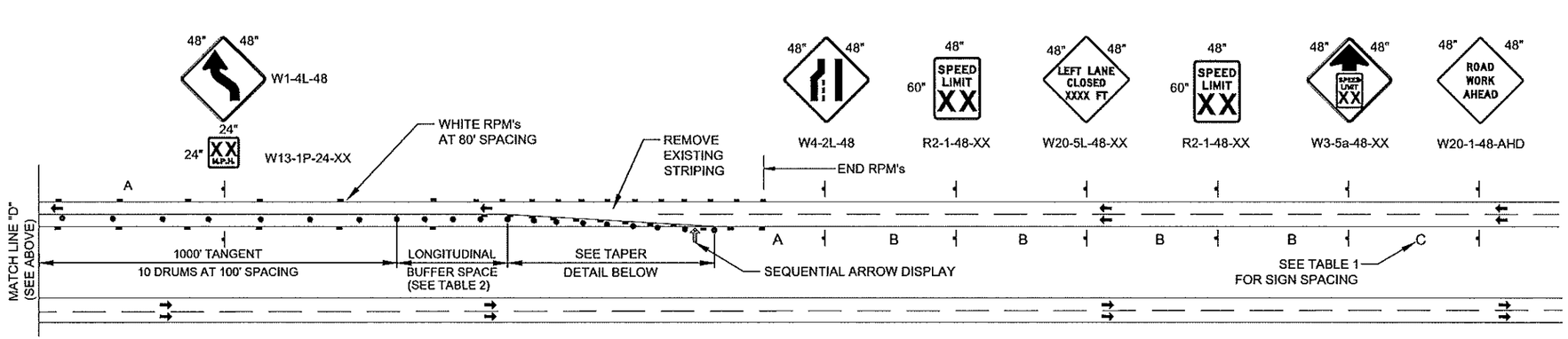
SEE 702-04-1/2 FOR NOTES:

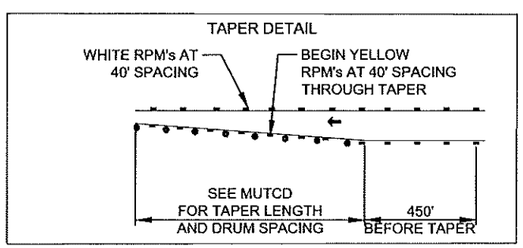




MINIMUM RECOMMENDED CROSSOVER CURVE RADIUS	
SPEED (MPH)	RADIUS (FEET)
45	2500
55	4500
65	6500

- MINIMUM RADIUS DETERMINED BY FORMULA: $R_{min} = V^2/(15(0.01e+0.5f_{max}))$ WHERE: V=POSTED CONSTRUCTION SPEED LIMIT.
- e=SUPERELEVATION RATE: (e-.02) FOR A NORMAL CROWN DETOUR.
- f_{MAX}=MAXIMUM FRICTION FOR POSTED SPEED AS SHOWN IN AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS.

TABLE 1: MEANING OF LETTER CODES ON INTERSTATE AND NON-INTERSTATE CROSSOVERS			
	MINIMUM DISTANCE BETWEEN SIGNS (FEET)		
ROAD TYPE	A	B	C
NON-INTERSTATE	500	500	500
INTERSTATE	1000	1000	1000
BASED ON TABLE 6C-1. RECOMMENDED ADVANCE WARNING SIGN MINIMUM SPACING FROM MUTCD.			



THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

AFSHIN JIAN NEW MEXICO 16226 12-11-2019 PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION
2	APR 2017	P.C.	Combined w/ previous 702-06-2/2
1	JAN 2012	L.S.	GENERAL REVISIONS

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING

4 LANE, INTERSTATE / NON-INTERSTATE, TYPICAL CROSSOVER SIGNING

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-04-2/2

DAVID BARBOZA
11-Dec-19

Drawing File: O:\PRELIMINARY DRAWINGS & DOCS\CONSTRUCTION_TRAFFIC_CONTROL\PSE\702-04-2OF2.DWG
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NOTES:

1. WRITTEN JUSTIFICATION SHALL BE SUBMITTED FOR CONCURRENCE TO THE DISTRICT TRAFFIC ENGINEER FOR SPEED REDUCTION MORE THAN 10 MPH.
2. ADDITIONAL ADVANCE WARNING SIGNING IS REQUIRED FOR SPEED REDUCTION GREATER THAN 10 MPH.
3. PORTABLE CHANGEABLE MESSAGE SIGNS ARE RECOMMENDED, WARNING OF SPEED REDUCTION, NARROW LANES OR PRESENCE OF WORKERS NEAR TRAFFIC.
4. SIGN INFORMATION AND SPACING VARY WITH SPEED LIMIT. SEE TABLE 1 FOR SIGN SPACING.

TABLE 1: RECOMMENDED ADVANCE WARNING SIGN MINIMUM SPACING

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS, FEET		
	A	B	C
URBAN (LOW SPEED)	100	100	100
URBAN (HIGH SPEED)	350	350	350
NON-INTERSTATE	500	500	500
INTERSTATE	1000	1500	2640

SPEED CATEGORY TO BE DETERMINED BY NMDOT. RECOMMENDED ADVANCE WARNING SIGN MINIMUM SPACING.

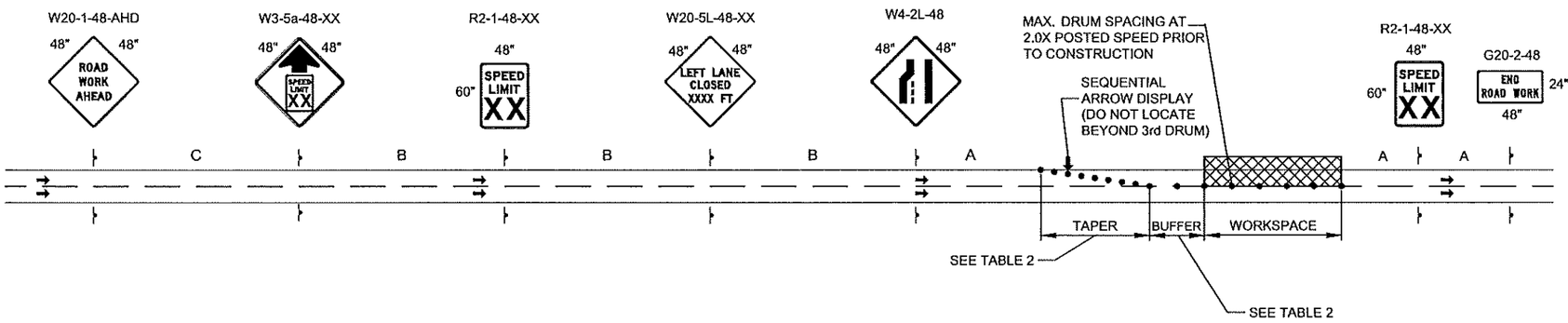
TABLE 2: LANE TAPER, BUFFER LENGTHS, DRUM SPACING

•SPEED LIMIT (MPH)	••BUFFER LENGTH (FT)	BUFFER DRUM SPACING (FT)	TAPER LENGTH (FT)	TAPER DRUM SPACING (FT)
20	115	40	80	20
25	155	50	125	25
30	200	60	180	30
35	250	70	245	35
40	305	80	320	40
45	360	90	540	45
50	425	100	600	50
55	495	110	660	55
60	570	120	720	60
65	645	130	780	65
70	730	140	840	70
75	820	150	900	75

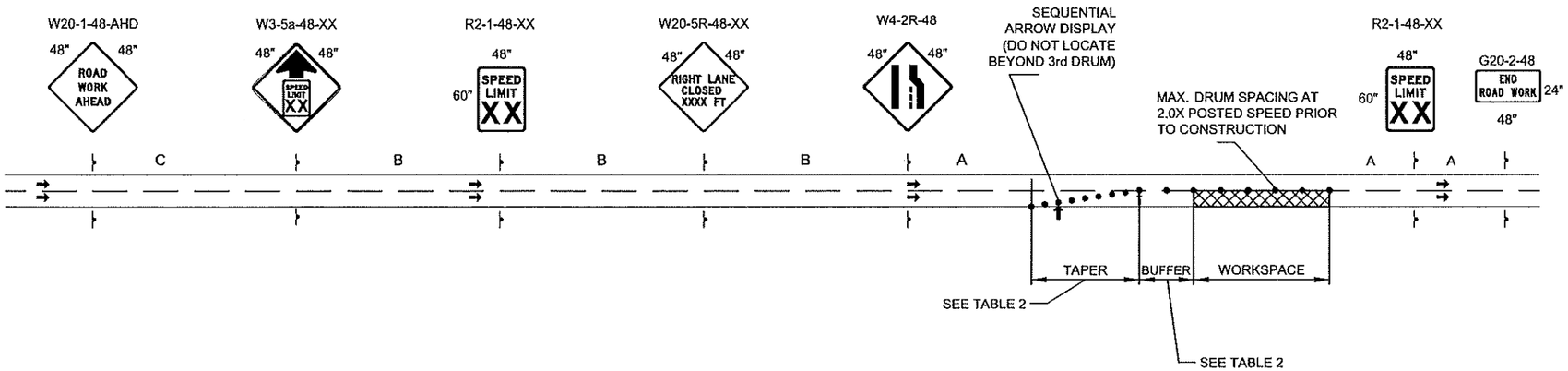
•POSTED SPEED, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO CONSTRUCTION.

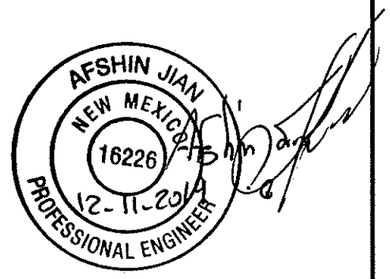
••STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED.

INSIDE LANES & MEDIAN OPERATIONS:



OUTSIDE LANES AND SHOULDER OPERATIONS:





THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY.

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

INSIDE / MEDIAN AND OUTSIDE LANE OPERATIONS FOR DIVIDED INTERSTATES & NON-INTERSTATES

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-05-1/1

DAVID BARBOZA
11-Dec-19

Drawing File: O:\PRELIMINARY DRAWINGS & DOCS\CONSTRUCTION_TRAFFIC_CONTROL\PSE\702-05-1OF1.DWG
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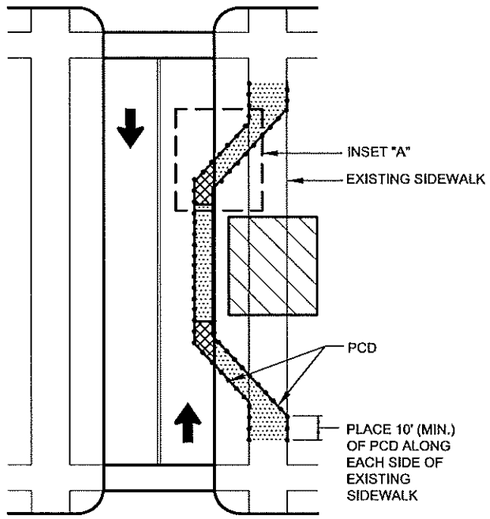
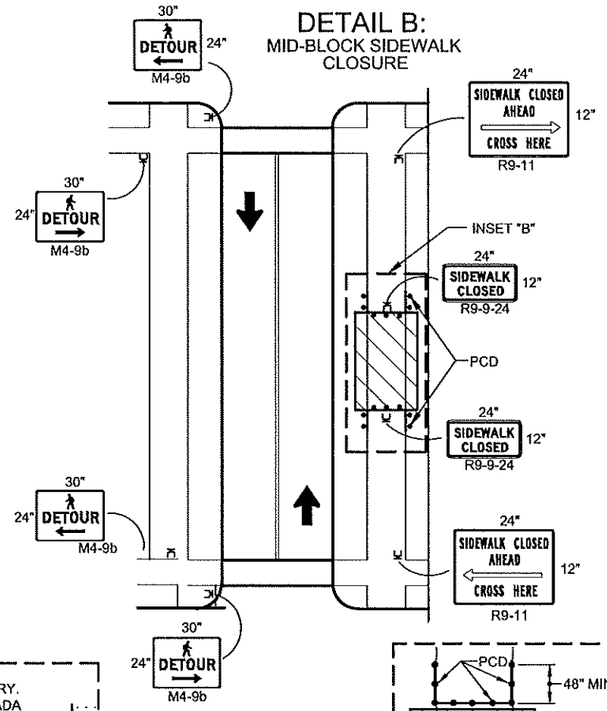
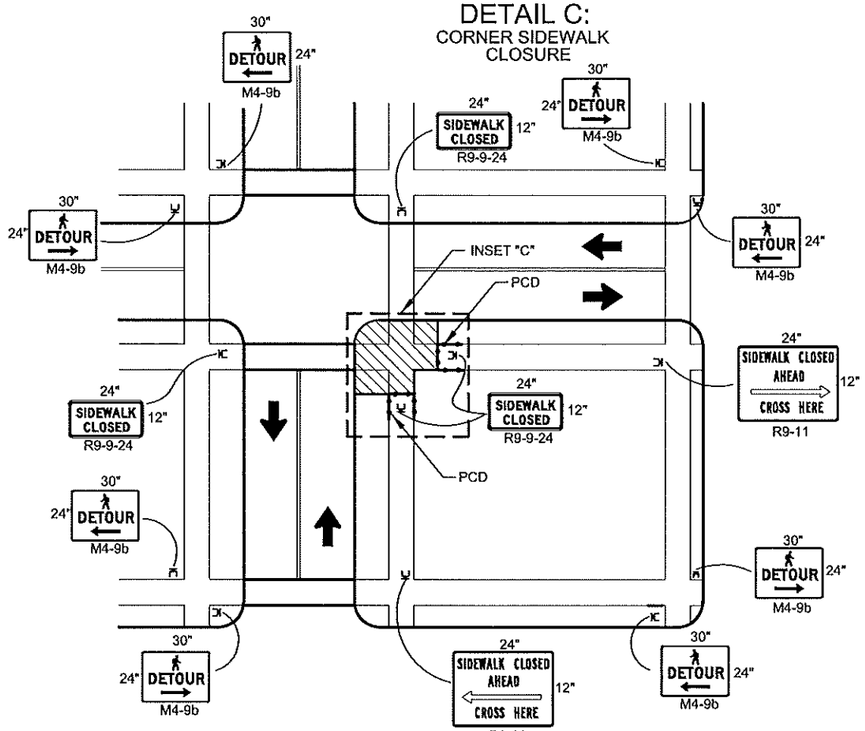
DETAIL A:
SIDEWALK DIVERSION

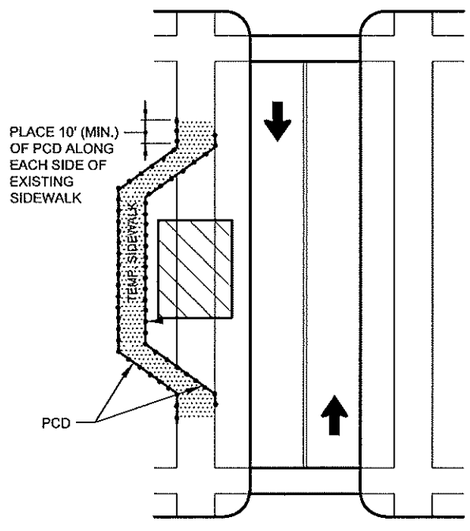


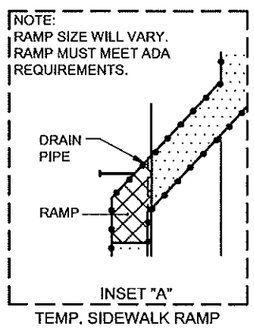
DETAIL B:
MID-BLOCK SIDEWALK CLOSURE



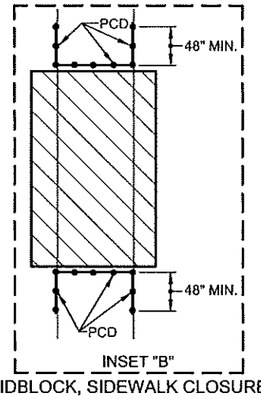
DETAIL C:
CORNER SIDEWALK CLOSURE



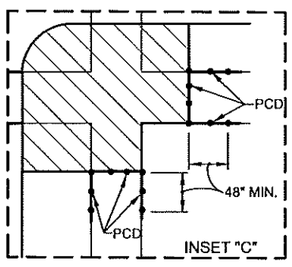




TEMP. SIDEWALK RAMP



MIDBLOCK, SIDEWALK CLOSURE



CORNER, SIDEWALK CLOSURE

LEGEND
- UNDER PEDESTRIAN TRAFFIC
- UNDER CONSTRUCTION
- PEDESTRIAN CHANNELIZATION DEVICE (PCD).

NOTES: APPLY TO EACH DETAIL

1. EXAMPLES A,B,C,D SHALL BE MODIFIED FOR PROJECT SPECIFIC REQUIREMENTS. FURTHER ADJUSTMENTS TO ME MADE IN THE FIELD DEPENDING ON SITE CONDITIONS.
2. WHEN CLOSING OR RELOCATING CROSSWALKS OR OTHER PEDESTRIAN FACILITIES PROVIDE ADA COMPLIANT FACILITIES. INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES BY PROVIDING ADEQUATE SLOPE TRANSITIONS AND SURFACING.
3. PROVIDE FIRM, STABLE NON-SLIP, 60 INCH MINIMUM WIDE SURFACE THROUGH ENTIRE PEDESTRIAN ROUTE. IF NOT POSSIBLE, PROVIDE 60"X60" PASSING SPACES EVERY 200 FEET ALONG THE ROUTE.
4. ONLY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC.
5. STAGE WORK, AS NECESSARY, PROVIDING A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES. (FOR ROADWAYS WITH NO AVAILABLE DETOURS).
6. MINIMIZE PEDESTRIAN OUT-OF-DIRECTION TRAVEL.
7. LIMIT WORK AREA TO MINIMIZE PEDESTRIAN DISRUPTION AND DETOUR LENGTH.
8. ADDITIONAL PROTECTION OF PCD'S MAY BE REQUIRED, WHEN PLACED ADJACENT TO ACTIVE TRAFFIC AREAS.

AFSHIN JIAN NEW MEXICO 16226 12-11-2019 PROFESSIONAL ENGINEER

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

EXAMPLES OF TEMPORARY PEDESTRIAN DETOUR ROUTING FOR ROADWAYS WITH POSTED SPEEDS OF 40 MPH OR LESS

APPROVED: _____ DESIGN ENGINEER _____ DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

702-06-1/1

DAVID BARBOZA
11-Dec-19

Drawing File: O:\PRELIMINARY DRAWINGS & DOCS\CONSTRUCTION_TRAFFIC_CONTROL\PSE\702-06-1OF1.DWG
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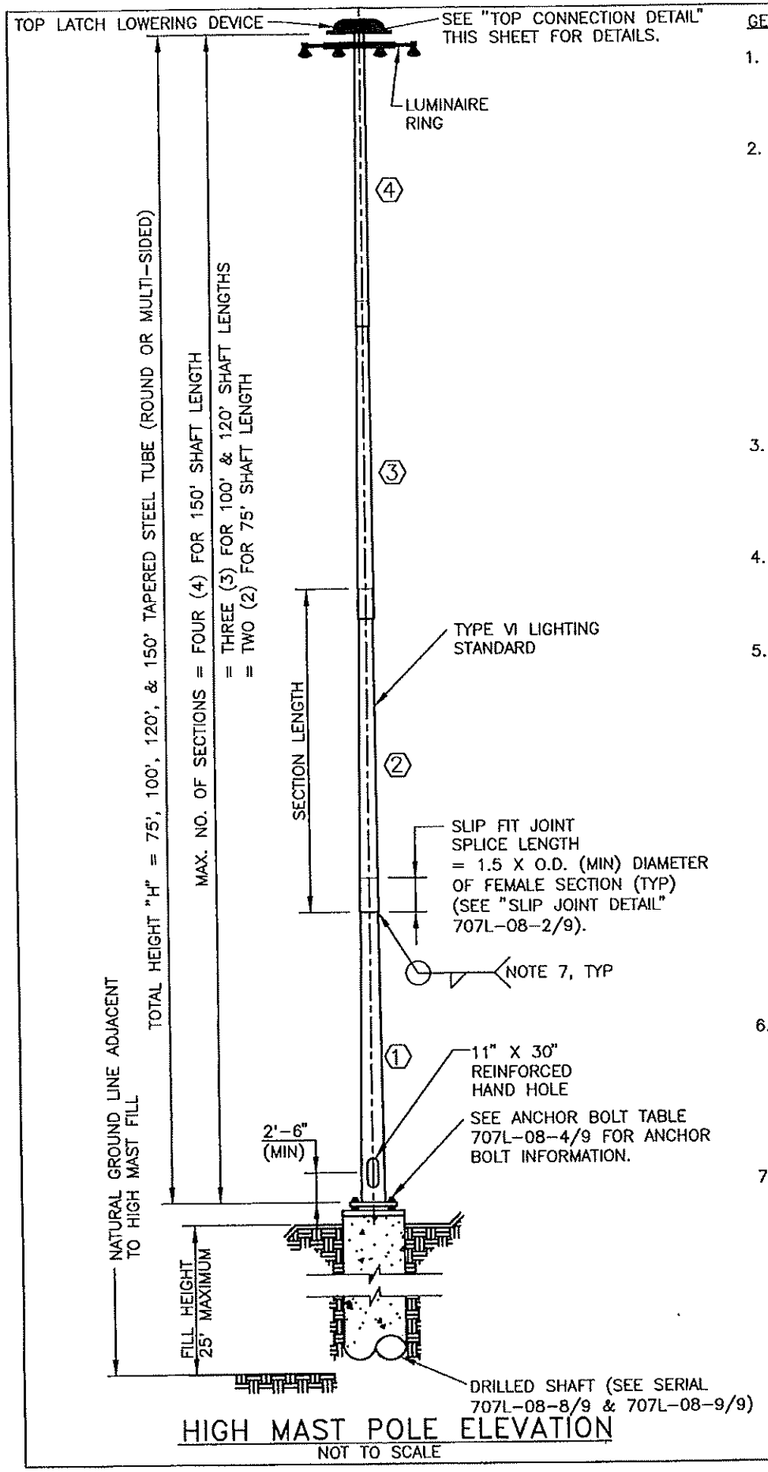


HIGH MAST POLE ELEVATION
NOT TO SCALE

GENERAL NOTES:

1. DESIGN CONFORMS TO 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, WITH REVISIONS UP TO AND INCLUDING 2006 INTERIMS.

2. DESIGN CRITERIA:

   RECURRENCE INTERVAL = 50 YRS
   SERVICE LIFE = 50 YRS
   DESIGN WIND SPEED = 90 MPH
   GUST EFFECT FACTOR = 1.14
   FATIGUE CATEGORY I
   MATERIALS (POLES AND HAND HOLES): 55,000 PSI MINIMUM YIELD

   MAXIMUM NUMBER OF LUMINAIRES IS EIGHT (8). MAXIMUM WEIGHT OF EACH LUMINAIRE IS 85 LBS, WITH A PROJECTED AREA OF 3.4 FT^2.

   MAXIMUM ALLOWABLE DEFLECTION = 9% OF POLE HEIGHT.

3. WORKMANSHIP AND MATERIALS SHALL CONFORM TO NEW MEXICO DEPARTMENT OF TRANSPORTATION (NMDOT) STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION CURRENT EDITION. CONTRACTOR SHALL CONTACT NMDOT FOR APPROVED PRODUCTS LISTING.

4. POLES SHALL CONSIST OF ROUND TELESCOPING SECTIONS, TAPERED AT A RATE OF 0.14"/FOOT. MULTI-SIDED SECTIONS WILL BE PERMITTED AS AN ALTERNATE DESIGN. SEE NOTE 9 FOR REQUIREMENTS.

5. MATERIALS:

   A. POLES SHALL BE STEEL OF 50 KSI MINIMUM YIELD STRENGTH AFTER FABRICATION.

   B. BASE PLATES AND ANCHOR BOLT TEMPLATES SHALL BE PER AASHTO M-183 (ASTM A-36).

   C. HARDWARE AND ANCHOR BOLTS SHALL BE PER AASHTO M-314 (ASTM F-1554), GR. 55. EACH BOLT SHALL BE SUPPLIED WITH A MINIMUM OF THREE HEAVY HEX NUTS AND TWO FLAT WASHERS. STEEL BOLT TEMPLATES SHALL BE SUPPLIED WITH ANCHOR BOLTS. NUTS SHALL BE ASTM A-563. WASHERS SHALL BE ASTM A-436.

   D. PRELOAD BOLTS BASED ON BOLT TYPE AND DIAMETER. PROVIDE LOCKING ADHESIVE (ND INDUSTRIES, NYLOCK, LOCKTITE, OR APPROVED EQUAL).

6. GALVANIZING:

   A. POLES AND PLATES SHALL BE GALVANIZED PER AASHTO M-111-94 (ASTM A-123).

   B. HARDWARE AND ANCHOR BOLTS SHALL BE HOT-DIPPED GALVANIZED PER AASHTO M-232 M (ASTM A-153).

7. WELDS:

   ALL FABRICATORS SHALL BE CERTIFIED UNDER NMDOT SPECIFICATION SECTION 541.3 "CERTIFICATION OF STEEL FABRICATORS", AND SHALL CONFORM TO THE LATEST EDITION OF THE STRUCTURAL WELDING CODE (ANSI/AWS D1.1) AND SHALL CONFORM TO SECTION 707 "SIGNAL AND LIGHTING STANDARDS" OF THE CURRENT NEW MEXICO DEPARTMENT OF TRANSPORTATION (NMDOT) STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS OR MEET THE DATA SHOWN ON THESE DRAWINGS.

   FILLET WELD AT BOTTOM OF SLIP FIT JOINT SHALL BE MINIMUM SIZE PER AWS D1.1.

8. THE CONTRACTOR/FABRICATOR SHALL FURNISH EIGHT SETS OF SHOP DRAWINGS OF ALL HIGH MAST LUMINAIRE SUPPORT STRUCTURE COMPONENTS FOR THE TYPE VI LIGHTING STANDARD TO THE STATE BRIDGE ENGINEER FOR APPROVAL. SHOP DRAWINGS SHALL COVER ALL MECHANISMS/PARTS REQUIRED FOR THE INSTALLATION. THE CONTRACTOR SHALL FURNISH AN APPROPRIATE CERTIFICATION OF COMPLIANCE WITH ALL DESIGN REQUIREMENTS. THE CONTRACTOR'S CERTIFICATION SHALL APPEAR ON THE DRAWINGS. THE CONTRACTOR MUST RECEIVE WRITTEN APPROVAL OF THE SHOP DRAWINGS FROM THE ENGINEER PRIOR TO BEGINNING FABRICATION OR ASSEMBLY OF PARTS.

9. THE INFORMATION AND DETAILS PROVIDED FOR POLES, ANCHOR BOLTS, HAND HOLE, AND FOUNDATIONS IN THESE STANDARDS ARE MINIMUM REQUIREMENTS. DESIGN AND DETAILS FOR ALTERNATE DESIGNS AND ALL OTHER LUMINAIRE SUPPORT STRUCTURE COMPONENTS SUCH AS TOP CONNECTION PLATE, SPECIFIC REQUIREMENTS FOR HAND HOLES TO ACCOMMODATE EXTERNAL WINCH, HEADFRAME ASSEMBLY, LUMINAIRE RING ASSEMBLY, AND TOP LATCH LOWERING DEVICE SHALL BE PROVIDED BY CONTRACTOR/FABRICATOR IN COMPLIANCE WITH AASHTO SPECIFICATIONS REFERENCED IN NOTE 1 AND ALL OTHER GOVERNING ELECTRICAL AND MECHANICAL SPECIFICATIONS.

10. THE TOP CONNECTION DETAIL MAY BE REVISED TO COMPLY WITH THE REQUIREMENTS OF THE TOP LATCH LOWERING DEVICE SYSTEM. THE REVISED TOP CONNECTION DETAIL SHALL BE SUBMITTED TO NMDOT FOR REVIEW AND APPROVAL AS PART OF THE DESIGN FOR THE TOP LATCH LOWERING DEVICE SYSTEM.

11. ALL TYPE VI STANDARDS SHALL BE EQUIPPED WITH AN INTERNAL MOTOR ASSEMBLY WITH 20' REMOTE CONTROL FOR THE LOWERING DEVICE. LOWERING DEVICES SHALL BE TOP LATCH AS APPROVED BY LIGHTING DESIGN ENGINEER. THE INTERNAL MOTOR ASSEMBLY AND LOWERING DEVICE WILL BE SUBSIDIARY TO THE HIGH MAST POLE PAY ITEM.

12. THE LOWERING DEVICE, LIGHTING FIXTURES AND POLES SHALL BE MANUFACTURED AND TESTED AS AN INTEGRATED SYSTEM AND BE PROVIDED AND WARRANTED BY THE MANUFACTURER.

13. FACTORY REPRESENTATIVE SHALL PROVIDE ONE DAY TRAINING AND VIDEO TAPE ON OPERATING THE LOWERING DEVICE SYSTEM FOR THE LOCAL MAINTAINING AGENCY AND LOCAL POWER COMPANY. THIS TRAINING SHALL BE APPROXIMATELY ONE-HALF IN THE CLASSROOM AND ONE-HALF IN THE FIELD.

14. APPROXIMATELY 90 DAYS AFTER INSTALLATION, A FACTORY REPRESENTATIVE SHALL RETURN TO THE PROJECT SITE TO ADJUST THE LOWERING DEVICE CABLES AND LATCHING MECHANISMS. THE CONTRACTOR SHALL COORDINATE WITH THE NMDOT LIGHTING ENGINEER, THE LOCAL MAINTENANCE AGENCY, AND THE LOCAL POWER COMPANY TO BE PRESENT WHILE THE ADJUSTMENTS ARE MADE.

15. DURING THE ERECTION OF THE HIGH MAST LIGHTING POLES AND LOWERING DEVICES, A FACTORY REPRESENTATIVE SHALL BE PRESENT TO ENSURE CORRECT ERECTION.

16. CONTRACTOR SHALL PROVIDE COPIES OF ALL HIGH MAST LIGHTING SYSTEM TECHNICAL DATA, CALCULATIONS, SHOP DRAWINGS, AND LUMINAIRE TYPE INFORMATION TO THE LOCAL MAINTAINING AGENCY AND THE LOCAL POWER COMPANY.

17. THE DESIGN PROVIDED FOR THIS STANDARD MUST BE RE-EVALUATED FOR POLES LOCATED IN ELEVATED REGIONS AND POLES LOCATED IN SPECIAL WIND REGIONS EXCEEDING THE DESIGN CRITERIA PROVIDED IN THESE STANDARDS.

18. CONTRACTOR/POLE FABRICATOR SHALL SUBMIT GROUNDING DETAILS FOR REVIEW AND APPROVAL.

19. ALL DESIGNS SUBMITTED FOR APPROVAL MUST BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF NEW MEXICO.

ALFRED P. MURILLO
NEW MEXICO
18841
PROFESSIONAL ENGINEER

Alfred Murillo 12-08-11

NO.	DATE	REV.BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

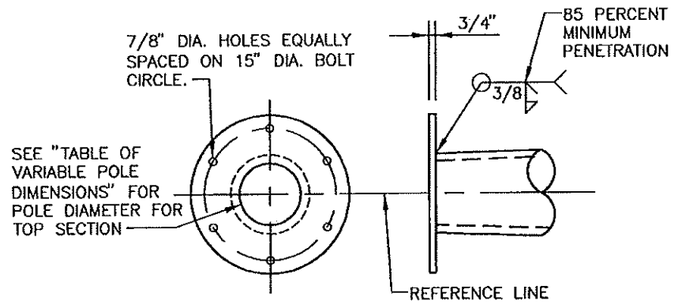
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

HIGH MAST LUMINAIRE
SUPPORT STRUCTURES
TYPE VI

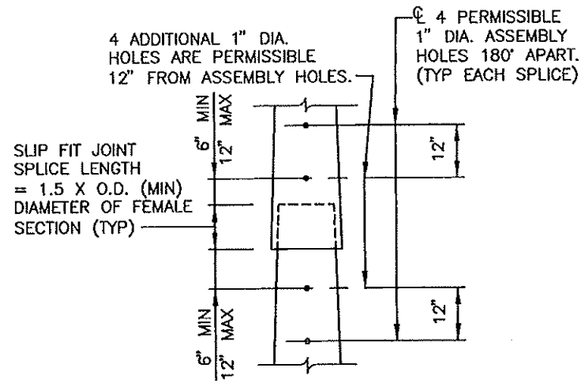
DESIGNED BY NB/MS DRAWN BY CCS CHECKED BY APM

707L-08-1/9 1 of 9

TABLE OF VARIABLE POLE DIMENSIONS							
TOTAL HEIGHT "H"	SECTION	SECTION LENGTH	SPLICE LENGTH	RATE OF TAPER	OUTSIDE DIAMETER		SECTION THICKNESS
					BOTTOM	TOP	
(FT)		(FT)	(IN)	(IN/FT)	(IN)	(IN)	(IN)
150	1	40.00	33.00	0.14	26.000	20.400	0.3750
	2	39.50	26.00	0.14	21.410	15.880	0.3125
	3	39.42	18.00	0.14	16.683	11.165	0.2500
	4	37.50	0.00	0.14	11.853	6.603	0.2391
120	1	42.00	26.00	0.14	22.000	16.120	0.2500
	2	41.33	18.00	0.14	16.902	11.115	0.2391
	3	40.33	0.00	0.14	11.700	6.054	0.1875
100	1	32.00	25.00	0.14	20.000	15.520	0.1875
	2	31.67	19.00	0.14	16.187	11.753	0.1875
	3	40.00	0.00	0.14	12.350	6.750	0.1875
75	1	38.92	20.00	0.14	18.000	12.551	0.1875
	2	37.75	0.00	0.14	13.160	7.875	0.1875



TOP CONNECTION DETAIL
NOT TO SCALE



SLIP JOINT DETAIL
NOT TO SCALE

ALFRED P. MURILLO
NEW MEXICO
18841
PROFESSIONAL ENGINEER

Alfred Murillo 12.08.11

NO.	DATE	REV.BY	DESCRIPTION

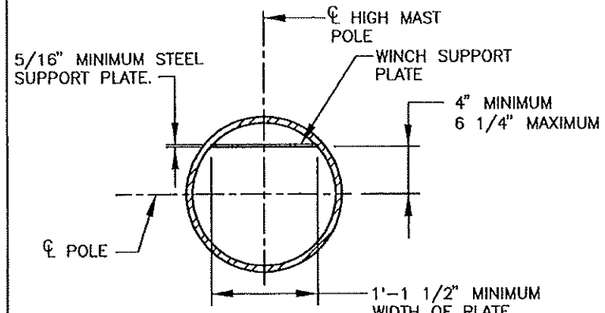
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

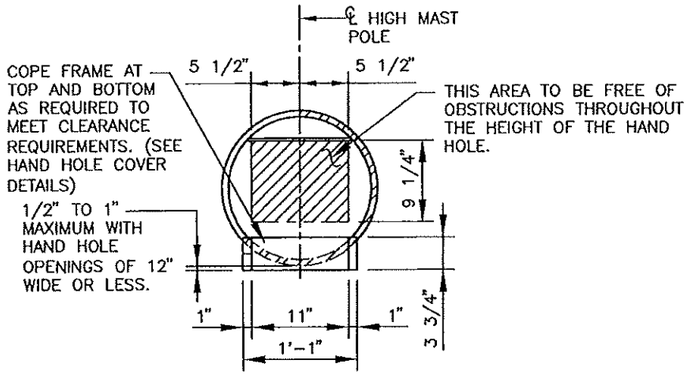
HIGH MAST LUMINAIRE
SUPPORT STRUCTURES
TYPE VI

DESIGNED BY NB/MS DRAWN BY CCS CHECKED BY APM

707L-08-2/9



① SECTION A–A
NOT TO SCALE



① SECTION B–B
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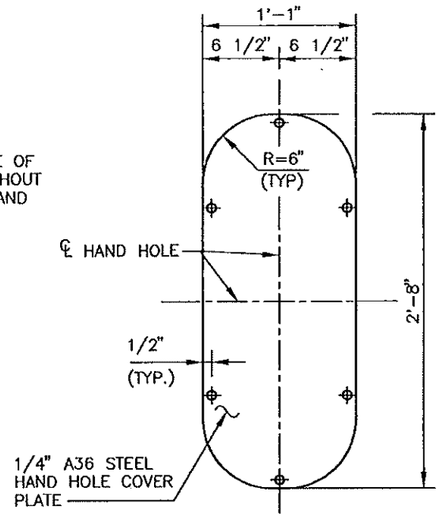
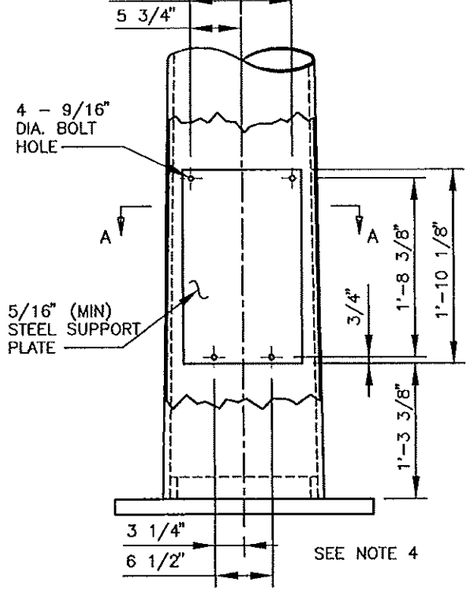


HAND HOLE COVER
NOT TO SCALE

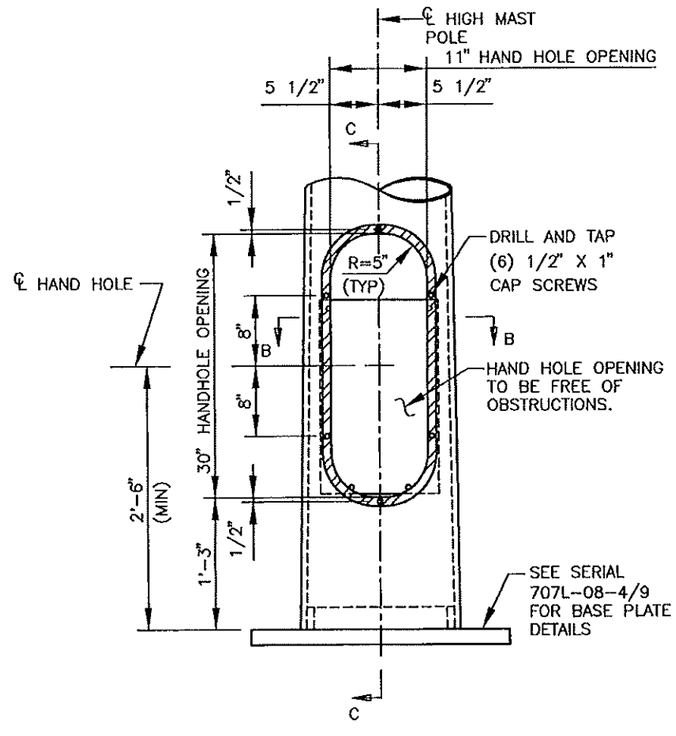
NOTES:

1. POLES SHALL BE FREE OF INTERNAL AND EXTERNAL OBSTRUCTIONS WHICH WOULD INTERFERE WITH WIRE ROPES, CORD, OR THE PROPER OPERATION OF ANY OTHER ELECTRICAL OR MECHANICAL COMPONENT.
2. HAND HOLE COVER SHALL BE FABRICATED FROM 1/4" A36 STEEL PLATE OR MAY BE HINGED WITH A SUITABLE METHOD OF CLOSURE. POLE CONTRACTOR/FABRICATOR SHALL SUBMIT DRAWINGS TO NMDOT FOR REVIEW AND APPROVAL FOR ANY ADDITIONAL OPENINGS WITHIN COVER PLATE TO ACCOMMODATE SPECIFIC INTERNAL AND EXTERNAL WINCH REQUIREMENTS.
3. HAND HOLE COVER PLATES SHALL BE GALVANIZED PER ASTM A–123.
4. INFORMATION AND DETAILS PROVIDED FOR WINCH SUPPORT PLATE AND MINIMUM CLEARANCES MAY BE REVISED ACCORDINGLY TO CONFORM WITH REQUIREMENTS FOR THE SPECIFIC WINCH SPECIFIED FOR THE PROJECT. SEE PROJECT DEVELOPMENT PLANS AND DETAILS FOR WINCH AND EXTERNAL DRIVE ASSEMBLY REQUIREMENTS.

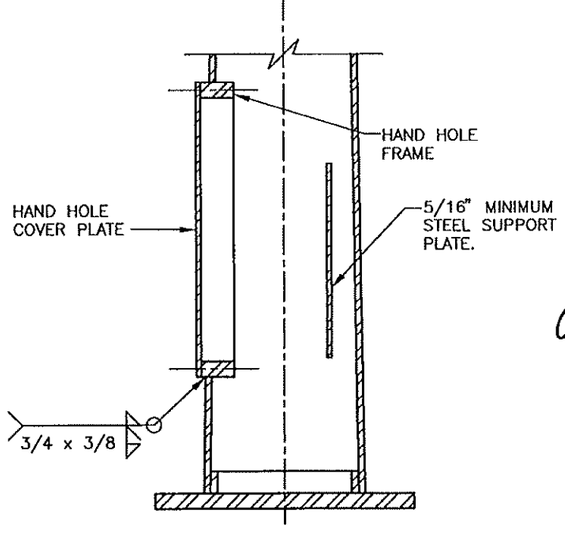
① BASE PLATE NOT SHOWN FOR CLARITY.



WINCH SUPPORT PLATE DETAIL
NOT TO SCALE



HAND HOLE DETAIL
NOT TO SCALE



SECTION C–C
NOT TO SCALE

NO.	DATE	REV.BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

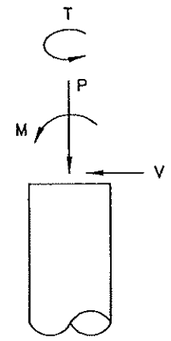
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

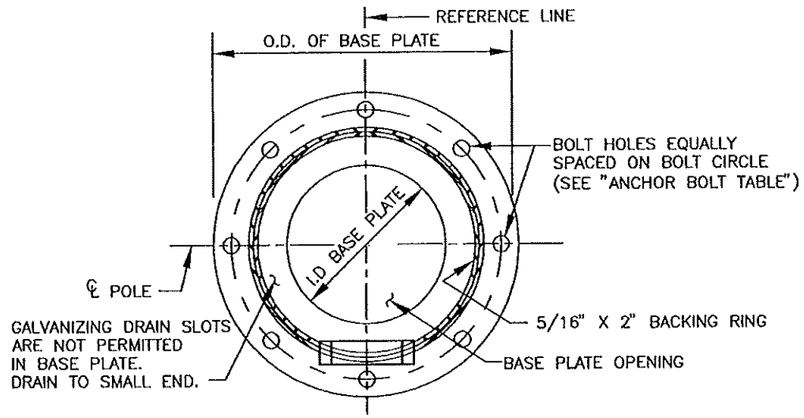
HIGH MAST LUMINAIRE
SUPPORT STRUCTURES
TYPE VI

DESIGNED BY NB/MS DRAWN BY CCS CHECKED BY APM

707L-08-3/9 3 of 9

SERVICE LOADS AT TOP OF DRILLED SHAFT				
TOTAL HEIGHT	AXIAL LOAD "P"	SHEAR "V"	MOMENT "M"	TORSION "T"
(FT)	(KIP)	(KIP)	(KIP-FT)	(KIP-FT)
150	10.85	3.22	273.76	1.09
120	6.86	2.47	178.84	1.05
100	5.16	2.03	128.94	1.02
75	3.94	1.54	78.98	0.97

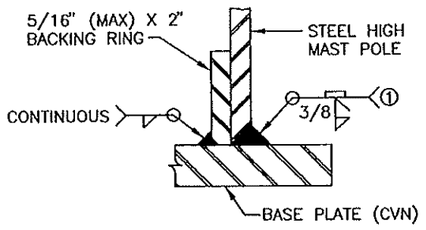




SECTION A-A
NOT TO SCALE

ANCHOR BOLT TABLE									
POLE HEIGHT	POLE DIAMETER	BOLT DIAMETER	BOLT LENGTH	NUMBER OF BOLTS	BOLT CIRLCE DIAMETER	BASE PLATE		BOLT TEMPLATE	
	O.D.					O.D.	I.D.	O.D.	I.D.
FT	IN	IN	IN		IN	IN	IN	IN	IN
150	26	2	72	8	37	43	16	41.5	32.5
120	22	2	72	8	33	39	16	37.5	28.5
100	20	2	72	6	31	37	16	35.5	26.5
75	18	2	72	6	29	35	16	33.5	24.5

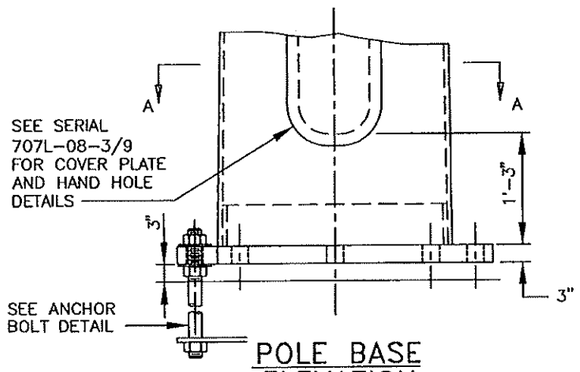
(1) BOLT SHANK PROJECTION ABOVE CONCRETE.



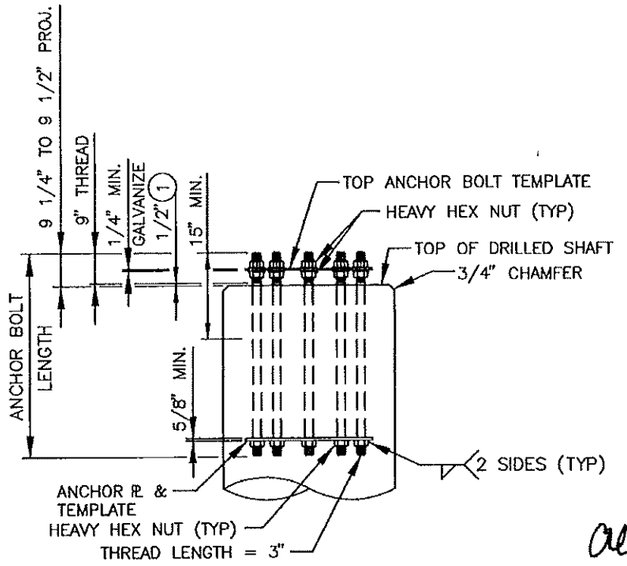
WELD DETAIL
NOT TO SCALE

NOTE:

BACKING RING MUST BE FITTED/SIZED TO THE STEEL POLE AND CONTINUOUSLY FILLET WELDED TO THE BASE PLATE BEFORE FULL PENETRATION GROOVE WELD IS MADE.

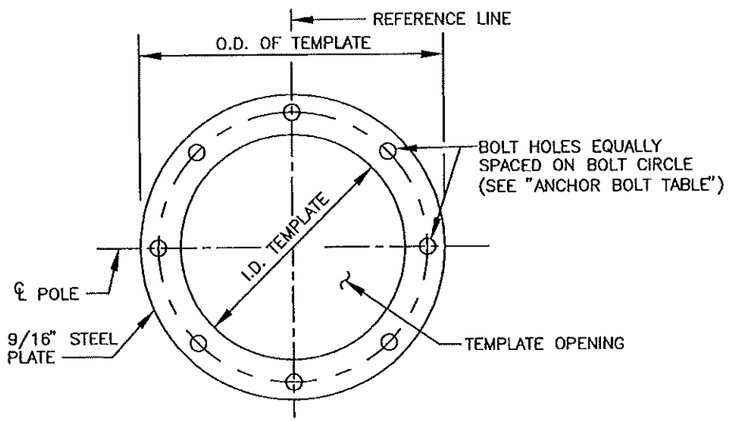


POLE BASE ELEVATION
NOT TO SCALE

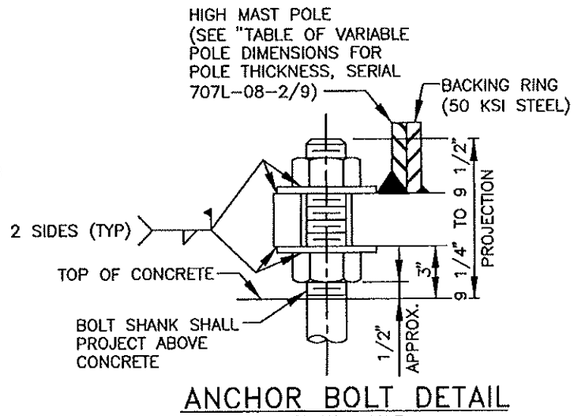


ANCHOR BOLT ASSEMBLY
NOT TO SCALE
(SEE ANCHOR BOLT TABLE)

Alfred Murillo 12-08-11



ANCHOR BOLT AND ANCHOR PLATE TEMPLATE
NOT TO SCALE



ANCHOR BOLT DETAIL
NOT TO SCALE

NO.	DATE	REV.BY	DESCRIPTION

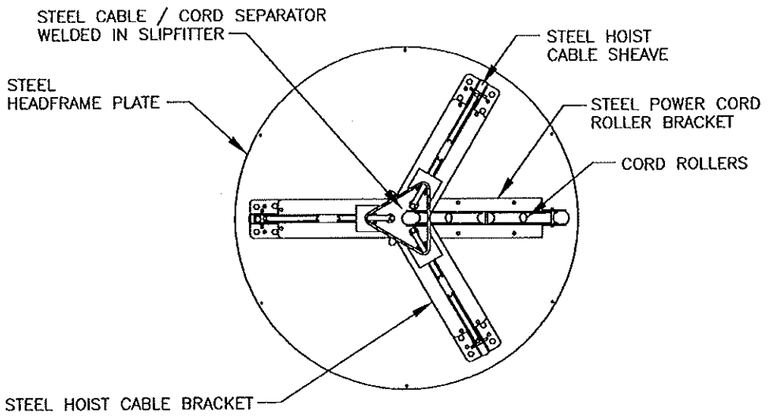
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

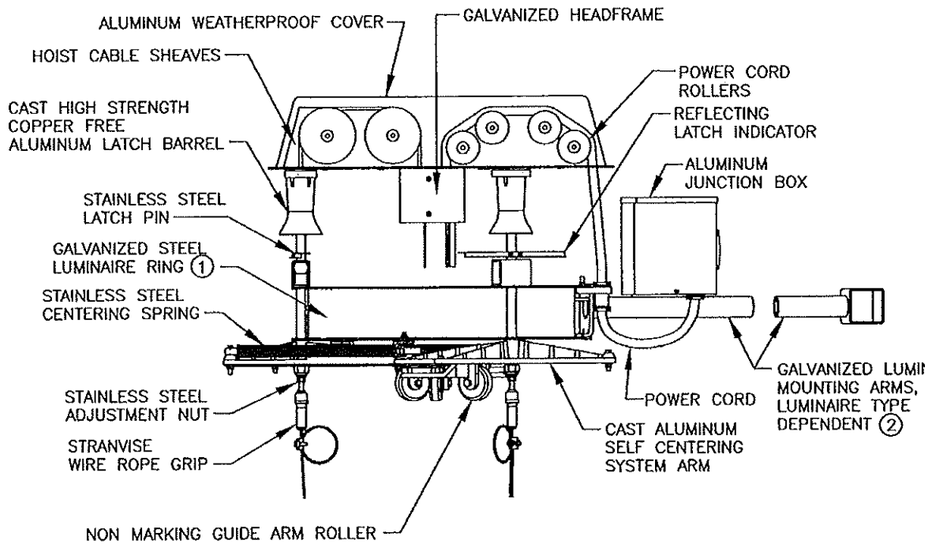
HIGH MAST LUMINAIRE
SUPPORT STRUCTURES
TYPE VI

DESIGNED BY NB/MS DRAWN BY CCS CHECKED BY APM

707L-08-4/9 4 of 9



HEADFRAME ASSEMBLY
NOT TO SCALE

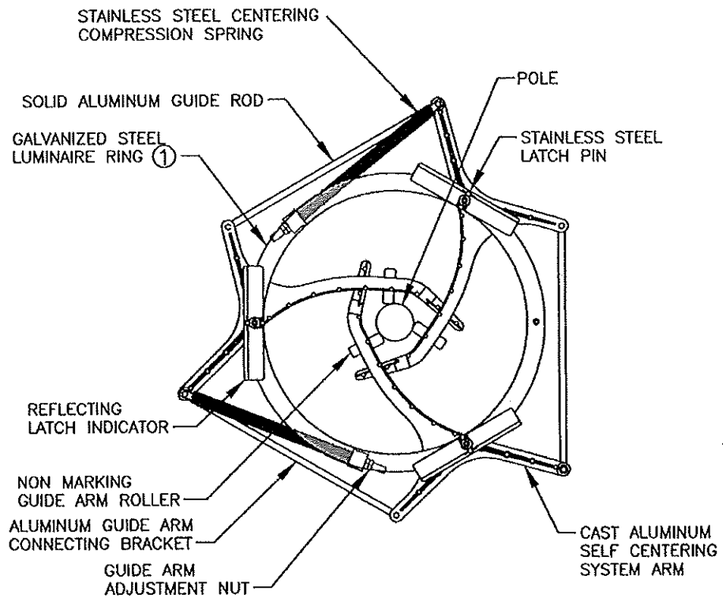


EPA = 5.62 SQUARE FEET
WEIGHT = 250 POUNDS
DIAMETER OF ASSEMBLY WITH LUMINAIRES VARIES FROM 8 TO 11 FEET

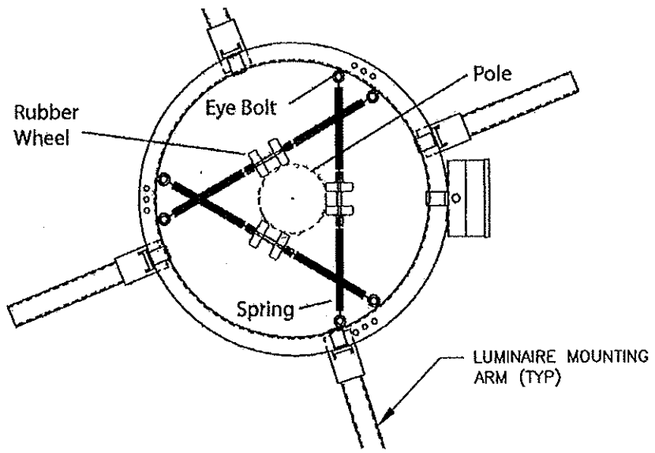
TOP LATCH LOWERING DEVICE SYSTEM
NOT TO SCALE

NOTES:

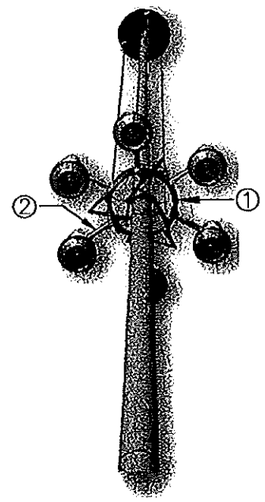
1. DETAILS SHOWN ON THIS SHEET ARE GENERAL SCHEMATIC DETAILS AND ARE NOT TO BE USED FOR CONSTRUCTION. THESE DETAILS ARE INTENDED TO PROVIDE MINIMUM REQUIREMENTS.
2. RING ASSEMBLIES SHALL ACCOMMODATE EIGHT (MAX) LUMINARES.
3. THE CONTRACTOR/FABRICATOR SHALL SUBMIT SPECIFIC DESIGN AND DETAILS FOR ALL ELECTRICAL AND MECHANICAL COMPONENTS, HEADFRAME ASSEMBLIES, RING ASSEMBLIES, CENTERING DEVICE, AND TOP LATCH LOWERING DEVICE SYSTEMS TO THE NMDOT FOR REVIEW AND APPROVAL. ALL DESIGN AND DETAILS SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF NEW MEXICO.
4. SEE PROJECT DEVELOPMENT PLANS AND SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.
5. REFERENCE NMDOT SPECIFICATIONS FOR ADDITIONAL PERFORMANCE REQUIREMENTS OF THE TOP LATCH LOWERING DEVICE SYSTEM.



RING ASSEMBLY
NOT TO SCALE
(WITH SPRING LOADED, INTER-CONNECTED CENTERING SYSTEM)



RING ASSEMBLY
NOT TO SCALE
(WITH CENTERING SPRINGS)



ISOMETRIC VIEW
NOT TO SCALE

ALFRED P. MURILLO
NEW MEXICO
18841
PROFESSIONAL ENGINEER
12-08-11

NO.	DATE	REV.BY	DESCRIPTION

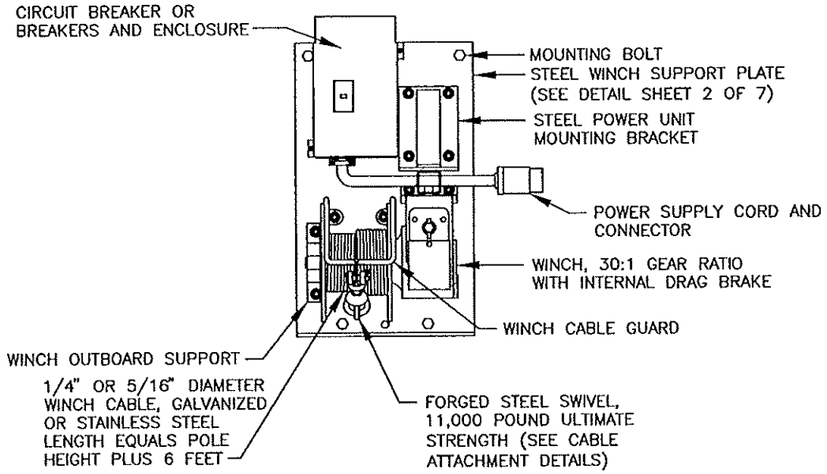
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

HIGH MAST LUMINAIRE
SUPPORT STRUCTURES
TYPE VI

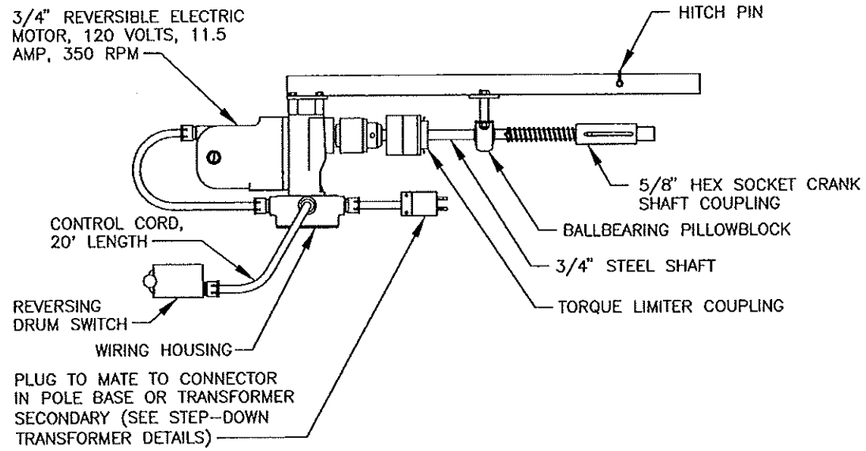
DESIGNED BY HB/MS DRAWN BY CCS CHECKED BY APM

707L-08-5/9



WINCH PLATE ASSEMBLY

NOT TO SCALE

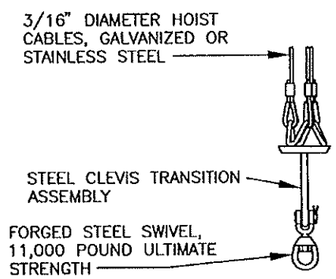


PORTABLE DRIVE MOTOR ASSEMBLY

NOT TO SCALE

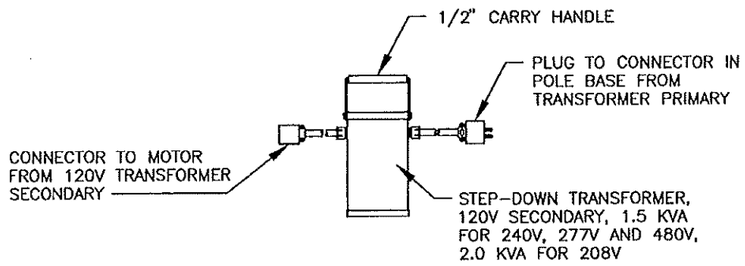
NOTES:

1. DETAILS SHOWN ON THIS SHEET ARE GENERAL SCHEMATIC DETAILS AND ARE NOT TO BE USED FOR CONSTRUCTION OR FABRICATION PURPOSES. THESE DETAILS ARE INTENDED TO PROVIDE MINIMUM REQUIREMENTS.
2. SEE PROJECT DEVELOPMENT PLANS AND SPECIFICATIONS FOR SPECIFIC WINCH REQUIREMENTS.
3. WINCH PLATE ASSEMBLY BOLTS, PORTABLE DRIVE MOTOR, AND STEP DOWN TRANSFORMER DETAILS AND SPECIFICATIONS SHALL BE SUBMITTED BY MANUFACTURER TO NMDOT FOR REVIEW AND APPROVAL.
4. THE CONTRACTOR/FABRICATOR SHALL SUBMIT SPECIFIC DESIGN AND DETAILS FOR ALL ELECTRICAL AND MECHANICAL COMPONENTS, IN COMPLIANCE WITH PROJECT SPECIFIC REQUIREMENTS, TO THE NMDOT FOR REVIEW AND APPROVAL. ALL DESIGN AND DETAILS SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF NEW MEXICO.



CABLE ATTACHMENT ASSEMBLY

NOT TO SCALE



STEP-DOWN TRANSFORMER DETAILS

NOT TO SCALE

ALFRED P. MURILLO
NEW MEXICO
18841
PROFESSIONAL ENGINEER

Alfred Murillo 12.08.11

NO.	DATE	REV.BY	DESCRIPTION

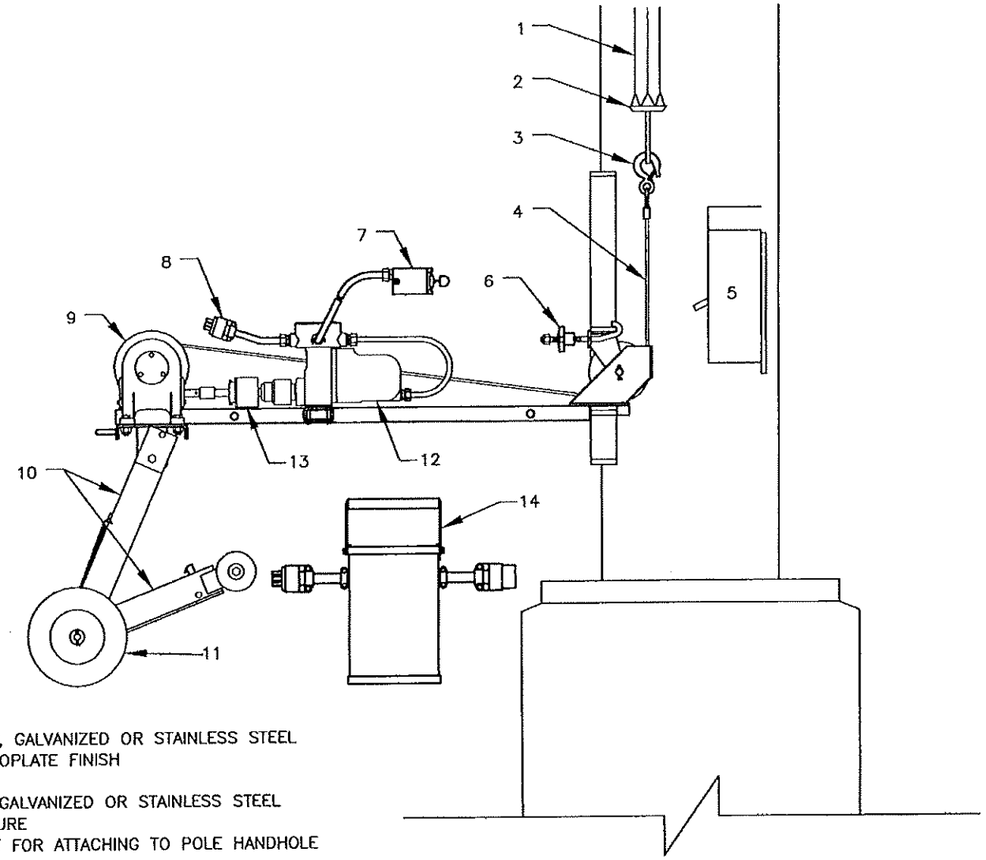
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

HIGH MAST LUMINAIRE
SUPPORT STRUCTURES
TYPE VI

DESIGNED BY NB/MS DRAWN BY CCS CHECKED BY APM

707L-08-6/9



1. 3/16" DIAMETER HOIST CABLES, GALVANIZED OR STAINLESS STEEL
2. TRANSITION PLATE ZINC ELECTROPLATE FINISH
3. 3/4 TON EYEHOOK
4. 1/4" DIAMETER WINCH CABLE, GALVANIZED OR STAINLESS STEEL
5. CIRCUIT BREAKER AND ENCLOSURE
6. HAND KNOB/SUPPORT BRACKET FOR ATTACHING TO POLE HANDHOLE
7. REVERSING DRUM SWITCH
8. PLUG TO MATE WITH POLE BASE CORD OR TRANSFORMER
9. WINCH, 30:1 GEAR RATIO WITH INTERNAL DRAG BRAKE
10. LEG BRACKET AND EXTENSION LEG BRACKET
11. SEMI-PNEUMATIC BALL BEARING WHEEL
12. 3/4", 120V, REVERSING MOTOR
13. TORQUE LIMITER
14. STEPDOWN TRANSFORMER ASSEMBLY FROM [ ] 480V [ ] 277V [ ] 240V [ ] 208V TO 120V

PORTABLE (EXTERNAL) WINCH AND DRIVE ASSEMBLY

NOT TO SCALE

NOTES:

1. DETAILS SHOWN ON THIS SHEET ARE GENERAL SCHEMATIC DETAILS AND ARE NOT TO BE USED FOR CONSTRUCTION OR FABRICATION PURPOSES. THESE DETAILS ARE INTENDED TO PROVIDE MINIMUM REQUIREMENTS.
2. SEE PROJECT DEVELOPMENT PLANS AND SPECIFICATIONS FOR SPECIFIC PORTABLE WINCH REQUIREMENTS AND STEPDOWN TRANSFORMER ASSEMBLY POWER REQUIREMENTS.
3. PORTABLE WINCH TO BE USED IN CASE OF FAILURE OF PRIMARY (INTERNAL) WINCH.
4. CONTROL CORD LENGTH SHALL BE 20' MINIMUM.
5. THE CONTRACTOR/FABRICATOR SHALL SUBMIT SPECIFIC DESIGN AND DETAILS FOR ALL ELECTRICAL AND MECHANICAL COMPONENTS, IN COMPLIANCE WITH PROJECT SPECIFIC REQUIREMENTS, TO THE NMDOT FOR REVIEW AND APPROVAL. ALL DESIGN AND DETAILS SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF NEW MEXICO.

ALFRED P. MURILLO
NEW MEXICO
18841
PROFESSIONAL ENGINEER

Alfred P. Murillo 12.08.11

NO.	DATE	REV.BY	DESCRIPTION

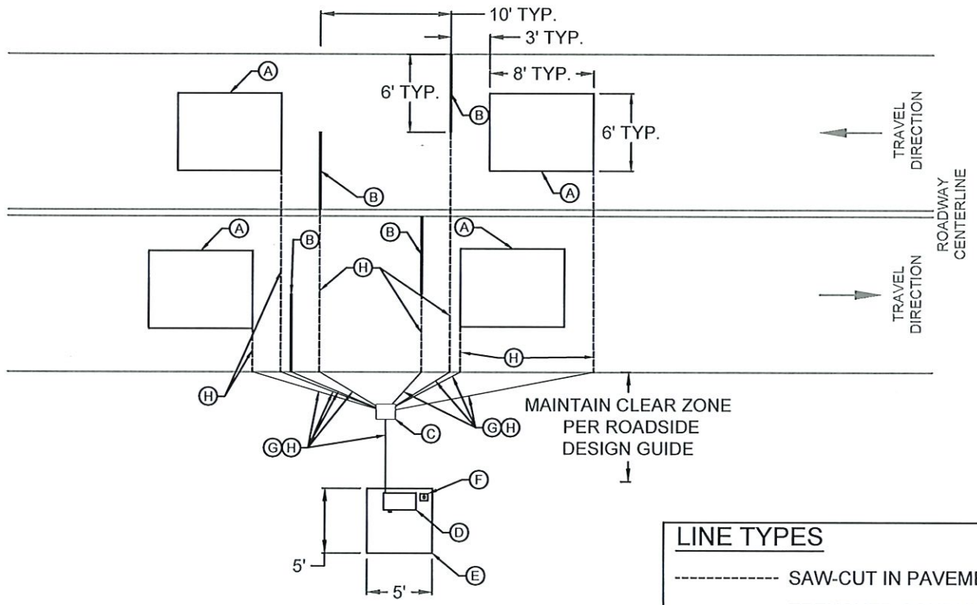
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

HIGH MAST LUMINAIRE
SUPPORT STRUCTURES
TYPE VI

DESIGNED BY NB/MS DRAWN BY CCS CHECKED BY APM

707L-08-7/9



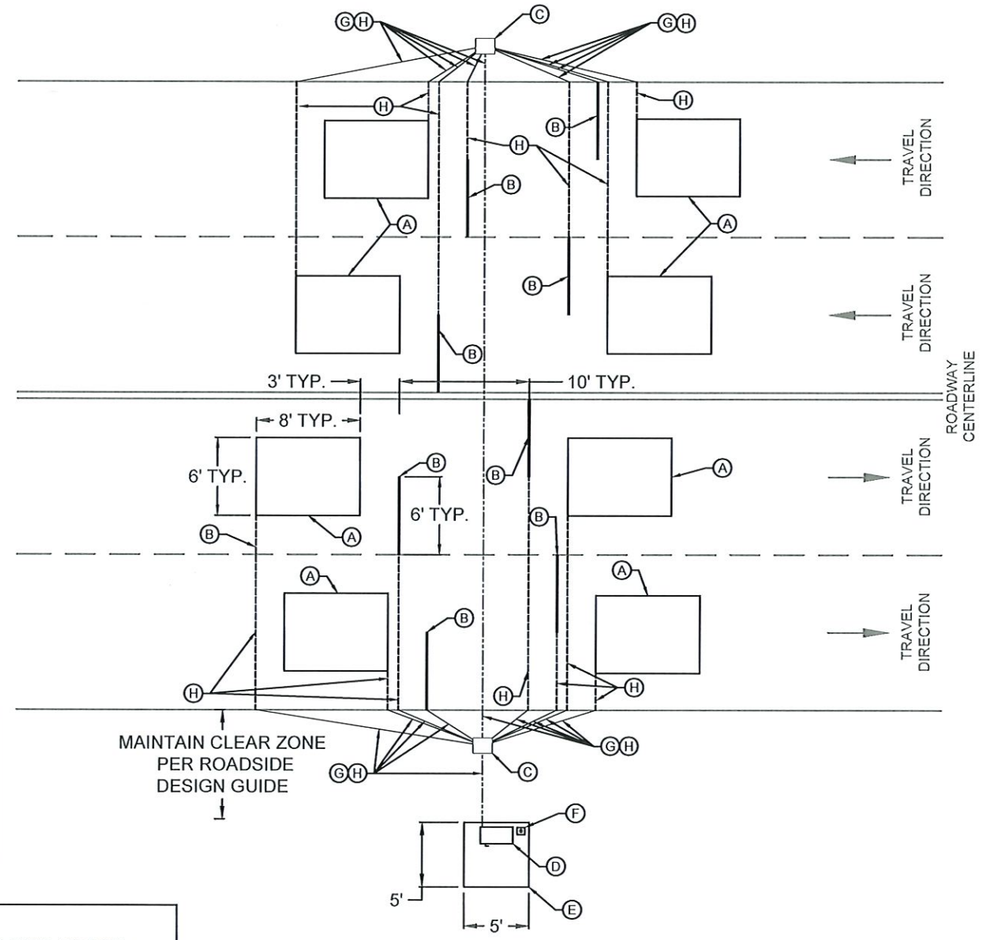
2 - LANE UNDIVIDED

LINE TYPES

---------- SAW-CUT IN PAVEMENT

———— TRENCHED CONDUIT

——·——·—— BORED CONDUIT



4 - LANE UNDIVIDED

NOTES

A: INSTALL 6' X 8' INDUCTANCE LOOP OF 4 TURNS AT 3" DEEP CENTERED IN LANE AS PER NMDOT SPECIFICATIONS SECTION 713* USING COLD-APPLIED SEALANT.

B: INSTALL QUARTZ PIEZO AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON RTS 20 POLE AND RUN LEAD WIRES THROUGH CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: SHIELDED LOOP AND/OR PIEZO LEAD-IN WIRES. LENGTH SHALL NOT EXCEED 250' UNLESS APPROVED BY NMDOT TRAFFIC MONITORING PROGRAM.

NOTE: ALL LOOPS, PIEZOS AND LEAD IN WIRES THAT ARE SAW-CUT INTO PAVEMENT SHALL BE SEALED WITH MANUFACTURER RECOMMENDED COLD-APPLIED LOOP SEALANT WITH LIQUID HARDENER REACTOR.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION

12/17/2019

NO.	DESCRIPTION	DATE	BY
4			
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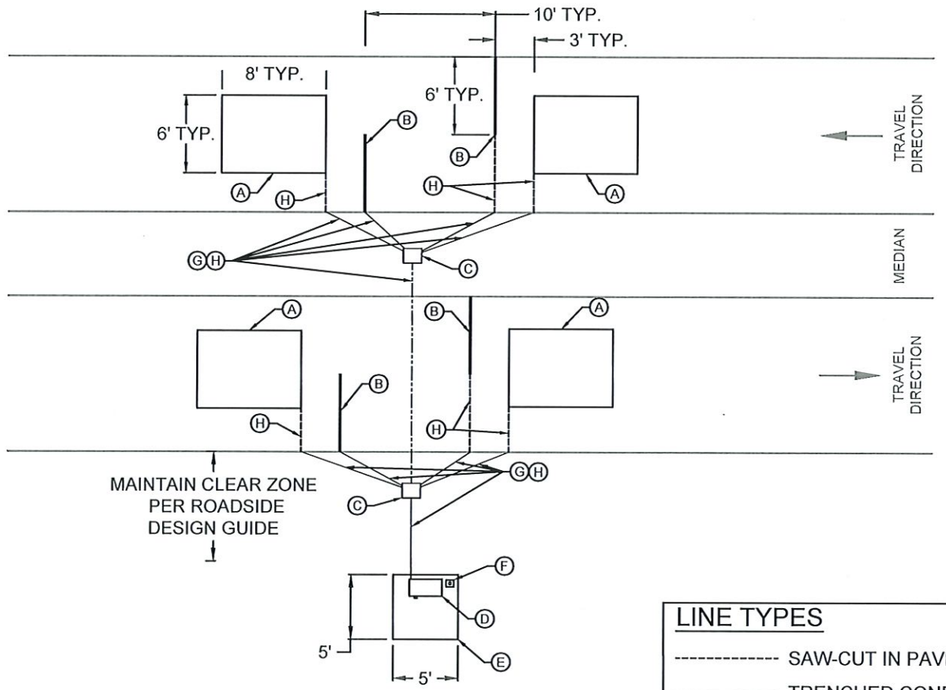
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

WEIGH-IN-MOTION (WIM) UNDIVIDED SECTION DETAILS



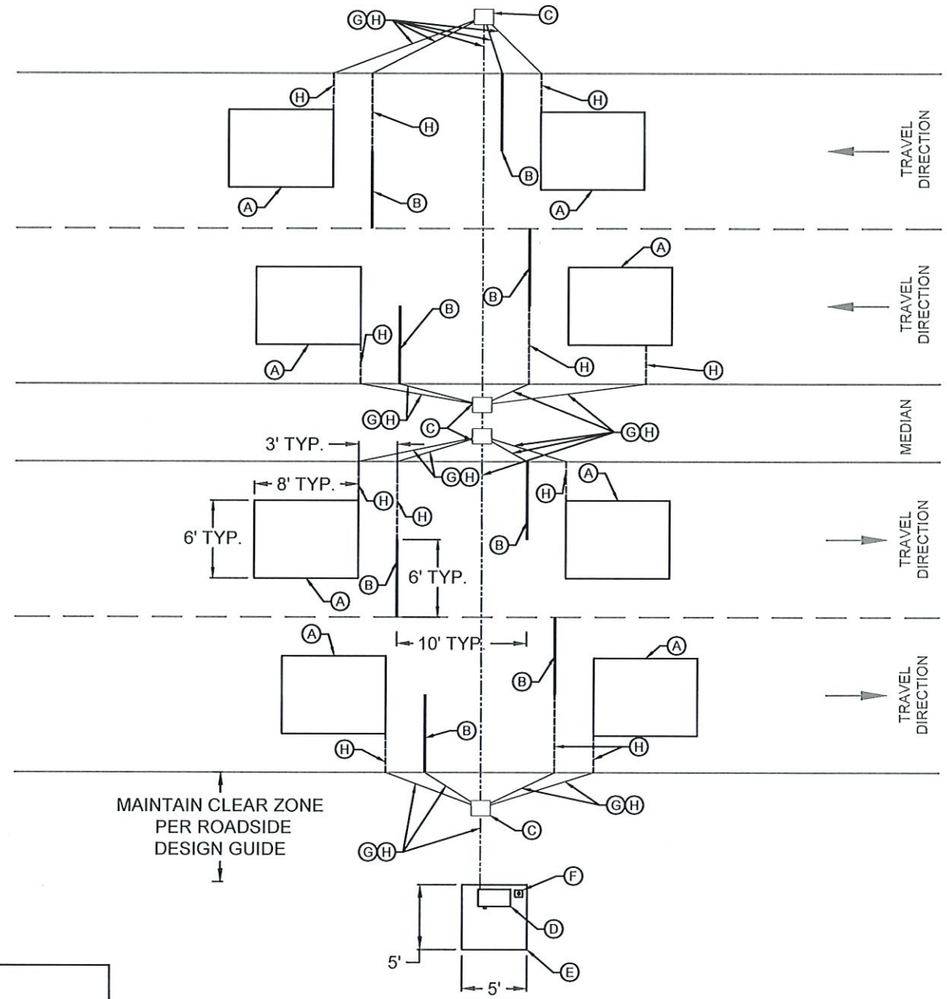
2 - LANE DIVIDED

LINE TYPES

---------- SAW-CUT IN PAVEMENT

———— TRENCHED CONDUIT

—·—·—·— BORED CONDUIT



4 - LANE DIVIDED

NOTES

A: INSTALL 6' X 8' INDUCTANCE LOOP OF 4 TURNS AT 3" DEEP CENTERED IN LANE AS PER NMDOT SPECIFICATIONS SECTION 713* USING COLD-APPLIED SEALANT.

B: INSTALL QUARTZ PIEZO AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON RTS 20 POLE AND RUN LEAD WIRES THROUGH CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: SHIELDED LOOP AND/OR PIEZO LEAD-IN WIRES. LENGTH SHALL NOT EXCEED 250' UNLESS APPROVED BY NMDOT TRAFFIC MONITORING PROGRAM.

NOTE: ALL LOOPS, PIEZOS AND LEAD IN WIRES THAT ARE SAW-CUT INTO PAVEMENT SHALL BE SEALED WITH MANUFACTURER RECOMMENDED COLD-APPLIED LOOP SEALANT WITH LIQUID HARDENER REACTOR.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION

PAUL A. BARRICKLOW
NEW MEXICO
17744
LICENSED PROFESSIONAL ENGINEER

12/17/2019

NO.	DESCRIPTION	DATE	BY
4			
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1			

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

WEIGH-IN-MOTION (WIM) DIVIDED SECTION DETAILS

NOTES

A: INSTALL 6' X 8' INDUCTANCE LOOP OF 4 TURNS AT 3" DEEP CENTERED IN LANE AS PER NMDOT SPECIFICATIONS SECTION 713* USING COLD-APPLIED SEALANT.

B: INSTALL QUARTZ PIEZO AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

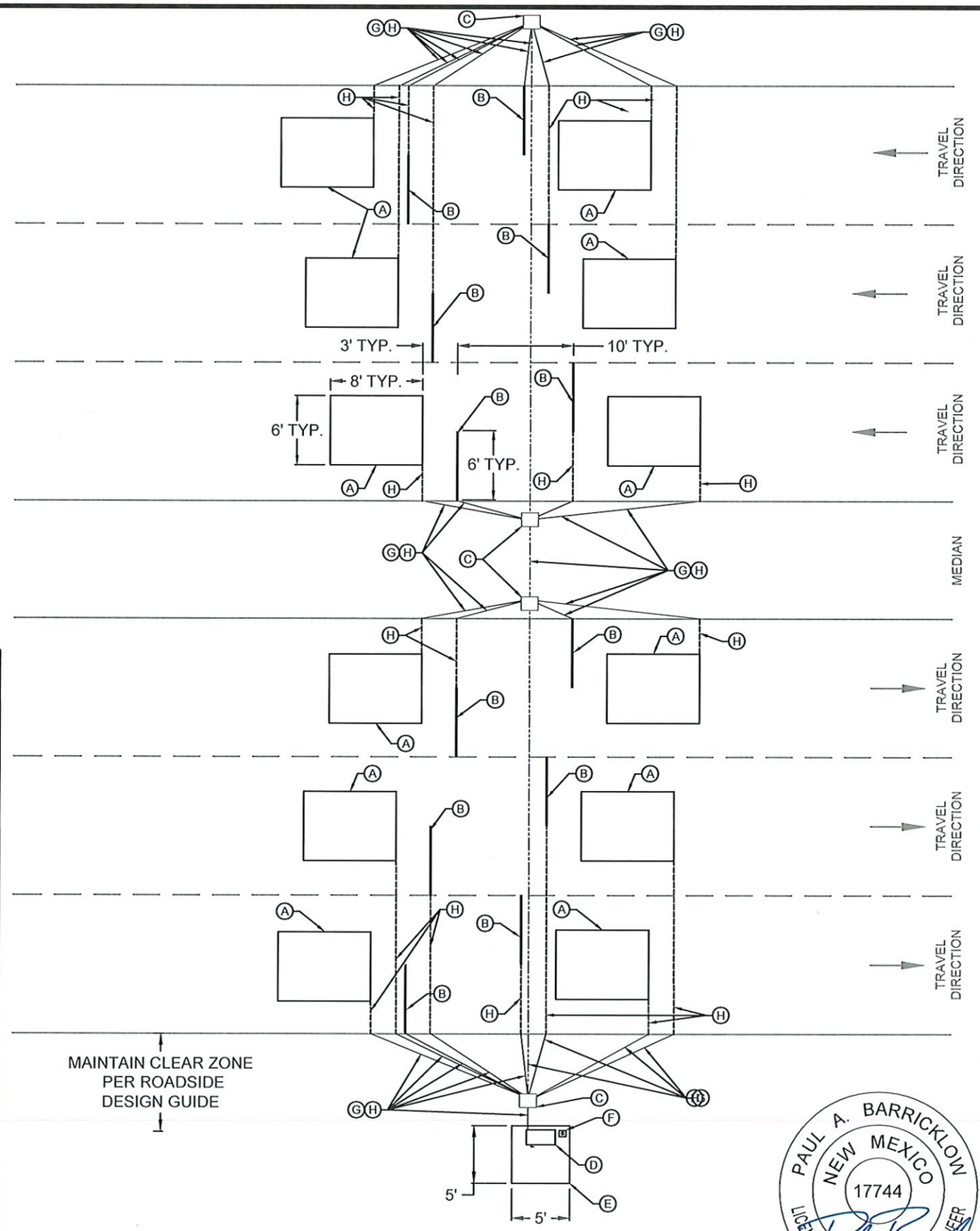
F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON RTS 20 POLE AND RUN LEAD WIRES THROUGH CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: SHIELDED LOOP AND/OR PIEZO LEAD-IN WIRES. LENGTH SHALL NOT EXCEED 250' UNLESS APPROVED BY NMDOT TRAFFIC MONITORING PROGRAM.

NOTE: ALL LOOPS, PIEZOS AND LEAD IN WIRES THAT ARE SAW-CUT INTO PAVEMENT SHALL BE SEALED WITH MANUFACTURER RECOMMENDED COLD-APPLIED LOOP SEALANT WITH LIQUID HARDENER REACTOR.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION



6 - LANE DIVIDED

LINE TYPES

---------- SAW-CUT IN PAVEMENT

———— TRENCHED CONDUIT

—·—·—·— BORED CONDUIT

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY

PAUL A. BARRICKLOW
NEW MEXICO
17744
LICENSED PROFESSIONAL ENGINEER

12/17/2019

NO.	DESCRIPTION	DATE	BY
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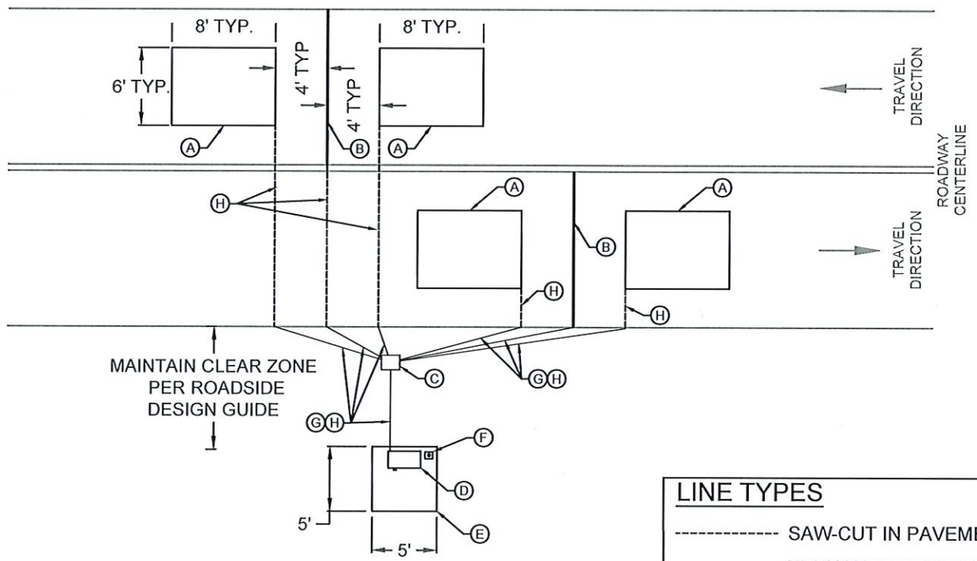
REVISIONS (OR CHANGE NOTICES)

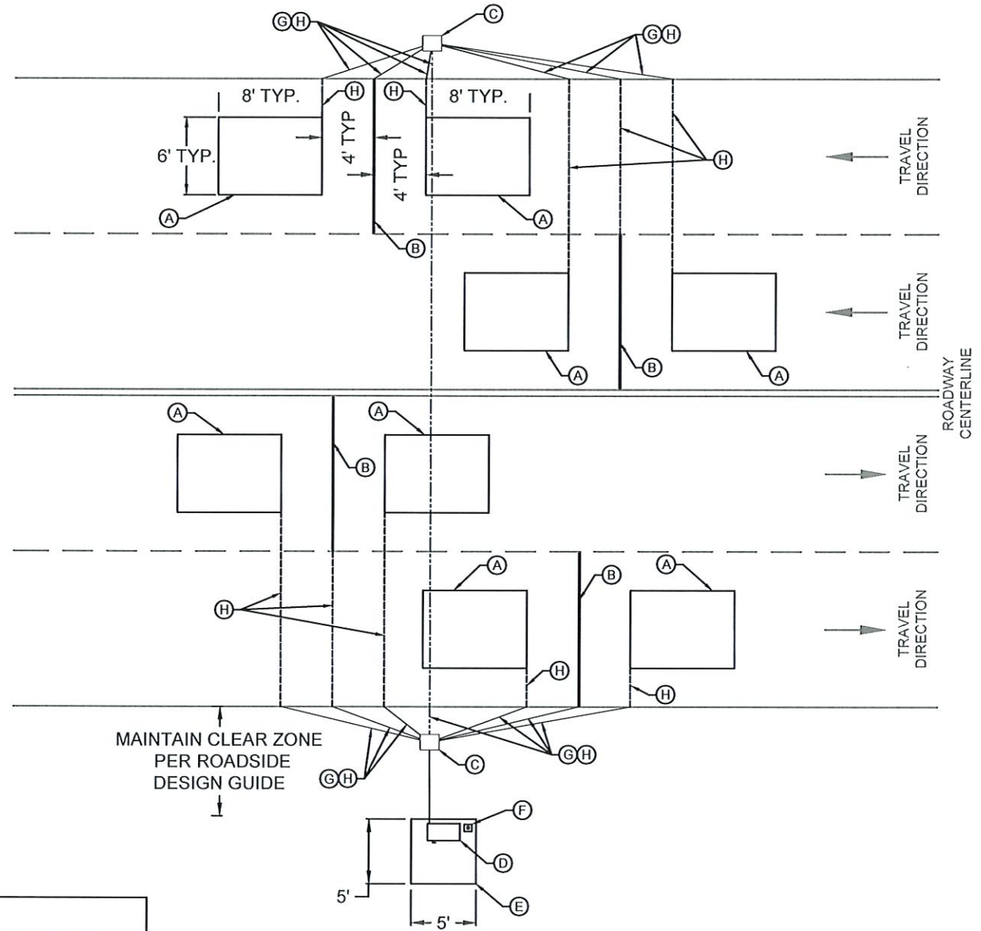
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

WEIGH-IN-MOTION (WIM)
6-LANE SECTION DETAILS

730-01 3 of 3



2 - LANE UNDIVIDED



4 - LANE UNDIVIDED

LINE TYPES

---------- SAW-CUT IN PAVEMENT

———— TRENCHED CONDUIT

—·—·—·— BORED CONDUIT

NOTES

A: INSTALL 6' X 8' INDUCTANCE LOOP OF 3 TURNS AT 3" DEEP CENTERED IN LANE AS PER NMDOT SPECIFICATIONS SECTION 713* USING COLD-APPLIED SEALANT. SPACE SEQUENTIAL LOOPS 16' FROM LEADING EDGE TO LEADING EDGE.

B: INSTALL CLASS 1 PIEZO AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON TOP OF RTS 20 POLE AND RUN LEAD WIRES THROUGH CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: SHIELDED LOOP AND/OR PIEZO LEAD-IN WIRES. LENGTH SHALL NOT EXCEED 250' UNLESS APPROVED BY NMDOT TRAFFIC MONITORING PROGRAM.

NOTE: ALL LOOPS, PIEZOS AND LEAD IN WIRES THAT ARE SAW-CUT INTO PAVEMENT SHALL BE SEALED WITH MANUFACTURER RECOMMENDED COLD-APPLIED LOOP SEALANT WITH LIQUID HARDENER REACTOR.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION

PAUL A. BARRICKLOW
NEW MEXICO
17744
LICENSED PROFESSIONAL ENGINEER

12/17/2019

NO.	DESCRIPTION	DATE	BY
4			
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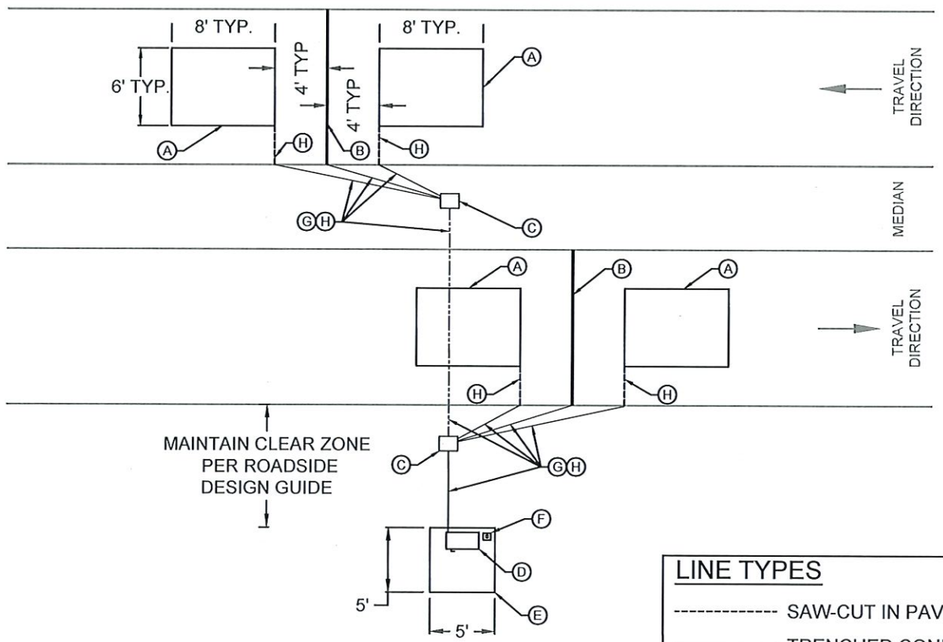
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONTINUOUS COUNT STATION (CCS) UNDIVIDED SECTION DETAILS



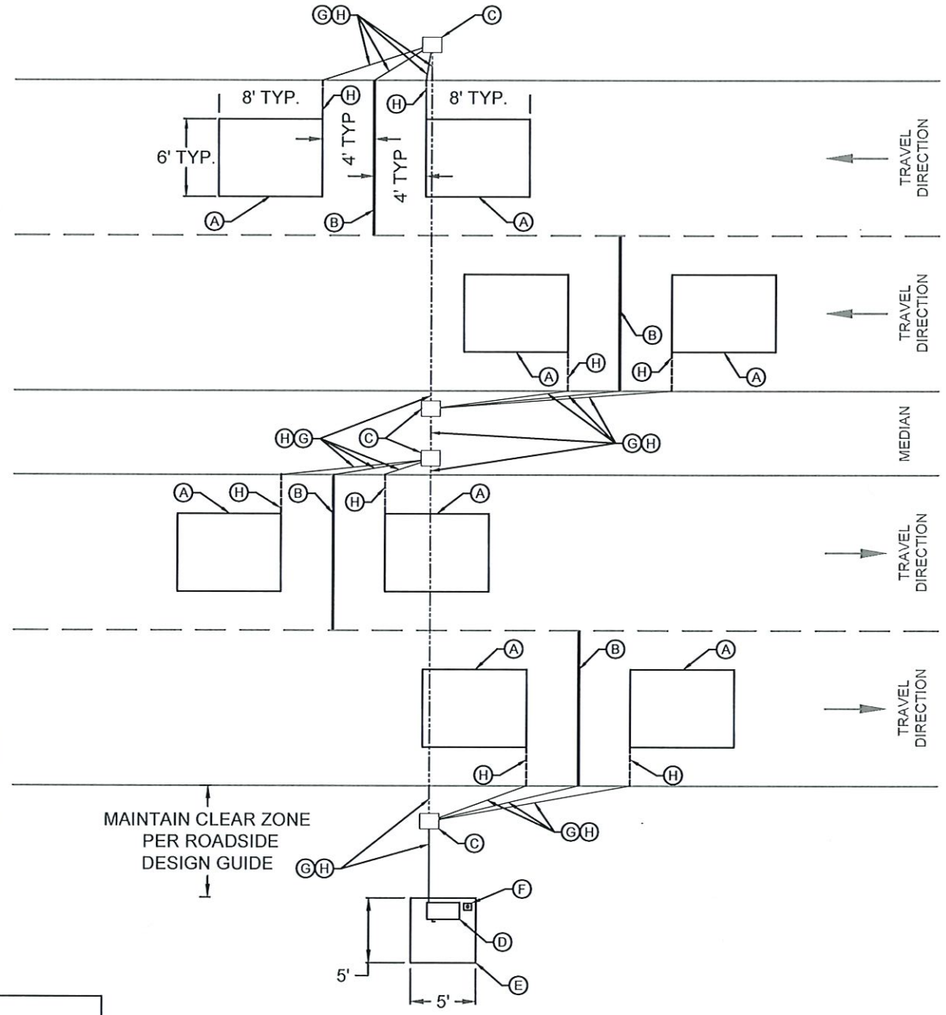
2 - LANE DIVIDED

LINE TYPES

---------- SAW-CUT IN PAVEMENT

———— TRENCHED CONDUIT

—·—·—·— BORED CONDUIT



4 - LANE DIVIDED

NOTES

A: INSTALL 6' X 8' INDUCTANCE LOOP OF 3 TURNS AT 3" DEEP CENTERED IN LANE AS PER NMDOT SPECIFICATIONS SECTION 713* USING COLD-APPLIED SEALANT. SPACE SEQUENTIAL LOOPS 16' FROM LEADING EDGE TO LEADING EDGE.

B: INSTALL CLASS 1 PIEZO AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON RTS 20 POLE AND RUN LEAD WIRES THROUGH CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: SHIELDED LOOP AND/OR PIEZO LEAD-IN WIRES. LENGTH SHALL NOT EXCEED 250' UNLESS APPROVED BY NMDOT TRAFFIC MONITORING PROGRAM.

NOTE: ALL LOOPS, PIEZOS AND LEAD IN WIRES THAT ARE SAW-CUT INTO PAVEMENT SHALL BE SEALED WITH MANUFACTURER RECOMMENDED COLD-APPLIED LOOP SEALANT WITH LIQUID HARDENER REACTOR.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION

12/17/2019

NO.	DESCRIPTION	DATE	BY
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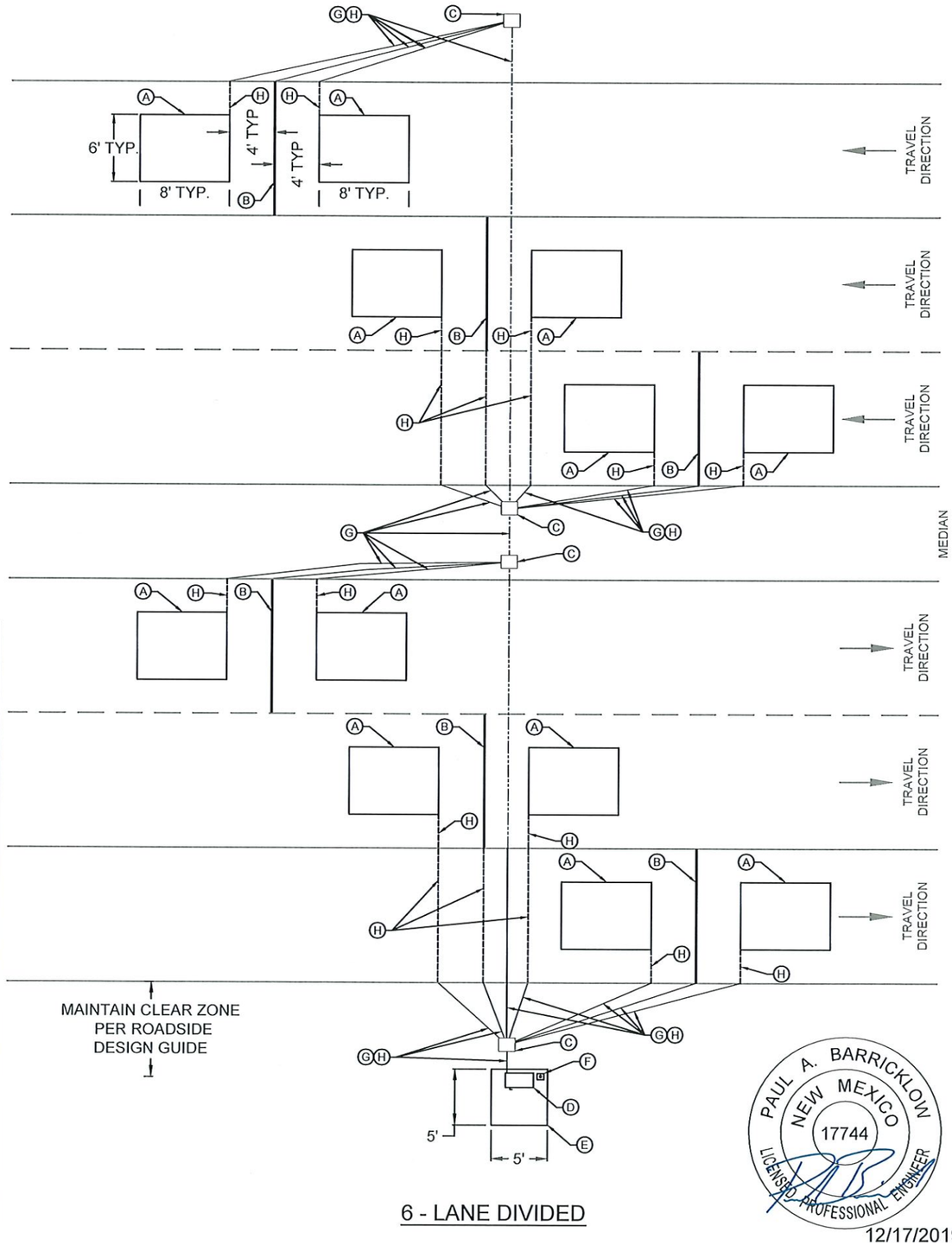
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONTINUOUS COUNT STATION (CCS) DIVIDED SECTION DETAILS



6 - LANE DIVIDED

NOTES

A: INSTALL 6' X 8' INDUCTANCE LOOP OF 3 TURNS AT 3" DEEP CENTERED IN LANE AS PER NMDOT SPECIFICATIONS SECTION 713* USING COLD-APPLIED SEALANT. SPACE SEQUENTIAL LOOPS 16' FROM LEADING EDGE TO LEADING EDGE.

B: INSTALL CLASS 1 PIEZO AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON RTS 20 POLE AND RUN LEAD WIRES THROUGH CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: SHIELDED LOOP AND/OR PIEZO LEAD-IN WIRES. LENGTH SHALL NOT EXCEED 250' UNLESS APPROVED BY NMDOT TRAFFIC MONITORING PROGRAM.

NOTE: ALL LOOPS, PIEZOS AND LEAD IN WIRES THAT ARE SAW-CUT INTO PAVEMENT SHALL BE SEALED WITH MANUFACTURER RECOMMENDED COLD-APPLIED LOOP SEALANT WITH LIQUID HARDENER REACTOR.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION

LINE TYPES

---------- SAW-CUT IN PAVEMENT

———— TRENCHED CONDUIT

—·—·—·— BORED CONDUIT

THIS STANDARD DRAWING IS FOR USE ONLY ON NMDOT PROJECTS. OTHERS WHO USE THE NMDOT STANDARD DRAWINGS DO SO AT THEIR OWN RISK AND ACCEPT THE RESPONSIBILITY OF DETERMINING THEIR APPLICABILITY AND ANY RESULTING LIABILITY

PAUL A. BARRICKLOW NEW MEXICO 17744 LICENSED PROFESSIONAL ENGINEER

12/17/2019

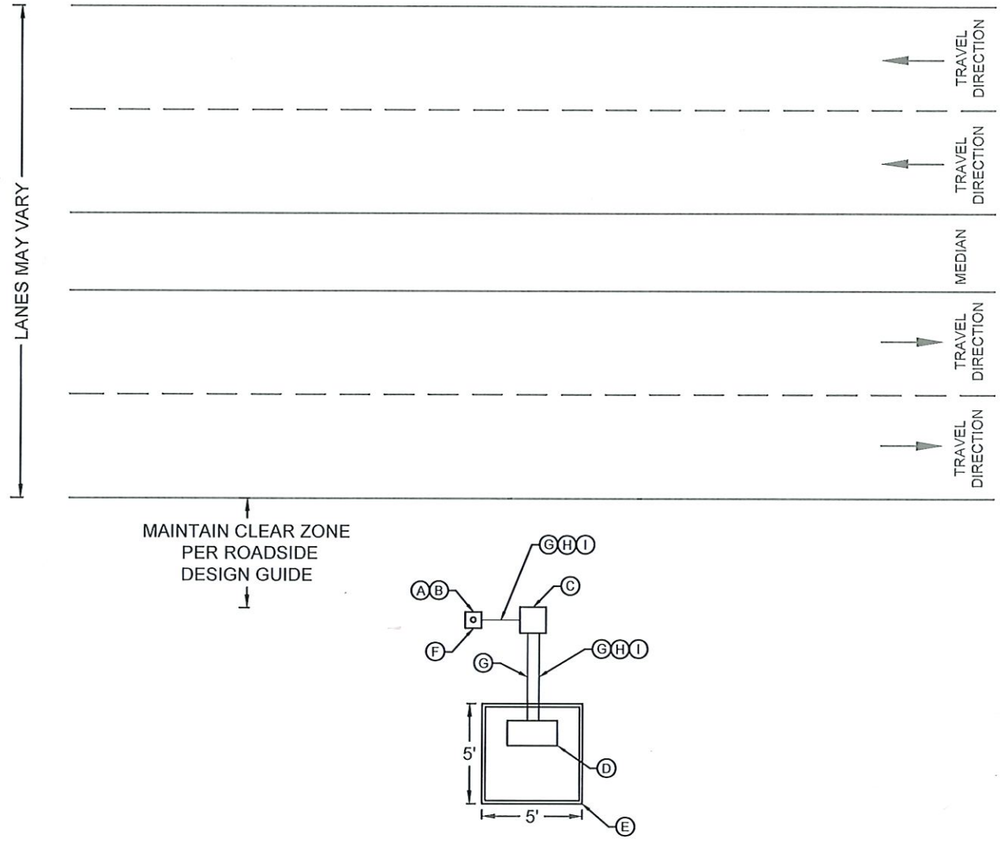
NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CONTINUOUS COUNT STATION (CCS)
6-LANE SECTION DETAILS

730-02 3 of 3



NOTES

A: INSTALL 30' ITS POLE AND FOUNDATION AS PER NMDOT SPECIFICATIONS SECTION 750*.

B: INSTALL RADAR SENSOR ON ITS POLE AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON 30' ITS POLE ABOVE RADAR SENSOR AND RUN LEAD WIRES THROUGH POLE AND CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: INSTALL RADAR CABLE IN CONDUIT.

I: INSTALL SOLAR PANEL WIRING IN CONDUIT.

NOTE: RADAR SENSOR SHALL BE INSTALLED, POSITIONED, AIMED AND WIRE PER MANUFACTURERS RECOMMENDATIONS. SENSOR MOUNTING HARDWARE SHALL BE PURCHASED FROM SENSOR MANUFACTURER.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION

1 TO 4 LANE RADAR CCS

PAUL A. BARRICKLOW
NEW MEXICO
17744
LICENSED PROFESSIONAL ENGINEER

12/17/2019

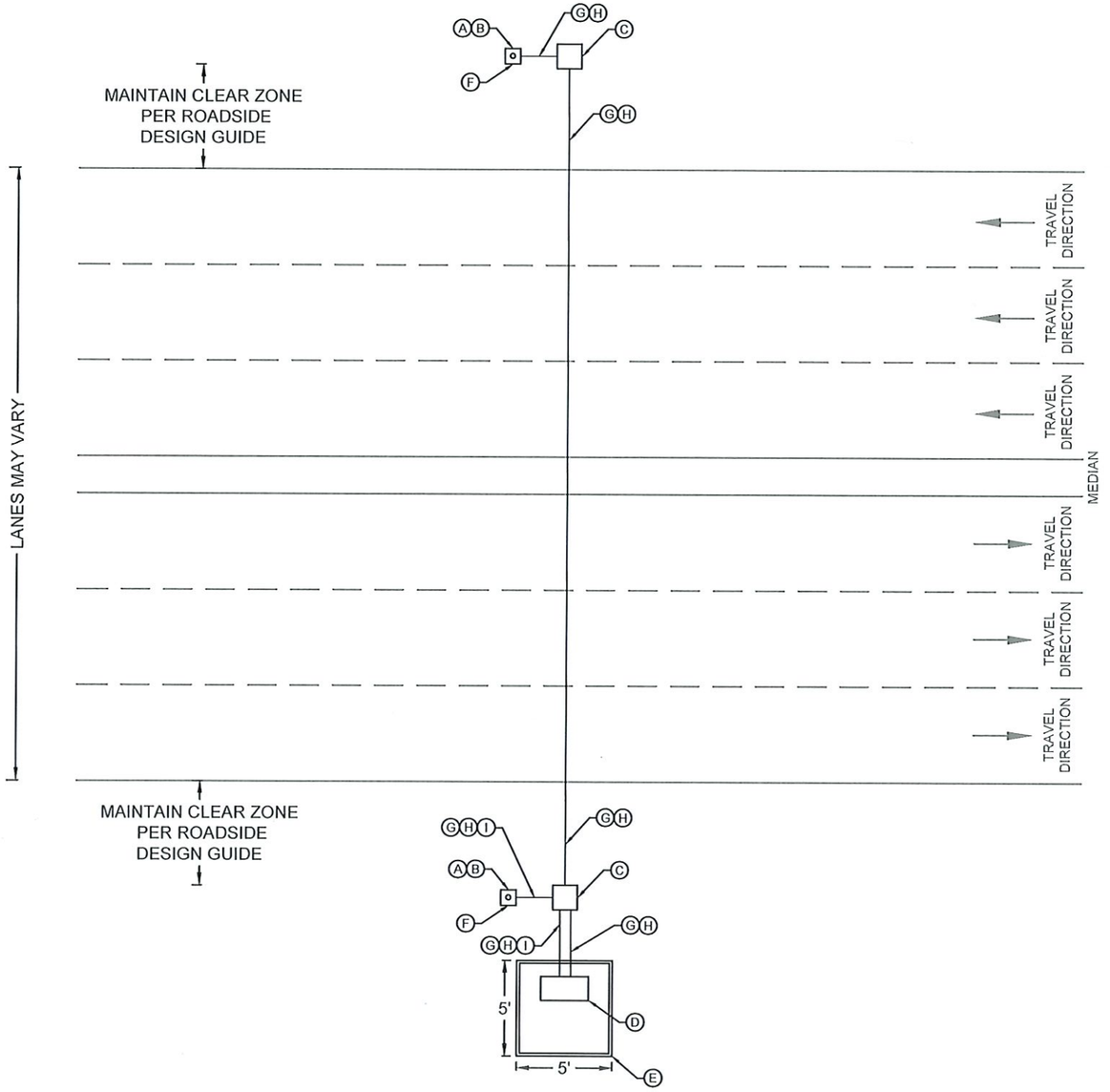
NO.	DESCRIPTION	DATE	BY
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

RADAR CONTINUOUS COUNT STATION
1 TO 4 LANES SINGLE SENSOR

730-03-1/2



5 TO 6 LANE RADAR CCS

NOTES

A: INSTALL 30' ITS POLE AND FOUNDATION AS PER NMDOT SPECIFICATIONS SECTION 750*.

B: INSTALL RADAR SENSOR ON ITS POLE AS PER MANUFACTURER'S RECOMMENDATIONS.

C: INSTALL STANDARD SIZE PULL BOX AS PER NMDOT SPECIFICATIONS SECTION 710*. PULLBOXES SHALL BE INSTALLED OUTSIDE OF PAVED ROADWAY.

D: INSTALL TYPE M TRAFFIC SIGNAL CABINET AS PER NMDOT SPECIFICATIONS SECTION 714*. COORDINATE WITH NMDOT TRAFFIC MONITORING PROGRAM FOR SPECIFIC IN-CABINET EQUIPMENT.

E: INSTALL 5'X5'X4" REINFORCED CONCRETE SLAB AS PER NMDOT SPECIFICATIONS SECTION 515*. MAINTAIN CLEAR ZONE PER ROADSIDE DESIGN GUIDE.

F: INSTALL 120-WATT SOLAR PANEL MOUNTED ON 30' ITS POLE ABOVE RADAR SENSOR AND RUN LEAD WIRES THROUGH POLE AND CONDUIT INTO CABINET.

G: INSTALL 2" NONMETALLIC RIGID ELECTRICAL CONDUIT AS PER NMDOT SPECIFICATIONS SECTION 709*.

H: INSTALL RADAR CABLE IN CONDUIT.

I: INSTALL SOLAR PANEL WIRING IN CONDUIT.

NOTE: RADAR SENSOR SHALL BE INSTALLED, POSITIONED, AIMED AND WIRE PER MANUFACTURERS RECOMMENDATIONS. SENSOR MOUNTING HARDWARE SHALL BE PURCHASED FROM SENSOR MANUFACTURER.

*NMDOT 2019 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION

PAUL A. BARRICKLOW
NEW MEXICO
17744
LICENSED PROFESSIONAL ENGINEER

12/17/2019

NO.	DESCRIPTION	DATE	BY
4			
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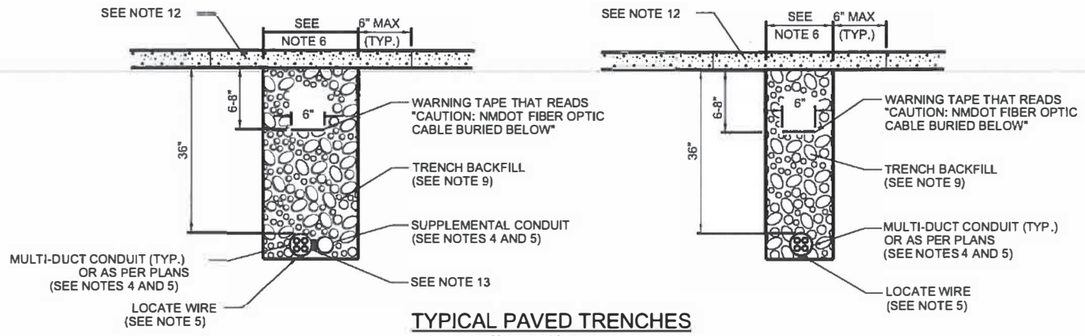
1			

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

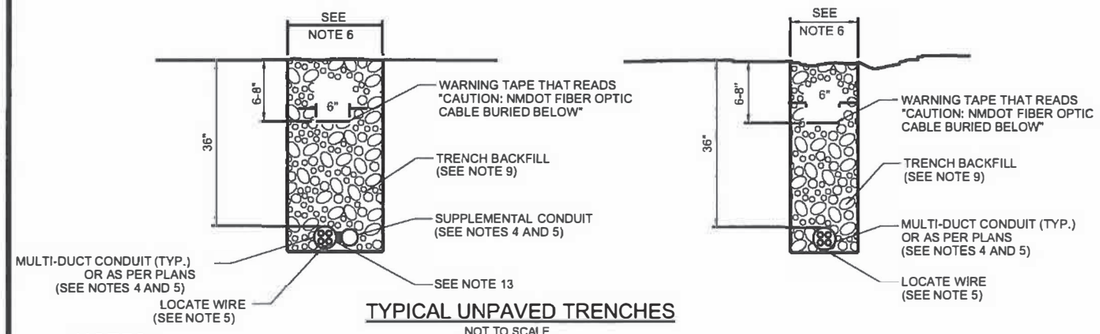
RADAR CONTINUOUS COUNT STATION
5 TO 8 LANES DUAL SENSORS

730-03-2/2



TYPICAL PAVED TRENCHES

NOT TO SCALE

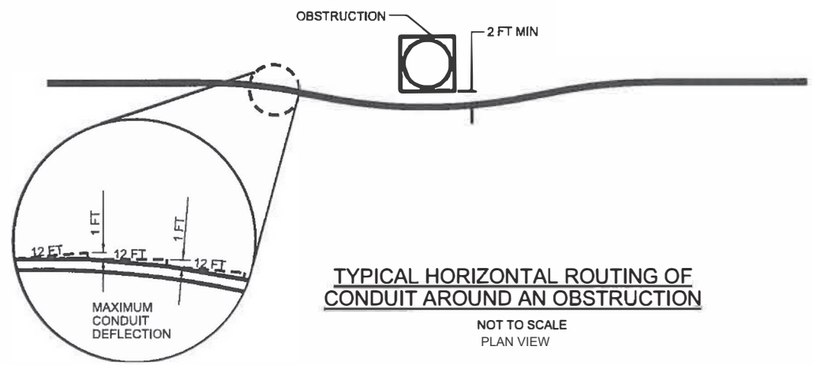


TYPICAL UNPAVED TRENCHES

NOT TO SCALE

NOTES:

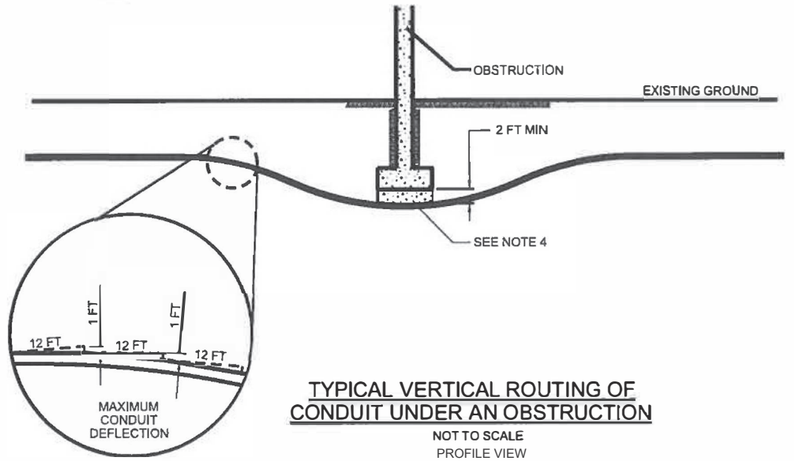
1. THE TRENCH BOTTOM SHALL BE SMOOTH, FLAT, AND FREE OF ROCKS OR OTHER IMPEDIMENTS. TRENCH BOTTOM SHALL ALSO MEET THE REQUIREMENTS OF SECTION 705.3.2 OF THE STANDARD SPECIFICATIONS.
2. ALL TRENCHES BETWEEN POWER SERVICES AND DEVICES SHALL MEET THE TRENCH REQUIREMENTS OF THE UTILITY COMPANY.
3. **WHEN TWO OR MORE CONDUITS ARE INSTALLED IN A TRENCH,** CONDUIT COUPLINGS SHALL BE STAGGERED.
4. CONDUIT SIZE AND NUMBER MAY VARY. SEE PLANS FOR CONDUIT DETAILS. WHEN CONDUITS ARE ARRANGED SUCH THAT COMPACTION METHODS PER SECTION 203.3.6 CAN NOT BE UTILIZED, TRENCH SHALL BE BACKFILLED WITH FLOWABLE FILL TO 3" ABOVE THE TOP OF THE HIGHEST CONDUIT. NO DIRECT MEASUREMENT OR PAYMENT WILL BE MADE FOR THE USE OF FLOWABLE FILL.
5. LOCATE WIRE SHALL BE INSTALLED INSIDE THE MULTI-DUCT CONDUIT. IN ADDITION TO THE LOCATE WIRE, PROVIDE FLAT PROFILE, LOW STRETCH POLYESTER, 5/8-INCH 2500 lb. MINIMUM TENSILE STRENGTH PULL TAPE WITH SEQUENTIAL MARKNGS IN ALL EMPTY CONDUITS OR INNER DUCTS, **UNLESS CONDUIT AND/OR INNER DUCT WILL ACCOMODATE FIBER BEING BLOWN INTO THE CONDUIT.**
6. TOTAL TRENCH WIDTH SHALL BE 3" NOMINAL WIDER THAN THE SUM OF OUTSIDE DIAMETERS OF CONDUIT(S) INSTALLED. CONDUIT(S) SHALL BE CENTERED IN TRENCH. SEE PLANS FOR NUMBER, TYPE, AND SIZE OF CONDUIT(S). SAWCUT SHALL BE NO MORE THAN 12" WIDER THAN TRENCH WIDTH.
7. COORDINATE WITH "NEW MEXICO ONE CALL" AT (800) 321-2537 OR WWW.NM811.ORG TO LOCATE ALL EXISTING UTILITIES PRIOR TO DIGGING.
8. TRENCH DEPTHS AND CONDUIT COVER ARE TO BE MEASURED FROM FINAL GRADE.
9. TRENCH BACKFILL SHALL MEET THE REQUIREMENTS OF SECTIONS 705.2.2 AND 705.3.2 OF THE STANDARD SPECIFICATIONS, AND SHALL NOT CONTAIN LARGER THAN 4" LARGE PIECES OF CONCRETE, VEGETATION, OR OTHER EXTRANEOUS SUBSTANCES. COMPACTION METHODS SHALL MEET THE REQUIREMENTS OF SECTION 203.3.6 OF THE STANDARD SPECIFICATIONS.
10. ALL SPOIL MATERIALS SHALL BE REMOVED OFFSITE BY THE CONTRACTOR.
11. RETURN ALL DISTURBED AREAS TO MATCH EXISTING GRADE.
12. FOR PAVED TRENCHES, REMOVE AND REPLACE EXISTING SURFACE. NEW SURFACE MATERIAL SHALL BE FROM AN APPROVED COMMERCIAL SOURCE. PAVEMENT REMOVAL SHALL BE BY SAWCUT METHOD.
13. INSTALL ALL CONDUIT PER NMDOT STANDARD DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION.



TYPICAL HORIZONTAL ROUTING OF CONDUIT AROUND AN OBSTRUCTION

NOT TO SCALE

PLAN VIEW



TYPICAL VERTICAL ROUTING OF CONDUIT UNDER AN OBSTRUCTION

NOT TO SCALE

PROFILE VIEW

NOTES:

1. CONDUIT DEFLECTION SHALL NOT EXCEED ONE FOOT IN THE HORIZONTAL OR VERTICAL DIRECTION PER 12 FEET IN LONGIDUTINAL DIRECTION (TYP).
2. CONDUIT SHALL BE ROUTED NO CLOSER THAN 2 FEET TO ANY OBSTRUCTION.
3. CORE DRILLING THROUGH AN OBSTRUCTION MAY BE USED AS AN ALTERNATIVE METHOD, SUBJECT TO PROJECT MANAGER'S APPROVAL.
4. BACKFILL UNDER FOOTING SHALL BE FLOWABLE FILL PER SECION 516 OF THE STANDARD SPECIFICATIONS.

12-10-2021

NO.	DESCRIPTION	DATE	BY

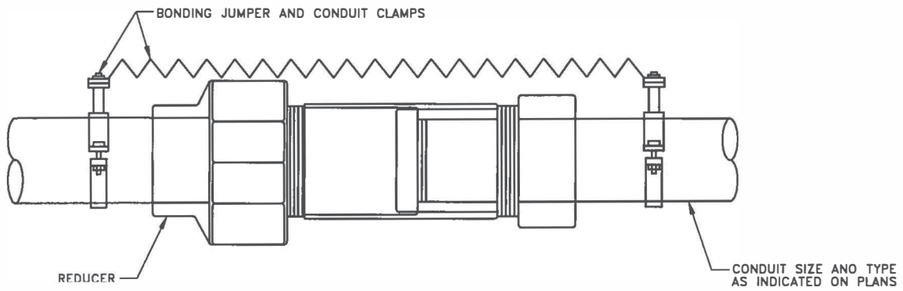
REVISIONS (OR CHANGE NOTICES)

NEW MEXICO DEPARTMENT OF TRANSPORTATION

TYPICAL CONDUIT TRENCH AND INSTALLATION DETAILS (ITS)

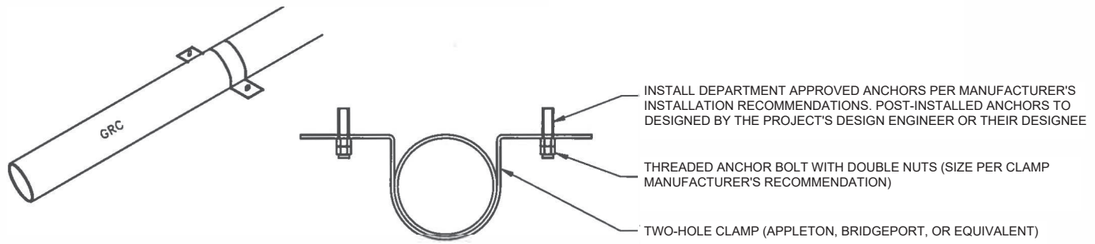
DESIGN BY ____ DRAWN BY ____ CHECKED BY ____

750-01-1/2



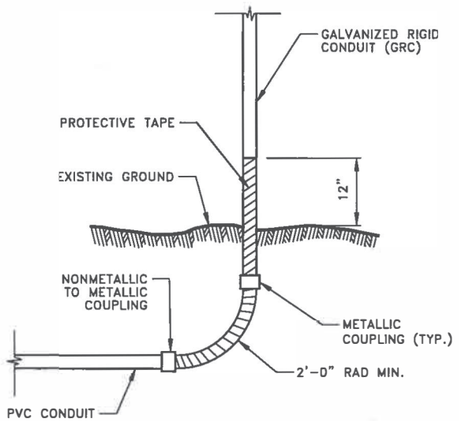
A. TYPICAL EXPANSION COUPLING DETAIL

NOT TO SCALE



C. TYPICAL GALVANIZED RIGID CONDUIT(GRC) TWO HOLE CLAMP DETAIL

NOT TO SCALE

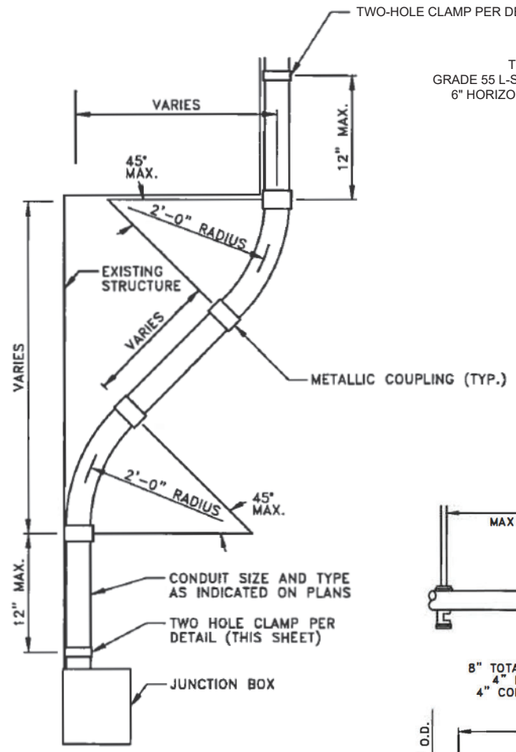


B. TYPICAL PVC TO GALVANIZED RIGID CONDUIT(GRC) TRANSITION DETAIL

NOT TO SCALE

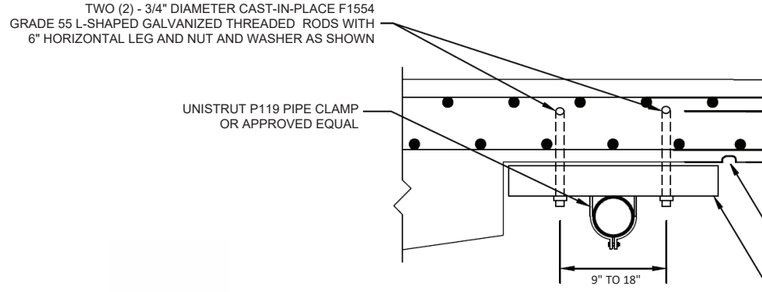
NOTES:

1. EXPANSION COUPLINGS SHALL BE INSTALLED FOR ALL GALVANIZED RIGID CONDUIT AT ALL BRIDGE EXPANSION JOINTS AND AS DIRECTED.
2. EXPANSION JOINTS SHALL ALLOW FOR 8" (MIN) MOVEMENT.
3. CONDUIT CLAMP SPACING FOR GALVANIZED RIGID CONDUIT SHALL BE PER MANUFACTURER SPECIFICATIONS, AND SHALL IN NO CASE EXCEED 10 FEET.
4. CONDUIT CLAMP MUST BE PLACED WITHIN 5 FEET OF EACH SIDE OF JUNCTION BOXES AND CONDUIT BENDS.
5. EACH CONDUIT SHALL HAVE INDEPENDENT EXPANSION COUPLINGS AND TWO HOLE CLAMPS.



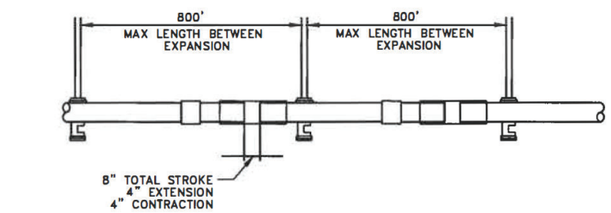
E. TYPICAL GALVANIZED RIGID CONDUIT (GRC) 45 DEGREE BEND DETAIL

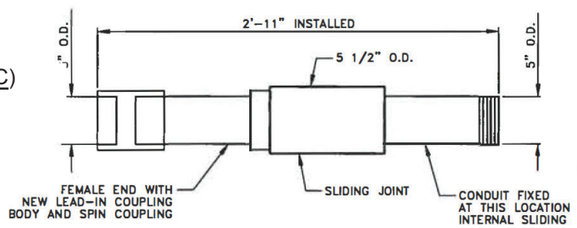
NOT TO SCALE



D. TYPICAL GALVANIZED RIGID CONDUIT (GRC) UNISTRUT DETAIL

NOT TO SCALE





F. TYPICAL EXPANSION JOINT PLACEMENT DETAIL

NOT TO SCALE

CHARLES REMKES
NEW MEXICO
13507
REGISTERED PROFESSIONAL ENGINEER
12-10-2021

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NO.	DESCRIPTION	DATE	BY
	REVISIONS (OR CHANGE NOTICES)		

NEW MEXICO DEPARTMENT OF TRANSPORTATION

CONDUIT EXPANSION COUPLING AND TWO HOLE CLAMP

DESIGN BY ____ DRAWN BY ____ CHECKED BY ____

750-01-2/2 2 of 2

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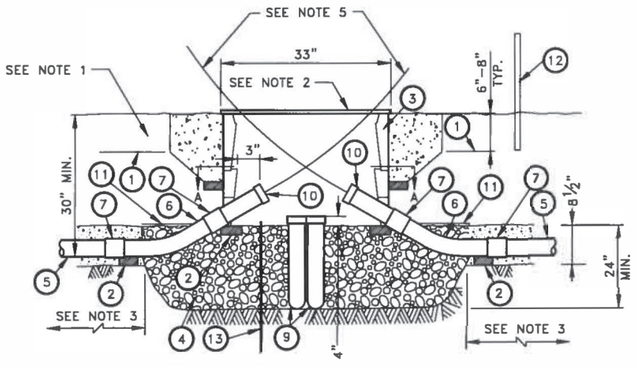
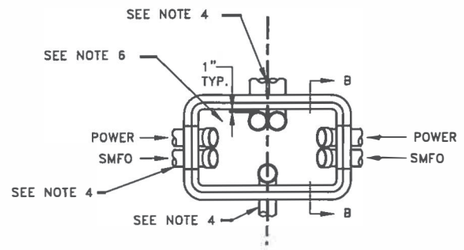
Edited by: addyle



TYPICAL ITS PULL BOX INSTALLATION
NOTE: SEE "CONCRETE COLLAR DETAILS"



SECTION A–A
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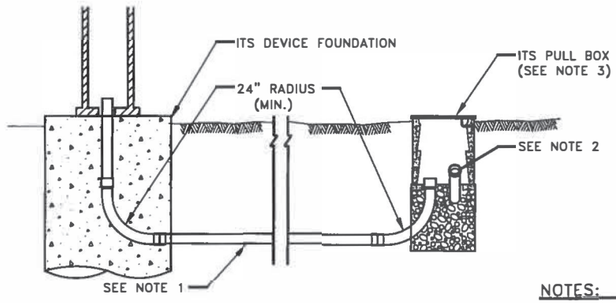
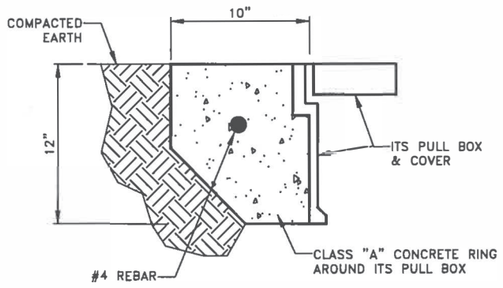
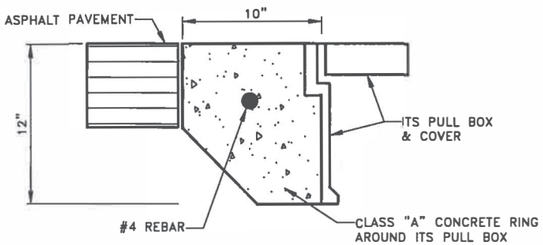


CONDUIT ARRANGEMENT FOR ITS DEVICE FOUNDATION
N.T.S.

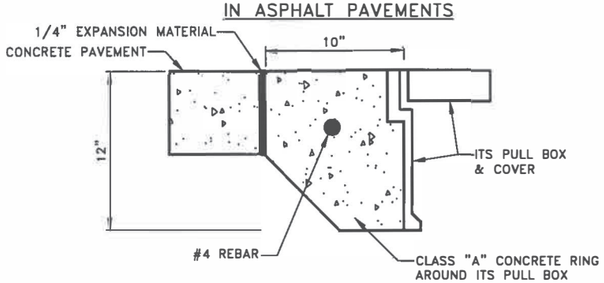
NOTES:
1. INSTALL CONDUIT FROM ITS PULL BOX TO ITS DEVICE FOUNDATION FOR COMMUNICATIONS AND POWER. SEE PLANS FOR SIZE AND TYPE OF CONDUITS.
2. SEE PLANS FOR CONDUIT LAYOUT AND CONTENTS AT EACH DEVICE LOCATION.
3. ITS PULL BOX NOT REQUIRED AT EVERY INSTALLATION, SEE PLANS FOR DETAILS.



IN COMPACTED EARTH



IN ASPHALT PAVEMENTS

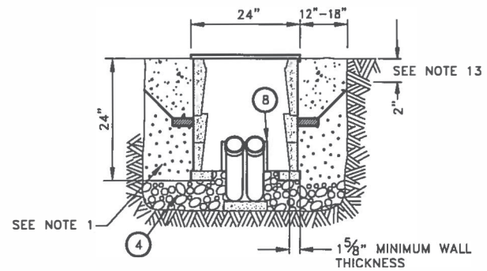


IN CONCRETE PAVEMENTS

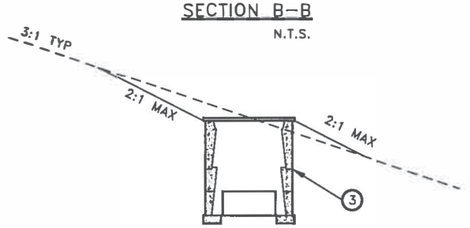
CONCRETE COLLAR DETAILS
NOTE: THE CONCRETE COLLAR FOR THE ITS PULL BOXES WILL BE CONSIDERED INCIDENTAL TO THE ITS PULL BOX BID ITEM

MATERIAL LIST	
ITEM (#)	DESCRIPTION
1	CONDUIT WARNING TAPE
2	CONCRETE BUILDING BLOCK 2" x 4" x 8"
3	ITS PULL BOX WITH EXTENSION (WITH EXCEPTIONS AS DRAWN)
4	NO. 57 AGGREGATE PER AASHTO M 43
5	4" MULTI–DUCT CONDUIT (MDC), OR AS PER PLANS
6	30 DEGREE MULTI–DUCT CONDUIT (MDC) ELBOW, 36" RADIUS
7	MULTI–DUCT CONDUIT (MDC) COUPLING
8	KNOCK OUT 6" X 12" – SEE NOTE 10
9	90 DEGREE ELBOW, 24" RADIUS
10	BELL END FOR MDC – SEE NOTE 9
11	30 LB FELT PAPER
12	PULL BOX DELINEATOR (FLEXIBLE TRAFFIC MARKER) – SEE NOTE 11
13	5/8" X 8' COPPER WELD GROUND ROD

NOTES:
1. BACKFILL WITH NO. 57 AGGREGATE (PER AASHTO M 43) TO BOTTOM OF CONCRETE COLLAR
2. PROVIDE HEAVY DUTY COVER, WITH SKID RESISTANT SURFACE, FLUSH LIFTING EYES, AND TWO OPENINGS FOR BOLTING COVER DOWN. WHEN SPECIFIED, COVER TO INCLUDE LOCKJAW ANTI-THEFT LOCKING MECHANISM OR EQUIVALENT.
3. CONDUIT FROM THE TYPICAL TRENCH SECTION SHALL NOT DEFLECT BY MORE THAN 1" PER FOOT FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE ITS PULL BOX.
4. SIZE AND TYPE OF CONDUITS AS INDICATED ON PLANS.
5. TOP EDGE OF MDC CONDUIT SHALL BE ALIGNED TO TOP EDGE OF ITS PULL BOX TO FACILITATE CABLE PULLING.
6. ALL POWER AND COMMUNICATION CABLES SHALL BE TAGGED WITH PROPER CABLE IDENTIFICATION.
7. NUMBERS IN CIRCLES REFER TO ITEMS IN MATERIAL LIST.
8. "NMDOT COMMUNICATIONS" SHALL BE THE TITLE EMBOSSED ON THE COVER.
9. USE MULTI–DUCT CONDUIT TO EXTEND INTO ITS PULL BOX.
10. USE FELT PAPER TO BLOCK OPENING BETWEEN CONDUITS.
11. INSTALL FLEXIBLE TRAFFIC MARKER 12" IN FRONT OF EACH ITS PULL BOX WITHOUT DISTURBING BURIED CONDUIT.
12. FLOWABLE FILL SHALL NOT BE USED WITHIN 12" OF ITS PULL BOX.
13. IF ITS PULL BOX IS INSTALLED IN PAVEMENT OR SIDEWALK, THE TOP OF THE ITS PULL BOX SHALL BE FLUSH WITH THE TOP OF THE PAVEMENT OR SIDEWALK.



SECTION B–B
N.T.S.



INSTALLATION IN SLOPED AREAS
N.T.S.

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

CHARLES REMKES
NEW MEXICO
13507
REGISTERED PROFESSIONAL ENGINEER
7-21-21

NEW MEXICO DEPARTMENT OF TRANSPORTATION

ITS PULL BOX INSTALLATION DETAIL

DESIGN BY ____ DRAWN BY ____ CHECKED BY ____

750–02–1/1 1 of 1

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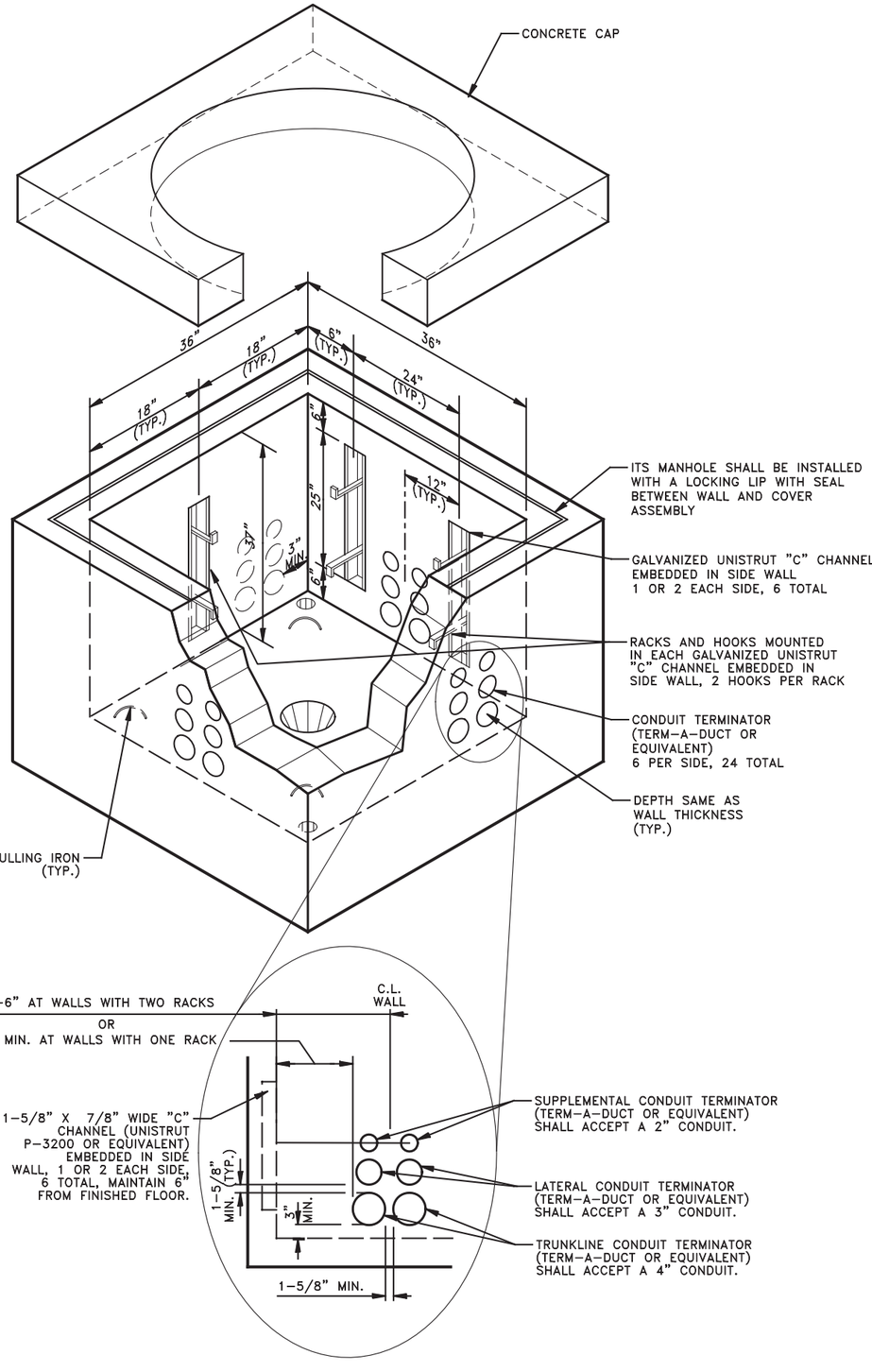
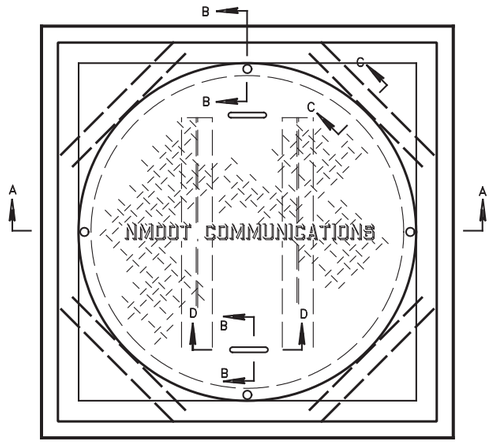
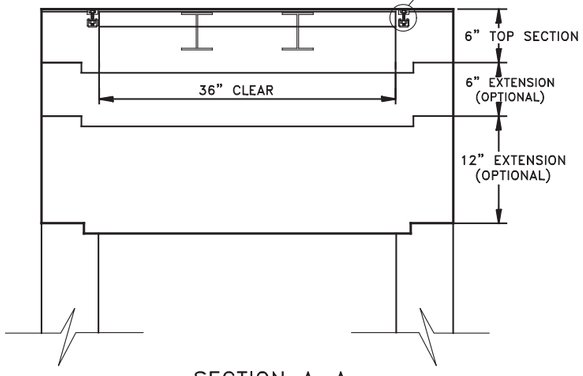
Edited by: adoyle





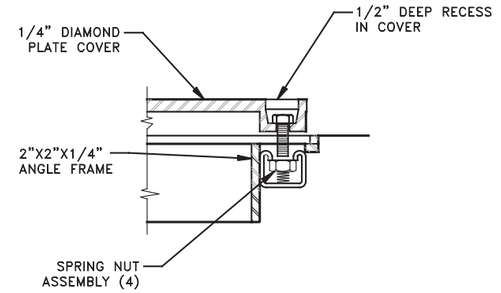
PLAN VIEW WITH COVER



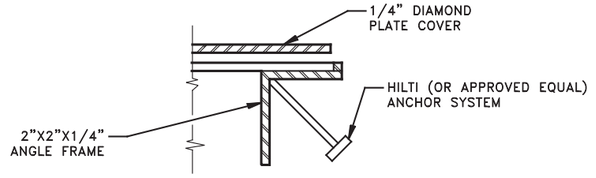
SECTION A-A

NOTES:

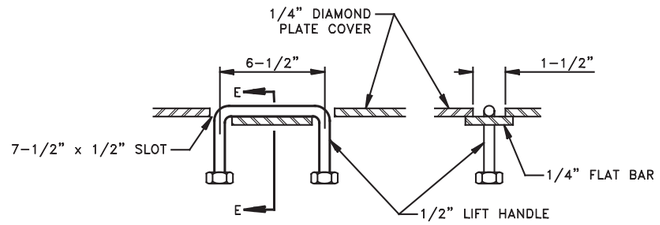
1. PULLING IRONS SHALL BE CAST INTO EACH CORNER OF THE BOTTOM OF THE ITS MANHOLE.
2. ALL NEW ITS MANHOLES SHALL BE FURNISHED WITH RACKS AND HOOKS INSTALLED.
3. PULLING IRONS SHALL NOT EXTEND MORE THAN 3" ABOVE THE BOTTOM OF ITS MANHOLE.
4. ITS MANHOLE AND CAST IRON LIDS SHALL BE RATED FOR HS20-44 LOADING.
5. LOCKING LIP W/SEAL BETWEEN WALL AND COVER ASSEMBLY.
6. "NMDOT COMMUNICATIONS" SHALL BE THE TITLE EMBOSSED ON THE LID.



SECTION B-B
(BOLT DOWN)



SECTION C-C
(TYPICAL)



SECTION D-D
(LIFT HANDLE)

SECTION E-E
(LIFT HANDLE)

NO.	DESCRIPTION	DATE	BY

REVISIONS (OR CHANGE NOTICES)

CHARLES REMKES
NEW MEXICO
13507
REGISTERED PROFESSIONAL ENGINEER

7-21-21

NEW MEXICO DEPARTMENT OF TRANSPORTATION

ITS MANHOLE
INSTALLATION DETAILS

DESIGN BY _____ DRAWN BY _____ CHECKED BY _____

750-03-1/2

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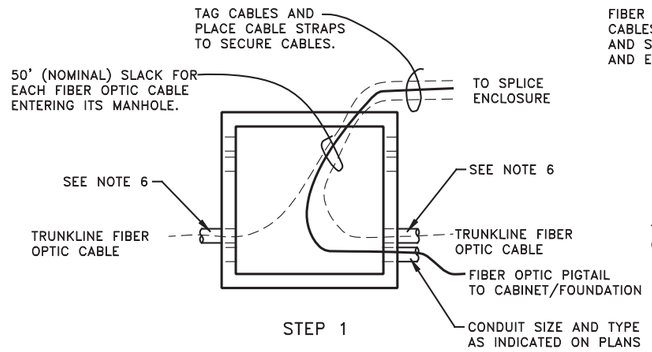
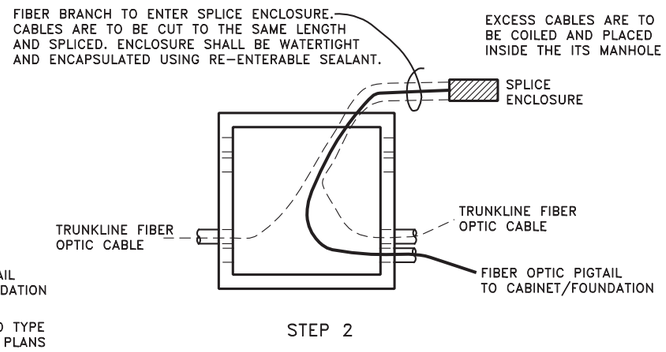
Edited by: adoyle

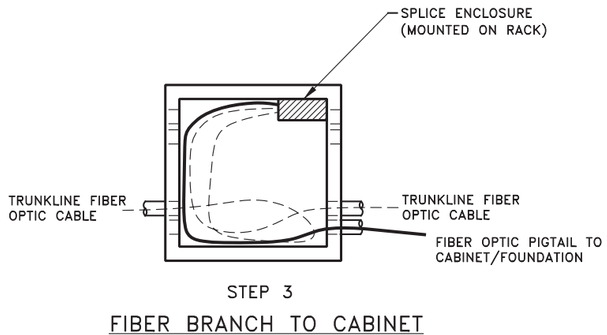


STEP 1



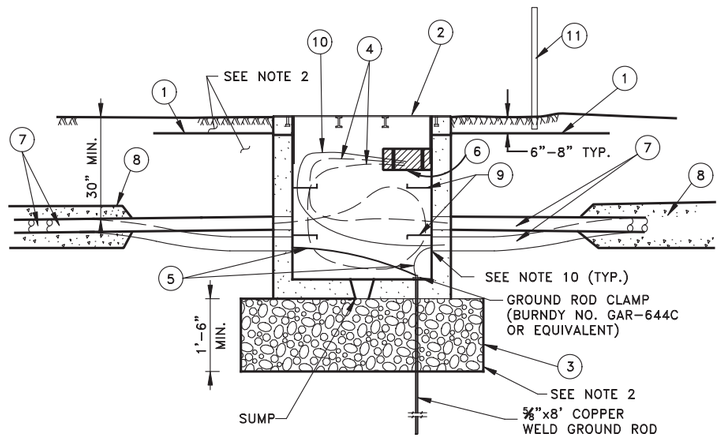
STEP 2

FIBER OPTIC SPLICE PROCEDURE
(TOP VIEW)



STEP 3

FIBER BRANCH TO CABINET



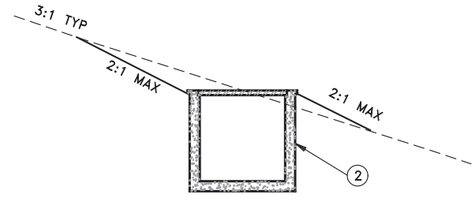
CONDUIT PLACEMENT AND COILING DETAIL
SIDE VIEW

MATERIAL LIST	
ITEM #	DESCRIPTION
1	CONDUIT WARNING TAPE
2	ITS MANHOLE AND COVER
3	NO. 57 AGGREGATE PER AASHTO M 43
4	SINGLE MODE FIBER OPTIC CABLE (SMFO)
5	COPPER GROUND WIRE (IF REQUIRED)
6	FIBER OPTIC SPLICE ENCLOSURE
7	4" MULTI-DUCT CONDUIT (TYP) OR AS PER PLANS
8	TRENCH BACKFILL (SEE NOTE 9)
9	RACK & HOOK (EACH WALL TYP)
10	SMFO BRANCH CABLE (WHERE REQUIRED)
11	ITS MANHOLE DELINEATOR (FLEXIBLE TRAFFIC MARKER) - SEE NOTE 11

ITS MANHOLE
WIRING DETAILS

NOTES:

1. NUMBERS IN CIRCLES REFER TO ITEMS IN MATERIALS LIST.
2. BACKFILL BELOW ITS MANHOLE WITH NO. 57 AGGREGATE PER AASHTO M 43. BACKFILL AROUND SIDES OF ITS MANHOLE PER SECTION 705.2.2 AND 705.3.2 OF THE STANDARD SPECIFICATIONS. COMPACTION SHALL BE PER SECTION 203.3.7 OF THE STANDARD SPECIFICATIONS.
3. CONDUIT FROM THE TYPICAL TRENCH SECTION SHALL NOT DEFLECT BY MORE THAN 1"/FT FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE ITS MANHOLE.
4. TOP OF CONDUITS SHALL BE LOCATED AT LEAST 30" BELOW EXISTING GROUND. CONDUITS AT ITS MANHOLES SHALL DEFLECT NO MORE THAN 1"/FT TO ENTER ITS MANHOLE. CONDUITS SHALL BE FLUSH WITH INSIDE EDGE OF ITS MANHOLE.
5. PROVIDE COILED FIBER OPTIC CABLE (TYP 50 FT) AND POWER IN ALL ITS MANHOLES AS PER PLANS.
6. 4" MULTI-DUCT CONDUIT (TYP) OR AS PER PLANS
7. ALL POWER AND COMMUNICATION CABLES SHALL BE TAGGED WITH PROPER CABLE IDENTIFICATION.
8. IF ITS MANHOLE IS INSTALLED IN PAVEMENT OR SIDEWALK, THE TOP OF THE ITS MANHOLE SHALL BE FLUSH WITH THE TOP OF THE PAVEMENT OR SIDEWALK.
9. FLOWABLE FILL SHALL NOT BE USED WITHIN 12" FROM THE EDGE OF ITS MANHOLE.
10. CONDUIT ENTERING THE ITS MANHOLE SHALL BE FLUSH WITH INSIDE EDGE OF ITS MANHOLE.
11. INSTALL FLEXIBLE TRAFFIC MARKER 12" IN FRONT OF EACH ITS PULL BOX WITHOUT DISTURBING BURIED CONDUIT.



INSTALLATION IN SLOPED AREAS

NO.	DESCRIPTION	DATE	BY

REVISIONS (OR CHANGE NOTICES)

7-21-21

CHARLES REMKES
NEW MEXICO
13507
REGISTERED PROFESSIONAL ENGINEER

NEW MEXICO DEPARTMENT OF TRANSPORTATION

ITS MANHOLE
INSTALLATION DETAILS

DESIGN BY _____ DRAWN BY _____ CHECKED BY _____

750-03-2/2

Date and Time Printed: 4/28/2009 1:41:33 PM
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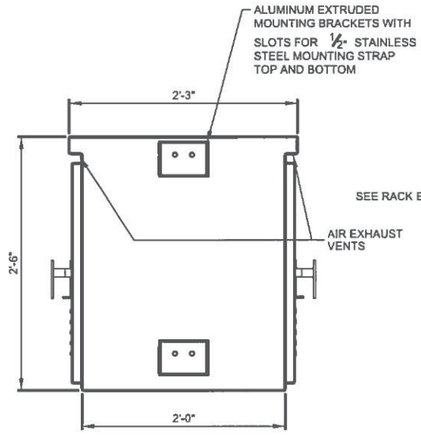
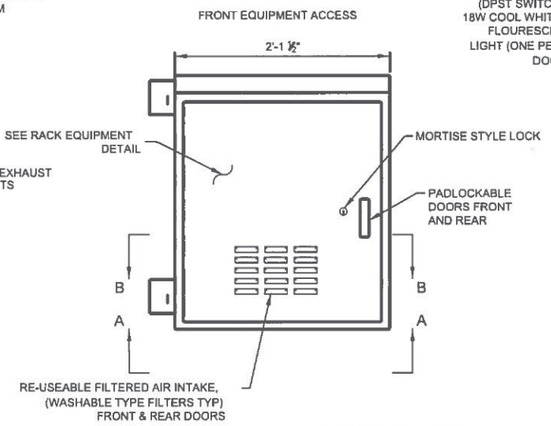
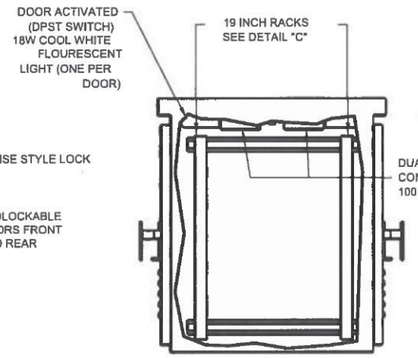
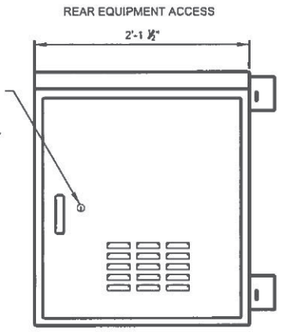
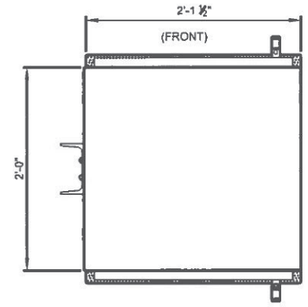
Edited by: adoyle



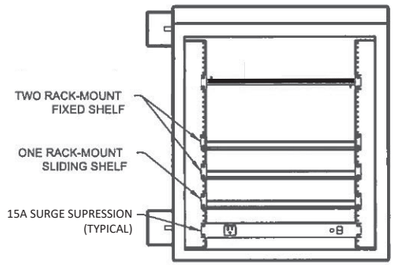




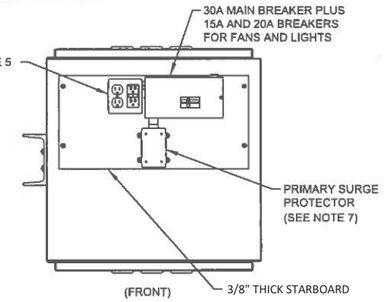




SECTION A-A

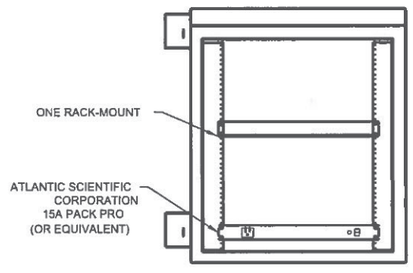


RACK EQUIPMENT DETAIL
(FRONT EQUIPMENT ACCESS, DOOR REMOVED FOR CLARITY)

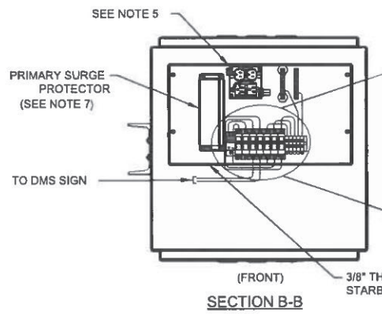


SECTION B-B

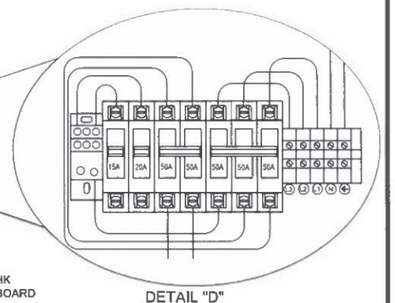
CCTV/VDS EQUIPMENT DETAIL
N.T.S.



RACK EQUIPMENT DETAIL
(FRONT EQUIPMENT ACCESS, DOOR REMOVED FOR CLARITY)



SECTION B-B



DETAIL "D"
CIRCUIT BREAKER

TWO 50 AMP LEGS SHOWN FOR CONTRACTOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE TO ENSURE MANUFACTURER LOAD REQUIREMENTS.

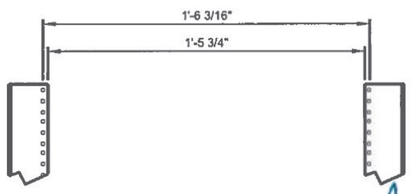
DMS EQUIPMENT DETAIL
N.T.S.

NOTES:

1. 1/8" THICK, CONSTRUCTED OF SERIES 5052 ALUMINUM ALLOY. ALL STAINLESS STEEL HARDWARE.
2. HELIARC WELDING METHOD (OR EQUIVALENT) USED FOR ALL WELDS.

CABINET FEATURES:

1. NEMA 3R RATED WITH NEOPRENE GASKETING ON DOORS FOR MAXIMUM EQUIPMENT PROTECTION.
2. ALUMINUM CONSTRUCTION WITH NATURAL FINISH.
3. HEAVY DUTY 3-POINT PADLOCKABLE HARDWARE ON ALL DOORS.
4. MINIMUM R4 RATED CABINET INSULATION TO CONTROL THE EFFECT OF ENVIRONMENTAL CONDITIONS.
5. ONE STANDARD DUPLEX RECEPTACLE AND ONE GFCI DUPLEX RECEPTACLE.
6. TWO PAIRS OF RAILS PROVIDED FOR 19" EQUIPMENT MOUNTING. 5/8" - 5/8" - 1/2" SPACING. HOLES TAPPED FOR #12-24 SCREWS.
7. PRIMARY SURGE SUPPRESSION TVSS 80kA TO 240kA SURGE CURRENT RATING PER PHASE.
8. ALL HINGES CONTINUOUS DOOR LENGTH, EITHER 1/8" ALUMINUM WITH STAINLESS STEEL PINS OR ALL STAINLESS STEEL HINGES.
9. DOORS OPEN TO 90° WITH RETAINER FOR OPEN POSITION.



DETAIL "C"
REQUIRED RACK SPACING
N.T.S.

CHARLES REMKES
NEW MEXICO
13507
REGISTERED PROFESSIONAL ENGINEER

7-21-21

NO.	DESCRIPTION	DATE	BY
	REVISIONS (OR CHANGE NOTICES)		

NEW MEXICO DEPARTMENT OF TRANSPORTATION

ITS EQUIPMENT CABINET DETAILS

DESIGN BY ____ DRAWN BY ____ CHECKED BY ____

750-05-1/1

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