



COMMONWEALTH OF PENNSYLVANIA
GOVERNOR'S OFFICE OF GENERAL COUNSEL

November 7, 2019

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

RE: M-2013-2364201, I-2015-2472242

Dear Secretary Chiavetta:

Enclosed for filing please find the Department's *Comments and Objections to the Final Repair Plans*, in the above captioned matter.

I hereby certify that a copy has been sent to all parties of record as indicated by the Certificate of Service.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Jennifer Brown-Sweeney".

Jennifer Brown-Sweeney
Assistant Counsel

Cc: Parties of Record
Daniel Leonard, P.E., Acting Chief, Utilities and Right-of-Way Section
Sarah J. Fenton, District Grade Crossing Engineer, District 4-0
Rick Cooper, District Grade Crossing Engineer, Engineer, District 4-0

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Bridge structure where State Route 1025, crosses over: a single track of Canadian Pacific Railroad (264 293 : K) in Nicholson Borough, Wyoming County :	M-2013-2364201 Electronically Filed
Investigation upon the Commission’s own : motion to determine the condition and disposition : of six (6) existing structures carrying various : highways above the grade of the tracks of the : Canadian Pacific Railroad in Great Bend Township, : New Milford Township, Brooklyn Township, Hop : Bottom Borough, Lathrop Township, Susquehanna : County and Benton Township, Lackawanna County :	I-2015-2472242 Electronically Filed

**COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF
TRANSPORTATION’S COMMENTS AND OBJECTIONS TO THE FINAL REPAIR
PLANS FOR S.R. 1025, S.R. 2032, AND S.R. 2041**

The Commonwealth of Pennsylvania, Department of Transportation, by and through their undersigned counsel, hereby provides these comments and objections to the Final Repair Plans offered by Norfolk Southern Railway Company for state routes 1025, 2032, and 2041, as follows:

1. S.R. 2032
 - a) It appears that the existing steel fence posts will need to be removed to repair the spandrel walls. Provide new protective fence as per PennDOT Standard Drawing BC-701M, which is attached as Exhibit A.
 - b) Provide a crash worthy, properly anchored traffic barrier in accordance with PennDOT Standard Drawings. Include bridge barrier to guide rail connections and approach guide rail at the 4 corners of the barrier. Refer to PennDOT Standard Drawing BC-739M & BC-703M, attached as Exhibits B1 and B2, respectively.

2. S.R. 2041
 - a) Repair the Far Right and Far Left Concrete End Posts. They are deteriorated with reinforcement bars exposed.
 - b) Provide bridge barrier to guide rail transition connections at the 4 corners of the bridge. Current transitions to bridge do not meet current standards due to low height and

not being gradually stiffened. In addition, there is minor collision damage at the near left transition. Refer to PennDOT Standard Drawing BC-739M & BC-703M, previously referenced as Exhibits B1 and B2, attached.

3. S.R. 1025

- a) Provide bridge barrier to guide rail connections, approach guide rail and end treatments at the 4 corners of the bridge. Refer to PennDOT Standard Drawing BC-739M & BC-703M, previously referenced as Exhibits B1 and B2, attached.
- b) Refer to S.R. 1025 Plan Set Sheet 10 of 10. Change the title of the “Existing Plan” detail to read “Existing Typical Section”. Also, this detail shows what can be interpreted as a concrete deck below the wearing surface and under the proposed barriers. We have no plans indicating a deck is present above the spandrel walls. Revise this detail to show the proposed barrier on top of the existing spandrel wall and remove the lines representing the “deck” from the detail. The arch ring should be added under the spandrel walls across the entire section. See markup attached as Exhibit C. Consider constructing a vertical wall barrier integral with a moment slab that sits on top of the repaired spandrel walls in order to provide a crash worthy, properly anchored bridge barrier; the proposed details on Sheet 10 of 10 do not follow PennDOT standard drawings for bridge barrier. See attached BD-627, which is attached as Exhibit D, showing the moment slab/barrier details.

Respectfully Submitted,

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION



Jennifer Brown-Sweeney

Assistant Counsel

Commonwealth of Pennsylvania

Department of Transportation

Office of Chief Counsel

P.O. Box 8212

Harrisburg, PA 17105-8212

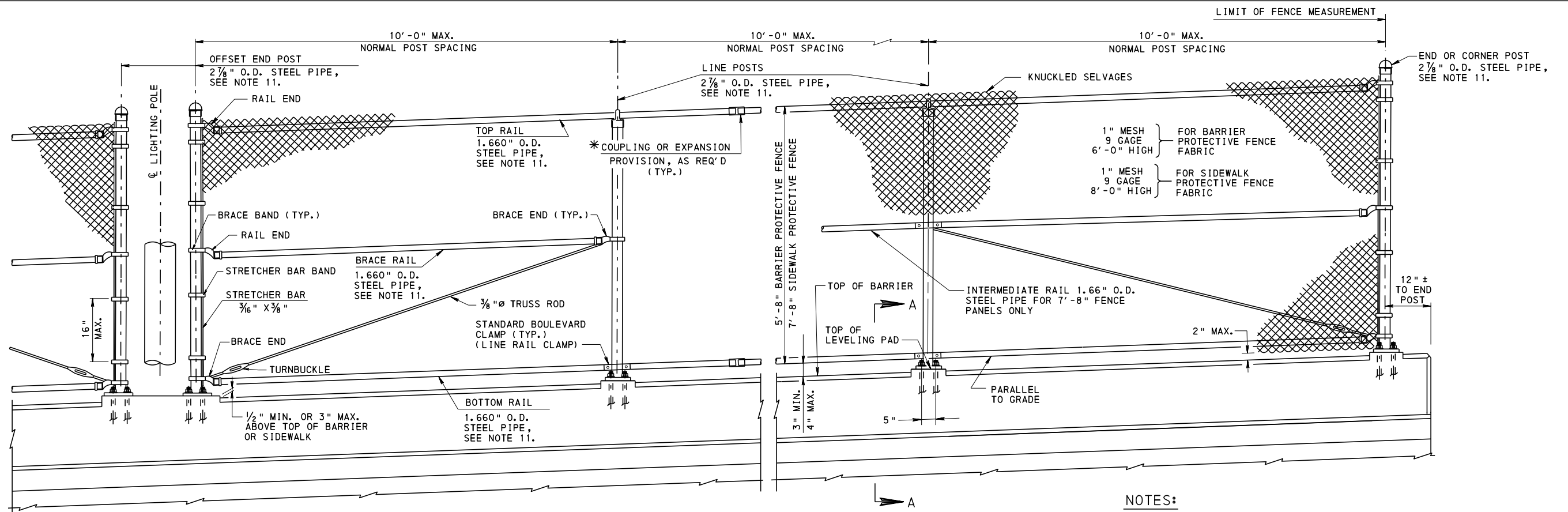
Telephone No. (717) 787-3128

Fax Number (717) 772-2741

Pennsylvania Attorney I.D. Number 314884

jbrownswee@pa.gov

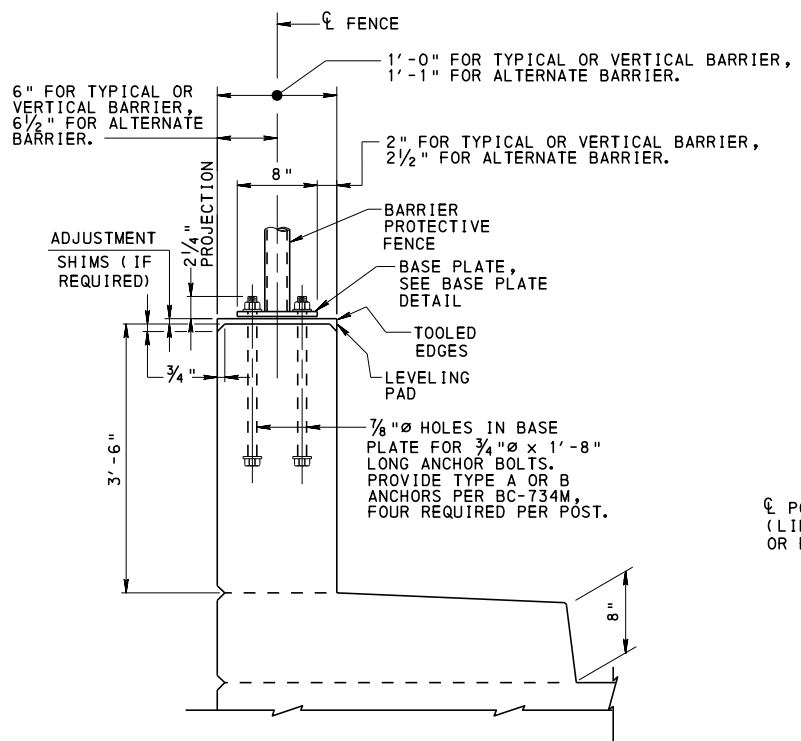
DATED: November 7, 2019



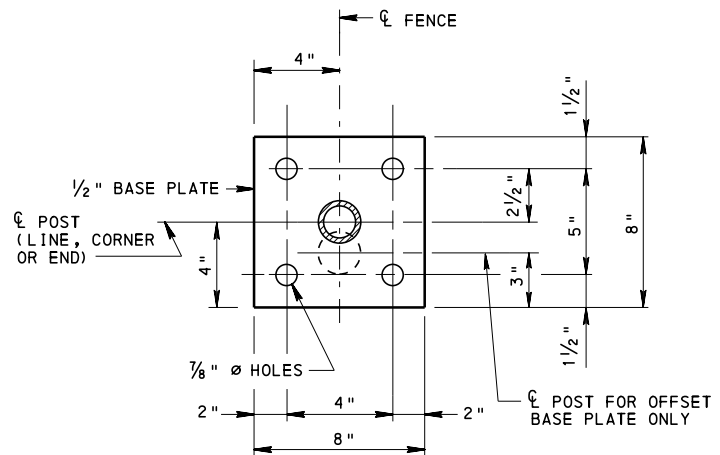
TYPICAL FENCE ELEVATION
* 9" MIN. DISTANCE TO STRUCTURE EXPANSION JOINT.

- NOTES:
1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH PUBLICATION 408.
 2. PROVIDE SHIMS FROM APPROVED MATERIAL.
 3. ONLY TOUCH-UP PAINTING OF MATERIAL IS PERMITTED.
 4. PLACE FENCE POSTS AND ANCHOR BOLTS TRULY VERTICAL. PLACE RAILS PARALLEL TO GRADE.
 5. IF LIGHTING POLES ARE NOT INSTALLED, CLOSE GAPS WITH SEPARATE PIECE OF FENCE FABRIC.
 6. AT BRIDGE EXPANSION JOINTS, PERMIT THE FENCE FABRIC AND RAILS TO EXPAND OR CONTRACT.
 7. CLIP THE TIE WIRE FASTENERS AND BEND AWAY FROM TRAFFIC.
 8. COAT ALL SURFACES OF THE BASE PLATES IN CONTACT WITH CONCRETE WITH CAULKING COMPOUND PRIOR TO ERECTION AND ALIGNMENT. AFTER ERECTION AND ALIGNMENT, SEAL OPENINGS BETWEEN THE METAL SURFACES AND THE CONCRETE WITH CAULKING COMPOUND MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 705.8(b).
 9. PLACE ANCHOR BOLTS WITH SIDEWALK OR BARRIER AND ACCURATELY SET AND BRACE AGAINST DISPLACEMENT BEFORE THE SURROUNDING CONCRETE IS PLACED. LEVEL THE BASE PLATE AND THEN PLACE THE LEVELING PAD USING RAPID SET CONCRETE.
 10. DESIGN DRAINAGE SYSTEM IN ACCORDANCE WITH DM4, SECTION PP 3.2.3.
 11. POSTS AND RAIL MATERIAL PER PUBLICATION 408, SECTION 1016.2(a)3.
 12. REFER TO CONTRACT DOCUMENTS FOR POST SPACING.
 13. PLACE CORNER POSTS AT ANGLE POINTS IN HORIZONTAL AND VERTICAL ALIGNMENT OF FENCE.

CHANGE 2



SECTION A-A
TYPICAL FENCE POST SECTION,
ALTERNATE SIDEWALK DETAIL SHOWN
(TYP. AND ALT. CONCRETE BARRIER SIMILAR)



BASE PLATE DETAIL
(ALL DIMENSIONS ARE TYPICAL UNLESS NOTED OTHERWISE)
N. T. S.

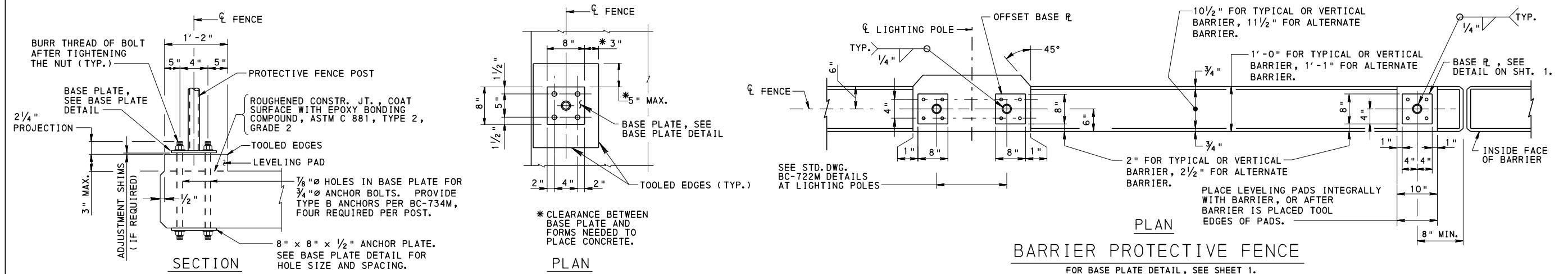
BC-721M	ELECTRICAL DETAILS
BC-722M	LIGHTING POLE ANCHORAGE
BC-734M	ANCHOR SYSTEMS
REFERENCE DRAWINGS	

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

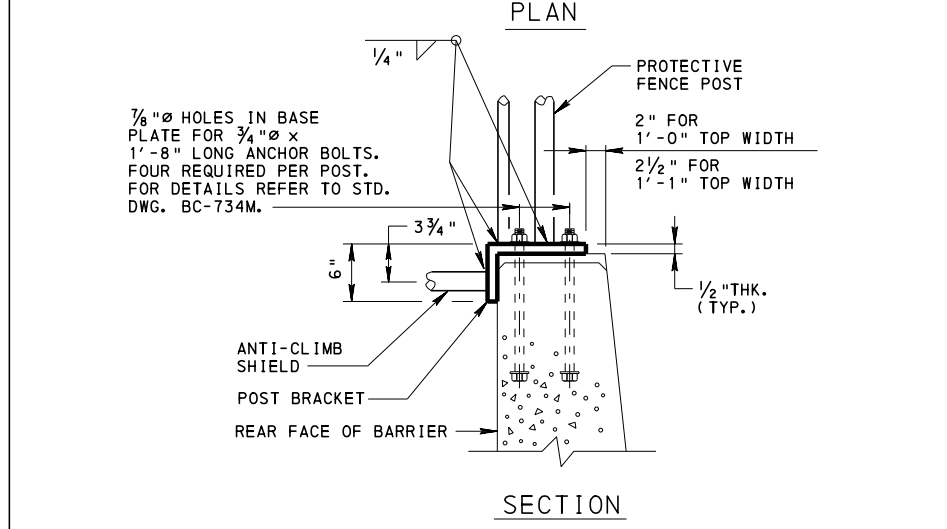
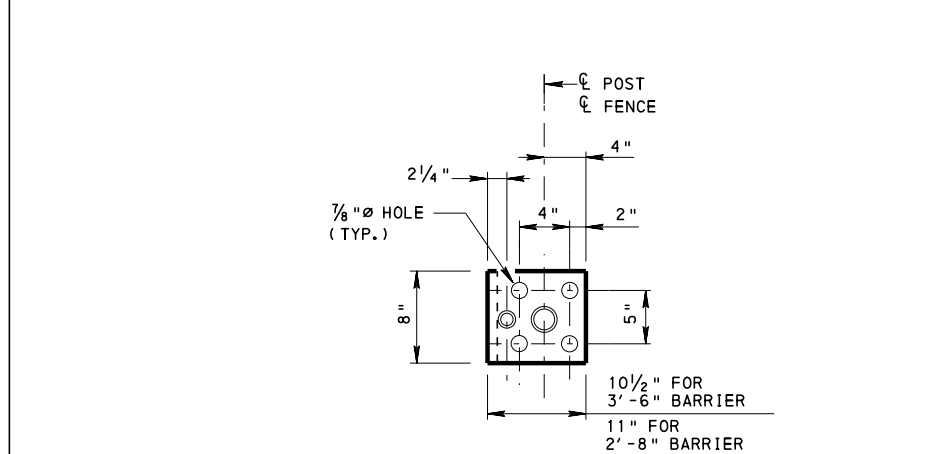
STANDARD
PROTECTIVE FENCE

RECOMMENDED JAN. 31, 2019	RECOMMENDED JAN. 31, 2019	SHEET 1 OF 3
<i>T. Rossa R. Maciora</i> CHIEF BRIDGE ENGINEER	<i>William J. ...</i> ACTING DIR. BUR. OF PROJECT DELIVERY	BC-701M

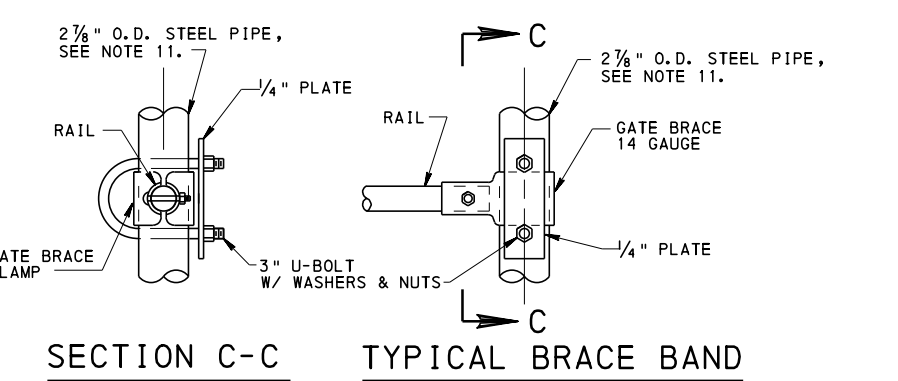
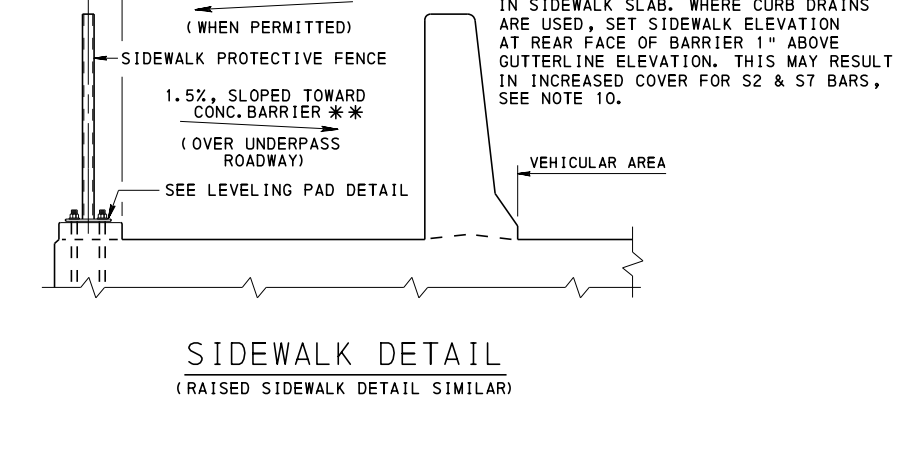
EXHIBIT A



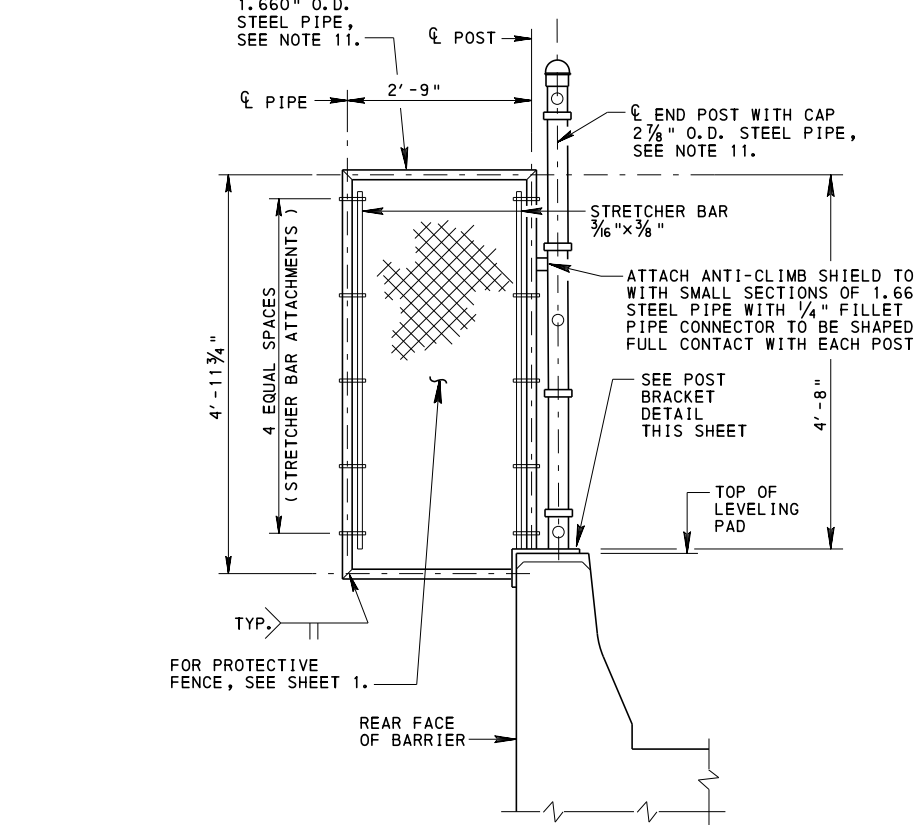
LEVELING PAD DETAIL
AT SIDEWALK



SIDEWALK DETAIL
(RAISED SIDEWALK DETAIL SIMILAR)



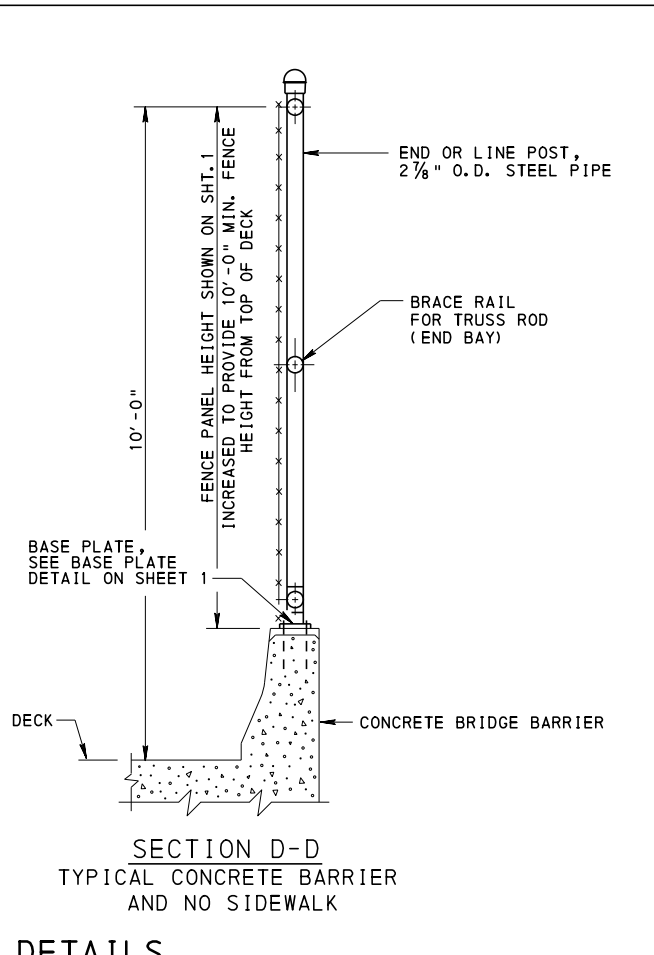
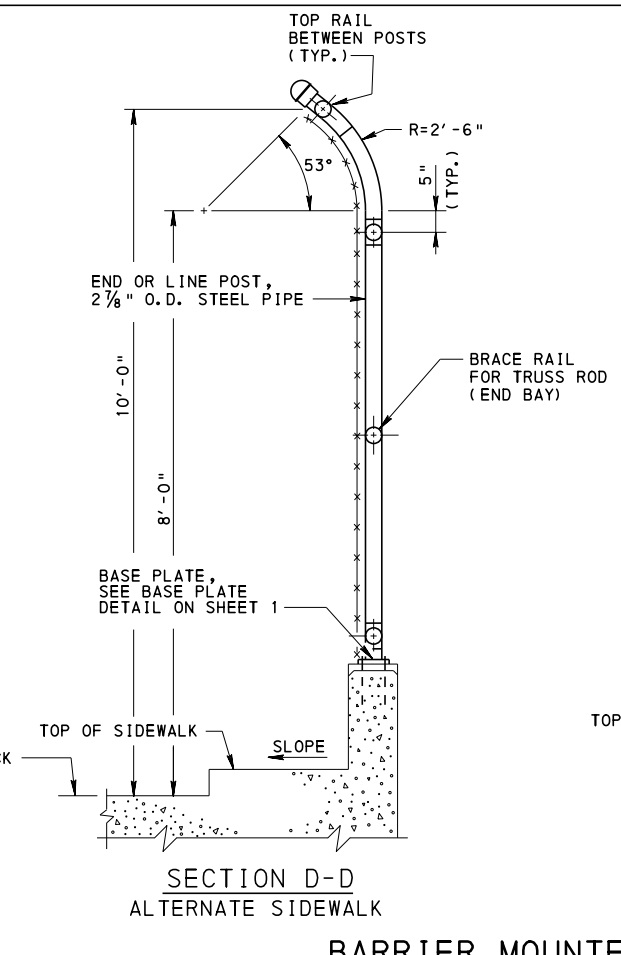
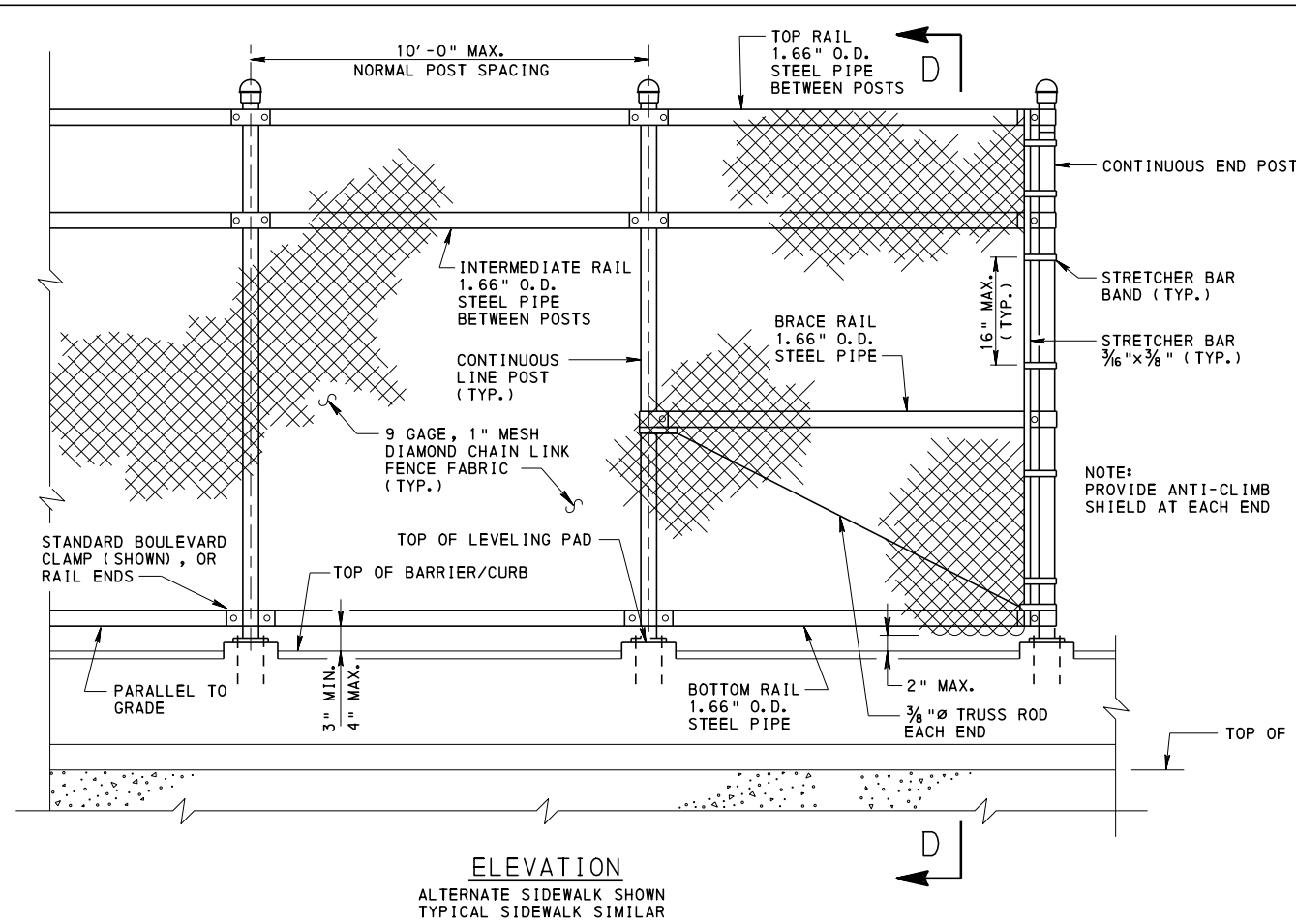
NOTES:
FOR OTHER DETAILS AND NOTES, SEE SHEETS 1 & 3.



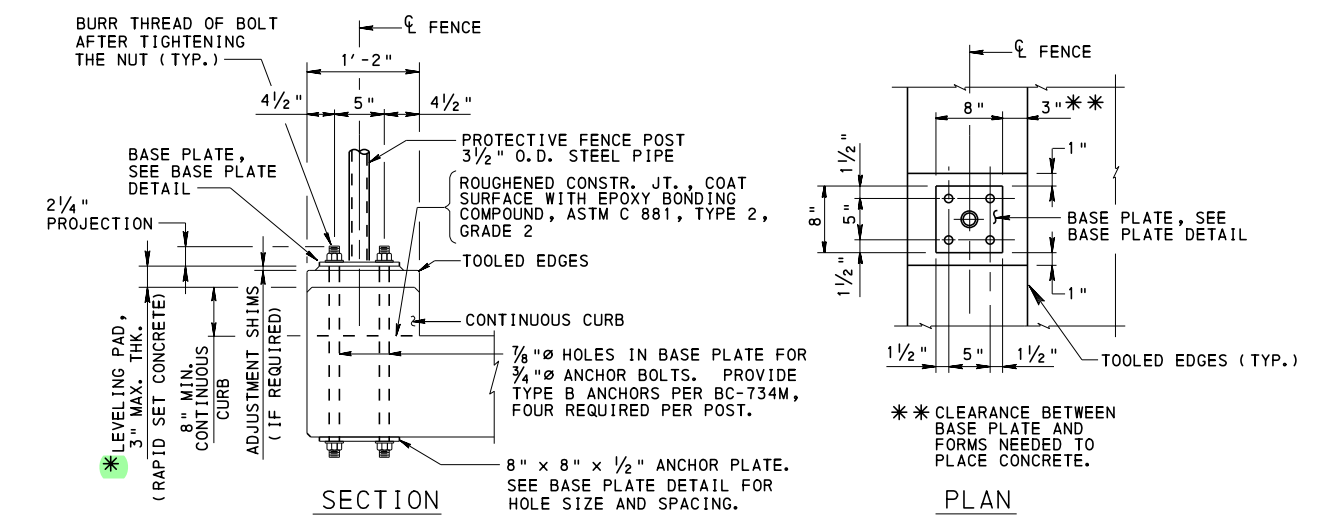
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
PROTECTIVE FENCE

RECOMMENDED JAN. 31, 2019 <i>T. Rosa R. Maciara</i> CHIEF BRIDGE ENGINEER	RECOMMENDED JAN. 31, 2019 <i>William J. ...</i> ACTING DIR. BUR. OF PROJECT DELIVERY	SHEET 2 OF 3 BC-701M
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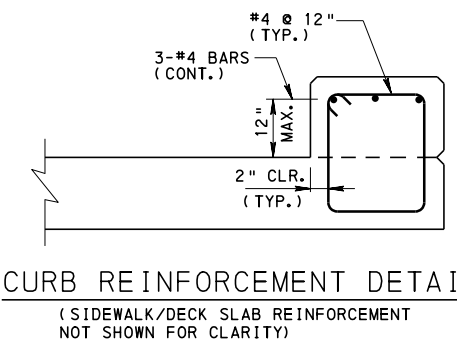


BARRIER MOUNTED DETAILS

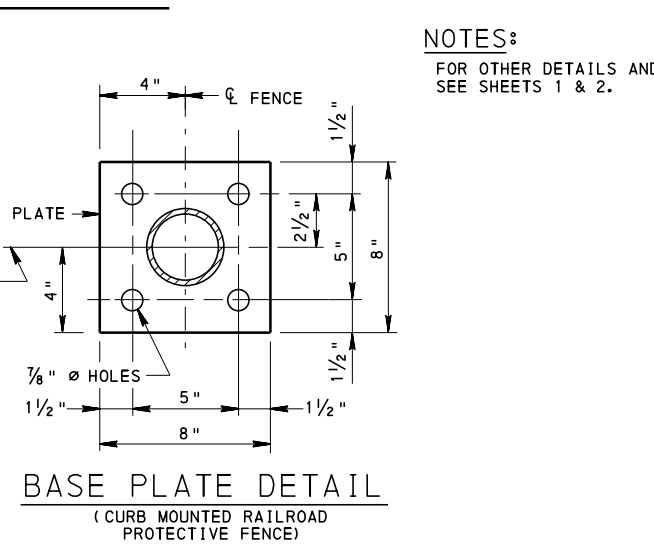
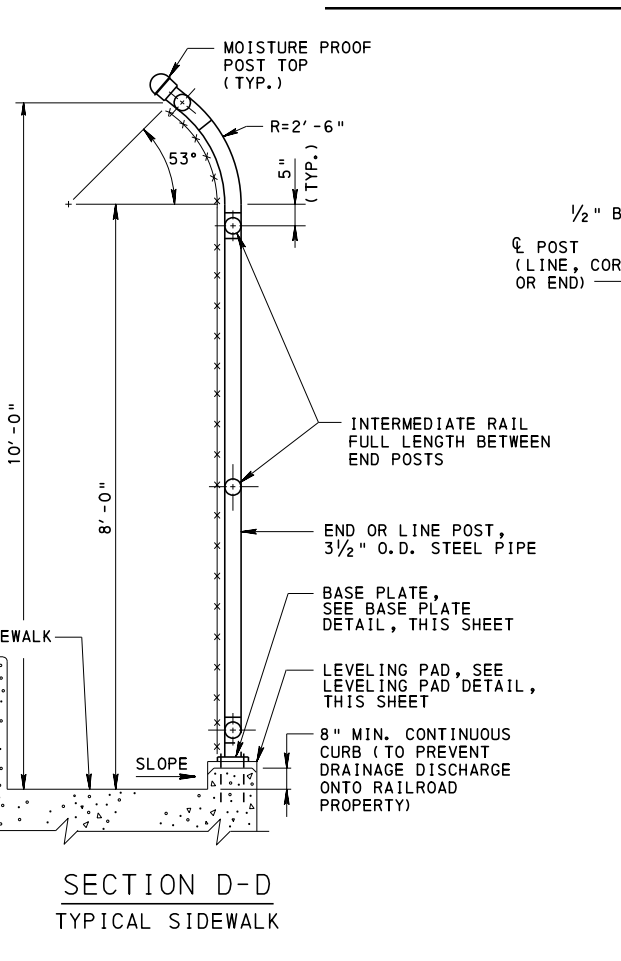


LEVELING PAD DETAIL
(CURB MOUNTED RAILROAD PROTECTIVE FENCE)

* LEVELING PAD CAN BE CONTINUOUSLY POURED MONOLITHICALLY WITH CURB. LEVELING PAD CAN BE ELIMINATED IF SLOPE/GRADE ON TOP OF CURB IS LESS THAN 1%.



CURB MOUNTED DETAILS

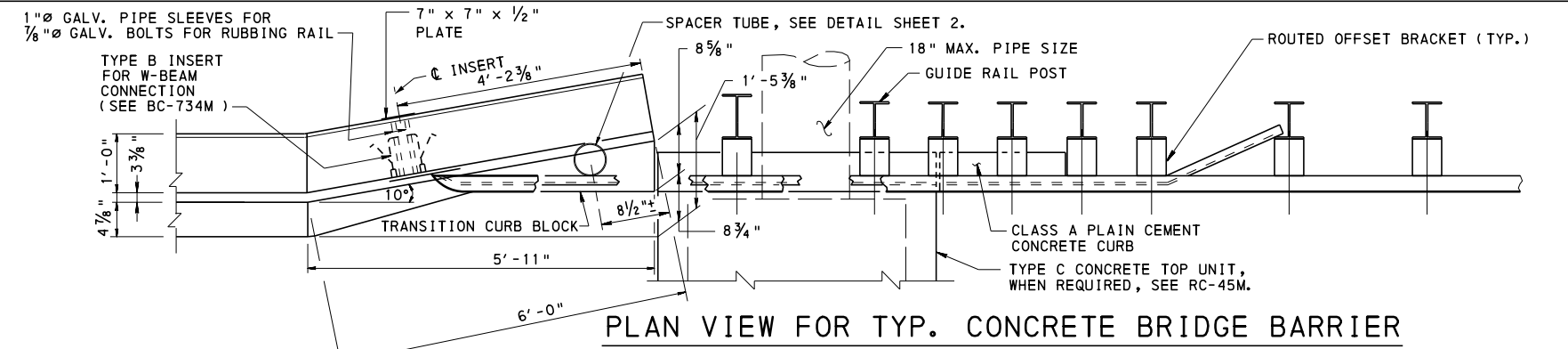


NOTES:
FOR OTHER DETAILS AND NOTES, SEE SHEETS 1 & 2.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

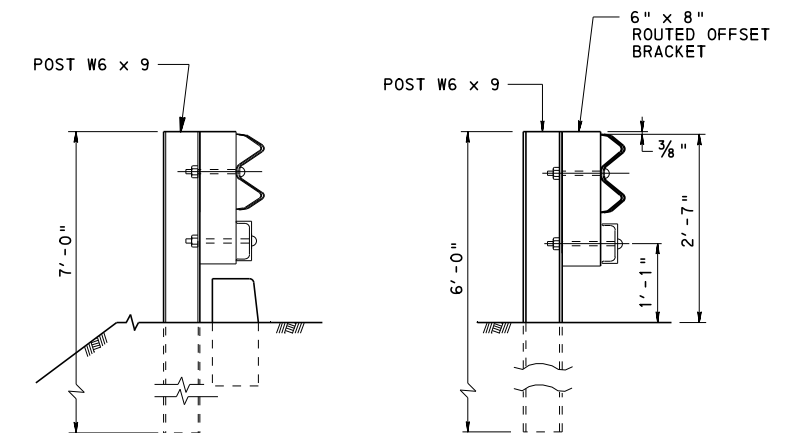
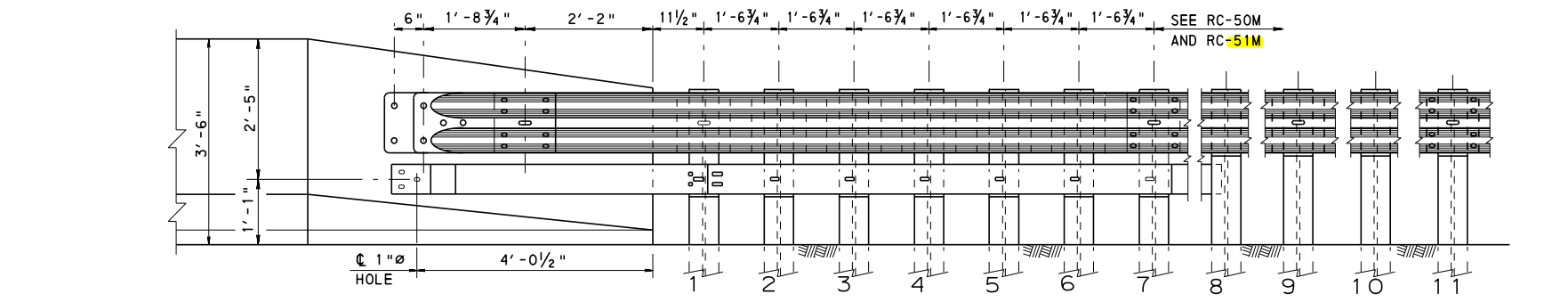
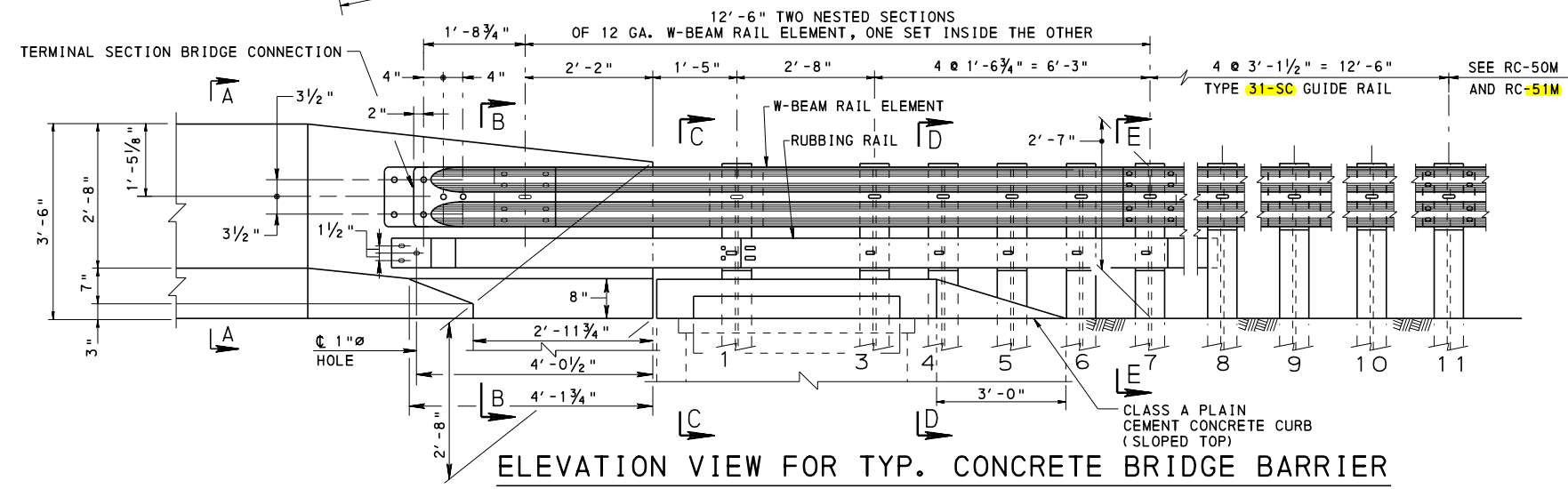
STANDARD
PROTECTIVE FENCE
OVERHEAD BRIDGE
OVER RAILROADS

RECOMMENDED JAN. 31, 2019 <i>T. Rosa R. Maciora</i> CHIEF BRIDGE ENGINEER	RECOMMENDED JAN. 31, 2019 <i>William J. ...</i> ACTING DIR. BUR. OF PROJECT DELIVERY	SHEET 3 OF 3 BC-701M
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NOTES

1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH PUB. 408.
2. USE PLAN DIMENSIONS WHEN DIFFERENT FROM THOSE SHOWN ON THIS STANDARD.
3. REINFORCED CONCRETE BARRIER AND EMBEDDED INSERTS ARE BRIDGE ITEMS.
4. TERMINAL SECTION AND RUBBING RAIL END MUST BE ATTACHED FLUSH WITH THE BRIDGE BARRIER. INSTALLATION CAN BE GREATLY SIMPLIFIED BY FABRICATING OR SHOP TWISTING TO BE CONSISTENT WITH THE SLOPE OF THE BARRIER.
5. SEE RC-51M AND RC-50M FOR DETAILS AND HARDWARE NOT SHOWN.
6. TYPICAL CONCRETE BARRIER 42" WITH INLET PLACEMENT HAS SUCCESSFULLY PASSED TL-4 CRASH TESTING. THE TYPICAL CONCRETE BARRIER 42" IS GRANTED TL-4 EQUIVALENCE BY FHWA, BASED ON NCHRP REPORT 350 CRITERIA. THE ALTERNATE CONCRETE BARRIER 32" AND ALTERNATE CONCRETE BARRIER WITH INLET PLACEMENT ARE GRANTED TL-3 EQUIVALENCE BY FHWA, BASED ON NCHRP REPORT 350 CRITERIA.
7. PROVIDE APPROACH END GUIDE RAIL TREATMENT AT BOTH THE APPROACH AND TRAILING ENDS OF STRUCTURE BARRIERS ON TWO LANE FACILITIES WITH TWO-WAY TRAFFIC. ON FOUR LANE DIVIDED HIGHWAYS, GUIDE RAIL TRANSITION IS NOT REQUIRED ON TRAILING ENDS OF BARRIERS UNLESS WARRANTED BY OTHER OBSTRUCTIONS.
8. PAYMENT FOR THE APPROACH END TRANSITION ARE ROADWAY ITEMS.



SECTION D-D

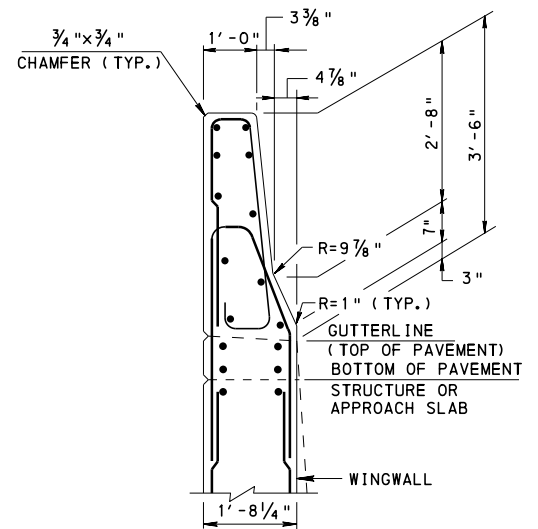
SECTION E-E

SECTION D-D IS TYPICAL TO SECTION C-C EXCEPT AS SHOWN OTHERWISE.

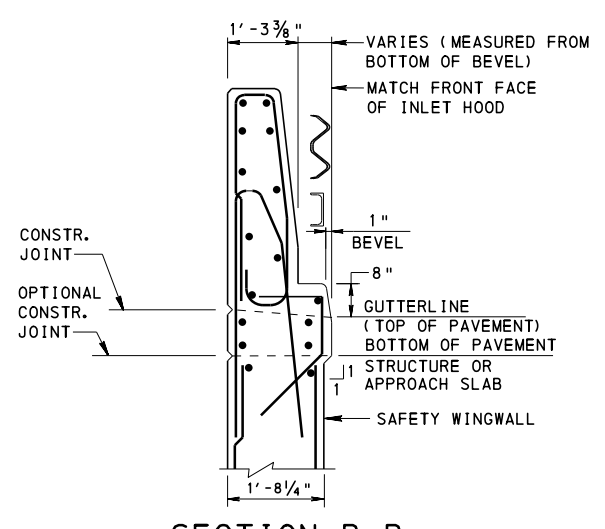
NOTE: TYPICAL TO ELEVATION VIEW WITH INLET PLACEMENT EXCEPT AS NOTED.

ELEVATION VIEW FOR TYP. CONCRETE BRIDGE BARRIER

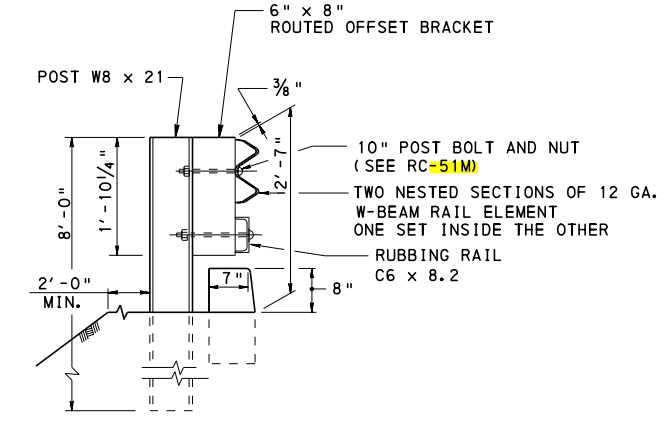
(WITHOUT INLET PLACEMENT)



SECTION A-A



SECTION B-B



SECTION C-C

BC-734M	ANCHOR SYSTEMS
RC-45M	INLET TOPS, GRATES AND FRAMES
RC-50M	GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS
RC-51M	TYPE 31 STRONG POST GUIDE RAIL
REFERENCE DRAWINGS	

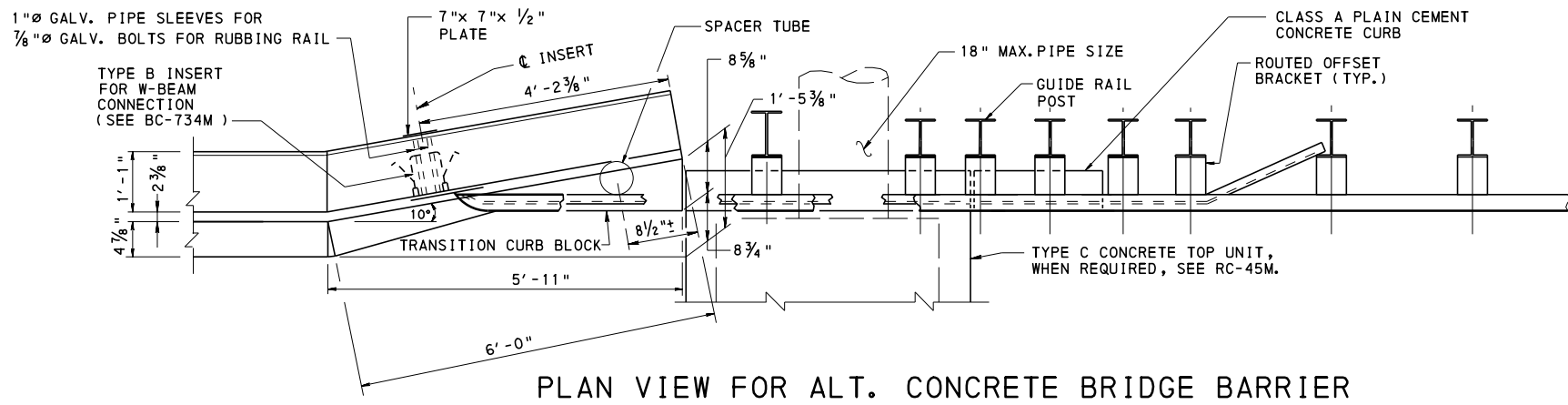
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
BRIDGE BARRIER TO
GUIDE RAIL TRANSITION

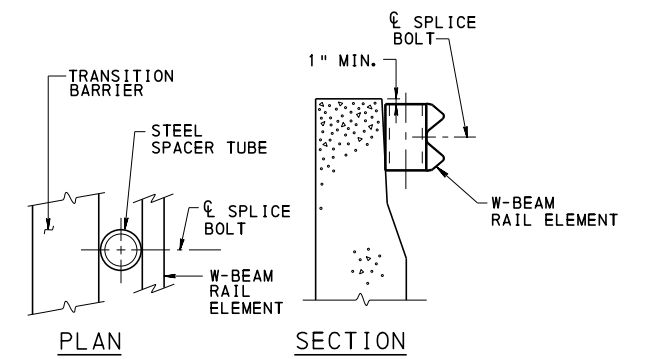
RECOMMENDED JAN. 31, 2019 <i>T. Rosa P. Maciora</i> CHIEF BRIDGE ENGINEER	RECOMMENDED JAN. 31, 2019 <i>Alvin J. Hester</i> ACTING DIR. BUR. OF PROJECT DELIVERY	SHEET 1 OF 2 BC-739M
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■ CHANGE 1
■ CHANGE 2

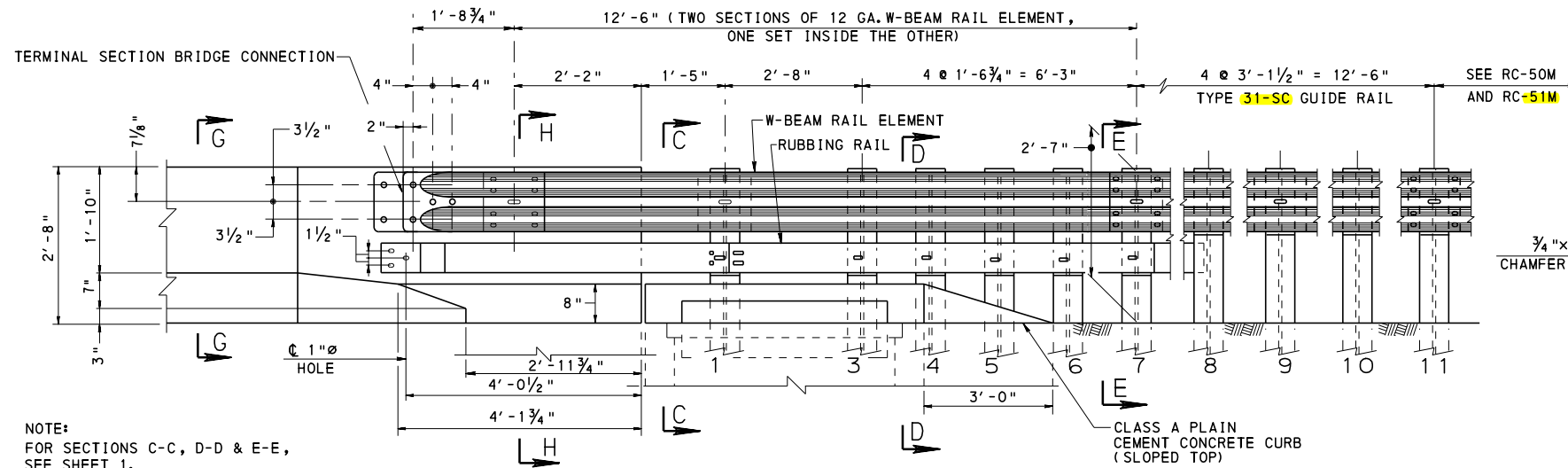
EXHIBIT B1



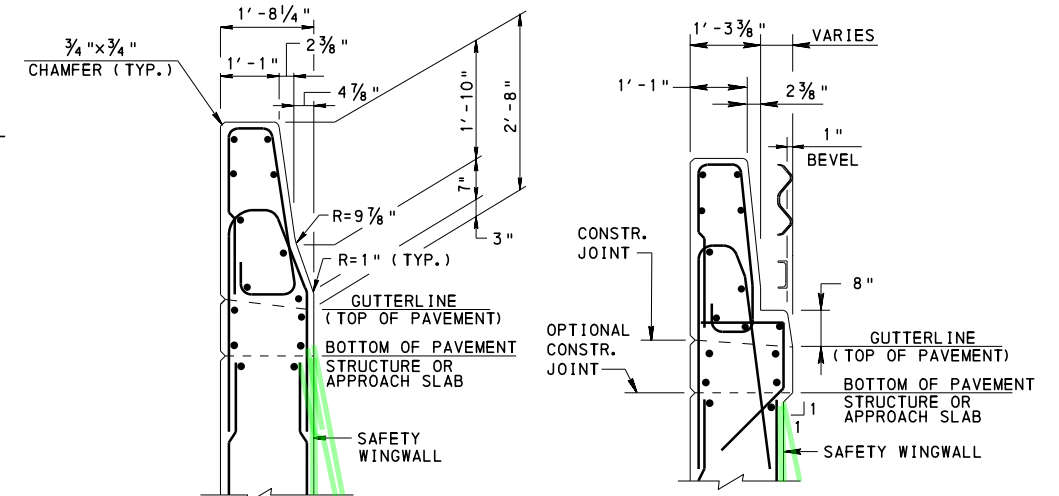
PLAN VIEW FOR ALT. CONCRETE BRIDGE BARRIER



STEEL SPACER TUBE DETAIL



ELEVATION VIEW FOR ALT. CONCRETE BRIDGE BARRIER



SECTION G-G

SECTION H-H

NOTES:

1. FOR NOTES, SEE SHEET 1.

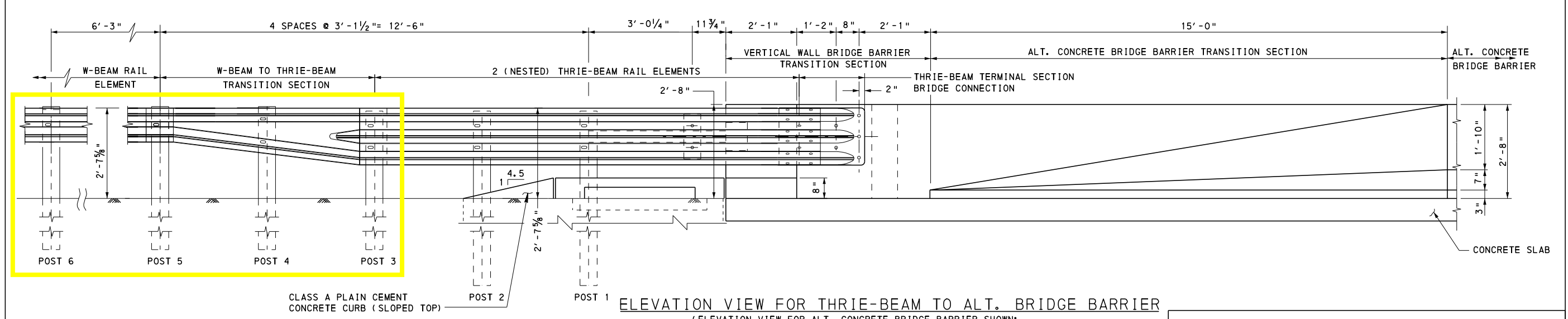
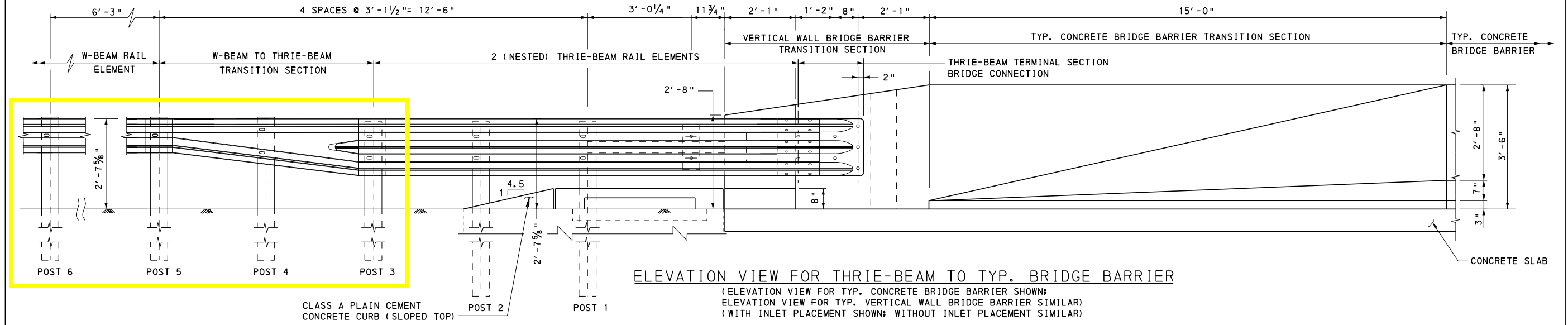
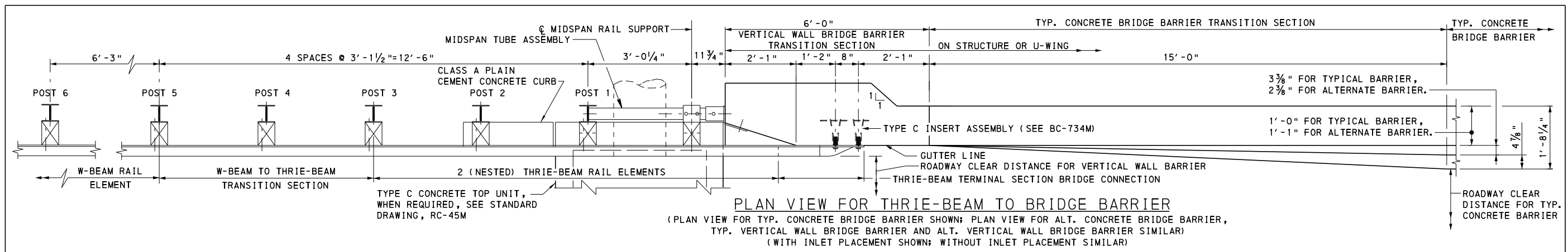
NOTE:
TYPICAL TO ELEVATION VIEW WITH INLET PLACEMENT EXCEPT AS NOTED.

ELEVATION VIEW FOR ALT. CONCRETE BRIDGE BARRIER

(WITHOUT INLET PLACEMENT)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
BRIDGE BARRIER TO
GUIDE RAIL TRANSITION



NOTE:
 THRIE-BEAM TO BRIDGE BARRIER TRANSITION ON THIS SHEET IS PERMITTED IN PLACE OF FLARED END TRANSITIONS FOR RECONSTRUCTED STRUCTURES WITHOUT SAFETY WINGS OR WITHOUT BACKWALLS WITH APPROACH SLABS. FOR STRUCTURES < 100 FT., USE VERTICAL WALL BRIDGE BARRIER. FOR STRUCTURES > 100 FT., USE TYPICAL CONCRETE BRIDGE BARRIER OR ALTERNATE CONCRETE BRIDGE BARRIER.

- NOTES:**
1. THRIE-BEAM TO BRIDGE BARRIER TRANSITION HAS BEEN ACCEPTED BY FHWA AS A TL-3 BARRIER DESIGNATION.
 2. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH PUB. 408.
 3. USE PLAN DIMENSIONS WHEN DIFFERENT FROM THOSE SHOWN ON THIS STANDARD.
 4. REINFORCED CONCRETE BARRIER AND EMBEDDED INSERTS ARE BRIDGE ITEMS.
 5. SEE RC-50M AND RC-51M FOR DETAILS AND HARDWARE NOT SHOWN.
 6. PROVIDE APPROACH END GUIDE RAIL TREATMENT AT BOTH THE APPROACH AND TRAILING ENDS OF STRUCTURE BARRIERS ON TWO LANE FACILITIES WITH TWO-WAY TRAFFIC. ON FOUR LANE DIVIDED HIGHWAYS, GUIDE RAIL TRANSITION IS NOT REQUIRED ON TRAILING ENDS OF BARRIERS UNLESS WARRANTED BY OTHER OBSTRUCTIONS.
 7. THE APPROACH END TRANSITION COMPONENTS ARE ROADWAY ITEMS.

BC-734M	ANCHOR SYSTEMS
BC-752M	CONCRETE DECK SLAB DETAILS
BC-788M	TYPICAL WATERPROOFING AND EXPANSION DETAILS
RC-45M	INLET TOPS, GRATES AND FRAMES
RC-50M	GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS
RC-51M	TYPE 31 STRONG POST GUIDE RAIL
REFERENCE DRAWINGS	

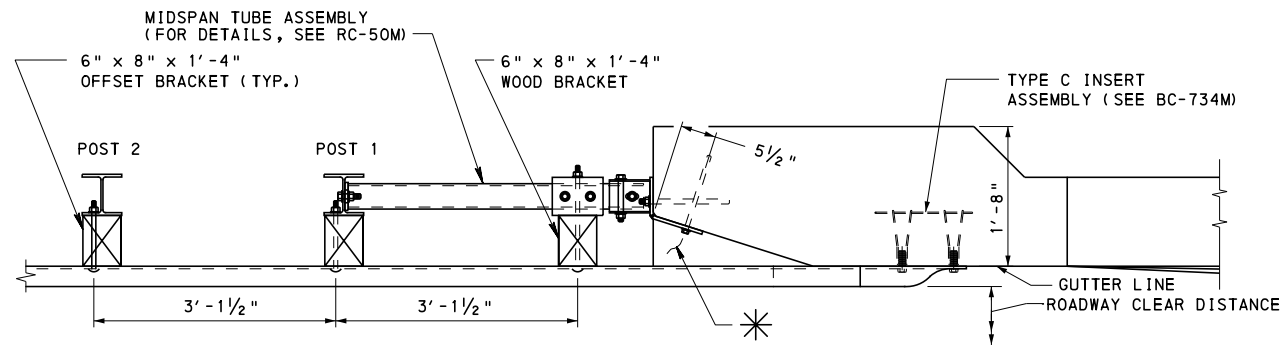
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
 BUREAU OF PROJECT DELIVERY

STANDARD

THRIE-BEAM TO VERTICAL WALL BRIDGE BARRIER TRANSITION CONNECTION

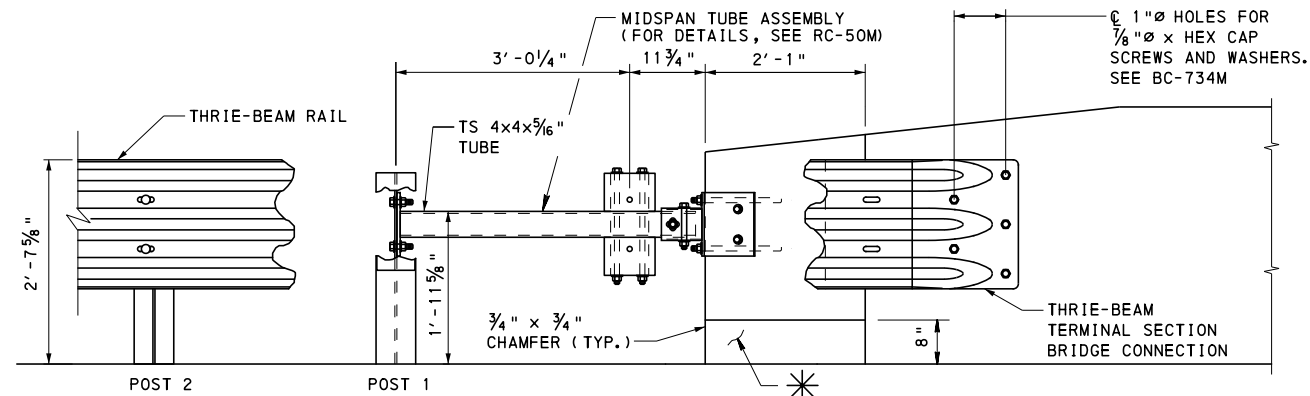
RECOMMENDED AUG. 4, 2017 <i>Thomas P. Maiore</i> CHIEF BRIDGE ENGINEER	RECOMMENDED AUG. 4, 2017 <i>Brenda S. Thompson</i> DIRECTOR, BUR. OF PROJECT DELIVERY	SHEET 1 OF 2 BC-703M
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CHANGE 1



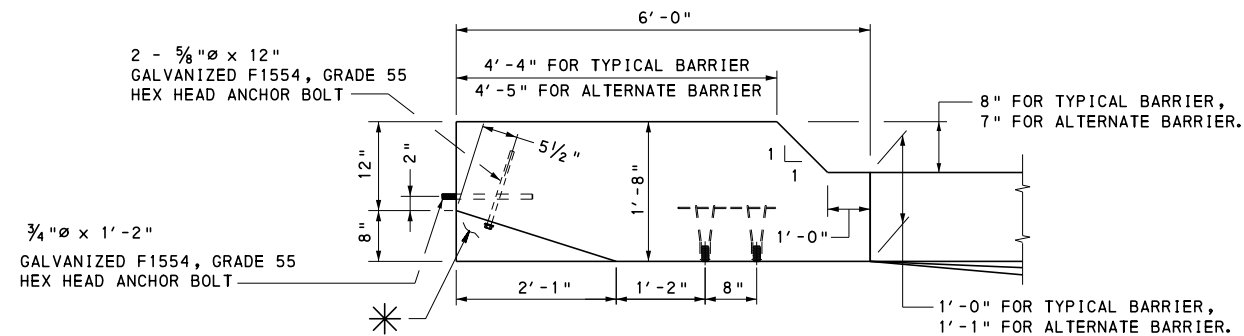
TRANSITION CONNECTION PLAN

(AT TYP. CONCRETE BRIDGE BARRIER SHOWN;
AT ALT. CONCRETE BRIDGE BARRIER AND VERTICAL WALL BRIDGE BARRIERS SIMILAR)



TRANSITION CONNECTION ELEVATION

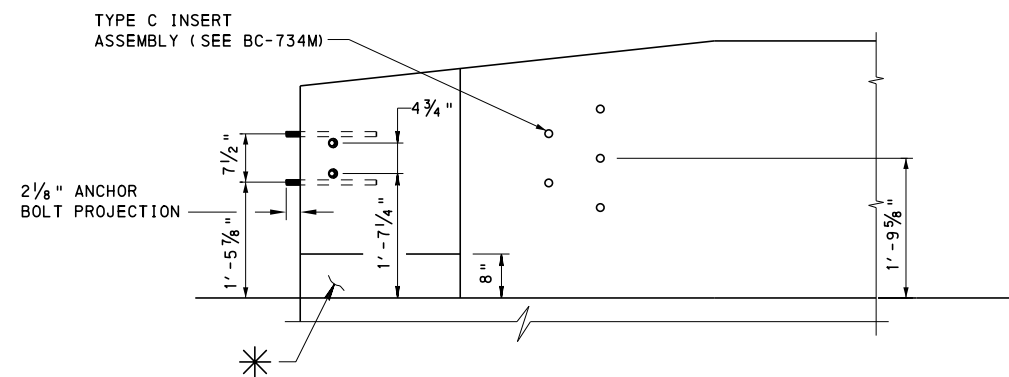
(AT TYP. CONCRETE BRIDGE BARRIER SHOWN;
AT ALT. CONCRETE BRIDGE BARRIER AND VERTICAL WALL BRIDGE BARRIERS SIMILAR)



BARRIER PLAN

(AT TYP. CONCRETE BRIDGE BARRIER SHOWN;
AT ALT. CONCRETE BRIDGE BARRIER AND VERTICAL WALL BRIDGE BARRIER SIMILAR)

*-DETAILS SHOWN INCLUDE CURB FOR INLET PLACEMENT.
DELETE CURB IF NO INLET IS PRESENT.



BARRIER ELEVATION

(AT TYP. CONCRETE BRIDGE BARRIER SHOWN;
AT ALT. CONCRETE BRIDGE BARRIER AND VERTICAL WALL BRIDGE BARRIERS SIMILAR)

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEET 1.
2. FOR APPROACH TRANSITION POST DETAILS, SEE RC-50M.

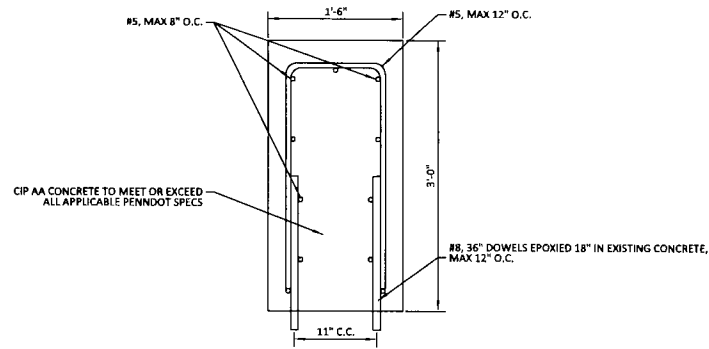
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
THRIE-BEAM TO VERTICAL WALL BRIDGE
BARRIER TRANSITION CONNECTION

RECOMMENDED AUG. 4, 2017 <i>Thomas P. Maiore</i> CHIEF BRIDGE ENGINEER	RECOMMENDED AUG. 4, 2017 <i>Brenda Thompson</i> DIRECTOR, BUR. OF PROJECT DELIVERY	SHEET 2 OF 2 BC-703M
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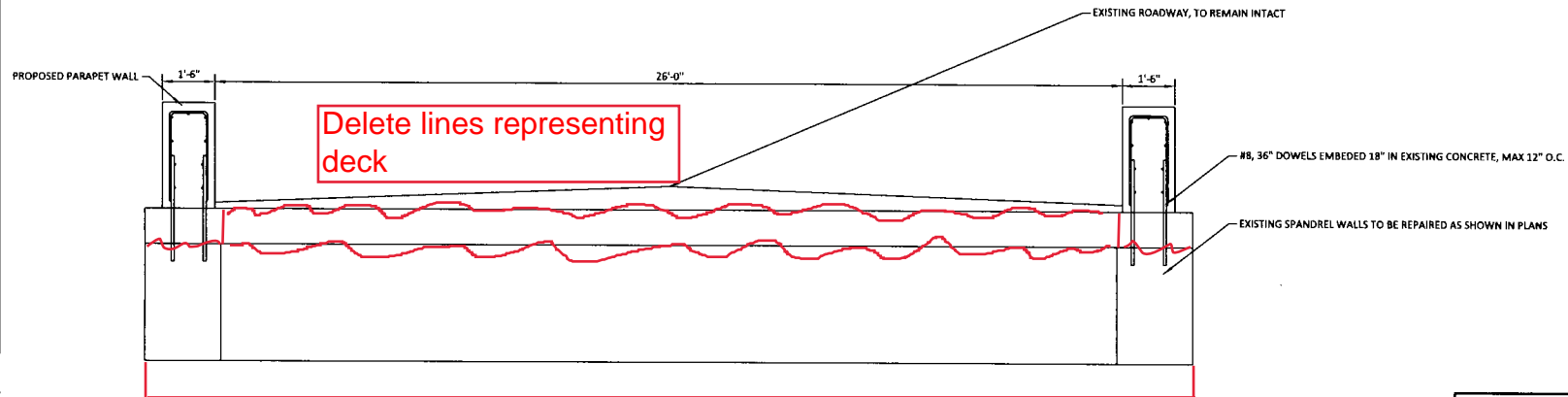
NOTES:

1. ALL REPAIRS SHALL BE MADE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STANDARDS FOR BRIDGE CONSTRUCTION BC-783M.
2. ALL CIP CONCRETE SHALL MEET OR EXCEED PENNDOT CLASS AA.
3. EXISTING PARAPET WALLS SHALL BE REMOVED BY METHODS TO KEEP EXISTING ROAD IN SERVICE AND NOT TO INTERFERE WITH RAILROAD OPERATIONS.
4. ONCE EXISTING PARAPET WALL IS REMOVED EXISTING SLAB CLEANED AND SPANDREL WALL IS TO BE REPAIRED ACCORDING TO THIS DOCUMENT AND THE ENGINEERS RECOMMENDATION.
5. ONCE SPANDREL WALL IS REPAIRED AND CURED 28 DAYS THE PROPOSED PARAPET WALLS SHALL BE CONSTRUCTED AS SHOWN IN THIS DOCUMENT.
6. TEMPORARY BARRIER WALL AND FENCING SHALL BE REMOVED BY CONTRACTOR ONCE PROPOSED PARAPET WALLS ARE CONSTRUCTED AND CURED FOR 28 DAYS.
7. EXISTING PAVEMENT IS NOT TO BE DAMAGED BY CONTRACTOR.
8. ALL CONCRETE REPAIRS SHALL BE MADE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE 318, CURRENT EDITION.



PROPOSED PARAPET WALL DETAIL

SCALE : 1/4" = 1'

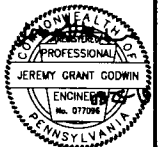


EXISTING PLAN

Delete lines representing deck

Add lines to represent arch

Existing Typical Section



NS NORFOLK SOUTHERN
 NORTHERN REGION NORFOLK SOUTHERN RAILWAY HARRISBURG DIV

BRIDGE REPAIRS
 OFFICE OF CHIEF ENGINEER - BRIDGES & STRUCTURES ATLANTA, GA.

DRAWING TITLE: PROPOSED PARAPET WALL DETAIL

CHK: DBG FILE: BR0027263 DATE: 08/25/2019

SHEET NUMBER: 10 OF 10 DRAWING NUMBER:

REV	BY	DATE	DESCRIPTION

RAILROAD CONSULTANTS, PLLC
 213 UPTOWN SQUARE
 MURFREESBORO, TN 37129
 (p) 615.663.1142

GENERAL NOTES:

- DESIGN SPECIFICATIONS:
 - BARRIER AND MOMENT SLAB DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1992 (INCLUDING THE 1993 AND 1994 INTERIM SPECIFICATIONS), AND AS SUPPLEMENTED BY THE DESIGN MANUAL, PART 4, STRUCTURES, AUGUST 1993 EDITION (INCLUDING LATEST REVISIONS).
- CONSTRUCTION SPECIFICATIONS AND **WORK QUALITY:**
 - PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE CURRENT VERSION OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, AND THE CONTRACT SPECIAL PROVISIONS.
- ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.
- DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES F.
- REINFORCEMENT IN SOME SECTIONS IS NOT SHOWN FOR CLARITY.
- IF NEEDED DETAILS ARE NOT FOUND IN THIS STANDARD, A SPECIAL SUBMISSION REQUESTING APPROVAL FOR SPECIFIC DETAILS MUST BE MADE TO THE CHIEF BRIDGE ENGINEER.

MATERIAL NOTES:

- CAST-IN-PLACE CONCRETE:
 - PROVIDE CLASS AA CEMENT CONCRETE IN THE MOMENT SLAB, BARRIERS, AND TOE WALLS.
- PRECAST CONCRETE BARRIERS:
 - CLASS AA CEMENT CONCRETE, MODIFIED - FURNISH PRECAST BARRIERS IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 714, EXCEPT PROVIDE CONCRETE HAVING A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI WHEN TESTED IN ACCORDANCE WITH PTM NO. 604.
- REINFORCEMENT STEEL:
 - PROVIDE GRADE 60 DEFORMED REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A615, ASTM A996, OR A706. DO NOT WELD REINFORCEMENT BARS. DO NOT USE RAIL STEEL A996 IN BARRIERS OR WHERE BENDING OR WELDING OF REINFORCEMENT BARS IS INDICATED.
 - EPOXY COAT ALL REINFORCEMENT BARS.
 - PROVIDE MINIMUM LAP AND EMBEDMENT LENGTH FOR REINFORCING BARS IN ACCORDANCE WITH BC-736M.

INSTRUCTIONS TO DESIGNERS:

- THE INFORMATION SHOWN IN THIS STANDARD IS PROVIDED FOR USE IN THE DEVELOPMENT OF THE CONTRACT DRAWINGS. THE DESIGNER IS RESPONSIBLE FOR THE PRESENTATION OF ALL REQUIRED DETAILS AND NOTES.
- DESIGN COMPUTATIONS ARE NOT REQUIRED FOR THE MOMENT SLAB AND BARRIER CONFIGURATIONS SHOWN ON THIS STANDARD. WHERE CONDITIONS AND/OR DETAILS DIFFER FROM THE STANDARD, COMPLETE DESIGN COMPUTATIONS MUST BE SUBMITTED TO THE DEPARTMENT. SUCH SPECIAL DESIGNS MUST PROVIDE ULTIMATE STRENGTH EQUAL TO THE DESIGN PROVIDED IN THIS STANDARD.
- DESIGNER TO DETAIL ONLY CAST-IN-PLACE BARRIERS ON THE CONTRACT PLANS. PRECAST BARRIER OPTION IS ONLY PERMITTED AS A CONTRACTOR ALTERNATE.
- CONTRACT DRAWINGS:
 - PREPARE CONTRACT DRAWINGS IN ACCORDANCE WITH THE DESIGN MANUAL, PART 4, THIS STANDARD AND OTHER PENNDOT STANDARDS.
 - PROVIDE COMPLETE DETAILS AND NOTES AS REQUIRED.
 - PROVIDE STAKE OUT PLAN.
 - PROVIDE COMPLETE REINFORCEMENT BAR DETAILS AND BAR SCHEDULE.
 - PROVIDE TOP OF SLAB (OR ROADWAY) ELEVATIONS AT ALL TRANSVERSE JOINT LOCATIONS.
 - PROVIDE ELEVATIONS AT GUTTER LINES AND EDGE OF MOMENT SLAB.
- PAY ITEMS:
 - PROVIDE SEPARATE PAY ITEMS AND INDICATE THE APPROXIMATE QUANTITY FOR CONCRETE, REINFORCEMENT, PROTECTIVE COATINGS, AND ANY OTHER ITEM THAT MAY BE REQUIRED FOR THE CONSTRUCTION OF THE MOMENT SLAB AND BARRIER.
 - EXCAVATION, SUBBASE, AND SUBGRADE DRAINS ARE ROADWAY PAY ITEMS.
- PROVIDE PAVEMENT BASE DRAINS IN ACCORDANCE WITH RC-30M.
- PROTECTIVE COATINGS:
 - APPLY A PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE) IN ACCORDANCE WITH PUBLICATION 408, SECTION 1019 TO THE TOP SURFACE OF THE MOMENT SLAB AND TO THE INSIDE FACE AND TOP SURFACES OF THE BARRIERS. DO NOT PLACE PENETRATING SEALERS ON TOP OF ANY SURFACE THAT RECEIVES ASPHALT OVERLAY.
- SUBBASE THICKNESS BENEATH THE MOMENT SLAB AND BARRIER MUST MATCH THE ROADWAY SUBBASE THICKNESS.
- THE DESIGNED CRASH TEST LEVEL IS TL-4 EXCEPT WHERE NOTED OTHERWISE.

CONTRACT DRAWING NOTES:

THE FOLLOWING NOTES ARE TO BE PLACED ON THE CONTRACT DRAWINGS WHEN REQUIRED:

- A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT.
- CONTRACTOR IS PERMITTED TO PROVIDE A PRECAST BARRIER IN PLACE OF THE CAST-IN-PLACE BARRIER. CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH PUBLICATION 408. THE SHOP DRAWINGS MUST COMPLETELY DETAIL THE ENTIRE MOMENT SLAB AND BARRIER ALONG THE REQUIRED LENGTH.
 - CONTRACTOR IS RESPONSIBLE FOR LIFTING, HANDLING AND TRANSPORTATION STRESSES.
 - CONTRACTOR IS RESPONSIBLE FOR TEMPORARY BRACING DESIGN CALCULATIONS AND DETAILS.
 - LIFTING INSERTS:
 - PROVIDE GALVANIZED LIFTING INSERTS.
 - PROVIDE LIFTING INSERTS WITH A MINIMUM CAPACITY OF AT LEAST TWO TIMES THE CALCULATED LOAD ON THE INSERT.
 - PROVIDE A MINIMUM OF TWO LIFTING INSERTS PER BARRIER SECTION.
- PROVIDE ANY OTHER NOTES AS REQUIRED.

INDEX OF SHEETS	
SHEET NO.	SHEET TITLE
1	GENERAL NOTES
2	TYPICAL C. I. P. BARRIER DETAILS
3	TYPICAL PRECAST BARRIER DETAILS
4	MISCELLANEOUS DETAILS
5	TOE WALL DETAILS
6	PLANS
7	FLARED END TREATMENT
8	PAVEMENT RELIEF JOINT AND INLET INSTALLATION

NOTE: e-Notification revision on sheet 3

CHANGE 2

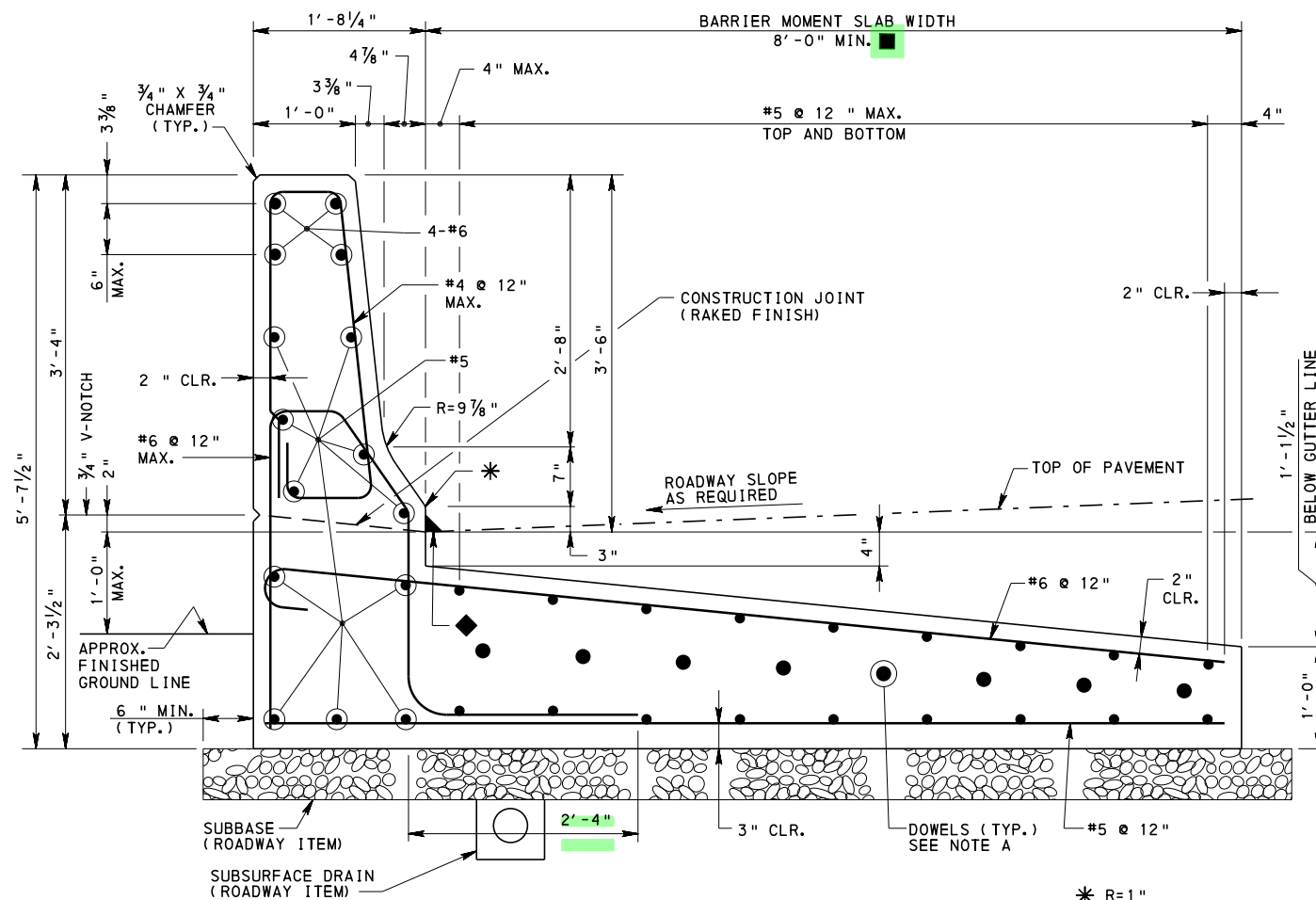
RC-20M	CONCRETE PAVEMENT JOINTS
RC-21M	REINFORCED CONCRETE PAVEMENT
RC-24M	PAVEMENT RELIEF JOINT
RC-27M	PLAIN CONCRETE PAVEMENT
RC-30M	SUBSURFACE DRAINS
BC-703M	THRIE-BEAM TO VERTICAL WALL BRIDGE BARRIER TRANSITION CONNECTION
BC-708M	THRIE-BEAM TO PA TYPE 10M BRIDGE BARRIER TRANSITION CONNECTION
BC-709M	PA TYPE 10M BRIDGE BARRIER
BC-712M	THRIE-BEAM TO PA BRIDGE BARRIER TRANSITION CONNECTION
BC-713M	PA BRIDGE BARRIER
BC-735M	WALL CONSTRUCTION AND EXPANSION JOINT DETAILS
BC-736M	REINFORCEMENT BAR FABRICATION DETAILS
BC-739M	BRIDGE BARRIER TO GUIDRAIL TRANSITION
BC-752M	CONCRETE DECK SLAB DETAILS
BC-767M	NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE AND STEEL BEAM BRIDGES
BC-799M	MECHANICALLY STABILIZED EARTH RETAINING WALLS
BD-601M	CONCRETE DECK SLAB
BD-610M	PA BRIDGE BARRIER
BD-615M	PA HT BRIDGE BARRIER
BD-617M	PA TYPE 10M BRIDGE BARRIER
BD-618M	PA VERTICAL WALL BRIDGE BARRIER
BD-628M	BRIDGE APPROACH SLABS
BD-679M	STRUCTURE MOUNTED SOUND BARRIER WALLS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
MOMENT SLABS
GENERAL NOTES

RECOMMENDED AUG. 30, 2019 <i>Jean J. Ringer</i> ACTING CHIEF BRIDGE ENGINEER	RECOMMENDED AUG. 30, 2019 <i>Melvin V. Bittler</i> ACT. DIR., BUR. OF PROJECT DELIVERY	SHEET 1 OF 8 BD-627M
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REFERENCE DRAWINGS



**MOMENT SLAB (BURIED)
WITH TYPICAL C.I.P. BARRIER**

SEE SHEET 6 FOR PLAN OF C.I.P. MOMENT SLAB

* R=1"

◆ ASPHALT RUBBER SEALING COMPOUND
[PUB. 408, SECTION 705.4(g)]

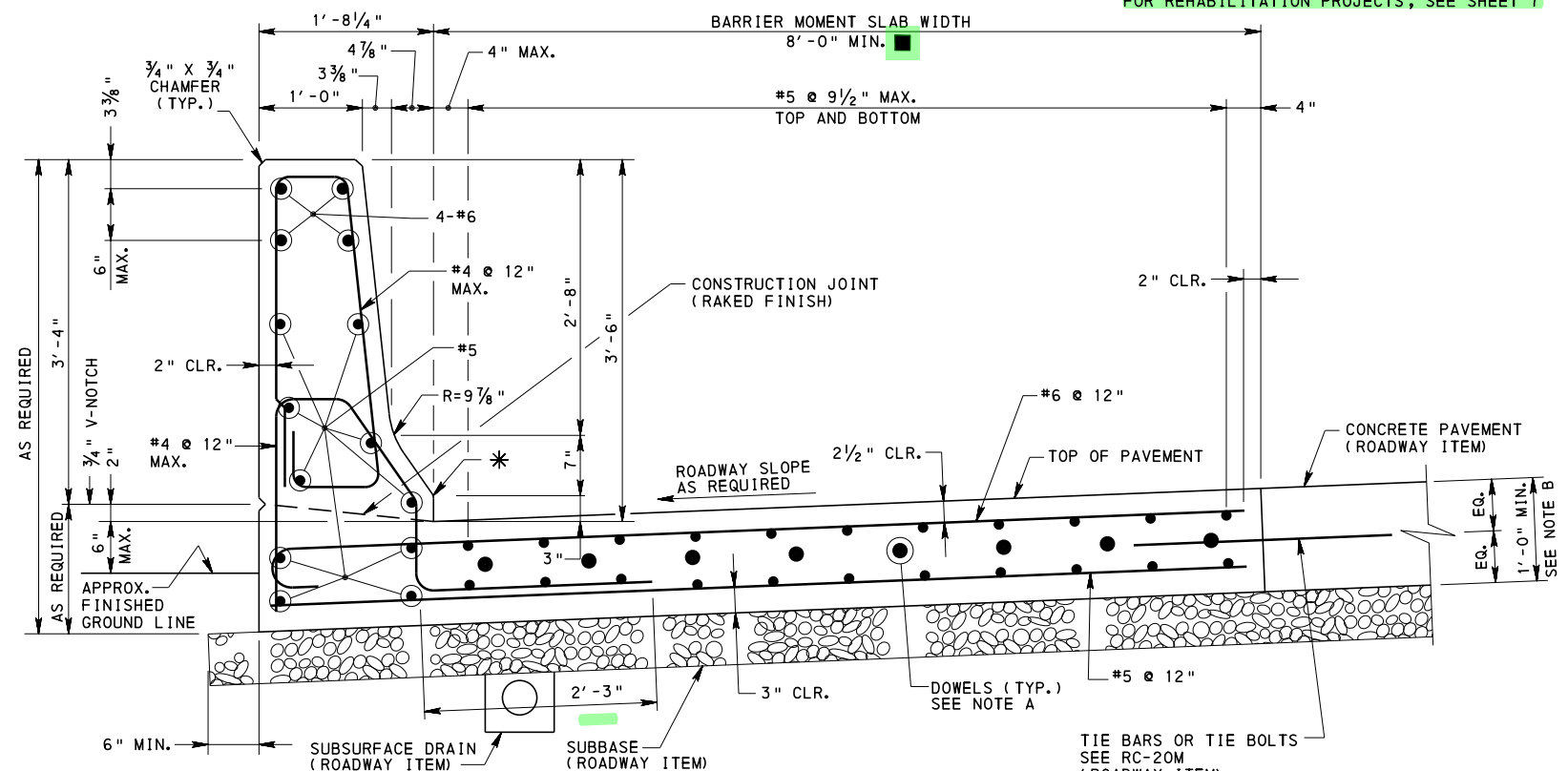
■ AT DISCRETION OF DISTRICT BRIDGE ENGINEER,
MOMENT SLAB WIDTH MAY BE REDUCED TO 4'-0".
FOR REHABILITATION PROJECTS, SEE SHEET 7

NOTE A:

PROVIDE DOWELS AT EXPANSION JOINTS.
USE TYPE D OR E JOINT PER RC-20M.
USE SAME JOINT AS PROVIDED IN PAVEMENT.

NOTE B:

MOMENT SLAB DEPTH TO MATCH DEPTH OF
CONCRETE PAVEMENT IN ROADWAY.



**MOMENT SLAB (AT-GRADE)
WITH TYPICAL C.I.P. BARRIER**

SEE SHEET 6 FOR PLAN OF C.I.P. MOMENT SLAB

* R=1"

TIE BARS OR TIE BOLTS
SEE RC-20M
(ROADWAY ITEM)

NOTES

1. FOR NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

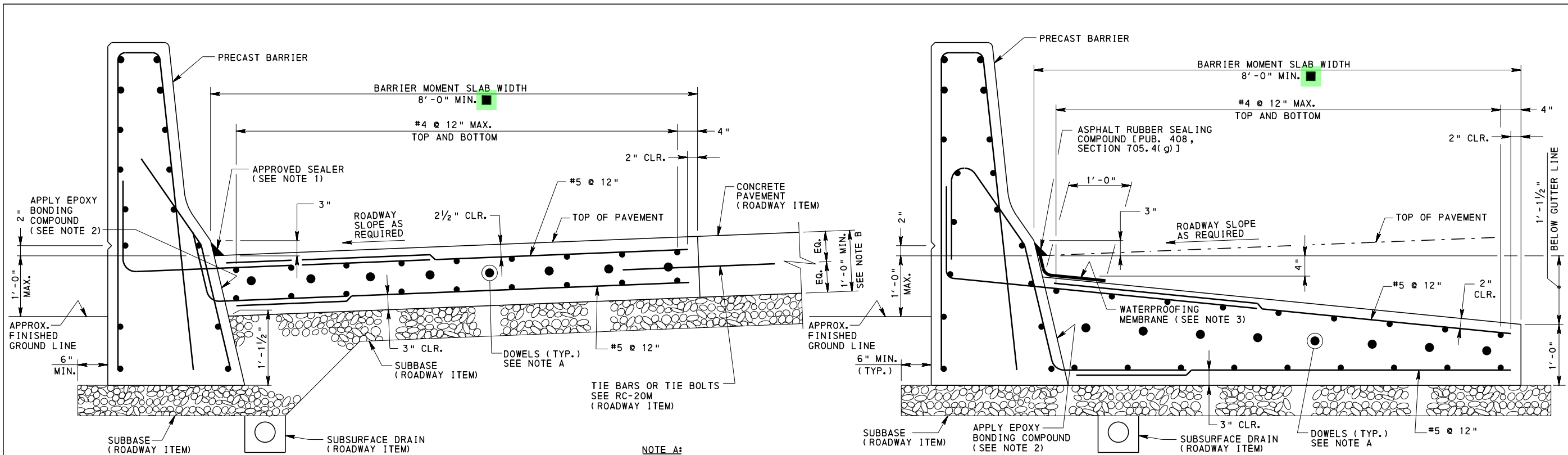
STANDARD
MOMENT SLABS
TYPICAL C.I.P. BARRIER DETAILS

RECOMMENDED AUG. 30, 2019
Janis J. Ring
ACTING CHIEF BRIDGE ENGINEER

RECOMMENDED AUG. 30, 2019
Melvin V. Bitt
ACT. DIR., BUR. OF PROJECT DELIVERY

SHEET 2 OF 8

BD-627M



MOMENT SLAB (AT-GRADE) WITH TYPICAL PRECAST CONCRETE BARRIER

SEE SHEET 6 FOR PLAN OF C. I. P. MOMENT SLAB

MOMENT SLAB (BURIED) WITH TYPICAL PRECAST CONCRETE BARRIER

SEE SHEET 6 FOR PLAN OF C. I. P. MOMENT SLAB

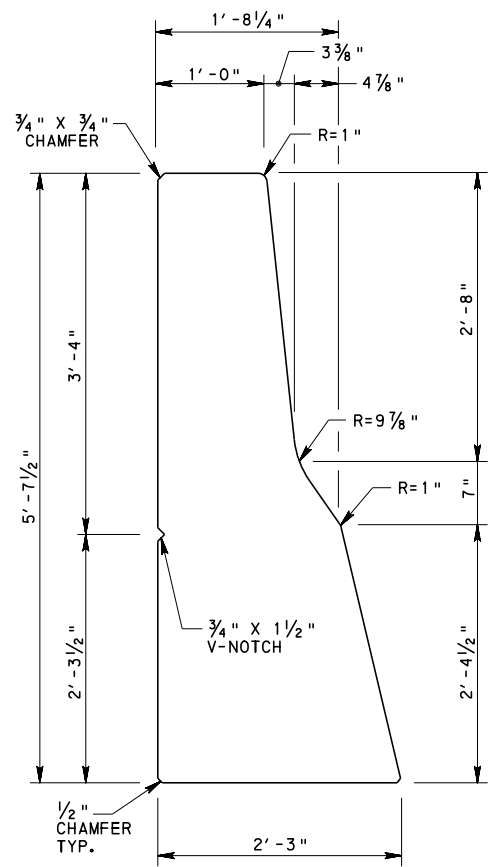
NOTE A:
 PROVIDE DOWELS AT EXPANSION JOINTS.
 USE TYPE D OR E JOINT PER RC-20M.
 USE SAME JOINT AS PROVIDED IN PAVEMENT.

NOTE B:
 MOMENT SLAB DEPTH TO MATCH DEPTH OF
 CONCRETE PAVEMENT IN ROADWAY.

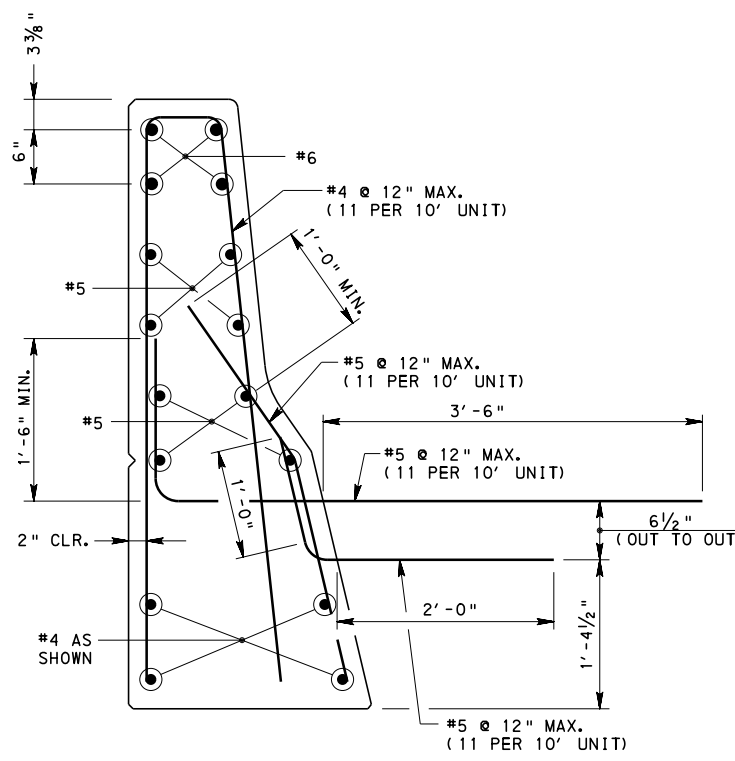
■ AT DISCRETION OF DISTRICT BRIDGE ENGINEER,
 MOMENT SLAB WIDTH MAY BE REDUCED TO 4'-0".
 FOR REHABILITATION PROJECTS, SEE SHEET 7.

NOTES:

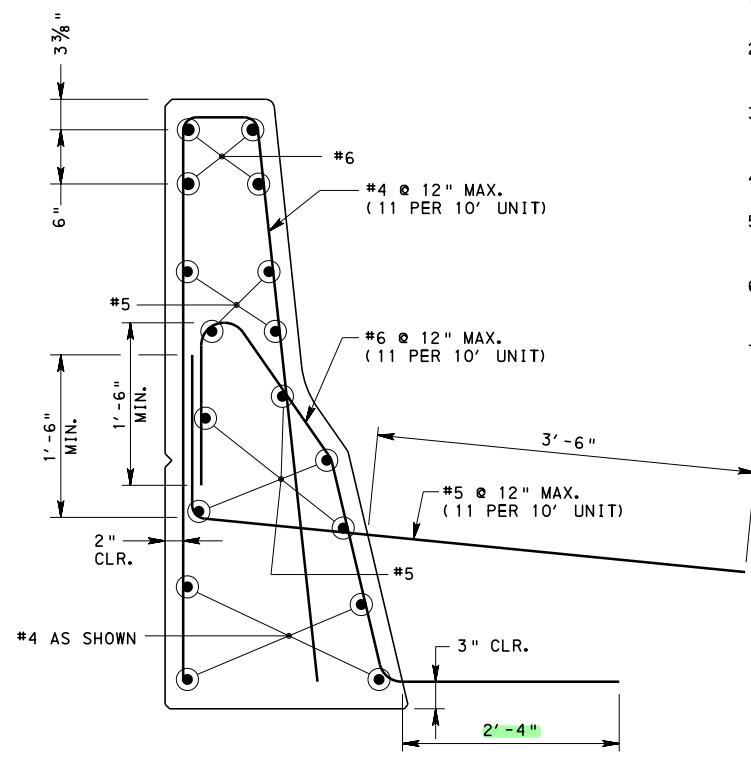
1. USE SILICONE JOINT SEALING MATERIAL PER PUB. 408 SECTION 705.4 (d).
2. APPLY EPOXY BONDING COMPOUND CONFORMING TO ASTM C881 TYPE 11, GRADE 2 BETWEEN PRECAST BARRIER AND C. I. P. MOMENT SLAB.
3. PROVIDE WATERPROOFING MEMBRANE IN ACCORDANCE WITH PUBLICATION 408, SECTION 680.
4. PROVIDE A MINIMUM PRECAST BARRIER LENGTH OF 10'-0".
5. PROVIDE SPECIAL DESIGN AND DETAILING OF THE MOMENT SLAB AND BARRIER FOR INLET INSTALLATIONS, SEE SHEET 8.
6. BEGIN VERTICAL REINFORCEMENT AT 3" FROM EITHER END OF 10'-0" PANEL.
7. FOR ADDITIONAL NOTES, SEE SHEET 1.



DIMENSIONS



REINFORCEMENT FOR BARRIER WITH CEMENT CONCRETE SHOULDER



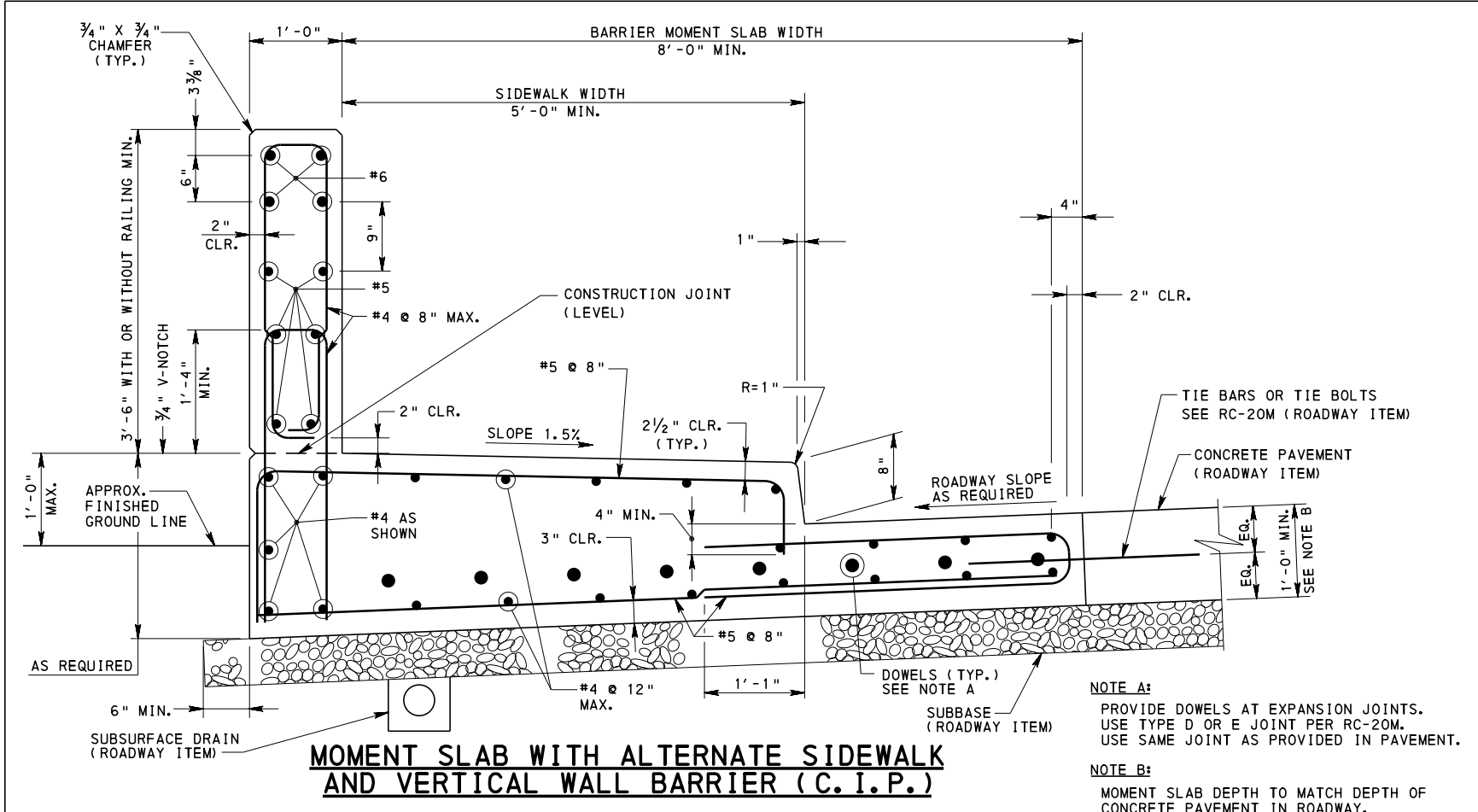
REINFORCEMENT FOR BARRIER WITH ASPHALT-PAVED CONCRETE SHOULDER

TYPICAL PRECAST CONCRETE BARRIER DETAILS

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF PROJECT DELIVERY

STANDARD
 MOMENT SLABS
 TYPICAL PRECAST BARRIER DETAILS

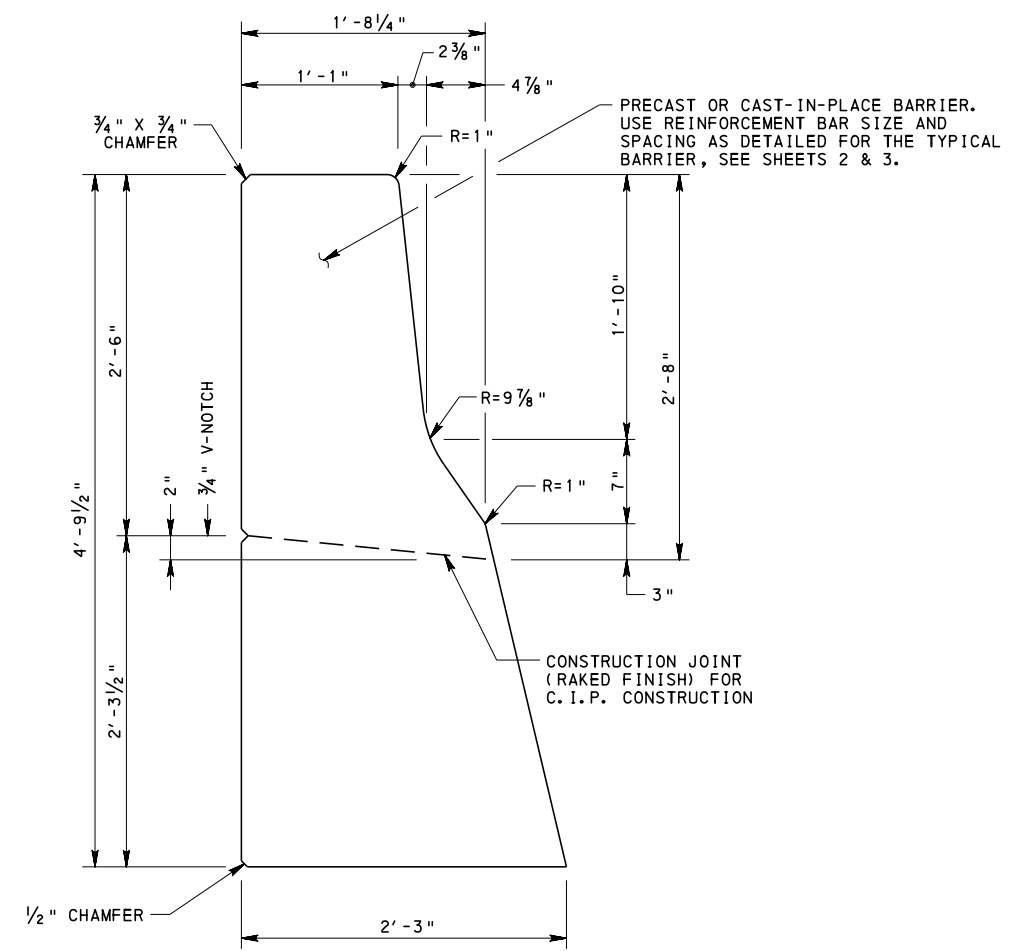
e-Notification No. 74,
 dated Sept. 19, 2019



MOMENT SLAB WITH ALTERNATE SIDEWALK AND VERTICAL WALL BARRIER (C.I.P.)

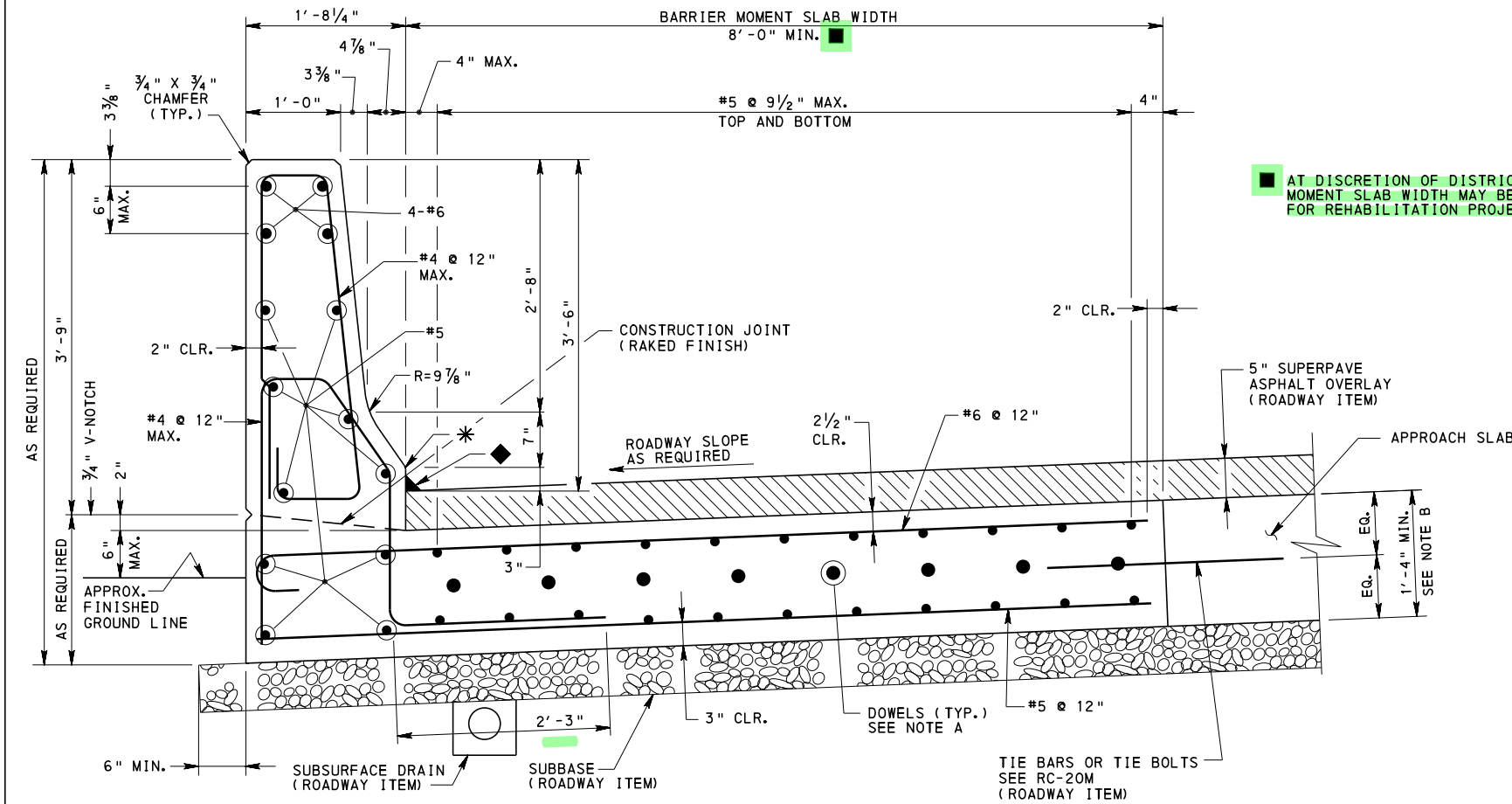
NOTE A:
 PROVIDE DOWELS AT EXPANSION JOINTS. USE TYPE D OR E JOINT PER RC-20M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

NOTE B:
 MOMENT SLAB DEPTH TO MATCH DEPTH OF CONCRETE PAVEMENT IN ROADWAY.



ALTERNATE TRAFFIC BARRIER

TO BE USED ONLY IF AUTHORIZED BY CHIEF BRIDGE ENGINEER



MOMENT SLAB WITH ASPHALT OVERLAY ADJACENT TO TYPE 2 APPROACH SLAB WITH TYPICAL C.I.P. BARRIER

■ AT DISCRETION OF DISTRICT BRIDGE ENGINEER, MOMENT SLAB WIDTH MAY BE REDUCED TO 4'-0". FOR REHABILITATION PROJECTS, SEE SHEET 7

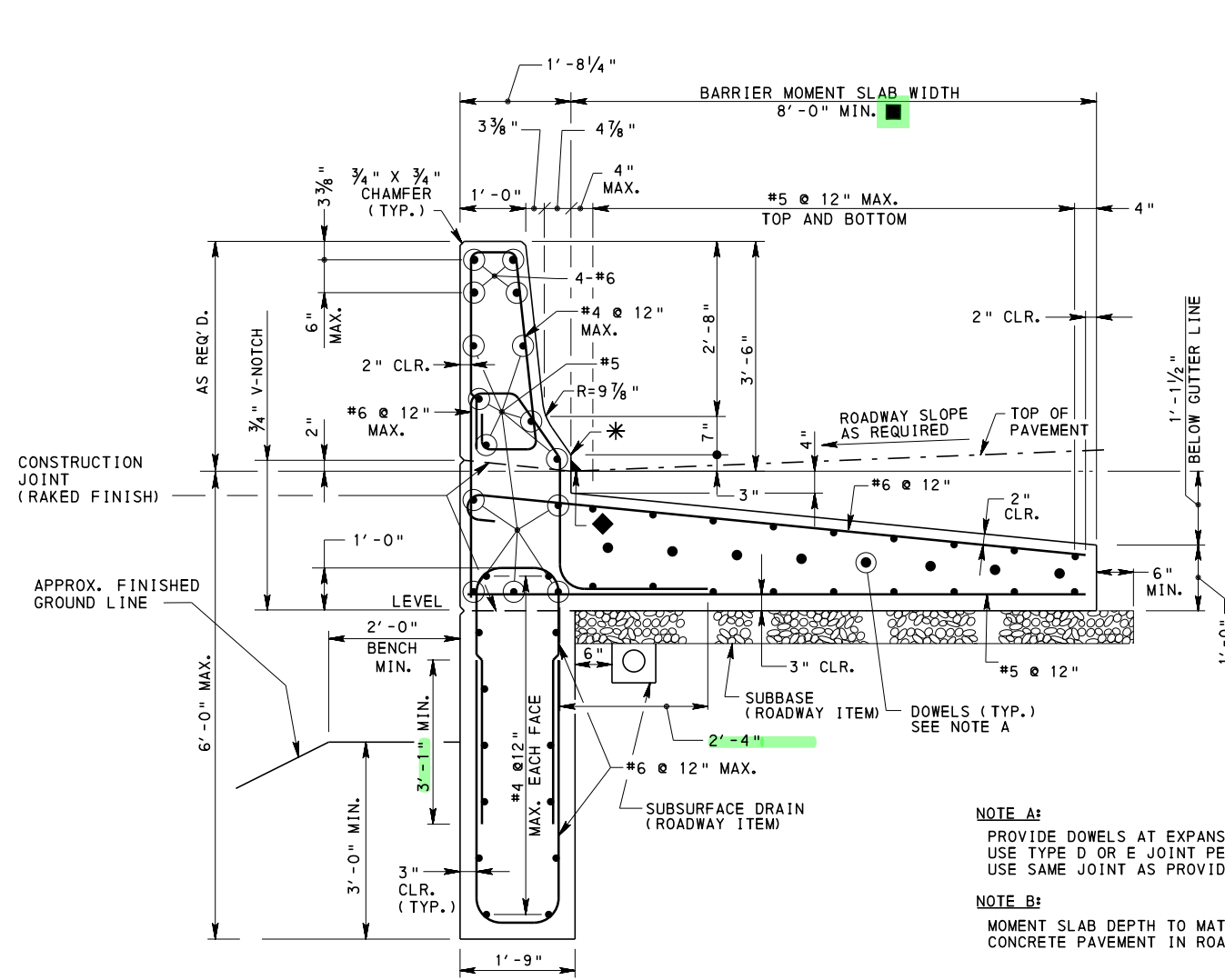
* R=1"
 ◆ ASPHALT RUBBER SEALING COMPOUND [PUB. 408, SECTION 705.4 (g)]

NOTES
 1. FOR NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF PROJECT DELIVERY

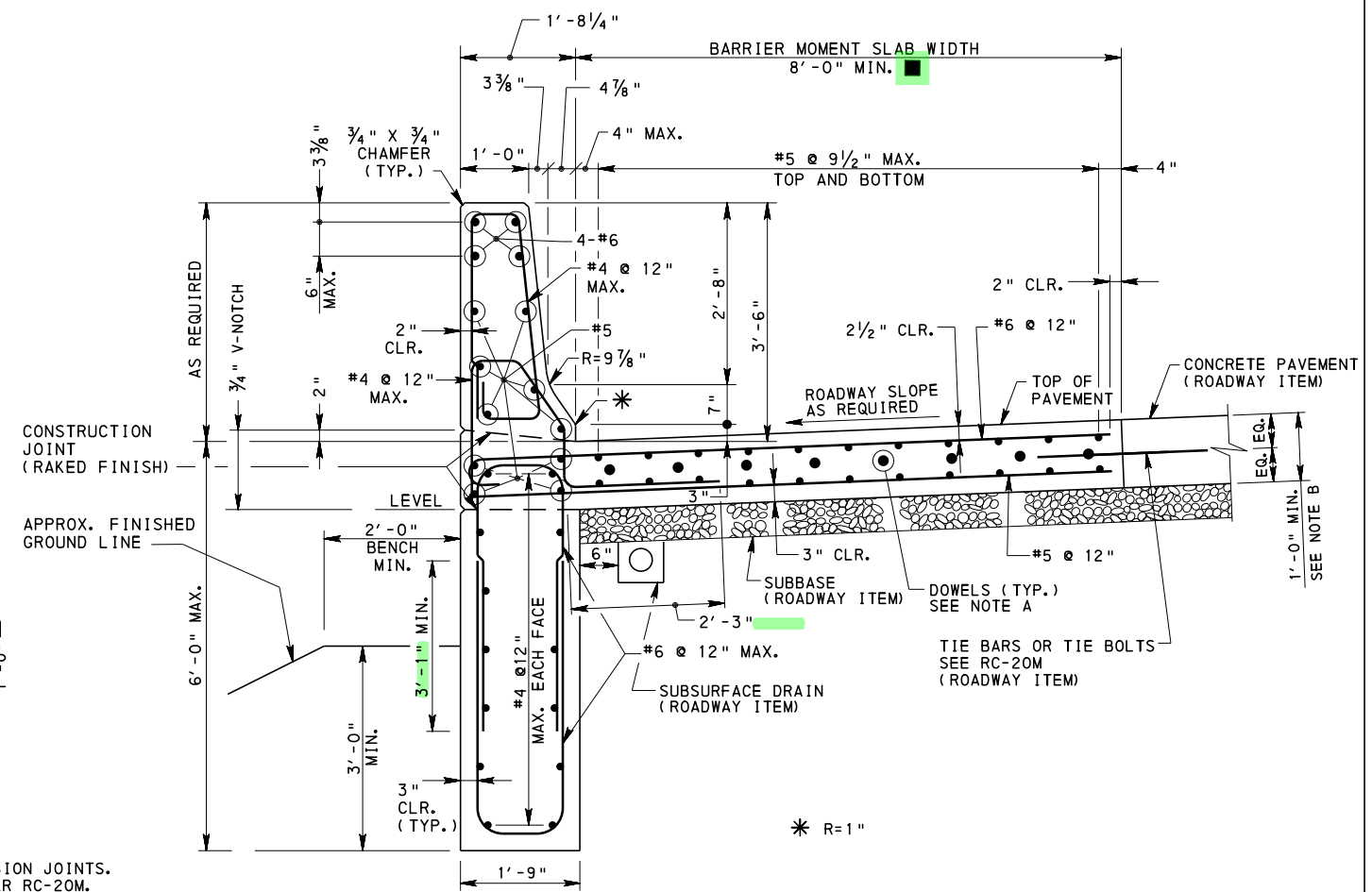
STANDARD
 MOMENT SLABS
 MISCELLANEOUS DETAILS

RECOMMENDED AUG. 30, 2019 <i>Janis J. Ringo</i> ACTING CHIEF BRIDGE ENGINEER	RECOMMENDED AUG. 30, 2019 <i>Melvin V. Bittler</i> ACT. DIR., BUR. OF PROJECT DELIVERY	SHEET 4 OF 8 BD-627M
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MOMENT SLAB (BURIED) WITH TOE WALL AND TYPICAL C.I.P. BARRIER

SEE SHEET 6 FOR PLAN OF C.I.P. MOMENT SLAB



MOMENT SLAB (AT-GRADE) WITH TOE WALL AND TYPICAL C.I.P. BARRIER

SEE SHEET 6 FOR PLAN OF C.I.P. MOMENT SLAB

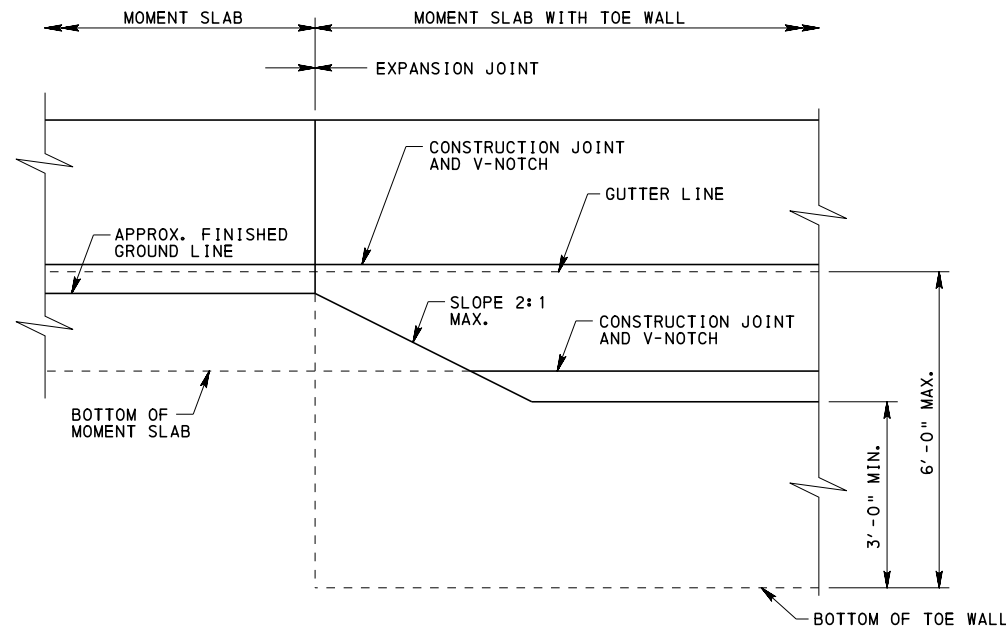
NOTE A:
PROVIDE DOWELS AT EXPANSION JOINTS. USE TYPE D OR E JOINT PER RC-20M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

NOTE B:
MOMENT SLAB DEPTH TO MATCH DEPTH OF CONCRETE PAVEMENT IN ROADWAY.

* R=1"

◆ ASPHALT RUBBER SEALING COMPOUND [PUB. 408, SECTION 705.4(g)]

■ AT DISCRETION OF DISTRICT BRIDGE ENGINEER, MOMENT SLAB WIDTH MAY BE REDUCED TO 4'-0". FOR REHABILITATION PROJECTS, SEE SHEET 7



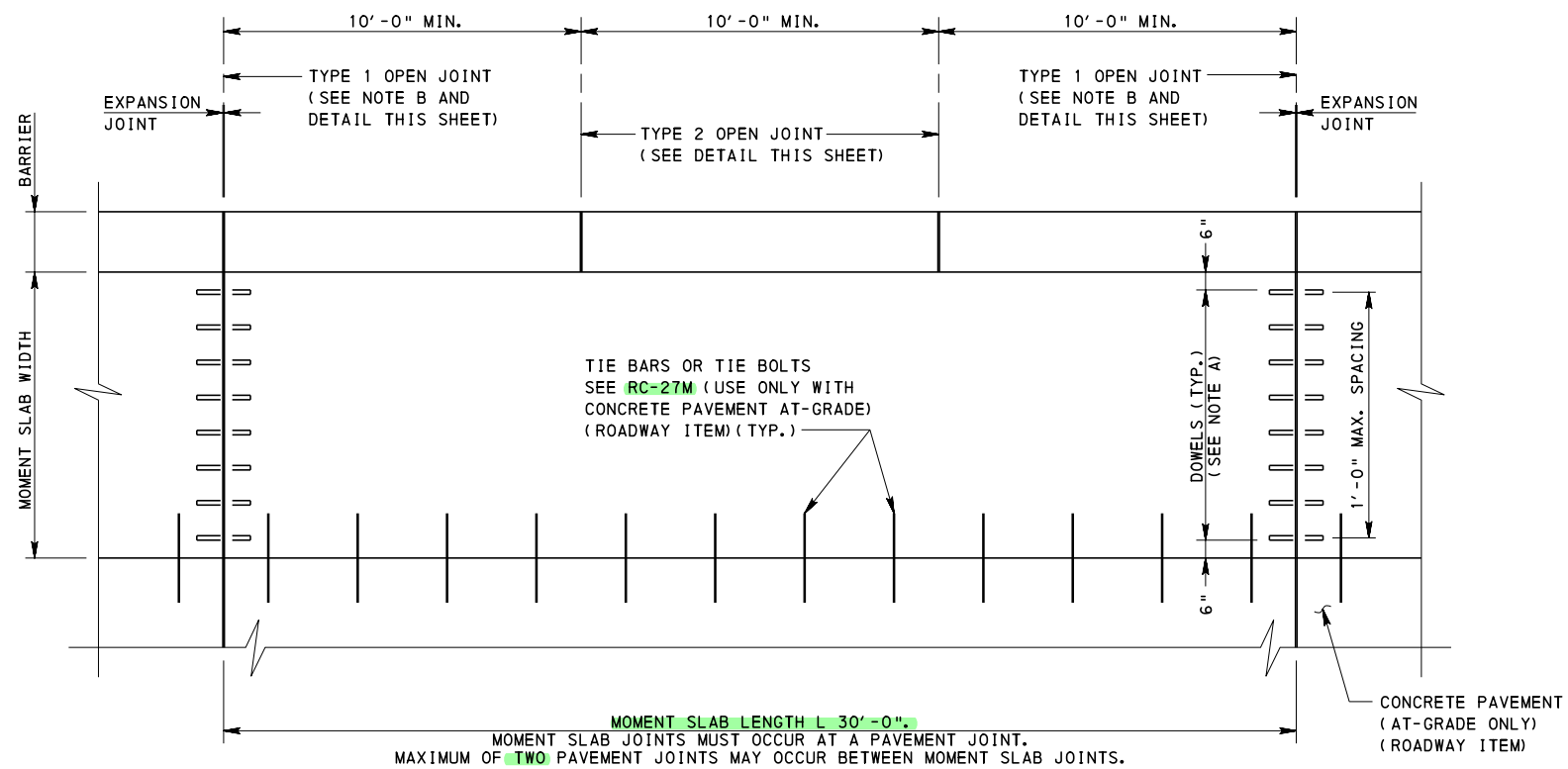
TOE WALL ELEVATION TRANSITION

NOTES

1. FOR NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
MOMENT SLABS
TOE-WALL DETAILS

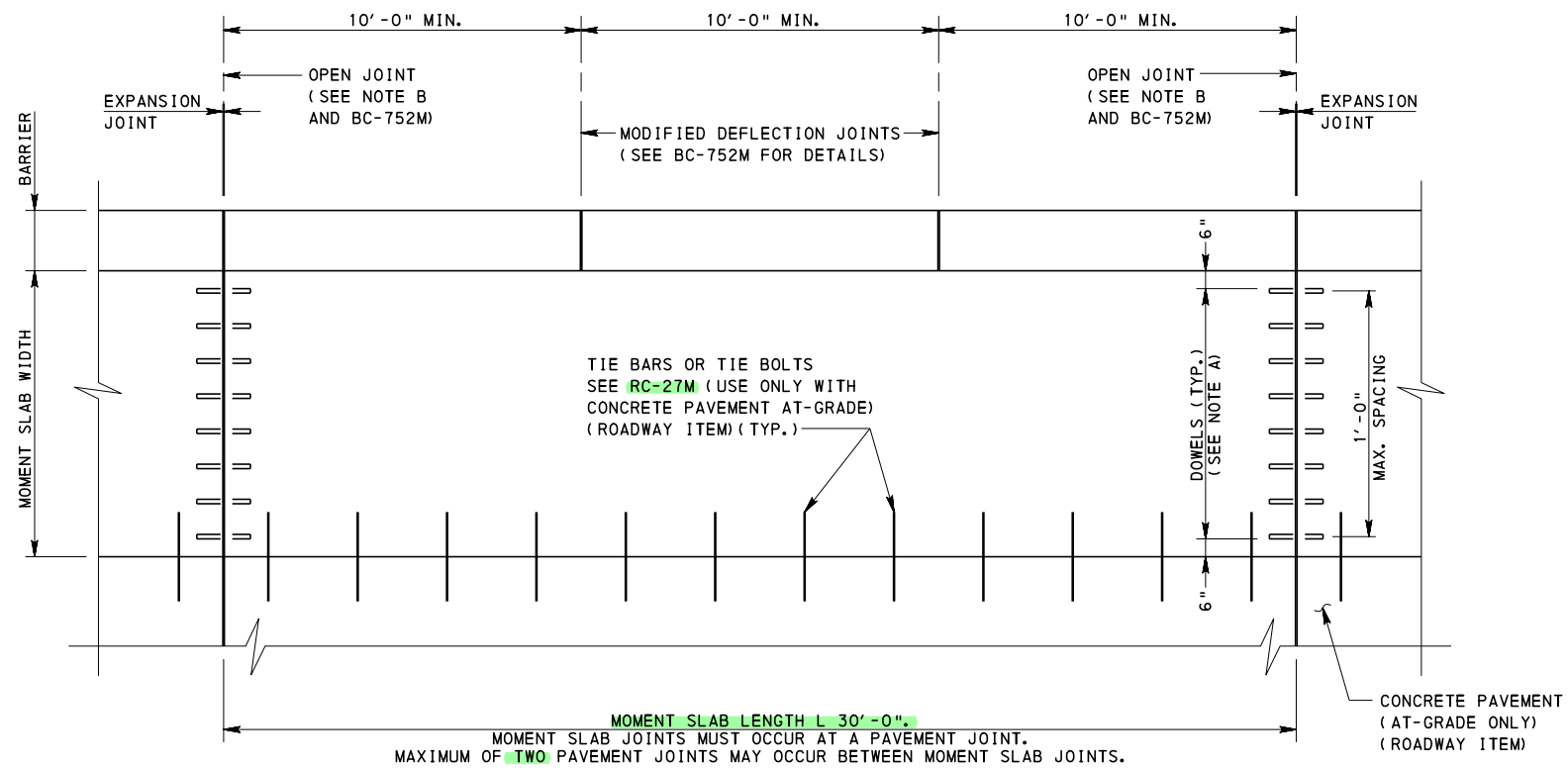


NOTE A: USE TYPE D OR E JOINT PER RC-27M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

NOTE B: PROVIDE TYPE 1 OPEN JOINTS AT SAME LOCATIONS AS THOSE PROVIDED FOR THE MOMENT SLAB.

PLAN - BARRIER MOMENT SLAB

(PRECAST BARRIER)

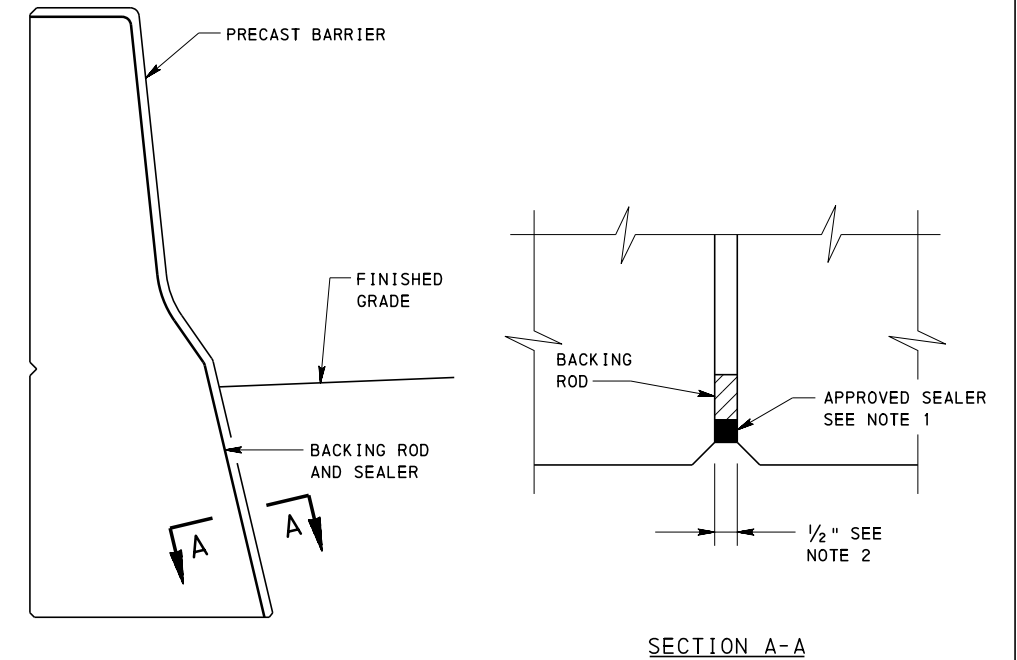


NOTE A: USE TYPE D OR E JOINT PER RC-27M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

NOTE B: PROVIDE OPEN JOINTS IN BARRIER AT SAME LOCATIONS AS THOSE PROVIDED FOR THE MOMENT SLAB.

PLAN - BARRIER MOMENT SLAB

(C. I. P. BARRIER)



TYPE 1 AND TYPE 2 OPEN JOINT IN PRECAST BARRIER

JOINT NOTES:

1. ALL OPEN JOINTS IN THE BARRIER MUST BE FILLED WITH BACKING ROD AND SEALED WITH SILICONE JOINT SEALING MATERIAL PER PUBLICATION 408, SECTION 705.4(d).
2. EXPOSED JOINTS AT BARRIER MAY VARY FROM 1/2" TO 1" WIDTH FOR TYPE 1 OPEN JOINT AND 1/4" TO 3/4" WIDTH FOR TYPE 2 OPEN JOINT, TO ALLOW FOR HORIZONTAL AND/OR VERTICAL CURVATURE IN WALL.

MOMENT SLAB AND BARRIER NOTE:

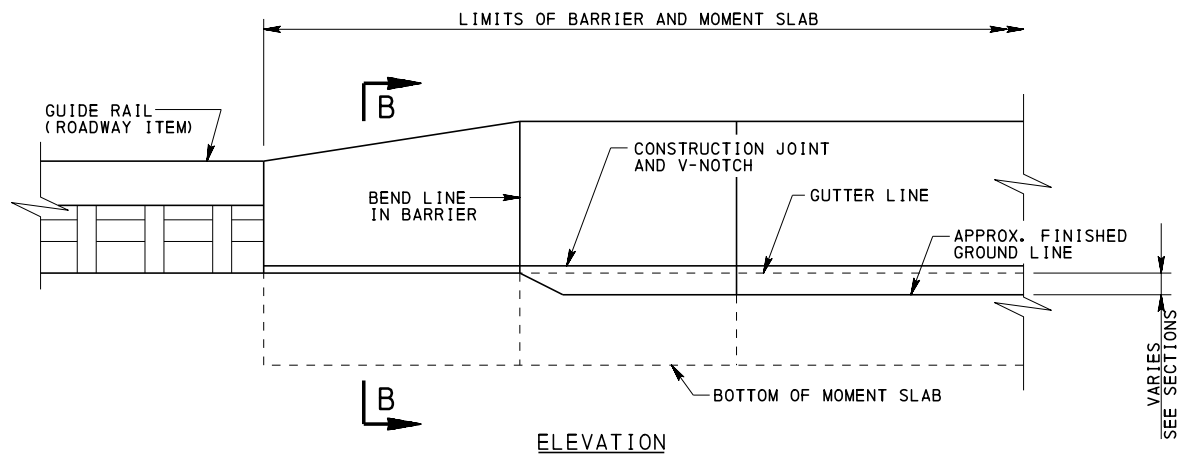
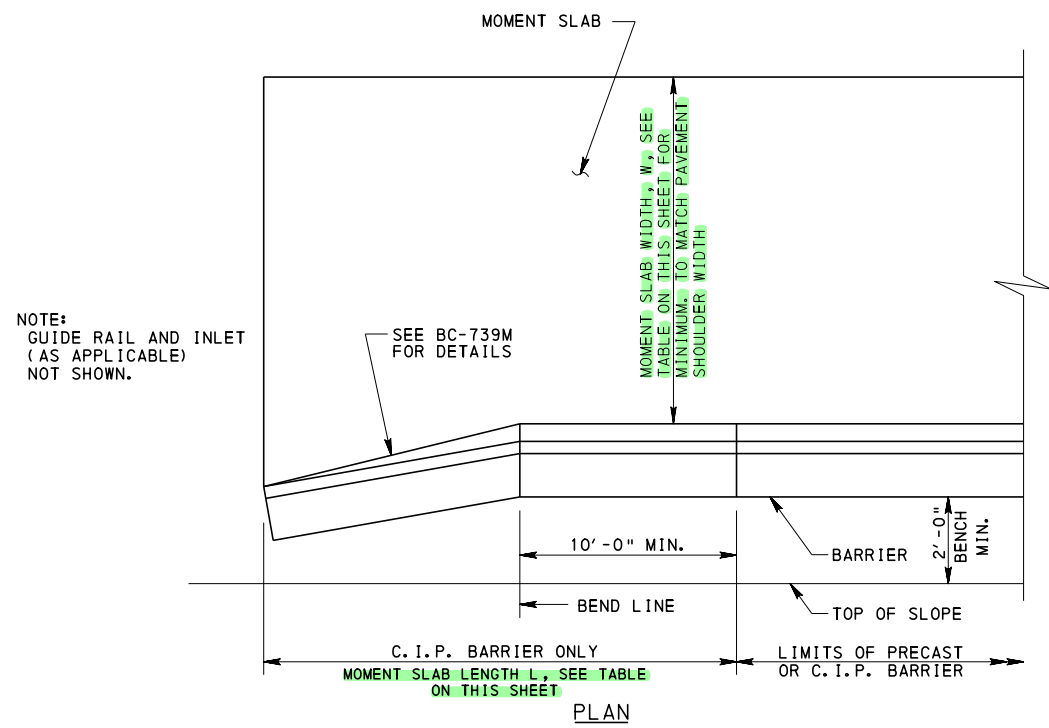
LOCATE EXPANSION JOINTS IN MOMENT SLAB AND BARRIER TO MATCH THE PAVEMENT JOINTS. DO NOT LOCATE EXPANSION JOINTS WITHIN 6'-0" OF THE CENTERLINE OF LIGHT POLE OR WITHIN 2'-0" OF THE CENTERLINE OF A JUNCTION BOX.

NOTES

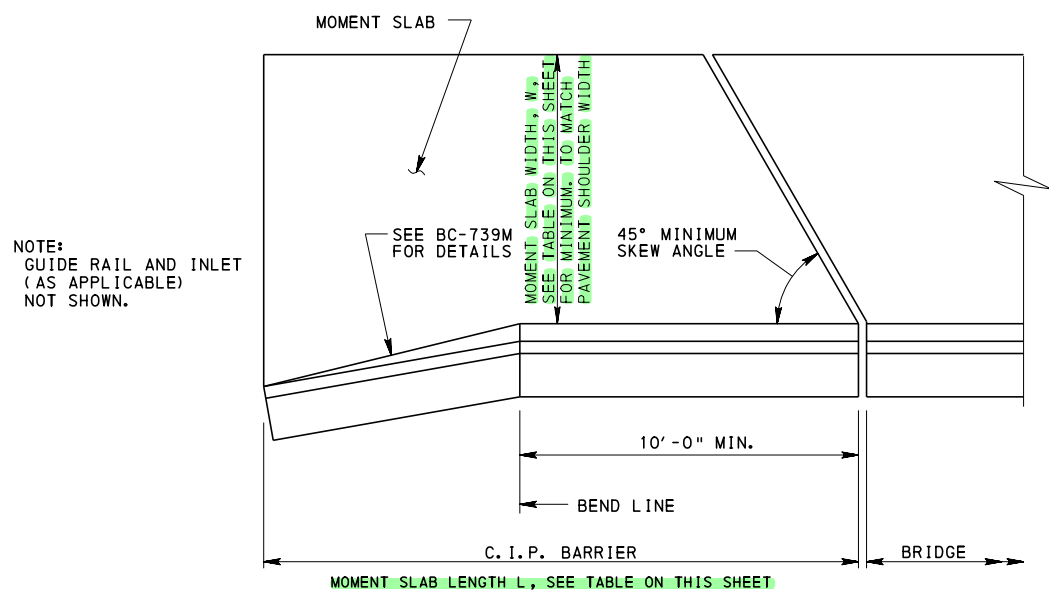
1. FOR NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

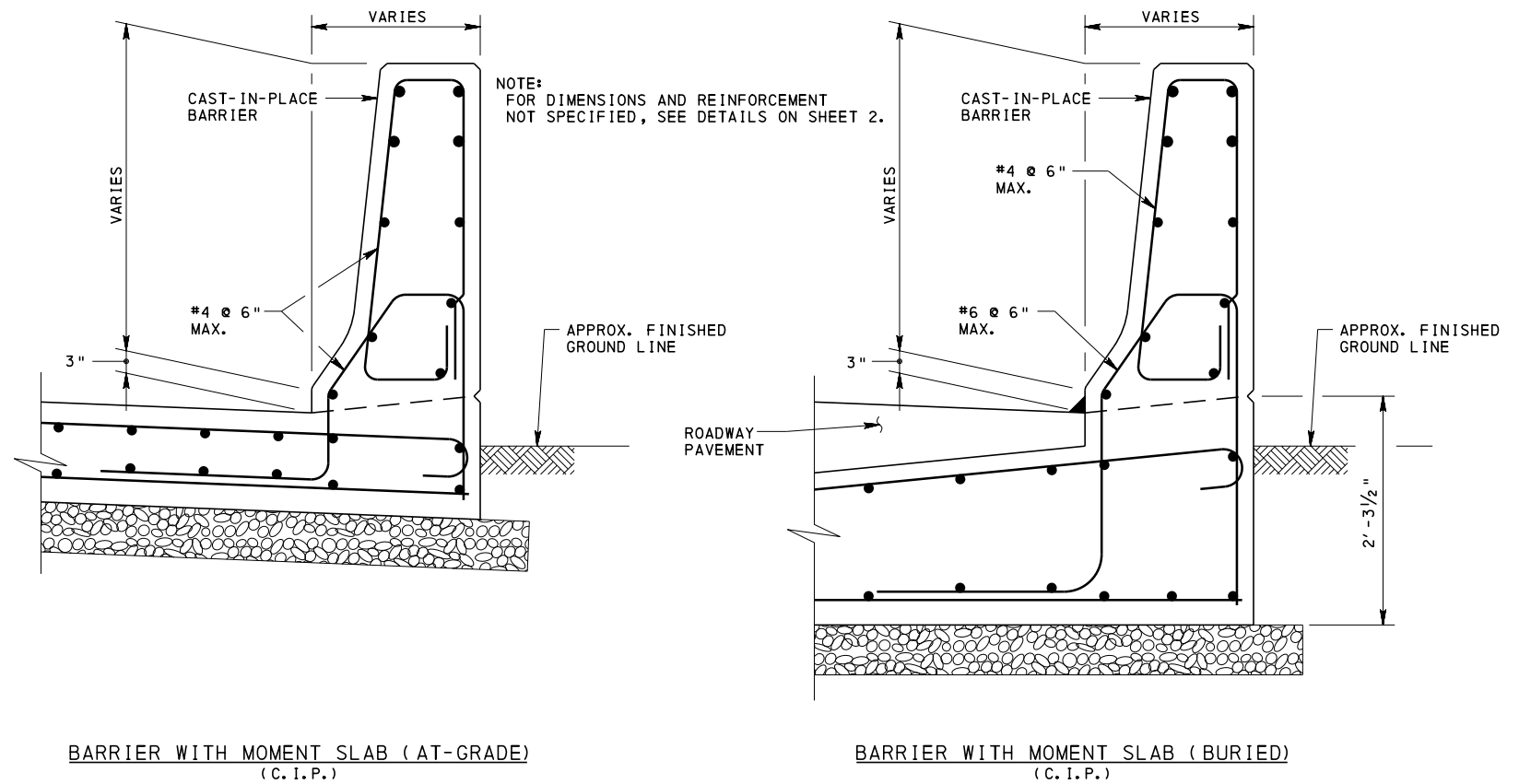
STANDARD
MOMENT SLABS
PLANS



BARRIER TO GUIDE RAIL TRANSITION



MOMENT SLAB ADJACENT TO BRIDGE



SECTION B-B

(REFER TO BC-739M FOR ADDITIONAL INFORMATION)

MINIMUM MOMENT SLAB DIMENSIONS FOR REHABILITATION PROJECTS		
OPTION	L	W
A	20'-0"	4'-0"
B	16'-0"	5'-0"

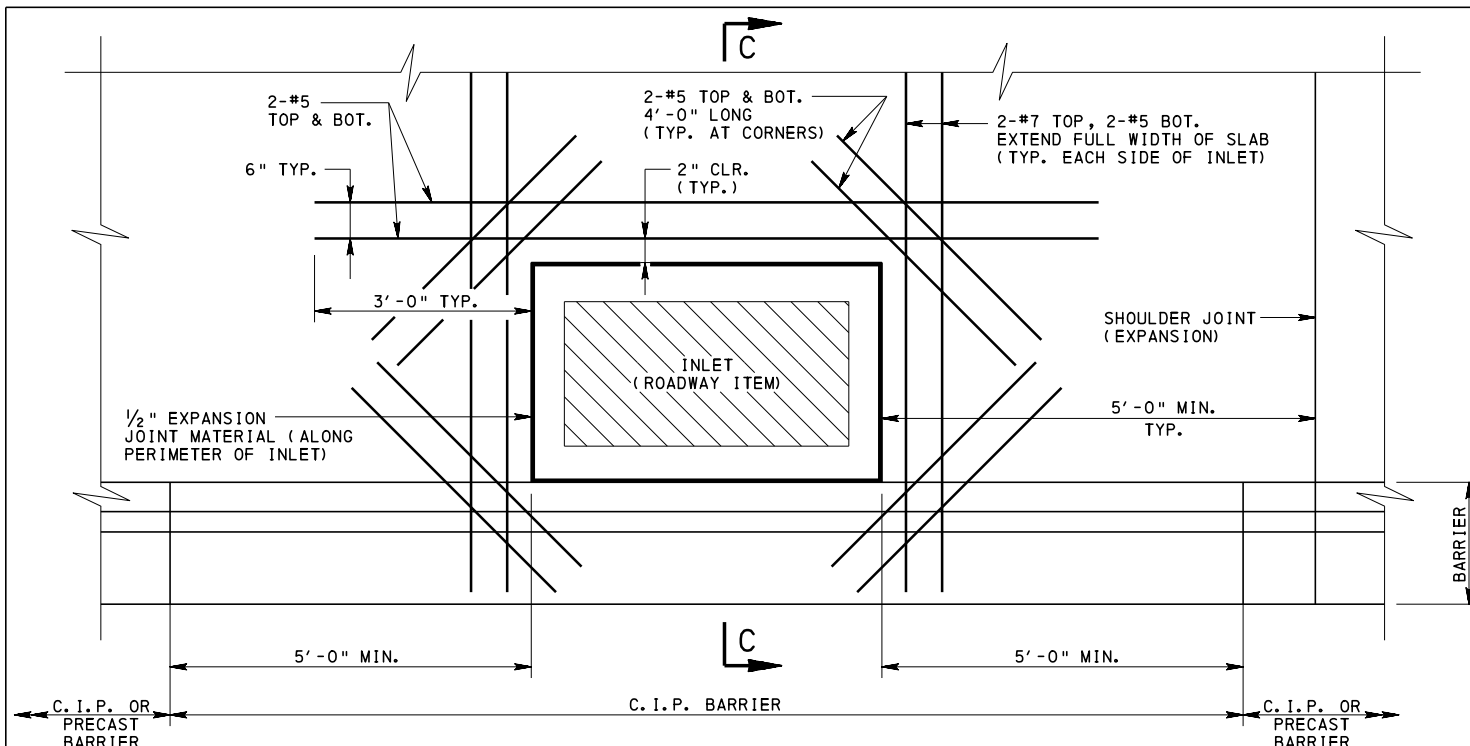
NOTE: 1. THE USE OF THIS TABLE IS FOR REHABILITATION ONLY AND AT THE DISCRETION OF THE DISTRICT BRIDGE ENGINEER.
2. THE DESIGNED CRASH TEST LEVEL IN THIS TABLE IS TL-3.

NOTES

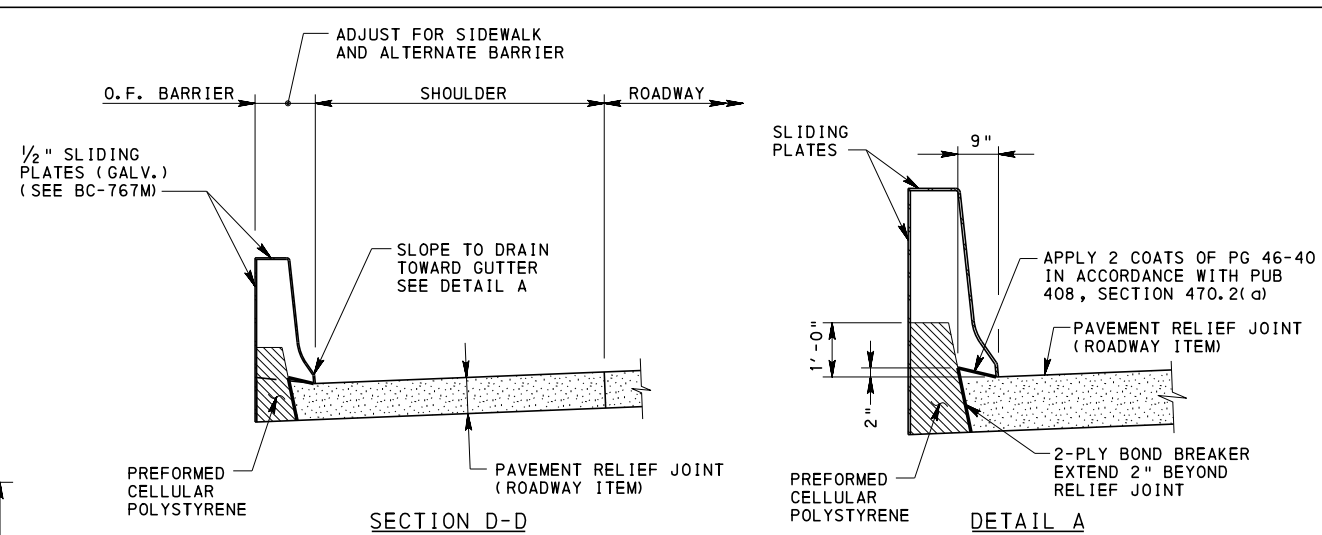
1. FOR NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
MOMENT SLABS
FLARED END TRANSITION
FOR REHABILITATION PROJECTS

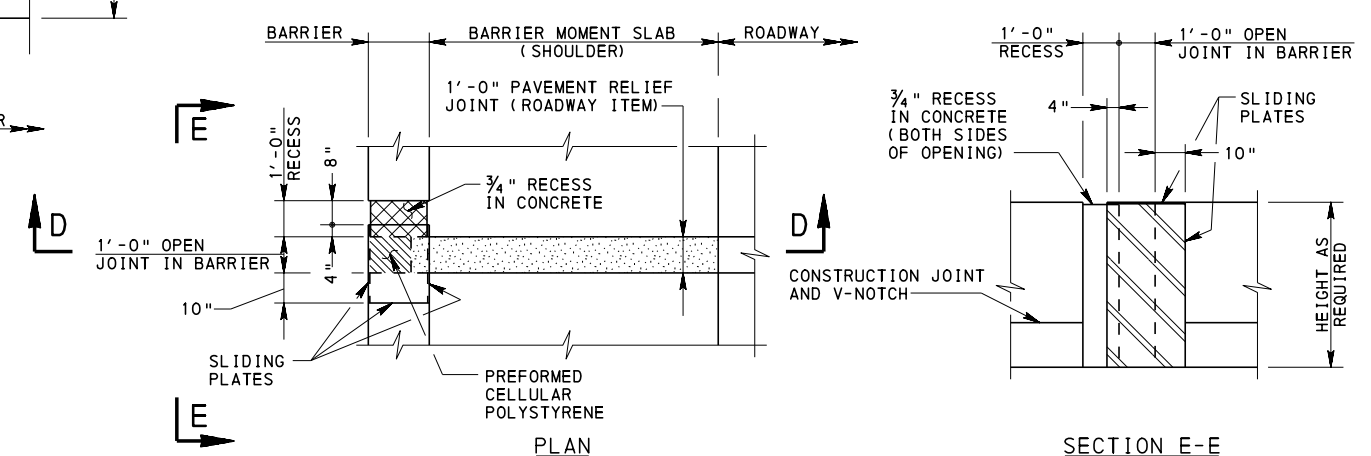


PLAN - SHOULDER DETAILS AT INLET
(ADDITIONAL REINFORCEMENT AT INLETS)



SECTION D-D

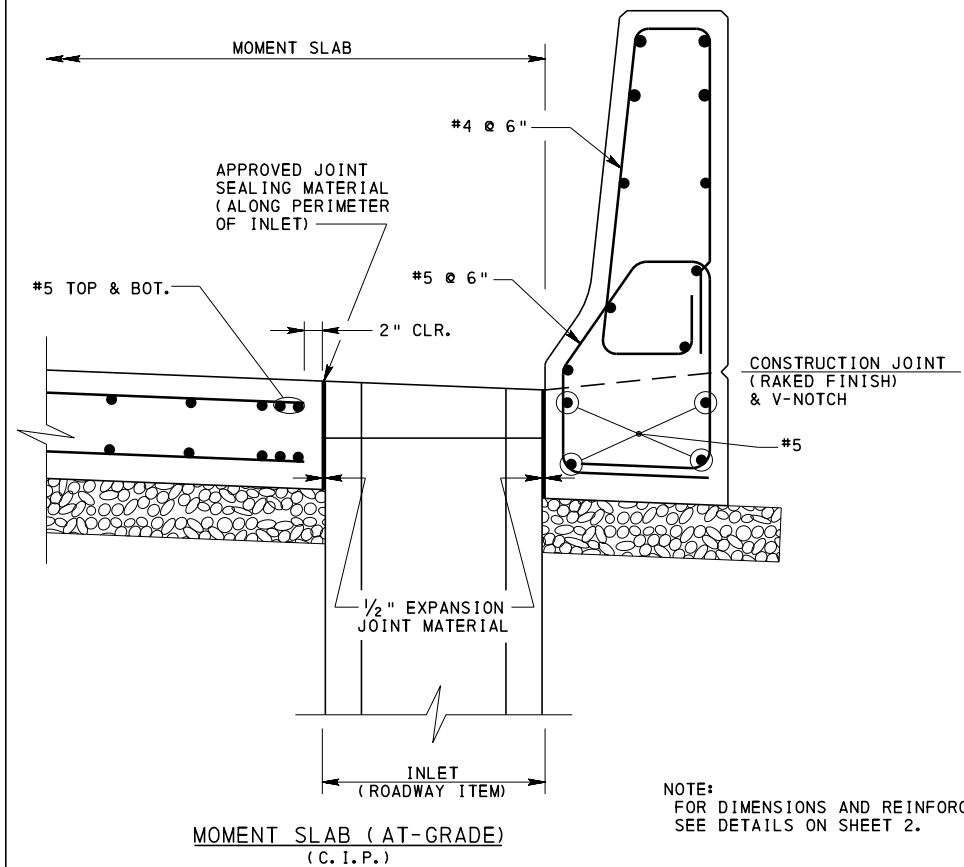
DETAIL A



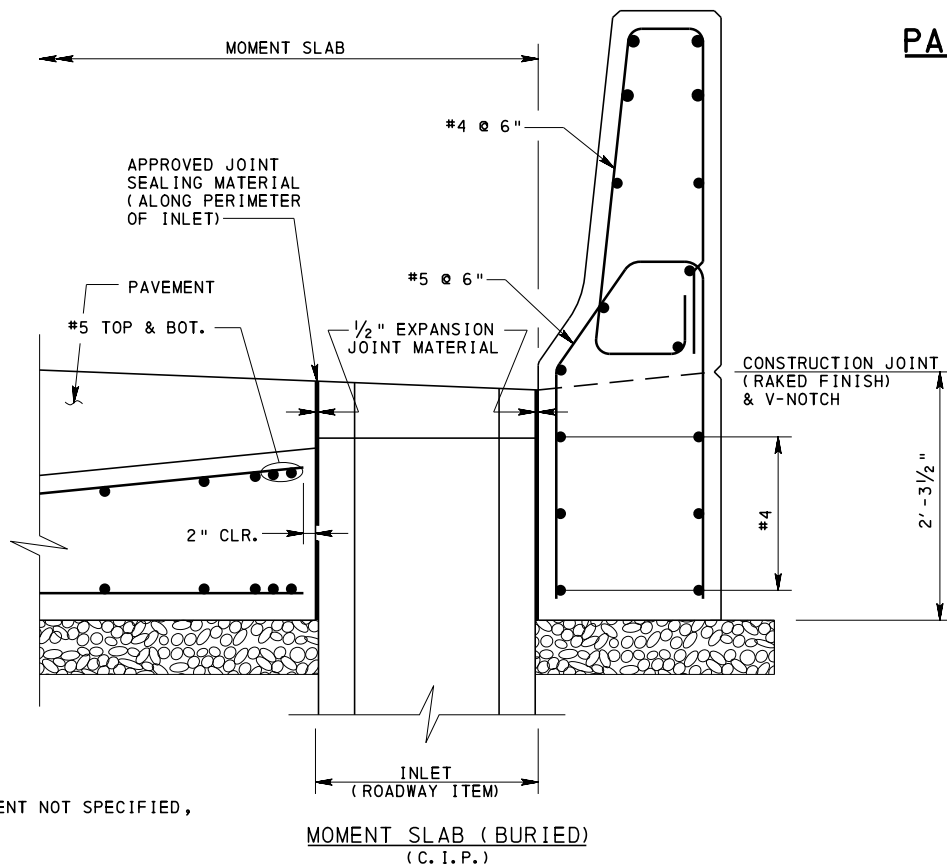
PLAN

SECTION E-E

PAVEMENT RELIEF JOINT DETAILS



MOMENT SLAB (AT-GRADE)
(C. I. P.)



MOMENT SLAB (BURIED)
(C. I. P.)

NOTE:
FOR DIMENSIONS AND REINFORCEMENT NOT SPECIFIED,
SEE DETAILS ON SHEET 2.

SECTION C-C

NOTES
1. FOR NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
MOMENT SLABS
PAVEMENT RELIEF JOINT AND
INLET INSTALLATION

RECOMMENDED AUG. 30, 2019 <i>Janis J. Ring</i> ACTING CHIEF BRIDGE ENGINEER	RECOMMENDED AUG. 30, 2019 <i>Melvin V. Bitt</i> ACT. DIR., BUR. OF PROJECT DELIVERY	SHEET 8 OF 8 BD-627M
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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Bridge structure where State Route 1025, crosses over: a single track of Canadian Pacific Railroad (264 293 K) in Nicholson Borough, Wyoming County	M-2013-2364201 Electronically Filed
Investigation upon the Commission's own motion to determine the condition and disposition of six (6) existing structures carrying various highways above the grade of the tracks of the Canadian Pacific Railroad in Great Bend Township, New Milford Township, Brooklyn Township, Hop Bottom Borough, Lathrop Township, Susquehanna County and Benton Township, Lackawanna County	I-2015-2472242 Electronically Filed

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the Department's *Letter* was served upon the parties listed below, by first class mail, postage prepaid this 7th day of November 2019.

Larry Seamour, Chairman
Benton Township
Attn: Pat Saxon
4377 S.R. 438
Dalton, PA 184141

Paul J. Himka, Supervisor
Lathrop Township
2479 State Route 2096
Hop Bottom, PA 18824

Sprint Communications Company, LP
Wesley Carpenter
484 Williamsport Pike
Box 113
Martinsburg, WV 25404

Graham A. Anthony, Jr., Supervisor
Township of Brooklyn
69401 Maple St
Brooklyn, PA 18813

Charles E. Thomas, III
Thomas, Niesen & Thomas, LLC
212 Locust Street, Suite 302
Harrisburg, PA 17101

Joe Stec
100 Cte Drive
Dallas, PA 18612

Donald J. Frederickson, Jr., Esq.
Lackawanna County Commissioners Office
200 Adams Avenue – 6th Floor
Scranton, PA 18503

John Koshinski, Councilman
Borough of Hop Bottom
P.O. Box 175
Hop Bottom, PA 18824

Don Shibley, Supervisor
New Milford Township
19730 State Route 11
New Milford, PA 18834

Colonel Tyree C. Blocker
Commissioner
PA State Police
3rd Floor Dept. Headquarters
1800 Elmerton Avenue
Harrisburg, PA 17110

Kayla L. Rost, Esq.
PA PUC Bureau of Investigation &
Enforcement
P.O. Box 3265
Harrisburg, PA 17105-3265

Tori L. Giesler, Esq.
PENELEC
2800 Pottsville Pike
P.O. Box 16001
Reading, PA 19612-6001

Benjamin C. Dunlap, Jr., Esq.
Nauman Smith
200 North Third Street, 18th Floor
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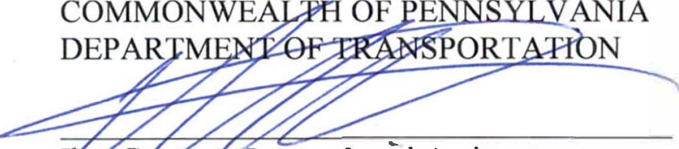
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