

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 WORKMANSHIP:
 - 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.

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. DETAIL INFORMATION IN ACCORDANCE WITH BD-629M.
 - 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

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.

CHANGE 1

CHANGE 3

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.
- MINIMUM MOMENT SLAB LENGTH = 15'-0".
- 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.

RC-20M	CONCRETE PAVEMENT JOINTS
RC-24M	PAVEMENT RELIEF JOINT
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 GURDRAIL TRANSITION
BC-752M	CONCRETE DECK SLAB DETAILS
BC-767M	NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE AND STEEL BEAM BRIDGES
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

REFERENCE DRAWINGS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUREAU OF PROJECT DELIVERY

STANDARD

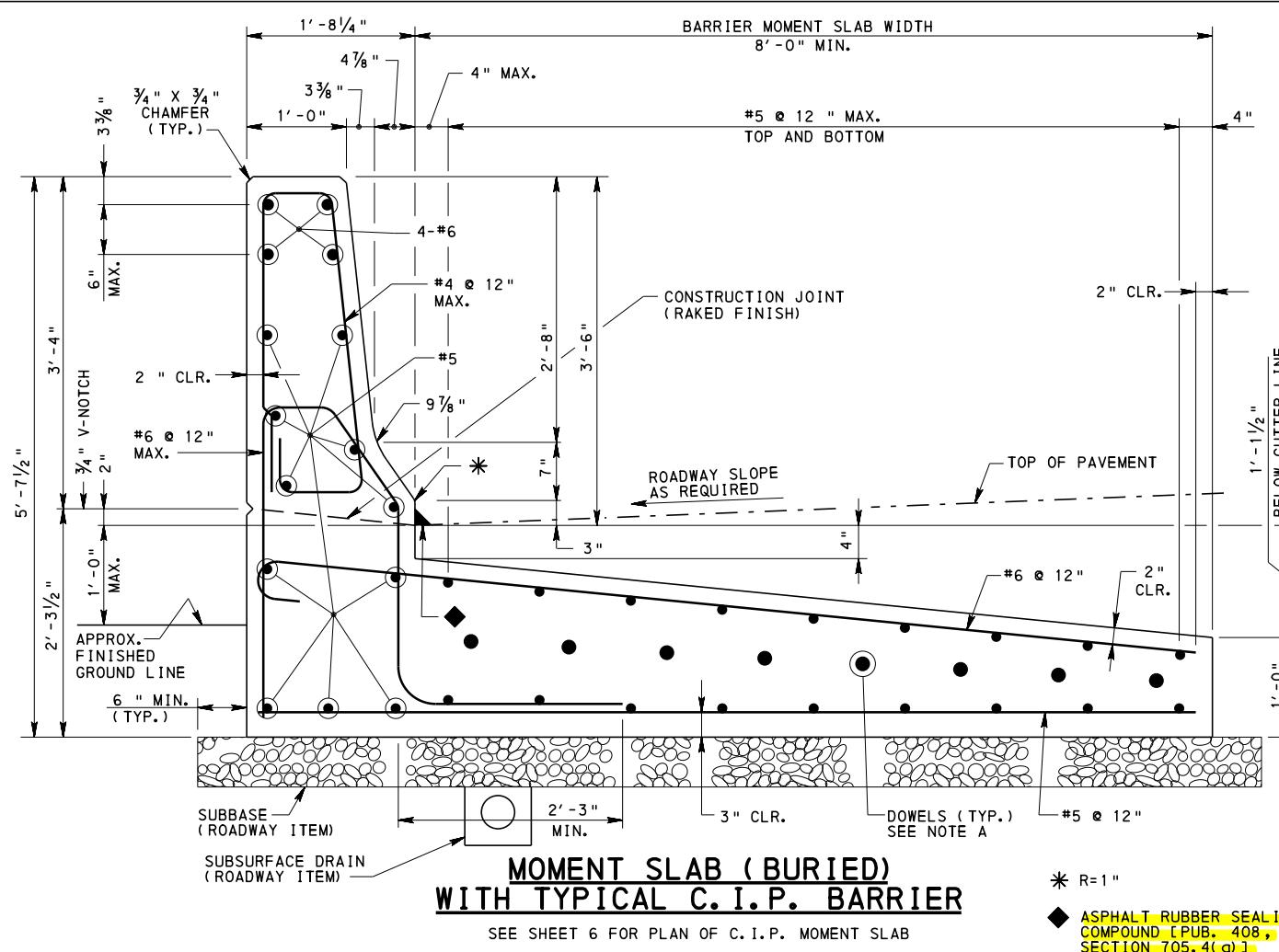
MOMENT SLABS

GENERAL NOTES

RECOMMENDED NOV. 21, 2014
Thomas P. Maiorino
CHIEF BRIDGE ENGINEER

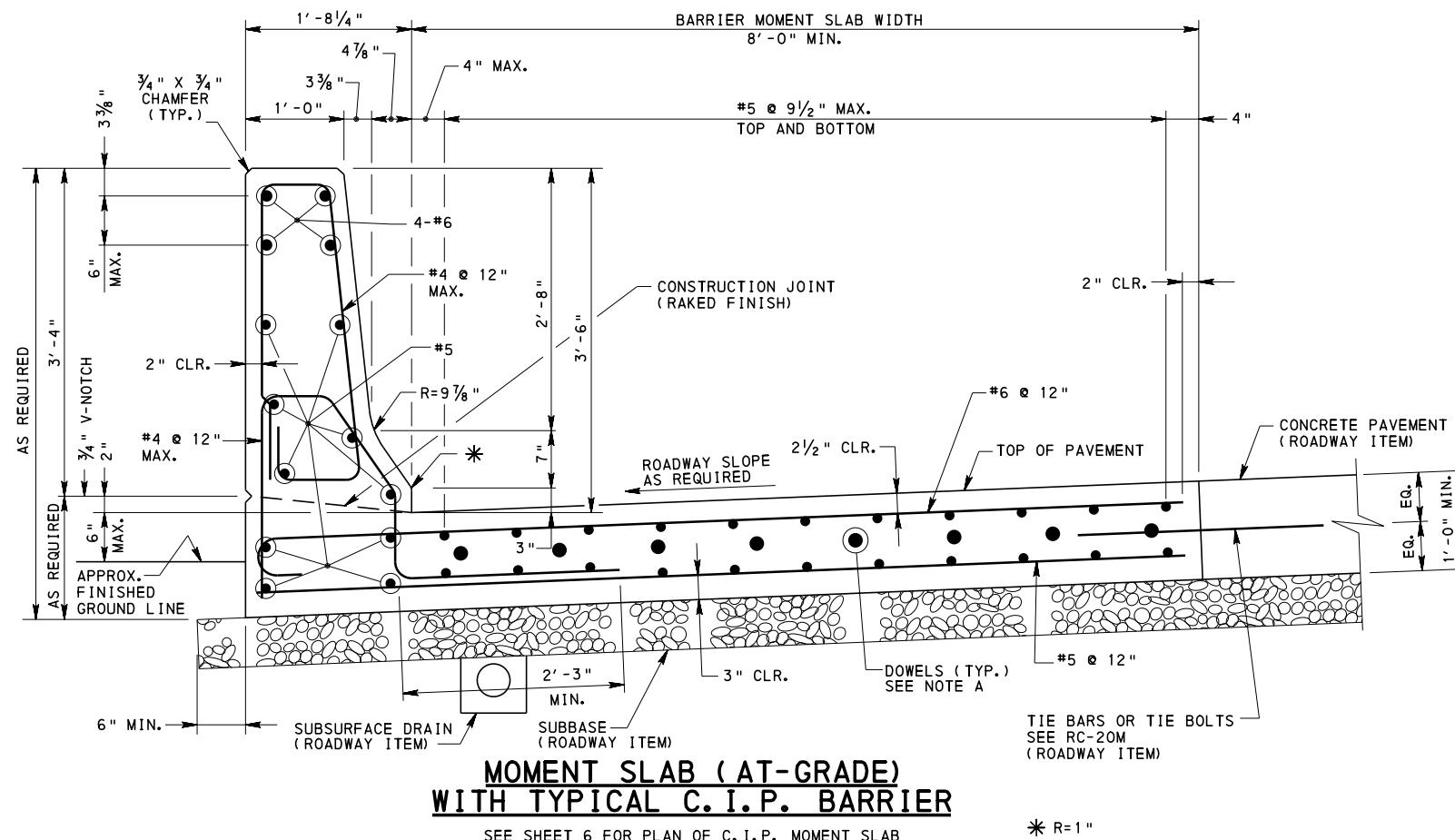
RECOMMENDED NOV. 21, 2014
Brenda Thompson
ACTING DIR, BUR. OF PROJECT DELIVERY

SHEET 1 OF 8
BD-627M



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.



NOTES
1. FOR NOTES, SEE SHEET 1.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY**

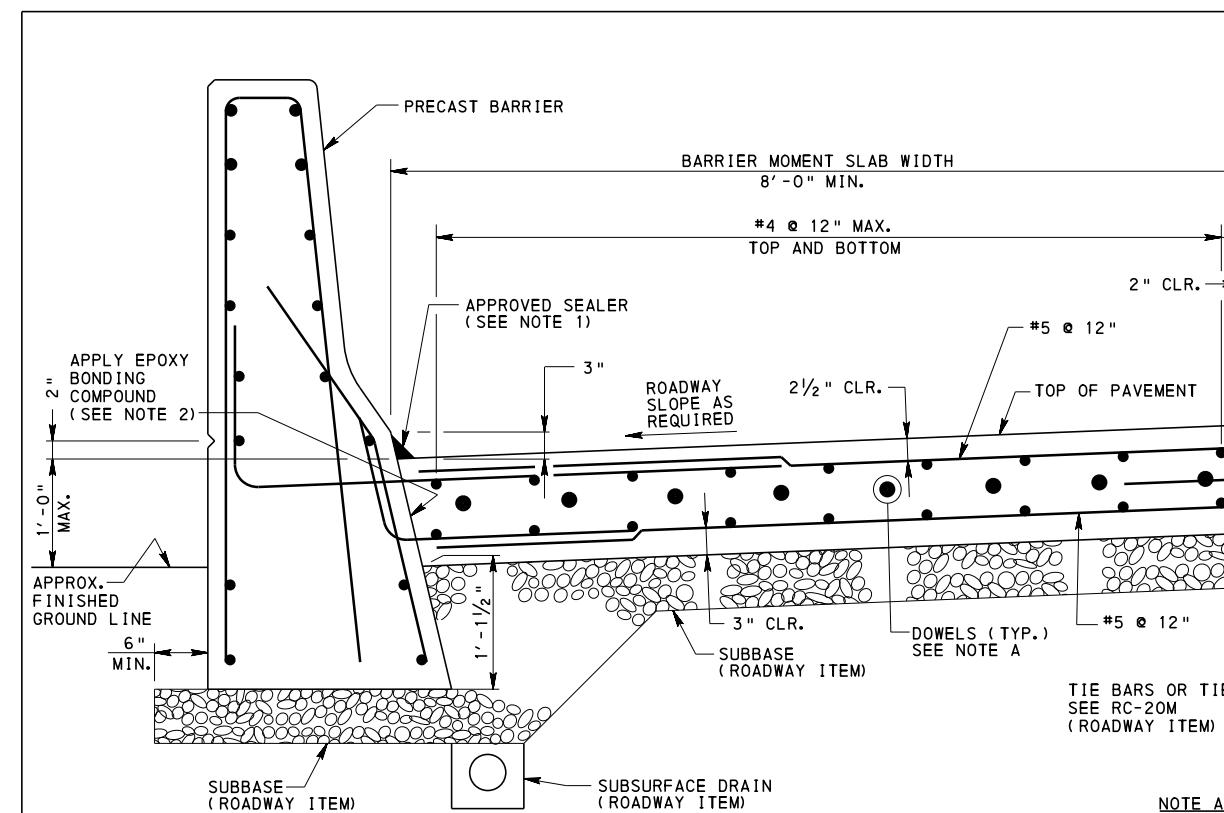
**STANDARD
MOMENT SLABS**

TYPICAL C.I.P. BARRIER DETAILS

RECOMMENDED NOV. 21, 2014
Thomas P. Maiore
CHIEF BRIDGE ENGINEER

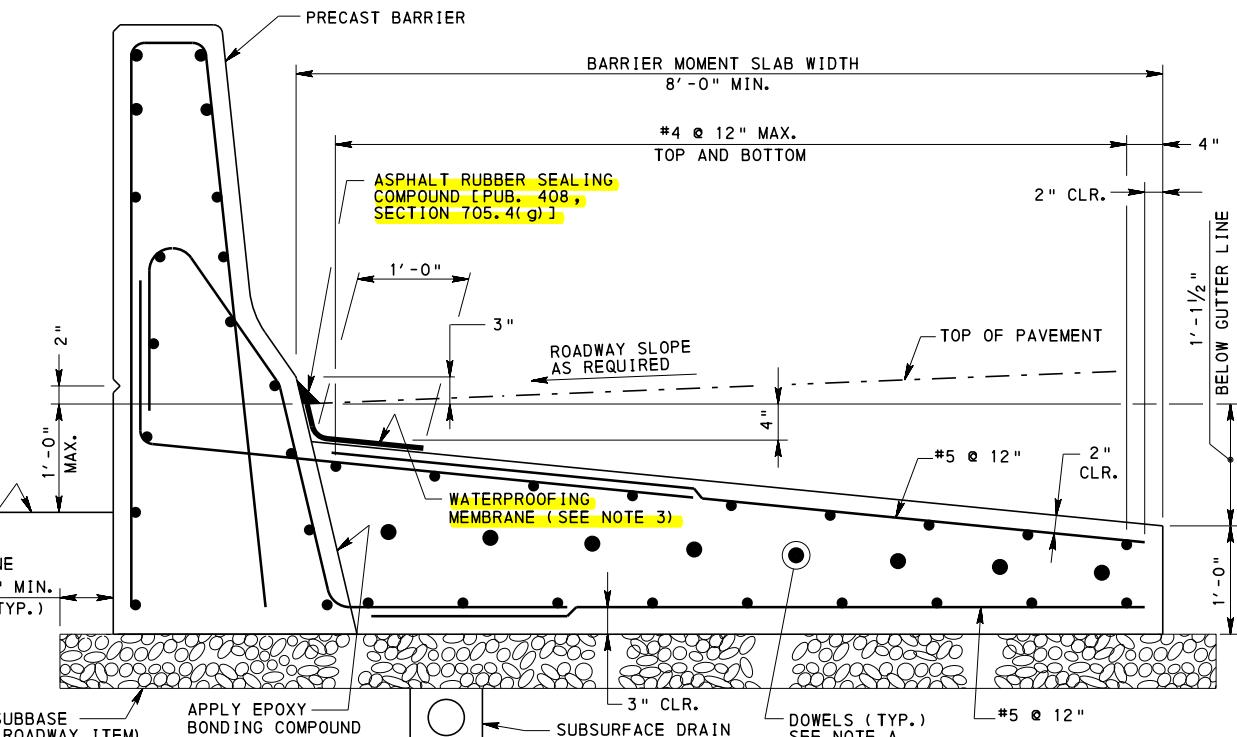
RECOMMENDED NOV. 21, 2014
Brenda S. Thompson
ACTING DIR, BUR. OF PROJECT DELIVERY

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 SLA

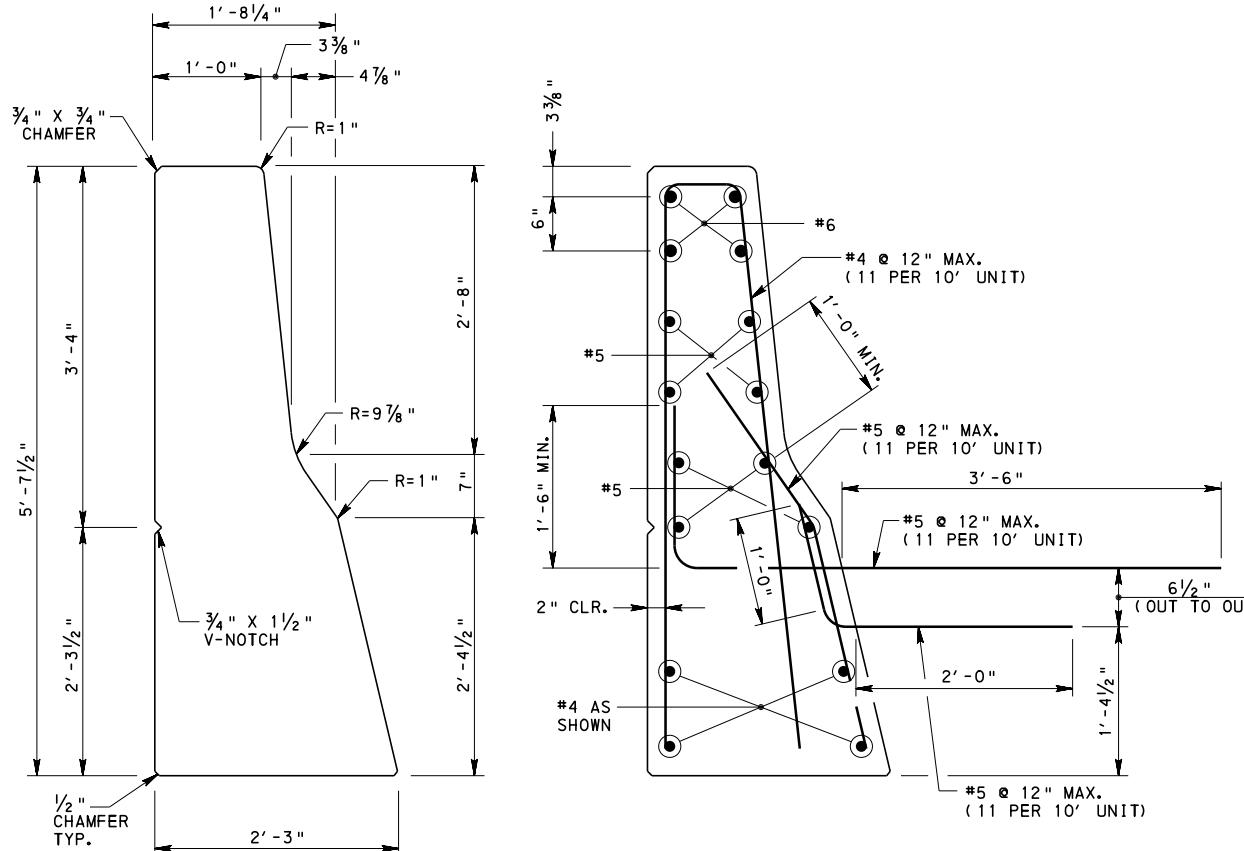


MOMENT SLAB (BURIED) WITH TYPICAL PRECAST CONCRETE BARRIER

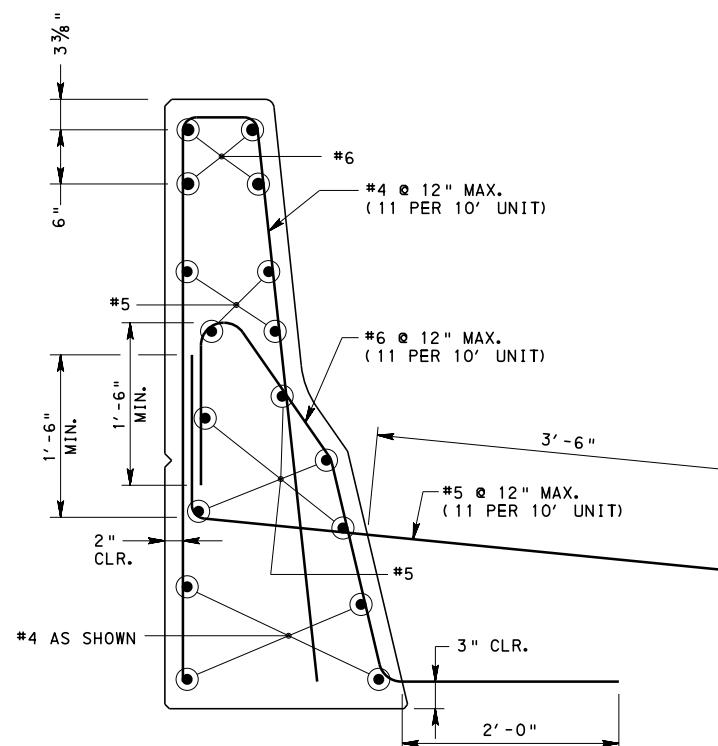
SEE SHEET 6 FOR PLAN OF C.I.P. MOMENT SLAB

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.



REINFORCEMENT FOR BARRIER WITH CEMENT CONCRETE SHOULDER



REINFORCEMENT FOR BARRIER WITH BITUMINOUS CONCRETE SHOULDER

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

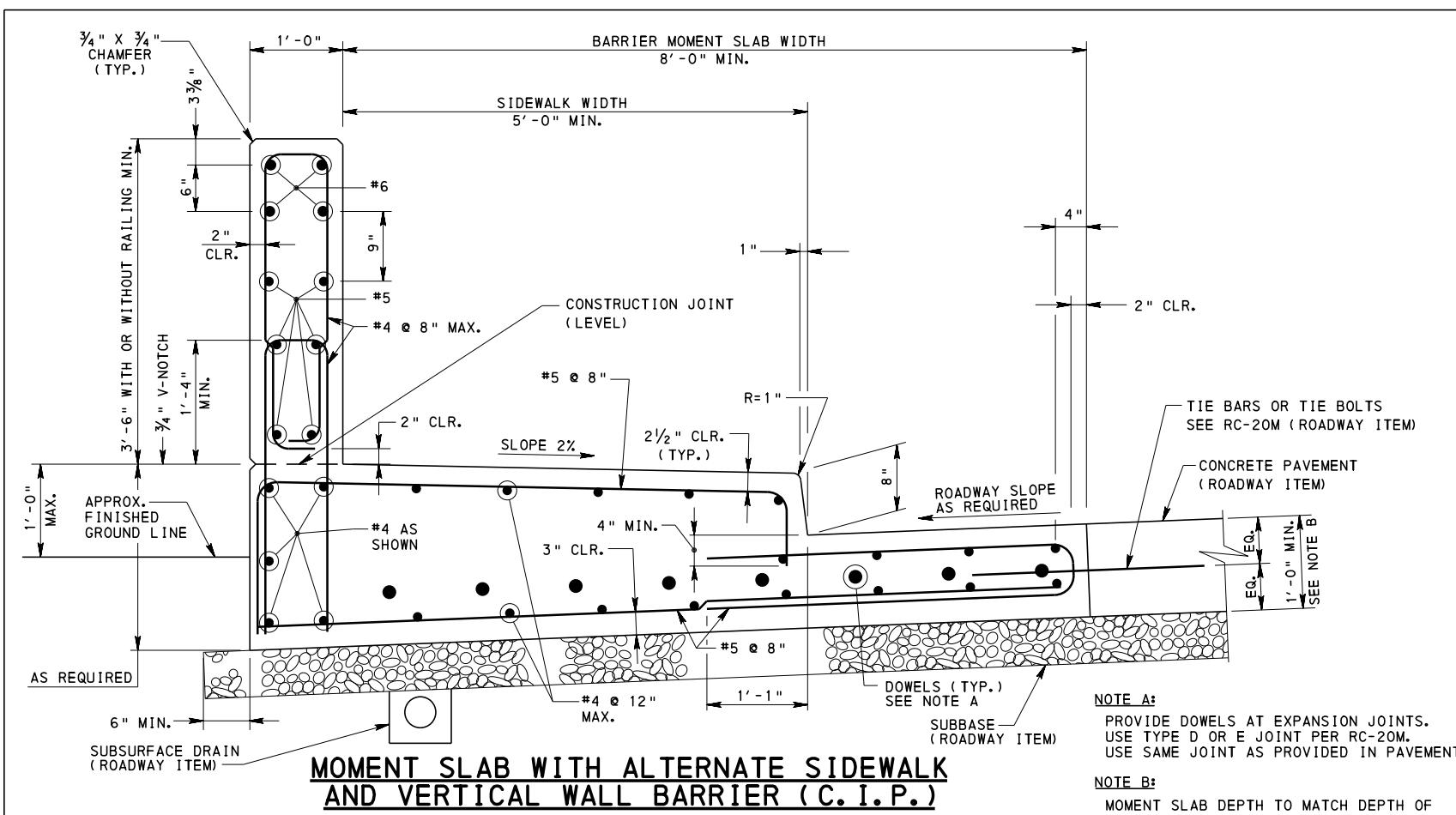
STANDARD MOMENT SI ABS

TYPICAL PRECAST BARRIER DETAILS

RECOMMENDED NOV. 21, 2014
Thomas P. Maciore
CHIEF BRIDGE ENGINEER

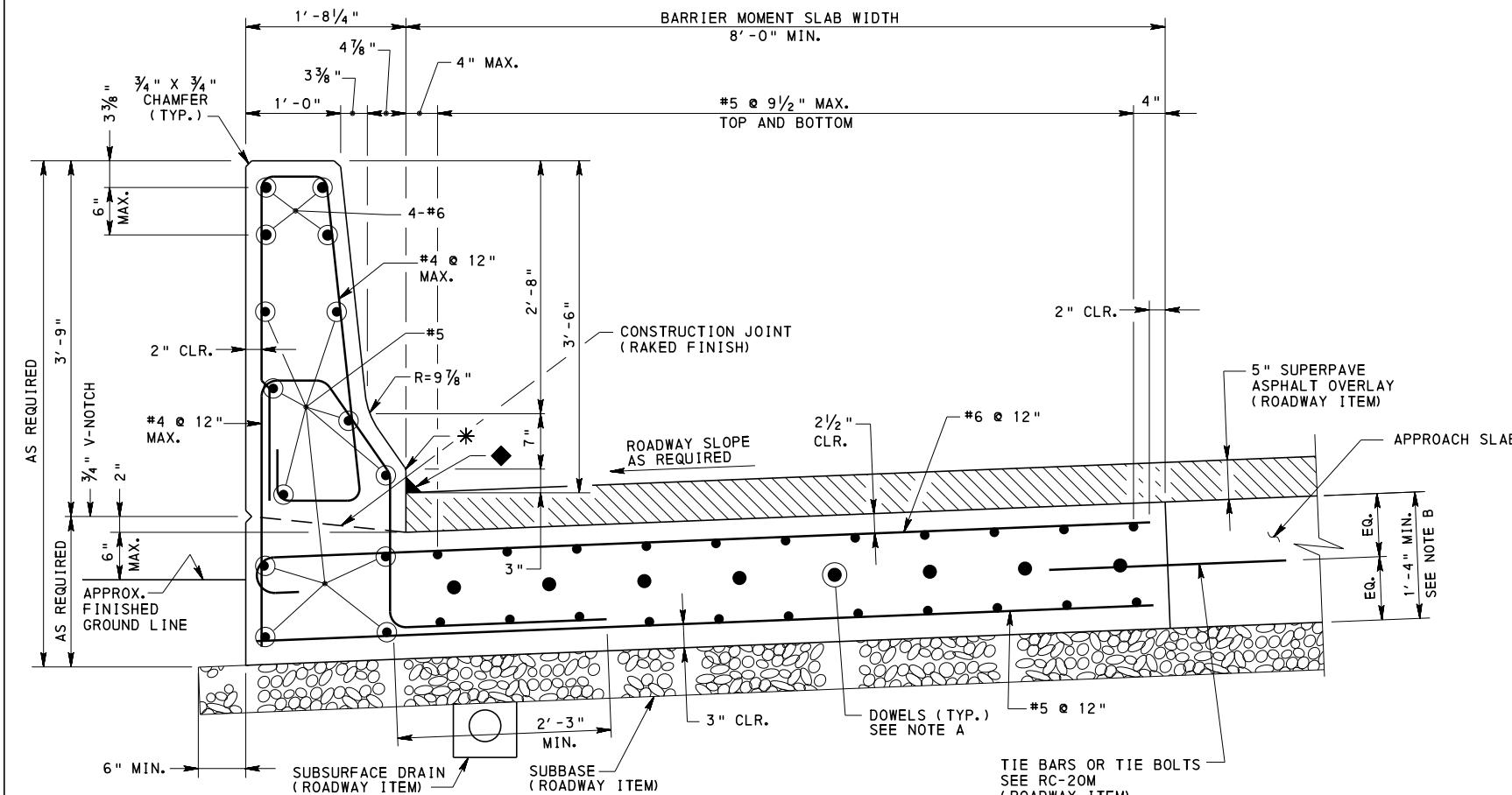
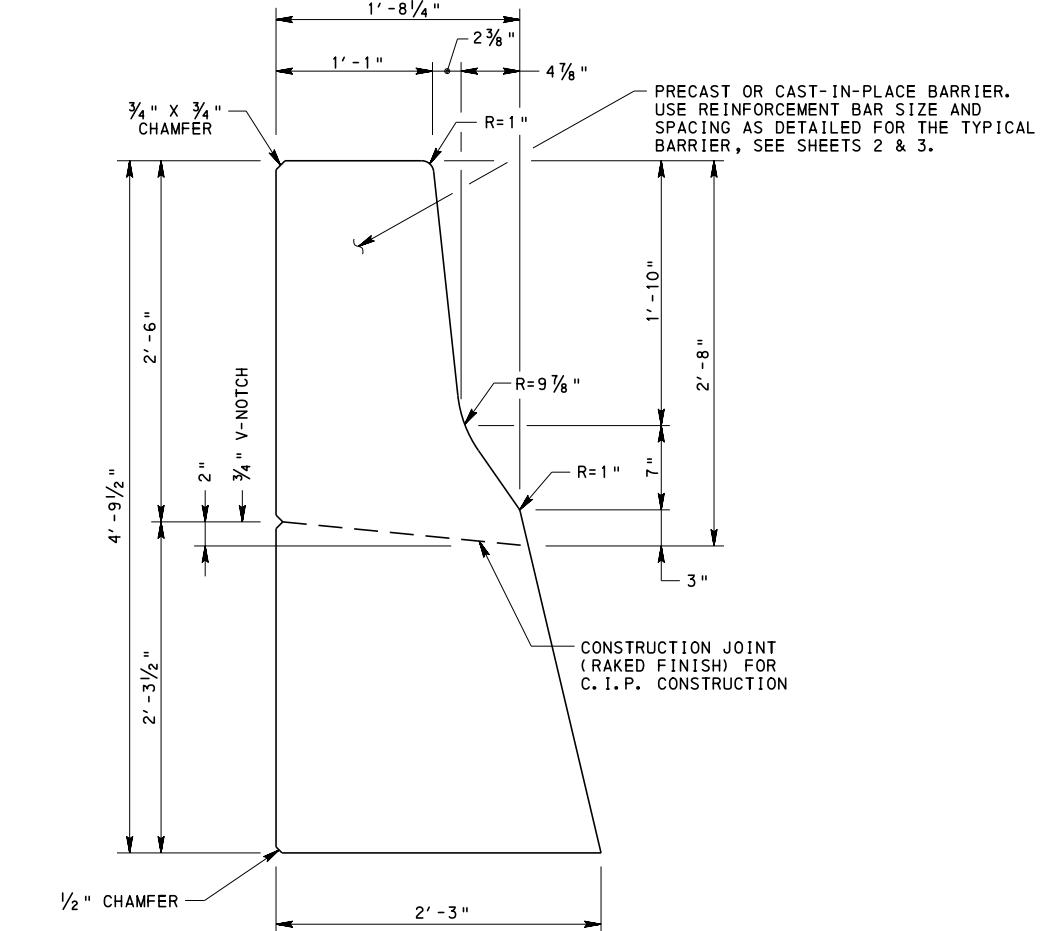
RECOMMENDED NOV. 21, 2014
Bruce S. Thompson
TING DIR., BUR. OF PROJECT DELIVERY

SHEET 3 OF 8



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)]

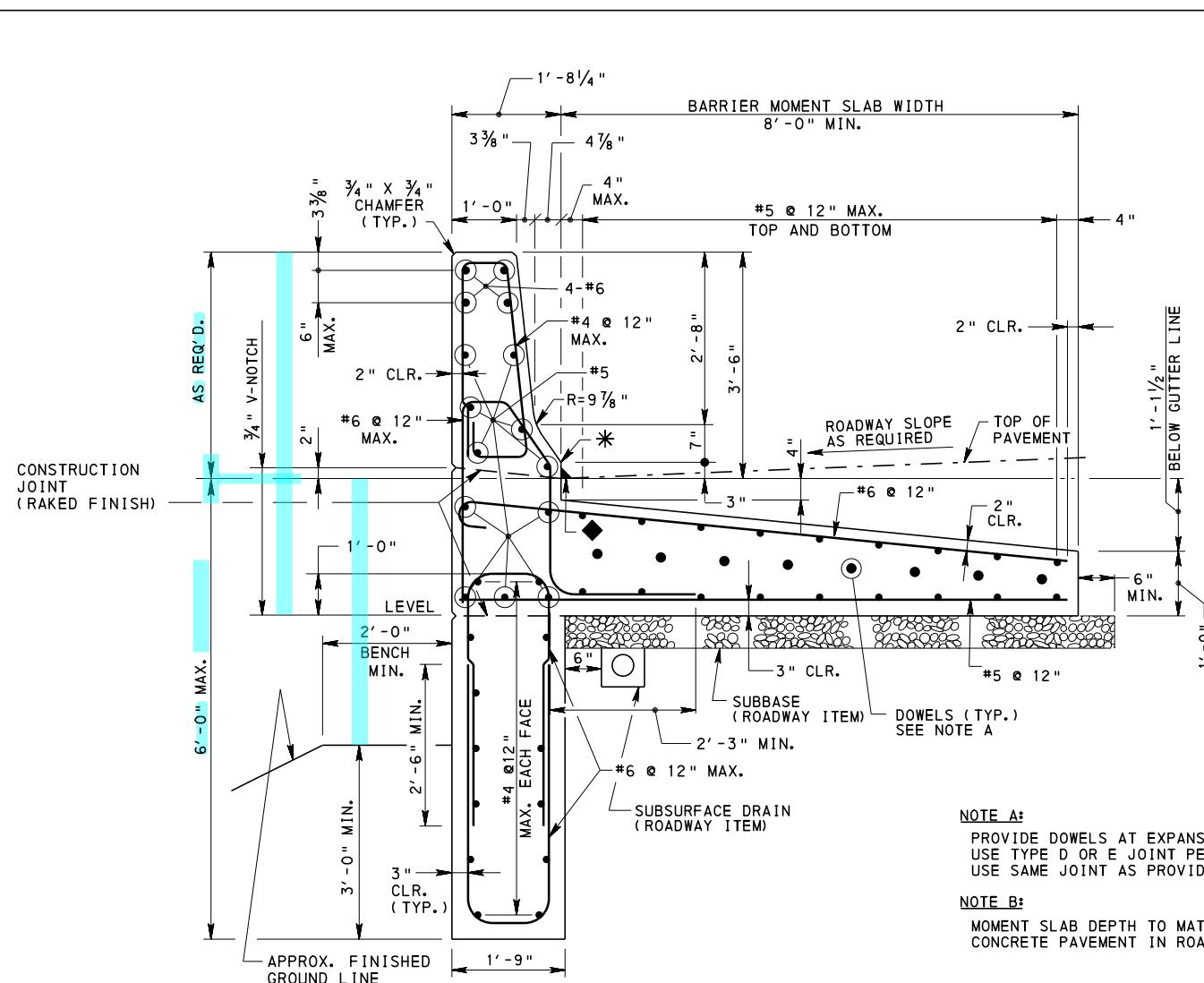
**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY**

**STANDARD
MOMENT SLABS
MISCELLANEOUS DETAILS**

RECOMMENDED NOV. 21, 2014
Thomas P. Maiore
CHIEF BRIDGE ENGINEER

RECOMMENDED NOV. 21, 2014
Brenda S. Thompson
ACTING DIR, BUR. OF PROJECT DELIVERY

SHEET 4 OF 8
BD-627M

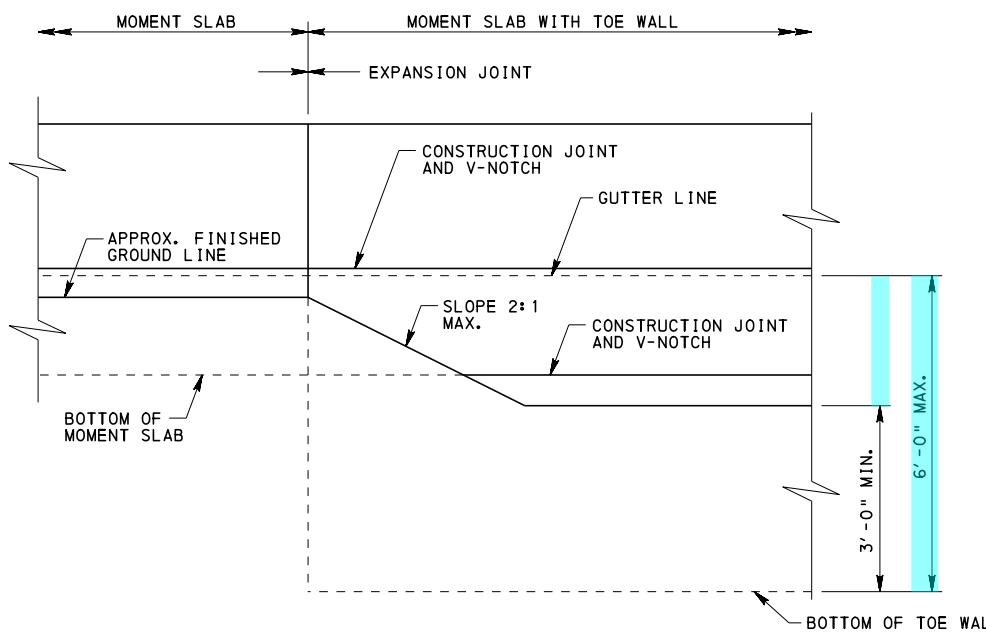


MOMENT SLAB (BURIED) WITH TOE WALL AND TYPICAL C. I.P. BARRIER

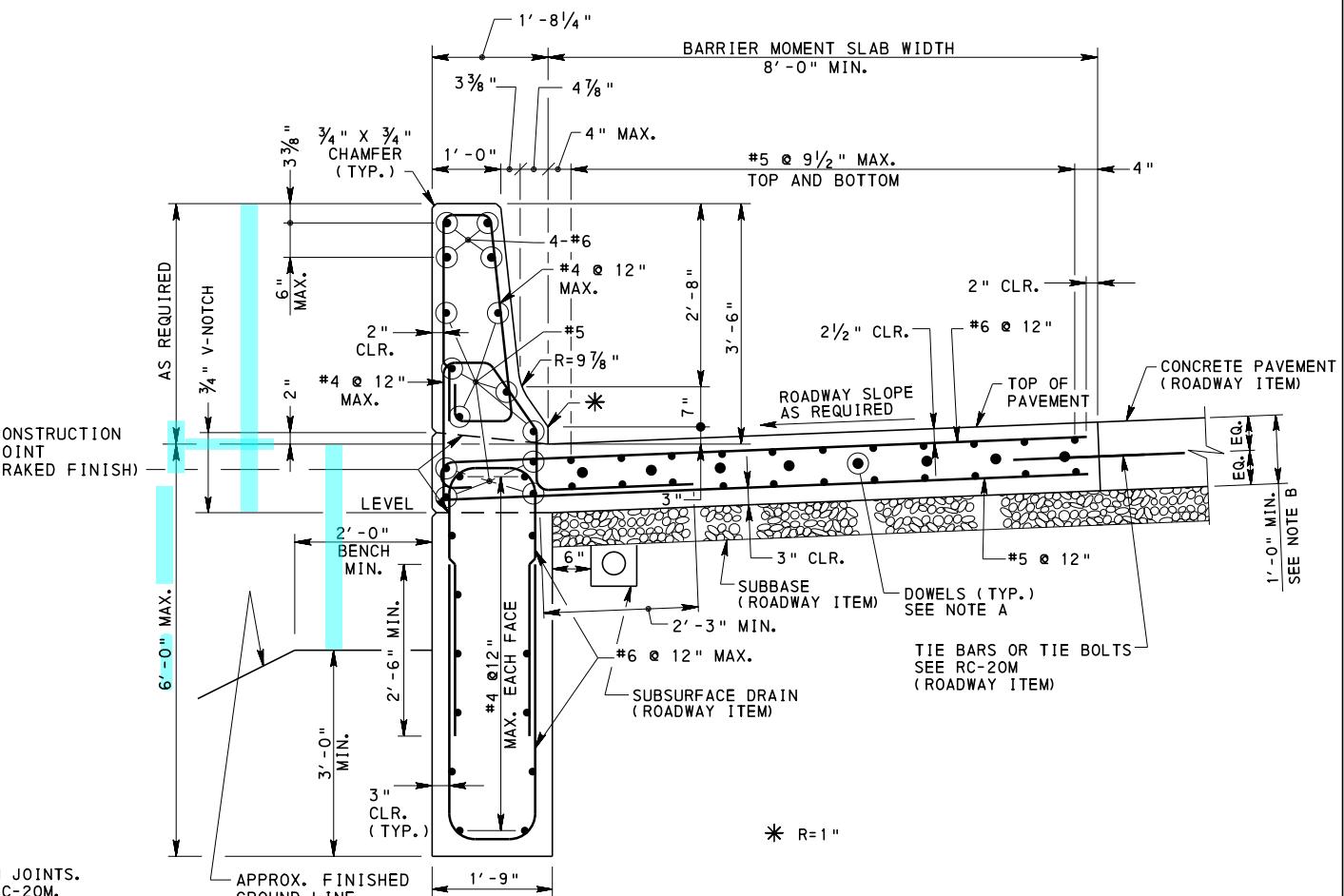
SEE SHEET 6 FOR PLAN OF C. I. P. MOMENT SLAB

* R=1

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



TOE WALL ELEVATION TRANSITION



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

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

NOTES

1. FOR NOTES, SEE SHEET 1.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION**

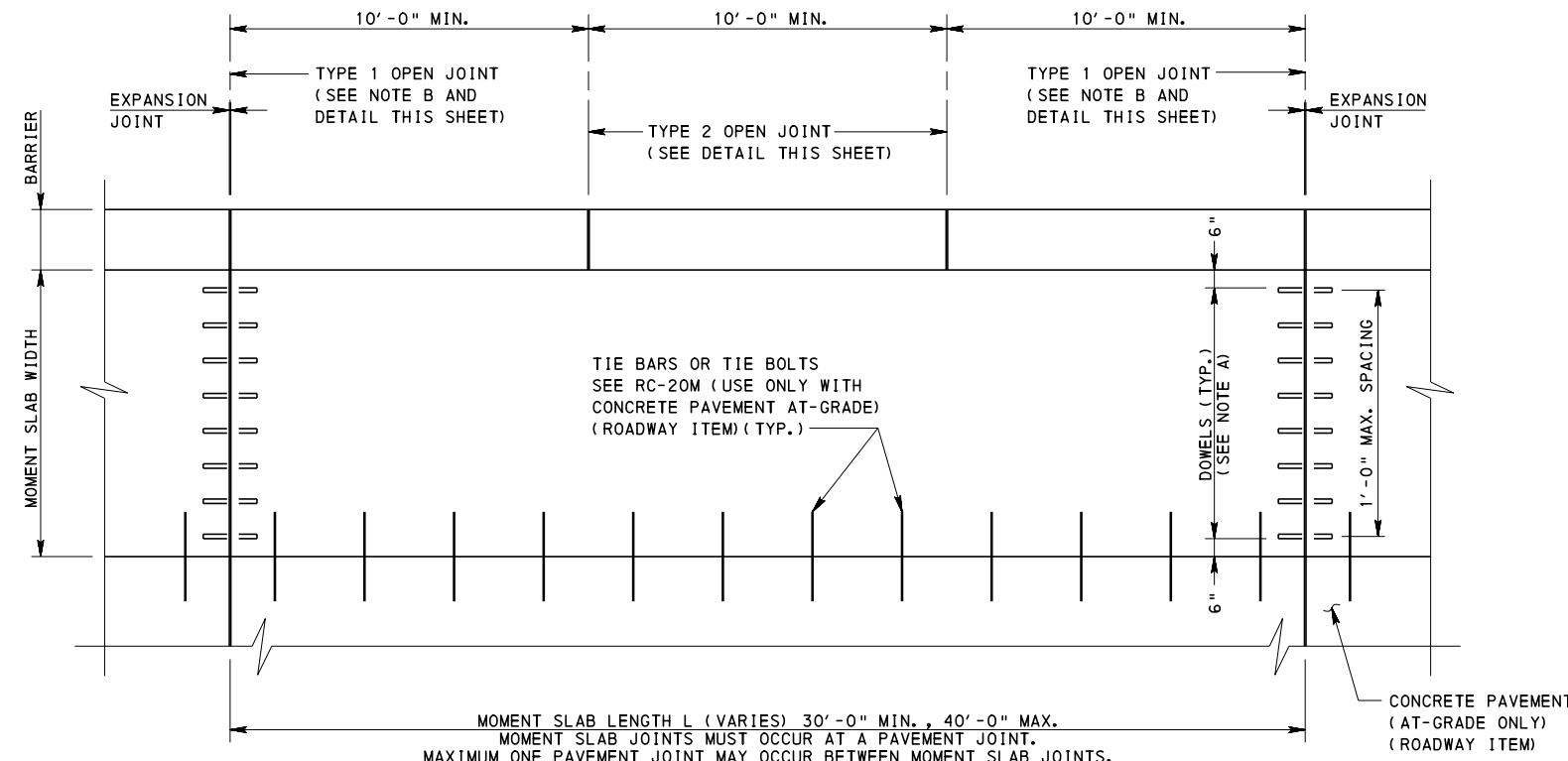
STANDARD MOMENT SLABS TOE-WALL DETAILS

RECOMMENDED NOV. 21, 2014
Thomas P Macioce
CHIEF BRIDGE ENGINEER

RECOMMENDED NOV. 21, 2014
Bevond Thompson
TING DIR. BUR. OF PROJECT DELIVERY

SHEET 5 OF 8

BD-627M

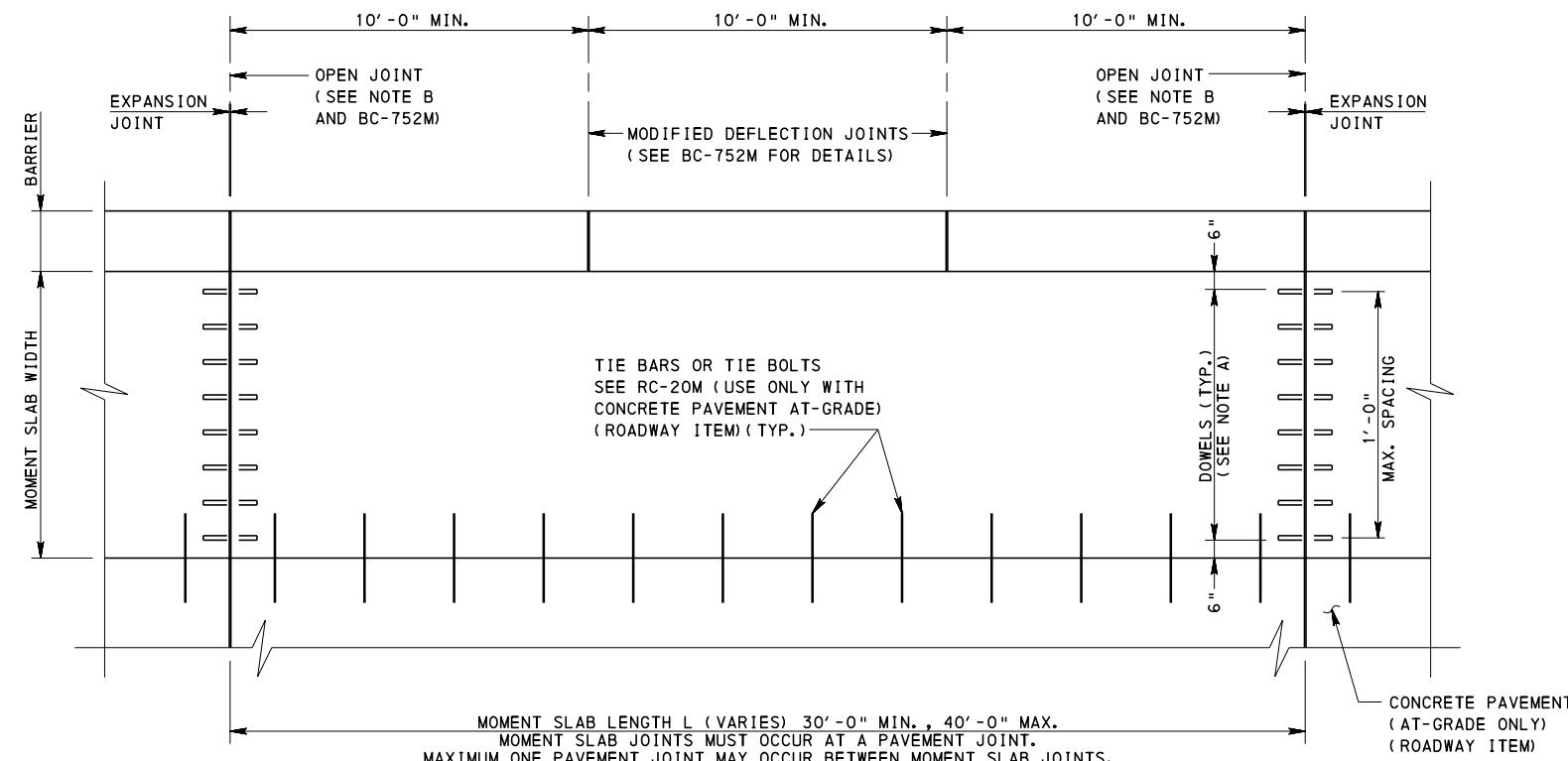


NOTE A: USE TYPE D OR E JOINT PER RC-20M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

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

PLAN - BARRIER MOMENT SLAB

(PRECAST BARRIER)

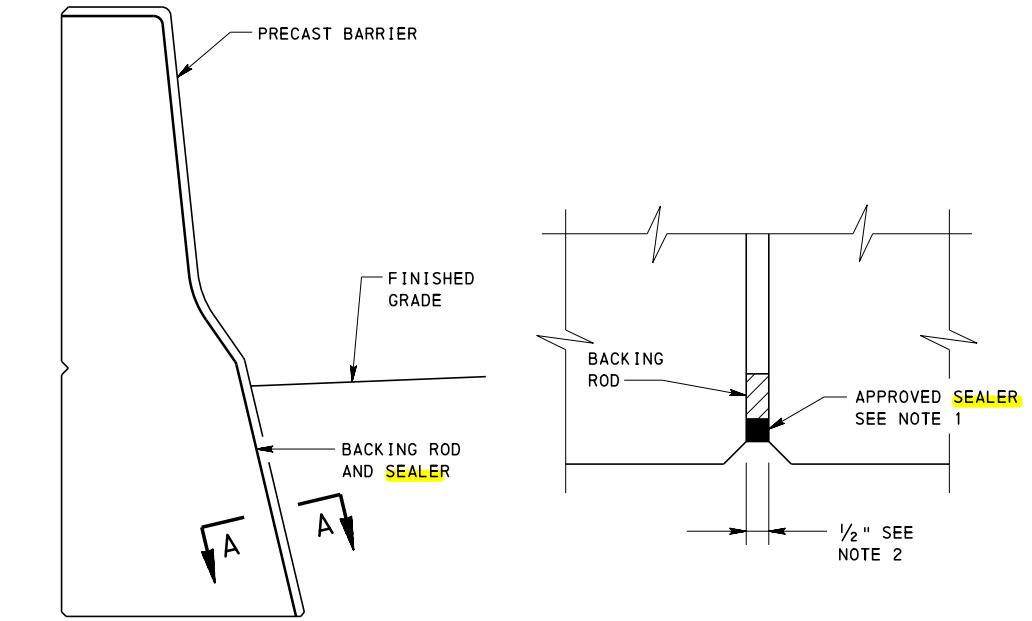


NOTE A: USE TYPE D OR E JOINT PER RC-20M. USE SAME JOINT AS PROVIDED IN PAVEMENT.

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

PLAN - BARRIER MOM 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 $\frac{1}{2}$ " TO 1" WIDTH FOR TYPE 1 OPEN JOINT AND $\frac{1}{4}$ " TO $\frac{3}{4}$ " 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.

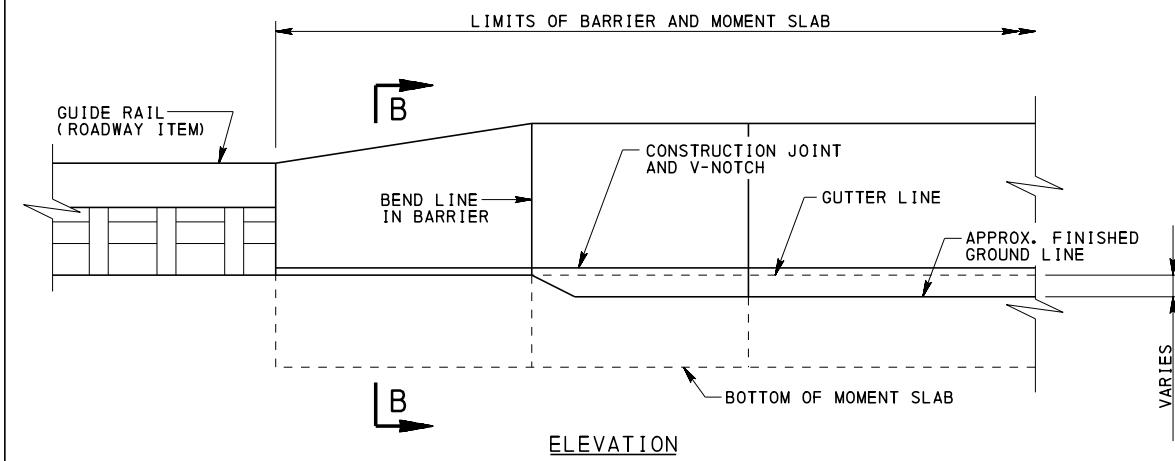
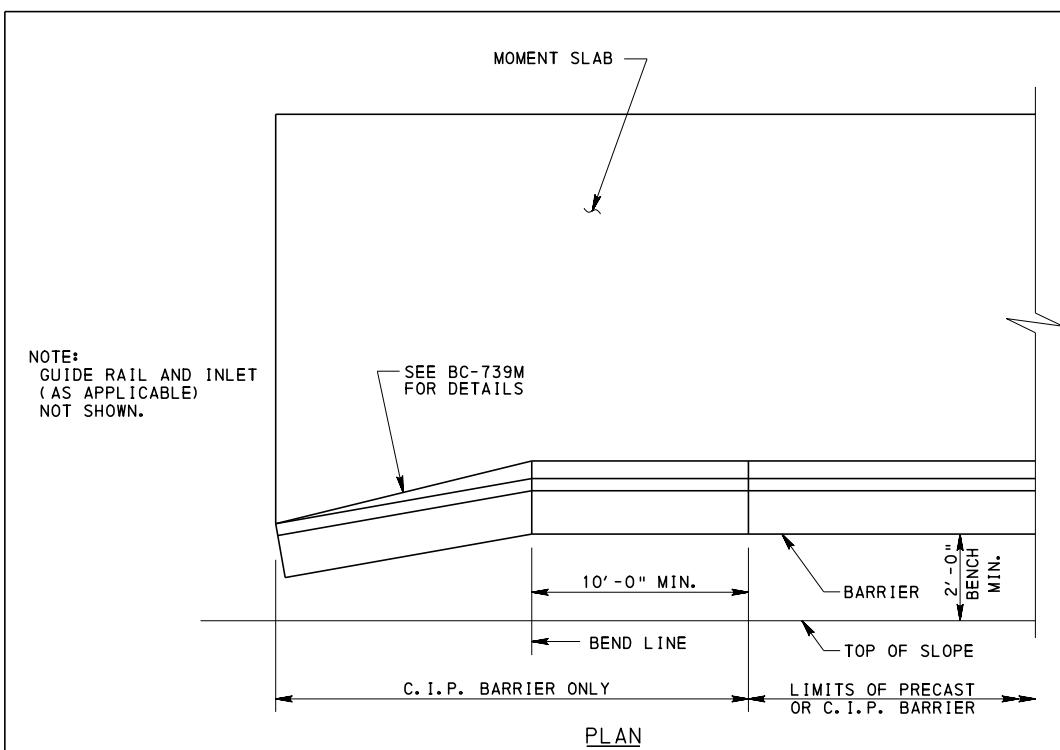
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD MOMENT SLABS PLANS

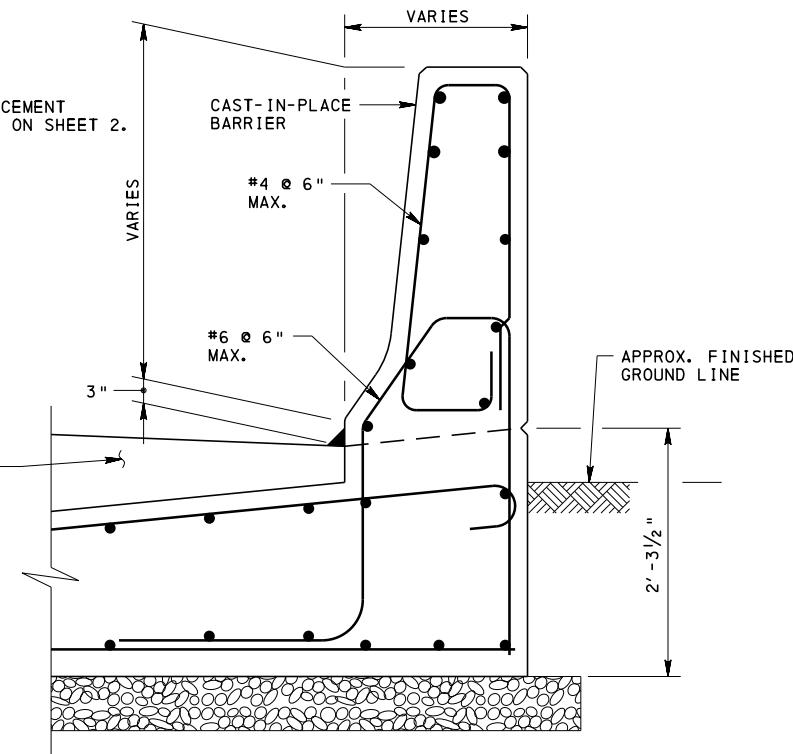
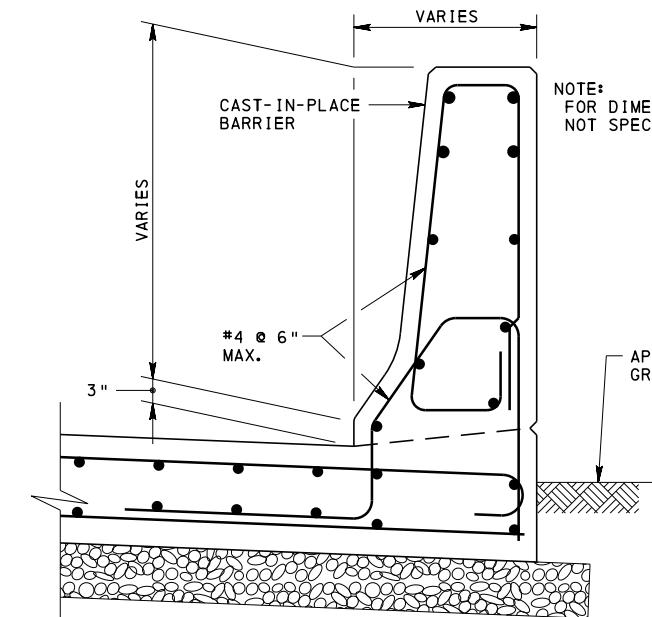
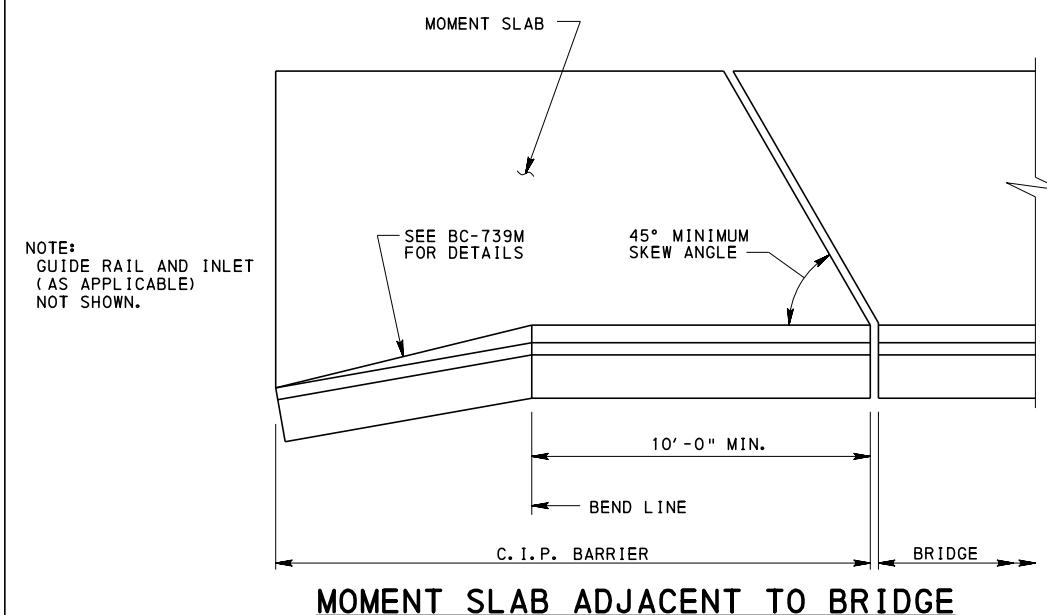
RECOMMENDED NOV. 21, 2014
Thomas P. Maiorino
CHIEF BRIDGE ENGINEER

RECOMMENDED NOV. 21, 2014
Brenda S. Thompson
ACTING DIR, BUR. OF PROJECT DELIVERY

SHEET 6 OF 8
BD-627M



BARRIER TO GUIDE RAIL TRANSITION



SECTION B-B

(REFER TO BC-739M FOR ADDITIONAL INFORMATION)

NOTES

1. FOR NOTES, SEE SHEET 1.

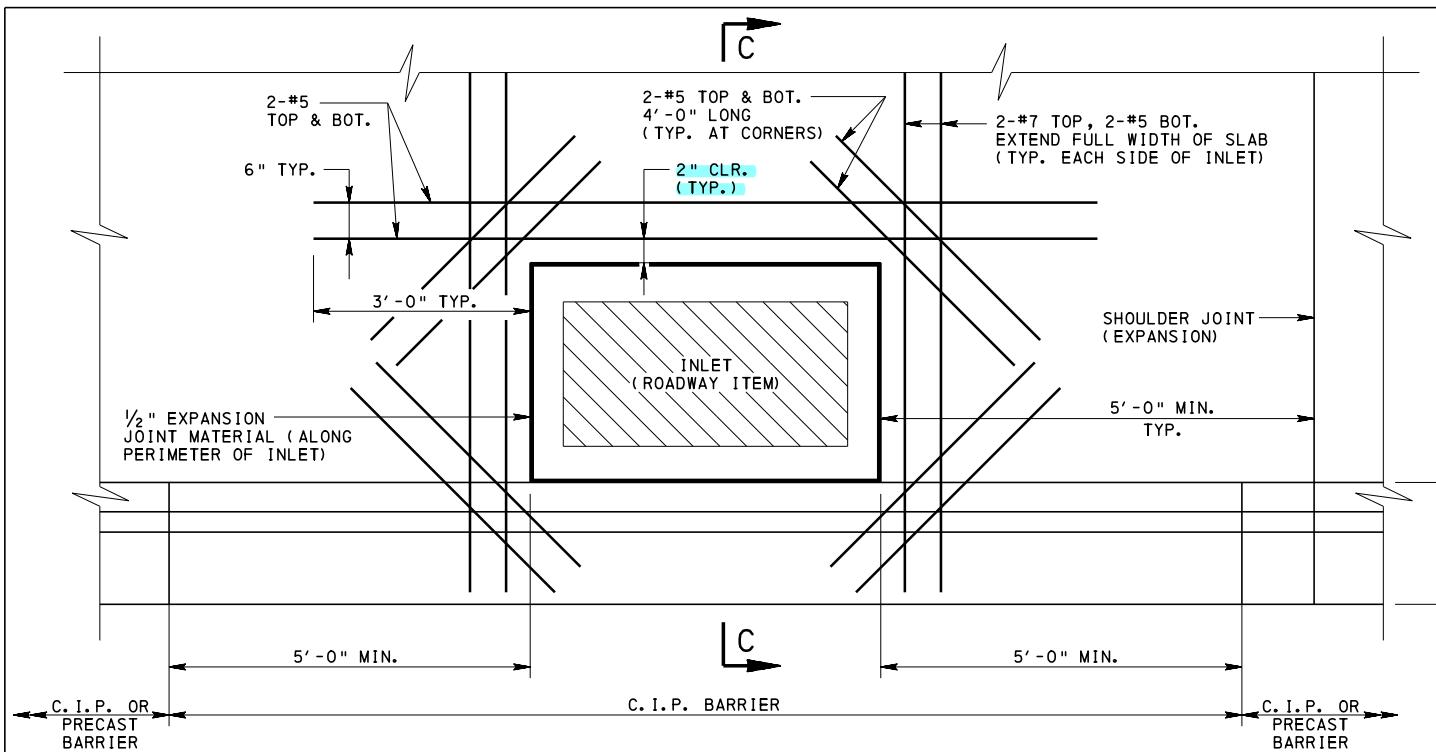
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF **PROJECT DELIVERY**

STANDARD MOMENT SLABS FLARED END TRANSITION

RECOMMENDED NOV. 21, 2014
Thomas P. Maioroz
CHIEF BRIDGE ENGINEER

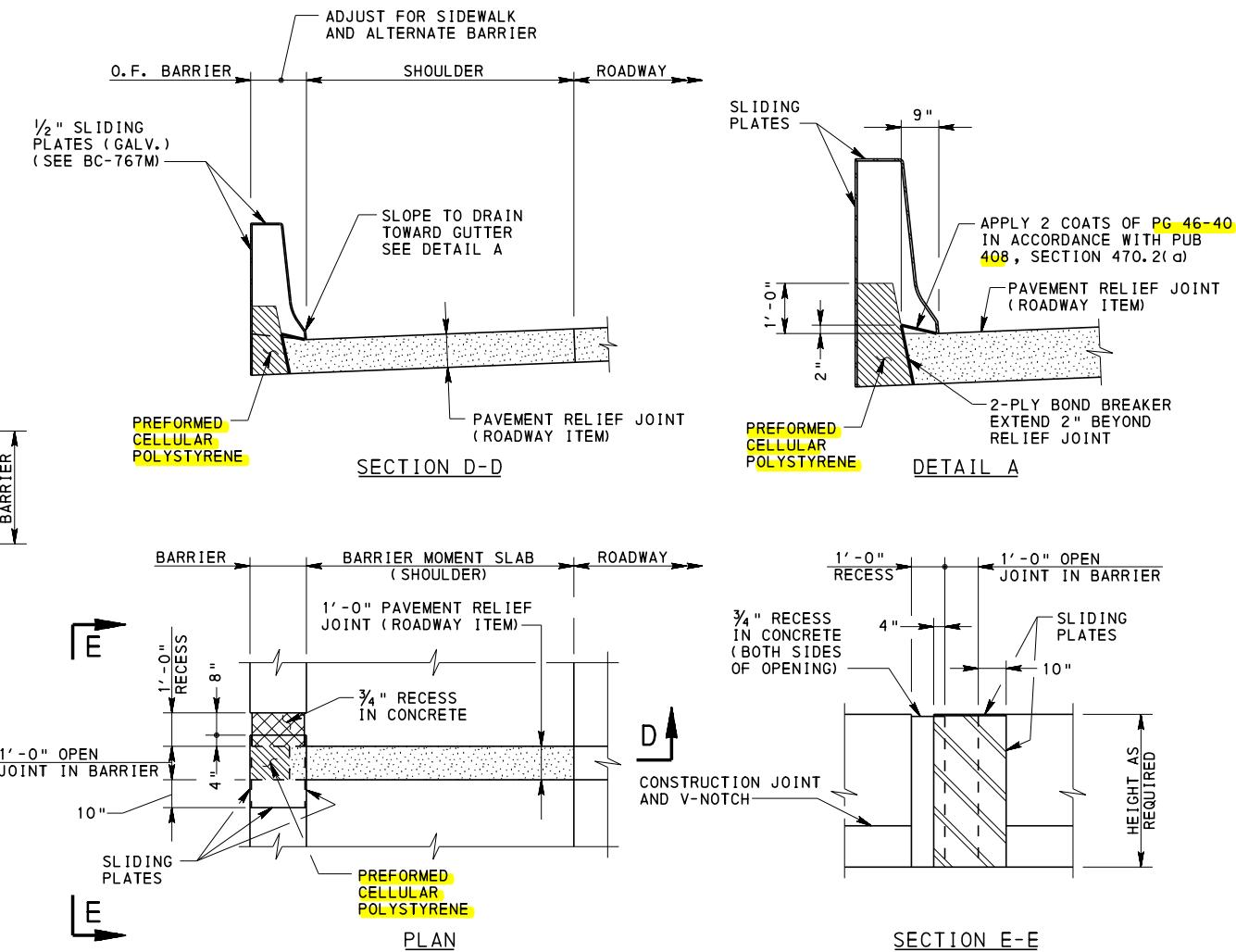
RECOMMENDED NOV. 21, 2014
Brenda S. Thompson
ACTING DIR, BUR. OF **PROJECT DELIVERY**

SHEET 7 OF 8
BD-627M



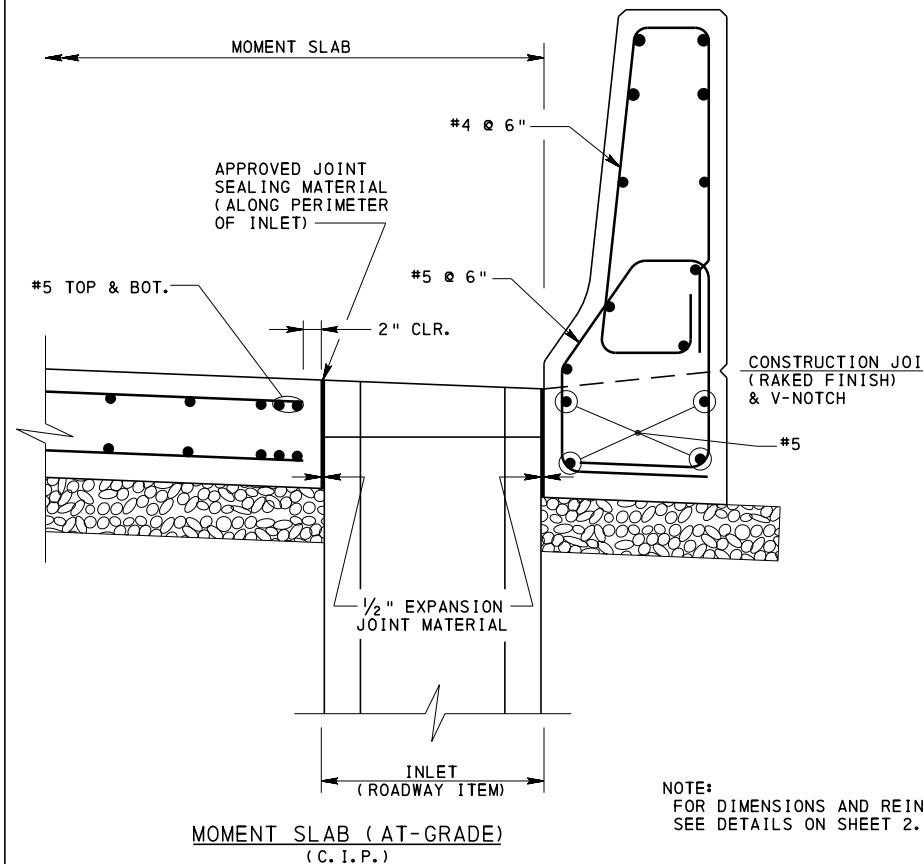
PLAN - SHOULDER DETAILS AT INLET

(ADDITIONAL REINFORCEMENT AT INLETS)

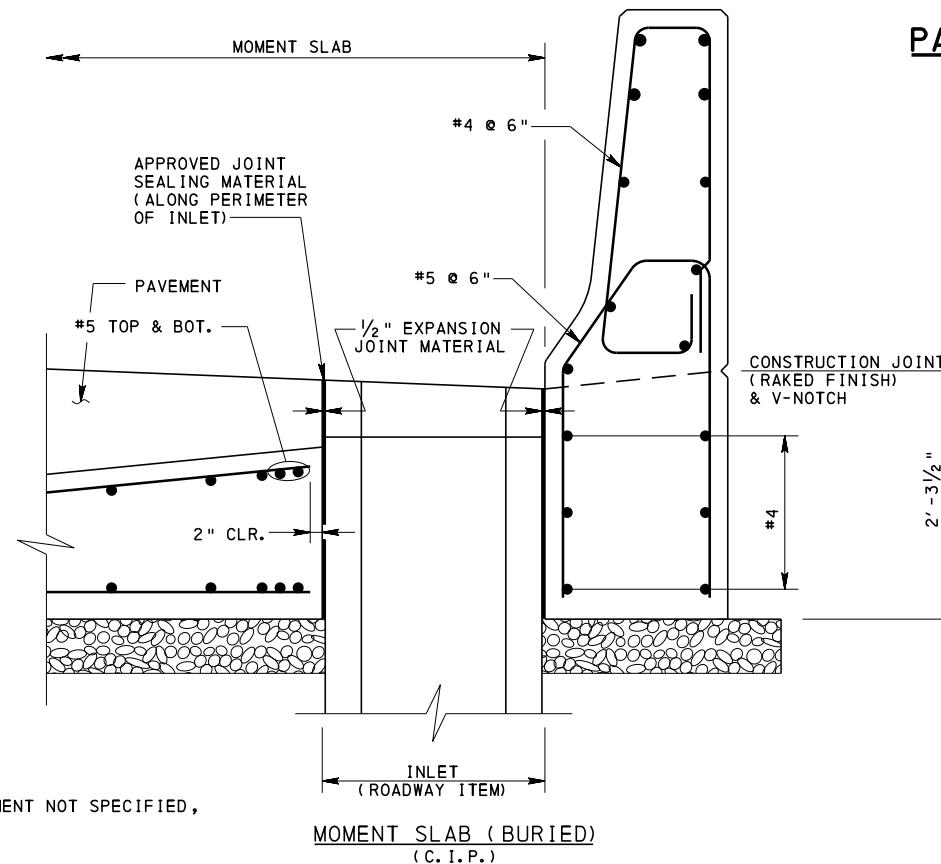


PLAN

SECTION E-E



SECTION C-C



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

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 NOV. 21, 2014
Thomas P. Maiore
CHIEF BRIDGE ENGINEER

RECOMMENDED NOV. 21, 2014
Brenda S. Thompson
ACTING DIR, BUR. OF PROJECT DELIVERY

SHEET 8 OF 8
BD-627M