

GENERAL NOTES

GENERAL: THESE DRAWINGS PROVIDE INFORMATION FOR THE DESIGNER AND ARE NOT INTENDED FOR USE AS CONSTRUCTION DRAWINGS. THE PROJECT PLANS FOR EACH STRUCTURE WILL SHOW SPAN LENGTHS, ROADWAY WIDTHS, SKEW, CURVE AND SUPERELEVATION (IF ANY), ELEVATIONS, SLAB REINFORCEMENT DETAILS IN PLAN AND CROSS SECTIONS, ESTIMATED QUANTITIES, CONCRETE SEALING LIMITS, SEISMIC PEDESTAL DETAILS, REINFORCING STEEL LIST AND OTHER NECESSARY DETAILS AND SPECIAL NOTES.

THE DETAILS SHOWN ARE TYPICAL FOR THE AVERAGE STEEL BEAM AND SHALLOW STEEL GIRDER BRIDGE ABUTMENTS SUPPORTED ON PILES, ON NEWLY COMPACTED EMBANKMENT, OR ON BEDROCK. (IF THE TOP SURFACE OF BEDROCK IS NEAR THE BRIDGE SEAT ELEVATION THESE DETAILS WILL NOT APPLY.)

FOR DEEP GIRDER BRIDGES OR SUPERELEVATED BEAM BRIDGES, THE BACKWALLS, WINGWALLS AND WINGWALL FOOTINGS MAY REQUIRE WIDENING AND/OR ADDITIONAL REINFORCING. WINGWALL FOOTINGS MAY REQUIRE AN ADDITIONAL ROW OF PILES.

DESIGN DATA:

CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - CMS 709.00 GRADE 60, MINIMUM YIELD STRENGTH 60 KSI.

SEISMIC PEDESTALS:

THE DESIGN CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997, 1998 AND 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

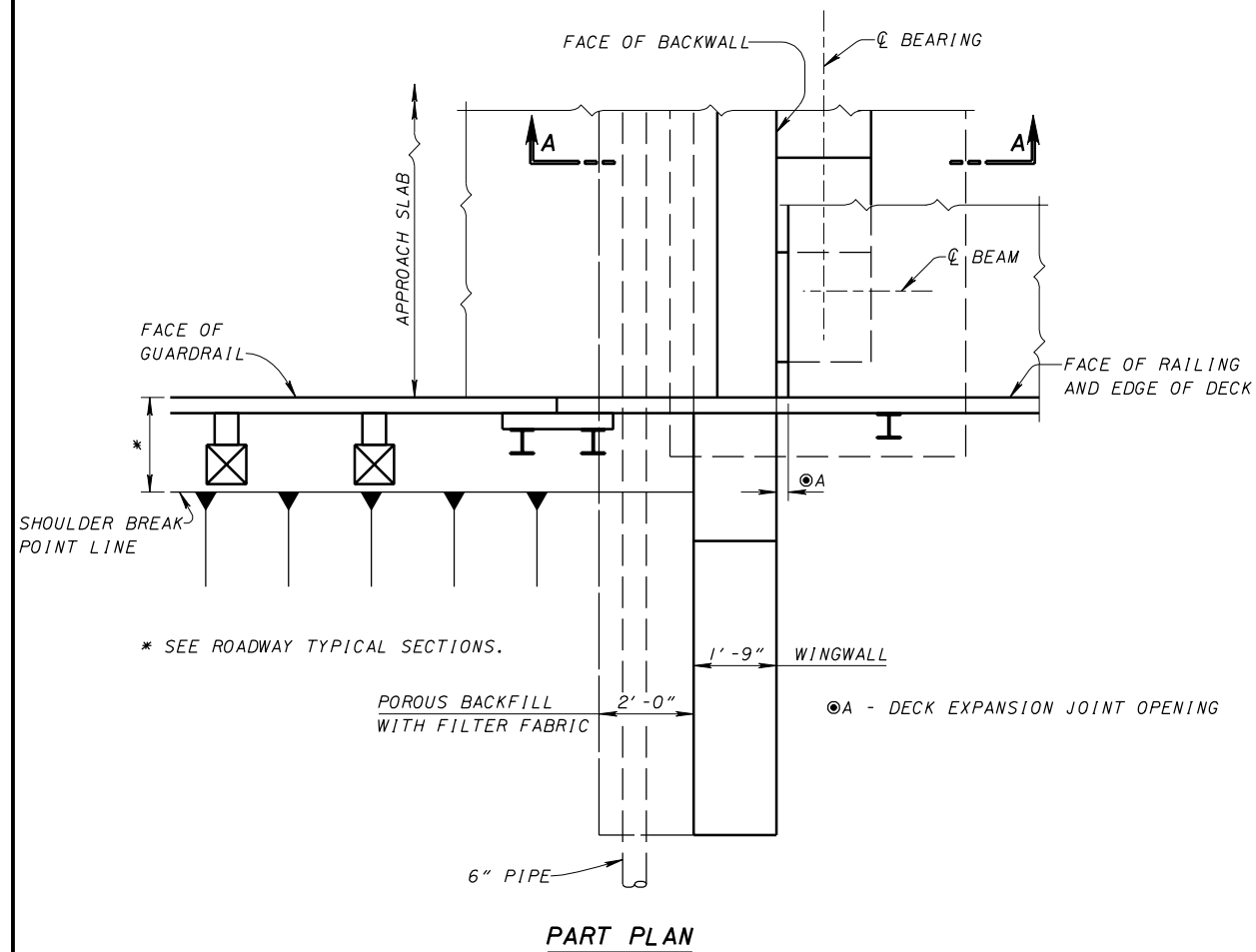
SEISMIC PEDESTALS: <CONTINUED>

TABLE A ON SHEET 5 OF 5 PROVIDES THE MAXIMUM ALLOWABLE SEISMIC LOAD PER PEDESTAL VERSUS PEDESTAL HEIGHT. DESIGN SEISMIC LOAD (SHOWN AS V_u IN TABLE A) SHALL BE CALCULATED AS 0.2 TIMES THE TOTAL FACTORED DEAD LOAD AT THE ABUTMENT (INCLUDING FUTURE WEARING SURFACE) DIVIDED BY THE COSINE OF THE SKEW ANGLE. CALCULATED LOADS EXCEEDING THOSE SHOWN IN TABLE A WILL REQUIRE ADDITIONAL PEDESTALS. THE MAXIMUM RESISTANCE PROVIDED IN ONE DIRECTION BY MULTIPLE PEDESTALS IS EQUAL TO THE SUM OF THE INDIVIDUAL CAPACITIES OF EACH PEDESTAL IN THE SAME DIRECTION.

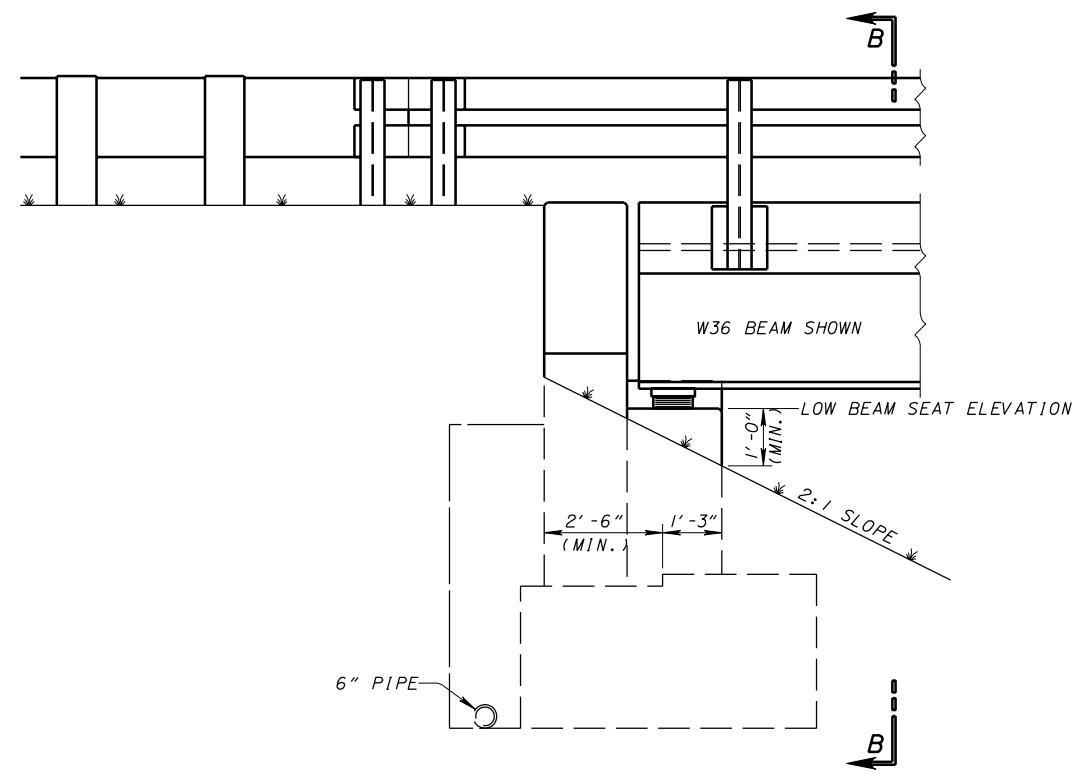
A MINIMUM OF TWO PEDESTALS ARE ALWAYS REQUIRED AND SHALL BE PLACED ON THE INSIDE OF EACH FASCIA BEAM. ANY ADDITIONAL PEDESTALS SHALL BE PLACED IN PAIRS IN ORDER TO RESIST LATERAL LOADS IN BOTH DIRECTIONS. ADDITIONAL PEDESTALS FOR RESTRAINT DURING PART-WIDTH CONSTRUCTION SHALL NOT BE USED.

PEDESTALS ARE REQUIRED FOR ALL BEARING TYPES, BOTH EXPANSION AND FIXED, UNLESS THE BEARING, ITS INDIVIDUAL COMPONENTS AND ITS ATTACHMENT TO BOTH THE SUPERSTRUCTURE AND SUBSTRUCTURE ARE SPECIFICALLY DESIGNED FOR THE DESIGN SEISMIC LOAD.

THE DESIGNER SHALL DETERMINE IF THE STANDARD END CROSS-FRAMES WILL CLEAR THE PEDESTALS. IF NOT, THE CROSSFRAME LAYOUT SHALL BE MODIFIED TO CLEAR THE PEDESTALS BY PLAN DETAILS.



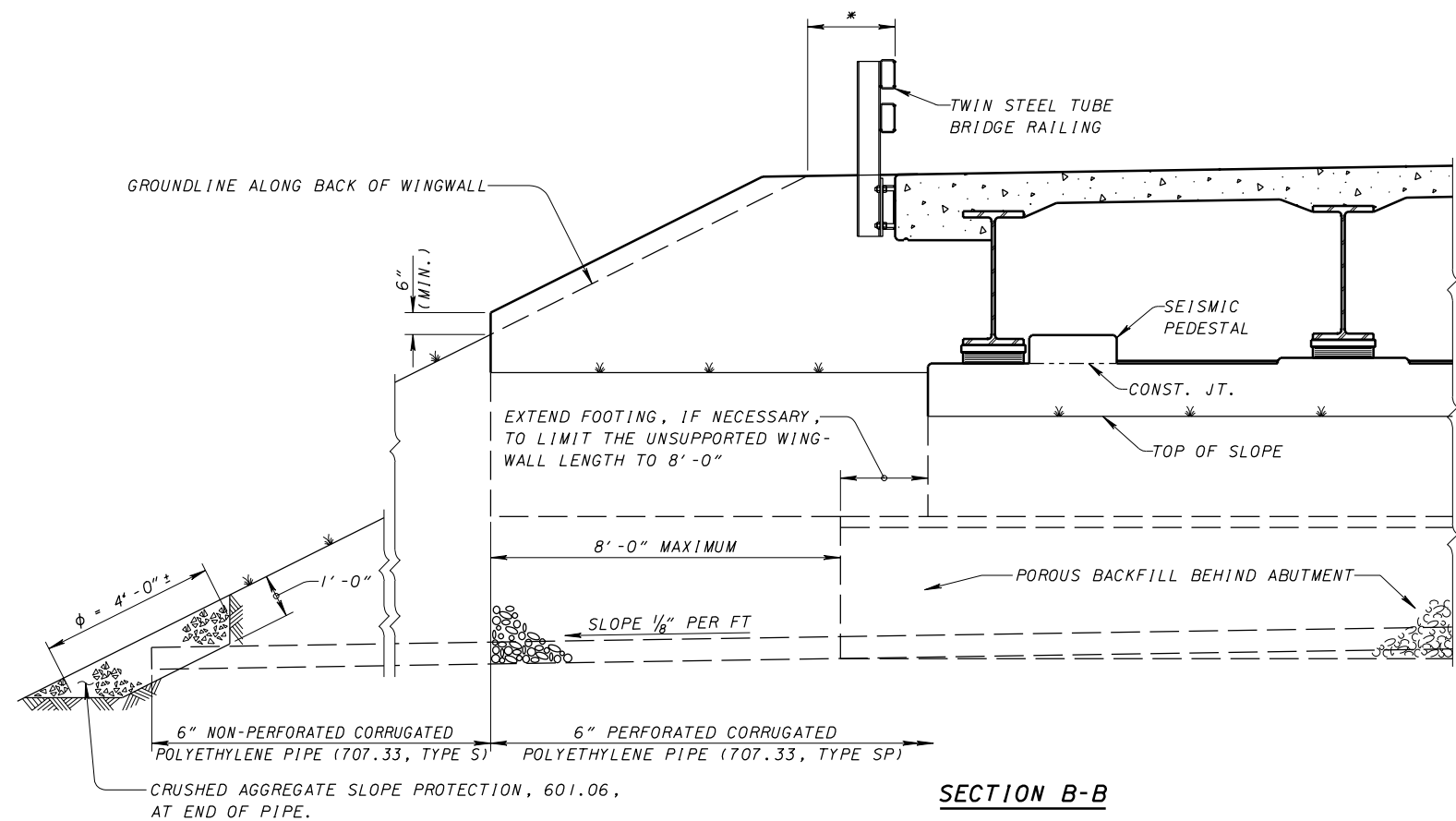
PART PLAN



ELEVATION

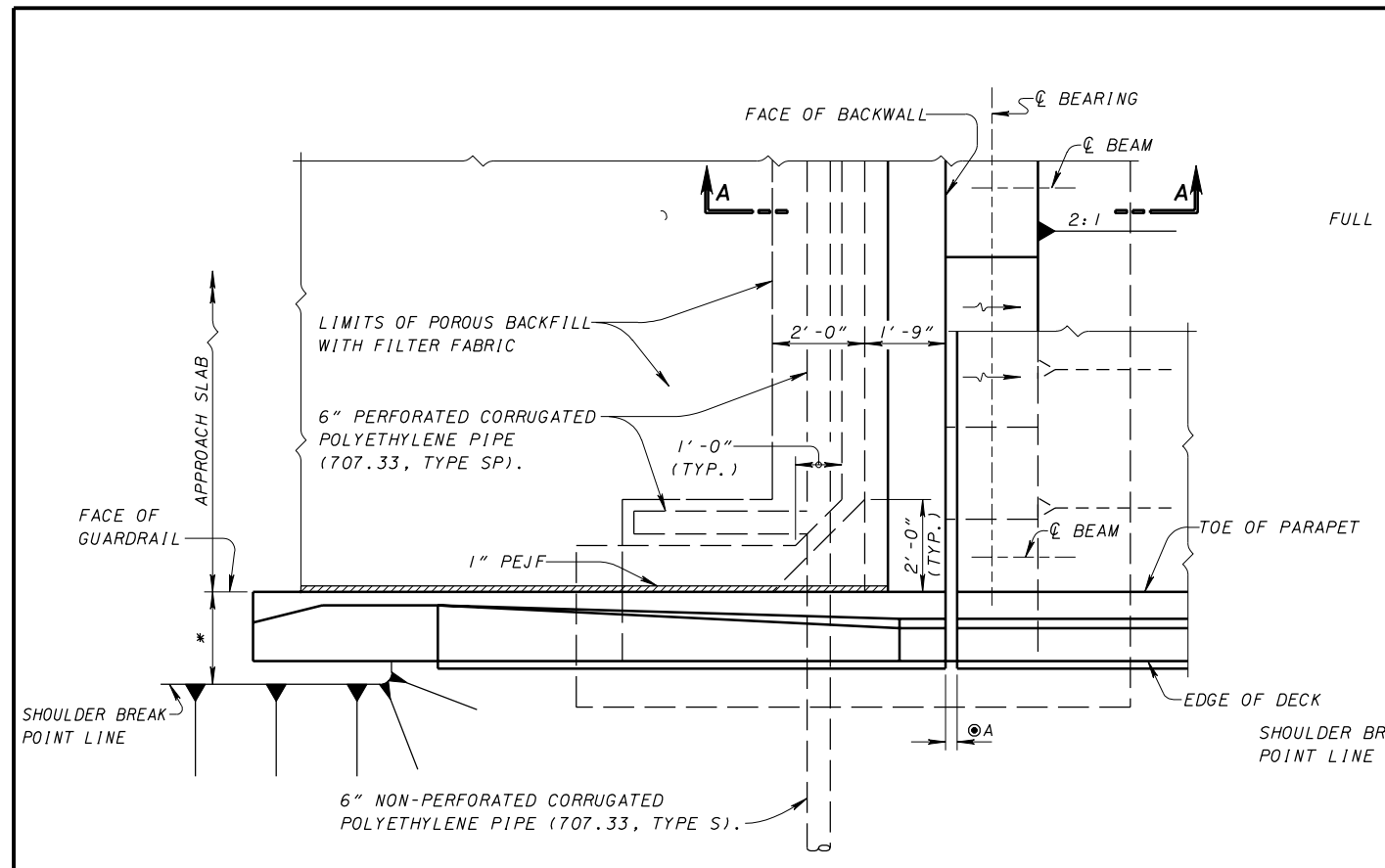
SEE SHEET 4/5 FOR SECTION A-A.

SEE SHEET 5/5 FOR PEDESTAL DETAILS.

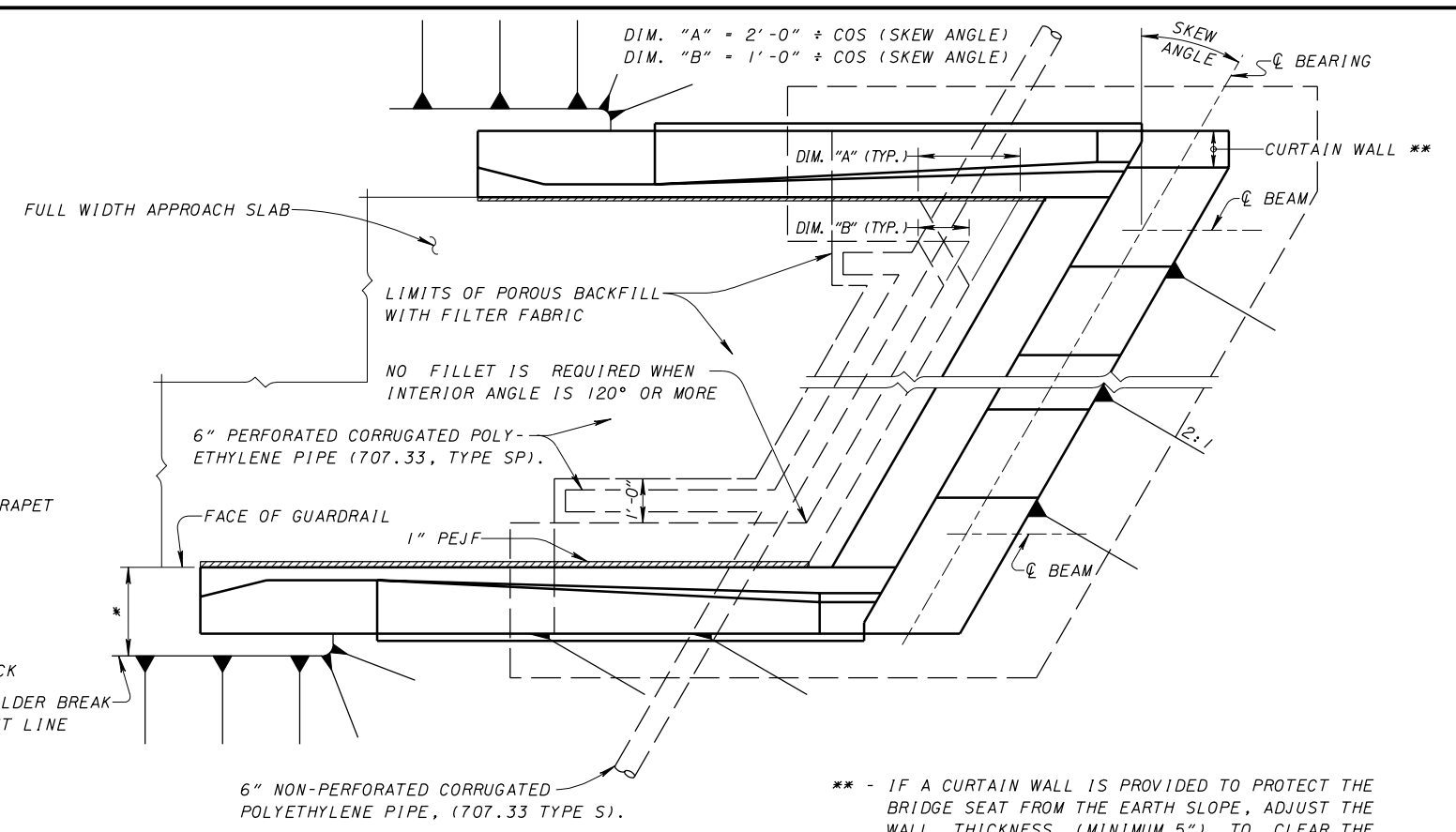


SECTION B-B

DESIGN AGENCY	OFFICE OF	STRUCTURAL ENGINEERING
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	DATE	03-20-95
REVIEWED	CHECKED	DESIGNED
MPB/LMW	MAA/SDS	CPD/SAM
A-1-69		SAM
REVISIONS	04-20-01	07-19-02
STANDARD	TYPICAL ABUTMENT DETAILS FOR STEEL BEAM AND GIRDER BRIDGES	
1/5		



PART PLAN

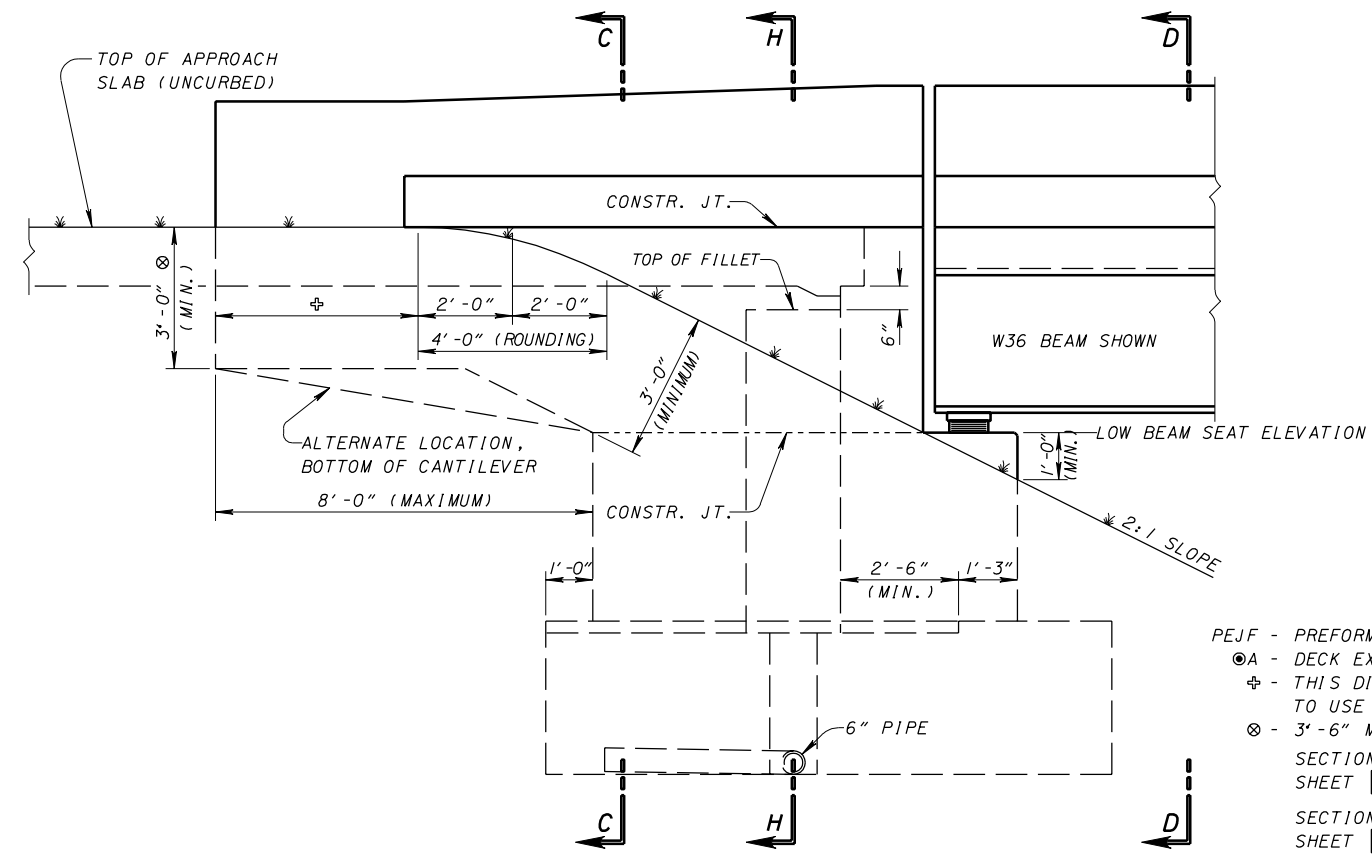


PART PLAN

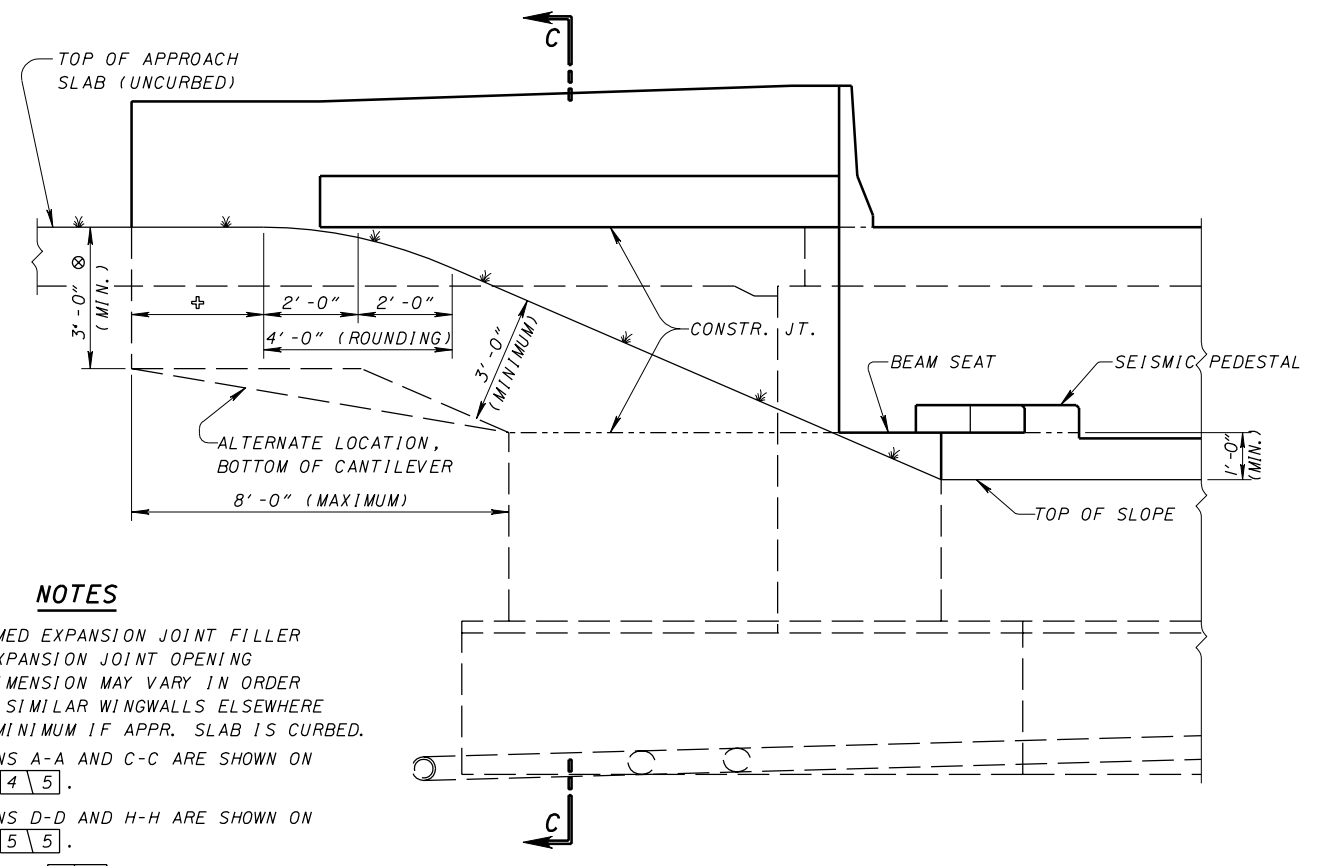
(SUPERSTRUCTURE NOT SHOWN)

** - IF A CURTAIN WALL IS PROVIDED TO PROTECT THE BRIDGE SEAT FROM THE EARTH SLOPE, ADJUST THE WALL THICKNESS (MINIMUM 5") TO CLEAR THE OUTER EDGE OF THE BEARING ASSEMBLY BY A MINIMUM OF 2".

* SEE ROADWAY TYPICAL SECTIONS.



ELEVATION

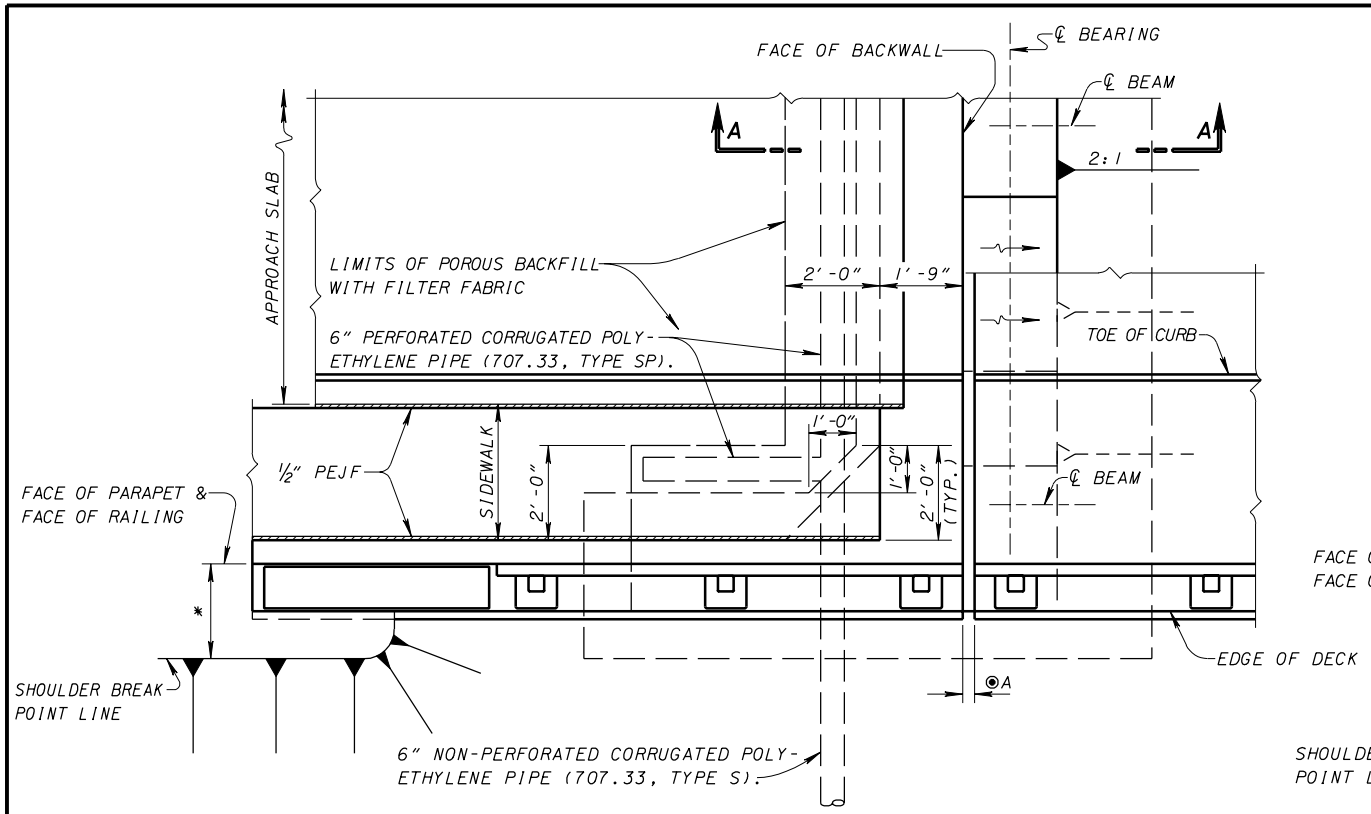


ELEVATION

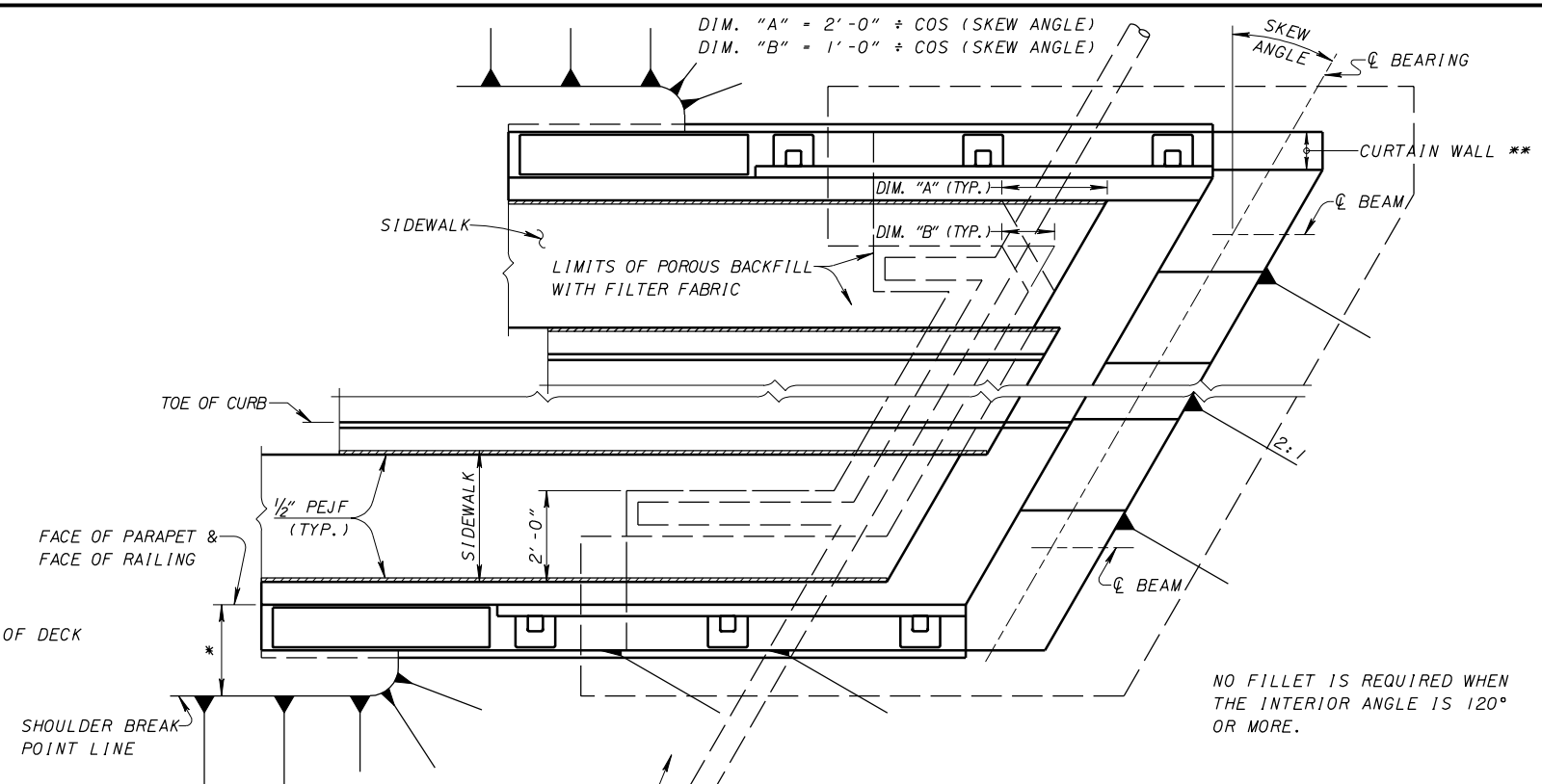
NOTES

- PEJF - PREFORMED EXPANSION JOINT FILLER
 - ⊙A - DECK EXPANSION JOINT OPENING
 - ⊕ - THIS DIMENSION MAY VARY IN ORDER TO USE SIMILAR WINGWALLS ELSEWHERE
 - ⊗ - 3'-6" MINIMUM IF APPR. SLAB IS CURBED.
- SECTIONS A-A AND C-C ARE SHOWN ON SHEET **4/5**.
- SECTIONS D-D AND H-H ARE SHOWN ON SHEET **5/5**.
- SEE SHEET **5/5** FOR SEISMIC PEDESTAL DETAILS.

DESIGN AGENCY	OFFICE OF	STRUCTURAL ENGINEERING
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	DATE	03-20-95
REVIEWED	MPB/LMW	A-1-69
CHECKED	NAA/SDS	
DESIGNED	CPD/SAM	
REVISIONS	04-20-01	
	07-19-02	
STANDARD	TYPICAL ABUTMENT DETAILS FOR STEEL BEAM AND GIRDER BRIDGES	
	2	5



PART PLAN

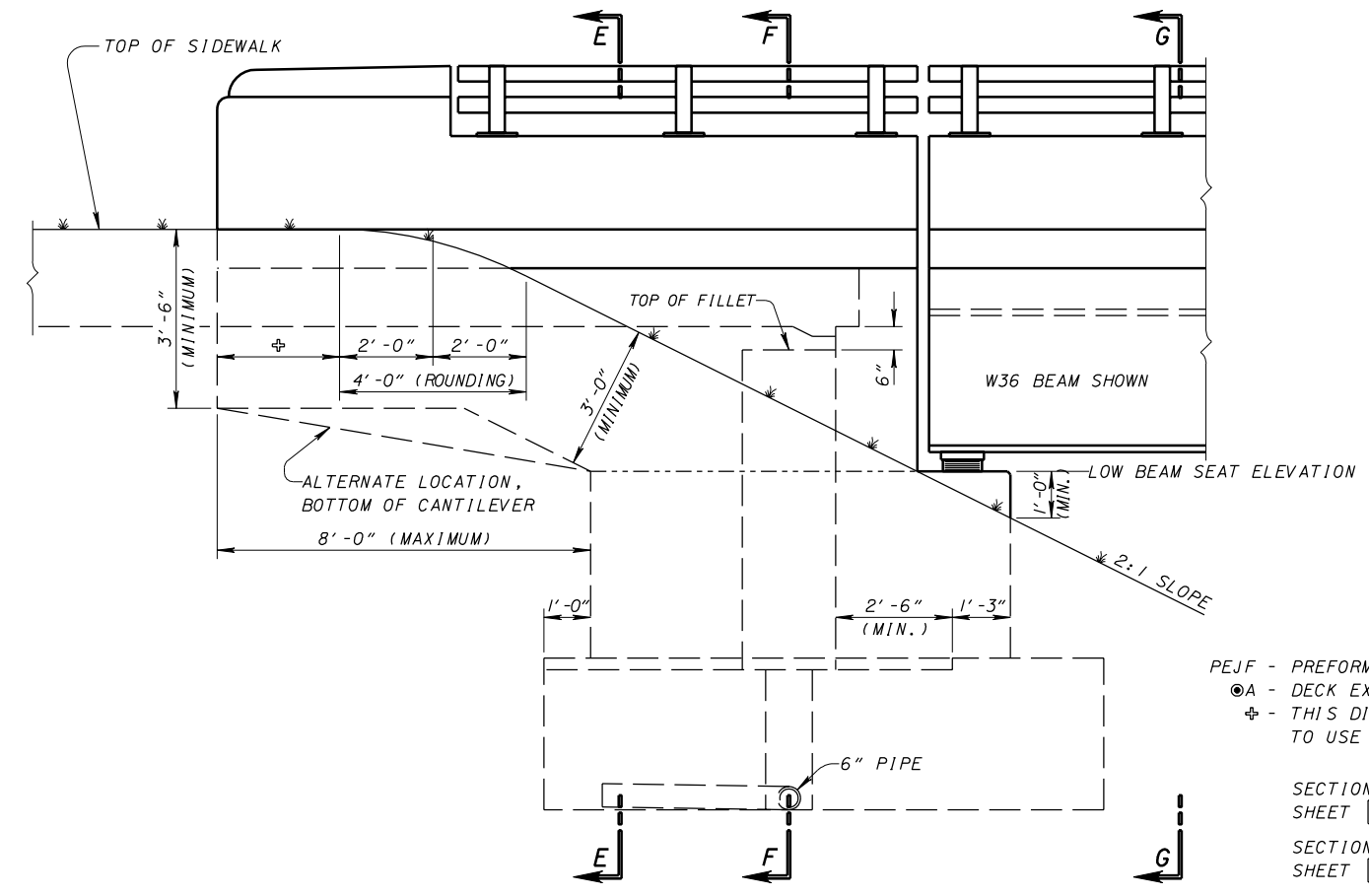


PART PLAN

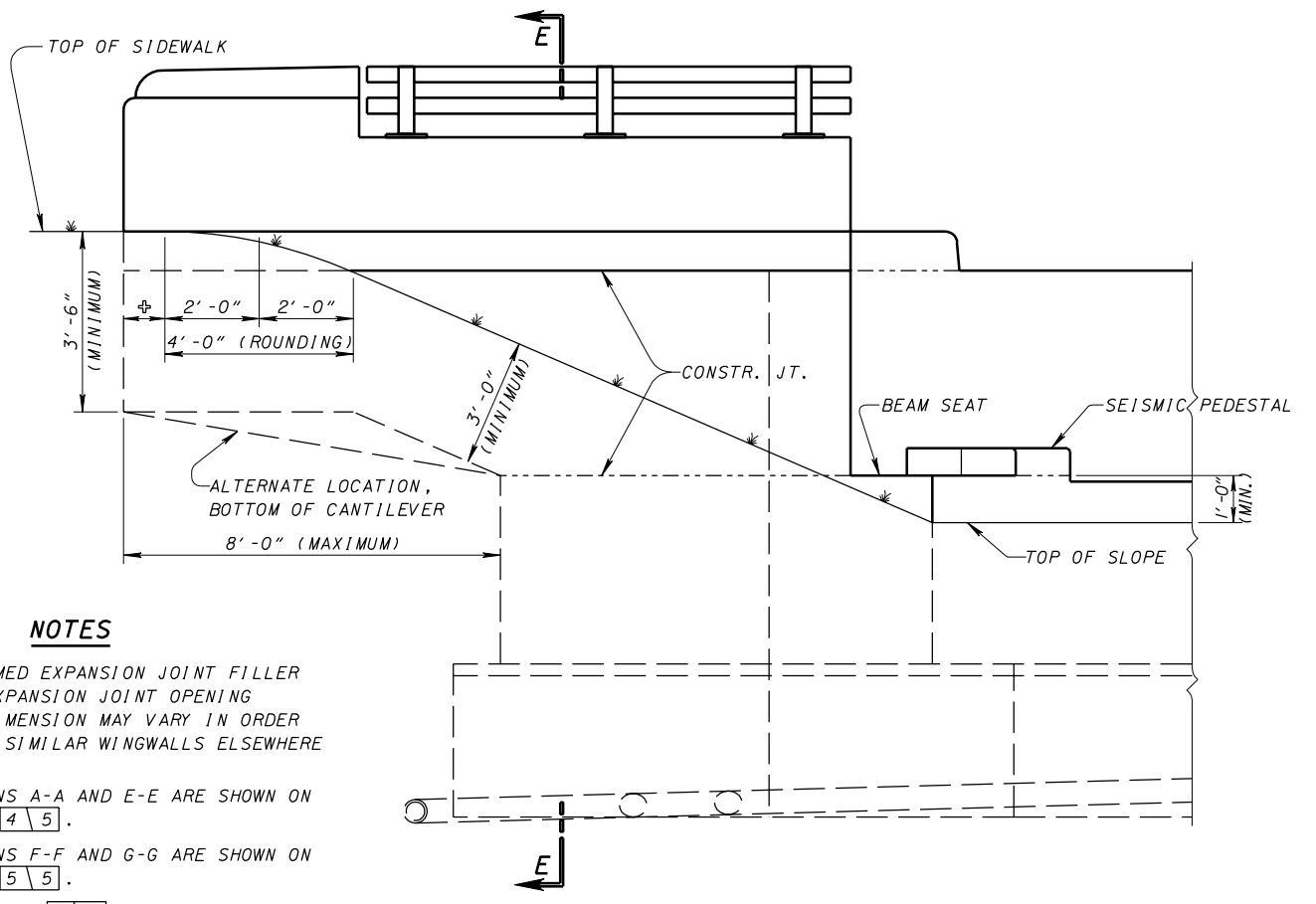
(SUPERSTRUCTURE NOT SHOWN)

* SEE ROADWAY TYPICAL SECTIONS.

** - IF A CURTAIN WALL IS PROVIDED TO PROTECT THE BRIDGE SEAT FROM THE EARTH SLOPE, ADJUST THE WALL THICKNESS (MINIMUM 5") TO CLEAR THE OUTER EDGE OF THE BEARING ASSEMBLY BY A MINIMUM OF 2".



ELEVATION

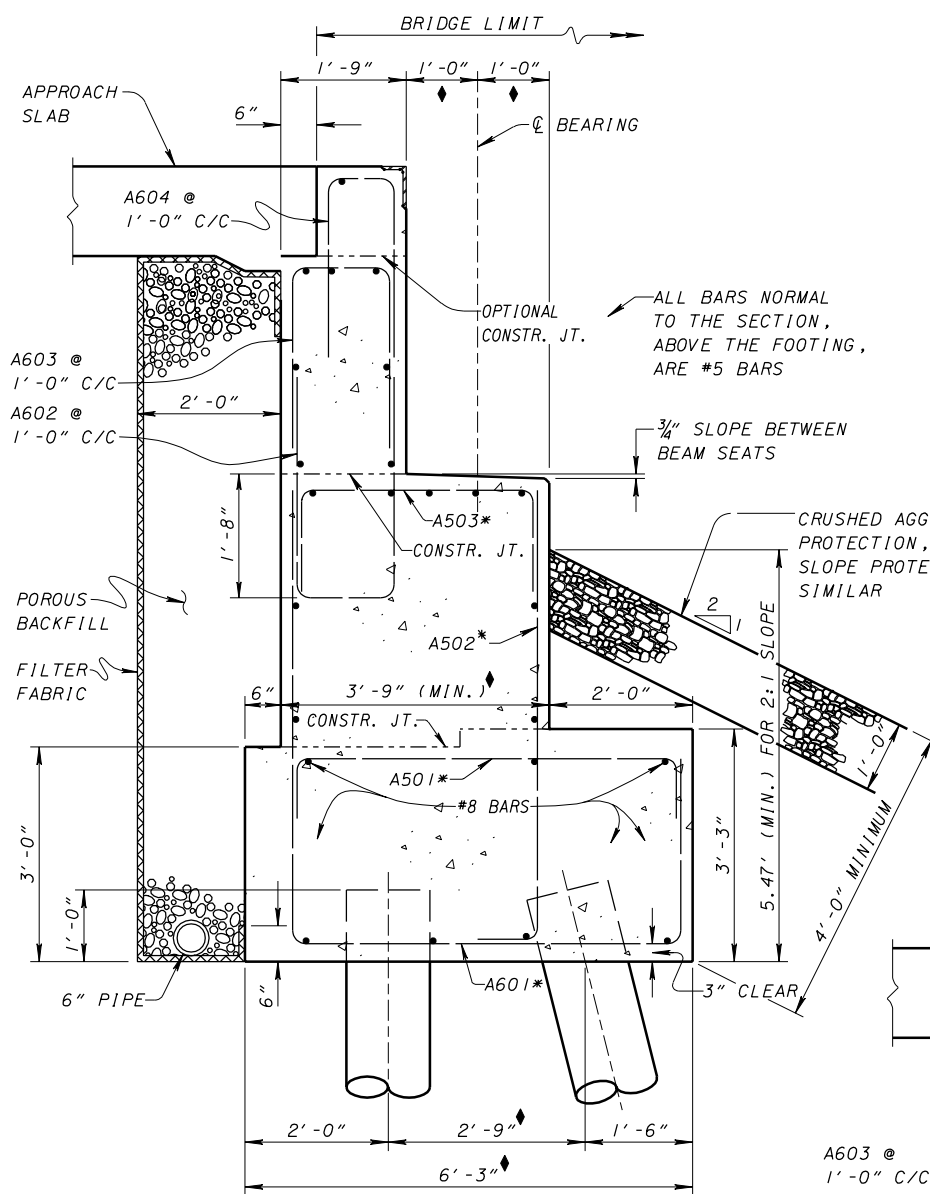


ELEVATION

NOTES

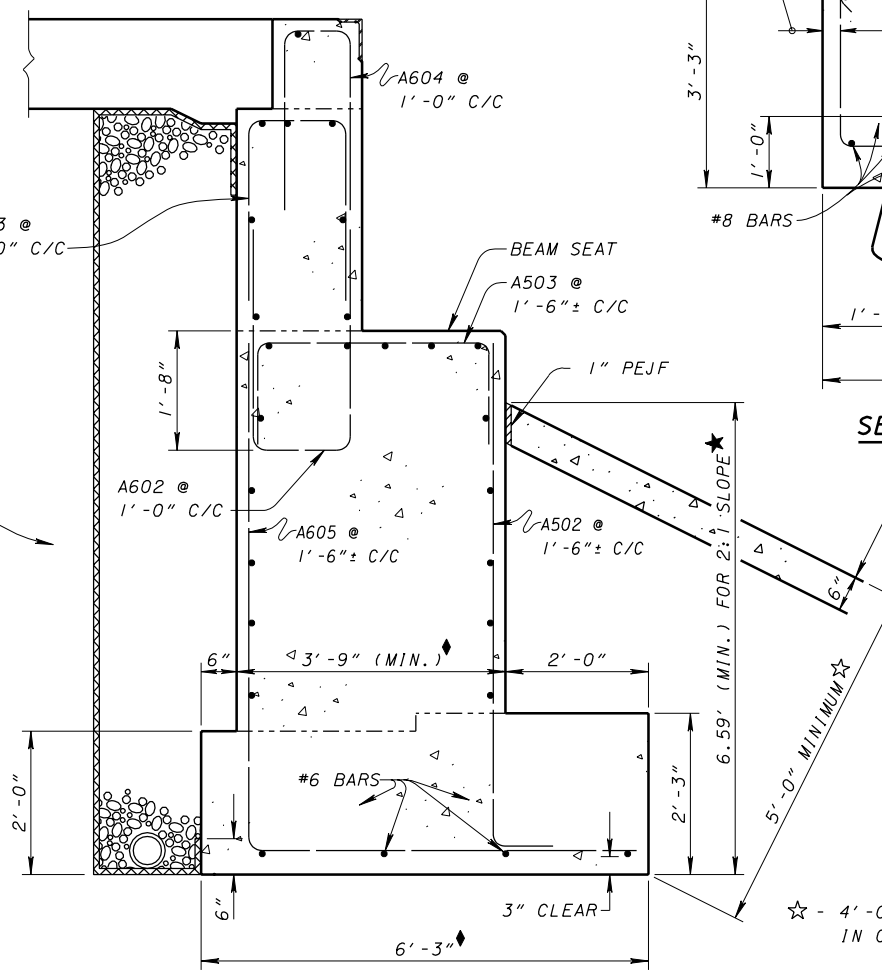
- PEJF - PREFORMED EXPANSION JOINT FILLER
 - ⊙A - DECK EXPANSION JOINT OPENING
 - ⊕ - THIS DIMENSION MAY VARY IN ORDER TO USE SIMILAR WINGWALLS ELSEWHERE
- SECTIONS A-A AND E-E ARE SHOWN ON SHEET 4/5.
- SECTIONS F-F AND G-G ARE SHOWN ON SHEET 5/5.
- SEE SHEET 5/5 FOR SEISMIC PEDESTAL DETAILS.

DESIGN AGENCY	OFFICE OF	STRUCTURAL ENGINEERING
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	DATE	03-20-95
ADMINISTRATOR	<i>Robert L. George</i>	
REVISIONS	CHECKED	DESIGNED
04-20-01	CPD/SAM	NAA/SDS
07-19-02	MPB/LMV	SAM
STANDARD	TYPICAL ABUTMENT DETAILS FOR STEEL BEAM AND GIRDER BRIDGES	
A-1-69		
3	5	



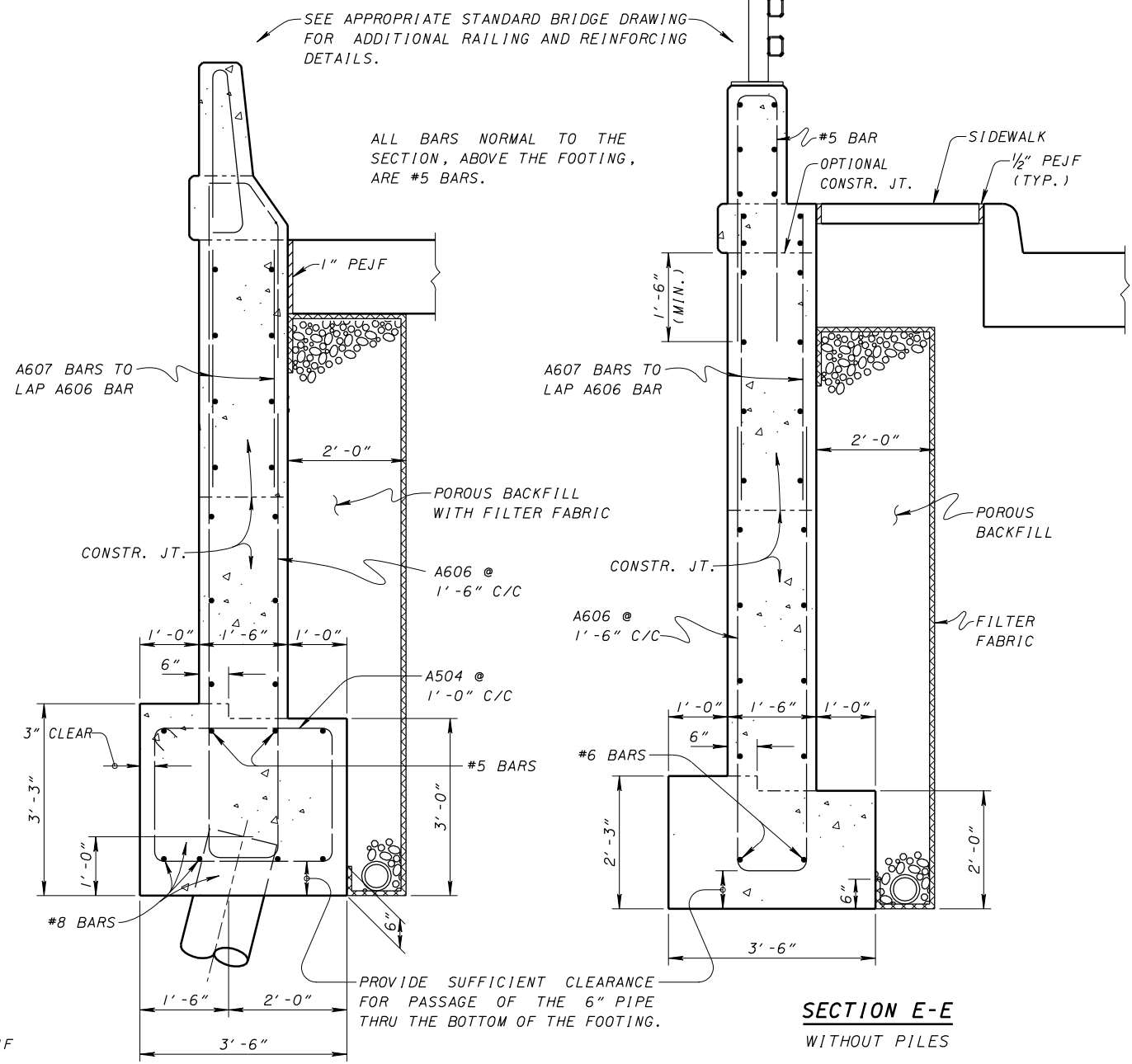
SECTION A-A
WITH PILES

* - BARS SHALL BE EQUALLY SPACED BETWEEN PILES AT 1'-6" MAXIMUM.



SECTION A-A
WITHOUT PILES

ALL BARS NORMAL TO THE SECTION, ABOVE FOOTING, ARE #5 BARS.



SECTION C-C
WITH PILES

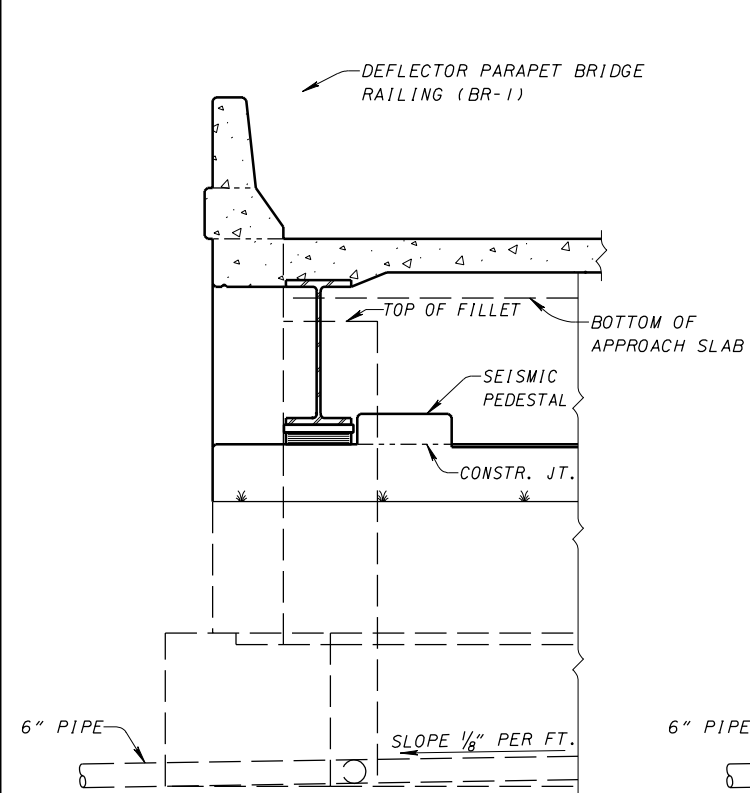
SECTION E-E
WITHOUT PILES

NOTES & LEGEND

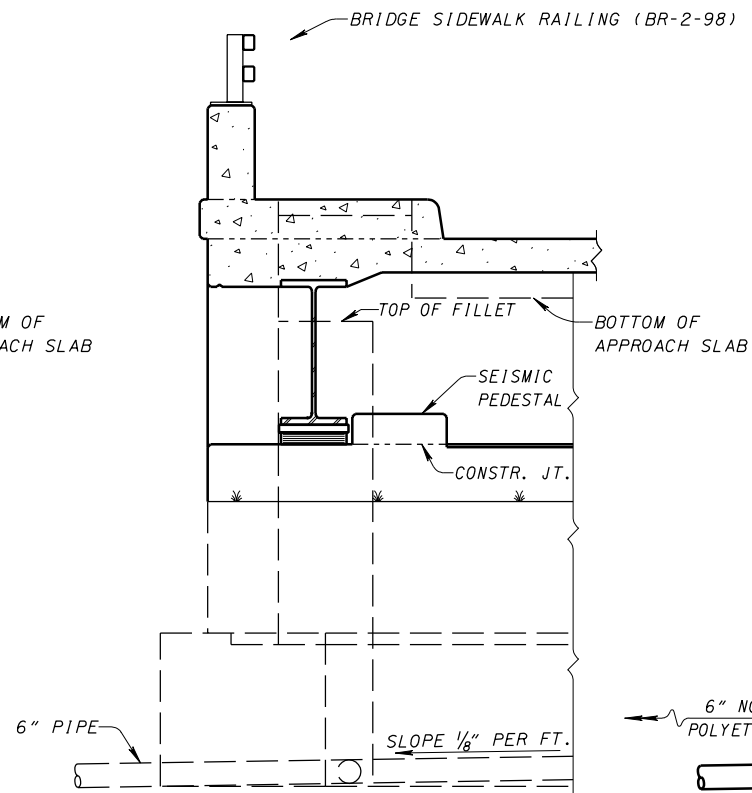
1. THE MAXIMUM SPACING FOR PILES IN THE FRONT ROW SHALL BE 8'-0". USUALLY PILES IN THE BACK ROW SHALL BE PLACED DIRECTLY BEHIND ALTERNATE FRONT ROW PILES.
2. THE CONCRETE COVER SHALL BE 2" UNLESS OTHERWISE NOTED.
3. FOR FOOTINGS WITHOUT PILES FOUNDED ON BEDROCK WHERE THE TOP OF BEDROCK ELEVATION IS NEAR THE BEAM SEAT ELEVATION, A SPECIAL DESIGN IS REQUIRED. THE MINIMUM BEDROCK EMBEDMENT SHALL BE 3".

PEJF - PREFORMED EXPANSION JOINT FILLER
 ◆ - THE BEARING SEAT MAY REQUIRE ADDITIONAL WIDTH IN ORDER TO MEET AASHTO SEISMIC SEAT WIDTH REQUIREMENTS.

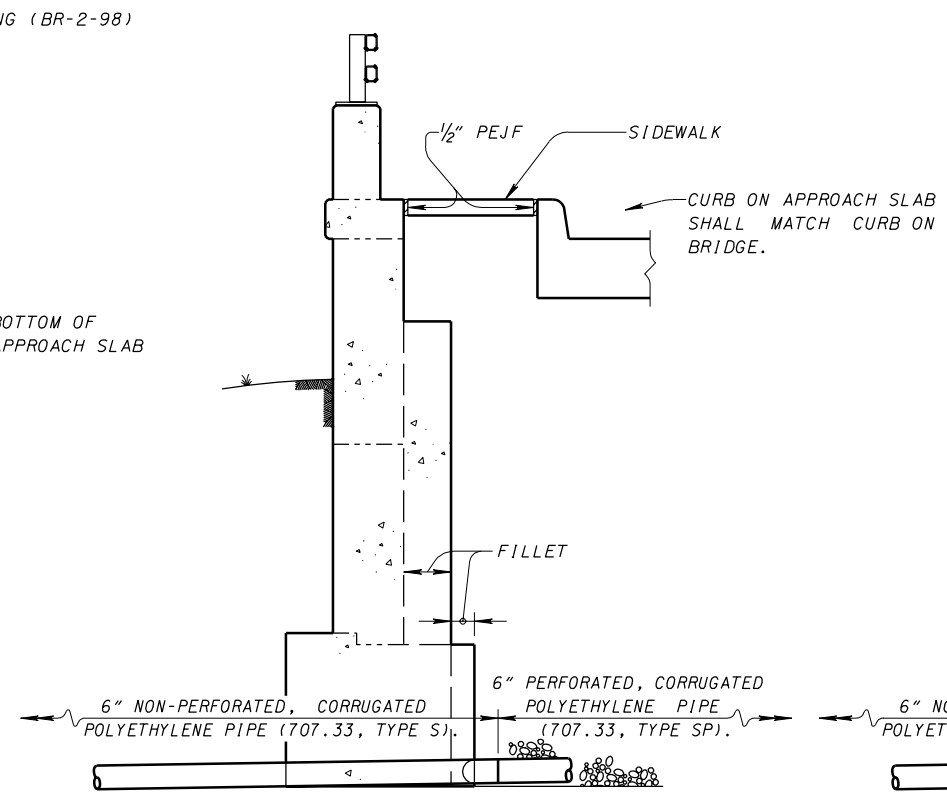
☆ - 4'-0" MINIMUM WHEN FOUNDED IN COMPETENT BEDROCK.
 ★ - 5.47' MINIMUM WHEN FOUNDED IN COMPETENT BEDROCK.



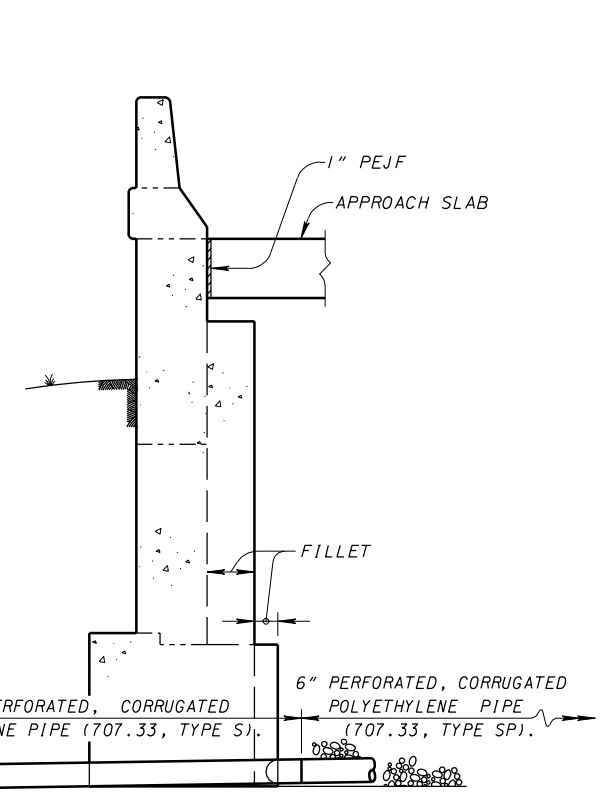
SECTION D-D



SECTION G-G

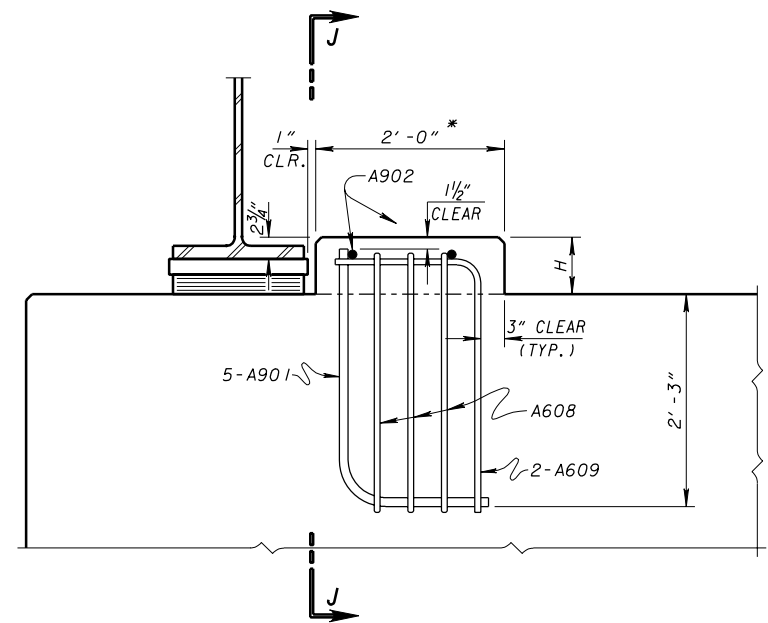


SECTION F-F



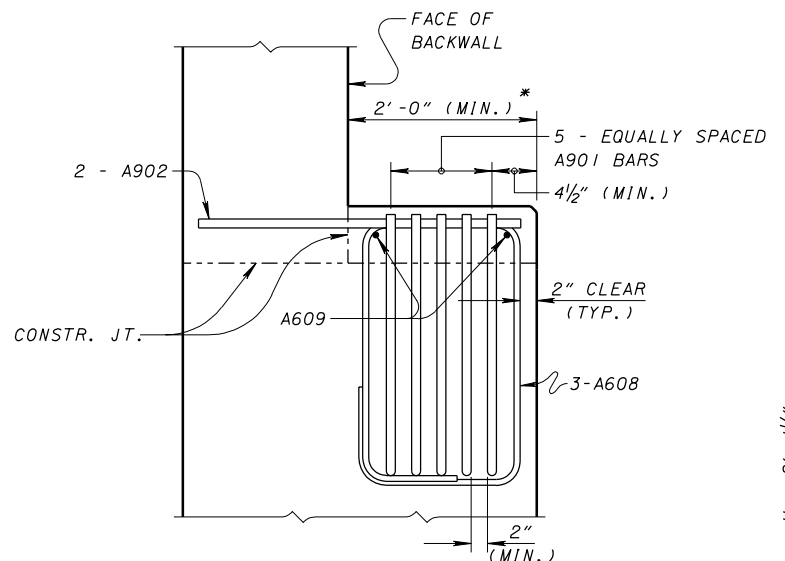
SECTION H-H

SEE SHEET 15 FOR DRAINAGE PIPE OUTLET DETAIL.
 PEJF - PREFORMED EXPANSION JOINT FILLER.



FRONT VIEW OF SEISMIC PEDESTAL

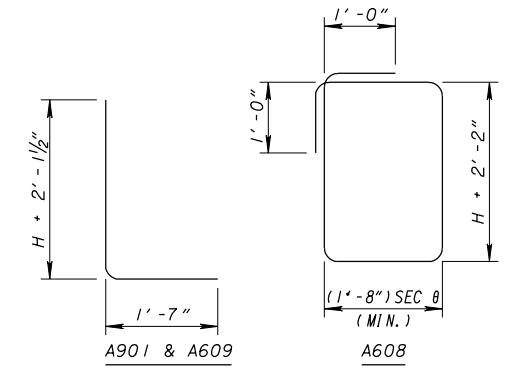
THE 2'-0" WIDTH OF THE PEDESTAL SHALL BE MEASURED PARALLEL TO THE CENTERLINE OF BEARING. THE A901 & A609 BARS SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING. THE A902 & A608 BARS SHALL BE PLACED PARALLEL TO THE BEAMS OR GIRDERS.



SECTION J-J

THE LOCATION OF THE MAIN REINFORCEMENT IN THE BEAM SEAT MAY BE ADJUSTED HORIZONTALLY ±1" TO ACCOMMODATE THE A901 BARS.

* - THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE 1/4" DEEP MINIMUM.



BENDING DIAGRAMS
 θ = SKEW ANGLE

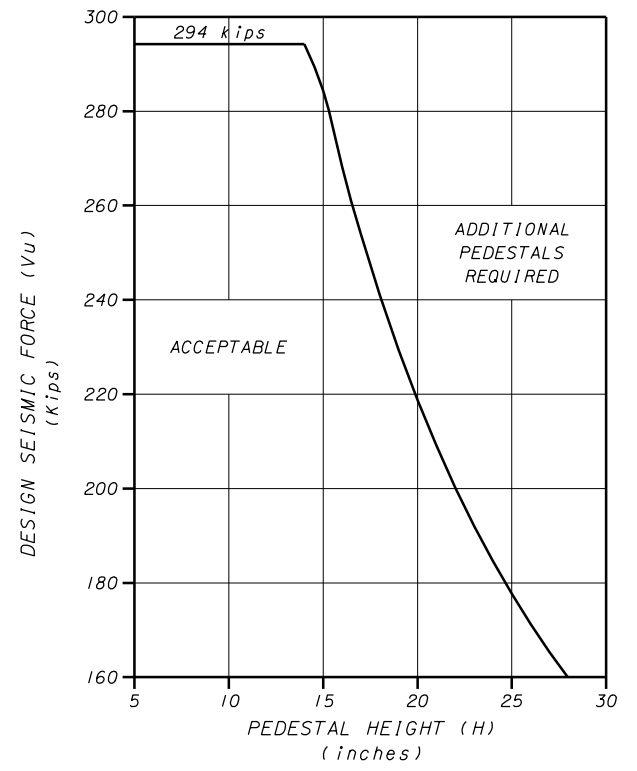


TABLE A