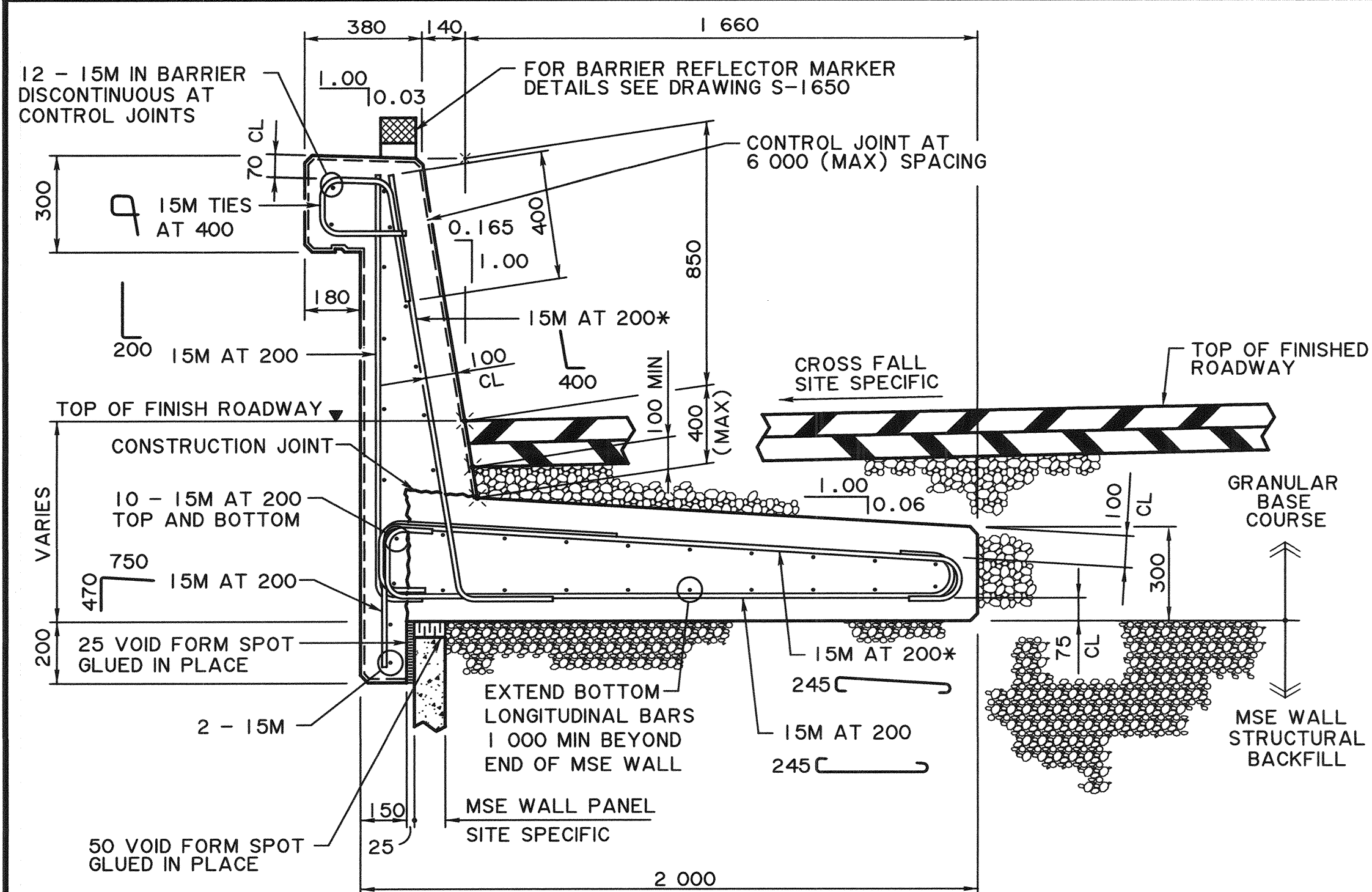
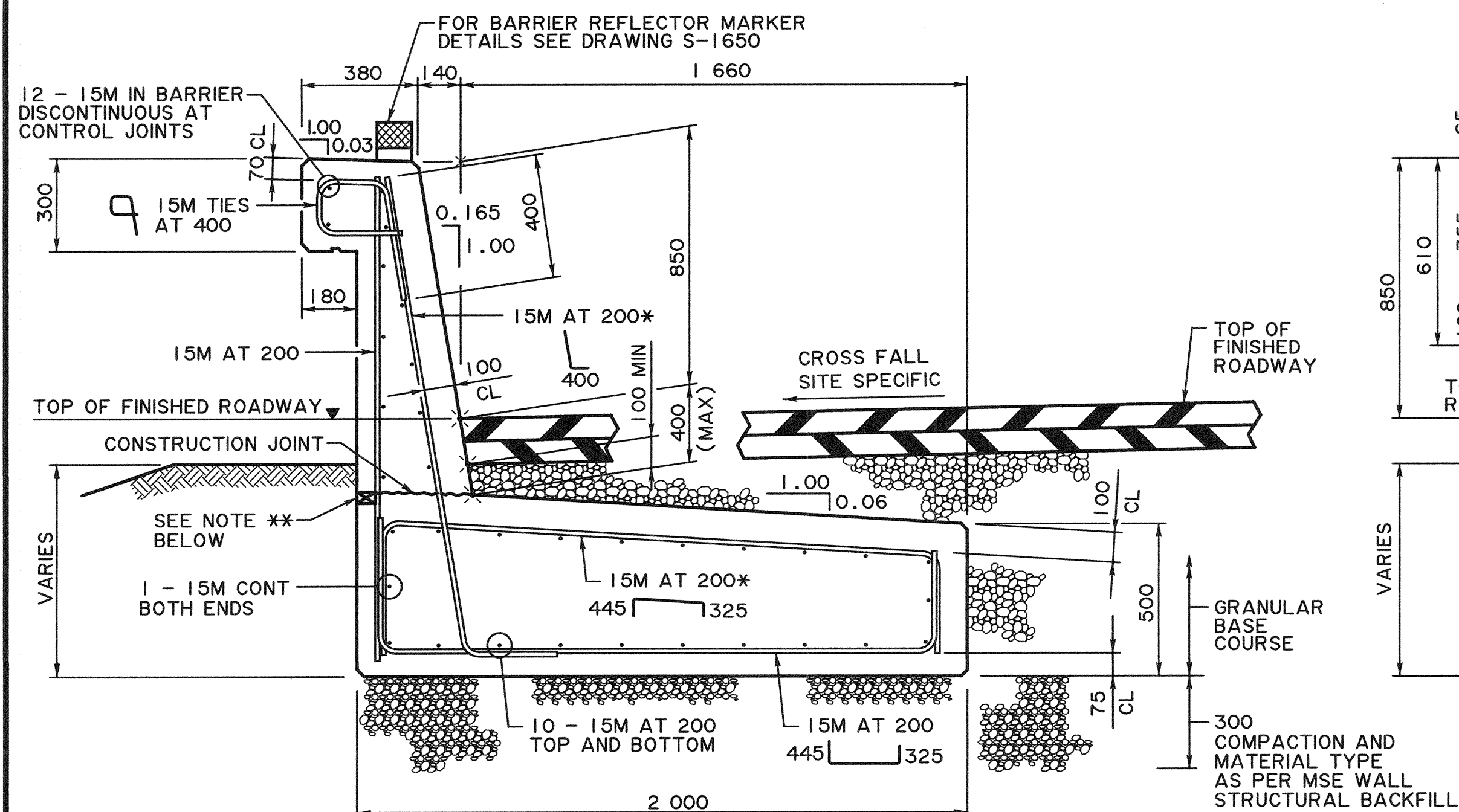
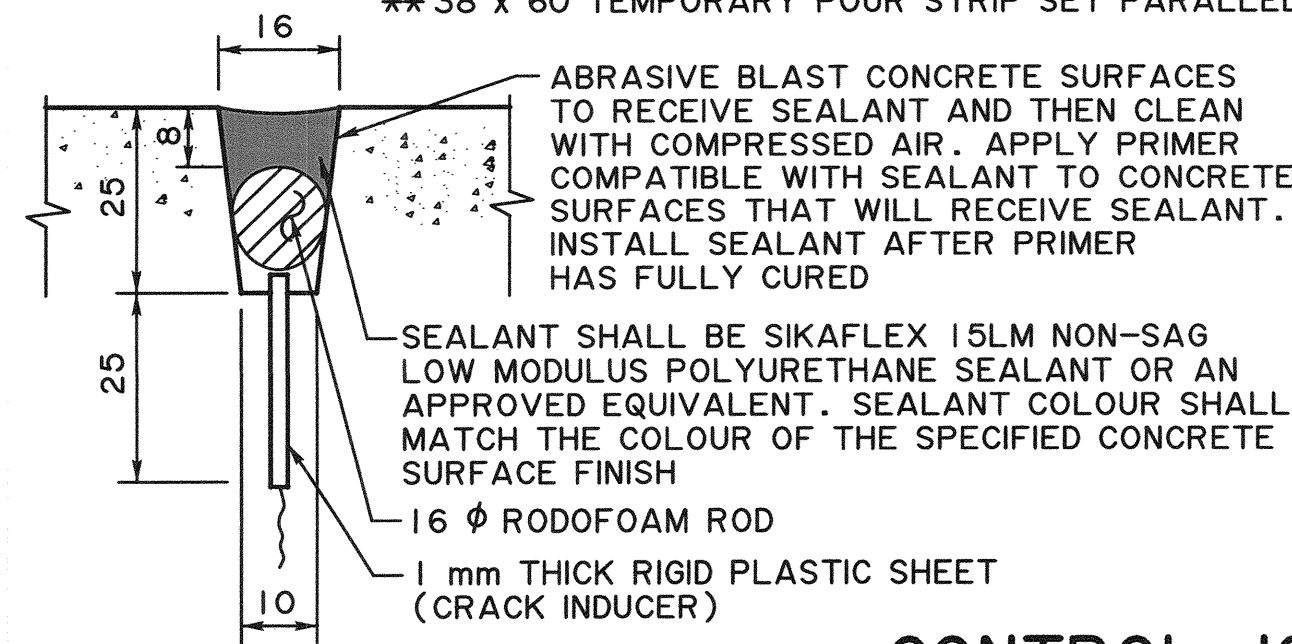




A TL-4 CONCRETE BARRIER OVER MSE WALL
NOTE:
* 15M AT 100 WITHIN 1 000 OF CONTROL JOINTS
1:15

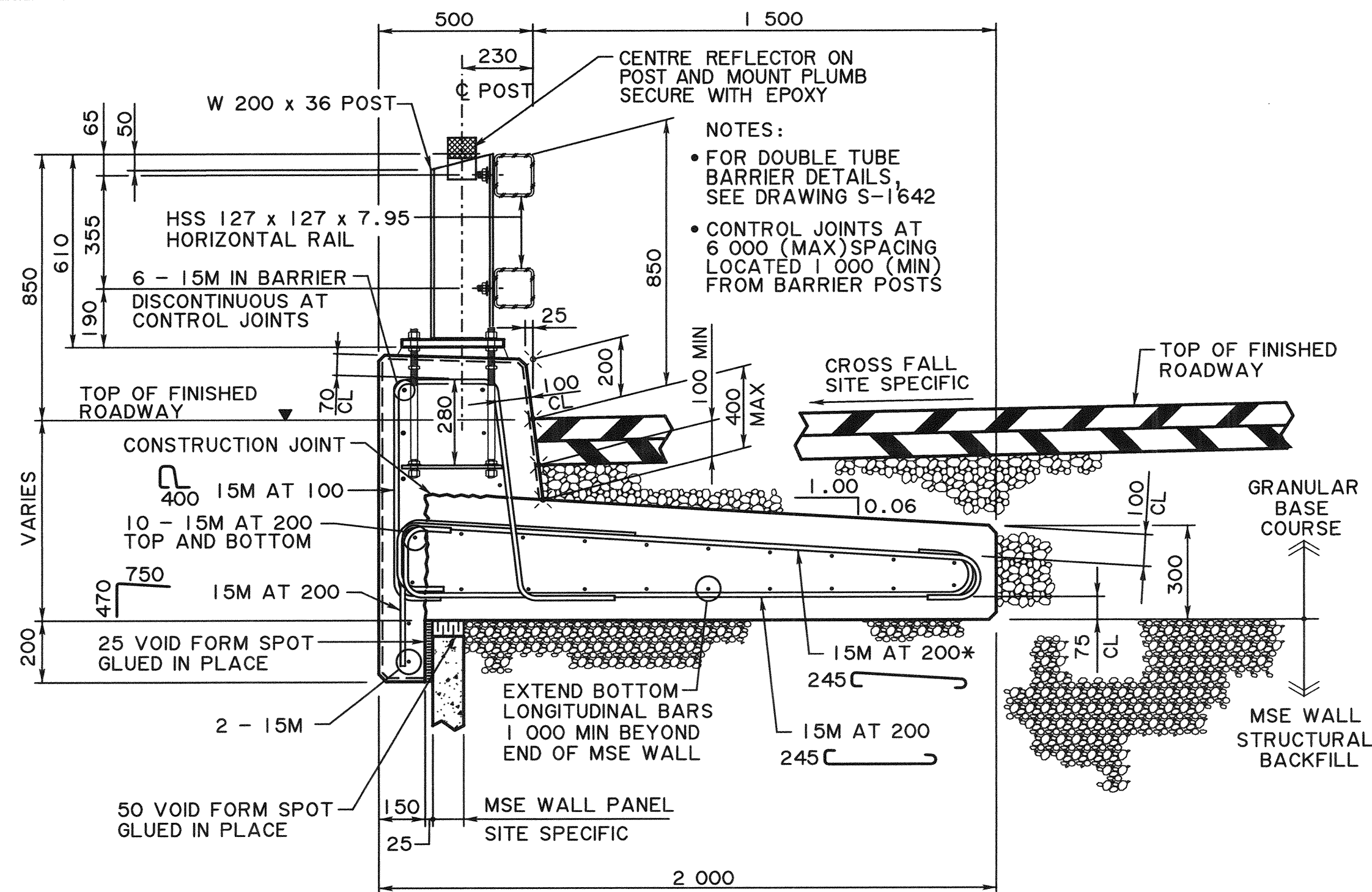


B TL-4 CONCRETE BARRIER END TREATMENT BEYOND MSE WALL
NOTES:
* 15M AT 100 WITHIN 1000 OF CONTROL JOINTS OR END OF BARRIER
** 38 x 60 TEMPORARY POUR STRIP SET PARALLEL TO FINISHED ROADWAY
1:15

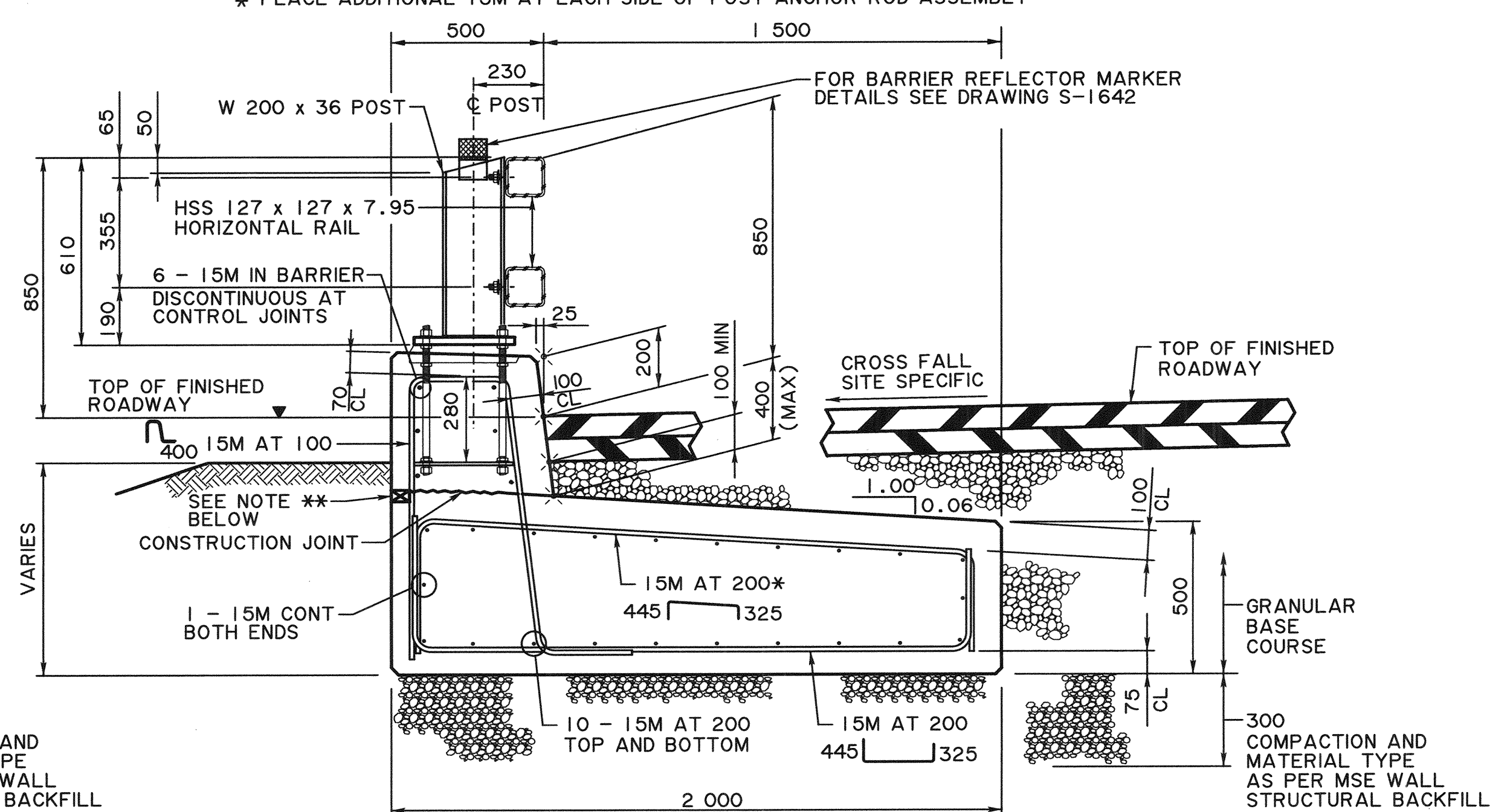


CONTROL JOINT DETAIL

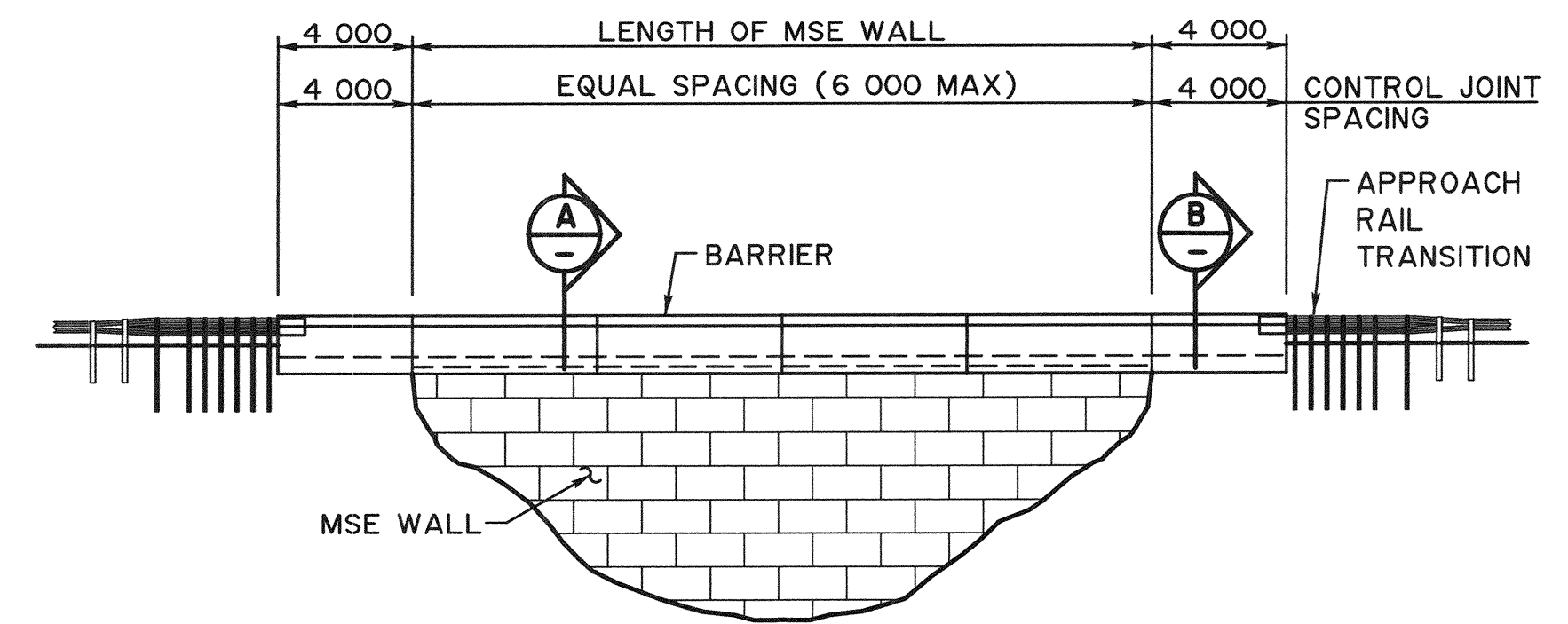
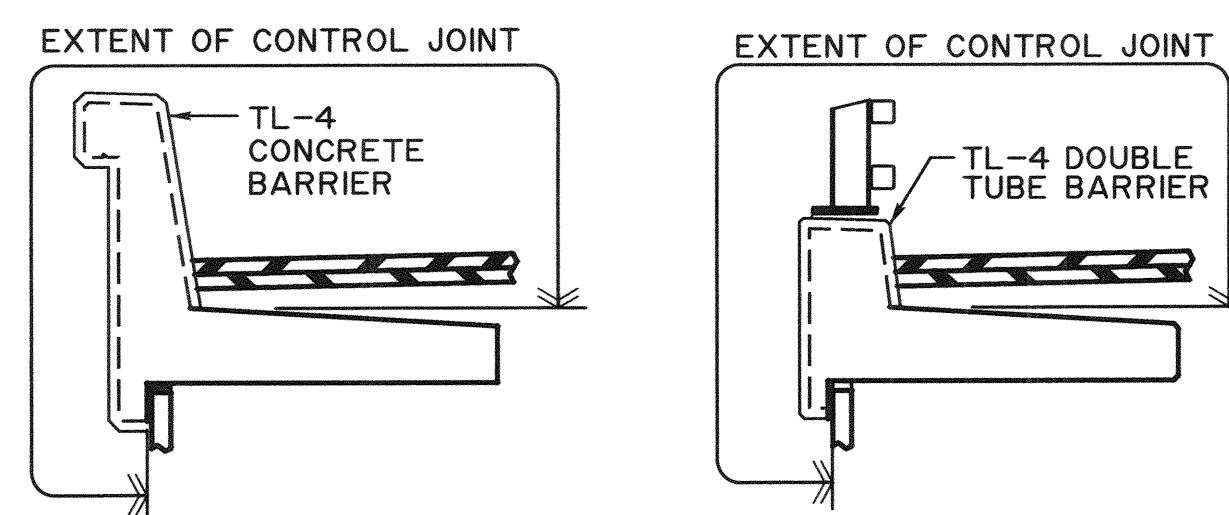
- NOTES:
- AFTER THE ENTIRE BARRIER FOOTING HAS BEEN CAST, THE CONCRETE BARRIER SHALL BE PLACED CONTINUOUSLY WITH FORMED CONTROL JOINTS AT 6 000 MAX SPACING. AT CONTROL JOINTS, LONGITUDINAL REINFORCEMENT IN THE BARRIER SHALL BE DISCONTINUOUS AND HAVE 60 CONCRETE COVER FROM THE CENTRELINE OF THE JOINTS
 - CONTROL JOINTS SHALL BE CENTRED BETWEEN BRIDGERAIL POST
 - CONTROL JOINT CRACK INDUCER SHALL BE REMOVED PRIOR TO SURFACE PREPARATION AND APPLICATION OF SEALANT PRIMER
 - CONTROL JOINT SEALANT SHALL BE APPLIED AND CURED PRIOR TO PLACING WATERPROOFING AND ACP



A TL-4 DOUBLE TUBE BARRIER OVER MSE WALL
NOTE:
* PLACE ADDITIONAL 15M AT EACH SIDE OF POST ANCHOR ROD ASSEMBLY
1:15



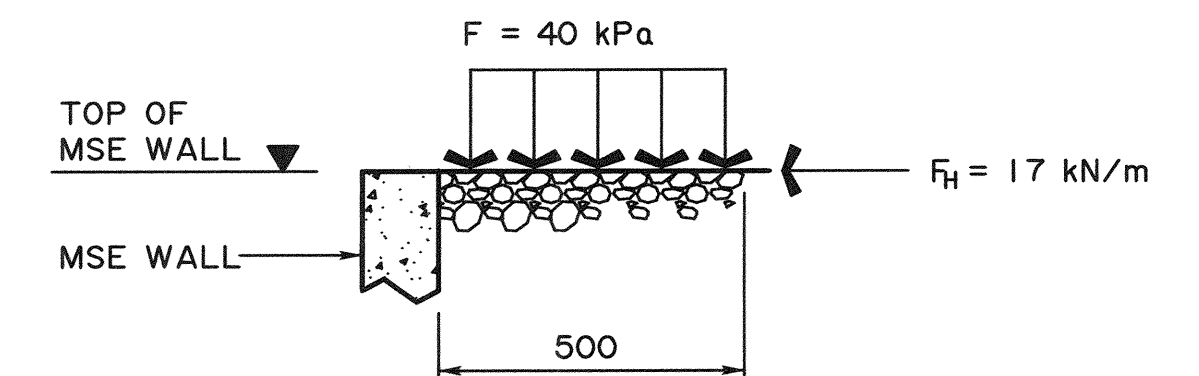
B TL-4 DOUBLE TUBE BARRIER END TREATMENT BEYOND MSE WALL
NOTES:
* PLACE ADDITIONAL 15M AT EACH SIDE OF POST ANCHOR ROD ASSEMBLY
** 38 x 60 TEMPORARY POUR STRIP SET PARALLEL TO FINISHED ROADWAY
1:15



TL-4 BARRIER ELEVATION
(CONCRETE BARRIER SHOWN)
(DOUBLE TUBE BARRIER SIMILAR)
1:200

GENERAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
- MSE WALL VEHICLE IMPACT LOADING DIAGRAM DUE TO UNFACTORED TL-4 VEHICLE IMPACT ONLY:



MSE WALLS SHALL ALSO BE DESIGNED FOR SURCHARGE LOADING DUE TO OVERBURDEN SOILS, BARRIER AND FOOTING SELF-WEIGHT, AND FROM TRAFFIC LOADING, IN ADDITION TO THE VEHICLE IMPACT LOADING SHOWN ABOVE

- FOR DOUBLE TUBE BARRIER AND END DETAILS INCLUDING CURB AND APPROACH RAIL TRANSITION DETAILS SEE DRAWINGS, S-1642 AND S-1643
- FOR SINGLE SLOPE CONCRETE BARRIER AND END DETAILS AND APPROACH RAIL TRANSITION DETAILS SEE DRAWINGS, S-1650 AND S-1651

CONSTRUCTION

- BARRIER CONFIGURATIONS ARE BASED ON BARRIER CONFIGURATIONS THAT HAVE BEEN CRASHED TESTED AND MEET THE REQUIREMENTS OF PERFORMANCE LEVEL 2 OF THE AASHTO GUIDE SPECIFICATIONS FOR BRIDGE RAILING, 1989. RAILING, (EQUIVALENT TO NCHRP 350, TEST LEVEL 4)
- FOOTING TO BE POURED IN MAXIMUM 12 000 SEGMENTS. REINFORCING SHALL BE CONTINUOUS ACROSS KEYED CONSTRUCTION JOINTS
- FOOTING CONSTRUCTION JOINTS SHALL BE LOCATED AT BARRIER CONTROL JOINTS
- ALL CONCRETE SHALL BE CLASS HPC ($f_c = 45 \text{ MPa}$)
- ALL CORNERS SHALL HAVE A 20 CHAMFER OR FILLET UNLESS NOTED OTHERWISE
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 400 MPa UNLESS NOTED OTHERWISE AND MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR BRIDGE CONSTRUCTION SECTION 5
- CLEAR CONCRETE COVER IS 60 UNLESS NOTED OTHERWISE. THE CONCRETE COVER TO REINFORCING STEEL SHALL BE WITHIN CONCRETE PLACEMENT TOLERANCES AS SPECIFIED IN THE STANDARD SPECIFICATIONS FOR BRIDGE CONSTRUCTION
- VOID FORM SHALL BE A COMPRESSIBLE EXPANDED POLYSTYRENE PRODUCT WITH A MAXIMUM COMPRESSIVE STRENGTH OF 50kPa AT 50% DEFORMATION SUCH AS GEOSPAN FROM PLASTIFAB OR APPROVED EQUIVALENT

ERECTION

- ALL ALIGNMENT NUTS MUST BE "SNUG- TIGHT" BEFORE ANCHOR RODS ARE FULLY PRETENSIONED
- LINE AND ELEVATION OF BARRIER SHALL BE SET BY INSTRUMENT AFTER FOOTING IS CAST
- SLIP FORMING IS NOT PERMITTED WITHOUT APPROVAL FROM THE DEPARTMENT

RECOMMENDED DIRECTOR BRIDGE ENGINEERING				Alberta Transportation			
APPROVED EXECUTIVE DIRECTOR TECHNICAL STANDARDS BRANCH				TL-4 SINGLE SLOPE CONCRETE AND DOUBLE TUBE TYPE BARRIERS ALONG TOP OF MSE WALL			
REV		DATE		REVISION		BY	
DESIGNER		CM CM		CHECKER		MT	
DATE		2021-3-2		SHEET		1 OF 1	
DRAWING		S-1798-20		DATE		2020-09-04	