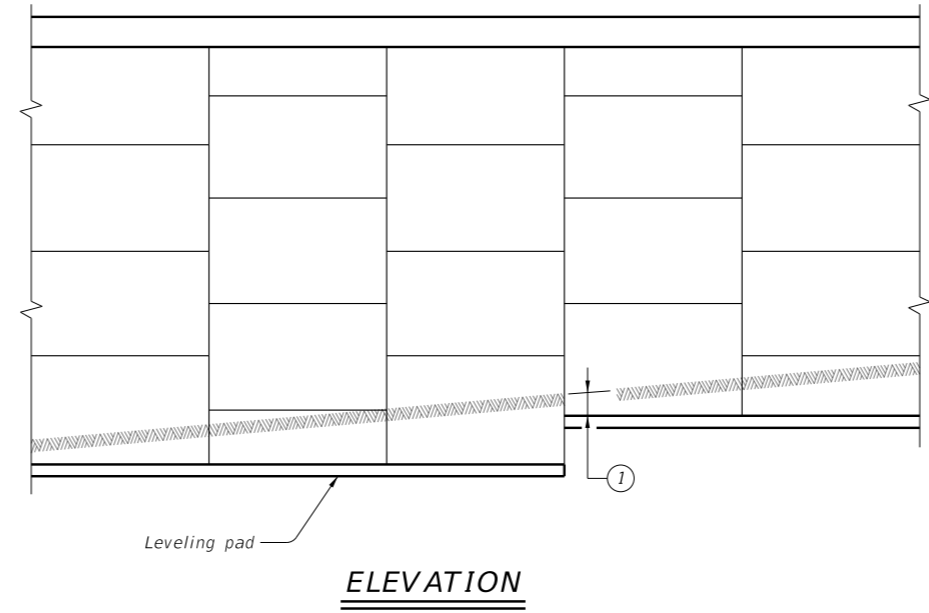
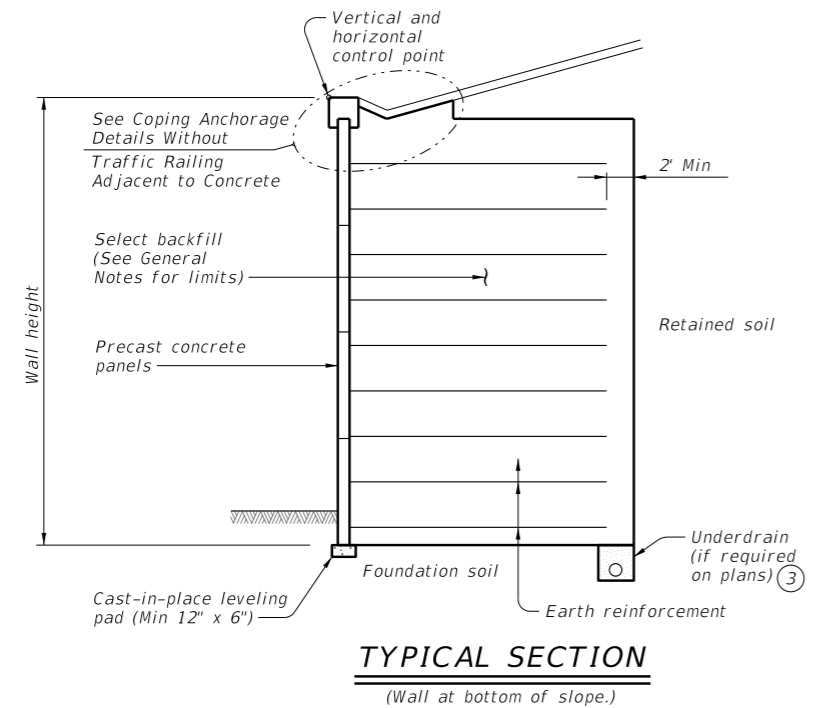
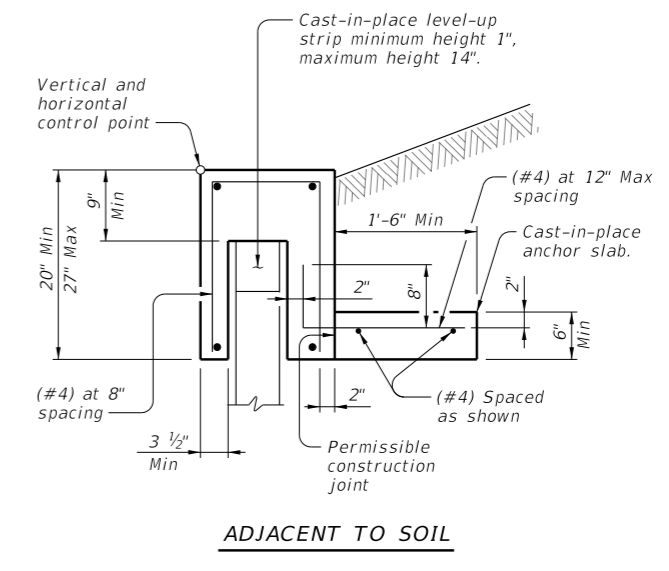
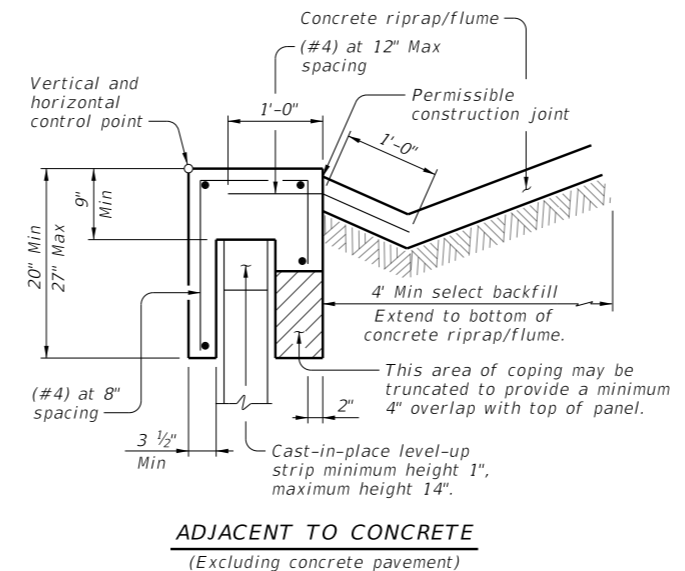
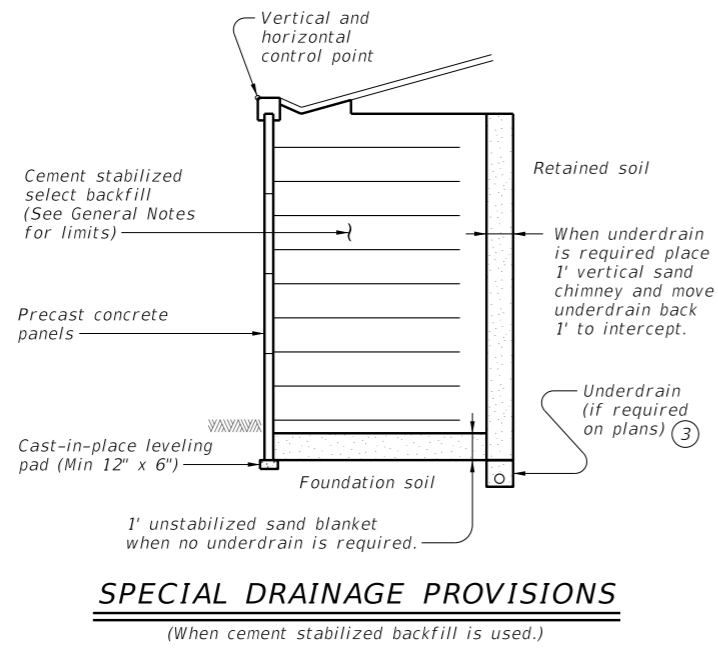


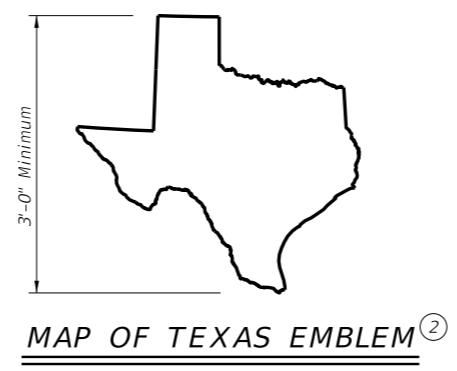
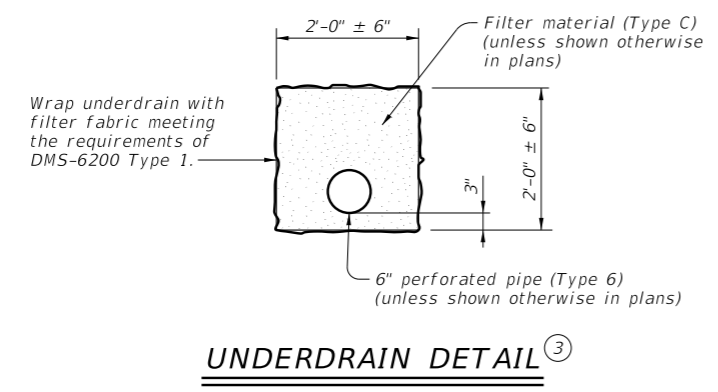
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- 1 Minimum embedment conforming to values given on the RW(MSE)DD standard.
- 2 Form map of Texas emblem into a wall panel next to each bridge abutment. Submit the exact location of each emblem to the Engineer for approval. The cost of forming the emblems will not be paid for directly, but is subsidiary to Item 423, "Retaining Walls." Inset the map of Texas a minimum of 3/4" into the face of the panel with a smooth finish. Finish the inset area in a contrasting color as approved by the Engineer.
- 3 Provide underdrain pipe and filter material in accordance with Item 556, "Pipe Underdrains."
- 4 Anchor precast coping to prevent rotation or displacement. Use these details to develop custom anchorage for precast copings. Provide details that include coping reinforcement. Concrete flume (if required) is paid for separately from Item 423, "Retaining Walls."

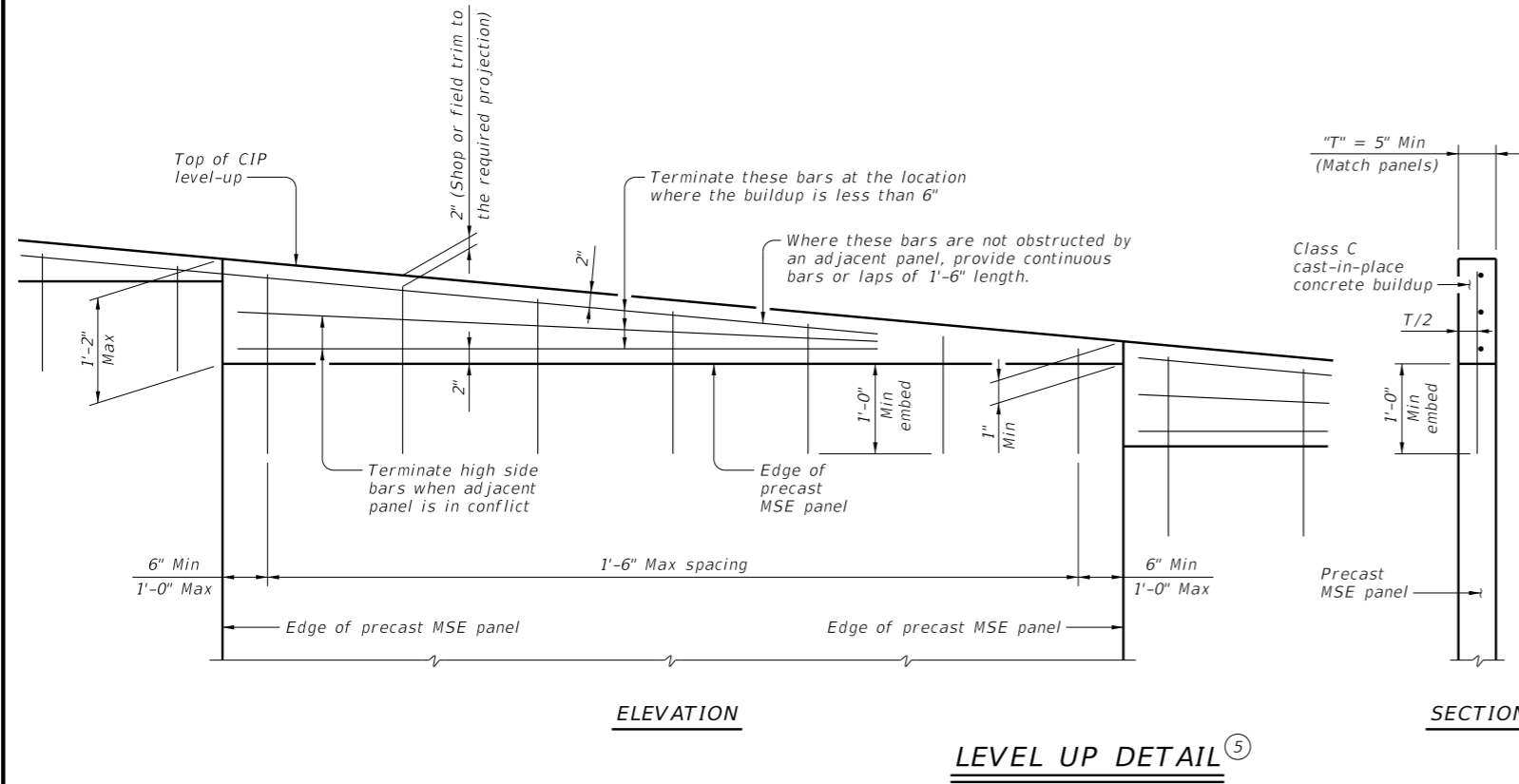


COPING ANCHORAGE DETAILS WITHOUT TRAFFIC RAILING 4



Texas Department of Transportation		Bridge Division Standard		
<h2 style="margin: 0;">MECHANICALLY STABILIZED EARTH RETAINING WALL</h2> <h3 style="margin: 0;">RW(MSE)</h3>				
FILE: RW-MSE-ASD-25.dgn	DN: TxDOT	CK: TxDOT	DW: JER	CR: RLE
©TxDOT October 2025	CONT	SECT	JOB	HIGHWAY
REVISIONS				
DIST	COUNTY		SHEET NO.	

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- ⑤ Cast vertical bars into the top of panels. At Contractor's option vertical bars may be embedded 4 inches with a Type III Class C epoxy anchorage system. Follow manufacturer's directions for installing the epoxy vertical bars.
- ⑥ Soil design parameters must be based on long term soil strength. Design parameters must be listed on the RW(MSE)DD standard.

⑦

SELECT BACKFILL UNIT WEIGHT			
Type AS, BS & DS	Unit Weight	Internal Stability	External Stability
	105 PCF	Pullout	Sliding, Overturning, Eccentricity
	125 PCF	Rupture	Bearing

PRECAST COPINGS:
 Wall supplier is to maximize lengths of precast coping. Provide precast coping in 10-foot minimum lengths (typical.) To optimize coping lengths at radiuses, ends of runs, or other wall geometric conditions favorable to shorter coping sections, shorter lengths may be used pending approval by the Engineer. This applies only to coping without railing.

JOINT SEALANT:
 Seal joints between coping segments in accordance with Item 438, "Cleaning and Sealing Joints." Provide Class 4 joint seal. Place sealant flush with coping surface. The purpose of the joint sealing is to reduce surface drainage infiltration into the retaining wall backfill. Sealing coping joint is considered subsidiary to other items.

EARTH REINFORCEMENT:
 Place the uppermost earth reinforcement no more than 3 feet below the top of wall. Place the lowest level of earth reinforcement no more than 2 feet above the top of the leveling pad. Provide earth reinforcement with a minimum wire size of W7.0. If different longitudinal and cross wires are used in an earth reinforcement mesh, the smaller wire must be at least 50% of the cross sectional area of the larger wire. A maximum of four wire mesh configurations (wire sizes) will be allowed on a project. Provide unique transverse bar spacing for each mesh configuration, differing from other configurations by a minimum of 3 inches. Step earth reinforcement lengths in increments no finer than 12 inches.

PANELS:
 Fabricate standard precast concrete panels to a maximum height of 6 feet and a maximum surface area of 50 sq ft. Top and bottom panels may exceed these limitations as necessary to achieve required wall grades. Maximum height of any panel must not exceed 7 ft.-6 in. Provide a minimum panel thickness of 5 inches. Arrange panels to provide offset horizontal joints. Provide an open joint around the perimeter of the concrete panels. Configure joints such that 1) the filter fabric and/or pad materials are not exposed at the wall face and 2) the design opening is between 3/8" and 3/4". Provide a one-piece corner panel for wall angle changes of greater than 30 degrees. Butting of chamfered panels will be allowed for angle changes of 30 degrees or less.

MATERIAL NOTES:
 Provide Class C concrete for reinforced concrete and precast coping.
 Provide Class H concrete for precast concrete panels.
 Provide Class A concrete for unreinforced concrete.
 Provide Grade 60 reinforcing steel.

GENERAL NOTES:
 Section and elevation shown is for informational purposes only. Determine specific geometry based on wall layouts and other plan information. Extend select backfill specified for use within the mechanically stabilized earth volume horizontally from the back of the panels a minimum 2 feet beyond the end of the earth reinforcement. Extend select backfill vertically to the top of the panels from either the top of the leveling pad, or from 4 inches below the lowest earth reinforcement, whichever is lower. Provide concrete coping along the top of wall, at the vertical steps at bridge backwalls, and at other vertical steps along the top of wall. Provide details and calculations that establish support for panels that are affected when obstructions (inlets, drilled shafts, piling, etc.) prevent placement of soil reinforcement in their normal locations. Furnish the same earth reinforcement coverage as that required in the absence of the obstruction. For skewed (rotated) earth reinforcement, no adjustment in length is needed for skew angles less than or equal to 10 degrees. Adjust the length of earth reinforcement to provide a cosine length of the reinforcement equivalent to the stated design length for the section of wall when skew angles are greater than 10 degrees. Provide calculations that justify any alterations made to the soil reinforcement or modifications to their normal placement. Do not use panels without any soil reinforcement connected to them unless they are connected with galvanized hardware to adjacent panels which do have supporting soil reinforcement attached to them and as approved by the Engineer. Coping and anchor slabs are considered subsidiary to the Item 423, "Retaining Walls." Use these details in conjunction with the retaining wall layout, the Mechanically Stabilized Earth Retaining Wall Design Data (RW[MSE]DD) standard and other applicable standards.

Cover dimensions are clear dimensions, unless noted otherwise.

DESIGN CRITERIA NOTES:

Design Parameters:
 Base design of retaining walls on the following design parameters unless stated elsewhere in the plans:

Retained Soil	Unit Weight = 125 pcf $\phi = \textcircled{6}$ C = 0 psf
Foundation Soil	$\phi = \textcircled{6}$ C = 0 psf
Select Backfill	Unit Weight = See Table ⑦ $\phi = 34^\circ$ C = 0 psf
Cement Stabilized Select Backfill	Unit Weight = 125 pcf $\phi = 45^\circ$ C = 0 psf

Limit stress in steel and concrete in accordance with current AASHTO Standard Specifications for Highway Bridges and Interim Specifications. The minimum length of earth reinforcement are as shown on the Mechanically Stabilized Earth Retaining Wall Design Data (RW[MSE]DD) standard.

Stability Criteria:
 Stability criteria applies to both dry and drawdown analysis. Base design on the following factors of safety.

Sliding along the base of the structure	Factor of Safety ≥ 1.5
Overturning	Factor of Safety ≥ 2.0
Pullout of Earth Reinforcement at each level	Factor of Safety ≥ 1.5

Design the wall such that the base pressure resultant falls within the middle third of the retaining wall. Determine pullout resistance from test data evaluated at 3/4 inch strain.

Corrosion Criteria:
 Design the earth reinforcement elements to have a minimum design life of 75 years, using current AASHTO corrosion rates. Perform stress calculations (rupture) on the calculated earth reinforcement section remaining after 75 years. Pullout calculations may be based on non-corroded section.

		Bridge Division Standard	
<h2>MECHANICALLY STABILIZED EARTH RETAINING WALL</h2>			
<h3>RW(MSE)</h3>			
FILE: RW-MSE-ASD-25.dgn	DN: TxDOT	CK: TxDOT	DW: JER
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DATE: FILE: