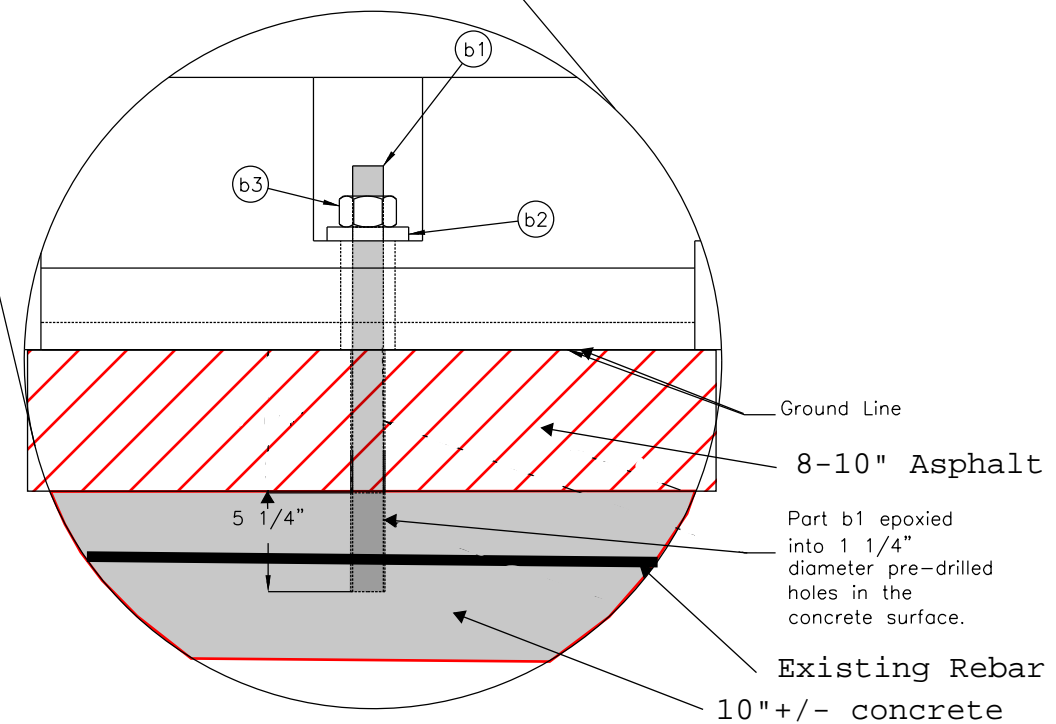
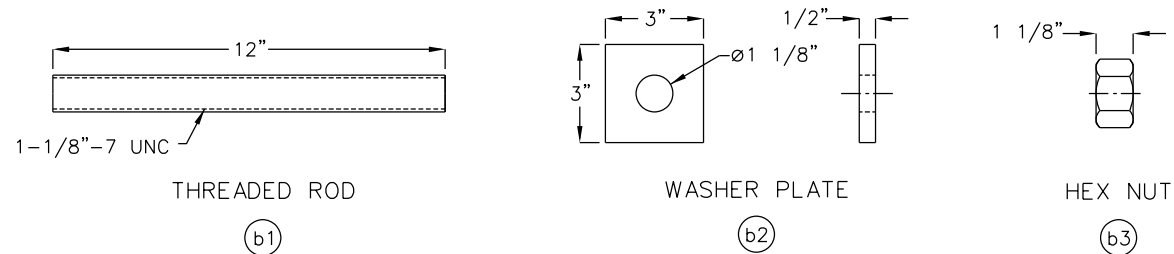
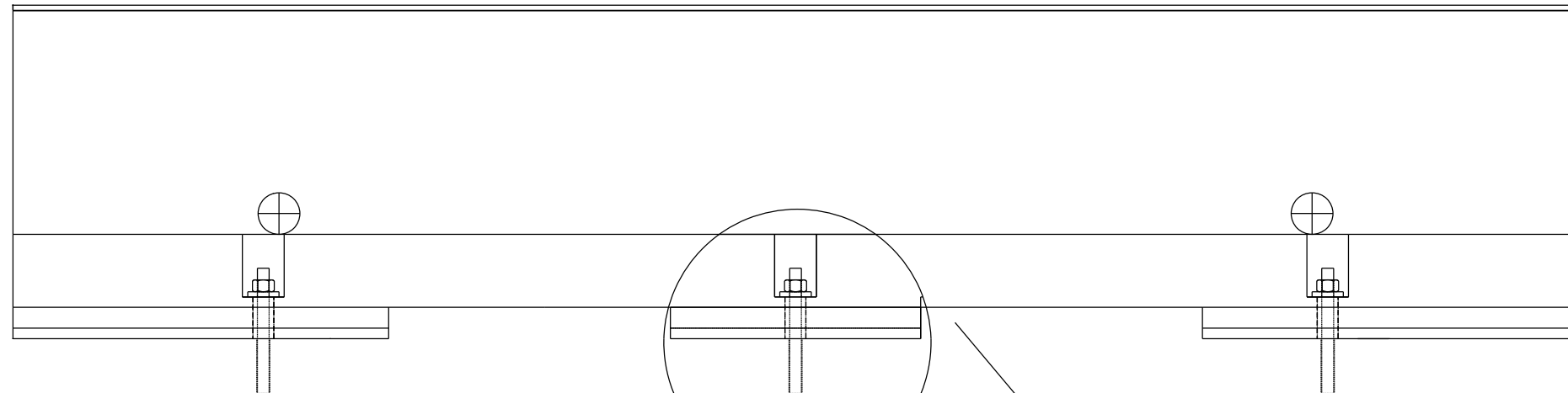
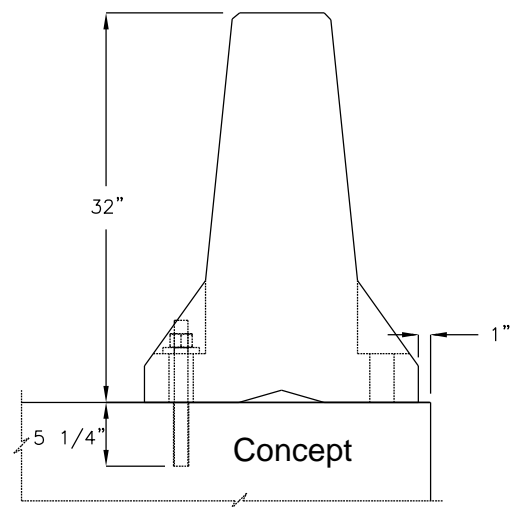


REFERENCES



WORK ZONE TRAFFIC CONTROL ENGINEER



SIGNATURE

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0	01-16-21	WEM	NEW DRAWING
#	DATE	CHK	DESCRIPTION



STANDARD DRAWING

TEMPORARY CONCRETE BARRIER F-SHAPE K-WALL DESIGN ANCHORAGE

605-235-06

EFFECTIVE LETTING DATE | JULY 2022

- Notes:
- (1) This temporary concrete barrier wall meets the Manual for Assessing Safety Hardware (MASH) requirements.
 - (2) This anchoring method is for bridge decks that has a minimum depth of 7 1/2". Bridge decks that are less than 7 1/2" thick will require a bolt through method that is fixed with a 3" by 3" by 1/4" plate washer and nut.
 - (3) This anchoring method is not intended for bridge decks with asphalt overlays. A bolt through method may be required for a bridge deck with an asphalt overlay.
 - (4) Anchors are prohibited from being partially or fully embedded into any prestressed concrete structural elements.
 - (5) A single anchor adjacent to a bridge expansion joint can be omitted from a temporary concrete barrier unit that crosses over the expansion joint. To accommodate movement at bridge expansion joints, set the temporary concrete barrier units with a 3 3/4" gap between them and omit the anchor before the expansion joint downstream from the barrier unit's gap relative to the direction of traffic.
 - (6) To avoid damaging reinforcing steel, a single anchor may be omitted from the temporary concrete barrier unit within three consecutive units. The barrier units adjacent to the unit with the omitted anchor are required to have all anchors installed. Do not omit the last anchor upstream of the barrier units' gap relative to the direction of traffic.
 - (7) Anchor barrier units in all traffic side bolt pockets, unless noted otherwise in this drawing.
 - (8) Anchor Threaded Rod (part b1) using Hilti HIT-RE 500 V3 epoxy or equivalent.
 - (9) Follow all Hilti installation guidance. Use 1/8" oversized bit. Clean holes with steel wire brushes and air nozzles to remove dust. Also ensure that there is no standing water inside of the anchor holes. Installation temperature range of 23°F-104°F. Follow cure time on package. Limit installation torque to 175 ft -lbs.
 - (10) Field test the anchorage, using a test load of 26 kips per anchor, in accordance with the requirements of the Supplemental Specification, "Adhesively Bonded Anchors and Dowels" Latest Edition.
 - (11) This anchoring method is for bridge decks that has a minimum compressive strength of 4000 psi. Bridge decks that has a compressive strength less than 4000 psi will require that the rod embedment be increased to reach an equivalent pullout strength.
 - (12) Upon removal of an anchor, completely fill in the anchor hole with non-shrink non-metallic grout. Do not reuse anchor bolts.

THIS DRAWING IS NOT TO SCALE

Item	*QTY	Description	Material Spec	Galvanization Spec
b1	3	1 1/8" Dia. UNC, 12" Long Threaded Rod	ASTM A307 GR. A	**ASTM A153 or B695 Class 55 OR F2329
b2	3	3"x3"x1/2" Washer Plate	ASTM A36	**ASTM A123
b3	3	1 1/8" Dia. Heavy Hex Nut	ASTM A563A	**ASTM A153 or B695 Class 55 OR F2329
c1	-	Hilti HIT-RE 500 V3 Epoxy or equivalent	Minimum bond strength for 1 1/8" anchor > 1,650 psi in uncracked concrete	-

*Quantities are per barrier.

**Component does not need to be galvanized for testing purposes.