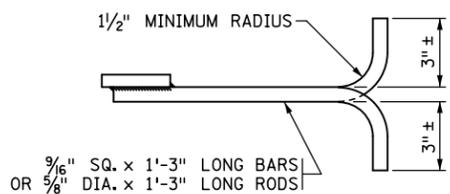
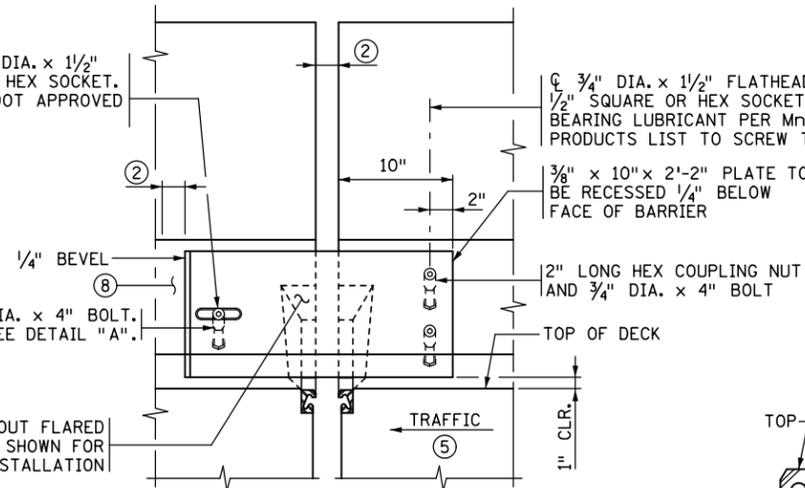


SECTION THROUGH BARRIER
TYPE F BARRIER

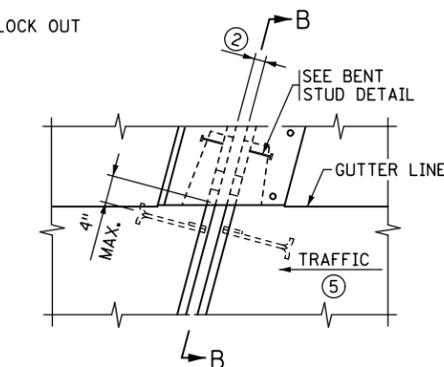


BAR-ROD DETAIL

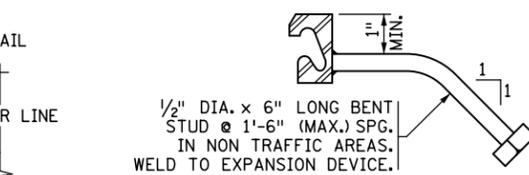
1" DIA. x 6" LONG SLOTTED HOLE FOR 3/4" DIA. x 1/2" FLATHEAD CAP SCREW WITH 1/2" SQUARE OR HEX SOCKET. APPLY BRIDGE BEARING LUBRICANT PER MnDOT APPROVED PRODUCTS LIST TO SCREW THREADS. (9)



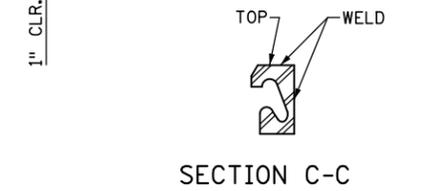
BARRIER ELEVATION



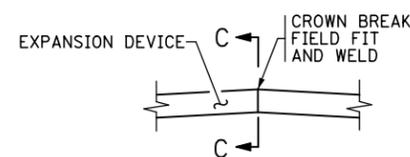
PLAN VIEW @ EXPANSION DEVICE
MEDIAN OR SIDEWALK ALTERNATE



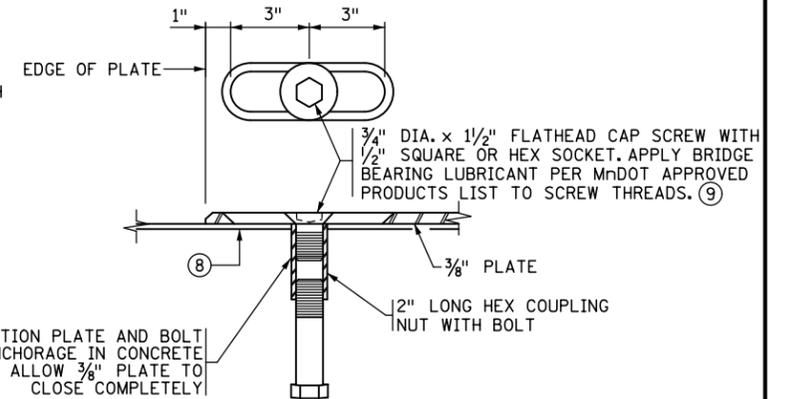
BENT STUD DETAIL



SECTION C-C



DETAIL "B"



DETAIL "A"

GENERAL NOTES

GALVANIZE STRUCTURAL STEEL AFTER FABRICATION PER SPEC. 3394. GALVANIZE FASTENERS PER SPEC. 3392.

LOCATE JOINTS IN EXTRUSION AT BREAKS IN TRANSVERSE PROFILE AND AS OTHERWISE REQUIRED, WITH CLOSE FIT, WELDED JOINTS. REPAIR AFTER WELDING PER SPEC. 2471.3.L.

PROVIDE STRUCTURAL STEEL PER SPEC. 3306 OR SPEC. 3309.

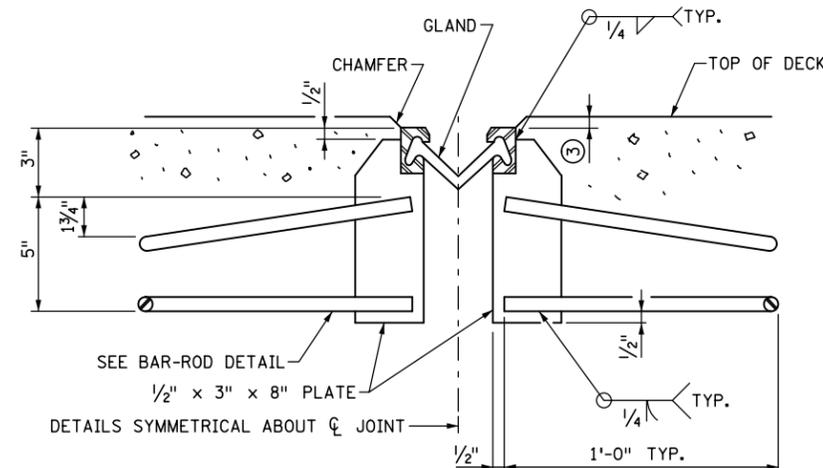
STRAIGHTEN EXPANSION DEVICE TO A TOLERANCE OF 1/8" IN 10 FT.

3/4" DIA. X 1/2" FLATHEAD CAP SCREW WITH 1/2" SQUARE OR HEX SOCKET PER SPEC 3391. COUNTERSINK CAP SCREWS 1/16" BELOW TOP OF PLATE. APPLY BRIDGE BEARING LUBRICANT PER MnDOT APPROVED PRODUCTS LIST TO SCREW THREADS. (9)

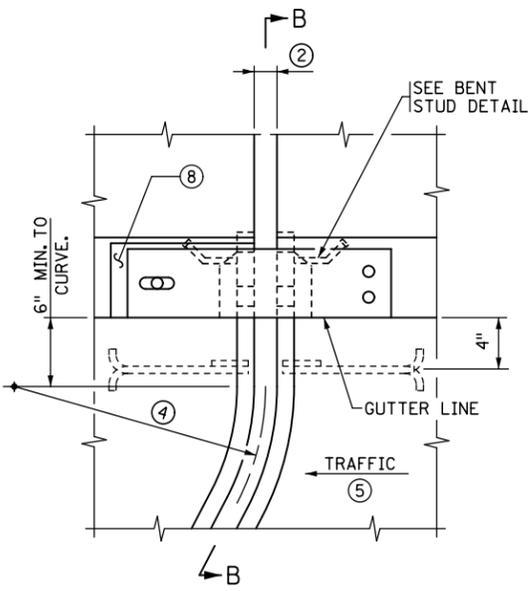
PAYMENT LENGTH IS BASED ON THE HORIZONTAL DISTANCE BETWEEN THE OUTSIDE EDGES OF THE DECK MEASURED ALONG THE CENTERLINE OF JOINT.

- (1) DIMENSIONS ARE ALONG CENTERLINE OF JOINT.
- (2) -- AT 45° F; -- AT 90° F. 2" AT ALL TEMPS.
- (3) 1/8" (1/4" MAX.), 1/2" (5/8" MAX.) WHEN SNOWPLOW FINGERS ARE USED. SNOWPLOW FINGERS ARE REQUIRED FOR SKEWS OVER 15° AND LESS THAN 50°.
- (4) SEE SUPERSTRUCTURE DETAILS FOR RADIUS.
- (5) SEE SHEET NO. ... FOR DIRECTION OF TRAFFIC.
- (6) PLACE BAR-ROD NORMAL TO JOINT ON NEW BRIDGES AND JOINT REPLACEMENTS. ON JOINT REPLACEMENTS WHEN SKEW IS OVER 15° AND LESS THAN 50° BEND RODS PARALLEL TO CL ROADWAY.
- (7) EXTEND GLAND 1" MIN. BEYOND THE TOP OF THE EXTRUSION.
- (8) PROVIDE SMOOTH CONCRETE FINISH BENEATH PLATE WITH 0" MIN. TO 1/8" MAX. GAP BETWEEN CONCRETE AND UNDERSIDE OF PLATE. PROVIDE BOND BREAKER (DUCT TAPE, ETC.) TO UNDERSIDE OF COVER PLATE.
- (9) LUBRICANT PER MnDOT APPROVED/QUALIFIED PRODUCTS LIST: BRIDGE GREASE.

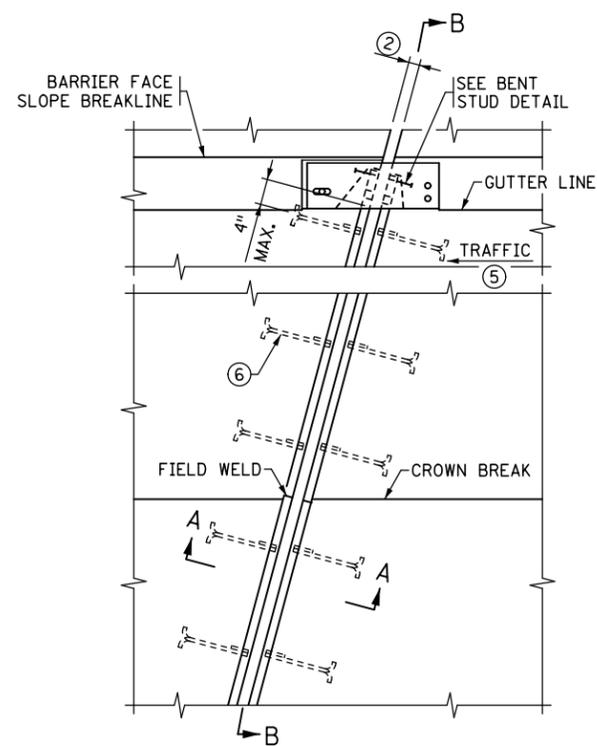
DESIGNER NOTE:
CHOOSE ONE JOINT
OPENING NOTE AND
DELETE OTHER.



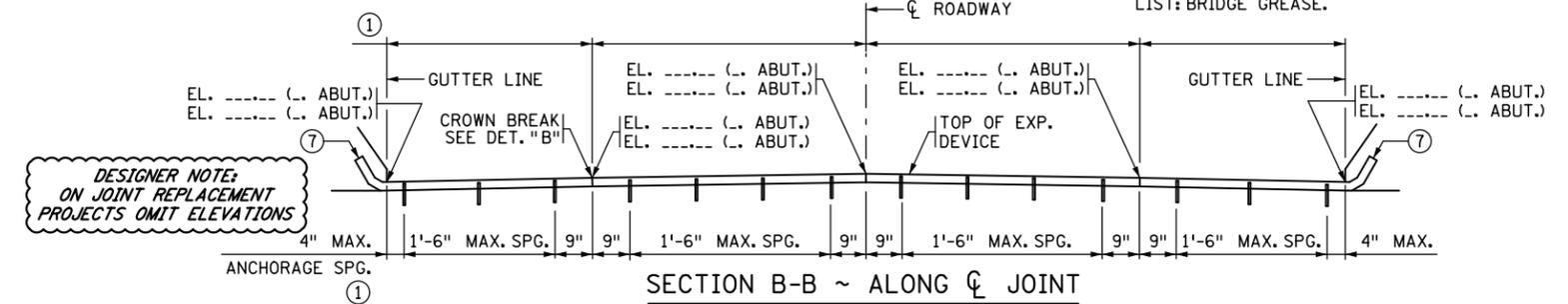
SECTION A-A



PLAN VIEW @ EXPANSION DEVICE
WITH CURVED DEVICE ALTERNATE



PLAN VIEW @ EXPANSION DEVICE
WITH STRAIGHT DEVICE



SECTION B-B ~ ALONG CL JOINT

ELEVATIONS SHOWN ARE 1/8" BELOW TOP OF SLAB @ CL JOINT
ELEVATIONS SHOWN ARE 1/2" BELOW TOP OF SLAB @ CL JOINT

REVISION: 01-05-2017
APPROVED: AUGUST 24, 2016
Kevin Westrom
STATE BRIDGE ENGINEER

CERTIFIED BY _____
LICENSED PROFESSIONAL ENGINEER DATE _____
NAME: _____ LIC. NO. _____

TITLE: WATERPROOF EXPANSION DEVICE (WITH TYPE F BARRIER)

DES: _____ DR: _____
CHK: _____ CHK: _____
APPROVED: _____
SHEET NO. OF SHEETS _____ BRIDGE NO. _____

FIG. 5-397.627(A)