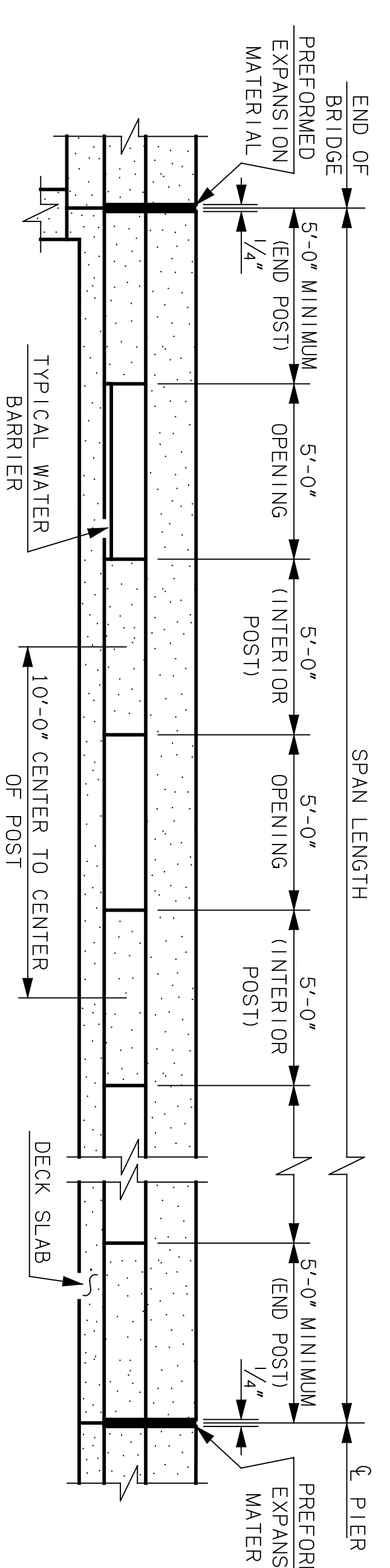


AT EXPANSION ABUTMENTS

ELEVATION OF RAIL WITH EXPANSION JOINTS

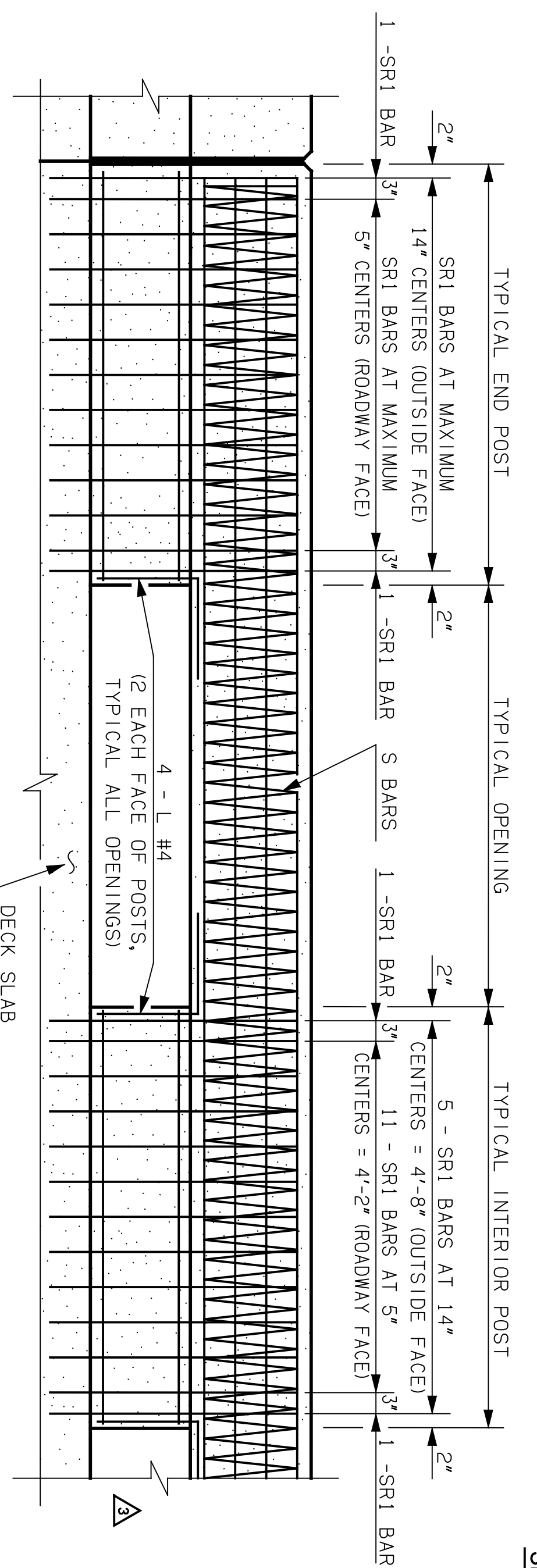
AT EXPANSION PIERS



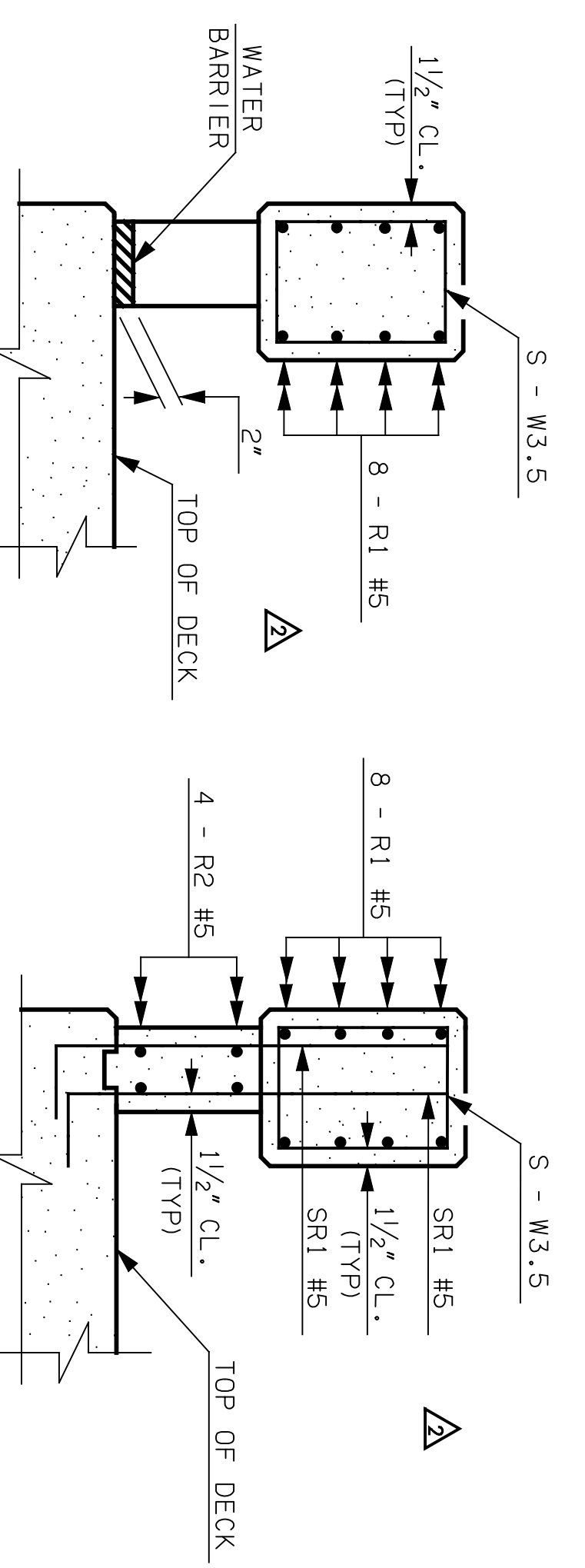
AT FIXED ABUTMENTS

ELEVATION OF RAIL WITH FIXED JOINTS

AT FIXED PIERS

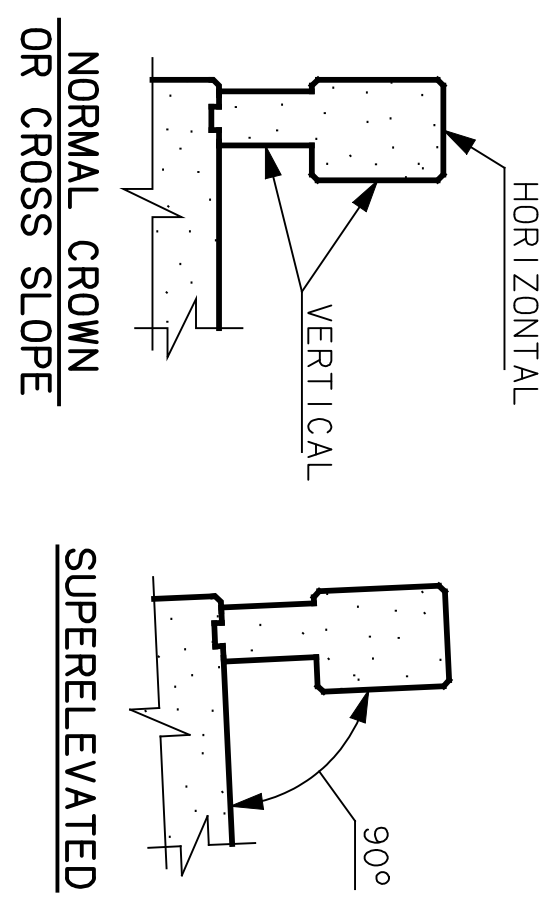


TRAFFIC RAIL REINFORCING



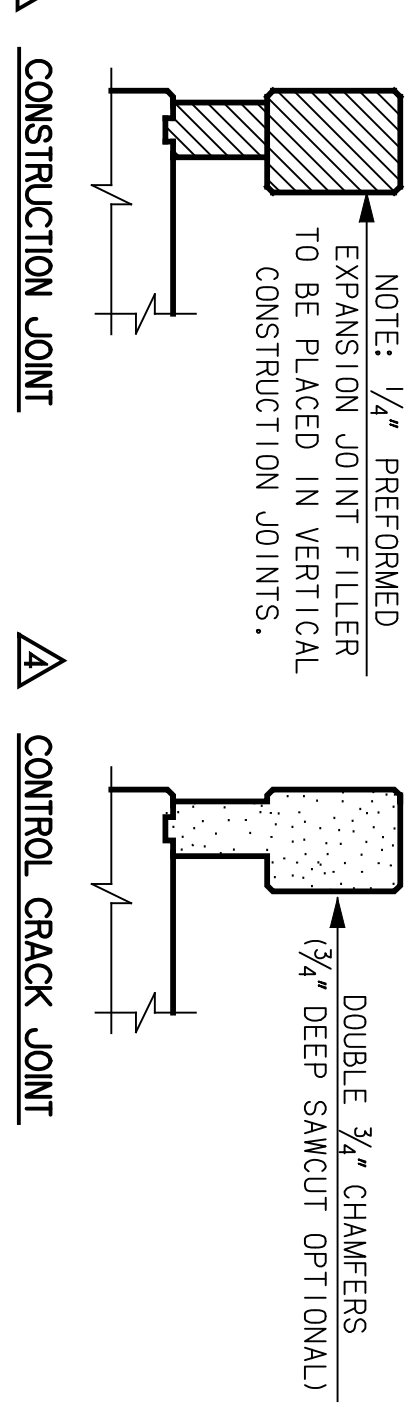
SECTION THRU POST OPENING

SECTION THRU RAIL AT BRIDGE DECK OR APPROACH SLAB



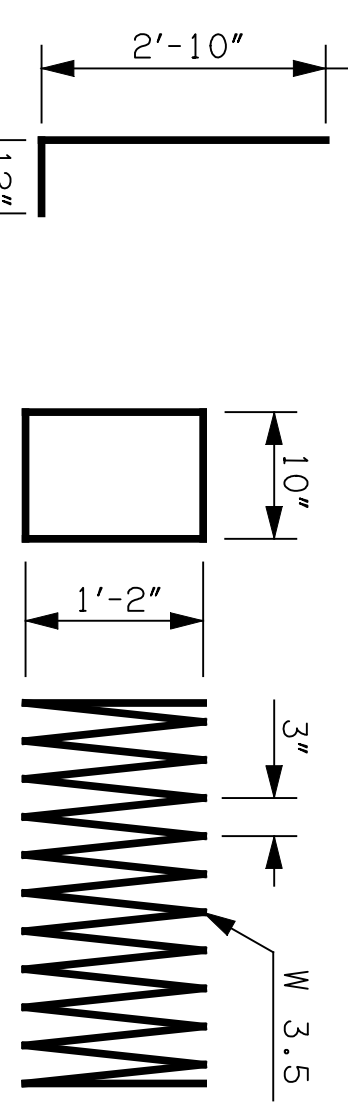
NORMAL CROWN OR CROSS SLOPE
SUPERELEVATED

NOTE: WHERE ROADWAY SURFACE TRANSITIONS FROM NORMAL CROWN SLOPE TO FULL SUPERELEVATION, UNIFORMITY VARY THE ANGLE FORMED BY THE FACE OF THE RAILING AND THE ROADWAY BETWEEN THE LIMITS SHOWN ABOVE.



CONSTRUCTION JOINT

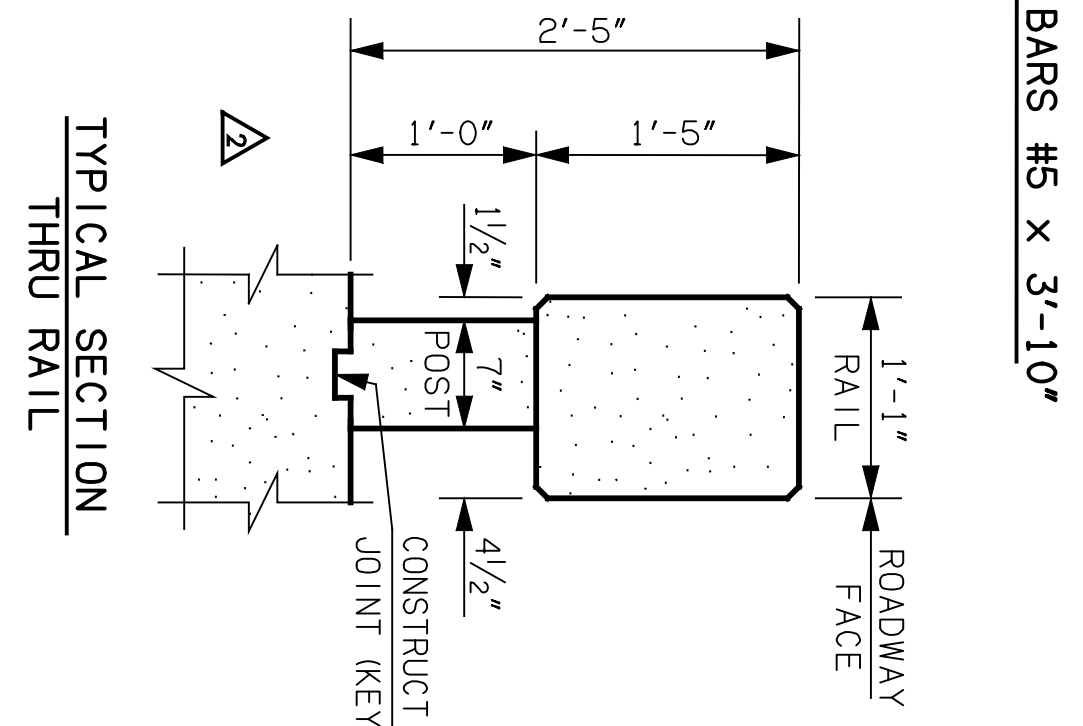
CONTROL CRACK JOINT



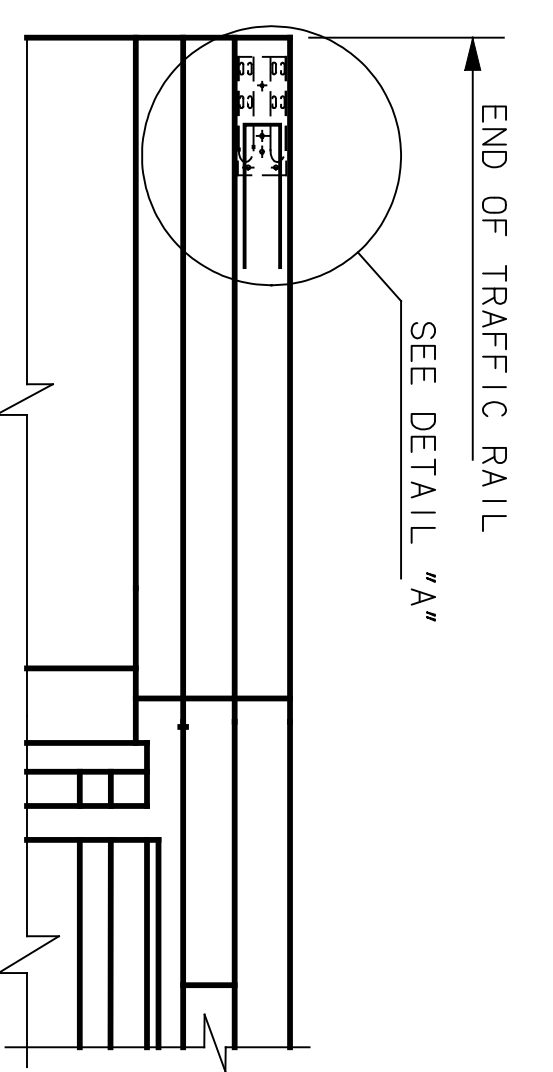
S BAR

T BARS #4 x 6'-10"

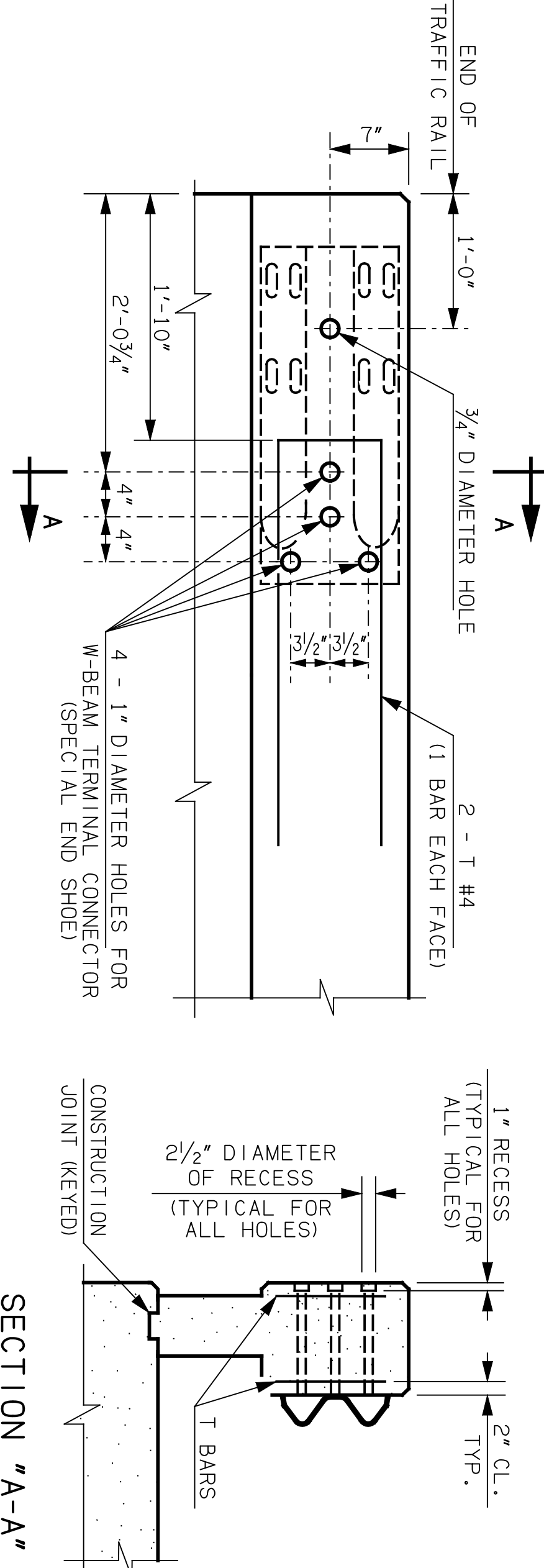
L BAR #4 x 2'-0"



TYPICAL SECTION THRU RAIL



GUARDRAIL CONNECTION



DETAIL "A-A"

SECTION "A-A"

CONCRETE TRAFFIC RAIL NOTES

- ▲ CONSTRUCT THE CONCRETE TRAFFIC RAIL TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (ENGLISH) AS WELL AS THE FOLLOWING REQUIREMENTS:
- ▲ **S-BARS (SPIRAL BARS):** WHEN TWO OR MORE S-BARS ARE USED IN A CONTINUOUS RAIL SECTION, BUT THEIR ENDS TOGETHER WITHIN THE CENTER 3'-0" OF A RAIL POST, S-BARS ARE NOT TO BE EPOXY COATED.
- ▲ **CLASS AA CONCRETE:** CLASS AA CONCRETE SHALL BE USED IN THE CONCRETE TRAFFIC RAIL. ALL COSTS OF CONCRETE TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE TRAFFIC RAIL (TR3).

▲ **SR-BARS VERTICAL POST BARS:** PLACE AND TIE ALL SR1 BARS BEFORE CONCRETE IS PLACED IN THE DECKSLAB AND APPROACH SLABS AS APPLICABLE. ALL REINFORCING STEEL SHALL BE EPOXY COATED REINFORCING STEEL AND SHALL BE PAID FOR IN THE PRICE BID PER LB OF EPOXY COATED REINFORCING STEEL.

▲ **WATER BARRIER:** WATER BARRIERS, AS DETAILED, SHALL BE PROVIDED AT RAIL OPENINGS THAT DRAIN ONTO UNDERCROSSING ROADWAYS AND SIDEWALKS AS SHOWN IN THE PLANS AND AT OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. PLACE THE CONCRETE FOR THE WATER BARRIER CONCURRENTLY WITH THE PLACEMENT OF THE POSTS. INCLUDE THE COST OF WATER BARRIERS IN THE PRICE BID FOR CONCRETE RAIL (TR3).

▲ **CONCRETE RAIL CONSTRUCTION:** THE GUIDELINES AS SHOWN IN THE CONSTRUCT RAILING WITHIN THIS SHEET UNLESS OTHERWISE SHOWN IN THE PLANS. PLACE 1/4" THICK PREFORMED EXPANSION MATERIAL IN THE CONSTRUCTION JOINT, SUCH THAT IT COVERS THE ENTIRE AREA OF THE RAIL AND POST IN ACCORDANCE WITH THE DETAILS SHOWN.

▲ **CONSTRUCTION JOINTS:** PLACE A CONSTRUCTION JOINT AT EACH FIXED ABUTMENT AND FIXED PIER, AND AT OTHER LOCATIONS AS SHOWN IN THE PLANS. PLACE 1/4" THICK PREFORMED EXPANSION MATERIAL IN THE CONSTRUCTION JOINT, SUCH THAT IT COVERS THE ENTIRE AREA OF THE RAIL AND POST IN ACCORDANCE WITH THE DETAILS SHOWN.

▲ **EXPANSION JOINTS:** AT EXPANSION JOINTS IN THE DECKSLAB OR APPROACH SLAB, MATCH THE WIDTH OF THE OPENING BETWEEN THE ENDS OF THE RAILING WITH THE OPENING OF THE EXPANSION JOINT. CONSTRUCT THE OPENING BETWEEN THE END POST AND THE EXPANSION JOINT AS SHOWN ON THE PLANS WITHIN THE MAXIMUM AND MINIMUM DIMENSIONS AS SHOWN ON THIS SHEET.

▲ **CONTROL CRACK JOINTS:** WHEN PLANS CALL FOR A CONTROL CRACK JOINT PROVIDE DOUBLE 3/4" CHAMFERS OR 3/4" DEEP SAWCUT IN ACCORDANCE WITH THE DETAILS SHOWN. ALL BARS SHALL BE CONTINUOUS THROUGH THE CONTROL CRACK JOINTS.

▲ **GUARDRAIL CONNECTION:** FORM OR DRILL HOLES, AS SHOWN, FOR THE CONNECTION OF THE W-BEAM GUARDRAIL TERMINAL CONNECTORS (SPECIAL END SHOES) AT THE LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. IT IS THE RESPONSIBILITY OF THE BRIDGE CONTRACTOR TO PROVIDE THE HOLES. THE CONTRACTOR THAT INSTALLS THE GUARDRAIL WILL BE RESPONSIBLE FOR INSTALLING THE W-BEAM GUARDRAIL TERMINAL CONNECTORS. INCLUDE THE COST OF "T" BARS IN THE PRICE BID FOR CONCRETE RAIL (TR3).

BASIS OF PAYMENT		
ITEM NO.	DESCRIPTION	UNIT
(S04E)	CONCRETE RAIL (TR3)	L.F.

APPROVED BY BRIDGE ENGINEER: *Clayton* DATE: 10-10-05
OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)
CONCRETE TRAFFIC RAIL (TR3)

DESCRIPTION	REVISIONS	DATE
REVISED NOTE		08/23/00
REVISED NOTE AND DETAILS		08/04/00
REVISED NOTE AND DETAIL		08/27/04
REVISED NOTE AND DETAIL		08/10/05