

CONCRETE BARRIER RAIL WITH MOMENT SLAB

* NOTCH NOT PRESENT IN AREA ABOVE END BENT BACKWALL

NOTES:

FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB, SEE CONCRETE BARRIER RAIL WITH MOMENT SLAB PROVISION.

CONCRETE BARRIER RAIL WITH MOMENT SLAB SHALL BE A MINIMUM OF 15' IN LENGTH.

EXPANSION JOINTS SHALL BE PLACED IN THE BARRIER RAIL AND MOMENT SLAB AS SHOWN ON "CONCRETE BARRIER RAIL WITH MOMENT SLAB", SHEETS 1 OF 3 AND 2 OF 3.

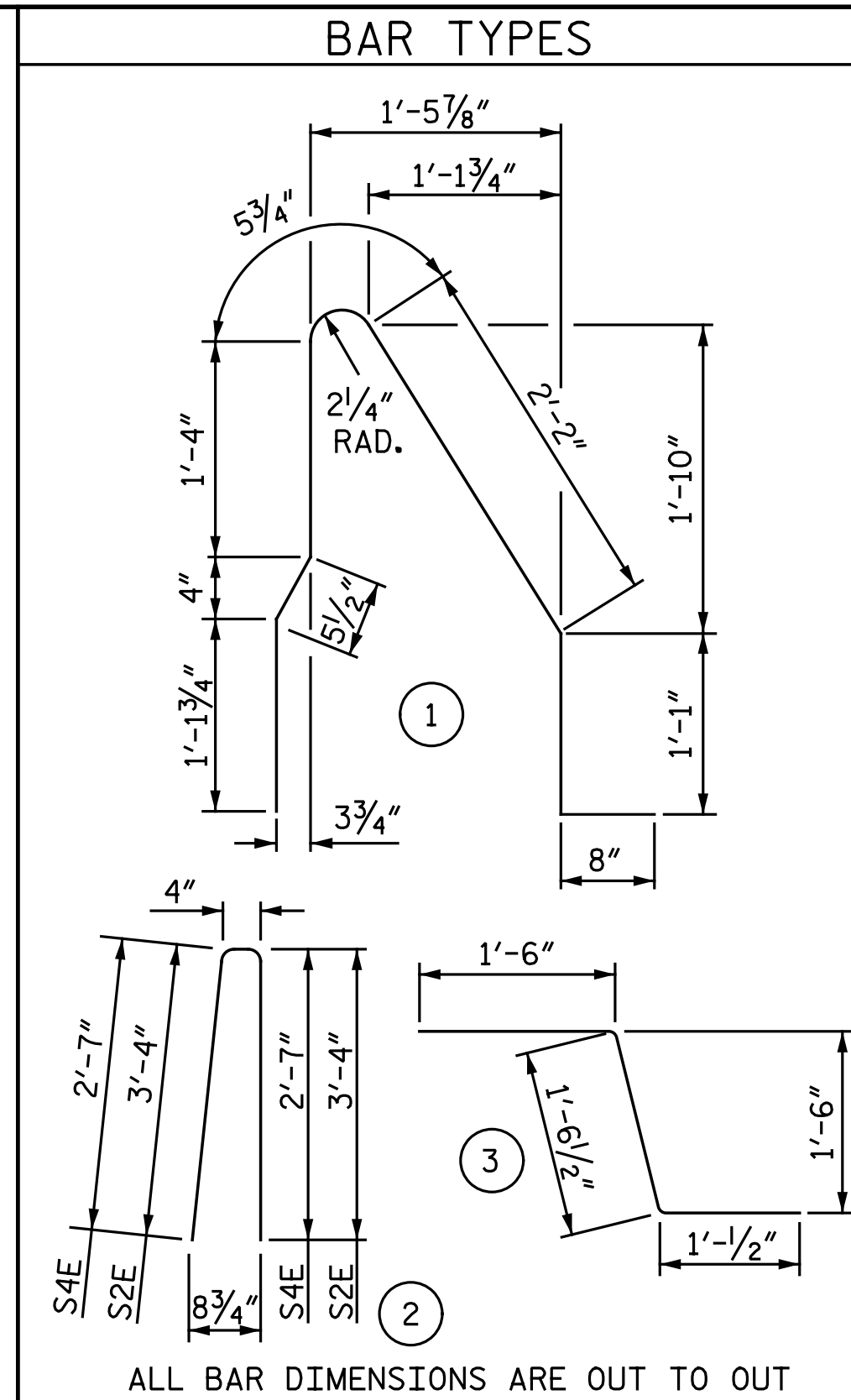
GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED SURFACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MID-POINT OF BARRIER RAIL SEGMENTS LESS THAN 20' IN LENGTH.

THE BARRIER RAIL SHALL NOT BE CAST UNTIL THE MOMENT SLAB HAS ATTAINED AN AGE OF THREE CURING DAYS OR A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI. IN ADDITION, NO FILL MATERIAL, ASPHALT, OR CONSTRUCTION EQUIPMENT IS ALLOWED ON THE MOMENT SLAB PRIOR TO SATISFYING THE MINIMUM CONCRETE CURING AND STRENGTH REQUIREMENTS.

ALL REINFORCING STEEL IN THE BARRIER RAIL SHALL BE EPOXY COATED.

IF EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, BARRIERS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH CONCRETE BARRIER RAIL WITH MOMENT SLAB OR CONCRETE FACING FOR RETAINING WALL WILL BE THICKER THAN 8", CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS SHALL BE REVISED AND SUBMITTED FOR APPROVAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A BLOCK OUT IN THE MOMENT SLAB TO ACCOMMODATE INSTALLATION OF THE EXPANSION JOINT ASSEMBLY. SEE "BLOCK OUT" DETAIL FOR GENERAL REQUIREMENTS.



**BILL OF MATERIAL
END BENT 1**

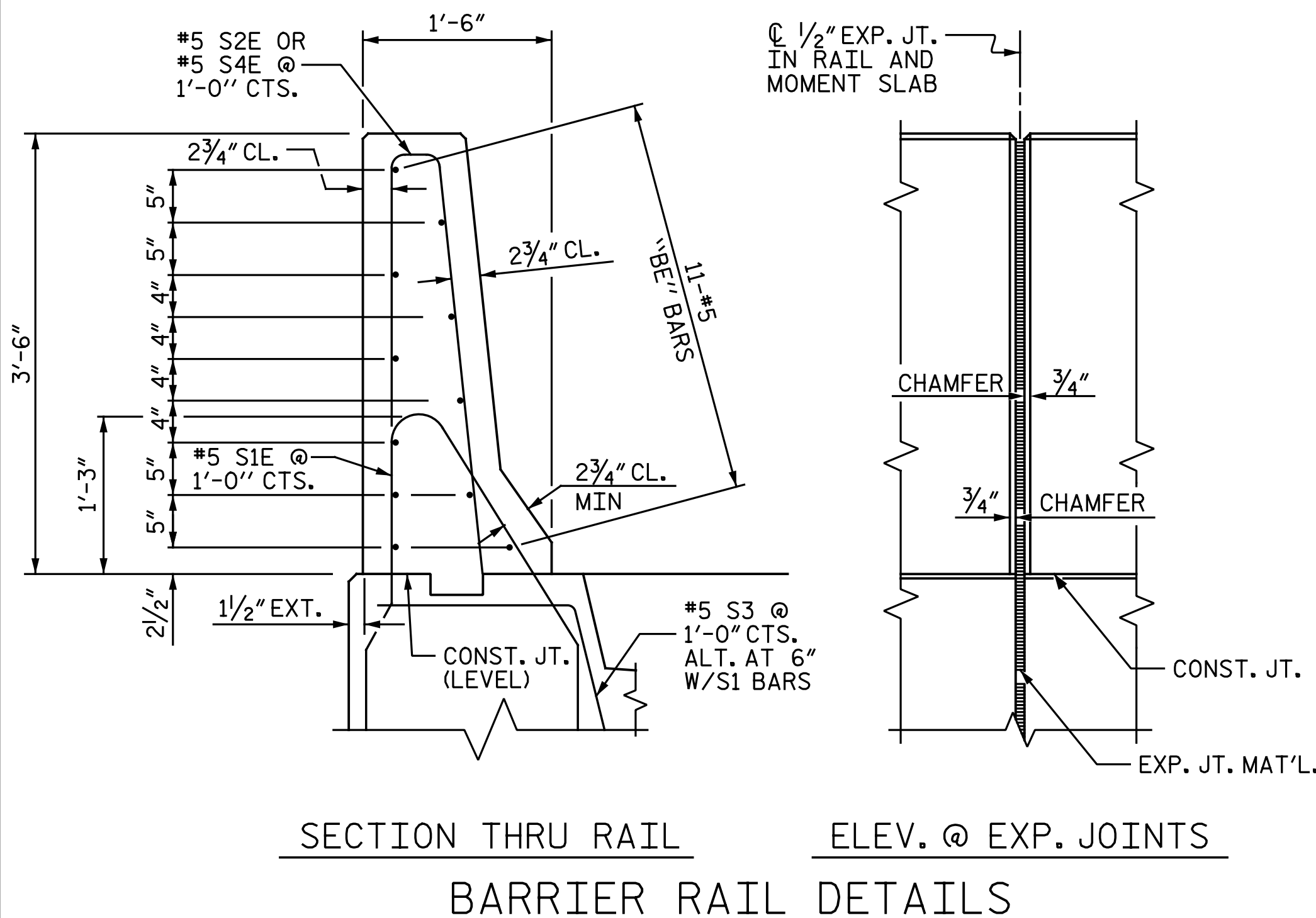
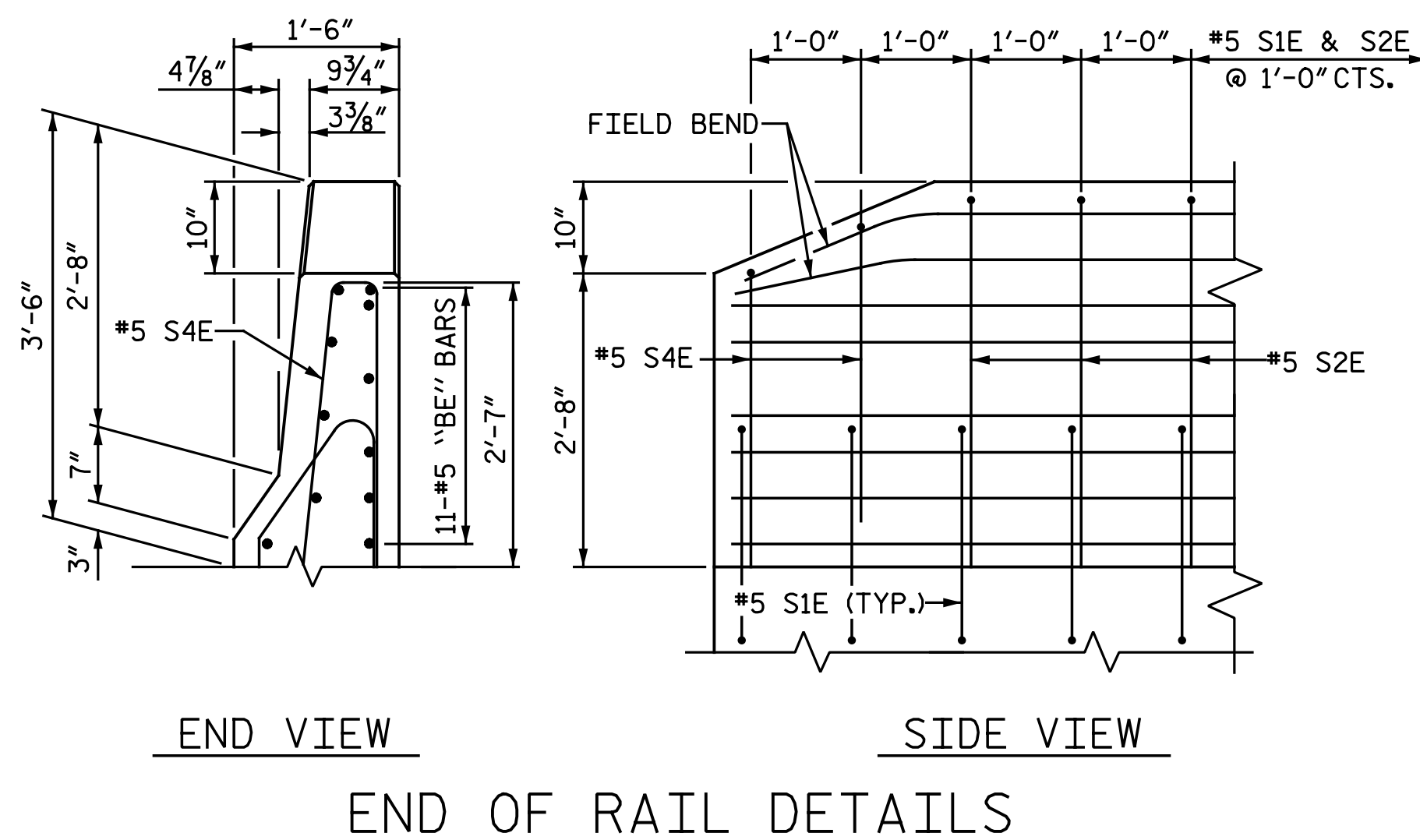
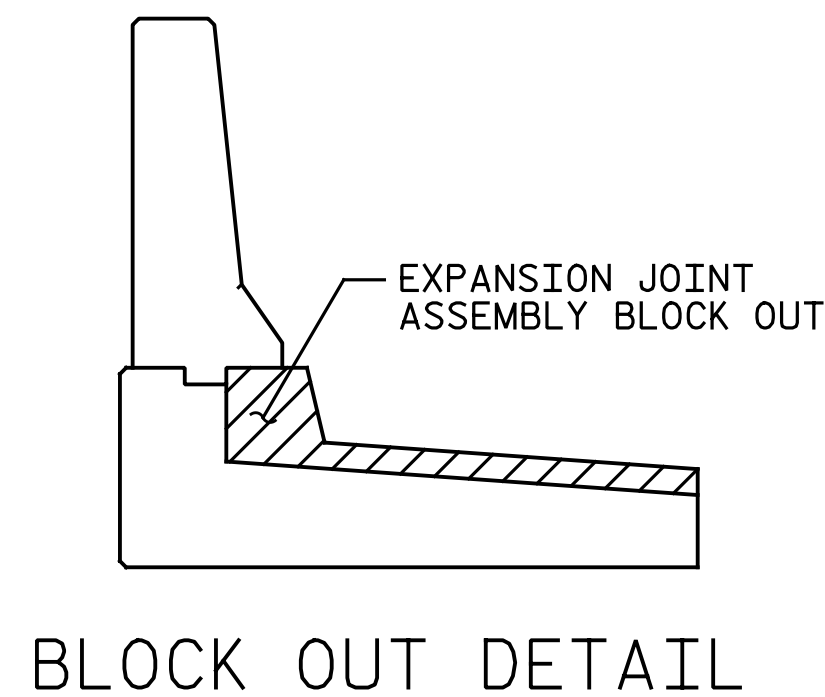
CONC. BARRIER RAIL WITH MOMENT SLAB					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	28	#4	STR	15'-2"	284
B2	140	#4	STR	28'-2"	2,634
B3E	11	#5	STR	28'-4"	325
B4E	110	#5	STR	28'-2"	3,232
G1	319	#5	STR	4'-4"	1,442
G2	319	#4	STR	4'-4"	923
S1E	319	#5	1	7'-3"	2,412
S2E	319	#5	2	7'-0"	2,329
S3	308	#5	3	4'-1"	1,312

REINFORCING STEEL	LBS.	6,595
EPOXY COATED REINFORCING STEEL	LBS.	8,298
CLASS AA CONCRETE BARRIER RAIL	C.Y.	43.4
CLASS A CONCRETE MOMENT SLAB	C.Y.	95.1
CONCRETE BARRIER RAIL WITH MOMENT SLAB	LIN. FT.	314.5

**BILL OF MATERIAL
END BENT 2**

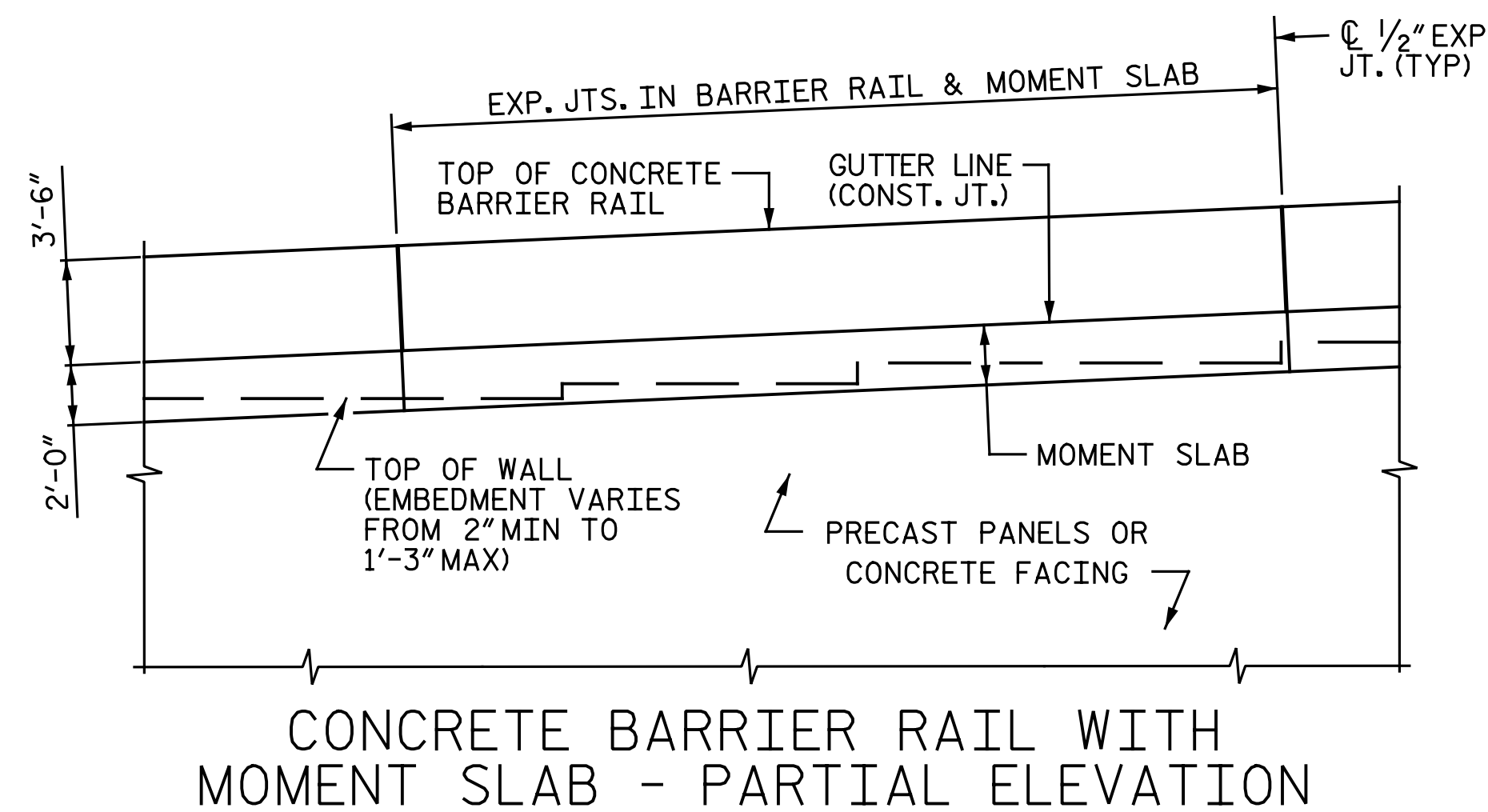
CONC. BARRIER RAIL WITH MOMENT SLAB					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#4	STR	29'-6"	276
B2	210	#4	STR	29'-4"	4,115
B3E	11	#5	STR	29'-6"	338
B4E	165	#5	STR	29'-4"	5,048
G1	480	#5	STR	4'-4"	2,169
G2	480	#4	STR	4'-4"	1,389
S1E	480	#5	1	7'-3"	3,630
S2E	478	#5	2	7'-0"	3,490
S3	464	#5	3	4'-1"	1,976
S4E	2	#5	2	5'-6"	11

REINFORCING STEEL	LBS.	9,925
EPOXY COATED REINFORCING STEEL	LBS.	12,517
CLASS AA CONCRETE BARRIER RAIL	C.Y.	65.8
CLASS A CONCRETE MOMENT SLAB	C.Y.	144.1
CONCRETE BARRIER RAIL WITH MOMENT SLAB	LIN. FT.	476.5



**SECTION THRU RAIL
BARRIER RAIL DETAILS**

ELEV. @ EXP. JOINTS



**CONCRETE BARRIER RAIL WITH
MOMENT SLAB - PARTIAL ELEVATION**

CONCRETE BARRIER RAIL WITH MOMENT SLAB
PAY LENGTH = 791.0 LIN FT

PROJECT NO. U-2524D
GUILFORD COUNTY
 STATION: 495+22.00 -LREV-
 SHEET 3 OF 3

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



Michael Baker
INTERNATIONAL

Michael Baker Engineering
8000 Regency Parkway, Suite 600
Cary, North Carolina 27518
NC License No.: F-1084

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CONCRETE BARRIER RAIL WITH MOMENT SLAB

LEFT LANES

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
S3-35
TOTAL SHEETS
35

DRAWN BY: N. B. SPEAKS DATE: 3-25-16
 CHECKED BY: B. J. BELL DATE: 3-30-16

5/17/2016 5:18:39 PM
 File Name: Y:\Projects\NC DOT\U-2524D\Site\2\DWG\Left\Final\403.038.U2524D_SWL.MS.dgn