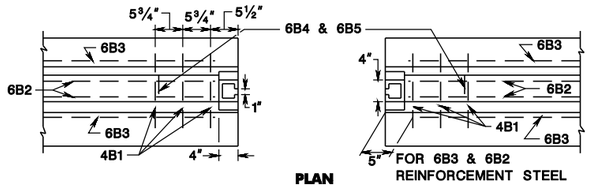
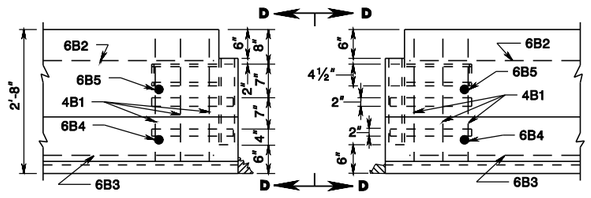
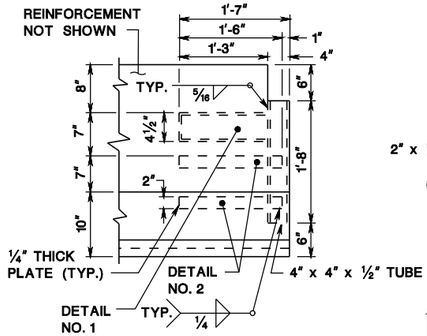
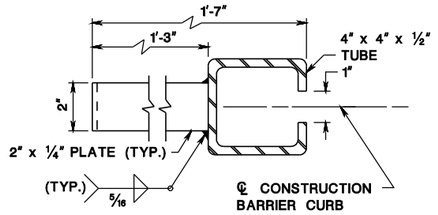
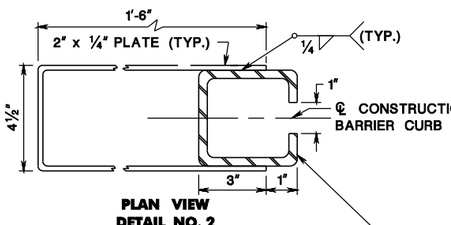
CONSTRUCTION BARRIER CURB CONNECTION DETAILS

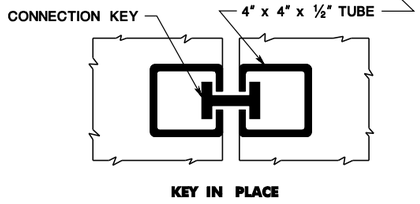




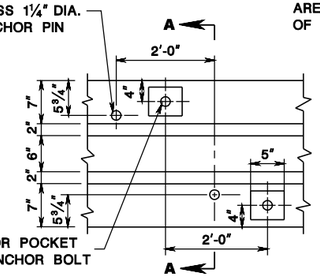








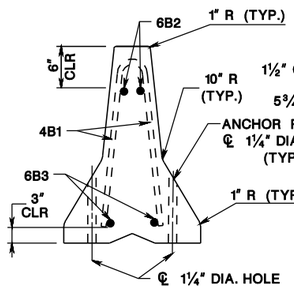
ANCHOR RECESS 1¼" DIA.
HOLE FOR ANCHOR PIN
(TYP.)

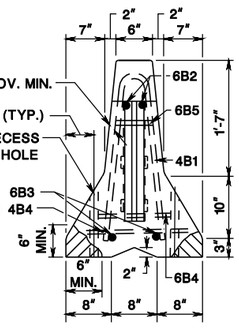


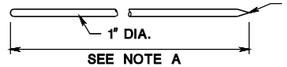
2" DIA. ANCHOR POCKET
HOLE FOR ANCHOR BOLT
(TYP.)

FOR SECTION D-D, PLACE NON-SHRINK GROUT IN HATCHED AREAS BETWEEN SECTIONS, WHEN REQUIRED BY THE TABLE OF JOINT AND ANCHORAGE TREATMENT.

PLAN–ANCHOR RECESS/POCKET





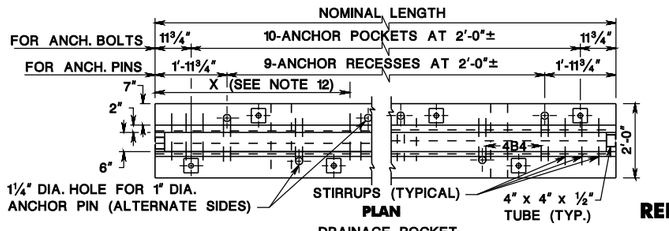


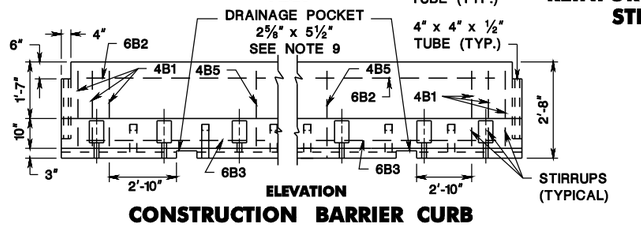
ANCHOR PIN

ATTACHMENT TYPE	TABLE OF JOINT AND ANCHORAGE TREATMENTS FOR CONSTRUCTION BARRIER CURB
A	CONNECTION KEY AND BARRIER END SECTIONS FULLY PINNED*
B	CONNECTION KEY, 6" X 6" BOX BEAM, NON-SHRINK GROUT EVERY JOINT, AND BARRIER END SECTIONS FULLY PINNED*
C	CONNECTION KEY, NON-SHRINK GROUT EVERY JOINT, TRAFFIC SIDE OF ALL SECTIONS PINNED, AND BARRIER END SECTIONS FULLY PINNED*
D	CONNECTION KEY, NON-SHRINK GROUT EVERY JOINT, AND BOLT EVERY ANCHOR POCKET HOLE IN EVERY UNIT

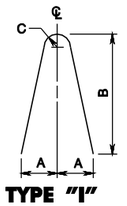
*FULLY PINNED - PINS IN EVERY ANCHOR RECESS ON BOTH SIDES

TABLE OF VARIABLE REINFORCEMENT STEEL			
NOMINAL LENGTH OF BARRIER UNIT	MARK	"X"	NO. EACH SECTION
20'	4B4	N.A.	9
20'	4B5	6'-11"	2
18'	4B4	N.A.	8
18'	4B5	6'-5"	2
16'	4B4	N.A.	7
16'	4B5	5'-11"	2
14'	4B4	N.A.	6
14'	4B5	7'-0"	1
12'	4B4	N.A.	5
12'	4B5	6'-0"	1
10'	4B4	N.A.	4
10'	4B5	5'-0"	1
8'	4B4	N.A.	3
8'	4B5	-	0
"X" DISTANCE FROM END OF BARRIER TO 4B5 REINFORCEMENT STEEL			

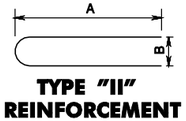




CONSTRUCTION BARRIER CURB

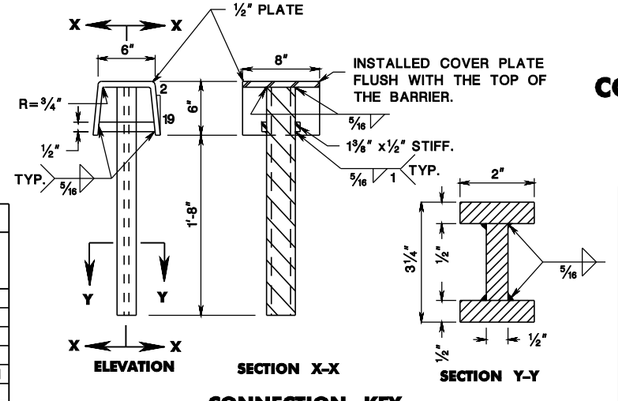


TYPE "I" REINFORCEMENT STEEL



TYPE "II" REINFORCEMENT STEEL

REINFORCEMENT STEEL LIST (EACH BARRIER SECTION)								
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C	LOCATION
4B1	#13	6	4'-11"	I	5"	26"	2"	STIRRUPS
4B4	#13	SEE NOTE 12	3'-1"	II	15½"	4"		STIRRUPS
4B5	#13	SEE NOTE 12	4'-11"	I	5"	26"	2"	STIRRUPS
6B2	#19	2	SEE NOTE 12	STR.				LONGITUDINAL (TOP) NORMAL SECTION
6B3	#19	2	SEE NOTE 12	STR.				LONGITUDINAL (BOTTOM) NORMAL SECTION
6B4	#19	2	1'-2"	STR.				TRANSVERSE (BOTTOM) NORMAL SECTION
6B5	#19	2	0'-6"	STR.				TRANSVERSE (TOP) NORMAL SECTION



CONNECTION KEY

CD-159-5.1

GENERAL NOTES:

1. STEEL PLATE TO BE ASTM A36, A588, A441, OR A572 GRADE 50.
2. USE REINFORCEMENT STEEL ASTM A615, GRADE 60.
3. USE CONCRETE CLASS B.
4. CONCRETE CLEAR COVER FOR REINFORCEMENT STEEL IS 1½" (MIN.).
5. USE TUBE STEEL ASTM A500, GRADE B OR C.
6. USE ANCHOR PINS 1 INCH DIA. ASTM A36 AND ANCHOR BOLTS 1 INCH DIA. ASTM F1554 GRADE 36.
7. ANCHOR PINS ARE NOT REQUIRED IN EVERY UNIT. SEE TABLE OF JOINT AND ANCHORAGE TREATMENTS.
8. PIN ALL END SECTIONS UNLESS OTHERWISE NOTED.
9. 2⅝" X 5½" DRAINAGE POCKETS - TWO REQUIRED IN SECTIONS 12 FEET AND GREATER. ONE REQUIRED IN 8 FOOT AND 10 FOOT SECTIONS.
10. AFTER A BARRIER UNIT HAS BEEN PLACED AND THE CONNECTION KEY INSERTED, REMOVE ANY SLACK IN THE JOINT BY PULLING THE UNIT IN A DIRECTION PARALLEL TO ITS LONGITUDINAL AXIS.
11. THE CONSTRUCTION BARRIER CURB TO BE CAST IN STEEL FORMS.
12. THE CONSTRUCTION BARRIER CURB IS IN UNITS OF 20 FEET, HOWEVER, OTHER LENGTHS MAY BE USED TO MEET FIELD CONDITIONS. THE NUMBER AND PLACEMENT OF THE 4B4 AND 4B5 REINFORCEMENT STEEL WILL VARY WITH THE LENGTH OF THE BARRIER UNIT AS SHOWN ON THE TABLE OF VARIABLE REINFORCEMENT STEEL. THE 6B2 AND 6B3 REINFORCEMENT STEEL TO BE 10 INCHES SHORTER THAN THE NOMINAL LENGTH OF THE BARRIER UNITS.
13. REINFORCING SHOWN IS THE MINIMUM REQUIRED. ADDITIONAL REINFORCING NECESSARY FOR HANDLING IS THE OPTION AND RESPONSIBILITY OF THE CONTRACTOR.
14. WELDING AND FABRICATION OF STEEL STRUCTURES TO BE IN ACCORDANCE WITH SECTIONS 1 THROUGH 6 OF THE ANSI / AASHTO / AWS D1.5 BRIDGE WELDING CODE AND SECTION 10 OF THE ANSI / AWS D.1 STRUCTURAL WELDING CODE, WHICHEVER IS MORE STRICT WHEN THERE IS CONFLICT. ENSURE THAT THE WELDS ARE FREE OF SCALE, SLAG, RUST, MOISTURE, GREASE, OR ANY OTHER MATERIAL THAT WILL PREVENT PROPER WELDING OR PRODUCE OBJECTIONAL FUMES. WELDING IS TO BE SHIELDED METAL ARC WELDING USING PROPERLY DRIED 5/32" DIA. E7018 ELECTRODES.
15. AFTER REMOVAL OF THE BARRIER, FILL THE HOLES IN THE SURFACE ON WHICH THE BARRIER SAT WHICH WERE USED TO ANCHOR THE SYSTEM. THE ONLY EXCEPTION IS WHEN THE HOLES ARE IN AN AREA WHICH IS TO BE REMOVED. FILL HOLES IN FLEXIBLE PAVEMENT OR UNPAVED AREAS, AS DIRECTED. FILL HOLES IN PORTLAND CEMENT CONCRETE PAVEMENTS OR, WHEN ALLOWED, STRUCTURAL DECKS WITH NON-SHRINK GROUT MATERIAL MEETING THE REQUIREMENTS OF SECTION 903.08.02.A, EXCEPT THAT IN LATEX MODIFIED CONCRETE BRIDGE DECK, USE A COMPATIBLE NON-SHRINK GROUT MATERIAL.
16. THE APPROACH END OF THE CONSTRUCTION BARRIER CURB TO BE FLARED AWAY FROM TRAFFIC AT A RATE OF 8:1. ON CURVED ROADWAYS, AVOID KINKS IN THE BARRIER ALIGNMENT.
17. HOLES ARE NOT TO BE DRILLED AND ANCHOR PIN AND ANCHOR BOLT INSTALLATION IS NOT ALLOWED IN CONCRETE BRIDGE DECKS THAT WILL BE PERMANENTLY USED, UNLESS APPROVED BY THE DEPARTMENT BASED ON SPECIAL FIELD CONDITIONS. WHEN ANCHOR PIN AND BOLT INSTALLATION IS ALLOWED FOR PERMANENT OR NON-PERMANENT BRIDGE DECKS, ENSURE THAT CONCRETE IS SOUND AND IN GOOD CONDITION, AND CONCRETE THICKNESS IS SUFFICIENT.

NOTE A

ENSURE THAT THE LENGTH OF THE ANCHOR PIN IS SUFFICIENT SUCH THAT THE FOLLOWING MINIMUM EMBEDMENT LENGTH ARE OBTAINED:

(a) INTO CONCRETE PAVEMENT 0'-5".
(b) INTO FLEXIBLE PAVEMENT 1'-6"
(c) INTO UNPAVED AREA 2'-6"

WHEN ANCHOR PINS ARE IN PLACE, THEY WILL NOT PROJECT ABOVE THE PLANE OF THE CONCRETE SURFACE OF THE BARRIER.

HOLES, WHEN ALLOWED, IN BRIDGE DECKS TO BE 1¼" DIAMETER MAXIMUM AND MADE WITH A CORE DRILL OR ANY OTHER APPROVED ROTARY DRILLING DEVICE THAT DOES NOT IMPART AN IMPACT FORCE.

NOTE B

FOR INSTALLATION ON BRIDGE DECKS, WHEN ALLOWED, REFER TO BRIDGE PLANS FOR NECESSARY MODIFICATIONS AS REQUIRED AND GENERAL NOTE 15.

NOTE:

REINFORCEMENT STEEL IS IN METRIC UNITS.

CONSTRUCTION BARRIER CURB (ALTERNATE B) (MASH TL–3)

N.T.S.

CD-159-5

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

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