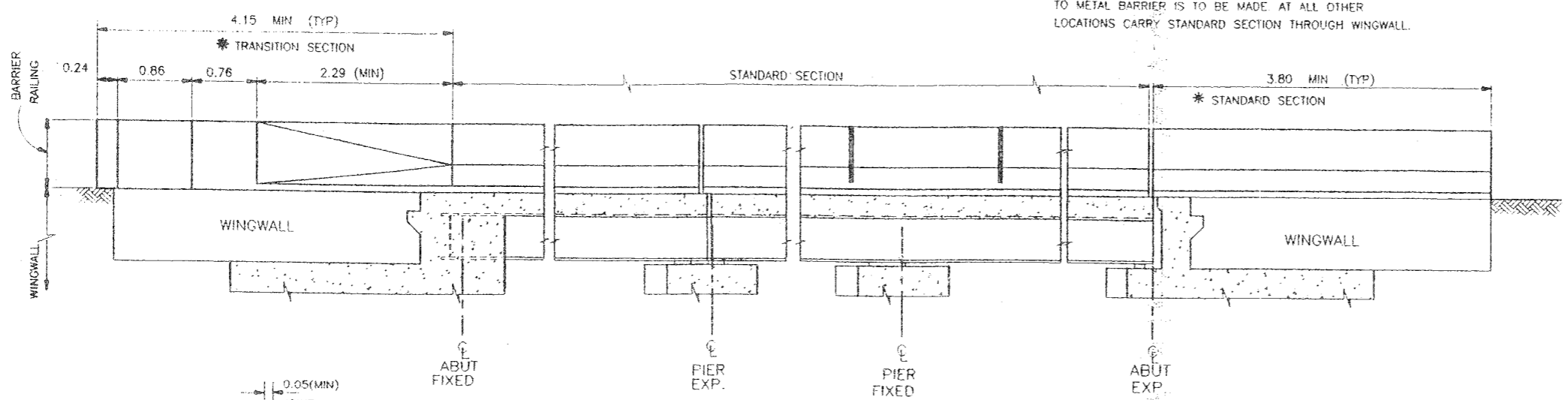
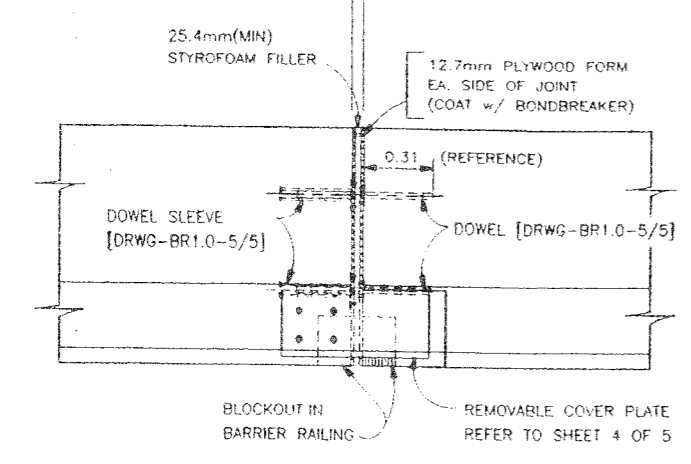


TYPICAL PARTIAL PLAN



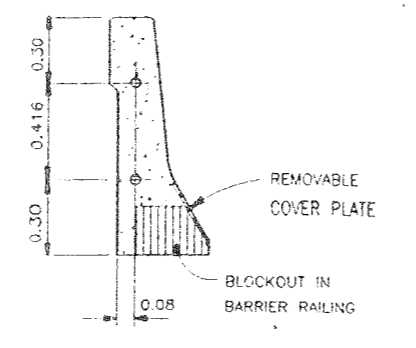
SECTION A-A



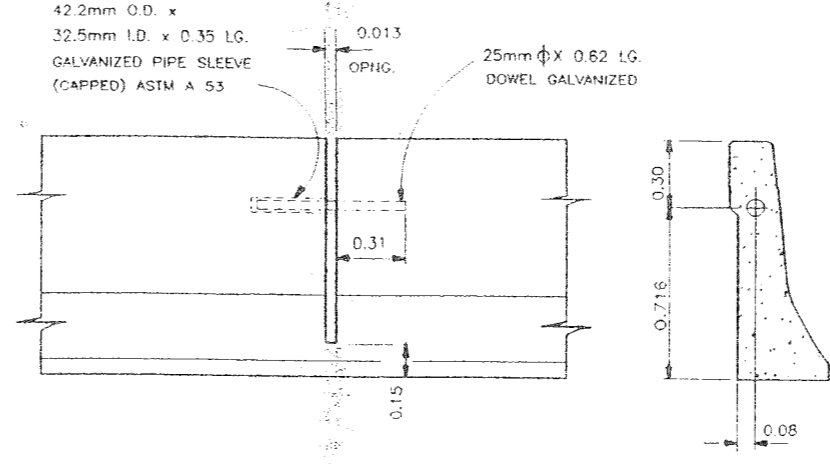
ELEVATION

EXPANSION JOINT DETAIL

PROVIDE EXPANSION JOINTS AT EACH DECK SLAB JOINT. REFER TO SERIAL DRWG-BR1.0-5/5 FOR DETAILS OF THE JOINT, FORMING MATERIALS AND DOWELS.



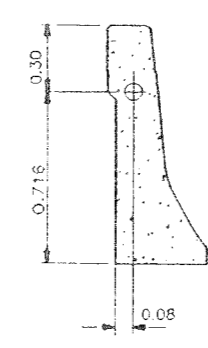
SECTION



ELEVATION

CONTRACTION JOINT DETAIL

PROVIDE CONTRACTION JOINTS AT EQUALLY SPACED INTERVALS (4.50m MIN, 9.00m MAX) BETWEEN EXPANSION JOINTS OR, FOR STRUCTURES WITH INTEGRAL ABUTMENTS, BETWEEN CONTRACTION JOINTS AT WINGWALLS.



SECTION

GENERAL NOTES

- ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONCRETE FOR BARRIER RAILING SHALL BE SUPERSTRUCTURE CONCRETE CLASS "AA". BARRIER RAILING SHALL BE PAID FOR AT THE UNIT PRICE PER LINEAR FOOT, INCLUDING COMPLETELY EMBEDDED REINFORCING STEEL, ANCHOR BOLTS AND ANY OTHER COMPLETELY EMBEDDED OR APPURTENANT STEEL ITEMS. BARRIER RAILING SHALL BE CAST-IN-PLACE USING REMOVABLE FORMS.
- REINFORCING STEEL SHALL BE EPOXY COATED AND SHALL CONFORM TO AASHTO SPECIFICATION M 31M, GRADE 400. DIMENSIONS REFER TO CENTERLINE OF BAR UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- BARRIER RAILING INSTALLATIONS ON DECK SLABS MAY BE TYPE 1, 2, OR 3 AT THE OPTION OF THE CONTRACTOR. DECK THICKNESS (NEW OR EXISTING) MUST BE APPROPRIATE FOR THE TYPE OF INSTALLATION SELECTED.
- FOR DETAILS OF BARRIER RAILING CONNECTION TO THE APPROACH METAL BARRIER - SEE TRAFFIC PLANS.
- REFLECTIVE BARRIER DELINEATORS SHALL BE MOUNTED ON TOP OF THE BARRIER RAILING IN CONFORMANCE WITH THE TRAFFIC PLANS.
- APPLY PENETRATING WATER REPELLANT TREATMENT TO ALL EXPOSED SURFACES OF THE BARRIER RAILING.
- DISCONTINUE HORIZONTAL REINFORCEMENT AT ALL EXPANSION AND CONTRACTION JOINT OPENINGS.
- STRUCTURAL STEEL FOR REMOVABLE COVER PLATES AT THE EXPANSION JOINTS SHALL CONFORM TO AASHTO SPECIFICATION M 183M, AND SHALL BE GIVEN A PROTECTIVE COATING IN CONFORMANCE WITH THE SPECIFICATIONS. GALVANIZE ALL BOLTS AND HARDWARE.
- COST OF REMOVABLE COVER PLATES, IN PLACE, SHALL BE CONSIDERED INCIDENTAL TO THE COST OF BARRIER RAILING.
- CONSTRUCTION JOINTS BETWEEN BARRIER RAILING AND BRIDGE DECK CONCRETE SHALL BE CLEANED AND ROUGHENED PRIOR TO PLACEMENT OF BARRIER RAILING CONCRETE AS IS REQUIRED BY THE SPECIFICATIONS. THE APPLICATION OF A MORTAR COATING TO THE SURFACE OF THE BRIDGE DECK CONCRETE WILL HOWEVER NOT BE REQUIRED.
- BARRIER RAILING CROSS SECTION IS IDENTICAL IN SHAPE AND SIZE TO THE BARRIER RAILING CROSS SECTION SHOWN ON DRAWING 040.

DESIGN DATA

DESIGN IS IN ACCORDANCE WITH AASHTO SPECIFICATIONS DATED 1989 AND LATEST INTERIMS.
 $f'_c=20.684 \text{ MPa}$ @ 28 days, $f_c=8.274 \text{ MPa}$
 $f_y=413.685 \text{ MPa}$, $f_s=165.474 \text{ MPa}$, $n=9.2$

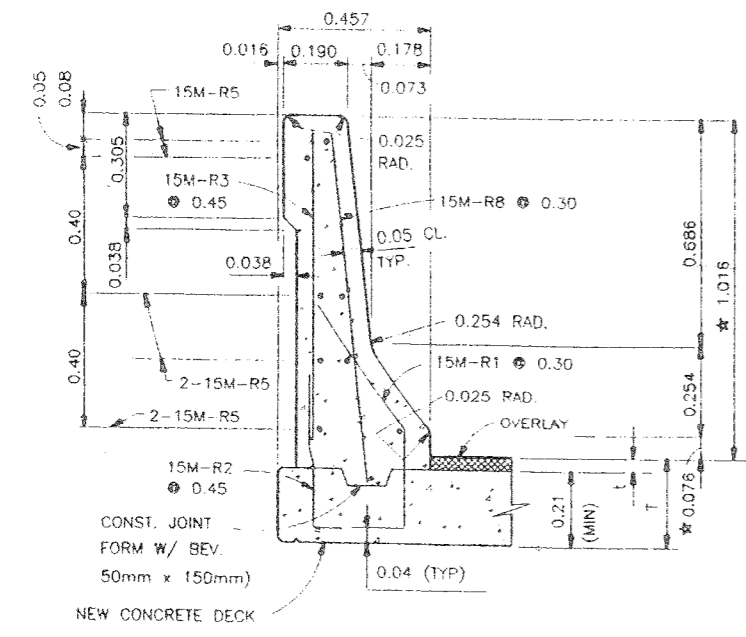
NO.		DESCRIPTION	DATE	BY
REVISIONS (OR CHANGE NOTICES)				
DESIGNED BY:	APPROVAL:	RECOMMENDATION:	DATE:	DATE:
DRAWN BY:	APPROVED:	BRIDGE DESIGN ENGINEER:	DATE:	DATE:
CHECKED BY:	APPROVED:	DESIGN BUREAU CHIEF:	DATE:	DATE:

NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT

1.0m BARRIER RAILING GENERAL DETAILS

DRWG-BR1.0-1/5

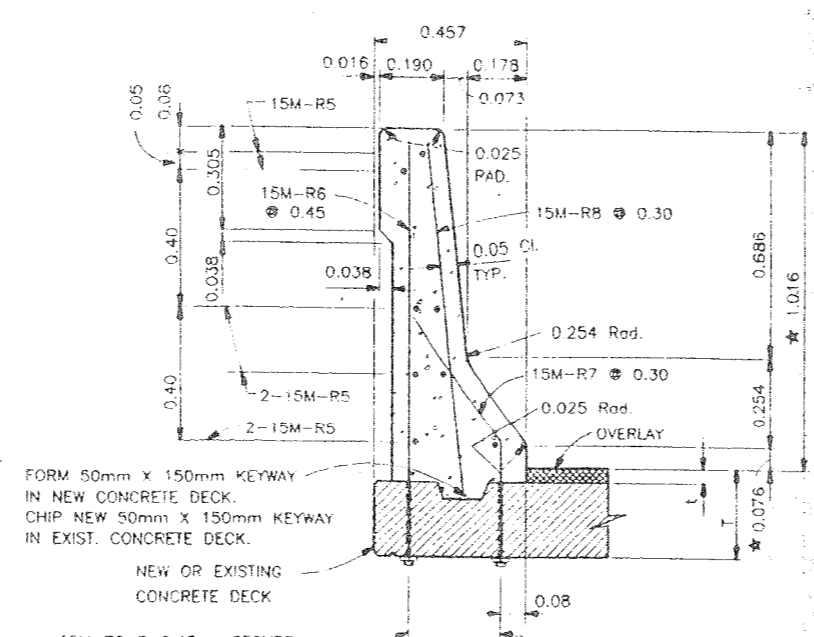
SHEET 1 OF 5



TYPE "1"

PLACE 15M-R1 AND 15M-R2 BARS WITH BRIDGE DECK REINFORCEMENT.

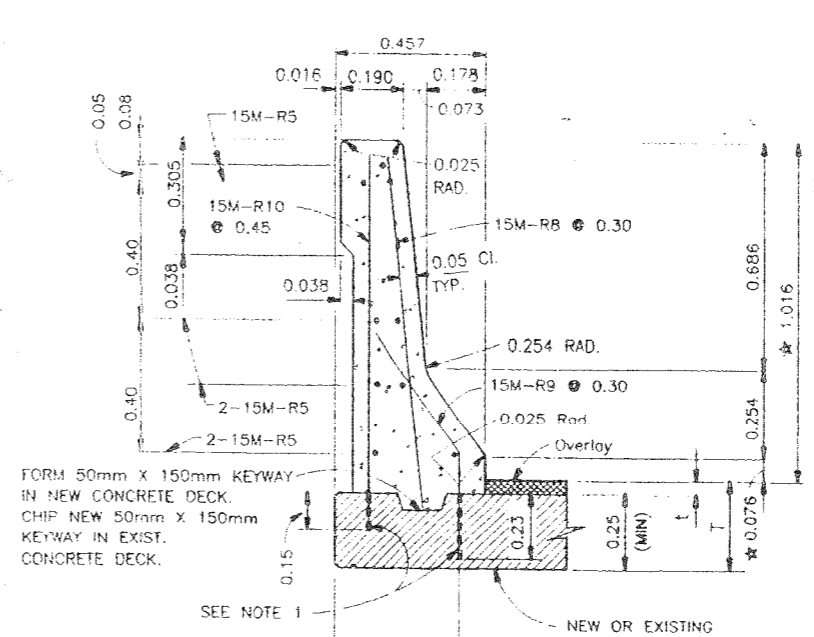
* THESE DIMENSIONS SHALL BE MEASURED ABOVE TOP OF WEARING SURFACE, (TOP OF CONCRETE DECK, OR TOP OF OVERLAY - IF ANY). IN DETERMINING DIMENSIONS OF THE 15M-R1, 15M-R6 OR 15M-R7 BARS, THE "T" DIMENSION USED SHALL INCLUDE THE THICKNESS ("t") OF ANY OVERLAY.



TYPE "2"

15M-R6 ϕ 0.45 - SECURE w/13mm X 50mm SQ. WASHER & HEX NUT (TIGHTEN NUTS & BURR THREADS). 25mm ϕ FORMED OR CORED HOLES IN SLAB. SUPPORT DURING CONSTRUCTION w/ SPRING CLIPS. FILL VOID BETWEEN HOLE AND REBAR WITH NON-SHRINK GROUT AFTER PLACING REBAR.

15M-R7 ϕ 0.30 - SECURE w/13mm X 50mm SQ. WASHER & HEX NUT (TIGHTEN NUTS & BURR THREADS). 25mm ϕ FORMED OR CORED HOLES IN SLAB. SUPPORT DURING CONSTRUCTION w/ SPRING CLIPS. FILL VOID BETWEEN HOLE AND REBAR WITH NON-SHRINK GROUT AFTER PLACING REBAR.



TYPE "3"

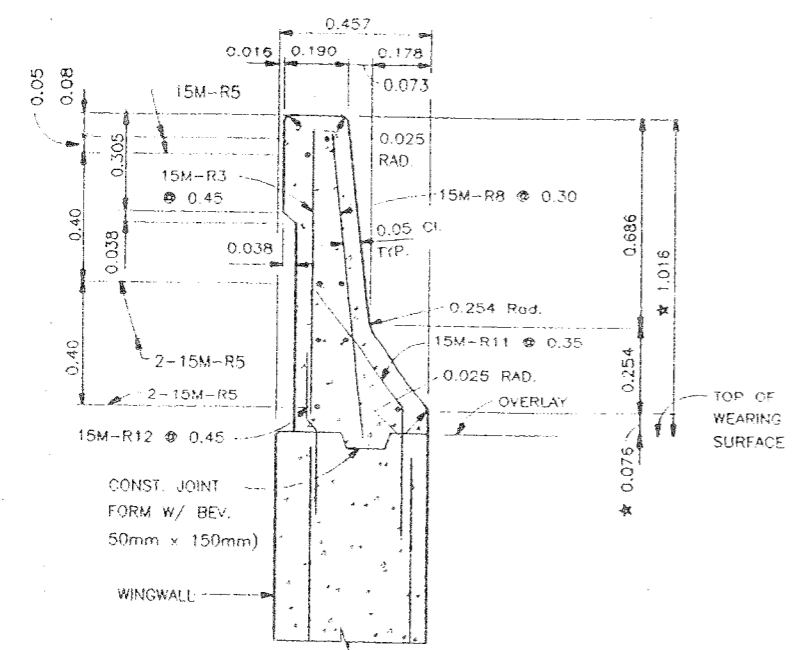
NOTES

- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- REINFORCING BARS SHALL BE PLACED IN 25 mm DIAMETER CORED HOLES, AND GROUTED INTO PLACE USING A NEAT CEMENT PASTE OF PORTLAND CEMENT AND WATER. THE WATER CONTENT SHALL BE NOT MORE THAN 15.14 LITERS PER 42.64 kg. OF CEMENT. RETEMPERING OF GROUT WILL NOT BE PERMITTED. IMMEDIATELY PRIOR TO PLACING THE DOWELS THE HOLES SHALL BE CLEANED OF DUST AND OTHER DELETERIOUS MATERIALS. SHALL BE THOROUGHLY SATURATED WITH WATER, HAVE ALL FREE WATER REMOVED AND THE HOLES SHALL BE DRIED TO A SATURATED SURFACE DRY CONDITION. SUFFICIENT GROUT SHALL BE PLACED IN THE HOLES SO THAT NO VOIDS REMAIN AFTER THE DOWELS ARE INSERTED. GROUT SHALL BE CURED FOR A PERIOD OF 3 DAYS OR UNTIL THE DOWELS ARE ENCASED IN CONCRETE, WHICHEVER OCCURS FIRST, BY EITHER THE CURING COMPOUND METHOD OR BY KEEPING THE SURFACE OF THE GROUT CONTINUOUSLY DAMP. ANY DOWELS OR GROUT WHICH FAIL TO BOND OR ARE DAMAGED BEFORE THE CONCRETE IS PLACED SHALL BE REMOVED AND REPLACED. COST OF CORING AND GROUTING ARE TO BE INCLUDED IN THE UNIT PRICE BID FOR "BARRIER RAILING".

ESTIMATED QUANTITIES (FOR CONTRACTOR'S INFORMATION ONLY)

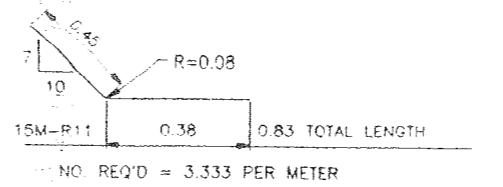
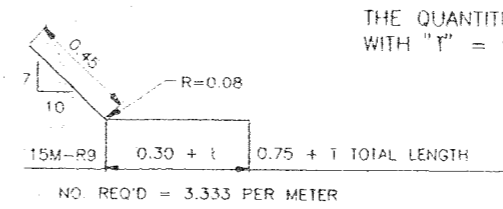
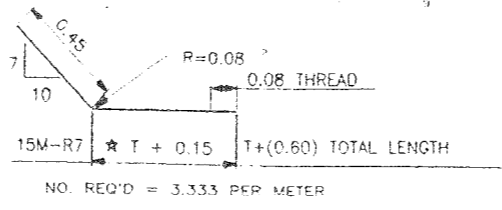
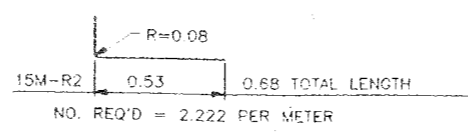
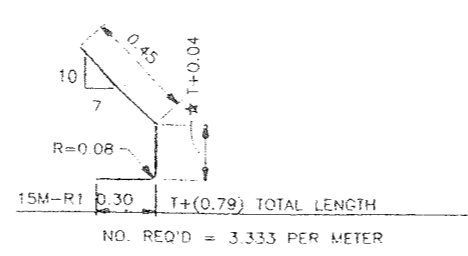
ITEM	UNIT	TOTAL
EPOXY COATED REINFORCING BARS, GRADE 400	kg./M.	26.99
SUPERSTRUCTURE CONCRETE CLASS "AA"	Cu. M./M.	0.27

THE QUANTITIES SHOWN IN THE ABOVE TABLE ARE BASED ON TYPE "2" WITH "T" = 0.26 AND VARY WITH THE TYPE OF BARRIER RAIL SELECTED.



SECTION C - C

SECTION B - B



REBAR SCHEDULE

MARK	LENGTH	NO. REQ'D	METER
15M-R3	0.95 + t		2.222
15M-R4	NOT USED		NOT USED
15M-R5	Varies		8
15M-R6	T + 1.00		2.222
15M-R8	1.00 + t		3.333
15M-R10	1.10 + t		2.222
15M-R12	0.61		2.222

† THREAD ONE END 0.08
t = THICKNESS OF OVERLAY

METRIC logo

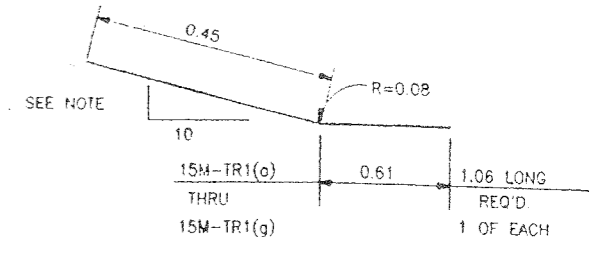
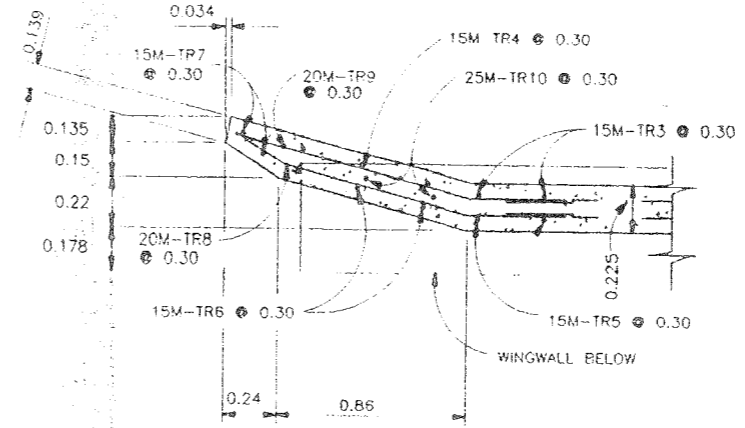
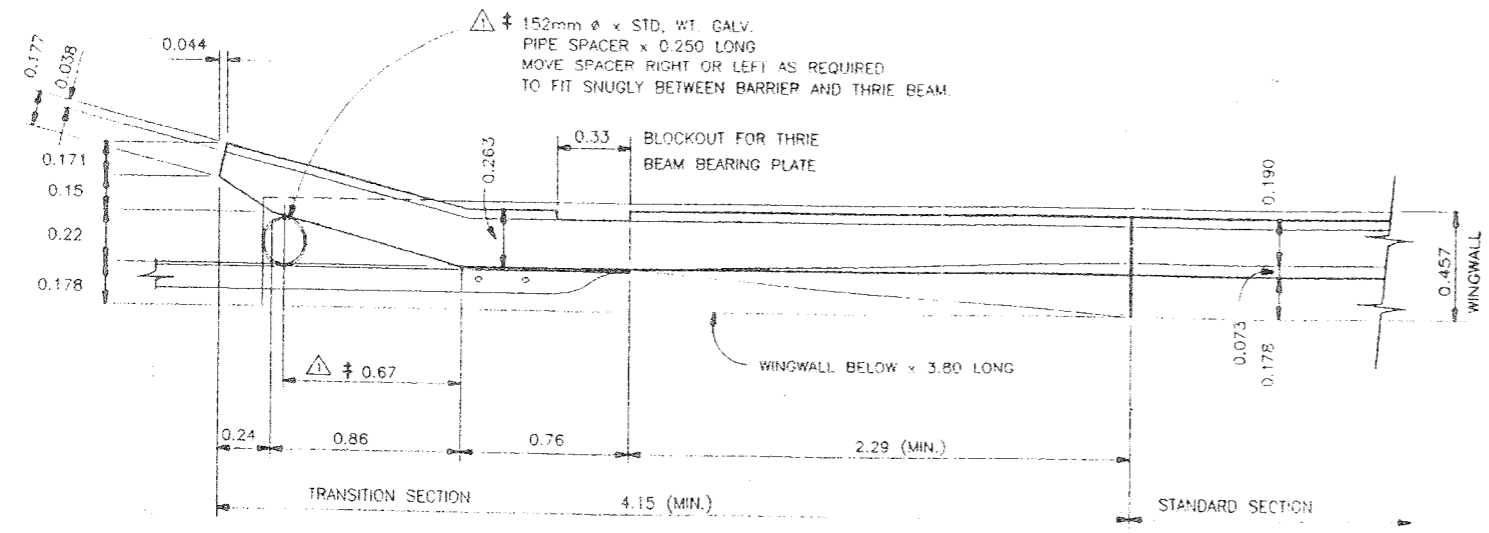
NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT

1.0m BARRIER RAILING STANDARD SECTION DETAILS

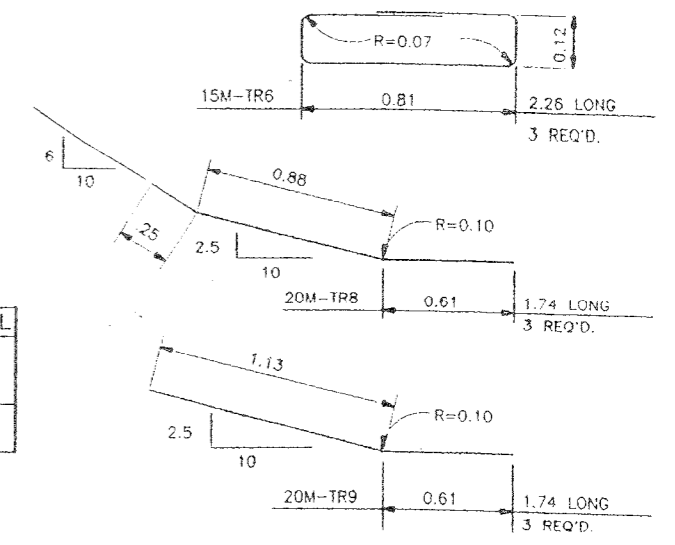
DRWG-BR1.0-2/5 SHEET 2 OF 5

NO.	DESCRIPTION	DATE	BY

DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 APPROVAL: [Signature]
 BRIDGE DESIGN ENGINEER DATE: 2/22/96
 DESIGN BUREAU CHIEF



NOTE: BEVEL VARIES FROM 7 TO 0 IN 6 EQUAL INCREMENTS.



**** ESTIMATED QUANTITIES (FOR ONE TRANSITION)**

ITEM	UNIT	TOTAL
EPOXY COATED REINFORCING BARS, GRADE 400	kg.	143
SUPERSTRUCTURE CONCRETE CLASS "AA"	Cu.M.	1.03

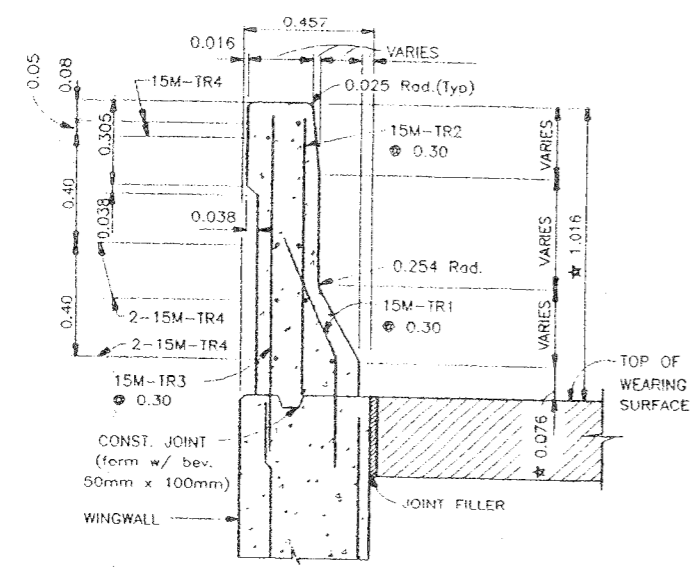
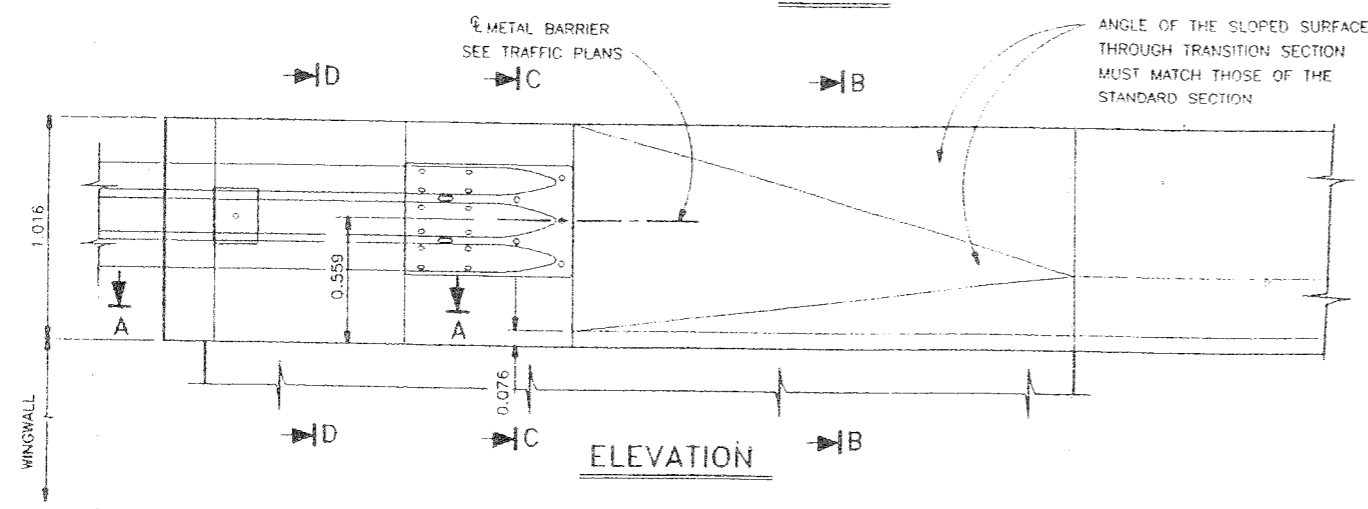
**FOR CONTRACTOR'S INFORMATION ONLY

* THESE DIMENSIONS SHALL BE MEASURED ABOVE THE TOP OF WEARING SURFACE. (TOP OF DECK OR TOP OF OVERLAY - IF ANY)

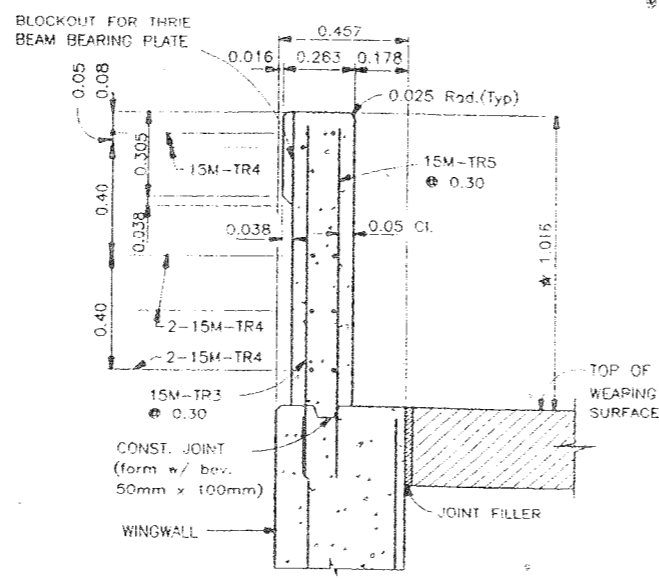
REBAR SCHEDULE (FOR ONE TRANSITION)

15M-TR2	0.95	8 REQ'D.
15M-TR3	1.31	11 REQ'D.
15M-TR4	3.00	8 REQ'D.
15M-TR5	1.41	4 REQ'D.
15M-TR7	0.90	2 REQ'D.
25M-TR10	1.42	2 REQ'D.

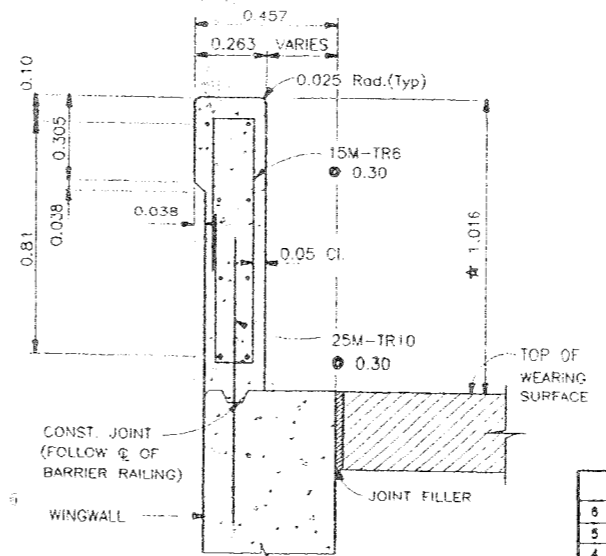
NOTE: ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED ON THE DRAWINGS.



SECTION B - B



SECTION C - C



SECTION D - D

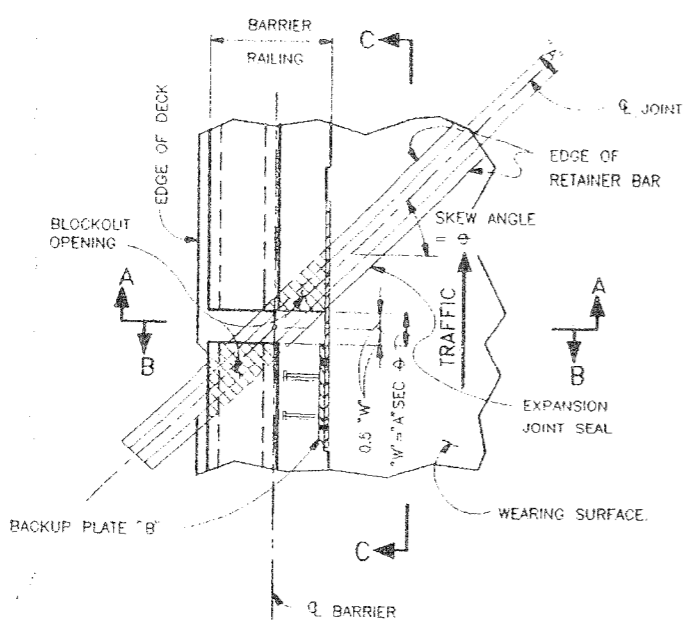
REVISIONS (OR CHANGE NOTICES)

NO.	REV. DIMENSION AND NOTES.	DATE	BY
1	REV. DIMENSION AND NOTES.	5/13	KWZ

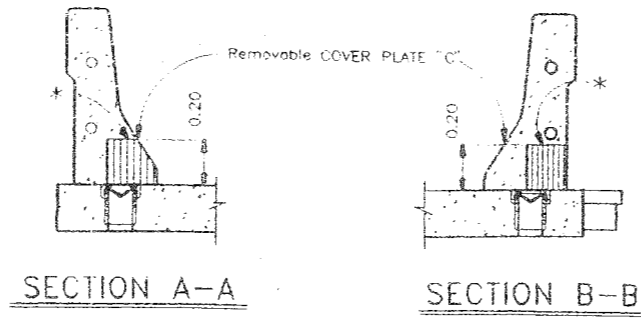
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CHECKED BY: [Signature]

NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT

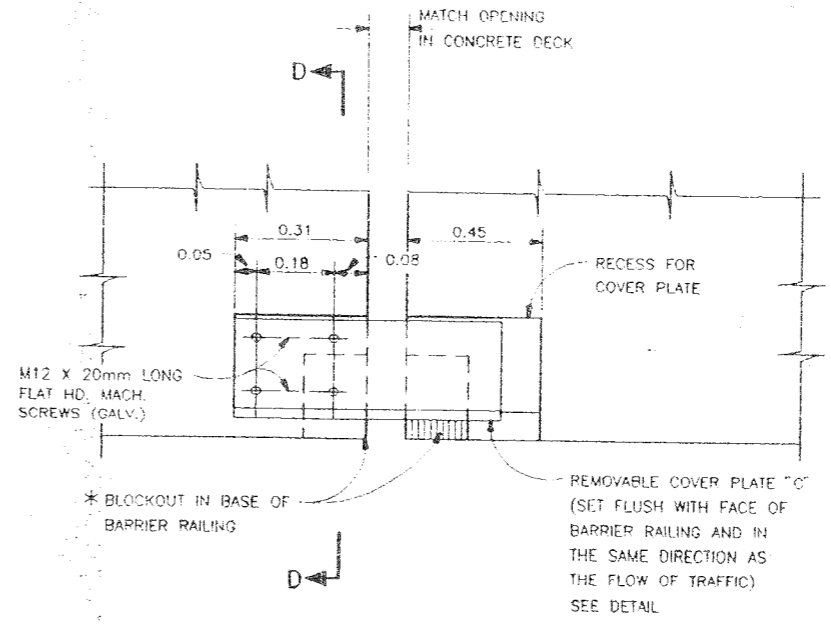
1.0m BARRIER RAILING TRANSITION SECTION DETAILS



**PART PLAN-SKEW JOINT
AT CONCRETE BARRIER RAILING**

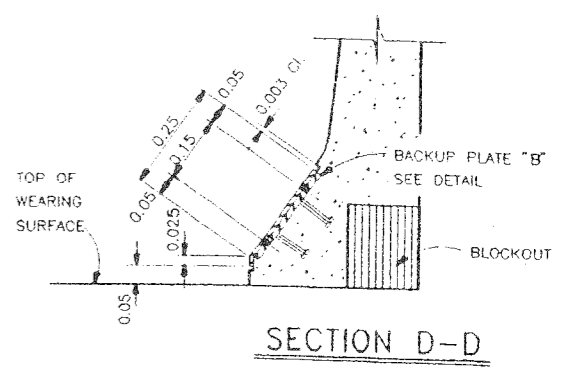


SECTION A-A SECTION B-B
SIMILAR DETAIL FOR CURB AND SIDEWALK.
* BLOCKOUT IN BASE OF BARRIER RAILING.

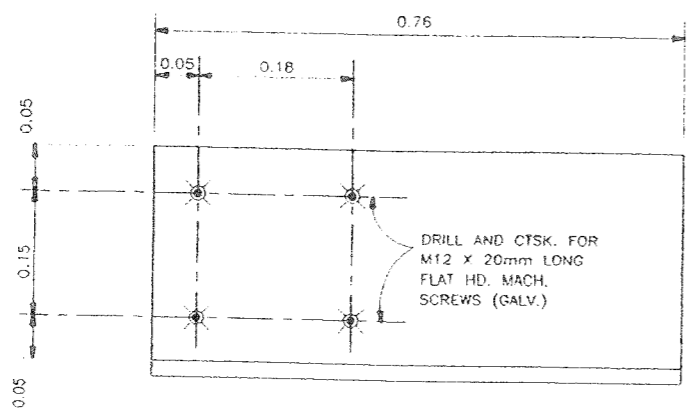


ELEVATION C-C

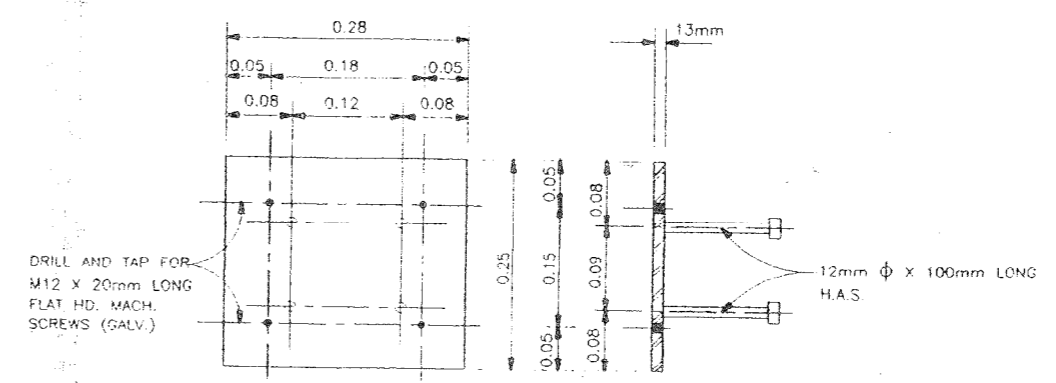
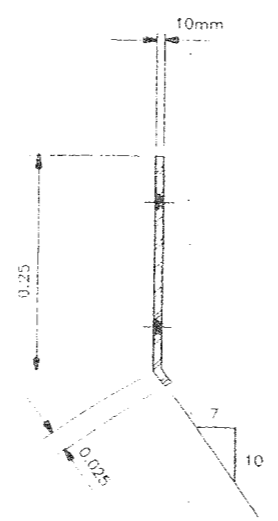
PROVIDE EXPANSION JOINTS
AT EACH DECK SLAB JOINT.



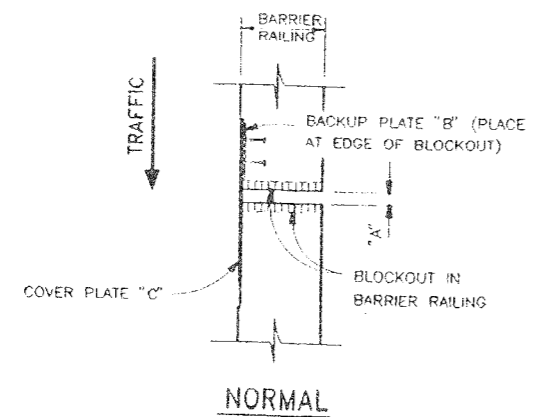
SECTION D-D



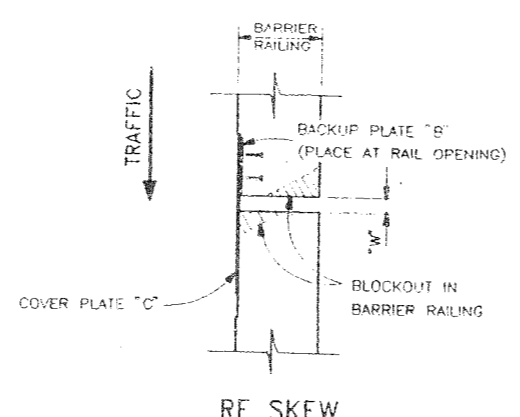
REMOVABLE COVER PLATE "C"



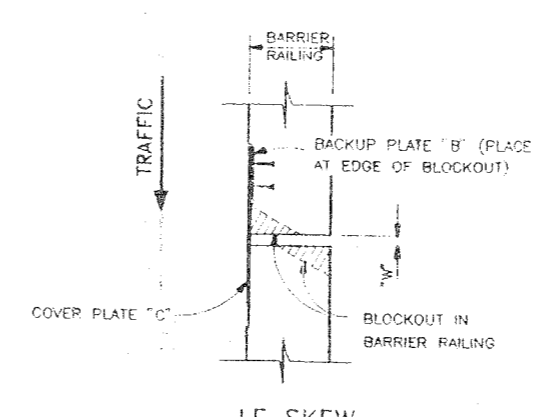
BACKUP PLATE "B"



NORMAL



RF SKEW



LF SKEW

BACKUP PLATE "B" LOCATIONS

NOTE: ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED ON THE DRAWINGS.

NO.	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2			
1			

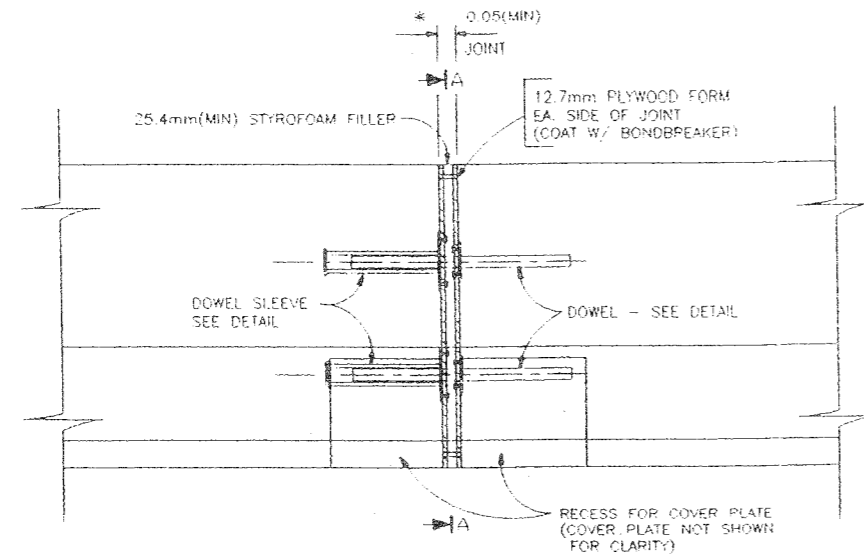
DESIGNED BY	APPROVAL	DATE
	RECOMMENDATION	
	APPROVED	

NEW MEXICO STATE HIGHWAY
& TRANSPORTATION DEPARTMENT

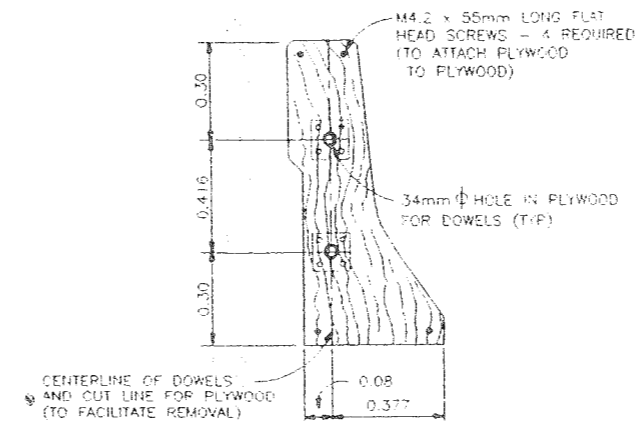
**1.0m BARRIER RAILING
DETAILS AT JOINT SEALS**

DRWG-BR1.0-4/5

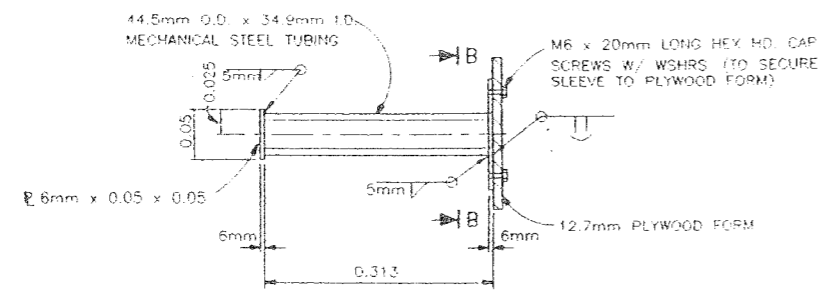
SHEET 4 OF 5



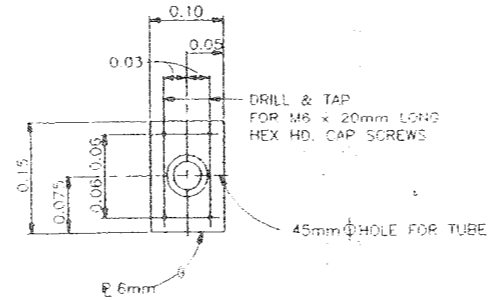
ASSEMBLY DETAIL



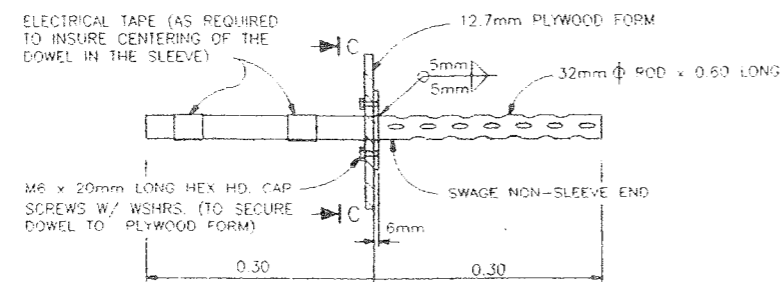
SECTION A-A



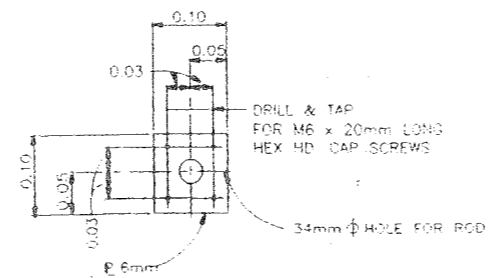
DOWEL SLEEVE DETAIL



SECTION B-B



DOWEL DETAIL



SECTION C-C

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION.
3. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 183M UNLESS OTHERWISE NOTED ON THE DETAILS, AND SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 111.
4. THE SLEEVE ASSEMBLY SHALL BE SET PARALLEL TO THE BRIDGE DECK GRADE AND THE OUTSIDE FACE OF THE CONCRETE BARRIER RAILING.
5. AFTER CONCRETE HAS TAKEN INITIAL SET, REMOVE STYROFOAM FILLER, M6 HEX HD. CAP SCREWS, AND THE 12.5 mm PLYWOOD FORMS FROM THE JOINT (CUT THE M4.2 SCREWS TO FACILITATE THE PLYWOOD FORM REMOVAL).
6. PLYWOOD FORMS AND STYROFOAM FILLER SHALL BE CUT TO THE CROSS SECTION OF THE CONCRETE BARRIER RAILING. PLYWOOD FORMS SHALL BE COATED WITH AN APPROVED BOND-BREAKER.
7. FOR MOVEMENT LENGTHS IN EXCESS OF 75 METERS INCREASE JOINT OPENING (*) AS REQUIRED.
8. THE COST OF ALL FORMING MATERIALS FOR THE EXPANSION JOINT SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CONCRETE BARRIER RAILING AND NO DIRECT PAYMENT WILL BE MADE THEREFOR.



NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT	
1.0m DOWEL ASSEMBLY DETAILS FOR EXPANSION JOINTS CONCRETE BARRIER RAILING	
NO.	DESCRIPTION DATE BY
REVISIONS (OR CHANGE NOTICES)	
DESIGNED BY: -	APPROVAL RECOMMENDATION <i>[Signature]</i> 9/26/26
DETAILED BY: -	BRIDGE DESIGN ENGINEER DATE
CHECKED BY: -	APPROVED <i>[Signature]</i> 9/23/26
	DESIGN BUREAU CHIEF DATE
DRWG-BR1.0-5/5 SHEET 5 OF 5	