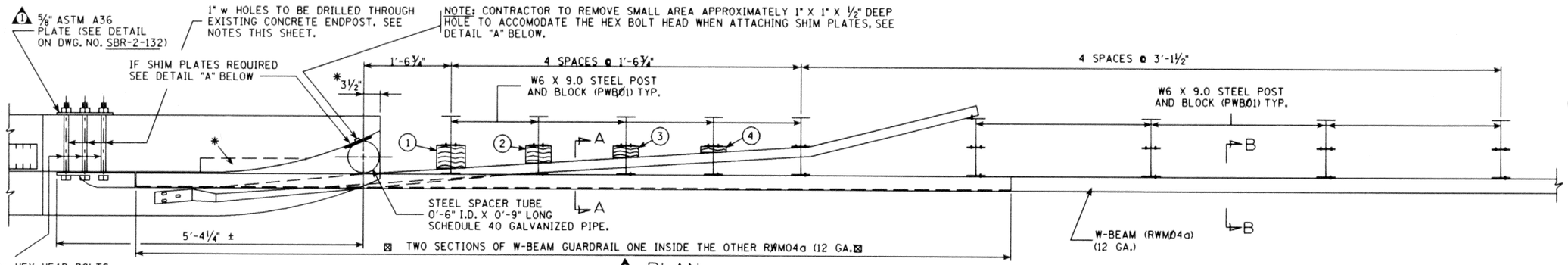
PROJECT NO.	YEAR	SHEET NO.
	1989	

REVISIONS

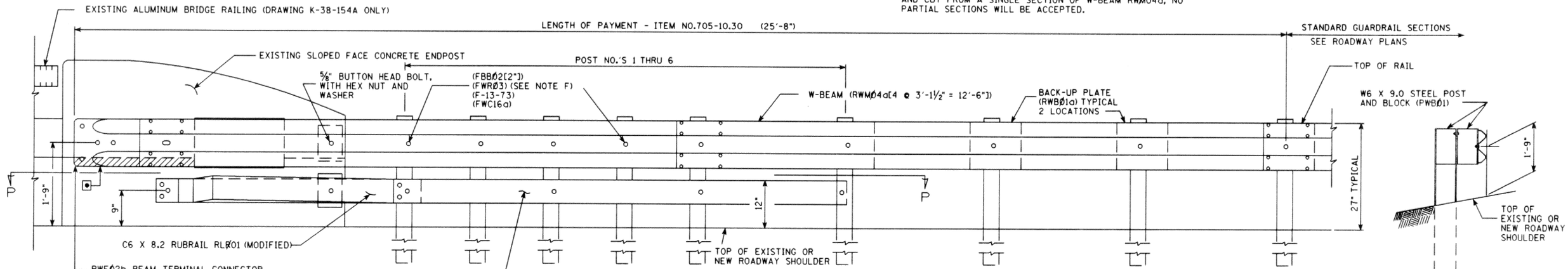
	NO.	DATE	BY	BRIEF DESCRIPTION
	1	11-16-92	WMM	REVISED DRAWING NUMBERS
B/R	2	2-23-95	TO	REMOVED SIGNATURES
B/R	3	1-4-96	TO	REVISED BR DRAWING NO. TO SBR DRAWING NO.
B/R	4	1-9-02	WS	GENERAL REVISION
B/R	5	1-22-02	WS	REVISED MATERIAL DESCRIPTION



4 PLAN

SHOWING W-BEAM GUARDRAIL AND CHANNEL RUBRAIL ATTACHMENT

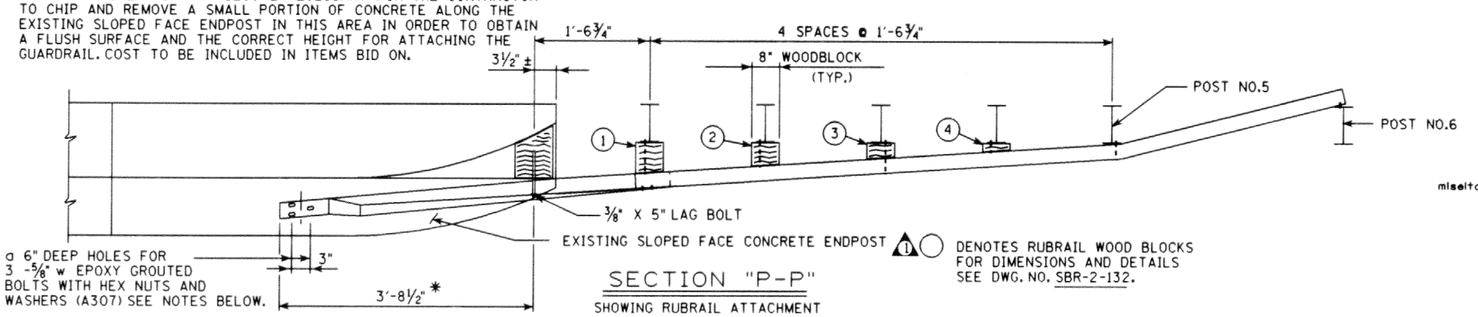
NOTE: BACKUP RAIL IN THIS AREA SHALL BE CONTINUOUS AND CUT FROM A SINGLE SECTION OF W-BEAM RWM04a, NO PARTIAL SECTIONS WILL BE ACCEPTED.



4 ELEVATION

SHOWING W-BEAM GUARDRAIL AND CHANNEL RUBRAIL ATTACHMENT

DENOTES: ON SOME BRIDGE DECKS WHERE THERE IS NO EXISTING ASPHALT OVERLAY IT MAY BECOME NECESSARY FOR THE CONTRACTOR TO CHIP AND REMOVE A SMALL PORTION OF CONCRETE ALONG THE EXISTING SLOPED FACE ENDPOST IN THIS AREA IN ORDER TO OBTAIN A FLUSH SURFACE AND THE CORRECT HEIGHT FOR ATTACHING THE GUARDRAIL. COST TO BE INCLUDED IN ITEMS BID ON.



SECTION "P-P"

SHOWING RUBRAIL ATTACHMENT

DENOTES RUBRAIL WOOD BLOCKS FOR DIMENSIONS AND DETAILS SEE DWG. NO. SBR-2-132.

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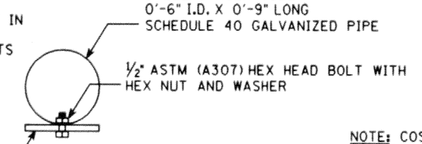
* VOID IN EXISTING ENDPOST TO BE FILLED WITH CONCRETE GROUT. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

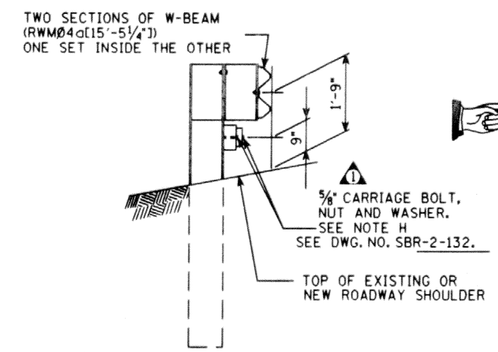
NOTE: 1" w THROUGH HOLES FOR 7/8" w HEX HEAD BOLTS AND 6" DEEP X 7/8" w HOLES FOR 5/8" w EPOXY GROUTED A307 BOLTS TO BE DRILLED WITH A HIGH SPEED DRILL. THE DRILL BIT SHALL BE CAPABLE OF DRILLING THROUGH EXISTING REINFORCING BARS AND CONCRETE. COST OF DRILLING TO BE INCLUDED IN ITEMS BID ON. A LIST OF APPROVED EPOXY GROUTS MAY BE OBTAINED FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TEST.

NOTE: 1/2" X 0'-6" X 0'-8" SHIM PLATES TO BE PAINTED WITH ALUMINUM EPOXY PAINT THAT CAN BE SUPPLIED BY A PAINT COMPANY THAT IS CURRENTLY IN THE TENNESSEE DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST FOR PAINT.



1/2" X 0'-6" X 0'-8" SHIM PLATES MAY BE REQUIRED IN ORDER TO OBTAIN A SNUG FIT OF THE 0'-6" I.D. PIPE MAXIMUM PLATE THICKNESS SHALL BE IN 1/2" INCREMENTS.

DETAIL "A"

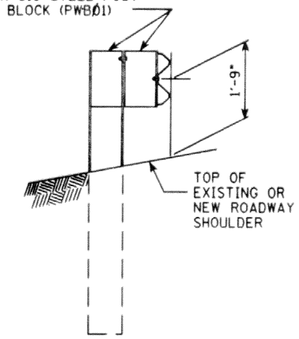


SECTION "A-A"

SPECIAL NOTE TO CONTRACTOR: THE CONTRACTOR SHALL HAVE THE NEW BENT PLATE RUBRAIL (REØ01), C6 X 8.2 RUBRAIL (RLØ01), AND THE W-BEAM (RWMØ4a) SECTIONS SHALL BE SHOP FABRICATED TO ALIGN AND MEET ALL CONNECTION REQUIREMENTS AS SHOWN THESE DETAILS. NO SUBSTITUTES OR FIELD ALTERATIONS WILL BE ACCEPTED. IT SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR TO FIELD MEASURE EACH INDIVIDUAL CONNECTION LOCATION BEFORE ANY SHOP FABRICATION OF THE RAILING IS BEGUN TO INSURE PROPER ALIGNMENT AND CONNECTION. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER, AND IF THE CONNECTIONS MUST BE CORRECTED FOR ANY REASON, IT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.

NOTE: COST OF ALL GUARDRAIL HARDWARE, POST DRILLING, ANCHORS, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO INSTALL THE PROTECTIVE GUARDRAIL AT BRIDGE ENDS AS SHOWN ON THESE DETAILS TO BE INCLUDED UNDER ITEM NO.705-10.30, GUARDRAIL ATTACHMENT TO SLOPE FACE ENDPOST, L.F.

DETAILS GRA-30
ITEM NO.705-10.30
LINEAR FEET



SECTION "B-B"

SPECIAL NOTE: PORTIONS OF THE RAIL SECTIONS AS SHOWN ON THESE ATTACHMENT DETAILS WILL NOT BE STANDARD LENGTHS. IT WILL BECOME NECESSARY FOR THE CONTRACTOR TO CUT SECTIONS OF THE RAILS FROM STOCK LENGTHS IN ORDER TO CONFORM TO DETAILS AS SHOWN ON THESE SHEETS. THE CONTRACTOR WILL NOT RECIEVE ANY EXTRA COMPENSATION FOR CUTTING OF RAIL SECTIONS.

B/R MINOR REVISION - FHWA APPROVAL NOT REQUIRED

GUARDRAIL ATTACHMENT DETAILS
TO EXISTING BRIDGERAIL ENDPOST
FOR FORMER STANDARD DRAWING
NUMBERS K-38-154A & M-28-1 (LAST REVISION DATE OF 10-22-86)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE SLOPE FACE ENDPOST 1989

DESIGNED BY		DATE	
DRAWN BY	KIM FRANKENFIELD	DATE	9-92
SUPERVISED BY	GENTRY & McINTURFF	DATE	9-92
CHECKED BY	McINTURFF	DATE	

1 2 5 3 SBR-2-131