

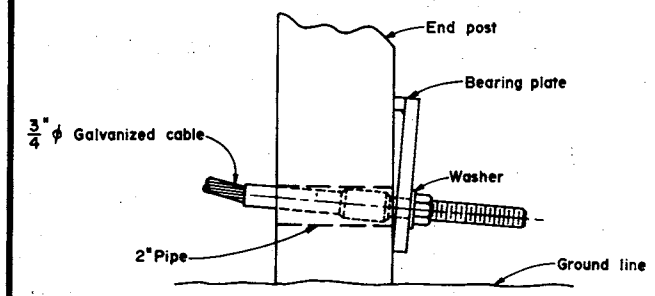
Post no.	Offset distance from face of rail to shoulder line
1	0.0'
2	0.1'
3	0.6'
4	1.3'
5	2.5'
6	4.0'

Offset distance shown is desired if conditions permit. Lesser distance may be used when the engineer so directs.

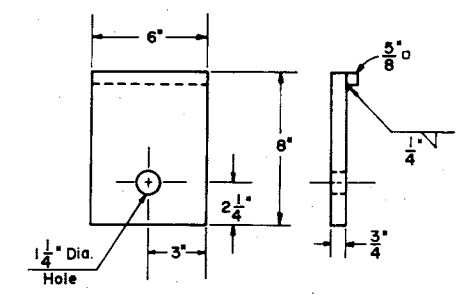
NOTES:
 Buffered end section shall be made of 0.109" minimum thickness sheet steel, except diaphragms shall be made of 0.079" minimum thickness sheet steel. After fabrication the entire buffered end section shall be galvanized. All other fittings, including bolts, nuts and washers used in the guard rail anchorage, shall also be galvanized.

The portion of post to be embedded in concrete shall be wrapped with two thicknesses of lightweight felt roofing paper.

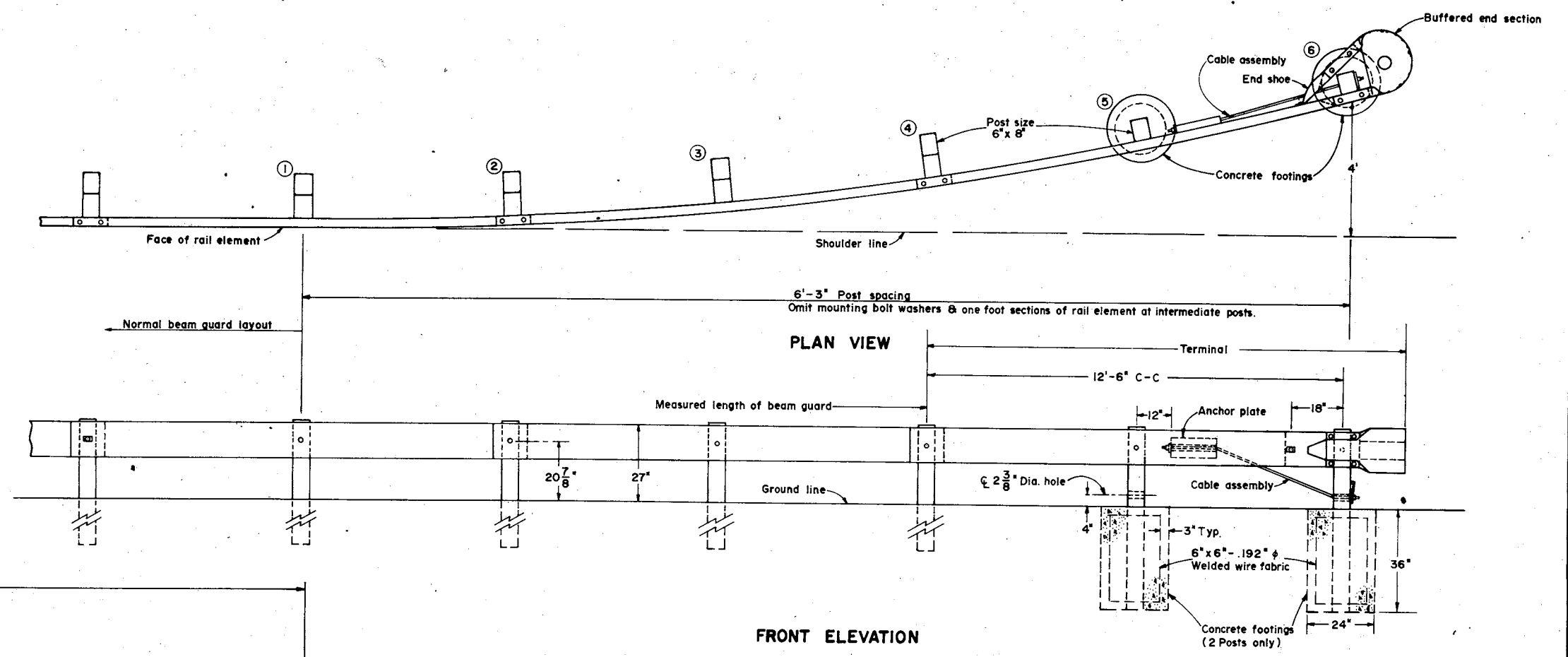
Details not shown shall conform to the standard detail drawings for steel plate beam guard CLASS "A".



ANCHORAGE DETAIL AT END POST

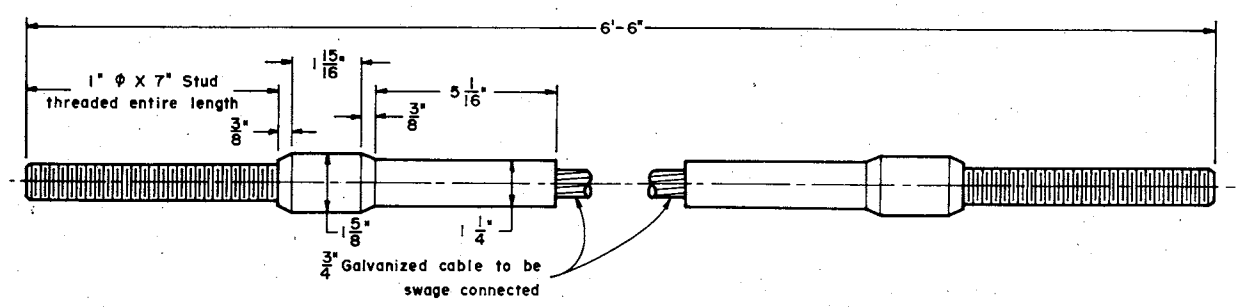


BEARING PLATE DETAILS

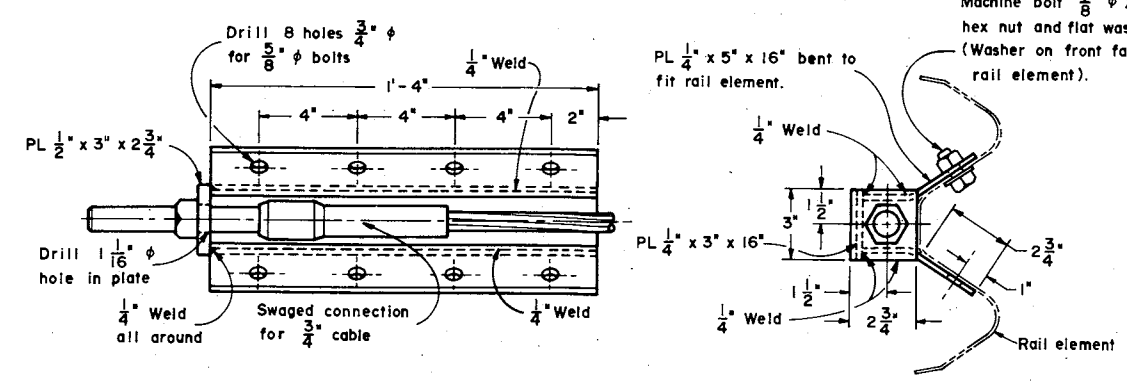


PLAN VIEW

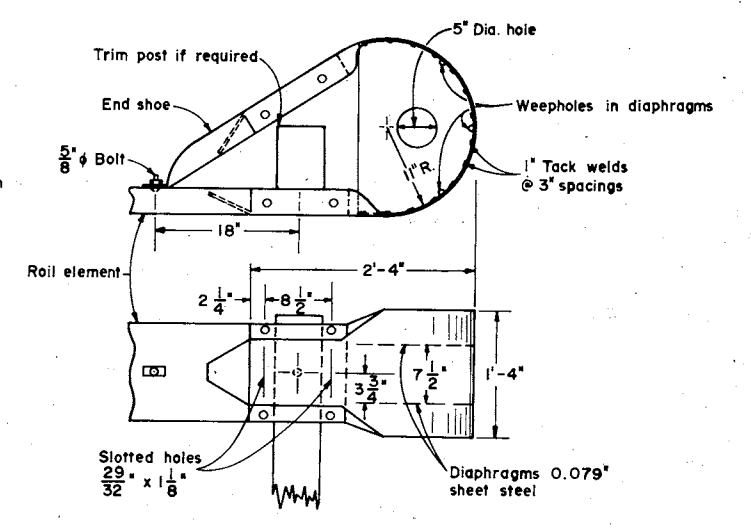
FRONT ELEVATION



SWAGE FITTING AND STUD



ANCHOR PLATE DETAILS

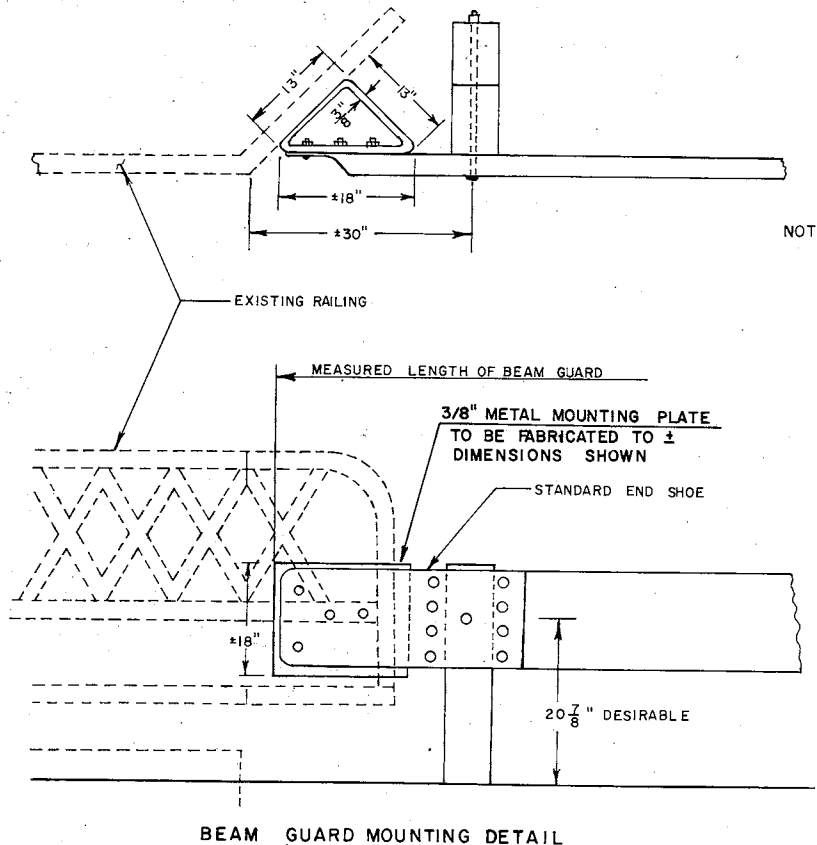
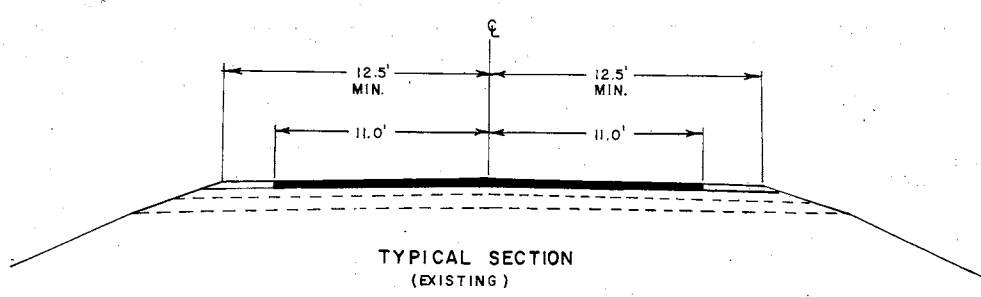
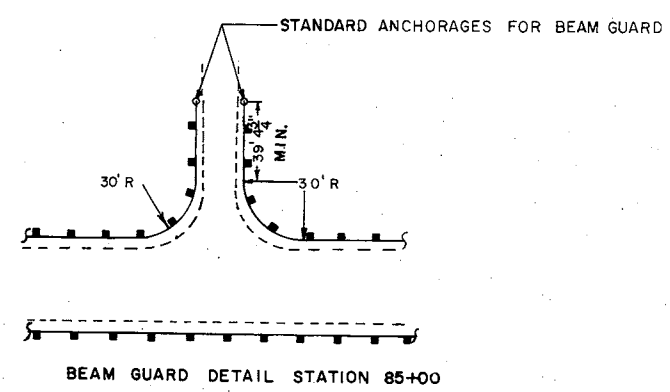
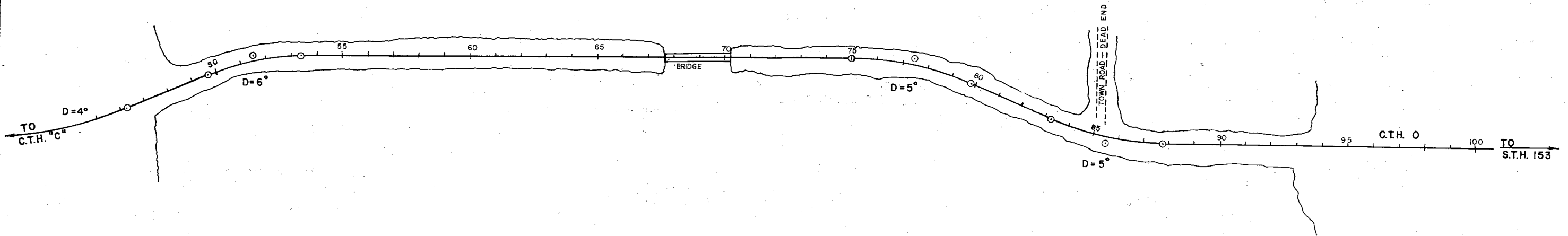


BUFFERED END SECTION (BRONSTAD END)

STATE PROJECT NUMBER	SHEET NO.
6664-1-71	2.1
PLAN AND CONSTRUCTION DETAILS	



BIG EAU PLEINE RESERVOIR

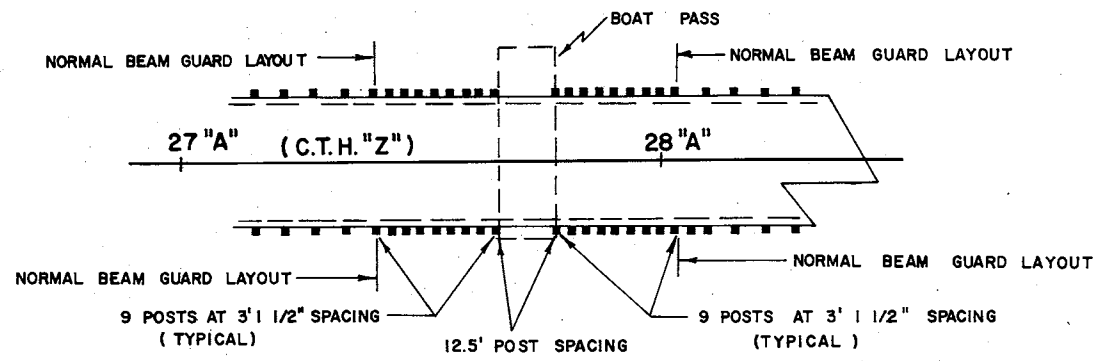
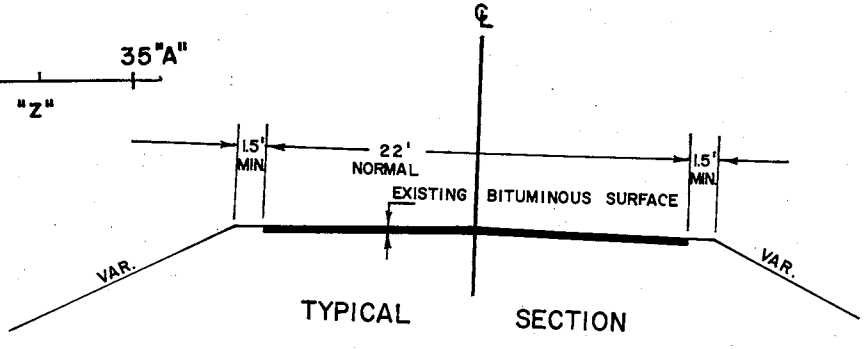
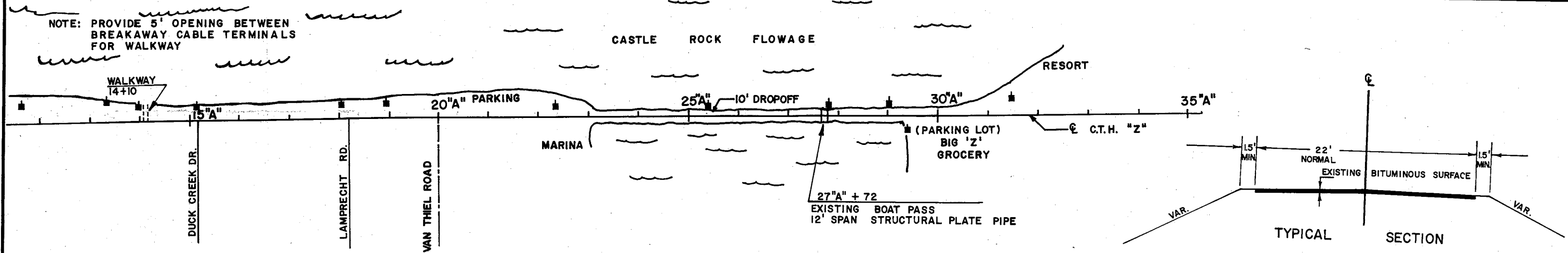


NOTE:
 3/8" METAL MOUNTING PLATE TO BE BOLTED TO THE STANDARD END SHOE AND BEAM GUARD USING STANDARD BOLTS FOR STEEL PLATE BEAM GUARD. METAL MOUNTING PLATE TO BE WELDED TO THE EXISTING BRIDGE RAILING. AND SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWINGS.
 THE 6 FOOT ANCHOR OFFSET MAY BE REDUCED TO ZERO FOR INSTALLATIONS WHERE EXISTING CONDITIONS WILL NOT PERMIT THE DESIRABLE OFFSET.
 ALL COSTS INCIDENTAL TO THE ATTACHMENT OF STEEL PLATE BEAM GUARD TO STRUCTURES SHALL BE INCLUDED IN THE UNIT PRICE FOR THE ITEM, STEEL PLATE BEAM GUARD, CLASS "A"

STATE PROJECT NUMBER	SHEET NO.
6355-2-71	2.2
PLAN AND CONSTRUCTION DETAILS	

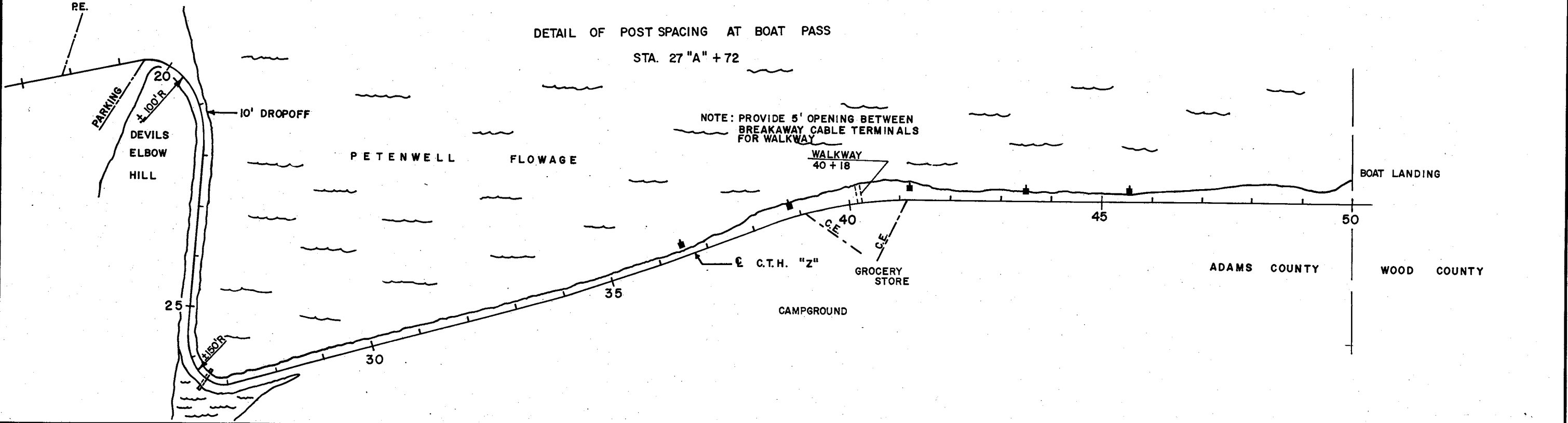


NOTE: PROVIDE 5' OPENING BETWEEN BREAKAWAY CABLE TERMINALS FOR WALKWAY



DETAIL OF POST SPACING AT BOAT PASS
STA. 27 "A" + 72

NOTE: PROVIDE 5' OPENING BETWEEN BREAKAWAY CABLE TERMINALS FOR WALKWAY



ESTIMATE OF QUANTITIES

CONTRACT NO. 1 STEEL PLATE BEAM GUARD

STATE PROJECT NUMBER	SHEET NO.
6664-1-71 AND 6355-2-71	3

PROJECT NUMBER	NET LENGTH OF CENTER LINE	REMOVING GUARDRAIL	ANCHORAGES FOR STEEL PLATE BEAM GUARD	STEEL PLATE BEAM GUARD CLASS A	MOBILIZATION 6664-1-71	MOBILIZATION 6355-2-71	TRAFFIC CONTROL 6664-1-71	TRAFFIC CONTROL 6355-2-71	BREAKAWAY CABLE TERMINAL
6664-1-71		8632	6	8,931	1	—	1	—	—
6355-2-71		260	8	5,902	—	1	—	1	6
TOTAL CONTRACT		8,892	14	14,833	1	1	1	1	6

REMOVING GUARDRAIL

STATION TO STATION	LOCATION	LIN. FT.
PROJECT 6664-1-71		
47+50 — 67+69	LT.	2019
48+00 — 67+69	RT.	1969
70+26 — 84+50	LT.	1462
84+75 — 93+95	LT.	920
70+26 — 92+88	RT.	2262
PROJECT 6355-2-71		
20+25 — 22+85	LT.	260

STEEL PLATE BEAM GUARD

STATION TO STATION	LOCATION	LIN. FT.	NUMBER OF ANCHORAGES	BREAKAWAY CABLE TERMINALS	REMARKS
PROJECT 6664-1-71					
47+08 — 67+74	LT.	2066	1	—	ATTACH TO STRUCTURE
47+08 — 67+74	RT.	2066	1	—	ATTACH TO STRUCTURE
70+21 — 84+50	LT.	1491	1	—	ATTACH TO STRUCTURE
70+21 — 93+25	RT.	2304	1	—	ATTACH TO STRUCTURE
84+70 — 94+14	LT.	1004	2	—	—
PROJECT 6355-2-71					
11"A"+66 — 13"A"+93	LT.	227	1	—	1 - STA. 13"A"+93
14"A"+27 — 20"A"+41	LT.	614	1	—	1 - STA. 14"A"+27
22"A"+14 — 29"A"+28	RT.	714	1	—	1 - STA. 29"A"+28
22"A"+14 — 31"A"+43	LT.	929	2	—	—
19+49 — 40+01	LT.	2052	1	—	1 - STA. 40+01
24+65 — 28+44	RT.	379	2	—	—
40+35 — 50+22	LT.	987	—	—	2 - STA. 40+35 & STA. 50+22

GENERAL NOTES

REMOVED CABLE, HARDWARE & POSTS WILL BE PLACED IN A NEAT MANNER WITHIN THE RIGHT OF WAY LIMITS AND WILL BE REMOVED BY COUNTY FORCES.

THE 6 FOOT ANCHOR OFFSET FOR STEEL PLATE BEAM GUARD MAY BE REDUCED TO NOTHING FOR INSTALLATIONS WHERE EXISTING CONDITIONS WILL NOT PERMIT THE DESIRABLE OFFSET.

THE EXACT LOCATION OF BEAM GUARD, ANCHORS AND BREAKAWAY CABLE TERMINALS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

UTILITIES

6664-1-71: CENTRAL STATE TELEPHONE CO.
VESPER, WIS. 54489
ATTN: MR. CHESTER GINGLE
TELEPHONE: 715-424-2121

WISCONSIN PUBLIC SERVICE CORP.
1700 WEST SHERMAN STREET
P.O. BOX 1666
WAUSAU, WIS. 54401
ATTN: MR. LARRY SANDERS
TELEPHONE: 715-845-7261

MOSINEE TELEPHONE CO.
410 FOURTH STREET
MOSINEE, WIS. 54455
ATTN: MR. JERRY STAHLCKER
TELEPHONE: 715-693-2622

6355-2-71: NORTH LOCATION

WOOD COUNTY TELEPHONE CO.
440 EAST GRAND AVE.
WISCONSIN RAPIDS, WIS. 54494
ATTN: MR. E. J. SWENSON
TELEPHONE: 715-424-4050

ADAMS MARQUETTE ELECTRIC COOP.
FRIENDSHIP, WIS. 53934
ATTN: MR. ROBERT ROBICHEAU
TELEPHONE: 608-339-3346

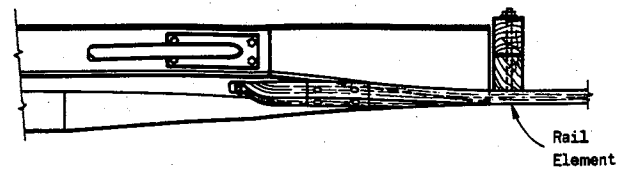
6355-2-71 SOUTH LOCATION

GENERAL TELEPHONE CO.
2222 WISCONSIN ST.
PORTAGE, WIS. 53901
ATTN: MR. MIKE ALLEN
TELEPHONE 608-742-4184

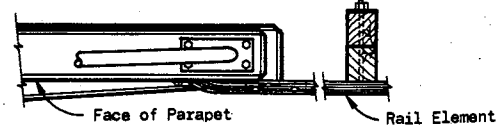
ADAMS MARQUETTE ELECTRIC COOP.
FRIENDSHIP, WIS. 53934
ATTN: MR. ROBERT ROBICHEAU
TELEPHONE: 608-339-3346

APPLICABLE STANDARD DETAIL DRAWINGS

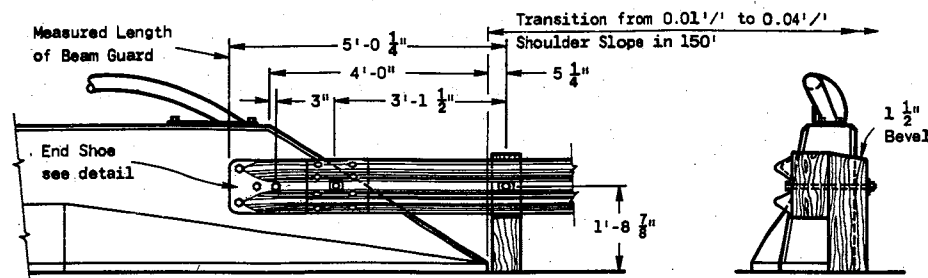
- 14B2-4a & b CLASS "A" STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD (2 SHEETS)
- 15C1-5 CONSTRUCTION BARRICADES & STANDARD SIGNS



PLAN VIEW



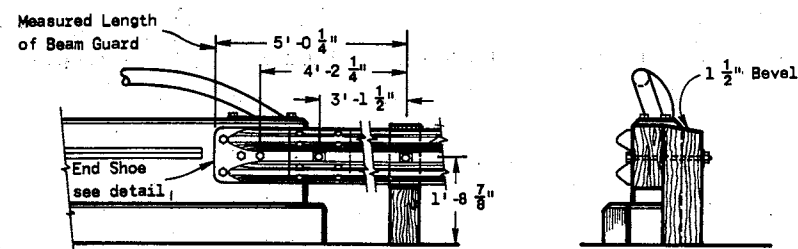
PLAN VIEW



FRONT ELEVATION

END ELEVATION

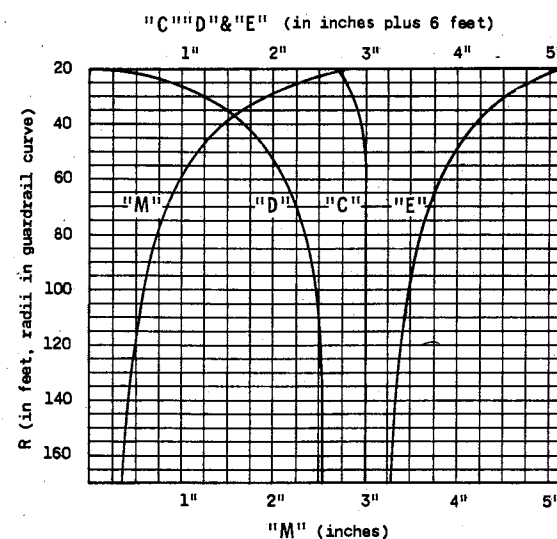
STRUCTURE MOUNTING DETAIL
SLOPING TYPE PARAPET WALL



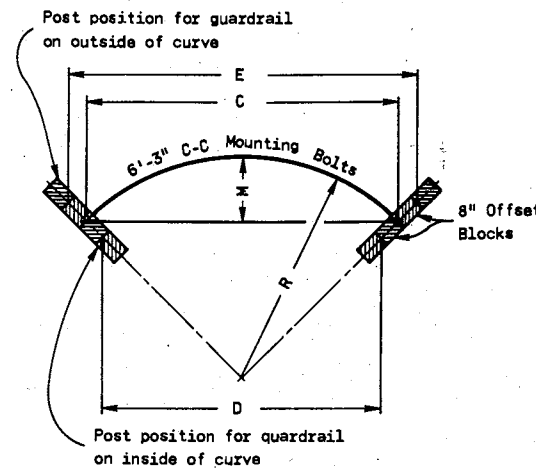
FRONT ELEVATION

END ELEVATION

STRUCTURE MOUNTING DETAIL
VERTICAL TYPE PARAPET WALL



CURVE DATA FOR POST SPACING AND BEAM CURVING



CHORD LENGTHS FOR POST SPACING AND MIDDLE ORDINATES FOR BEAM CURVING

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

The exact location of the beginning and end of each Guardrail installation shall be as shown on the plans or as directed by the Engineer.

Square anchor alternates will be permitted. Square anchors shall be a minimum of 24 inches x 24 inches.

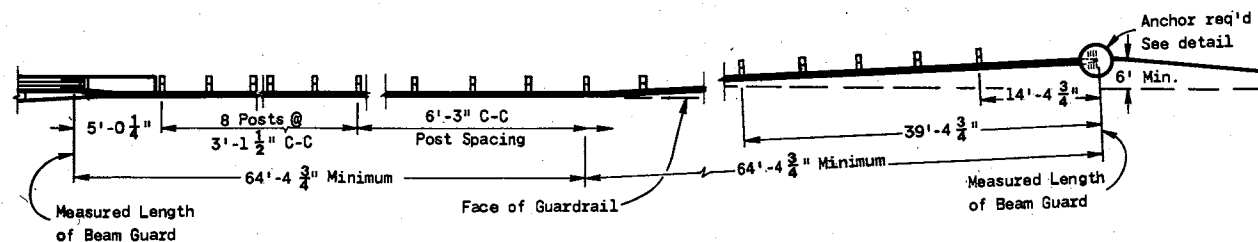
The shoulder widening to accommodate the anchored end of the guardrail shall be accomplished at the rate of widening not to exceed 15 to 1.

Upon approval of the Engineer, the 6 foot anchor offset may be reduced to nothing for replacement installations where existing conditions will not permit the desirable offset. However, when no offset greater than or equal to 3 feet can be provided, the minimum length of guardrail in advance of an obstacle (obstacle to anchor) shall be 150 feet.

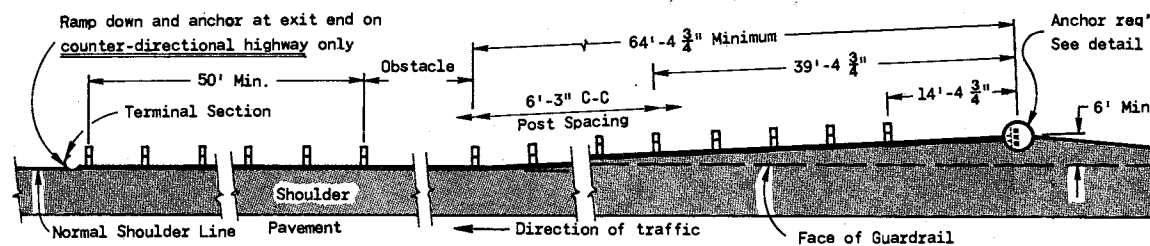
The minimum clearance from the front face of guardrail to obstacle shall be 3 feet unless otherwise shown on contract plans. When clearance is less than 3 feet post spacing shall be reduced to 3 feet - 1 1/2 inches C.C.

The "Post Footing Details At Piers" shall be used when guardrail posts are over structure footings and less than 3 feet - 6 inches of earth is provided over the top of the footing.

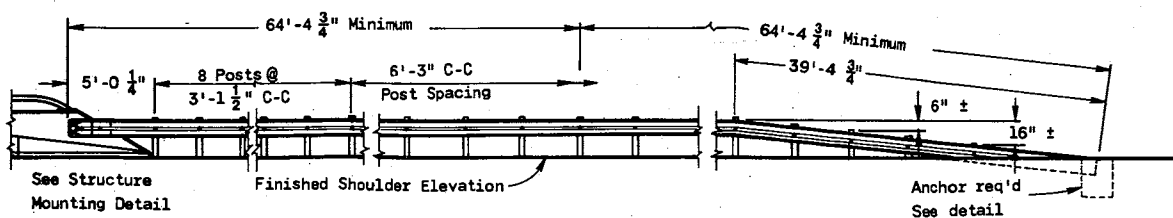
NOTE:
THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES, AND BOTH PLATES ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.



PLAN VIEW

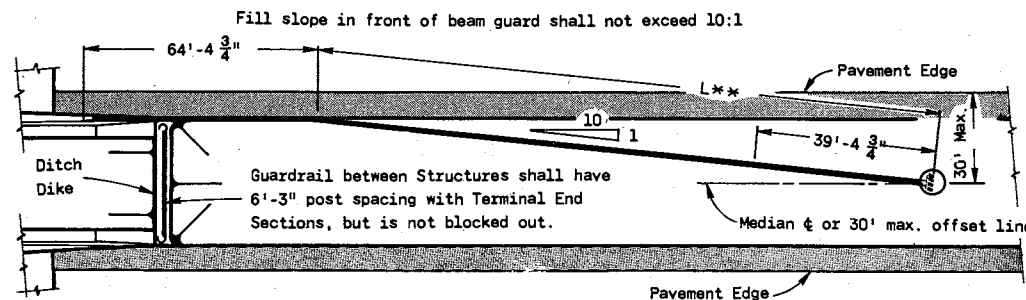


TYPICAL INSTALLATION AT LOCATIONS OTHER THAN STRUCTURES



FRONT ELEVATION

TYPICAL INSTALLATION AT STRUCTURES



PLAN VIEW

MEDIAN PROTECTION

** Variable based on Median width or 30' max. offset

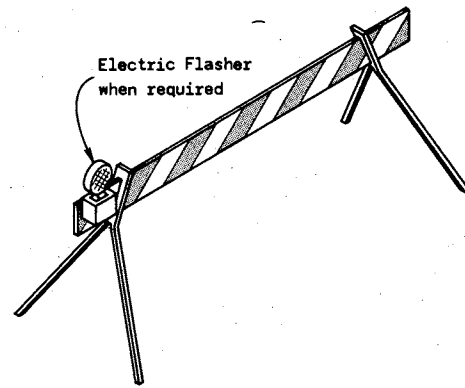
CLASS "A"
STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD

State of Wisconsin
Department of Transportation
Division of Highways

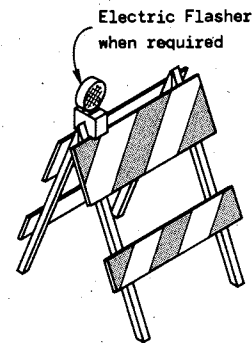
TABLE OF BARRICADE CHARACTERISTICS

BARRICADE TYPE	I	II	III
Height	3' Minimum		5' Minimum
* Rail Width	8" Minimum to 12" Maximum		
Rail Length	2' Minimum to variable Maximum		
** Stripe Width	6" at 45° Angle		
Stripe Colors	Reflectorized Orange & White		

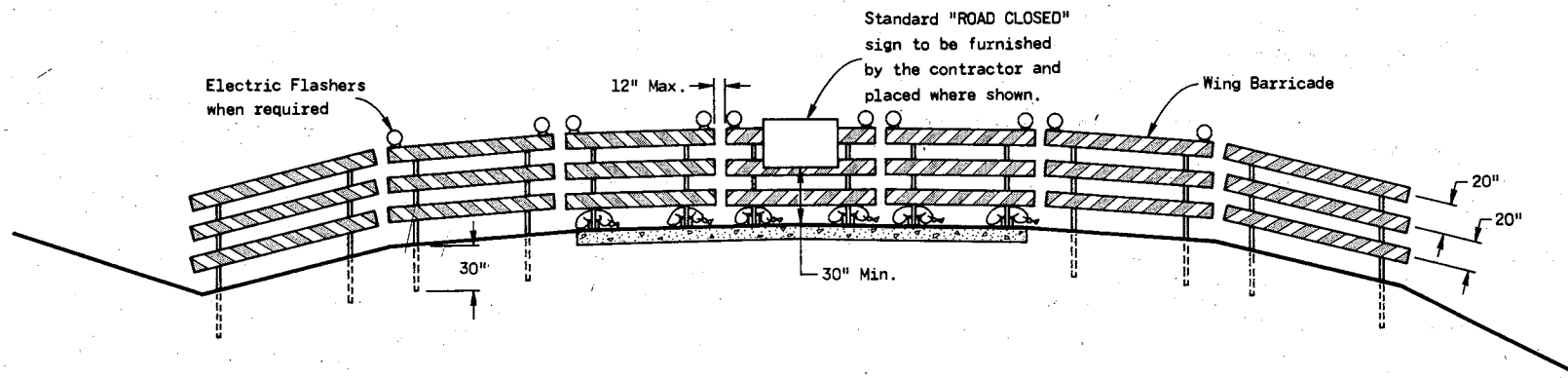
* Nominal dimensions when barricade is constructed of lumber.
 ** May be 4" for rail lengths less than 3'.



TYPICAL TYPE I BARRICADE

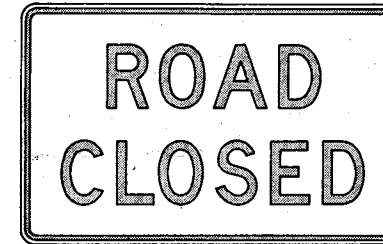


TYPICAL TYPE II BARRICADE



TYPICAL INSTALLATION SHOWING TYPE III BARRICADE

CONSTRUCTION BARRICADES



R11-2
 48" x 30"
 Black Lettering on Reflective
 White Background
 Letter Series "D"
 Letter height 8"



W20-3
 48" x 48"
 Black Lettering on Reflective
 Orange Background
 Letter Series "D"
 Letter height 7"

STANDARD SIGNS-TYPE II

GENERAL NOTES

The contractor shall furnish, erect and maintain Barricades and Signs. Details regarding location, spacing, dimensions, fabrication, material, sign lettering, lighting devices and color of Barricades and Signs shall conform to this drawing, the Wisconsin Manual on Uniform Traffic Control Devices, the Standard Specifications, Special Provisions and/or plans.

Type III Barricades and Signs shall be erected at the termini of projects and at other road or street locations where it is necessary to control or eliminate public access to the construction area.

Type I and II Barricades shall be used on projects when traffic is to be maintained through the construction area.

The actual field location of barricade installations and advance signs shall be as directed by the Engineer.

Each barricade shall have the name and telephone number of a person responsible for 24 hour emergency service printed in letters at least 3/4 inch in height.

CONSTRUCTION BARRICADES
& STANDARD SIGNS

State of Wisconsin
 Department of Transportation
 Division of Highways

APPROVED
 10-1-76
 DATE

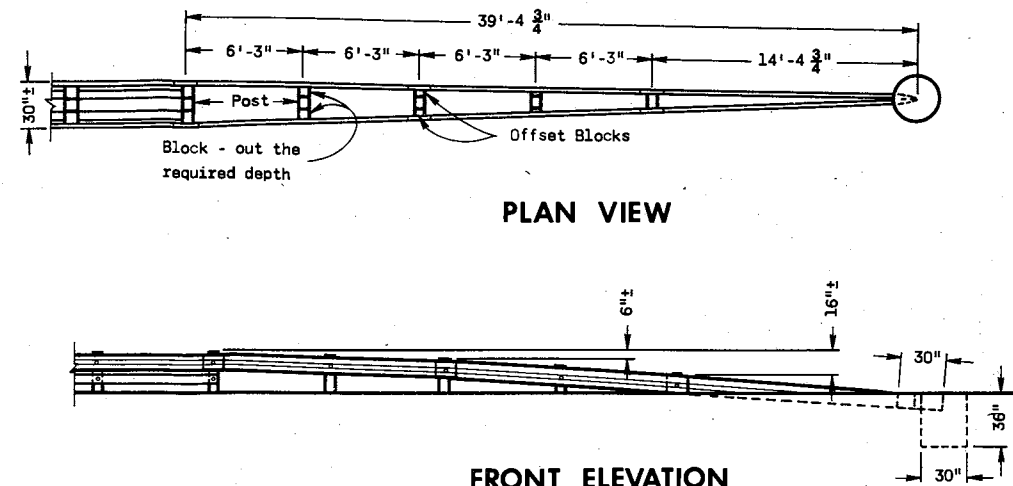
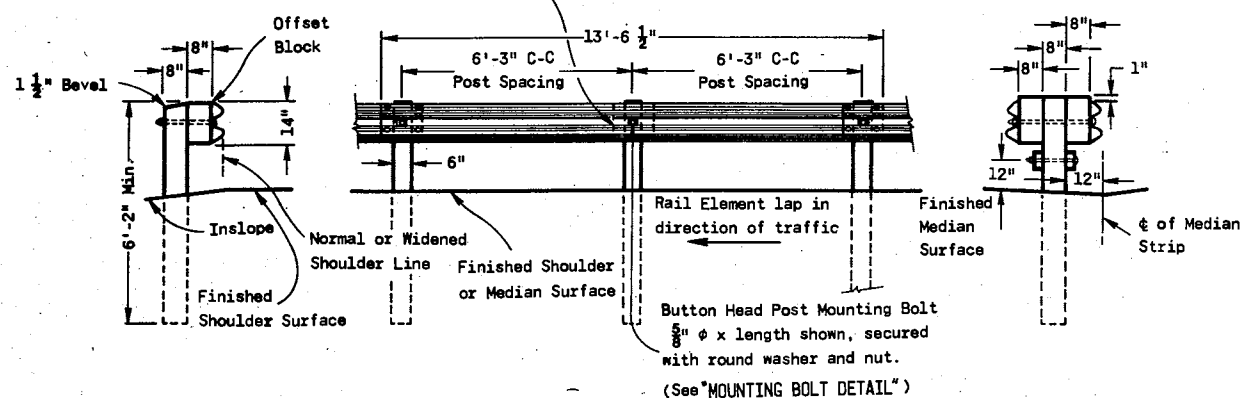
D. J. Strand
 CHIEF OF FACILITIES DEVELOPMENT

APPROVED
 10-1-76
 DATE

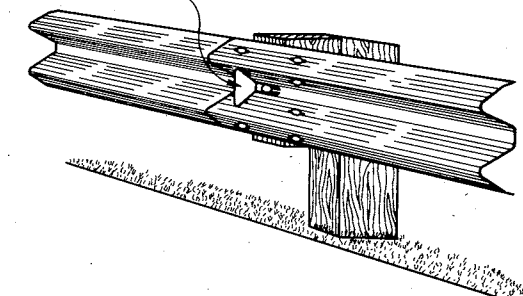
W. J. Sudler
 STATE HIGHWAY ENGINEER

One foot long section of rail element, with a $\frac{3}{4}$ " slotted hole for mounting, shall be placed behind the continuous rail element at the intermediate posts.

Sawn and treated timber posts and offset blocks shall be furnished and placed in accordance with Standard Specifications. Posts shall be 6" x 8" x 6'-6" and have 6" x 8" x 14" offset blocks.



NOTE: (DIVIDED HIGHWAYS) Reflector spacing shall be 50' C-C on installations less than 200' long, with a minimum of 3 reflectors on any installation. For installations 200' or longer, spacing shall be 100' C-C. (COUNTER-DIRECTIONAL HIGHWAYS) Reflector spacing shall be 25' C-C on installations less than 200' long, with a minimum of 6 reflectors on any installation, and every other reflectorized surface shall be reversed. For installations 200' or longer, spacing shall be 50' C-C.



END ELEVATION

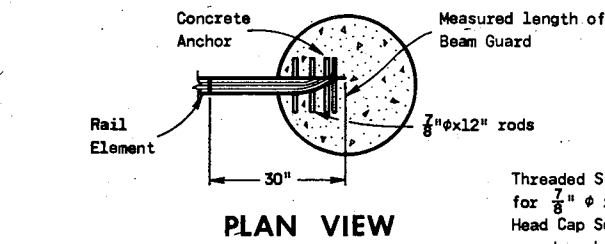
FRONT ELEVATION

END ELEVATION

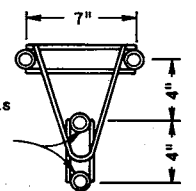
ANCHOR DETAIL FOR DOUBLE RAIL ELEMENT INSTALLATION

TYPICAL INSTALLATION

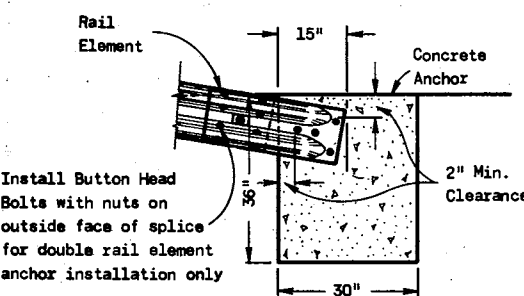
STEEL PLATE BEAM GUARD
STEEL PLATE BEAM GUARD OR STEEL PLATE BEAM MEDIAN GUARD



PLAN VIEW



PLAN VIEW



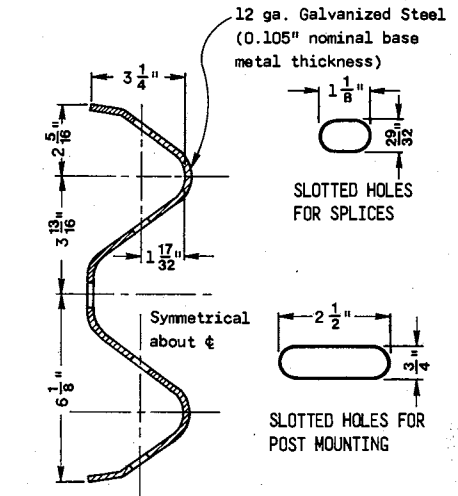
SECTION VIEW
ANCHOR DETAIL

SINGLE RAIL ELEMENT INSTALLATION

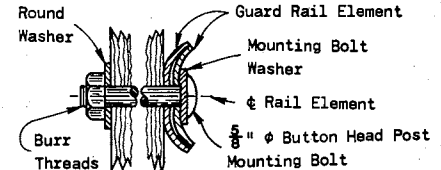
Threaded Steel Inserts for $\frac{7}{8}$ " ϕ x 2" Hex Head Cap Screws with round washers.

ELEVATION
4 BOLT INSERT ASSEMBLY

NOTE: Installation of 4 Bolt Insert Assembly (with Cap Screws inserted) to be part of Bridge Contract.

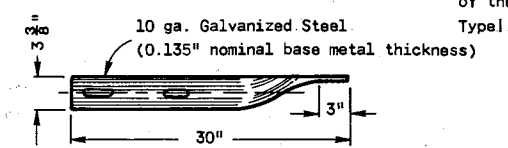


SECTION THRU RAIL ELEMENT

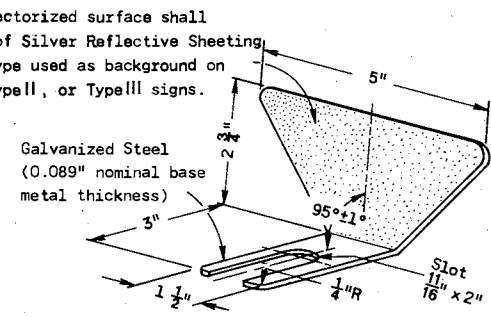


MOUNTING BOLT DETAIL

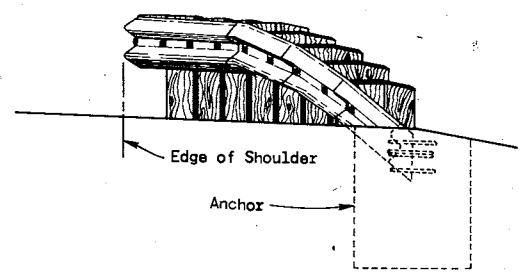
MOUNTING BOLT WASHER



END SHOE DETAIL

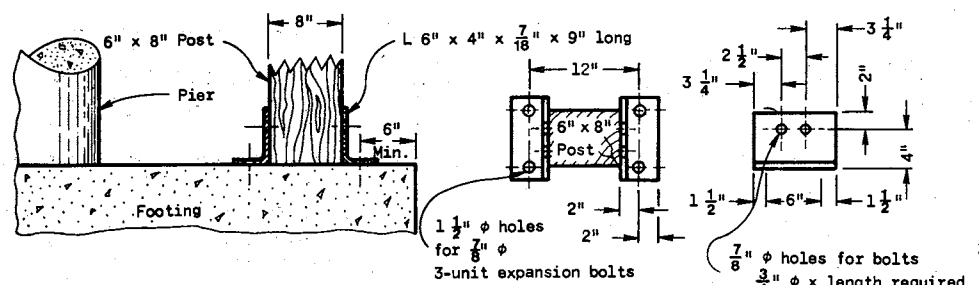


REFLECTOR DETAIL



TYPICAL TERMINAL END ELEVATION

NOTE: THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES, AND BOTH PLATES ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.

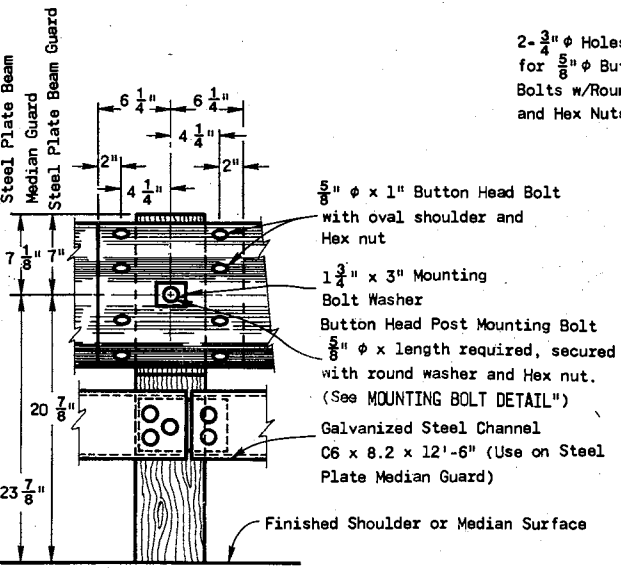


SECTION VIEW

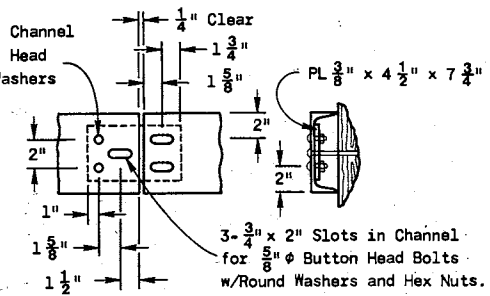
PLAN VIEW

ELEVATION

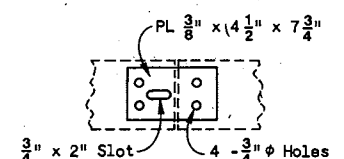
POST FOOTING DETAIL AT PIERS



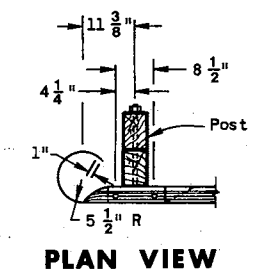
RAIL ELEMENT SPLICING AND POST MOUNTING DETAIL



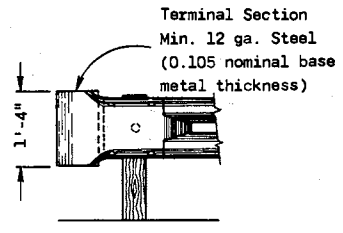
RUB RAIL SPLICE DETAIL



SPLICE PLATE



PLAN VIEW



FRONT ELEVATION
TERMINAL SECTION DETAILS

CLASS "A"
STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD

State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL
5-7-76
DATE

APPROVED
5-11-76
DATE

CHIEF OF FACILITIES DEVELOPMENT
STATE HIGHWAY ENGINEER