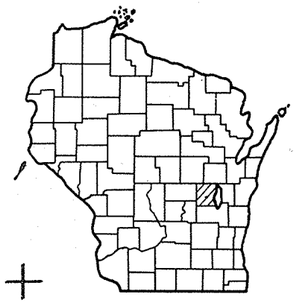
(B 70-63) And (B 70-64)

Sheet Number	Total Sheets
1	91

Index of Sheets



STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED

WEST COUNTY LINE - OSHKOSH

S.T.H. 116 - C.T.H."FF" SECTION

C.T.H."E"

WINNEBAGO COUNTY

#2

PROJECT IDENTIFICATION NUMBER	FEDERAL PROJECT DESIGNATION
6460-2-71,72,73	S 1260(3)

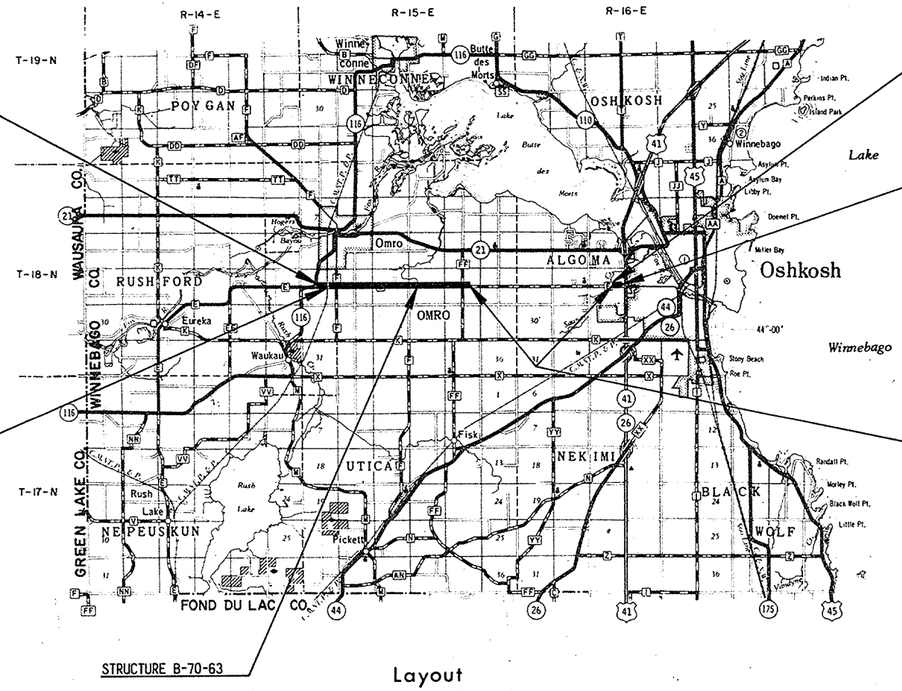
Scales Plan 1 in.= 100 ft.
Profile Hor. 1 in.= 100 ft. Vert. 1 in.= 10 ft.
Cross Sections Hor. 1 in.= 5ft. Vert. 1 in.= 5 ft.

Design Designation

A.D.T. 1973	= 800
A.D.T. 1993	= 1,200
D.H.V.	= 168
D.	= 60%
T.	= 8%
V.	= 60 M.P.H.

BEGINNING OF PROJECT S 1260 (3) / 6460-2-(71.72.73)
STA. 10 + 00
365.78' S. 89°-56'W. OF CENTER
SEC. 19 T. 18 N. R. 15 E.

STA. 26 + 98.60 TO STA. 27 + 11.31
EXCEPTION TO NET ℄ LENGTH



STRUCTURE B-70-64

END OF PROJECT S 1260 (3) / 6460-2-(71.72.73)
STA. 458 + 42.37
1,771 94' S. 89°-53' E. OF CENTER OF
SEC. 21 T. 18 N. R. 16 E.

STA. 235 + 00 TO STA. 447 + 87.17
EXCEPTION TO NET ℄ LENGTH

STRUCTURE B-70-63

Layout
Scale 0 1 2 Mi.

Total Net Length of Centerline = 4.459 Mi.

Conventional Signs

State Line
County Line
Township or Range Line
Section Line
New Right of Way Line
Present Right of Way Line
Wire Fence { Woven / Barbed
Lot Line
Corporate or City Limits
Property Line — P.L. + 32.6
Traveled Way or P.E.
Railroads
Base or Survey Line

Culverts in Place
Culverts Required
Drop Inlet
Power Pole
Telephone or Telegraph Pole
Right of Way Markers
Reference Stake for Hubs Only
Marsh
Hedge
Trees
Ground Elevation — Datum Line 73.9
Grade Elevation — Datum Line 76.16

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

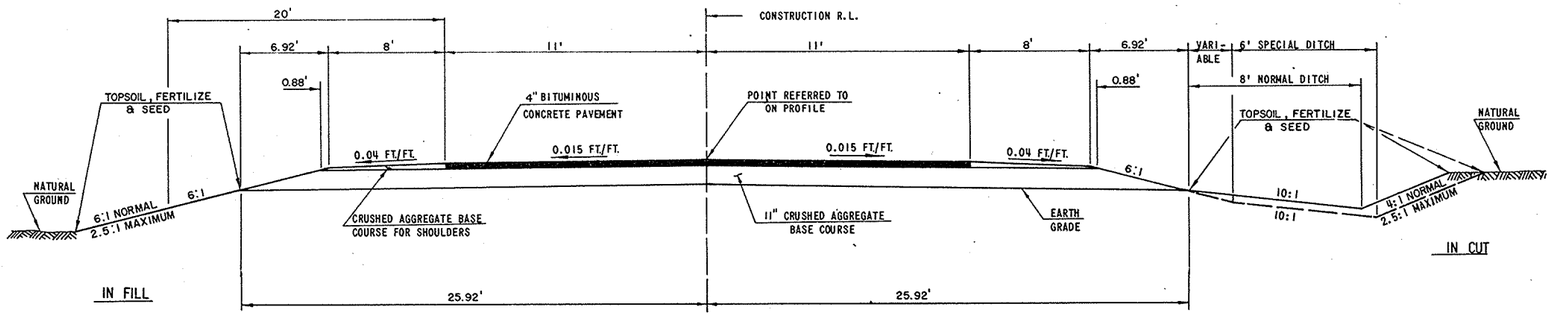
Surveyor R.D.N. District Checker M.R.L., D.P.C.
Designer C.W.M., C.M.G. C.O. Checker I.L.J.

Correct:
Date 4-27-72 District Engineer
Recommended for Approval:
Date 5/30/72 Chief Design Engineer
Approved:
Date 5/31/72 State Highway Engineer

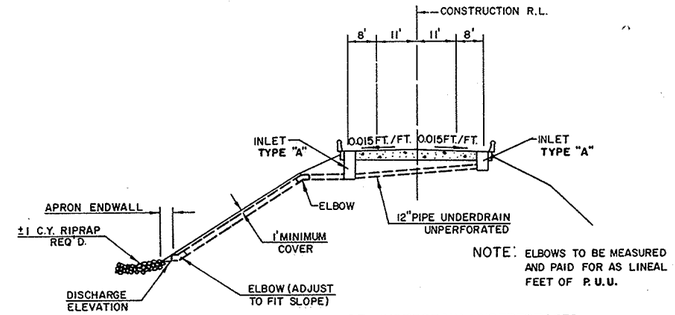
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 4 WISCONSIN DIVISION

Approved:
Date _____ Division Engineer

PROJECT I.D. 6460 - 2 - 71, 72, 73	SHEET NUMBER	TOTAL SHEETS
FEDERAL PROJECT DESIGNATION S 1260(3)	2	91
TYPICAL CROSS SECTIONS FOR C.T.H. "E" WINNEBAGO CO.		

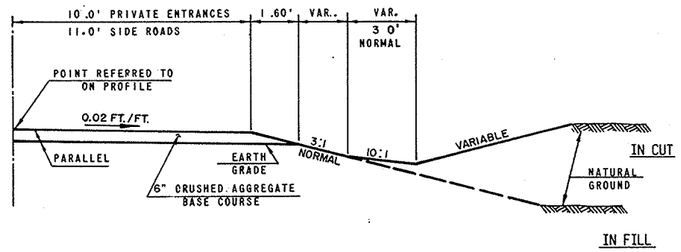


TYPICAL FINISHED SECTION C.T.H. "E"

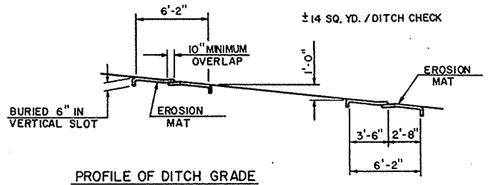


NOTE: ELBOWS TO BE MEASURED AND PAID FOR AS LINEAL FEET OF P.U.U.

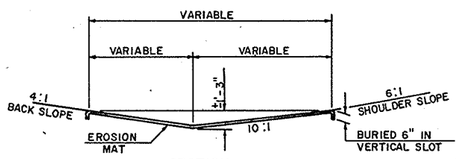
PIPE UNDERDRAIN UNPERFORATED
STA. 168+46 AND STA. 447+73
NOT TO SCALE



1/2 TYPICAL SECTION GRAVEL SURFACE SIDE ROADS AND PRIVATE ENTRANCES

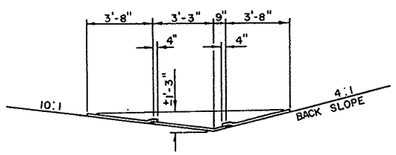


PROFILE OF DITCH GRADE

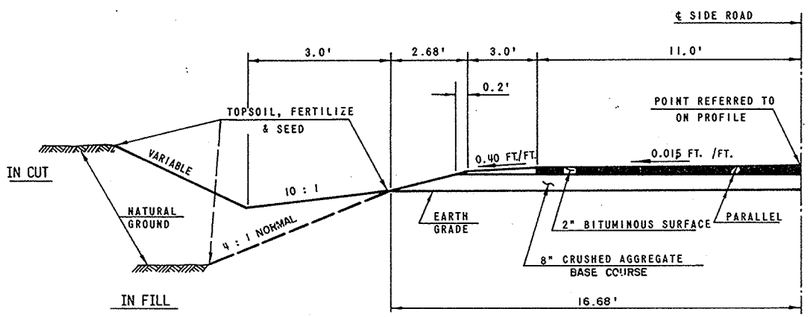


SECTION

DETAILS OF EROSION MAT DITCH CHECKS



EROSION MAT DITCH PROTECTION



1/2 TYPICAL SECTION BITUMINOUS SURFACE FOR SIDE ROADS

GENERAL NOTES

SALVAGED TOPSOIL SHALL BE PLACED TO AN APPROXIMATE DEPTH OF 3 INCHES

CERTAIN UNDERGROUND UTILITY STRUCTURES HAVE BEEN LOCATED ON THESE PLANS. THESE LOCATIONS SHALL NOT BE TAKEN AS CONCLUSIVE. VERIFICATION AS TO THE LOCATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND UTILITY STRUCTURES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT.

THE EXACT LOCATION OF CULVERT PIPE, PRIVATE ENTRANCES AND FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CUBIC YARDS OF FILL AS SHOWN ON THE PLAN SHEETS PERTAINS TO EMBANKMENT CONSTRUCTED FROM UNCLASSIFIED AND BORROW EXCAVATION AND WAS COMPUTED WITH A SHRINKAGE ALLOWANCE OF 25 % - 30 % FOR UNCLASSIFIED EXCAVATION AND 15 % FOR BORROW EXCAVATION BASED ON THE VOLUME OF THE FILL.

BITUMINOUS SURFACING AND SHOULDERS IS NOT PART OF THESE CONTRACTS.

WHEN THE QUANTITY OF THE ITEMS OF SUBBASE, AND BASE COURSE ARE MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

UTILITIES LOCATED WITHIN THIS PROJECT

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC RAILROAD (MILWAUKEE ROAD)
WISCONSIN TELEPHONE COMPANY
WISCONSIN POWER AND LIGHT COMPANY
WISCONSIN PUBLIC SERVICE CORP.

STANDARD DETAIL DRAWINGS

INLETS TYPE 1 & 2 & INLET COVERS	8C1-1
SURFACE DRAIN DROP INLET TYPE	8D3-1
APRON ENDWALLS	8F1-2
CORRUGATED METAL PIPE ARCH	8F2-1
SIDE ROAD INTERSECTIONS	9A1-1
CONCRETE PAVEMENT REINFORCEMENT	13A1-1
PAVEMENT DETAILS FOR RAILROAD APPROACH	13B1-1
CLASS "A" STEEL PLATE BEAM GUARD	14B2-2 A&B
MARKER POSTS	15A1-1
CONSTRUCTION BARRICADE	15C1-1
LANDMARK REFERENCE MONUMENTS	16A1-1

ESTIMATE OF QUANTITIES

CONTRACT NO. 1 STRUCTURES (6460-2-71) B-70-63.64
CONTRACT NO. 2 BASE COURSE (6460-2-72)
CONTRACT NO. 3 GRADING (6460-2-73)

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460 - 2 - 71, 72, 73	3	91
FEDERAL PROJECT DESIGNATION S 1260(3)		

THIS PROJECT IS TO BE EXECUTED UNDER THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE WISCONSIN DIVISION OF HIGHWAYS - EDITION OF 1969
APPROVED MARCH 3, 1969, FEDERAL AID REQUIRED CONTRACT PROVISIONS APPROVED NOVEMBER 15, 1968, AND SPECIAL PROVISIONS AS ATTACHED TO PROPOSALS.

CONTRACT NO.	STATION TO STATION	NET LENGTH OF CENTER-LINE	CLEARING	CLEARING	GRUBBING	GRUBBING	UNCLASSIFIED EXCAVATION	BORROW EXCAVATION	FINISHING ROADWAY	CRUSHED AGGREGATE BASE COURSE	CULVERT PIPE CLASS III				APRON ENDWALLS FOR CULVERT PIPE				CORRUGATED METAL PIPE ARCH							
											18 - INCH	24 - INCH	30 - INCH	36 - INCH	18 - INCH	24 - INCH	30 - INCH	36 - INCH	22"X 13"	29"X 18"	36"X 22"	43"X 27"	58"X 36"	65"X 40"		
	ITEM NO.		20101	20102	20104	20105	20503	20801	21301	30404	52003	52005	52007	52009	52061	52063	52065	52067	52136	52138	52139	52140	52142	52143		
	UNIT	LIN. FT.	STATION	IN. DIA.	STATION	IN. DIA.	CU. YD.	CU. YD.	L.S.	TON	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.		
1	B-70-63,64	130.78																								
										76,300																
2	STA. 10 + 00 - STA 458+42.37	23,411.71																								
3	STA. 10 + 00 - STA. 458 + 42.37	23,411.71	8	2,102	8	2,116	51,860	28,561	1		1,414	556	108	32	94	26	2	2	96	344	178	32	148	74		
	PROJECT TOTALS	23.542.49	8	2,102	8	2,116	51,860	28,561	1	76,300	1,414	556	108	32	94	26	2	2	96	344	178	32	148	74		

BRIDGES (STRUCTURES OVER 20FT. SPAN)

CONTRACT NO.	REMOVING OLD BRIDGE, STA. 169 + 00	REMOVING OLD BRIDGE, STA. 448 + 18	EXCAVATION FOR STRUCTURES	GRANULAR BACKFILL	CONCRETE SURFACE DRAINS	CONCRETE MASONRY	PRESTRESSED GIRDER, I TYPE, 36 - INCH	PRESTRESSED GIRDER, I TYPE, 45 - INCH	BAR STEEL REINFORCEMENT	STRUCTURAL CARBON STEEL	BEARING PADS ELASTOMERIC	CAST-IN-PLACE CONCRETE PILING DELIVERED AND DRIVEN 10 3/4 - INCH	STEEL PILING DELIVERED AND DRIVEN 10 - INCH X 42 POUND	TUBULAR RAILING, TYPE "J"	RIPRAP	HEAVY RIPRAP	INLETS, TYPE I	INLET COVERS, TYPE "A"	METAL APRON ENDWALLS FOR CULVERT PIPE, 12 - INCH	PIPE UNDERDRAIN UNPERFORATED 12 - INCH	FIELD OFFICE TYPE "A"						
	20351	20352	20601	20901	40934	50201	50303	50305	50501	50601	50625	90001	90002	90003	60601	60602	61121	61161	90004	61214	64201					
	L.S.	L.S.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	LIN. FT.	LIN. FT.	LBS.	LBS.	SQ. FT.	LIN. FT.	LIN. FT.	LIN. FT.	CU. YD.	CU. YD.	EACH	EACH	EACH	LIN. FT.	L.S.					
1	B-70-63	1		20	10	5	170.4	476		23,890	460	14	720		162	1	170	2	2	1	72						
																					1					
1	B-70-64		1	82	48	5	181		246	27,840	430	10		640	157	1	210	2	2	1	76						
	PROJECT TOTALS	1	1	102	58	10	351.4	476	246	51,730	890	24	720	640	319	2	380	4	4	2	148	1					

CONTRACT NO.	METAL APRON ENDWALLS FOR PIPE ARCH						ANCHORAGES FOR STEEL PLATE BEAM GUARD	STEEL PLATE BEAM GUARD, CLASS "A"	MARKER POSTS	LANDMARK REFERENCE MONUMENTS	CALCIUM CHLORIDE SURFACE TREATMENT	SALVAGED TOPSOIL	EROSION MAT	FERTILIZER	SEEDING	FIELD OFFICE, TYPE "A"	FIELD OFFICE TYPE "A"	ON THE JOB TRAINING									
	22"X 13"	29"X 18"	36"X 22"	43"X 27"	58"X 36"	65"X 40"																				
	52162	52164	52165	52166	52168	52169	61406	61408	61421	62101	62301	62505	62802	62901	63002	64201	64201	90005								
	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH	TON	SQ. YD.	SQ. YD.	C W T	LB.	L.S.	L.S.	HRS.								
																		1,000								
1																										
2																1										
3	4	10	6	2	4	2	10	993	40	3	44	132,360	3.000	60	1,790		1									
TOT	4	10	6	2	4	2	10	993	40	3	44	132,360	3.000	60	1,790	1	1	1,000								

DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-(71.72.73)	3A	91
FEDERAL PROJECT DESIGNATION S 1260 (3)		

CLEARING & GRUBBING

CONTRACT	STATION TO STATION	CLEARING STATION	CLEARING IN. DIA.	GRUBBING STATION	GRUBBING IN. DIA.
3	STA.10 + 00 - STA.161 + 00	-	1.034	-	1.048
3	STA.161 + 00 - STA.163 + 00	2	-	2	-
3	STA.163 + 00 - STA.209 + 00	-	243	-	243
3	STA.209 + 00 - STA.211 + 00	2	-	2	-
3	STA.211 + 00 - STA.235 + 00	-	290	-	290
3	STA.416 + 00 - STA.420 + 00	4	-	4	-
3	STA.420 + 00 - STA.458 + 42	-	535	-	535

EXCAVATION

CONTRACT NO.	LOCATION	UNCLASSIFIED CU. YD.	BORROW CU. YD.
3	STA.10 + 00 - STA.235 + 00	42.381	27.621
3	STA.414 + 00 - STA.448 + 02	6.270	-
3	STA.448 + 02 - STA.458 + 42.37	3.209	940

CRUSHED AGGREGATE BASE COURSE

CONTRACT NO.	STATION TO STATION	TON MAINLINE	TON SIDE ROADS	TON P. E.'S
2	STA.10 + 00 - STA.235 + 00	70.000	1.420	575
2	STA.446 + 00 - STA.447 + 87	420	-	625
2	STA.448 + 83 - STA.458 + 42.37	3.110	-	150

PIPE CULVERTS

CONTRACT NO	STATION	LOCATION	DIAMETER IN. DIA.	LENGTH LIN. FT.	TYPE	APRON ENDWALLS	MARKER POSTS
3	STA.26 + 90	℄	36"X 22"	62'	C.M.P. A.	2	2
3	STA.27 + 26	℄	36"X 22"	62'	C.M.P. A.	2	2
3	STA.40 + 00	℄	29"X 18"	76'	C.M.P. A.	2	2
3	STA.40 + 36	SIDE ROAD LEFT	36"X 22"	54'	C.M.P. A.	2	-
3	STA.53 + 80	F. E. LEFT	18"	32'	CULVERT PIPE CLASS III	2	-
3	STA.55 + 75	℄	65"X 40"	74'	C.M.P. A.	2	2
3	STA.56 + 70	P. E. RIGHT	18"	30'	CULVERT PIPE CLASS III	2	-
3	STA.67 + 15	SIDE ROAD LEFT	22"X 13"	58'	C.M.P. A.	2	-
3	STA.67 + 15	SIDE ROAD RIGHT	18"	58'	CULVERT PIPE CLASS III	2	-
3	STA.83 + 02	℄	24"	68'	CULVERT PIPE CLASS III	2	2
3	STA.92 + 45	P.E. RIGHT	18"	30'	CULVERT PIPE CLASS III	2	-
3	STA.95 + 25	F.E. RIGHT	18"	36'	CULVERT PIPE CLASS III	2	-
3	STA.97 + 05	P. E. LEFT	18"	34'	CULVERT PIPE CLASS III	2	-
3	STA.120 + 50	℄	29"X 18"	66'	C.M.P. A.	2	2
3	STA.120 + 50	℄	29"X 18"	66'	C.M.P. A.	2	-
3	STA.120 + 80	P. E. RIGHT	43"X 27"	32'	C.M.P. A.	2	-
3	STA.122 + 95	P. E. RIGHT	36"	32'	CULVERT PIPE CLASS III	2	-
3	STA.127 + 06	SIDE ROAD LEFT	24"	54'	CULVERT PIPE CLASS III	2	-
3	STA.137 + 45	℄	58"X 36"	74'	C.M.P. A.	2	2
3	STA.137 + 45	℄	58"X 36"	74'	C.M.P. A.	2	-
3	STA.140 + 30	P. E. LEFT	18"	30'	CULVERT PIPE CLASS III	2	-
3	STA.147 + 04	SIDE ROAD RIGHT	18"	46'	CULVERT PIPE CLASS III	2	-
3	STA.147 + 33	℄	29"X 18"	72'	C.M.P. A.	2	2
3	STA.160 + 77	℄	24"	68'	CULVERT IPIE CLASS III	2	2
3	STA.166 + 50	℄	30"	108'	CULVERT PIPE CLASS III	2	2
1	STA.168 + 53	℄	12"	38'	C.M.P. UNDERDRAIN UNPERFORATED	-	-
1	STA.168 + 46	19.5' LEFT	12"	34'	C.M.P. UNDERDRAIN UNPERFORATED	1	1
3	STA.170 + 00	P. E. LEFT	24"	34'	CULVERT PIPE CLASS III	2	-
3	STA.173 + 85	P. E. RIGHT	24"	32'	CULVERT PIPE CLASS III	2	-
3	STA.205 + 27	℄	29"X 18"	64'	C.M.P. A.	2	2
3	STA.222 + 81	℄	24"	64'	CULVERT PIPE CLASS III	2	2
3	STA.226 + 96	SIDE ROAD LEFT	22"X 13"	38'	C.M.P. A.	2	-
3	STA.417 + 89	SIDE ROAD RIGHT	18"	36'	CULVERT PIPE CLASS III	2	-
3	STA.422 + 20	P.E. LEFT	24"	36'	CULVERT PIPE CLASS III	2	-
3	STA.422 + 60	F.E. RIGHT	18"	30'	CULVERT PIPE CLASS III	2	-
3	STA.424 + 71	SIDE ROAD LEFT	24"	36'	CULVERT PIPE CLASS III	2	-
3	STA.425 + 67	P.E. LEFT	24"	36'	CULVERT PIPE CLASS III	2	-
3	STA.426 + 85	P.E. LEFT	24"	36'	CULVERT PIPE CLASS III	2	-
3	STA.427 + 65	P.E. RIGHT	24"	32'	CULVERT PIPE CLASS III	2	-
3	STA.429 + 18	P.E. RIGHT	24"	30'	CULVERT PIPE CLASS III	2	-
3	STA.430 + 15	P.E. LEFT	24"	30'	CULVERT PIPE CLASS III	2	-
3	STA.446 + 90	F.E. LEFT	18"	44'	CULVERT PIPE CLASS III	2	-
1	STA.447 + 73	℄	12"	35'	C.M.P. UNDERDRAIN UNPERFORATED	-	-
1	STA.447 + 73	19.5' LEFT	12"	41'	C.M.P. UNDERDRAIN UNPERFORATED	1	1
3		(36 P.E.'S @ 18"X 28' EACH)			CULVERT PIPE CLASS III	72	-

STEEL PLATE BEAM GUARD

CONTRACT NO.	LOCATION	LIN.FT.	ANCHORAGES
3	B-70-63 WEST END LEFT	128.8	1
3	B-70-63 WEST END RIGHT	128.8	1
3	B-70-63 EAST END LEFT	91.3	1
3	B-70-63 EAST END RIGHT	128.8	1
3	STA.101 + 53.8 - STA.102 + 82.6 LEFT	128.8	2
3	STA.101 + 41.2 - STA.102 + 70.2 RIGHT	128.8	2
3	B-70-64 EAST END LEFT	128.8	1
3	B-70-64 EAST END RIGHT	128.8	1

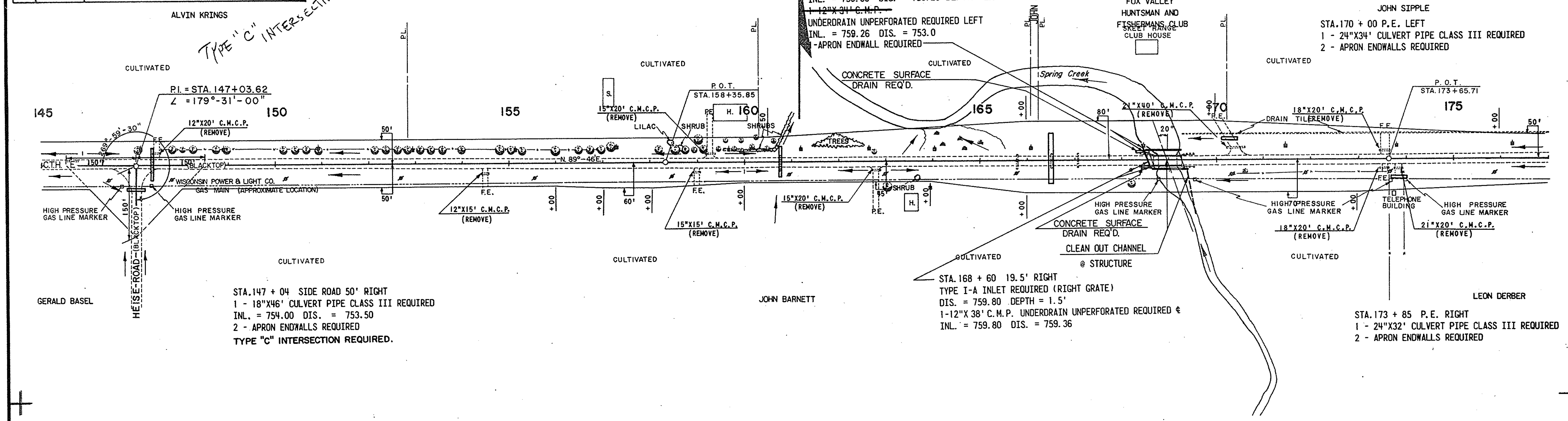
RIPRAP

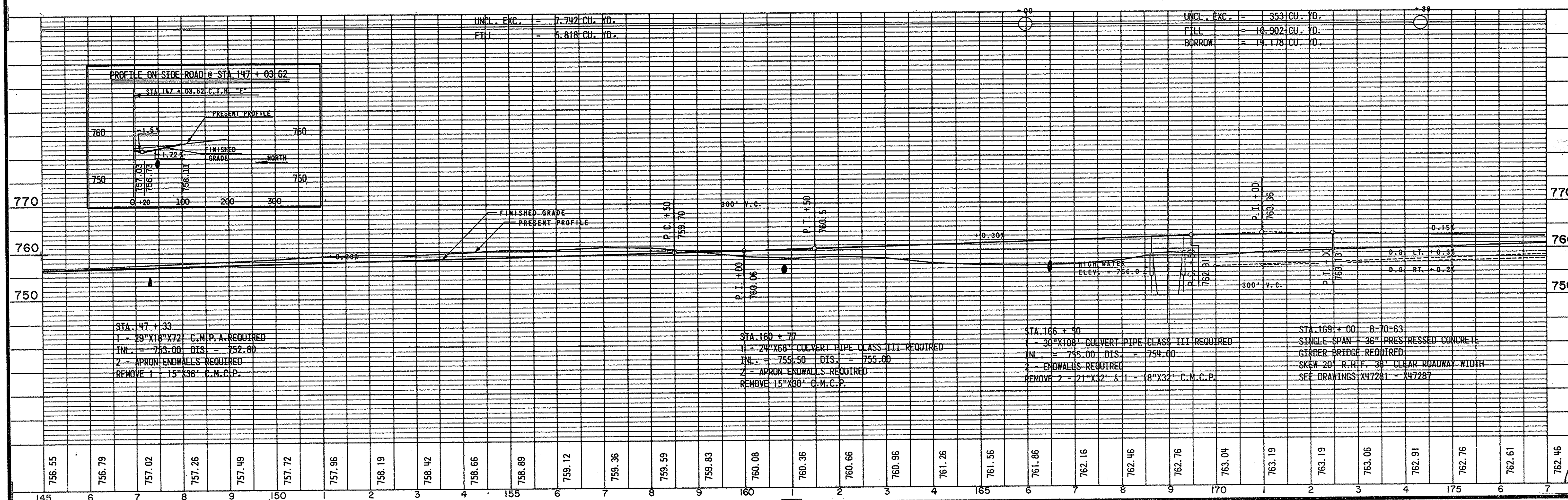
CONTRACT NO.	LOCATION	CU. YD.
1	STA.168 + 46 LEFT	1
1	STA.447 + 73 LEFT	1

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71,72,73	10	91
FEDERAL PROJECT DESIGNATION S 1260 (3)		

BENCH MARKS

NO.	STATION	DESCRIPTION		ELEV.
26	146+90	SPIKE IN POWER POLE	178' RT.	757.82
27	159+04	SPIKE IN 22" MAPLE	50' LT.	759.23
28	167+60	SPIKE IN 24" OAK STUB	225' RT.	757.35





PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71,72,73		
FEDERAL PROJECT DESIGNATION	14	91
S 1260(3)		

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
59	448+40	PT. MK. TOP N.E. WINGWALL 20' LT.	767.20
60	454+22	SPIKE IN 14" OAK 45' RT.	779.17
61	457+58	S.E. CORNER OF ENTRY SLAB OF HOUSE (FRONT DOOR) 82' LT.	779.58
171	499+18	SPIKE IN POWER POLE 115' RT. R/W RL.	763.43

HENRY LAUTENSCHLAGER

STA. 447 + 73 18.5' LEFT
TYPE I-A INLET REQUIRED (LEFT GRATE)
INL. = 768.56 DIS. = 768.56 DEPTH = 2.0'
~~1-12"X 41' C.M.P. UNDERDRAIN UNPERFORATED REQ'D LT.~~
INL. = 768.56 DIS. = 760.50
1-APRON ENDWALL REQUIRED

STA. 446 + 00 P.I.
1-18"X 44' CULVERT PIPE CLASS III REQ'D.
2-APRON ENDWALLS REQUIRED
REMOVE 18"X 18' C.M.C.P.

ROBERT SCHULZ
CONCRETE SURFACE DRAIN REQUIRED
CLEAN OUT
CHANNEL @ STRUCTURE
CULTIVATED
15"X 20' C.M.C.P. (REMOVE)
ROBERT SCHULZ
NEIL ANDERSON
18"X 22' C.M.C.P. (REMOVE)
ROBERT VANDERBILT
WERTCH MOTOR COMPANY INC.
CHARLES REEVE
RICHARD NASLUND
18"X 22' C.M.C.P. (REMOVE)
18"X 24' C.M.C.P. (REMOVE)
P.I. = STA. 458+42.37
∠ = 180°-09'-12"
ROW OF SHRUBS
CONCRETE PIT WELL
DRYWELL VENT
HIGH PRESSURE GAS LINE MARKER
TWIN BIRCH
WISCONSIN POWER & LIGHT CO GAS MAIN (APPROXIMATE LOCATION)
WISCONSIN PUBLIC SERVICE CORP GAS MAIN (APPROXIMATE LOCATION)
C.T.H. "E" (BLACKTOP)
S.89°-53'E.
LILAC
12"X 20' C.M.C.P. (REMOVE)
P.O.T. STA. 455+58.08
CULTIVATED
CONCRETE SURFACE DRAIN REQUIRED
OTTO WINTER

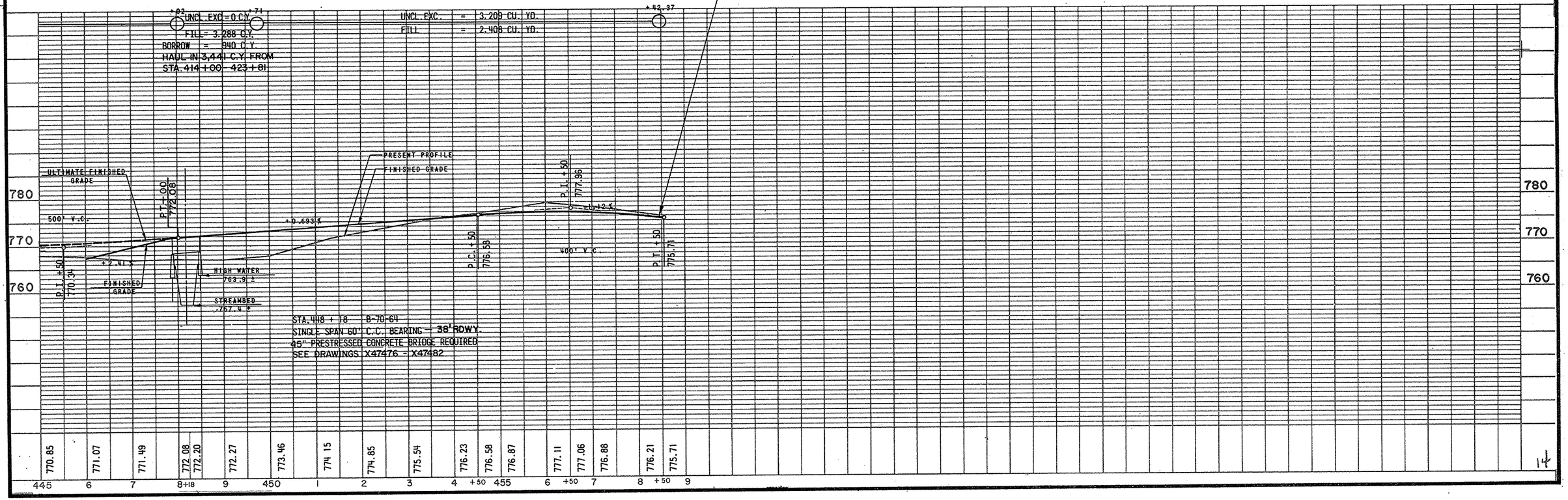
STA. 458 + 42.37 BACK =
STA. 19 + 00 AHEAD
PROJECT I.D. 1121-5-71

END OF PROJECT S1260(3) / 6460-2-71,72,73
STA. 458+42.37

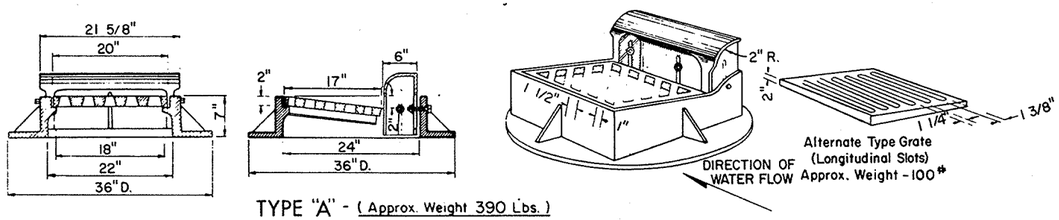
STA. 447 + 73 18.5' RIGHT
TYPE I-A INLET REQUIRED (RIGHT GRATE)
DIS. = 769.06 DEPTH = 1.5'
1-12"X 35' C.M.P. UNDERDRAIN UNPERFORATED REQ'D.
INL. = 769.06 DIS. = 768.56

UNCL. EXC. = 0 C.Y.
FILL = 3,288 C.Y.
BORROW = 940 C.Y.
HAUL IN 3,441 C.Y. FROM STA. 414+00 - 423+81

UNCL. EXC. = 3,209 CU. YD.
FILL = 2,408 CU. YD.

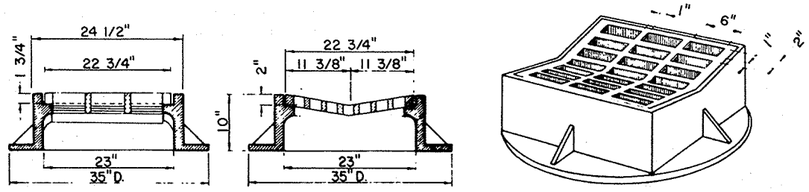


STA. 448 + 18 8-70-64
SINGLE SPAN 60' C.C. BEARING — 38' RDWY.
45° PRESTRESSED CONCRETE BRIDGE REQUIRED
SEE DRAWINGS X47476 - X47482



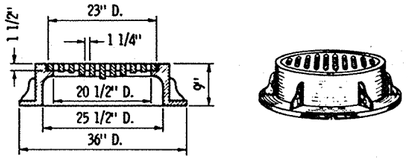
TYPE "A" - (Approx. Weight 390 Lbs.)

Frame Weight - 250 #
Grate " - 90 #
Box " - 50 #



TYPE "B"- (Approx. Weight 414 Lbs.)

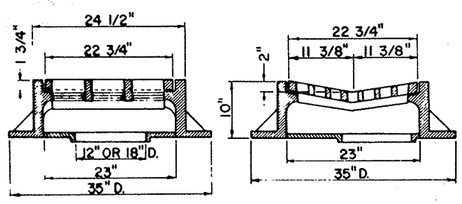
Frame Weight - 275 #
Grate " - 139 #



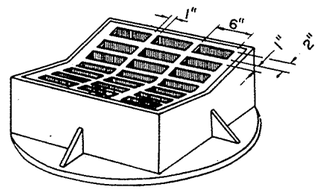
TYPE "C"- (Approx. Weight 370 Lbs.)

Frame Weight Type "C" & Type "D" - 255 #
Slotted Grate Weight - 115 #
Solid Cover Weight - 150 #

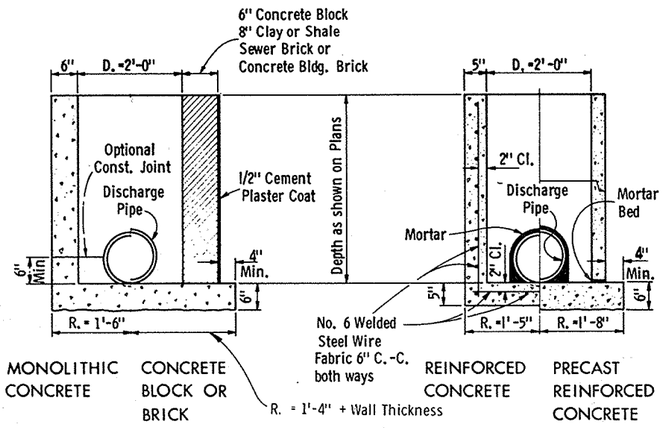
(Note: Frame for Type "C" same as for Type "D")



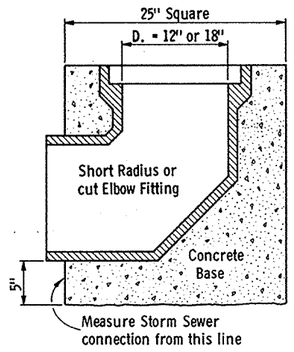
TYPE "S" - (Approx. Weight 450 Lbs.)



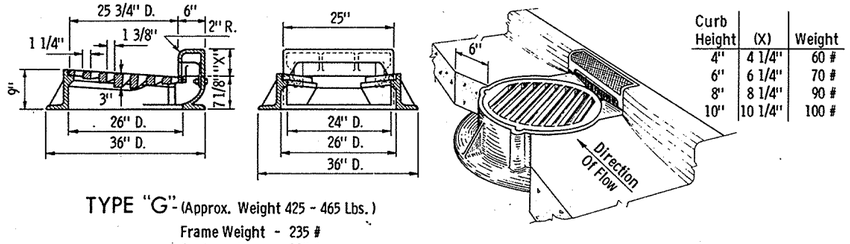
INLET COVERS



INLET TYPE 1



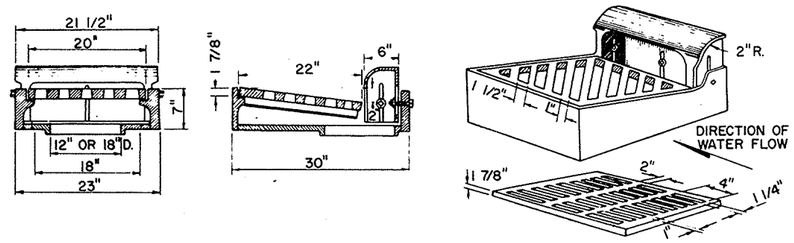
INLET TYPE 2



Curb Height	(X)	Weight
4"	4 1/4"	60 #
6"	6 1/4"	70 #
8"	8 1/4"	90 #
10"	10 1/4"	100 #

TYPE "G"- (Approx. Weight 425 - 465 Lbs.)

Frame Weight - 235 #
Grate " - 130 #
Box - See Table



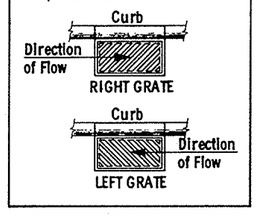
TYPE "R"- (Approx. Weight 450 Lbs.)

Alternate Type Grate
(Longitudinal Slots)

SPECIAL NOTE

Diagonal Slots shall be oriented to the direction of flow as shown hereon. Hence RIGHT and LEFT Grates shall be furnished depending on direction of flow. (See Sketch Below)

Longitudinal slot type grates may be used ONLY where bicycles are prohibited.



GENERAL NOTES

1. 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.
2. Detailed drawings for proposed alternate designs for Inlets shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivaleht capacity and strength.
3. All Inlets are designated on the Plans as "Inlets, 1-A", 2-R, etc. This designation is interpreted to mean that the number, or first digit, designates the masonry portion of the structure, and the following letter, designates the type of cover or iron casting to be used therewith to comprise the complete unit "Inlet" in place.
4. All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.
5. Precast Reinforced Bases may be used in lieu of cast-in-place bases. When Precast Bases are used, they shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding material shall be compacted and provide uniform support for the entire area of the base.
6. All Precast Reinforced Concrete Risers, Grade Rings, and Flat Slab Tops shall conform to AASHO Designation M 199. Precast Reinforced Concrete Bases shall conform to the Flat Slab Top requirements of AASHO Designation M 199.
7. Adjustment of the cover to grade may be accomplished by the use of mortar and brick. Maximum adjustment shall be 8 inches.
8. Precast Reinforced Concrete Risers may be placed with tongue or "D" joint ends either up or down.
9. Strike all joints for brick or block construction.

INLETS TYPE 1 & 2 AND INLET COVERS

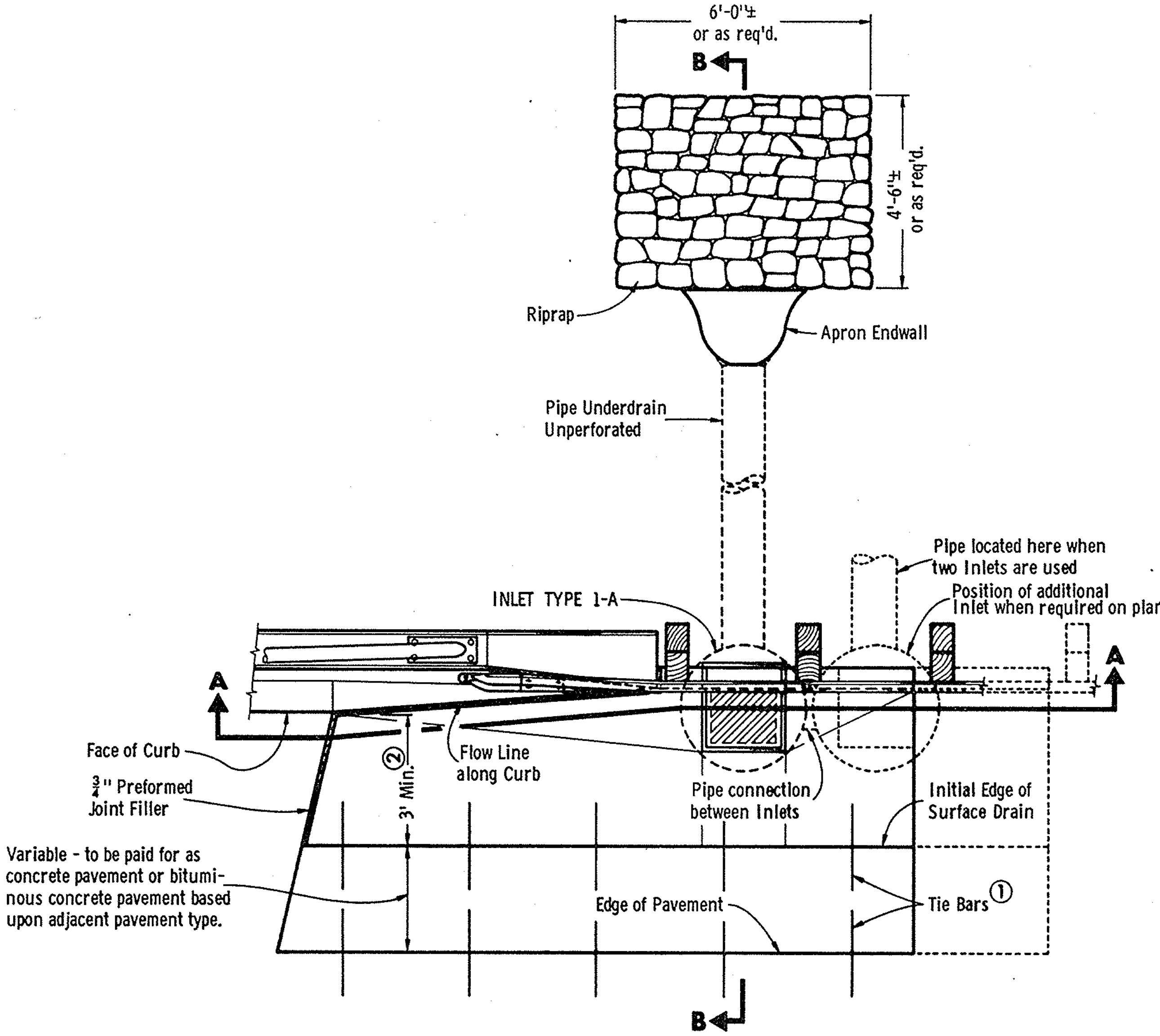
State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL: 5/7/69 DATE — E. J. Bystrit, CHIEF DESIGN ENGINEER

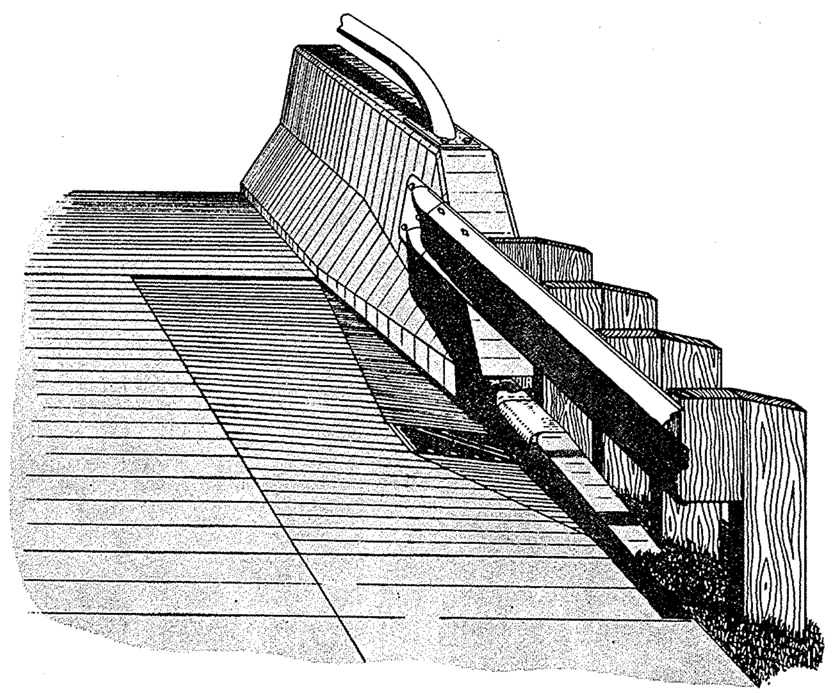
APPROVED: 5/12/69 DATE — W. J. Sammicster, STATE HIGHWAY ENGINEER

S.D.D. 8C1-1

S.D.D. 8C1-1



PLAN VIEW



TYPICAL INSTALLATION

① Tie Bars

4 x 2'-0" tie bars spaced at 3'-0" centers to be used only when adjacent to P. C. concrete

② Based on drainage requirements

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.

Detailed drawings for proposed alternate designs for Surface Drains shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

See Standard Detail Drawing "INLETS TYPE 1" for construction details of Inlet.

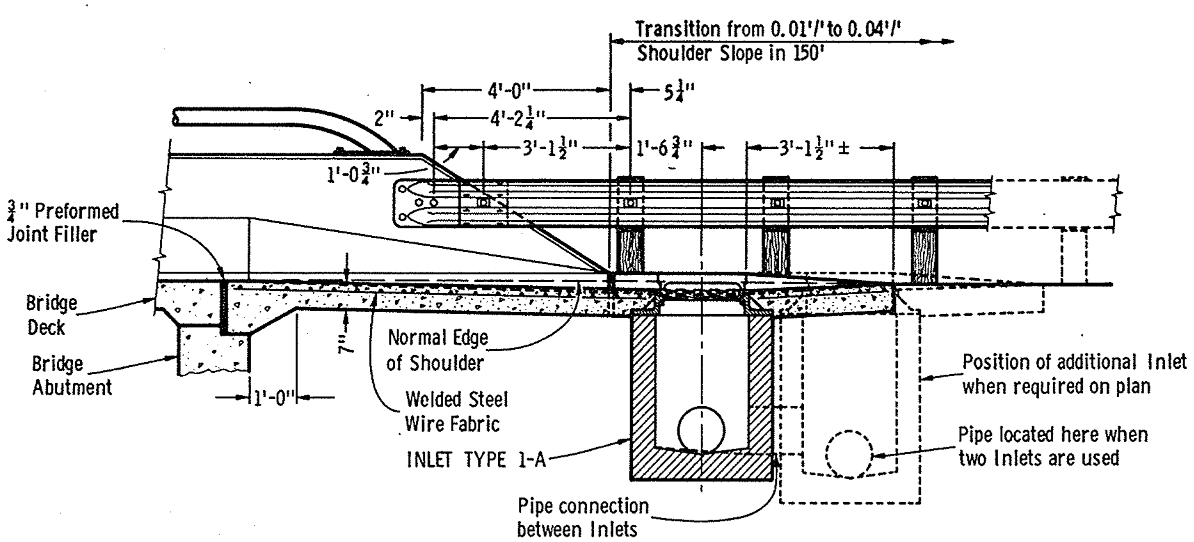
See Standard Detail Drawing "Class "A" STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD" for construction and layout details not shown on this sheet.

REINFORCEMENT

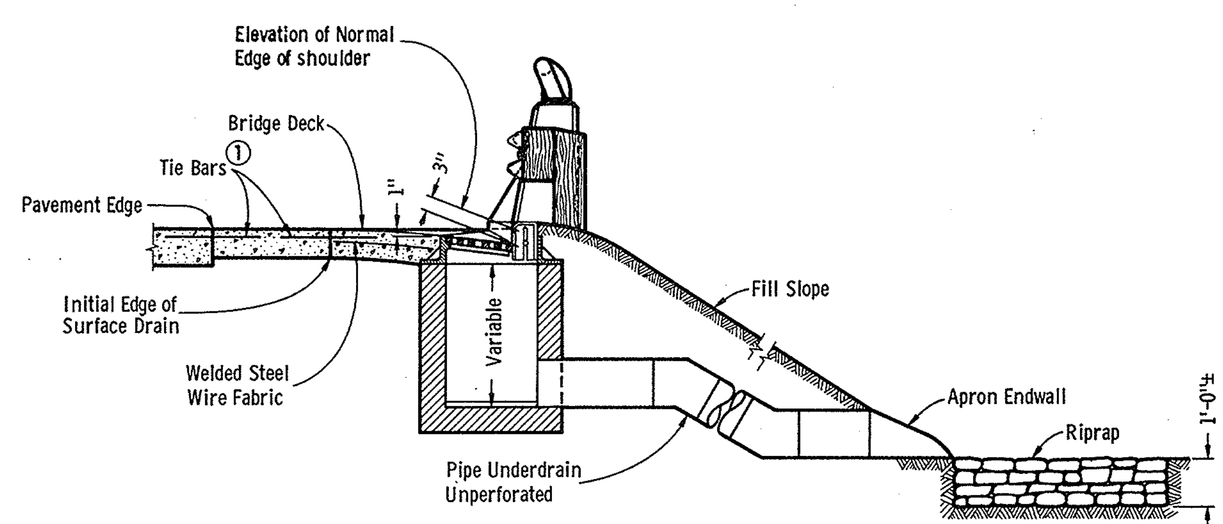
Welded Steel Wire Fabric shall conform to the Standard Specifications for Welded Steel Wire Fabric for concrete pavement.

BASIS OF PAYMENT

The curb and initial portion of the Concrete Surface Drain shall be paid for as provided in the Standard Specifications for Concrete Surface Drains. The Unperforated Pipe Underdrain, Metal Apron Endwall, Inlet, Inlet Cover and Riprap shall be paid for under the pertinent Contract items.



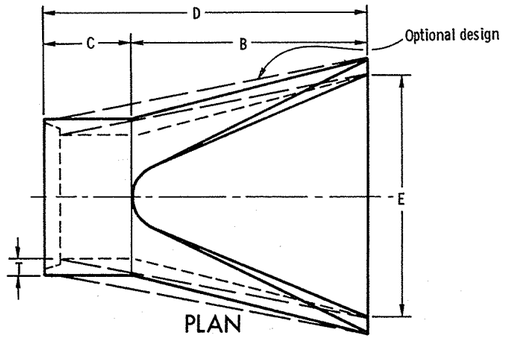
SECTION A-A



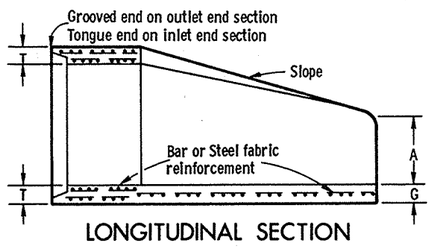
SECTION B-B

SURFACE DRAIN DROP INLET TYPE
State of Wisconsin *Department of Transportation* *Division of Highways*
RECOMMENDED FOR APPROVAL: 5/13/71 DATE — ACTING CHIEF DESIGN ENGINEER
APPROVED: 5/13/71 DATE — STATE HIGHWAY ENGINEER

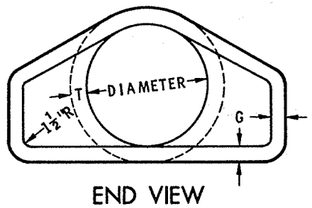
S.D.D. 8D3-1



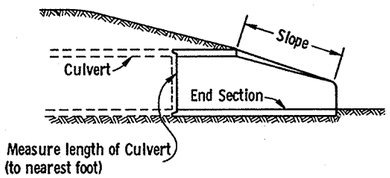
PLAN



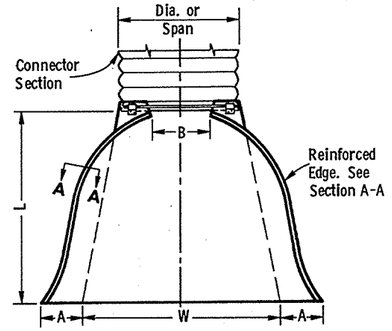
LONGITUDINAL SECTION



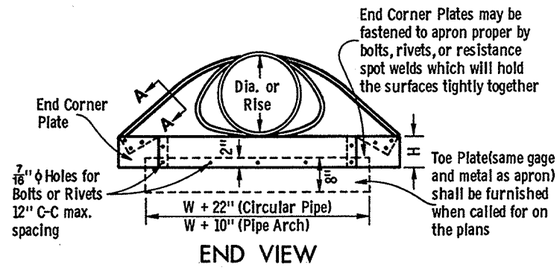
END VIEW



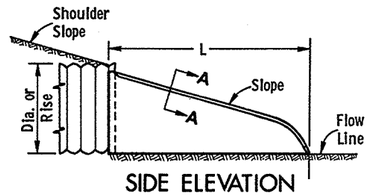
SLOPE DETAIL



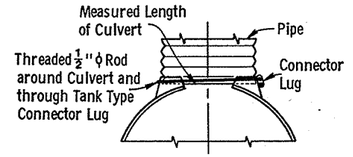
PLAN



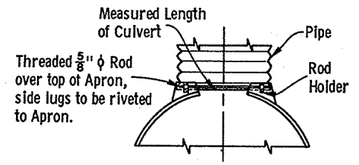
END VIEW



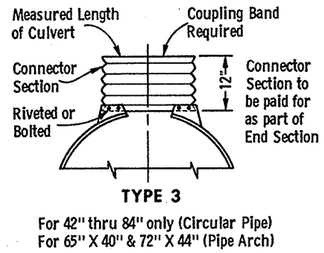
SIDE ELEVATION



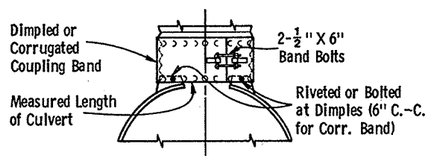
TYPE 1
For 12" thru 24" only (Circular Pipe)



TYPE 2
For 30" and 36" only (Circular Pipe)
For 18" X 11" thru 58" X 36" only (Pipe Arch)

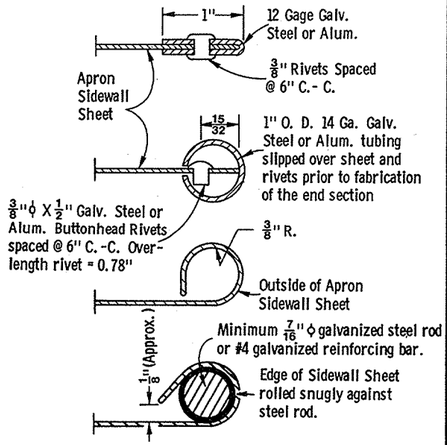


TYPE 3
For 42" thru 84" only (Circular Pipe)
For 65" X 40" & 72" X 44" (Pipe Arch)



TYPE 5
Alternate for
All sizes Corrugated Circular Pipe and Pipe Arch

NOTE: Dimpled Band fits over Outside of Endwall, and Corr. Band fits Inside Endwall. Dimpled Band may be used with Helically Corrugated Pipe



SECTION A-A

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.

Variations of the dimensions and designs shown hereon will be permitted providing equivalent capacity and structural integrity are attained, and prior approval of the Engineer is obtained.

Concrete culvert endwalls may not be used with metal or aluminum culvert pipe, nor may metal or aluminum culvert endwalls be used with concrete culvert pipe.

When two or more pipes or pipe arches with apron endwalls are to be laid adjacent to each other, they shall be separated by the following amount:

Pipes: Total width of apron endwall less the diameter of pipe plus 6 inches.
Pipe Arches: Total width of apron endwall less the span dimension of the pipe arch plus 6 inches.

CONNECTION DETAILS

CIRCULAR PIPE

For Circumferentially Corrugated Pipe use Endwall Connection Details 1, 2, 3, or 5 as applicable.

For Helically Corrugated Pipe use Endwall Connection Details 1, 2 or 5.

For Helically Corrugated Pipes with two Circumferential Corrugations at each end use Endwall Connection Details 1, 2, or 3

PIPE ARCH

Use Endwall Connection Details 2, 3, or 5 as applicable.

DIA.	APPROX. WEIGHT/ SECTION	APPROX. SLOPE	T	A	B	C	D	E	G
12"	530	3 to 1	2"	4"	24"	48 7/8	72 7/8"	24"	2"
15"	740	3 to 1	2 1/4"	6"	27"	46"	73"	30"	2 1/4"
18"	990	3 to 1	2 1/2"	9"	27"	46"	73"	36"	2 1/2"
21"	1,280	3 to 1	2 3/4"	9"	36"	37 1/2"	73 1/2"	42"	2 3/4"
24"	1,520	3 to 1	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3"
27"	1,930	3 to 1	3 1/4"	10 1/2"	49 1/2"	24"	73 1/2"	54"	3 1/4"
30"	2,190	3 to 1	3 1/2"	12"	54"	19 3/4"	73 3/4"	60"	3 1/2"
36"	4,100	3 to 1	4"	15"	63"	34 3/4"	97 3/4"	72"	4"
42"	5,380	3 to 1	4 1/2"	21"	63"	35"	98"	78"	4 1/2"
48"	6,550	3 to 1	5"	24"	72"	26"	98"	84"	5"
54"	8,040	2 2/5 to 1	5 1/2"	27"	65"	** 33 1/4" - * 35"	** 98 1/4" - * 100"	90"	5"
60"	8,730	2 to 1	6"	** 30" - * 35"	60"	39"	99"	96"	5"
66"	10,630	2 to 1	6 1/2"	** 24" - * 30"	** 72" - * 78"	21" - 27"	99"	102"	5 1/2"
72"	12,520	2 to 1	7"	** 24" - * 36"	78"	21"	99"	108"	6"
78"	14,430	2 to 1	7 1/2"	** 24" - * 36"	78"	21"	99"	114"	6 1/2"
84"	18,160	1 1/2 to 1	8"	36"	90 1/2"	21"	111 1/2"	120"	6 1/2"

** Minimum
* Maximum

REINFORCED CONCRETE APRON ENDWALLS

D PIPE DIAM.	MIN. METAL GAGE	MIN. ALUM. GAGE	DIMENSIONS A ± 1"	B MAX.	H ± 1"	L ± 1 1/2"	W ± 2"	APPROX. SLOPE
12"	16	16	6"	6"	6"	21"	24"	2 1/2 to 1
15"	16	16	7"	8"	6"	26"	30"	"
18"	16	16	8"	10"	6"	31"	36"	"
21"	16	16	9"	12"	6"	36"	42"	"
24"	16	14	10"	13"	6"	41"	48"	"
30"	14	14	12"	16"	8"	51"	60"	"
36"	14	12	14"	19"	9"	60"	72"	"
42"	12	12	16"	22"	11"	69"	84"	"
48"	12	12	18"	27"	12"	78"	90"	2 1/4 to 1
54"	12	12	18"	30"	12"	84"	102"	2 to 1
60"	10	8	18"	33"	12"	87"	114"	1 3/4 to 1
66"	10	8	18"	36"	12"	87"	120"	1 1/2 to 1
72"	10	8	18"	39"	12"	87"	126"	1 3/8 to 1
78"	8	NA	18"	42"	12"	87"	132"	1 1/4 to 1
84"	8	NA	18"	45"	12"	87"	138"	1 1/8 to 1

NOTE: All splices to be lap riveted or bolted

METAL OR ALUMINUM APRON ENDWALLS FOR CIRCULAR PIPES

PIPE — ARCH DIMENSIONS SPAN	RISE	GAGE MIN.	DIMENSIONS A ± 1"	B MAX.	H ± 1"	L ± 1 1/2"	W ± 2"	APPROX. SLOPE
18"	11"	16	7"	9"	6"	19"	30"	2 1/2 to 1
22"	13"	16	7"	10"	6"	23"	36"	"
25"	16"	16	8"	12"	6"	28"	42"	"
29"	18"	16	9"	14"	6"	32"	48"	"
36"	22"	14	10"	16"	6"	39"	60"	"
43"	27"	14	12"	18"	8"	46"	75"	"
50"	31"	12	13"	21"	9"	53"	85"	"
58"	36"	12	18"	26"	12"	63"	90"	"
65"	40"	12	18"	30"	12"	70"	102"	2 1/4 to 1
72"	44"	12	18"	33"	12"	77"	114"	"

NOTE: All splices to be lap riveted or bolted

METAL APRON ENDWALLS FOR PIPE ARCHES

APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

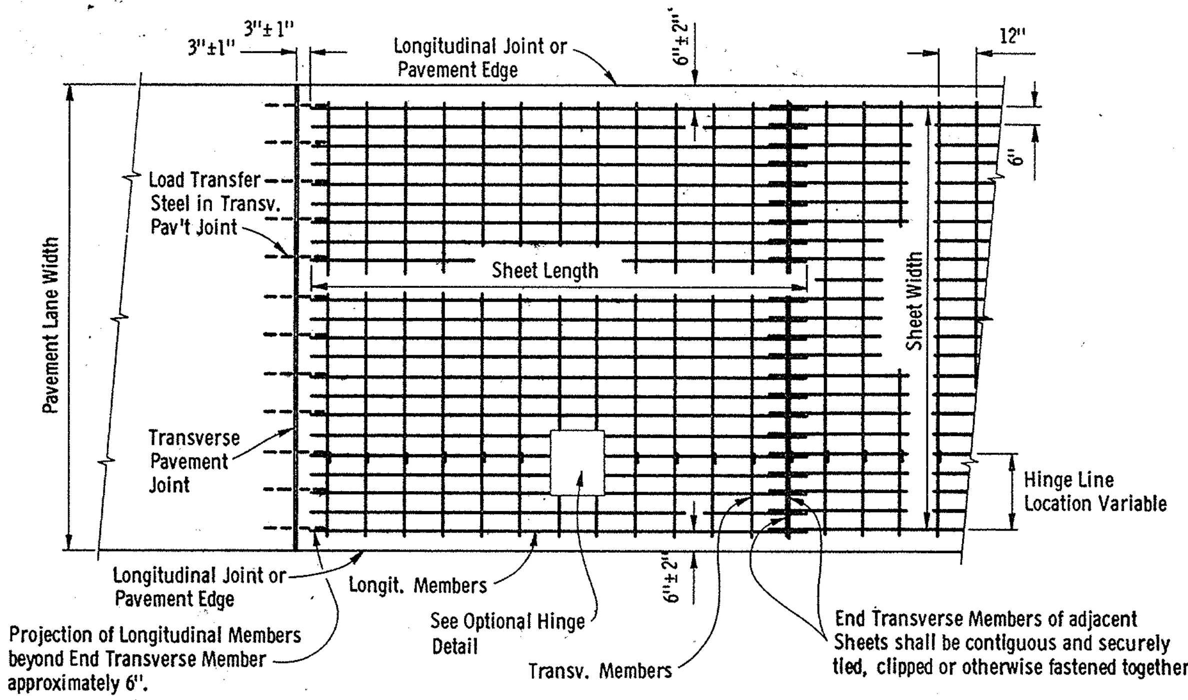
State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL:
4-11-72 — DATE — CHIEF DESIGN ENGINEER

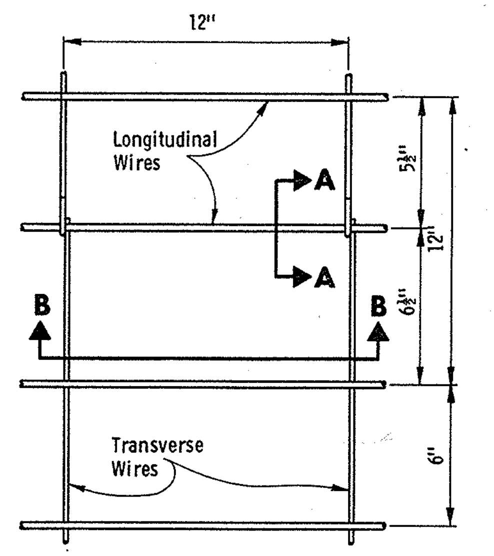
APPROVED
4-11-72 — DATE — STATE HIGHWAY ENGINEER

S.D.D. 8F1-2

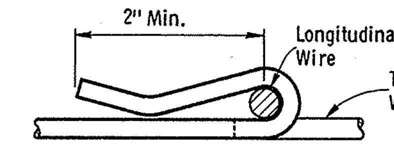
S.D.D. 8F1-2



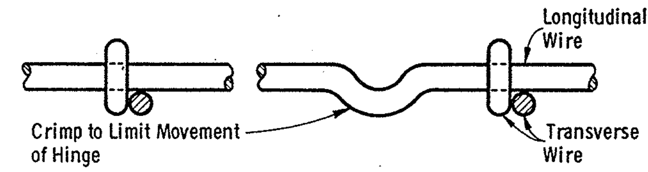
PLAN VIEW



PLAN VIEW

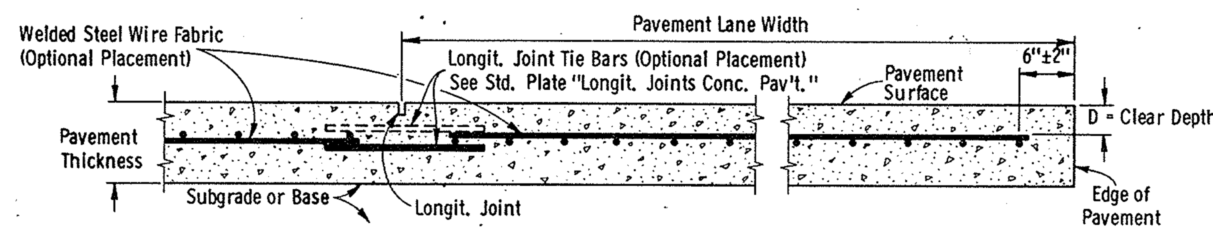


SECTION A-A



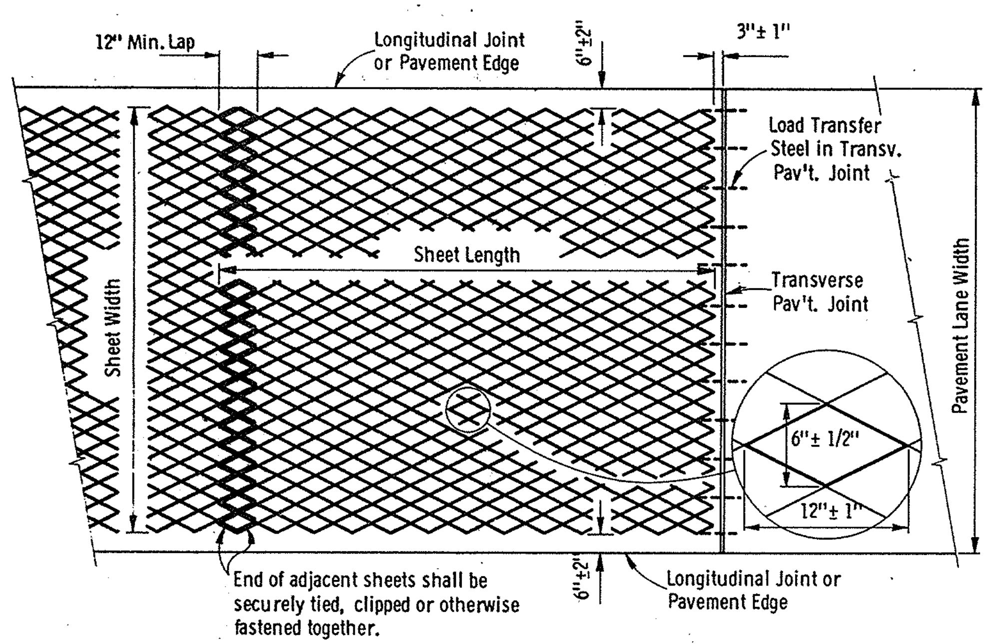
SECTION B-B

OPTIONAL HINGE DETAIL

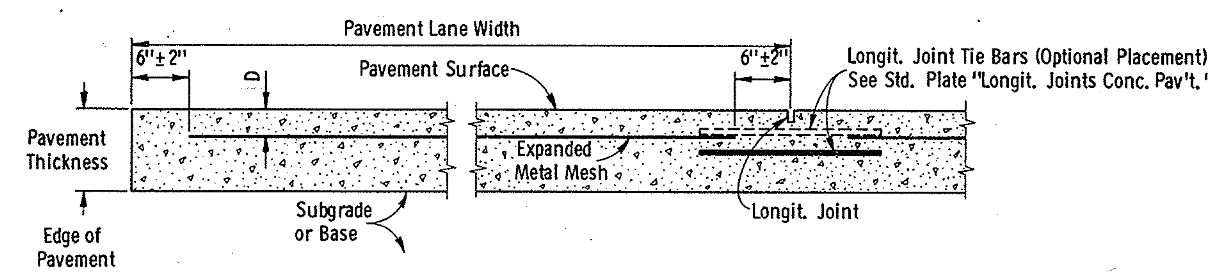


CROSS SECTION

WELDED STEEL WIRE FABRIC



PLAN VIEW



CROSS SECTION

EXPANDED METAL MESH

GENERAL NOTES

Details of construction and materials not shown hereon shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Alternate hinge designs may be used upon approval of the engineer.

WELDED STEEL WIRE FABRIC

Welded Steel Wire Fabric shall conform to the requirements of the Standard Specifications for Welded Steel Fabric for Concrete Reinforcement A.A.S.H.O. Designation M55 except as shown hereon.

Welded Steel Wire Fabric Specifications:
Approximate Weight per 100 sq. ft. = 69.0 lbs.
Longitudinal Steel - Gage No. 0 = 0.3065" D. at 6" C-C.
Transverse Steel - Gage No. 4 = 0.2253" D. at 12" C-C.

Side lap of adjacent sheets shall be approximately 6".

EXPANDED METAL MESH

Weight per 100 sq. ft. = 76.0 lbs min. Expanded Metal Mesh shall be manufactured from open hearth steel, having a phosphorus content of not more than 0.05 percent, and a yield point of not less than 55,000 p.s.i. The steel shall be sufficiently ductile to permit any strand to be bent through an angle of 180 degrees over one diam. without fracture. The diamond shaped mesh shall be fabricated by a cold drawn process which will cut and draw the steel forming uniform dimensioned strands conforming to shape and weight as shown elsewhere hereon.

Side lap of adjacent sheets shall be approximately 6".

SPECIAL REQUIREMENTS

Welded Steel Wire Fabric or Expanded Metal Mesh Concrete Pavement Reinforcement shall be shipped to the job site in flat sheets.

One longitudinal hinge line will be permitted in each Welded Steel Wire Fabric sheet for convenience in shipping. This hinge shall encircle the longitudinal wire such that no more than one (1) inch of transverse movement of the hinge exists. The longitudinal wire around which the hinge rotates shall be crimped adjacent to the hinge such that no more than one (1) inch of longitudinal movement of the hinge exists.

Pavement Thickness	"D"
8"	2"-4"
9"	2"-4 1/2"
10"	2"-5"

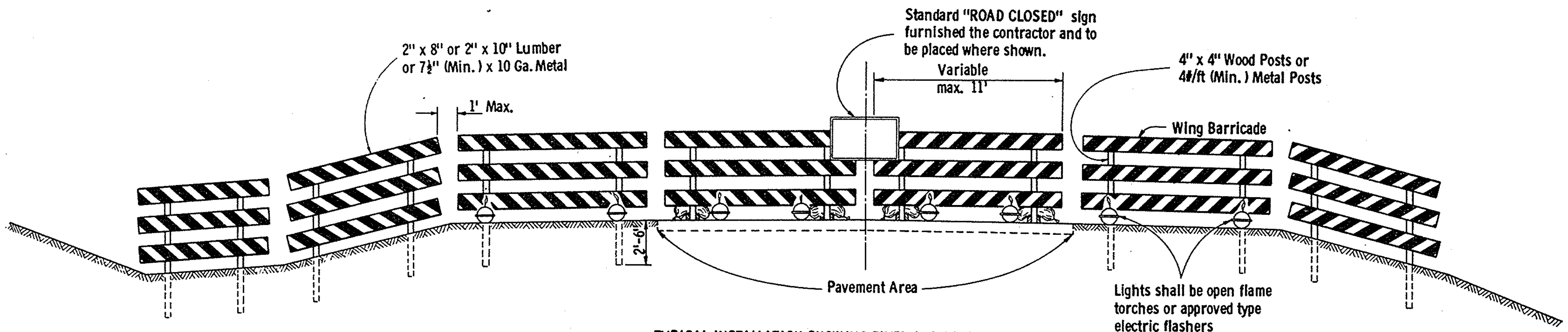
CONCRETE PAVEMENT REINFORCEMENT

State of Wisconsin
Department of Transportation
Division of Highways

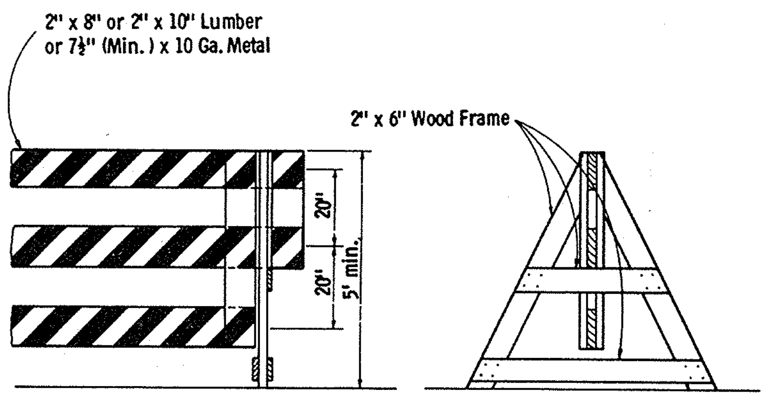
RECOMMENDED FOR APPROVAL: 3/13/69 DATE — E. J. Bygkit, CHIEF DESIGN ENGINEER

APPROVED: 3/27/69 DATE — [signature] STATE HIGHWAY ENGINEER

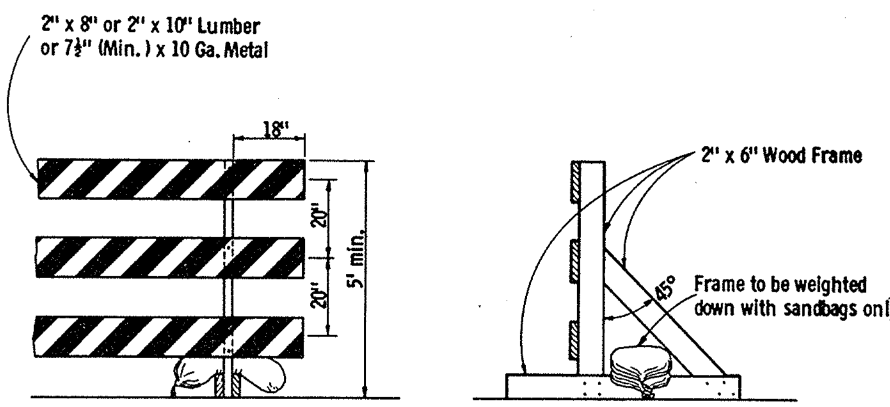
S.D.D. 13A 1-1



TYPICAL INSTALLATION SHOWING FIXED AND RIGID BARRICADES

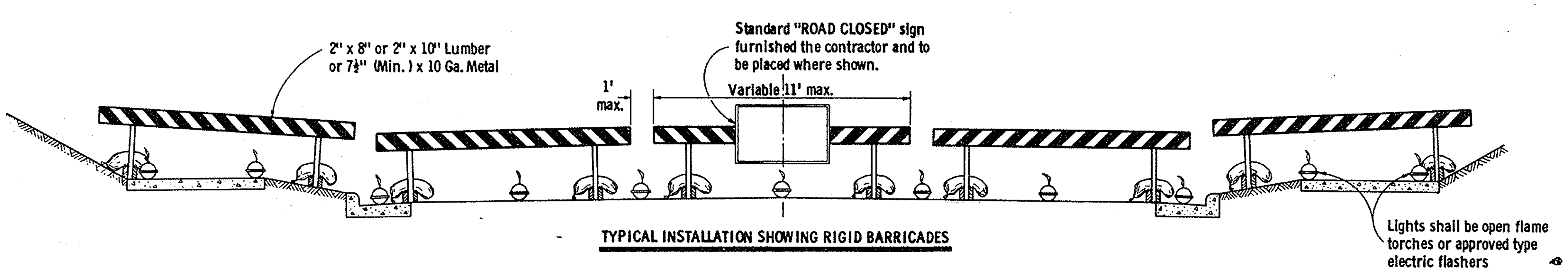


ALTERNATE TYPE INSTALLATION (DEMOUNTABLE)

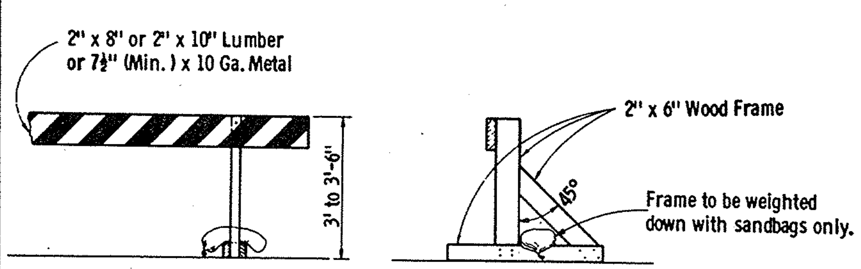


ALTERNATE TYPE INSTALLATION (RIGID)

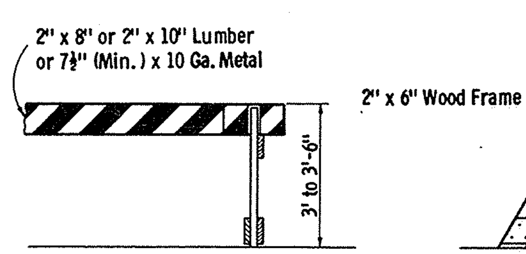
CLASS I BARRICADES



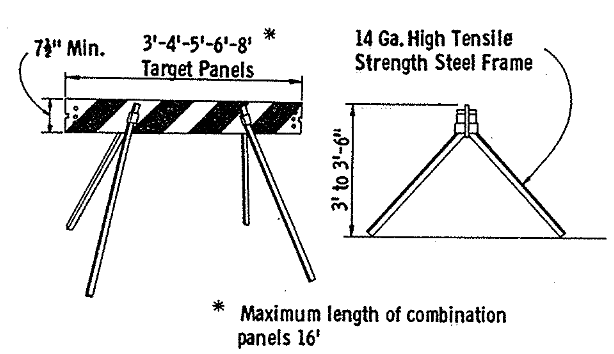
TYPICAL INSTALLATION SHOWING RIGID BARRICADES



ALTERNATE TYPE INSTALLATION (RIGID)



ALTERNATE TYPE INSTALLATION (DEMOUNTABLE)



* Maximum length of combination panels 16'

ALTERNATE TYPE INSTALLATION (DEMOUNTABLE)

CLASS II BARRICADES

GENERAL NOTES

The contractor shall construct, place and maintain barricades as shown on the drawing and as required by the Standard Specifications or applicable Special Provisions.

CLASS 1 BARRICADE:

Class 1 Barricades shall be of variable length as indicated, and long barricades shall be assembled from these units. The Class 1 Barricade is the type normally required for major operations, where the barricade will remain in place for extended periods. Class 1 Barricades shall be used at points where the road is closed to traffic. Gates or movable sections of a barricade shall be provided when necessary, for access of equipment or other authorized vehicles.
Wing Barricades are Class 1 Barricades erected on the shoulder on one or both sides of the pavement to give Traffic the perceptive effect of a narrowing or restricted roadway. The ends closest to traffic of all three members of a wing barricade shall be in a vertical line. If used in a series, they should start at the outer edge of the shoulder and be brought progressively closer to the pavement. Wing Barricades may be used as a mounting for the advance warning or guide signs or for flashers. When used on two-way roadways, the back of the wing barricade shall be painted reflectorized white.

CLASS 11 BARRICADE:

Class 11 Barricades may be used only where the hazard to traffic is relatively small, and for the more or less continuous delimiting of a restricted roadway, or for temporary daytime use.

MATERIAL & FABRICATION:

Lumber shall be of a grade structurally sound and sufficiently rigid to satisfactorily support and maintain the purpose and intent of a barricade facility.
Metal shall be sufficiently rigid to satisfactorily support and maintain the purpose and intent of a barricade facility.
The fabrication of the barricade shall be in accord with good pertinent woodworking and metalworking practices.
All lumber or timber dimensions stated are nominal.

PAINTING:

All barricades shall be painted in alternate 4" or 6" black and white stripes at a 45° angle. The width of stripe shall be consistent for each complete barricade installation.
Black stripes shall be painted with weather resistant and durable black paint. White stripes shall be primed, followed by two coats of white reflectorized paint or reflective wide angle sheeting.

DIRECTION OF DIAGONAL STRIPES:

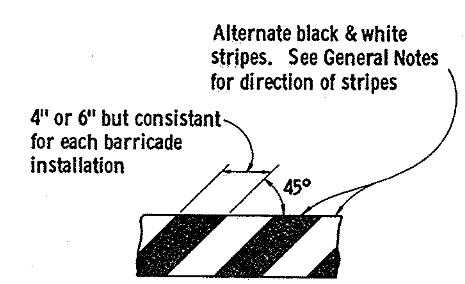
Where a barricade extends entirely across the roadway with no vehicle access provision, the stripes shall slope downward toward the highway centerline.
Where vehicle access is permitted, the stripes shall slope downward in the direction toward which vehicles must turn in detouring.
Where both right and left turns are provided for, the stripes shall slope downward in both directions from the center.
The stripes on wing barricades shall point downward toward the roadway.

LIGHTING:

Lighting devices for barricades shall conform to the requirements of the Standard Specifications.

MEASUREMENT & PAYMENT:

All barricades, unless otherwise provided for in the plans and/or special provisions shall be furnished, placed, and maintained as noted above, and no additional compensation will be allowed but shall be construed to be included in the price bid for other items.



TYPICAL DIAGONAL STRIPES

Applies to all Classes & Types of Barricades

CONSTRUCTION BARRICADE

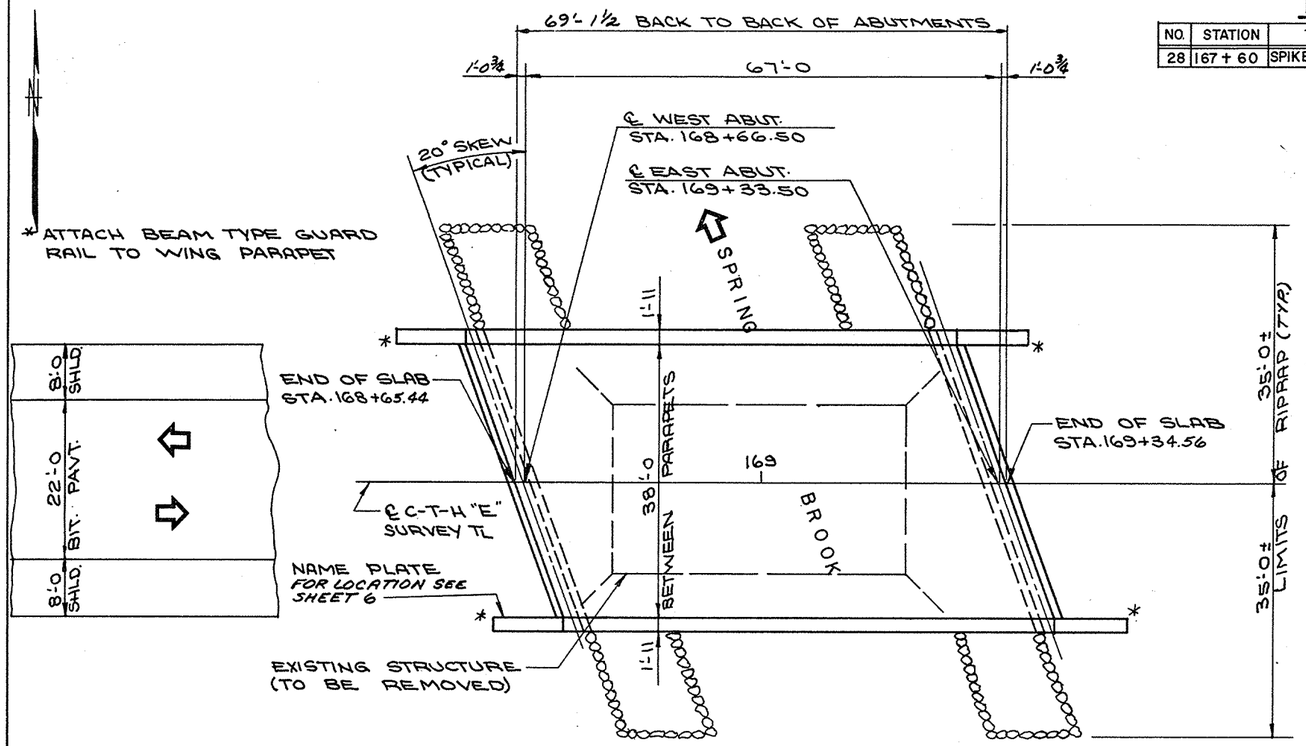
State Highway Commission of Wisconsin

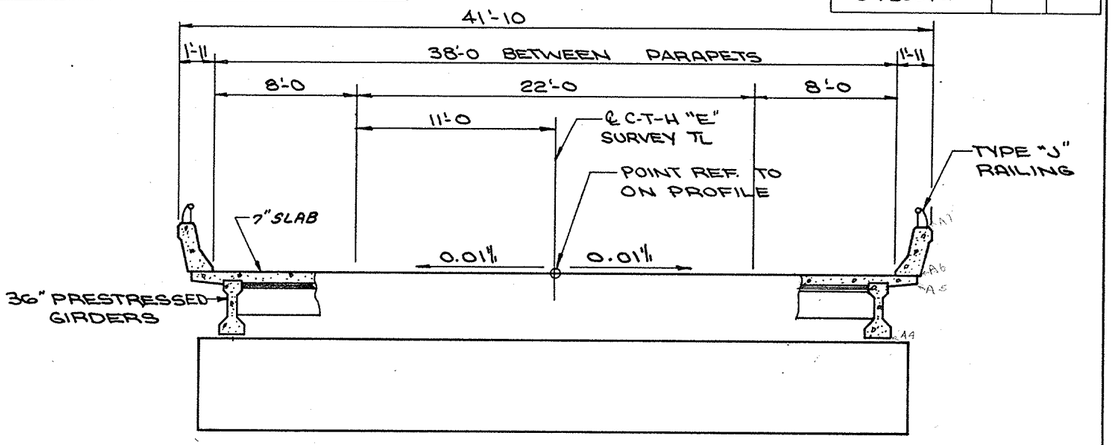
RECOMMENDED FOR APPROVAL:
1/11/67 DATE
[illegible] CHIEF DESIGN ENGINEER
APPROVED:
1/13/67 DATE
[illegible] STATE HIGHWAY ENGINEER

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	16	91
FEDERAL PROJECT DESIGNATION 5 1260(3)		

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
28	167 + 60	SPIKE IN 24" OAK STUB . 225' RT.	757.35





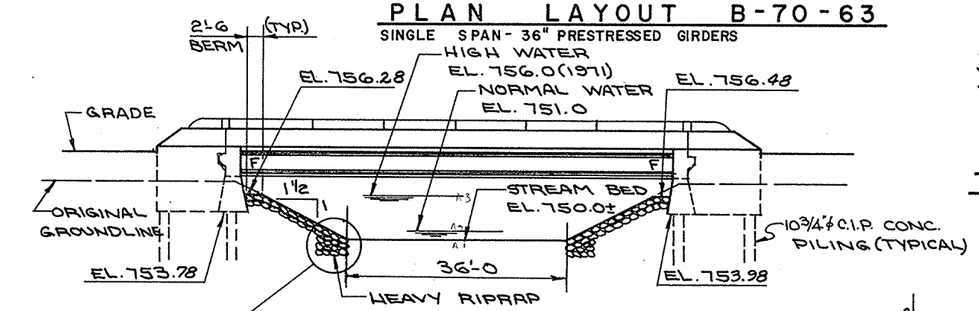
CROSS SECTION THRU ROADWAY LOOKING EAST

DESIGN DATA

LIVE LOAD: H20 - FUTURE WEARING SURFACE — 20 P.S.F.
ALLOWABLE DESIGN STRESSES:
CONCRETE MASONRY, GRADE "AA" SLAB — f_c = 1,200 P.S.I.
ALL OTHER — f_c = 1,400 P.S.I.
BAR REINFORCING — f_s = 20,000 P.S.I.
n = 10
36" PRESTRESSED GIRDERS
CONCRETE MASONRY — f'_c = 6,000 P.S.I.
STRANDS: ½"ϕ WITH ULTIMATE TENSILE STRENGTH OF — 270,000 P.S.I.

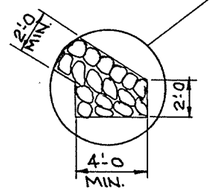
PLAN LAYOUT B-70-63

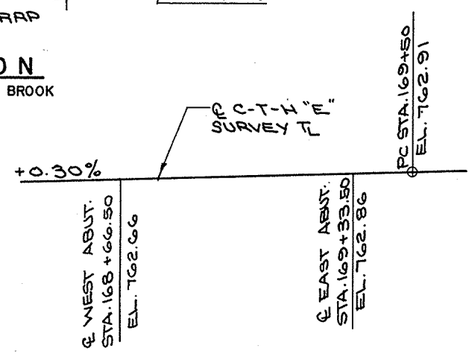
SINGLE SPAN - 36" PRESTRESSED GIRDERS



ELEVATION

NORMAL TO SPRING BROOK





PROFILE GRADE C-T-H "E"

HYDRAULIC DATA

Q_{50} — 2,000 C.F.S.
VEL. — 7.4 F.P.S.
WATERWAY AREA — 270 SQ. FT.
H.W. — 756.0 (1971)
DRAINAGE AREA — 10.2 SQ. MI.

TRAFFIC VOLUME

A.D.T. — 800 (1973)
R.D.S. — 50 M.P.H.

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER	TOTAL
REMOVING OLD BRIDGE - STA. 169+00.00	L.S.	——	——	——	1
EXCAVATION FOR STRUCTURES	C.Y.	10	10	——	20
GRANULAR BACKFILL	C.Y.	5	5	——	10
CONCRETE MASONRY	C.Y.	36.5	36.5	97.4	170.4
PRESTRESSED GIRDER, I TYPE, 36 INCH	L.F.	——	——	476	476
BAR STEEL REINFORCEMENT	LBS.	1910	1910	20,070	23,890
STRUCTURAL CARBON STEEL	LBS.	——	——	460	460
BEARING PADS, ELASTOMERIC	S.F.	——	——	14	14
CAST-IN-PLACE CONCRETE PILING, DELIVERED AND DRIVEN, 10¾ INCH	L.F.	360	360	——	720
TUBULAR RAILING, TYPE J	L.F.	——	——	162	162
HEAVY RIPRAP	C.Y.	85	85	——	170
NON-BID ITEM					
⅛" ALUMINUM OR ZINC PLATE	S.F.	——	——	17	17
FILLER - ¼" SIZE	S.F.	——	——	16	16
FILLER - ½" SIZE	S.F.	——	——	24	24
FILLER - ¾" SIZE	S.F.	——	——	13	13
POLYVINYL CHLORIDE WATERSTOP	L.F.	40	40	——	80

GENERAL NOTES

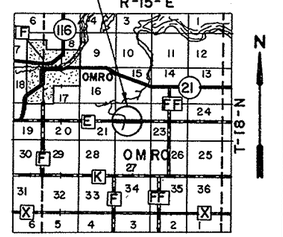
DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE EDGES ARE SMOOTH AND TRUE.
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP TO THE EXTENT SHOWN ON THIS SHEET AND IN THE ABUTMENT DETAILS.
THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES FOR THE ABUTMENTS SHALL BE THE BOTTOM OF SLOPE PROTECTION AND THE QUANTITIES WERE COMPUTED FROM THIS LINE.
AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH GRANULAR BACKFILL. PAYMENT WILL BE MAY ONLY FOR MATERIAL ACTUALLY PLACED WITHIN THE LIMITS FOR "EXCAVATION FOR STRUCTURES".
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.O. DESIGNATION M153 OR M213.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10¾" ϕ C.I.P. CONC. PILES DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.
LENGTH = 45'-0

LIST OF DRAWINGS

STRUCTURE B-70-63



No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-63

C-T-H "E" OVER SPRING BROOK

County WINNEBAGO		TN: OMRO	
Design Spec. A.A.S.H.O. 1969		Load H20	Const. Spec. 1969
Designed By B.F.K	Design Checked W.V.	Drawn By R.J.J.	Plans Checked BMW

Approved W.A. Kleine — Chief Bridge Engineer — 4-28-72 Date

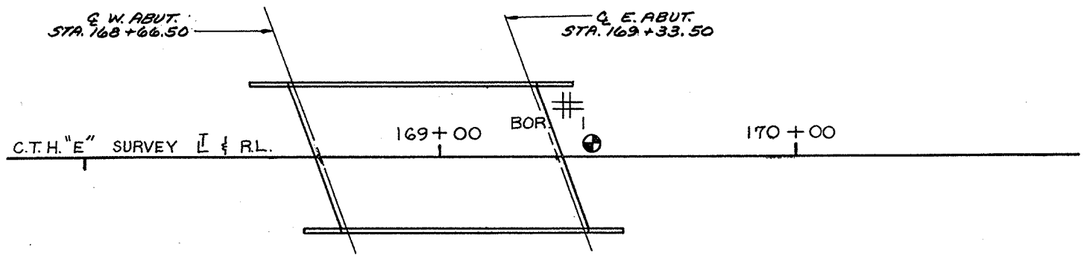
GENERAL PLAN

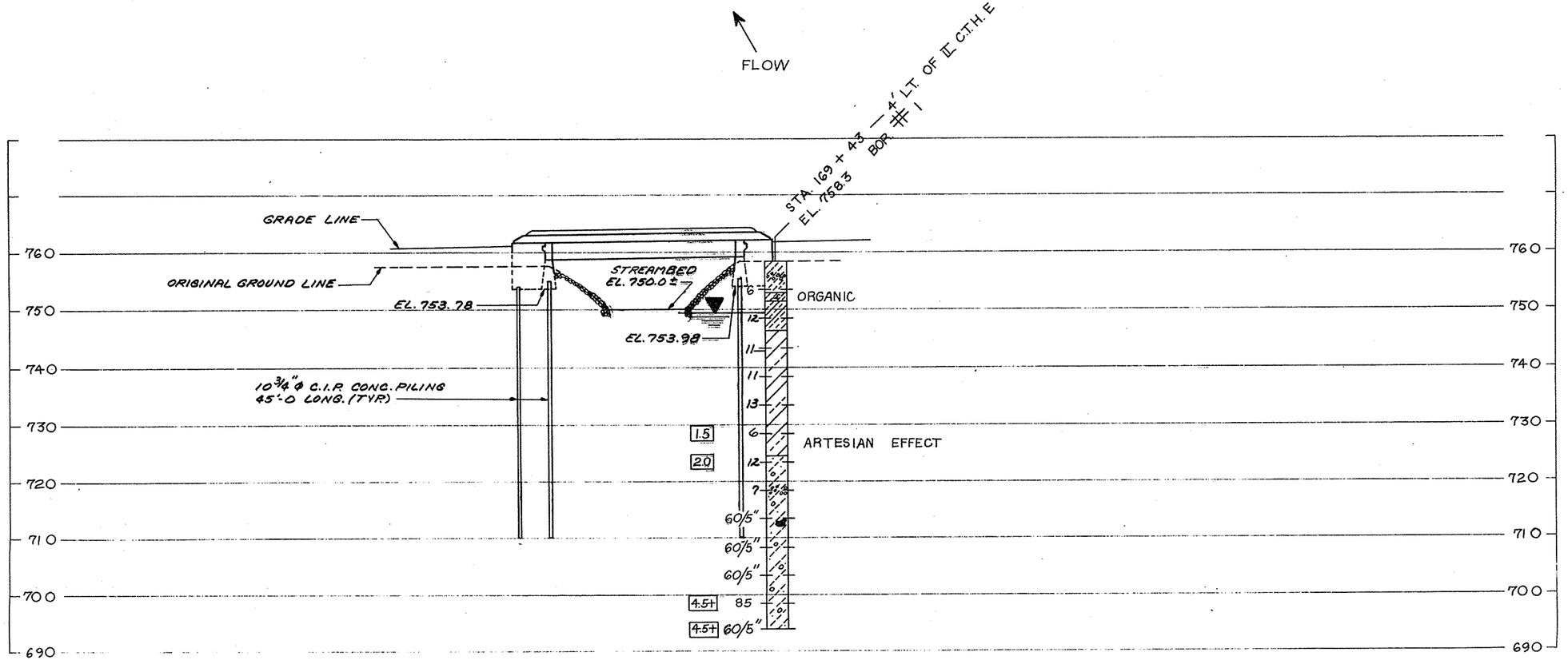
SHEET 1 OF 7
X 47281

Form E B 45-69

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	17	91
FEDERAL PROJECT DESIGNATION 51260(3)		

SCALE: 1" = 20'





ABBREVIATIONS

F — Fine M — Medium C — Coarse
Ws — Weathered So — Sound

MATERIAL SYMBOLS

Topsoil, Sand, Gravel, Silt, Peat, Clay, Sandstone, Limestone, Igneous Rock

LEGEND OF PROBING

95/6=95 Blows for 6" Penetration
Probing taken with a 350# wt. Falling 18" on a 2" O. D. Point.

Probing No.
Sta.
Elevation
7 Average Blows Per Foot
Refusal 95/6

LEGEND OF BORING

Boring No.
Elev.
Sta.
Unconfined Strength → 7.7
Blows Per Ft. Using 140# Wt. Falling 30"
Wash Sample
Shelby Tube — S. T.
Ground Water Elevation
No Ground Water Observed Above This Elevation
Sandy Gravel
F.
Boulders or Cobbles
Sand
Silty Clay
So
Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-63

Const. Spec. 1969	Drawn By R. J. J.	Checked BMW

SUBSURFACE EXPLORATION

SHEET 2 OF 7

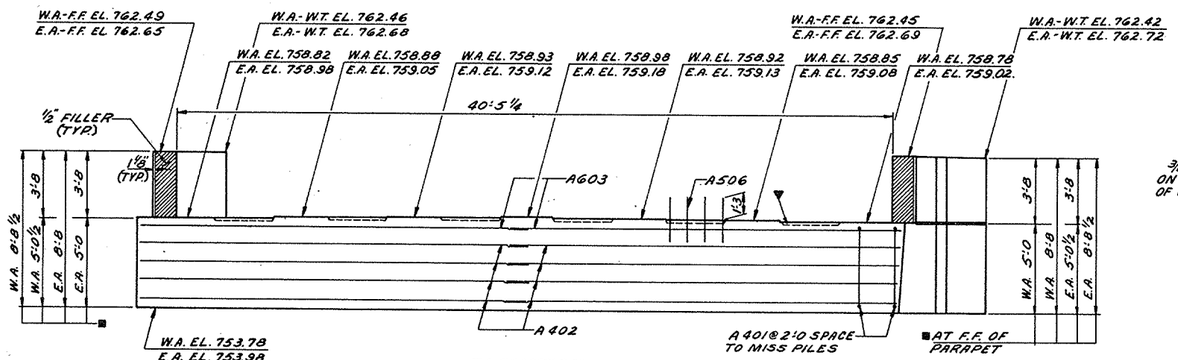
X 47282

PROJECT ID	SHEET NUMBER	TOTAL SHEETS
6460-2-71	18	91
FEDERAL PROJECT DESIGNATION: S 1260(3)		

W.A.- WEST ABUT.
E.A.- EAST ABUT.
RAIL PARAPET NOT SHOWN.
FOR DETAILS, SEE SHEET 6.

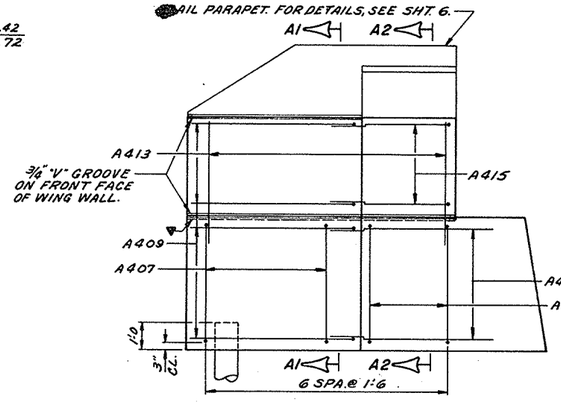
▼KEYED CONST. JT. FORMED BY SURFACED, BEVELED 2 x 6. POUR CONC. ABOVE THIS JT. AFTER SUPER CONC. IS POURED.

SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛ BELOW SURFACE OF CONCRETE.)



ELEVATION

W.A.- LOOKING WEST
E.A.- LOOKING EAST



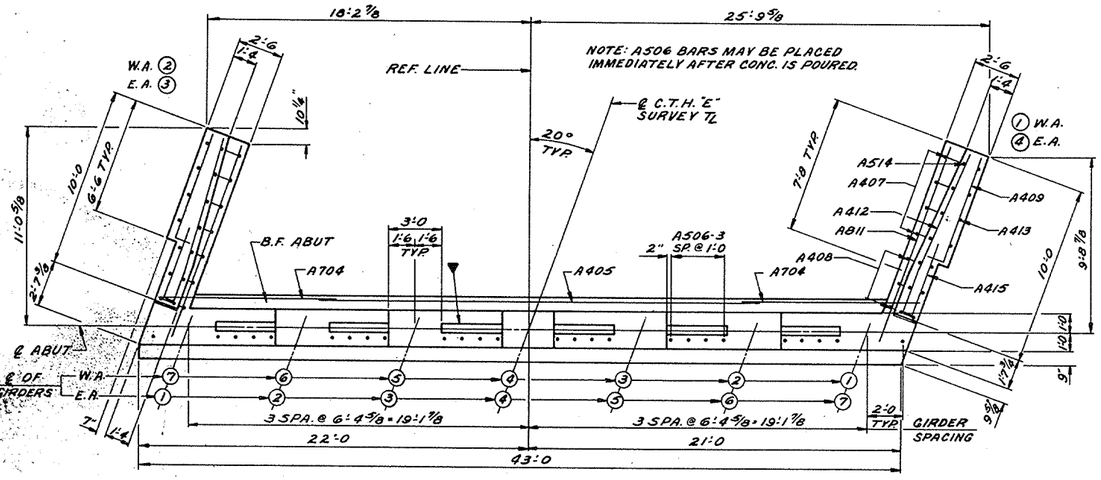
TYPICAL WING ELEVATION

BILL OF BARS

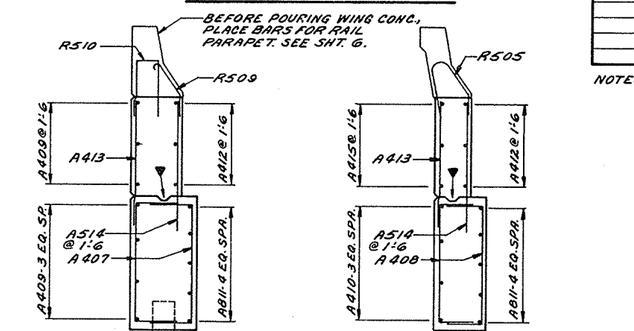
3,130 LBS.

MARK	NO. REQ'D. W.A.	NO. REQ'D. E.A.	LENGTH	BENT	LOCATION
A401	44	44	7-10	X	BODY-STIRRUPS-VERT.
A402	12	12	22-0		" - HORIZ.
A603	4	4	22-3		" "
A704	8	8	10-0		" " @ WINGS-B.F.
A405	4	4	25-0		" " -B.F.
A506	26	26	2-6		" -DOWELS
A407	16	16	7-7	X	WINGS-STIRRUPS
A408	12	12	7-0	X	" "
A409	14	14	7-1	X	" -HORIZ.-F.F.
A410	8	8	6-6		" " "
A811	10	10	11-11		" " -B.F.
A412	6	6	10-6	X	" " "
A413	14	14	4-6		" -VERT.-F.F.
A514	14	14	4-9		" " -B.F.
A415	6	6	5-2	X	" " -F.F.

NOTE: THE FIRST DIGIT OF THE MARK SIGNIFIES THE BAR SIZE.
ALL BAR DIMENSIONS ARE OUT TO OUT.

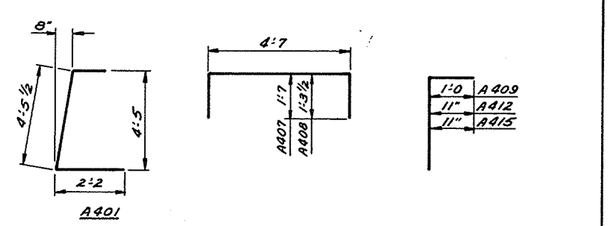


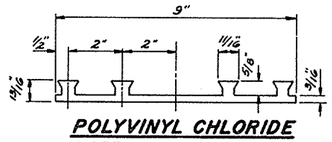
PLAN



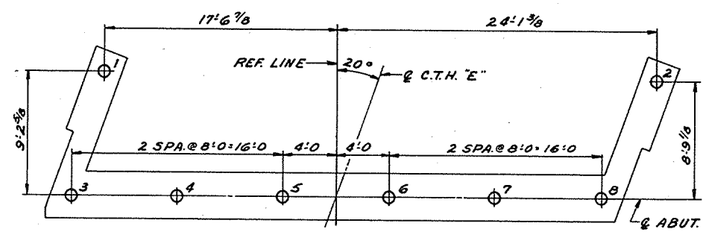
SECTION A1

SECTION A2

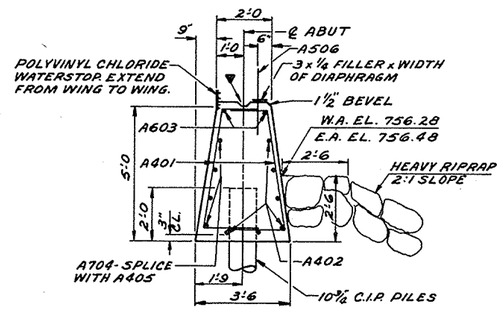




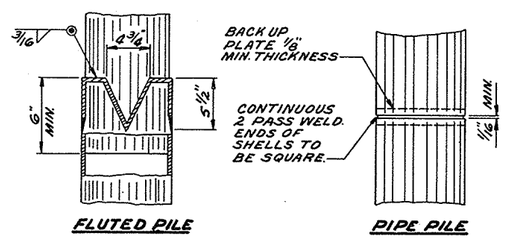
POLYVINYL CHLORIDE WATERSTOP DETAILS



PILE PLAN



SECTION THRU BODY



FLUTED PILE — PIPE PILE

PILE SPLICE DETAILS

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-63

Const. Spec. 1969 | Drawn By SELJE | Plans Checked BMW

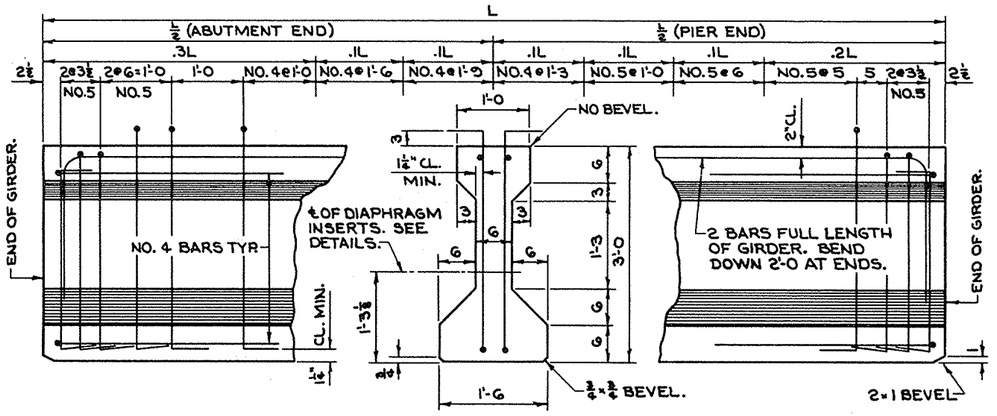
ABUTMENTS

SHEET 3 OF 7

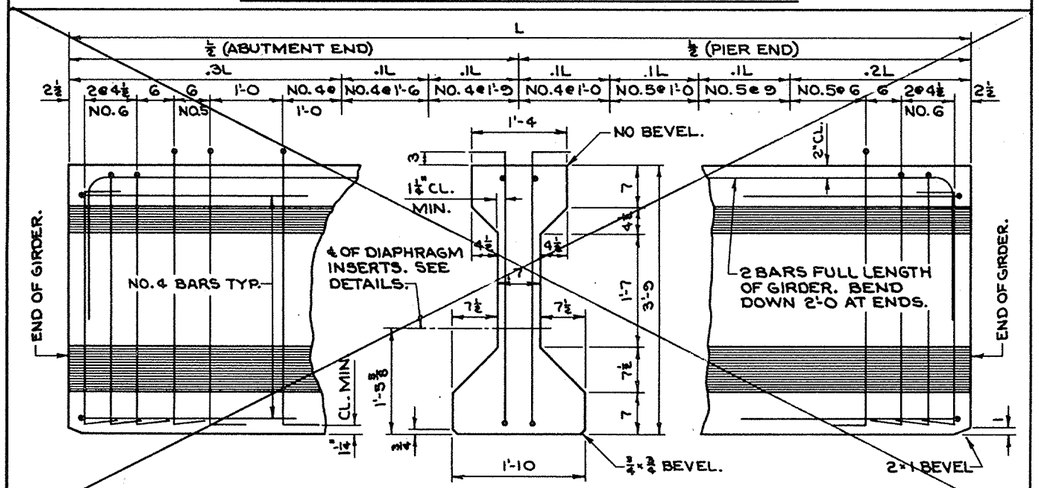
X47283

Form E-8-12-67

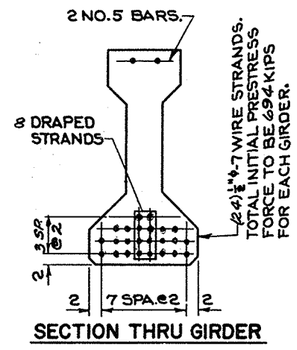
B.P.R. Division	Project	Sheet Number	Total Sheets
4	6460-2-71 5126(3)	19	91



36" GIRDER - SIDE VIEW & TYPICAL SECTION IN SPAN



45" GIRDER - SIDE VIEW & TYPICAL SECTION IN SPAN



SECTION THRU GIRDER

NOTES

TOP OF GIRDERS TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB.

THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

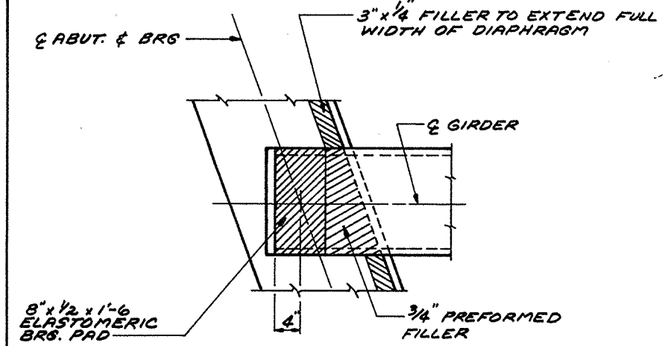
PRESTRESSING STRANDS SHALL HAVE AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

INSERTS SHALL BE PLACED ON 6" CENTERS SYMMETRICALLY ABOUT THE ℄ OF DIAPHRAGMS IN SPANS.

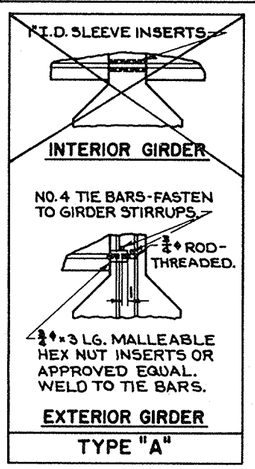
ALL STIRRUPS SHALL BE IN PAIRS AND THE SPACING SHOWN IN "SIDE VIEW" IS MAXIMUM. THE LOCATION SHALL BE SHOWN IN THE SHOP DRAWINGS.

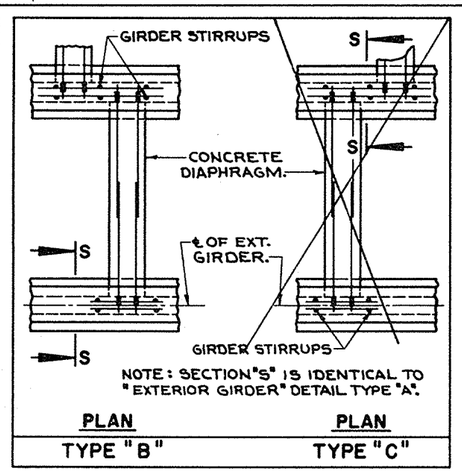
BEND EACH END OF NO.4 AND NO.5 STIRRUPS 6" AND NO.6 STIRRUPS 6½".

TOP LONGITUDINAL BARS IN GIRDER MAY BE SPLICED BY USING 35 BAR DIAMETER LAPS. PLACE ONE LAP AT ℄ OF GIRDER

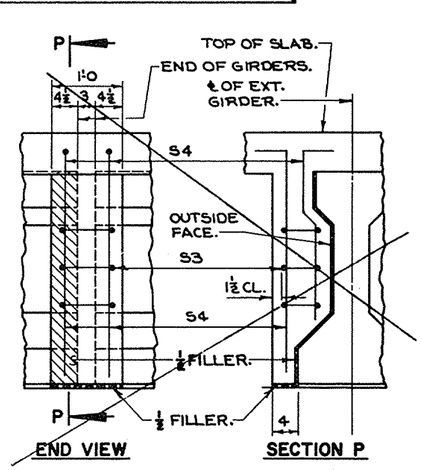


BEARING PAD DETAIL



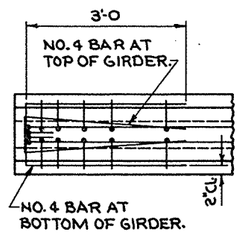


DIAPHRAGM INSERT DETAILS

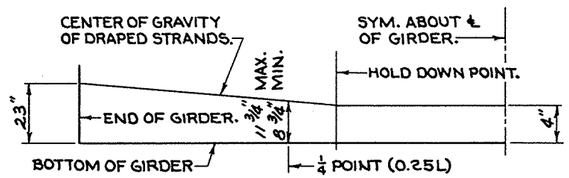


PILASTER DETAIL AT PIERS

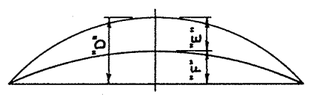
* MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE.



TOP VIEW OF GIRDER ENDS



DRAPED STRAND PROFILE



** DATA SHOWN IS THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESS CONDITIONS AND PRESTRESS LOSSES.

GIRDER DATA		
GIRDER SIZE REQUIRED 36 "		
GIRDER LENGTH "L" REQUIRED		68'-0
f'ci (psi)*	DRAPED PATTERN	5,200
	SPREAD PATTERN	—
DEFLECTION DATA**	PRESTRESS CAMBER "D"	2"
	DEAD LOAD DEFLECTION "E"	7/8"
	RESIDUAL CAMBER "F"	1⅛"
USE DIAPHRAGM INSERT DETAIL TYPE "B"		

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-63

Const. Spec.	1969	Drawn By	R.J.J.	Plans Checked	BMW

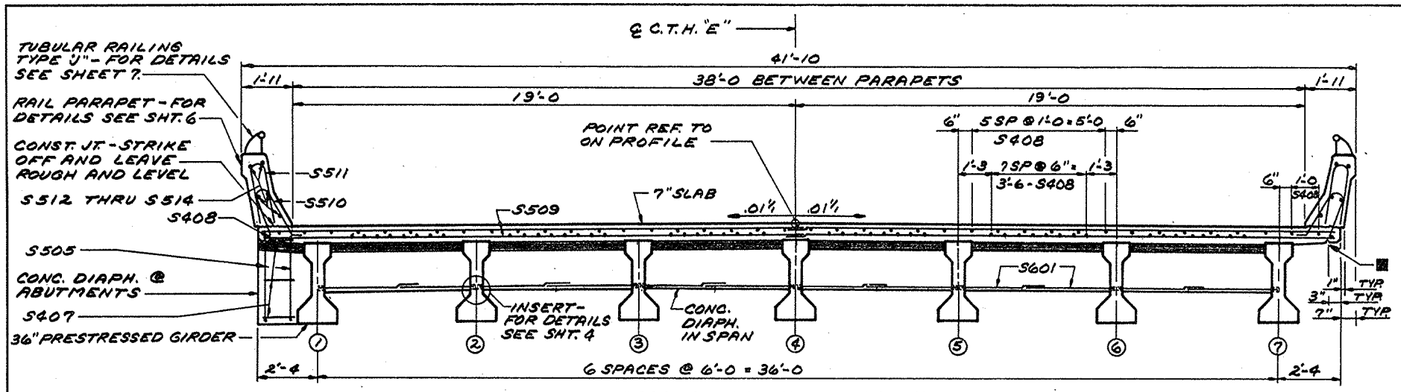
PRESTRESSED GIRDER DETAILS

SHEET 4 OF 7

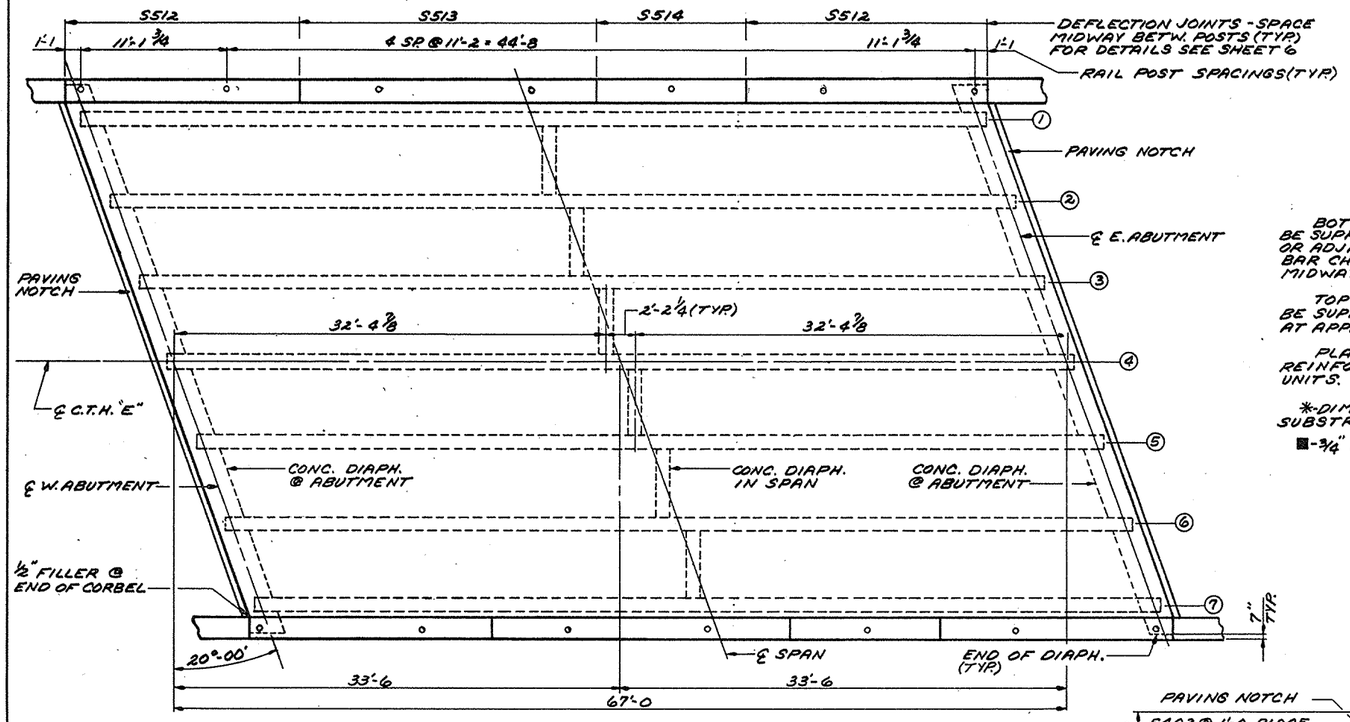
X47284

Form E-B-12-69

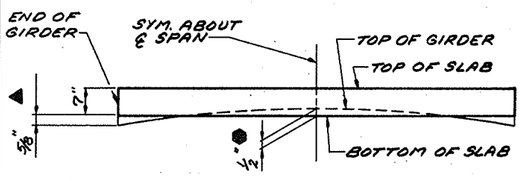
PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	20	91
FEDERAL PROJECT DESIGNATION: S1260(3)		



CROSS SECTION THRU ROADWAY
LOOKING EAST



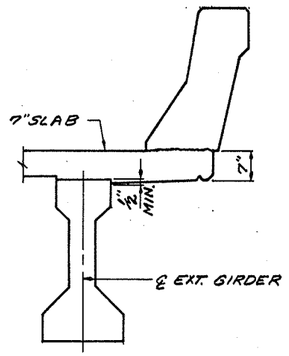
PLAN



SLAB FORMING DIAGRAM

● - TO COMPENSATE FOR VARIATIONS IN PRESTRESS CAMBER AND OTHER MINOR CONSTRUCTION DISCREPANCIES, THE IMBEDMENT AT THE ℄ OF SPAN MAY BE VARIED WITH A MAXIMUM OF 1½" ALLOWABLE IMBEDMENT AND THE SLAB HELD TO PLAN THICKNESS.

▲ - IF VARIATIONS IN PRESTRESS CAMBER AND OTHER CONSTRUCTION DISCREPANCIES ARE OF SUCH MAGNITUDE THAT THE MAXIMUM ALLOWABLE IMBEDMENT AS NOTED ABOVE SHALL BE EXCEEDED, THESE DIMENSIONS SHALL BE REVISED. THE 1½" IMBEDMENT AND THE PLAN SLAB THICKNESS SHALL BE HELD WHILE THE GRADE LINE WILL BE REVISED.



SECTION THRU SLAB AT EXTERIOR GIRDER

NOTES

BOTTOM TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS ON OR ADJACENT TO EACH GIRDER AND BY INDIVIDUAL BAR CHAIRS AT 3'-0 CENTERS AT APPROXIMATELY MIDWAY BETWEEN GIRDERS.

TOP LONGITUDINAL BARS IN SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0 CENTERS.

PLACE TRANSVERSE BAR STEEL REINFORCEMENT PARALLEL TO SUBSTRUCTURE UNITS.

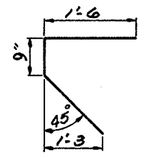
*-DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

■ - ¾" CONTINUOUS DRIP GROOVE

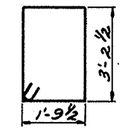
BILL OF BARS — 20,070 LBS.

MARK	NO. REQ'D	LENGTH	BENT	LOCATION
S601	24	3-9		DIAPH. @ MID-SPAN●
S402	68	3-9	X	" @ ABUT.
S403	8	20-6		" " "
S404	12	22-0		" " "
S505	68	10-7	X	" " "
S406	36	4-8		" " " - BET'W. GIRDERS
S407	12	1-4		" " " @ EXT. GIRDERS
S408	180	34-11		SLAB. - LONG.
S509	534	22-1		" - TRANS.
S510	138	4-9	X	" & RAIL PARAPET
S511	138	5-0	X	RAIL PARAPET
S512	20	17-4		" "
S513	10	22-0		" "
S514	10	10-10		" "

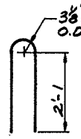
THE FIRST DIGIT OF A THREE DIGIT MARK SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS ARE OUT TO OUT OF BAR.
●- PLAIN BAR - THREAD ONE END 3"



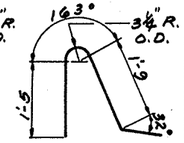
S402



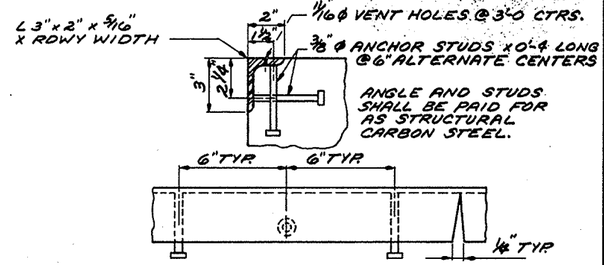
S505

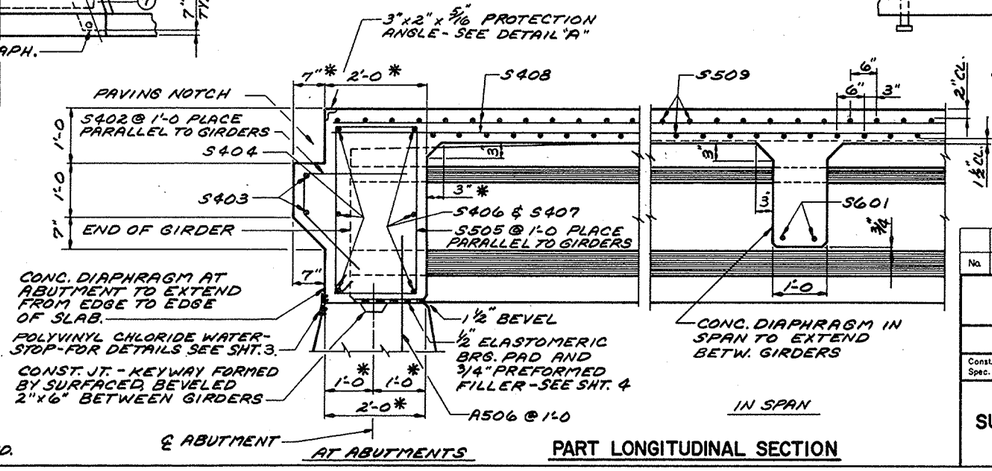


S511



S510





PART LONGITUDINAL SECTION

NOTE: FIELD CUT 3" LEG OF ANGLE AS REQ'D FOR BENDING ANGLE TO CONFORM TO ROWY CROWN. ONE CUT SHALL BE AT CROWN. ONE FIELD SPLICE WILL BE PERMITTED IN ANGLE.

DETAIL A

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-63

Const. Spec. 1969	Drawn By R.J.J.	Plans Checked BMW

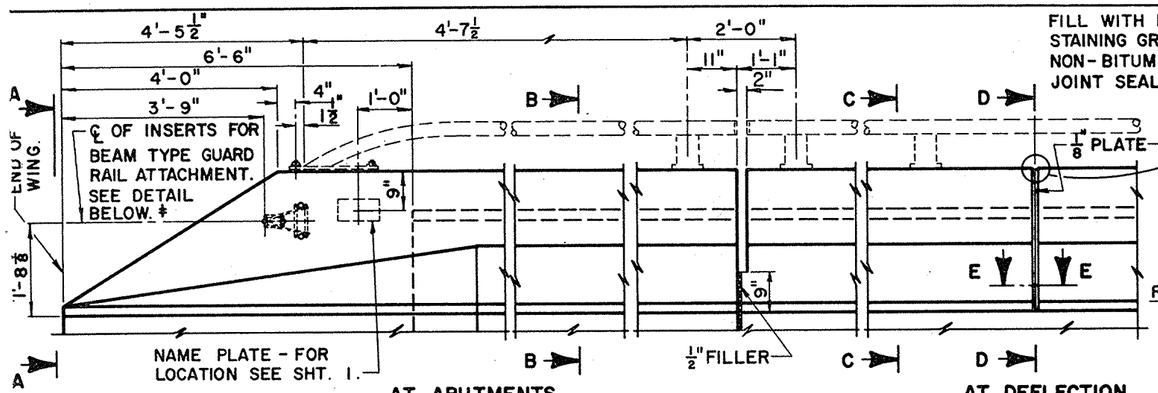
SUPERSTRUCTURE

SHEET 5 OF 7

X 47285

Form E B 12-6-

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	21	91
FEDERAL PROJECT DESIGNATION		
S1260(3)		

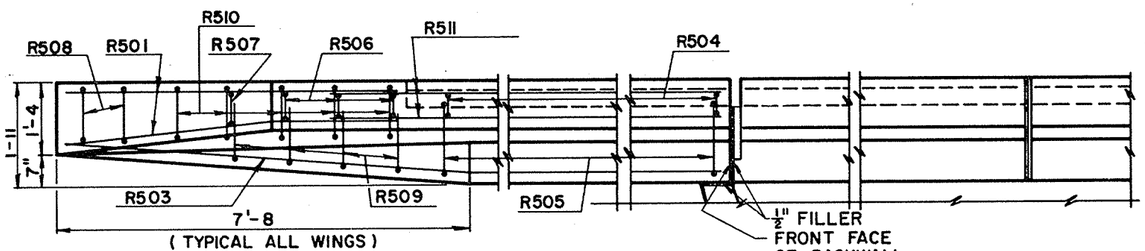


AT ABUTMENTS

AT DEFLECTION JOINT

*PLACE AT ABUTMENT WINGS WHERE REQUIRED. SEE SHT. 1.

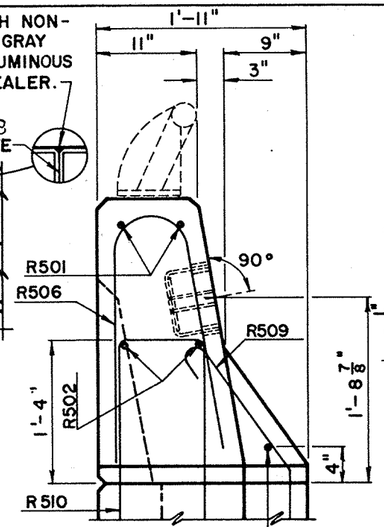
ELEVATION OF RAIL PARAPET



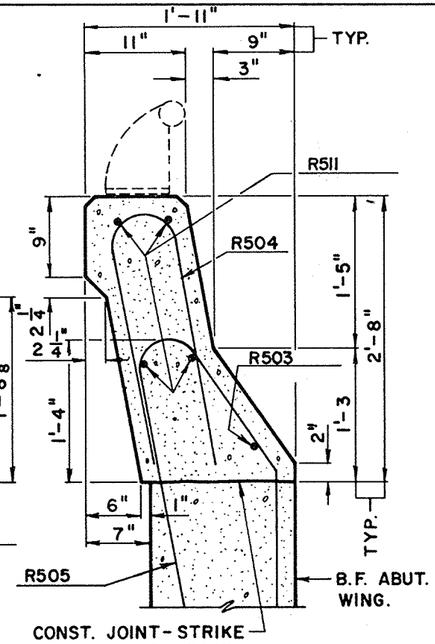
AT ABUTMENTS

AT DEFLECTION JOINT

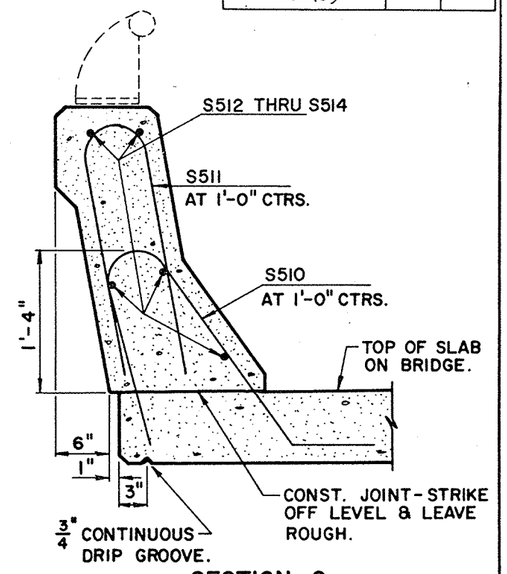
PART PLAN OF RAIL PARAPET



VIEW A



SECTION B



SECTION C

NOTE: BENDING DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

RAIL PARAPET
BILL OF BARS @ ABUTS. 690 LBS.**

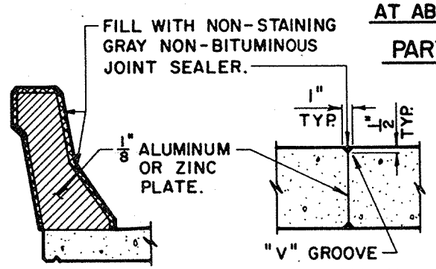
MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
R501	8	6-10	X	WINGS 1 THRU 4
R502	8	4-5		" 1 " 4
R503	4	9-6	X	" 1 " 4
R504	16	5-0	X	" 1 " 4
R505	16	5-10	X	" 1 " 4
R506	12	5-2	X	" 1 THRU 4
R507	4	4-2	X	" 1 " 4
R508	8	4-10	X	" 1 " 4
R509	16	3-3	X	" 1 " 4
R510	20	5-10	X	" 1 " 4
R511	16	4-8		" 1 " 4

** WEIGHT IS INCLUDED IN ABUTMENT TOTALS ON SHEET 1.

NOTES

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION "D" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.

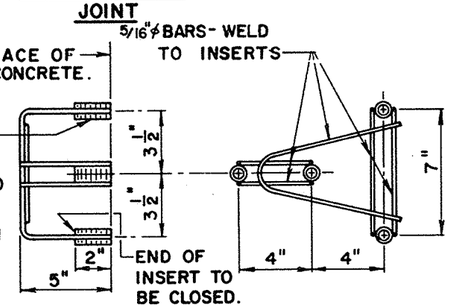
WORK THIS SHEET WITH SHEET TITLED "DETAILS FOR TYPE 'J' TUBULAR ALUMINUM OR STEEL RAILING."



SECTION D

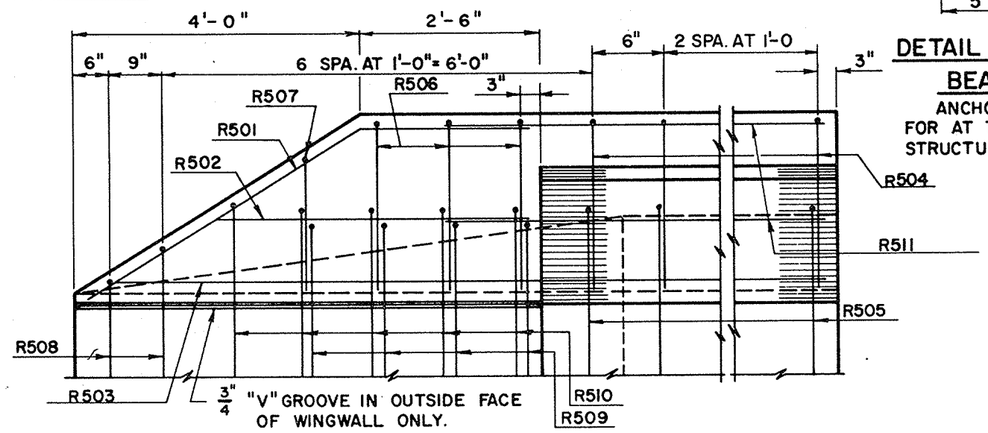
SECTION E

THREADED INSERTS FOR ⅞"ϕ x 0'-2" LONG GALVANIZED HEX. HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MINIMUM OF 1⅞". INSERTS TO BE THREADED A MINIMUM OF 1¾".

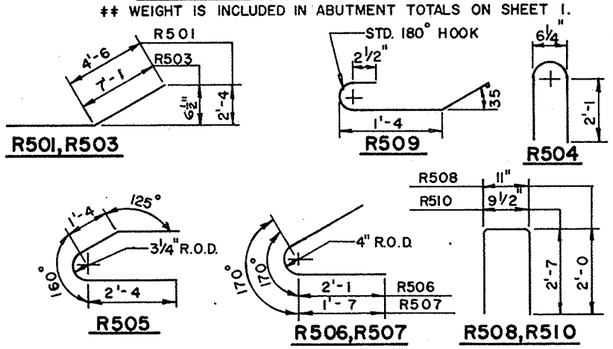


DETAIL OF ANCHOR ASSEMBLY FOR BEAM TYPE GUARD RAIL

ANCHOR ASSEMBLY SHALL BE PAID FOR AT THE UNIT PRICE BID FOR STRUCTURAL CARBON STEEL.



VIEW SHOWING OUTSIDE FACE OF PARAPET & REINF.



R501, R503

R509

R504

R505

R506, R507

R508, R510

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-63

Const. Spec. 1969	Drawn By SELJE	Plans Checked GMW

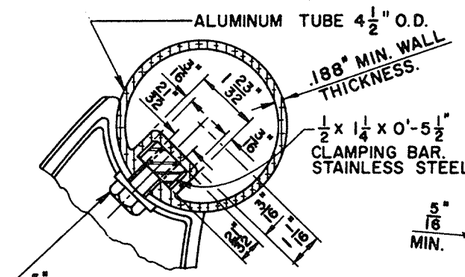
SLOPED FACE PARAPET "A"

SHEET 6 OF 7

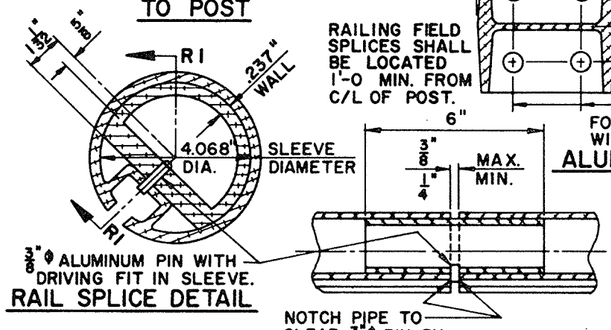
X 47286

Form E-8-12-69

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	22	91
FEDERAL PROJECT DESIGNATION 51260(3)		



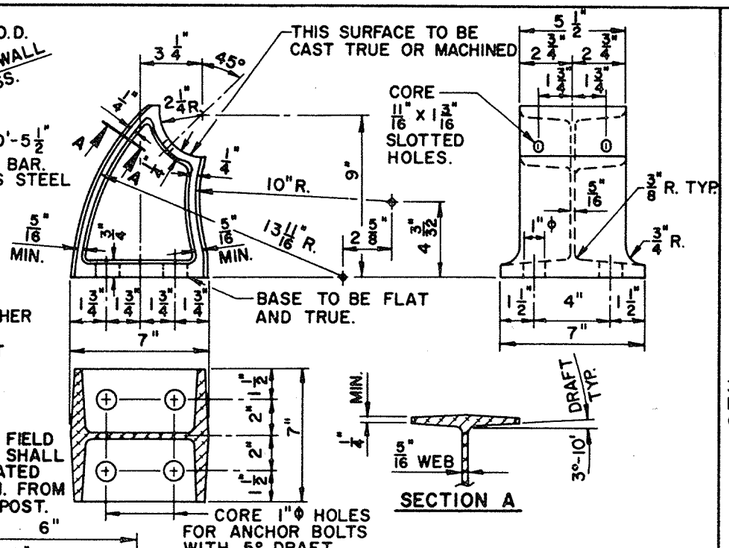
DETAIL OF RAIL ATTACHMENT TO POST



RAIL SPLICE DETAIL

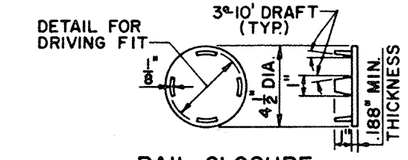
SECTION R1

NOTES:
MAX. REDUCTION IN DIAMETER OF BENT SECTION SHALL BE 3%.
MAX. REDUCTION IN SLOT WIDTH IN BENT TUBING SHALL BE 3/16.
WALL THICKNESS OF TUBING SHOWN ABOVE SHALL BE MIN. NOMINAL AVERAGE WALL THICKNESS.

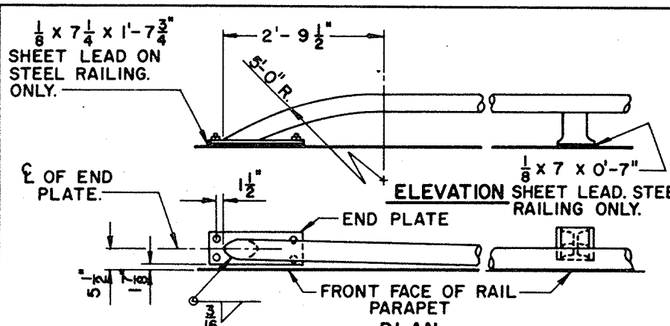


ALUMINUM POST CASTING

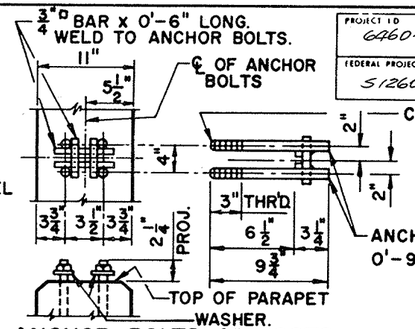
SECTION A



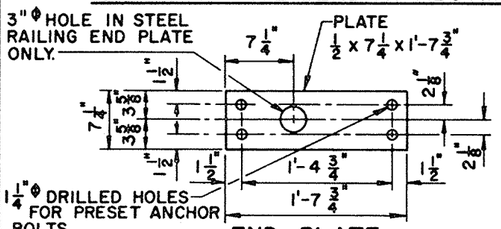
RAIL CLOSURE CAP DETAIL



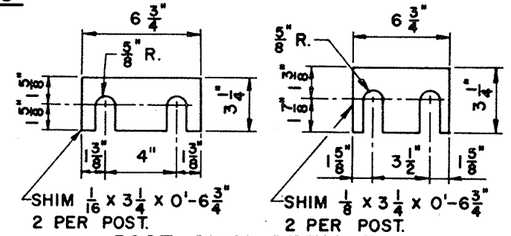
DETAIL OF RAIL BEND AT ABUTMENTS



ANCHOR BOLTS AT POSTS



END PLATE



POST SHIM DETAILS

GENERAL NOTES

BID ITEM SHALL BE TUBULAR RAILING, TYPE 'J'.

ALL POST SPACINGS ARE TAKEN HORIZONTALLY ALONG C/L OF ANCHOR BOLTS.

RAILING SHALL BE FABRICATED IN TWO OR THREE PANEL LENGTHS.

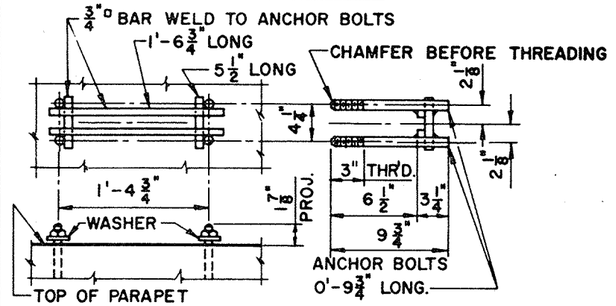
SHIMS CONFORMING TO SAME MATERIAL AS POSTS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQ'D FOR ALIGNMENT.

RAIL POSTS SHALL BE SET NORMAL TO GRADE.

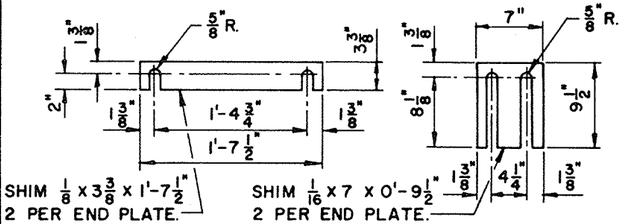
THE SHANK AND ROOT OF THREAD DIAMETER FOR ANCHOR BOLTS SHALL BE A MIN. OF 0.62 INCHES.

ANCHOR BOLTS, NUTS & WASHERS FOR ALUMINUM RAILING SHALL BE STAINLESS STEEL.

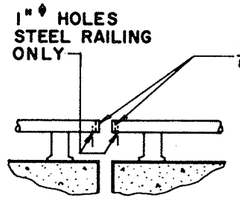
ANCHOR BOLTS, NUTS & WASHERS FOR STEEL RAILING SHALL BE EITHER STAINLESS STEEL OR ASTM A307. IF A307 IS USED ELECTRO-GALVANIZE NUTS, WASHERS & TOP 3½" OF ANCHOR BOLTS.



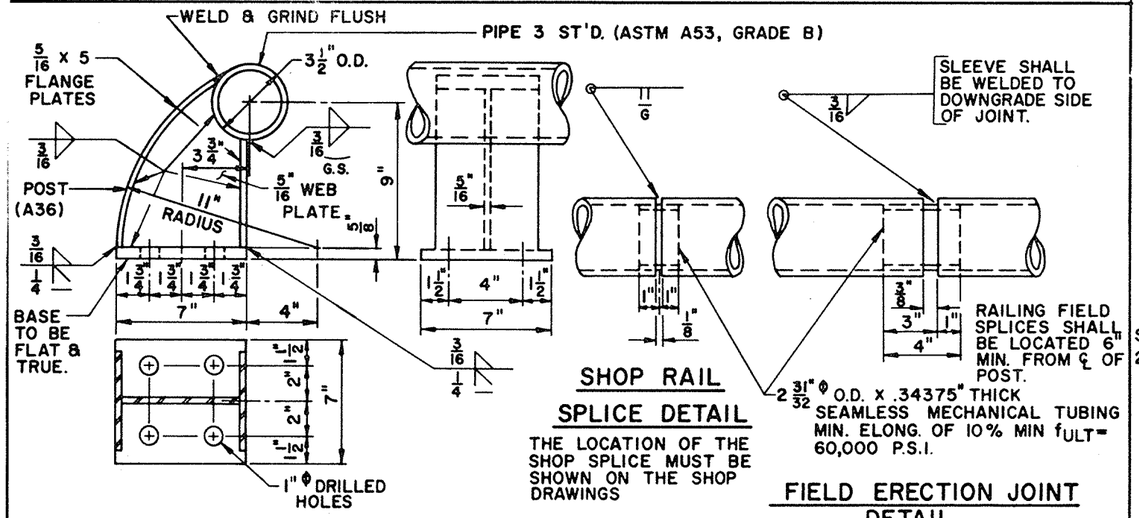
ANCHOR BOLTS AT END PLATE



END PLATE SHIM DETAILS



DETAIL AT RAIL OPENINGS



STEEL POST DETAILS

NOTE:
GALVANIZE ENTIRE RAILING AFTER FABRICATION INCLUDING SHIMS.

SHOP RAIL SPLICE DETAIL

THE LOCATION OF THE SHOP SPLICE MUST BE SHOWN ON THE SHOP DRAWINGS

FIELD ERECTION JOINT DETAIL

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-63

Const. Spec. 1969	Drawn By SELJE	Plans Checked BMW

TUBULAR RAILING TYPE 'J'

SHEET 7 OF 7

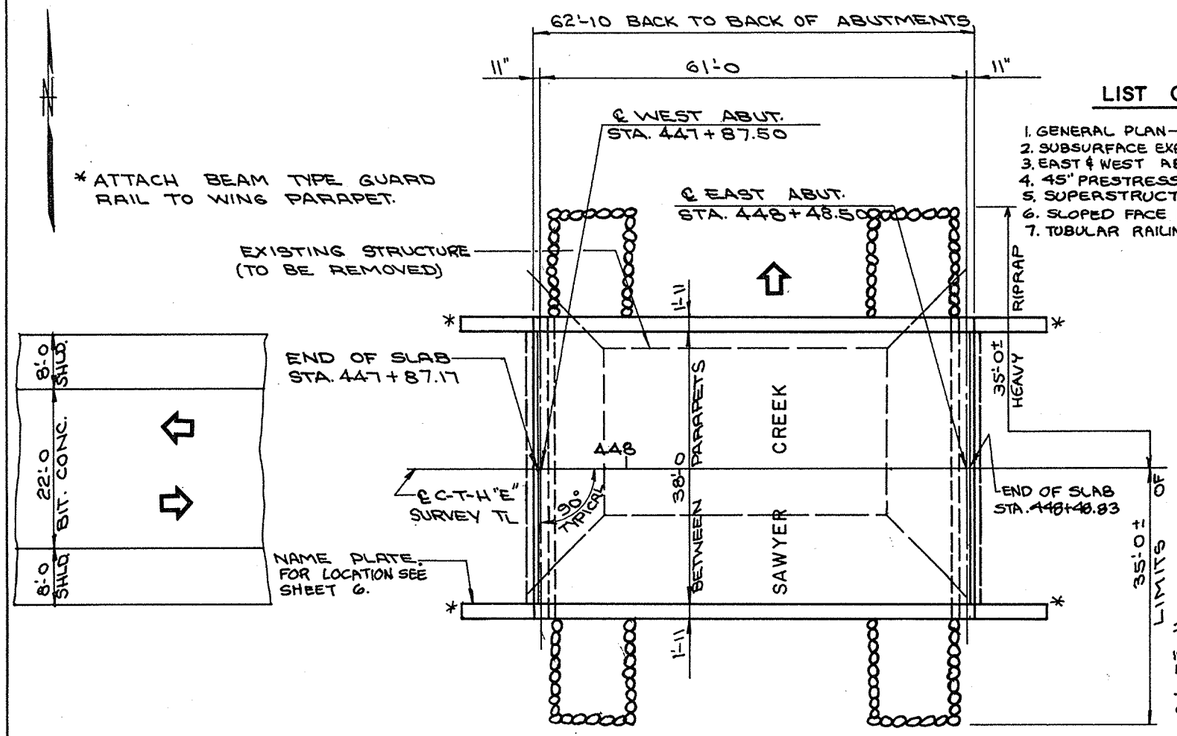
X 47287

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	23	91
FEDERAL PROJECT DESIGNATION: S 1260(3)		

BENCH MARK

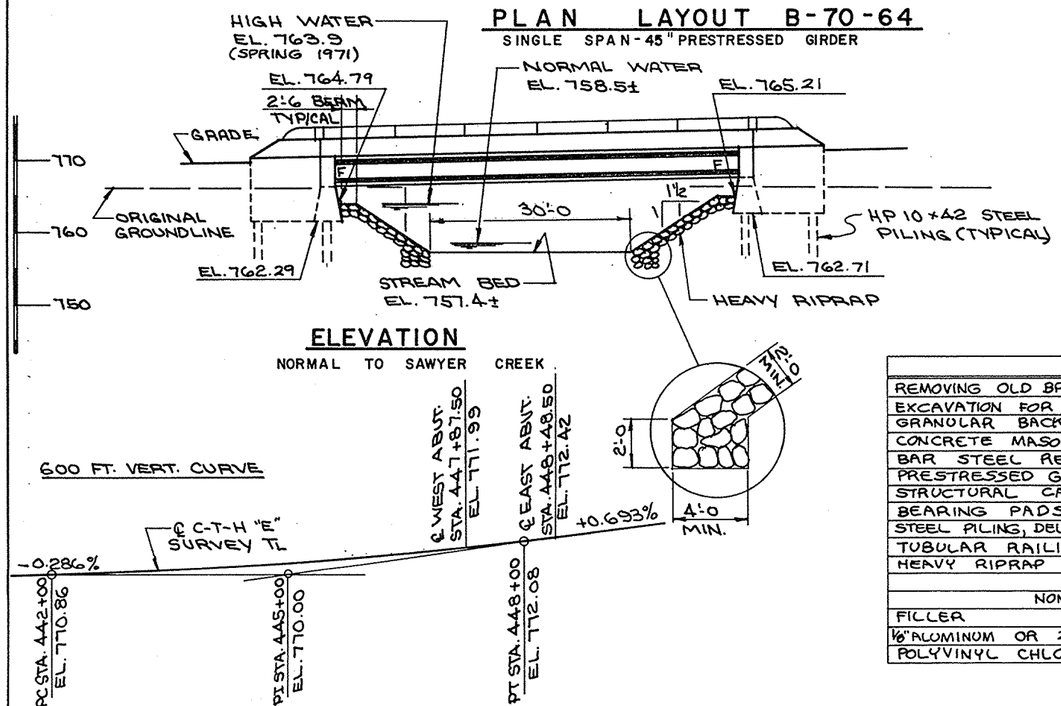
NO.	STATION	DESCRIPTION	ELEV.
59	448+40	PT. MK. TOP N.E. WINGWALL 20' LT.	767.20

LIST OF DRAWINGS



PLAN LAYOUT B-70-64

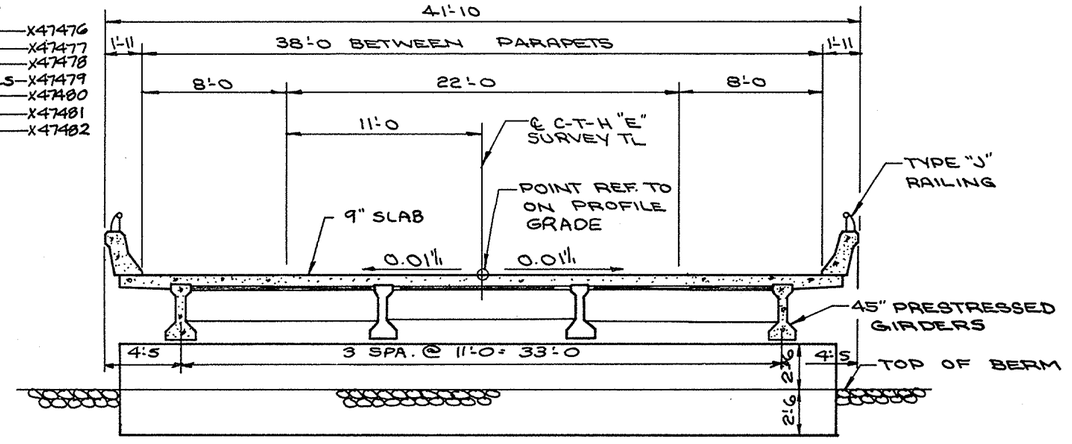
SINGLE SPAN - 45" PRESTRESSED GIRDER



ELEVATION

NORMAL TO SAWYER CREEK

PROFILE GRADE C-T-H "E"



CROSS SECTION THRU ROADWAY LOOKING EAST

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE EXISTING GROUND LINE WAS USED AS THE UPPER LIMITS OF EXCAVATION FOR THE COMPUTATION OF EXCAVATION QUANTITIES.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH GRANULAR BACKFILL. PAYMENT WILL BE MADE ONLY FOR MATERIAL ACTUALLY PLACED WITHIN THE LIMITS FOR 'EXCAVATION FOR STRUCTURES'. THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP TO THE EXTENT SHOWN ON THIS SHEET AND IN THE ABUTMENT DETAILS.

FILLER SHALL CONFORM TO A.A.S.H.O. M 153 OR M 213.

DESIGN DATA

LIVE LOAD: H20

ALLOWABLE DESIGN STRESSES:

CONCRETE MASONRY, GRADE "AA" SLAB ——— f_c = 1,200 P.S.I.

ALL OTHER ——— f_c = 1,400 P.S.I.

BAR STEEL REINFORCEMENT ——— f_s = 20,000 P.S.I.

n = 10

45" PRESTRESSED GIRDERS

CONCRETE MASONRY ——— f'_c = 6,000 P.S.I.

STRANDS - ½"ϕ WITH ULTIMATE TENSILE STRENGTH OF ——— 270,000 P.S.I.

STRUCTURE IS DESIGNED FOR FUTURE DEAD LOAD OF 20 POUNDS PER SQUARE FOOT.

FOUNDATION DATA

PLACE ABUTMENTS ON HP 10x42 STEEL PILING DRIVEN TO 50 TONS / PILE MINIMUM BEARING. ESTIMATED PILE LENGTH 40 FEET.

HYDRAULIC DATA

Q_{50}	1,400 C.F.S.
VEL.	5.4 F.P.S.
WATERWAY AREA	258 S.F.
HW	EL. 763.9 (1971)
DRAINAGE AREA	12 SQ. MI.

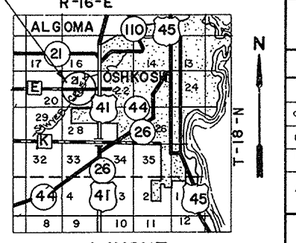
TRAFFIC VOLUME

A.D.T.	2150 (1973)
P.D.S.	50 M.P.H.
D.H.V.	650 (1973)

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	W. ABUT.	E. ABUT.	TOTAL
REMOVING OLD BRIDGE - STA. 448+10.00	L.S.	———	———	———	1
EXCAVATION FOR STRUCTURES	C.Y.	———	42	40	82
GRANULAR BACKFILL	C.Y.	———	25	23	48
CONCRETE MASONRY	C.Y.	105	38	38	181
BAR STEEL REINFORCEMENT	LB.	22,340	2,750	2,750	27,840
PRESTRESSED GIRDER, I TYPE, 45 INCH	L.F.	246	———	———	246
STRUCTURAL CARBON STEEL	LB.	430	———	———	430
BEARING PADS, ELASTOMERIC	S.F.	10	———	———	10
STEEL PILING, DELIVERED & DRIVEN, HP 10 INCH x 42 POUND	L.F.	———	320	320	640
TUBULAR RAILING, TYPE 'J'	L.F.	157	———	———	157
HEAVY RIPRAP	C.Y.	———	103	107	210
NON - BID ITEMS					
FILLER	SIZE	¼, ½, ¾	———	———	¼, ½, ¾
⅛" ALUMINUM OR ZINC PLATE	S.F.	18	———	———	18
POLYVINYL CHLORIDE WATERSTOP	L.F.	———	38	38	76

STRUCTURE B-70-64



LAYOUT

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-64

C-T-H "E" OVER SAWYER CREEK

County WINNEBAGO — City ~~Village~~ TN: ALGOMA

Design Spec. A.A.S.H.O. 1969 — Load H 20 — Const. Spec. 1969

Designed By CRH — Design Checked JRL — Drawn By DB — Plans Checked B.W.

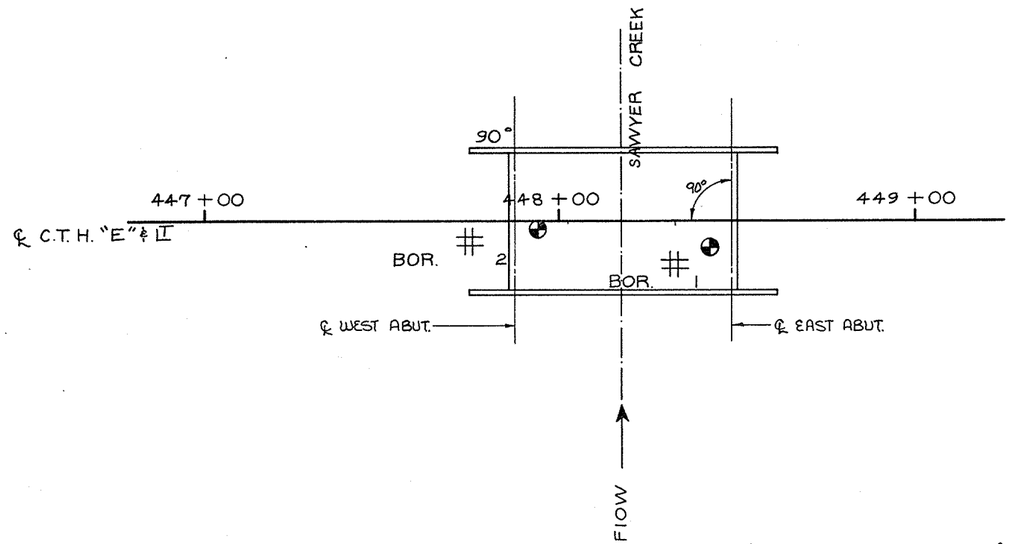
Approved W.A. Kleine, Chief Bridge Engineer — 4-28-72, Date

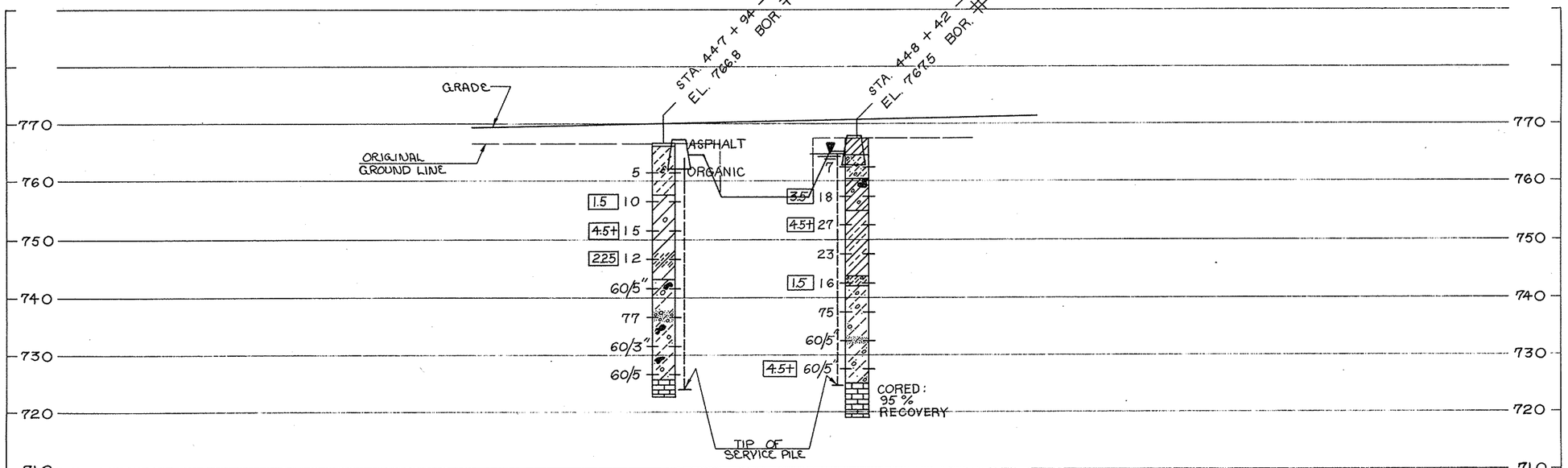
GENERAL PLAN

SHEET 1 OF 7

X 47476

PROJECT ID	SHEET NUMBER	TOTAL SHEETS
6460-2-71	24	91
FEDERAL PROJECT DESIGNATION 51260(3)		





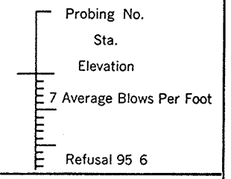
ABBREVIATIONS

F — Fine M — Medium C — Coarse
Ws — Weathered So — Sound

MATERIAL SYMBOLS

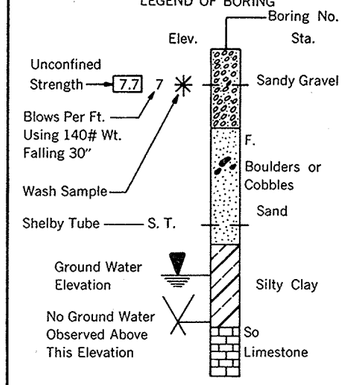
Topsoil, Sand, Gravel, Silt, Peat, Clay, Sandstone, Limestone, Igneous Rock

LEGEND OF PROBING



95/6=95 Blows for 6" Penetration
Probing taken with a 350# wt.
Falling 18" on a 2" O. D. Point.

LEGEND OF BORING



Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B — 70 — 64

Const. Spec. 1969	Drawn By R.W.A.	Plans Checked B.W.

SUBSURFACE EXPLORATION

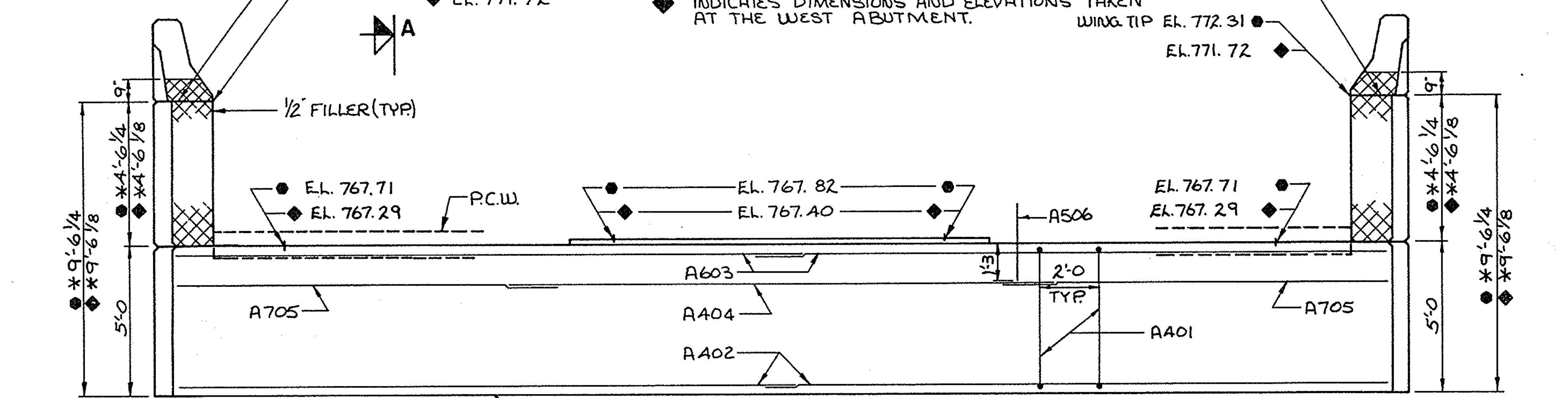
SHEET 2 OF 7

X 47477

NOTE: RAILING NOT SHOWN.

⬢ INDICATES DIMENSIONS AND ELEVATIONS TAKEN AT THE EAST ABUTMENT.

◆ INDICATES DIMENSIONS AND ELEVATIONS TAKEN AT THE WEST ABUTMENT.

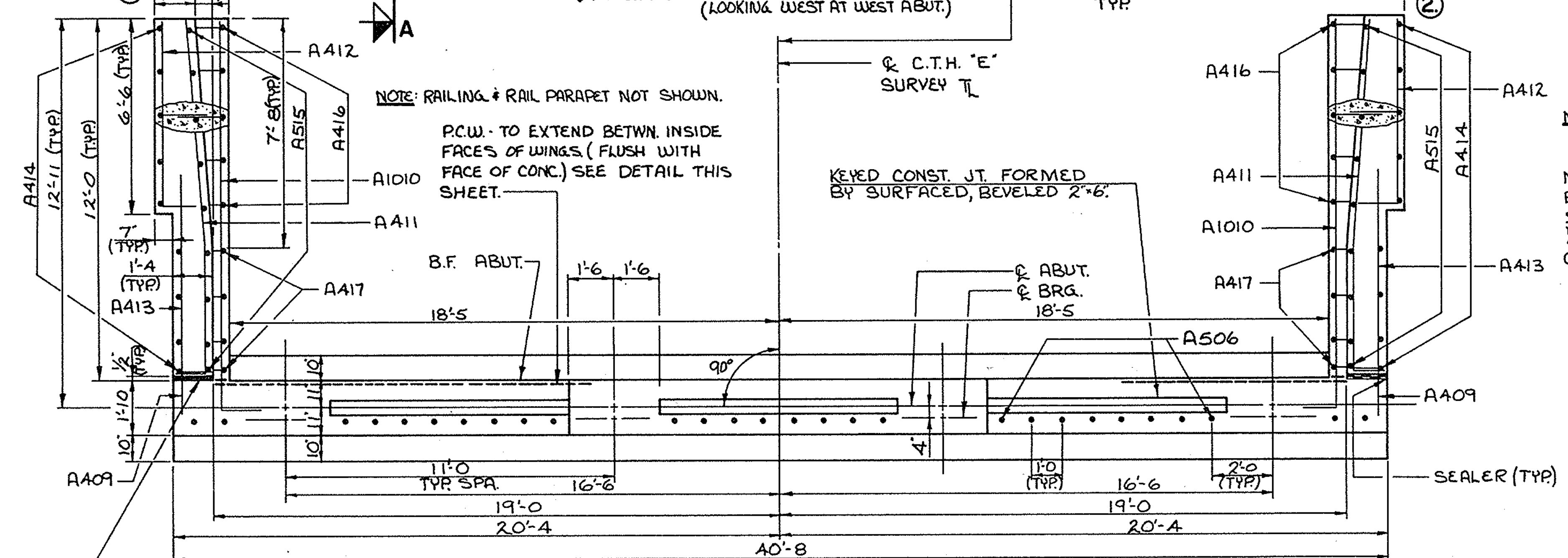


* DIMENSIONS GIVEN AT B.F. ABUT.

ELEVATION
(LOOKING EAST AT EAST ABUT.)
(LOOKING WEST AT WEST ABUT.)

NOTE: RAILING & RAIL PARAPET NOT SHOWN.

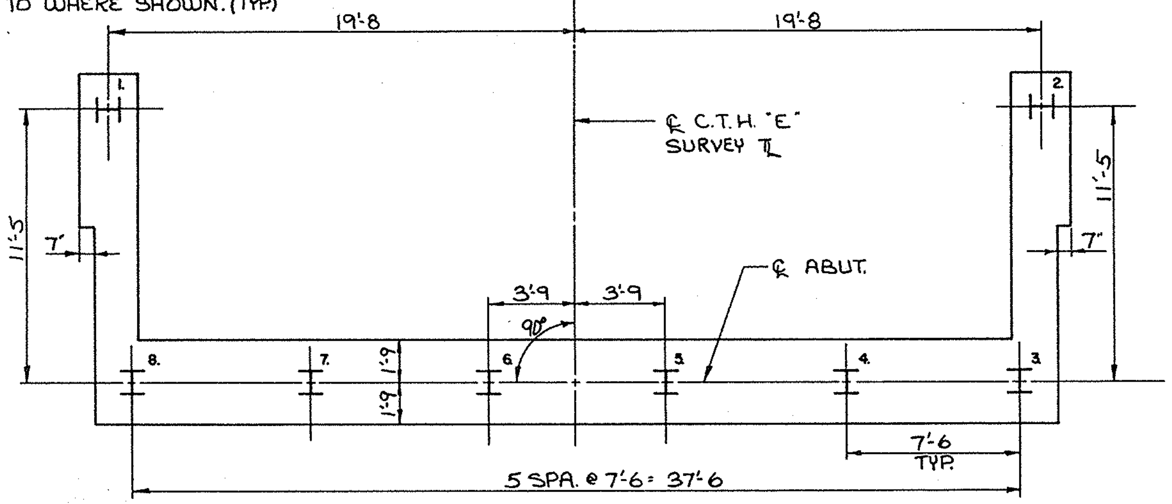
P.C.W. - TO EXTEND BETWN. INSIDE FACES OF WINGS (FLUSH WITH FACE OF CONC.) SEE DETAIL THIS SHEET.



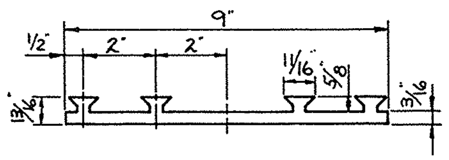
1/2" FILLER EXTEND FROM BRIDGE SEAT TO WHERE SHOWN. (TYP.)

PLAN

NOTE: A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET.

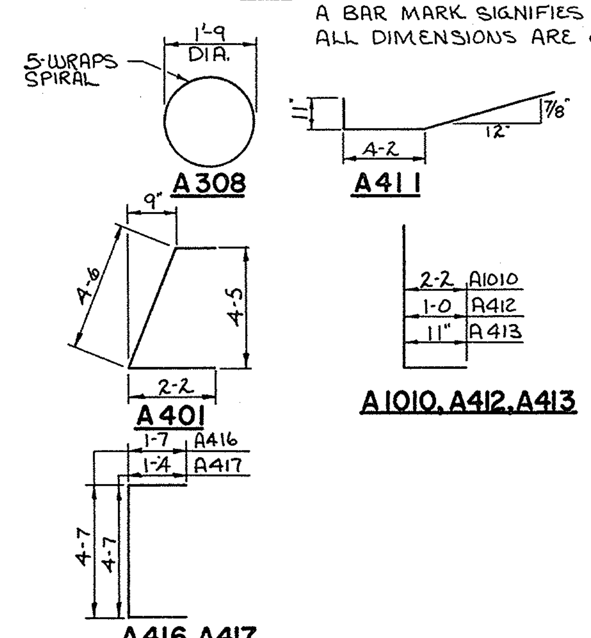


PILE PLAN



POLYVINYL CHLORIDE WATERSTOP
(P.C.W.)

NOTE: THE FIRST OR FIRST AND SECOND DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE. ALL DIMENSIONS ARE OUT TO OUT OF BAR.



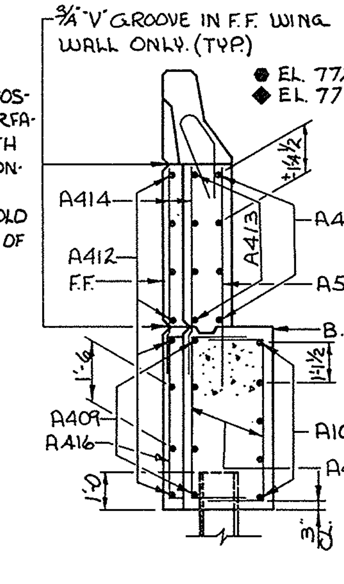
Project ID	Sheet Number	Total Sheets
6460-2-71	25	91
Federal Project Designation: 5 1260(3)		

BILL OF BARS (2 ABUTS.) 4,680 LBS.

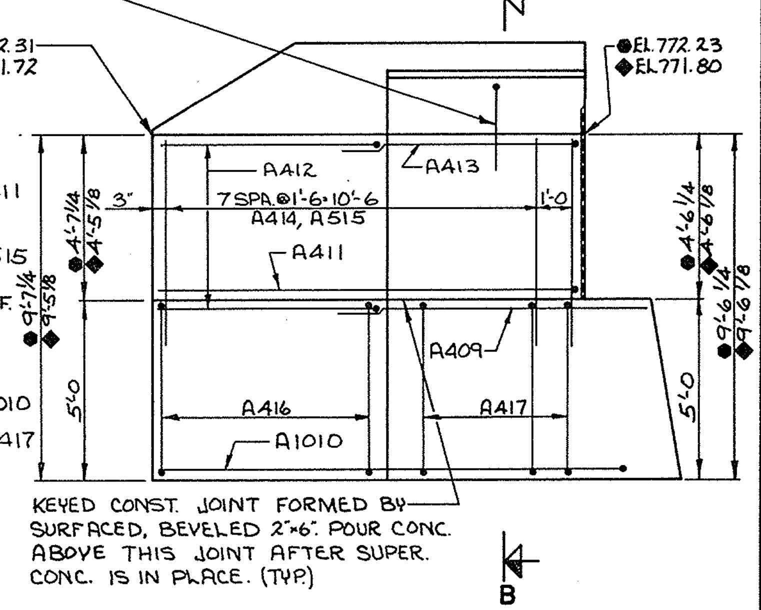
MARK	NO. REQ'D	LENGTH	BENT	LOCATION		
A401	84	7-10	X	BODY		
A402	24	20-8		"	HORIZ.	
A603	8	20-11		"	"	
A404	8	18-4		"	"	
A705	32	12-0		"	"	
A506	56	2-6		"	VERT.	
A407	24	2-3		"	"	
A308	12	28-0	X	"	SPIRAL	
A409	16	8-3		WINGS	HORIZ.	F.F.
A1010	20	15-2	X	"	"	B.F.
A411	16	12-5	X	"	"	"
A412	32	7-1	X	"	"	F.F.
A413	16	7-8	X	"	"	"
A414	36	5-5		"	VERT.	"
A515	36	5-8		"	"	B.F.
A416	40	7-7	X	"	"	
A417	32	7-2	X	"	"	

FOR RAIL PARAPET REINF. DETAILS SEE SHEET 6.

NOTE: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE.)

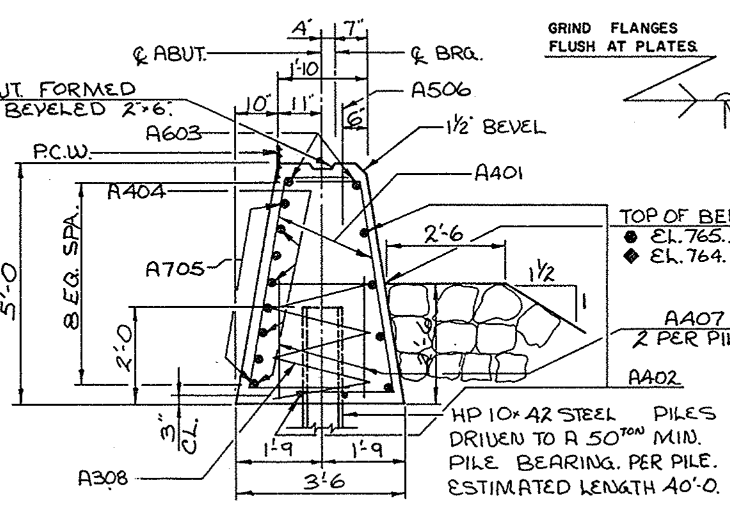


SECTION B-B

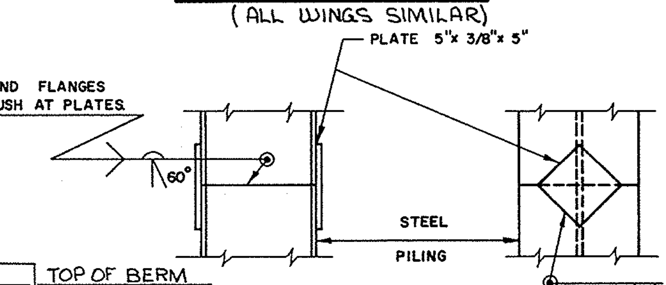


KEYED CONST. JOINT FORMED BY SURFACED, BEVELED 2"×6". POUR CONC. ABOVE THIS JOINT AFTER SUPER. CONC. IS IN PLACE. (TYP.)

WING ELEVATION
(ALL WINGS SIMILAR)



SECTION A-A



PILE SPLICE DETAIL

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

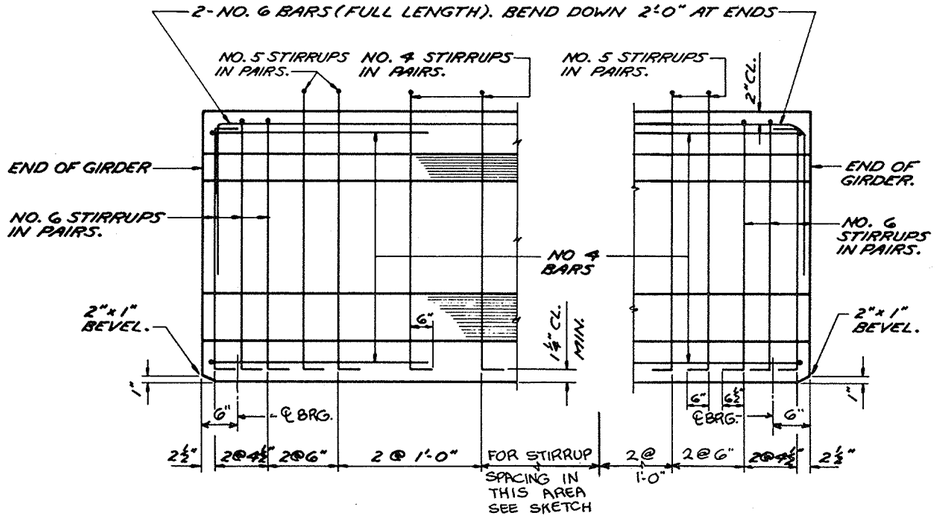
STRUCTURE B-70-64

Const. Spec. 1969	Drawn By R.W.A.	Plans Checked B.W.

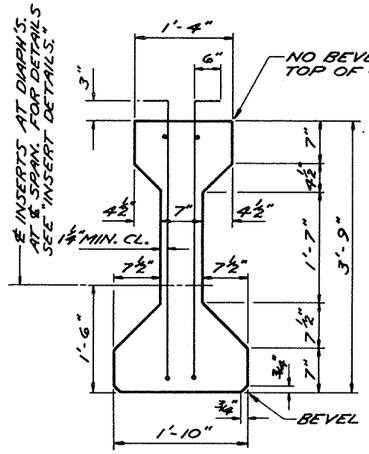
EAST & WEST ABUTMENTS — SHEET 3 OF 7 — X 47478

FORM E-B-12-62

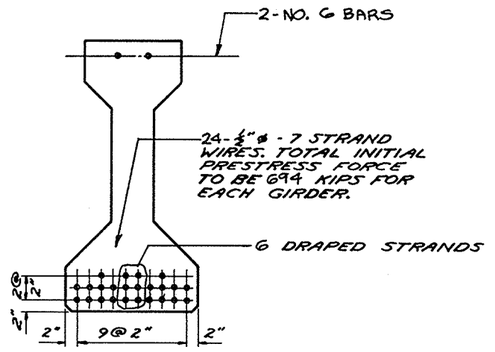
B.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	6960-2-71 51260(3)	26	91



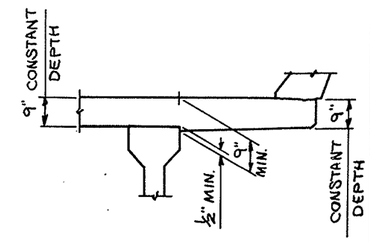
SIDE VIEW OF GIRDER



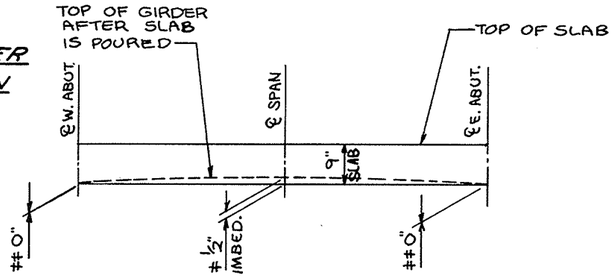
SECTION THRU GIRDER



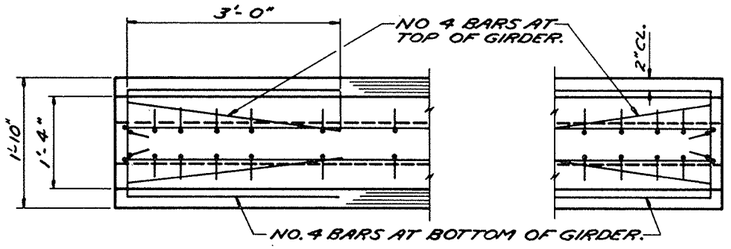
SECTION THRU GIRDER TAKEN @ ℄ OF SPAN



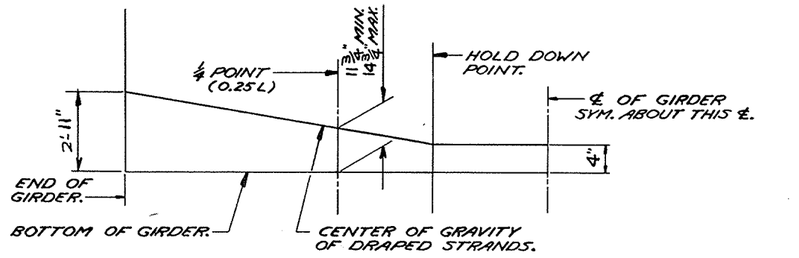
SLAB FORMING DETAIL AT EXTERIOR GIRDER



SLAB FORMING DIAGRAM



TOP VIEW OF GIRDER



DRAPED STRAND PROFILE

GENERAL NOTES

TOP OF GIRDERS TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO SLAB.

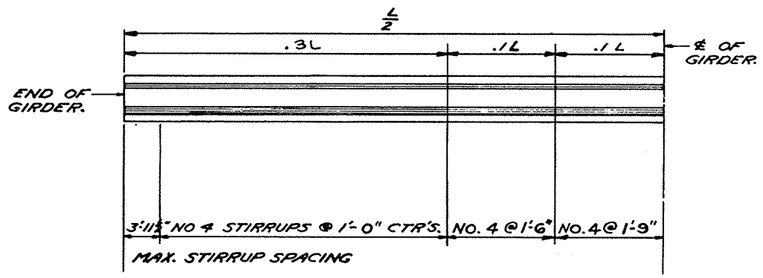
THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.
WIRES SHALL BE FLUSH WITH END OF GIRDERS.

PRESTRESSING WIRES SHALL HAVE AN ULT. STRENGTH OF 270,000 psi.

≠ TO COMPENSATE FOR VARIATIONS IN PRESTRESS CAMBER AND OTHER MINOR CONSTRUCTION DISCREPANCIES THE IMBEDMENT AT THE ℄ OF SPAN MAY BE VARIED WITH A MAXIMUM OF 1½" ALLOWABLE IMBEDMENT AND THE SLAB HELD TO PLAN THICKNESS.

≠≠ IF VARIATIONS IN PRESTRESS CAMBER AND OTHER CONSTRUCTION DISCREPANCIES ARE OF SUCH A MAGNITUDE SO THAT THE MAXIMUM ALLOWABLE IMBEDMENT AS NOTED ABOVE WILL BE EXCEEDED, THESE DIMENSIONS WILL BE REVISED. THE 1½" IMBEDMENT AND THE PLAN SLAB THICKNESS WILL BE HELD WHILE THE GRADE LINE WILL BE REVISED.



SKETCH SHOWING MAXIMUM STIRRUP SPACING

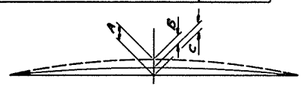
ALL STIRRUPS TO BE IN PAIRS AS SHOWN ABOVE.
THE LOCATION OF STIRRUPS SHALL BE SUBMITTED FOR APPROVAL ON THE SHOP DRAWINGS.
THE OVERALL LENGTH OF GIRDERS "L" IS 61'-4".

MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRE-STRESS FORCE f'_{ci} (psi).

GIRDER TYPE	
DRAPED PATTERN	4,800
SPREAD PATTERN	——

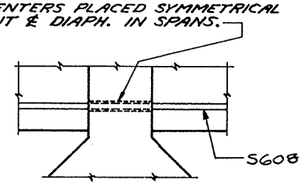
DEFLECTION DATA

CAMBER	
* A - PRE-STRESS CAMBER	1⅛"
* B - DEAD LOAD DEFLECTION	⅝"
# C - RESIDUAL CAMBER	½"

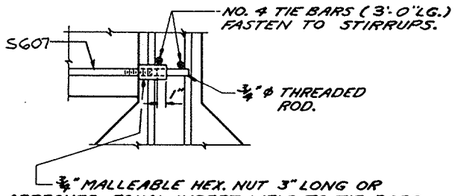


* PRE-STRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN ARE THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRE-STRESS LOSSES.

2-1" I.D. SLEEVE INSERTS AT 6" CENTERS PLACED SYMMETRICAL ABOUT ℄ DIAPH. IN SPANS.



INTERIOR GIRDERS



⅝" MALLEABLE HEX. NUT 3" LONG OR APPROVED EQUAL INSERT. WELD TO TIE BARS.
2 - INSERTS AT 6" CTR'S PLACED SYMMETRICAL ABOUT ℄ DIAPHRAGMS IN SPANS.

EXTERIOR GIRDERS INSERT DETAILS

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-64

Const. Spec	1969	Drawn By	DB	Plans Checked	B.W.

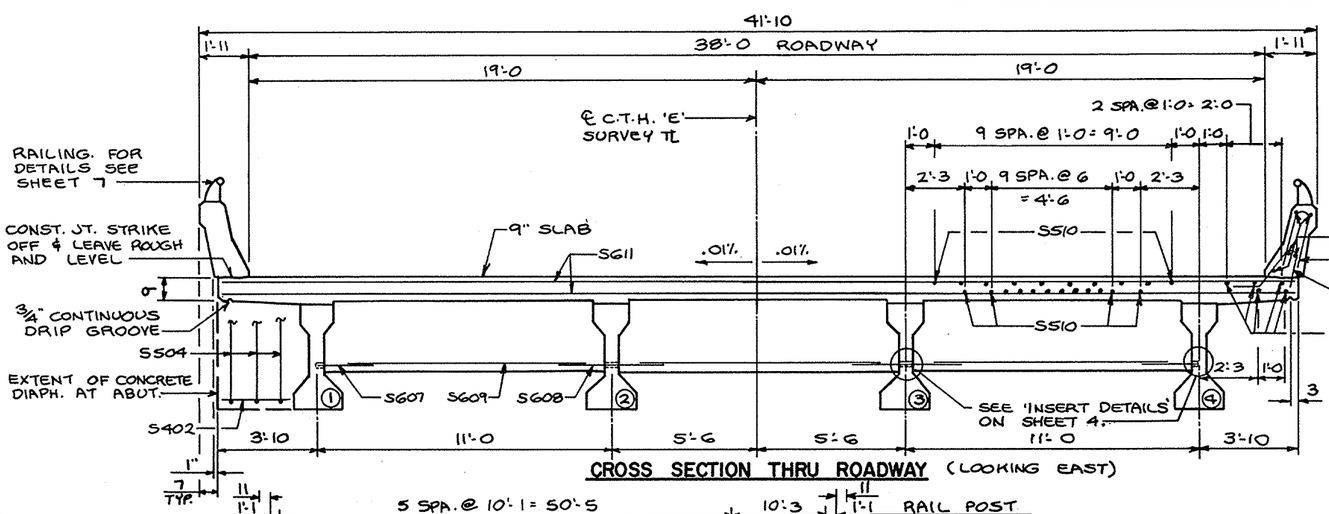
45" PRESTRESSED GIRDER DETAILS

SHEET 4 OF 7

X 47479

Form E-B-12-69

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	27	91
FEDERAL PROJECT DESIGNATION: S 1260(3)		



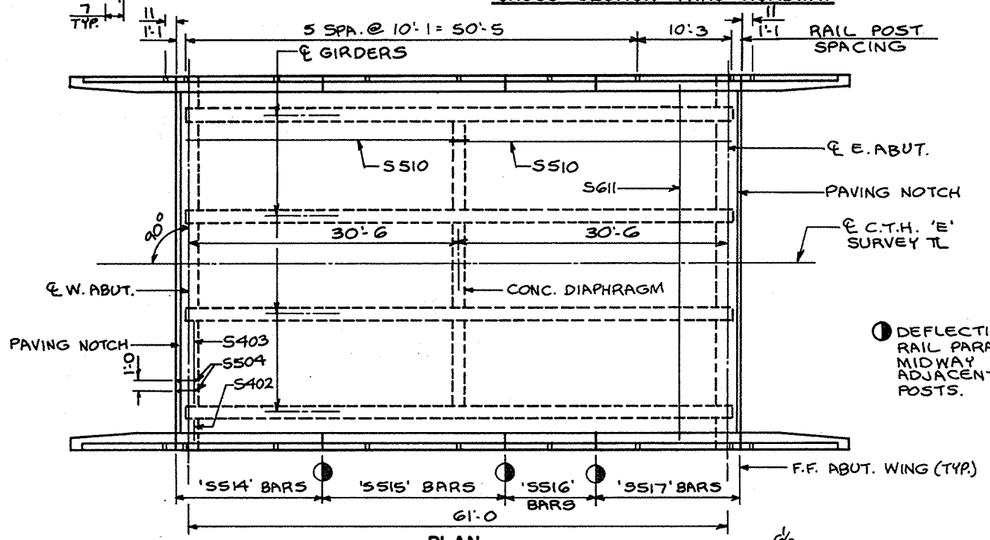
CROSS SECTION THRU ROADWAY (LOOKING EAST)

NOTE:
BOTTOM TRANS. BARS IN SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS ON OR ADJACENT TO EACH GIRDER AND BY INDIVIDUAL BAR CHAIRS AT 3'-0 CENTERS AT APPROX. THE 1/3 POINTS BETWEEN GIRDERS.
TOP LONGIT. BAR STEEL SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0 CENTERS.

BILL OF BARS

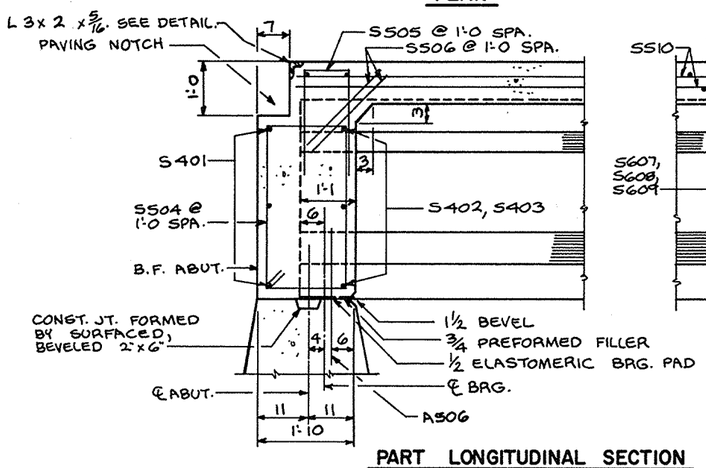
22,340#

MARK	NO.	LENGTH	BENT	LOCATION
S401	12	20-9		ABUT. DIAPH. - HORIZ.
S402	12	2-7		ABUT. DIAPH. - HORIZ.
S403	18	8-10		ABUT. DIAPH. - HORIZ.
S504	66	9-11	X	ABUT. DIAPH. - VERT.
S505	66	4-8	X	ABUT. DIAPH. - VERT.
S506	132	2-0		ABUT. DIAPH.
* S607	4	2-0		DIAPH. AT MID-SPAN
S608	4	4-0		DIAPH. AT MID-SPAN
S609	6	10-0		DIAPH. AT MID-SPAN
S510	152	31-4		SLAB - LONGIT. - TOP & BOTTOM
S511	227	40-4		SLAB - TRANS. - TOP & BOTTOM
S512	126	4-9	X	SLAB & RAIL PARAPET
S513	126	5-0	X	RAIL PARAPET
S514	10	15-8		RAIL PARAPET
S515	10	19-10		RAIL PARAPET
S516	10	9-9		RAIL PARAPET
S517	10	15-10		RAIL PARAPET

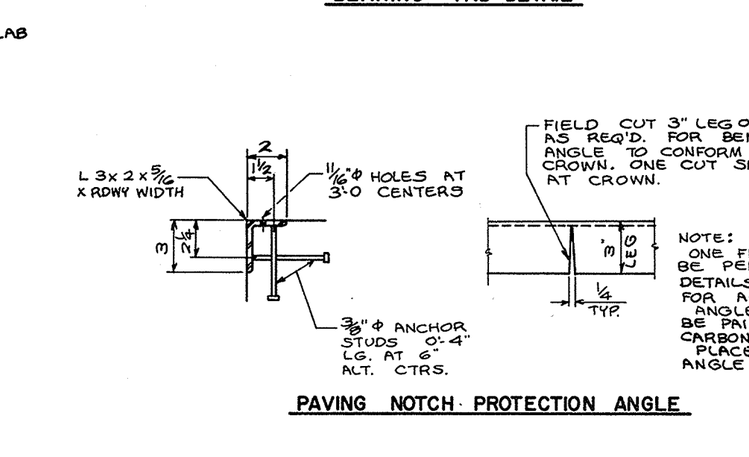


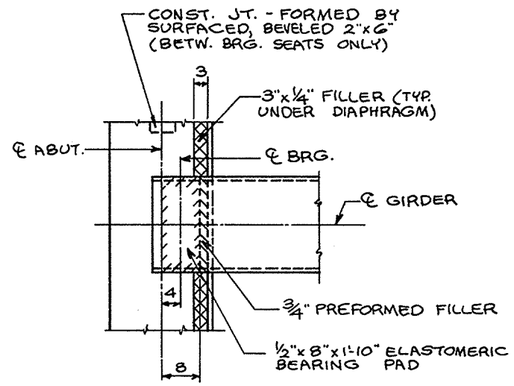
PLAN

◑ DEFLECTION JOINT IN RAIL PARAPET. SPACE MIDWAY BETWEEN ADJACENT RAIL POSTS.

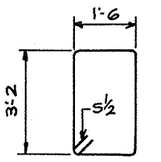


PART LONGITUDINAL SECTION

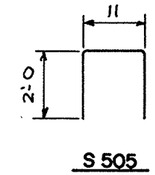




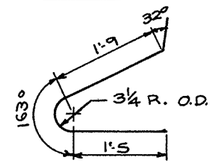
BEARING PAD DETAIL



S 504



S 505



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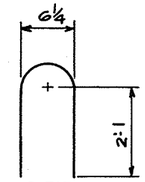


S 513

NOTE:
THE FIRST DIGIT OF A MARK SIGNIFIES THE BAR SIZE.
ALL BENDING DIMENSIONS ARE OUT TO OUT OF BAR.
* ¾"Φ PLAIN BAR. THREAD ONE END 3".

PAVING NOTCH PROTECTION ANGLE

NOTE:
ONE FIELD SPLICE SHALL BE PERMITTED, IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL.
ANGLE AND STUDS SHALL BE PAID FOR AS 'STRUCTURAL CARBON STEEL'.
PLACE ONE PROTECTION ANGLE AT EACH ABUTMENT.

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-70-64

Const. Spec.	Drawn By	Plans Checked
1969	DB	B.W.

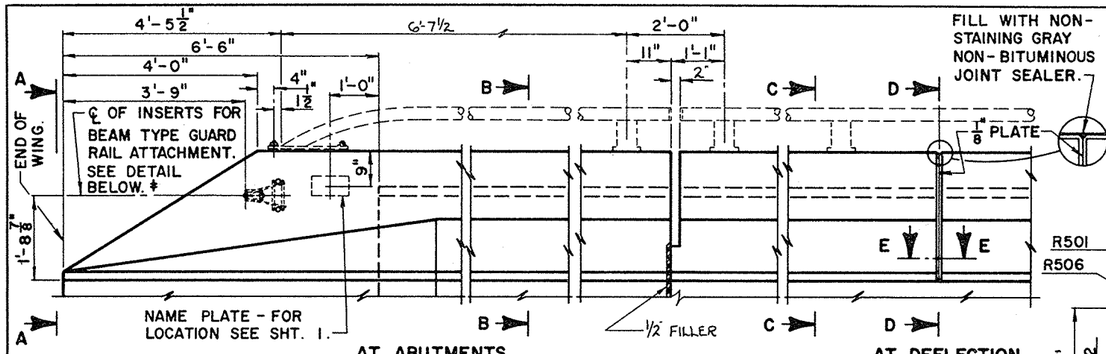
SUPERSTRUCTURE

SHEET 5 OF 7

X 47480

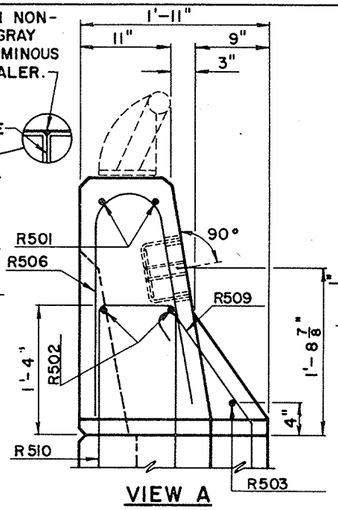
Form C B 12 6

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6460-2-71	28	91
FEDERAL PROJECT DESIGNATION		
S 1260(3)		

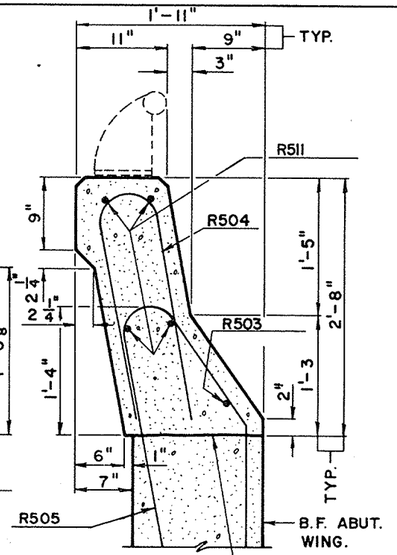


*PLACE AT ABUTMENT WINGS WHERE REQUIRED. SEE SHT. 1.

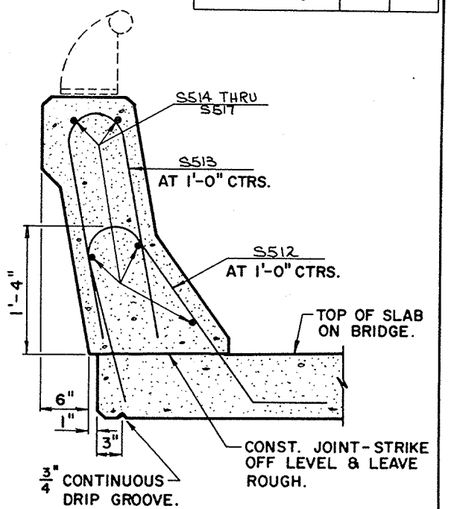
ELEVATION OF RAIL PARAPET



VIEW A

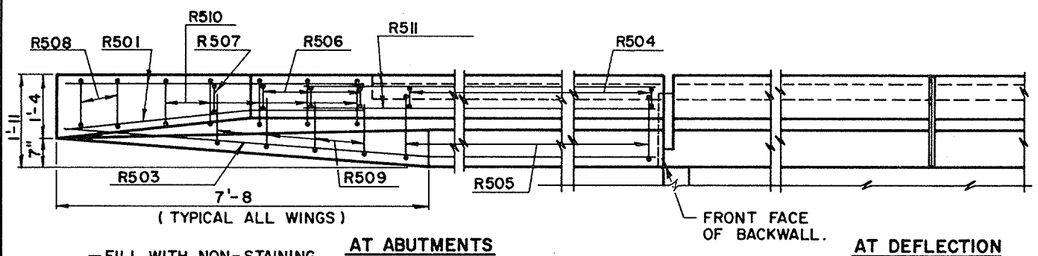


SECTION B



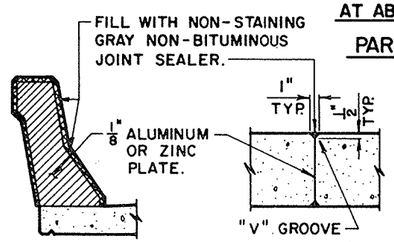
SECTION C

NOTE: BENDING DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.



PART PLAN OF RAIL PARAPET

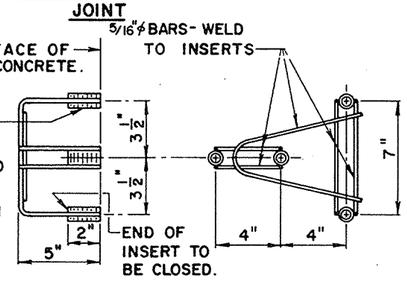
AT ABUTMENTS



SECTION D

SECTION E

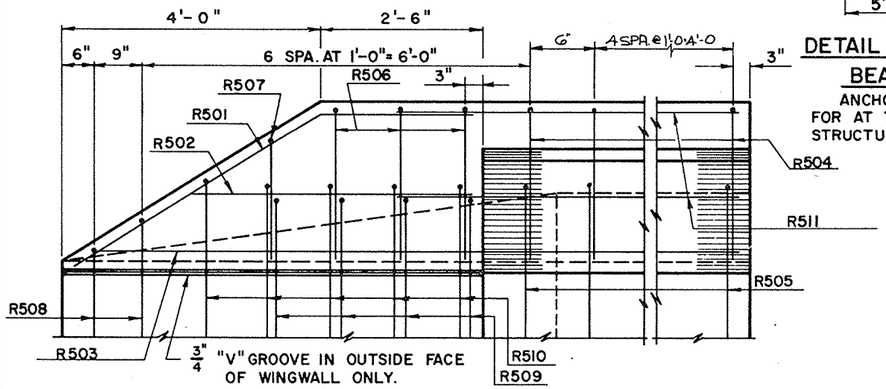
AT DEFLECTION JOINT



THREADED INSERTS FOR $\frac{7}{8}$" ϕ x 0'-2" LONG GALVANIZED HEX. HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MINIMUM OF $1\frac{7}{8}$". INSERTS TO BE THREADED A MINIMUM OF $1\frac{3}{4}$".

DETAIL OF ANCHOR ASSEMBLY FOR BEAM TYPE GUARD RAIL

ANCHOR ASSEMBLY SHALL BE PAID FOR AT THE UNIT PRICE BID FOR STRUCTURAL CARBON STEEL.



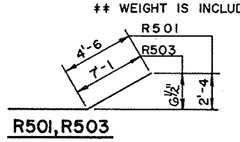
VIEW SHOWING OUTSIDE FACE OF PARAPET & REINF.

RAIL PARAPET

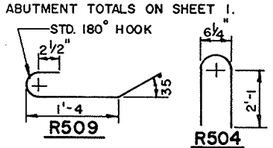
BILL OF BARS @ ABUTS. 820 LBS. **

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
R501	8	6-10	X	WINGS 1 AND 2
R502	8	4-5		" 1 " 2
R503	4	11-4	X	" 1 " 2
R504	24	5-0	X	" 1 " 2
R505	24	5-10	X	" 1 " 2
R506	12	5-2	X	" 1 " 2
R507	4	4-2	X	" 1 " 2
R508	8	4-10	X	" 1 " 2
R509	16	3-3	X	" 1 " 2
R510	20	5-10	X	" 1 " 2
R511	16	6-8		" 1 " 2

** WEIGHT IS INCLUDED IN ABUTMENT TOTALS ON SHEET 1.

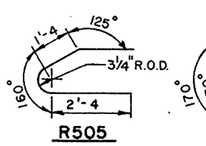


R501, R503

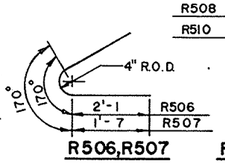


R509

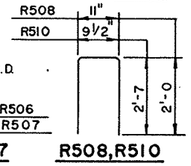
R504



R505



R506, R507



R508, R510

NOTES

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF $\frac{1}{8}$" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION "D" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.

WORK THIS SHEET WITH SHEET TITLED "TUBULAR RAILING TYPE 'J'."

No.	Date	Revision	By

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STRUCTURE B-70-64

Const. Spec. 1969	Drawn By R.W.A.	Plans Checked B.W.

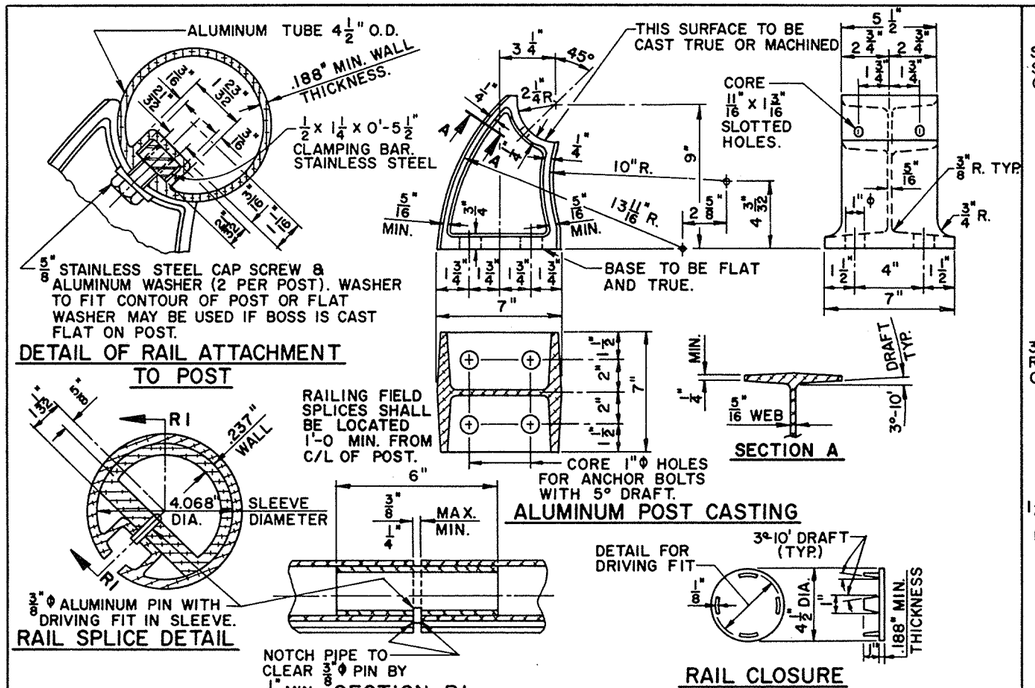
SLOPED FACE PARAPET "A"

SHEET 6 OF 7

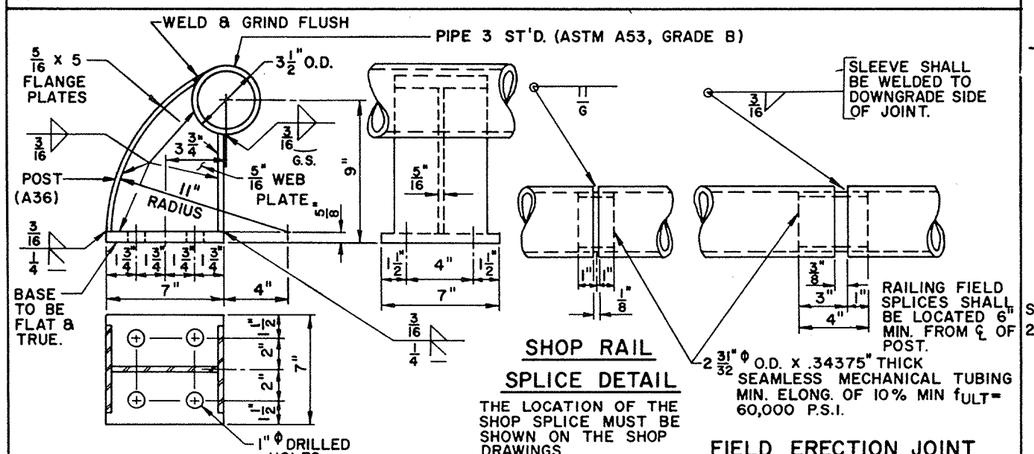
X 47481

Form E 8-12 69

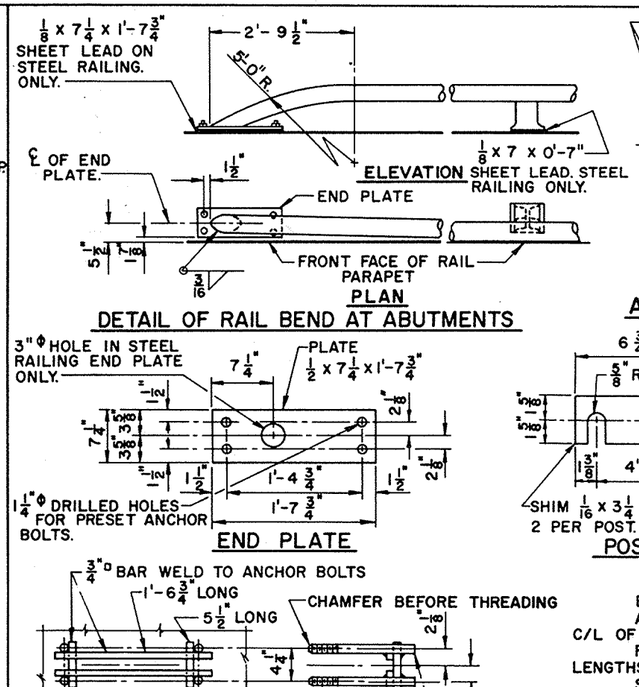
PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
6960-2-71	29	91
FEDERAL PROJECT DESIGNATION S 1260(3)		



NOTES:
MAX. REDUCTION IN DIAMETER OF BENT SECTION SHALL BE 3%.
MAX. REDUCTION IN SLOT WIDTH IN BENT TUBING SHALL BE 3/16".
WALL THICKNESS OF TUBING SHOWN ABOVE SHALL BE MIN. NOMINAL AVERAGE WALL THICKNESS.



NOTE:
GALVANIZE ENTIRE RAILING AFTER FABRICATION INCLUDING SHIMS.



GENERAL NOTES

BID ITEM SHALL BE TUBULAR RAILING, TYPE 'J'.

ALL POST SPACINGS ARE TAKEN HORIZONTALLY ALONG C/L OF ANCHOR BOLTS.

RAILING SHALL BE FABRICATED IN TWO OR THREE PANEL LENGTHS.

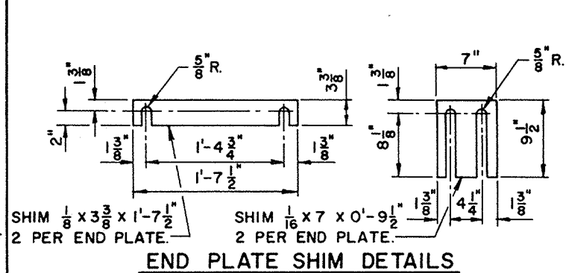
SHIMS CONFORMING TO SAME MATERIAL AS POSTS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQ'D FOR ALIGNMENT.

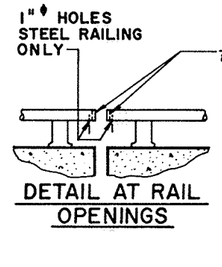
RAIL POSTS SHALL BE SET NORMAL TO GRADE.

THE SHANK AND ROOT OF THREAD DIAMETER FOR ANCHOR BOLTS SHALL BE A MIN. OF 0.62 INCHES.

ANCHOR BOLTS, NUTS & WASHERS FOR ALUMINUM RAILING SHALL BE STAINLESS STEEL.

ANCHOR BOLTS, NUTS & WASHERS FOR STEEL RAILING SHALL BE EITHER STAINLESS STEEL OR ASTM A307. IF A307 IS USED ELECTRO-GALVANIZE NUTS, WASHERS & TOP 3½" OF ANCHOR BOLTS.





No.	Date	Revision	By

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DIVISION OF HIGHWAYS

STRUCTURE B-70-64

Const. Spec. 1969	Drawn By R.W.A.	Plans Checked B.W.

TUBULAR RAILING TYPE 'J'

SHEET 7 OF 7

X 47482