

1131-08-83

8.1

DESIGN DATA

LIVE LOAD:

DESIGN RATING: MS-18
 INVENTORY RATING: MS-20
 OPERATIONAL RATING: MS-39
 MAXIMUM STANDARD PERMIT VEHICLE LOAD = 110 K.N.
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 1.0 KN/M².

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — $f'_c = 28 \text{ MPa}$ ALL OTHER — $f'_c = 24 \text{ MPa}$
 BAR STEEL REINFORCEMENT, AASHTO M-318, GRADE 420 — $f_y = 420 \text{ MPa}$
 1370mm PRESTRESSED GIRDERS, CONCRETE MASONRY — $f'_c = 42 \text{ MPa}$
 STRANDS - 13mm DIA. WITH ULTIMATE TENSILE STRENGTH OF 1860 MPa

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 250 X 62 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 490 K.N PER PILE. ESTIMATED 29m LONG.

TRAFFIC VOLUME

U.S.H. 41 C.T.H. JJ
 A.D.T.=37,000 (2018) A.D.T.=1,620 (2018)
 R.D.S.=110 km/h R.D.S.=70 km/h

BRIDGE OFFICE CONTACT:

FINN HUBBARD -----(608) 266-8489
 JERRY ZIRK -----(608) 266-5163

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. 1370 mm PRESTRESSED GIRDER DETAILS
11. STEEL DIAPHRAGM
12. SLOPED FACE PARAPET LF

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
U.S.H. 41 OVER C.T.H. JJ			
COUNTY	OUTAGAMIE	TOWN/CITY/VILLAGE	KAUKAUNA
DESIGN SPEC.	AASHTO 1996	LOAD	MS-18
DESIGNED BY	CIHA	CONST. SPEC.	1996
BY	CKD	DRAWN BY	JHC
APPROVED	CHIEF BRIDGE DESIGN ENGINEER		DATE
GENERAL PLAN			SHEET 1 OF 12
			DATE: MAR'98

I.D. 1131-08-00F

* PROVIDE FOR THREE BEAM
 GUARD RAIL ATTACHMENT

NOTE: SURFACE DRAIN ANCHORS
 REQ'D. ON WINGS 3 & 4

INDICATES WING NUMBER

B-44-71

R SB. LANE
U.S.H. 41END OF SLAB
STA. 38+122.58C BRG. SOUTH ABUT.
STA. 38+122.99STA. 38+138.09 R SB. LANE U.S.H. 41=
STA. 0+759.03 C.T.H. JJR NB. LANE
U.S.H. 41END OF SLAB
STA. 38+126.81C BRG. SOUTH ABUT.
STA. 38+127.22

B-44-72

PLAN

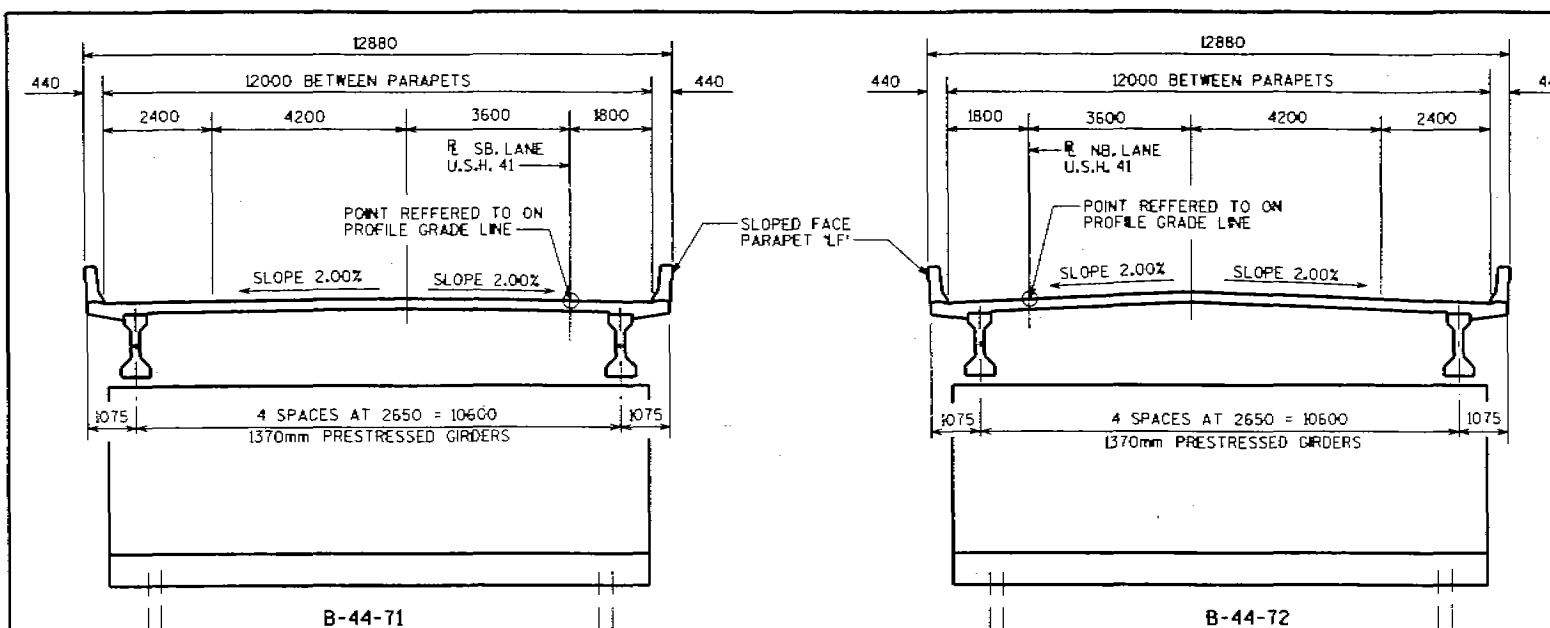
SINGLE SPAN - 1370mm PRESTRESSED GIRDERS

ELEVATION

NORMAL TO C.T.H. JJ

TYPICAL SECTION THRU C.T.H. JJ

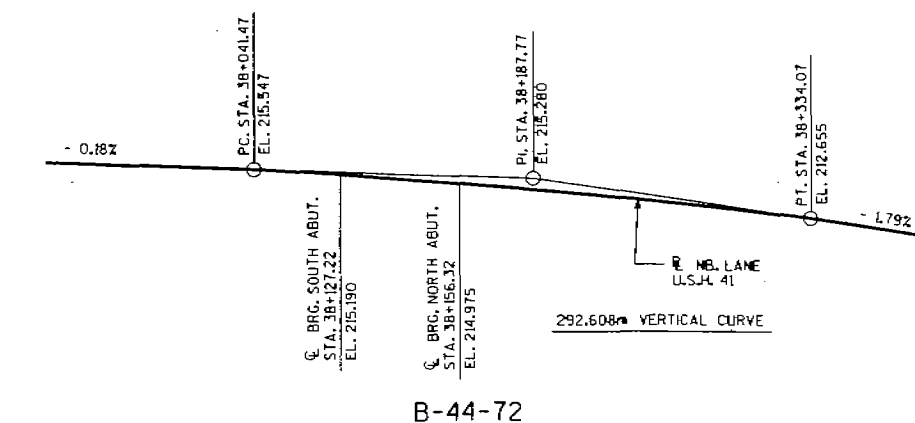
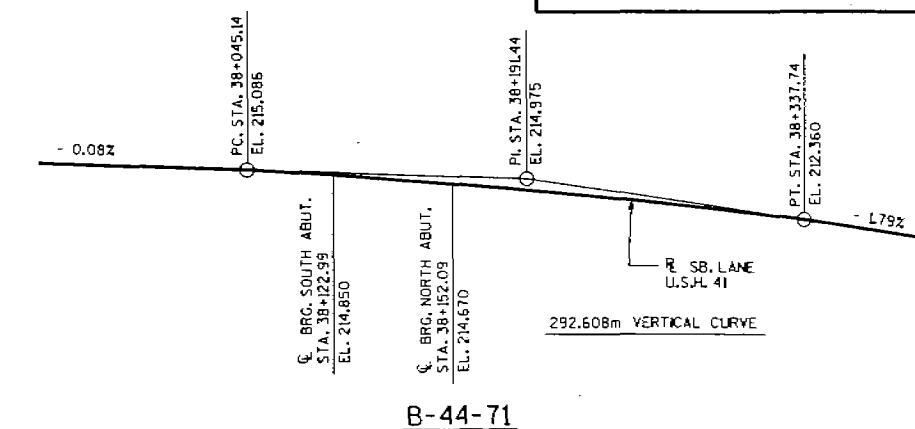
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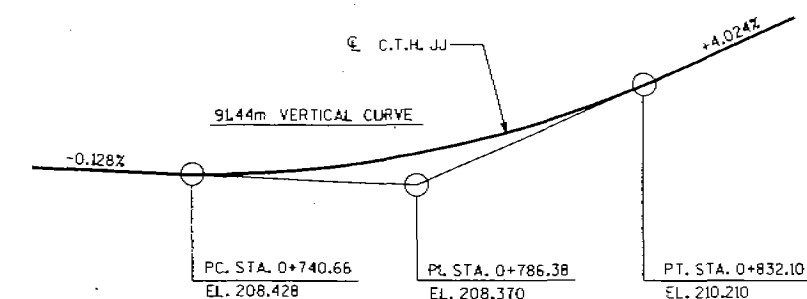
CROSS SECTION THRU ROADWAY

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-44-71	L.S.				1
STRUCTURE BACKFILL	m ³		570	570	1140
CONCRETE MASONRY, BRIDGES	m ³	126	108	108	342
PROTECTIVE SURFACE TREATMENT	m ²	430			430
PRESTRESSED GIRDER, I-TYPE, 1370 mm	m	147			147
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	Kg		3770	3800	7570
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	Kg	14090	480	480	15050
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	10			10
STEEL PILING, DELIVERED AND DRIVEN, HP250mm X 62kg/m	m		493	493	986
RUBBERIZED MEMBRANE WATERPROOFING	m ²		7	7	14
SLOPE PAVING, BREAKER RUN	m ²		98	132	230
PIPE UNDERDRAIN, 150 mm	m		10	10	20
PIPE UNDERDRAIN, UNPERFORATED, 150 mm	m		10	10	20
GEOTEXTILE FABRIC, TYPE OF	m ²		23	23	46
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2			2
STEEL DIAPHRAGMS, STRUCTURE B-44-71	EACH	8			8
NON-BID ITEMS					
FILLER	SIZE				13 & 19



PROFILE GRADE LINE U.S.H. 41



PROFILE GRADE LINE C.T.H. JJ

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 50 mm CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ALL REINFORCING BARS ARE METRIC AND THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
 ALL DIMENSIONS MILLIMETERS (mm) UNLESS OTHERWISE NOTED.
 ALL STATIONS AND ALL ELEVATIONS ARE METERS (m).
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
 AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
 THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECT. 209.2.2 OF THE STD. SPEC'S. FOR GRADE 1 MATERIAL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY JHG	PLANS CTD. 212
CROSS SECTION & QUANTITIES			SHEET 2

FILE=710P.DGN
SCALE = 75

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

MATERIAL SYMBOLS		

LEGEND OF PROBING

Probing No. Sta. Elevation

95/152=95 Blows for 152mm Penetration
 Probing taken with a 159.1Kg Wt.
 Falling 457mm on a 51mm O.D. Point.

7 Average Blows Per 305mm

Refusal 95/152

LEGEND OF BORING

Boring No. Sta. Elev.

Unconfined Strength KN/m² → 7.7

Blows Per 305mm Using 63.6 Kg Wt. Falling 762mm

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 305mm at the locations indicated are based on driving a 51mm O.D. x 35mm I.D. split spoon sampler with a 63.6Kg hammer having a free fall of 762mm. The blow count is taken in undisturbed soil immediately below a closed or open hole eliminating side friction on the drive pipe.

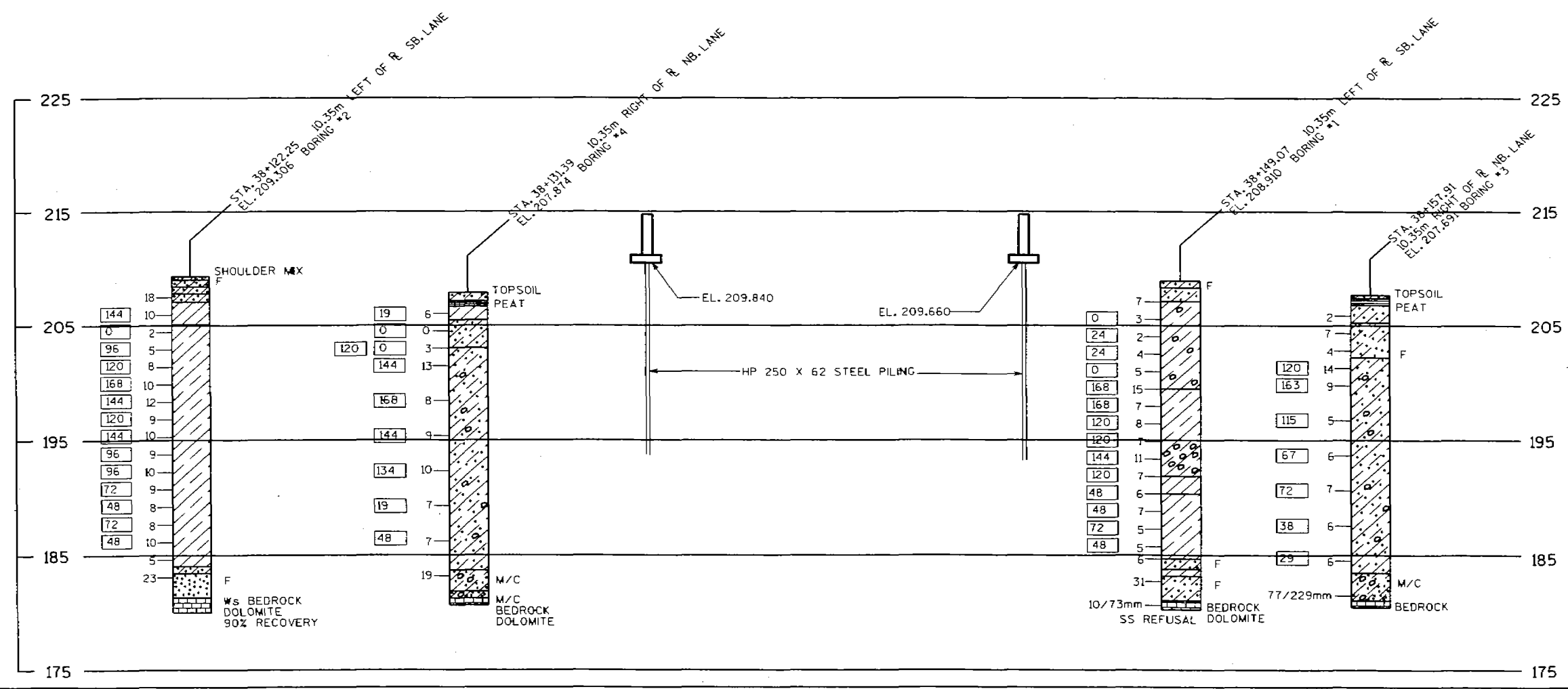
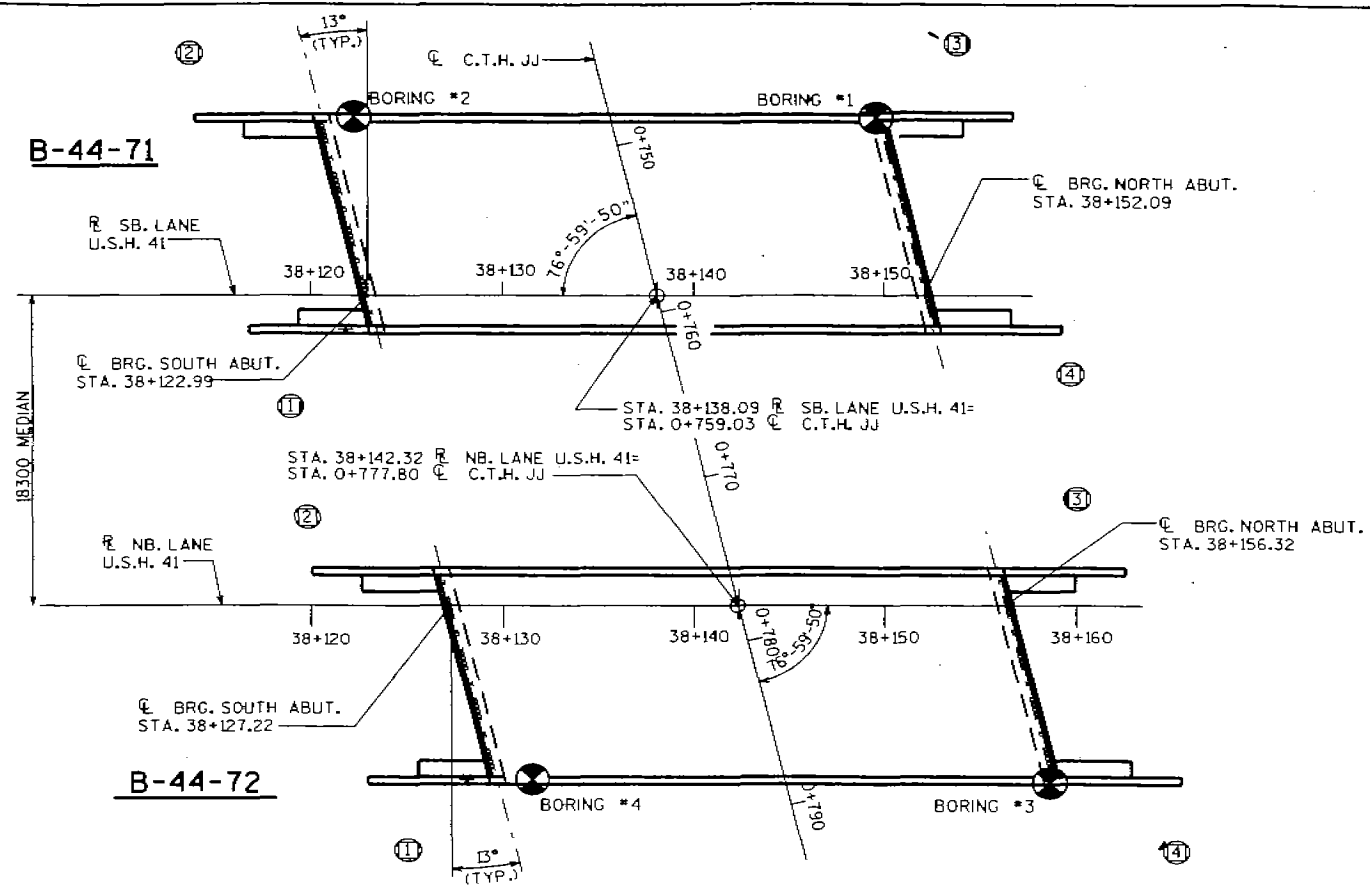
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

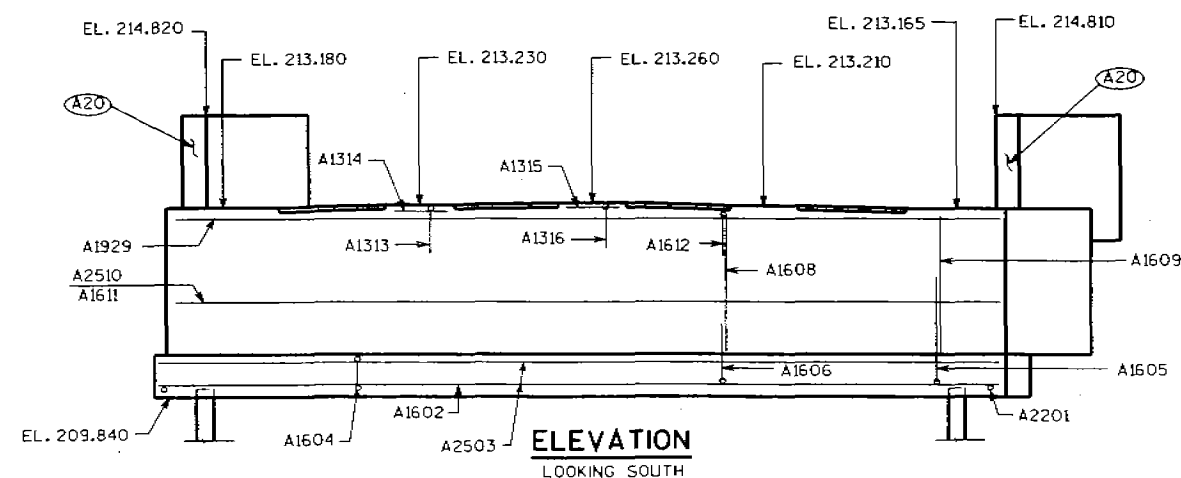
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
STRUCTURE B-44-71	
CONST. SPEC. 1996	DRAWN BY RIES/JHG
PLANS EXT. ZRK	
SUBSURFACE EXPLORATION	SHEET 3

FILE= 71BOR.DGN
SCALE= 200



1131-08-83

8.4

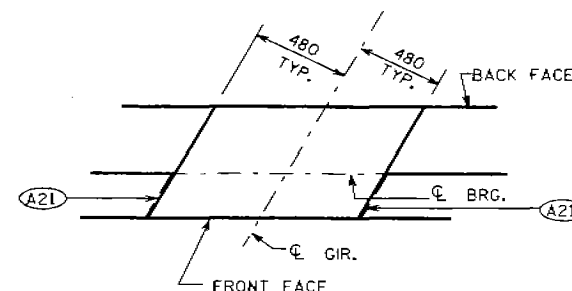


(A20) 13 mm FILLER (INCLUDED IN WING LENGTH); SEAL EXPOSED HORIZ. & VERT. SURFACES OF 13 mm FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (25 mm DEEP AND HOLD 3 mm BELOW SURFACE OF CONCRETE). EXTEND SEALER 75 mm BELOW GUTTER LINE AT INSIDE FACE.

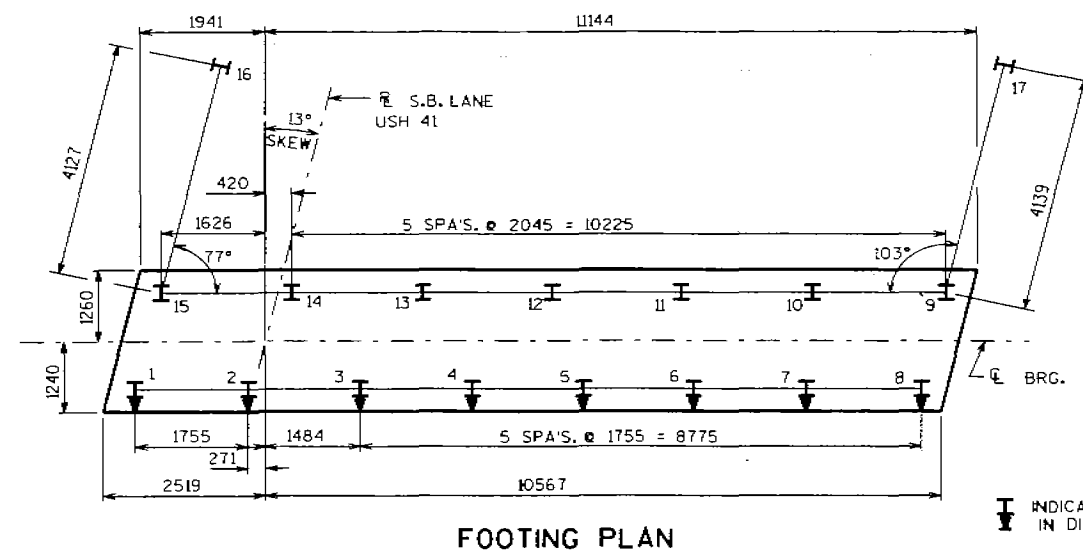
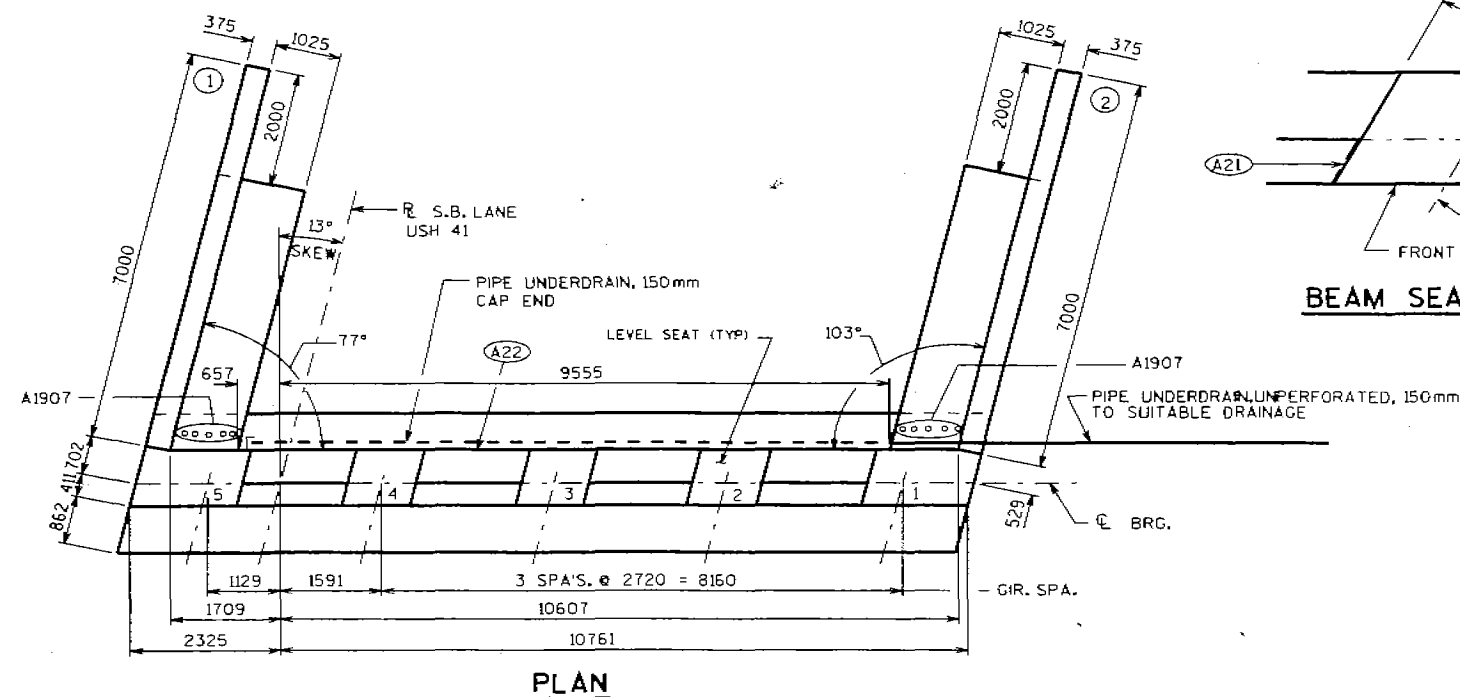
(A21) 19 mm CORK UP VERT. FACES OF BEAM SEATS.

(A22) 457 mm (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

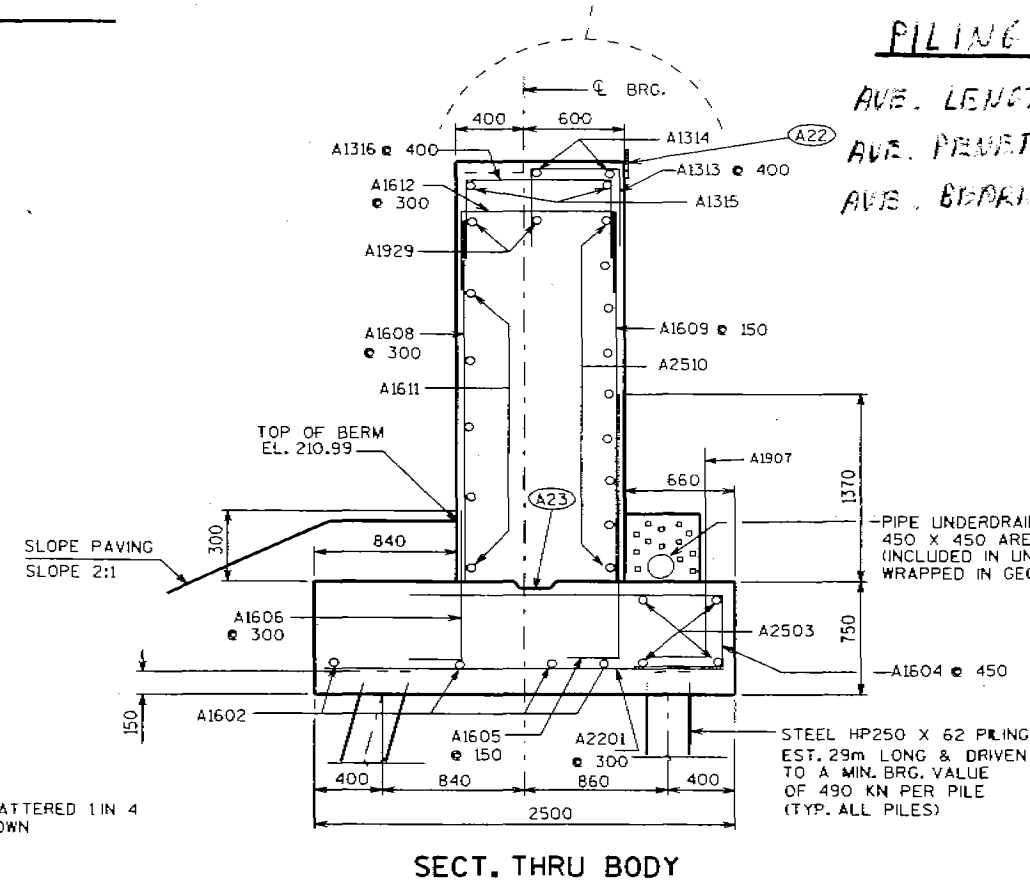
(A23) CONST. JOINT KEYWAY FORMED WITH A SURFACED, BEVELED 38mm x 140mm.



STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS. (TOTAL THICKNESS TO BE .75 mm MIN)



INDICATES PILE BATTERED 1 IN 4 IN DIRECTION SHOWN



PILE DATA

AVE. LENGTH BELOW CUTOFF = 29.23 m
AVE. PENETRATION (BELOW GROUND) = 29.07 m
AVE. BEARING = ROCK, REFUSAL

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY JHG	PLANS OK'D. ZIRK
SOUTH ABUTMENT			SHEET 4

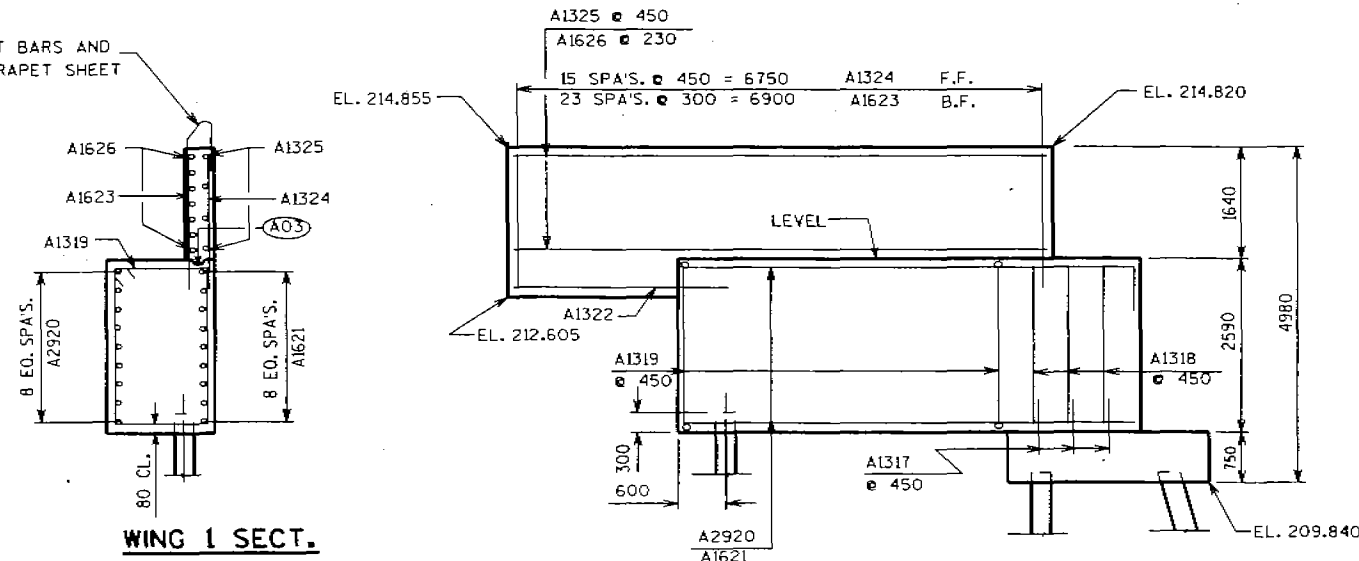
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BILL OF BARS

NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

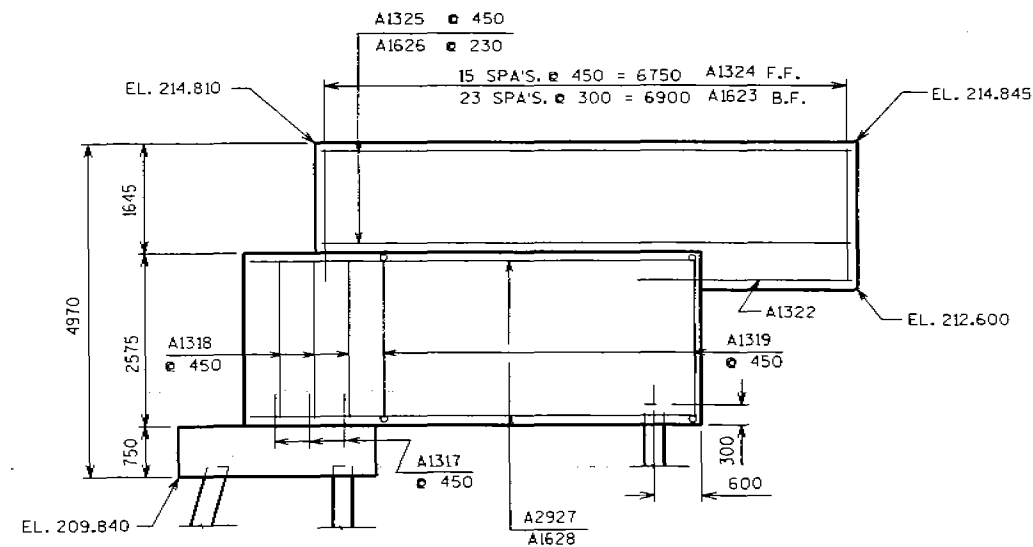
BAR MARK	QTY	NO. REQ'D.	LENGTH	BEND	BAR SERIES	LOCATION
A2201	44	2400				FOOTING
A1602	4	12985				FOOTING
A2503	4	12985				FOOTING
A1604	29	2330	X			FOOTING
A1605	87	2190	X			FTG. DOWEL B.F.
A1606	44	1120	X			FTG. DOWEL F.F.
A1907	10	1260	X			FTG. DOWEL WING FILLETS
A1608	44	2525				BODY F.F.
A1609	87	2525				BODY B.F.
A2510	9	12985				BODY B.F.
A1611	5	12985				BODY TOP
A1612	44	1420	X			BODY TOP
A1313	32	1170	X			BODY TOP
A1314	4	6795				BODY TOP
A1315	2	2500				BODY TOP @ GIR. 3
A1316	6	1590	X			BODY TOP @ GIR. 3
A1317	6	600				FTG. WING DOWELS F.F.
A1318	6	2525				WINGS F.F.
A1319	22	7670	X			WINGS STIRRUPS
A2920	9	6000	X			WING 1 HORIZ. B.F.
A1621	9	6000				WING 1 HORIZ. F.F.
A1322	4	2450				WINGS F.F. & B.F. HORIZ.
A1623	48	2145				WINGS B.F. VERT.
A1324	32	2145				WINGS F.F. VERT.
A1325	8	6900				WINGS HORIZ. F.F.
A1626	14	6900				WINGS HORIZ. B.F.
A2927	9	6260	X			WING 2 HORIZ. B.F.
A1628	9	5850				WING 2 HORIZ. F.F.
A1929	2	12080				BODY TOP

FOR PARAPET BARS AND DETAILS SEE PARAPET SHEET



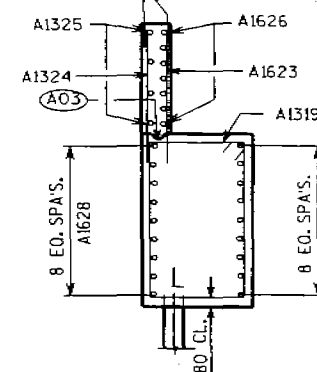
WING 1 SECT.

WING 1 ELEVATION

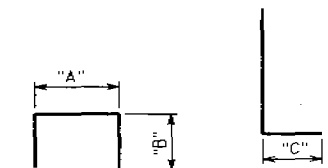
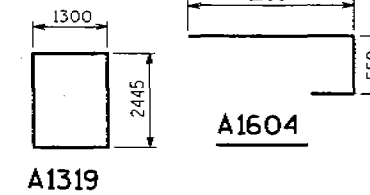


WING 2 ELEVATION

FOR PARAPET BARS AND DETAILS SEE PARAPET SHEET

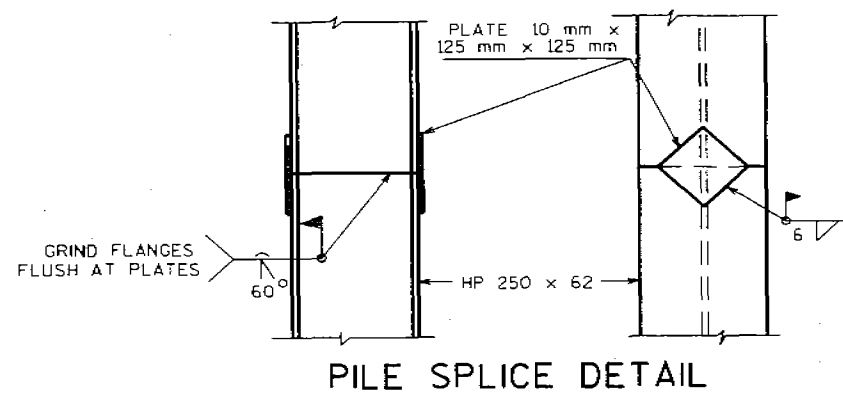


WING 2 SECT.



MARK	A	B	C
A1313	500	375	---
A1316	900	375	---
A1605	---	---	260
A1606	---	---	260
A1907	---	---	300
A1612	900	300	---
A2920	---	---	300
A2927	---	---	300

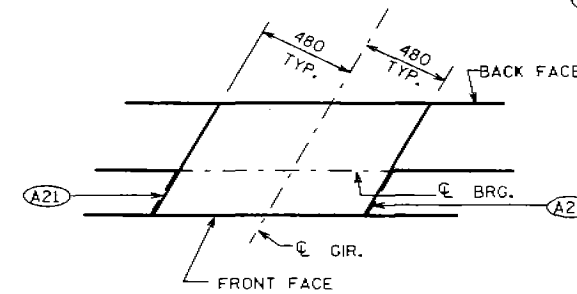
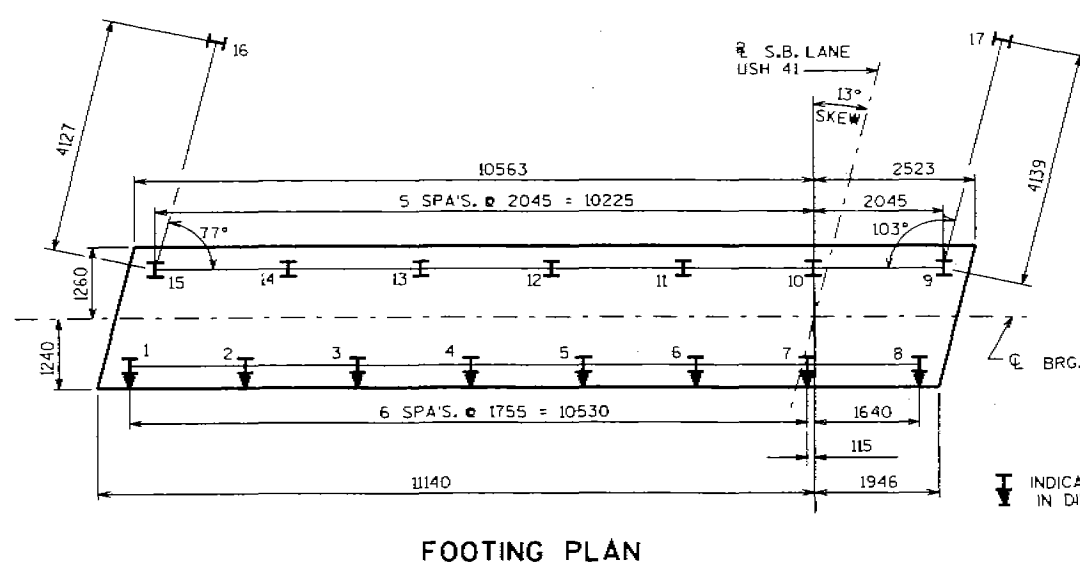
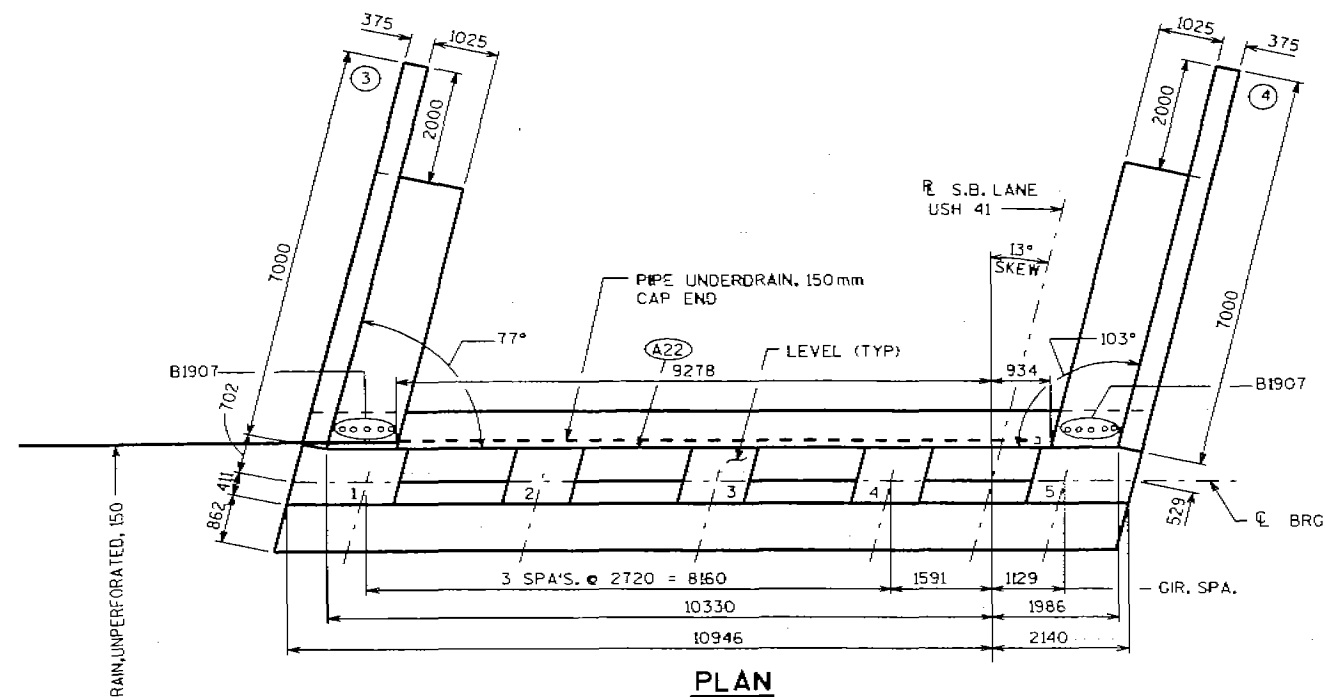
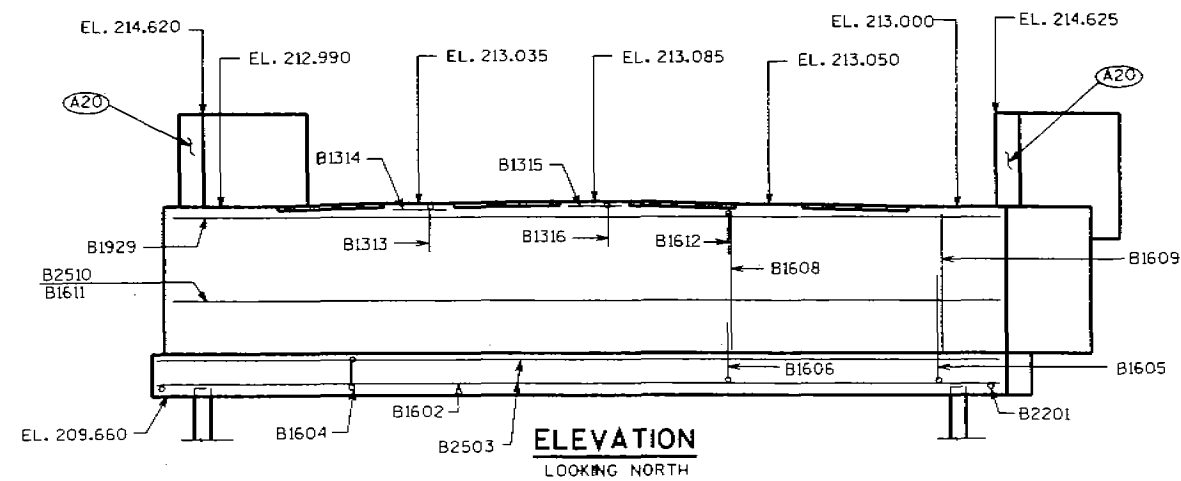
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY SURFACED BEVELED 38 mm x 140 mm, (457 mm R.M.W. @ B.F. & 19 mm "V" GROOVE @ F.F. IF JOINT IS USED).



PILE SPlice DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY	JHG
SOUTH ABUT. DETAILS		PLANS CTD.	ZIAC
SHEET 5			

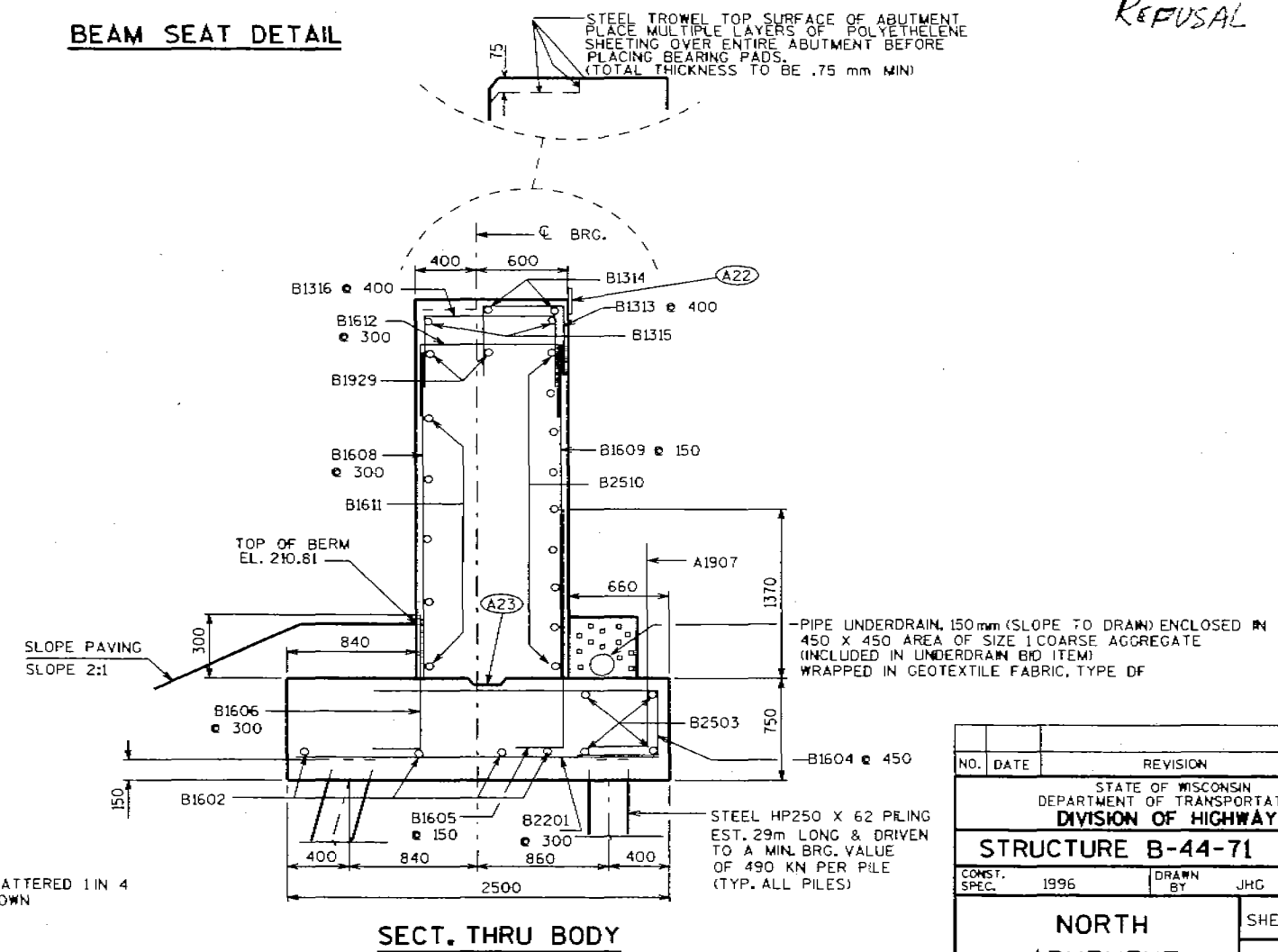


- (A20) 13 mm FILLER (INCLUDED IN WING LENGTH); SEAL EXPOSED HORIZ. & VERT. SURFACES OF 13 mm FILLER WITH NON-STAINING GRAY NON-BUTYRABLE JOINT SEALER (25 mm DEEP AND HOLD 3 mm BELOW SURFACE OF CONCRETE). EXTEND SEALER 75 mm BELOW GUTTER LINE AT INSIDE FACE.
- (A21) 19 mm CORK UP VERT. FACES OF BEAM SEATS
- (A22) 457 mm (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A23) CONST. JOINT KEYWAY FORMED WITH A SURFACED, BEVELED 38mm x 140mm.

PILING DATA

AVE. LENGTH BELOW CUTOFF = 29.29 m
 AVE. PENETRATION (BELOW GROUND) = 29.14 m
 AVE BEARING = ROCK,

— STEEL TROWEL TOP SURFACE OF ABUTMENT REFUSAL

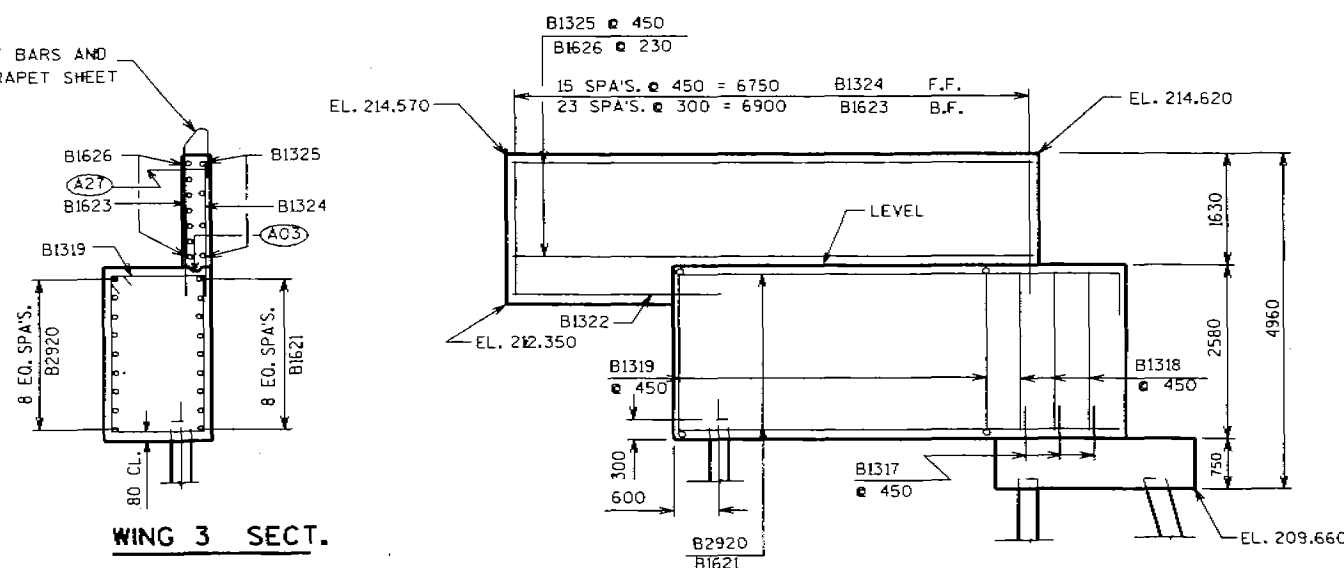


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY	JHG PLANS CHKD. <i>ZHR</i>
NORTH ABUTMENT		SHEET 6	

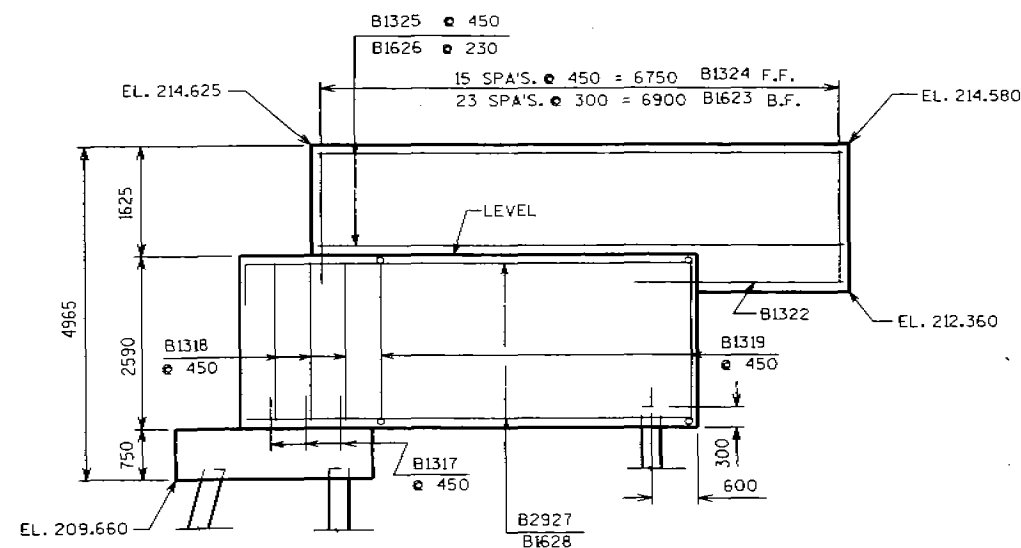
BILL OF BARS

NOTE: THE FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

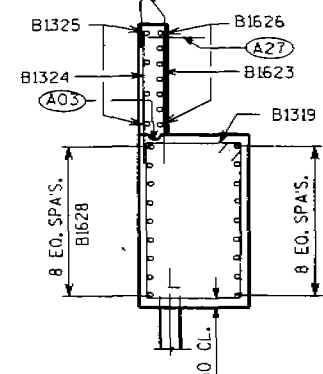
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B2201		44	2400			FOOTING
B1602		4	12985			FOOTING
B2503		4	12985			FOOTING
B1604		29	2330	X		FOOTING
B1605		87	2190	X		FTG. DOWEL B.F.
B1606		44	1120	X		FTG. DOWEL F.F.
B1907		10	1260	X		FTG. DOWEL WING FILLETS
B1608		44	2525			BODY F.F.
B1609		87	2525			BODY B.F.
B2510		9	12985			BODY B.F.
B1611		5	12985			BODY TOP
B1612		44	1420	X		BODY TOP
B1313		32	1170	X		BODY TOP
B1314		4	6795			BODY TOP
B1315		2	2500			BODY TOP @ GIR. 3
B1316		6	1590	X		BODY TOP @ GIR. 3
B1317		6	600			FTG. WING DOWELS F.F.
B1318		6	2525			WINGS F.F.
B1319		22	7680	X		WINGS STIRRUPS
B2920		9	6000	X		WING 3 HORIZ. B.F.
B1621		9	6000			WING 3 HORIZ. F.F.
B1322		4	2450			WINGS F.F. & B.F. HORIZ.
B1623		48	2120			WINGS B.F. VERT.
B1324		32	2120			WINGS F.F. VERT.
B1325		8	6900			WINGS HORIZ. F.F.
B1626		14	6900			WINGS HORIZ. B.F.
B2927		9	6260	X		WING 4 HORIZ. B.F.
B1628		9	5850			WING 4 HORIZ. F.F.
B1929		2	12080			BODY TOP
B1330		46	600			WINGS SURFACE DRAIN DOWELS

FOR PARAPET BARS AND
DETAILS SEE PARAPET SHEET

WING 3 ELEVATION

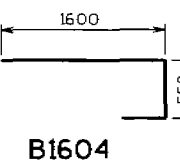


WING 4 ELEVATION

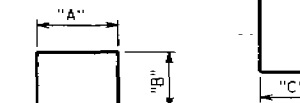
FOR PARAPET BARS AND
DETAILS SEE PARAPET SHEET

WING 4 SECT.

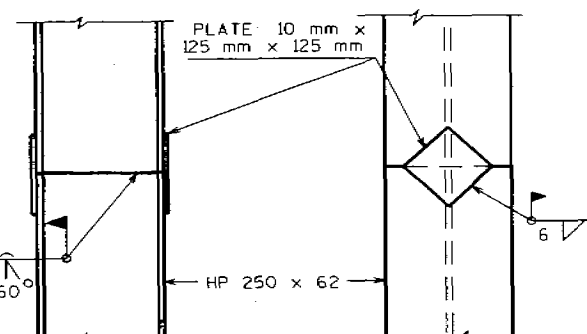
B1319



B1604



MARK	A	B	C
B1313	500	375	---
B1315	900	375	---
B1605	---	---	260
B1606	---	---	260
B1907	---	---	310
B1612	900	300	---
B2920	---	---	300
B2927	---	---	300



PILE SPLICE DETAIL

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY SURFACED BEVELED 38 mm x 140 mm, (457 mm R.M.W. @ B.F. & 19 mm "V" GROOVE @ F.F. JOINT IS USED).

(A27) A1330 BARS SPACED @ 300 mm CTRS. EMBED 250 mm MIN. INTO WING CONC. LOCATE 75 mm DOWN FROM TOP OF WING @ BACKFACE TO 150 mm DOWN @ WING TIP. (DRILLED IN EPOXY ANCHORED 13M BARS 560 mm LG. MAY BE USED-COST. INCIDENTAL TO BID ITEM. "HIGH STRENGTH BAR STEEL REINF.").

GRIND FLANGES
FLUSH AT PLATES

60°

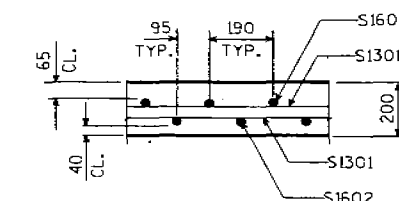
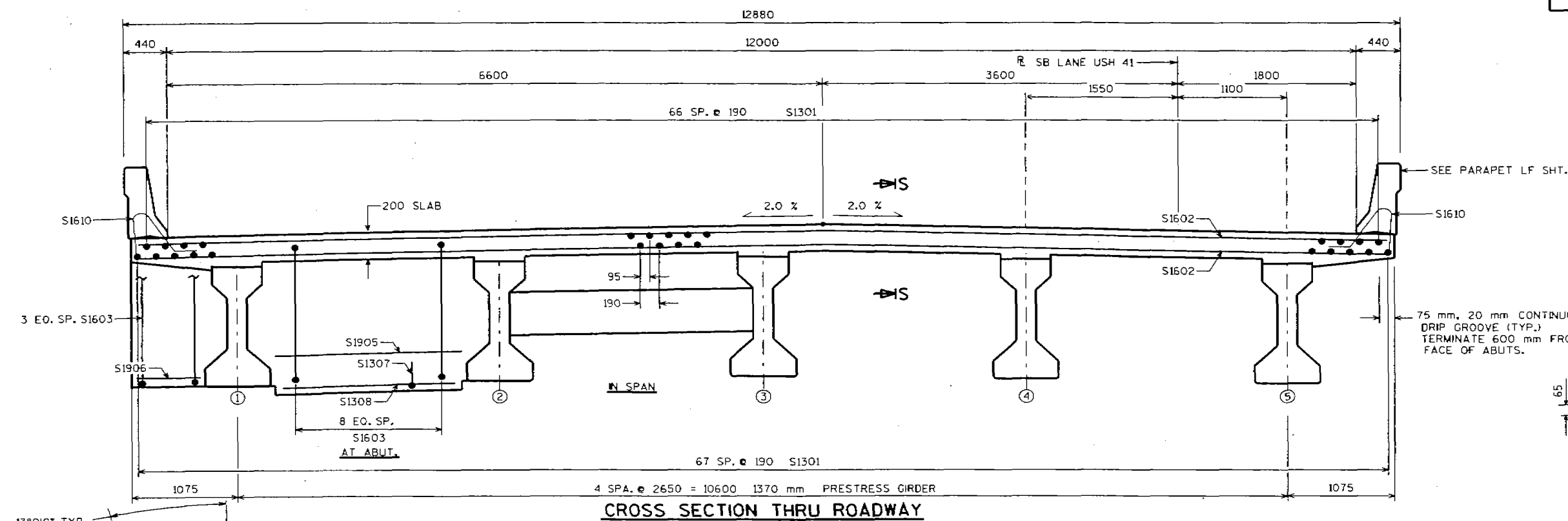
HP 250 x 62

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY JHG	PLANS CKD. ZIRC
NORTH ABUT. DETAILS		SHEET 7	

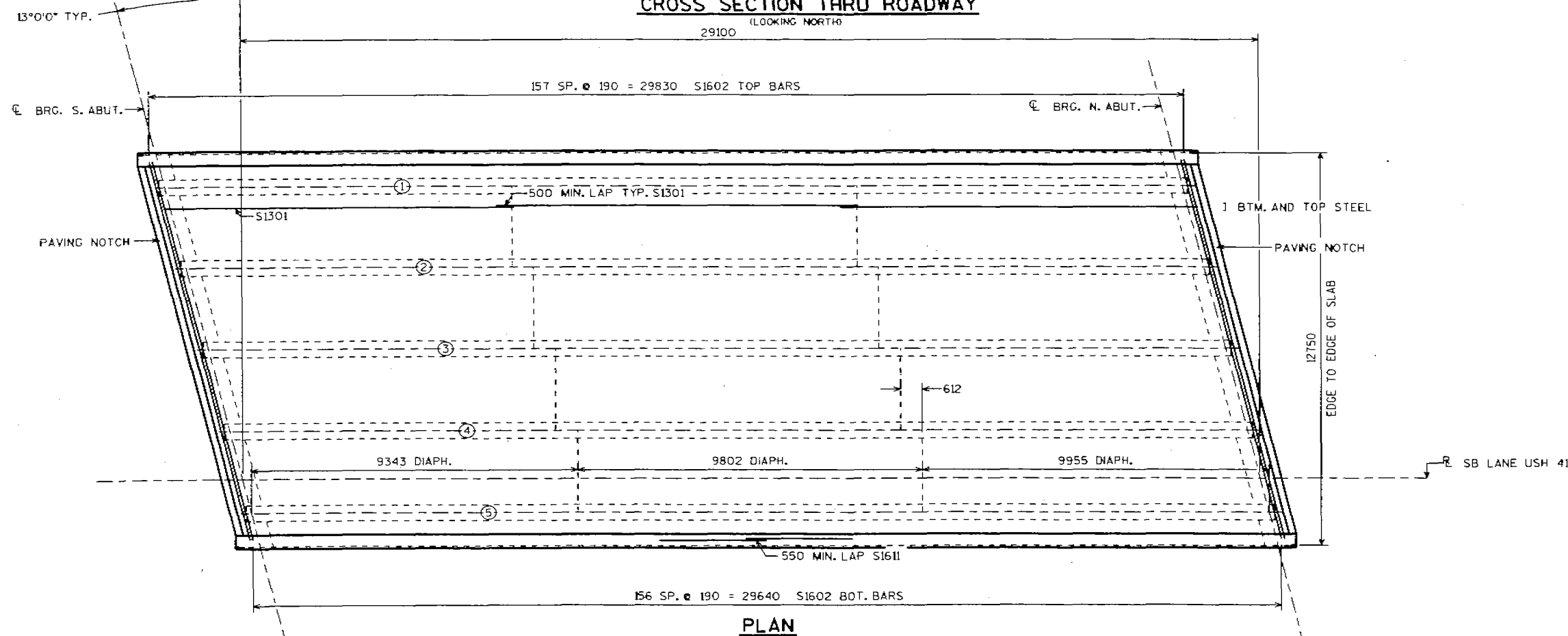
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1131-08-83

8.8



SECTION S-S



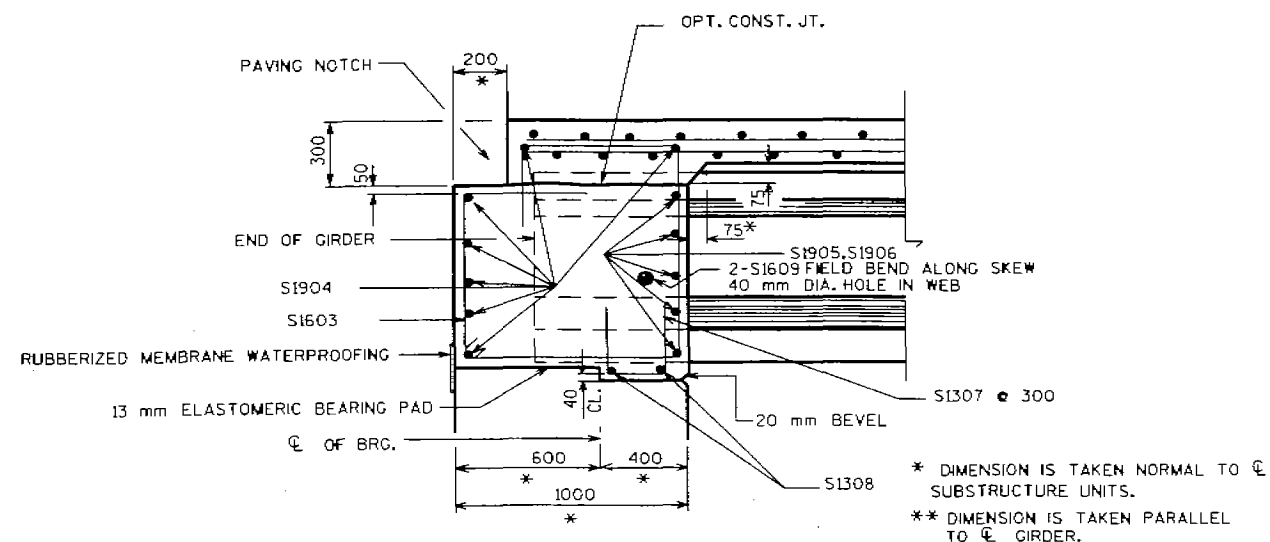
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY CMPT/JHG	PLANS C.D. ZIKF
SUPERSTRUCTURE			SHEET 8

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

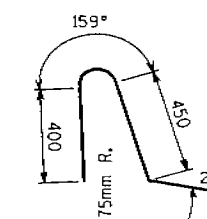
STATE PROJECT NUMBER	SHEET NO.
1131-08-83	8.9

BILL OF BARS

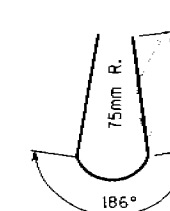
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1301	X	405	10275			LONGITUDINAL TOP & BOTTOM
S1602	X	315	12975			TRANSVERSE TOP AND BOTTOM
S1603	X	88	5300	X		ABUT. DIAPHRAGM
S1904	X	28	6940			ABUT. DIAPHRAGM
S1905	X	40	1950			ABUT. DIAPHRAGM
S1906	X	20	650			ABUT. DIAPHRAGM
S1307	X	56	1100	X		ABUT. DIAPHRAGM
S1308	X	16	1625			ABUT. DIAPHRAGM
S1609	X	20	2000			ABUT. DIAPHRAGM
S1610	X	304	1430	X		SLAB & PARAPET
S1611	X	30	10445			PARAPET
S1612	X	304	1980	X		PARAPET



PART LONGIT. SECTION

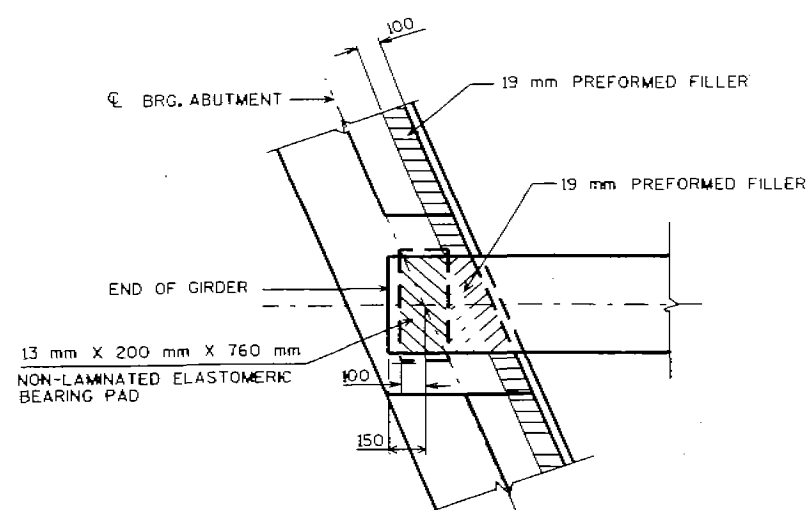


S1610



S1612

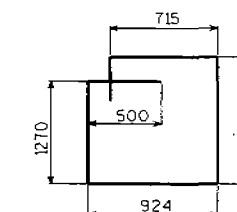
NOTE: HOW TO CUT
ALL THE S1612
BARS THAT WENT
INTO THE PARAPET
WALL. THE WALL
IS ONLY 0.310 M
HIGH.



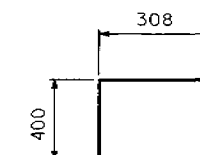
BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

	S. ABUT.	1/8	2/8	3/8	4/8	5/8	6/8	7/8	N. ABUT.
GIR. 1	214.820	214.800	214.780	214.755	214.735	214.715	214.690	214.665	214.640
GIR. 2	214.870	214.850	214.830	214.805	214.785	214.760	214.740	214.715	214.690
GIR. 3	214.915	214.900	214.875	214.855	214.835	214.810	214.790	214.765	214.740
GIR. 4	214.885	214.865	214.845	214.825	214.800	214.780	214.755	214.730	214.705
GIR. 5	214.830	214.810	214.790	214.765	214.745	214.720	214.700	214.675	214.650



S1603



S1307

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY CMPT/JMG	PLANS CRD. ZKK
SUPERSTRUCTURE DETAILS			SHEET 9

12-14-94
MON DEC 22 13:32:47 1997*

MC54DET.DGN

1131-08-83

8.10

GIRDER NOTES

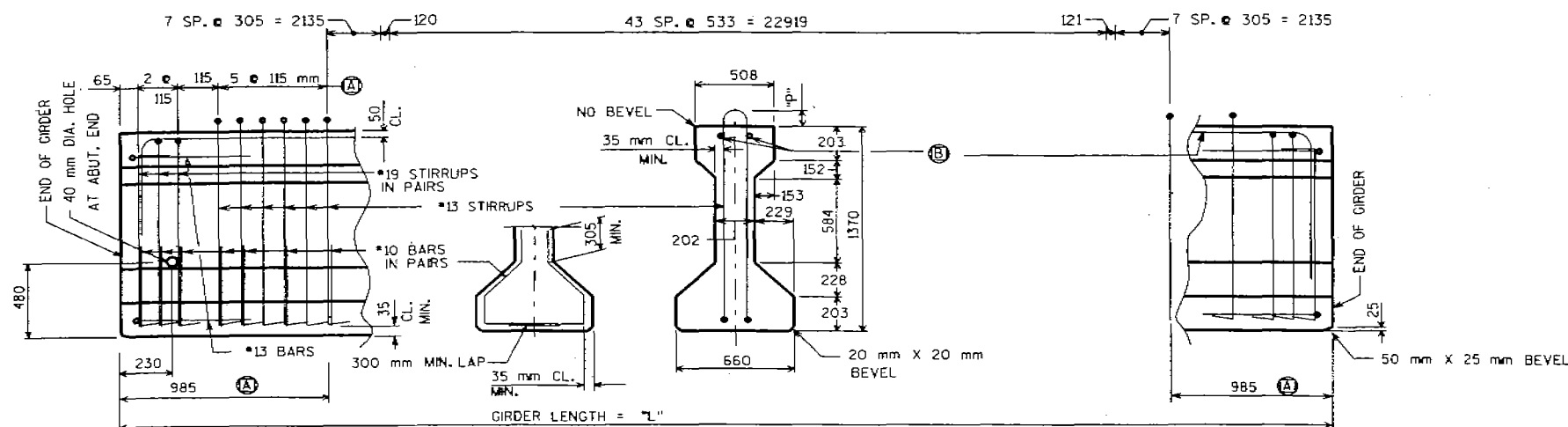
TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 50 mm OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 13 mm ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 1860 MPa AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF #13 STIRRUPS 115 mm AND #19 STIRRUPS 180 mm.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

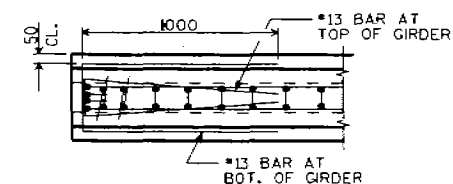


SIDE VIEW & TYP. SECTION IN SPAN

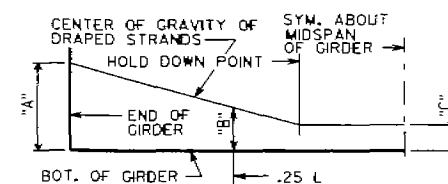
A DETAIL TYP. AT EACH END

B 2-BARS BEND DOWN 16 BAR DIA. AT ENDS

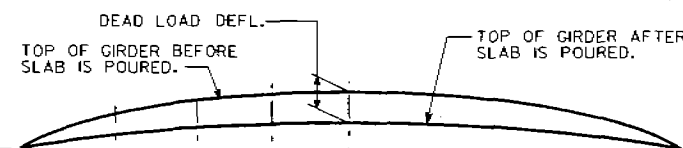
(SPAN 1) 2 #13, 600 MIN. LAP



TOP VIEW OF GIRDER ENDS



DRAPED STRAND PROFILE

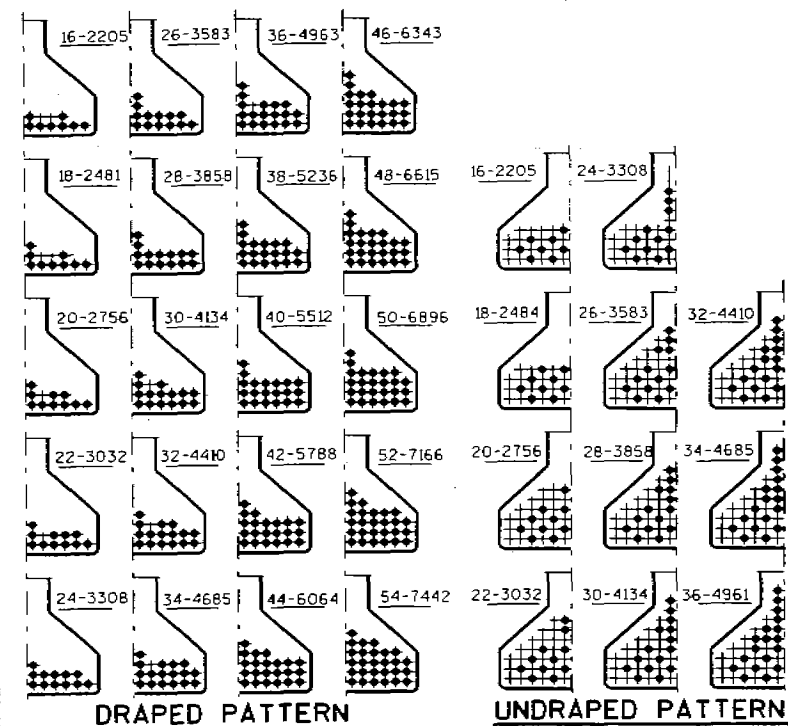


DEAD LOAD DEFLECTION DIAGRAM

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

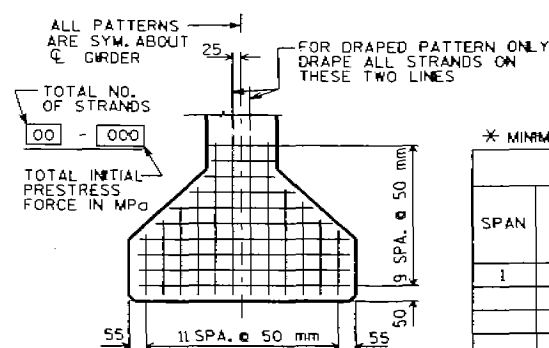
GIRDER DATA

SPAN	GIRDER LENGTH "L" (mm)	DEAD LOAD DEFL. (mm)				CONC. STRENGTH F'c (MPa)	"P"	DRAPED PATTERN					UNDRAPED PATTERN		
		.125	.25	.375	.5			TOTAL NO. OF STRANDS	F'ci (MPa) *	(mm)			TOTAL NO. OF STRANDS	F'ci (MPa) *	
										"A"	"B" MIN.	"B" MAX.			"C"
1	29400	13	23	29	30	42	150	40	34	1219	419	495	152	0	0

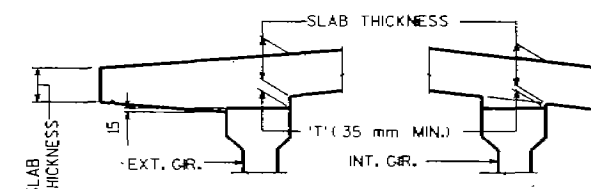


DRAPED PATTERN

UNDRAPED PATTERN



TYP. STRAND PATTERN



SLAB HAUNCH DETAIL

IF 35 mm MINIMUM HAUNCH HEIGHT 'T' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY BRIDGE OFFICE FOR HAUNCH HEIGHTS OVER 100 mm.

TO DETERMINE 'T' ELEV'S. OF TOP OF GRS. AT C. OF SUBSTRUCTURE UNITS & AT 0.25 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

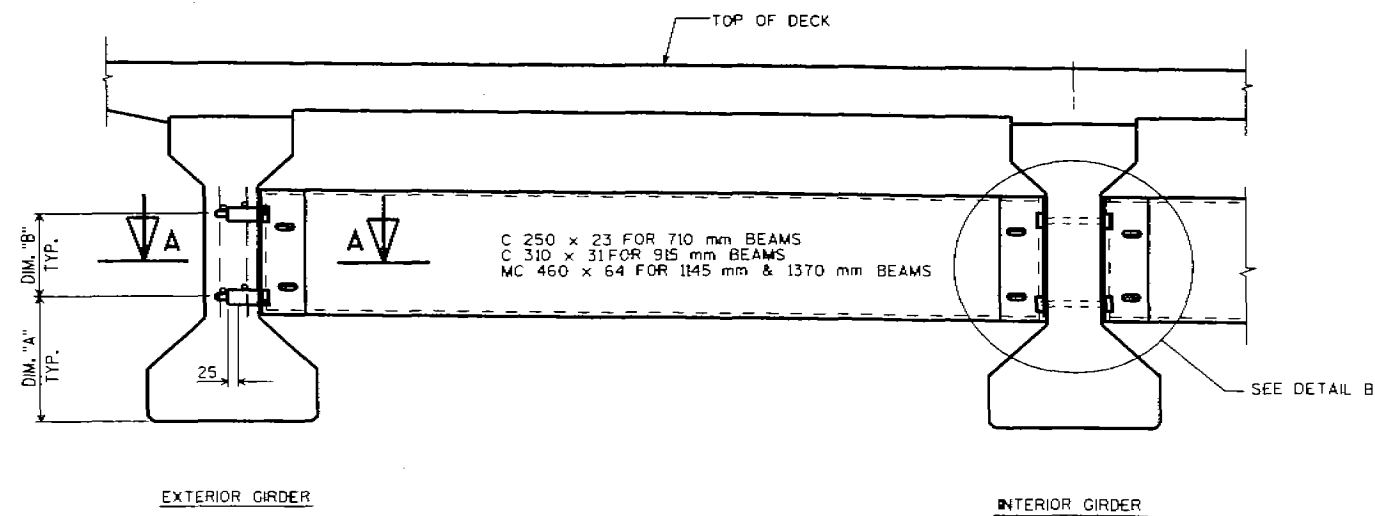
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY CMPT/JHC	PLANS OKD. ZIKK
1370 mm PRESTRESSED GIRDER DETAILS			SHEET 10

1131-08-83

8.11

TABLE

GIRDER HEIGHT mm	DIM. "A" mm	DIM. "B" mm	DIM. "L" mm	DIM. "X" mm
710	320	165	260	68
915	370	264	359	92
1145	435	366	461	67
1370	500	470	565	119



PART TRANSVERSE SECTION AT DIAPHRAGM

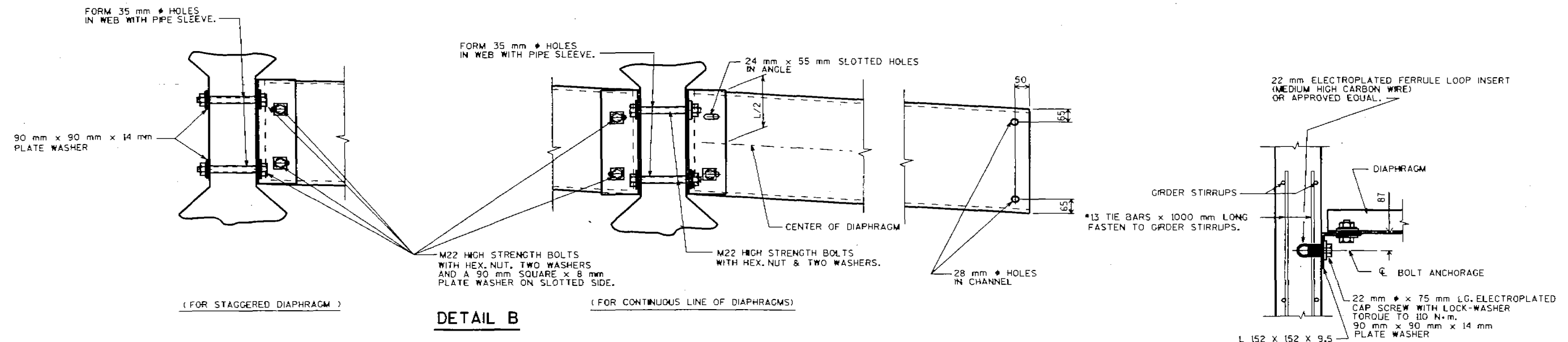
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM".

EACH DIAPHRAGM BETWEEN ORDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 M GRADE 250. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 M TYPE 1.

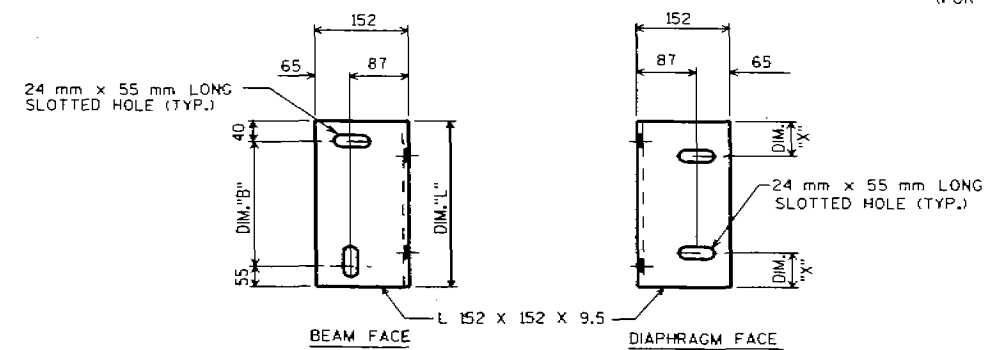
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 M AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



DETAIL B

SECT. A-A

(FOR EXTERIOR ATTACHMENT)

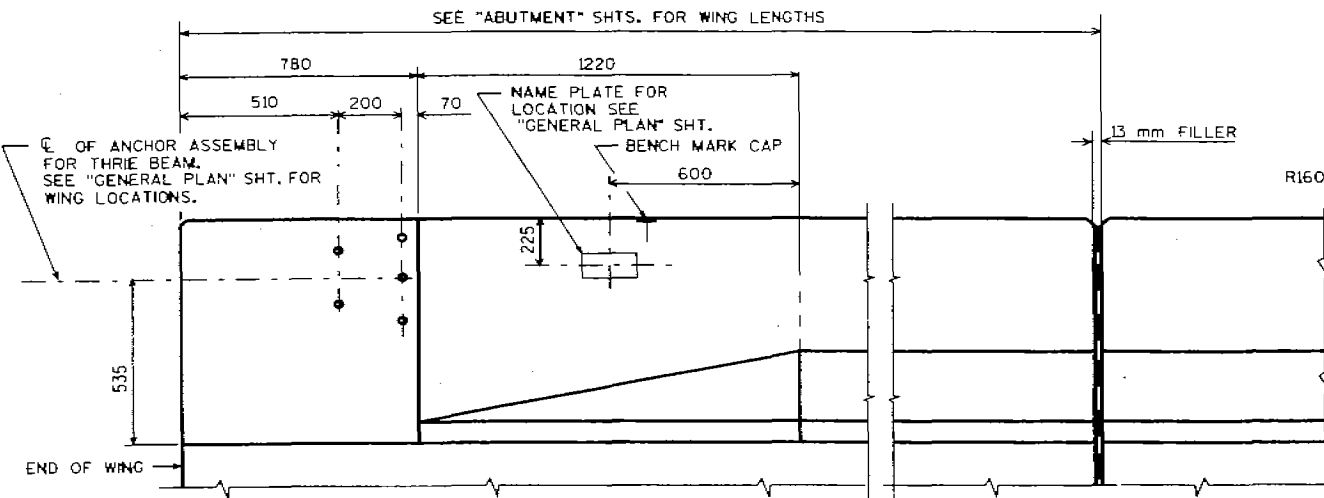


DIAPHRAGM SUPPORT

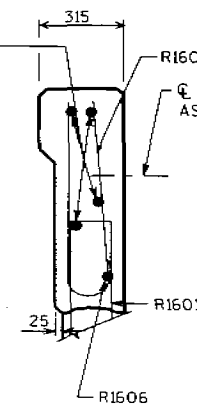
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY CMPT/JHC	PLANS DIV. 2166
STEEL DIAPHRAGM			SHEET 11

12-96

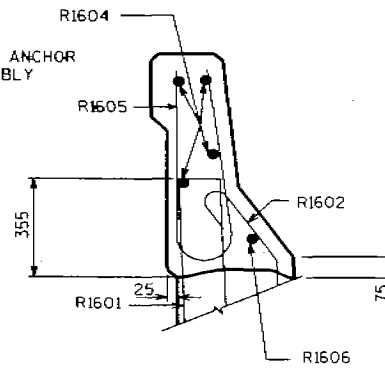
MON DEC 22 13:32:51 1997*



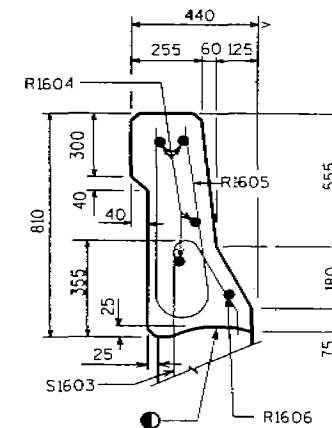
INSIDE ELEVATION



SECTION A



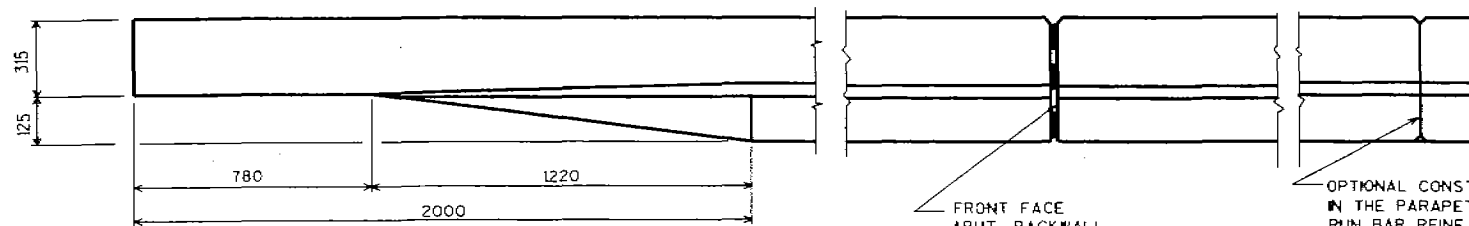
SECTION B



SECTION C

BILL OF BARS
FOR ABUTMENT PARAPETS

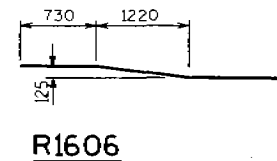
BAR MARK	QTY	S. ABUT.	N. ABUT.	LENGTH	BENT	LOCATION
R1601	X	28	28	1400	X	PARAPET VERT.
R1602	X	16	16	960	X	PARAPET VERT.
R1603	X	50	50	1430	X	PARAPET VERT.
R1604	X	8	8	6900		PARAPET HORIZ.
R1605	X	76	76	1470	X	PARAPET VERT.
R1606	X	2	2	6900	X	PARAPET HORIZ.



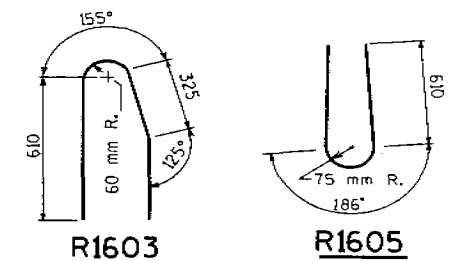
PLAN

FRONT FACE
ABUT. BACKWALL.

OPTIONAL CONSTRUCTION JOINTS
IN THE PARAPETS MAY BE USED.
RUN BAR REINF THRU THE JOINT.
LAP LONGIT. BARS A MIN. OF 550 mm
MIN. JOINT SPACING OF 25000 mm
DEFINE CONST. JOINT
WITH A 20 mm 'V' GROOVE.

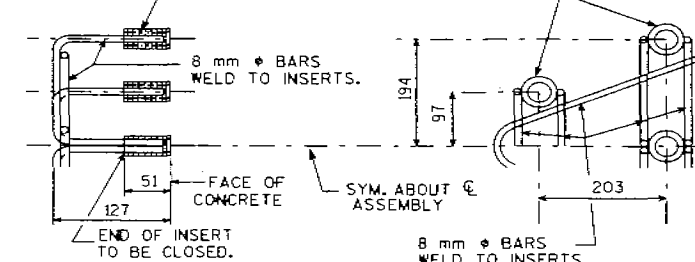


R1601
R1602



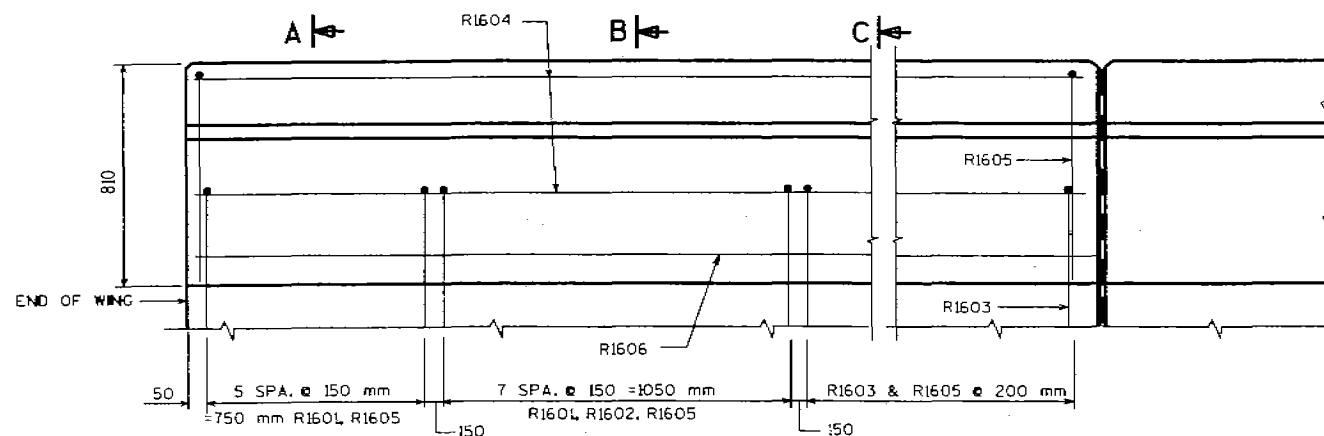
R1603
R1605

THREADED INSERTS FOR 22 mm x 51 mm LONG
GALVANIZED HEX. HEAD CAP SCREWS. CAP
SCREWS TO BE THREADED A MIN. OF 48 mm
AND SHALL BE SUPPLIED, INCLUDING WASHERS.
WITH ASSEMBLY. INSERTS TO BE THREADED
A MINIMUM OF 44 mm.

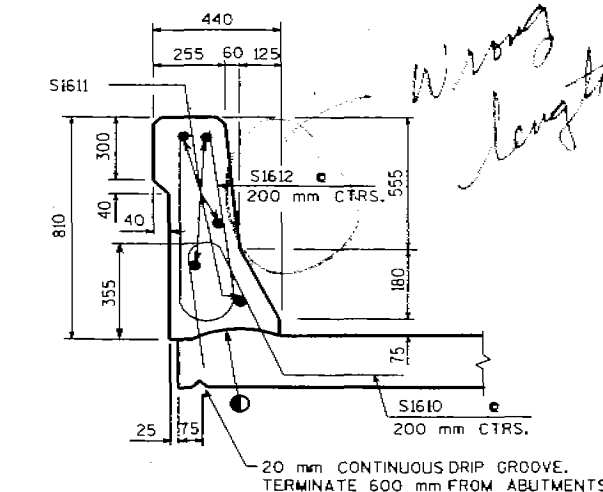


DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE
GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE

● CONST. JOINT - STRIKE OFF
AS SHOWN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-71			
CONST. SPEC.	1996	DRAWN BY CMPT/JHG	PLANS CKD. ZKC
SLOPED FACE PARAPET "LF"			SHEET 12

DESIGN DATA

LIVE LOAD:

DESIGN RATING: MS-18
 INVENTORY RATING: MS-20
 OPERATIONAL RATING: MS-45
 MAXIMUM STANDARD PERMIT VEHICLE LOAD = 1110 kN.
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 1.0 kN/m².

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — $f'_c = 28$ MPa ALL OTHER — $f'_c = 24$ MPa
 BAR STEEL REINFORCEMENT, AASHTO M-31M, GRADE 420 — $f_y = 420$ MPa
 1370mm PRESTRESSED GIRDERS, CONCRETE MASONRY — $f'_c = 45$ MPa
 STRANDS — 13mm DIA. WITH ULTIMATE TENSILE STRENGTH OF 1860 MPa

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 250 X 62 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 490 kN PER PILE. ESTIMATED 26m LONG @ S. ABUT. & 25m LONG @ N. ABUT.

TRAFFIC VOLUME

U.S.H. 41 WRIGHTSTOWN ROAD
 A.D.T.=37,000 (2018) A.D.T.=600 (2018)
 R.D.S.=110 km/h R.D.S.=70 km/h

BRIDGE OFFICE CONTACT:

JERRY ZIRK (608) 266-5163
 FINN HUBBARD (608) 266-8489

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUT. DETAILS
6. NORTH ABUTMENT
7. NORTH ABUT. DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. 1370mm PRESTRESSED GIRDER DETAILS
11. STEEL DIAPHRAGM
12. SLOPED FACE PARAPET "LF"

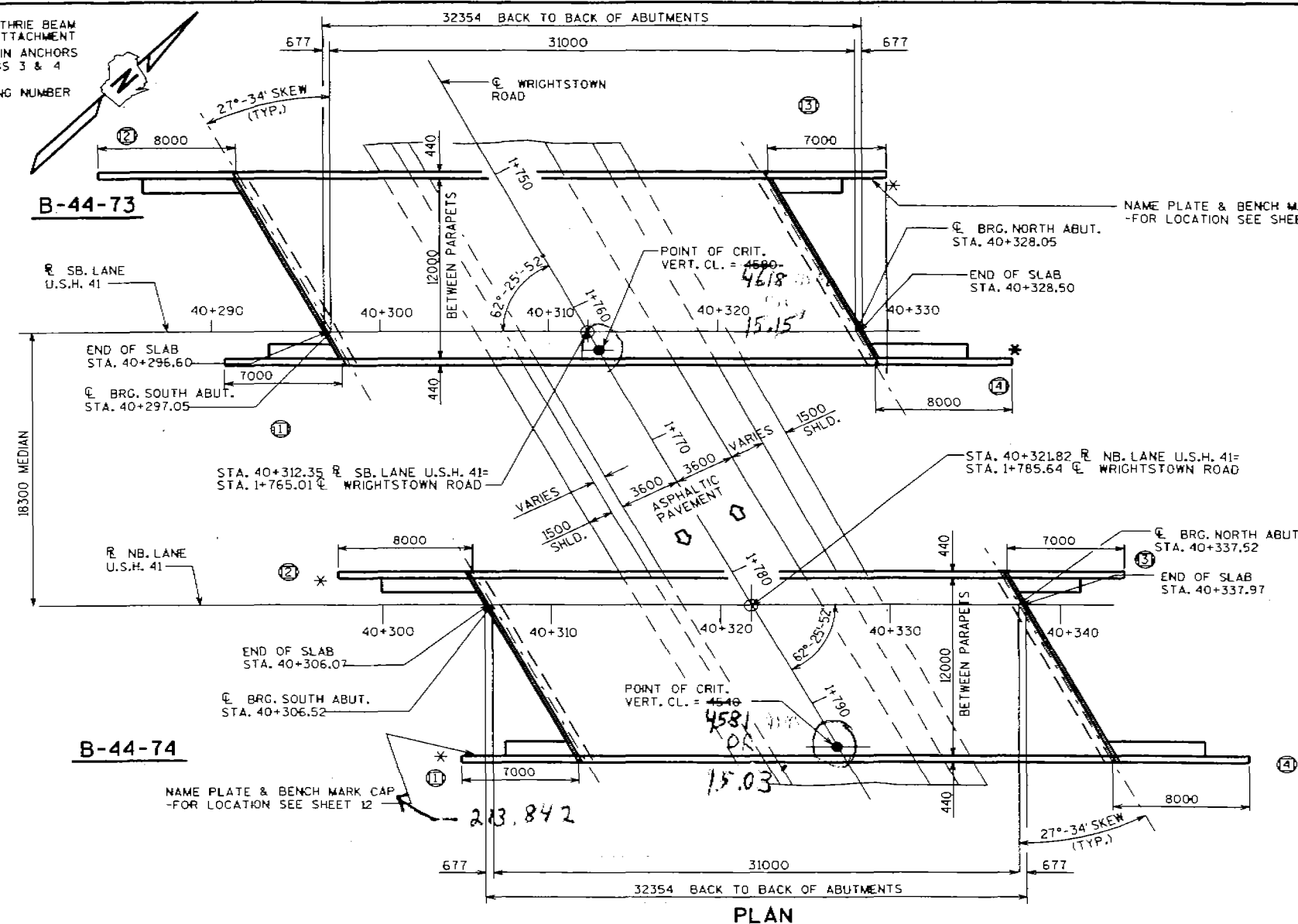
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
U.S.H. 41 OVER WRIGHTSTOWN ROAD			
COUNTY	OUTAGAMIE	TOWN/AGENCY/UNIVERSITY	KAUKAUNA
DESIGN SPEC.	AASHTO 1996	LOAD	MS-18
DESIGNED BY	CIHA	CONST. SPEC.	1996
CK'D.	KTN	DRAWN BY	JHG
PLANS CK'D.	ZIRK	DATE	01-18-00
APPROVED: <i>[Signature]</i> CHIEF BRIDGE DESIGN ENGINEER			DATE
GENERAL PLAN			SHEET 1 OF 12
			DATE: FEB'98

I.D. 1131-08-00G

DISTRICT CONTACT

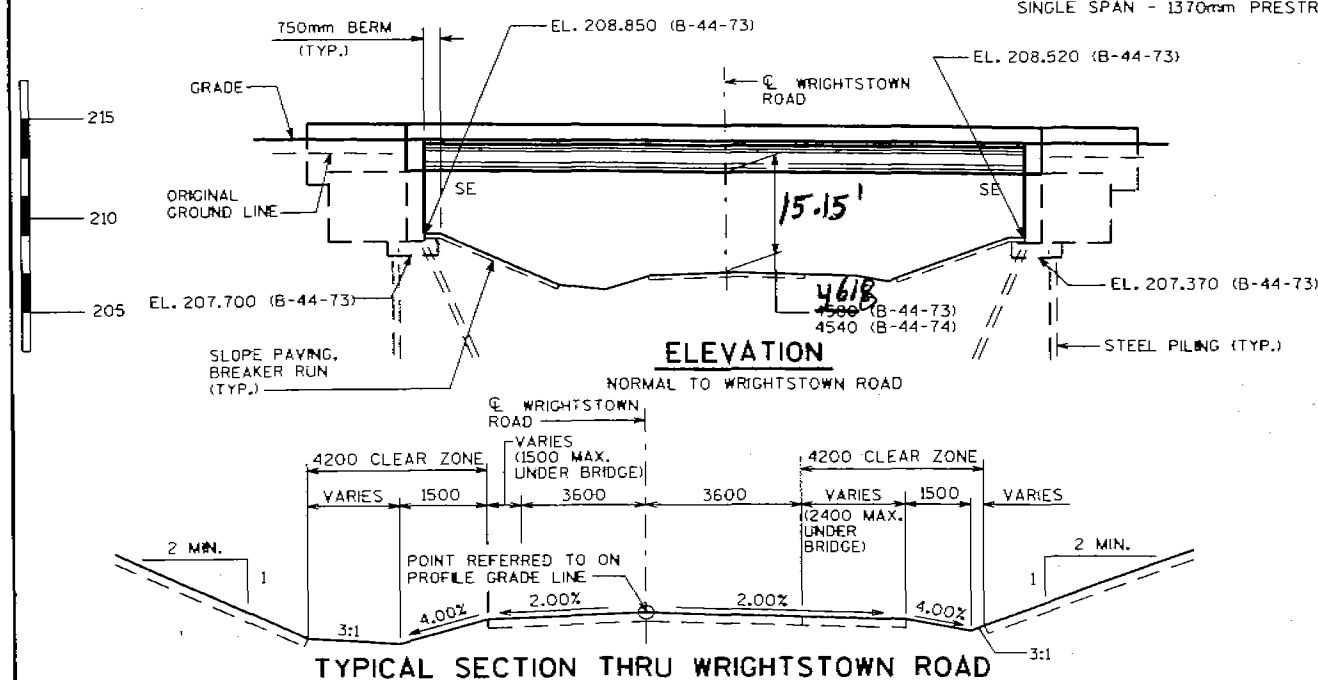
FILE= 73GP.DGN
SCALE= 1/75

* PROVIDE FOR THREE BEAM
 GUARD RAIL ATTACHMENT
 NOTE: SURFACE DRAIN ANCHORS
 REQ'D @ WINGS 3 & 4
 INDICATES WING NUMBER



PLAN

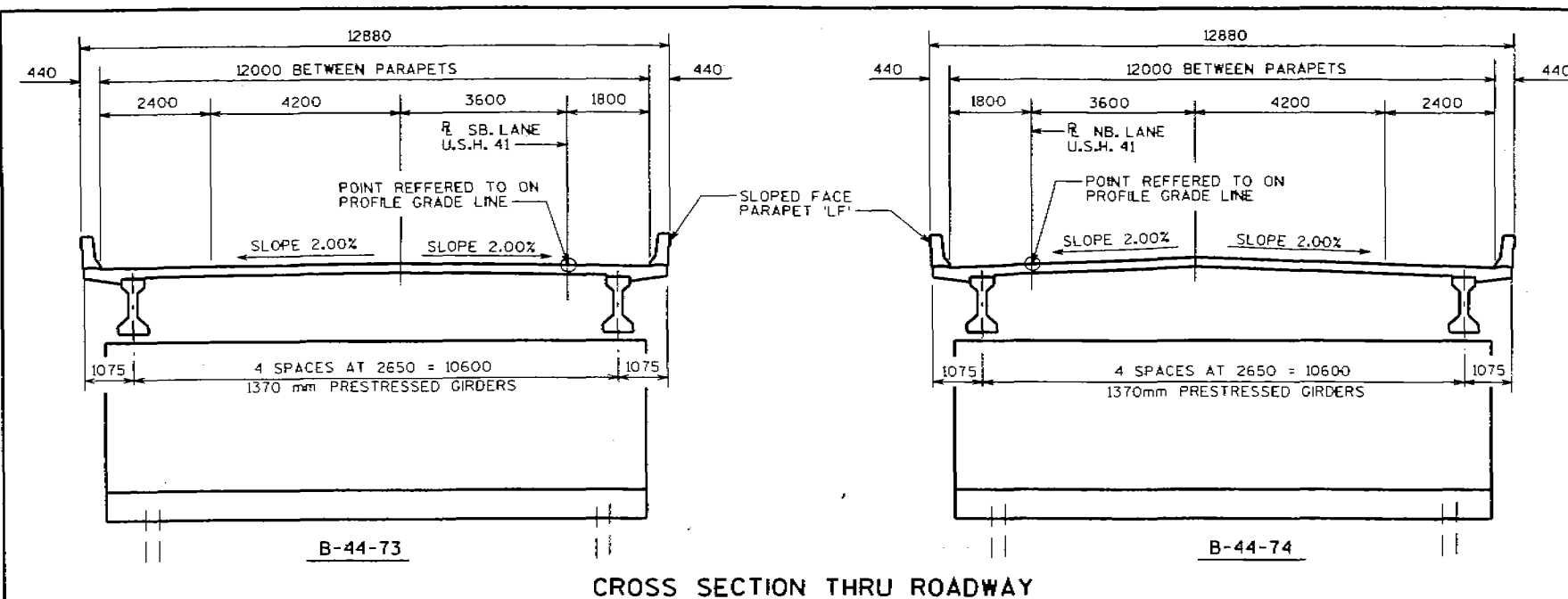
SINGLE SPAN - 1370mm PRESTRESSED GIRDERS



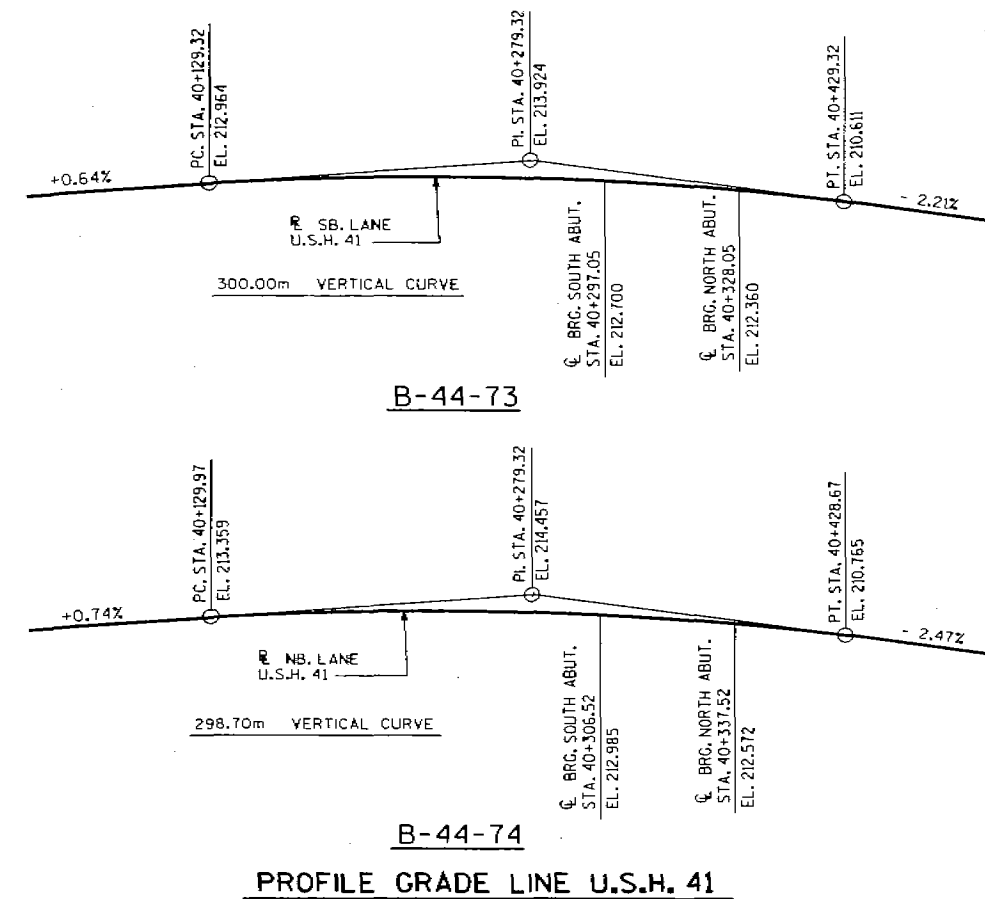
ELEVATION

NORMAL TO WRIGHTSTOWN ROAD

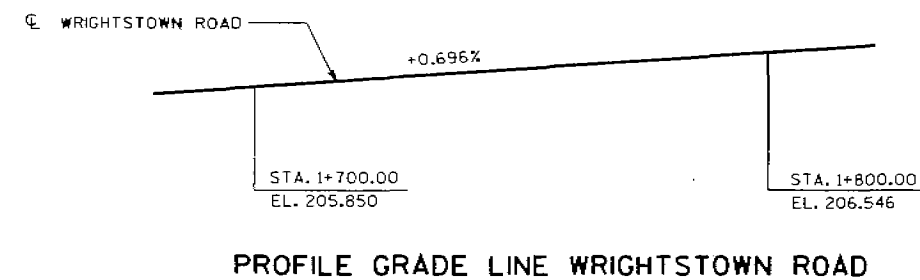
TYPICAL SECTION THRU WRIGHTSTOWN ROAD



CROSS SECTION THRU ROADWAY



PROFILE GRADE LINE U.S.H. 41



PROFILE GRADE LINE WRIGHTSTOWN ROAD

TOTAL ESTIMATED QUANTITIES

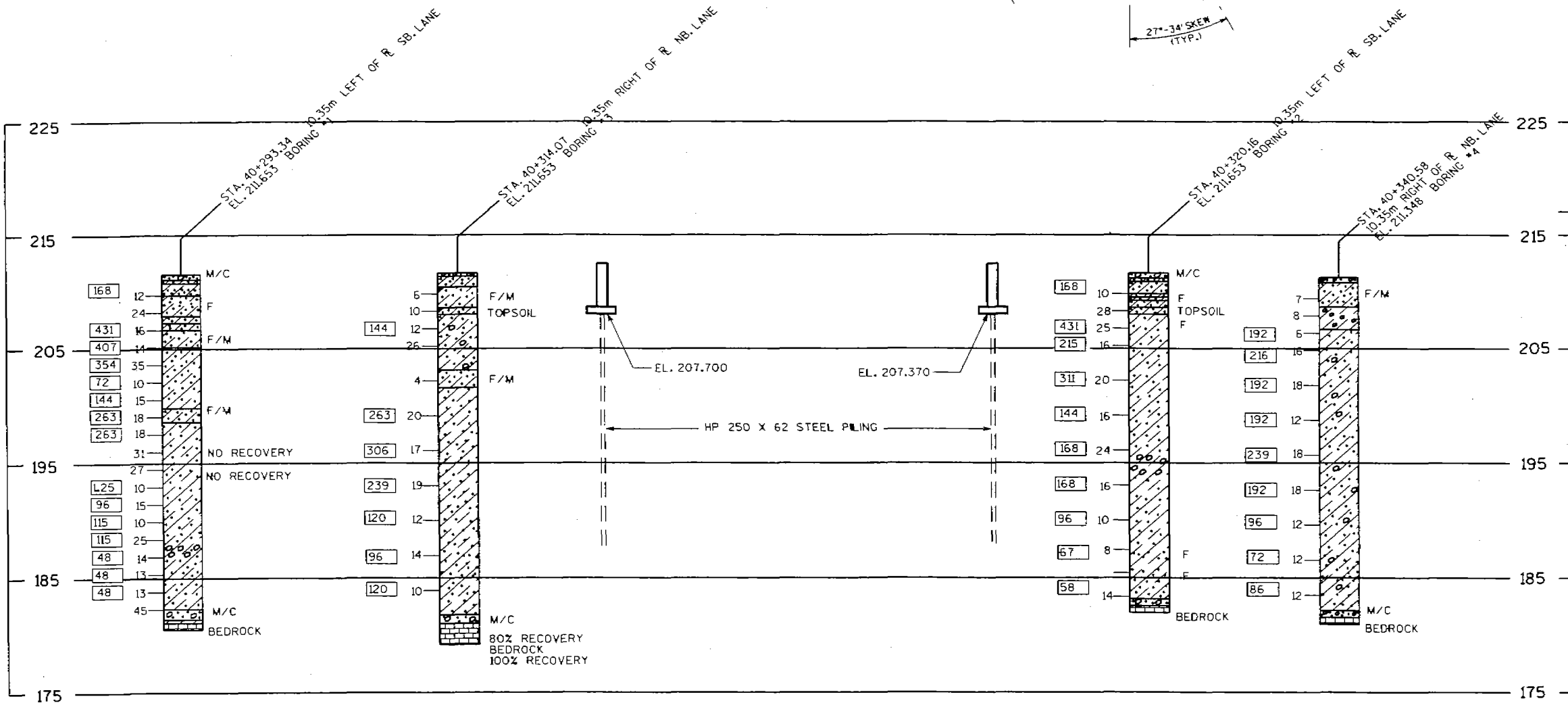
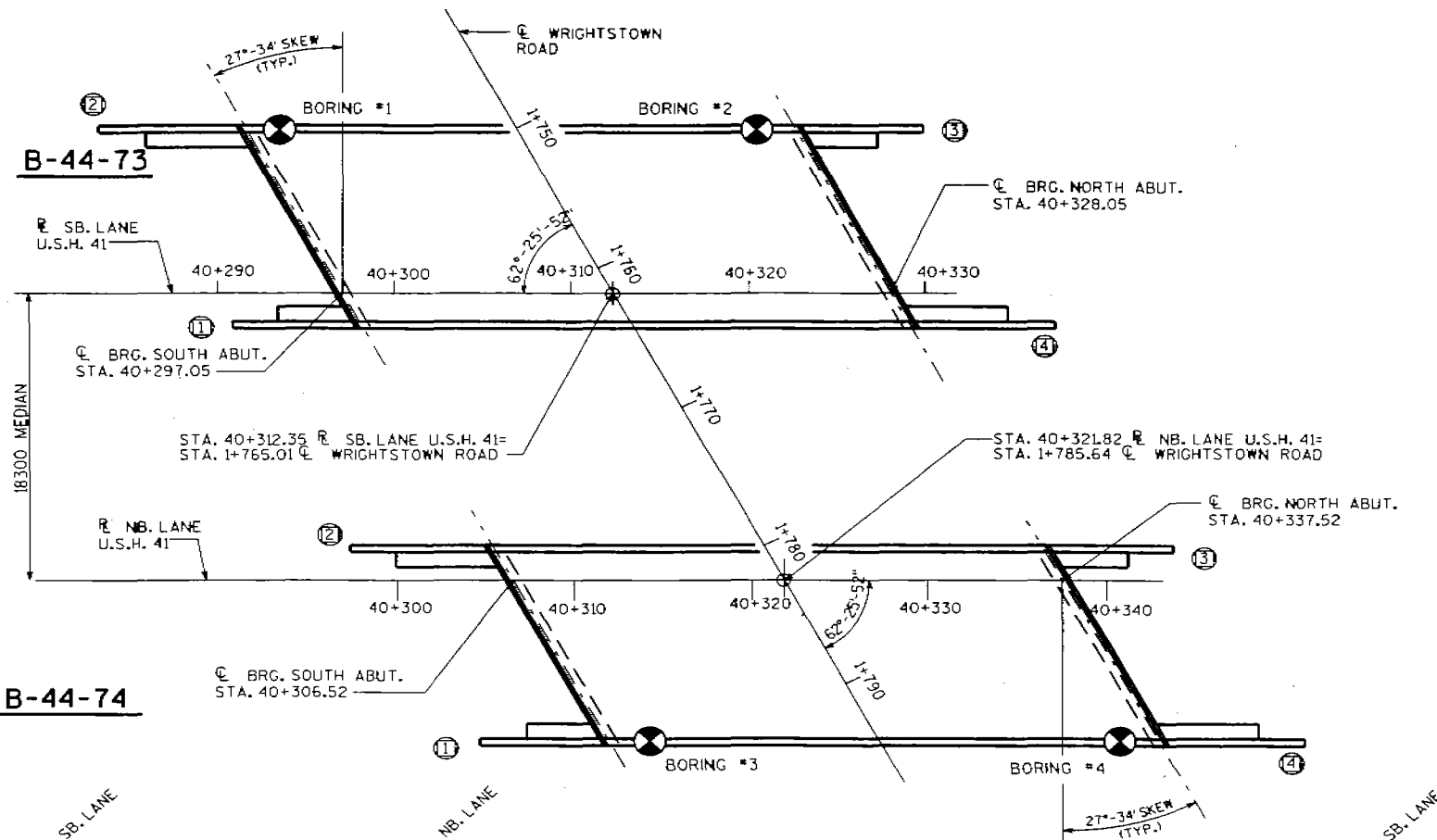
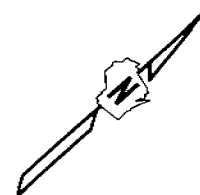
BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-44-73	L.S.	---	---	---	1
STRUCTURE BACKFILL	m ³	---	650	650	1300
CONCRETE MASONRY, BRIDGES	m ³	141	118	118	377
PROTECTIVE SURFACE TREATMENT	m ²	460	---	---	460
PRESTRESSED GIRDER, TYPE, 1370 mm	m	157	---	---	157
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	kg	---	4210	4150	8360
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	kg	14800	530	530	15860
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	10	---	---	10
STEEL PILING, DELIVERED AND DRIVEN, HP 250 X 62 kg/m	m	---	442	425	867
RUBBERIZED MEMBRANE WATERPROOFING	m ²	---	7	7	14
SLOPE PAVING, BREAKER RUN	m ²	---	70	70	140
PIPE UNDERDRAIN, 150 mm	m	---	11	11	22
PIPE UNDERDRAIN, UNPERFORATED, 150 mm	m	---	6	6	12
GEOTEXTILE FABRIC, TYPE DF	m ²	---	20	20	40
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	---	---	2
STEEL DIAPHRAGMS, STRUCTURE B-44-73	EACH	8	---	---	8
NON-BID ITEMS					
FILLER	SIZE	---	---	---	13 & 19

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 50 mm CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ALL REINFORCING BARS ARE METRIC AND THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE
 ALL DIMENSIONS WILL METERS (mm) UNLESS OTHERWISE NOTED.
 ALL STATIONS AND ALL ELEVATIONS ARE METERS (m).
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
 AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
 THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECT. 209.2.2 OF THE STD. SPEC'S. FOR GRADE 1 MATERIAL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY JHG	PLANS CKD. ZIRK
CROSS SECTION & QUANTITIES		SHEET 2	

FILE= 730P.DGN
 SCALE = 75



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

MATERIAL SYMBOLS
Topsoil Silt Sandstone
Sand Peat Limestone
Gravel Clay Igneous Rock

LEGEND OF PROBING
Probing No.
Sta.
Elevation
95/152-95 Blows for
152mm Penetration
Probing taken with a
159.1Kg Wt.
Falling 457mm on a
51mm O.D. Point.
7 Average Blows Per
305mm
Refusal 95/152

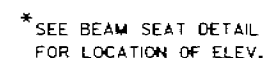
LEGEND OF BORING
Boring No.
Sta.
Elev.
Unconfined Strength
KN/m² → 7.7
Blows Per 305mm
Using 63.6 Kg Wt.
Falling 762mm
Wash Sample
Shelby Tube—S.T.
Ground Water Elevation
No Ground Water
Observed Above
This Elevation
Sandy Gravel
F
Boulders or
Cobbles
Sand
Silty Clay
So
Limestone

Unless otherwise specified, the blows per 305mm at the locations indicated are based on driving a 51mm O.D. x 35mm I.D. split spoon sampler with a 63.6Kg hammer having a free fall of 762mm. The blow count is taken in undisturbed soil immediately below a closed or open hole eliminating side friction on the drive pipe.

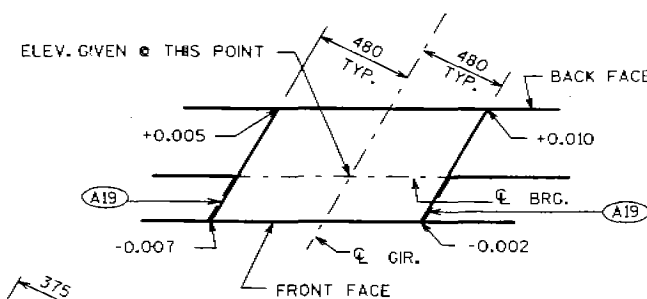
SUBSURFACE EXPLORATION FOR FOUNDATION
DESIGN AND BIDDERS INFORMATION
To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents 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-44-73			
CONST. SPEC.	1996	DRAWN BY RIES/JHG	PLANS Ckd. ZIRK
SUBSURFACE EXPLORATION		SHEET 3	

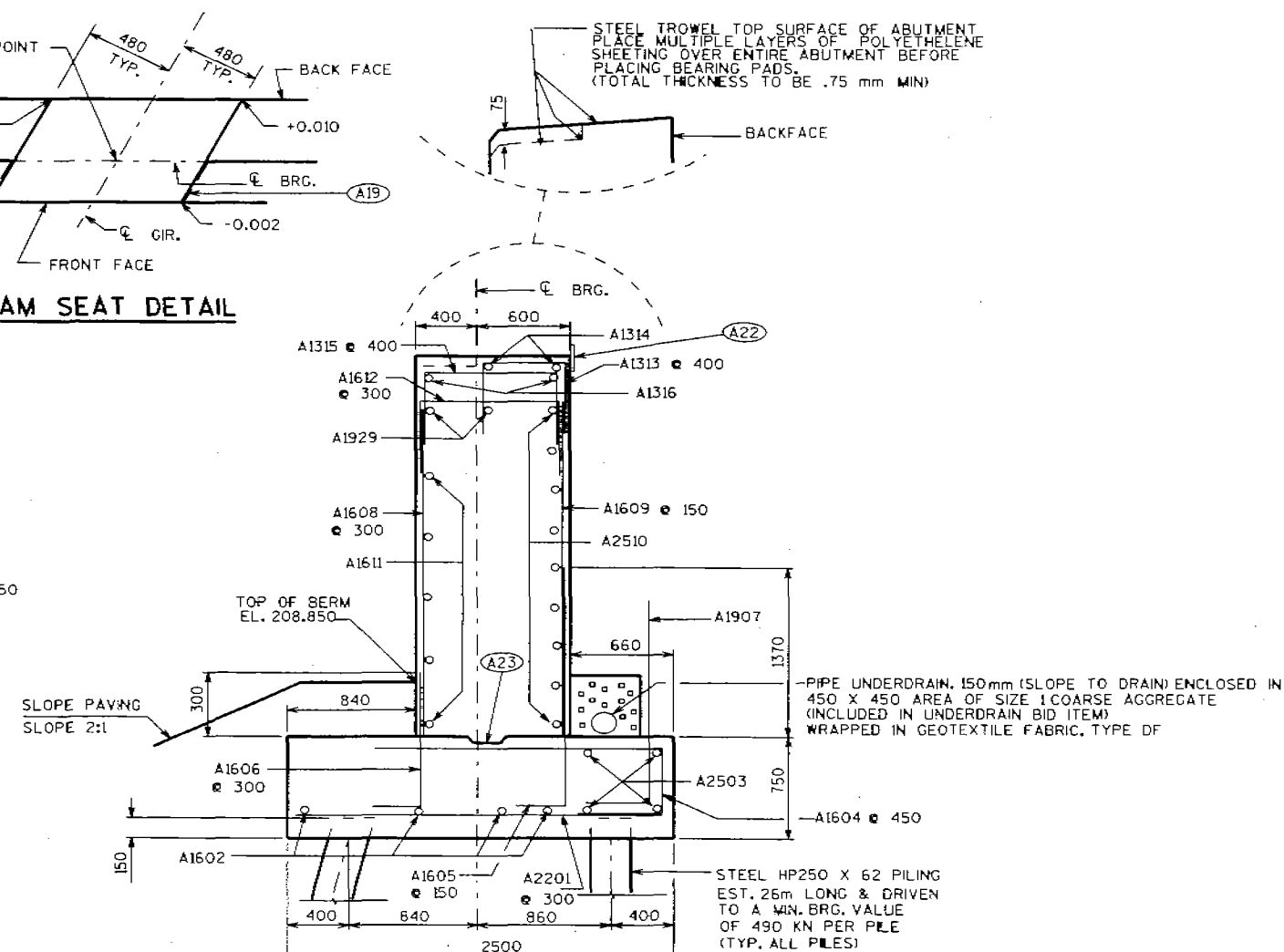
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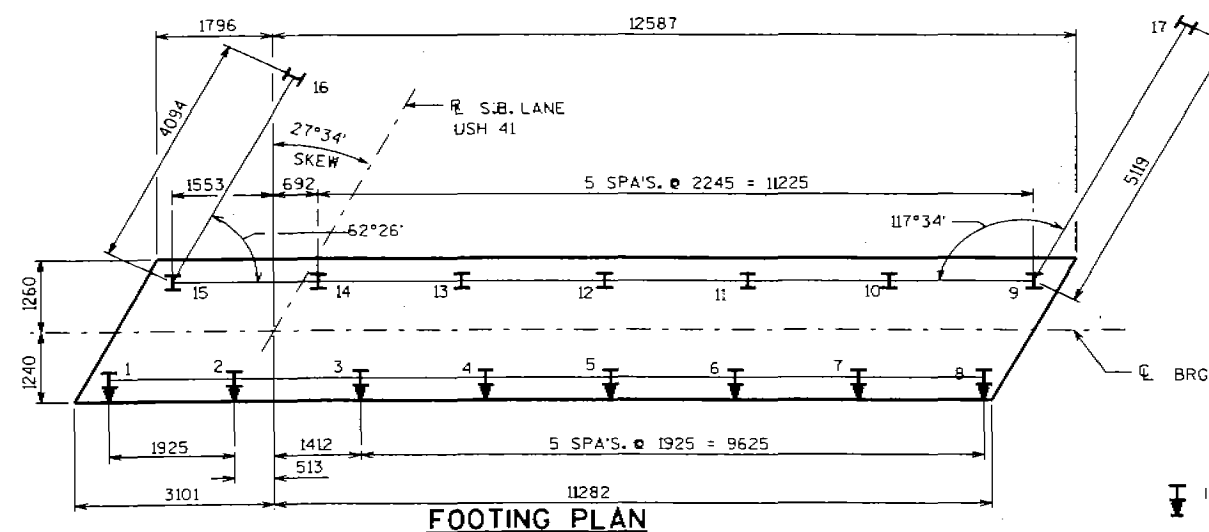
- (A23) CONST. JOINT KEYWAY FORMED WITH
A SURFACED, BEVELED 38mm x 140mm.



BEAM SEAT DETAIL



SECT. THRU BODY

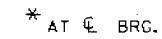


I INDICATES PILE BATTERED 1 IN 4
IN DIRECTION SHOWN

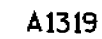
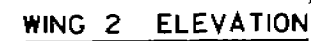
PILING DATA

AVE. LENGTH BELOW CUTOFF = 26.00 M
 AVE. PENETRATION (BELOW GROUND) = 25.85 M
 AVE. BEARING = 575 KM

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY	JHG PLANS CHKD. ZIKK
SOUTH ABUTMENT		SHEET 4	



WING 1 ELEVATION

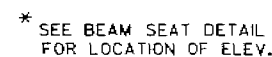


A03

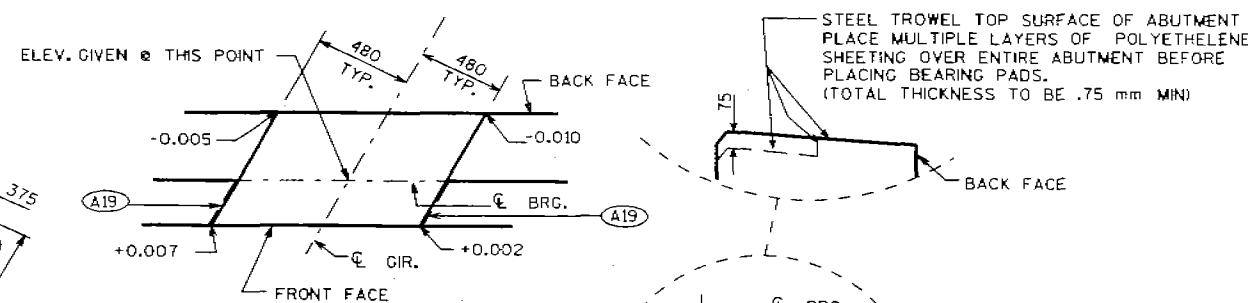
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A2201		49	2400			FOOTING
A1602		8	7420			FOOTING
A2503		8	7920			FOOTING
A1604		31	2330	X		FOOTING
A1605		95	2190	X		FTG. DOWEL B.F.
A1606		49	1120	X		FTG. DOWEL F.F.
A1907		10	1260	X		FTG. DOWEL WING FILLETS
A1608		49	2520			BODY F.F.
A1609		95	2520			BODY B.F.
A2510		18	7920			BODY B.F.
A1611		10	7420			BODY F.F.
A1612		49	1420	X		BODY TOP
A1313		36	1170	X		BODY TOP
A1314		4	7445			BODY TOP
A1315		6	1590	X		BODY TOP @ GIR. 3
A1316		2	2500			BODY TOP @ GIR. 3
A1317		6	600			FTG. WING DOWELS F.F.
A1318		6	2520			WINGS F.F.
A1319		22	7660	X		WINGS STIRRUPS
A2920		9	5700	X		WING 1 HORIZ. B.F.
A1621		9	6190			WING 1 HORIZ. F.F.
A1322		4	2450			WINGS F.F. & B.F. HORIZ.
A1623		51	2120			WINGS B.F. VERT.
A1324		34	2120			WINGS F.F. VERT.
A1325		4	6900			WING 1 HORIZ. F.F.
A1626		7	6900			WING 1 HORIZ. B.F.
A2927		9	7830	X		WING 2 HORIZ. B.F.
A1628		9	6850			WING 2 HORIZ. F.F.
A1929		4	7595			BODY TOP
A1330		4	7900			WING 2 HORIZ. F.F.
A1631		7	7900			WING 2 HORIZ. B.F.

MARK	A	B	C
A1313	500	375	---
A1315	900	375	---
A1605	---	---	260
A1606	---	---	260
A1907	---	---	310
A1612	900	300	---
A2920	---	---	300
A2927	---	---	300

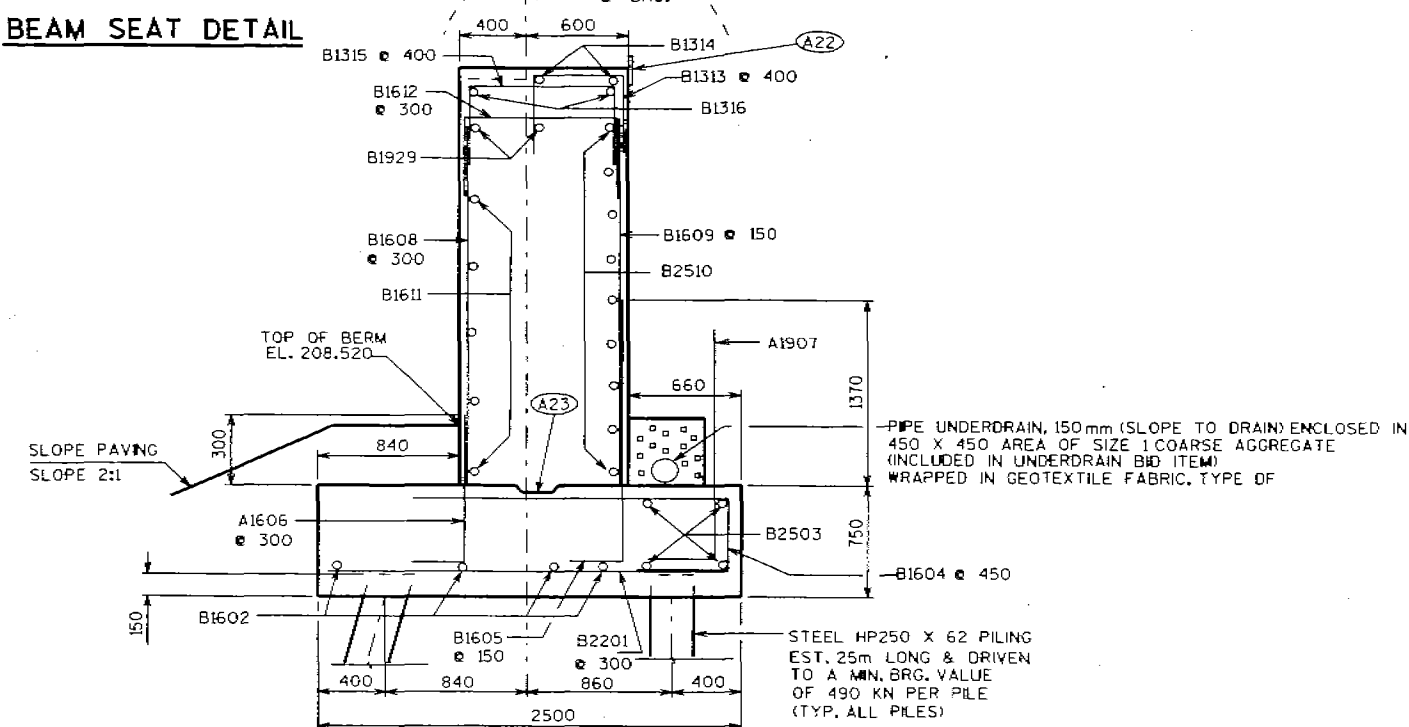
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY JHG	PLANS CKD. <i>ZLK</i>
SOUTH ABUT. DETAILS		SHEET 5	



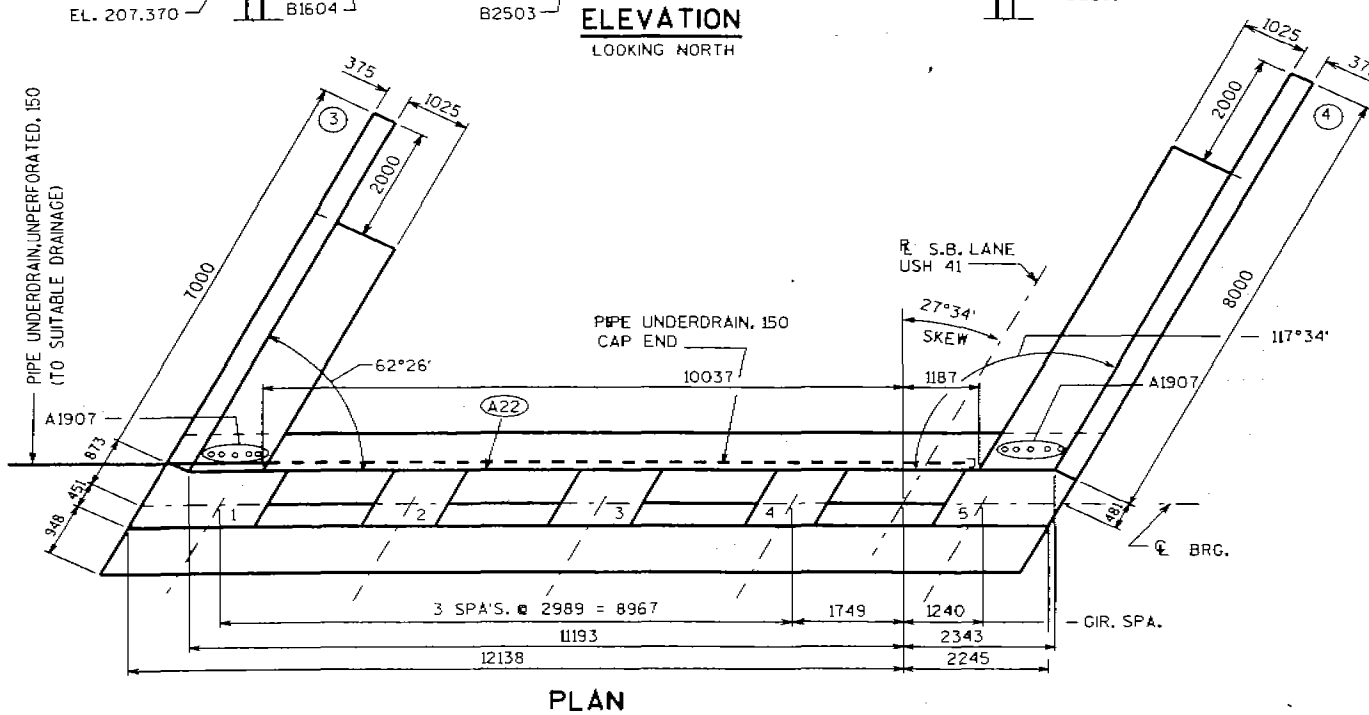
- A19 19mm CORK FILLER ON VERT. FACES ONLY
- A20 13 mm FILLER INCLUDED IN JOINT LENGTH:
SEAL EXPOSED HORIZ. & VERT. SURFACES OF
13 mm FILLER WITH NON-STAINING GRAY NON-
BITUMINOUS JOINT SEALER. (25 mm DEEP AND
HOLD 3 mm BELOW SURFACE OF CONCRETE).
EXTEND SEALER 75 mm BELOW GUTTER LINE
AT INSIDE FACE.
- A22 457 mm (RW) RUBBERIZED MEMBRANE
WATERPROOFING SEAL ALL HORIZ. & VERT.
JOINTS AT BACKFACE.
- A23 CONST. JOINT KEYWAY FORMED WITH
A SURFACED, BEVELED 38mm x 140mm.



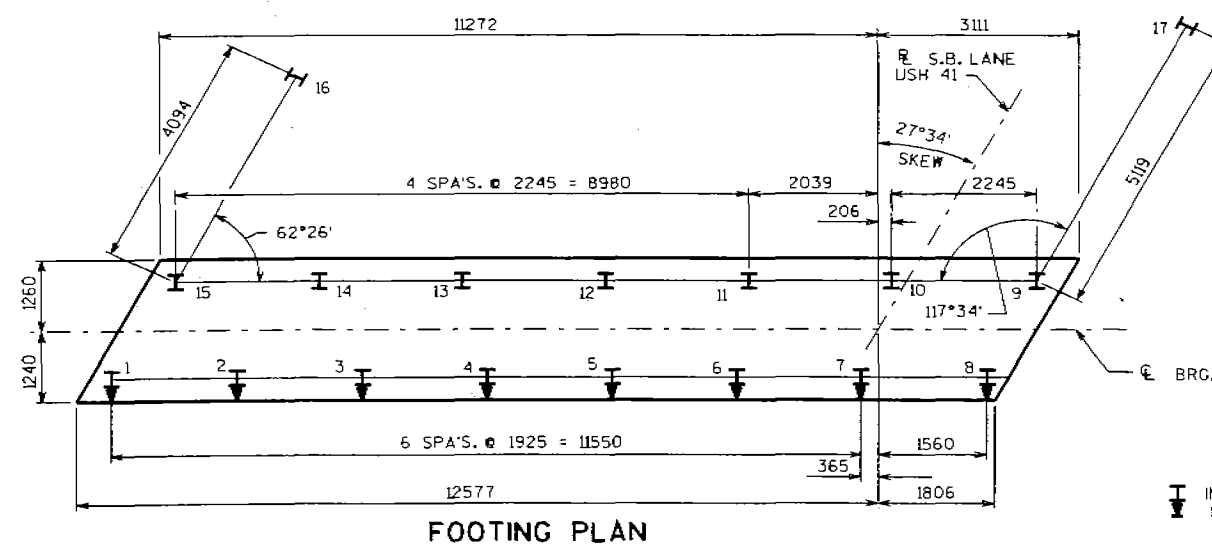
BEAM SEAT DETAIL



SECT. THRU BODY



PLAN



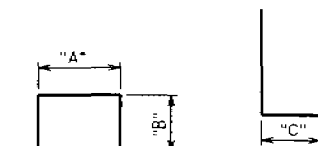
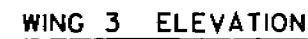
FOOTING PLAN

I INDICATES PILE BATTERED 1 IN 4
IN DIRECTION SHOWN

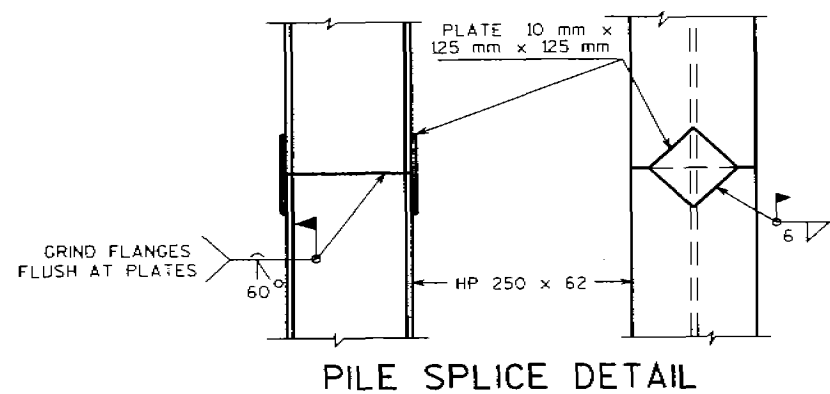
PILING DATA

AVE. LENGTH BELOW CUTOFF = 25.37 M
AVE. PENETRATION (BELOW GROUND) = 25.22 M
AVE BEARING = ROCK REFUSAL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY	JHG PLANS CHKD. <i>ZUCK</i>
NORTH ABUTMENT		SHEET 6	



MARK	A	B	C
B1313	500	375	---
B1315	900	375	---
B1605	---	---	260
B1606	---	---	260
B1907	---	---	310
B1612	900	300	---
B2920	---	---	500
B2927	---	---	500



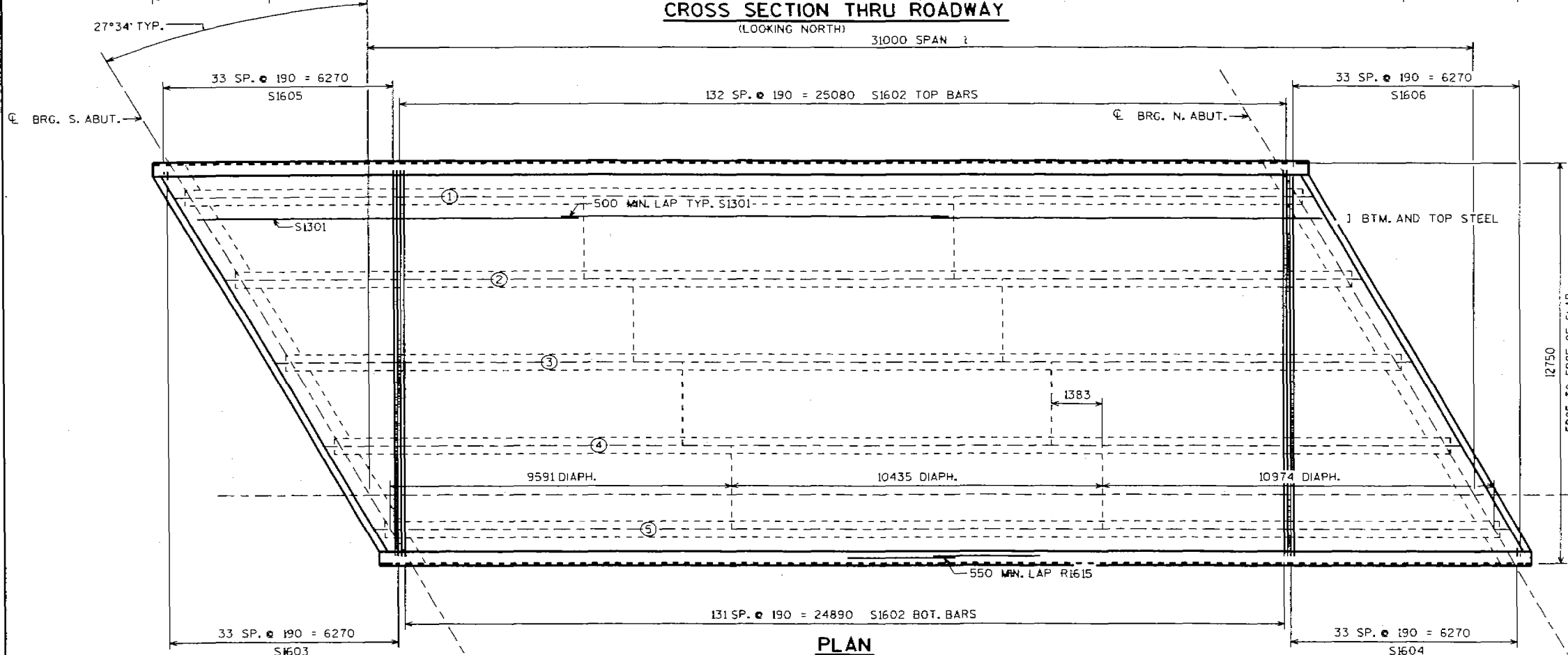
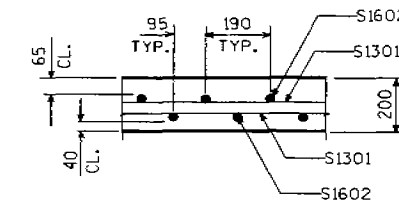
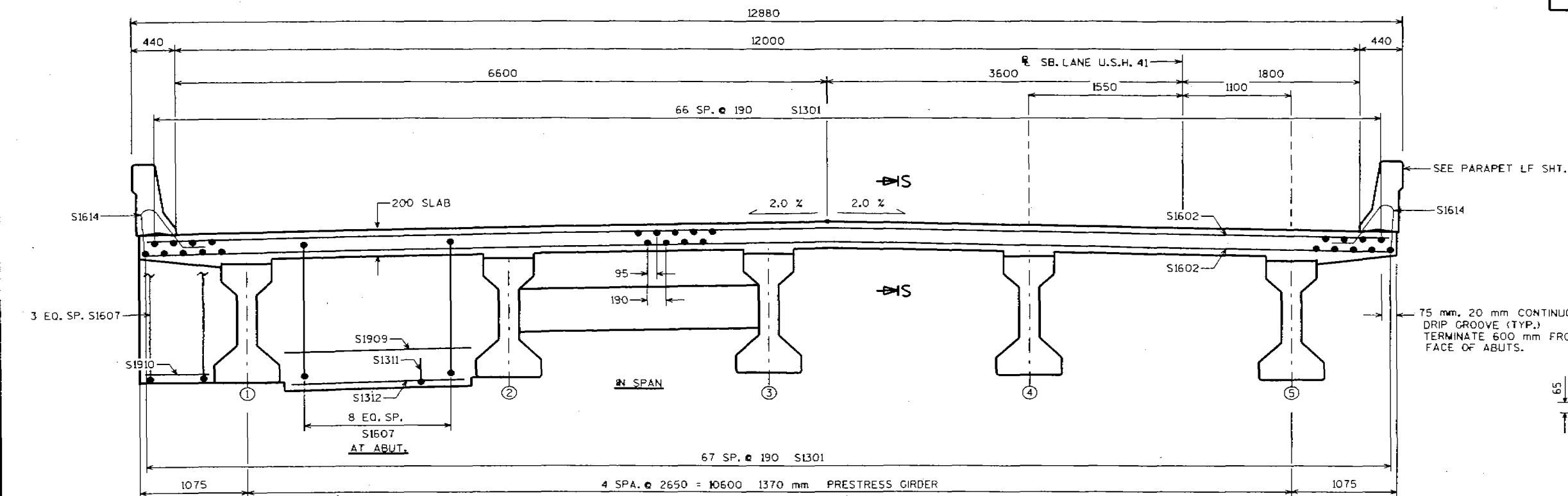
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY SURFACED BEVELED 38 mm x 140 mm. (457 mm R.M.W. @ B.F. & 19 mm "V" GROOVE @ F.F. IF JOINT IS USED).

(A27) A1332 BARS SPACED @ 300 mm CTRS. EMBED
250 mm ~~WALL~~ INTO WING CONC.
LOCATE 75 mm DOWN FROM TOP OF WING @
BACKFACE TO 150 mm DOWN @ WING TIP.
DRILLED IN EPOXY ANCHORED 13M BARS 560
mm LG. MAY BE USED-COST. INCIDENTAL TO
BID ITEM. "HIGH STRENGTH BAR STEEL
REINF."

NOTE: THE FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

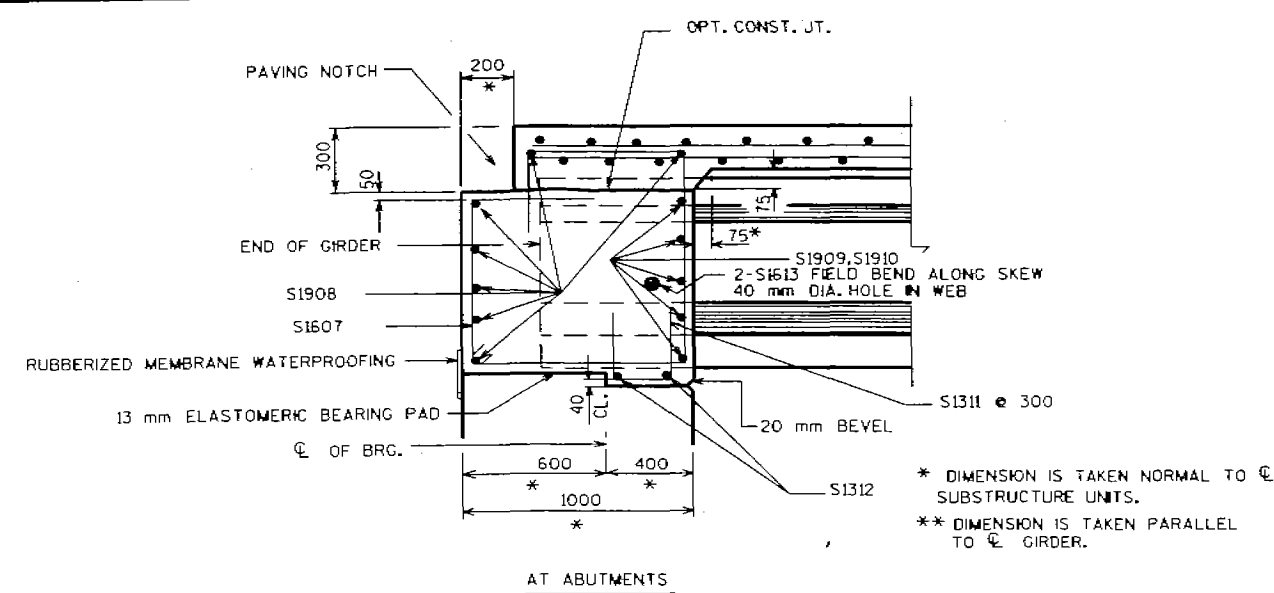
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B2201		49	2400			FOOTING
B1602		4	7420			FOOTING
B2503		8	7920			FOOTING
B1604		31	2330	X		FOOTING
B1605		95	2190	X		FTG. DOWEL B.F.
B1606		49	1120	X		FTG. DOWEL F.F.
B1907		10	1260	X		FTG. DOWEL WING FILLETS
B1608		49	2510			BODY F.F.
B1609		96	2510			BODY B.F.
B2510		18	7920			BODY B.F.
B1611		10	7505			BODY F.F.
B1612		49	1420	X		BODY TOP
B1313		35	1170	X		BODY TOP
B1314		4	7445			BODY TOP
B1315		6	1590	X		BODY TOP @ GR. 3
B1316		2	2500			BODY TOP @ GR. 3
B1317		6	600			FTG. WING DOWELS F.F.
B1318		6	2510			WINGS F.F.
B1319		22	7540	X		WINGS STIRRUPS
B2920		9	5910			WING 3 HORIZ. B.F.
B1621		9	6190			WING 3 HORIZ. F.F.
B1322		4	2450			WINGS F.F. & B.F. HORIZ.
B1623		51	1910			WINGS B.F. VERT.
B1324		34	1910			WINGS F.F. VERT.
B1325		4	6900			WING 3 HORIZ. F.F.
B1626		7	6900			WING 3 HORIZ. B.F.
B2927		9	8030			WING 4 HORIZ. B.F.
B1628		9	6850			WING 4 HORIZ. F.F.
B1929		2	7595			BODY TOP
B1330		4	7900			WING 4 HORIZ. F.F.
B1631		7	7900			WING 4 HORIZ. B.F.
B1332		50	600			WINGS, SURFACE DRAIN DOWELS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY	JHG PLANS CHKD. ZURK
NORTH ABUT. DETAILS		SHEET 7	

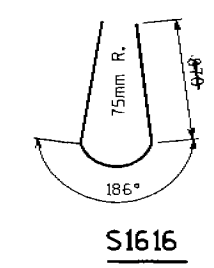
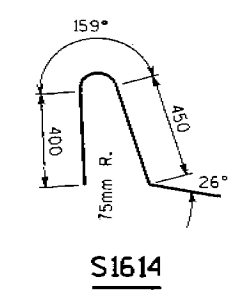
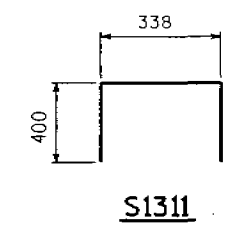
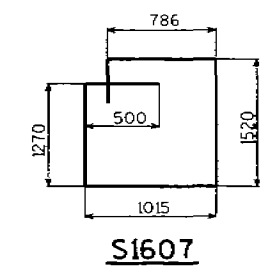


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONSTR. SPEC.	1996	DRAWN BY CMPT/JHG	PLANS CKD. ZUC
SUPERSTRUCTURE			SHEET 8

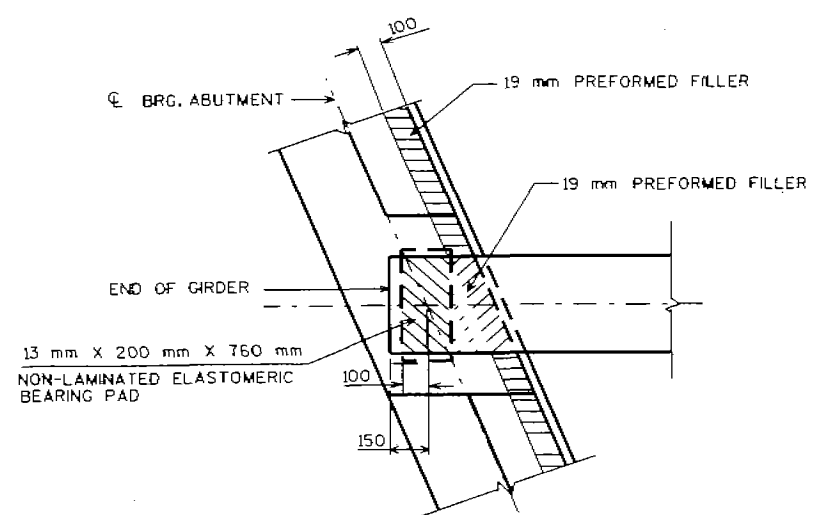
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



PART LONGIT. SECTION



NOTE: HAD TO CUT ALL THE S1616 BARS THAT WENT INTO THE PARAPET WALL. THE WALL IS ONLY 0.310 M HIGH.



BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

	S. ABUT.	1/8	2/8	3/8	4/8	5/8	6/8	7/8	N. ABUT.
GIR. 1	212.700	212.665	212.630	212.590	212.550	212.505	212.465	212.420	212.375
GIR. 2	212.740	212.705	212.665	212.630	212.585	212.545	212.500	212.455	212.410
GIR. 3	212.780	212.745	212.705	212.665	212.625	212.585	212.540	212.495	212.445
GIR. 4	212.740	212.700	212.665	212.625	212.580	212.540	212.495	212.450	212.400
GIR. 5	212.675	212.635	212.595	212.555	212.515	212.470	212.425	212.380	212.330

BILL OF BARS						LOCATION	
BAR MARK	CO.	NO. REQ'D.	LENGTH	BENT	BAR SERIES		
S1301	X	405	10925			LONGITUDINAL TOP & BOTTOM	
S1602	X	265	12650			TRANSVERSE TOP AND BOTTOM	
S1603	X	34	6550		▲	TRANSVERSE TOP CUT LEFT	
S1604	X	34	6550		▲	TRANSVERSE TOP CUT RIGHT	
S1605	X	34	6375		▲	TRANSVERSE BOT CUT	
S1606	X	34	6375		▲	TRANSVERSE BOT CUT RIGHT	
S1607	X	88	5475	X		ABUT. DIAPHRAGM	
S1908	X	28	7665			ABUT. DIAPHRAGM	
S1909	X	40	2125			ABUT. DIAPHRAGM	
S1910	X	20	725			ABUT. DIAPHRAGM	
S1311	X	64	1150	X		ABUT. DIAPHRAGM	
S1312	X	16	1800			ABUT. DIAPHRAGM	
S1613	X	20	2000			ABUT. DIAPHRAGM	
S1614	X	322	1430	X		SLAB & PARAPET	
S1615	X	30	11085			PARAPET	
S1616	X	322	1980	X		PARAPET	

BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
S1603	1 SERIES OF 34	550 TO 12575
S1604	1 SERIES OF 34	550 TO 12575
S1605	1 SERIES OF 34	375 TO 12400
S1606	1 SERIES OF 34	375 TO 12400

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE		B-44-73	
CONST. SPEC.	1996	DRAWN BY CMPT/JHG	PLANS CKD. ZICK
SUPERSTRUCTURE DETAILS		SHEET 9	

GIRDER NOTES

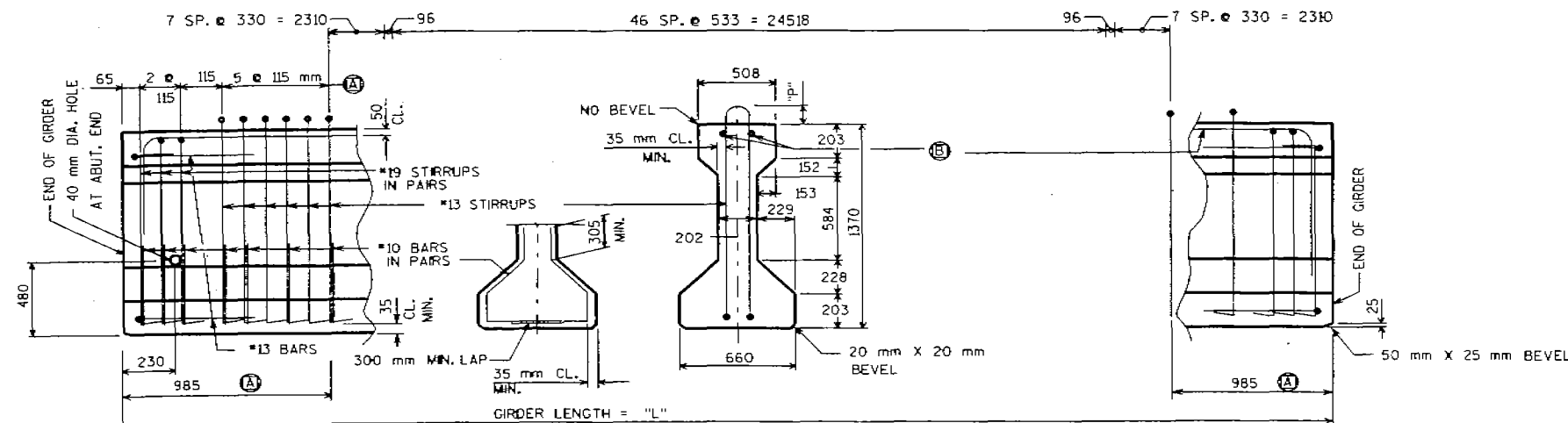
TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 50 mm OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 13 mm ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 1860 MPa AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

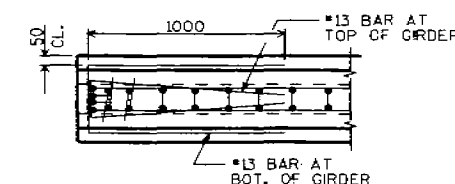
BEND EACH END OF #13 STIRRUPS 115 mm AND #16 STIRRUPS 150 mm.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

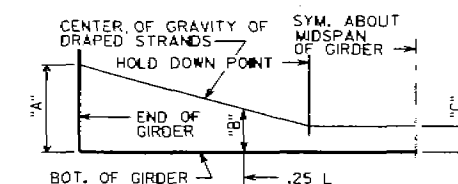


SIDE VIEW & TYP. SECTION IN SPAN

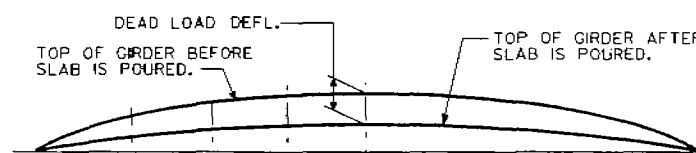
- (A) DETAIL TYP. AT EACH END
(B) 2-BARS BEND DOWN 16 BAR DIA. AT ENDS
2, #13, 600 MIN. LAP



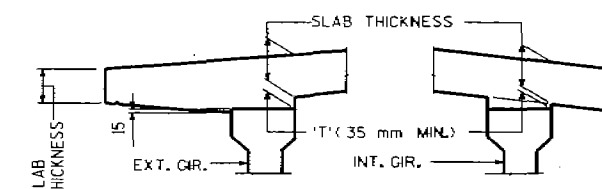
TOP VIEW OF GIRDER ENDS



DRAPED STRAND PROFILE



DEAD LOAD DEFLECTION DIAGRAM

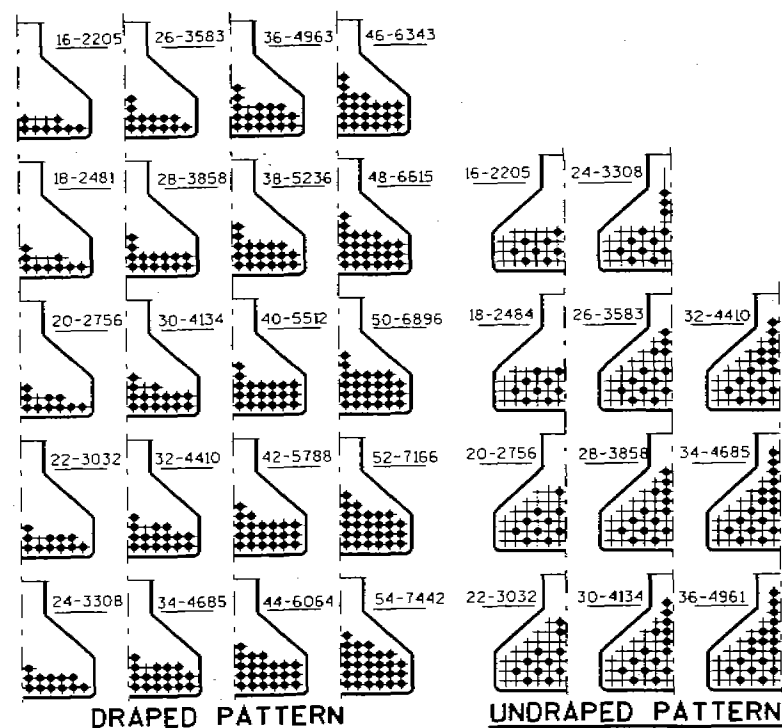


SLAB HAUNCH DETAIL

IF 35 mm MINIMUM HAUNCH HEIGHT 'T' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY BRIDGE OFFICE FOR HAUNCH HEIGHTS OVER 100 mm.

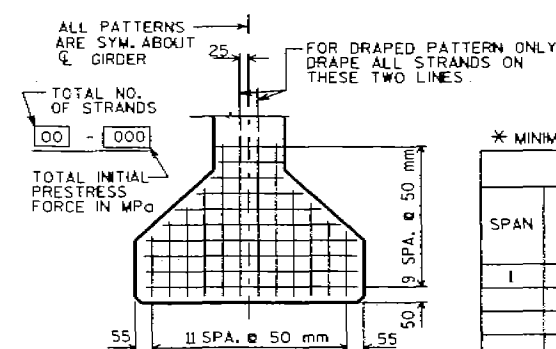
TO DETERMINE 'T', ELEV'S. OF TOP OF GIR'S. AT ϕ OF SUBSTRUCTURE UNITS & AT 0.25 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

- TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
- + DEADLOAD DEFLECTION
- SLAB THICKNESS
- = HAUNCH HEIGHT 'T'



DRAPED PATTERN

UNDRAPED PATTERN



TYP. STRAND PATTERN

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

GIRDER DATA																
SPAN	GIRDER LENGTH L (mm)	DEAD LOAD DEFL. (mm)				CONC. STRGTH. F'C (MPa)	"P"	DRAPED PATTERN							UNDRAPE PATTERN	
		.125	.25	.375	.5			TOTAL NO. OF STRANDS	F'CI (*)	(mm)				TOTAL NO. OF STRANDS	F'CI (MPa) *	
										"A"	"B" MIN.	"B" MAX.	"C"			
I	31300	17	29	36	39	45	150	48	36	1194	432	508	178	0	0	

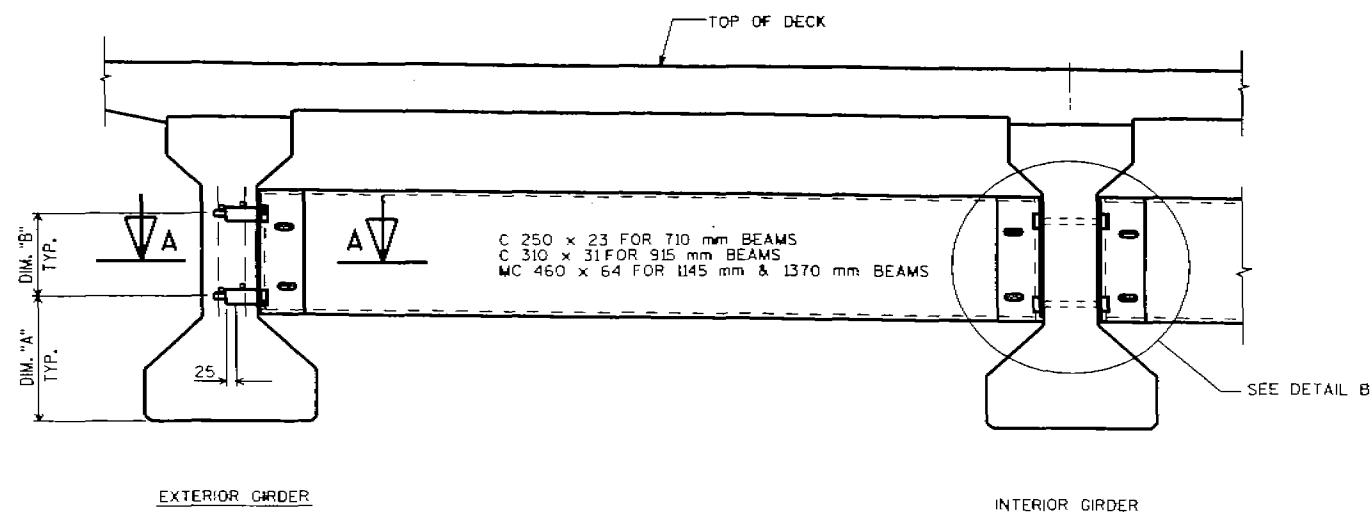
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY CMPT/JHG	PLANS CKD. <i>UAC</i>
1370 mm PRESTRESSED GIRDER DETAILS			SHEET 10

1131-08-83

8.23

TABLE

GIRDER HEIGHT mm	DIM. "A" mm	DIM. "B" mm	DIM. "L" mm	DIM. "X" mm
710	320	165	260	68
915	370	264	359	92
1145	435	366	461	67
1370	500	470	565	119



PART TRANSVERSE SECTION AT DIAPHRAGM

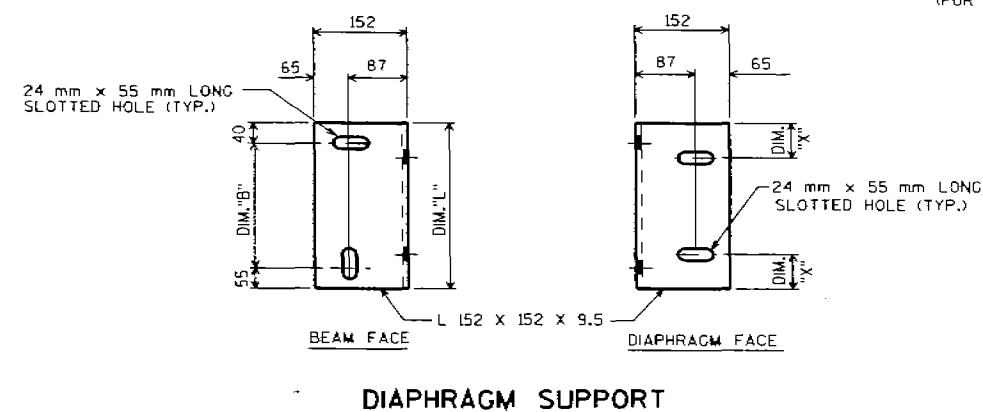
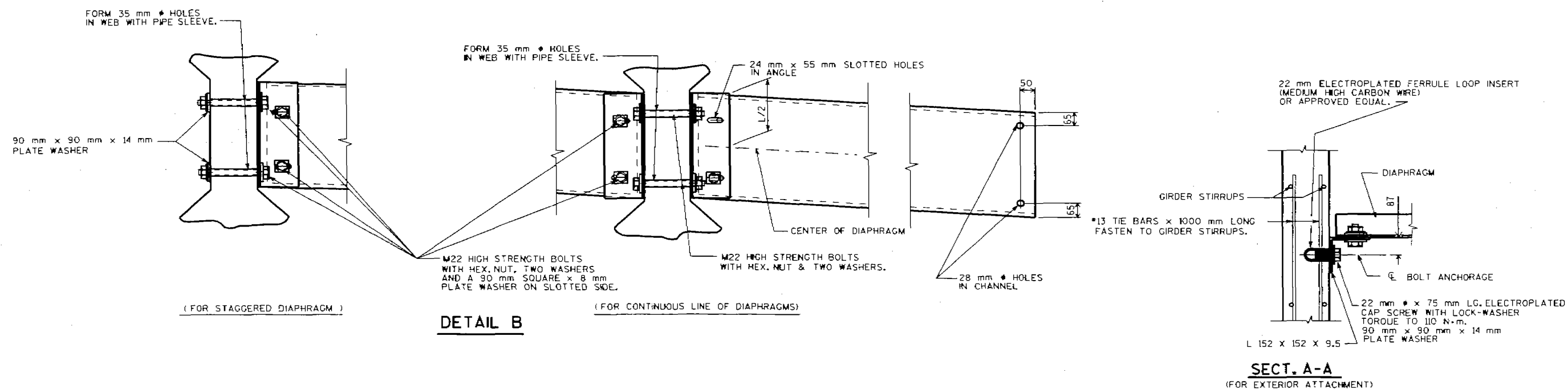
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM".

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 M GRADE 250. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 M TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 M AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

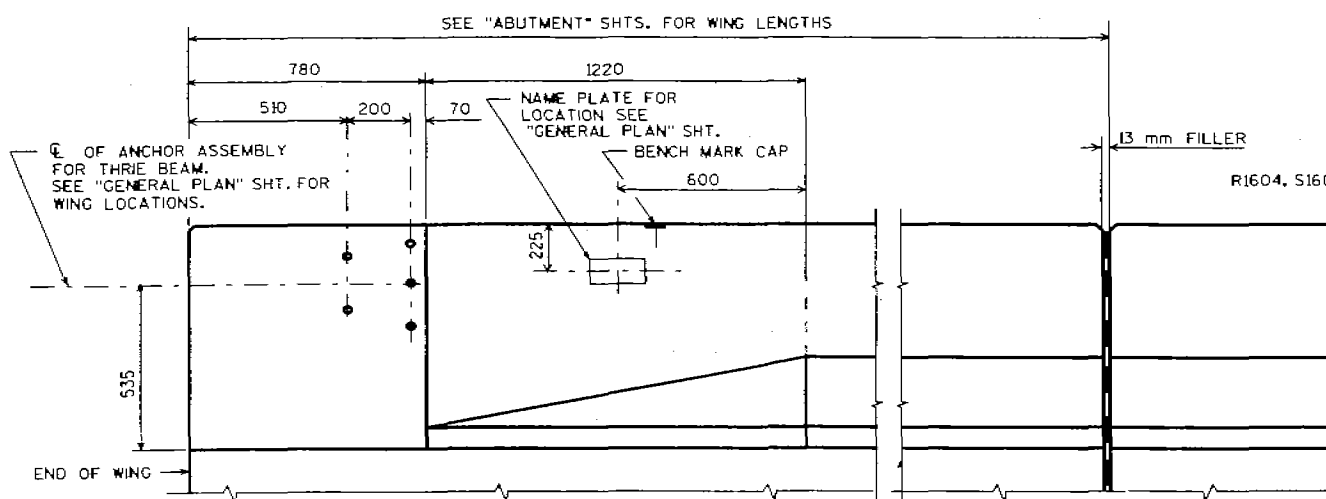


DIAPHRAGM SUPPORT

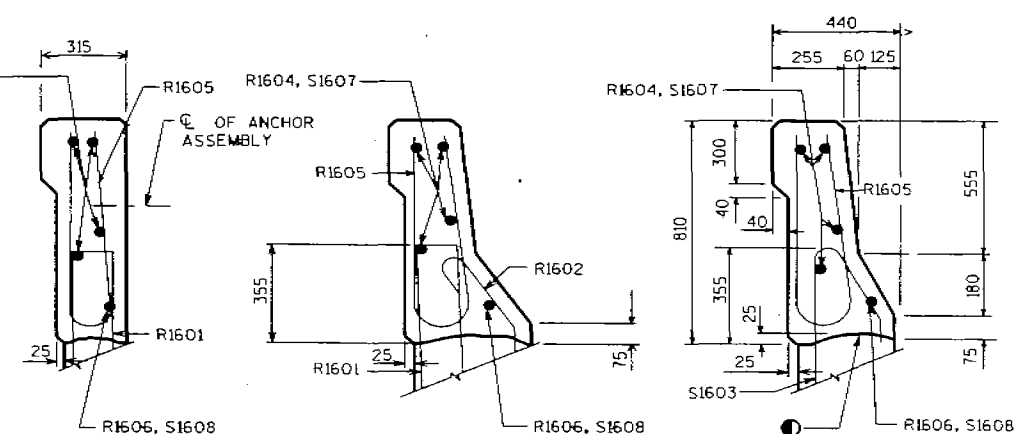
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY CMPT/JHC	PLANS OR. 211K
STEEL DIAPHRAGM			SHEET 11

12-96

THU JAN 08 09:58:25 1998*



INSIDE ELEVATION



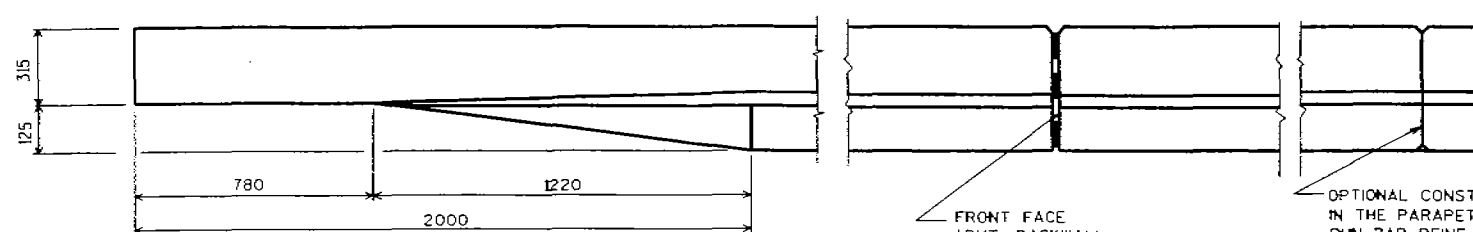
SECTION A

SECTION B

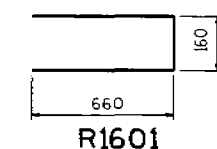
SECTION C

BILL OF BARS

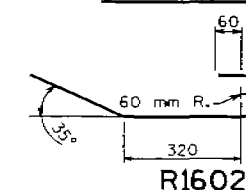
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	LOCATION
R1601	X	28	28	1400	X	PARAPET VERT.
R1602	X	16	16	960	X	PARAPET VERT.
R1603	X	60	60	1430	X	PARAPET VERT.
R1604	X	4	4	6900		PARAPET HORIZ.
R1605	X	86	86	1470	X	PARAPET VERT.
R1606	X	1	1	6900	X	PARAPET HORIZ.
R1607	X	4	4	7900		PARAPET HORIZ.
R1608	X	1	1	7900	X	PARAPET HORIZ.



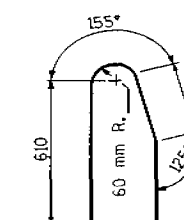
PLAN



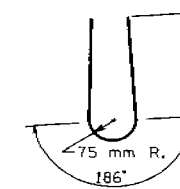
R1601



R1602



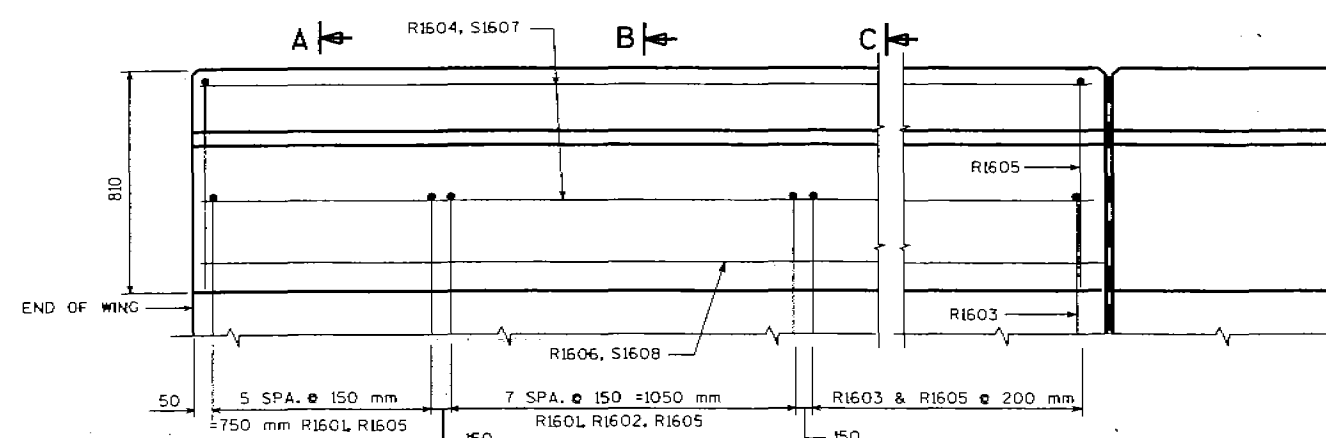
R1603



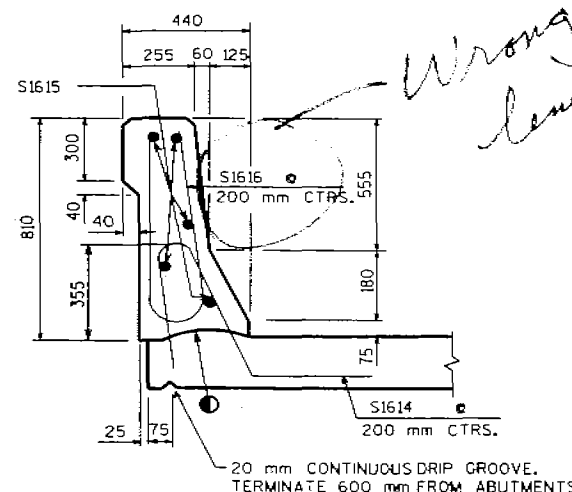
R1605

OPTIONAL CONSTRUCTION JOINTS
IN THE PARAPETS MAY BE USED.
RUN BAR REINF THRU THE JOINT.
LAP LONGIT. BARS A MIN. OF 550 mm
MIN. JOINT SPACING OF 25000 mm
DEFINE CONST. JOINT
WITH A 20 mm 'V' GROOVE.

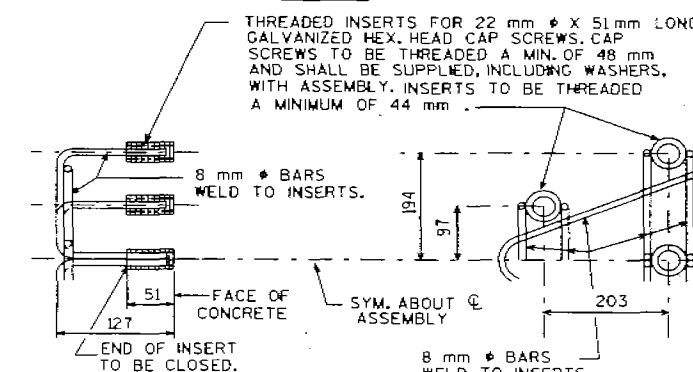
R1606, R1608



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

① CONST. JOINT - STRIKE OFF
AS SHOWN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-73			
CONST. SPEC.	1996	DRAWN BY CMPT/JHC	PLANS ORD. ZIRK
SLOPED FACE PARAPET "LF"			SHEET 12

1131-08-83

8.25

DESIGN DATA

LIVE LOAD:

DESIGN RATING: MS-18
 INVENTORY RATING: MS-20
 OPERATIONAL RATING: MS-45
 MAXIMUM STANDARD PERMIT VEHICLE LOAD = 1110 KN
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 1.0 KN/m².

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — $f'_c = 28 \text{ MPa}$ ALL OTHER — $f'_c = 24 \text{ MPa}$
 BAR STEEL REINFORCEMENT, AASHTO M-31M, GRADE 420 — $f_y = 420 \text{ MPa}$
 1370mm PRESTRESSED GIRDERS, CONCRETE MASONRY — $f'_c = 45 \text{ MPa}$
 STRANDS - 13mm DIA. WITH ULTIMATE TENSILE STRENGTH OF 1860 MPa

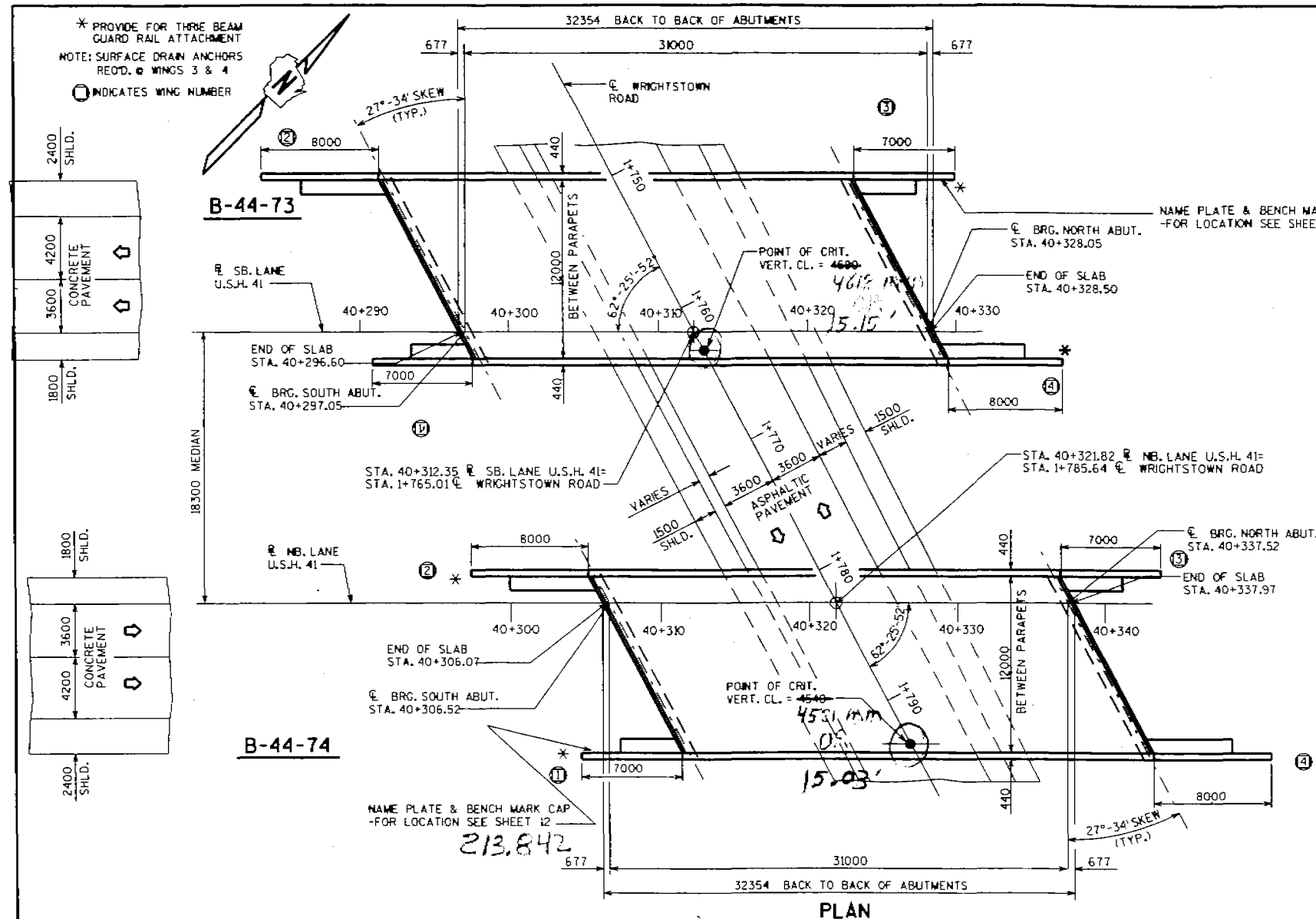
FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON #P 250 X 62 STEEL PILING
 DRIVEN TO A MINIMUM BEARING VALUE OF 490 KN PER PILE.
 ESTIMATED 26m LONG AT S. ABUT. AND 25m LONG AT N. ABUT.

TRAFFIC VOLUME

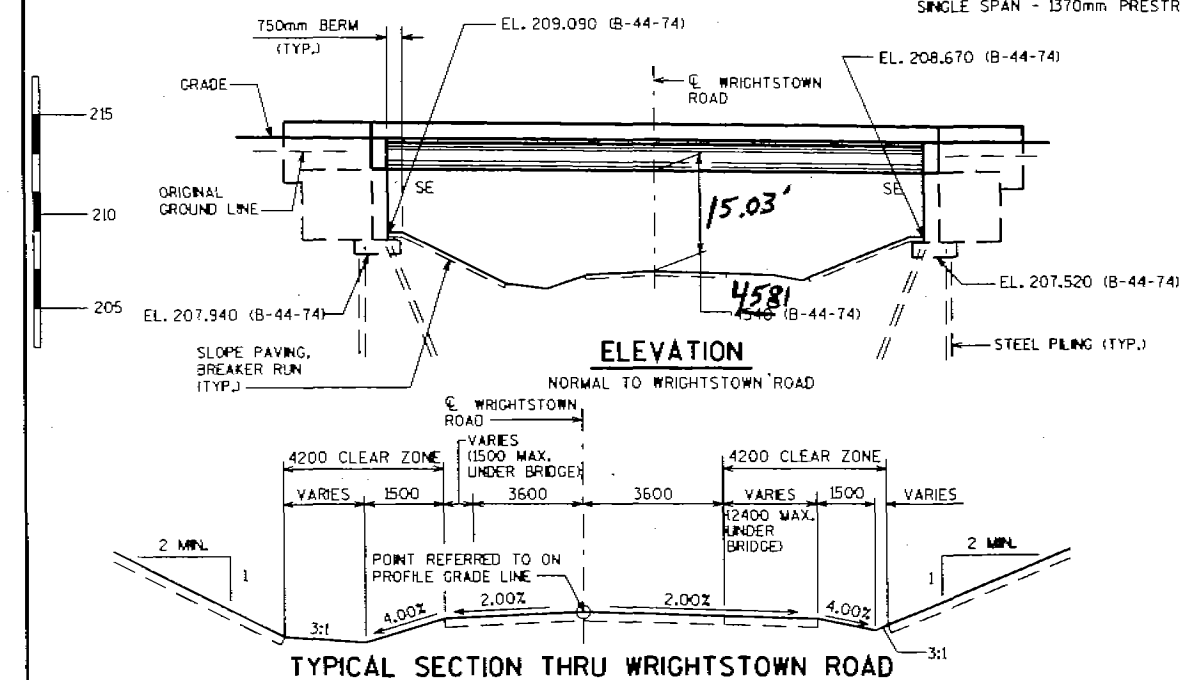
U.S.H. 41 WRIGHTSTOWN ROAD
 A.D.T. = 37,000 (2018) A.D.T. = 600 (2018)
 R.D.S. = 110 km/h R.D.S. = 70 km/h

* PROVIDE FOR THREE BEAM
 GUARD RAIL ATTACHMENT
 NOTE: SURFACE DRAIN ANCHORS
 RECD. @ WINGS 3 & 4
 ① INDICATES WING NUMBER



PLAN

SINGLE SPAN - 1370mm PRESTRESSED GIRDERS



ELEVATION

NORMAL TO WRIGHTSTOWN ROAD

TYPICAL SECTION THRU WRIGHTSTOWN ROAD

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUT. DETAILS
6. NORTH ABUTMENT
7. NORTH ABUT. DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. 1370mm PRESTRESSED GIRDER DETAILS
11. STEEL DIAPHRAGM
12. SLOPED FACE PARAPET "LF"

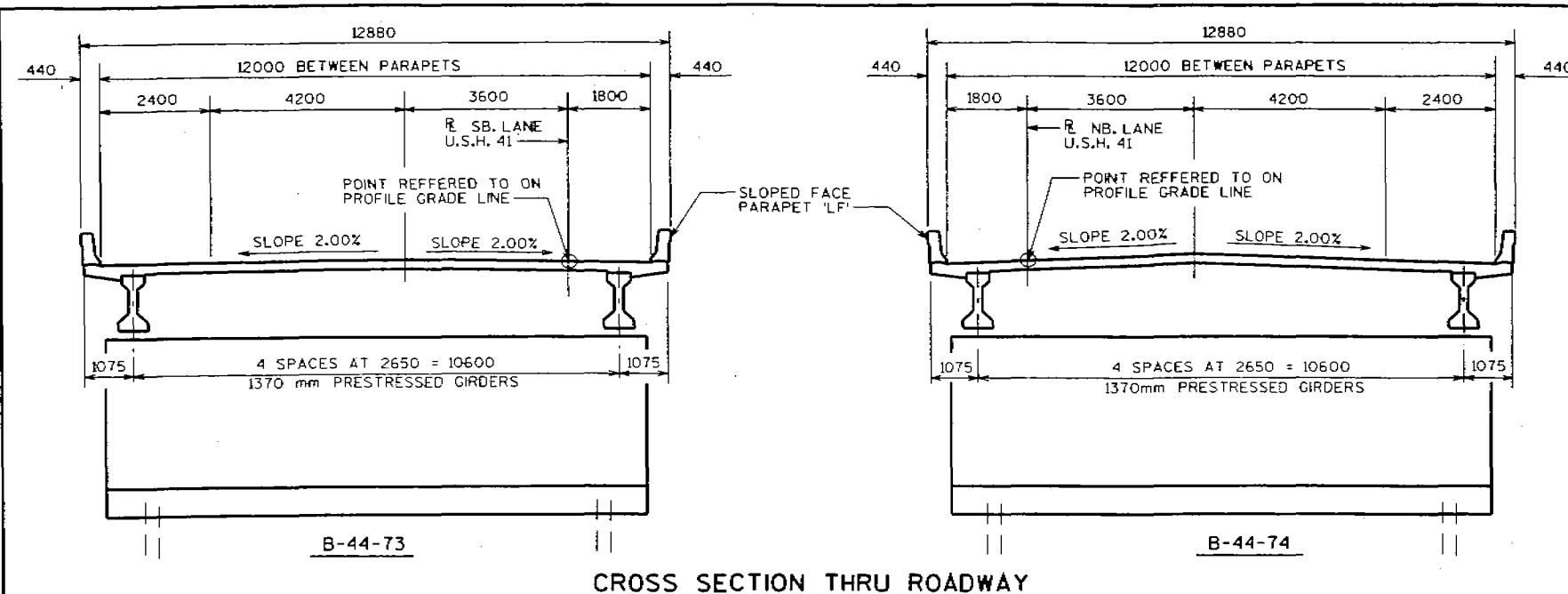
BRIDGE OFFICE CONTACT:
 JERRY ZIRK (608) 266-5163
 FINN HUBBARD (608) 266-8489

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
U.S.H. 41 OVER WRIGHTSTOWN ROAD			
COUNTY	OUTAGAMIE	TOWN/SHIP/VILLAGE	KAUKAUNA
DESIGN SPEC.	AASHTO 1996	LOAD MS-18	CONST. SPEC. 1996
DESIGNED BY	CHIA	DRAWN BY	JHG
	DESIGN CKD.	KTN	PLANS CKD. ZIRK
APPROVED			01-18-00
	CHIEF BRIDGE DESIGN ENGINEER		DATE
GENERAL PLAN			SHEET 1 OF 12
			DATE: FEB'98

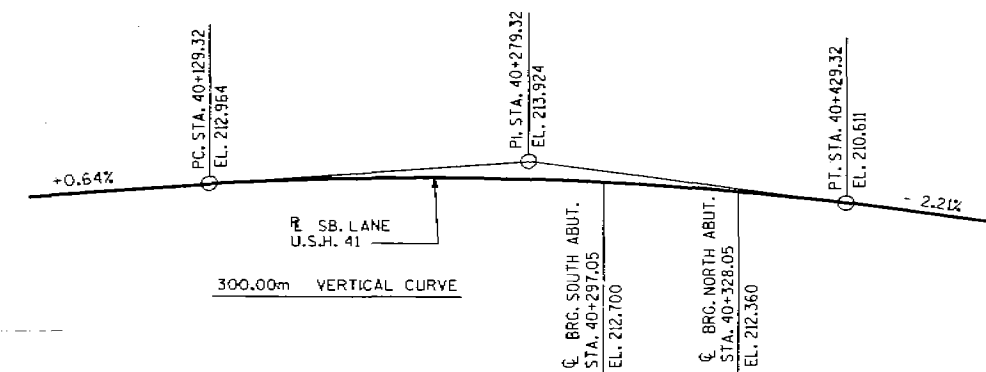
I.D. 1131-08-00G

DISTRICT CONTACT

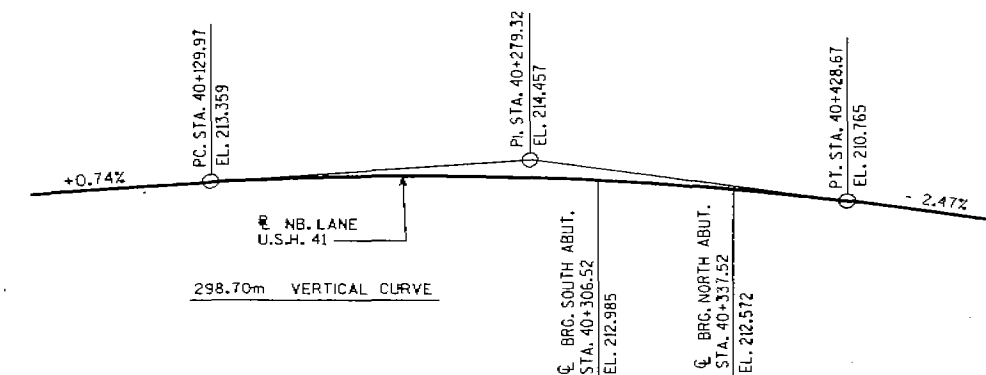
FILE: 749b.dgn
SCALE: 1/175



CROSS SECTION THRU ROADWAY

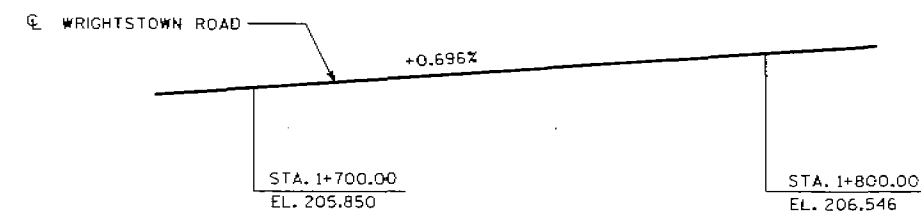


B-44-73



B-44-74

PROFILE GRADE LINE U.S.H. 41



PROFILE GRADE LINE WRIGHTSTOWN ROAD

TOTAL ESTIMATED QUANTITIES

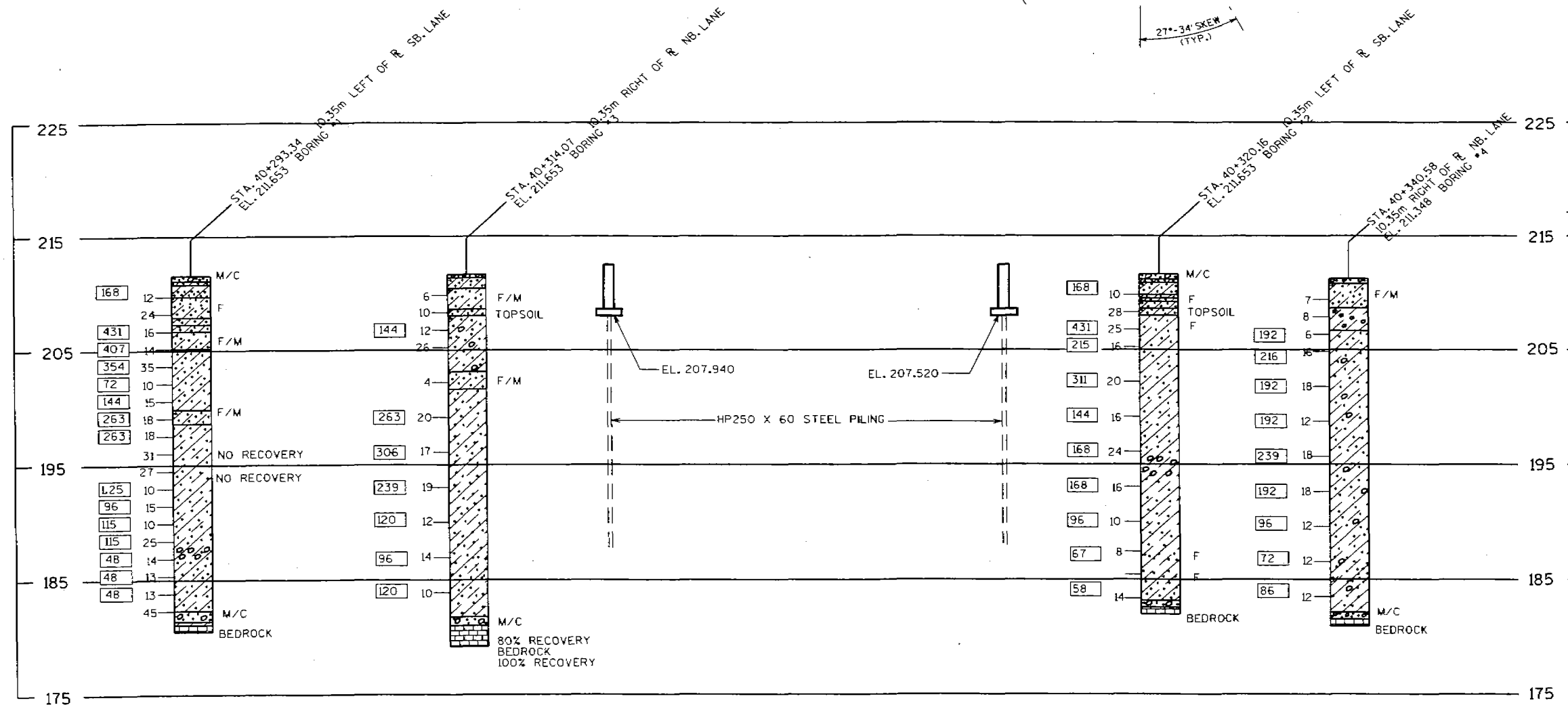
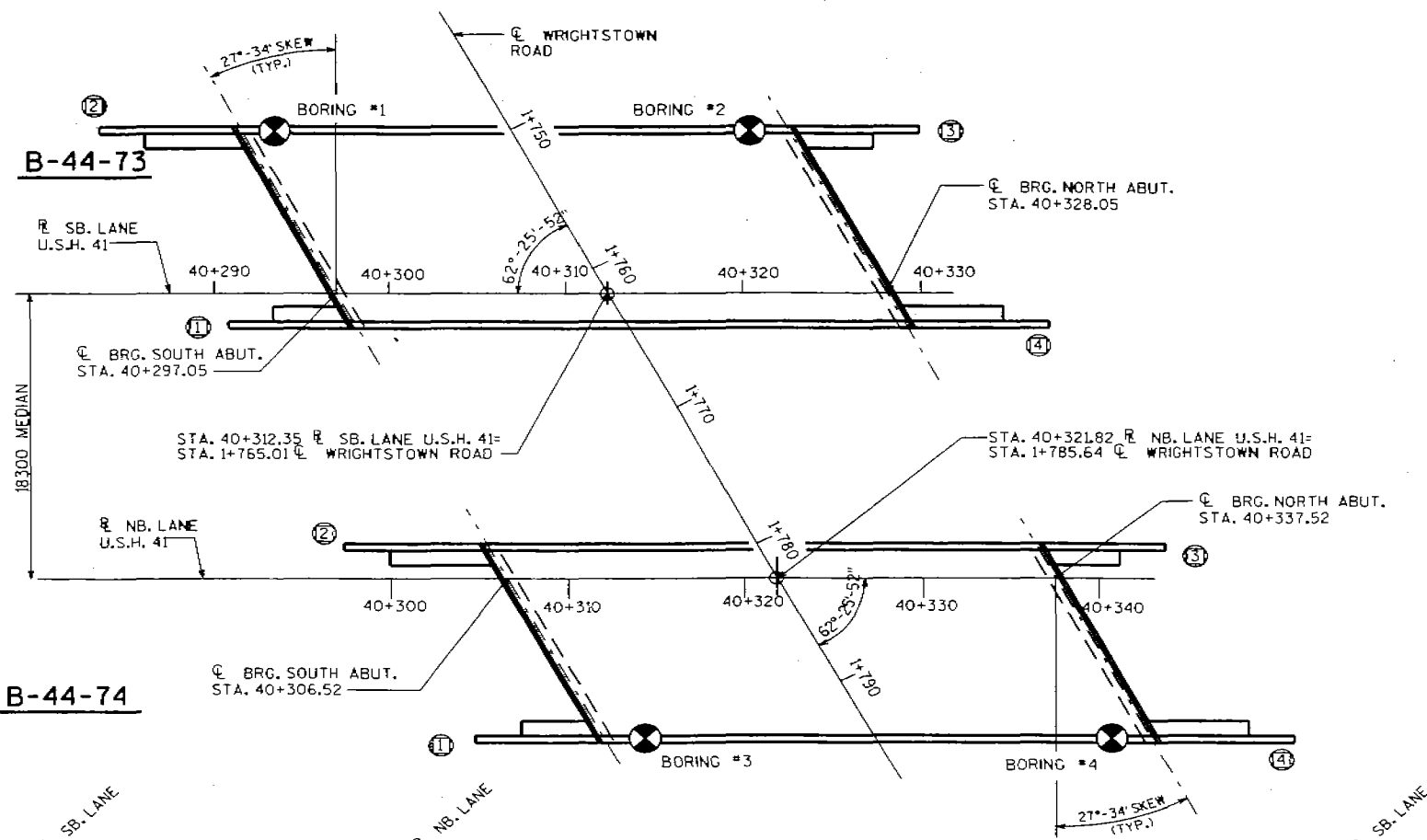
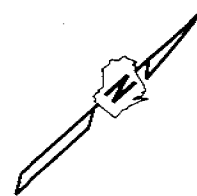
BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-44-74	L.S.				1
STRUCTURE BACKFILL	m ³		650	650	1300
CONCRETE MASONRY, BRIDGES	m ³	141	118	118	377
PROTECTIVE SURFACE TREATMENT	m ²	460			460
PRESTRESSED GIRDER, TYPE, 1370 mm	m	157			157
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	Kg		4230	4220	8450
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	Kg	14800	530	530	15860
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	10			10
STEEL PILING DELIVERED AND DRIVEN, HP250 x 62kg/m	m		442	425	867
RUBBERIZED MEMBRANE WATERPROOFING	m ²		7	7	14
SLOPE PAVING, BREAKER RUN	m ²		70	70	140
PIPE UNDERDRAIN, 150 mm	m		11	11	22
PIPE UNDERDRAIN, UNPERFORATED, 150 mm	m		6	6	12
GEOTEXTILE FABRIC, TYPE DF	m ²		20	20	40
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2			2
STEEL DIAPHRAGMS, STRUCTURE B-44-74	EACH	8			8
NON-BID ITEMS					
FILLER	SIZE				13 & 19

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 50 mm CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ALL REINFORCING BARS ARE METRIC AND THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE
 ALL DIMENSIONS MILLIMETERS (mm) UNLESS OTHERWISE NOTED.
 ALL STATIONS AND ALL ELEVATIONS ARE METERS (m).
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
 AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
 THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECT. 209.2.2 OF THE STD. SPEC'S, FOR GRADE 1 MATERIAL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY JHG	PLANS CKD. ZIRK
CROSS SECTION & QUANTITIES		SHEET 2	

FILE= 74gp.dgn
 SCALE = 75



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

MATERIAL SYMBOLS		
Topsoil	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock

LEGEND OF PROBING

Probing No. Sta. Elevation

95/152=95 Blows for 152mm Penetration

Probing taken with a 159.1Kg Wt. Falling 457mm on a 51mm O.D. Point.

7 Average Blows Per 305mm

Refusal 95/152

LEGEND OF BORING

Elev. Boring No. Sta.

Unconfined Strength KN/m^2 → 7.7

Blows Per 305mm Using 63.6 Kg Wt. Falling 762mm

Wash Sample

Shelby Tube—S.T.

Ground Water Elevation

No Ground Water Observed Above This Elevation

Sandy Gravel

Boulders or Cobbles

Sand

Silty Clay

So

Limestone

Unless otherwise specified, the blows per 305mm at the locations indicated are based on driving a 51mm O.D. x 35mm I.D. split spoon sampler with a 63.6Kg hammer having a free fall of 762mm. The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

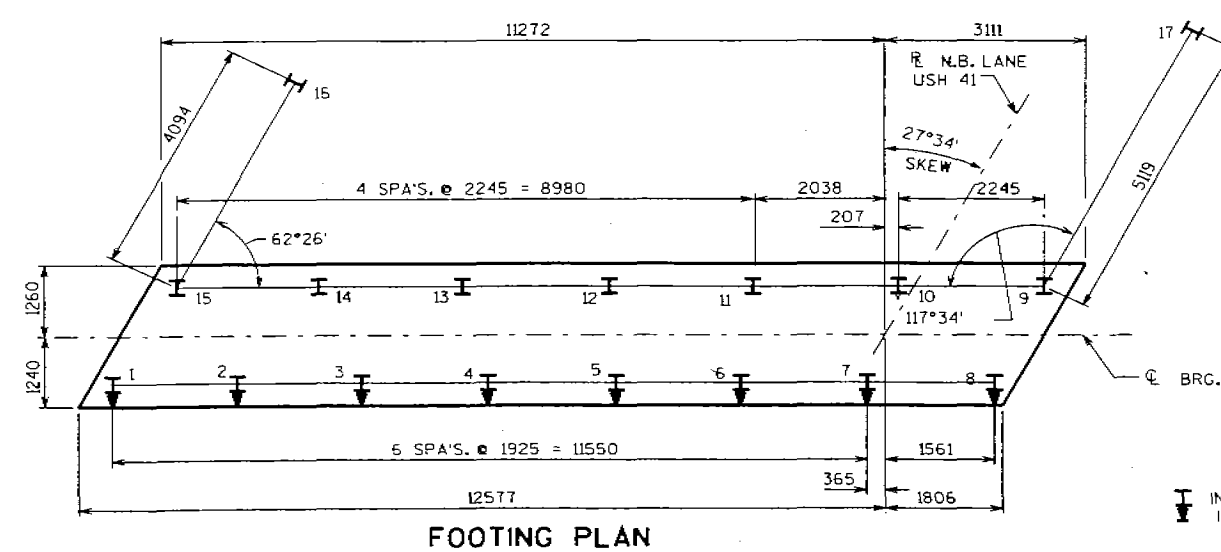
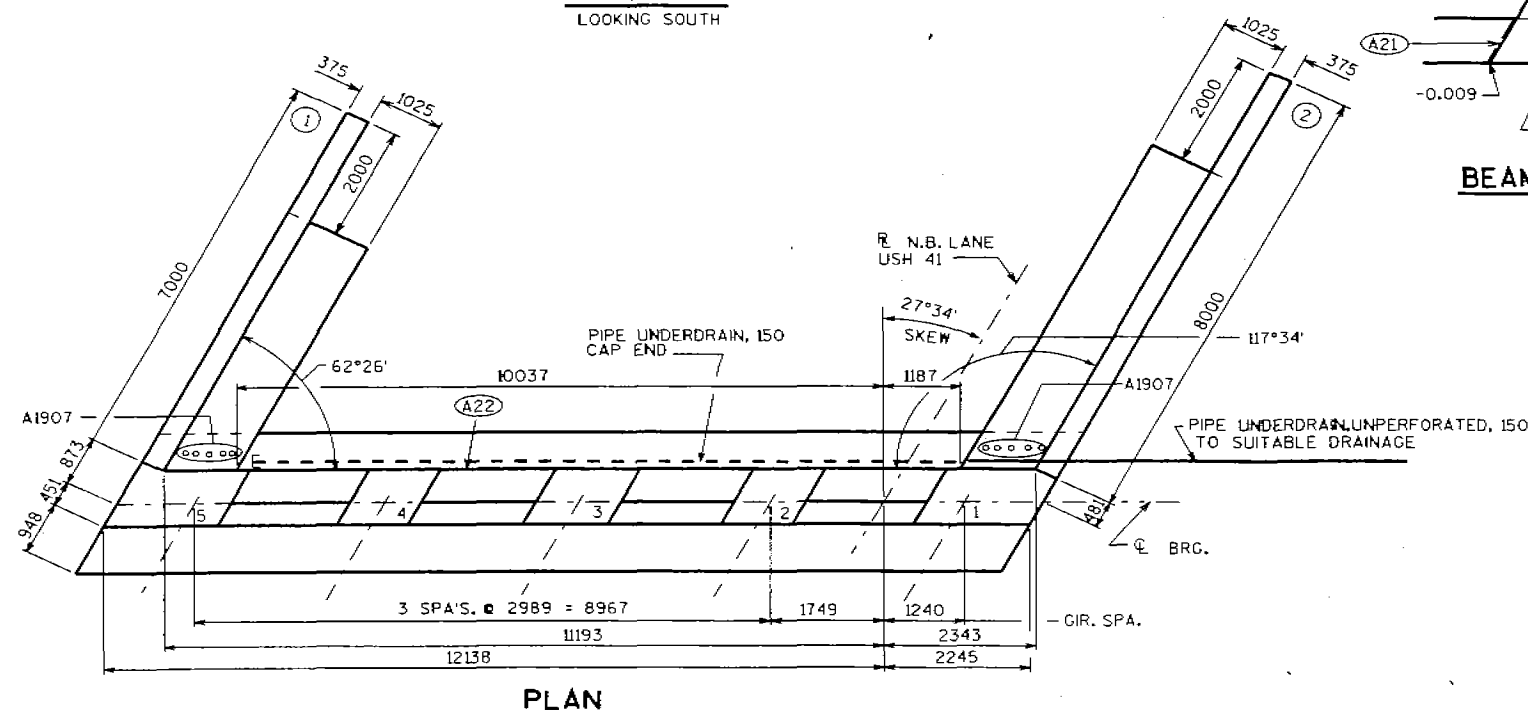
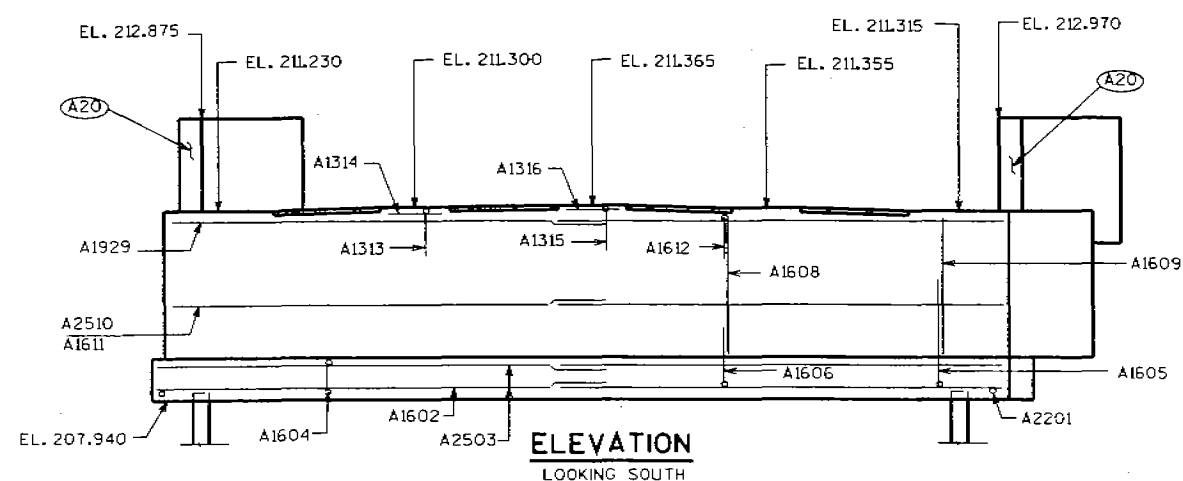
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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.

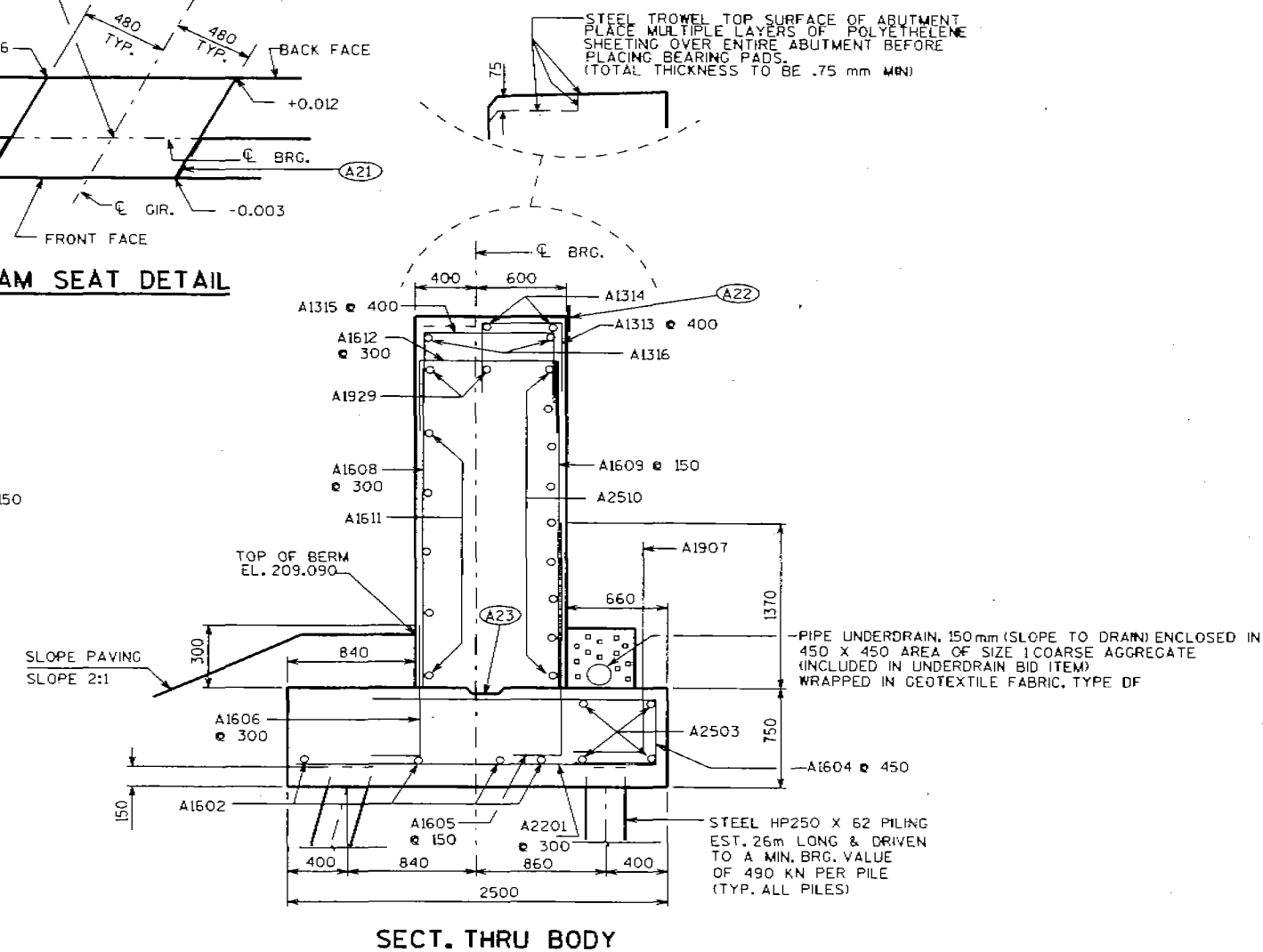
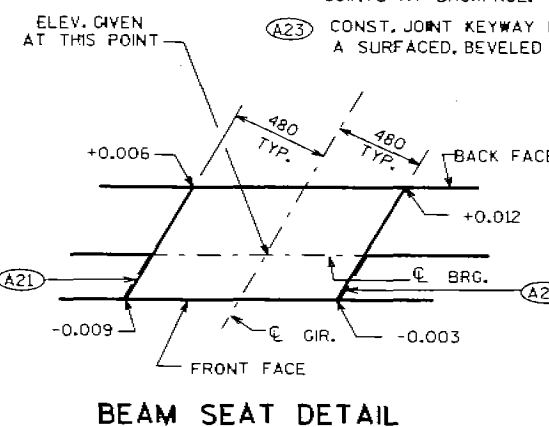
NO.	DATE	REVISION	BY

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY RIES/JHG	PLANS Ckd. ZIRK
SUBSURFACE EXPLORATION		SHEET 3	

FILE= 745011.DGN
SCALE= 200



- (A20) 13 mm FILLER (INCLUDED IN WING LENGTH):
SEAL EXPOSED HORIZ. & VERT. SURFACES OF
13 mm FILLER WITH NON-STAINING GRAY NON-
BITUMINOUS JOINT SEALER. (25 mm DEEP AND
HOLD 3 mm BELOW SURFACE OF CONCRETE).
EXTEND SEALER 75 mm BELOW GUTTER LINE
AT INSIDE FACE.
- (A21) 19 mm CORK UP VERT. FACES OF BEAM SEATS.
- (A22) 457 mm (18") RUBBERIZED MEMBRANE
WATERPROOFING SEAL ALL HORIZ. & VERT.
JOINTS AT BACKFACE.
- (A23) CONST. JOINT KEYWAY FORMED WITH
A SURFACED, BEVELED 38mm x 140mm.



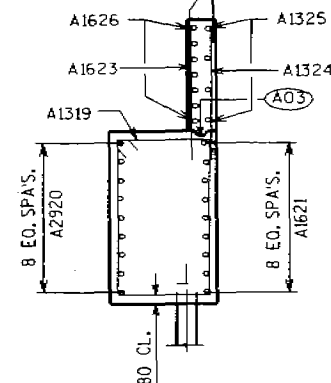
PILING DATA

AVE. LENGTH BELOW CUTOFF = 25.73 m
AVE. PENETRATION (BELOW GROUND) = 25.58 m
AVE. BEARING = 619 KN

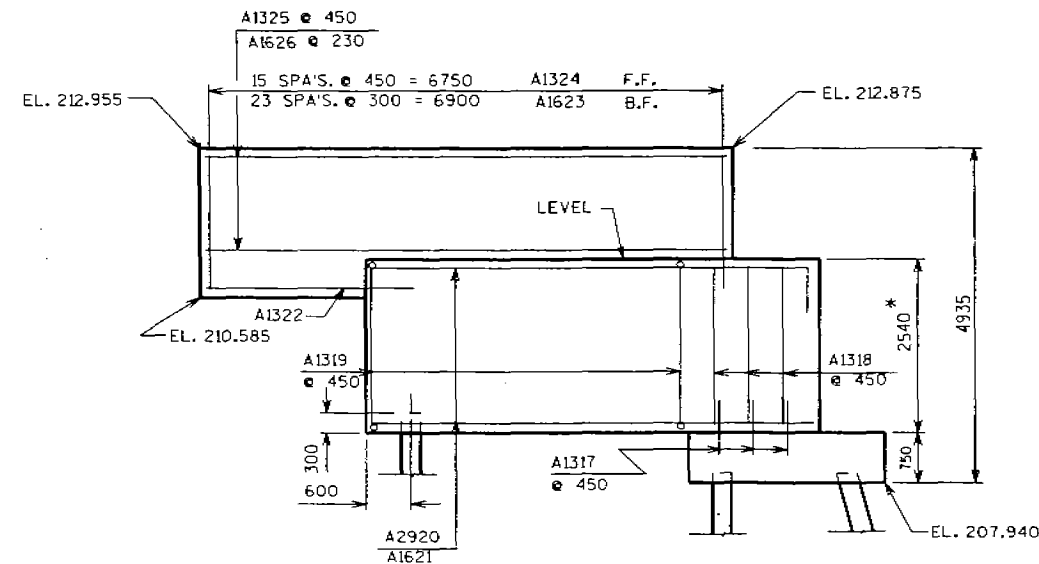
 INDICATES PILE BATTERED 1 IN 4
IN DIRECTION SHOWN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY	JHG PLANS O.K.D. ZARK
SOUTH ABUTMENT			SHEET 4

FILE= 74SA.DGN SCALE = 60

FOR PARAPET BARS AND
DETAILS SEE PARAPET SHEET

WING 1 SECT.



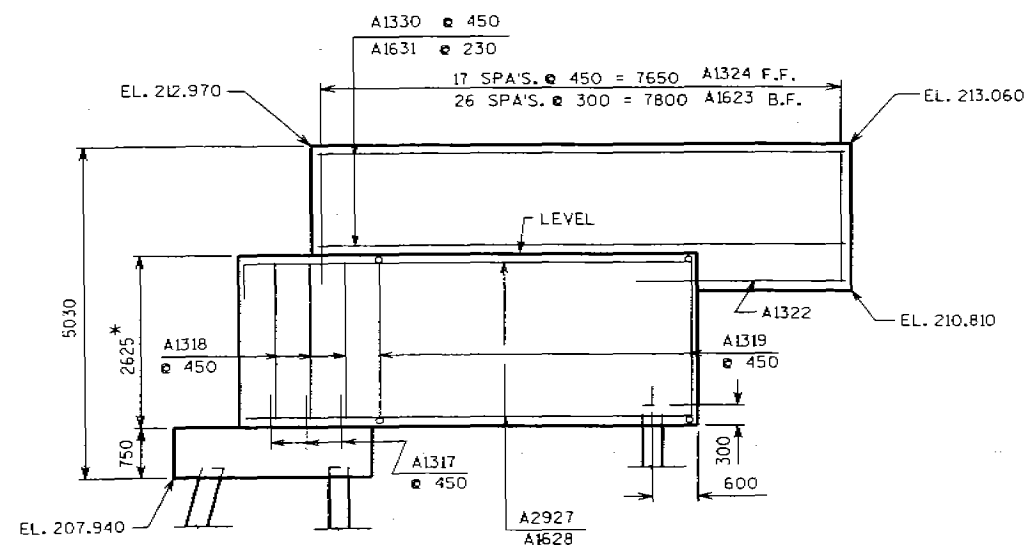
WING 1 ELEVATION

*AT & BRC.

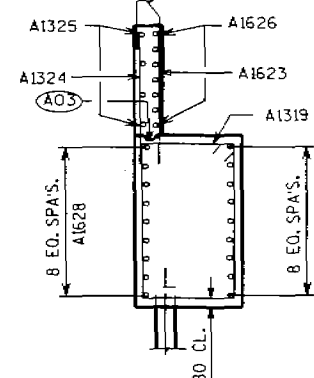
BILL OF BARS

NOTE: THE FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

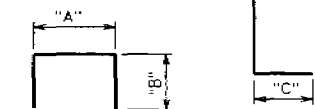
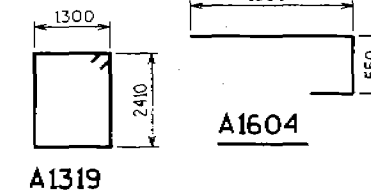
BAR MARK	QTY	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A2201		49	2400			FOOTING
A1602		8	7420			FOOTING
A2503		8	7920			FOOTING
A1604		31	2330	X		FOOTING
A1605		95	2190	X		FTG. DOWEL B.F.
A1606		49	1120	X		FTG. DOWEL F.F.
A1907		10	1510	X		FTG. DOWEL WING FILLETS
A1608		49	2490			BODY F.F.
A1609		95	2490			BODY B.F.
A2510		18	7920			BODY B.F.
A1611		10	7520			BODY F.F.
A1612		49	1420	X		BODY TOP
A1313		36	1170	X		BODY TOP
A1314		4	7445			BODY TOP
A1315		6	1590	X		BODY TOP @ GIR. 3
A1316		2	2500			BODY TOP @ GIR. 3
A1317		6	600			FTG. WING DOWELS F.F.
A1318		6	2490			WINGS F.F.
A1319		22	7600	X		WINGS STIRRUPS
A2920		9	5700	X		WING 1 HORIZ. B.F.
A1621		9	6190			WING 1 HORIZ. F.F.
A1322		4	2450			WINGS F.F. & B.F. HORIZ.
A1623		51	2270			WINGS B.F. VERT.
A1324		34	2270			WINGS F.F. VERT.
A1325		4	6900			WING 1 HORIZ. F.F.
A1626		7	6900			WING 1 HORIZ. B.F.
A2927		9	7830	X		WING 2 HORIZ. B.F.
A1628		9	6850			WING 2 HORIZ. F.F.
A1929		4	7595			BODY TOP
A1330		4	7900			WING 2 HORIZ. F.F.
A1631		7	7900			WING 2 HORIZ. B.F.



WING 2 ELEVATION

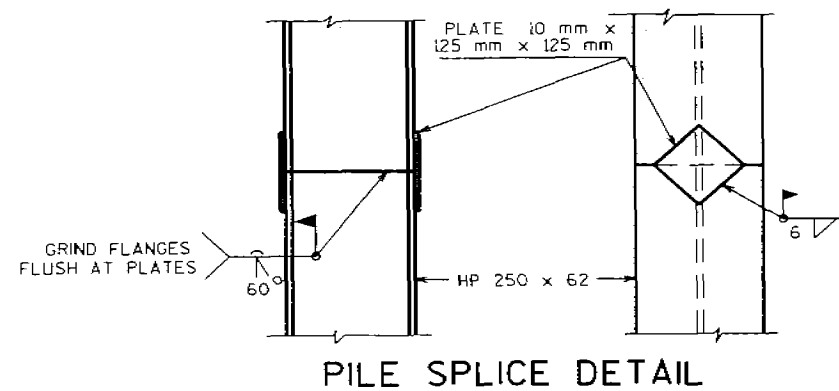
FOR PARAPET BARS AND
DETAILS SEE PARAPET SHEET

WING 2 SECT.



MARK	A	B	C
A1313	500	375	---
A1315	900	375	---
A1605	---	---	260
A1606	---	---	260
A1907	---	---	310
A1612	900	300	---
A2920	---	---	300
A2927	---	---	300

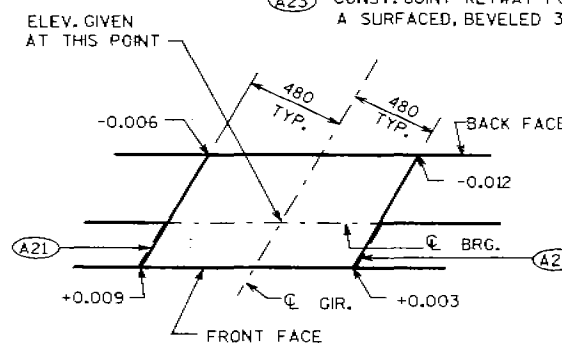
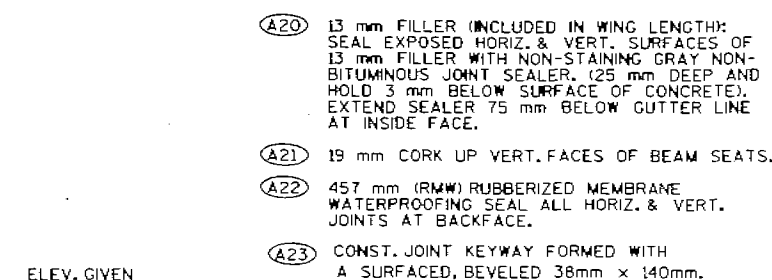
A03 OPTIONAL CONST. JOINT: KEYWAY FORMED
BY SURFACED BEVELED 38 mm x 140 mm, (457
mm R.M.W. @ B.F. & 19 mm "V" GROOVE @ F.F.
IF JOINT IS USED).



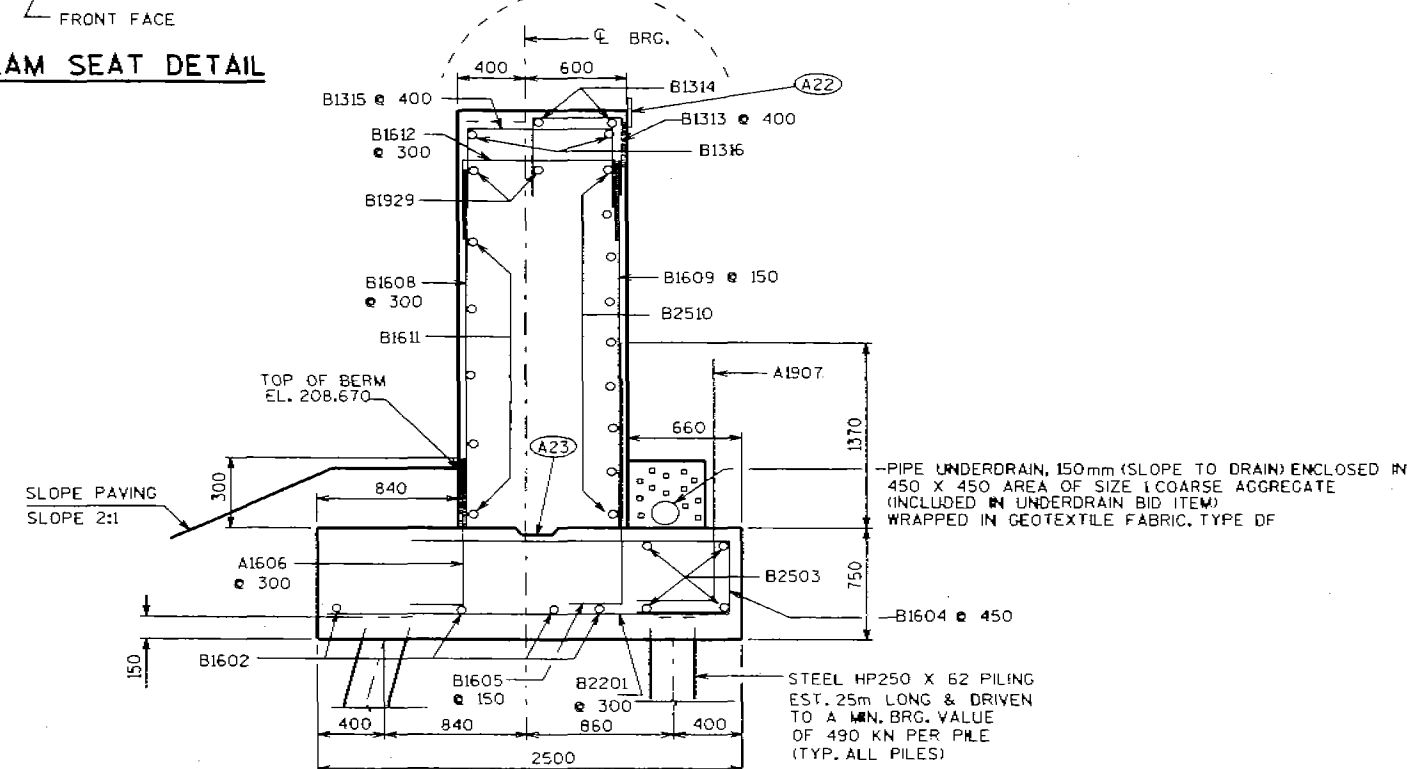
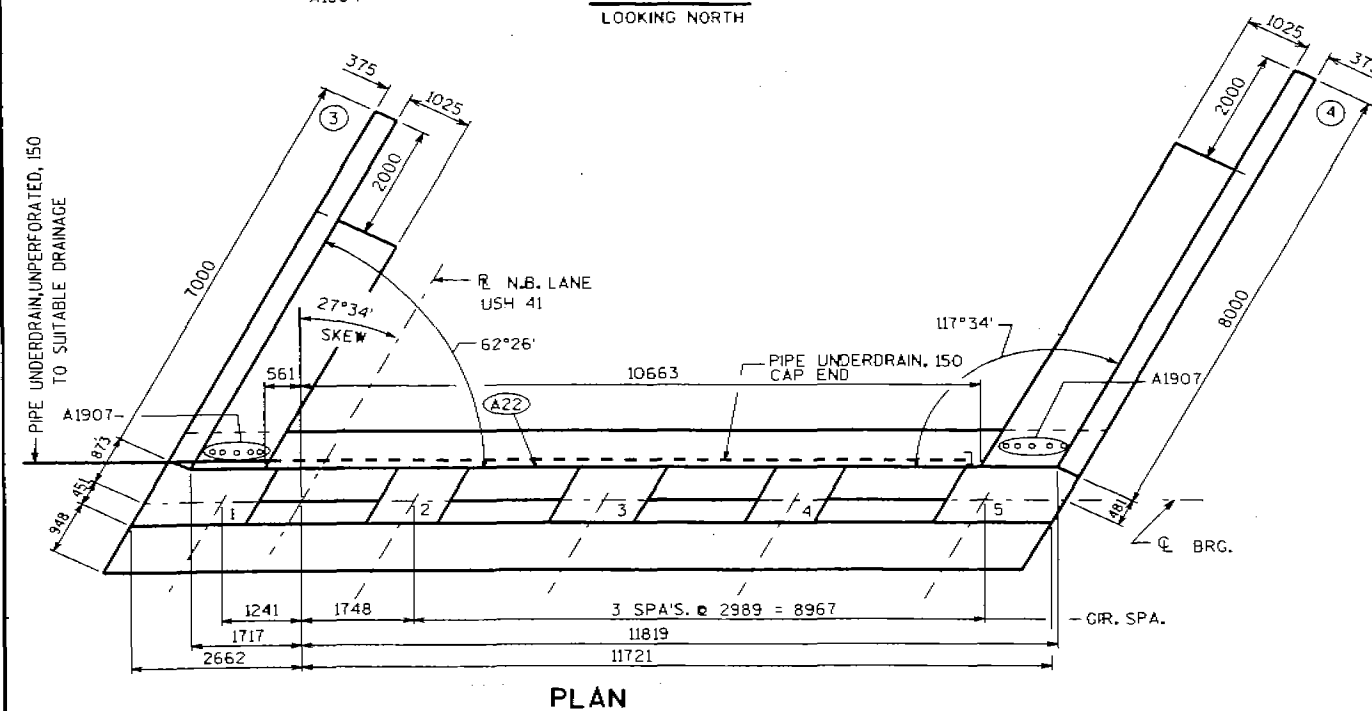
PILE SPLICE DETAIL

NO.	DATE	REVISION	BY

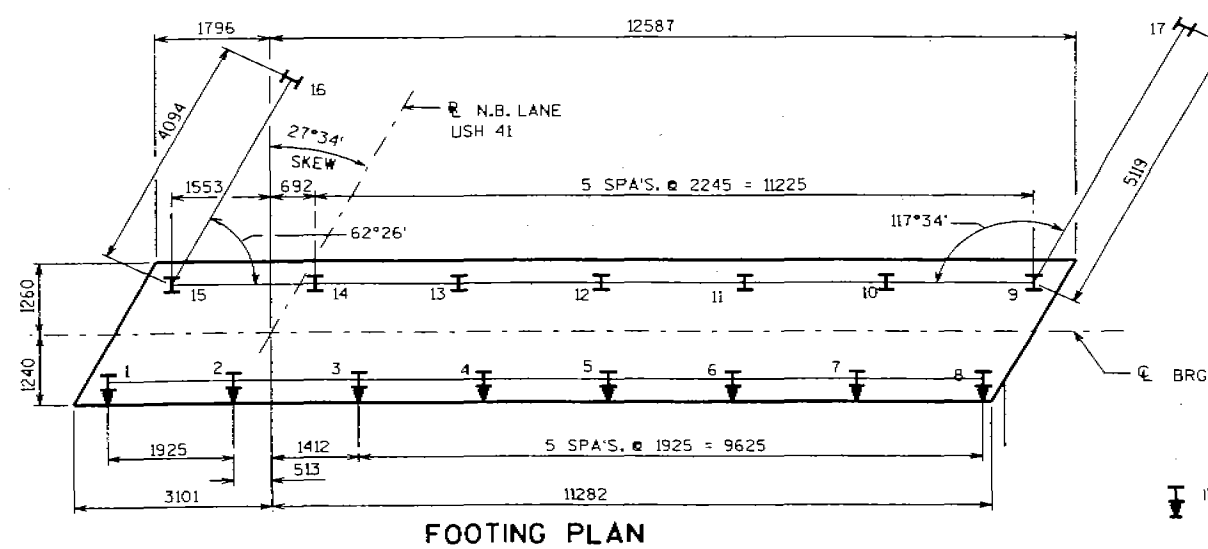
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY JHG	PLANS CRD. ZIRK
SOUTH ABUT. DETAILS			SHEET 5



BEAM SEAT DETAIL



SECT. THRU BODY



FOOTING PLAN

 INDICATES PILE BATTERED 1 IN 4
IN DIRECTION SHOWN

PILING DATA

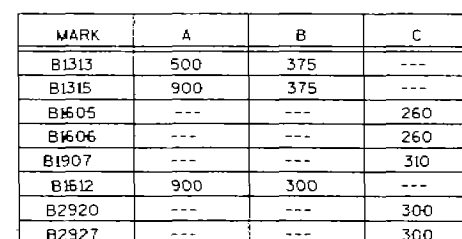
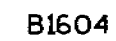
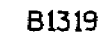
AVE. LENGTH BELOW CUTOFF = 25.04 m

AVE. PENETRATION (BELOW GROUND) = 24.89 m

AVE. BEARING = ROCK, Refusal

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY	JHG PLANS CHKD. 218
NORTH ABUTMENT		SHEET 6	

X
FILE = 7ANA.DGN SCALE = 60

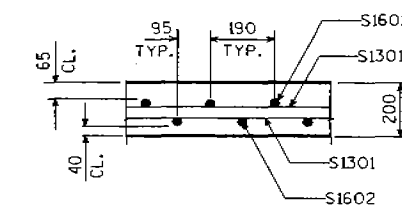


(A21) A1330 BARS SPACED @ 300 mm CTRS. EMBED 250 mm MIN. INTO WING CONC. LOCATE 75 mm DOWN FROM TOP OF WING @ BACKFACE TO 150 mm DOWN @ WING TIP. (DRILLED IN EPOXY) ANCHORED 13M BARS 560 mm L.G. MAY BE USED. COST INCIDENTAL TO BID ITEM. "HIGH STRENGTH BAR STEEL BEING".

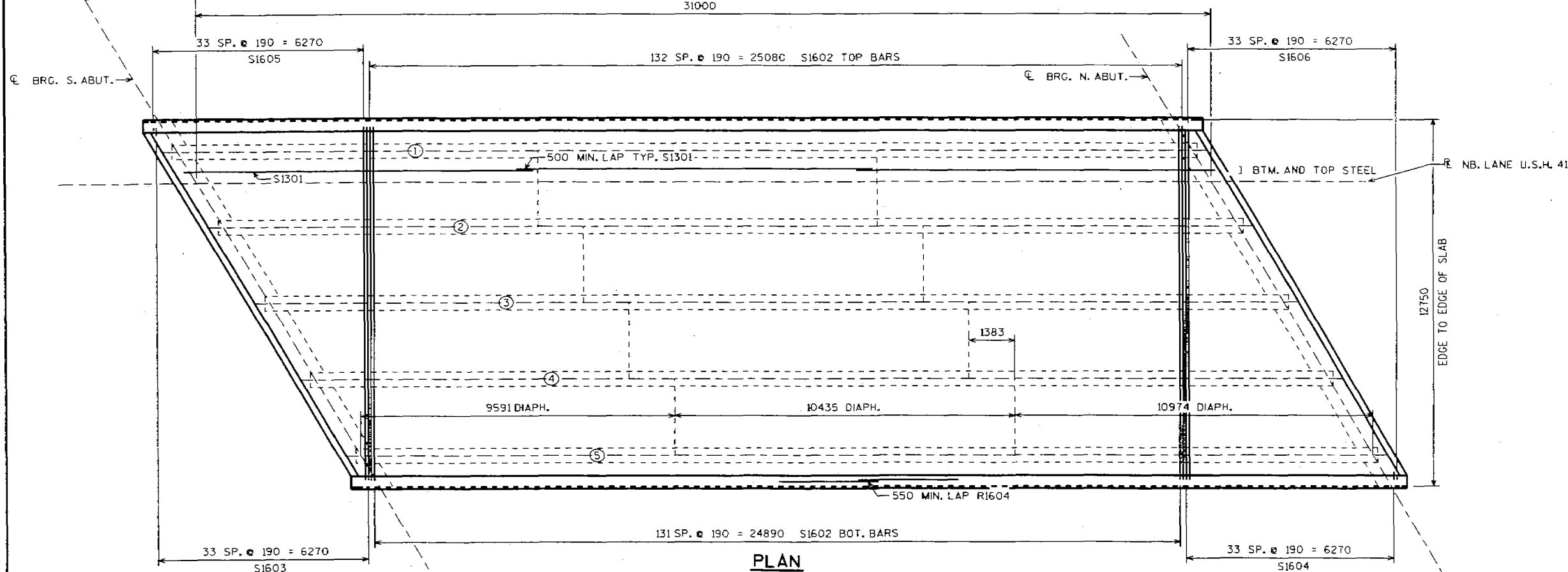
NOTE: THE FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B2201		49	2400			FOOTING
B1602		8	7420			FOOTING
B2503		8	7920			FOOTING
B1604		31	2330	X		FOOTING
B1605		95	2190	X		FTG. DOWEL B.F.
B1606		49	1120	X		FTG. DOWEL F.F.
B1907		10	1510			FTG. DOWEL WING FILLETS
B1608		49	2480			BODY F.F.
B1609		95	2480			BODY B.F.
B2510		18	7920			BODY B.F.
B1611		10	7520			BODY F.F.
B1612		49	1420	X		BODY TOP
B1313		36	1170	X		BODY TOP
B1314		4	7445			BODY TOP
B1315		6	1590	X		BODY TOP @ GIR. 3
B1316		2	2500			BODY TOP @ GIR. 3
B1317		6	600			FTG. WING DOWELS F.F.
B1318		6	2480			WINGS F.F.
B1319		22	7580	X		WINGS STIRRUPS
B2920		9	5700			WING 3 HORIZ. B.F.
B1621		9	6190			WING 3 HORIZ. F.F.
B1322		4	2450			WINGS F.F. & B.F. HORIZ.
B1623		51	1935			WINGS B.F. VERT.
B1324		34	1935			WINGS F.F. VERT.
B1325		4	6900			WING 3 HORIZ. F.F.
B1626		7	6900			WING 3 HORIZ. B.F.
B2927		9	7830			WING 4 HORIZ. B.F.
B1628		9	6850			WING 4 HORIZ. F.F.
B1929		4	7595			BODY TOP
B1330		4	7900			WING 4 HORIZ. F.F.
B1631		7	7900			WING 4 HORIZ. B.F.
B1332		51	600			SURFACE DRAIN DOWELS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1966	DRAWN BY	JHG PLANS O.D. ZIRK
NORTH ABUT.		SHEET 7	
DETAILS			



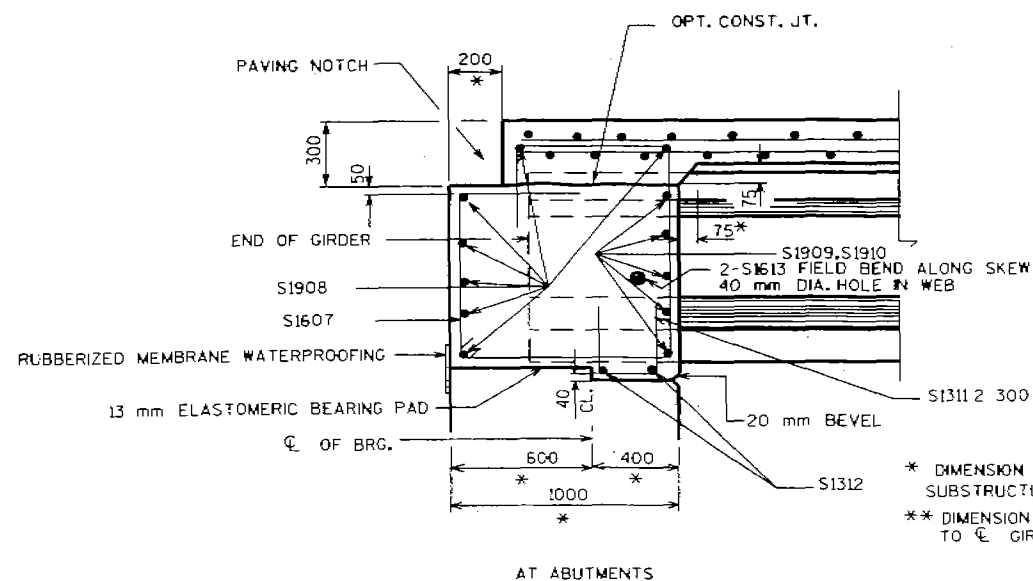
SECTION S-S



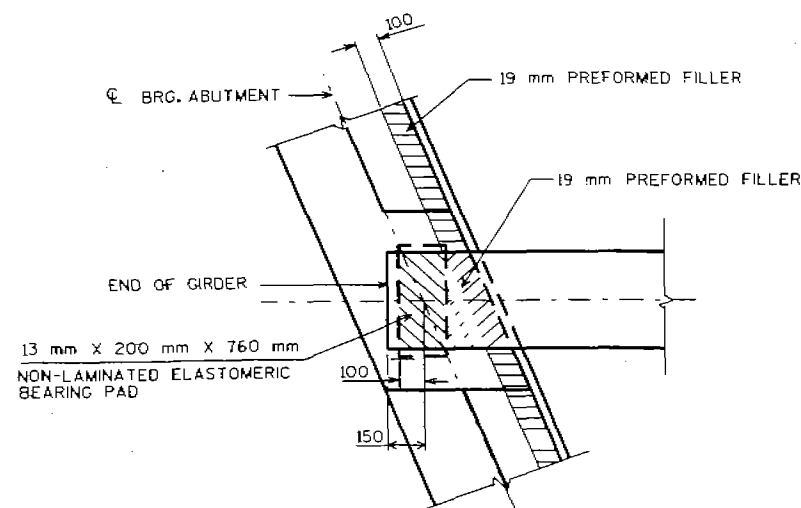
PLAN

THU JAN 08 10:14:34 1998*
B-44-74

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



PART LONGIT. SECTION



BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

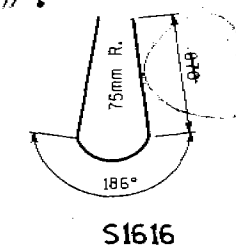
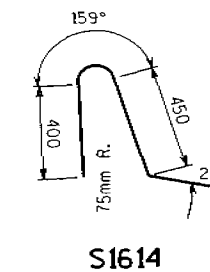
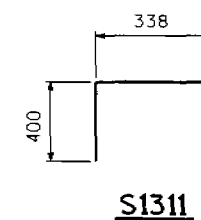
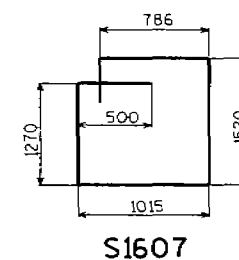
	S. ABUT.	1/8	2/8	3/8	4/8	5/8	6/8	7/8	N. ABUT.
GIR. 1	212.970	212.920	212.875	212.825	212.775	212.725	212.670	212.615	212.560
GIR. 2	213.005	212.960	212.910	212.860	212.810	212.760	212.705	212.650	212.590
GIR. 3	213.015	212.970	212.925	212.875	212.820	212.770	212.715	212.655	212.600
GIR. 4	212.950	212.900	212.850	212.800	212.750	212.695	212.640	212.585	212.525
GIR. 5	212.880	212.830	212.780	212.730	212.680	212.625	212.570	212.510	212.450

BILL OF BARS

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BEND	BAR SERIES	LOCATION
S1301	X	405	10925			LONGITUDINAL TOP & BOTTOM
S1602	X	265	12650			TRANSVERSE TOP AND BOTTOM
S1603	X	34	6550	▲		TRANSVERSE TOP CUT LEFT
S1604	X	34	6550	▲		TRANSVERSE TOP CUT RIGHT
S1605	X	34	6375	▲		TRANSVERSE BOT CUT
S1606	X	34	6375	▲		TRANSVERSE BOT CUT RIGHT
S1607	X	88	5475	X		ABUT. DIAPHRAGM
S1908	X	28	7665			ABUT. DIAPHRAGM
S1909	X	40	2125			ABUT. DIAPHRAGM
S1910	X	20	725			ABUT. DIAPHRAGM
S1311	X	64	1150	X		ABUT. DIAPHRAGM
S1312	X	16	1800			ABUT. DIAPHRAGM
S1613	X	20	2000			ABUT. DIAPHRAGM
S1614	X	322	1430	X		SLAB & PARAPET
S1615	X	30	11085			PARAPET
S1616	X	322	1980	X		PARAPET

NOTE: HAD TO CUT ALL THE S1616 BARS THAT GO INTO THE PARAPET WALL. THE WALL IS ONLY 0.310 M HIGH.



BAR SERIES TABLE
BUNDLE AND TAG EACH SERIES SEPARATELY

MARK	NO. REQ'D.	LENGTH
S1603	1 SERIES OF 34	550 TO 12575
S1604	1 SERIES OF 34	550 TO 12575
S1605	1 SERIES OF 34	375 TO 12400
S1606	1 SERIES OF 34	375 TO 12400

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE		B-44-74	
CONST. SPEC.	1996	DRAWN BY	CMPT/JHG
SUPERSTRUCTURE DETAILS		PLANS CKD.	ZIRK
		SHEET	9

GIRDER NOTES

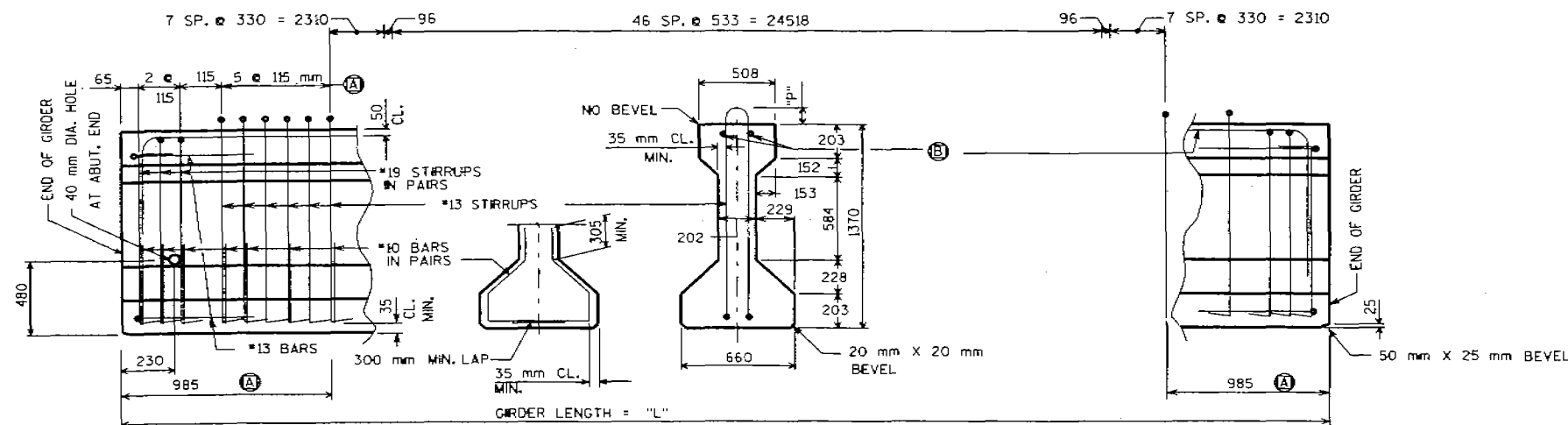
TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 50 mm OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 13 mm ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 1860 MPa AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF #13 STIRRUPS 115 mm AND #16 STIRRUPS 150 mm.

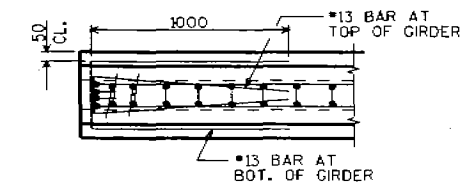
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



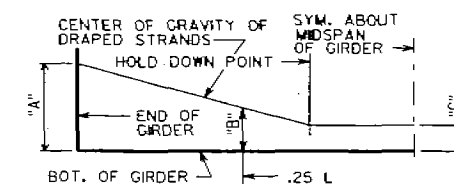
SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END
(B) 2-BARS BEND DOWN 16 BAR DIA. AT ENDS

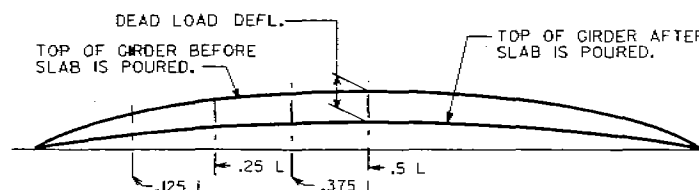
(SPAN 1) 2 #13, 600 MIN. LAP



TOP VIEW OF GIRDER ENDS



DRAPED STRAND PROFILE

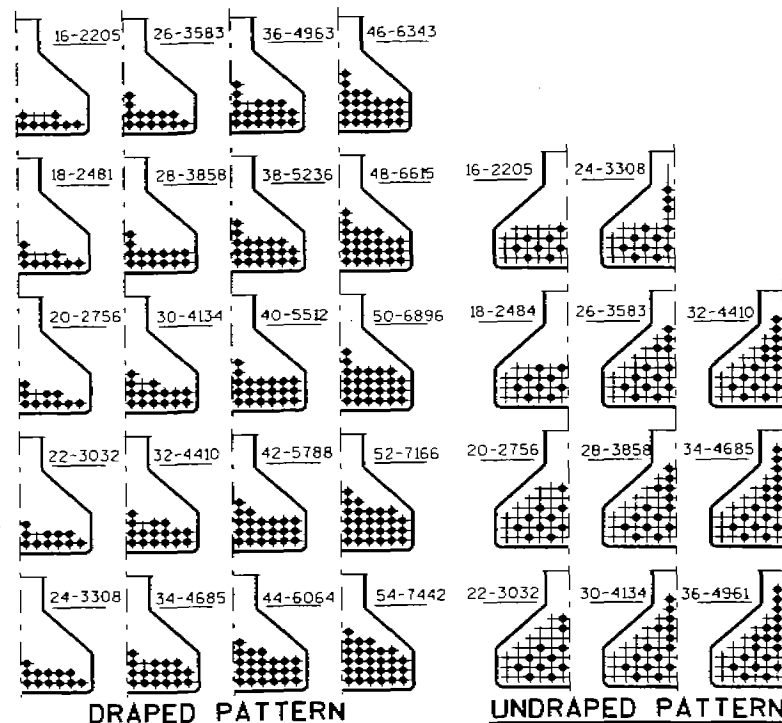


DEAD LOAD DEFLECTION DIAGRAM

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

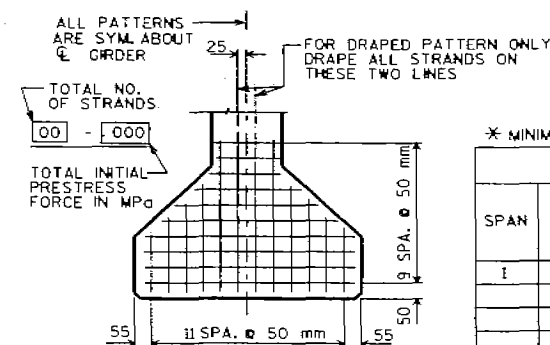
GIRDER DATA

SPAN	GIRDER LENGTH "L" (mm)	DEAD LOAD DEFL. (mm)				CONC. STRGTH. F'c (MPa)	"P"	TOTAL NO. OF STRANDS	F'ci (MPa) *	DRAPED PATTERN (mm)				UNDRAPE PATTERN TOTAL NO. OF STRANDS	F'ci (MPa) *
		.125	.25	.375	.5					"A"	"B" MIN.	"B" MAX.	"C"		
I	31300	17	29	36	39	45	150	48	36	1194	432	508	178	0	0

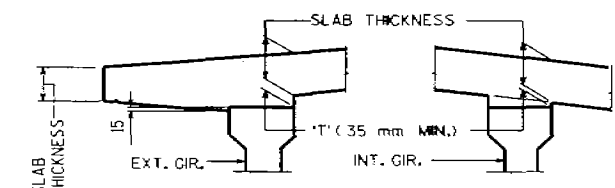


DRAPED PATTERN

UNDRAPED PATTERN



TYP. STRAND PATTERN



SLAB HAUNCH DETAIL

IF 35 mm MINIMUM HAUNCH HEIGHT 'T' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY BRIDGE OFFICE FOR HAUNCH HEIGHTS OVER 100 mm.

TO DETERMINE 'T', ELEV'S. OF TOP OF GIR'S. AT C. OF SUBSTRUCTURE UNITS & AT 0.25 POINTS OF EACH SPAN SHALL BE TAKEN, THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

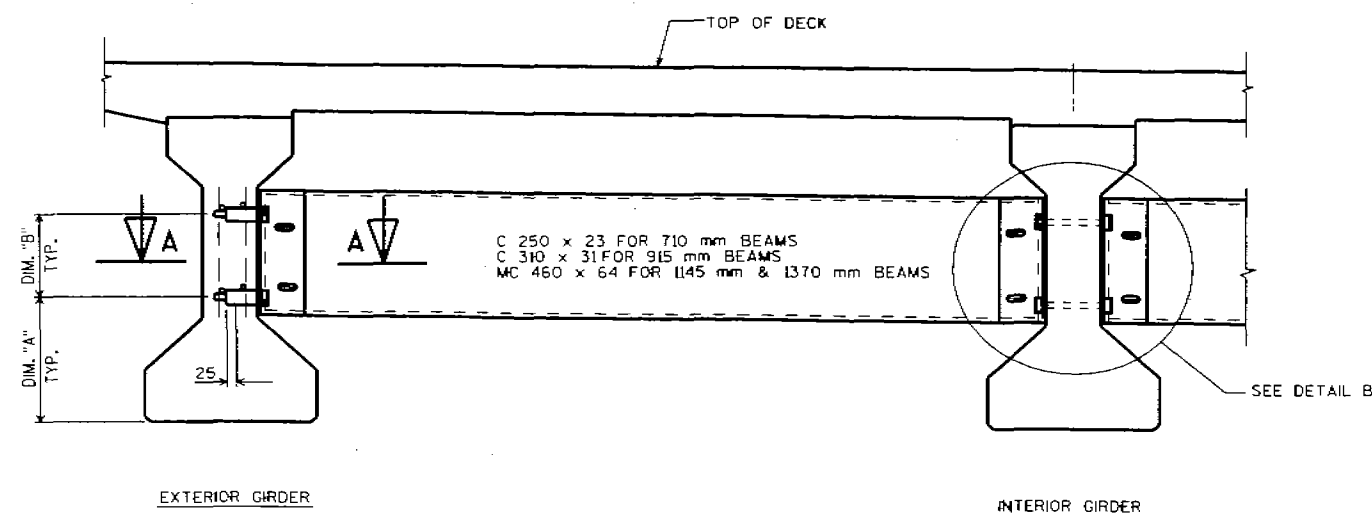
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY CMPT/JHG	PLANS CND. ZIRK
1370 mm PRESTRESSED GIRDER DETAILS			SHEET 10

1131-08-83

8.35

TABLE

GIRDER HEIGHT mm	DIM. "A" mm	DIM. "B" mm	DIM. "C" mm	DIM. "D" mm
710	320	165	260	68
915	370	264	359	92
1145	435	366	461	67
1370	500	470	565	119



PART TRANSVERSE SECTION AT DIAPHRAGM

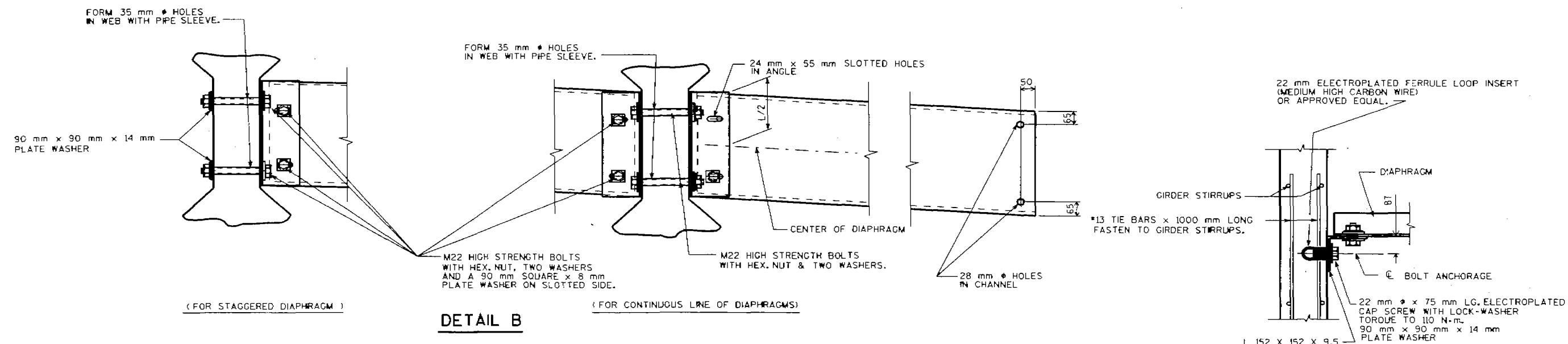
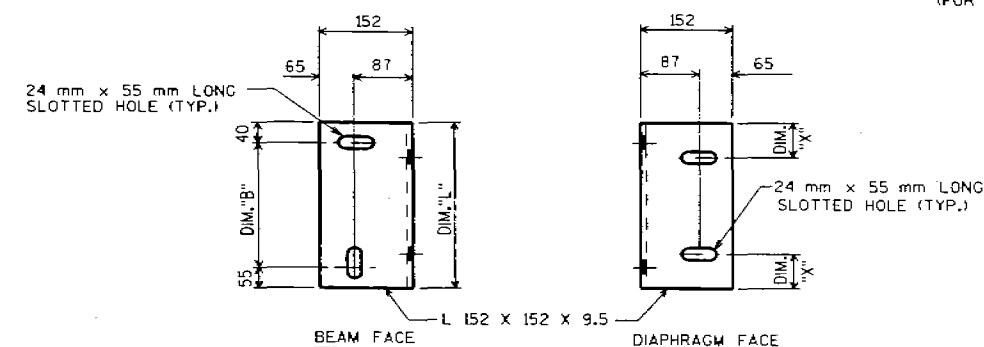
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM".

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 M GRADE 250. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 M TYPE L.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 M AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

SECT. A-A
(FOR EXTERIOR ATTACHMENT)

DIAPHRAGM SUPPORT

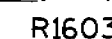
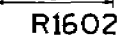
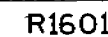
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY CMPT/JHG	PLANS CKD. ZIKK
STEEL DIAPHRAGM			SHEET 11

12-96

THU JAN 08 10:14:31 1998*



BAR MARK	COMT	S. ABUT.	N. ABUT.	LENGTH	BENT	LOCATION
R1601	X	28	28	1400	X	PARAPET VERT.
R1602	X	16	16	960	X	PARAPET VERT.
R1603	X	60	60	1430	X	PARAPET VERT.
R1604	X	4	4	6900		PARAPET HORIZ.
R1605	X	86	86	1470	X	PARAPET VERT.
R1606	X	1	1	6300	X	PARAPET HORIZ.
R1607	X	4	4	7900		PARAPET HORIZ.
R1608	X	1	1	7900		PARAPET HORIZ.



R1606, R1608



NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

① CONST. JOINT - STRIKE OFF
AS SHOWN.

NO.	DATE	REVISION	BY
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STRUCTURE B-44-74			
CONST. SPEC.	1996	DRAWN BY CMPT/JHC	PLANS C'D. ZKR
SLOPED FACE PARAPET "LF"			SHEET 12