STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PINE RIVER BRIDGE AND APPROACHES

(HILLVIEW ROAD)

TOWN ROAD
LINCOLN COUNTY

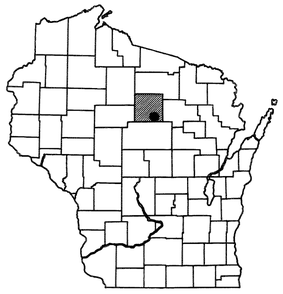
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9857-02-70	———	———

STATE PROJECT NUMBER

9857-02-70

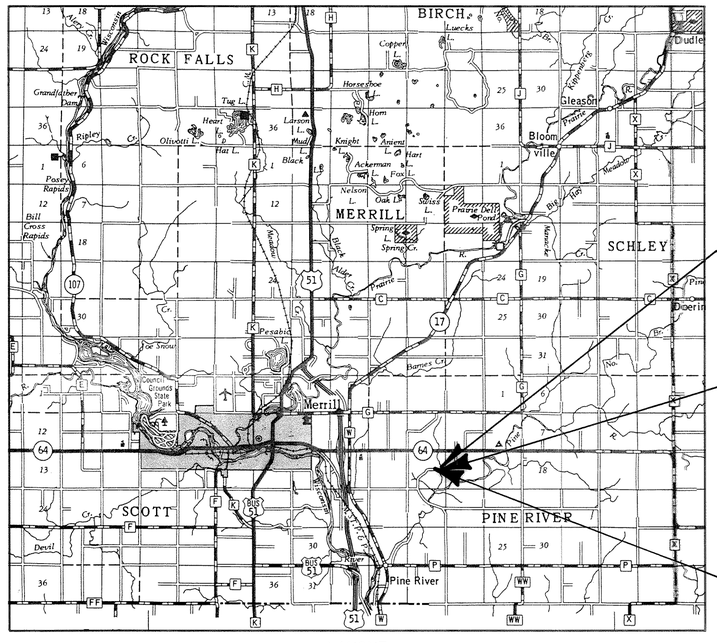
INDEX OF SHEETS

TOTAL SHEETS = 20



N

R-7-E



LAYOUT

SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.081 MI.

STRUCTURE B-35-110

END PROJECT
STA. 12+00

T-31-N

BEGIN PROJECT
STA. 7+70

Y = 487,800 (±200')
X = 2,104,700 (±200')

THE COORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM, CENTRAL ZONE. SCALED FROM U.S.G.S. TOPOGRAPHIC MAP, PINE DELLS QUAD. FOR IDENTIFICATION ONLY.

DESIGN DESIGNATION

A.D.T.	(1988)	=	90
A.D.T.	(2011)	=	125
D.H.V.		=	12
D.		=	50-50
T.		=	10%

CONVENTIONAL SIGNS

COUNTY LINE		COMBUSTIBLE FLUIDS (UNDER PRESSURE)	CAUTION
CORPORATE LIMITS		UNDERGROUND UTILITIES	
PROPERTY LINE		GAS	G
LOT LINE		ELECTRIC	E
LIMITED HIGHWAY EASEMENT		TELEPHONE	T
EXISTING RIGHT OF WAY		SERVICE PEDESTAL	TP
NEW RIGHT OF WAY		CABLE MARKER	
REFERENCE LINE		POWER POLE	
SLOPE INTERCEPT		TELEPHONE POLE	
ORIGINAL GROUND		RAILROADS	
MARSH OR ROCK PROFILE		MARSH	
CULVERT IN PLACE		WOODED AREA	
CULVERT REQUIRED			
CULVERT REQUIRED (Profile)			

APPROVED
FOR
LINCOLN COUNTY

12/4/89 — DATE
COUNTY HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

OWEN AYRES & ASSOCIATES INC.
CONSULTING ENGINEERS

EAU CLAIRE WISCONSIN

WISCONSIN DAVID H. CHARLTOFF E-15724 EAU CLAIRE, WIS. PROFESSIONAL ENGINEER

DATE 1/29/90

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Surveyor O.A.&A. INC. District Checker RGB
Designer O.A.&A. INC. C.O. Checker NRA
District Supervisor RJS C.O. Coordinator LAS

APPROVED:

DATE: 2/5/90 — James D. Grundler
DISTRICT DIRECTOR

APPROVED:

DATE: 2/20/90 — Robert W. Gray
REGIONAL CHIEF ROAD DESIGN ENGINEER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 5 WISCONSIN DIVISION

APPROVED:

DATE: _____ DIVISION ADMINISTRATOR

SUBSET: TRROADS
FILE NAME: 09231TS

LEVELS ON =1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

Lincoln
9857-2-70
4/29-1-70

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	5

PLAN AND PROFILE
FOR
HILLVIEW ROAD — LINCOLN COUNTY

SCHEDULE OF LAND & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES OR S.F.	R/W ACRES REQUIRED OR S.F. NEW	EXISTING	TOTAL	TOTAL ACRES REM.
1	FARM CREDIT BANK	FEE	39.42	0.06	----	0.06	39.36
2	RANDY L. FROKJER	FEE	20.00	0.07	----	0.07	19.93

SEC. COR. OF RECORD
EST. BY CO. SURVEYOR
R.R. SPIKE WITH TIES
FND.

T 31 N
R 7 E
16 15
W 1/4 COR.

SEC. LINE

1/4 LINE

5299.53' TO E 1/4 CORNER

N 89° 37' 55" E

WISCONSIN
EVELYN L. FERNEDING
S-1669
EAU CLAIRE
LAND SURVEYOR

4JW90

POSTED WEIGHT LIMIT SIGN

P.K.

73.91'
24.34'
23.84'

PK IN 3" ASH

PK IN 3" ASH

STA. 9+00.00 ℄

BEGIN RELOCATION ORDER
STA. 8+75

BEGIN PROJECT
STA. 7+70.00

P.L.

THEODORE & LILA SCHLEIF

℄ OF HILLVIEW RD.
N 89° 55' 35" E

N 0°04'25"W 45.00'

S 89°55'35"W 35.00'

8+75 45'

45'

N 89°55'35"E 225.00'

2.2'

N 0°04'25"W 45.00'

9+10 45'

S 89°55'35"W 240.00'

RICHARD & DELORES HAGEDORN

BR. OF PINE RIVER

NET LENGTH OF CENTER LINE STA. 7+70 TO STA. 12+00 = 430 LIN. FT.

WISCONSIN PUBLIC SERVICE CORP

SE-NE
15-31-7

S 0°04'25"E 45.00'

FARM CREDIT BANK

(1)

11+00 45'

G.T.E.

66'

225.00'

240.00'

S89°20'06"W 653.40'

N 89°08'47"W

11+50 45'

S 0°04'25"E 45.00'

(2)

RANDY L. FROKJER

NE-SE
15-31-7

PK IN POWER POLE

52.73'

22.80'

PK

PK IN BLACK WALNUT TREE

STA. 11+00.00 ℄

END RELOCATION ORDER
STA. 11+50

END PROJECT
STA. 12+00.00

N

SEC. LINE

T 31 N
R 7 E
15 14

E 1/4 COR.

SEC. COR. OF RECORD
EST. BY CO. SURVEYOR
R.R. SPIKE WITH TIES
FND.

1/4 LINE

ORIGIN OF LEVELS
SPOT ELEVATION AT INTERSECTION OF HILLSIDE ROAD & TOWN ROAD
ELEVATION 1373.00

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	10+64	70 d SPK. IN POWER POLE 38' LT.	1294.76

YARDAGE SUMMARY
STA. 7+70 TO STA. 9+68
UNCL. EX. 100 C.Y.
FILL 695 C.Y.
SHR. 30%
BORROW 804 C.Y.

YARDAGE SUMMARY
STA. 10+22 TO STA. 12+00
UNCL. EX. 58 C.Y.
FILL 594 C.Y.
SHR. 30%
BORROW 714 C.Y.

P.C. STA. 7+72.00
EL. 1295.07

P.T. STA. 11+72.00
EL. 1298.95

400' V.C.

NEW ℄ PROFILE

+4.15 %

-3.21%

EXISTING GROUND LINE

P.I. STA. 9+72.00
EL. 1290.65

HIGH WATER$_{100}$ EL. 1285.9

WATER EL. 1280.1 (8-10-88)

STA. 10+00
REMOVE EXISTING TWO-SPAN
STEEL SECK GIRDER BRIDGE (P-35-87)
34 FT. LONG x 25 FT. WIDE

STA. 9+95
STRUCTURE B-35-110 REQ'D
SINGLE SPAN 36" PRESTRESSED GIRDER
24' CLEAR ROADWAY
SEE DRAWING X 82833 (9 SHEETS)

FINISHED ℄ ELEVATIONS

5	6	7	8	9	10	11	12	13
			1294.51	1293.83	1293.54	1293.66	1294.16	1295.07	1296.37	1298.08

1315 1310 1305 1300 1295 1290 1285 1280

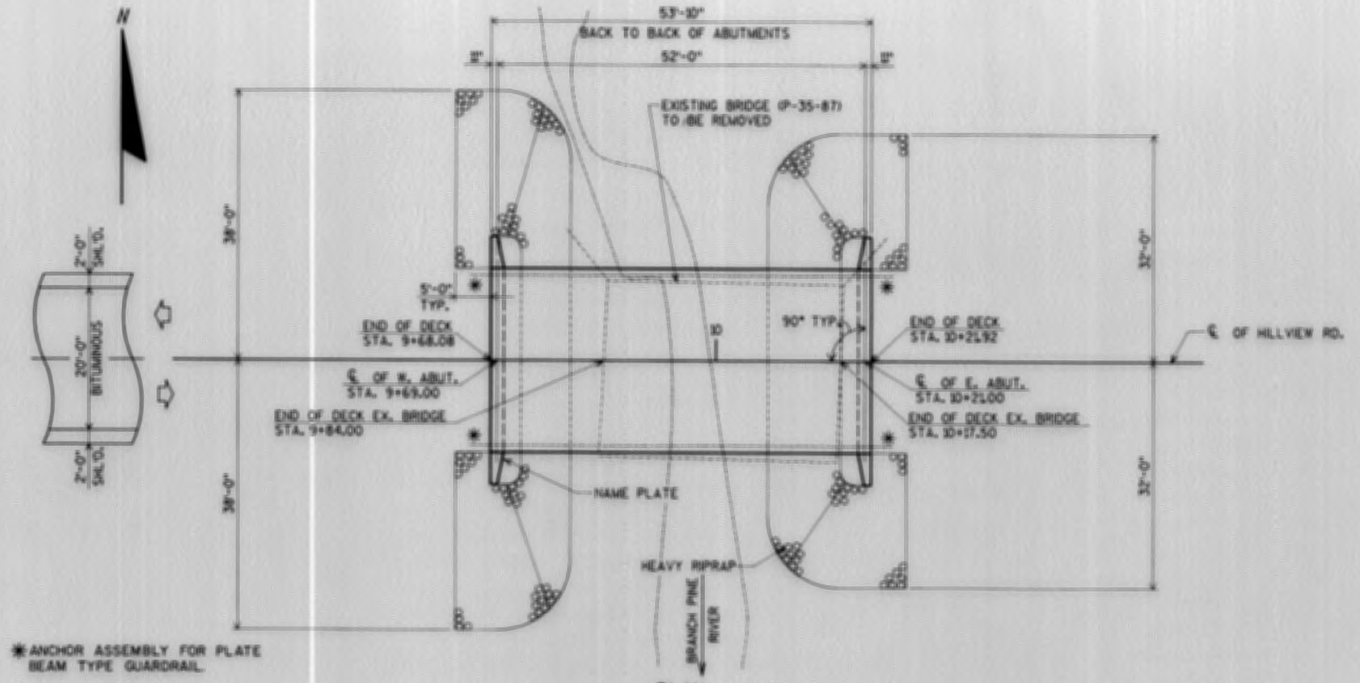
PLOT SCALE:
PLOT NAME:
REV. DATE:
ORIGINATOR:
LEVELS ON : 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,61,62,63

FILE NAME: HDGN:09231PP

WISDOT/CADDS SHEET 4

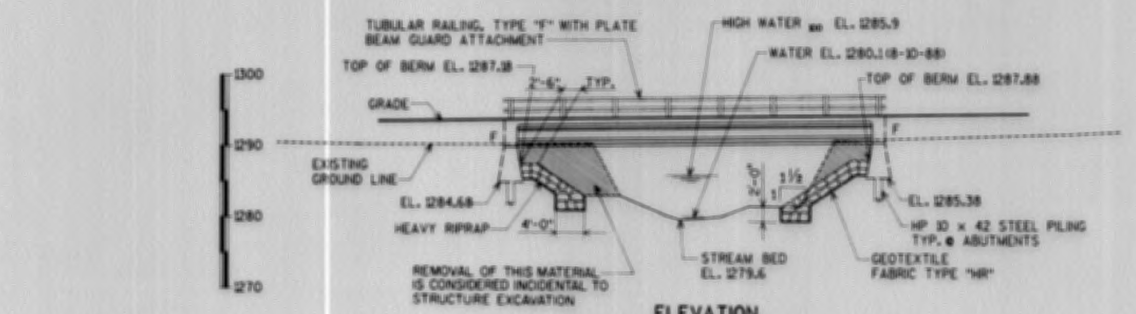
SUBSET: TRBRIDGE
FILE NAME: 09231GP

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	

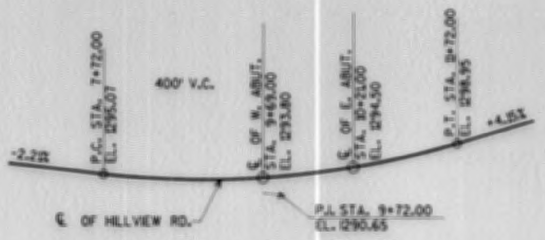


PLAN

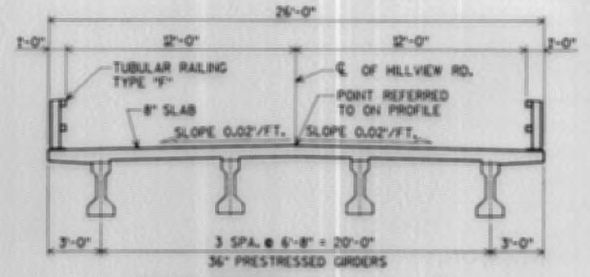
SINGLE SPAN, 36" PRESTRESSED GIRDER BRIDGE



ELEVATION



PROFILE GRADE LINE
HILLVIEW ROAD



CROSS SECTION THRU ROADWAY

DESIGN DATA

LIVE LOAD: HS-20 (STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20#/S.F.)

RATINGS: INVENTORY = HS-27 OPERATING = HS-33

MAXIMUM STANDARD PERMIT VEHICLE LOAD = 225 KIPS

ALLOWABLE DESIGN STRESSES:

CONCRETE MASONRY	SLAB	f'_c =	4,000 p.s.i.
	ALL OTHER	f'_c =	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)		f_s =	60,000 p.s.i.
PRESTRESSED GIRDER CONCRETE MASONRY		f'_c =	6,000 p.s.i.
STRANDS - 1/2" DIA. WITH ULTIMATE TENSILE STRENGTH OF			270,000 p.s.i.

HYDRAULIC DATA:
DRAINAGE AREA = 2.8 sq. mi.
WATERWAY AREA = 81 sq. ft.
V = 10.0 f.p.s.
Q ∞ = 810 c.f.s.
HIGH WATER ∞ EL. 1285.9
ROWY. OVERFLOW = N/A

FOUNDATION DATA:
PLACE W. ABUTMENT ON HP 10 x 42 STEEL PILING DRIVEN TO 45 TONS/PILE MINIMUM BEARING VALUE. ESTIMATED LENGTH 45'-0".
PLACE E. ABUTMENT ON HP 10 x 42 STEEL PILING DRIVEN TO 45 TONS/PILE MINIMUM BEARING VALUE. ESTIMATED LENGTH 35'-0".
STEEL OIL FIELD PIPE, IF USED, SHALL HAVE AN 8 5/8" ϕ MINIMUM OUTSIDE DIAMETER.

TRAFFIC DATA:
A.D.T. = 90 (1988)
A.D.T. = 125 (2010)
R.D.S. = 40 M.P.H.

LIST OF DRAWINGS

BENCH MARK:
70 d SPIKE IN POWER POLE
STA. 10+64.0, 38' LT.
EL. 1294.76

BRIDGE OFFICE CONTACT:
D. BABLER
(608) 266-8486

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES Engineers/Architects Planners/Surveyors
Owen Ayres & Associates Inc. Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-110

HILLVIEW ROAD OVER BR. PINE RIVER

County: LINCOLN		Town/Village/City: PINE RIVER	
Design Spec.: A.A.S.H.T.O. '89	Load: HS-20	Const. Spec.: 1989	
Designed By: MNL	Design Checked: CBM	Drawn By: G.L.D.	Plans Checked:

Approved: _____ State Bridge Engineer _____ Date

GENERAL PLAN

SHEET 1 OF 9

X 82833

LEVELS ON 42,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,

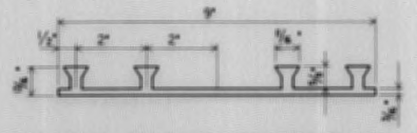
CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	

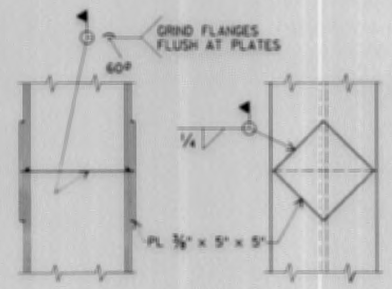
SUBSET: TRBRIDGE
FILE NAME: 09230P

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
REMOVING OLD BRIDGE, STA. 10+00	L.S.	-----	-----	-----	1
EXCAVATION FOR STRUCTURES, BRIDGES B-35-110	L.S.	-----	-----	-----	1
CONCRETE MASONRY, BRIDGES	C.Y.	18.2	18.2	48.6	85
PROTECTIVE SURFACE TREATMENT	GAL.	-----	-----	7	7
PRESTRESSED GIRDER, I-TYPE, 36-INCH	L.F.	-----	-----	212	212
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	1,580	1,580	5,220	8,380
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	-----	-----	4,550	4,550
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	4	4	-----	8
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	180	140	-----	320
TUBULAR RAILING, TYPE F, STRUCTURE B-35-110	L.S.	-----	-----	-----	1
HEAVY RIPRAP	C.Y.	90	95	-----	185
GEOTEXTILE FABRIC, TYPE HR	S.Y.	150	155	-----	305
PILE POINTS	EACH	4	4	-----	8
NON-BID ITEMS					
FILLER	SIZE	-----	-----	-----	½ & ¾
POLYVINYL CHLORIDE WATERSTOP	L.F.	34	34	-----	68



POLYVINYL CHLORIDE WATERSTOP DETAIL



HP 10 x 42 SPLICE DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

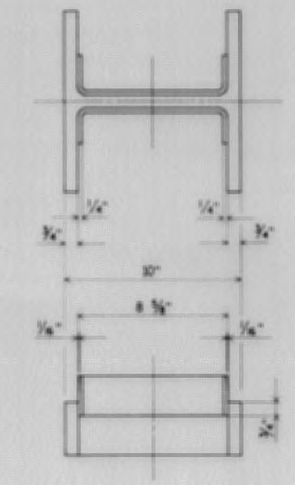
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O DESIGNATION M 213.

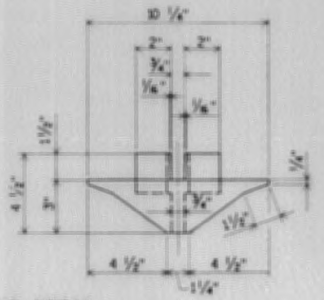
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF DECK.

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

THE EXISTING BRIDGE (P-35-87) IS A TWO SPAN STEEL DECK GIRDER BRIDGE WITH A WIDTH OF 25 FEET AND AN OVERALL LENGTH OF 34 FEET.





PILE POINT DETAIL
FOR HP 10x42 STEEL PILING.

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Planners/Surveyors
Owen Ayres & Associates Inc.
Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-110

Const. Start: 1989	Drawn By: G.L.D.	Plans Checked: C.B.M.

QUANTITIES & NOTES

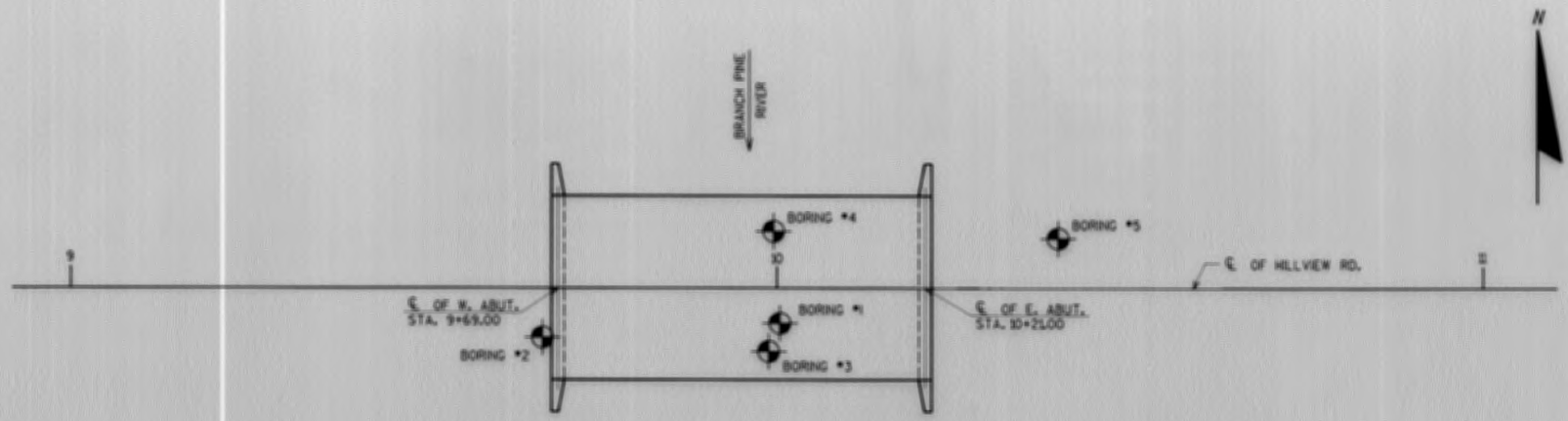
SHEET 2 OF 9

X 82833

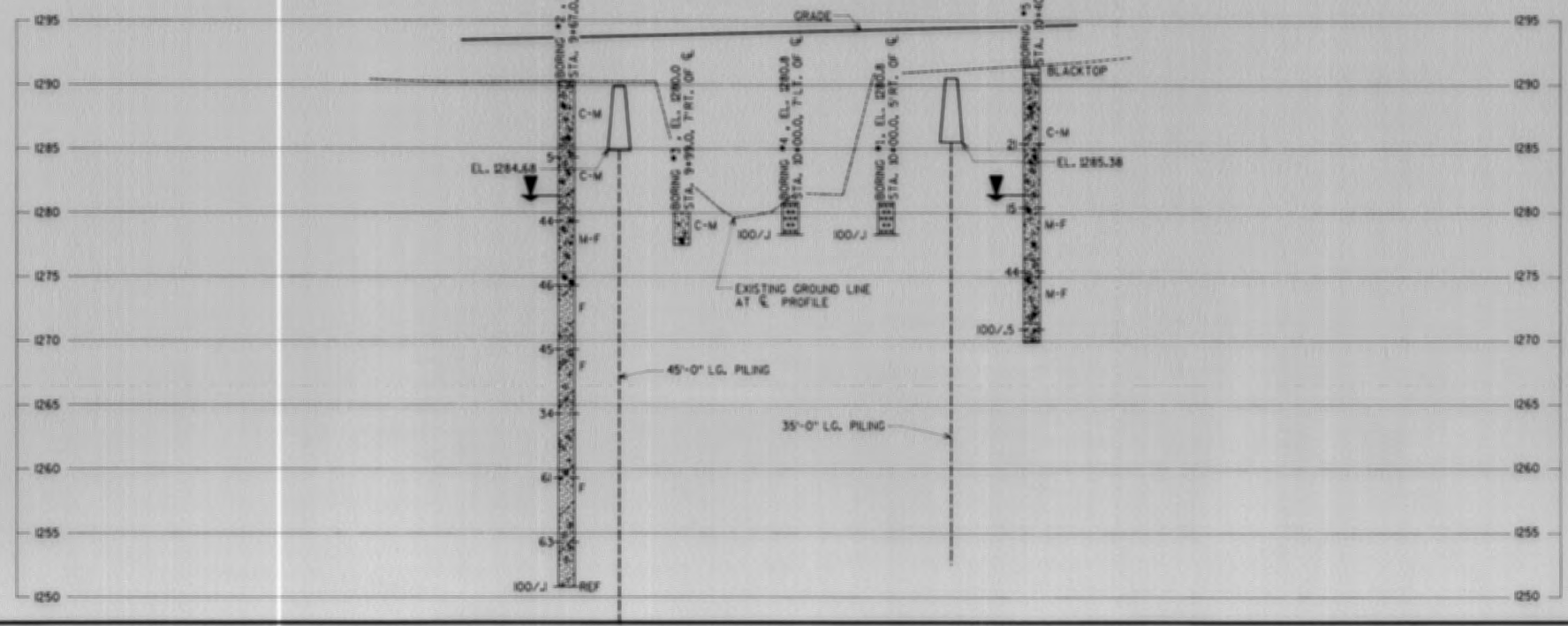
CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

LEVELS ON 42,3,4,45,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,

SUBSET: TRBRIDGE
FILE NAME: 09231GP



BORINGS TAKEN BY:
WISCONSIN TEST DRILLING, INC.
SCHOFIELD, WISCONSIN
JANUARY 3 & 4, 1989



STATE PROJECT NUMBER	SHEET NO.
9857-02-70	

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
95/6 = 95 Blows for 6" Penetration
Probing taken with a 350# wt. Falling 18" on a 2" O.D. Point.
Probing No. Station Elevation
7 Average Blows Per Foot
Refusal 95/6

LEGEND OF BORING
Unconfined Strength → T.S. 7 *
Blows Per Foot Using 140# Wt. Falling 30".
Wash Sample
Shelby Tube S.T.
Ground Water Elevation
No Ground Water Observed Above This Elevation
Boring No., Elev., Sta. & Offset
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 DEPT. OF TRANSPORTATION 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

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Planners/Surveyors
Ayres & Associates Inc.
Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-110

Const. Spec.	Drawn By	Plans Checked
1989	G.L.D.	

SUBSURFACE EXPLORATION

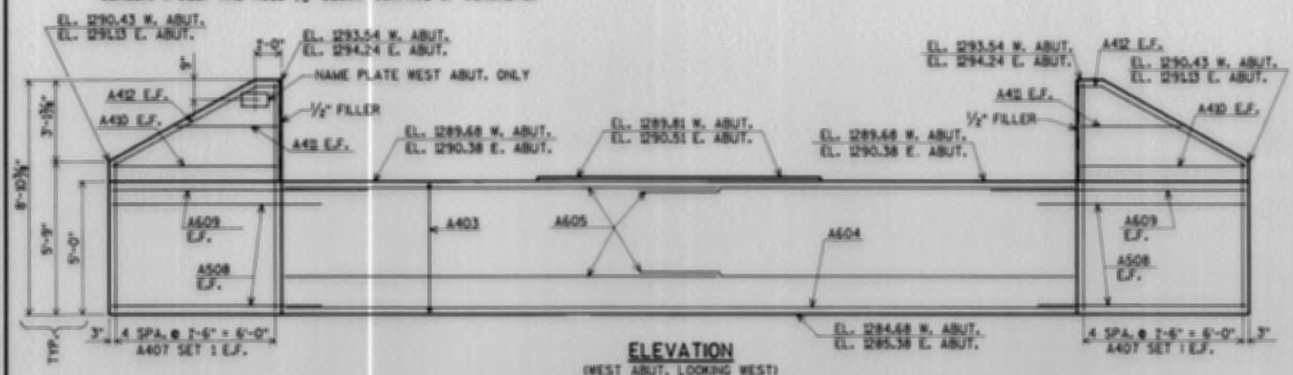
SHEET 3 OF 9

X 82833

CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

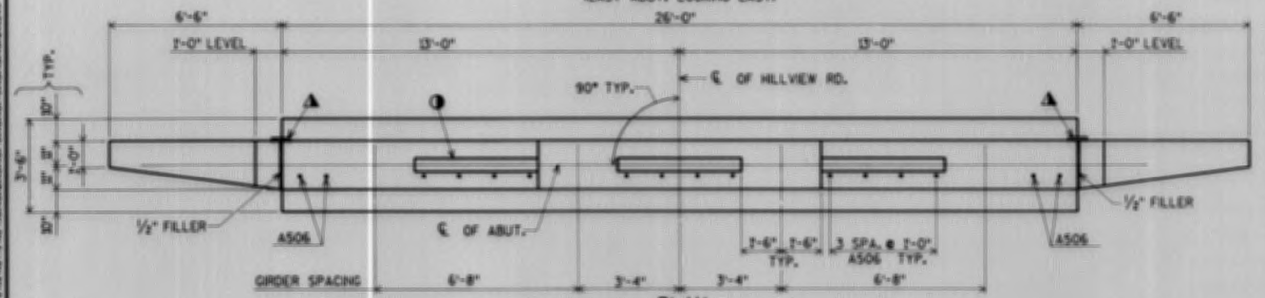
SUBSET: TRBRIDGE
FILE NAME: 09231ABUT

NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, 6" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

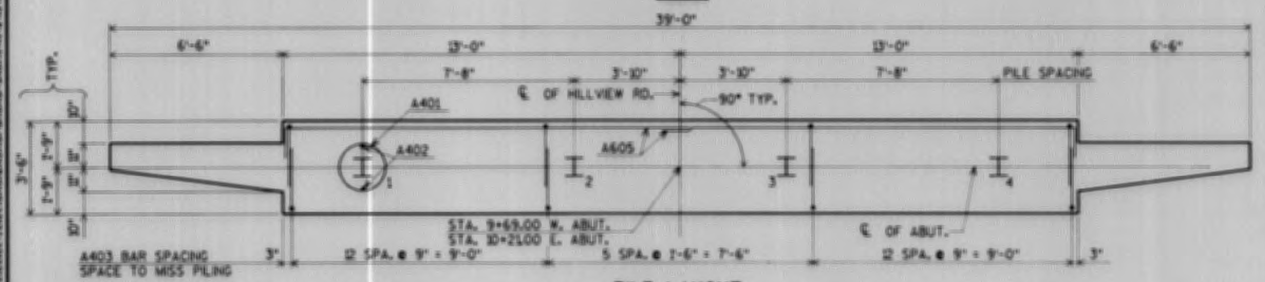


ELEVATION

(WEST ABUT. LOOKING WEST)
(EAST ABUT. LOOKING EAST)



PLAN



PILE LAYOUT

◑ KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" × 6".

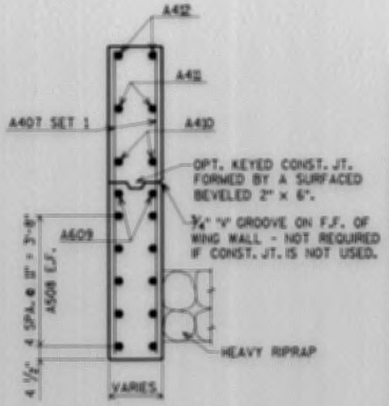
▲ VERT. P.C.W. FROM BELOW BRIDGE SEAT TO TOP OF WING. SPLICE AT JUNCTION WITH HORIZ. WATERSTOP BY USING A HEATED SPLICING IRON, HOLD P.C.W. FLUSH WITH CONCRETE.

P.C.W. DENOTES POLYVINYL CHLORIDE WATERSTOP. SEE SHEET 2 FOR DETAILS.

FOR PILE SPLICE DETAIL SEE SHEET 2.

SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

NOTE: TO ELIMINATE STEPPING & SPLICING OF THE WATERSTOP, THE TOP OF BODY MAY BE SLOPED BETWEEN THE LEVEL BEAM SEAT AREAS.



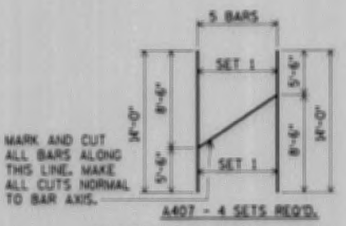
TYP. SECTION THRU WING

BILL OF BARS

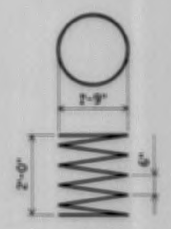
(FOR ONE ABUTMENT ONLY)

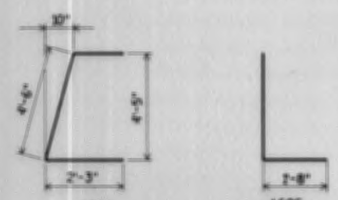
BAR. NO.	NO. REQ'D.	LENGTH	BENT BAR	COATED BAR	CUT. DIAGR.	LS80* UNCOATED LOCATION
A401	4	28-0	X			BODY @ PILES
A402	8	2-3				BODY @ PILES
A403	60	8-3	X			BODY VERT.
A404	4	25-8				BODY HORIZ.
A405	26	15-10	X			BODY HORIZ.
A506	16	2-0				BODY DOWELS
A407	10	14-0			X	WINGS VERT. E.F. SET 1
A508	20	7-10				WINGS HORIZ. E.F.
A609	4	9-7				WINGS HORIZ. E.F.
A410	4	6-2				WINGS HORIZ. E.F.
A411	4	3-9				WINGS HORIZ. E.F.
A412	4	6-10	X			WINGS DIAG. E.F.

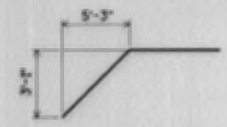
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.
B.F. DENOTES BACK FACE.
F.F. DENOTES FRONT FACE.
E.F. DENOTES EACH FACE.

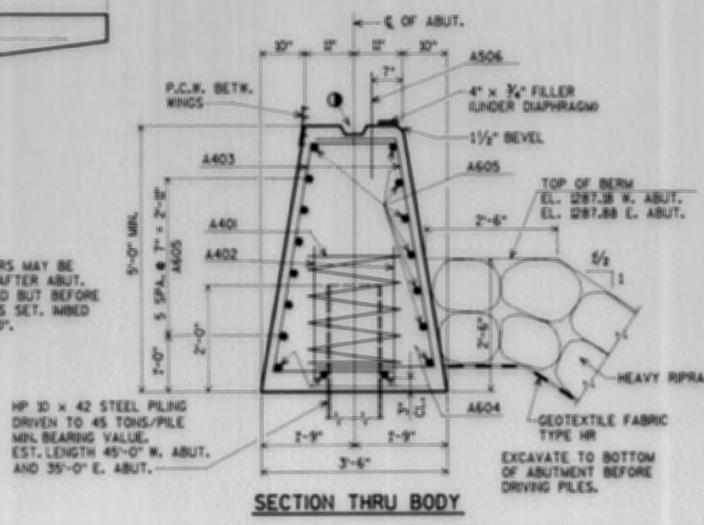


CUTTING DIAGRAM









SECTION THRU BODY

A506 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. IMBED BARS 1'-0".

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Planners/Surveyors
Owen Ayres & Associates Inc.
Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-110

Current Year	1989	Drawn By	G.L.O.	Plans Checked	... A. A.

ABUTMENTS

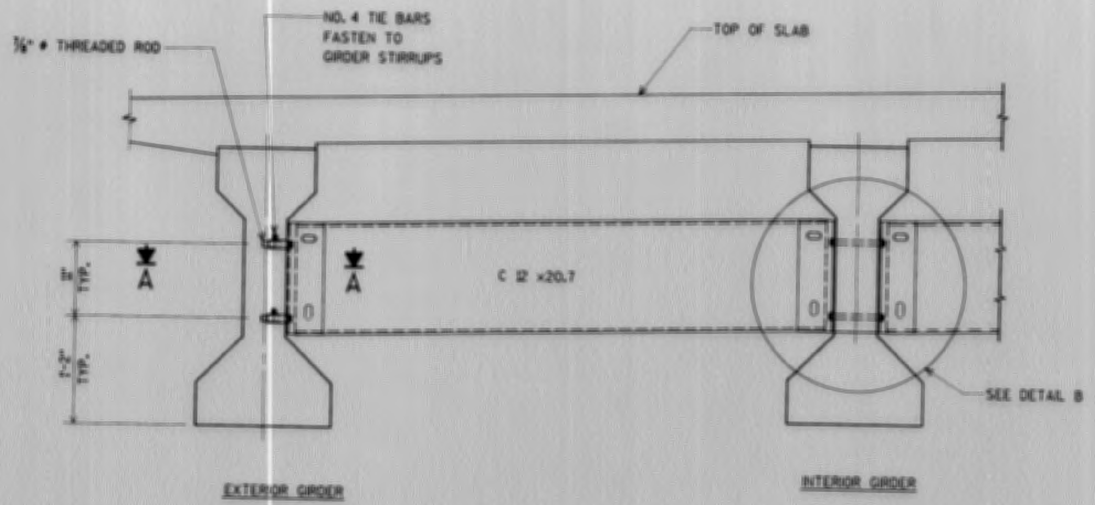
SHEET 4 OF 9

X 82833

DATE
DATE
DATE
CHECKED BY
BACK CHECKED BY
CORRECTED BY

SUBSET: TRBRIDGE
FILE NAME: 09231SUP

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	



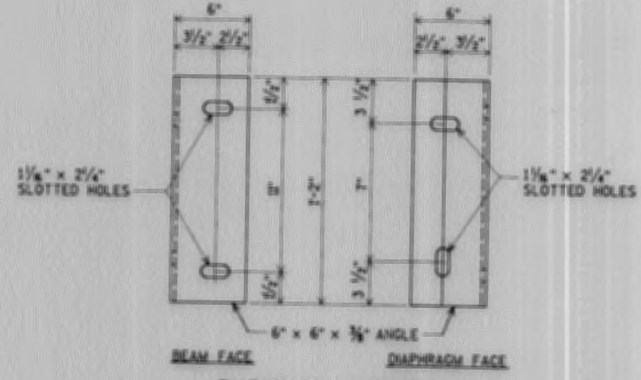
PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES FOR ALTERNATE DIAPHRAGM

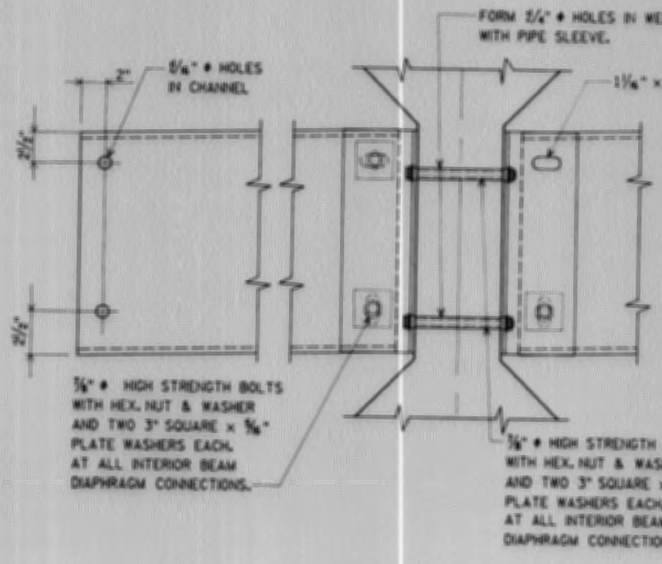
STEEL DIAPHRAGMS MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE DIAPHRAGMS. NO ADDITIONAL PAYMENT WILL BE MADE IF STEEL DIAPHRAGMS ARE USED.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 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 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.

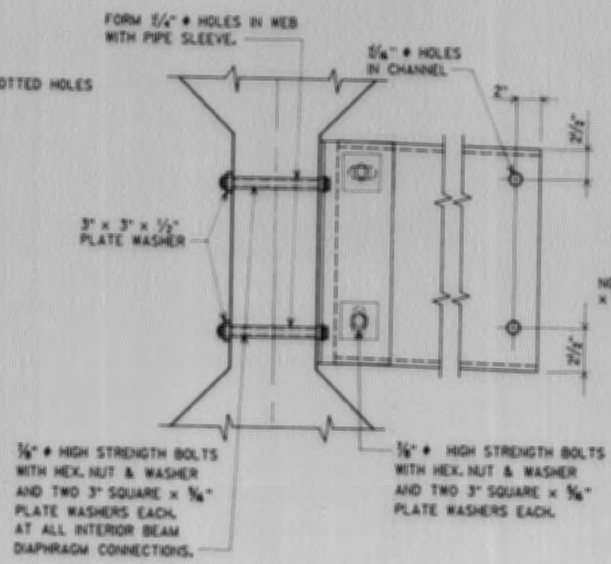


DIAPHRAGM SUPPORT



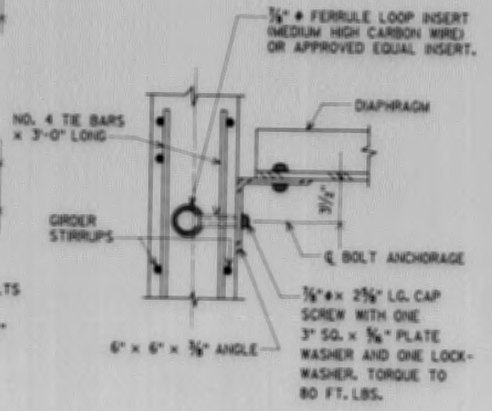
FOR INTERIOR GIRDER

DETAIL B



FOR EXTERIOR GIRDER

DETAIL B



FOR EXTERIOR ATTACHMENT

SECTION A

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES — Engineers/Architects Planners/Surveyors
Dwain Ayres & Associates Inc. Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-110

Const. Year	Drawn By	Plans Checked
1989	G.L.O.	C.R.M.

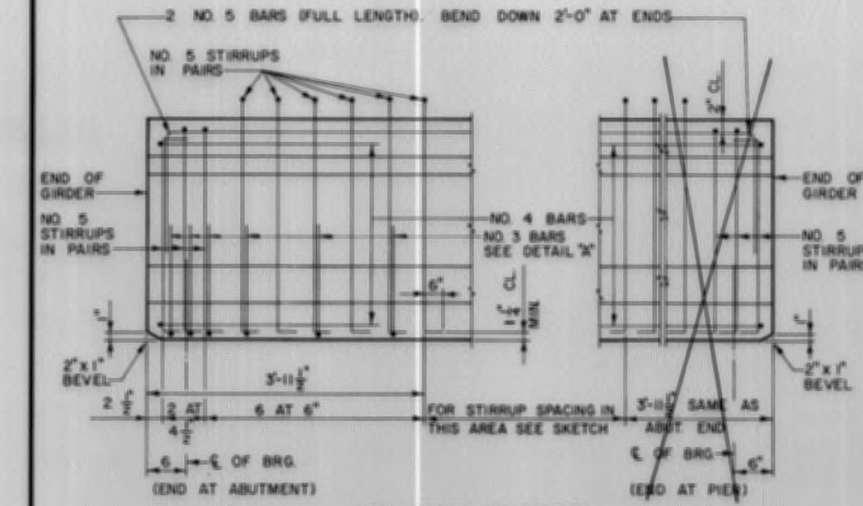
ALT. STEEL INTER. DIAPHRAGM DETAILS

SHEET 5 OF 9

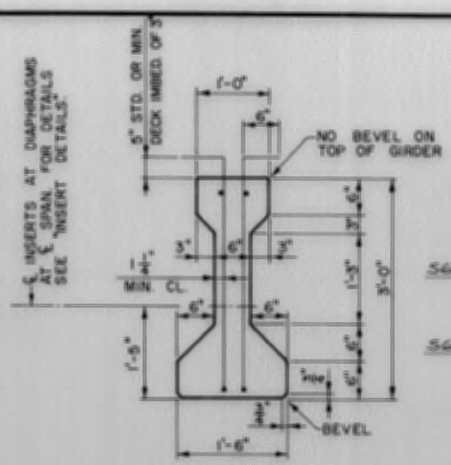
X 82833

CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

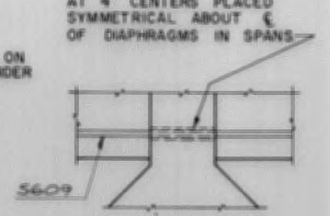
STATE PROJECT NUMBER	SHEET NO.



SIDE VIEW OF GIRDER



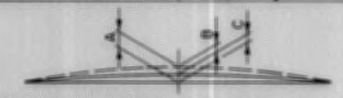
SECTION THRU GIRDER



INSERT DETAILS

DEFLECTION DATA

	CAMBER	SPAN 1	SPAN	SPAN
◨	* A= PRESTRESS CAMBER			
◨	* B= DEAD LOAD DEFLECTION			
◨	* C= RESIDUAL CAMBER			
▲	* A= PRESTRESS CAMBER	1"		
▲	* B= DEAD LOAD DEFLECTION	3/8"		
▲	* C= RESIDUAL CAMBER	5/8"		

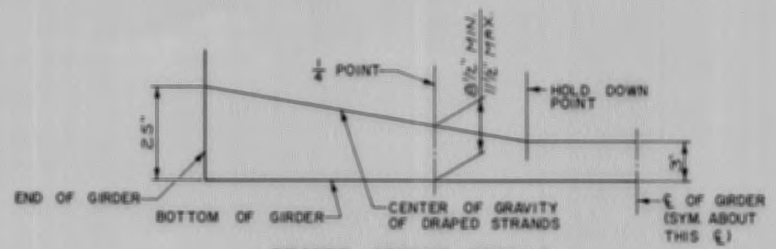


* PRESTRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN ARE THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRESTRESS LOSSES.

MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE f'ci (psi)

GIRDER TYPE	SPAN 1	SPAN	SPAN
DRAPED PATTERN ◨	—		
DRAPED PATTERN ▲	4800		
SPREAD PATTERN	—		

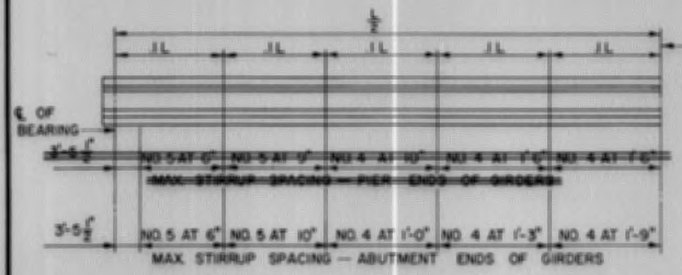
TOP VIEW OF GIRDER



DRAPED STRAND PROFILE

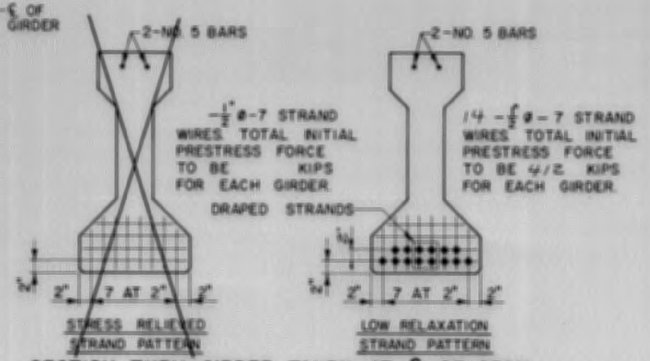
GENERAL NOTES

THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.
STRANDS SHALL BE FLUSH WITH END OF GIRDERS.
PRESTRESSING STRANDS SHALL HAVE AN ULTIMATE STRENGTH OF 270,000 p.s.i.
ALL NON PRESTRESSED BAR STEEL REINFORCEMENT SHALL BE GRADE 60.
TOPS OF GIRDERS TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO SLAB, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

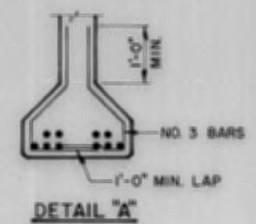


SKETCH SHOWING MAXIMUM STIRRUP SPACING

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 53'-0".



SECTION THRU GIRDER TAKEN AT ℄ OF SPAN



DETAIL "A"

◨ DENOTES STRESS RELIEVED GIRDER
▲ DENOTES LOW RELAXATION GIRDER

No.	Date	Revision	By

AYRES ASSOCIATES — Engineers / Architects Planners / Surveyors — Owen Ayres & Associates Inc. Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-35-110

Date	Drawn By	Plans Checked
1969	G.L.D.	C.B.M.

36" PRESTRESSED GIRDER DETAILS

SHEET 6 OF 9

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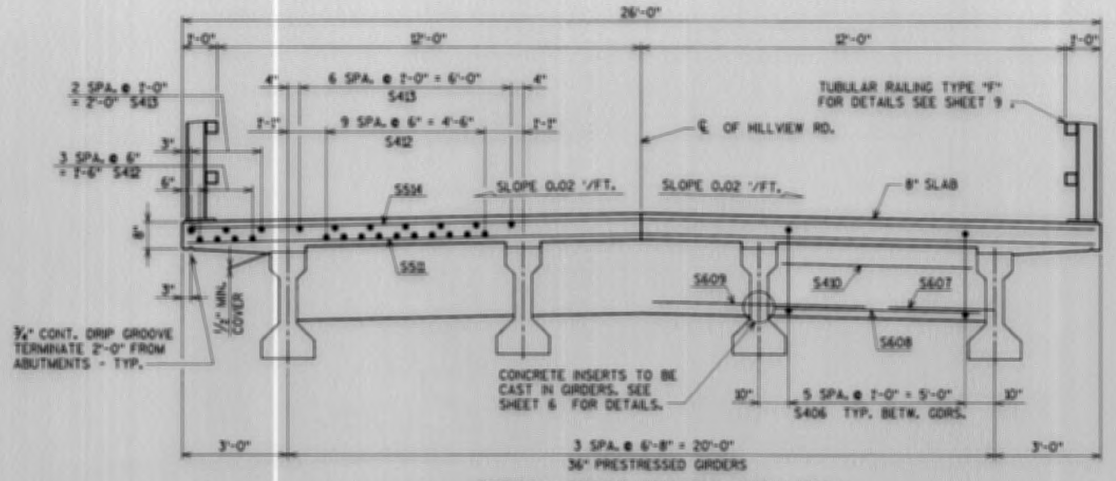
SUBSET: TRBRIDGE
FILE NAME: 09231SUP

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	

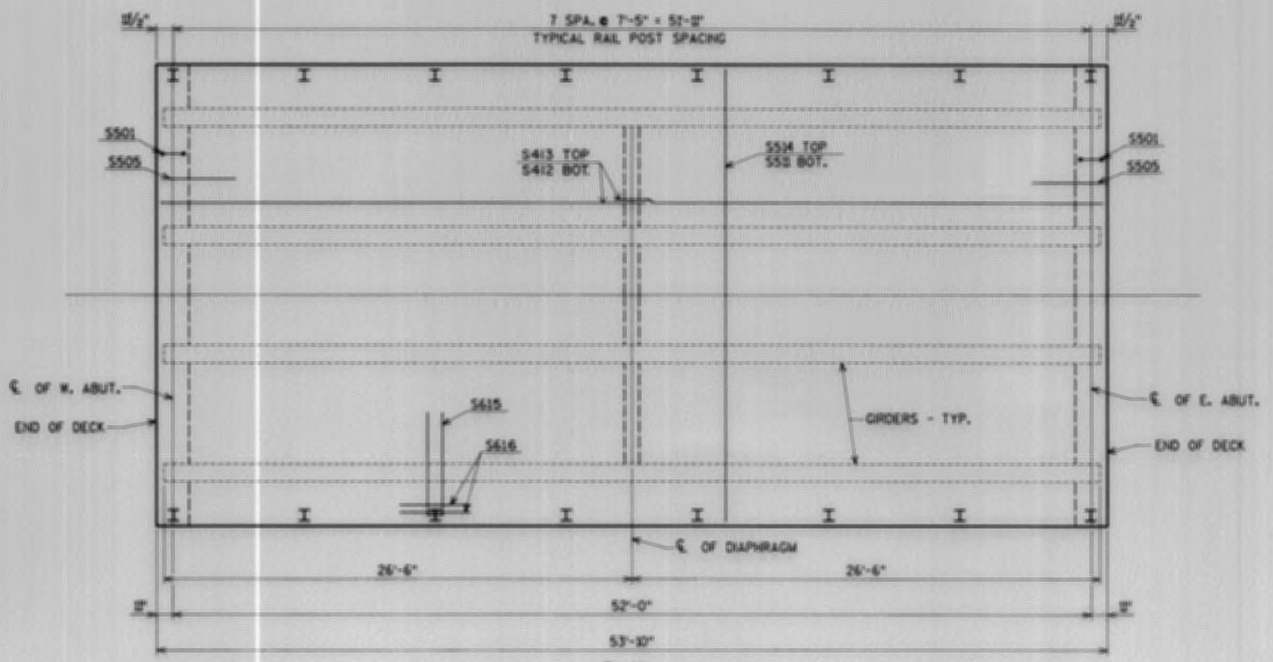


TYPICAL CROSS SECTION THRU DECK

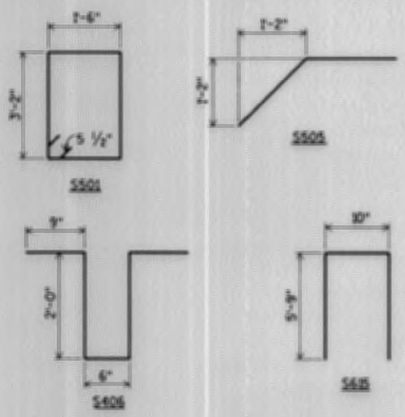
BILL OF BARS

BAR. NO.	NO. REQ'D.	LENGTH	BENT BAR	COATED BAR	CUT. DIAGR.	5,220* UNCOATED 4,550 * COATED LOCATION
S501	48	10-0	X			DIAPHRAGM @ ABUT. VERT.
S502	8	25-8				DIAPHRAGM @ ABUT. HORIZ.
S503	8	1-11				DIAPHRAGM @ ABUT. HORIZ.
S504	12	4-10				DIAPHRAGM @ ABUT. HORIZ.
S505	48	3-7	X	X		DIAPHRAGM @ ABUT.
S506	18	5-8	X			DIAPHRAGM IN SPAN VERT.
S607	4	3-1				DIAPH. IN SPAN HORIZ. EXT. GDR.
S608	6	5-10				DIAPH. IN SPAN HORIZ. BETW. GDR.
S609	4	6-2				DIAPH. IN SPAN HORIZ. INT. GDR.
S610	6	5-4				DIAPH. IN SPAN HORIZ. BETW. GDR.
S511	101	25-8				SLAB TRANSVERSE BOT.
S412	76	27-6				SLAB LONGITUDINAL BOT.
S413	54	27-6		X		SLAB LONGITUDINAL TOP
S514	108	25-8		X		SLAB TRANSVERSE TOP
S615	16	12-0	X	X		SLAB @ RAIL POSTS
S616	32	4-0		X		SLAB @ RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.
⊞ THREAD ONE END 3".



PLAN



No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Planners/Surveyors
Owen Ayres & Associates Inc.
Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-110

Const. Spec.	Drawn By	Plans Checked
1989	G.L.D.	C.B.M.

SUPERSTRUCTURE

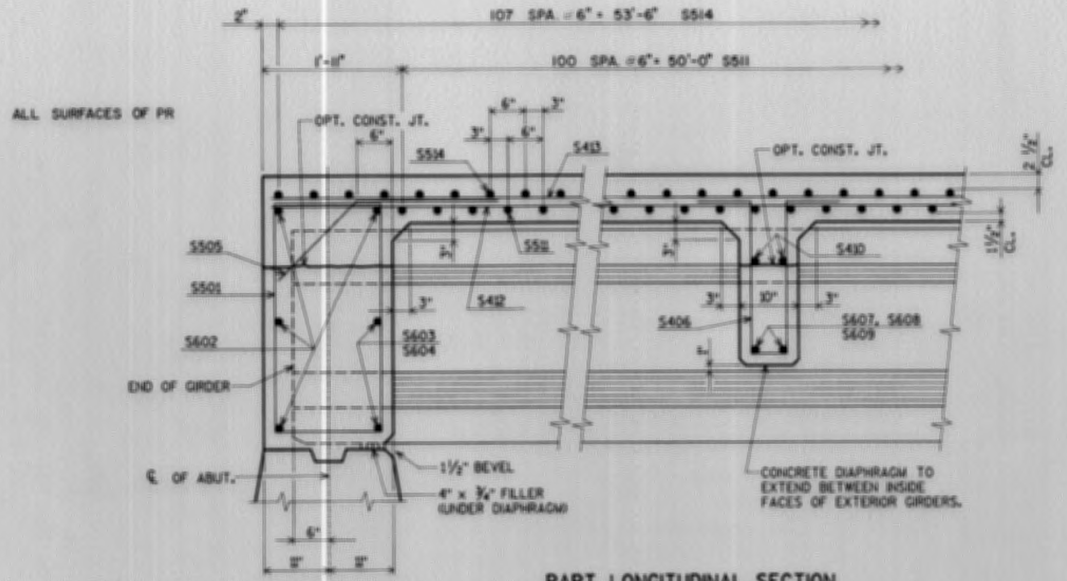
SHEET 7 OF 9

X 82833

CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

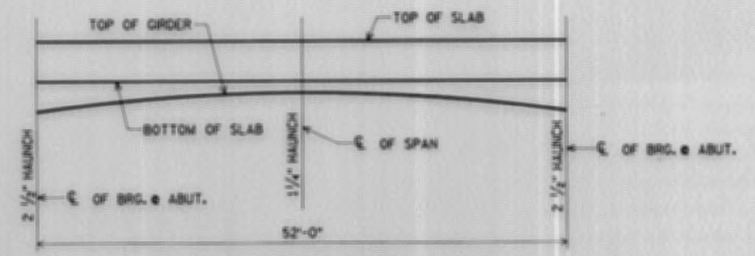
SUBSET: TRBRIDGE
FILE NAME: 09231SUP

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	

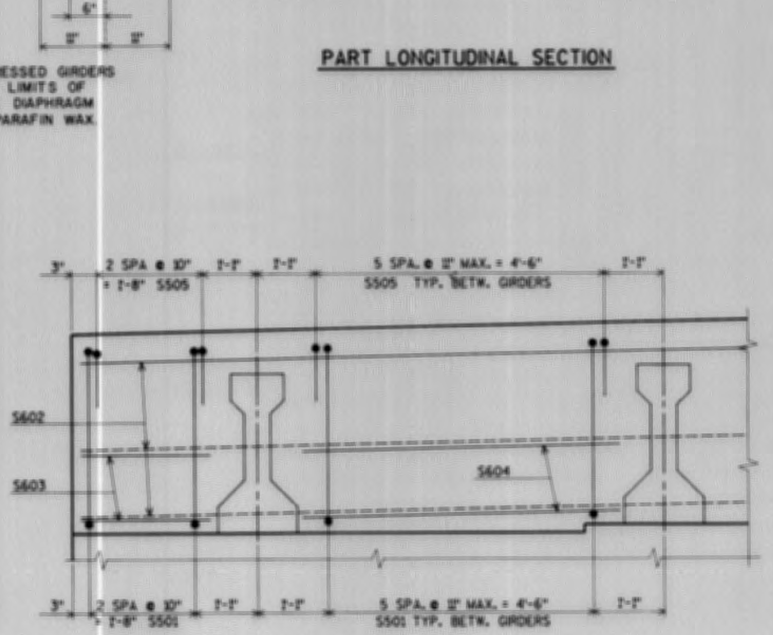


PART LONGITUDINAL SECTION

ALL SURFACES OF PRESTRESSED GIRDERS THAT WILL BE WITHIN THE LIMITS OF THE ABUTMENT CONCRETE DIAPHRAGM SHALL BE COATED WITH PARAFIN WAX.



SLAB FORMING DIAGRAM



SECTION AT ABUTMENT

BEARING PLAN

No.	Date	Revision	By

PLANS PREPARED BY
AYRES ASSOCIATES
Engineers/Architects
Planners/Surveyors
Owen Ayres & Associates Inc.
Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-110

Const. Spec.	Drawn By	Plans Checked
1989	G.L.O.	C.B.M.

SUPERSTRUCTURE DETAILS

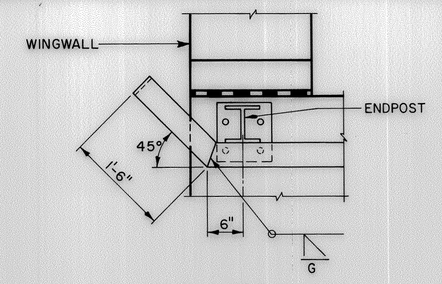
SHEET 8 OF 9

X 82833

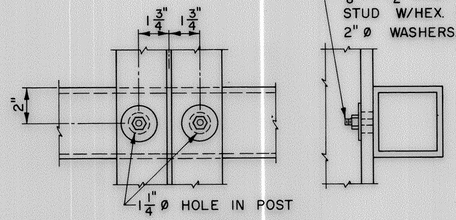
CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

LEVELS ON 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49

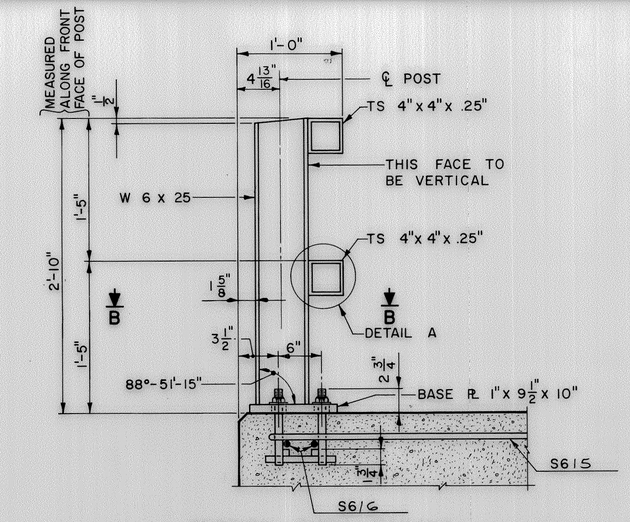
STATE PROJECT NUMBER	SHEET NO.



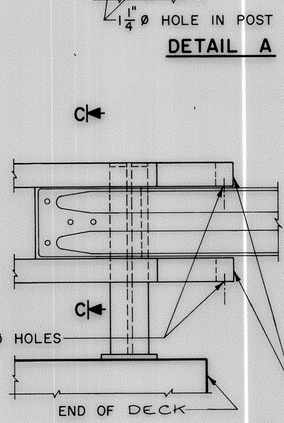
END DETAIL FOR WINGS



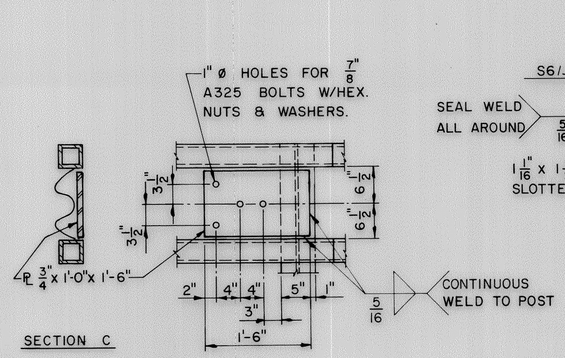
DETAIL A

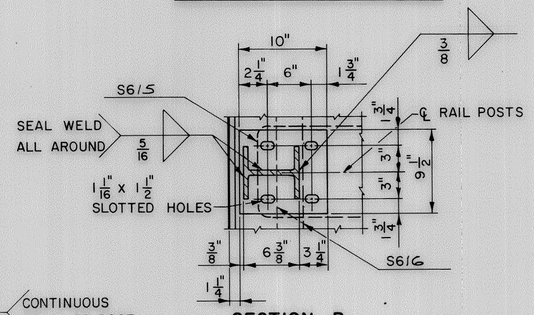


SECTION THRU RAILING

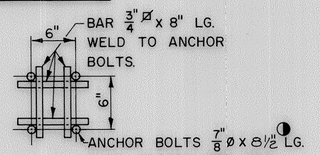


DETAIL AT END POST
(BEAM GUARD RAIL ATTACHMENT)

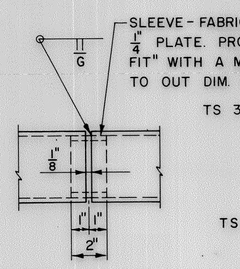




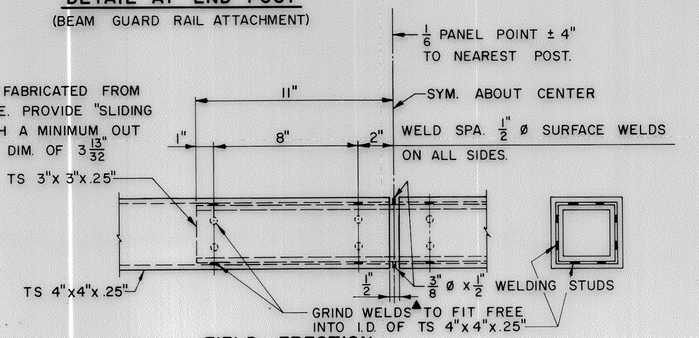
SECTION B



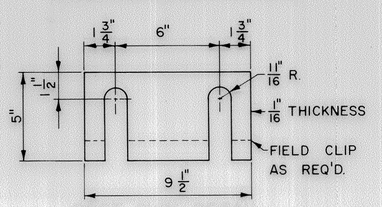
ANCHOR BOLT DETAIL



SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL



POST SHIM DETAIL
(4 PER POST)

GENERAL NOTES

1. BID ITEM SHALL BE "TUBULAR RAILING, TYPE F".
2. POST BASE PLATE SHALL BE FLAT WITH ALL SURFACES SMOOTH & FREE FROM WARP & ALL EDGES SMOOTH, STRAIGHT & VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
3. RAILING SHALL BE 4" x 4" x .25" STRUCTURAL TUBING CONFORMING TO A.S.T.M. DESIGNATION A36.
4. ANCHOR BOLTS SHALL BE 7/8" Ø NOMINAL CONFORMING TO A.S.T.M. A449 WITH 3" THREAD AND A325 NUTS AND WASHERS.
5. CAULK EXPOSED OPENINGS BETWEEN SHIMS.
6. POST, BASE PLATES & SHIMS SHALL BE MADE FROM MATERIAL CONFORMING TO A.S.T.M. DESIGNATION A36. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST NORMAL TO GRADE LINE.
7. PLACE ANCHOR BOLTS NORMAL TO BASE PLATE.
8. ALL MEMBERS, INCLUDING UPPER 4" OF ANCHOR BOLTS, SHALL BE GALVANIZED AFTER FABRICATION.
9. WELD WITH E70 ELECTRODES.
10. FILL BOLT SLOT OPENINGS IN POST SHIMS AND BASE PLATE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
11. STEEL SHIMS SHALL BE USED UNDER POSTS WHERE REQUIRED FOR ALIGNMENT.
12. RAILING SHALL BE FABRICATED IN 2 AND 3 PANEL LENGTHS.
13. PRIOR TO GALVANIZING, ALL STEEL RAILING SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY S.S.P.C. SPECIFICATIONS. BLAST CLEANING IS NOT REQUIRED FOR COLD FORMED 4"x 4"x .25" STRUCTURAL TUBING, EXCEPT TO REMOVE WELDING SLAG AND IMPERVIOUS SUBSTANCES.

▲ MINIMUM 5/8" FLAT SURFACE DIAMETER PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

⬢ OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION. (MIN. YIELD OF 92 K.S.I. AND ELONGATION OF 14 %).

◑ 1'-3" LG. ANCHOR BOLTS AT END POSTS.

No.	Date	Revision	By

AYRES ASSOCIATES — Engineers / Architects / Planners / Surveyors
Owen Ayres & Associates Inc. Eau Claire, Wisconsin

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-35-110

Const. Spec.	Drawn By	Plans Checked
1989	G.L.D.	C.B.M.

TUBULAR RAILING TYPE "F"

SHEET 9 OF 9

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