

9852-03-70

**Index of Sheets**

Sheet No. 1	Title
Sheet No.	Typical Sections and Details
Sheet No.	Estimate of Quantities
Sheet No.	Miscellaneous Quantities
Sheet No.	Right of Way Plat
Sheet No.	Plan and Profile
Sheet No.	Standard Detail Drawings
Sheet No.	Sign Plates
Sheet No.	Structure Plans
Sheet No.	Computer Earthwork Data
Sheet No.	Cross Sections

TOTAL SHEETS =



**Design Designation**

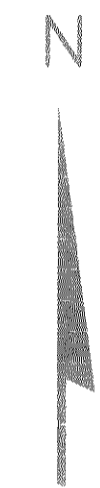
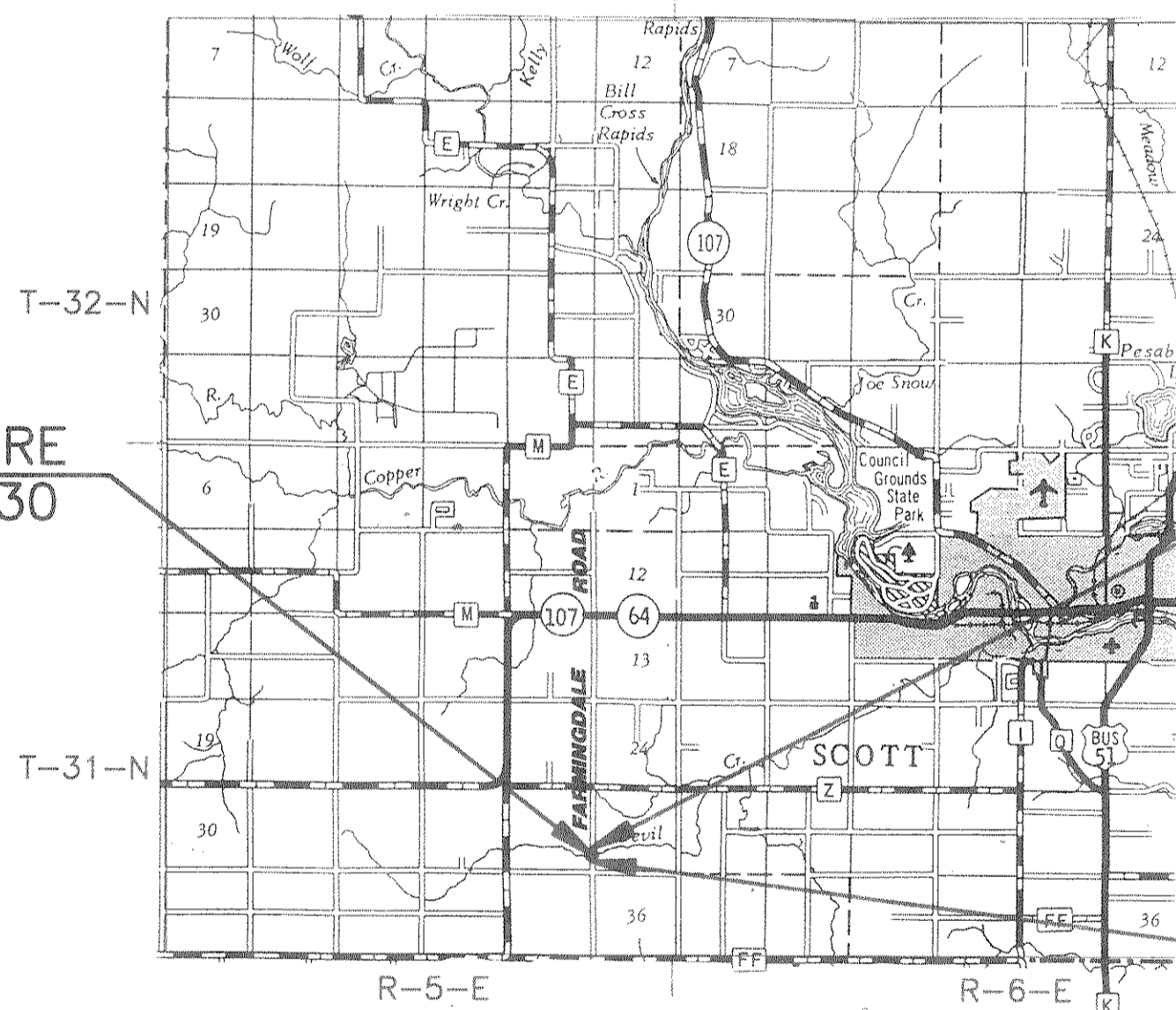
A.D.T. (1995)	=	25
A.D.T. (2015)	=	40
D.H.V. (2015)	=	4
D.	=	60/40
T.	=	10.0%
DESIGN SPEED	=	40 mph
ESALS	=	N/A

**Conventional Symbols**

County Line	.....	Combustible Fluids	.....
Town or Range Line	-----	Railroad	.....
Section Line	-----	Fence	.....
Corporate Limits	.....	Culvert (in Place)	.....
Property Line	.....	Culvert (Required)	.....
Lot Line	.....	Power Pole	.....
Existing Right of Way Line	.....	Telephone Pole	.....
New Right of Way Line	.....	Right of Way Monument (Type)	.....
Reference Line	.....	Marsh	.....
Slope Intercept	.....	Wooded or Shrub Area	.....
Existing Roadway or	.....	Grade Line Elevation	.....
Private Entrance	.....	Water	.....
Limited Easement	.....	Gas	.....
Right of Way Point	.....	Telephone	.....
Silt Fence	.....	Electric	.....
Erosion Bales	.....	Cable Television	.....
Sod	.....	Fiber Optic	.....
Ditch Dike	.....	Sanitary Sewer	.....
Reinforced Sod	.....	Storm Sewer	.....
Intercepting Embankment	.....		
Riprap	.....		
Erosion Mat.	.....		

**STATE OF WISCONSIN**  
**DEPARTMENT OF TRANSPORTATION**  
**PLAN OF PROPOSED IMPROVEMENT**  
**DEVILS CREEK BRIDGE & APPROACHES**  
 (FARMINGDALE ROAD)  
**TOWN OF CORNING**  
**TOWN ROAD**  
**LINCOLN COUNTY**

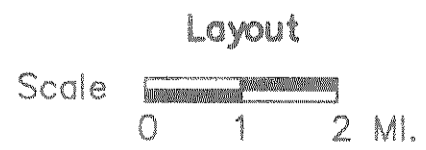
STATE PROJECT NUMBER  
**9852-03-70**



**STRUCTURE**  
**B-35-130**

**END PROJECT**  
**STA. 11+00**

**BEGIN PROJECT**  
**STA. 9+00**  
**X: 2,051,400(± 100')**  
**Y: 475,400(± 100')**



Total Net Length of Centerline: 0.038 Mi. (Rural)

COORDINATES ARE SCALED FROM THE U.S.G.S. TOPOGRAPHIC MAP ALEXANDER LAKE, WISCONSIN QUADRANGLE, FOR IDENTIFICATION ONLY.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9852-03-70		

ACCEPTED FOR  
 COUNTY OF LINCOLN

DATE \_\_\_\_\_ COMMISSIONER \_\_\_\_\_

ORIGINAL PLANS PREPARED BY:  
**MSA** MID-STATE ASSOCIATES, INC.  
 1230 South Blvd, Baraboo, WI 53913

**WISCONSIN**  
 MARVIN S. RUHLAND  
 E-15125  
 BARABOO  
 WISCONSIN  
 PROFESSIONAL ENGINEER

January 17, 1994 *Marvin S. Ruhlund*  
 Date Signature

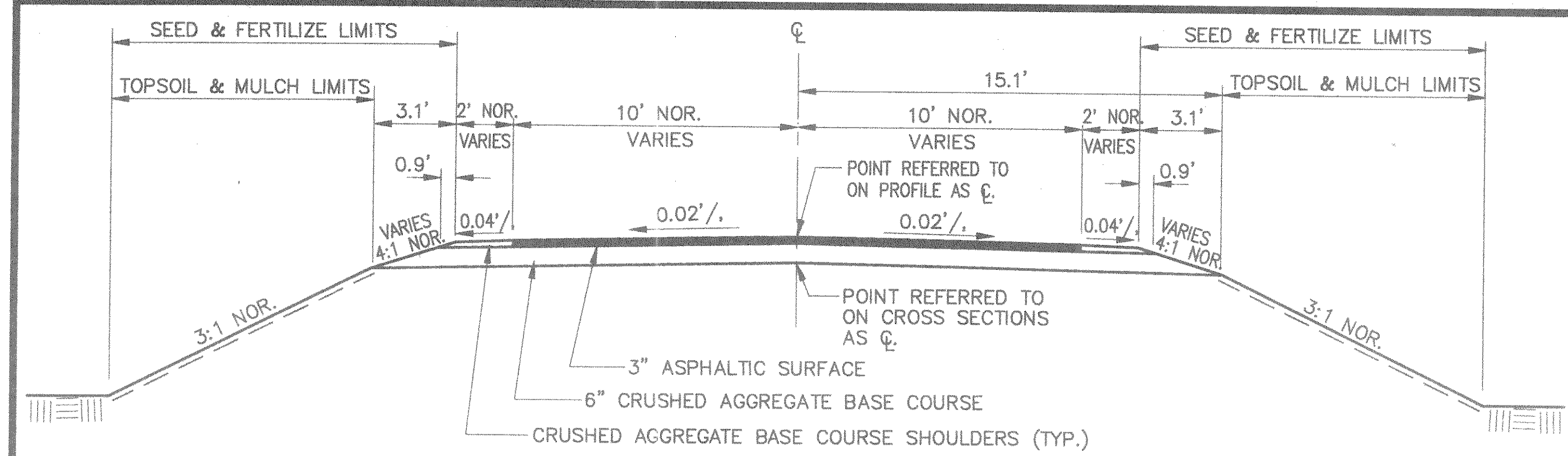
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

PREPARED BY  
 Surveyor MID-STATE ASSOCIATES, INC.  
 Designer MID-STATE ASSOCIATES, INC.  
 District Examiner DANIEL T. KUHN  
 District Supervisor ALLAN J. PETERSON  
 Proj. Dev. Engineer \_\_\_\_\_  
 C.O. Examiner \_\_\_\_\_

APPROVED FOR DISTRICT OFFICE

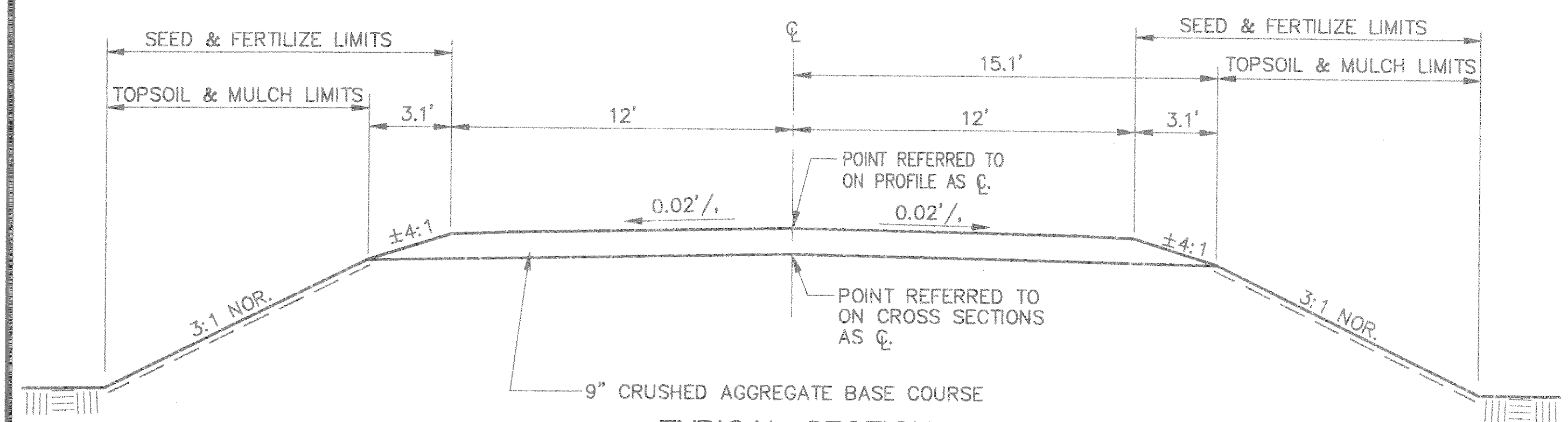
DATE: \_\_\_\_\_ (Signature) \_\_\_\_\_

STATE PROJECT NUMBER	SHEET NO.
9852-03-70	
TYPICAL SECTION, TIES, S.D.D., UTILITIES, GENERAL NOTES, MISCELLANEOUS QUANTITIES & SUPPLEMENTAL TRAFFIC CONTROL	



**TYPICAL SECTION**

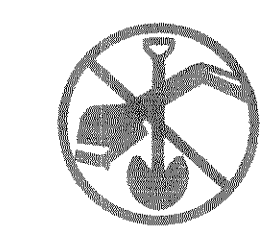
(STA. 9+33 TO STA. 9+83 AND STA. 10+17 TO STA. 10+67)



**TYPICAL SECTION**

(STA. 9+00 TO STA. 9+33 AND STA. 10+67 TO STA. 11+00)

**UTILITIES**  
NO KNOWN UTILITIES



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE  
1-800-242-8511

TOLL FREE  
WIS. STATUTE 182.0175(1974)  
REQUIRES MIN. OF 3 WORK DAYS  
NOTICE BEFORE YOU EXCAVATE

**GENERAL NOTES**

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDDED AND MULCHED AS DIRECTED BY THE ENGINEER.

THERE ARE NO KNOWN UTILITY FACILITIES WITHIN THE PROJECT AREA.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH A BENCHMARK MONUMENT MARKER TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

SILT FENCE (SILTY SOIL) TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO BRIDGE REMOVAL.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO U.S.G.S. DATUM, A STANDARD TABLET STAMPED "21 WRM 1975"; LOCATED IN TOWN OF CORNING, LINCOLN CO., 1 MILE SOUTH AND 0.1 MILE WEST OF; NEAR COR. SECS. 22, 23, 26 AND 27, T31N, R5E; ABOUT 700 FT. WEST OF CROSSROADS, 29 FT. NORTH AND 360 FT. EAST AND 3.5 FT. HIGHER THAN CENTER OF Y-ROADS, (HWY. 64 AT CO. HWY. "F" EAST), 16 FT. EAST OF A 3 FT. ELM TREE, 52 FT. SOUTH OF HWY. 64, 1 FT. NORTH OF A METAL WITNESS POST, ON A COPPER-CLAD STEEL ROD AND INSIDE A 4-IN. TILE; ELEV. 1412.444.

THE 3-INCH ASPHALTIC SURFACE SHALL CONSIST OF A 1 1/2-INCH UPPER COURSE AND A 1 1/2-INCH LOWER COURSE.

THE ASPHALTIC SURFACE SHALL TAPER FROM 26 FEET WIDE AT THE ENDS OF THE BRIDGE TO 20 FEET WIDE 50 FEET FROM THE ENDS OF THE BRIDGE

**STANDARD DETAIL DRAWINGS**

- 8E8-1 TYPICAL INSTALLATIONS OF EROSION BALES
- 8E9-3 SILT FENCE
- 12A3-4 NAME PLATE-STRUCTURES
- 15C2-2 BARRICADES AND TRAFFIC CONTROL FOR ROAD CLOSURES
- 15C6-3 TRAFFIC CONTROL DEVICES FOR TWO LANE BRIDGES

**SUMMARY OF MISCELLANEOUS QUANTITIES**

**EARTHWORK SUMMARY**

STATION TO STATION	UNCLASSIFIED EXC. C.Y.	BORROW EXC. C.Y.
9+00 - 10+00	17	46
10+00 - 11+00	23	0
TOTALS	40	46

**SILT FENCE (SILTY)**

LOCATION	DELIVERED L.F.	INSTALLED L.F.	MAINTENANCE L.F.
SOUTH BANK	60	60	120
NORTH BANK	60	60	120
UNDISTRIBUTED	80	80	160
TOTALS	200	200	400

**CRUSHED AGGREGATE BASE COURSE**

STATION TO STATION	BASE C.Y.	SHOULDER C.Y.
9+00 - 9+33	30	-
9+33 - 9+83	35	3
10+17 - 10+67	35	3
10+67 - 11+00	30	-
TOTALS	130	6

**WOOD POSTS, 4x4-INCH x 10 FT.**

LOCATION	EACH
STA. 9+78, LT.	1
STA. 9+85, RT.	1
STA. 10+15, LT.	1
STA. 10+22, RT.	1
TOTAL	4

**ASPHALTIC SURFACE**

STATION TO STATION	TONS
9+33 - 9+83	22 *
10+17 - 10+67	22 *
TOTAL	44

\*-INCLUDES TAPERS OFF BRIDGE ENDS

**SIGNS, TYPE II, REFLECTIVE**

LOCATION	S.F.	REMARKS
STA. 9+78, LT.	3	W5-52L
STA. 9+85, RT.	3	W5-52R
STA. 10+15, LT.	3	W5-52R
STA. 10+22, RT.	3	W5-52L
TOTAL	12	

**EROSION CONTROL**

STATION TO STATION	TOPSOIL S.Y.	MULCHING S.Y.	TYPE B FERT. CWT.	#20 SEED LB.
9+00 - 9+79	130	130	0.1	5
10+21 - 11+00	110	110	0.1	5
TOTALS	240	240	0.2	10

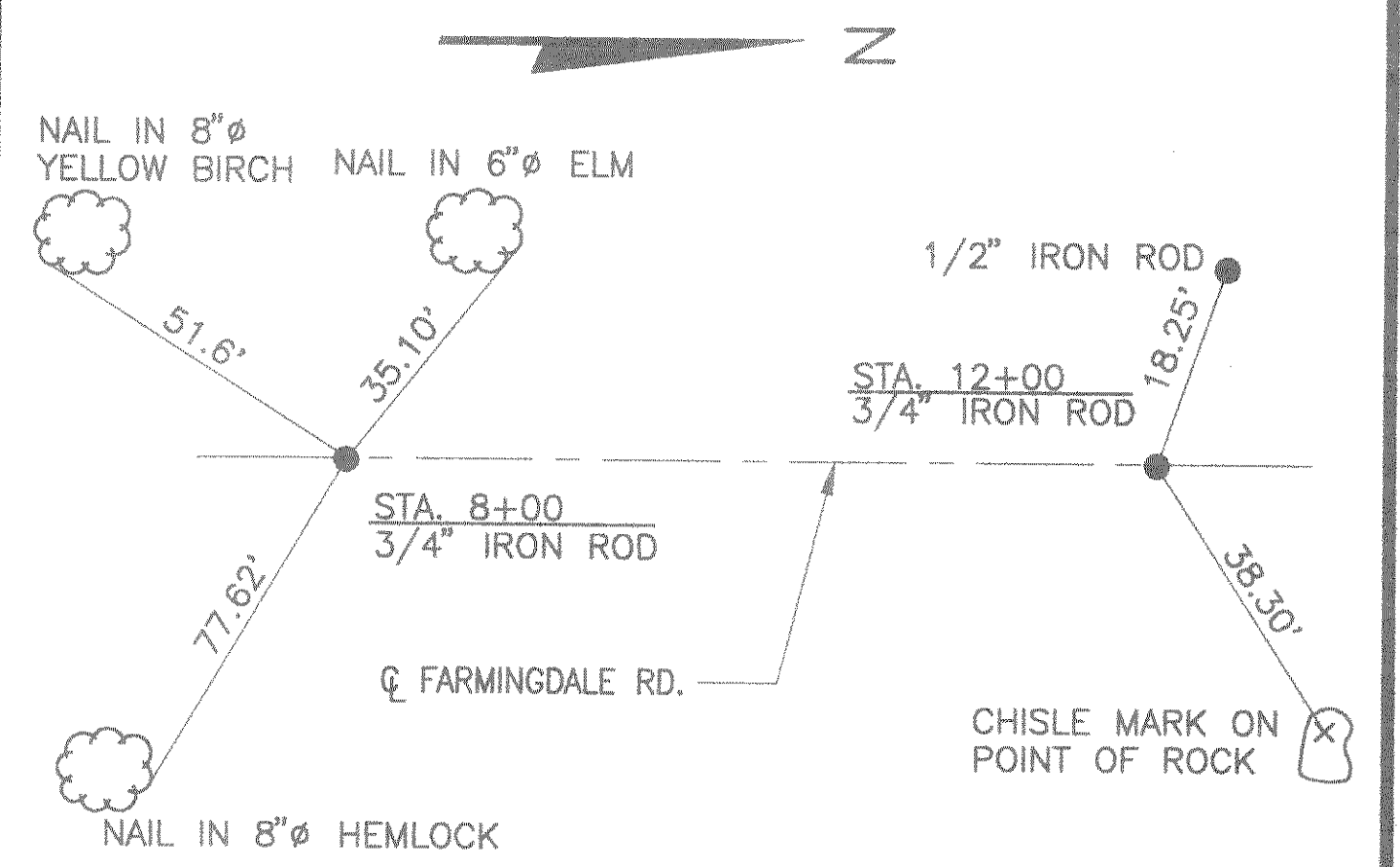
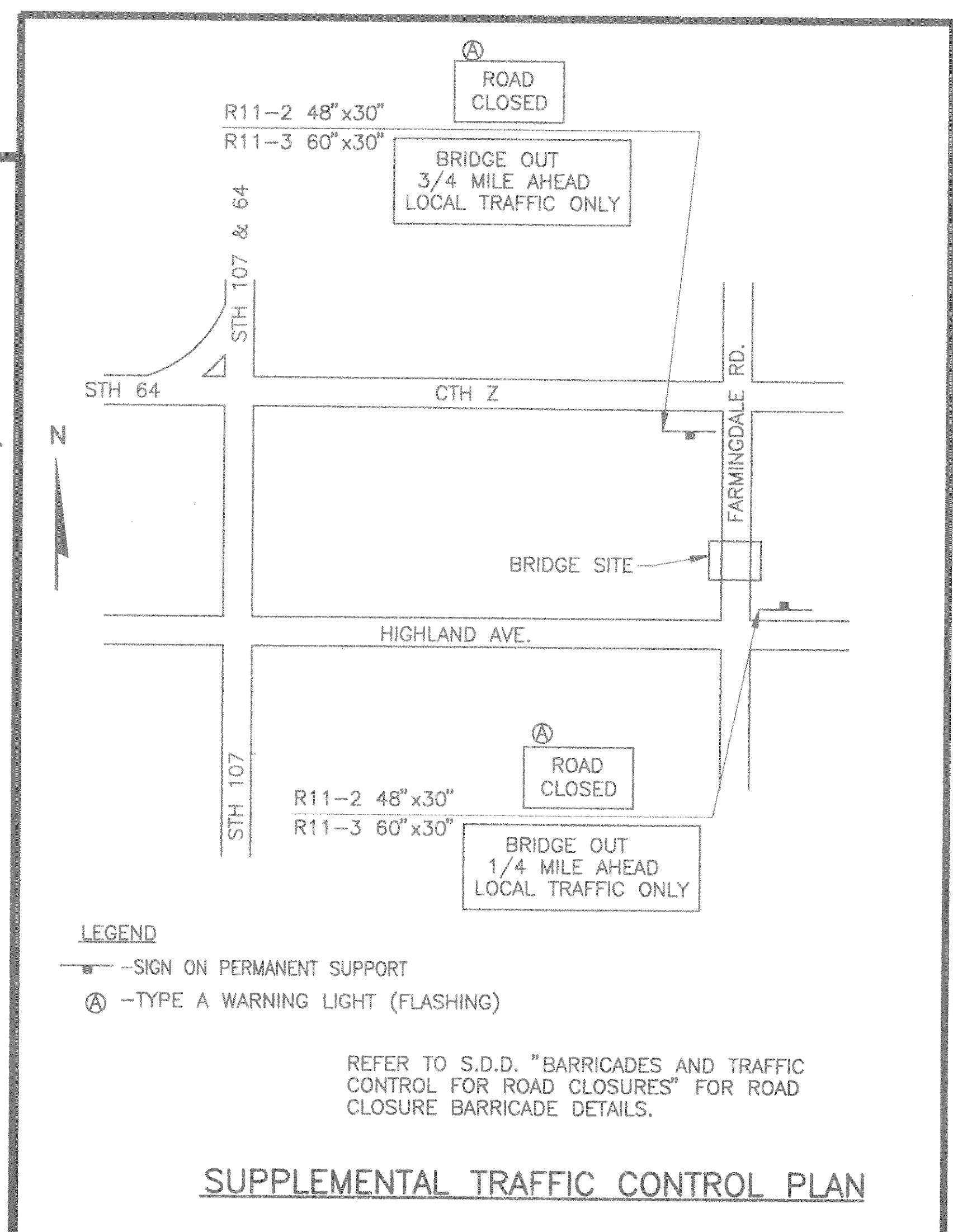
**TRAFFIC CONTROL**

LOCATION	BARRICADES TYPE III DAYS	WARNING LIGHTS TYPE A DAYS	SIGNS DAYS
AT BRIDGE	370	745	370
SUPPLEMENTAL TRAFFIC CONTROL	-	125	250
TOTALS	370	870	620

⊗ - PER S.D.D. "BARRICADES & TRAFFIC CONTROL FOR ROAD CLOSURES."

**EROSION BALES**

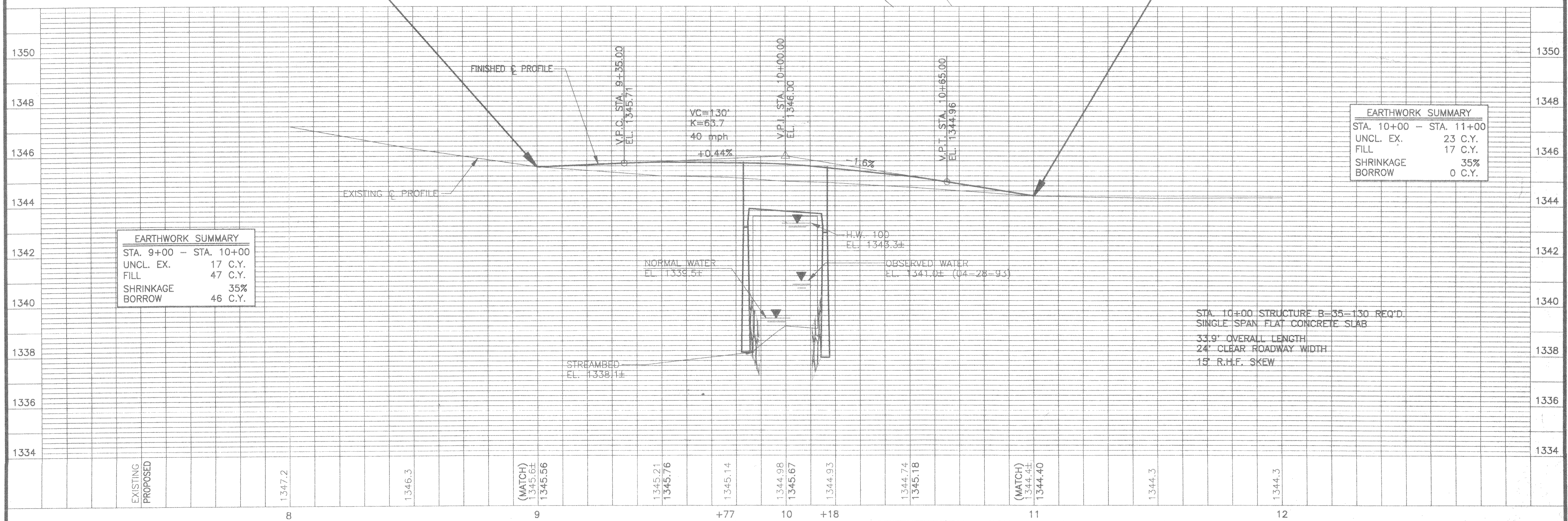
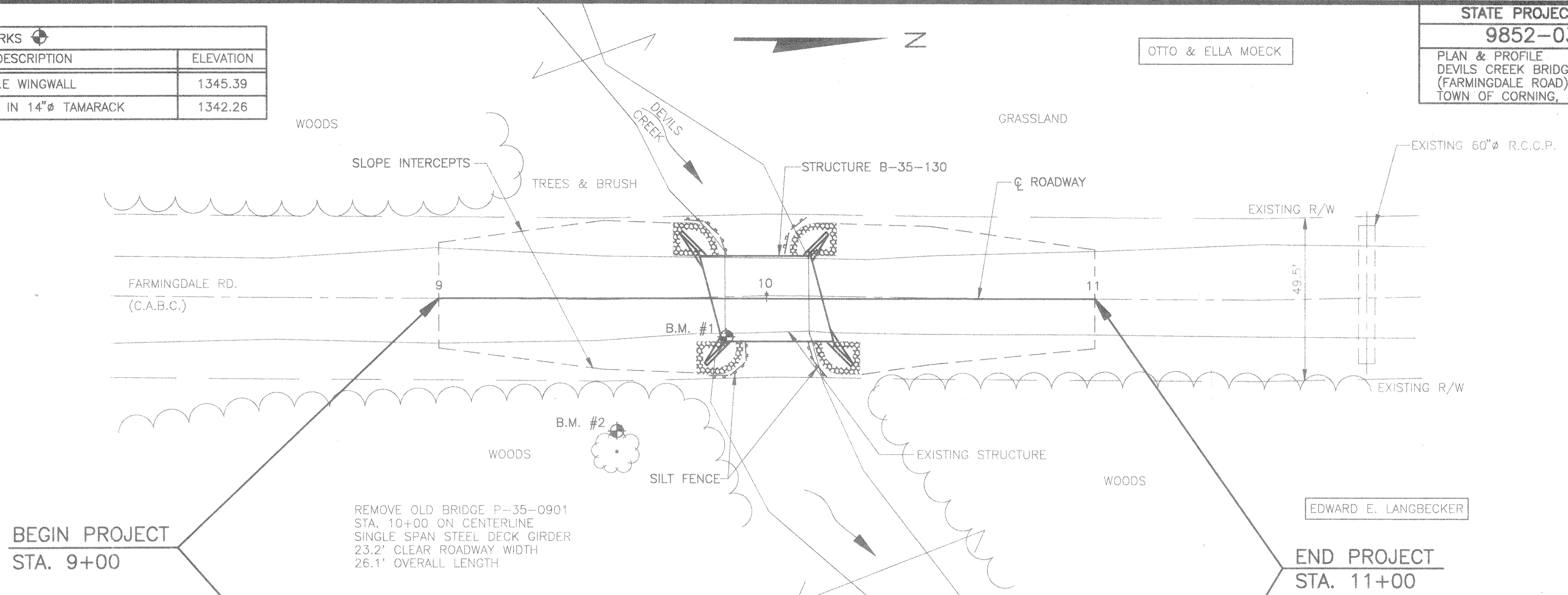
LOCATION	DELIVERED EACH	INSTALLED EACH
UNDISTRIBUTED	12	12



**SUPPLEMENTAL TRAFFIC CONTROL PLAN**

BENCHMARKS			
NO.	STATION	DESCRIPTION	ELEVATION
1	9+88, 12' RT.	TOP OF S.E. WINGWALL	1345.39
2	9+54, 40' RT.	R.R SPIKE IN 14"Ø TAMARACK	1342.26

STATE PROJECT NUMBER	SHEET NO.
9852-03-70	
PLAN & PROFILE DEVILS CREEK BRIDGE & APPROACHES (FARMINGDALE ROAD) TOWN OF CORNING, LINCOLN COUNTY	



BENCHMARKS				STATE PROJECT NUMBER	SHEET NO.
NO.	STA.	DESCRIPTION	ELEV.	9852-03-70	
1	9+88 12' RT.	TOP OF S.E. WING WALL	1345.39		
2	9+54 40' RT.	R.R. SPIKE IN 14" Ø TAMARACK	1342.26		

**DESIGN DATA**

**LIVELOAD**  
 DESIGN RATING : HS-20  
 INVENTORY RATING : HS-26  
 OPERATIONAL RATING : HS-43  
 MAX. STANDARD PERMIT VEHICLE LOAD = 230 KIPS  
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

**TRAFFIC DATA:**  
 A.D.T. (1995) = 25  
 A.D.T. (2015) = 40

**ULTIMATE DESIGN STRESSES:**  
 CONCRETE MASONRY - SLAB  $f_c' = 4,000$  P.S.I.  
 - ALL OTHER  $f_c' = 3,500$  P.S.I.  
 HIGH STRENGTH AND COATED HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60  $f_y = 60,000$  P.S.I.

**FOUNDATION DATA:**  
 ABUTMENTS SHALL BE SUPPORTED ON HP 10x42 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 45 TONS PER PILE. ESTIMATED PILE LENGTHS ARE 25'-0" AT THE SOUTH ABUTMENT AND 30'-0" AT THE NORTH ABUTMENT.

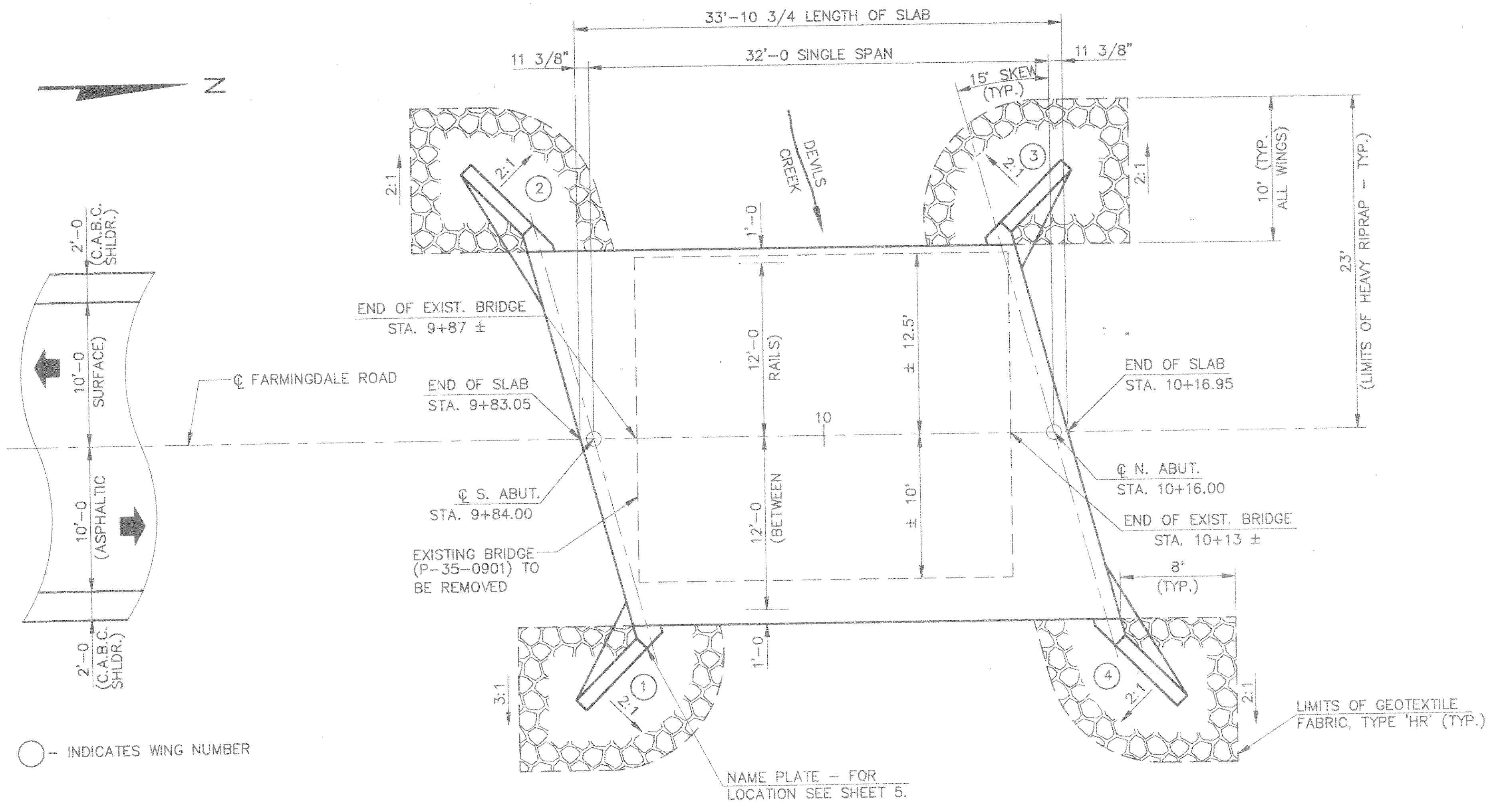
**HYDRAULIC DATA:**

**100 YEAR FREQUENCY**

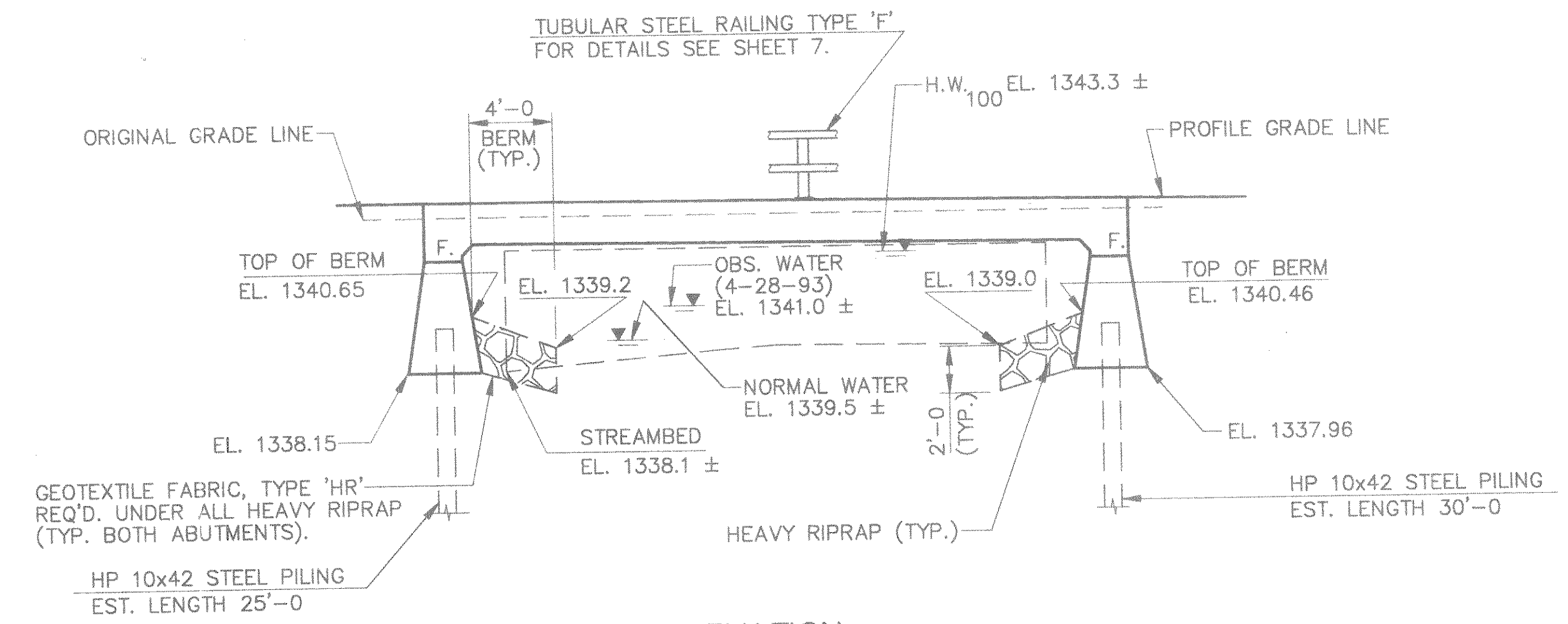
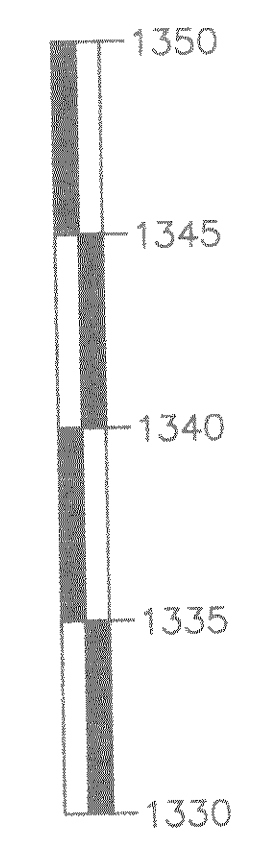
DRAINAGE AREA	8.13 SQ. MI.
Q <sub>100</sub> - TOTAL	700 C.F.S.
- THRU BRIDGE	590 C.F.S.
- SUPPLEMENTARY STRUCTURE	110 C.F.S.
VELOCITY - THRU BRIDGE	8.71 F.P.S.
- SUPPLEMENTARY STRUCTURE	6.9 F.P.S.
WATERWAY AREA - TOTAL	76 SQ. FT.
- THRU BRIDGE	68 SQ. FT.
- SUPPLEMENTARY STRUCTURE	16 SQ. FT.
HIGH WATER <sub>100</sub> ELEVATION	1343.3 ±
ROADWAY OVERFLOW DESIGN FREQUENCY	N/A
SCOUR CRITICAL CODE	8

**LIST OF DRAWINGS**

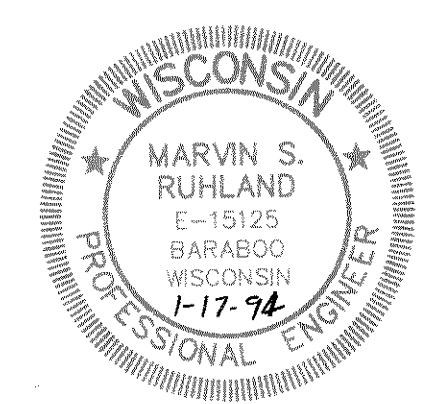
1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. ABUTMENTS
5. ABUTMENT DETAILS
6. SUPERSTRUCTURE
7. TUBULAR STEEL RAILING TYPE "F"



**PLAN**  
(SINGLE SPAN - CONCRETE SLAB)



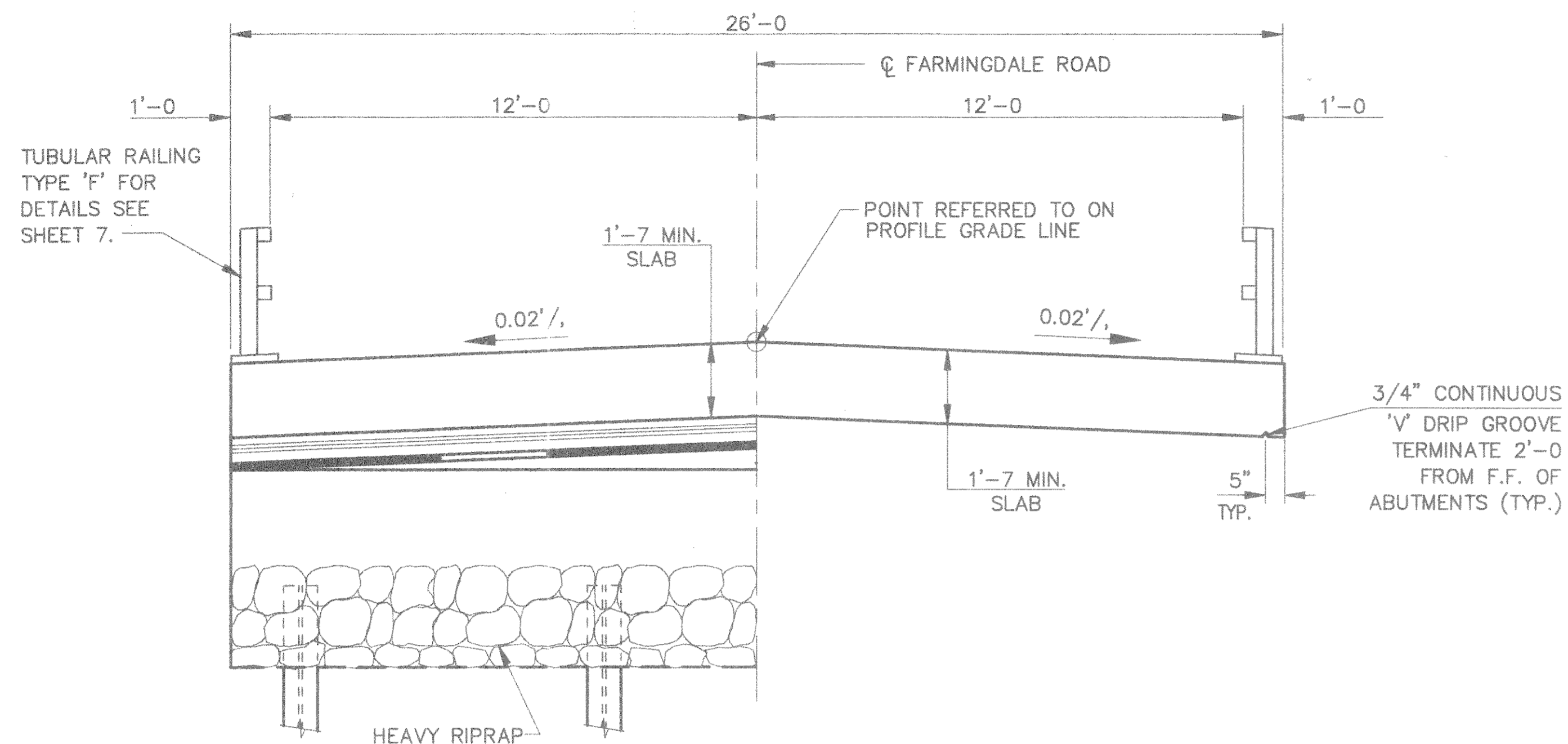
**ELEVATION**  
(NORMAL TO DEVILS CREEK)



*Marvin S. Ruhland*

BRIDGE OFFICE CONTACT (608) 266-8486

No.	Date	Revision	By
PLANS PREPARED BY			
<b>MSA</b> MID-STATE ASSOCIATES, INC. 1230 S. BLVD., BARABOO, WI. 53913			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-35-130</b>			
FARMINGDALE ROAD OVER DEVILS CREEK			
County	LINCOLN	Town/City/Village	CORNING
Design Spec.	AASHTO 1992	Load	HS-20
Designed By	MJS	Drawn By	RLR
Checked	DHW	Plans Checked	MJS
Approved _____ State Bridge Engineer Date _____			
<b>GENERAL PLAN</b>			SHEET 1 OF 7



AT ABUTMENTS IN SPAN  
 CROSS SECTION THRU BRIDGE  
 (LOOKING NORTH)

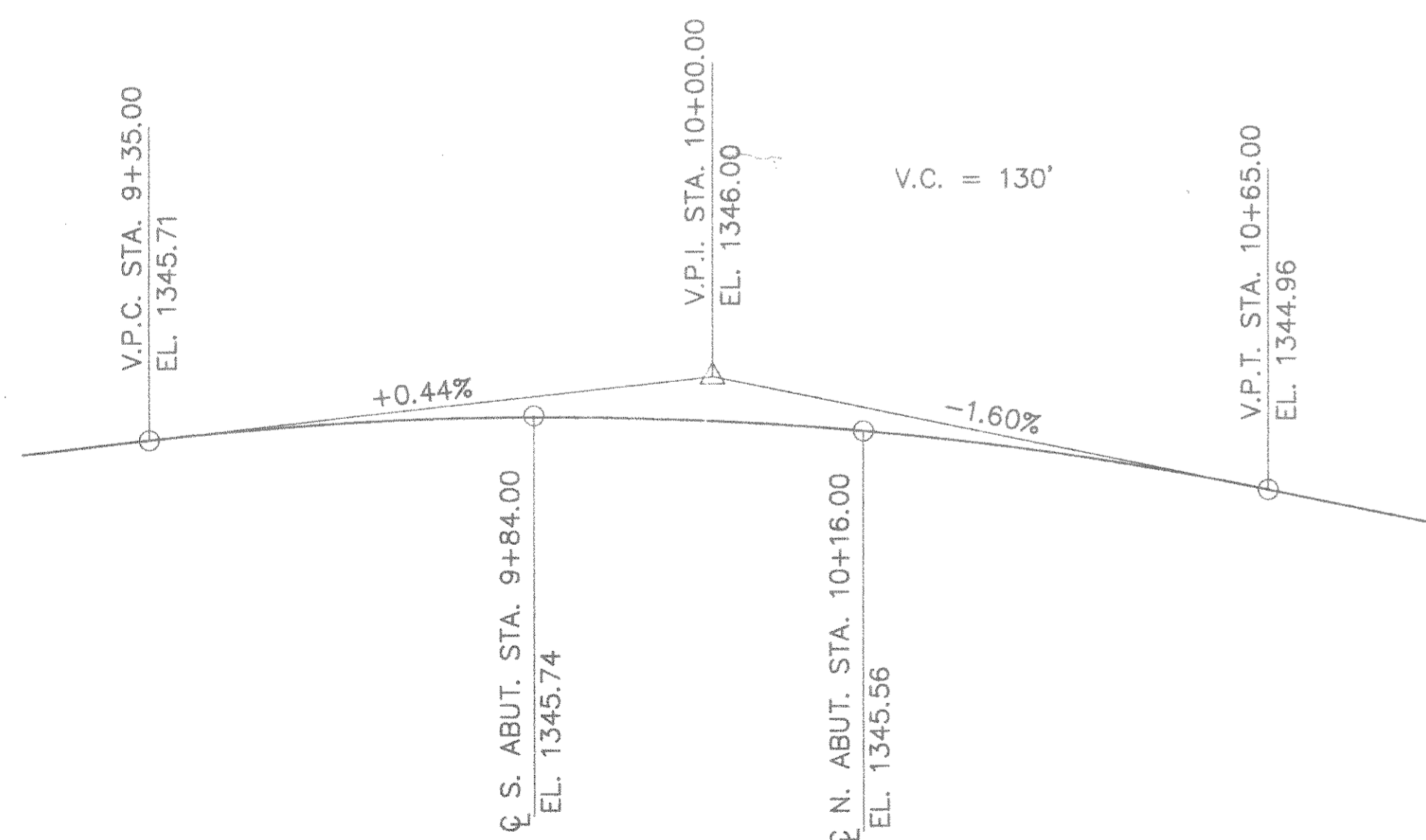
TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
REMOVING OLD BRIDGE, STATION 10+00	L.S.				1
EXCAVATION FOR STRUCTURES, BRIDGES B-35-130	L.S.				1
CONCRETE MASONRY, BRIDGES	C.Y.	20.1	20.1	54.8	95.0
PROTECTIVE SURFACE TREATMENT	GAL.			4	4
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	1750	1750	6610	10110
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.			1490	1490
* STEEL PILING DELIVERED & DRIVEN HP 10 INCH, 42 POUND	L.F.	100	120		220
TUBULAR RAILING, TYPE F, STRUCTURE B-35-130	L.S.				1
HEAVY RIPRAP	C.Y.	30	30		60
GEOTEXTILE FABRIC, TYPE HR	S.Y.	60	60		120
NON-BID ITEMS					
FILLER	SIZE				1/2" & 3/4"
POLYVINYL CHLORIDE WATERSTOP	L.F.	32	32		64

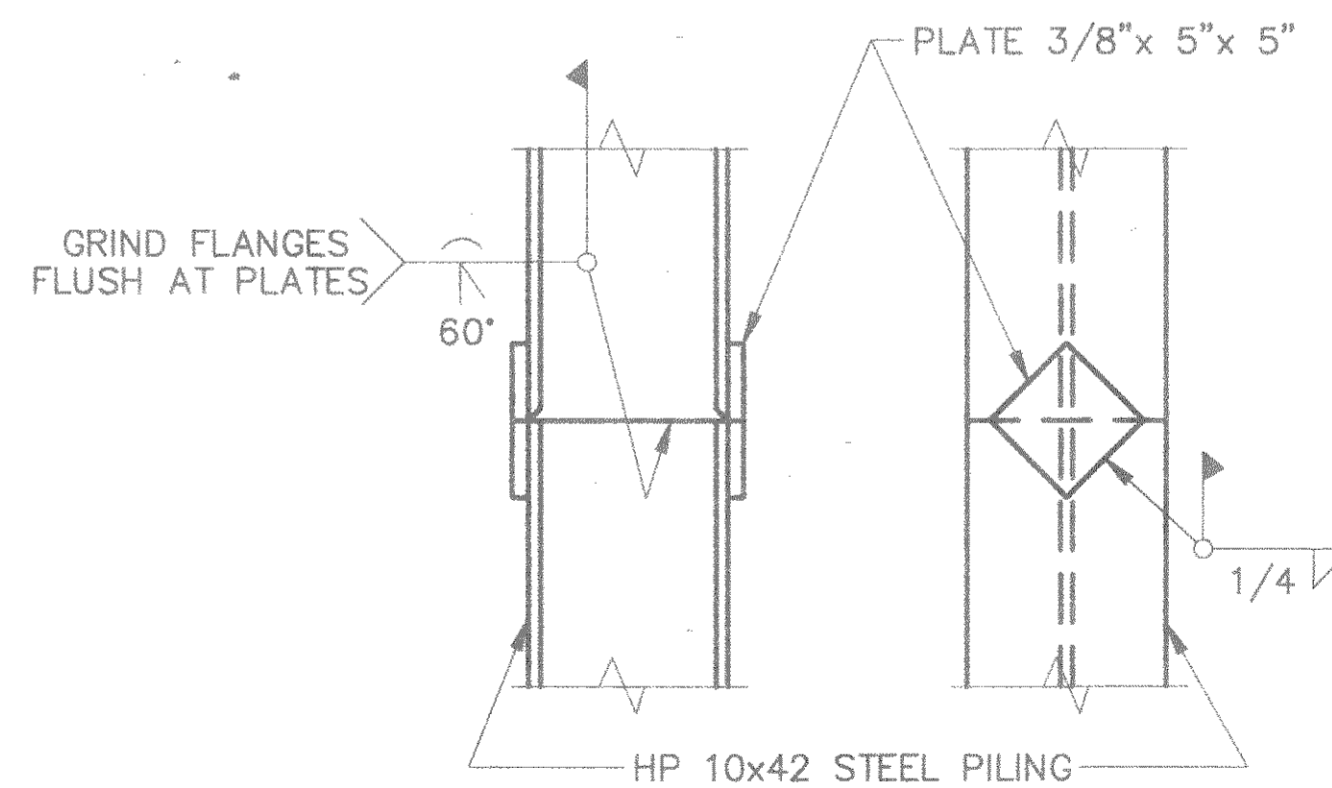
\* - OIL FIELD PIPE IS AN OPTION ON THIS PROJECT, 8 5/8" Ø MIN. WITH 1/2" WALL THICKNESS OR OTHER SIZE WITH EQUIVALENT STEEL AREA.

GENERAL NOTES

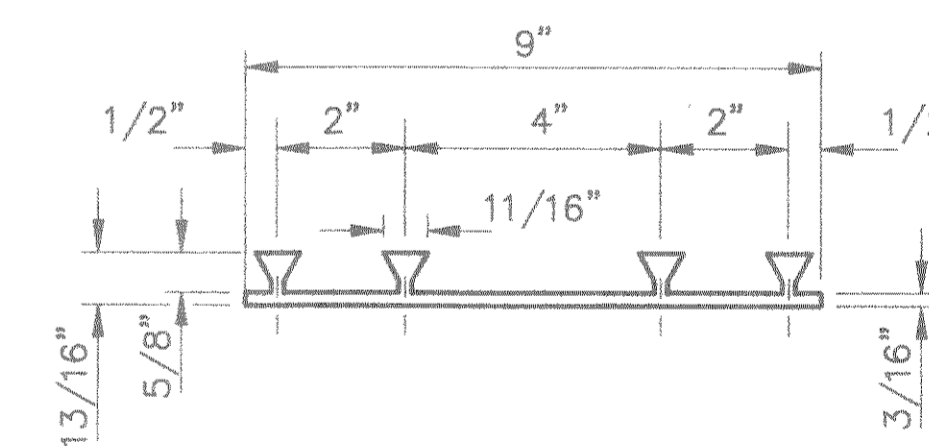
DRAWINGS SHALL NOT BE SCALED.  
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.  
 THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIES THE BAR SIZE.  
 FILLER SHALL CONFORM TO AASHTO DESIGNATIONS M153, TYPE I, II, OR III, OR AASHTO DESIGNATION M213.  
 THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC, TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.  
 THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS.  
 SLAB FALSEWORK SHALL BE SUPPORTED ON PILES, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.  
 THIS STRUCTURE WILL REPLACE EXISTING BRIDGE, P-35-0901, A 26.1 FT. LONG SINGLE SPAN STEEL DECK GIRDER BRIDGE SET ON FULL RETAINING CONCRETE ABUTMENTS.  
 AT THE ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH GRANULAR BACKFILL. PAYMENT WILL BE INCLUDED IN THE ITEM OF "EXCAVATION FOR STRUCTURES, BRIDGES B-35-130". SEE NOTE ON SHEET 4 REGARDING BOULDER REMOVAL.



PROFILE GRADE LINE - FARMINGDALE ROAD



PILE SPLICE DETAILS



P.C.W.  
 POLYVINYL CHLORIDE WATERSTOP

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-35-130			
Const. Spec. WI "89"	Drawn By RLR	Plans Checked MJS	
CROSS SECTION & QUANTITIES			SHEET 2 OF 7

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. Sta. Elevation 7 Average Blows Per Foot Refusal 95/6

LEGEND OF BORING

Unconfined Strength → 7.7 7 \* Boring No. Sta. Elev.

Blows Per Ft. Using 140# Wt. Falling 30" → 7 \* Sandy Gravel

Wash Sample → Boulders or Cobbles

Shelby Tube → S.T. → Sand

Ground Water Elevation → Silty Clay

No Ground Water Observed Above This Elevation → So. Limestone

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

No.	Date	Revision	By
-----	------	----------	----

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

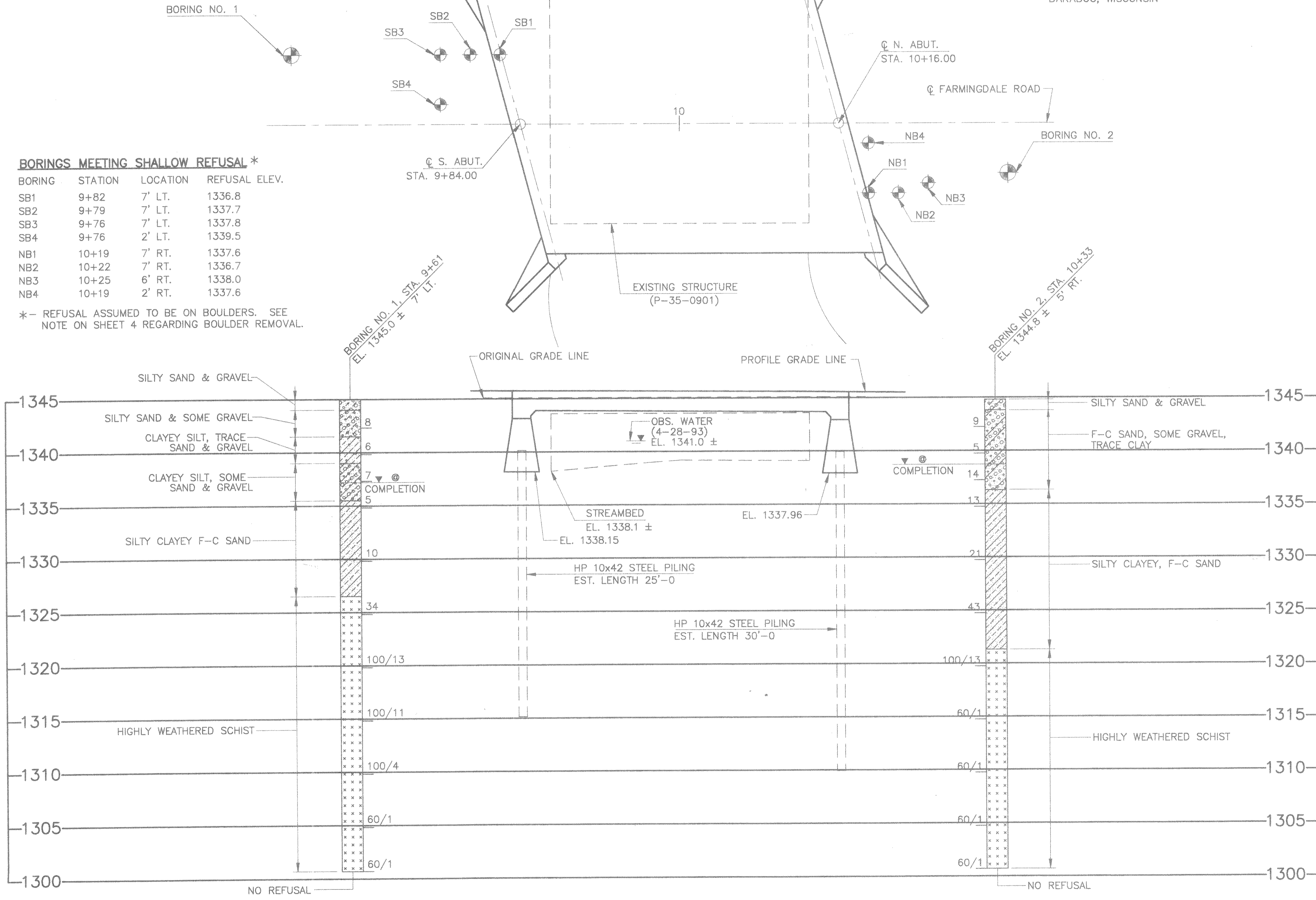
STRUCTURE B-35-130

Const. Spec. WI "89"	Drawn By MMR/RLR	Plans Checked MJS
----------------------	------------------	-------------------

SUBSURFACE EXPLORATION SHEET 3 OF 7

BORINGS PERFORMED BY:  
 ENVIRONMENTAL & FOUNDATION DRILLING, INC.  
 WAUNAKEE, WISCONSIN  
 BORINGS COMPLETED ON: AUGUST 11, 1993

PLANS PREPARED BY:  
 MID-STATE ASSOCIATES, INC.  
 BARABOO, WISCONSIN



**BORINGS MEETING SHALLOW REFUSAL \***

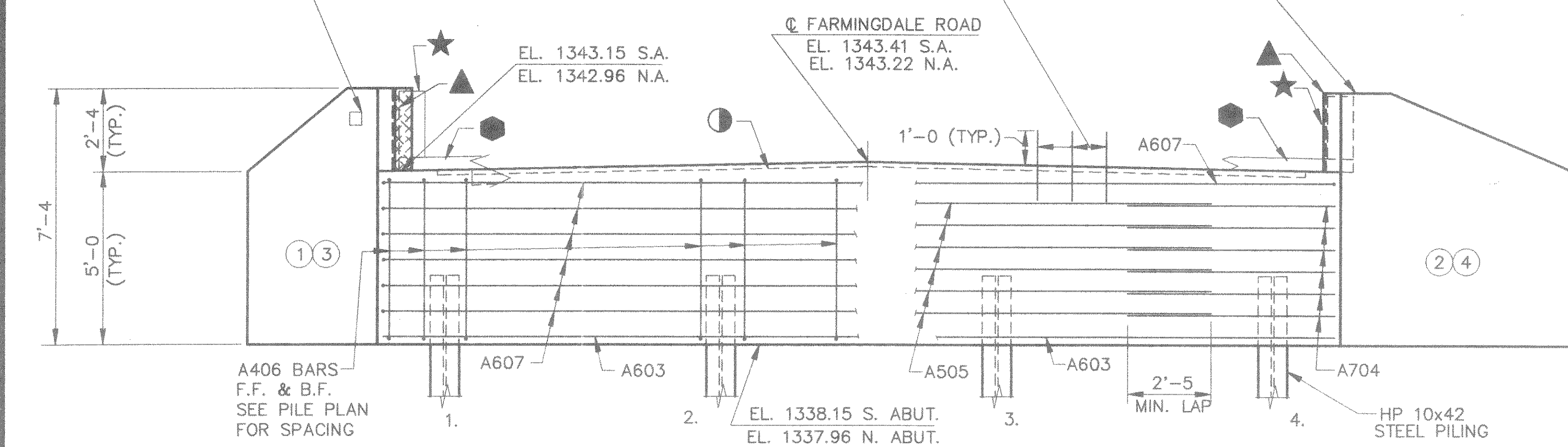
BORING	STATION	LOCATION	REFUSAL ELEV.
SB1	9+82	7' LT.	1336.8
SB2	9+79	7' LT.	1337.7
SB3	9+76	7' LT.	1337.8
SB4	9+76	2' LT.	1339.5
NB1	10+19	7' RT.	1337.6
NB2	10+22	7' RT.	1336.7
NB3	10+25	6' RT.	1338.0
NB4	10+19	2' RT.	1337.6

\* - REFUSAL ASSUMED TO BE ON BOULDERS. SEE NOTE ON SHEET 4 REGARDING BOULDER REMOVAL.

NAME PLATE - FOR LOCATION  
SEE SHEET 5 (WING 1 ONLY)

A408 BARS @ 1'-0" CENTERS, MAY BE  
PLACED AFTER CONCRETE IS POURED,  
BUT BEFORE INITIAL SET HAS TAKEN PLACE.

FOR WING DETAILS SEE SHEET 5.



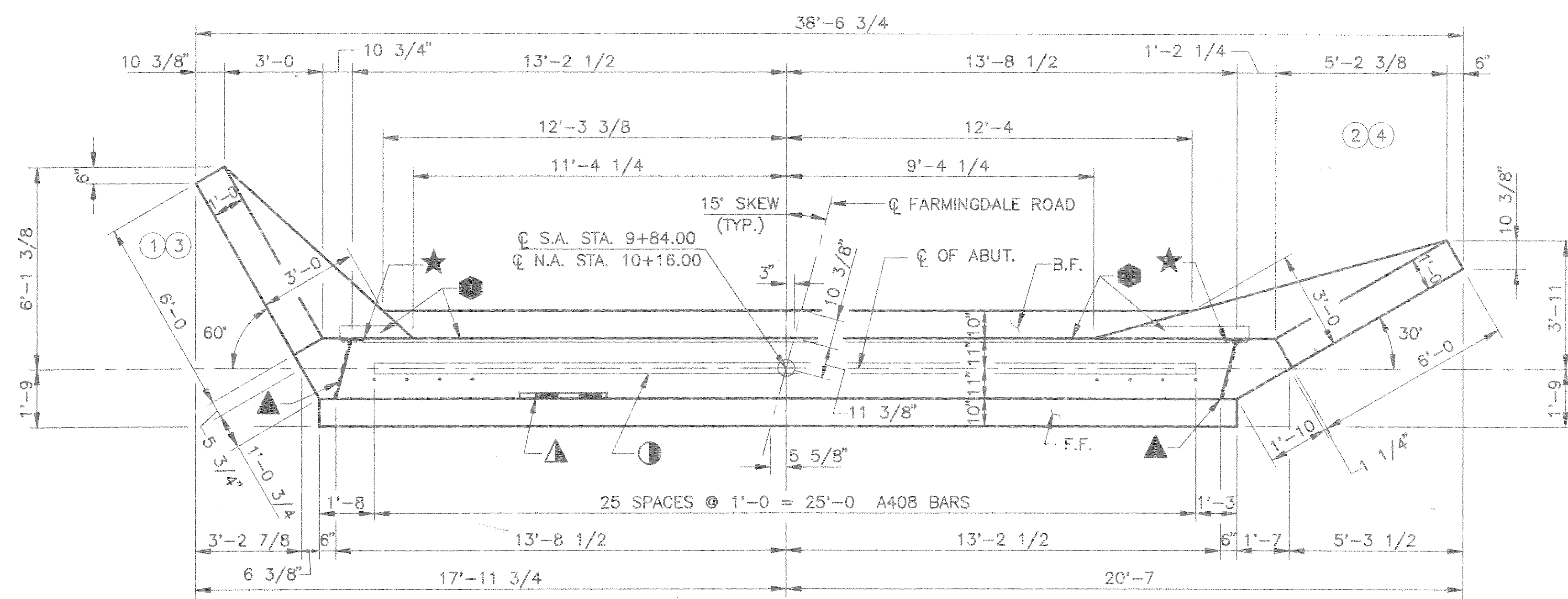
FRONT FACE BAR STEEL REINF. **ELEVATION** BACK FACE BAR STEEL REINF.  
(SOUTH ABUTMENT - LOOKING SOUTH)  
(NORTH ABUTMENT - LOOKING NORTH)

**LEGEND**

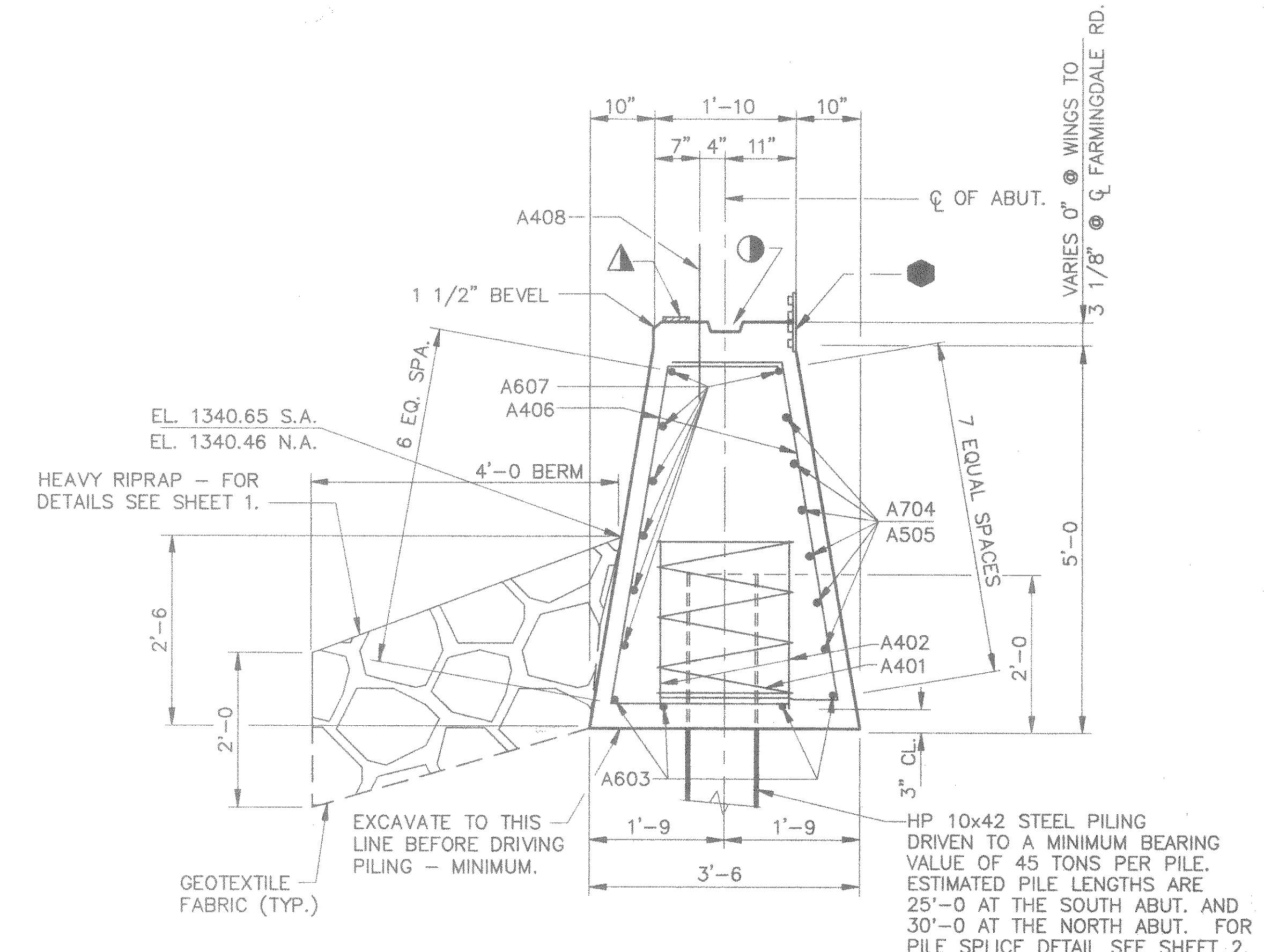
- — KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2 X 6.
- ★ — VERTICAL P.C.W. EXTEND FROM THE TOP EDGE OF HORIZONTAL P.C.W. TO 1" BELOW TOP OF WING. BUTT-SPLICE AT ALL INTERSECTIONS WITH HORIZ. P.C.W. BY USING A HEATED SPLICING IRON OR ACCEPTED BONDING AGENT. HOLD FLUSH WITH FACE OF CONCRETE.
- — HORIZONTAL P.C.W., EXTEND BETWEEN OUTSIDE EDGES OF VERTICAL P.C.W. AT WINGS. HOLD FLUSH WITH FACE OF CONCRETE. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREAS OF WINGS.
- ▲ — 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- ▲ — 4" X 3/4" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.

FOR DETAIL OF P.C.W. SEE SHEET 2.

NOTE:  
FASTEN P.C.W. TO FORMS BY NAILING OUTSIDE OF THE OUTSIDE TABS.

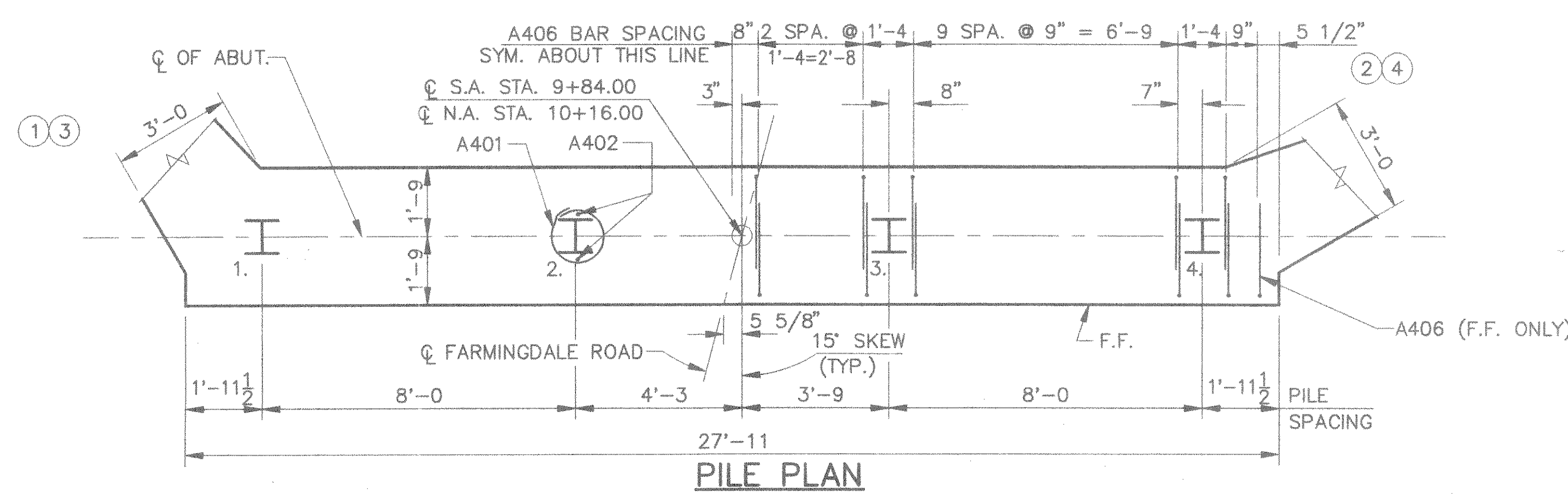


**PLAN**



**TYPICAL SECTION THRU ABUTMENTS**

NOTE:  
REMOVAL OF BOULDERS WITHIN FIVE (5) FEET BELOW THE BOTTOM OF ABUTMENTS TO FACILITATE PILING PLACEMENT SHALL BE INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES, BRIDGES B-35-130".



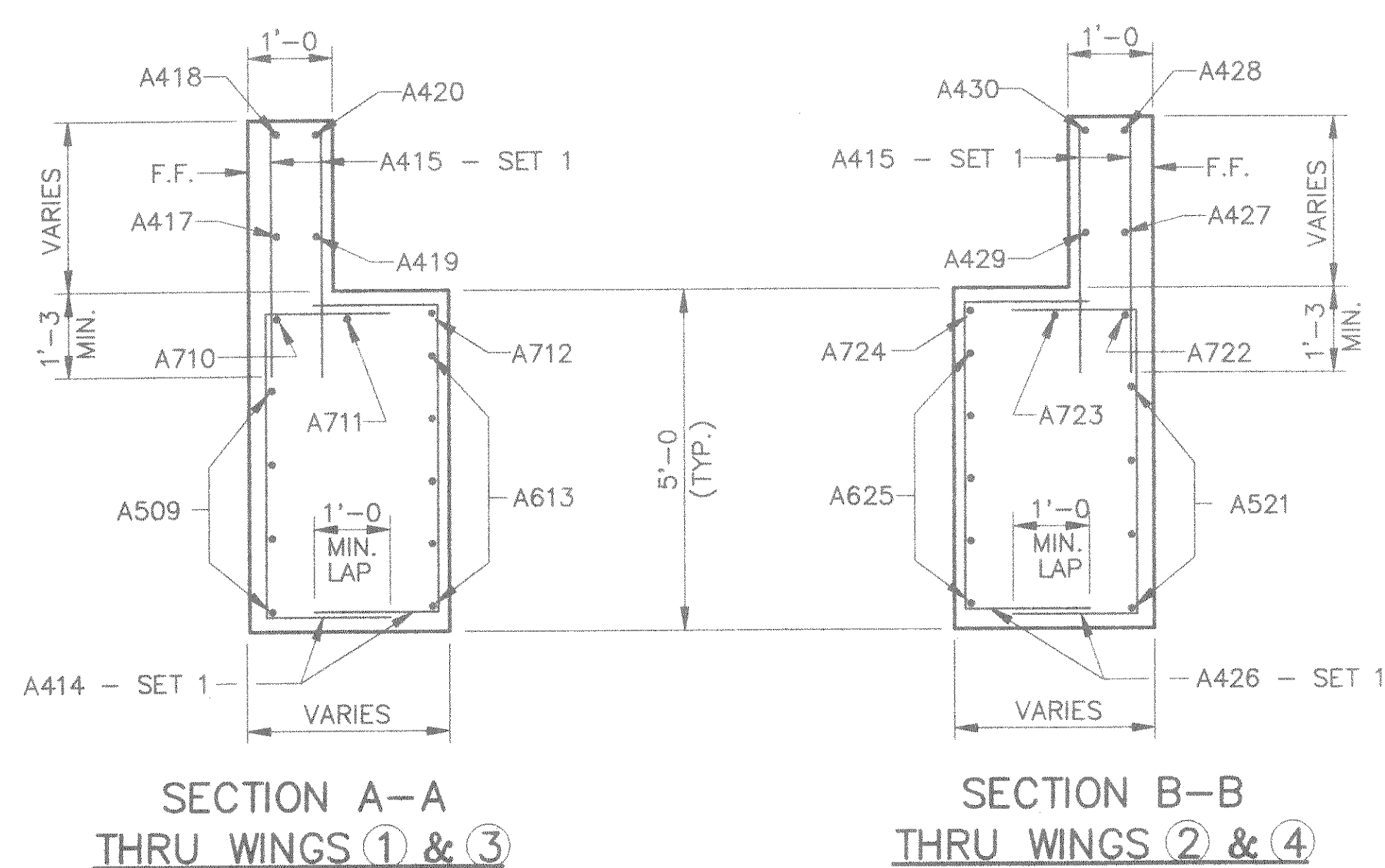
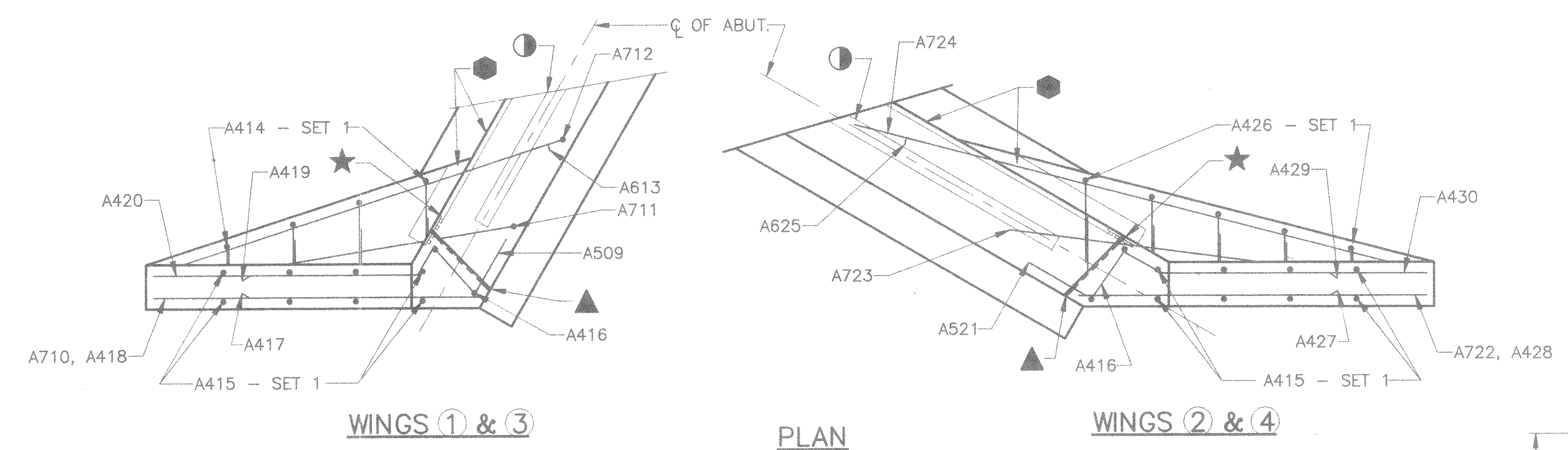
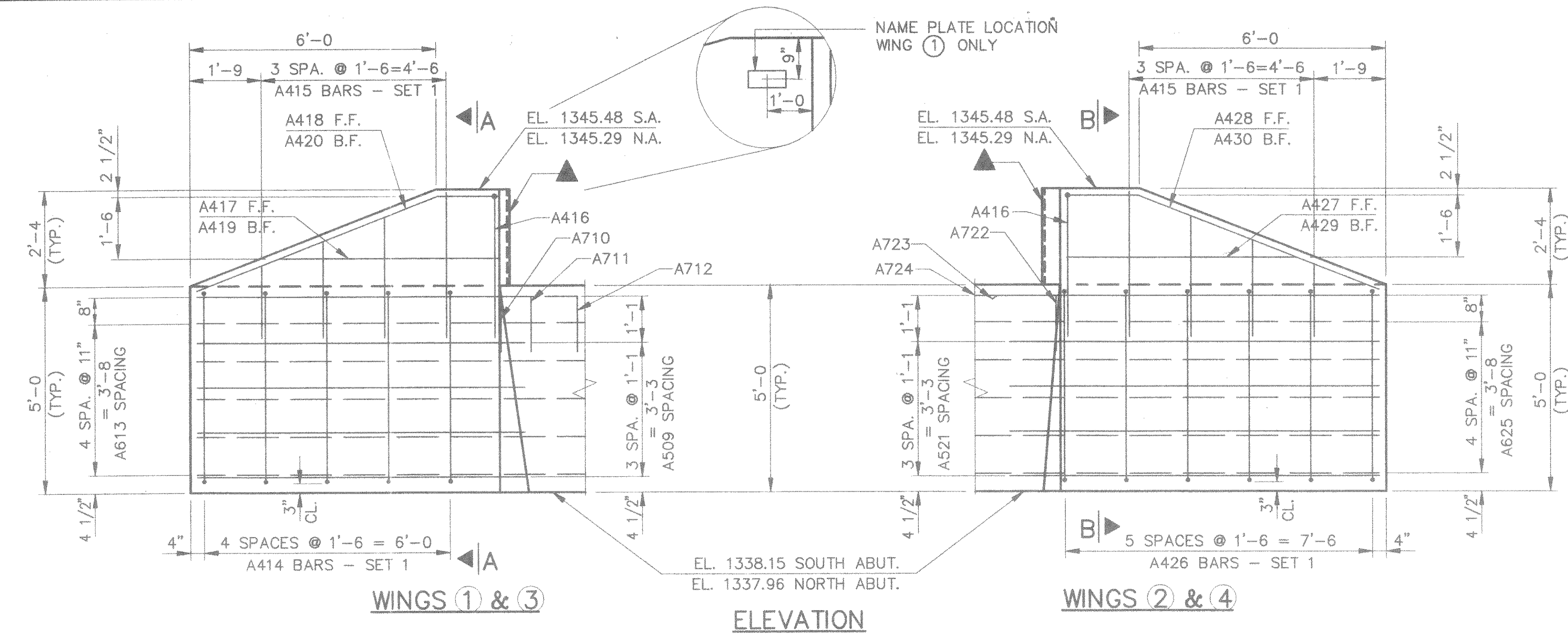
**PILE PLAN**

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE</b>		<b>B-35-130</b>	
Const. Spec.	WI "89"	Drawn By	Plans Checked
		RLR	MJS
<b>ABUTMENTS</b>			SHEET 4 OF 7

**BILL OF BARS (2 ABUTMENTS) 3500 LBS.**

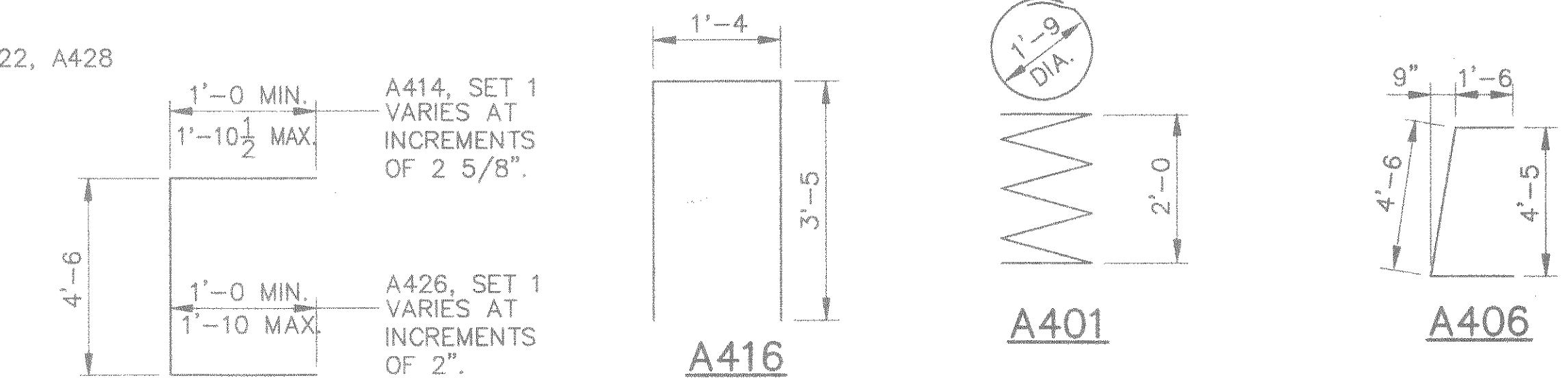
MARK	NO. REQ'D	LENGTH	BENT	CUTTING DIAGRAM	LOCATION
A401	8	28-0	X		BODY @ PILES-1 PER PILE 5 SPIRAL WRAPS
A402	16	2-3			" " " -2 " " - VERT.
A603	8	27-7			" - BOTTOM - HORIZ.
A704	24	8-0			" - B.F. - AT WINGS
A505	12	16-5			" - " - CENTER
A406	116	8-2	X		" - STIRRUP - VERT.
A607	14	28-11	X		" - F.F. & TOP - HORIZ.
A408	52	2-0			" - DOWELS @ TOP - VERT.
A509	8	8-9	X		WINGS ① & ③ BOTTOM- F.F. - HORIZ.
A710	2	8-5	X		" " " " " " "
A711	2	9-5	X		" " " " " - CENTER
A712	2	10-11	X		" " " " " - B.F.
A613	10	9-5			" " " " " " "
A414	10	14-5	X	X	" " " " " - F.F. & B.F. - VERT.
A415	16	5-3		X	" - ALL - TOP " " "
A416	4	8-0	X		" - AT FILLER " " "
A417	2	5-4			" ① & ③ " - F.F. - HORIZ.
A418	2	7-9	X		" " " " " " "
A419	2	4-8	X		" " " " " - B.F.
A420	2	7-0	X		" " " " " " "
A521	8	9-2	X		" ② & ④ BOTTOM- F.F.
A722	2	8-11	X		" " " " " " "
A723	2	9-6			" " " " " - CENTER
A724	2	13-4			" " " " " - B.F.
A625	10	12-2			" " " " " " "
A426	12	14-4	X	X	" " " " " - F.F. & B.F. - VERT.
A427	2	5-10			" " " " " - TOP - F.F. - HORIZ.
A428	2	8-0	X		" " " " " " "
A429	2	5-0	X		" " " " " - B.F.
A430	2	7-4	X		" " " " " " "

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.  
BENT BARS IF USED IN CUTTING DIAGRAM SHALL BE BENT AFTER CUTTING.



MARK	A	B
A509	1'-6"	60"
A418	1'-6"	21"
A419	9"	60"
A420	1'-6"	30"
A428	1'-9"	21"
A429	1'-0"	30"
A430	1'-1"	30"

MARK	C
A710, A711, A712	1'-4"
A722	1'-4"



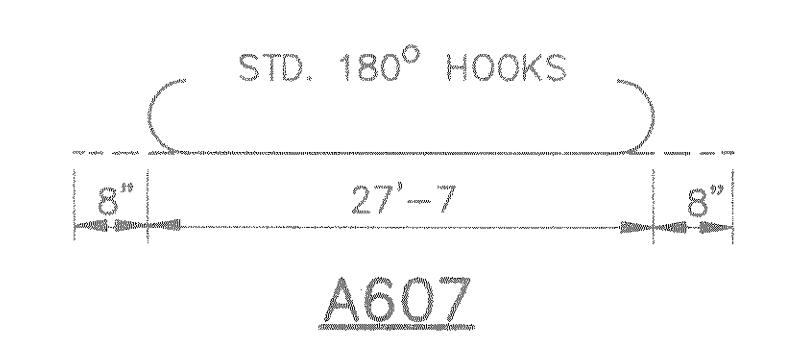
**A414, A426**

● BUNDLE & MARK CUT BARS W/ BAR MARK & SET NUMBER.

MARK & CUT ALL BARS ALONG THIS LINE. MAKE ALL CUTS NORMAL TO BAR AXIS.

**CUTTING DIAGRAM**

MARK	D	E	F	G	NO. OF BARS/SET	SETS REQ'D	
A414	SET 1	6'-4"	8'-1"	6'-4"	8'-1"	5	4
A415	SET 1	1'-9"	3'-6"	1'-9"	3'-6"	4	8
A426	SET 1	6'-4"	8'-0"	6'-4"	8'-0"	6	4



**A607**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

STRUCTURE B-35-130

Const. Spec. WI "89" Drawn By RLR Plans Checked MJS

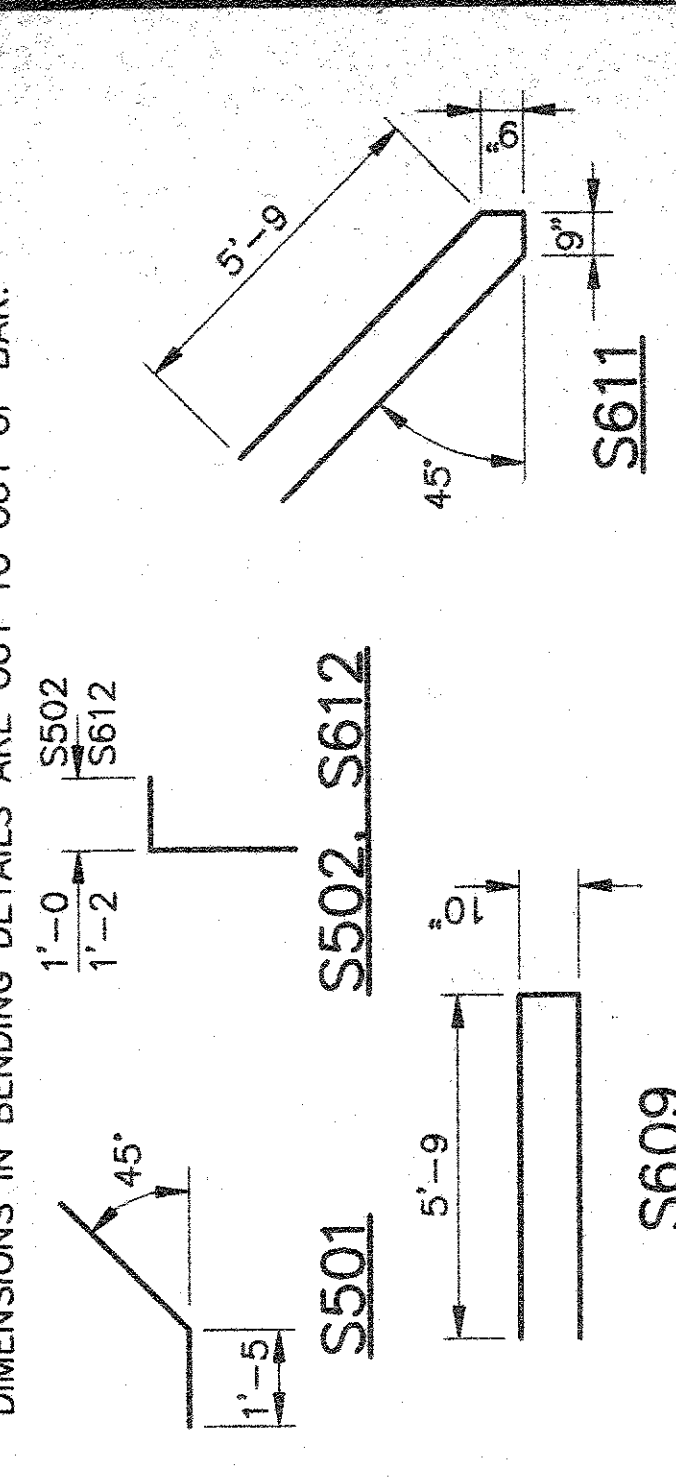
ABUTMENT DETAILS

SHEET 5 OF 7



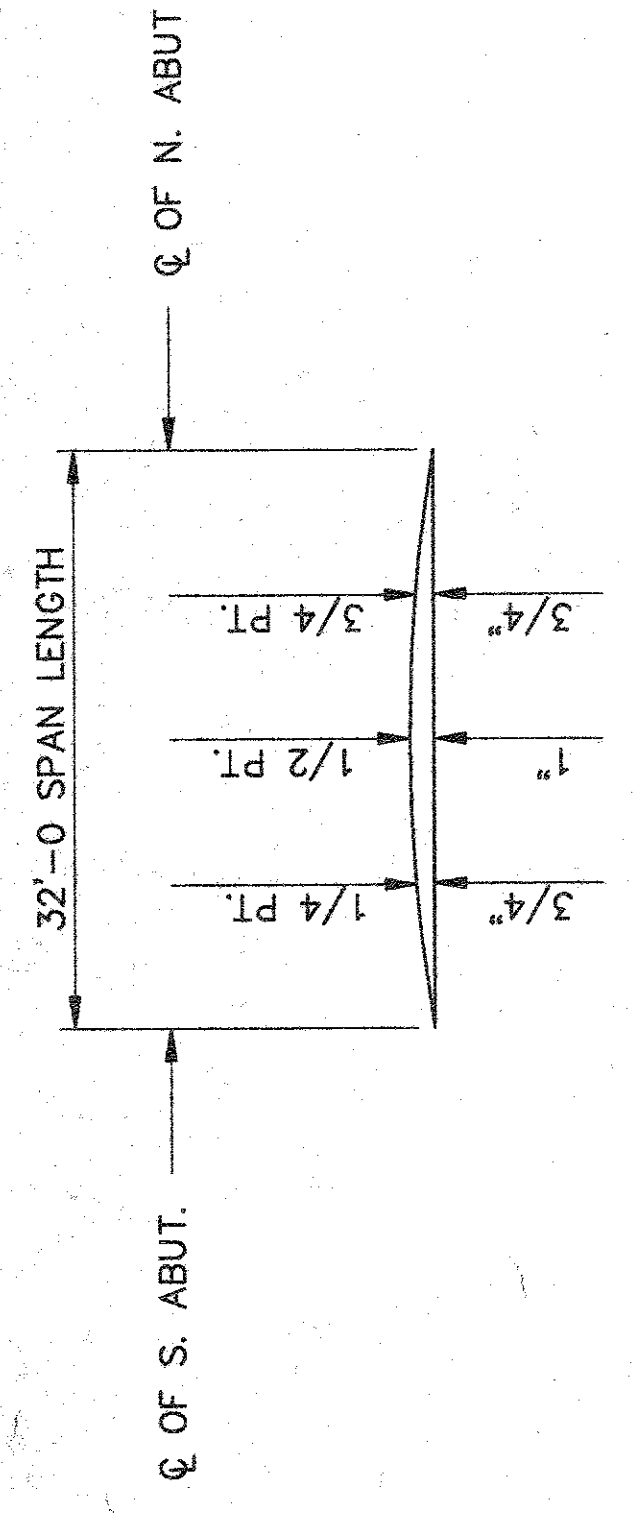
BILL OF BARS  
 COATED 1490 LBS.  
 UNCOATED 6610 LBS.

MARK	NO. REQ'D.	UN-COATED	LENGTH	BENT	LOCATION
S501	52	3-6	X	DIAPHRAGM @ ABUTS. - LONGIT.	
S502	52	3-0	X	" " " " - VERT.	
S903	27	33-6	"	SLAB BOTTOM - LONGIT.	
S904	26	25-1	"	" " " " - LONGIT.	
S505	37	26-7	"	" " @ ABUT. - TRANS.	
S406	6	26-7	"	" " " " - TRANS.	
S407	35	26-7	"	TOP	
S408	18	33-6	"	" " " " - LONGIT.	
S609	8	12-0	X	@ RAIL POST, ONE PER POST	
S610	12	4-0	"	" " " " - TWO	
S611	2	12-11	X	" " " " - CORNER POSTS AS NOTED	
S612	8	4-0	X	" " " " - CORNER POSTS AS NOTED	



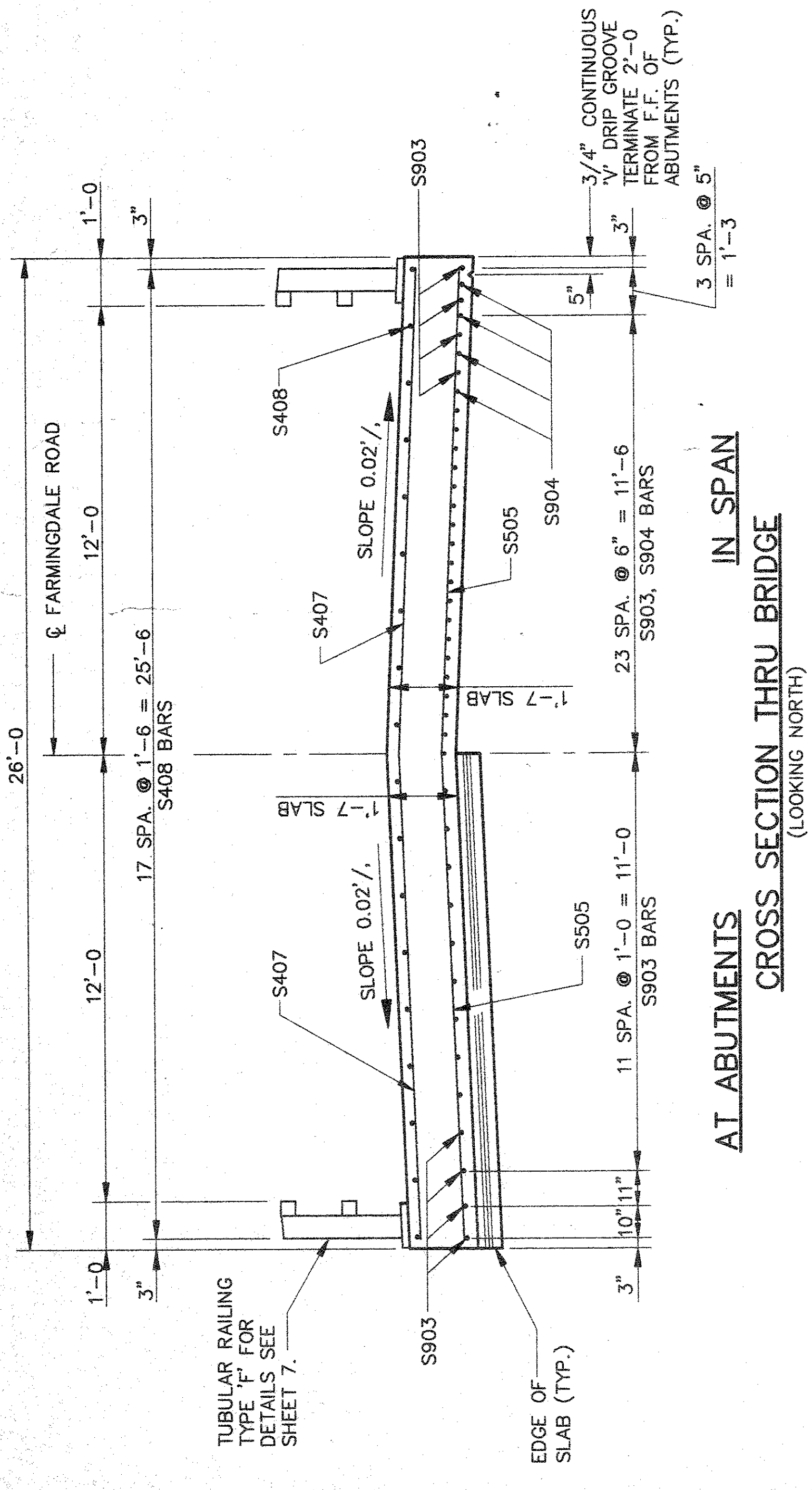
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

**GENERAL NOTES**  
 ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).  
 ALTERNATE TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.  
 ALL TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE PLACED ON THE SKEW.

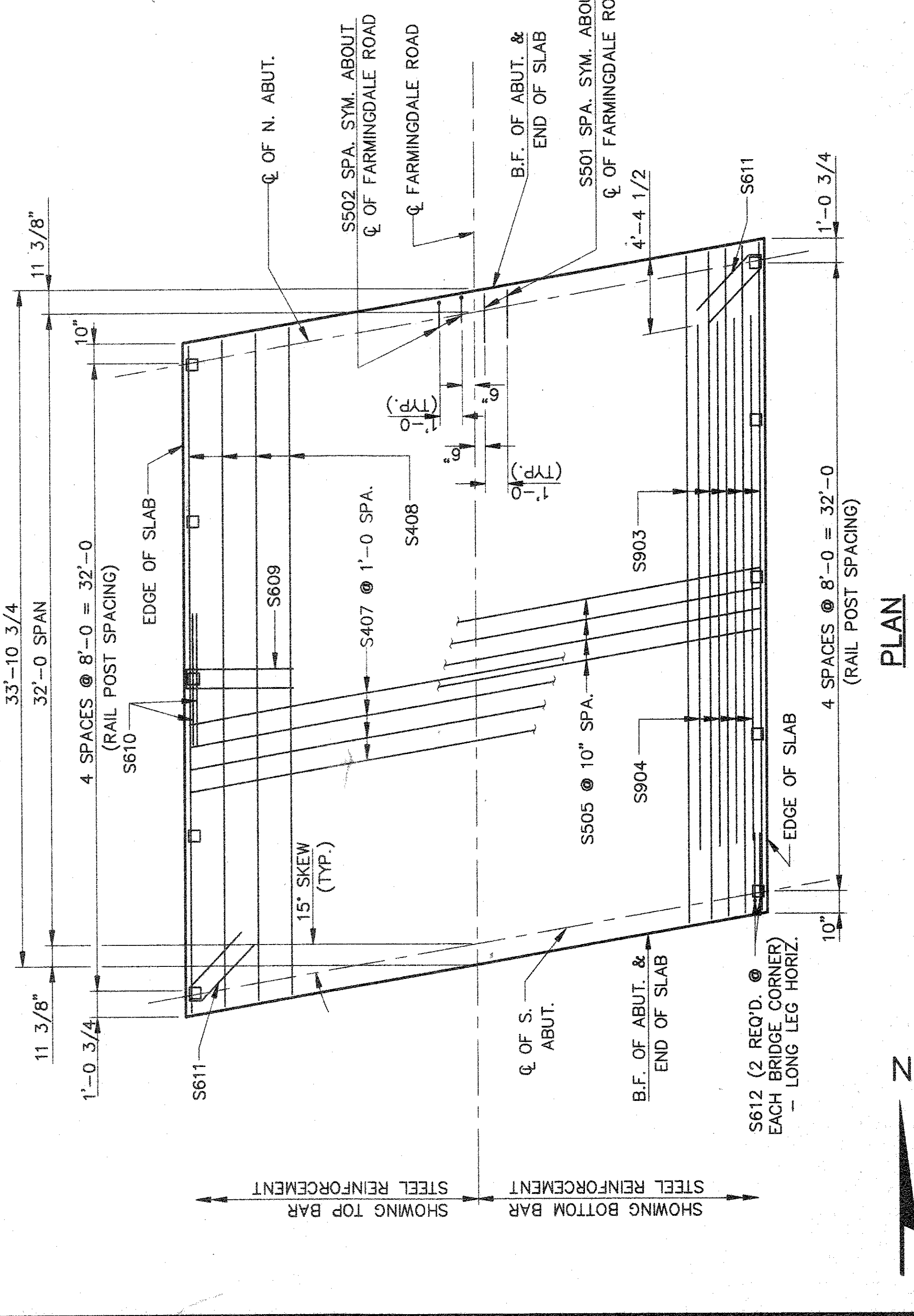


**CAMBER DIAGRAM**

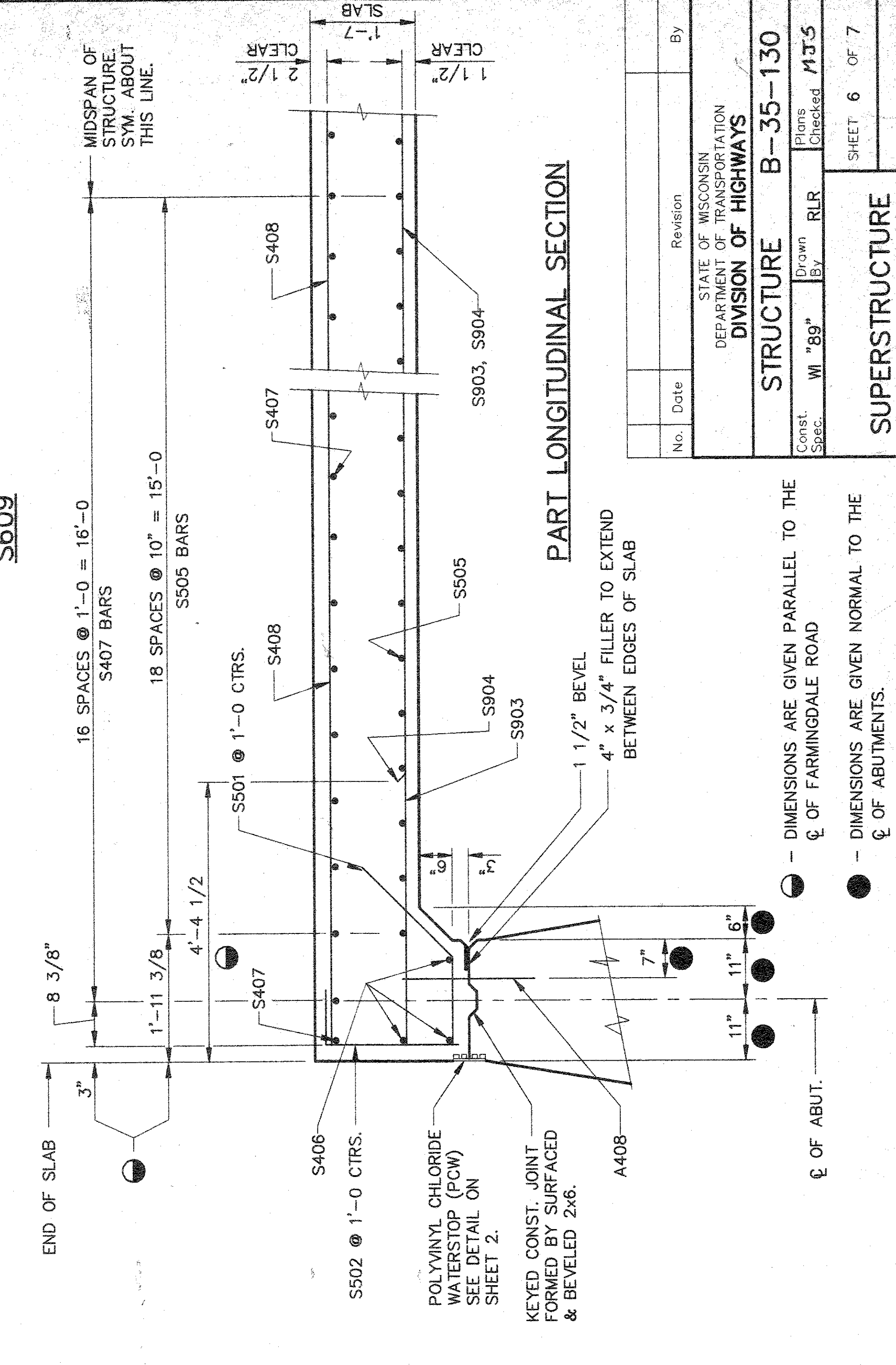
CAMBER SPAN AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEADLOAD DEFLECTION ONLY APPROXIMATELY 1/4 OF CAMBER VALUES SHOWN.



**CROSS SECTION THRU BRIDGE**  
 (LOOKING NORTH)



**PLAN**



**PART LONGITUDINAL SECTION**

- DIMENSIONS ARE GIVEN PARALLEL TO THE  $\phi$  OF FARMINGDALE ROAD
- DIMENSIONS ARE GIVEN NORMAL TO THE  $\phi$  OF ABUTMENTS.

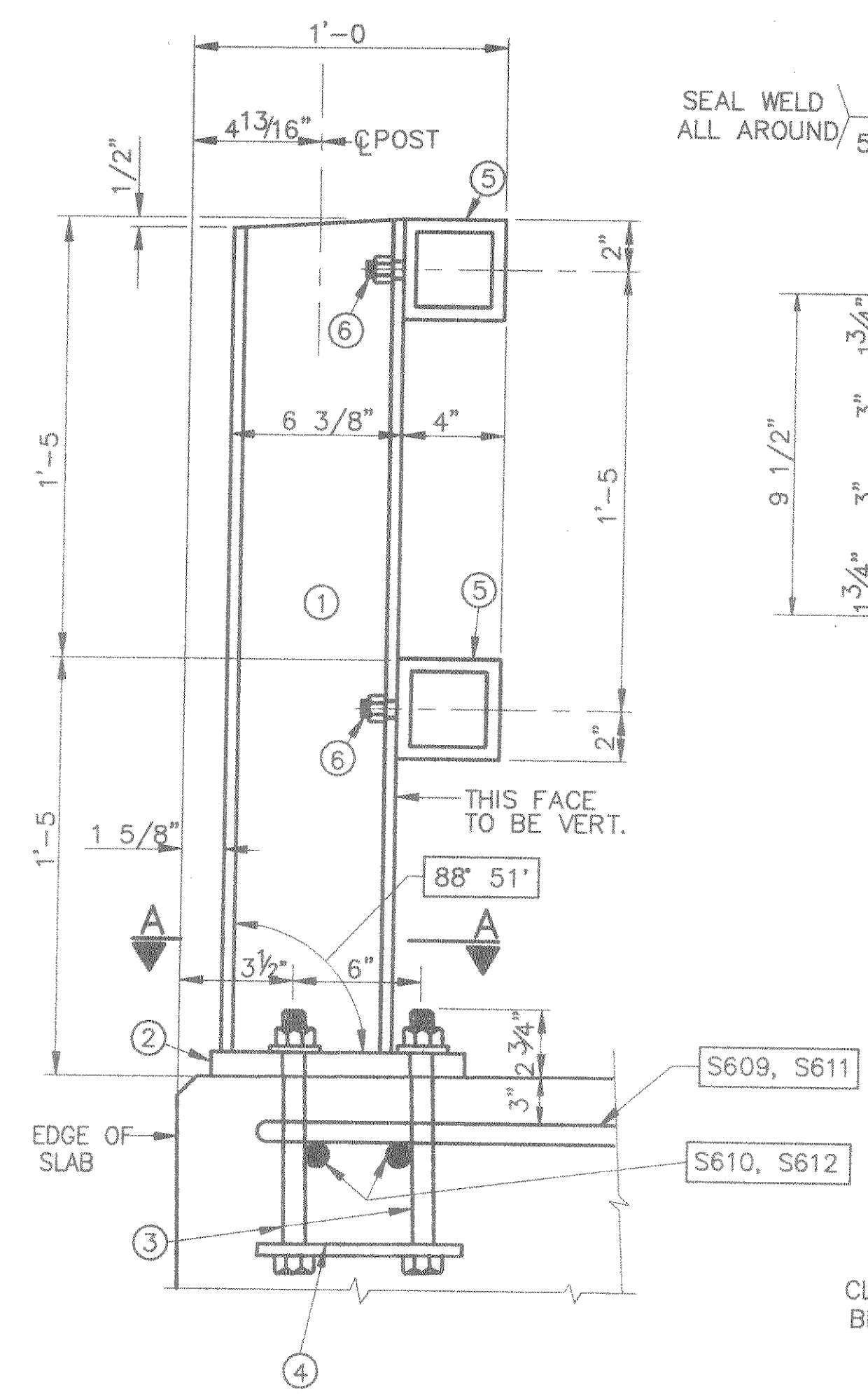
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

STRUCTURE B-35-130

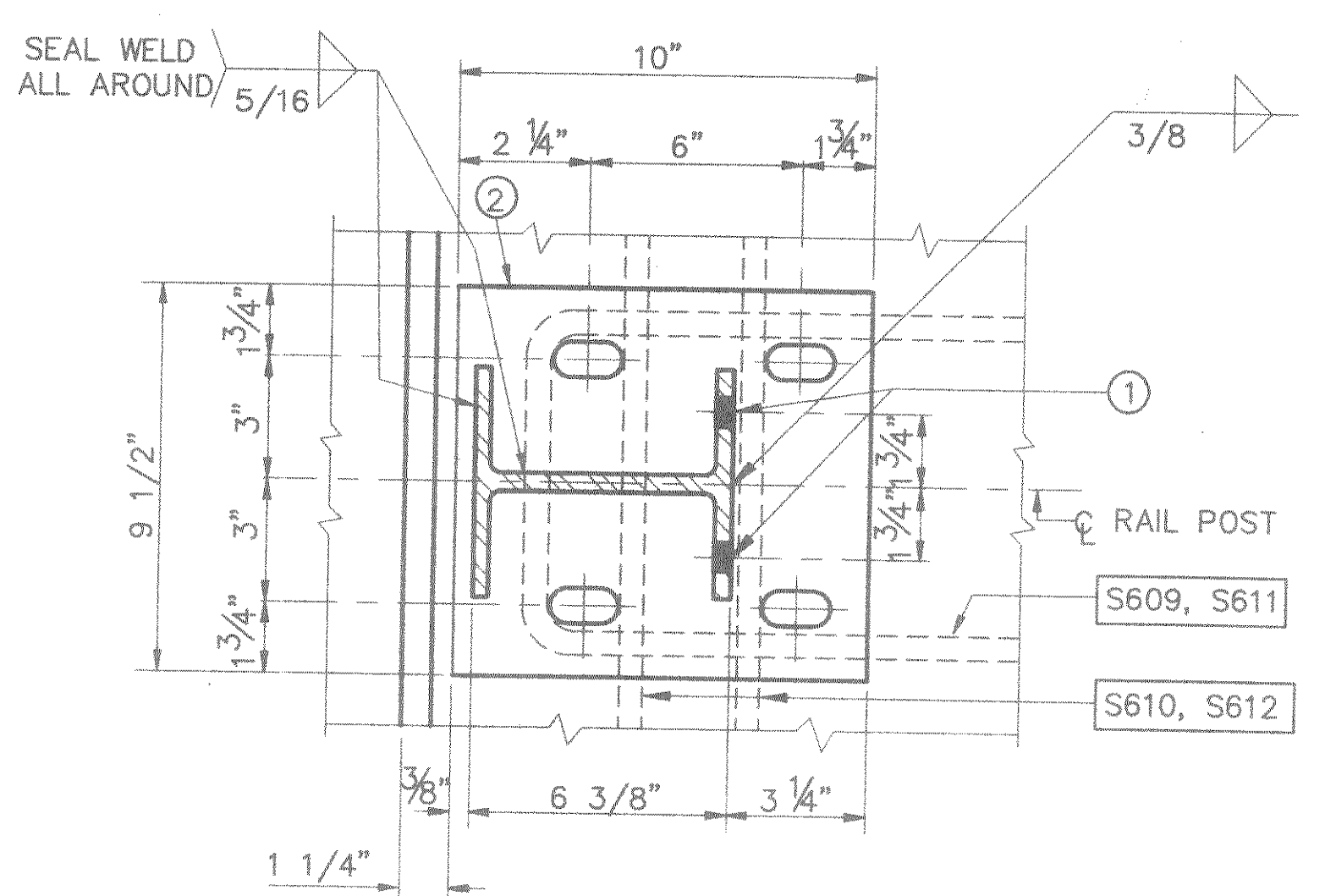
Const. Spec. WI "89" RLR  
 Drawn By MJS  
 Plans Checked

Revised By  
 No. Date

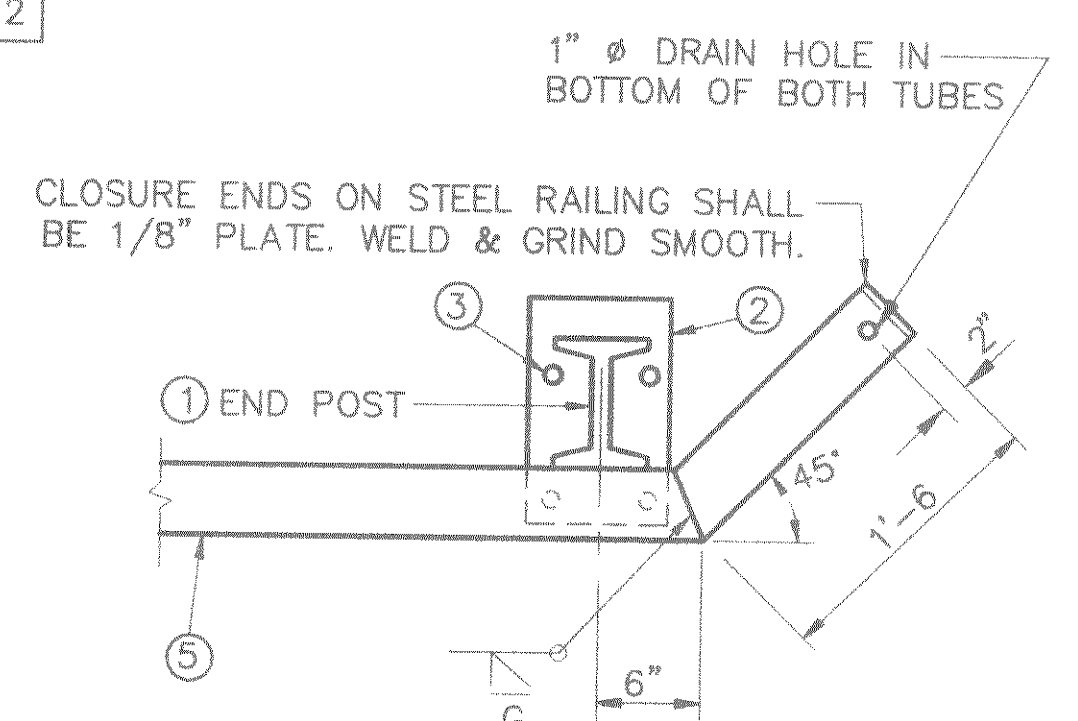
SUPERSTRUCTURE SHEET 6 OF 7



SECTION C THRU RAILING



SECTION A



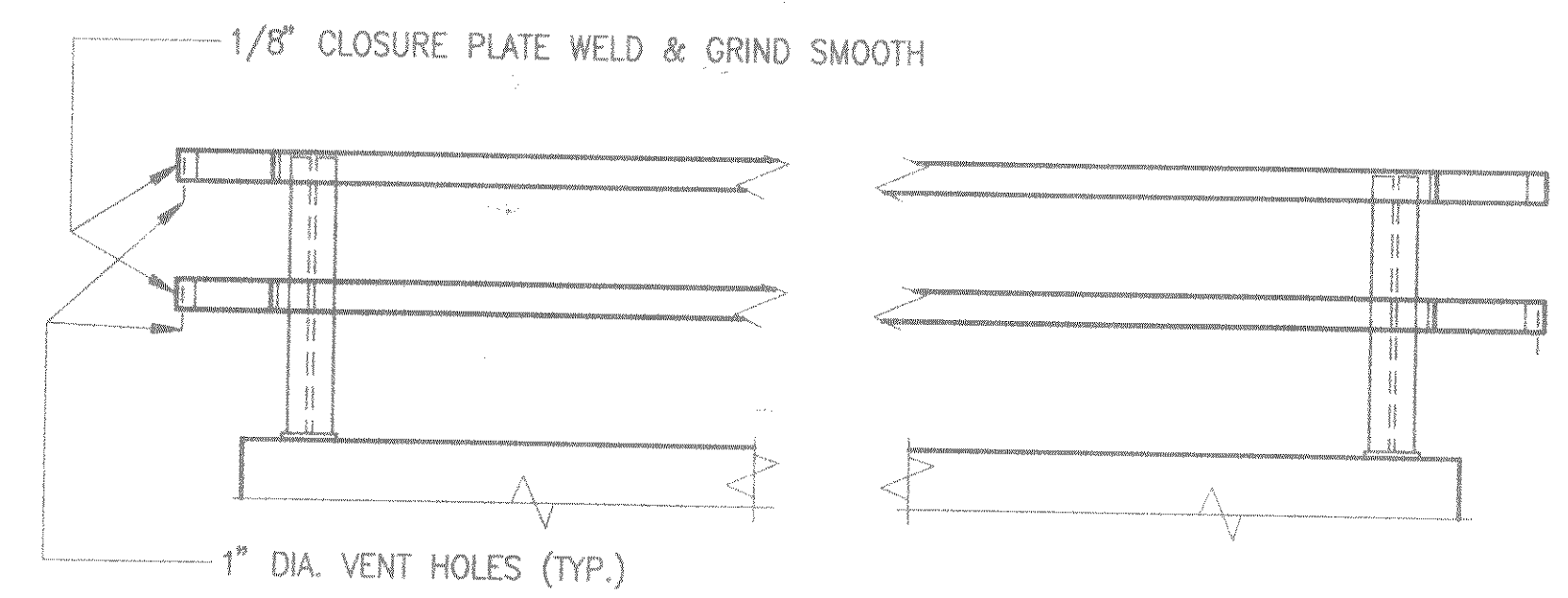
RAIL END DETAIL

SHOP RAIL SPLICE DETAIL

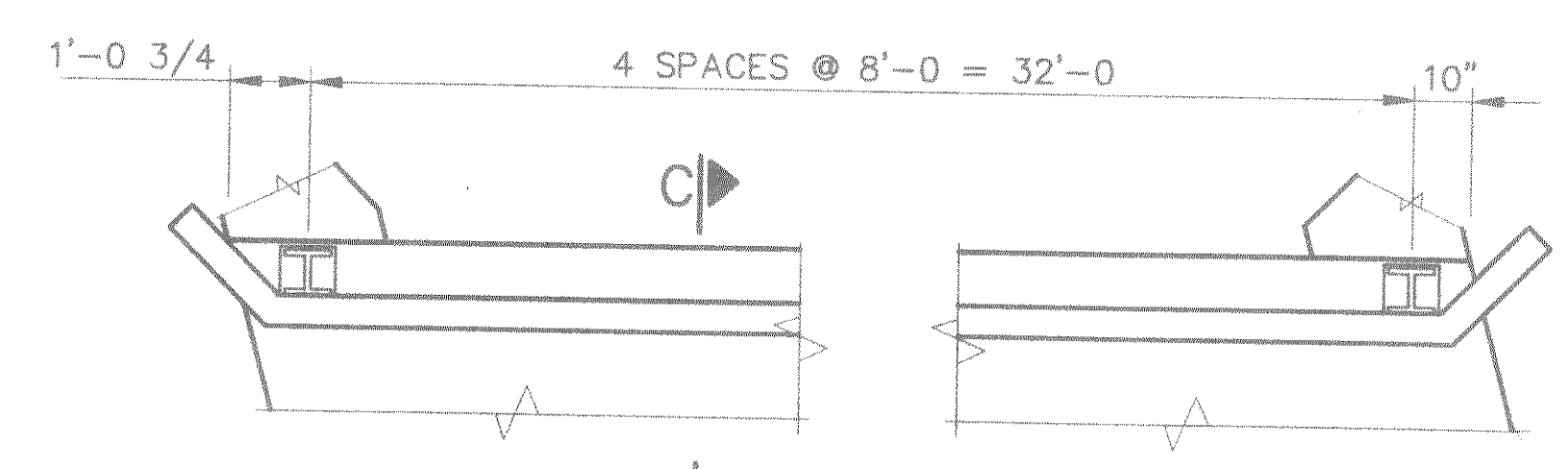
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

FIELD ERECTION JOINT DETAIL

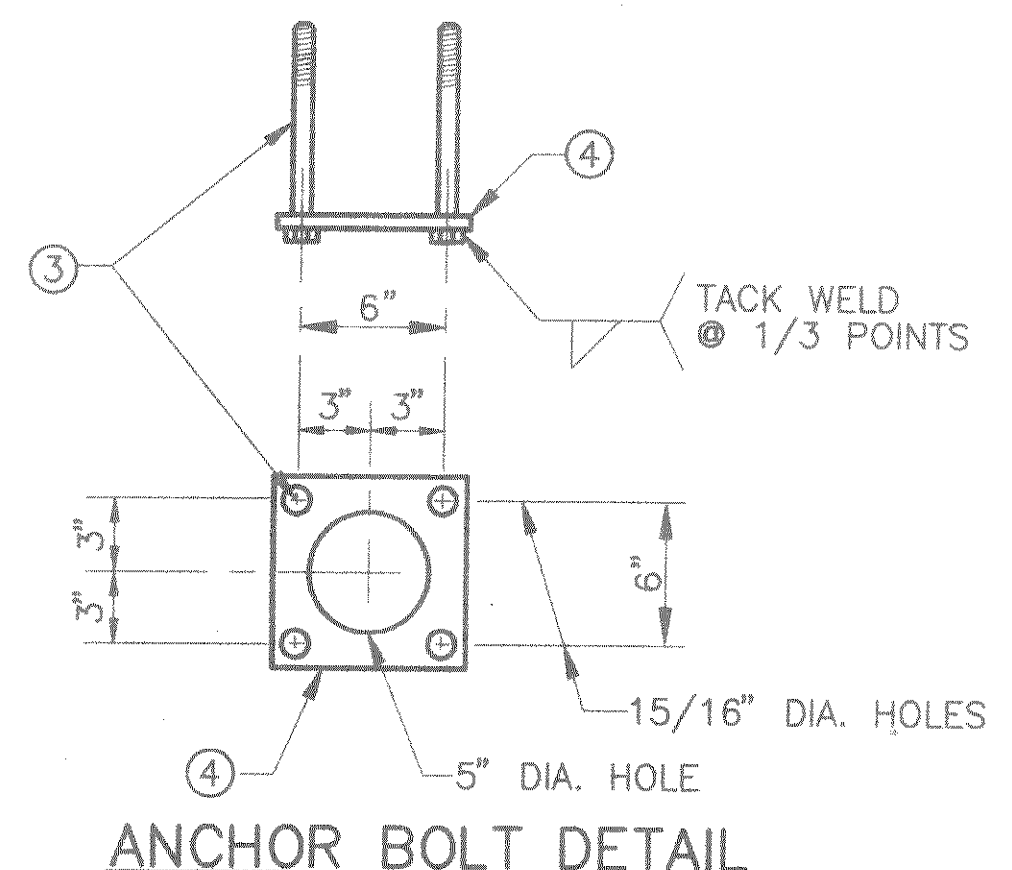
★ MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



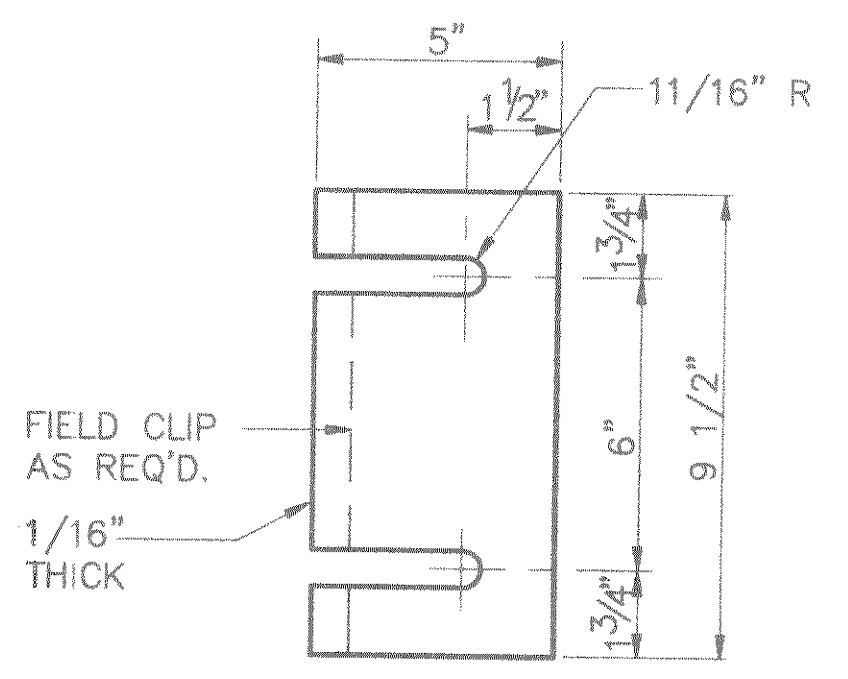
PART ELEVATION OF RAILING



PART PLAN OF RAILING



ANCHOR BOLT DETAIL



POST SHIM DETAIL  
(4 PER POST)

**LEGEND**

- ① W 6 x 25 WITH 1 1/4" DIA. HOLES ON EACH SIDE OF POST FLANGE FOR STUD ⑥. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POST NORMAL TO GRADE LINE.
- ② PLATE 1" x 9 1/2" x 10" WITH 1 1/16" x 1 1/2" SLOTTED HOLES FOR ANCHOR BOLTS ③. WELD TO ① AS SHOWN.
- ③ A325 - 7/8" DIA. HEX BOLT (GALVANIZED) WITH A325 NUT AND WASHER. 14" LONG AT END POSTS, 8" LONG AT ALL OTHER POST LOCATIONS. 4 REQUIRED PER POST. THREAD 3" AND PLACE NORMAL TO PLATE ②. CHAMFER TOP OF BOLTS BEFORE THREADING.
- ④ 1/4" x 8" x 8" FLAT BAR, WITH 15/16" DIA. HOLES FOR ANCHOR BOLTS ③.
- ⑤ TS 4 x 4 x .25 STRUCTURAL TUBING, CONFORMING TO A.S.T.M. DESIGNATION A501 OR A500 GRADE B ATTACH TO ① WITH STUDS ⑥.
- ⑥ 5/8" DIA. x 1 1/2" LG. SHOP WELDED STUDS WITH HEX. NUT AND 2" WASHERS. 4 PER POST REQ'D. (2 REQ'D AT EACH LOCATION.)
- ⑦ SQUARE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE 'SLIDING FIT' WITH A MINIMUM OUT TO OUT DIMENSION OF 3 13/32".
- ⑧ TS 3 x 3 x .25 x 1'-10" LONG. PROVIDE 1/2" DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF ⑤. PROVIDE 3/8" DIA. x 1/2" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

**GENERAL NOTES**

BID ITEM SHALL BE " TUBULAR RAILING TYPE 'F' " WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN 2 OR 3 PANEL LENGTHS.

POSTS BASE PLATES, ② SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL MATERIAL, EXCEPT ANCHORAGE DETAIL (NO. ③ & ④) SHALL BE GALVANIZED AFTER FABRICATION.

FILL BOLT SLOT OPENINGS IN POST BASE PLATE SHIMS AND PLATE ② WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. SEAL BOTTOM EDGES OF PLATE ② TO DECK.

ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO A.S.T.M. DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND COLD FORMED TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG CENTERLINE OF POST BASE.

WELD WITH E70 ELECTRODES.

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE		B-35-130	
Const. Spec.	WI "89"	Drawn By	RLR
Plans Checked			MJS
TUBULAR STEEL RAILING TYPE 'F'			SHEET 7 OF 7