MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE & BRIDGE NO. 55536

LOCATED ON C.S.A.H. 1 **BETWEEN** 8.8 MILES SE OF ROCHESTER **AND** 7.9 MILES SE OF ROCHESTER **(GEOGRAPHIC DESCRIPTION)**

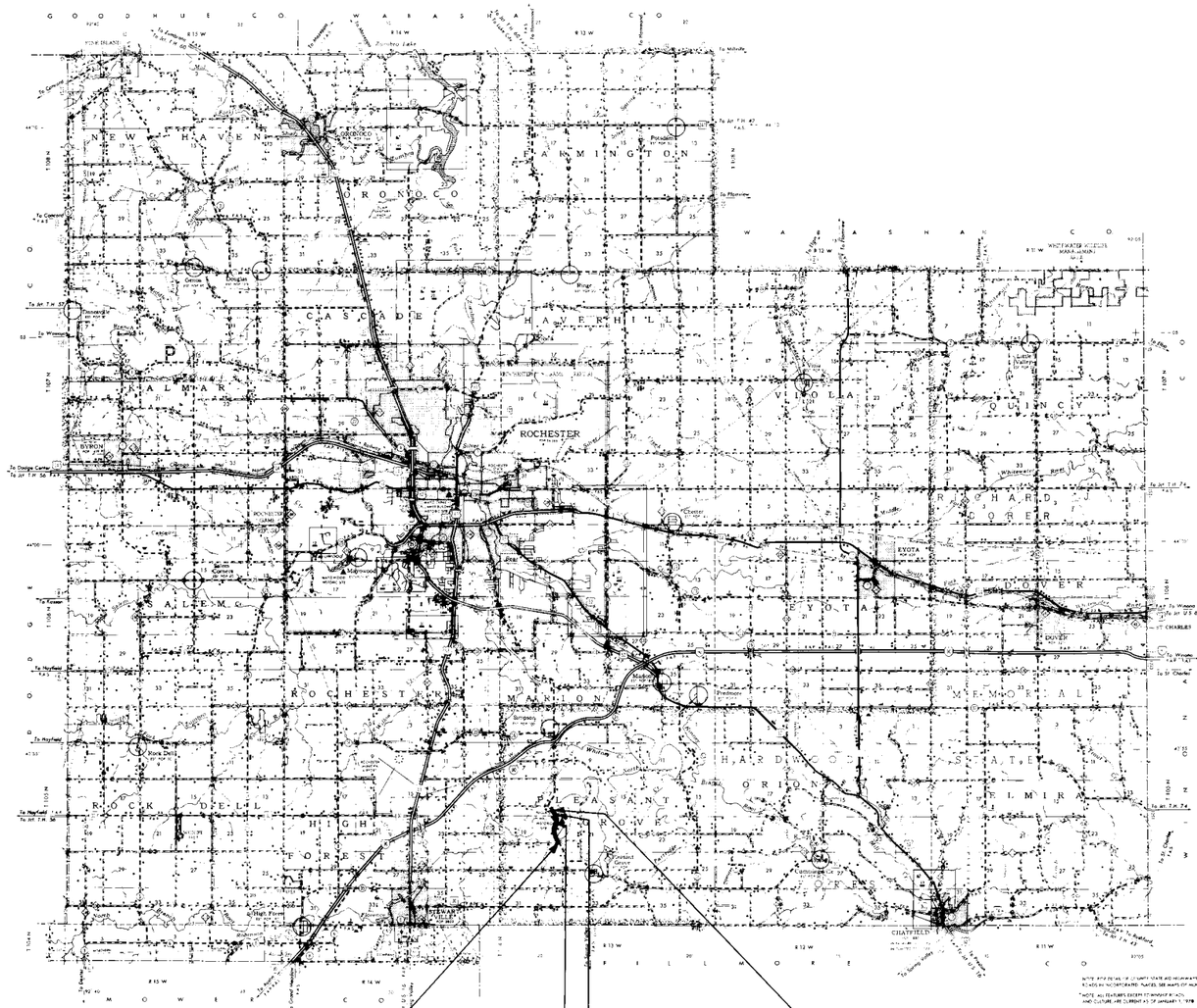
FROM 1121' SO. & 472' E. OF CENTER SEC. 20 T.105N. R.13W. **TO** 599' NO. & 138' W. OF S.1/4 COR. SEC. 17 T.105N. R.13W. **(LEGAL DESCRIPTION)**

STATE PROJ. NO. 55-601-09

GROSS LENGTH	213.25	FEET	MILES
BRIDGES-LENGTH	213.25	FEET	0.040 MILES
EXCEPTIONS-LENGTH		FEET	MILES
NET LENGTH	213.25	FEET	0.040 MILES

STATE PROJ. NO. 55-601-10

GROSS LENGTH	4784.73	FEET	0.906 MILES ✓
BRIDGES-LENGTH	213.25	FEET	0.040 MILES ✓
EXCEPTIONS-LENGTH	213.25	FEET	0.040 MILES ✓
NET LENGTH	4571.48	FEET	0.866 MILES ✓



RS 6229 (8) BEGIN: SP 55-601-09 STA. 78+00

EQUATION P.T. 114+34.0 = P.O.T. 114+49.27

BR. No. 55536 BR RS 6229 (9) STA. 115+88.54 – STA. 118+01.79

RS 6229 (8) END: SP 55-601-10 STA. 126+00

SCALES

PLAN	100	FEET
PROFILE	100	FEET HORZ. & 10 FEET VERT.
INDEX MAP	10,560	FEET
CROSS SECTIONS	10	FEET

PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
PRESENT RIGHT OF WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY LINE
RIVER OR CREEK (NAME)
DRY RUN
DRAINAGE DITCH (SIZE)
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN C.B.
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT (G)
SAND PIT (S)
BORROW PIT (B)
ROCK QUARRY (Q)
SLOPE EASEMENT SE

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER, (SANITARY OR STORM)
SEWER MANHOLE

MINN. PROJ. NO. BR RS 6229 (9)
RS 6229 (8)

SPECIFICATIONS REFERENCE

The 1978 Edition of the Minnesota Department of Transportation "Standard Specifications For Highway Construction" Shall Govern.

INDEX

SHEET NO. 1 TITLE SHEET & LAYOUT MAP.
" NO. 2 ESTIMATE OF QUANTITIES & TYPICAL SEC.
" NO. 3 & NO. 4 PLAN & PROFILE
" NO. 5 TO 13 CROSS SECTIONS
" NO. 1 TO 16 BRIDGE NO. 55536

DESIGN DESIGNATION

R		ΣN18 (20)	
ADT (Current Year)	= 606	Design Speed	55 MPH
ADT (Future Year)	= 970	Based on	STOPPING Sight Distance
DHV (Design Hr. Vol.)	=	Height of eye	3.75' Height of object 0.5'
D (Directional Distr.)	= %	Design Speed not achieved at:	
T (Heavy Commercial)	= 15 %	STA.	TO STA. MPH
SOIL FACTOR	130	STA.	TO STA. MPH
9 TON DESIGN		STA.	TO STA. MPH

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 3/31/80 REG. NO. 10219 ENGR. [signature]

COUNTY Olmsted

Recommended for Approval [signature] 3-31 1980
DISTRICT STATE AID ENGINEER

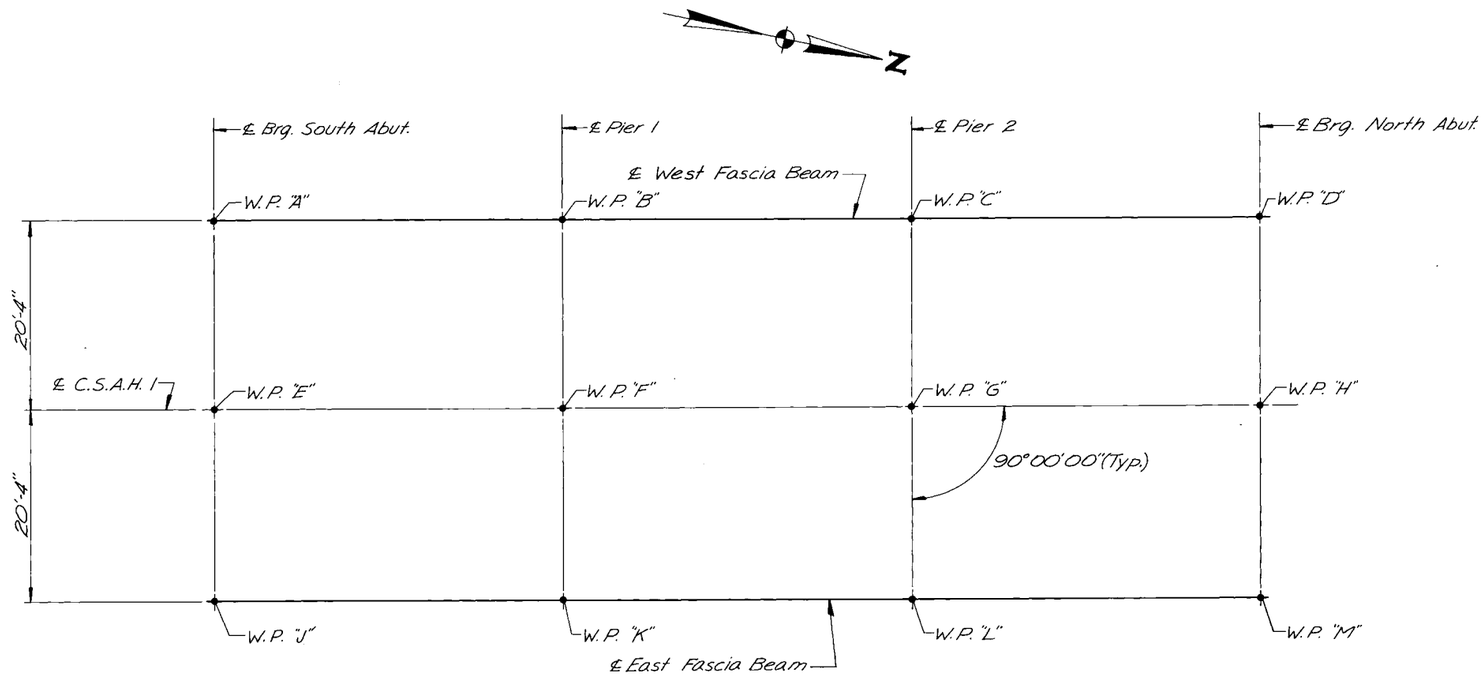
Recommended for Approval [signature] 1-21-1981
STATE AID PLANS AND SPECS ENGINEER

Approved 1/23 1981 [signature]
STATE AID ENGINEER

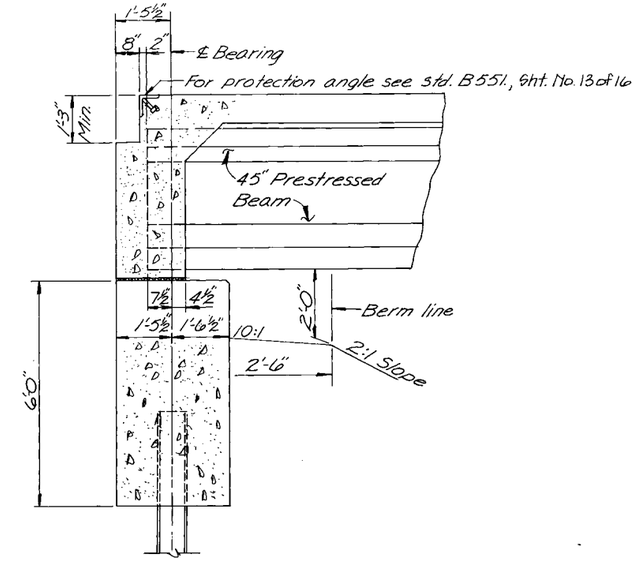
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO.
STATE PROJ. NO. 55-601-09 & SP 55-601-10 **SHEET NO.** 1 **OF** 13 **SHEETS**

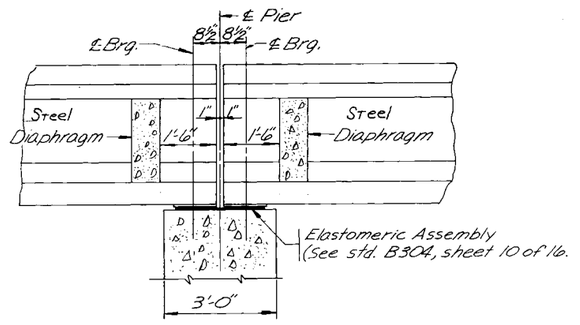
STATE AID TITLE SHEET 9/77 ALL MINOR MPLS 10/78



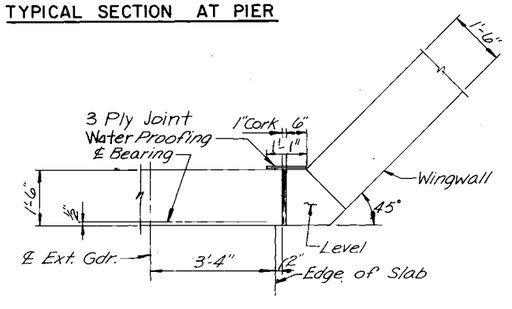
WORKING POINT LAYOUT



TYPICAL SECTION AT ABUTMENT



TYPICAL SECTION AT PIER



WINGWALL DETAIL

POINT	STATION	DIMENSIONS BETWEEN WORKING POINTS A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
A	115+90.00		69.87			20.33	72.77	141.92			80.85	146.23										
B	116+59.87	69.87		70.58		72.77	20.33	73.45		80.85		81.46	146.23									
C	117+30.45		70.58		69.87		73.45	20.33	72.77		81.46		80.85									
D	118+00.33			69.87			141.92	72.77	20.33		146.23	80.85										
E	115+90.00	20.33	72.77	141.92			69.87			20.33	72.77	141.92										
F	116+59.87	72.77	20.33	73.45	141.92	69.87		70.58		72.77	20.33	73.45	141.92									
G	117+30.45		73.45	20.33	72.77		70.58		69.87		73.45	20.33	72.77									
H	118+00.33		146.23	72.77	20.33			69.87			146.23	72.77	20.33									
J	115+90.00		80.85	146.23		20.33	72.77	141.92			69.87											
K	116+59.87	80.85		81.46	146.23	72.77	20.33	73.45		69.87		70.58										
L	117+30.45	146.23	81.46		80.85		73.45	20.33	72.77		70.58		69.87									
M	118+00.33		146.23	80.85			141.92	72.77	20.33			69.87										
N																						
P																						
Q																						
R																						
S																						
T																						
U																						
V																						
W																						

POINT	ELEVATIONS TOP OF SLAB	TOP OF SLAB TO BR. SEAT	BRIDGE SEAT
A	1164.17	4.95	1159.22
B	1164.45	4.89	1159.56
C	1164.73	4.89	1159.84
D	1165.01	4.95	1160.06
E	1164.52	4.95	1159.57
F	1164.80	4.88	1159.92
G	1165.08	4.88	1160.20
H	1165.36	4.95	1160.41
J	1164.17	4.95	1159.22
K	1164.45	4.89	1159.56
L	1164.73	4.89	1159.84
M	1165.01	4.95	1160.06

S.P. 55-601-09

Fig. 5-397.001

TITLE:	DES: J.L.C.	DR: D.Y.B.	APPROVED: 1-16-87	Bridge No.
BRIDGE LAYOUT	CHK: S.L.B.	CHK: J.L.C.	Sheet No. 2 of 16 Sheets	55536

Minn. Proj. No.

SUMMARY OF QUANTITIES — 2 ABUTMENTS		
Concrete Mix No. 3Y43	81	Cu. Yd.
Reinforcement Bars	5810	Pound
(1) Bench Mark Disc	1	Units
Steel H Test Piles, 45' Long	2	Each
(2) Steel H Piling Delivered (HP10x42)	630	Lin. Ft.
(2) Steel H Piling Driven (HP10x42)	630	Lin. Ft.
Pile Points	20	Each

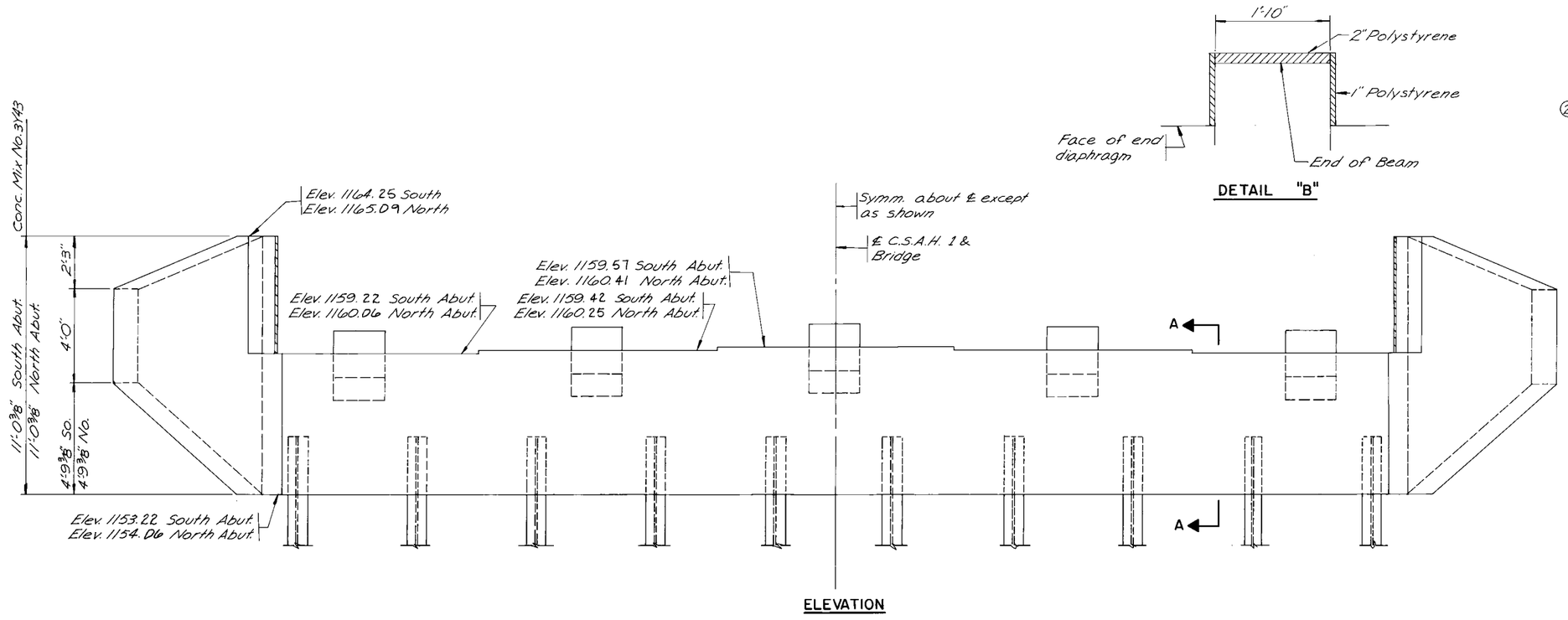
(1) County will furnish Disc payment for placing to be included in price bid for other items, see Standard Plate No. 9301 for placing.

(2) Does not include Test Piles.

(3) Pile Tips shall be reinforced See Special Provisions

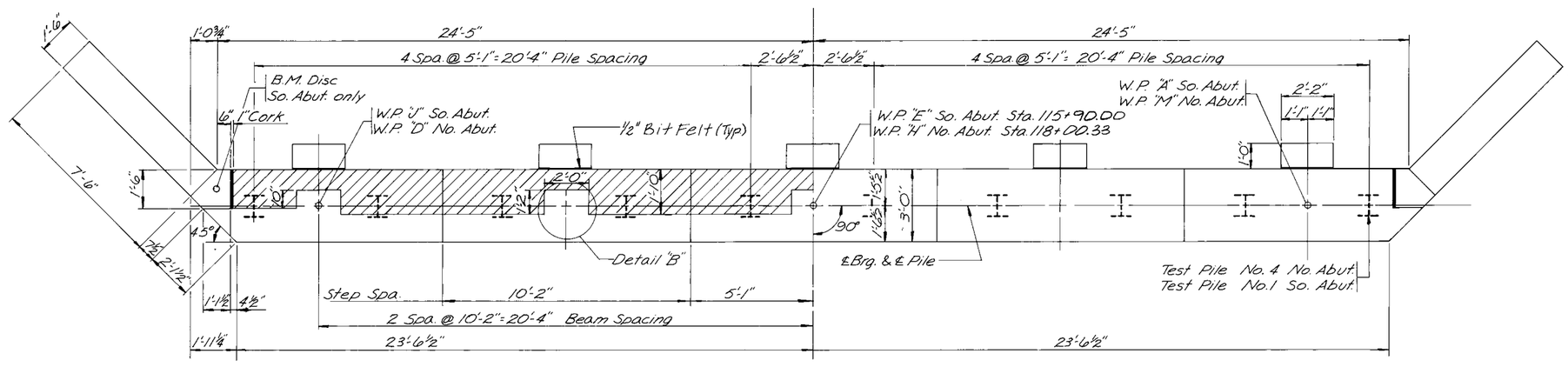
COMPUTED PILE LOADS	TONS/PILE
Dead Load	26.1
Live Load	11.4
Total	37.5

PILE NOTES:
South Abutment
1 Steel H Test Pile 45 Feet Long.
9 Steel H Piles 35 Feet Long.
10 Steel H Piles Required South Abut.
North Abutment
1 Steel H Test Pile 45 Feet Long
9 Steel H Piles 35 Feet Long
10 Steel H Piles Required North Abut.



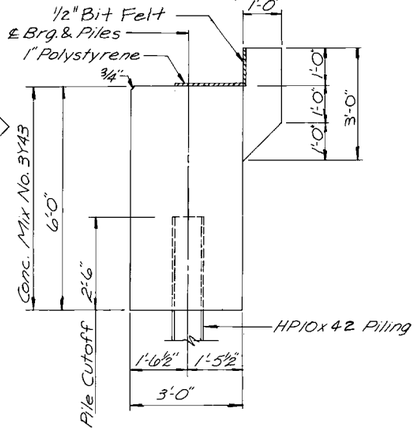
ELEVATION

DETAIL "B"



PLAN

NOTE: 1" Polystyrene type "A" in hatched area only included in price bid for other items.



SECTION A—A

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

Bridge No. 55536

ABUTMENT GEOMETRICS

APPROVED: 1-16-81

1-16-81

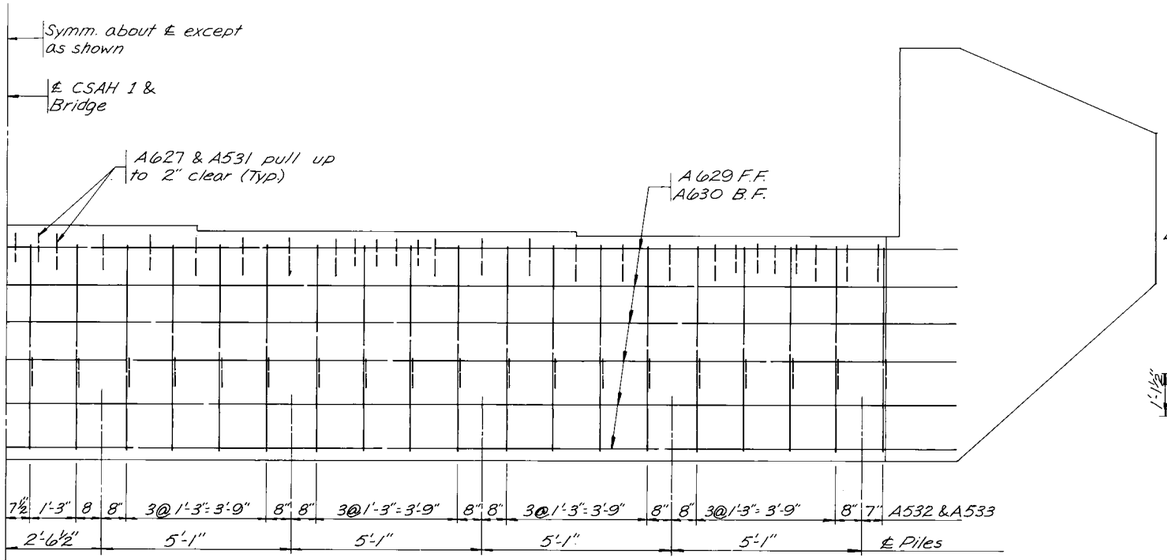
DES. J. L. C.	DR. D. Y. B.	55536
CHK. S. L. B.	CHK. J. L. C.	

State Proj. No. 55-601-09

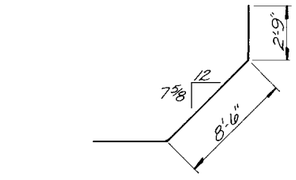
Sheet No. 3 **of** 16 **Sheets**

TELEDYNE POST-117-3/78

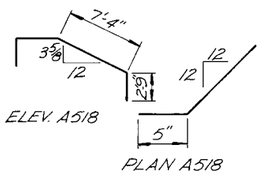
Minn. Proj. No.



HALF ELEVATION

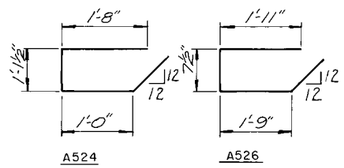


A508

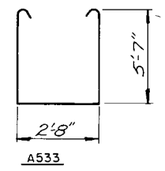


ELEV. A518 PLAN A518

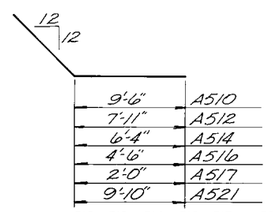
A518



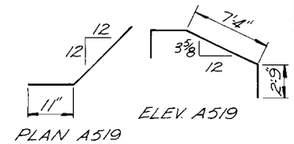
A524 A526



A533

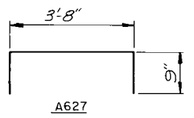


A510, A512, A514, A516, A517 & A521

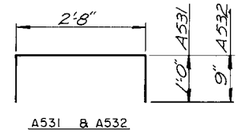


PLAN A519 ELEV. A519

A519

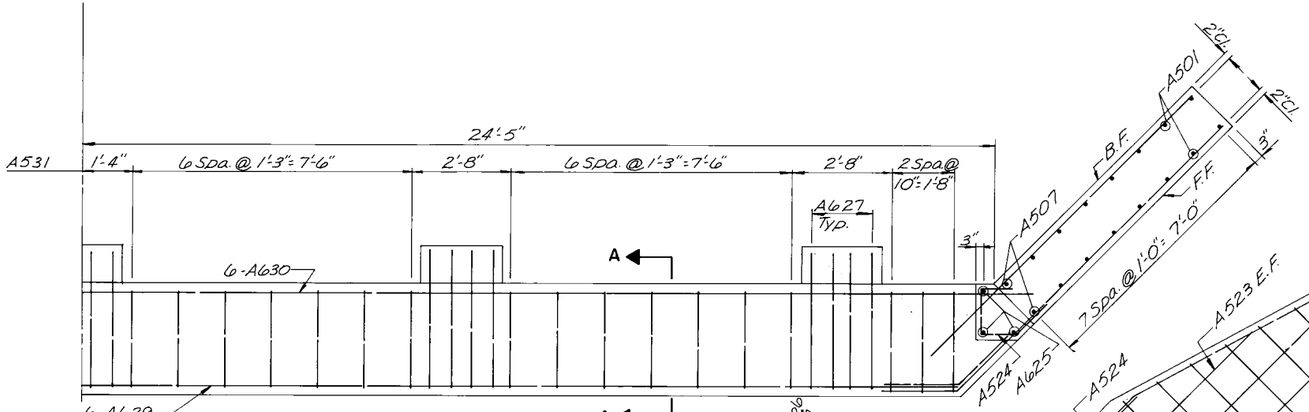


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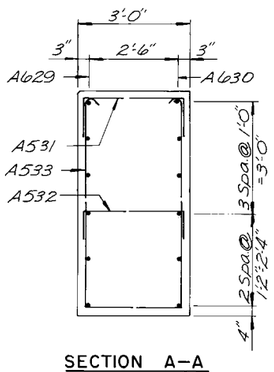


A531 & A532

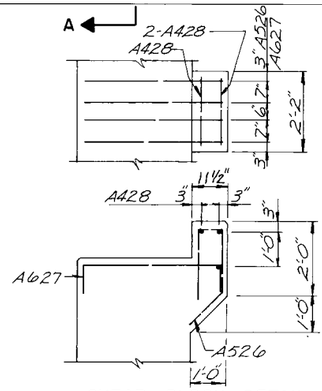
Minn. Proj. No.				
BILL OF REINFORCEMENT — 2 ABUTMENTS				
Mark	No.	Length	Shape	Location
A501	8	4'-10"	—	Wingwalls
A502	8	5'-9"	—	"
A503	8	6'-8"	—	"
A504	8	7'-7"	—	"
A505	8	8'-7"	—	"
A506	8	9'-6"	—	"
A507	8	10'-5"	—	"
A508	8	14'-0"	⌞	"
A509	4	9'-6"	—	"
A510	4	11'-6"	⌞	"
A511	4	7'-11"	—	"
A512	4	9'-11"	⌞	"
A513	4	6'-4"	—	"
A514	4	8'-4"	⌞	"
A515	4	4'-6"	—	"
A516	4	6'-6"	⌞	"
A517	4	4'-0"	⌞	"
A518	4	12'-8"	⌐	"
A519	4	13'-6"	⌐	"
A520	4	9'-10"	—	"
A521	4	11'-10"	⌞	"
A522	24	7'-11"	—	"
A523	8	4'-6"	—	"
A524	20	5'-1"	▱	"
A625	12	10'-8"	—	Wingwalls
A526	40	7'-4"	▱	Shear Block Tie
A627	40	5'-2"	⊓	" " "
A428	30	1'-10"	—	" "
A629	12	46'-9"	—	Cap — Long.
A630	12	49'-10"	—	" "
A531	68	4'-8"	⊓	" Tie
A532	76	4'-2"	⊓	" "
A533	76	14'-9"	⊔	" Stirrup



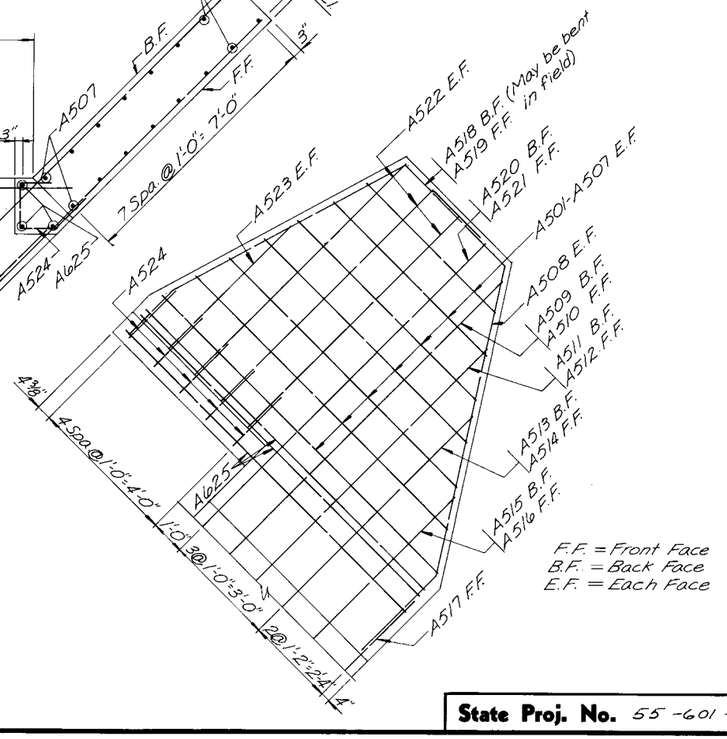
HALF PLAN



SECTION A-A



SHEAR BLOCK DETAIL



F.F. = Front Face
B.F. = Back Face
E.F. = Each Face

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

Bridge No. 55536

ABUTMENT REINFORCEMENT

APPROVED: 1-16-81

DES. J.L.C.	DR. D.Y.B.	55536
CHK. S.L.B.	CHK. J.L.C.	

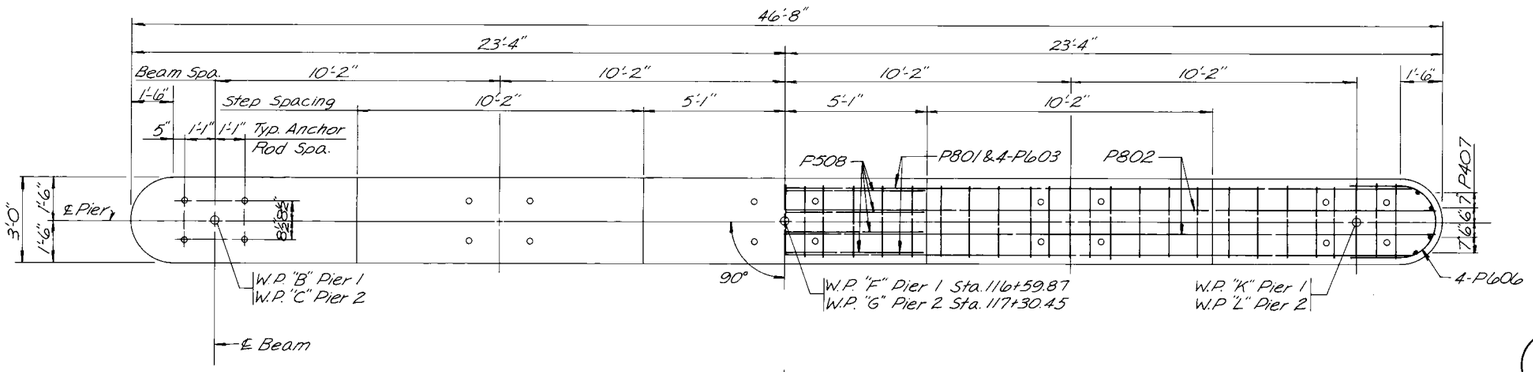
State Proj. No. 55-601-09

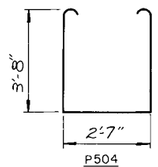
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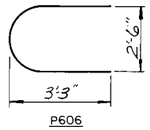
TELEDYNE POST 117-3/78

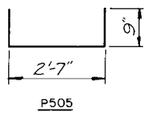
Minn. Proj. No.

BILL OF REINFORCEMENT —— 2 PIERS				
Mark	No.	Length	Shape	Location
P801	4	45'-0"	——	Cap - Long.
P802	4	46'-2"	——	" "
P603	20	44'-8"	——	" "
P504	82	10'-10"	⊓	" Stirrup
P505	184	4'-1"	⊔	" Ties
P606	16	7'-11"	⊂	" Ends
P407	16	3'-8"	——	" "
P508	8	9'-10"	——	" Long.









SUMMARY OF QUANTITIES	2—PIERS	
Concrete Mix No. 3Y43	~~160~~ 43	Cu. Yd.
Reinforcement Bars	4340	Pound
① Steel H Piling Delivered	780	Lin. Ft.
① Steel H Piling Driven	780	Lin. Ft.
Steel H Test Piles, 40' Long	2	Each
② 16" ø Steel Pile Shells	560	Lin. Ft.
② Pile Points	28	Each

PILE NOTES:

Pier 1
1-Steel H Test Pile 40' Feet Long
13-Steel H Piling 30 Feet Long
14 Steel H Piling Required For Pier 1

Pier 2
1-Steel H Test Pile 40 Feet Long
13-Steel H Piling 30 Feet Long
14 Steel H Piling Required For Pier 2

All piles for piers to be HP10x42
End piles to be battered at 2" per ft. as shown.
Pile spacing shown is at bottom of of cap.
Paint pier piles per Spec. 2452.3J.

Pile tips shall be reinforced

② See Special Provisions

COMPUTED PILE LOADS — TONS/PILE	
Dead Load	29.0
Live Load	11.4
Total	40.4

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

Bridge No. 55536

PIER DETAILS & REINFORCEMENT

APPROVED: 1-16-71

DES. J.L.C.	DR. D.Y.B.	55536
CHK. S.L.B.	CHK. J.L.C.	

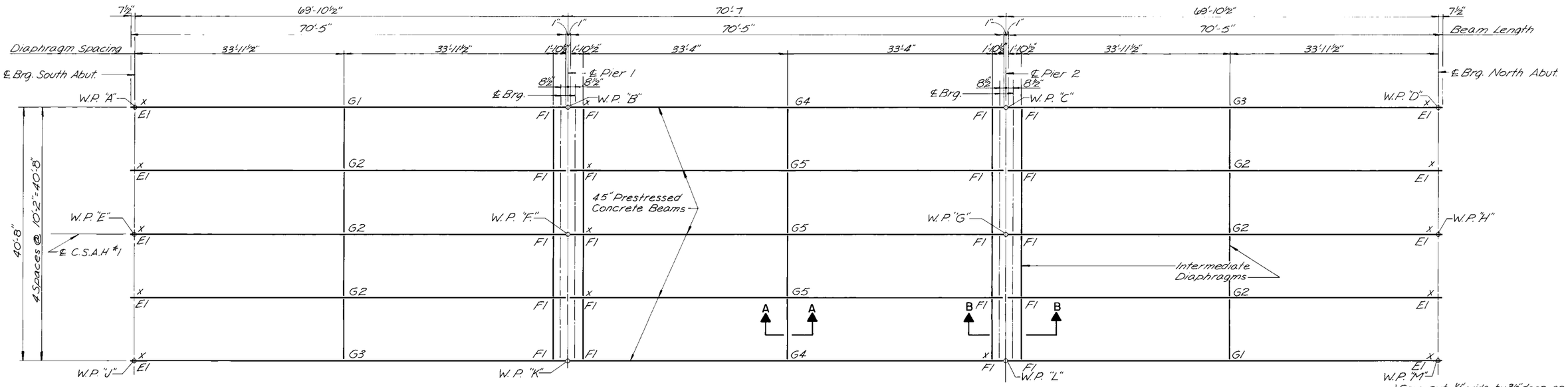
State Proj. No. 55-601-09

Sheet No. 5 **of** 16 **Sheets**

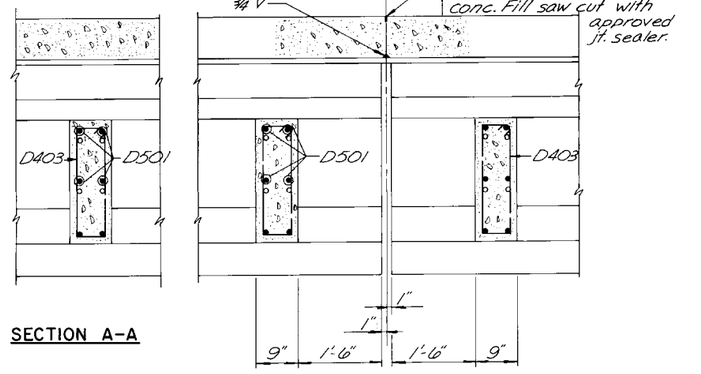
AS BUILT PLANS

TELEDYNE POST 117-378

Minn. Proj. No.



BEAM FRAMING PLAN



SECTION A-A

SECTION B-B

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

Bridge No. 55536

BEAM FRAMING PLAN

APPROVED: 1-16-81

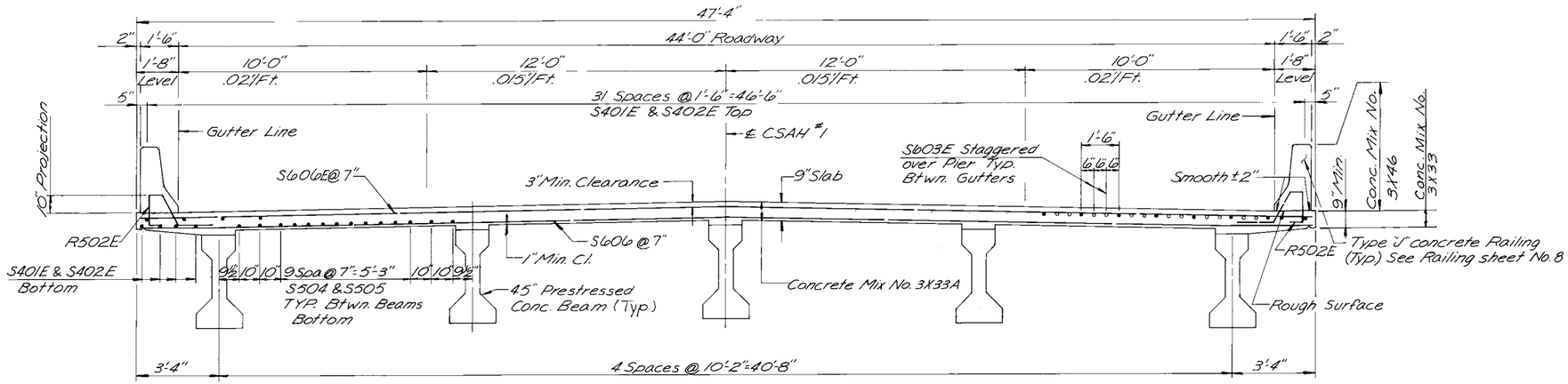
DES. J. L. C.	DR. D. Y. B.	55536
CHK. S. L. B.	CHK. J. L. C.	

State Proj. No. 55-601-09

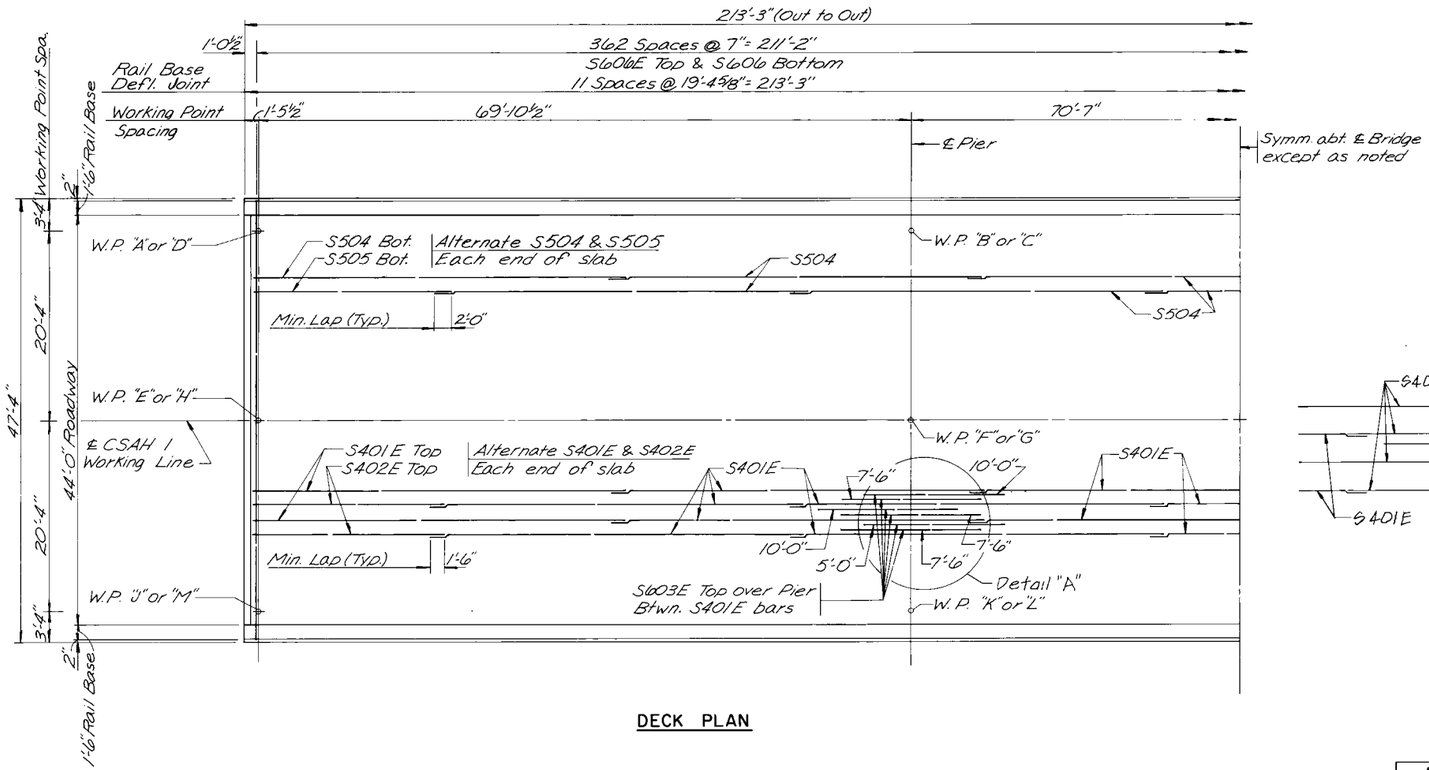
Sheet No. 6 **of** 16 **Sheets**

TELEDYNE POST-117-3/78

Minn. Proj. No.



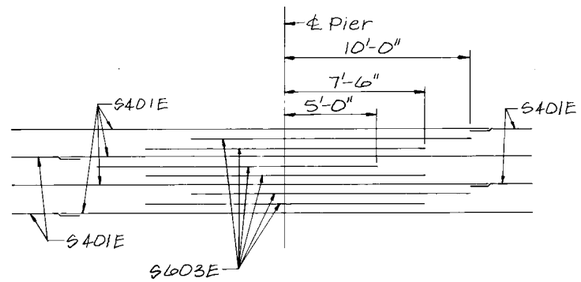
TRANSVERSE SECTION



DECK PLAN

BILL OF REINFORCEMENT FOR SUPERSTR.				
Bar	No.	Length	Shape	Location
S401E	200	40'-0"	——	Slab Longit. Top
S402E	40	19'-0"	——	" " "
S603E	116	15'-0"	——	Over Pier
S504	280	40'-0"	——	Slab Longit. Bottom
S505	56	21'-0"	——	" " "
S506	20	5'-0"	——	End Diaphragm
S407	16	9'-3"	——	" "
S408	8	8'-0"	——	" "
S409	4	2'-3"	——	" "
S410	8	47'-4"	——	" "
S411	8	8'-6"	——	" "
S412	12	10'-5"	⌐	" "
S413	54	10'-9"	⌐	" "
S414	54	6'-4"	⌐	" "
S606E	365	47'-0"	——	Slab Transverse Top
S606	365	47'-0"	——	Slab Transverse Bot.

SUMMARY OF QUANTITIES FOR SUPERSTR.		
(2) Concrete Mix No. 3X33 *	10031	Sq. Ft.
(3) Concrete Mix No. 3X46 *	427	Lin. Ft.
Reinforcement Bars	39930	Pound
(3) Reinforcement Bars (Epoxy Coated)	44810	Pound
(4)(1) Bridge Name Plate	1	Unit
(5) Elastomeric Bearing Pad Type E1	10	Each
(3) Elastomeric Bearing Assy. Type F1	20	Each
(3) Conc. Mix No. 3Y43	22	Cu. Yd.
(3) Diaf. For Type 45 Prestressed Beams	285	L. F.
Floor Drains Type I	14	Ea.
(4)(3) 3 Ply Jt. Waterproofing	21	L.F.
(4)(3) Preformed Jt. Filler (See Table)		



DETAIL "A"

*See table below for approx. volume of quantity.
(1) Bridge 55536, 1980
(2) The volume of deck concrete for payment shall be computed using an average stool height of 1½".
(3) See Spec. Prov.
(4) Include in price bid For other items

NOTES:
See Standard Detail B802 for Concrete Intermediate Diaphragm and B810 for Concrete End Diaphragm.

LIST OF PREFORMED CORK JOINT FILLER
4 Pcs. 18"x1"x5'-1" Btwn. W.W. & End Web
20 Pcs. 11"x1"x1'-7" Rail Def'l. Joints
LIST OF PREFORMED BITUM JOINT FILLER
10 Pcs. 2'-2"x½"x1'-0" Shear Blocks
LIST OF POLYSTYRENE
(1) 2 Pcs. 1'-10" x 47'-10" x 1" Abut. Bridge Seat
(1) 20 Pcs. 2½"x1"x14" Side of Abut. Brg.
(2) 10 Pcs. 2½"x2"x22" Behind Brg. at Abut.

(1) Type A
(2) Type B

APPROX. VOLUMES – SUPERSTRUCTURE		
Concrete Mix No. 3X33	292	Cu. Yd.
Concrete Mix No. 3X46	43	Cu. Yd.
Intermediate Diaphragm (Conc)	16	Cu Yd.
Intermediate Diaphragm (Reinf)	3140	Pound

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

Bridge No. 55536

SUPERSTRUCTURE DETAILS

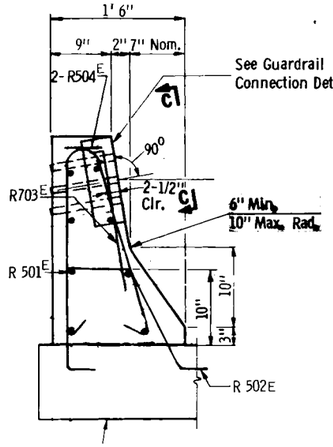
APPROVED: _____

DES. J.L.C.	DR. D.Y.B.	55536
CHK. S.L.B.	CHK. J.L.C.	

State Proj. No. 55-601-09

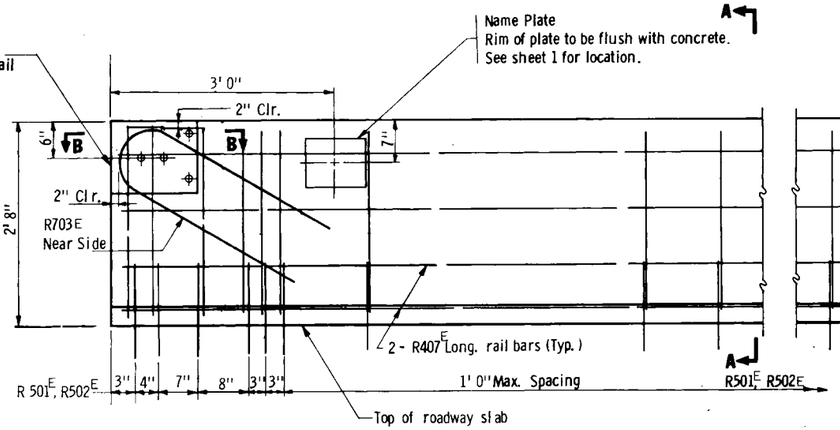
Sheet No. 7 **of** 16 **Sheets**

TELEDYNE POST 117-378

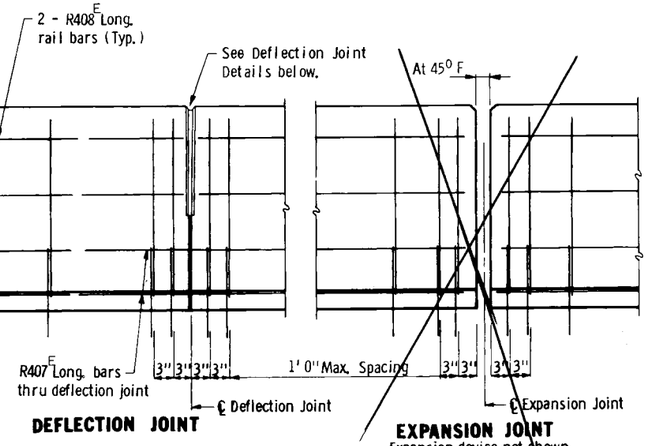


For Joint location, See Sheet 7 of 16

END VIEW



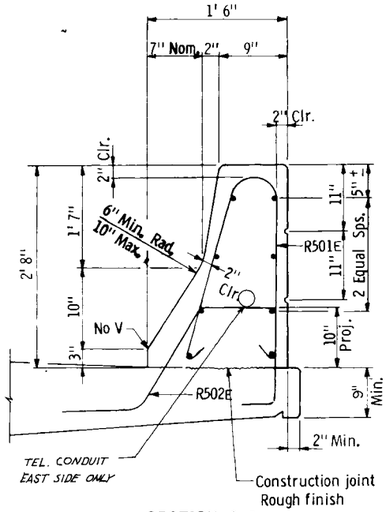
INSIDE ELEVATION OF RAILING



DEFLECTION JOINT

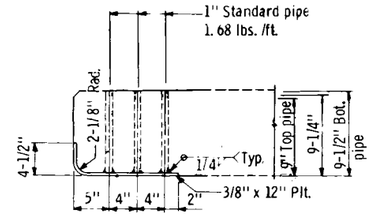
EXPANSION JOINT

Expansion device not shown. Expansion joint required only if expansion device is used. See superstructure sheets.

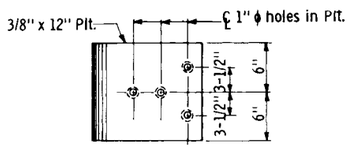


SECTION A-A

BILL OF REINFORCEMENT FOR RAILING				
BAR	NO.	LENGTH	SHAPE	LOCATION
R501E	~~246~~ 412	6' 0"	Bent	Rail Vertical
R502E	~~246~~ 412	5' 7"	Bent	Rail Vertical
R703E	4	6' 6"	Bent	End Post
R504E	8	2'-3"	Bent	End Post
R407E	48	36'-9"	Str't.	Rail Long
R408E	88	19'-0"	Str't.	Rail Long

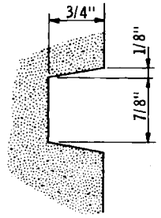


SECTION B-B
(Reinf. not shown)

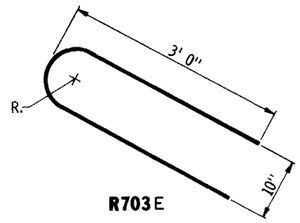


VIEW C-C

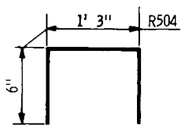
GUARDRAIL CONNECTION DETAIL
GALVANIZE AFTER FABRICATION PER SPEC. 3394
Est. Wt. 30 Lbs.



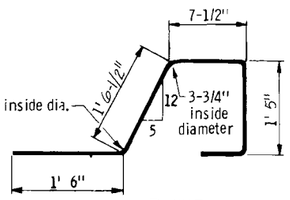
RAIL RUSTICATION



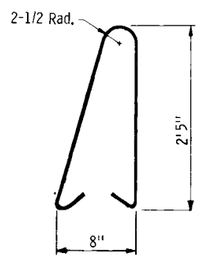
R703E



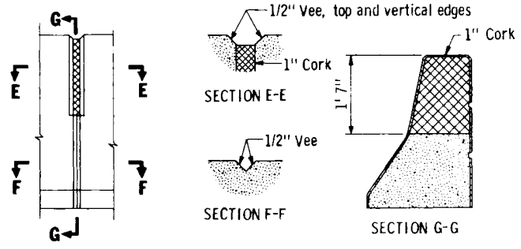
R504E



R502E



R501E



DEFLECTION JOINT DETAILS

GENERAL NOTES

Concrete Railing = 405 lbs. /ft.
Concrete Railing = 1.00 cu. yds.

Rail to be Concrete Mix No. 3X46 .

Guardrail connection to be Structural Steel, Spec. 3306

Finish all edges of rail with 1/2" vee except where otherwise noted.

See superstructure sheet for joint spacing.

Maximum spacing of concrete deflection joints shall be 20'-0".

Guardrail connection to be included in price bid for other items.

Rail quantities are included in summary of quantities for superstructure.

Length of railing concrete to be measured for payment between outside faces of end posts.

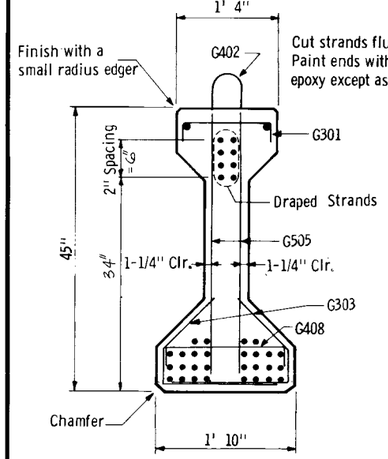
Fig. 5-397.115

Revised: May 5, 1978 Approved : December 5, 1977

S.P. 55-601-09

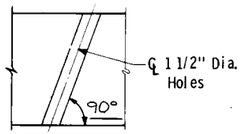
TITLE: CONCRETE RAILING (TYPE J) WITH INTEGRAL END POST (Without Wearing Course)	DES: J. L. C.	DR: D.Y.B.	APPROVED: 1-16-81	Bridge No. 55536
	CHK:	CHK:	Sheet No. 8 of 16 Sheets	

AS BUILT PLANS



Details not shown are the same as the SECTION AT ℄ BEAM

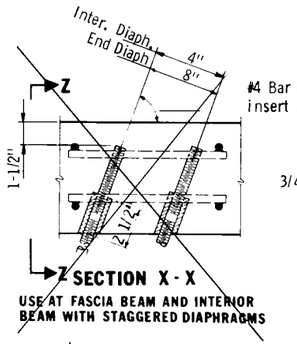
END VIEW



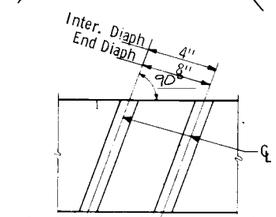
See FRAMING PLAN for skew direction. Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION Y-Y

FOR USE WITH CONCRETE END DIAPHRAGMS WITH PILE BENT ABUTMENTS



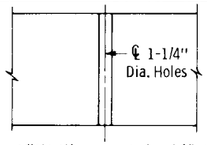
USE AT FASCIA BEAM AND INTERIOR BEAM WITH STAGGERED DIAPHRAGMS



See FRAMING PLAN for skew direction. Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X-X

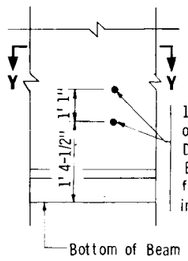
USE AT INTERIOR BEAM WITH CONTINUOUS CONCRETE DIAPHRAGM



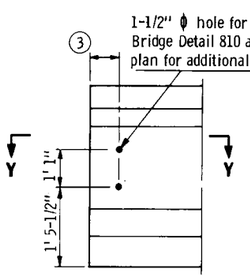
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION Y-Y

USE AT INTERIOR BEAM WITH STEEL DIAPHRAGM

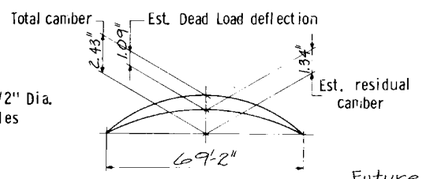


FOR USE WITH STEEL INTERMEDIATE DIAPHRAGM



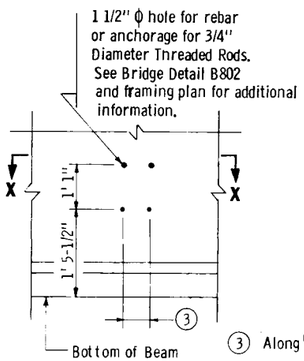
CONCRETE END DIAPHRAGMS PILE BENT ABUTMENT

SECTION Z-Z

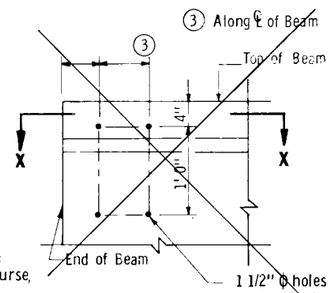


Deflections shown are for weight of slab, wearing course, railing, and diaphragms only. Future Engineer will take elevations at top of beams after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

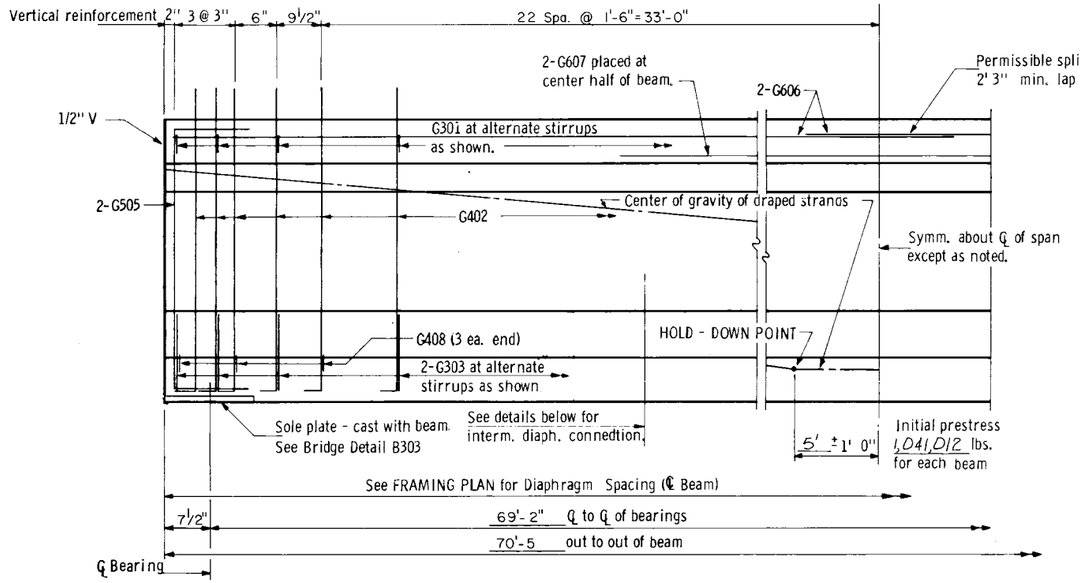
CAMBER DIAGRAM



FOR USE WITH CONCRETE INTERMEDIATE DIAPHRAGM



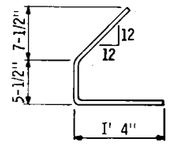
CONCRETE END DIAPHRAGMS PARAPET ABUTMENT



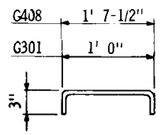
HALF ELEVATION

Bar	Wt.
G 301	.56 lb.
G 402	5.71 lb.
G 303	1.00 lb.
G 505	5.56 lb.
G 606	
G 607	
G 408	1.42 lb.

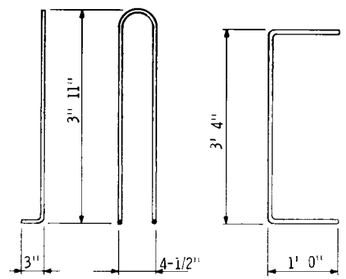
Cirder Section Data
Wt./Ft. = 583 lbs.
Cross sec. area at ℄ of span = 560 in.^{2}
C. G. (from bottom) = 20.27 in.
I = 125,390 in.^{4}
S_B = 6,186 in.^{3}
1/2" ϕ 270k strand wt./ft. = .525 lb.
1/2" ϕ 270k strand area = .1531 sq. in.



G303



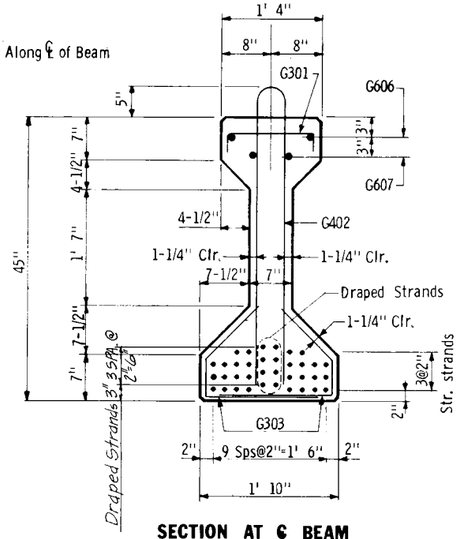
G301 & G408



G402

G505

First digit of bar mark indicates bar size. All bar dimensions are out-to-out.



SECTION AT ℄ BEAM

Y DISTANCES (IN INCHES)			
	NO.	℄ SPAN	END
Straight strands	28	4.51	
Draped strands	8	6.00	37.0 □
Total strands	36	4.89	

Y = distance of Center of Gravity of strands from bottom of beam. All strands spaced 2" c-c, horizontally and vertically except as noted.

All strands 1/2" ϕ 270 kip, ultimate strength

□ A tolerance of ± 2" will be permitted in this dimension

GENERAL NOTES:

Tops of beams shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of beam.

A modified strand pattern or a bundled strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned beam may be used as an alternate for the pretensioned design shown. Designer will provide plans for the post-tensioned alternate on request.

Each beam shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the beam, near the end, so located that they will be exposed after the end diaphragms have been cast. Fascia beams shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of beams, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete beams. See Spec. 2405.

See framing plan for beam ends marked "X".

Approximate weight of beam 20.5 tons.

As an alternate to the diaphragm anchorages shown, the contractor may submit details of a cast-in-place anchorage to the engineer for approval. Anchorage must provide an ultimate pull out strength of 15 kips per anchorage.

MINIMUM CONCRETE STRENGTH - P.S.I.		
	① f'ci	② f'c
Required min. Concrete Strength	5600	5650

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and beam transported and installed.

Fig. 5-397.504

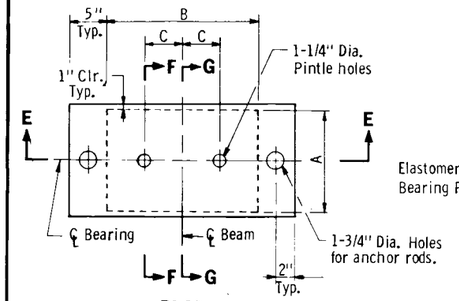
Revised: December 29, 1977 Approved: May 18, 1977

BEAMS G1, G2, G3, G4 & G5

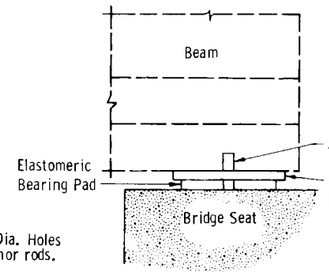
S.P. 55-604-09

TITLE: 45" PRESTRESSED CONCRETE BEAM (PRETENSIONED) TYPE 45 - 71	DES: J. L. C.	DR: D. Y. B.	APPROVED: 1-16-81	Bridge No. 55536
	CHK:	CHK:	Sheet No. 9 of 16 Sheets	

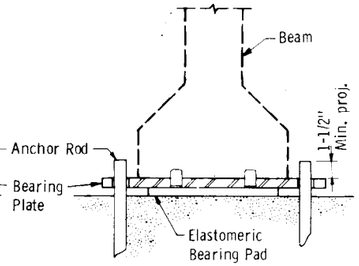
AS BUILT PLANS



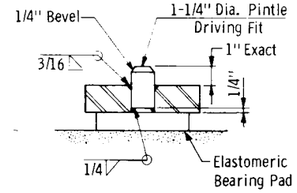
PLAN



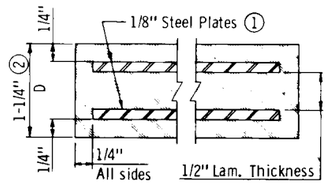
END ELEVATION



SECTION E-E

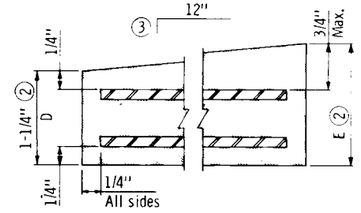


SECTION F-F
(ENLARGED)



SECTION G-G
(Section Thru Level Pad)

① Do not galvanize these plates.
② The total thickness shown includes the steel plates.



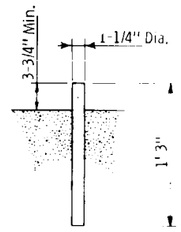
SECTION G-G
(Section Thru Sloped Pad)

③ Slopes to be made in 1/8" increments per foot.
④ Mark high side of sloped pads with an "E" for field placement.

ELASTOMERIC BEARING PAD TABLE ⑤

Beam Size	A	B	C	E	Bearing Plate Size	Assembly Type	DL + LL Min. (Kips)	DL Max. (Kips)	DL + LL Max. (Kips)	Shape Factor
28"	10"	14"	4"		12" x 24" x 1"		28	69	110	5.7
↓	12"	↓	↓		14" x 24" x 1"		33	83	132	6.4
↓	14"	↓	↓		16" x 24" x 1"		39	97	155	6.9
36"	10"	16"	6"		12" x 26" x 1"		32	79	126	6.1
↓	12"	↓	↓		14" x 26" x 1"		38	95	152	6.8
↓	14"	↓	↓		16" x 26" x 1"		44	111	177	7.4
40" & 45"	10"	20"	8"	1¼"	12" x 30" x 1"	F1	40	99	158	6.6
↓	12"	↓	↓		14" x 30" x 1"		48	119	190	7.4
↓	14"	↓	↓		16" x 30" x 1"		56	139	222	8.2
54"	10"	24"	9"		12" x 34" x 1"		48	118	190	7.0
↓	12"	↓	↓		14" x 34" x 1"		57	143	228	7.9
↓	14"	↓	↓		16" x 34" x 1"		67	167	267	8.8
63" - 81"	10"	↓	8"		12" x 34" x 1"		48	118	190	7.0
↓	12"	↓	↓		14" x 34" x 1"		57	143	228	7.9
↓	14"	↓	↓		16" x 34" x 1"		67	167	267	8.8
30" Bulb	10"	22"	9"		12" x 32" x 1"		44	109	174	6.8
↓	12"	↓	↓		14" x 32" x 1"		52	131	209	5.7
↓	14"	↓	↓		16" x 32" x 1"		61	153	244	8.5
↓	16"	↓	↓		18" x 32" x 1"		70	175	280	9.2

⑤ See Bridge Design Manual for additional information.



ANCHOR ROD DETAIL

NOTES:

For elastomeric materials and pad construction, see Spec. 3741.

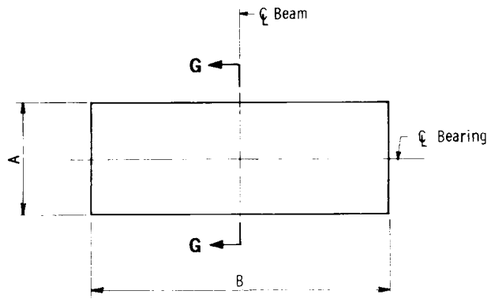
All steel plates and anchor rods shall comply with Spec. 3306.

Pintles shall comply with Spec. 3314, Type II.

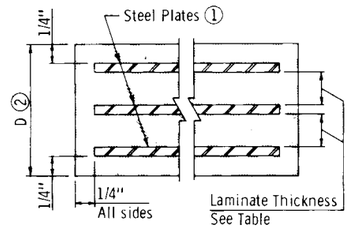
Galvanize structural steel bearing plate and pintle after assembly as per Spec. 3394.

Payment for bearing assembly shall include all material on this detail.

APPROVED: May 8, 1979	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Developed by: BRIDGE STANDARDS & BRIDGE AND STRUCTURES SECTION	**ELASTOMERIC BEARING ASSEMBLY** PRESTRESSED CONCRETE BEAMS (FIXED)		**B304**
Issued by: ENGINEERING STANDARDS SECTION			



PLAN



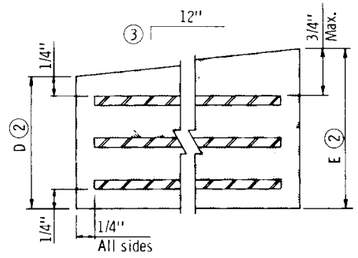
SECTION G-G
(Section Thru Level Pad)

① Do not galvanize these plates.
② The total thickness shown includes the steel plates.

ELASTOMERIC BEARING PAD TABLE ⑤

Beam Size	A	B	Pad Thickness D	Pad Thickness E	Steel Plates No.	Steel Plates Thickness	Laminates No.	Laminates Thickness	Shape Factor	Pad Type
28"										
↓										
36"										
↓										
40"										
↓										
45"	10"	20"	3 1/8"	3 1/8"	5	1/8"	4	1/2"	6.7	E1
↓										
54"										
↓										
63"										
↓										
72"										
↓										
81"										
↓										
30" Bulb										
↓										

⑤ See Bridge Design Manual for design requirememts.



SECTION G-G
(Section Thru Sloped Pad)

③ Slopes to be made in 1/8" increments per foot.
④ Mark high side of sloped pads with an "E" for field placement.

NOTES:

For elastomeric materials and pad construction, see Spec. 3741.

All steel plates shall comply with Spec. 3306.

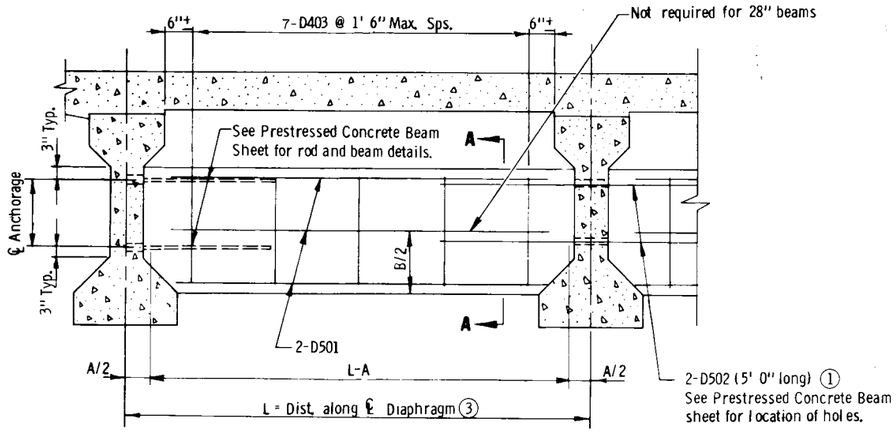
APPROVED: May 8, 1979	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Developed by: BRIDGE STANDARDS & BRIDGE AND STRUCTURES SECTION	**ELASTOMERIC BEARING PAD** PRESTRESSED CONCRETE BEAMS (EXPANSION)		**B305**
Issued by: ENGINEERING STANDARDS SECTION			

TITLE:	DES: J. L. C.	DR: D. Y. B.	APPROVED: 1-16-81	Bridge No.
DETAILS	CHK:	CHK:	Sheet No. 10 of 16 Sheets	55536

S.P. 55-601-09

AS BUILT PLANS

17M

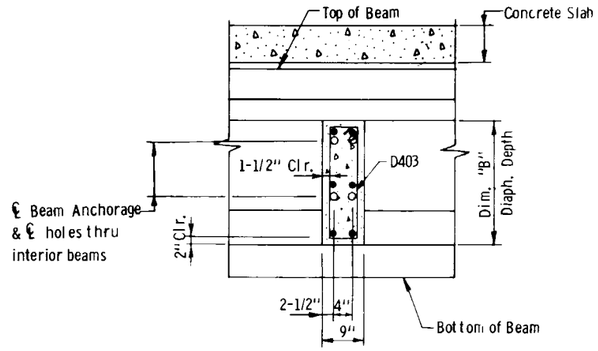


PART TRANSVERSE SECTION

Beam Height	Dim. "A" for comp. volume	Diaph. Dim. "B"	Bar D403 Length
28"	7-1/2"	1'-4"	3'-9"
36"	7-3/4"	1'-9"	4'-7"
40"	8-3/4"	1'-11"	4'-11"
45"	9"	2'-2 1/2"	5'-6"
54"	10-1/2"	2'-8"	6'-5"

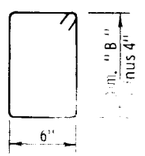
Concrete volume per diaphragm

$$\frac{(L - A) \times B \times .75}{27} = \text{(Cu. yd.)}$$



SECTION A-A

BAR	NO.	LENGTH	SHAPE	LOCATION
D501	168	8'-6"	Str.	Diaph. Horiz.
D502	126	5'-0"	Str.	Diaph. Horiz.
D403	196	5'-6"	Bent	Diaph. Vert.



D403

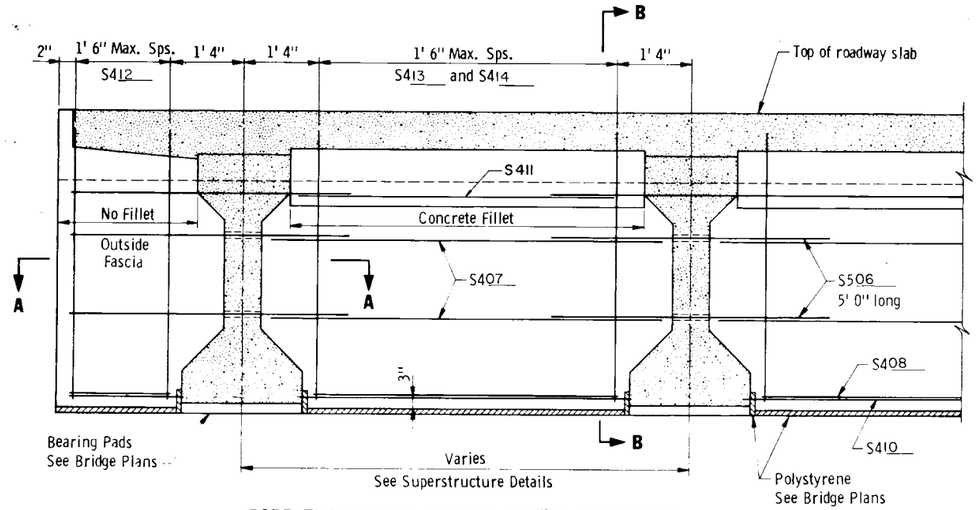
NOTE: STEEL DIAPHRAGMS WERE INSTALLED

GENERAL NOTES

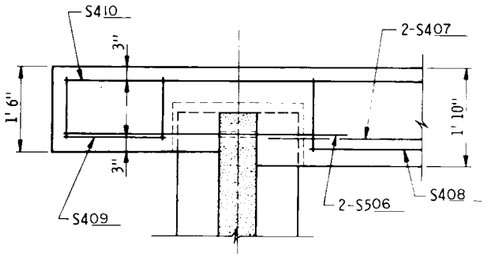
(1) For Diaphragms 20° and over, use threaded rods as shown on standard prestressed concrete beam sheet.

(2) All diaphragm concrete and reinforcement bars shown on this detail to be included in payment for diaphragms for prestressed beams. Threaded rods are included in payment for prestressed concrete beams.

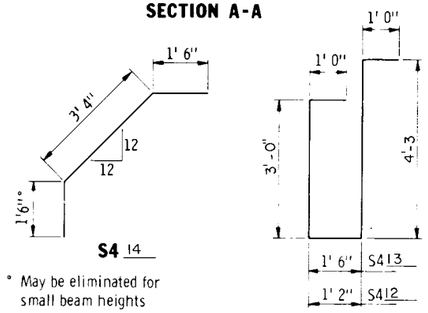
APPROVED: March 27, 1979 Developed by: OFFICE OF ENGINEERING STANDARDS AND BRIDGE DESIGN Issued by: OFFICE OF ENGINEERING STANDARDS	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION **CONCRETE INTERMEDIATE DIAPHRAGM** **(FOR 28"-54" PRESTRESSED CONCRETE BEAM SPANS)**	REVISION	DETAIL NO. **B802**



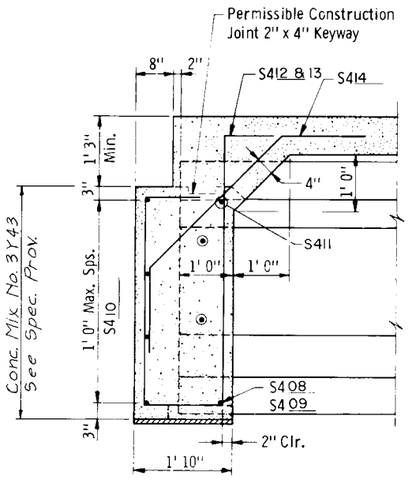
PART TRANSVERSE SECTION AT END DIAPHRAGM



SECTION A-A



° May be eliminated for small beam heights



SECTION B-B

All diaphragm bars shown are listed with the superstructure reinforcement. Diaphragm concrete and reinforcement quantities are included in superstructure quantities.

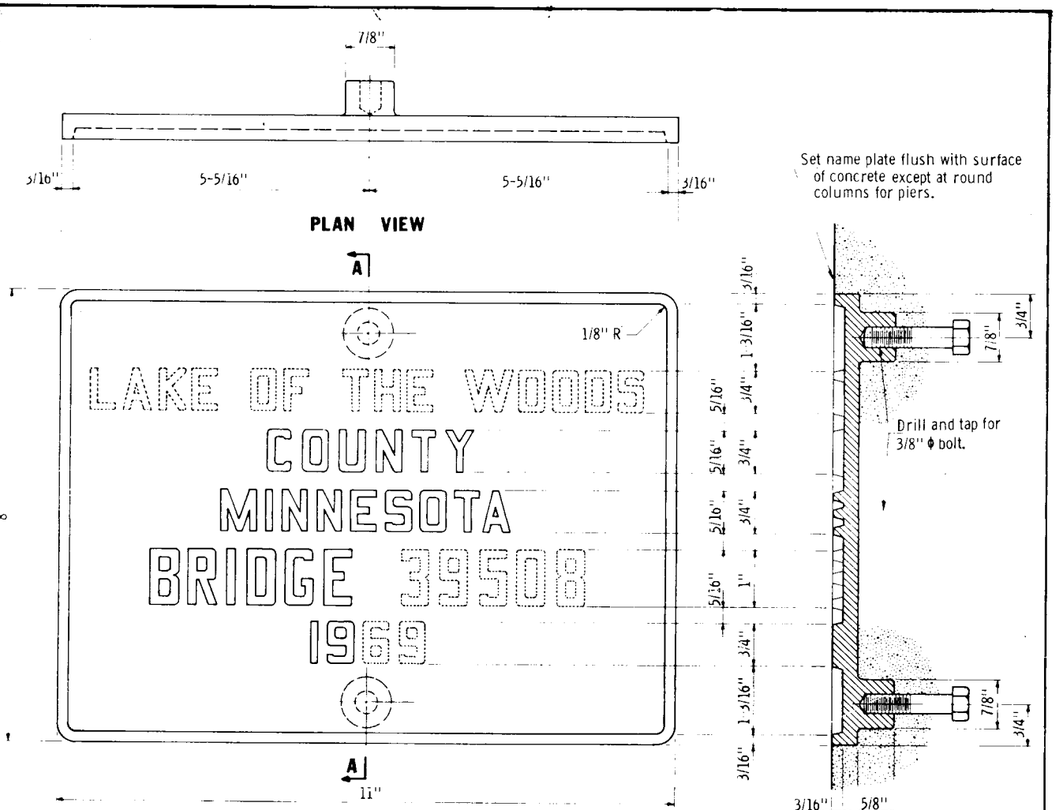
APPROVED: Oct. 20, 1976 Developed by: OFFICE OF ENGINEERING STANDARDS AND BRIDGE DESIGN Issued by: OFFICE OF ENGINEERING STANDARDS	MINNESOTA DEPARTMENT OF TRANSPORTATION **CONCRETE END DIAPHRAGM** **(PRESTRESSED CONC. BEAMS WITH PILE BENT ABUTMENT)**		DETAIL NO. **B810**

TITLE: DETAILS	DES: J. L. C.	DR: D. Y. B.	APPROVED: 1-16-81	Bridge No. 55536
	CHK:	CHK:		
	Sheet No. 11 of 16 Sheets			

S.P. 55-601-09

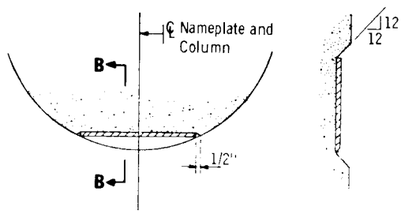
AS BUILT PLANS

17M



The numbers shown above are for illustration.
Data to be shown on name plate is as follows:

BRIDGE 55536
YEAR 1981



SECTION B-B

NAMEPLATE PLACEMENT

(Round Concrete Pier Columns)

NOTES:

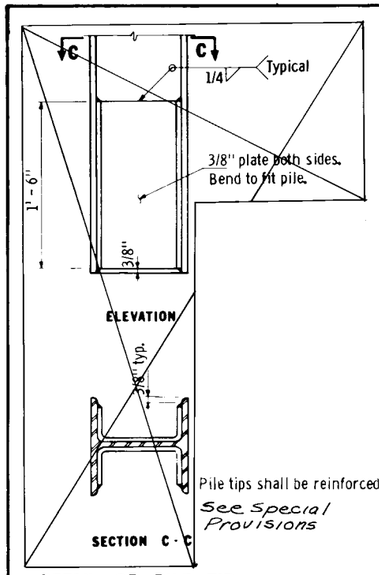
No shop drawing required.
Material shall comply with SPEC. 3327.
Numbers and letters shall conform to those shown.
Draft on letters shall not be more than 3" in 12"
Horizontal spacing of letters shall produce a balanced layout in proportion to spacing shown.
Top surface of letters and frames shall be burnished.
Furnish 2 steel bolts 3/8" ϕ x 3" long with each plate.
All dimensions for 3/4" high letters and numbers shall be in direct proportion to those shown for the 1" high letters and numbers.



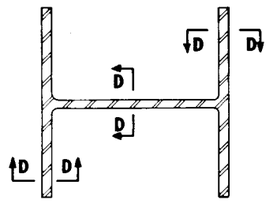
Specification reference: 2471.3H, A.S.T.M. Designation: B145 - Alloy 836.

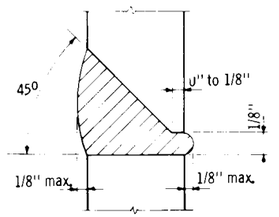
LETTERS & NUMBERS FOR NAMEPLATES

APPROVED: March 15, 1976 Developed by: OFFICE OF ENGINEERING STANDARDS AND BRIDGE DESIGN Issued by: OFFICE OF ENGINEERING STANDARDS	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION **BRIDGE NAMEPLATE** **COUNTY BRIDGES**		DETAIL NO. **B103**



DETAIL OF PILE TIP REINFORCEMENT





100% BUTT WELDED PILE SPLICE

NOTES:

A. W. S Type E7010 or E7018 (low-hydrogen) electrodes shall be used for 100% butt welded splices.

A. W. S. Type E6010, E6011 electrodes, or E7016 or E7018 (low-hydrogen) electrodes, shall be used for the alternate plate type pile splice.

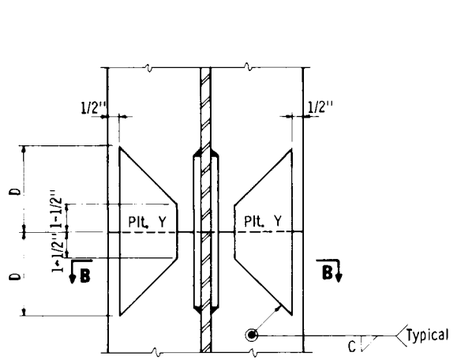
Low-hydrogen electrodes shall be supplied in hermetically (air-tight) sealed containers.

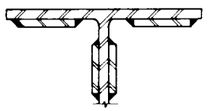
Low-hydrogen electrodes shall be stored in holding ovens at a temperature of not less than 250° F

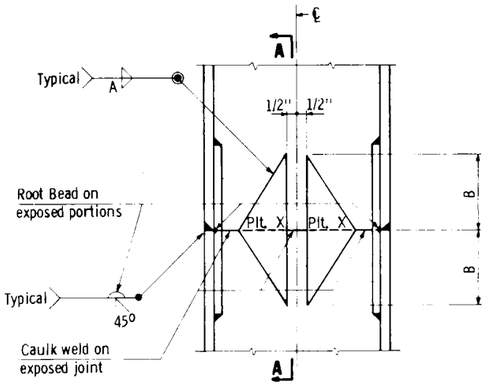
Low-hydrogen electrodes shall be placed in a holding oven for at least 8 hours, after having been exposed to the atmosphere for more than 2 hours

Any type electrode which has become wet, soiled, or damaged shall not be used.

Welding shall not be done when the ambient temperature is lower than 0° F. or when the pile is wet or exposed to falling rain or snow. When the pile metal temperature is below 32° F., the pile metal in the area of the weld shall be heated to a minimum temperature of 70° F anc maintained at this temperature during welding.







PILE SECTION	PLATE X			PLATE Y		
	Size	A	B	Size	C	D
HP10 x 42	2-1/2 x 3/8	1/4	4	3 x 3/8	5/16	4
HP10 x 57	2-1/2 x 1/2	5/16	4	3 x 1/2	5/16	5
HP12 x 53	3-1/2 x 3/8	1/4	5	4 x 3/8	5/16	5
HP12 x 74	3-1/2 x 1/2	5/16	6	4 x 1/2	5/16	6
HP14 x 73	4-1/2 x 3/8	1/4	7	5 x 3/8	5/16	6
HP14 x 89	4-1/2 x 7/16	5/16	7	5 x 1/2	5/16	7
HP14 x 102	4-1/2 x 1/2	5/16	7	5 x 9/16	3/8	7
HP14 x 117	4-1/2 x 9/16	3/8	7	5 x 5/8	3/8	8

ALTERNATE PILE SPLICE

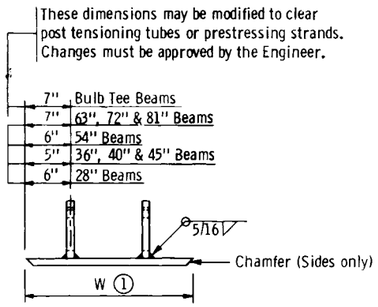
APPROVED July 21, 1972 Douglas D. Gilbert Engineering Standards Engineer RESEARCH AND STANDARDS DIVISION	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION **PILE SPLICE and TIP REINFORCEMENT** **STEEL H BEARING PILES 10" TO 14"**		DETAIL NO. **B202**

TITLE: DETAILS	DES: J. L. C.	DR: D. Y. B.	APPROVED: 1-16-81	Bridge No. 55536
	CHK:	CHK:	Sheet No. 12 of 16 Sheets	

S.P. 55-601-09

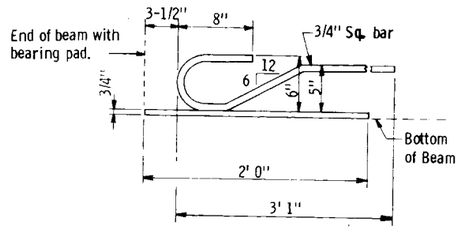
AS BUILT PLANS

17M



FRONT VIEW

(1) Dimension "W" to be the width at the bottom flange of the beam - 1/4".



SIDE VIEW

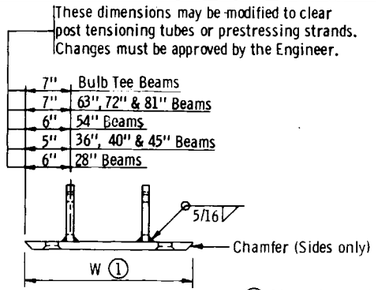
SOLE PLATE FOR B305 BEARING

NOTES

Material to be Structural Steel per Spec. 3306

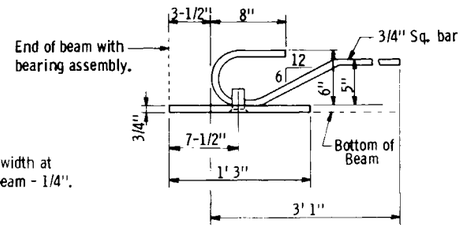
Sole plate for Bearing Assembly to be hot dipped galvanized as per Spec. 3394 after fabrication.

Payment for sole plates to be included in price bid for Prestressed Concrete Beams.



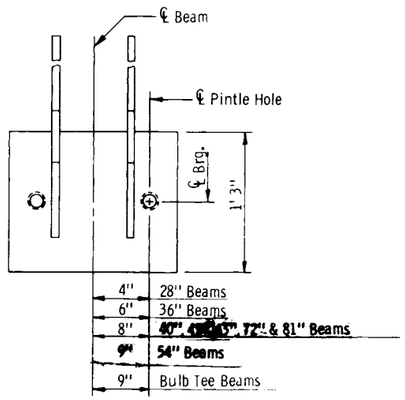
FRONT VIEW

(1) Dimension "W" to be the width at the bottom flange of the beam - 1/4".

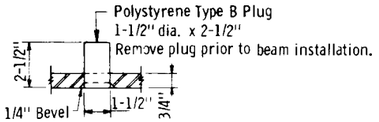


SIDE VIEW

Showing placement in beam



PLAN VIEW



PINTLE HOLE DETAIL

(2 Required)

SOLE PLATE FOR B302, & B304 BEARING ASSEMBLY

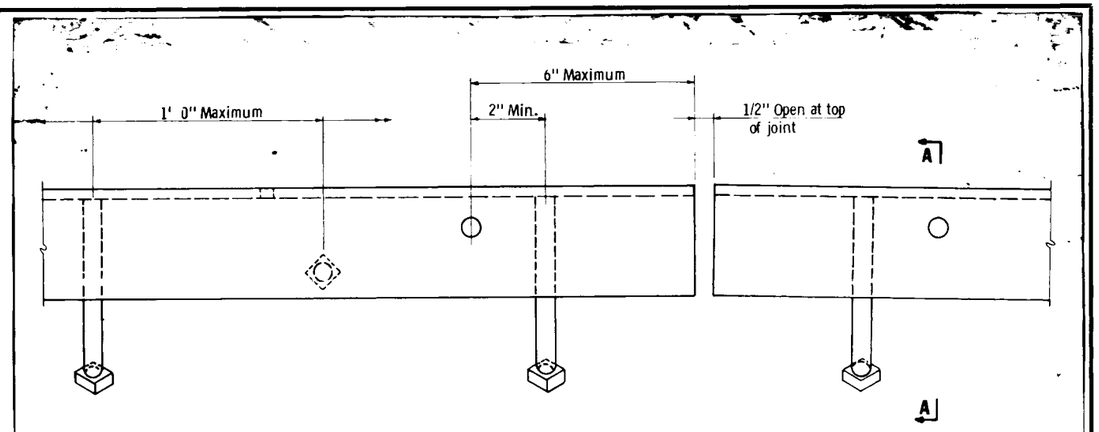
NOTES

Material to be Structural Steel per Spec. 3306

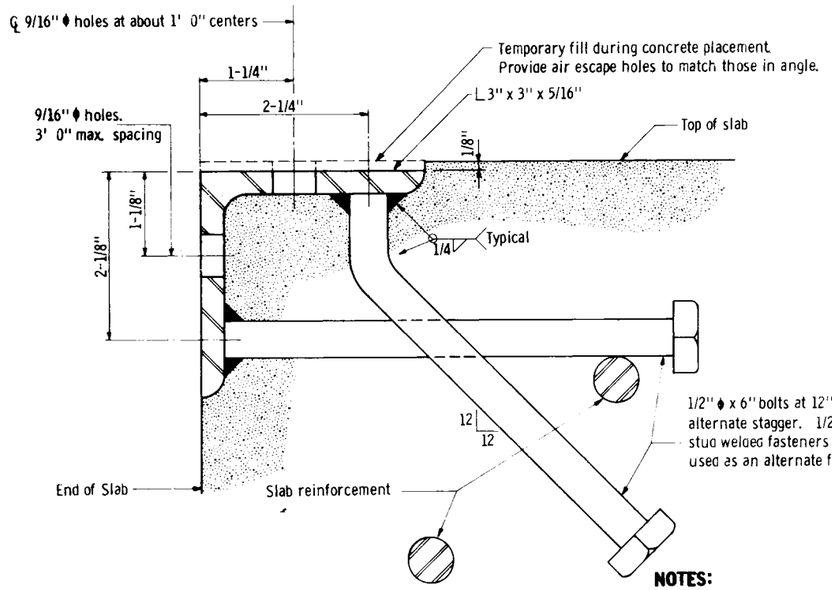
Sole plate for Bearing Assembly to be hot dipped galvanized as per Spec. 3394 after fabrication. Pintle holes shall be free of zinc build up from galvanizing.

Payment for sole plates to be included in price bid for Prestressed Concrete Beams

APPROVED: April 26, 1978 Developed by: ENGINEERING STANDARDS, AND BRIDGES AND STRUCTURES Issued by: ENGINEERING STANDARDS	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION **SOLE PLATES** **PRESTRESSED CONCRETE BEAMS**	REVISION Sept. 7, 1978	DETAIL NO. **B303**



ELEVATION
(Concrete not shown)



SECTION A - A

NOTES:

Angles shall extend full width of roadway between curbs with a 1/2" open joint at each break in crown profile. Maximum length 22 feet.

Angles shall be straightened to a tolerance of 1/16" in 10 feet after galvanizing

Material: Structural steel per SPEC. 3306. Galvanize after fabrication per SPEC. 3394

Set angle to proper grade and crown.

All material will be paid for as structural steel SPEC. 3306.

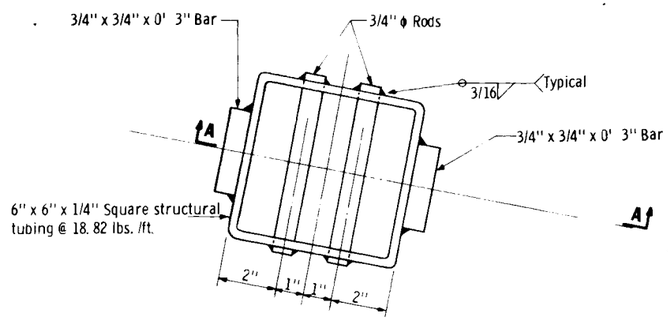
APPROVED May 26, 1972 Douglas Dellert Engineering Standards Engineer RESEARCH AND STANDARDS DIVISION	**PROTECTION ANGLE FOR END OF SLAB**		DETAIL NO. **B551**

TITLE: DETAILS	DES: J. L. C.	DR: D.Y.B.	APPROVED: 1-16-81	Bridge No. 55536
	CHK:	CHK:		
	Sheet No. 13 of 16 Sheets			

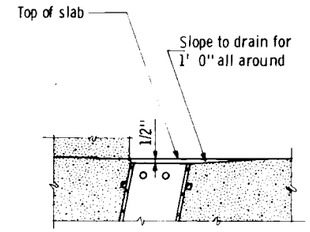
S.P. 55-601-09

AS BUILT PLANS

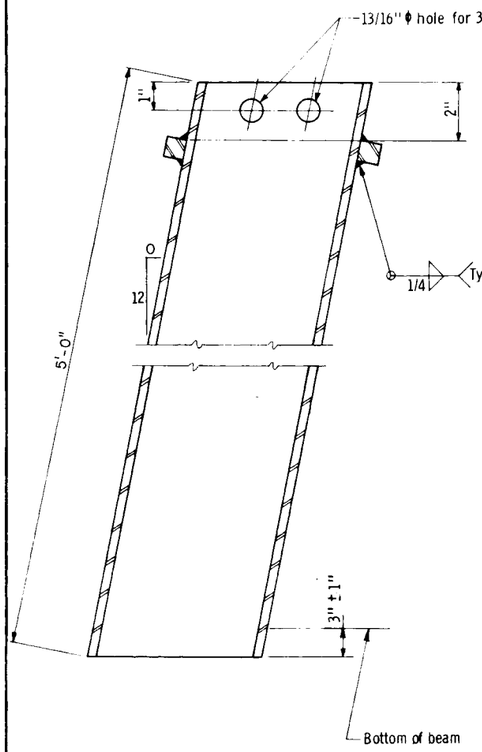
17M



PLAN VIEW



PLACEMENT DIAGRAM



SECTION A - A

NOTES:

Material to be structural steel per Spec. 3306.

Galvanize bolts and washer per Spec. 3392.

Galvanize other materials per Spec. 3394 after fabrication.

Payment for Floor Drain Type 1 shall include all material shown on this detail.

APPROVED: Aug. 12, 1975 Developed by: OFFICE OF ENGINEERING STANDARDS AND BRIDGE DESIGN Issued by: OFFICE OF ENGINEERING STANDARDS	[redacted] MINNESOTA DEPARTMENT OF [redacted] **BRIDGE FLOOR DRAIN** **STRUCTURAL TUBING**	REVISION Feb. 13, 1979	DETAIL NO. **B702**

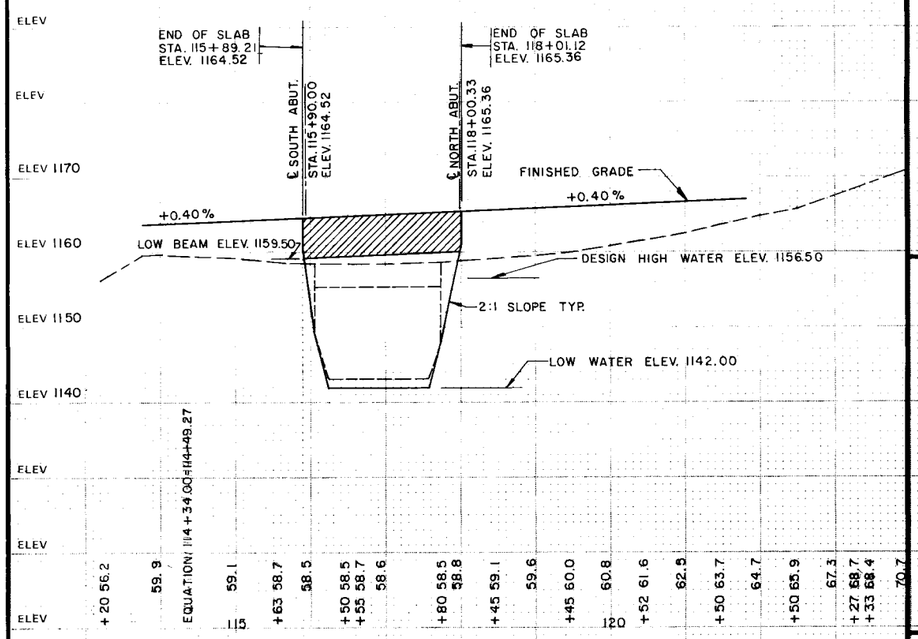
TITLE: DETAILS	DES: J.L.C.	DR: D.Y.B.	APPROVED: 1-16-81	Bridge No. 55536
	CHK:	CHK:	Sheet No. 14 of 16 Sheets	

S.P. 55-601-09

17M

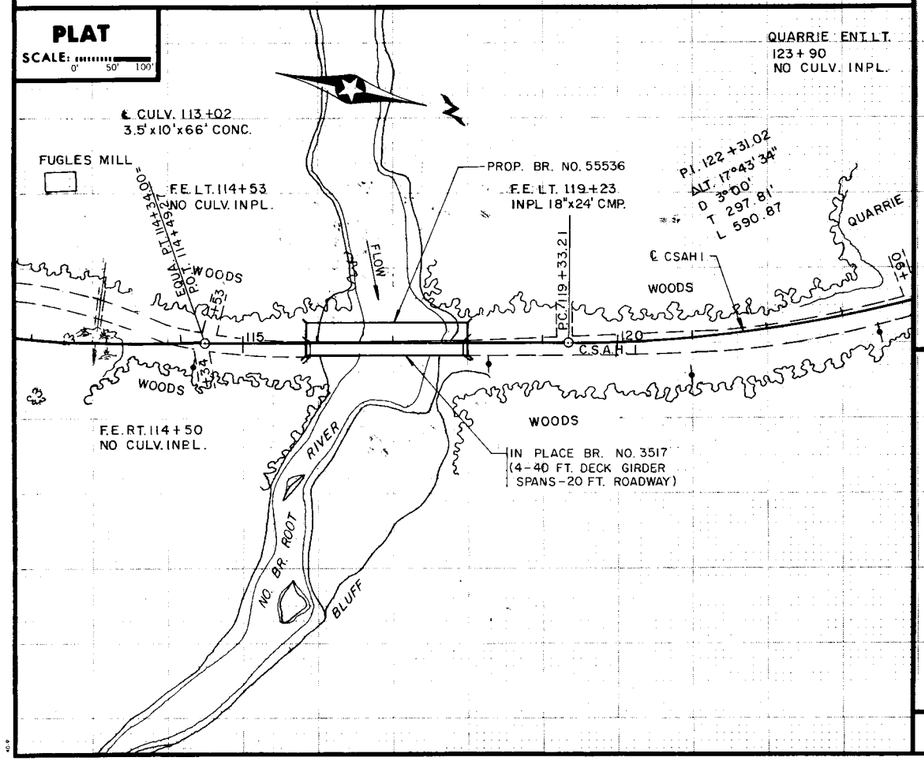
CONTRACTED PROFILE

SCALE: HOR. 0' 50' 100' VER. 0' 5' 10'



PLAT

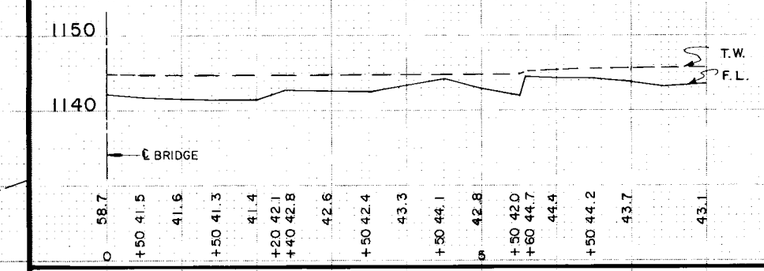
SCALE: 0' 50' 100'



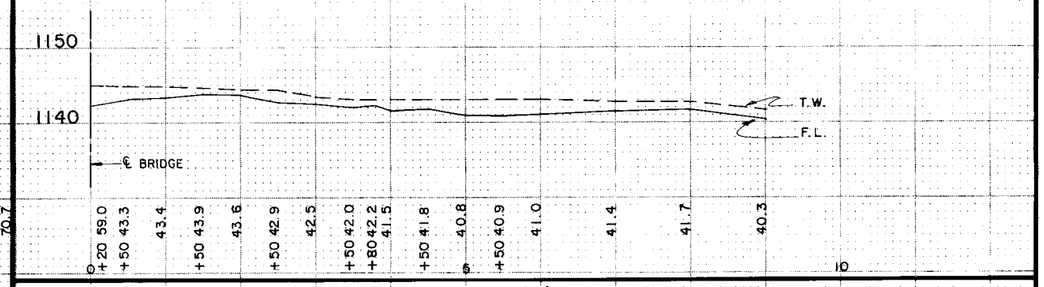
TYPICAL SECTIONS & PERTINENT DATA

SCALES AS SHOWN

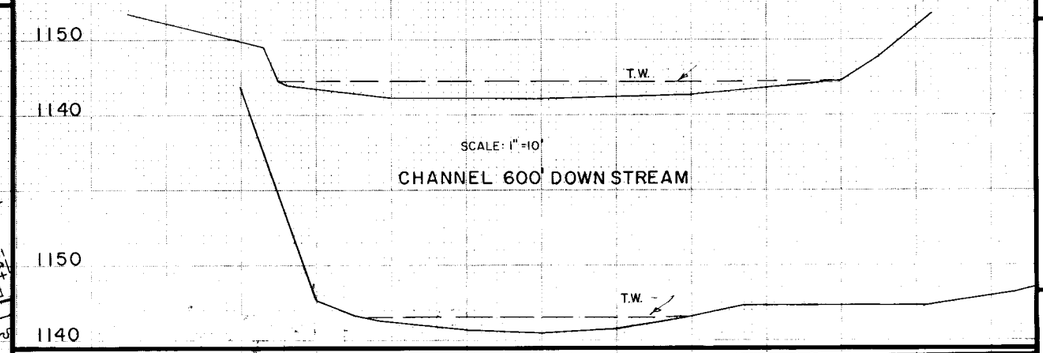
PROFILE 800' UP STREAM



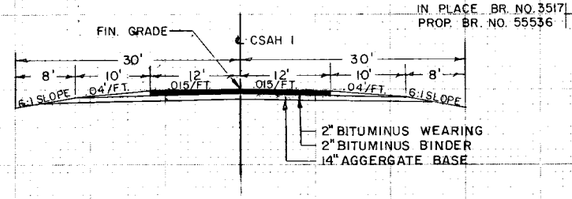
PROFILE 900' DOWN STREAM

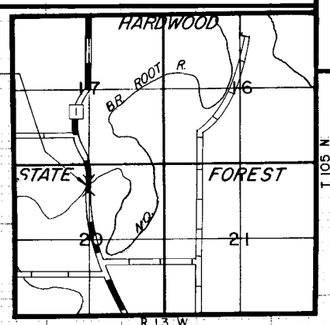


CHANNEL 750' UP STREAM



TYPICAL GRADING SECTION





Fed. Proj. No.

LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

1. Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, recreational boating.

2. Other bridges or culverts over the same stream (particularly structures which carry high water without overflow of roadway) :Given location, type, length, height above high water, cross-sectional area etc.

3. Apparent highwater elevation..... Obtained from.....

4. Other data: Approx. velocity of water at time of survey.....

HYDRAULIC ENGINEERS RECOMMENDATION

DATE FEBRUARY 1978

Stream or ditch designation NORTH BRANCH ROOT RIVER

Drainage area 142 SQUARE MILES

Max. flood on record.—.—.— Design flood (.50..... yr. freq.) 12,300 C.F.S.

Max. observed highwater elevation "A" Design highwater elevation 1156.5

Design mean velocity through structure 5.4 F.P.S.

Low superstructure at or above elevation 1159.50

Flowline elevation 1142.0 Skew angle 0°

Waterway area req'd. below elevation 1156.6 = 2296 Sq. Ft. at Rt. angles to channel

In the interest of flood plain zoning the regional flood (100 yr. freq.) is 14,700 C.F.S. at stage 1157.6 and mean velocity of 5.9 F.P.S. with 0.1 Ft. swellhead.

The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of Natural Resources.

"A"- 6.2' BELOW TOP OF SOUTH PIER OF EXIST. BRIDGE
ELEV. 1152.3

FOUNDATION ENGINEERS RECOMMENDATION

DATE .....

Bridge survey sheets made from: .....

Bench mark elevation 1159.00 (M.S.L. 1929 Adj.)

Location TOP OF CURB N.E. CORNER EXIST. BRIDGE

MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT 3.52 ON C.S.A.H. I (T.H., C.S.A.H., C.R. etc.)

PROPOSED BRIDGE LOCATED 2.3 MILES S OF JCT. C.S.A.H. 16

SEC. 17 TWP. 105 N. R. 13 W.

TOWNSHIP PLEASANT GROVE COUNTY OLMSTED

BRIDGE NO. 55536

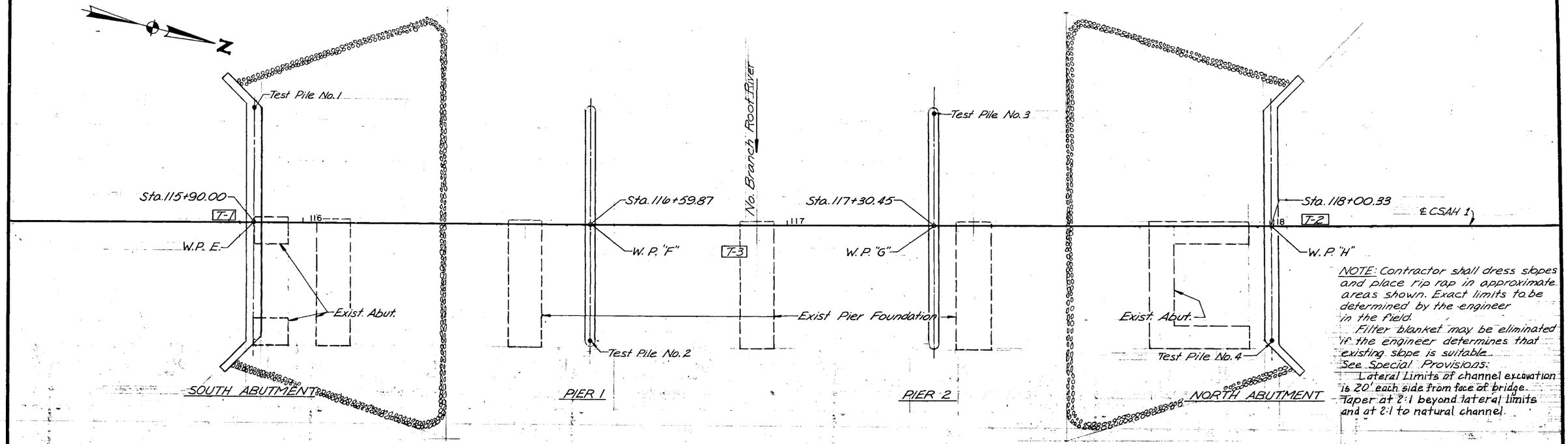
1-16-81

Area No. Job No. | State Proj. No. 55-601-09 | Sheet No. 15 of 16 Sheets

AS BUILT PLANS

TELEDYNE POST BRIDGE SURVEY 18C-2 9/76

Fed. Proj. No.

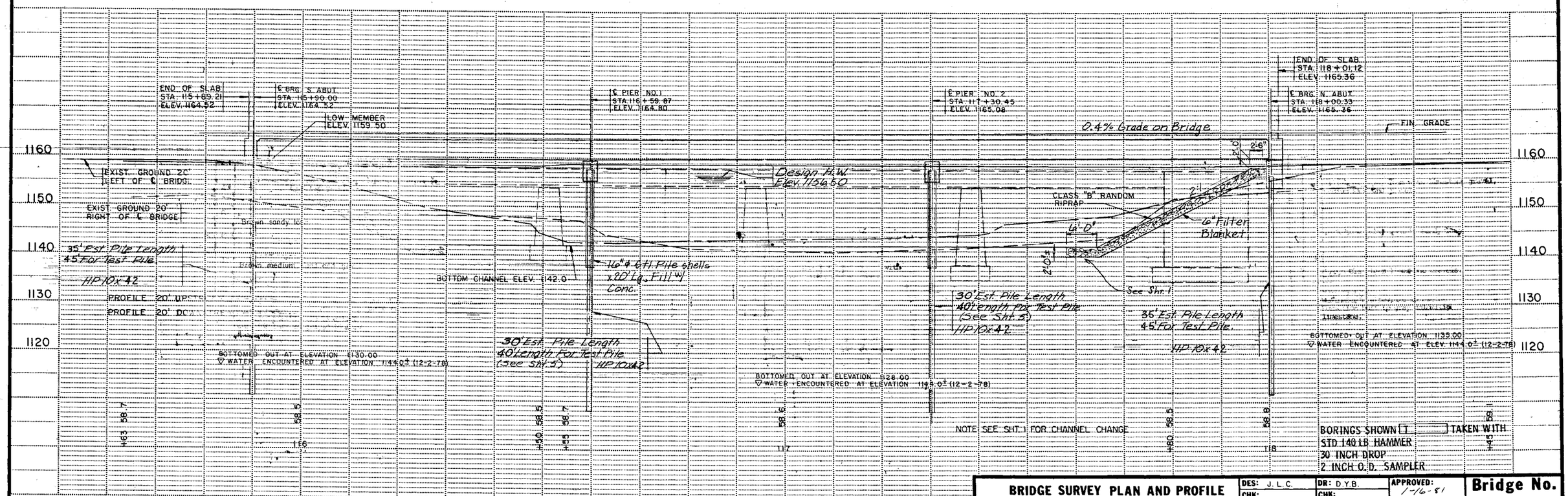


NOTE: Contractor shall dress slopes and place rip rap in approximate areas shown. Exact limits to be determined by the engineer in the field.

Filter blanket may be eliminated if the engineer determines that existing slope is suitable.

See Special Provisions:

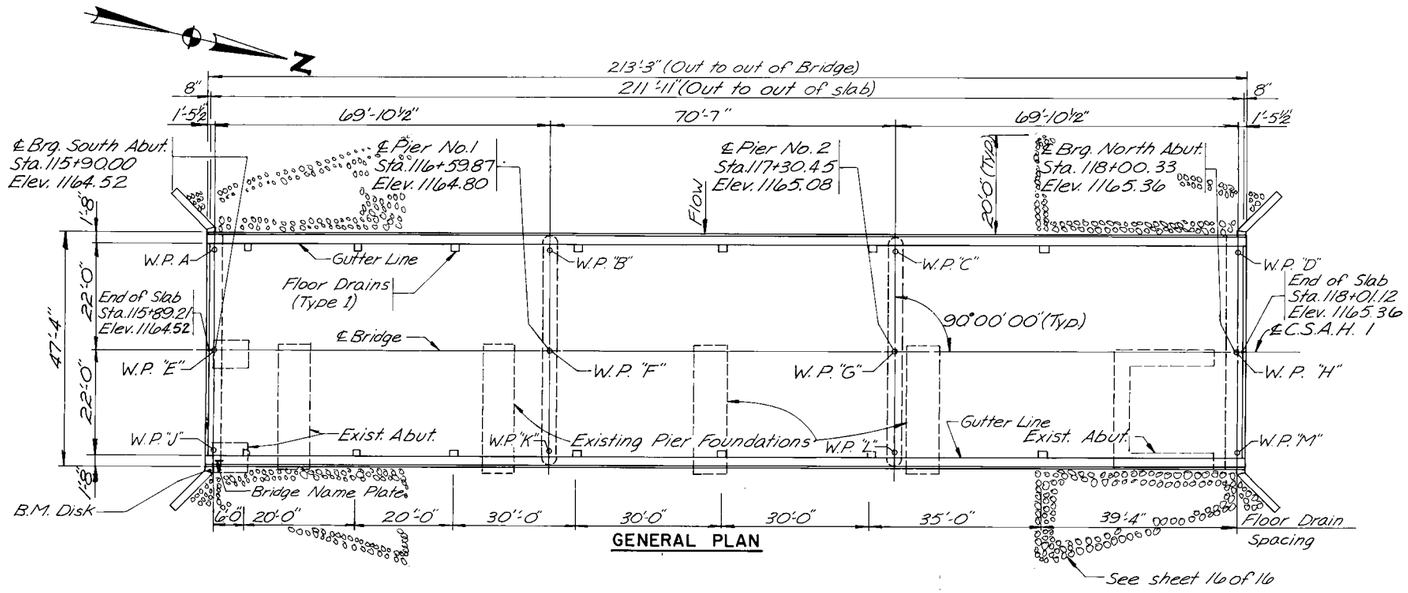
Lateral Limits of channel excavation is 20' each side from face of bridge. Taper at 2:1 beyond lateral limits and at 2:1 to natural channel.



BRIDGE SURVEY PLAN AND PROFILE	DES: J. L. C.	DR: D.Y.B.	APPROVED: 1-16-81	Bridge No.
State Proj. No. 55-601-09	CHK:	CHK:	Sheet No. 16 of 16 Sheets	55536

AS BUILT PLANS

Fed. Proj. No.



GENERAL PLAN

TRAFFIC DATA		
YEAR	1978	2000
ADT	750	1350

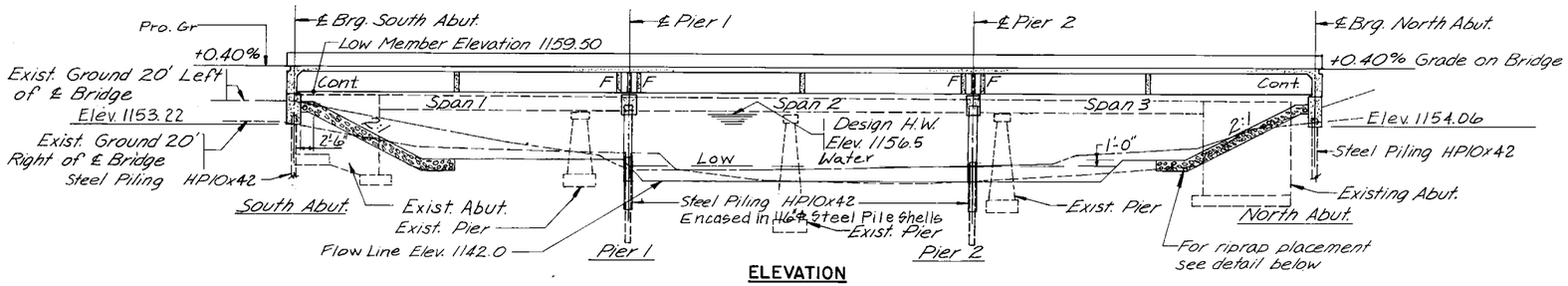
DESIGN DATA

1977 AASHTO Design Specs. & Interim Load Factor Design Method
HS20 Loading - Includes 17 psf Dead Load Allowance for Future Wearing Course.
Maximum Allowable Design Stresses:
Reinforced Concrete f'c = 4000 psi, N = 8, fy = 60,000 psi
Reinforcement (Grd. 60)
Prestressed Concrete:
f'c = 6000 psi, N = 6, f'ci = 270,000 psi (for 270K Strands)
Structural Steel:
fy = 36,000 psi Spec. 3306
Proj. ADT 1350 = 2000

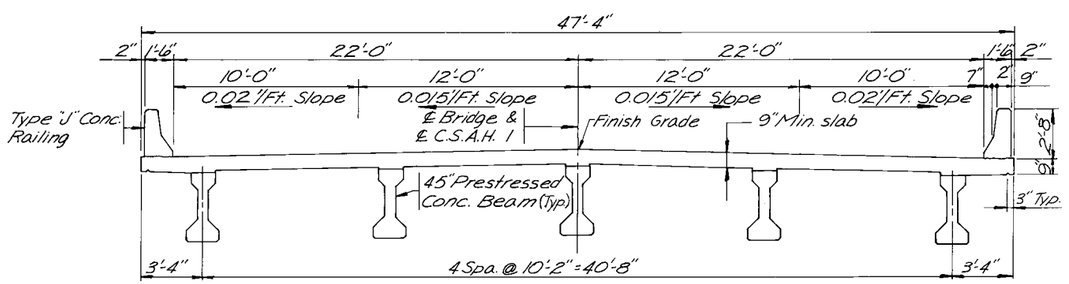
DECK AREA: 10031 SQ. FT.

LIST OF SHEETS

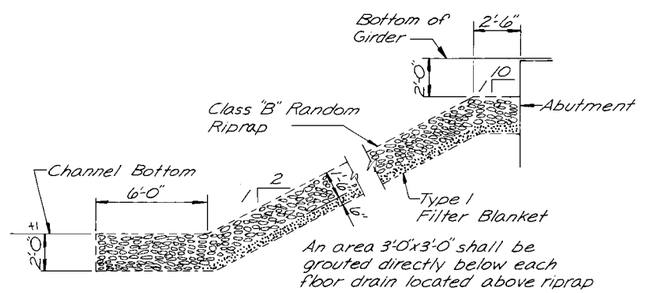
	DESCRIPTION
1	GENERAL PLAN AND ELEVATION
2	BRIDGE LAYOUT
3	ABUTMENT GEOMETRICS
4	ABUTMENT REINFORCEMENT
5	PIER DETAILS & REINFORCEMENT
6	BEAM FRAMING PLAN
7	SUPERSTRUCTURE DETAILS
8	CONCRETE RAILING (TYPE J)
9	45"PRESTRESSED CONCRETE BEAM TYPE 45-71
10	DETAILS
11	DETAILS
12	DETAILS
13	DETAILS
14	DETAILS
15	BRIDGE SURVEY
16	BRIDGE SURVEY PLAN & PROFILE



ELEVATION



TRANSVERSE SECTION



RIPRAP DETAIL

2123.506
3/4 C.Y. DRAGLINE
HOUR
20

CONSTRUCTION NOTES

The 1978 Edition of the Minnesota Department of Transportation "Standard Specifications for Highway Construction" shall govern.

For details of existing structure, refer to construction plans by Minnesota Highway Department dated May 16, 1921 and December 6, 1922.

The existing structure shall be removed and material disposed of in accordance with the special provisions.

Bridge seat reinforcement shall be carefully placed to avoid interference with drilling holes for anchor rods. The superstructure beams shall be erected in final position prior to drilling holes for and placing anchor rods.

Construction of each abutment shall not be started until the approach fill has been constructed to the top of subgrade.

B.M. ELEV. 1164.26
BRASS DISC S.E. COR.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

SIGNED James L Chandler
DATE 8-3-79 REG NO 10558

LOCATION-TOP OF CURB N.E. CORNER EXIST. BRIDGE
B.M. ELEV. 1159.00 (M.S.L. 1929 ADJ.)

APPROVED BY THE COUNTY OF OLMSTED
J.K. Dolan
J.K. DOLAN P.E.
PUBLIC WORKS DIRECTOR

KIRKHAM, MICHAEL & ASSOC.
ARCHITECTS ENGINEERS
OMAHA MINNEAPOLIS

TRUNK HIGHWAY NO.
MINNESOTA
DEPARTMENT OF TRANSPORTATION

Bridge No. 55536

C.S.A.H. 1 OVER NO. BRANCH ROOT RIVER.
2.3 MILES SOUTH OF JCT. C.S.A.H. 16.
70'-71'-70' PRESTRESSED CONCRETE BEAM SPANS WITH 45" PRECAST BEAMS AND CONCRETE SLAB. 44' RDWY. 0°-00' SKEW.

GENERAL PLAN AND ELEVATION

SEC. 17 T 105 N R 13 W
PLEASANT GROVE TOWNSHIP OLMSTED COUNTY
APPROVED 1-16-81
BRIDGE ENGINEER

DES. J.L.C. DR. D.Y.B.
CHK. S.L.B. CHK. J.L.C.

55536

(P) DENOTES PLAN QUANTITIES PAY ITEMS PER MN. D.O.T. 1901

SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE

ITEM NO	452.604	2401.501	401.605	401.606	401.601	2401.541	2401.541	2402.521	2402.590	2402.592	2452.510	2452.511	2452.520	2452.520	2405.501	2405.511	2402.546	2511.501	2511.504	2021.501	452.602
ITEM	16" STEEL PILE SHELLS	CONCRETE MIX NO. 3Y43	BRIDGE SLAB CONCRETE MIX NO. 3X33	TYPE J RAIL CONCRETE MIX NO. 3X46	STRUCTURE EXCAVATION	REINFORCEMENT BARS	REINFORCEMENT BARS (EPOXY COATED)	STRUCTURAL STEEL (3306)	ELASTOMERIC BEARING PADS TYPE I	ELASTOMERIC BEARING ASSEMBLY TYPE I	STEEL H PILING DRIVEN	STEEL H PILING DELIVERED	STEEL H TEST PILES 40 FT. LONG	STEEL H TEST PILES 45 FT LONG	PRESTRESSED CONCRETE BEAMS TYPE 45-71	DIAPHRAGMS FOR TYPE 45 PRESTRESSED BEAMS	FLOOR DRAINS TYPE 1	RANDOM RIPRAP CLASS B	FILTER BLANKET TYPE 1	MOBILIZATION	PILE POINT
UNIT	LIN. FT.	CU. YD.	SQ. FT.	LIN. FT.	LUMP SUM	POUND	POUND	POUND	EACH	EACH	LIN. FT.	LIN. FT.	EACH	EACH	EACH	LIN. FT.	EACH	CU. YD.	CU. YD.	LUMP SUM	EACH
QUANTITY	560	169 (P)	10031 (P)	427 (P)	1	~~50080~~ (P) 49930	~~44810~~ (P) 42400	570 (P)	10	20	1410	1410	2	2	15	285 (P)	14	400	110	1	48

Area No. Job No. Design Squad

State Proj. No. 55-601-09

Sheet No. 1 of 16 Sheets