MINNESOTA DEPARTMENT OF TRANSPORTATION

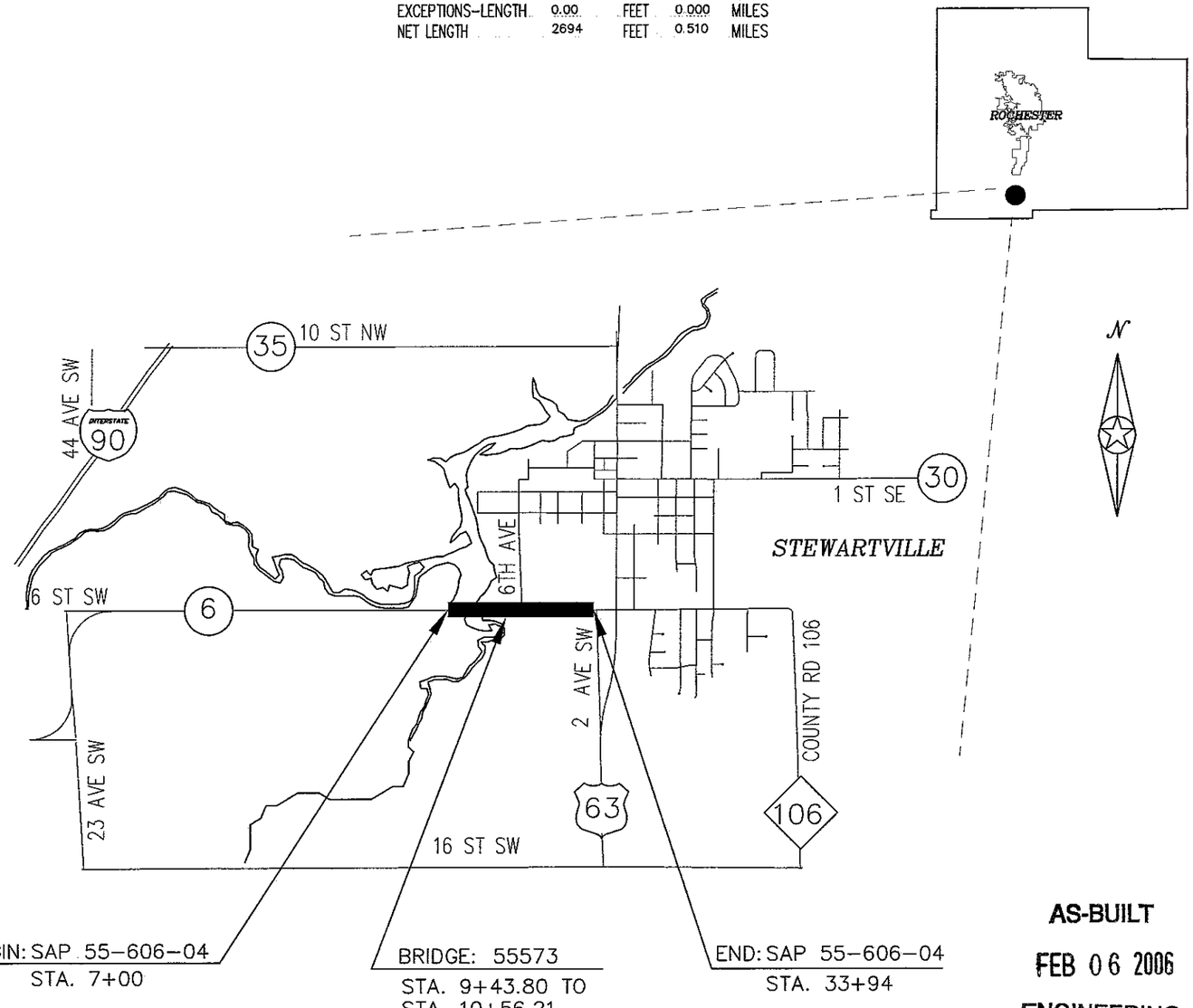
THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR BRIDGE OLD (6643), NEW (55573), GRADING, AGG. BASE, BIT. SURFACING

LOCATED ON CSAH 6 BETWEEN 1/4 MILE WEST OF JCT. 6th AVE. & CSAH 6 AND 1/4 MILE WEST OF JCT. TH 63 & CSAH 6 (GEOGRAPHIC DESCRIPTION)

FROM 53 FEET WEST of the NORTH 1/4 COR. SECTION 3 T 104 N – R 14 W TO NORTH SECTION COR. 2 & 3 T 104 N – R 14 W (LEGAL DESCRIPTION)

S.A.P. NO.	55–606–04			
GROSS LENGTH	2694	FEET	0.510	MILES
BRIDGE–LENGTH	112.41	FEET	0.021	MILES
EXCEPTIONS–LENGTH	0.00	FEET	0.000	MILES
NET LENGTH	2694	FEET	0.510	MILES



PLAN 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
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
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
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
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

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

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES

PLAN 0 50'
PROFILE 0 50' HORIZ. 0 5' VERT.
CROSS SECTIONS 0 10'
INDEX MAP 0 2640'

MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX FOR GRADING & BRIDGE (55573)

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATE OF QUANTITIES
SHEET NO. 3	TYPICAL SECTIONS
SHEET NO. 4	CURB LAYOUT
SHEET NO. 5	TABULATED QUANTITIES
SHEET NO. 6	EDGE DRAIN DETAILS
SHEET NO. 7–8	PLAN AND PROFILE
SHEET NO. 9–13	CROSS–SECTIONS
SHEET NO. 14–19	EROSION CONTROL
SHEET NO. 20	TRAFFIC SHEET
SHEET NO. B1–B30, A1–A2	BRIDGE SHEETS

THIS PLAN CONTAINS 52 SHEETS.

DESIGN DESIGNATION: S.A.P. 55–606–04

R IN18(20)
ADT (Current Year) = 1998(2003) Design Speed 55 MPH
ADT (Future Year) = 3198(2023) Based on STOPPING Sight Distance
DHV (Design Hr. Vol.) = Height of eye 3.5 FT. Height of object 0.5 FT
D (Directional Distr.) = Design Speed not achieved at:
T (Heavy Commercial) = STA. TO STA. mph.
SUBGRADE = STA. TO STA. mph.
LANE WIDTH 12 FT.
SHOULDER WIDTH 6 FT
SOIL FACTOR = 130%
TON DESIGN 10
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR

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

DATE 3/21/03 REG NUMBER 19917
PRINTED NAME: KAYE M. BIENIEK
SIGNED NAME: Kaye M Bieniek
APPROVED: COUNTY DESIGN ENGINEER

DESIGNED BY: Holmes

DATE 3/28/03 REG NUMBER 10397
APPROVED: OLMSTED COUNTY ENGINEER

RECOMMENDED FOR APPROVAL– CITY OF STEWARTVILLE DATE: 3/28/03

RECOMMENDED FOR APPROVAL– STATE BRIDGE ENGINEER DATE: 4/1/03

STATE AID APPROVALS:
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE–AID RULES/POLICY DATE: 4-3-03
Asst
APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER DATE: 4-30-03

AS-BUILT
FEB 06 2006
ENGINEERING

S.A.P. NO. 55–606–04 CSAH 6 SHEET NO. 1 OF 20 SHEETS

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	COUNTY	CITY LOCAL	TOTAL ESTIMATED QUANTITIES
	2031.501	FIELD OFFICE TYPE D	EACH	1		1
①	2101.502	CLEARING	TREE	63		63
①	2101.507	GRUBBING	TREE	53		53
②	2103.501	BUILDING REMOVAL	LUMP SUM	1		1
	2104.501	REMOVE PIPE CULVERTS	LIN. FT.	274		274
③	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ. YD.	7496		7496
	2104.513	SAWING BIT. PAVEMENT	LIN. FT.	98		98
	2104.521	SALVAGE CONCRETE CULVERT	LIN. FT.		~~45~~	~~45~~
	2104.523	SALVAGE CONCRETE APRON	EACH		1	1
④	2104.525	ABANDON & SEAL WELL SHAFT	EACH	1		1
⑤	2105.515	UNCLASSIFIED EXCAVATION	CU. YD.	10771		10771 (P)
	2105.521	GRANULAR BORROW (CV)	CU. YD.	450	1062	1512 (P)
⑥	2211.501	AGG. BASE CLASS 5	TON	8599	799	9398
	2221.501	AGG. SHOULDER CLASS 2	TON	976		976
⑦	2350.501	TYPE MV4 WEARING COURSE MIXTURE (MVWE45035C)	TON	636		636
⑧	2350.502	TYPE MV4 NON-WEARING COURSE MIXTURE (MVNW45035C)	TON	848		848
⑨	2350.502	TYPE MV3 NON-WEARING COURSE MIXTURE (MVNW35035B)	TON	1061		1061
⑨	2350.501	TYPE LV4 WEARING COURSE MIXTURE (LVWE45030B)	TON	237	391	628
	2501.511	12" C.S. PIPE CULVERT	LIN. FT.	15	15	30
	2501.511	24" C.S. PIPE CULVERT	LIN. FT.	64		64
	2501.511	36" C.S. PIPE CULVERT	LIN. FT.	40		40
	2501.511	42" C.S. PIPE CULVERT	LIN. FT.	84		84
	2501.511	15" R.C. PIPE CULVERT	LIN. FT.		132	132
	2501.511	18" R.C. PIPE CULVERT	LIN. FT.	36		36
	2501.511	24" R.C. PIPE CULVERT	LIN. FT.	74		74
	2501.515	12" G.S. PIPE APRON	EACH	1	1	2
	2501.515	24" G.S. PIPE APRON	EACH	4		4
	2501.515	36" G.S. PIPE APRON	EACH	2		2
	2501.515	42" G.S. PIPE APRON	EACH	4		4
	2501.515	15" R.C. PIPE APRON	EACH		4	4
	2501.515	18" R.C. PIPE APRON	EACH	2		2
	2501.515	24" R.C. PIPE APRON	EACH	2		2
	2501.571	INSTALL CONCRETE CULVERT	LIN. FT.		16	16
	2501.573	INSTALL CONCRETE APRON	EACH		1	1
	2502.501	4" PRECAST CONCRETE HEADWALL	EACH	8		8
	2502.521	4" TP PIPE DRAIN	LIN. FT.	120		120
	2502.541	4" PERF. PE. PIPE DRAIN	LIN. FT.	3040		3040
⑩	2503.541	36" R.C. PIPE SEWER DES 3006 CL. III	LIN. FT.		~~22~~ 40	~~22~~ 40
	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN N	EACH		5	5
	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN G	EACH		1	1
⑪	2521.501	4" CONCRETE WALK	SQ. FT.	60		60
⑫	2531.501	CONCRETE CURB & GUTTER B424	LIN. FT.		2035	2035
	2563.601	TRAFFIC CONTROL	LUMP SUM	1		1
	2564.603	4" SOLID LINE WHITE-EPOXY	LIN. FT.	5638		5638
	2564.603	4" BROKEN LINE YELLOW-EPOXY	LIN. FT.	540		540
⑬	2573.501	BALE CHECK	EACH	180		180
⑬	2573.502	SILT FENCE TYPE MACHINE SLICED	LIN. FT.	1800		1800
	2575.501	SEEDING	ACRE	4.5		4.5 (P)
	2575.502	SEED MIXTURE 50B	POUND	225		225
	2575.502	SEED MIXTURE 110B	POUND	360		360
	2575.505	SODDING TYPE EROSION	SQ. YD.	2000		2000
	2575.511	MULCH MATERIAL TYPE 1	TON	9		9
	2575.519	DISC ANCHORING	ACRE	4.5		4.5 (P)
	2575.532	COMMERCIAL FERTILIZER ANALYSIS 12-12-12	POUND	900		900

QUANTITY NOTES:

① TREES FOR REMOVAL SHALL BE DESIGNATED BY THE ENGINEER.

② WELL HOUSE LOCATED RT. STA. 16+40 AND HOUSE LOCATED RT. STA. 19+50.

③ INCLUDES REMOVAL OF 6 1/2" BITUMINOUS AND 6" OF AGGREGATE BASE IN EXISTING ROADBED. SEE SPECIAL PROVISIONS FOR REMOVE BITUMINOUS PAVEMENT.

④ RT. STA. 16+40

⑤ 925 CU. YDS. OF TOPSOIL TO BE SALVAGED FROM UNCLASSIFIED EXCAVATION

⑥ INCLUDES 315 TONS FOR ENTRANCES AND 627 TONS FOR BIKE PATH.

⑦ INCLUDES 69 TONS FOR (6TH AVE) AND TURNLANE.

⑧ INCLUDES 205 TONS FOR (6TH AVE).

⑨ INCLUDES 274 TONS FOR BIKE PATH AND 132 TONS FOR ENTRANCES.

⑩ INCLUDES 10 FT FOR 45° BEND

⑪ INCLUDES PEDESTRIAN RAMP STA. 33+80 LT.

⑫ CURB SHALL BE KNOCKED DOWN AT BIKE PATH AND ENT. LOCATION AND STA. 33+45 to 33+80 LT.

⑬ SPECIFICATION 1903 SHALL NOT APPLY FOR THESE ITEMS.

QUANTITY NOTES:

2350 BITUMINOUS MIXTURE- 110 LBS./SQ. YD./INCH OF DEPTH
AGGREGATE BASE CLASS 5 - 140LBS./CU.FT. COMPACTED
SEED MIXTURE 50B - 50 LBS/ACRE
SEED MIXTURE 110B - 80 LBS/ACRE
MULCH MATERIAL - 2 TONS/ACRE
DISK ANCHORING - ALL SEEDING AREAS EXCEPT 1:2 SLOPES
COMMERCIAL FERTILIZER - 200 LBS/ACRE

STANDARD PLATES

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF STANDARD PLATES
3000 L	REINFORCED CONCRETE PIPE
3006 G	GASKET JOINT FOR R.C. PIPE
3040 F	CORRUGATED METAL PIPE CULVERT
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123 K	METAL APRON FOR C.S. PIPE
3124 B	METAL APRON CONNECTION
3131 C	PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
3133 C	RIP RAP AT RCP OUTLETS
3145 E	CONCRETE PIPE TIES
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
7035 L	CONCRETE WALK & CURB RETURNS AT ENTRANCES
~~7036 E~~	~~PEDESTRIAN CURB RAMP~~
7100 G	CONCRETE CURB AND GUTTER
7111 J	INSTALLATION OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
9000 D	APPROACHES AND ENTRANCES

UTILITY LOCATIONS

GOPHER STATE ONE CALL 1-800-252-1166

NOTE: CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION ALL INPLACE UTILITIES MAY NOT BE SHOWN ON THIS PLAN.

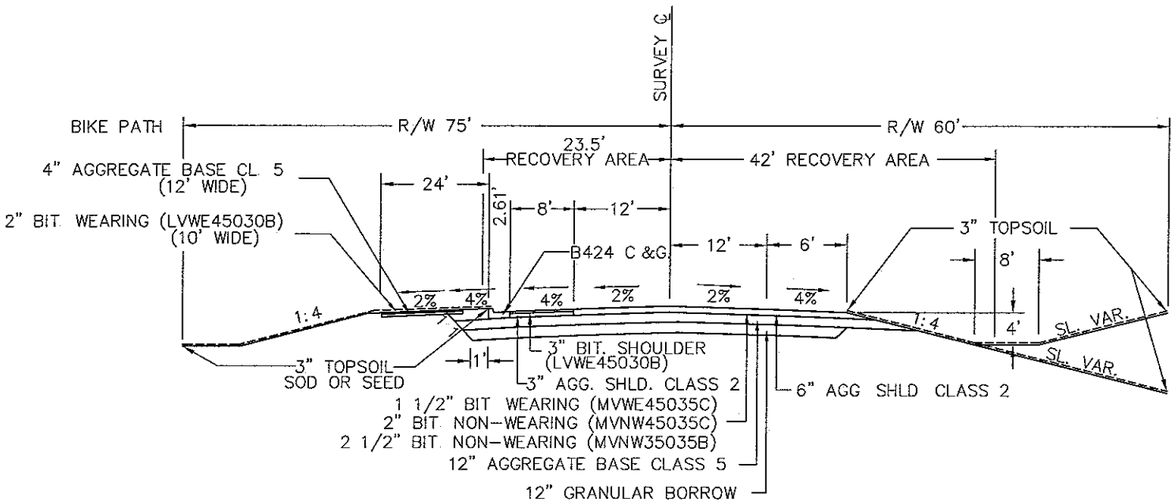
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FEB 06 2006

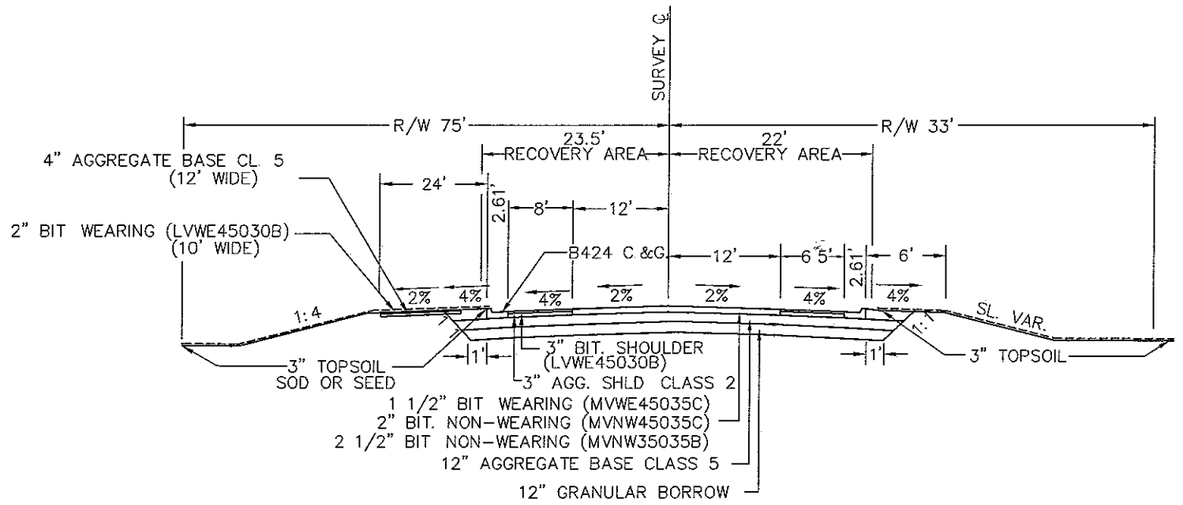
ENGINEERING

CERTIFIED BY Kevin M Poirier LICENSED PROFESSIONAL ENGINEER REG. NO. 19917 3/21 2003

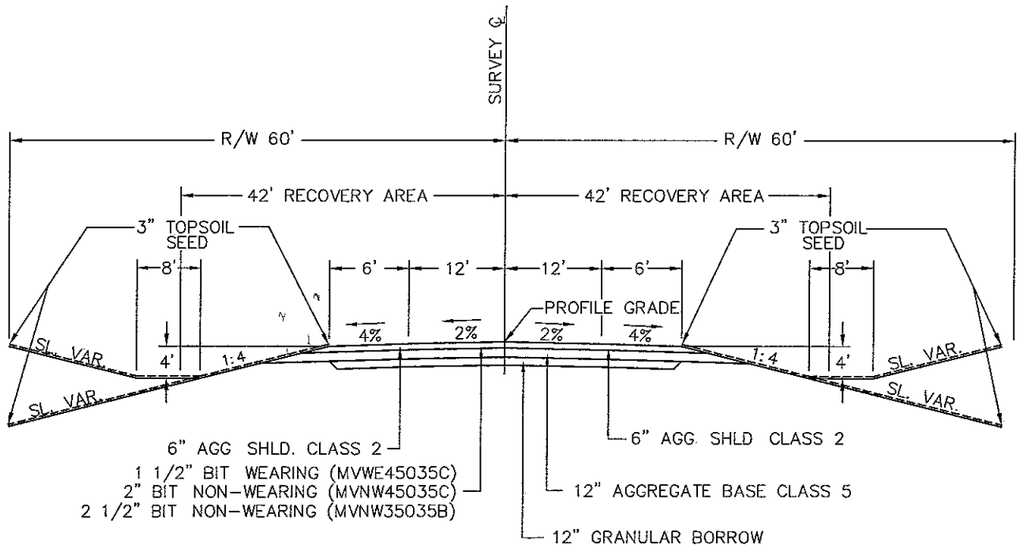
S.A.P. 55-606-04 CSAH 6



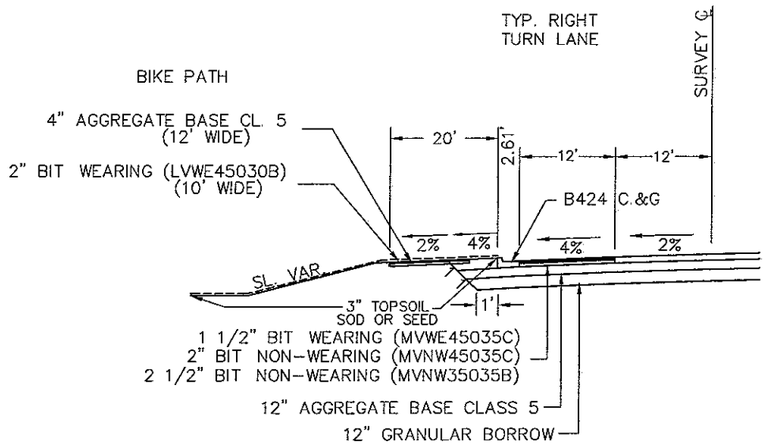
STA. 16+73 TO 30+81



STA. 30+81 TO 33+94



STA. 7+00 TO STA. 16+73



TURN LANE LOCATIONS:

LT. STA. 18+87 TO STA. 23+67

AS-BUILT

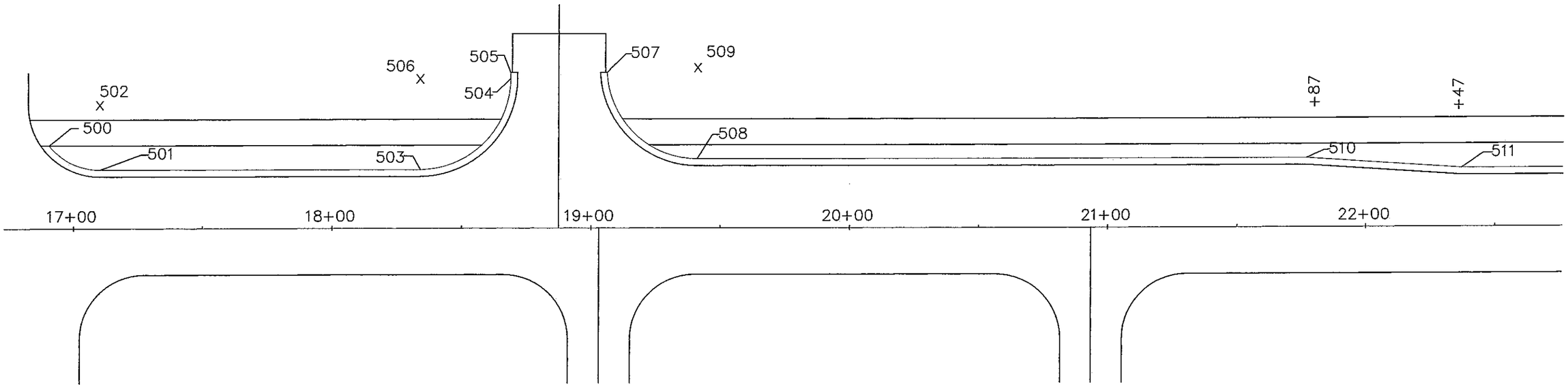
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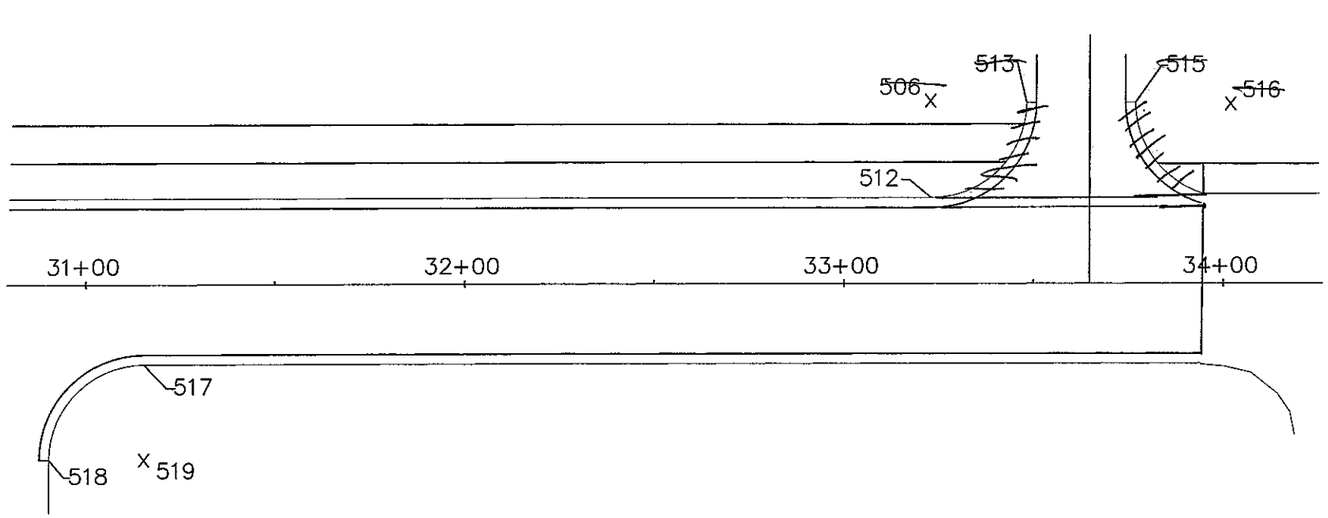
ENGINEERING

TYPICAL SECTIONS

CERTIFIED BY Kaye M Bruemmer REG NO 19917 3/21 2003
LICENSED PROFESSIONAL ENGINEER

SAP 55-606-04





AS-BUILT

FEB 06 2006

ENGINEERING

B424 CURB & GUTTER

POINT NO.	STATION	OFFSET	COORDINATES		BACK/CURB ELEVATION	DESCRIPTION
			NORTHING	EASTING		
500	16+90.59	32.00 L	105577.987	610858.838	1204.00	END 25' RADIUS
501	17+10.13	22.60 L	105568.689	610878.423	1204.89	BEGIN 25' RADIUS
502	17+10.13	47.60 L	105593.689	610878.293		CENTER 25' RADIUS
503	18+33.91	22.60 L	105569.333	611002.207	1206.58	BEGIN 35' RADIUS
504	18+68.91	57.60 L	105604.515	611037.024	1205.69	END 35' RADIUS
505	18+68.91	60.00 L	105606.915	611037.012	1205.59	END CURB
~~506~~	18+33.91	57.60 L	105604.333	611002.025		CENTER 35' RADIUS
507	19+06.15	60.00 L	105607.109	611074.248	1205.99	END 35' RADIUS
508	19+41.11	26.60 L	105573.891	611109.385	1207.59	BEGIN 35' RADIUS
509	19+41.11	61.60 L	105608.890	611109.203		CENTER 35' RADIUS
510	21+87.00	26.60 L	105575.170	611355.267	1208.73	BEGIN TAPER TURNLANE
511	22+47.00	22.60 L	105571.483	611415.287	1209.13	END TAPER TURNLANE
512	33+22.92	22.60 L	105577.081	612491.189	1224.93	BEGIN 25' RADIUS
~~513~~	33+48.23	47.60 L	105602.211	612516.375	1225.96	END 25' RADIUS
514	33+23.23	47.60 L	105602.080	612491.376		CENTER 25' RADIUS
~~515~~	33+76.80	47.60 L	105602.359	612544.941	1226.43	END 25' RADIUS
~~516~~	34+01.80	47.60 L	105602.489	612569.941		CENTER 25' RADIUS
517	31+15.27	21.10 R	105532.301	612283.774	1220.71	BEGIN 25' RADIUS
518	30+90.27	46.10 R	105507.171	612258.905	1220.25	END 25' RADIUS
519	31+15.27	46.10 R	105507.302	612283.904		CENTER 25' RADIUS

CERTIFIED BY Kaye M Prierniste REG. NO. 19917 3/21 20 03
LICENSED PROFESSIONAL ENGINEER

STATE AID PROJ. NO. 55-606-04

SHEET NO. 4 OF 20 SHEETS

ALIGNMENT TABULATION

POINT NO.	POINT	STATION	CURVE DATA				COORDINATES	
			DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING
	BOP	7+00					105541.772	609868.421
	PI	7+53.53	00°00'46"				105541.951	609921.954
	PI	11+57.72	00°07'08"				105543.215	610326.143
	EOP	34+34.34					105555.061	612602.728

TURF ESTABLISHMENT / EROSION CONTROL

STATIONING	LOCATION LT.–RT.	SEEDING (ACRES)	SEED MIXTURE 50B (LBS)	SEED MIXTURE 110B (LBS)	MULCH MATERIAL TYPE 1 (TON)	BALE CHECK (EACH)	SILT FENCE HEAVY DUTY (LIN FT)	SODDING TYPE EROSION (SQ YD)	DISK ANCHOR (ACRE)	EROSION CONTROL BLANKET (SQ YD)	COMM. FERT. ANALYSIS 12–12–12 (LBS)
7+00–13+50	LT						650				
7+00–18+50	RT						1150				
16+90–18+50	LT							180			
19+20–22+47	LT							150			
22+47–33+40	LT							980			
31+00–34+10	RT							690			
7+00–16+55	LT	1.0	50	80	2				1.0		200
7+00–30+70	RT	2.5	125	200	5				2.5		500
19+20–33+50	LT	1.0	50	80	2				1.0		200
13+50–16+60	LT					20					
13+50–16+70	RT					20					
17+00–18+90	RT					10					
19+15–20+80	RT					10					
21+05–26+20	RT					50					
26+45–28+30	RT					20					
28+55–30+65	RT					20					
30+80–31+50	RT					30					
TOTALS		4.5	225	360	9	180	1800	2000	4.5	0	900

SURFACE DRAINAGE REMOVAL

STATIONING	LOCATION	INPLACE	REMOVE PIPE CULVERTS C.M.P (LIN FT)	SALVAGE R.C.P. (LIN FT)	SALVAGE R.C.P. APRONS
16+90	RES. DRIVE RT.	30" x 20' CMP CULVERT	20		
19+03	RES. DRIVE RT.	30" x 28' CMP CULVERT	28		
20+93	FIELD ENT. RT.	30" x 28' CMP CULVERT	28		
23+57	C/L	15" x 58' CMP CULVERT W/APRONS	62		
23+57	C/L	15" x 58' CMP CULVERT W/APRONS	62		
26+31	ENTRANCE RT.	15" x 28' CMP CULVERT	28		
28+44	ENTRANCE RT.	24" x 22' CMP CULVERT	22		
30+80	RES. DRIVE RT.	15" x 24' CMP CULVERT	24		
33+14.50		~~36" x 16' PIPE CULVERT W/APRON~~		~~16~~	1
TOTALS			274	16	1

SURFACE DRAINAGE

STATIONING	LOCATION	C.S.P. 12" (LIN FT)	C.S.P. 24" (LIN FT)	C.S.P. 36" (LIN FT)	C.S.P. 42" (LIN FT)		APRONS
13+~~00~~ 40	46' LT BIKE PATH	30					12" G.S.
16+90	RES. DRIVE RT.				40		42" G.S.
19+03	RES. DRIVE RT.				44		42" G.S.
20+93	FIELD ENT. RT.			40			36" G.S.
26+31	ENTRANCE RT.		32				24" G.S.
28+44	ENTRANCE RT.		32				24" G.S.
27+72	63' LT Bike Trail		32				24" G.S.
TOTALS		30	64	40	84		

STORM SEWER

STRUCTURE NO.	STATION	LOCATION	CONSTRUCTION DESIGN M.H.	CONSTRUCTION DESIGN C.B.	CONSTRUCTION QUAN.	TOP CASTING ELEV.	INLET ELEV.		OUTLET ELEV.	FRAME CASTING NO.	GRATE NO.	CURB BOX NO.		15" R.C.PIPE LIN.FT.	18" R.C.PIPE LIN.FT.	24" R.C.PIPE LIN.FT.	36" R.C.PIPE LIN.FT.	FLOWS TO	% GRADE	CLASS
C.B. 1	16+94.08	26.75' LT		N	1	1204.17			1200.45 W.	806	816	825		40				OUTLET 1	1.0	III
C.B. 2	19+27	28.16' LT		N	1	1207.07			1203.90 N.	806	816	825		36				OUTLET 2	1.0	III
INLET 1	23+50	29.00' RT					1205.30									44		C.B. 3	2.0	III
C.B. 3	23+50	21.29' LT		G	1	1209.32	1204.30 S.		1204.20 N.	806	816	825				30		OUTLET	2.0	III
C.B. 4	~~27+00~~ 26+75	21.29' LT		N	1	1210.69			1207.70 N.	806	816	825		28				OUTLET	1.0	III
C.B. 5	30+00	21.29' LT		N	1	1217.17			1214.20 N.	806	816	825		28				OUTLET	1.0	III
INLET 2	31+05.65	41.02' RT					1217.50								10			C.B. 6	6.0	III
C.B. 6	30+89.68	40' RT		N	1	1220.00	1216.55 E.		1216.45 W.	806	816	825			~~35~~ 25			OUTLET 3	4.5	III
OUTLET 1	16+49.48	38' LT							1199.96											
OUTLET 2	19+53.82	60.63' LT							1203.55											
OUTLET 3	30+57.74	37.97' RT							1215.00											
OUTLET 4	32+96.90	57.94' LT							1220.00								22		4.0	III
TOTALS														132	36	74	22			

AS-BUILT

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ENGINEERING

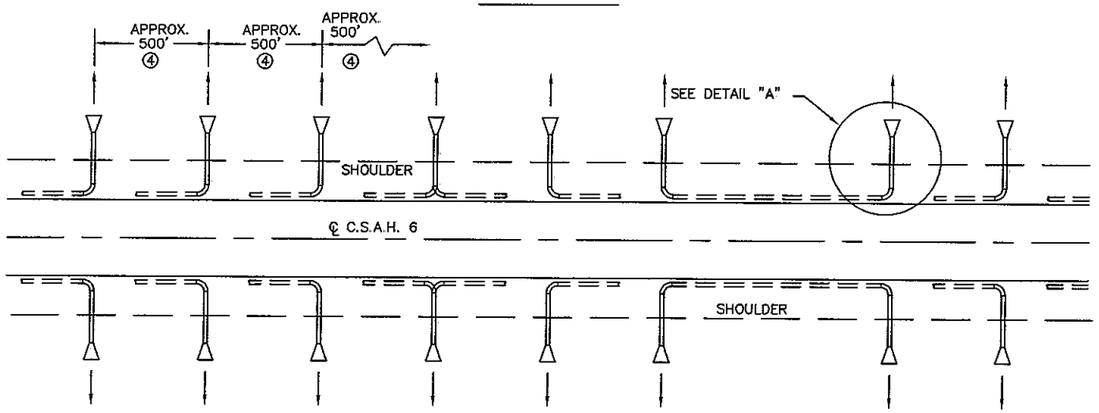
CERTIFIED BY Kaye M Bierwirth LICENSED PROFESSIONAL ENGINEER REG. NO. 19917 3/21 2003

S.A.P. 55–606–04

SHEET NO. 5 OF 20 SHEETS

EDGE DRAIN DETAILS AND CONSTRUCTION NOTES

PLAN VIEW



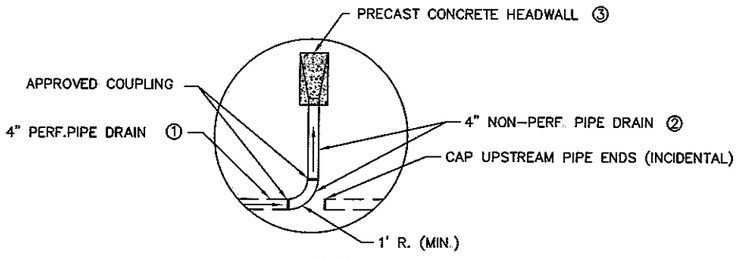


LEGEND

= = = 4" PERFORATED PIPE DRAIN

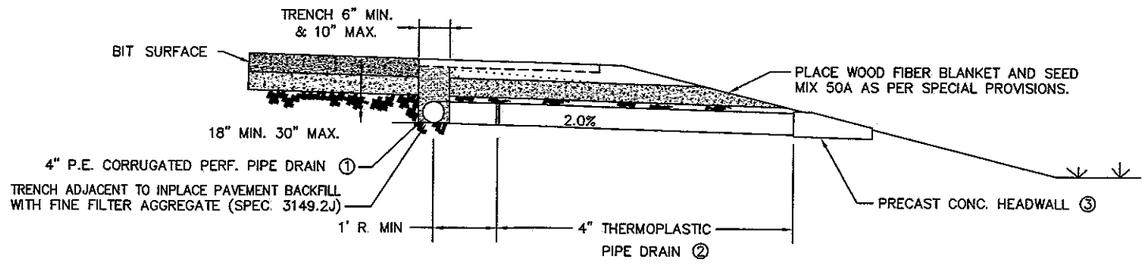
═══ 4" NON-PERFORATED PIPE DRAIN

▷ PRECAST CONCRETE HEADWALL



DETAIL "A"

X-SECTION VIEW



EDGE DRAINS

ALIGNMENT AND STATIONING	LOCATION	PERF. TP PIPE DRAIN 4" DIA. (LIN FT)	NON-PERF. TP PIPE DRAIN 4" DIA. (LIN FT)	CONCRETE HEADWALL (EACH)	HEADWALL STATIONS
~~7+00 – 9+30~~	RT & LT	460	30	2	~~7+00~~
~~10+80 – 16+80~~	LT	600	15	1	13+61
10+80 – 18+00	RT	720	15	1	13+61
18+00 – 22+00	RT	400	15	1	18+00
22+00 – 25+00	RT	300	15	1	22+00
25+00 – 28+00	RT	300	15	1	25+00
28+00 – 30+60	RT	260	15	1	28+00
TOTALS		3040	120	8	

7+09 to 9+00	RT	192	14	1	7+08 RT
7+43 to 9+00	LT	157	22	1	7+43 LT
11+00 to 13+55	RT	255	18	1	LP 13+55 RT
11+60 to 13+55	LT	195	16	1	LP 13+55 LT
13+55 to 16+45	LT	290			
13+55 to 18+00	RT	450			
18+00 to 23+65	RT	565	16	1	18+00 RT
23+65 to 28+00	RT	435	16	1	23+65 RT
28+00 to 30+45	RT	245	18	1	28+00 RT
28+00 to 33+35	LT	535	26		Road Crossing 28+00
30+45 to 33+60	RT	315	16	1	30+45 RT

CONSTRUCTION NOTES

① PAYMENT FOR 4" PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FABRIC WRAPPED P.E. PIPE, INSTALLATION, FILTER AGGREGATE BACKFILL AND COMPACTION, BITUMINOUS OR AGGREGATE CAP, AND ALL OTHER ASSOCIATED WORK.

② PAYMENT FOR 4" NON-PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FURNISHING AND PLACING PIPE AND CONNECTIONS, BACKFILL AND COMPACTION, AND ALL OTHER ASSOCIATED WORK.

③ PAYMENT FOR PRECAST CONCRETE HEADWALLS SHALL BE FULL COMPENSATION FOR PLACING HEADWALL, WOOD FIBER BLANKET AND SEED, AND ALL OTHER ASSOCIATED WORK.

④ IF AN OUTLET HAPPENS TO FALL WITHIN A CROSS-OVER OR DITCH-BLOCK INCREASE THE LENGTH OF THE PERFORATED PIPE TO A POINT WHERE AN OUTLET CAN BE SATISFACTORLY CONSTRUCTED AS DIRECTED BY THE ENGINEER.

⑤ EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH MN/DOT SPEC. 2104.303.

⑥ NO EDGEDRAINS WILL BE PLACED ON ELEVATED SUPER SIDE AS DIRECTED BY ENGINEER.

AS-BUILT

FEB 06 2006

ENGINEERING

MARY MALONE

RONALD & SHIRLEY CARLSON

RONALD & SHIRLEY CARLSON

RONALD & SHIRLEY CARLSON

T.105N. R.14W. 33, 34

PI Sta = 7+53.53
N = 105541.95
E = 609921.95
Δ = 00°00'46" RT

PI Sta = 11+57.72
N = 105543.22
E = 610326.14
Δ = 00°07'08" LT

12" x 30' C.S. PIPE CULVERT
2 – 12" C.S. PIPE APRONS

RES. DRIVE LT. STA 16+73
NO CULVERT INPLACE

C.B. 1

STA. 16+94.08 26.75' LT
15" x 40' R.C. PIPE CULVERT
1 – 15" R.C. PIPE APRON

6TH AVE SW STA 18+87
NO CULVERT INPLACE

C.B. 2

STA. 19+27 28.16' LT
15" x 36' R.C. PIPE CULVERT
1 – 15" R.C. PIPE APRON

SAW BITUMINOUS

10' BIKE PATH

OUTLET 1

OUTLET 2

NEW BRIDGE NO. 55573

60' R/W

50' R/W

75' R/W

150' R/W

BEGIN PROJECT:
STA 7+00

PI Sta = 7+53.53

PI Sta = 11+57.72

WELL HOUSE

BARN

HOUSE

GARAGE

10' T.E.

75' T.E.

RES. DRIVE RT STA 16+90
INPLACE 30" x 20' CMP
REMOVE 20 LIN FT

42" x 40' C.S. PIPE CULVERT
2 – 42" C.S. PIPE APRONS

RES. DRIVE RT STA 19+03
INPLACE 30" x 28' CMP
REMOVE 28 LIN FT

42" x 44' C.S. PIPE CULVERT
2 – 42" C.S. PIPE APRONS

JEROME TOWEY TRUST

BOP STA = 7+00.00
BOP EL = 1201.80

VPI STA = 11+00.00
VPI EL = 1203.40

PVC STA = 12+50.00
ELEV. = 1202.20

VPI STA = 14+00.00
VPI EL = 1201.00
300' V.C.

PVT STA = 15+50.00
ELEV. = 1203.05

VPI STA = 19+30.93
VPI EL = 1208.26
200' V.C.

PVC STA = 18+30.93
ELEV. = 1206.89

PVT STA = 20+30.93
ELEV. = 1208.66

0.40%

-0.80%

1.37%

0.40%

1201.80 1202.20 1202.60 1203.00 1203.40 1202.60 1202.20 1201.89 1201.76 1201.81 1202.04 1202.46 1203.05 1203.73 1205.10 1206.47 1207.14 1207.72 1208.18 1208.57

AS-BUILT

FEB 06 2006

ENGINEERING

CERTIFIED BY Kaye M Bruner REG. NO. 19917 3/21 2003
LICENSED PROFESSIONAL ENGINEER

S.A.P. 55-606-04

SHEET 7 OF 20 SHEETS

SCHOOL DISTRICT 534

SCHOOL DIST. 534

CITY OF STEWARTVILLE

JAMES HRSTKA

JAN HINCK

JAN HINCK

GWC 73 INC.

NORTHERN NATURAL GAS COMPANY

℄ CULVERTS STA 23+57 & STA 23+62
INPLACE 2 – 15" x 58' CMP W/APRONS
REMOVE 124 LIN FT

C.B. 3

STA. 23+50 21.29' LT
24" x 74' R.C. PIPE CULVERT
2 – 24" R.C. PIPE APRONS

C.B. 4

STA. 26+75 21.29' LT
15" x 28' R.C. PIPE CULVERT
1 – 15" R.C. PIPE APRON

C.B. 5

STA. 30+00 21.29' LT
15" x 28' R.C. PIPE CULVERT
1 – 15" R.C. PIPE APRON

STORM PIPE CULVERT STA 33+14.50
INPLACE 36" R.C. PIPE CULVERT
SALVAGE 36" R.C. PIPE APRON
SALVAGE 16' x 36" R.C. PIPE CULVERT
10' x 36" 45° R.C. PIPE CULVERT BEND
36" x ~~22'~~ R.C. PIPE CULVERT 40'
INSTALL 36" R.C. PIPE APRON

ENTRANCE LT. STA 33+65
NO CULVERT INPLACE

Bike Path STA 27+72

10' BIKE PATH

75' R/W

60' R/W

50' R/W

C.B. 3

C.B. 4

C.B. 5

C.B. 6

INLET 1

INLET 2

OUTLET 3

OUTLET 4

SAW BITUMINOUS

END PROJECT STA 33+94

2 AVE SW

FIELD ENT. RT. STA 20+93
INPLACE 30" x 28' CMP
REMOVE 28 LIN FT

36" x 40' C.S. PIPE CULVERT
2 – 36" C.S. PIPE APRONS

ENTRANCE RT. STA 26+31
INPLACE 15" x 28' CMP
REMOVE 28 LIN FT

24" x 32' C.S. PIPE CULVERT
2 – 24" C.S. PIPE APRONS

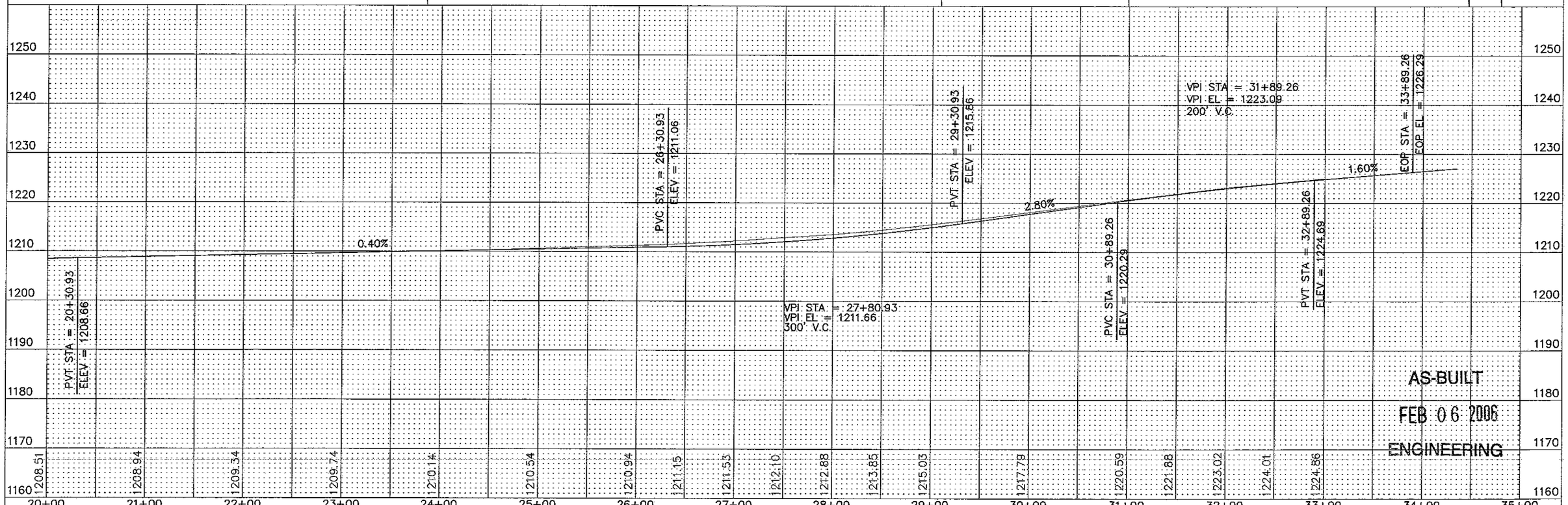
ENTRANCE RT. STA 28+44
INPLACE 24" x 22' CMP
REMOVE 22 LIN FT

24" x 32' C.S. PIPE CULVERT
2 – 24" C.S. PIPE APRONS

RES. DRIVE RT STA 30+80
INPLACE 15" x 24' CMP
REMOVE 24 LIN FT

C.B. 6

STA. 30+89.68 40.00' RT
18" x ~~36'~~ R.C. PIPE CULVERT
2 – 18" R.C. PIPE APRONS
35'



AS-BUILT

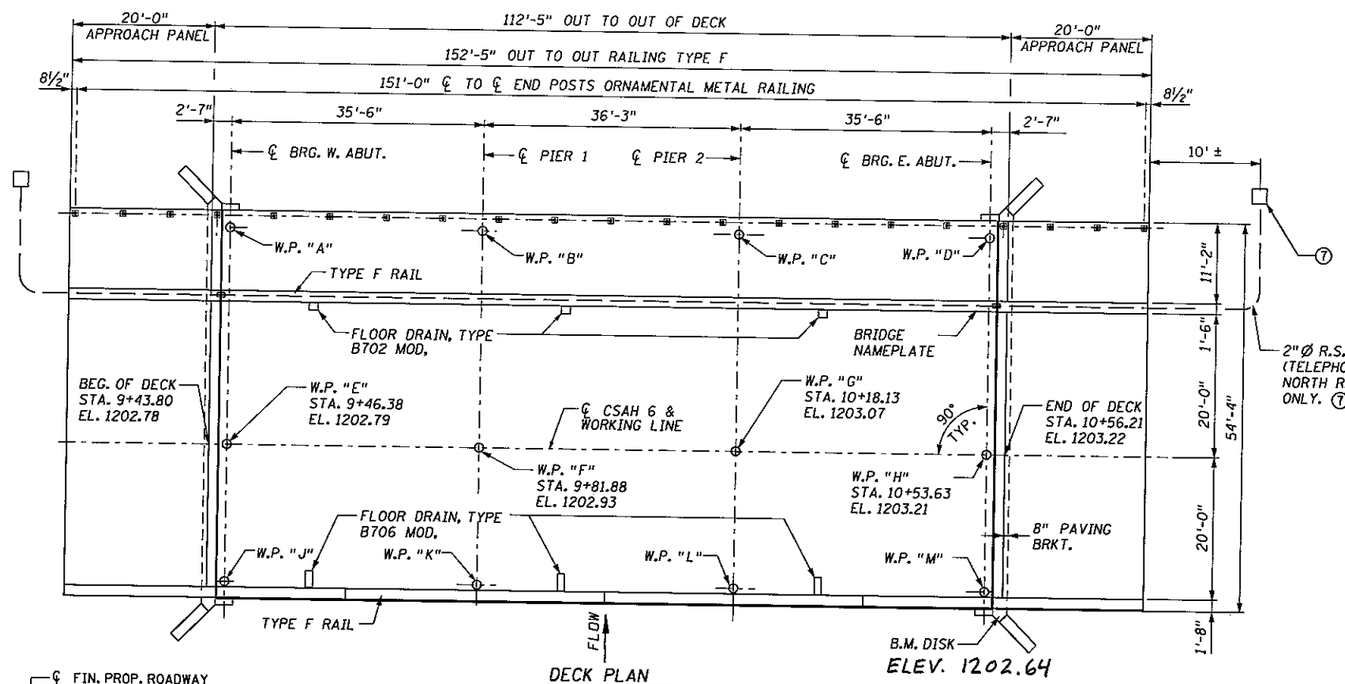
FEB 06 2006

ENGINEERING

CERTIFIED BY Kenneth Pierucek REG. NO. 19917 3/21 2003
LICENSED PROFESSIONAL ENGINEER

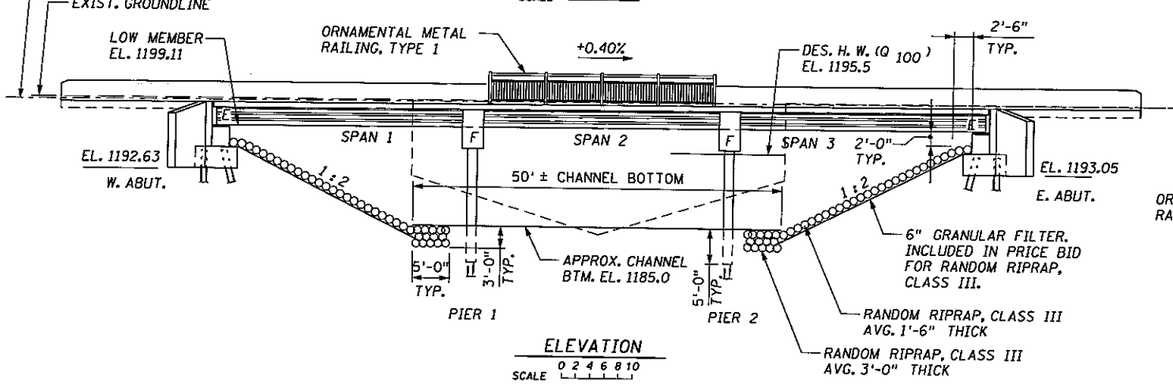
S.A.P. 55–606–04

SHEET 8 OF 20 SHEETS



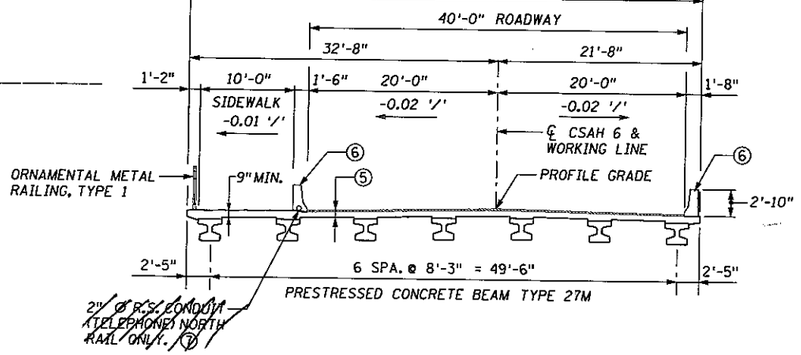
DECK PLAN

SCALE 0 2 4 6 8 10



ELEVATION

SCALE 0 2 4 6 8 10



TRANSVERSE SECTION THRU DECK

SCALE 0 2 4 6 8 10

NOTE:

ABUTMENT PILES ARE TO BE HP10x42 WITH TIP PROTECTION.

PIER PILES ARE TO BE HP10x57 WITH TIP PROTECTION AND 16"Ø SHELLS.

① STA. 10+00 - NON-PARTICIPATING.
② SEE SHEET B11 FOR REQUIREMENTS.
③ SEE SHEET B29, B30 FOR LIMITS OF RIPRAP PLACEMENT.
④ SEE SHEET B29 FOR DETAILS OF WORK, NON-PARTICIAPATING.
⑤ 9" MIN. SLAB, INCLUDES 2" CONC. WEARING COURSE.
⑥ CONCRETE RAIL, TYPE F.
⑦ SEE SHEET B16 FOR REQUIREMENTS.
⑧ SEE SHEET B12 FOR REQUIREMENTS.

SCHEDULE OF QUANTITIES FOR THE ENTIRE BRIDGE

ITEM NO.	2021.501	2105.511	2301.601	2401.501	2401.501	2401.512	2401.513	2401.541	2401.601	2401.601	2402.546	2402.546	2402.583	2402.590	2402.591	2402.595	
ITEM	MOBILIZATION	COMMON CHANNEL EXCAVATION ④	APPROACH PANELS	STRUCTURAL CONCRETE (1A43)	STRUCTURAL CONCRETE (3Y43)	BRIDGE SLAB CONCRETE (3Y36A)	TYPE F RAILING CONCRETE (3Y46A)	REIN-FORCEMENT BARS (EPOXY COATED)	STRUCTURE EXCAVATION ②	SLOPE PREPARATION	FLOOR DRAINS, TYPE B702 MOD.	FLOOR DRAINS, TYPE B706 MOD.	ORNAMENTAL METAL RAILING TYPE 1	ELASTOMERIC BEARING PAD TYPE 1	EXPANSION JOINT DEVICE TYPE 4.0	BEARING ASSEMBLY	
QUANTITY	1	910 (P)	1	78 (P)	145 (P)	6108 (P)	305 (P)	61080 (P)	1	1	3	3	151 (P)	28	109 (P)	14	
UNIT	LUMP SUM	CU. YD.	LUMP SUM	CU. YD.	CU. YD.	SQ. FT.	LIN. FT.	POUND	LUMP SUM	LUMP SUM	EACH	EACH	LIN. FT.	EACH	LIN. FT.	EACH	
ITEM NO.	2404.501	2405.502	2442.501	2452.510	2452.510	2452.511	2452.511	2452.520	2452.520	2452.602	2452.602	2452.603	2511.501	2545.509	2554.501	2554.501	2554.523
ITEM	CONCRETE WEARING COURSE (3U17A)	PRESTR. CONCRETE BEAMS 27M	REMOVE OLD BRIDGE ①	STEEL H-PILING DRIVEN 10 X 42	STEEL H-PILING DRIVEN 10 X 57	STEEL H-PILING DELIVERED 10 X 42	STEEL H-PILING DELIVERED 10 X 57	STEEL H-TEST PILE, 40 FT. LONG 10 X 42	STEEL H-TEST PILE, 50 FT. LONG 10 X 57	PILE TIP PROTECTION 10"	ROCK SOCKET ⑧	16" STEEL PILE SHELLS	RANDOM RIPRAP CLASS III ③	CONDUIT SYSTEM (TELEPHONE) ⑦	TRAFFIC BARRIER DESIGN SPECIAL	TRAFFIC BARRIER DESIGN 8307Q	END TREATMENT SPECIAL
QUANTITY	6097	756 (P)	1	480	480	480	480	4	2	34	14	280	460	1	100	200	4
UNIT	SQ. FT.	LIN. FT.	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	LIN. FT.	CU. YD.	LUMP SUM	LIN. FT.	LIN. FT.	EACH

B.M. ELEV. 1203.74 (M.S.L. 1929 ADJ.)

LOCATION:
PAINTED BOLT S.E. CORNER BRIDGE 6643.

CONSTRUCTION NOTES

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

THE FIRST TWO DIGITS OF EACH BAR MARK INDICATE THE BAR SIZE IN MILLIMETERS. BARS MARKED WITH THE SUFFIX 'E' SHALL BE EPOXY COATED.

ENGINEER IN THE FIELD SHALL VERIFY PROPER POSITIONING OF THE BRIDGE PRIOR TO COMMENCEMENT OF CONSTRUCTION. IF THE BRIDGE POSITIONING IS NOT COMPATIBLE WITH THE STREAM WHEN STAKING IS COMPLETED, THE SEALING ENGINEER SHALL BE NOTIFIED.

IF STATIONING IS CHANGED, THE REVISED PLANS SHALL BE SUBMITTED TO THE OWNER AND STATE AID BRIDGE.

DESIGN DATA

1996 AND INTERIM A.A.S.H.T.O. DESIGN SPECIFICATIONS
LOAD FACTOR DESIGN METHOD ~ HS25 LOADING
INCLUDES 17 PSF DEAD LOAD ALLOWANCE FOR FUTURE WEARING COURSE MODIFICATIONS.

MAXIMUM ALLOWABLE DESIGN STRESSES:
REINFORCED CONCRETE:
f'c = 4000 PSI n = 8
fy = 60000 PSI REINFORCEMENT
STRUCTURAL STEEL:
fy = 36000 PSI SPEC. 3306
PRESTRESSED CONCRETE:
f'c = 7000 PSI n=1
f's = 270000 PSI STRANDS (LOW RELAX)

DECK AREA = 6108 S.F.
PROJ. ADT = 3710(2022)
OPERATING RATING = HS55
DESIGN SPEED = 55 MPH

LIST OF SHEETS

NO.	TITLE
B1	GENERAL PLAN & ELEVATION
B2	BRIDGE LAYOUT
B3-B11	ABUTMENT DETAILS
B12-B13	PIER DETAILS
B14-B16	SUPERSTRUCTURE DETAILS
B17	PIER CONTINUITY DIAPHRAGM
B18	27M PRESTRESSED CONCRETE BEAM
B19	ORNAMENTAL METAL RAILING, TYPE 1
B20	CONCRETE RAILING TYPE F
B21-B22	WATERPROOF EXPANSION DEVICE
B23	BRIDGE APPROACH PANEL
B24-B28	STANDARD DETAILS
B29	BRIDGE SURVEY
B30	BRIDGE SURVEY PLAN & PROFILE
A1-A2	GUARDRAIL DETAILS

APPROVED: Michael Sheehan
COUNTY ENGINEER
OLMSTED COUNTY
DATE: 3/28/03

I HEREBY CERTIFY THAT THIS PLAN (SHEETS LISTED ABOVE) WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Ronald Benson RONALD BENSON
DATE: 10/24/02 LIC. NO. 22737

PLANS PREPARED BY:
ERICKSON ENGINEERING
3340 REPUBLIC AVENUE
ST. LOUIS PARK, MN 55426

AS-BUILT
FEB 06 2006
ENGINEERING

C.S.A.H. 6 OLMSTED COUNTY
MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573

LOCATED 0.5 MILES WEST OF JCT. T.H. 63 ON C.S.A.H. 6 OVER CAREY CREEK.

3-36' PRESTRESSED CONCRETE BEAM SPANS
40 FT. ROADWAY WITH 10 FT. SIDEWALK
SPAN IDENT NO. 501

GENERAL PLAN & ELEVATION

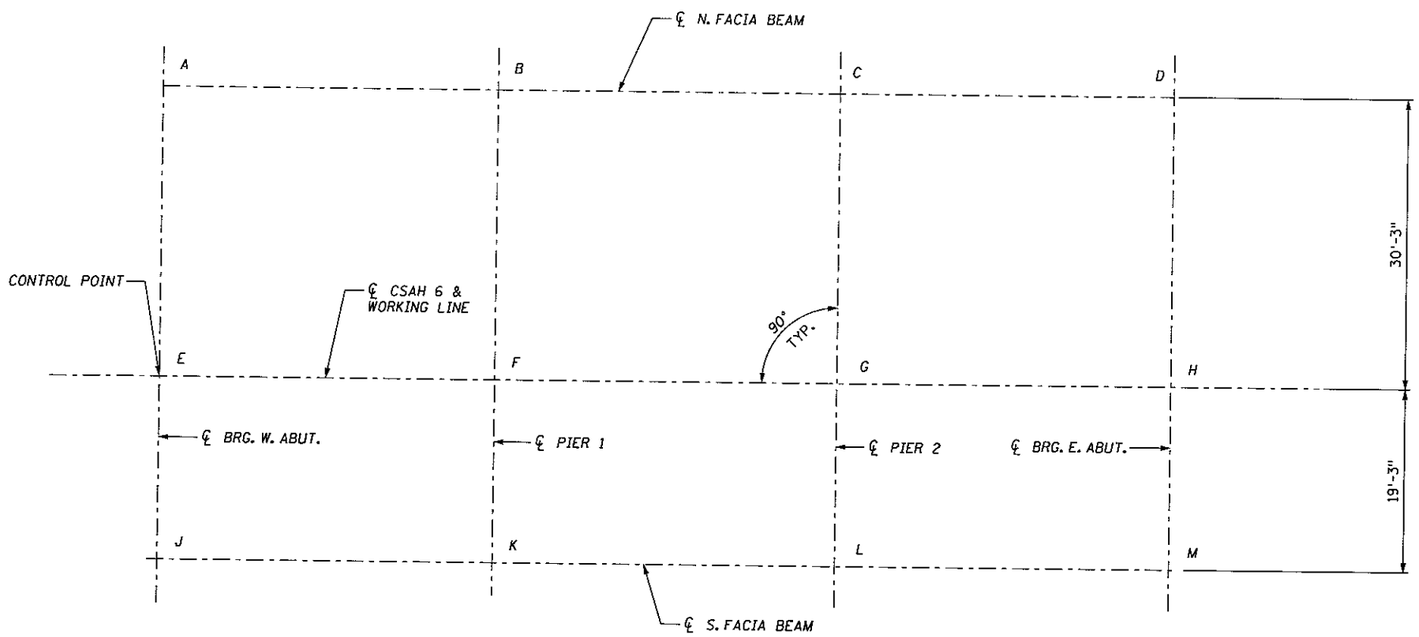
SEC. 3 TWP. 104 N R 14 W

TOWNSHIP: HIGH FOREST
COUNTY: OLMSTED

APPROVED: Ahmad Wayne 4/11/03
STATE BRIDGE ENGINEER

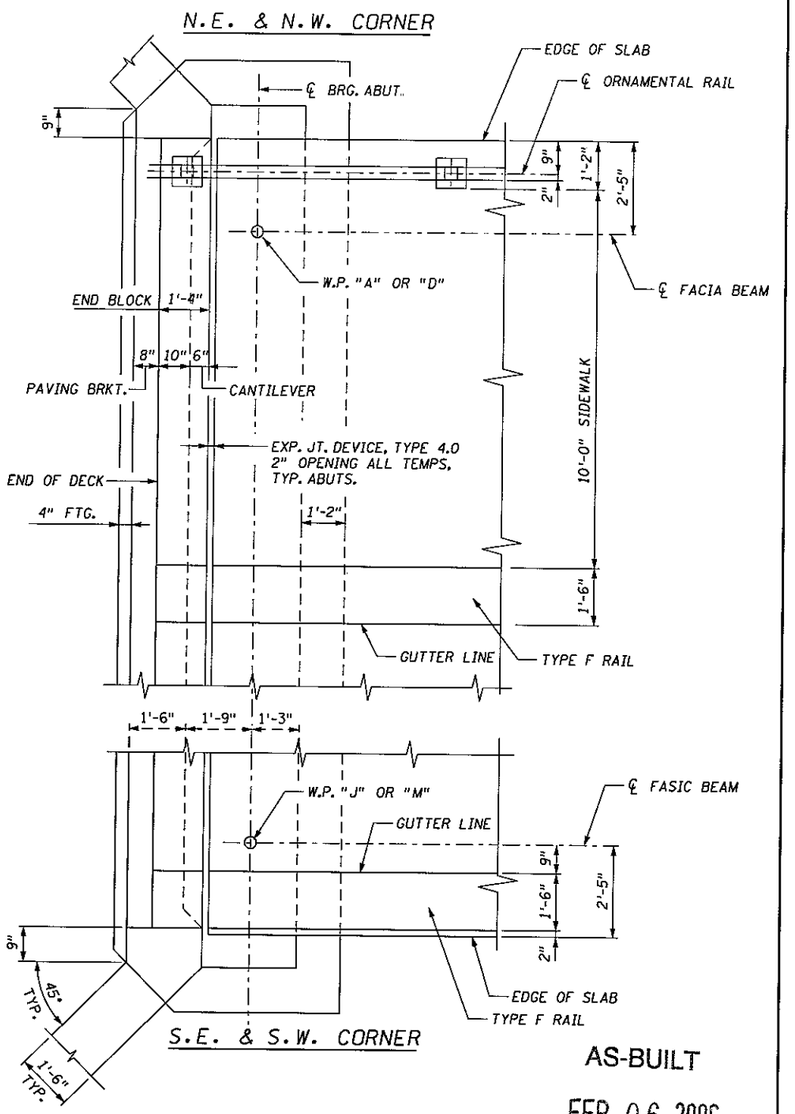
S.A.P. 55-606-04
SHEET B1 OF B30 SHEETS

DES.:	RAB	DRN.:	GRF	55573
CHK.:	CGD	CHK.:	CGD	



LAYOUT SHOWING WORKING POINTS

SCALE: 0 4' 8'



AS-BUILT

FEB 06 2006

ENGINEERING

TYPICAL CORNER DETAILS - APPROACH PANEL NOT SHOWN

SCALE: 0' 1' 2' 3'

TOP OF ROADWAY TO BRIDGE SEAT

	W. ABUT.	PIER 1	PIER 2	E. ABUT.
SLAB THICKNESS	9"	9"	9"	9"
STOOL HEIGHT	2⅜"	2⅜"	2⅜"	2⅜"
BEAM HEIGHT	27"	27"	27"	27"
BEARING HEIGHT	3⅝"	½"	½"	3⅝"
TOTAL	3'-6"	3'-2⅞"	3'-2⅞"	3'-6"

DIMENSIONS BETWEEN WORKING POINTS

POINT	STATION	A	B	C	D	E	F	G	H	J	K	L	M
A	9+46.38		35.50			30.25	46.64				60.91	87.17	
B	9+81.88			36.25			30.25	47.21		60.91		61.35	87.17
C	10+18.13				35.50			30.25	46.64	87.17	61.35		60.91
D	10+53.63								30.25		87.17	60.91	
E	9+46.38						35.50			19.25	40.38		
F	9+81.88							36.25			19.25	41.04	
G	10+18.13								35.50			19.25	40.38
H	10+53.63												19.25
J	9+46.38										35.50		
K	9+81.88											36.25	
L	10+18.13												35.50
M	10+53.63												

ELEVATIONS

TOP OF SLAB	SLAB TO BRIDGE SEAT	BRIDGE SEAT	POINT
1202.30	3.50	1198.80	A
1202.44	3.24	1199.20	B
1202.58	3.24	1199.34	C
1202.72	3.50	1199.22	D
1202.79			E
1202.93			F
1203.07			G
1203.21			H
1202.40	3.50	1198.90	J
1202.54	3.24	1199.30	K
1202.68	3.24	1199.44	L
1202.82	3.50	1199.32	M

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER / RONALD BENSON
LIC. NO. 22737 10/24/2002

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573

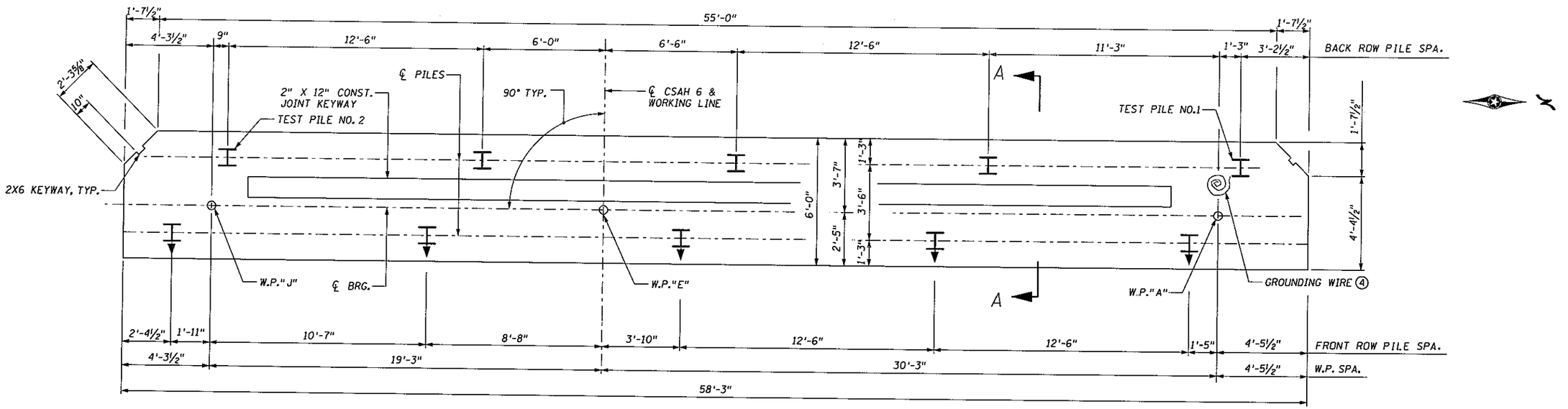
BRIDGE LAYOUT

APPROVED:

S.A.P. 55-606-04

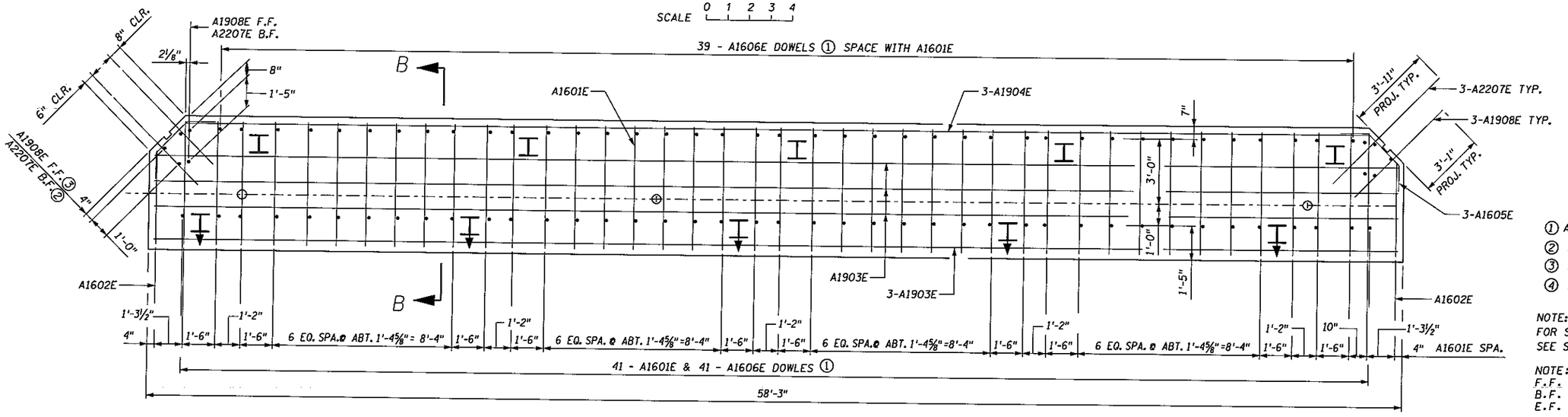
SHEET B2 OF B30 SHEETS

DES.:	RAB	DRN.:	GRF	55573
CHK.:	CGD	CHK.:	CGD	



FOOTING PLAN - PILES

SCALE 0 1 2 3 4



① A1606E PROJECTION IS 2'-10".
② A2207E PROJECTION IS 3'-11"
③ A1908E PROJECTION IS 3'-1"
④ SEE ORNAMENTAL RAILING SHEETS.

NOTE:
FOR SECTION A-A AND SECTION B-B, SEE SHEET NO. B11.

NOTE:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

AS-BUILT

FOOTING PLAN-REINFORCEMENT

SCALE 0 1 2 3 4

WEST ABUTMENT COMPUTED PILE LOAD - TONS/PILE	
DEAD LOAD + EARTH PRESSURE	40.9
LIVE LOAD	13.2
TOTAL LOAD	54.2

PILE NOTES:

2 STEEL H-TEST PILES 40 FT. LONG
8 STEEL H-PILES EST. LENGTH 30 FT.
10 STEEL H-PILES REQ'D. FOR WEST ABUT.

PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
PILES MARKED THUS ⊢► TO BE BATTERED 3" PER FOOT IN DIRECTION SHOWN.
ALL ABUT. PILES TO BE HP 10 x 42 WITH PILE TIP PROTECTION.
FOR PILE SPLICE DETAILS SEE DETAIL B202.
SEE SURVEY SHEET FOR TEST PILE LOCATIONS.

FEB 06 2006
ENGINEERING

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/ 2002

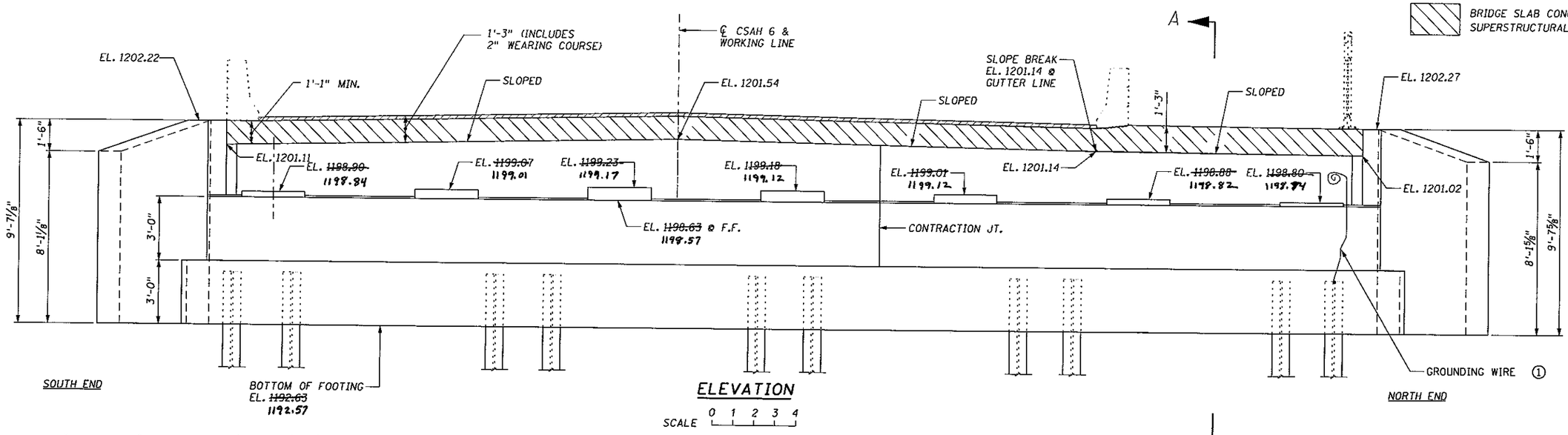
MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573
ABUTMENT DETAILS
(WEST ABUTMENT)

APPROVED:
S.A.P. 55-606-04
SHEET B3 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	

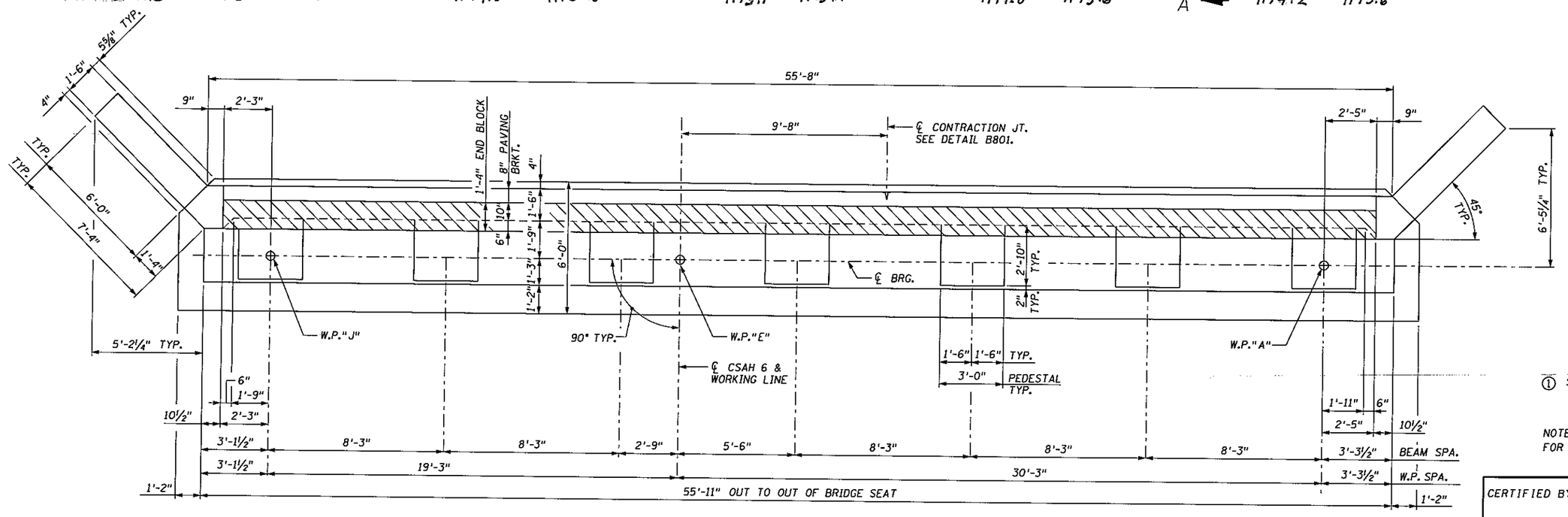
BRIDGE SLAB CONC. (3Y36A) TO BE INCLUDED IN THE SUPERSTRUCTURAL QUANTITIES.



ELEVATION

SCALE 0 1 2 3 4

Bottom of Pile 1174.6 1175.5 1174.8 1175.0 1175.1 1175.7 1174.8 1175.6 1174.2 1175.6



PLAN

SCALE 0 1 2 3 4

① SEE ORNAMENTAL RAILING SHEETS.

NOTE:
FOR SECTION A-A, SEE SHEET NO.B11.

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LIC. NO. 22737 10/24/2002

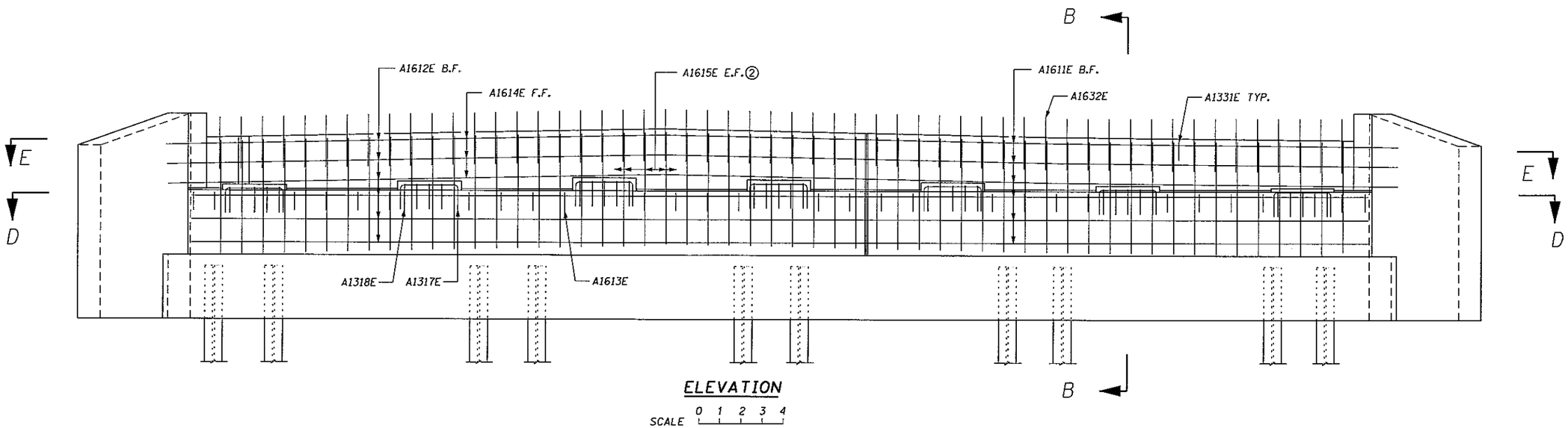
AS-BUILT
FEB 06 2006
ENGINEERING

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573
ABUTMENT DETAILS (WEST ABUTMENT)

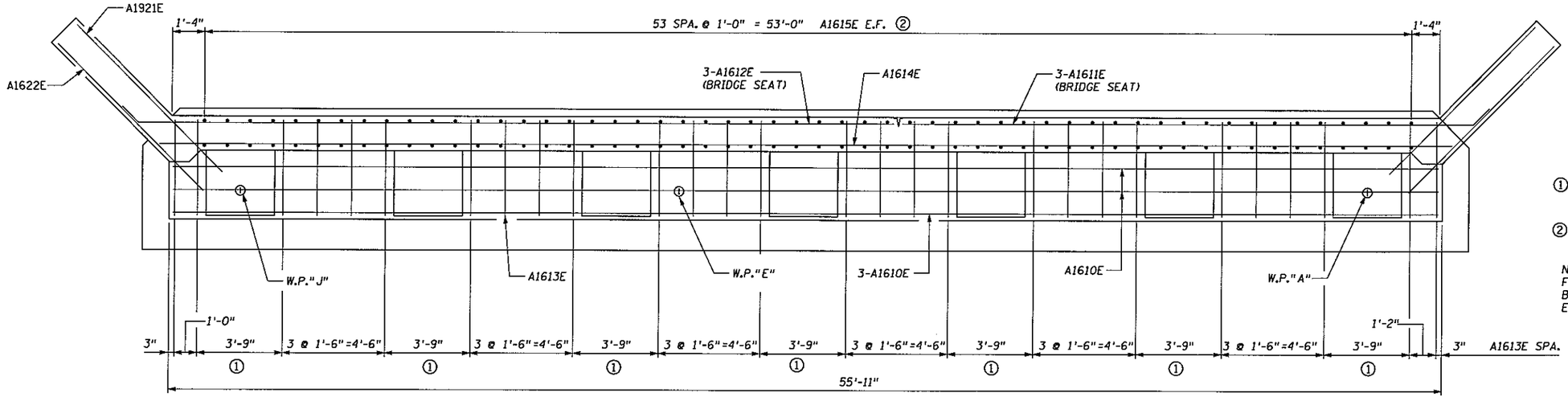
APPROVED:
S.A.P. 55-606-04
SHEET B4 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



ELEVATION

SCALE 0 1 2 3 4



SECTION D-D

SCALE 0 1 2 3 4

① SEE "BEARING PEDESTAL DETAIL", SHT. B6, FOR TRANSVERSE AND LONGITUDINAL TIES.

② PULL A1615E UP TO 2" CLEAR FROM TOP OF PARAPET WALL.

NOTE:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

NOTE:
FOR SECTION B-B SEE SHT. B11 .

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PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

AS-BUILT

FEB 06 2006

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MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573

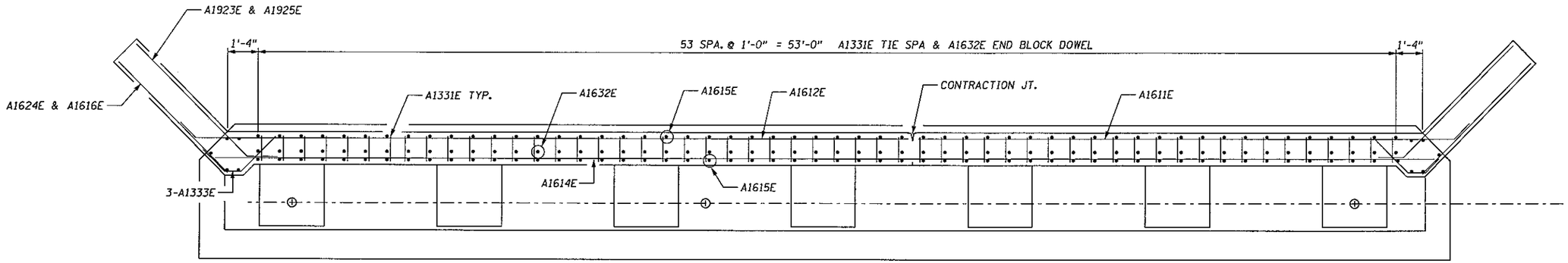
ABUTMENT DETAILS (WEST ABUTMENT)

APPROVED:

S.A.P. 55-606-04

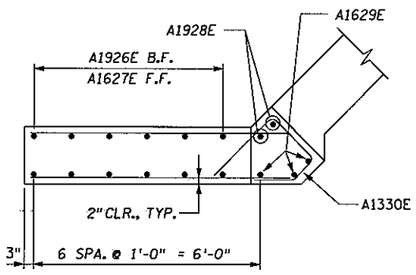
SHEET B5 OF B30 SHEETS

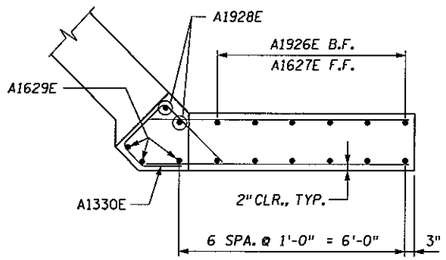
DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



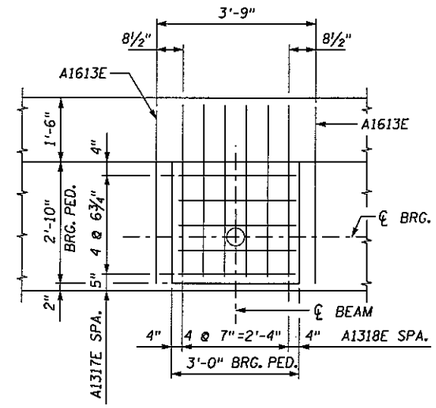
SECTION E-E

SCALE 0 1 2 3 4

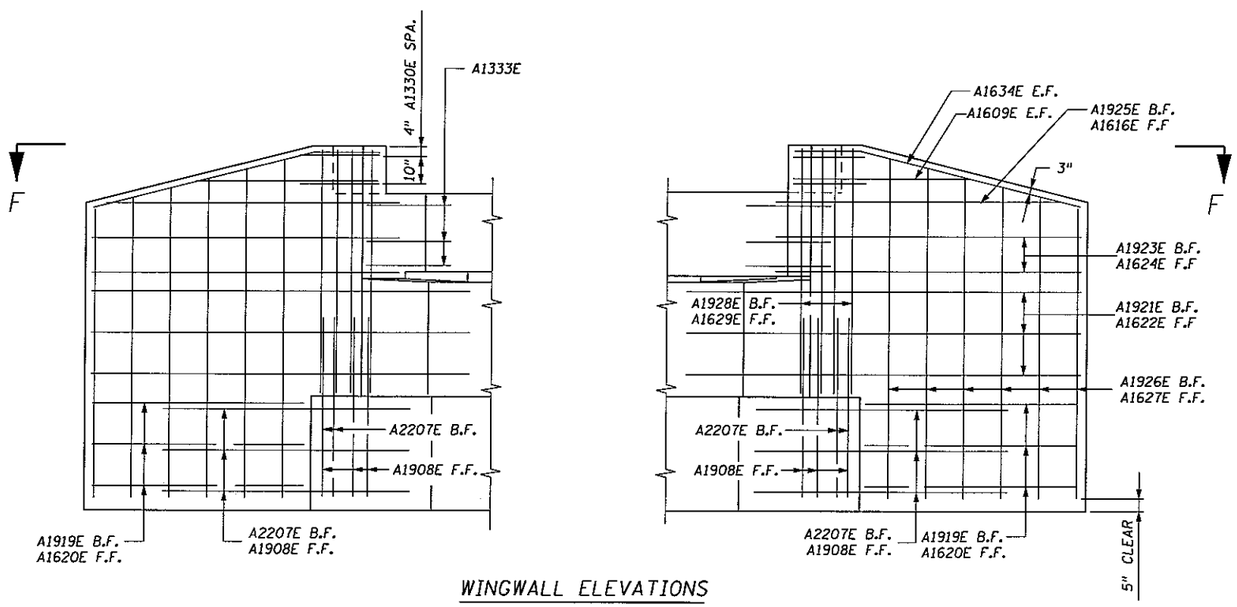




SECTION F-F



BEARING PEDESTAL DETAIL



WINGWALL ELEVATIONS

NOTE:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

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LIC. NO. 22737 10/24/2002

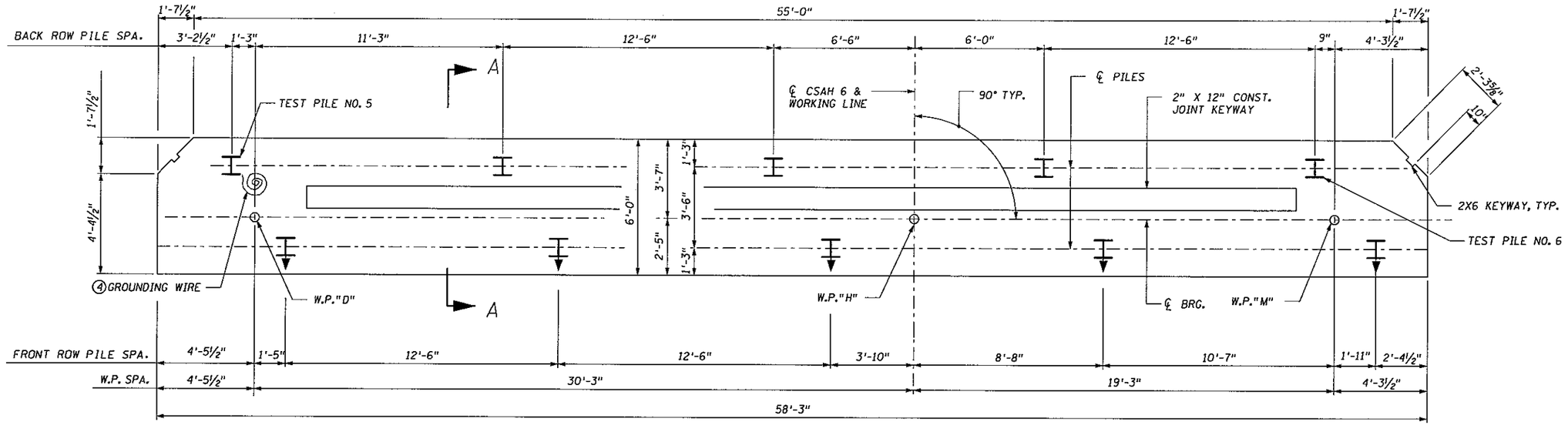
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MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573
ABUTMENT DETAILS (WEST ABUTMENT)

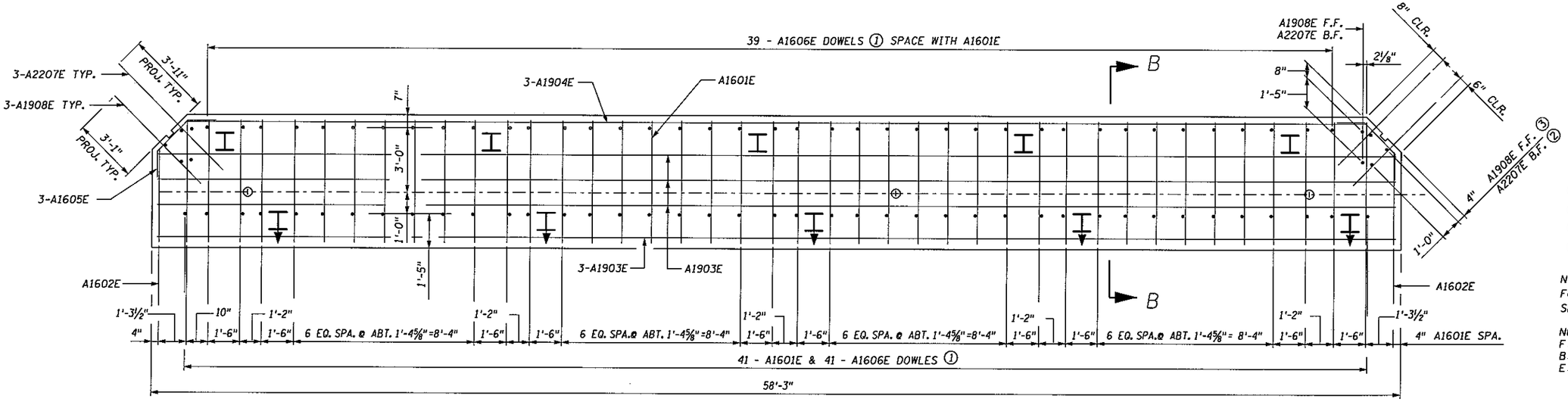
APPROVED:
S.A.P. 55-606-04
SHEET B6 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



FOOTING PLAN - PILES

SCALE 0 1 2 3 4



FOOTING PLAN-REINFORCEMENT

SCALE 0 1 2 3 4

① A1606E PROJECTION IS 2'-10".
② A2207E PROJECTION IS 3'-11"
③ A1908E PROJECTION IS 3'-1"
④ SEE ORNAMENTAL RAILING SHEETS.

NOTE:
FOR SECTION A-A AND SECTION B-B, SEE SHEET NO. B11.

NOTE:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

WEST ABUTMENT COMPUTED PILE LOAD - TONS/PILE	
DEAD LOAD + EARTH PRESSURE	40.9
LIVE LOAD	13.2
TOTAL LOAD	54.2

PILE NOTES:

2 STEEL H-TEST PILES 40 FT. LONG
8 STEEL H-PILES EST. LENGTH 30 FT.
10 STEEL H-PILES REQ'D. FOR EAST ABUT.

PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
PILES MARKED THUS H► TO BE BATTERED 3" PER FOOT IN DIRECTION SHOWN.
ALL ABUT. PILES TO BE HP 10 x 42 WITH PILE TIP PROTECTION.
FOR PILE SPLICE DETAILS SEE DETAIL B202.
SEE SURVEY SHEET FOR TEST PILE LOCATIONS.

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LIC. NO. 22737 10/24/2002

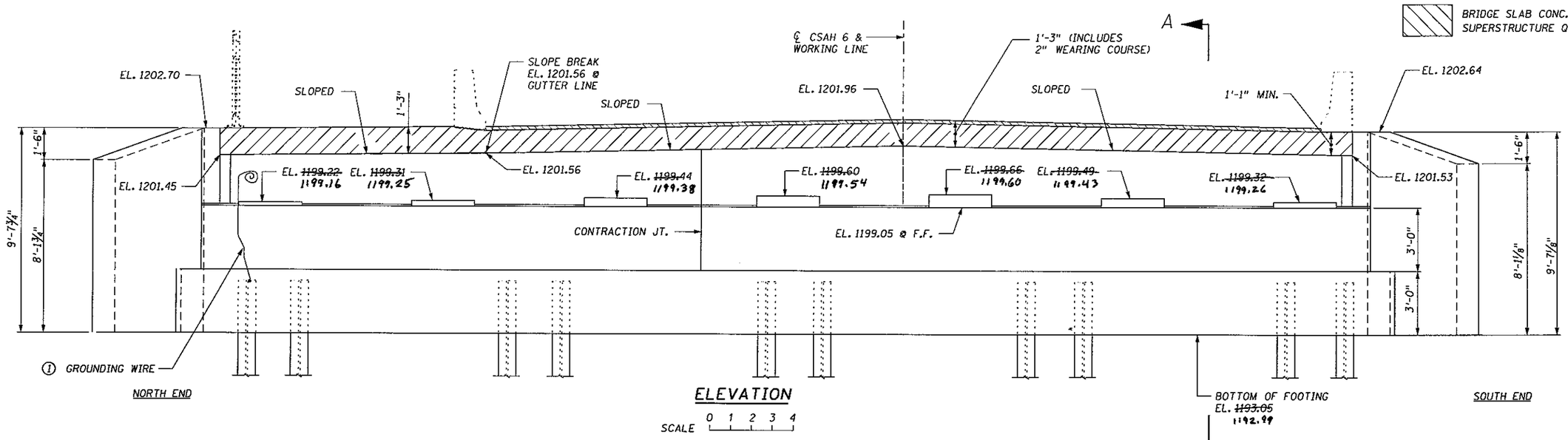
MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573
ABUTMENT DETAILS (EAST ABUTMENT)

APPROVED:
S.A.P. 55-606-04
SHEET B7 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	

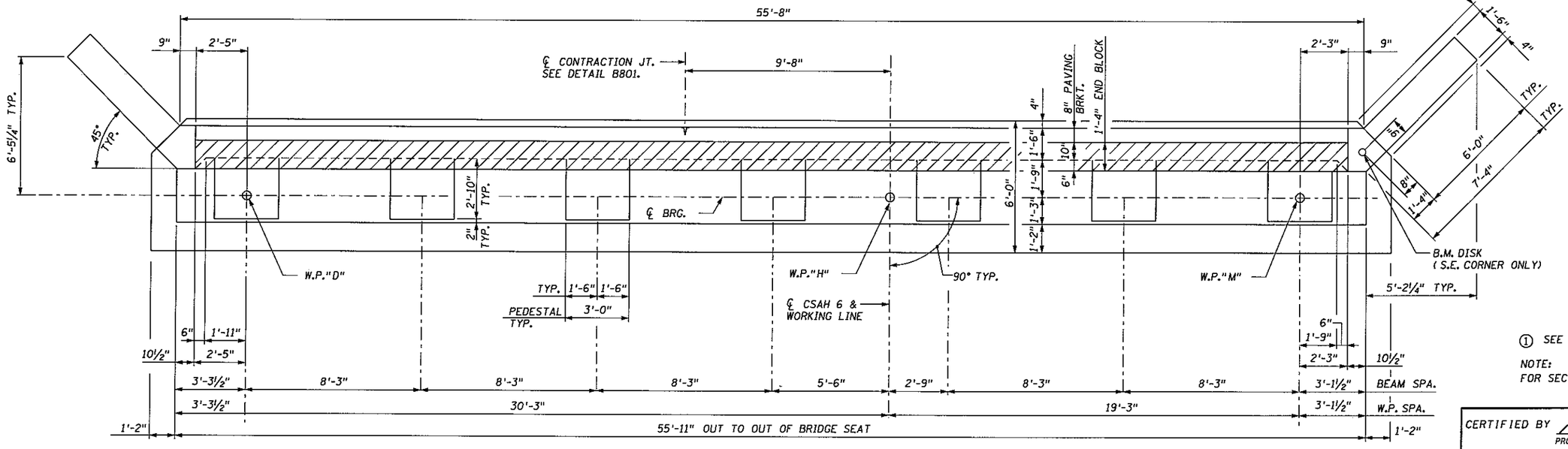
BRIDGE SLAB CONC. (3Y36A) TO BE INCLUDED IN THE SUPERSTRUCTURE QUANTITIES.



ELEVATION

SCALE 0 1 2 3 4

Bottom of Pile ELEV. 1171.0 1170.75 1170.9 1171.2 1170.8 1171.2 1170.7 1170.8 1170.7 1170.8



PLAN

SCALE 0 1 2 3 4

① SEE ORNAMENTAL RAILING SHEETS.

NOTE:
FOR SECTION A-A, SEE SHEET NO. B11 .

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PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

AS-BUILT
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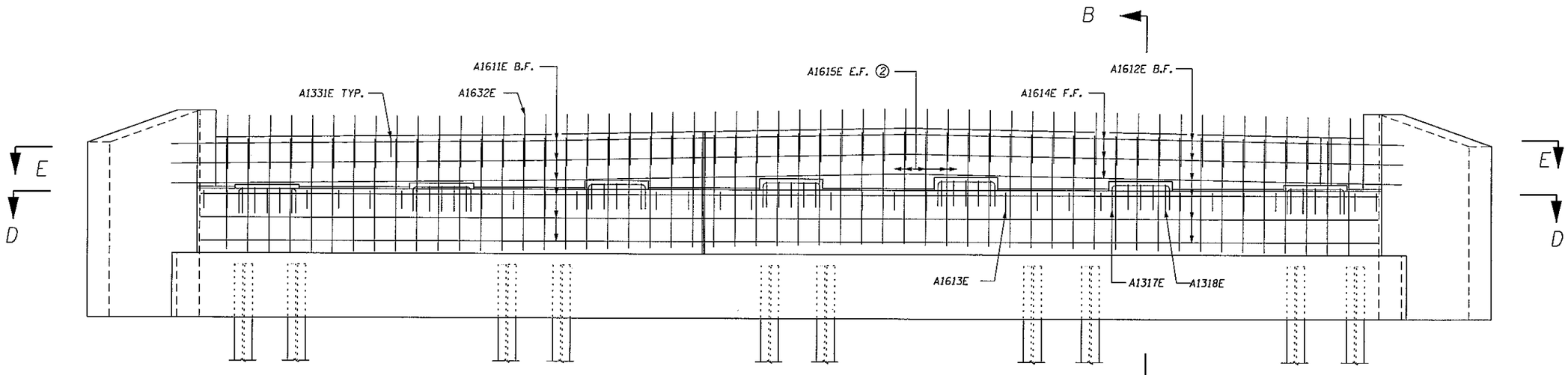
MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573
ABUTMENT DETAILS
(EAST ABUTMENT)

APPROVED:

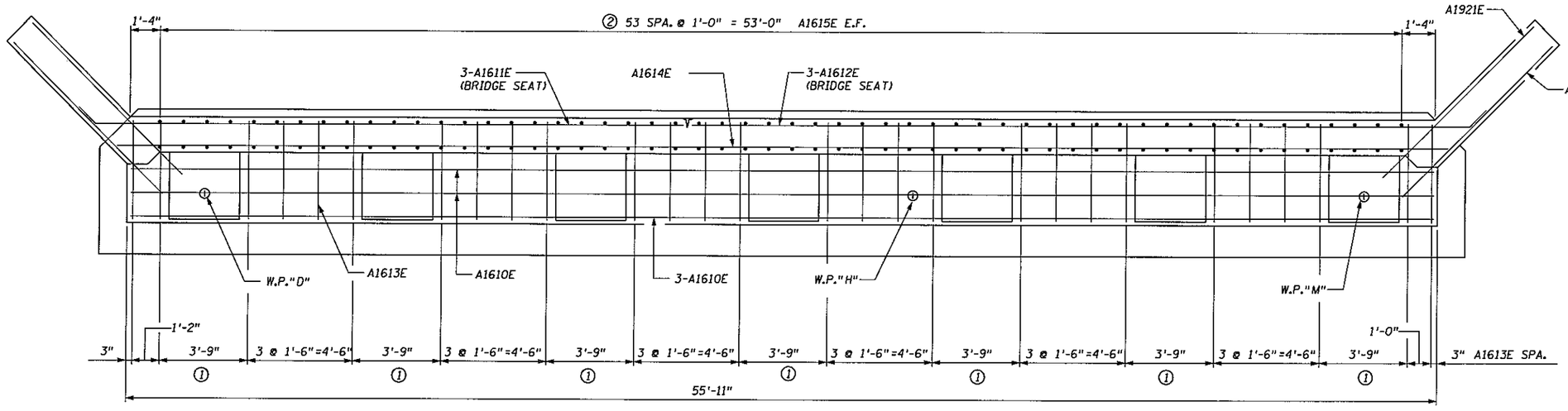
S.A.P. 55-606-04
SHEET B8 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



ELEVATION

SCALE 0 1 2 3 4



SECTION D-D

SCALE 0 1 2 3 4

① SEE "BEARING PEDESTAL DETAIL", SHT. B10, FOR TRANSVERSE AND LONGITUDINAL TIES.

② PULL A1615E UP TO 2" CLEAR FROM TOP OF PARAPET WALL.

NOTE:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

NOTE:
FOR SECTION B-B SEE SHT. B11 .

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

AS-BUILT
FEB 06 2006
ENGINEERING

MINNESOTA DEPARTMENT OF TRANSPORTATION

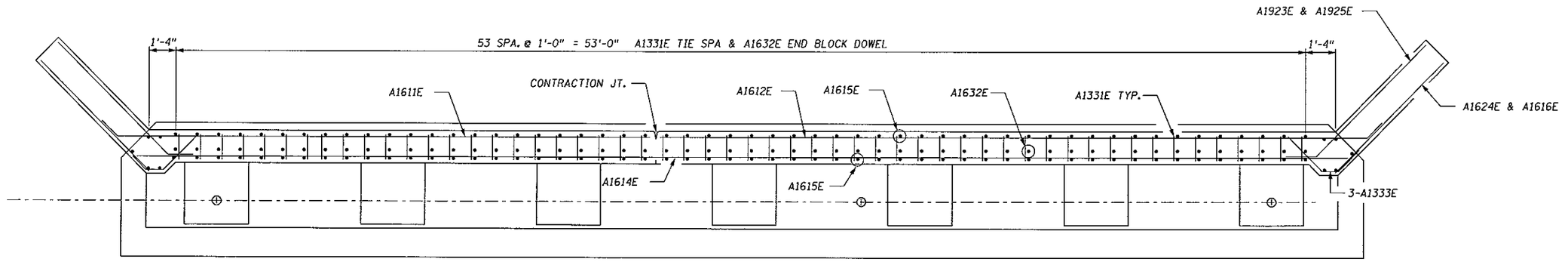
BRIDGE NO. 55573
ABUTMENT DETAILS (EAST ABUTMENT)

APPROVED:

S.A.P. 55-606-04

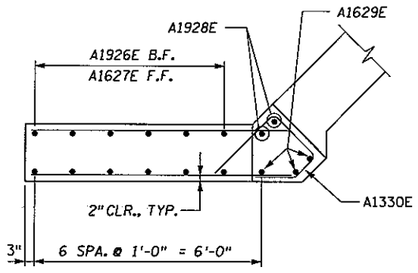
SHEET B9 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	

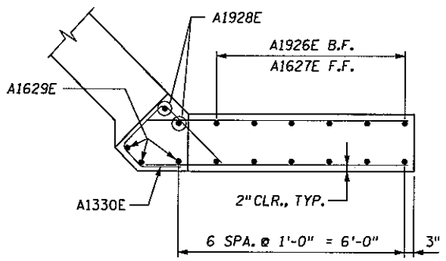


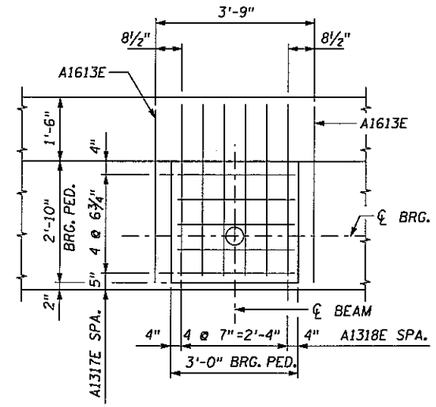
SECTION E-E

SCALE 0 1 2 3 4

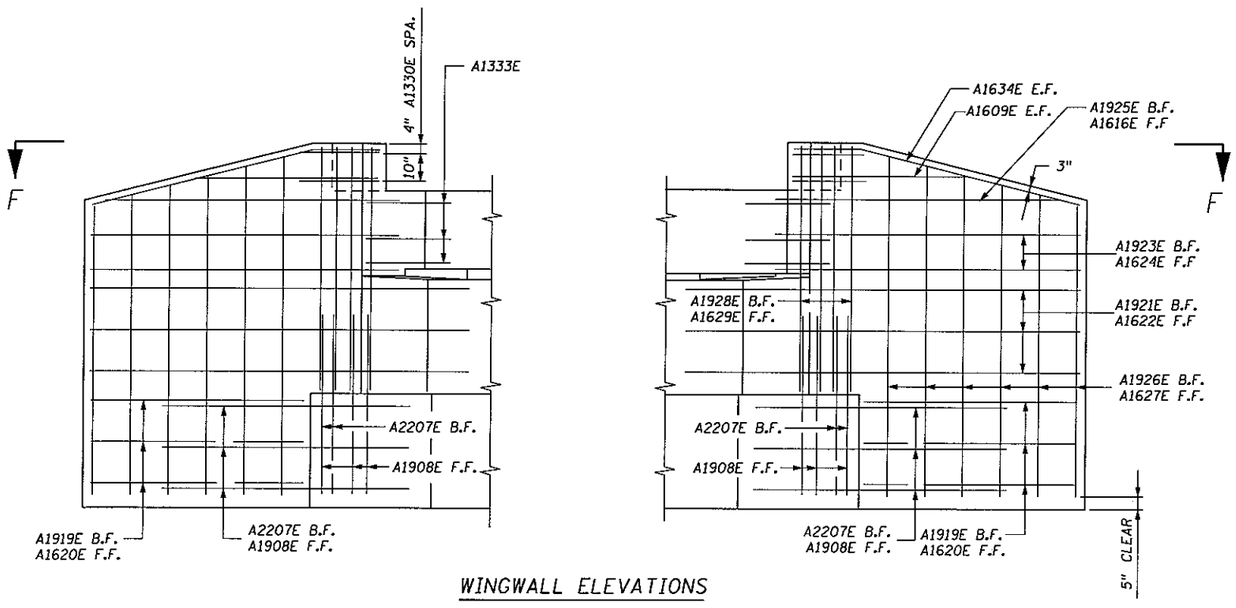


SECTION F-F





BEARING PEDESTAL DETAIL



WINGWALL ELEVATIONS

NOTE:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

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PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

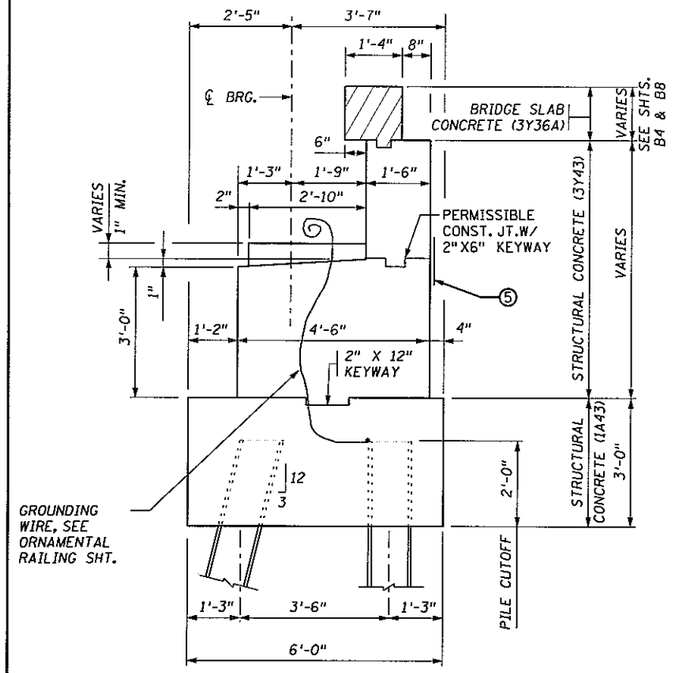
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MINNESOTA DEPARTMENT OF TRANSPORTATION

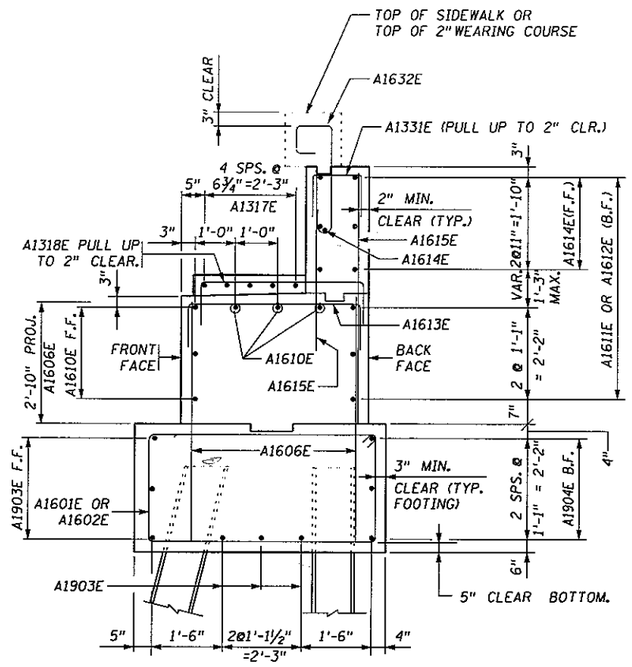
BRIDGE NO. 55573
ABUTMENT DETAILS
(EAST ABUTMENT)

APPROVED:
S.A.P. 55-606-04
SHEET B10 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	

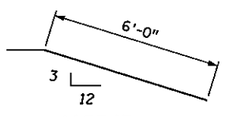


SECTION A-A

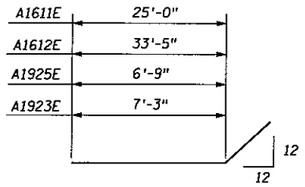


SECTION B-B

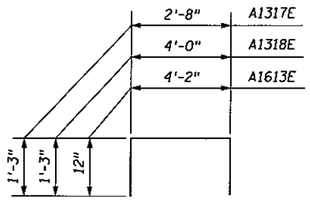
BILL OF REINFORCEMENT FOR 2 ABUTMENTS				
BAR	NO.	LENGTH	SHAPE	LOCATION
A1601E	82	16'-7"	BENT	FOOTING - TIE
A1602E	4	14'-1"	BENT	FOOTING - TIE
A1903E	12	57'-9"	STRT.	FOOTING -LONGIT.
A1904E	6	55'-0"	STRT.	FOOTING -LONGIT.
A1605E	12	6'-0"	BENT	FOOTING -LONGIT.
A1606E	160	5'-5"	STRT.	FOOTING -DOWEL
A2207E	20	6'-3"	STRT.	FOOTING -DOWEL
A1908E	24	4'-11"	STRT.	FOOTING -W.W. -DOWEL
A1609E	8	5'-4"	STRT.	WINGWALL - HORIZ.
A1610E	12	55'-7"	STRT.	BRIDGE SEAT-LONGIT.
A1611E	12	26'-0"	BENT	BRIDGE SEAT-LONGIT.
A1612E	12	34'-5"	BENT	BRIDGE SEAT-LONGIT.
A1613E	56	6'-2"	BENT	BRIDGE SEAT - TIE
A1614E	8	58'-8"	STRT.	PARAPET-HORIZ.
A1615E	216	5'-2"	STRT.	PARAPET-VERT.
A1616E	4	6'-4"	STRT.	WINGWALL - HORIZ.
A1317E	70	5'-2"	BENT	PED. -TRANSVERSE TIE
A1318E	70	6'-6"	BENT	PED. - LONGIT. TIE
A1919E	12	5'-9"	STRT.	WINGWALL - HORIZ.
A1620E	12	5'-9"	STRT.	WINGWALL - HORIZ.
A1921E	12	8'-10"	STRT.	WINGWALL - HORIZ.
A1622E	12	8'-10"	STRT.	WINGWALL - HORIZ.
A1923E	8	8'-3"	BENT	WINGWALL - HORIZ.
A1624E	8	7'-1"	STRT.	WINGWALL - HORIZ.
A1925E	4	7'-9"	BENT	WINGWALL - HORIZ.
A1926E	4 SER. OF 6	7'-6" TO 8'-9"	STRT.	WINGWALL - VERTICAL
A1627E	4 SER. OF 6	7'-6" TO 8'-9"	STRT.	WINGWALL - VERTICAL
A1928E	8	6'-4"	STRT.	WINGWALL - VERTICAL
A1629E	12	6'-4"	STRT.	WINGWALL - VERTICAL
A1330E	8	5'-4"	BENT	WINGWALL- CORNER-TIE
A1331E	108	3'-2"	BENT	PARAPET WALL TIE
A1632E	108	4'-10"	BENT	EXP. BLOCK-TIE
A1333E	12	3'-2"	BENT	WINGWALL- PARAPET-TIE
A1634E	8	7'-0"	BENT	WINGWALL



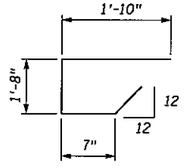
A1634E



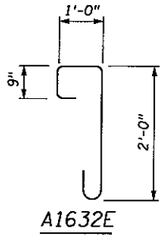
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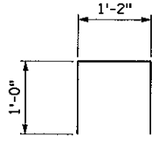
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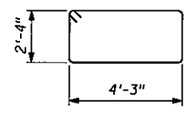
A1330E



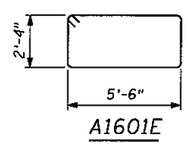
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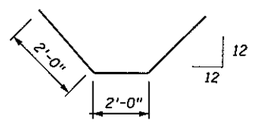
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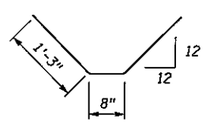
A1602E



A1601E



A1605E



A1333E

SUMMARY OF QUANTITIES - 2 ABUTMENTS		
	STRUCTURAL CONCRETE (1A43)	78 CU. YD.
	STRUCTURAL CONCRETE (3Y43)	93 CU. YD.
	REINFORCEMENT BARS (EPOXY COATED)	10700 POUND
②④	STRUCTURE EXCAVATION	1 LUMP SUM
③	BENCH MARK DISK	1 EACH
①	STEEL H-PILING DELIVERED 10x42	480 LIN. FT.
①	STEEL H-PILING DRIVEN 10x42	480 LIN. FT.
	STEEL H-TEST PILES, 40 FT. LONG 10x42	4 EACH
②	PILE TIP PROTECTION 10"	20 EACH
⑤⑥	3-PLY JOINT WATERPROOFING	110 LIN. FT.
⑥	GROUNDING WIRE	SEE ORNAMENTAL RAILING SHEETS

① DOES NOT INCLUDE TEST PILES

② SEE SPECIAL PROVISIONS

③ COUNTY WILL FURNISH DISK. PAYMENT FOR PLACING IS TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS. BEND PRONGS OUTWARD TO ANCHOR DISK IN CONCRETE. BOTTOM OF DISK TOP TO BE PLACED FLUSH WITH CONCRETE.

④ BACKFILL BEHIND ABUTMENTS SHALL BE SELECT GRANULAR BORROW PER SPEC. 3149.2B. BACKFILL DENSITY SHALL BE ATTAINED BY THE QUALITY COMPACTION METHOD IN ACCORDANCE WITH SPEC. 2105.3F2. SEE BRIDGE SURVEY PLAN AND PROFILE SHEET FOR PLACEMENT LIMITS (SHT. B30). APPROXIMATE QUANTITY OF SELECT GRANULAR BORROW IS 455 CU. YDS (CV), INCLUDED IN PRICE BID FOR STRUCTURE EXCAVATION.

⑤ 3-PLY JOINT WATERPROOFING REQUIRED WITH PERMISSIBLE CONSTRUCTION JOINT.

⑥ INCLUDED IN PRICE BID FOR OTHER ITEMS.

AS-BUILT

FEB 06 2006

ENGINEERING

NOTE:
F.F. = FRONT FACE
B.F. = BACK FACE
E.F. = EACH FACE

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573

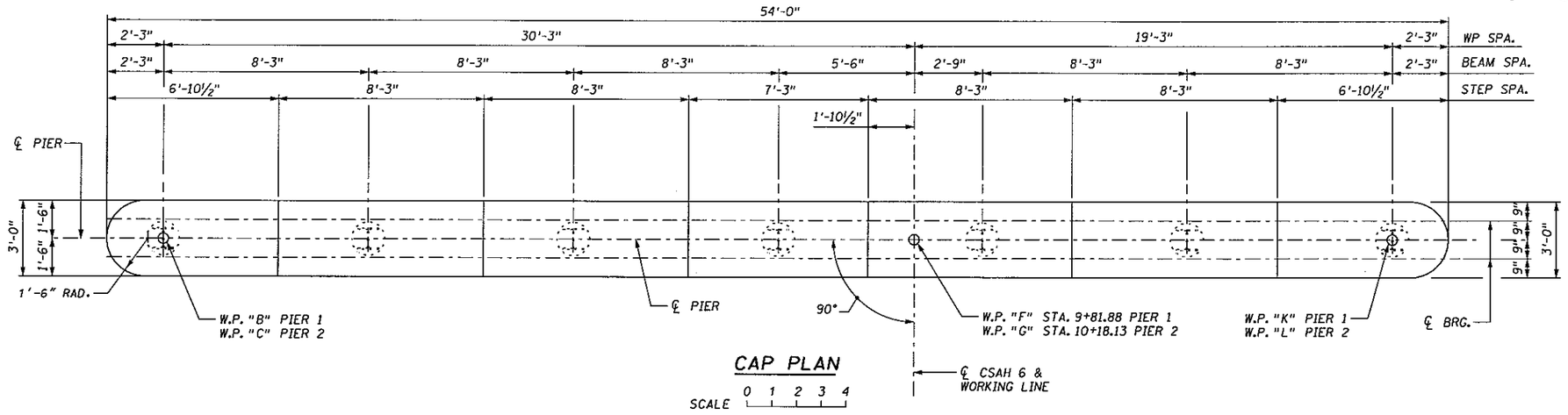
ABUTMENT DETAILS

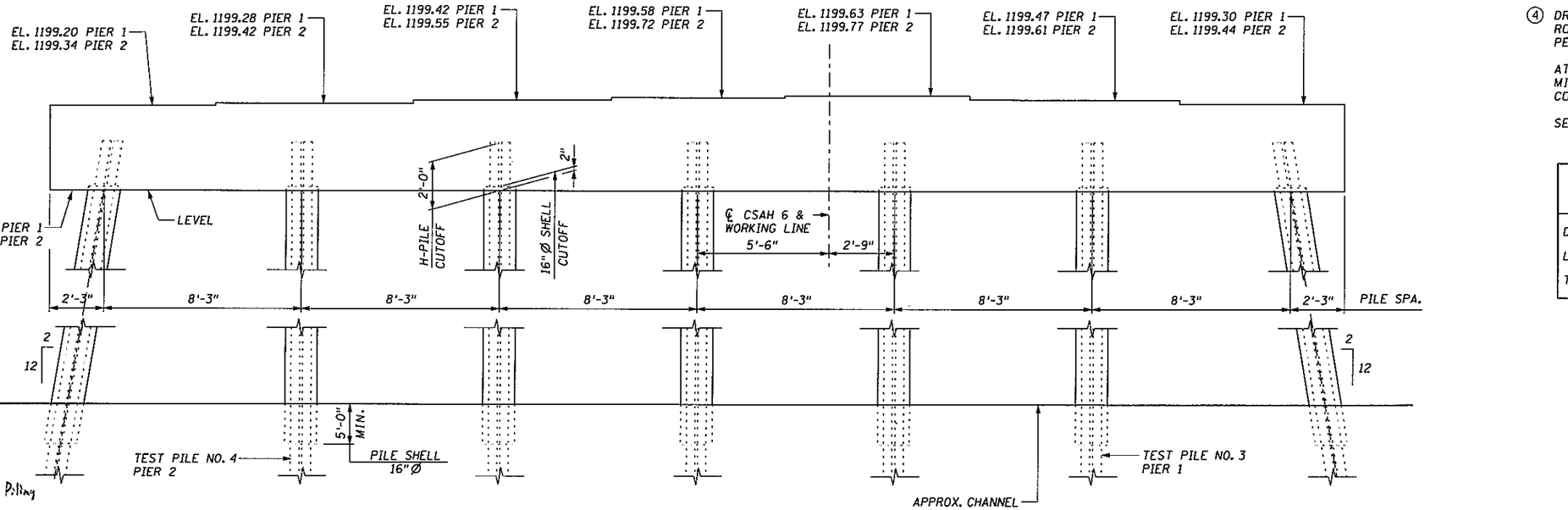
APPROVED:

S.A.P. 55-606-04

SHEET B11 OF B30 SHEETS

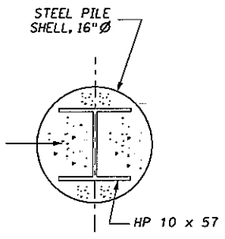
DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	





Bottom of Piling ELEV.							
Pier 1	1169.7	1169.7	1170.0	1171.6	1170.4	1169.7	1170.7
Pier 2	1171.0	1167.7	1168.0	1167.6	1170.1	1170.0	1170.6

ELEVATION
SCALE 0 1 2 3 4



FILL WITH CONCRETE MIX 3Y43 OR 1C62 (SEE SPECIAL PROVISIONS). INCLUDED IN PRICE BID FOR 16"STEEL PILE SHELLS.

SECTION THRU PILE

SUMMARY OF QUANTITIES - 2 PIERS	
STRUCTURAL CONCRETE (3Y43)	44 CU. YD.
REINFORCEMENT BARS, EPOXY COATED	5710 POUND
STEEL H-TEST PILE, 50 FT. LONG 10x57	2 EACH
② STEEL H-PILING DRIVEN 10x57	480 LIN. FT.
② STEEL H-PILING DELIVERED 10x57	480 LIN. FT.
③ PILE TIP PROTECTION 10"	14 EACH
③ 16" STEEL PILE SHELLS	280 LIN. FT.
④ ③ ROCK SOCKET	14 EACH

② DOES NOT INCLUDE TEST PILES.

③ SEE SPECIAL PROVISIONS.

PILE NOTES:

2 STEEL H-TEST PILES 50 FT. LONG
12 STEEL H-PILES EST. LENGTH 40 FT.
14 STEEL H-PILES REQ'D. FOR 2 PIERS .

14 STEEL PILE SHELLS (16"Ø) 20 FT. LONG.

ALL PIER PILES TO BE HP10X57 STEEL H-PILES WITH PILE TIP PROTECTION. SEE SPECIAL PROVISIONS.

PILE SPACING SHOWN IS AT BOTTOM OF CAP.

END PILES ARE TO BE BATTERED 2" PER FT. IN THE DIRECTION SHOWN.

FOR PILE SPLICE DETAILS SEE DETAIL B202.

ALL PIER PILES TO BE DRIVEN TO ELEVATION 1160.5 OR BELOW, OR TO A MINIMUM PENETRATION OF 5 FEET INTO THE LIMESTONE BEDROCK, (SEE SPECIAL PROVISIONS).

④ DRIVE TEST PILES AT PIERS PRIOR TO CONSTRUCTING ROCK SOCKETS. IF ALL PILES ARE DRIVEN TO MINIMUM PENETRATION, DELETE BID ITEM "ROCK SOCKET".

AT LOCATIONS WHERE PILES CANNOT BE DRIVEN TO MINIMUM PENETRATION, ROCK SOCKETS SHALL BE CONSTRUCTED.

SEE SURVEY SHEET FOR TEST PILE LOCATIONS.

COMPUTED PILE LOADS TONS PER PILE FOR PIERS	
DEAD LOAD	43.6
LIVE LOAD	14.2
TOTAL	57.8

AS-BUILT

FEB 06 2006

ENGINEERING

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573

PIER DETAILS

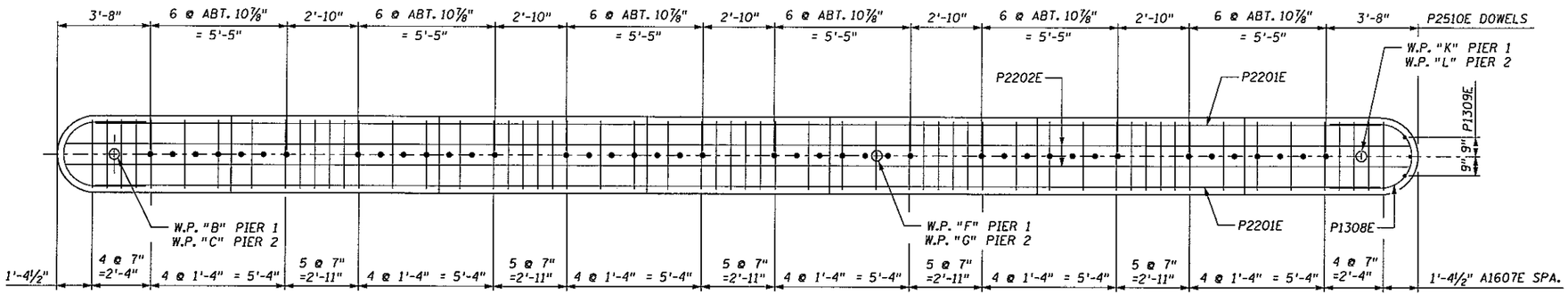
APPROVED:

S.A.P. 55-606-04

SHEET B12 OF B30 SHEETS

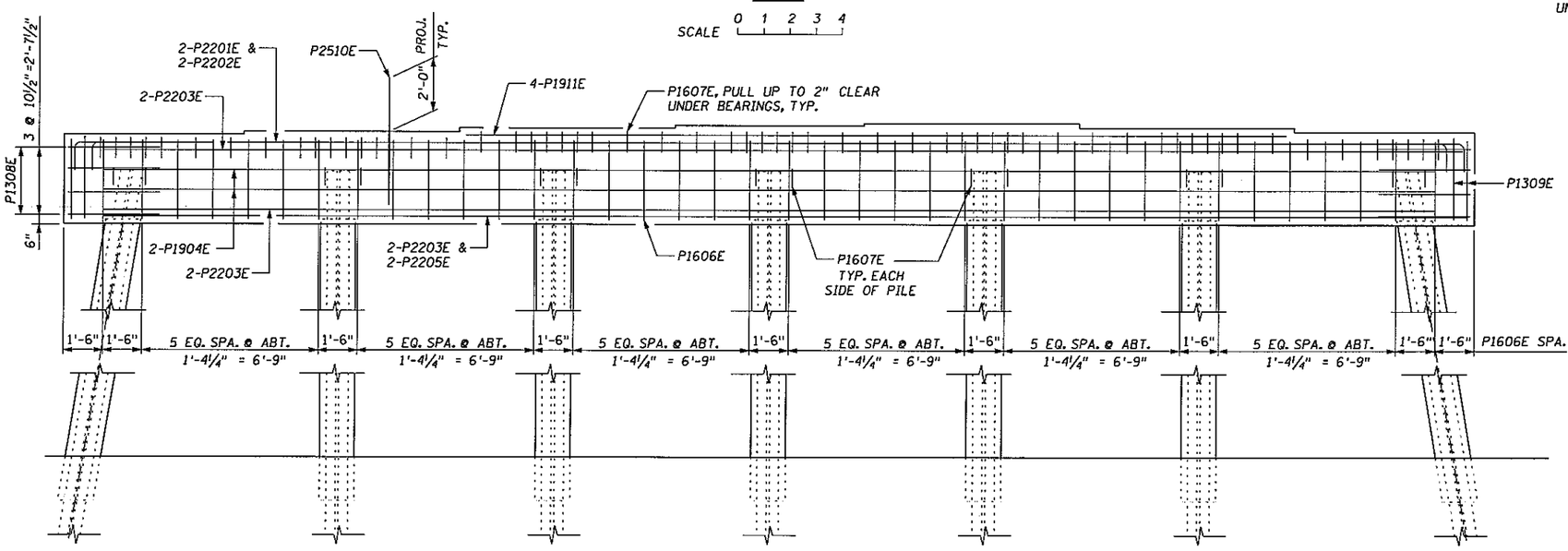
DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	

BILL OF REINFORCEMENT - 2 PIERS				
BAR	NO.	LENGTH	SHAPE	LOCATION
P2201E	4	54'-0"	BENT	CAP - LONGITUDINAL
P2202E	4	55'-7"	BENT	CAP - LONGITUDINAL
P2203E	8	51'-6"	STRT.	CAP - LONGITUDINAL
P1904E	8	51'-6"	STRT.	CAP - LONGITUDINAL
P2205E	4	52'-9"	STRT.	CAP - LONGITUDINAL
P1606E	76	9'-9"	BENT	CAP - STIRRUP
P1607E	144	5'-0"	BENT	CAP - TIE
P1308E	16	9'-5"	BENT	CAP - TIE AT ENDS
P1309E	12	3'-2"	STRT.	CAP - VERT. @ ENDS
P2510E	84	4'-0"	STRT.	CAP - DOWEL
P1911E	8	31'-5"	STRT.	CAP - STEP



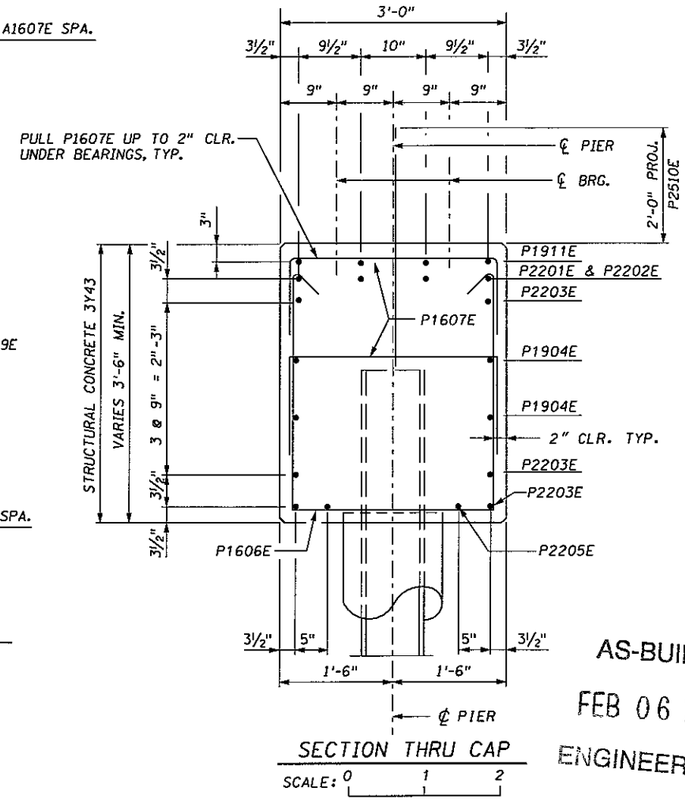
PLAN

SCALE 0 1 2 3 4



ELEVATION

SCALE 0 1 2 3 4



SECTION THRU CAP

SCALE: 0 1 2

AS-BUILT

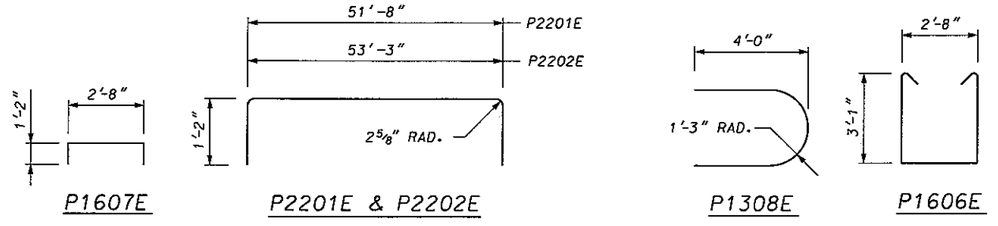
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ENGINEERING

CERTIFIED BY Ronald Benson

PROFESSIONAL ENGINEER - RONALD BENSON

LIC. NO. 22737 10/24/2002



MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573

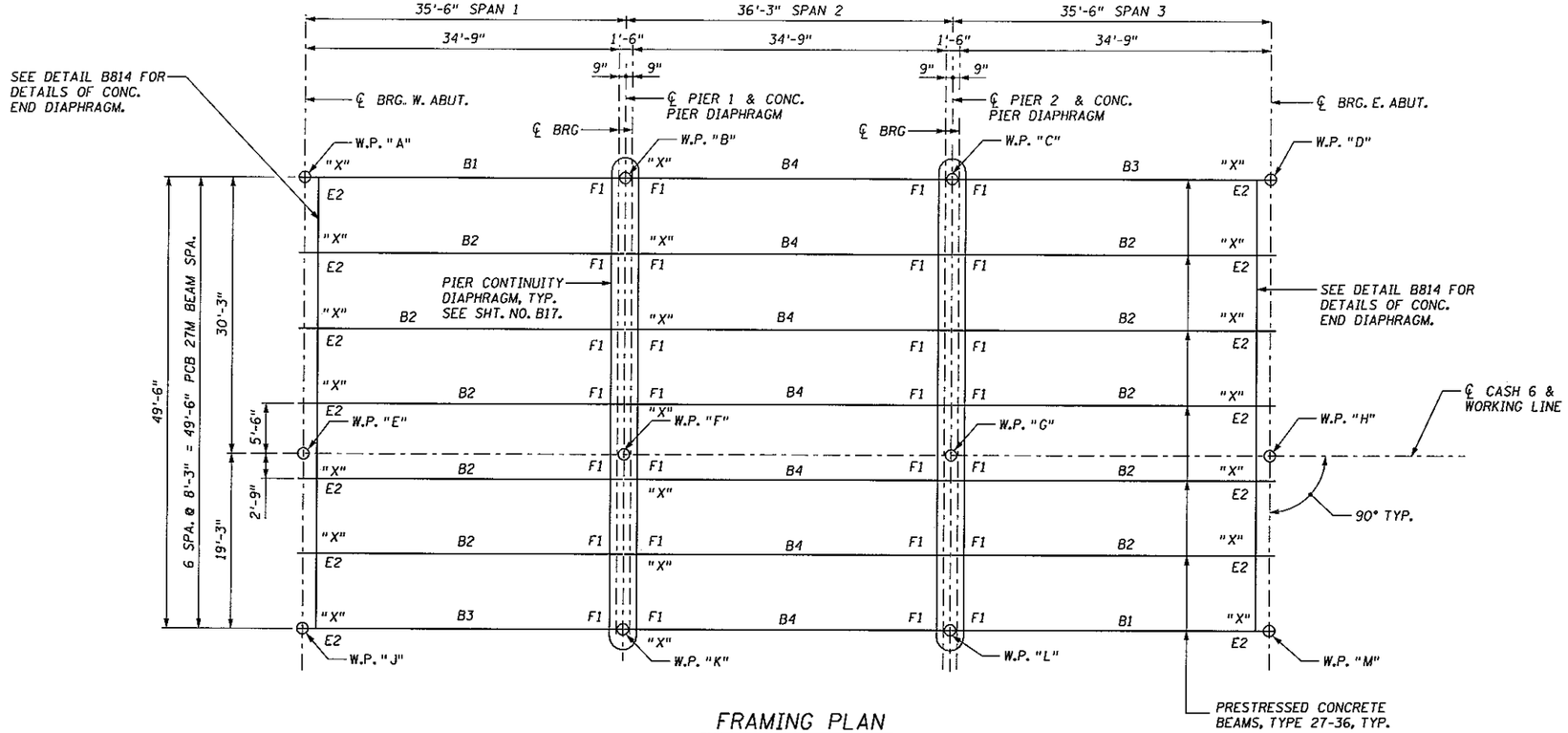
PIER DETAILS

APPROVED:

S.A.P. 55-606-04

SHEET B13 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



FRAMING PLAN

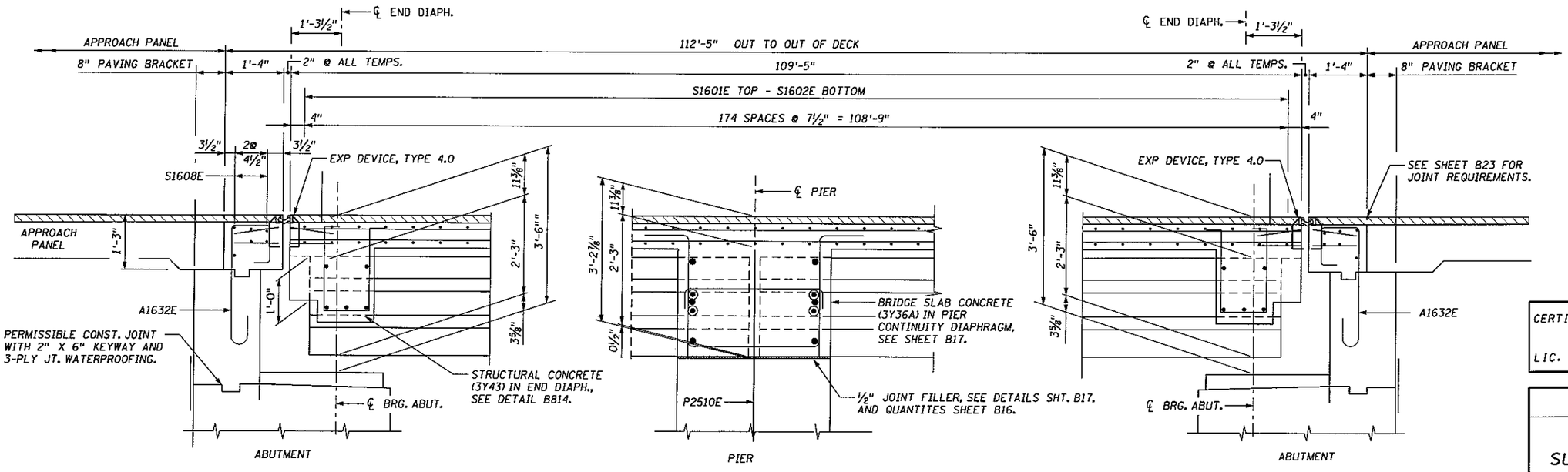
SCALE 0 3 6 12

NOTE:

F1 - DENOTES ELASTOMERIC BEARING PAD (FIXED-SEE DETAIL B310) TYPE 1

E2 - DENOTES CURVED PLATE BEARING ASSEMBLY (EXPANSION- SEE DETAIL B311) TYPE 2.

"X" - DENOTES END OF BEAM.



PARTIAL LONGITUDINAL SECTION THRU DECK

SCALE 0 1 2

AS-BUILT

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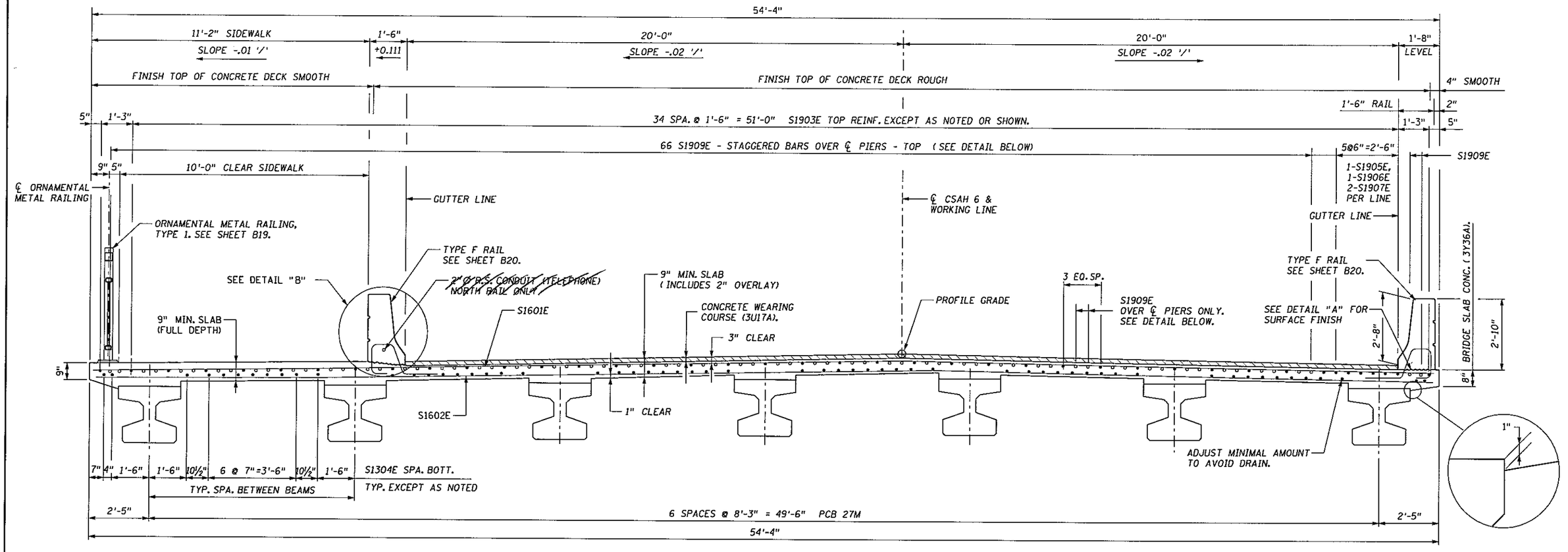
BRIDGE NO. 55573
SUPERSTRUCTURE DETAILS

APPROVED:

S.A.P. 55-606-04

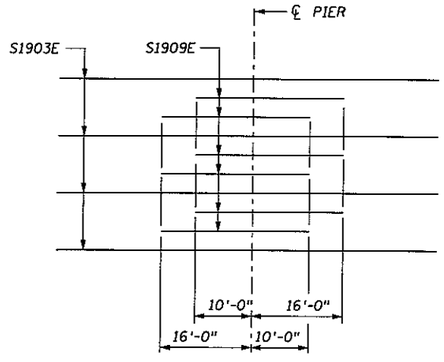
SHEET B14 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



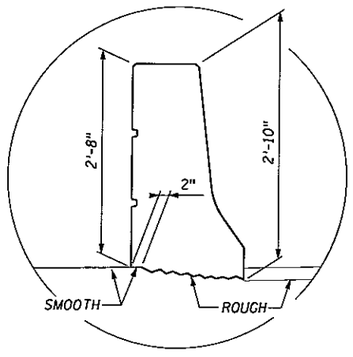
TYPICAL SECTION

SCALE 0 1 2 3

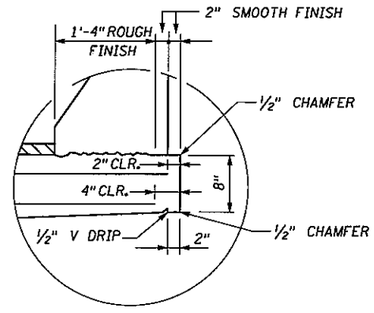


ADDITIONAL REINF. OVER ℄ PIERS

NO SCALE



DETAIL "B"



DETAIL "A"

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LIC. NO. 22737 10/24/2002

MINNESOTA DEPARTMENT
OF TRANSPORTATION

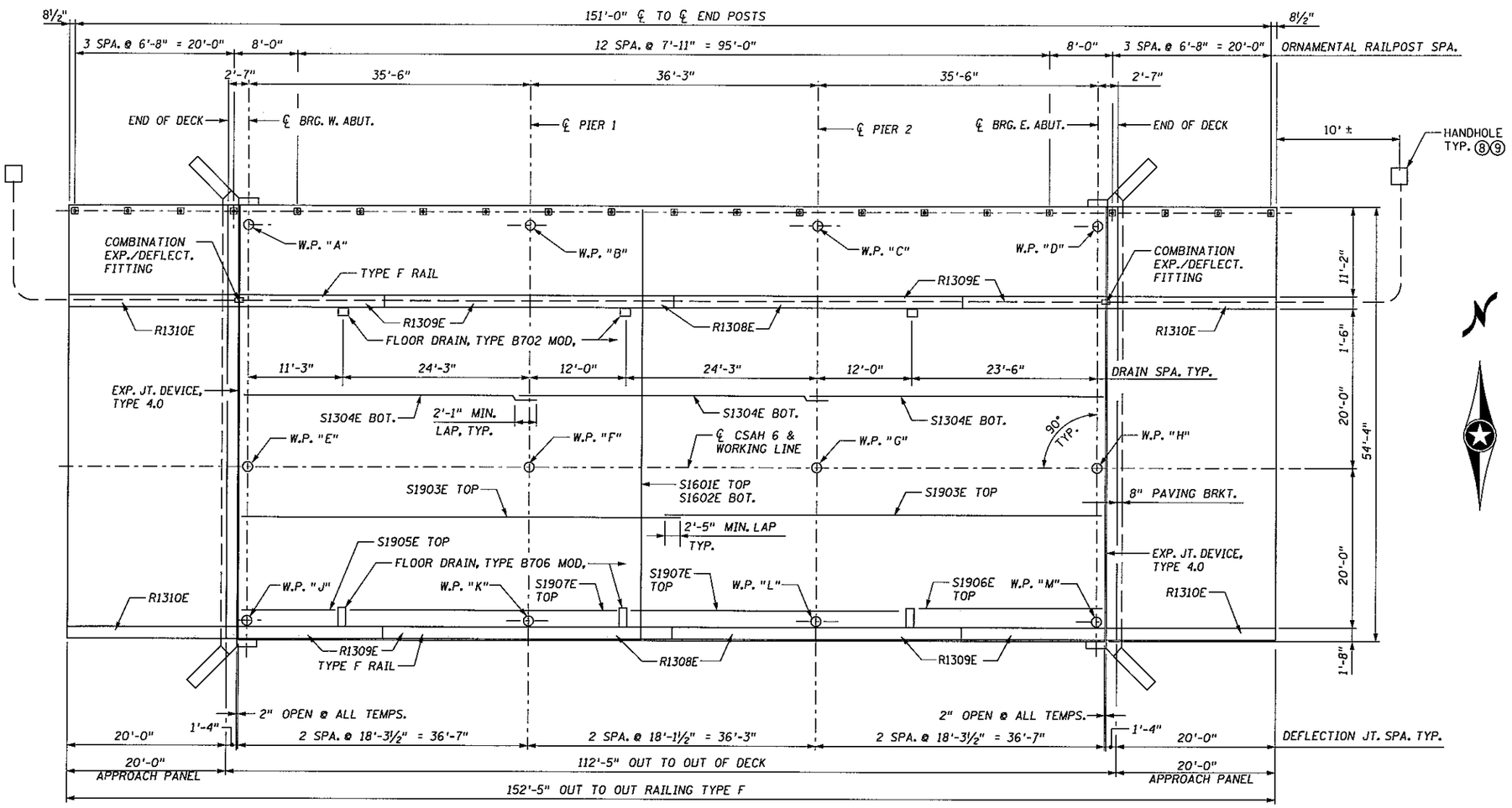
BRIDGE NO. 55573
SUPERSTRUCTURE DETAILS

APPROVED:

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SHEET B15 OF B30 SHEETS

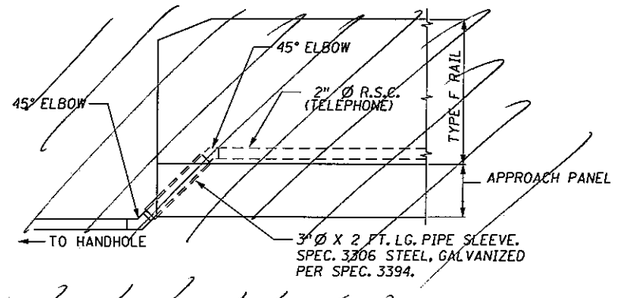
DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



DECK PLAN

SCALE 0 2 4 6 12

NOTE:
TRANSVERSE REINFORCEMENT SPACING SHOWN ON SHEET B14.



CONDUIT DETAIL @ END OF APPROACH PANEL

TELEPHONE CONDUIT SYSTEM
NORTH RAIL (TYPE F) ONLY
NOT TO SCALE

BILL OF REINFORCEMENT - SUPERSTRUCTURE

BAR	NO.	LENGTH	SHAPE	LOCATION
S1601E	175	54'-0"	STRT.	SLAB - TRANSV. - TOP
S1602E	175	53'-8"	STRT.	SLAB - TRANSV. - BOT
S1903E	70	55'-9"	STRT.	SLAB - LONGIT. TOP
S1304E	116	37'-9"	STRT.	SLAB - LONGIT. BOT.
S1905E	6	11'-9"	STRT.	SLAB - LONGIT. @ DRAIN
S1906E	6	24'-0"	STRT.	SLAB - LONGIT. @ DRAIN
S1907E	12	35'-5"	STRT.	SLAB - LONGIT. @ DRAIN
S1608E	12	53'-10"	STRT.	SLAB - TRANSV @ END BLK
S1909E	136	26'-0"	STRT.	SLAB - OVER ℄ PIERS

SUMMARY OF QUANTITIES - SUPERSTRUCTURE

④	STRUCTURAL CONCRETE (3Y43)	8 CU. YD.
②	BRIDGE SLAB CONCRETE (3Y36A)	6108 SQ. FT.
	CONCRETE WEARING COURSE (3U17A)	6097 SQ. FT.
③	TYPE F RAILING CONCRETE (3Y46A)	305 LIN. FT.
	ORNAMENTAL METAL RAILING, TYPE 1	151 LIN. FT.
	REINFORCEMENT BARS (EPOXY COATED)	44670 POUND
	EXPANSION JOINT DEVICES, TYPE 4.0	109 LIN. FT.
⑥	PRESTRESSED CONCRETE BEAMS 27M-36	21 EACH
	PRESTRESSED CONCRETE BEAMS 27M	756 LIN. FT.
	BEARING ASSEMBLY	14 EACH
⑤	EXP. CURVED PLATE BRG ASS'Y, TYPE 2	14 EACH
	ELASTOMERIC BEARING PAD, TYPE 1	28 EACH
⑧	BRIDGE NAMEPLATE (DETAIL B101)	1 EACH
⑧	3-PLY JOINT WATERPROOFING	109 LIN. FT.
⑦⑧	PREFORMED JOINT FILLER (SEE LIST)	
	FLOOR DRAIN TYPE B702 (MODIFIED)	3 EACH
	FLOOR DRAIN TYPE B706 (MODIFIED)	3 EACH
⑨	CONDUIT SYSTEM (TELEPHONE)	1 LUMP SUM

① INCLUDES RAILING, DIAPHRAGM, AND DECK REINFORCEMENT.

② BRIDGE SLAB CONCRETE (3Y36A) VOLUME IS APPROXIMATELY 185 CU. YD. (INCLUDES 27 CU.YD. FOR PIER CONT. DIAPH.) USING AN AVERAGE STOOL HEIGHT OF 2¼" INCHES.

③ TYPE F RAILING CONCRETE (3Y46A) VOLUME IS APPROXIMATELY 36 CU. YDS.

④ END DIAPHRAGM CONCRETE ONLY.

⑤ INCLUDED FOR PAYMENT IN ITEM "BEARING ASSEMBLY" PER EACH.

⑥ PAYMENT FOR BEAMS INCLUDED IN ITEM "PRESTRESSED CONCRETE BEAMS 27" PER LIN. FT.

⑦ SEE SPECIAL PROVISIONS

⑧ INCLUDED IN PRICE BID FOR OTHER ITEMS.

⑨ SEE SUMMARY OF QUANTITIES FOR "CONDUIT SYSTEM (TELEPHONE)" BELOW.

LIST OF PREFORMED JOINT FILLERS

	TYPE	LENGTH	SIZE	LOCATION
	CORK	19'	1"X13"	RAIL DEFLECTION JOINT
	BIT. FELT.	216'	½"X10"	PIER
⑩	POLYSTYRENE	108'	½"X16"	PIER

⑩ CUT IN 3 STRIPS TO FIT. AS NEEDED. (SEE DETAILS, SHT B17).

⑫ SUMMARY OF QUANTITIES FOR CONDUIT SYSTEM (TELEPHONE)

	3" DIA.x 2'-0" SLEEVE	2 EACH
	2" DIA. R.S.C.	200 LIN.FT.
	COMBINATION DEFLECTION & EXPANSION FITTINGS	2 EACH
⑪	PRECAST CONCRETE HANDHOLE (STD. PLATE 8117)	2 EACH
	45° ELBOWS	4 EACH

⑪ WITH VEHICLE LOAD

⑫ ALL MATERIAL LISTED IS INCLUDED IN PRICE BID FOR "CONDUIT SYSTEM (TELEPHONE)".

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

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MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 55573
SUPERSTRUCTURE DETAILS

APPROVED:

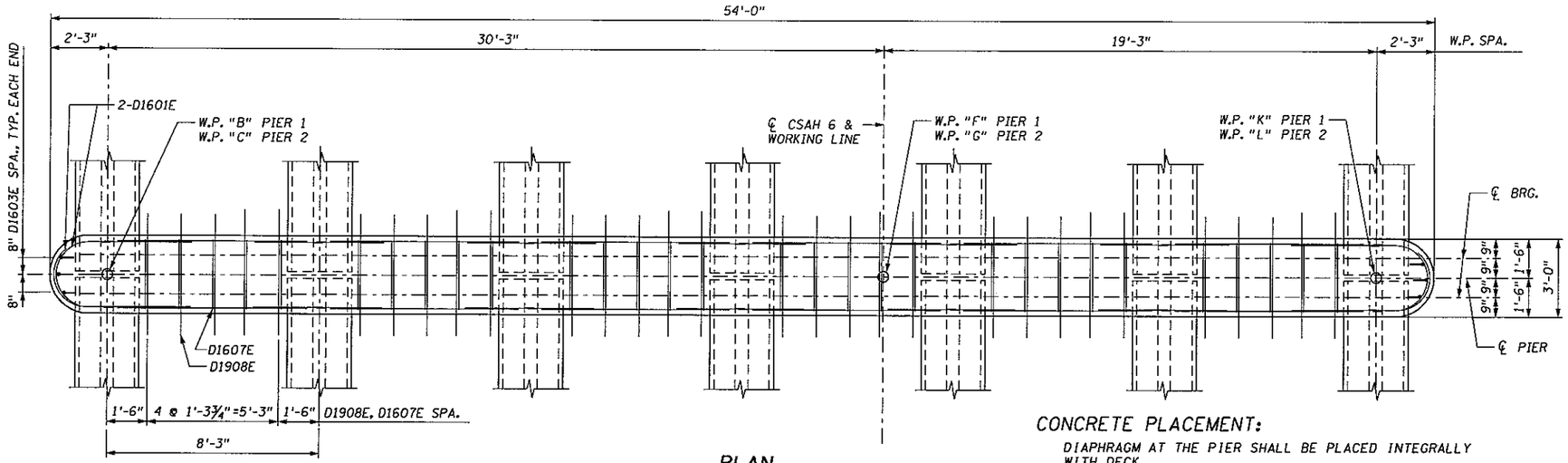
S.A.P. 55-606-04
SHEET B16 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	

BILL OF REINFORCEMENT FOR 2 PIER CONTINUITY DIAPHRAGMS

	BAR	NO.	LENGTH	SHAPE	LOCATION
	D1601E	16	7'-6"	BENT	END HORIZ. THRU BEAM
	D1602E	8	4'-1"	BENT	END TIE
	D1603E	12	3'-4"	BENT	END VERTICAL
	D1604E	40	5'-0"	STRT.	HORIZONTAL THRU BEAM
	D1605E	48	5'-5"	STRT.	HORIZONTAL
	D1606E	24	7'-4"	STRT.	HORIZONTAL
	D1607E	60	4'-4"	BENT	TIE
(1)	D1908E	60	10'-0"	STRT.	STIRRUP

(1) CONTINUITY DIAPHRAGM STIRRUP, D1906E, SHALL BE PULLED UP TIGHT TO TOP TRANSVERSE DECK REINFORCEMENT, AND 2" MINIMUM CLEARANCE SHALL BE MAINTAINED AT THE BOTTOM AND SIDES OF THE DIAPHRAGM.

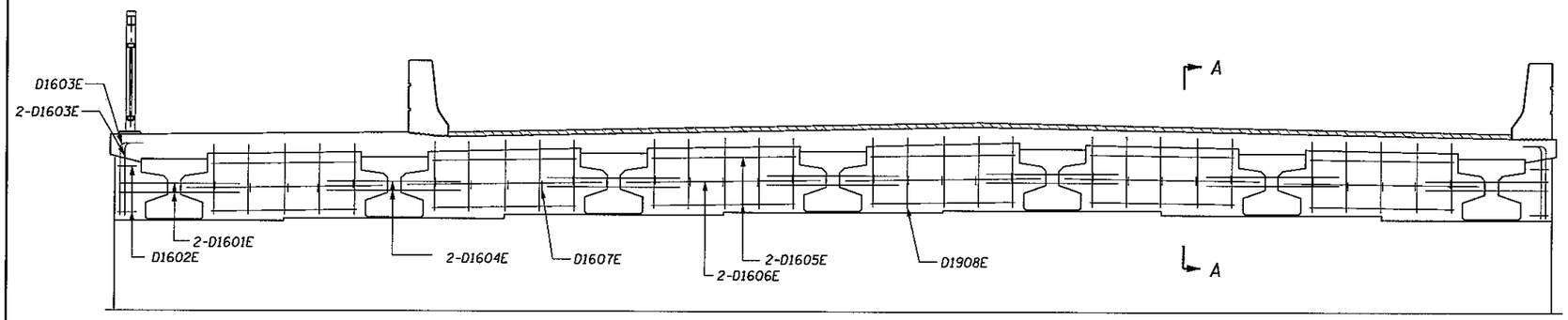


PLAN

SCALE 0 1 2 3 4

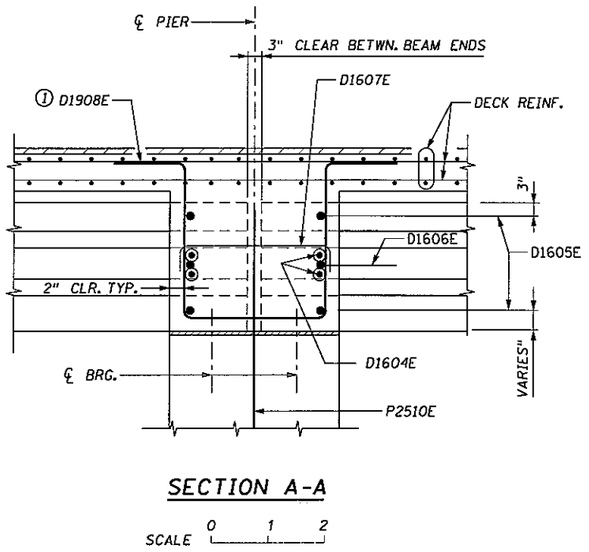
CONCRETE PLACEMENT:

DIAPHRAGM AT THE PIER SHALL BE PLACED INTEGRALLY WITH DECK.
THE CONTRACTOR SHALL PLACE CONCRETE FOR THE DECK WHILE THE DIAPHRAGM CONCRETE IS STILL PLASTIC.



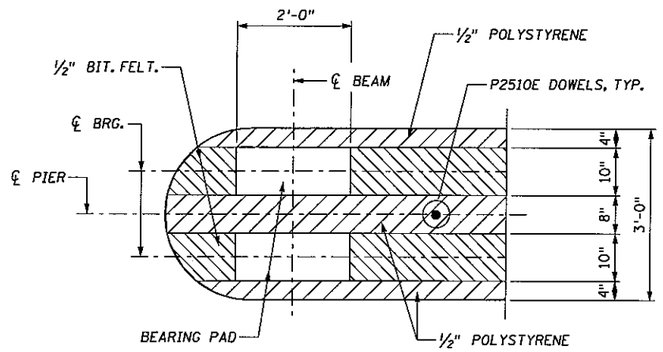
ELEVATION

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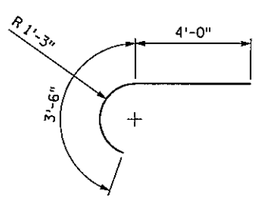
SECTION A-A

SCALE 0 1 2

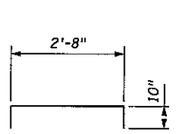


PARTIAL PIER CAP PLAN

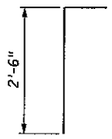
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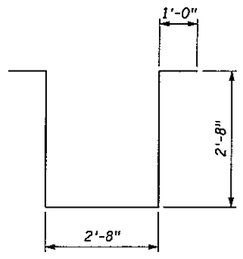
D1601E



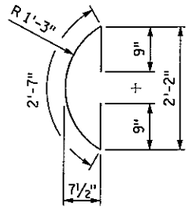
D1607E



D1603E



D1908E



D1602E

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MINNESOTA DEPARTMENT OF TRANSPORTATION

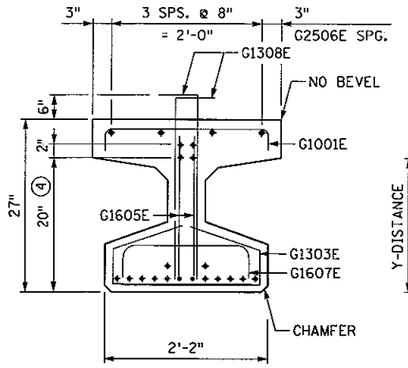
BRIDGE NO. 55573
PIER CONTINUITY DIAPHRAGM

APPROVED:

S.A.P. 55-606-04

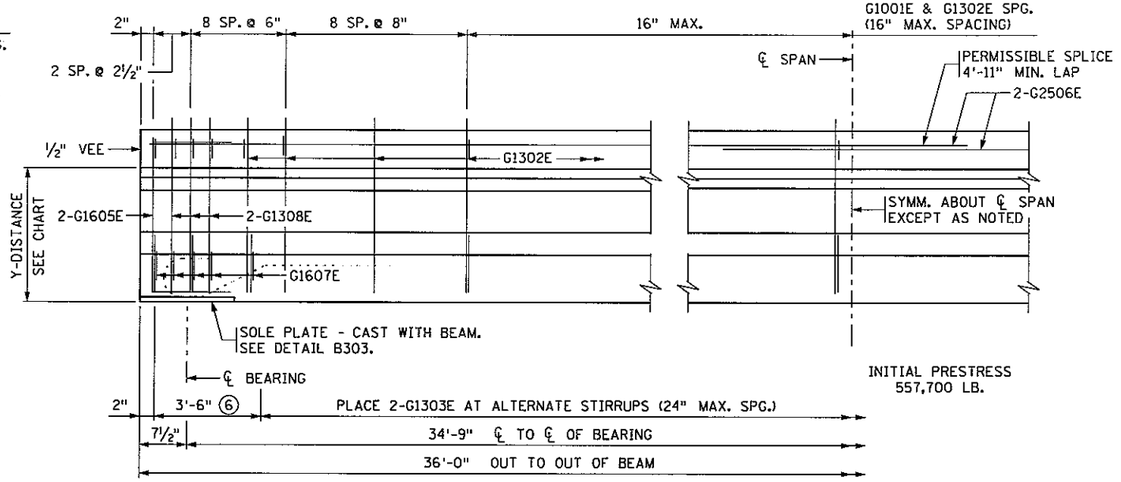
SHEET B17 OF B30 SHEETS

DES.: RAB	DRN.: GRF	55573
CHK.: CGD	CHK.: CGD	



END VIEW

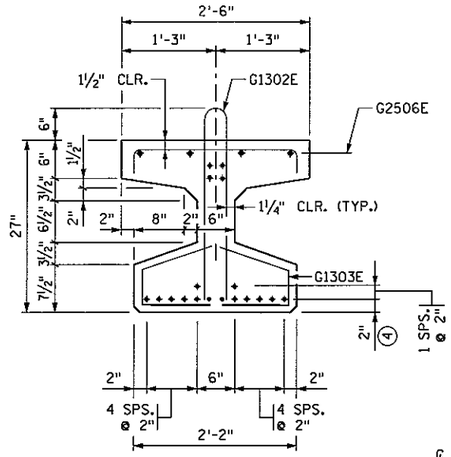
CUT STRANDS FLUSH WITH CONCRETE. PAINT ENDS WITH AN APPROVED GRAY EPOXY EXCEPT AS NOTED.



BEAM ELEVATION

CONTRACTOR SHALL PROVIDE TEMPORARY BRACING

PRIOR TO SLAB PLACEMENT, CONTRACTOR SHALL BRACE PRESTRESSED CONCRETE BEAMS AGAINST ROTATION, AS APPROVED BY THE ENGINEER.

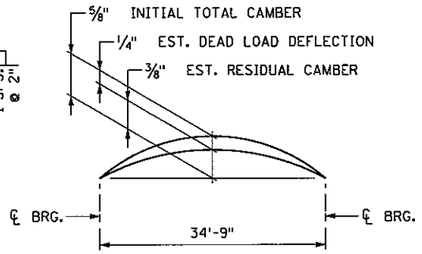


SECTION AT ℄ SPAN

Y DISTANCES (IN INCHES)			
	NO.	℄ SPAN	END
STRAIGHT STRANDS	18	6.44	☒
DRAPED STRANDS	-	-	- □
TOTAL STRANDS	18	6.44	☒

Y = DISTANCE TO CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM. ALL STRANDS SPACED 2" CENTER TO CENTER, HORIZONTALLY AND VERTICALLY, EXCEPT AS NOTED.

□ A TOLERANCE OF ± 1" WILL BE PERMITTED IN THIS DIMENSION.

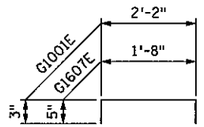


CAMBER DIAGRAM

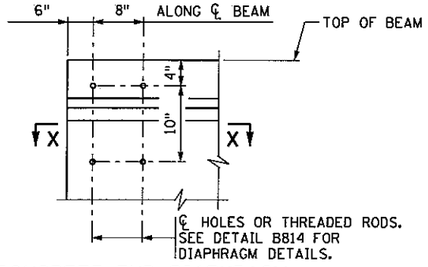
INITIAL CAMBER IS GIVEN AFTER DIAPHRAGMS ARE IN PLACE.

DEAD LOAD DEFLECTION SHOWN IS FOR WEIGHT OF SLAB, WEARING COURSE, RAILING, SIDEWALK AND MEDIAN WHERE APPLICABLE.

ENGINEER WILL TAKE ELEVATIONS AT TOP OF BEAMS AFTER ERECTION AND WILL ALLOW FOR DEFLECTION SHOWN TO ENABLE CONTRACTOR TO BUILD FORMS TO CORRECT GRADE AND SPECIFIED SLAB THICKNESS.

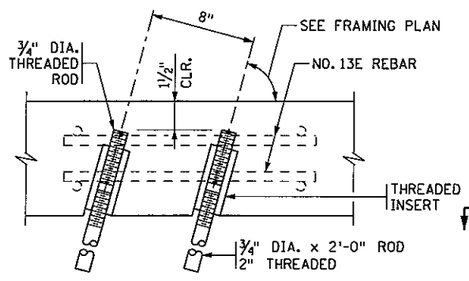


G1001E & G1607E



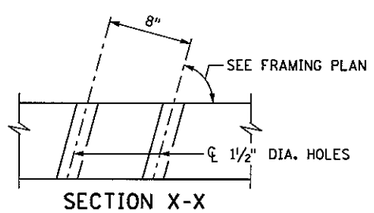
CONCRETE END DIAPHRAGM

(PARAPET ABUTMENT)



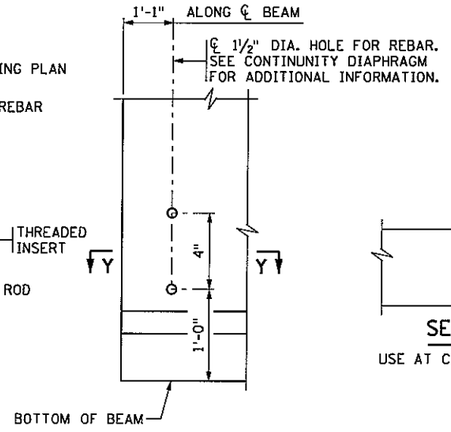
SECTION X-X

USE AT FASCIA BEAMS AND INTERIOR BEAMS WITH STAGGERED DIAPHRAGMS

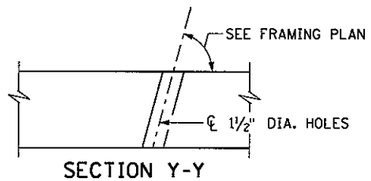


SECTION X-X

USE AT INTERIOR BEAMS WITH CONCRETE END DIAPHRAGMS



CONTINUITY DIAPHRAGM



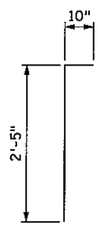
SECTION Y-Y

USE AT CONTINUITY DIAPHRAGM

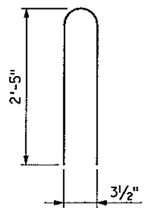
MINIMUM CONCRETE STRENGTH - P.S.I.		
	① f'ci	② f'c
REQUIRED MIN. CONCRETE STRENGTH	6000	7000

PRESTRESSING STRAND DIAMETER	
⑤	½" ☒
⑤	0.60" □

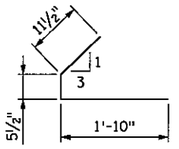
PLACE AN "X" IN THE APPROPRIATE BOX TO INDICATE THE STRAND DIAMETER USED FOR THE DESIGN.



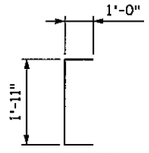
G1308E



G1302E



G1303E



G1605E

GENERAL NOTES

TOPS OF BEAMS SHALL BE INTENTIONALLY ROUGHENED FOR BOND.

PROVIDE HANDLING HOOKS OR DEVICES AS REQUIRED BY CONTRACTOR.

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 THE 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 Mn/DOT SPEC. 2405.

SEE FRAMING PLAN FOR BEAM END MARKED "X" AND DIAPHRAGM SPACING.

APPROXIMATE WEIGHT OF BEAM IS 10 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.

① MINIMUM CONCRETE STRENGTH AT TIME OF PRESTRESS TRANSFER.

② MINIMUM CONCRETE STRENGTH WHEN BEAM CAN BE TRANSPORTED AND INSTALLED.

AS-BUILT

④ STRAIGHT STRANDS.

FEB 06 2006

⑤ PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION STRAND, CONFORMING TO ASTM A 416, GRADE 270.

ENGINEERING

⑥ PLACE 2-G1303E WITH STIRRUPS (6" MAX. SPG.)

REVISION: 02-11-00

APPROVED: _____ STATE BRIDGE ENGINEER

CERTIFIED BY Ronald Benson PROFESSIONAL ENGINEER - RONALD BENSON

LIC. NO. 22737 10/24/2002

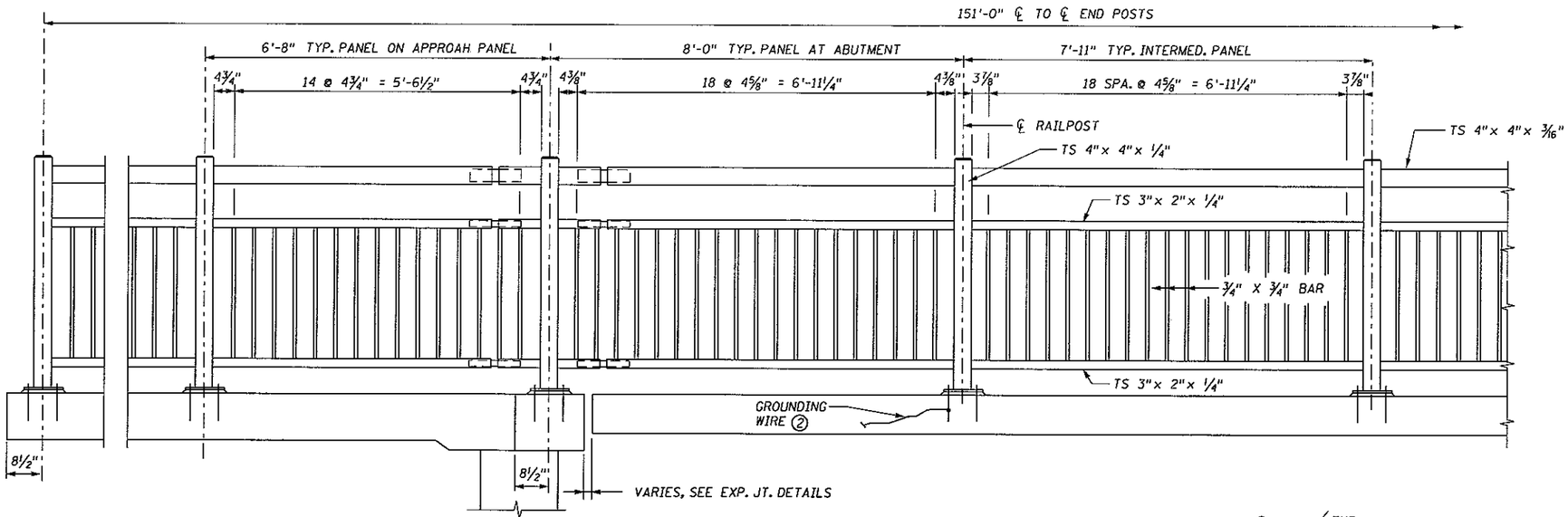
S.A.P. 55-606-04 BEAMS B1, B2, B3, & B4 MOD. FIG. 5-397.504

TITLE: 27" PRESTRESSED CONCRETE BEAM (PRETENSIONED) TYPE 27M-36

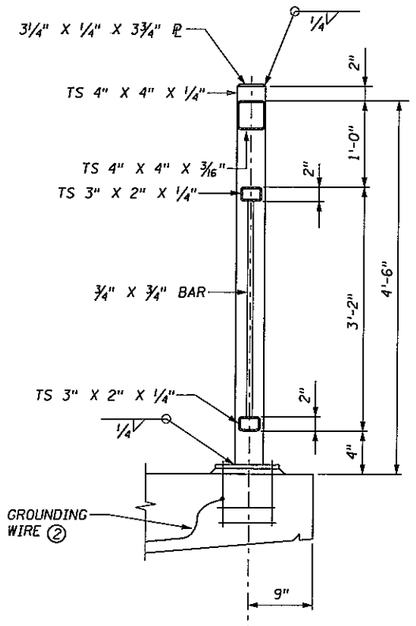
DES: RAB DR: GRF CHK: CGD CHK: CGD APPROVED:

SHEET NO. B18 OF B30 SHEETS

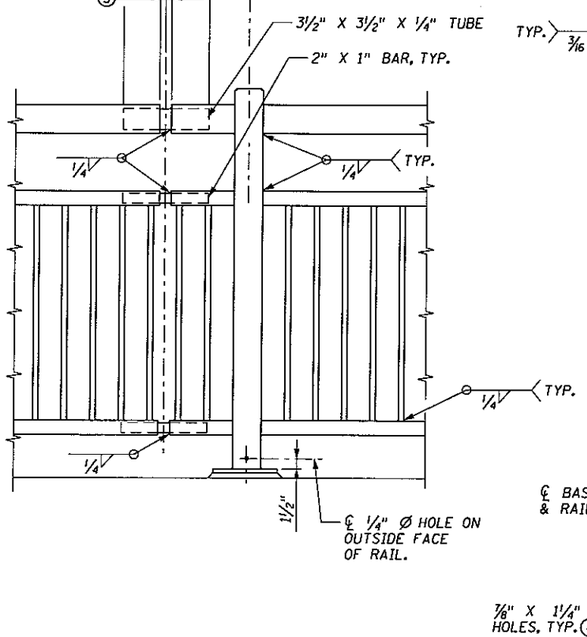
BRIDGE NO. 55573



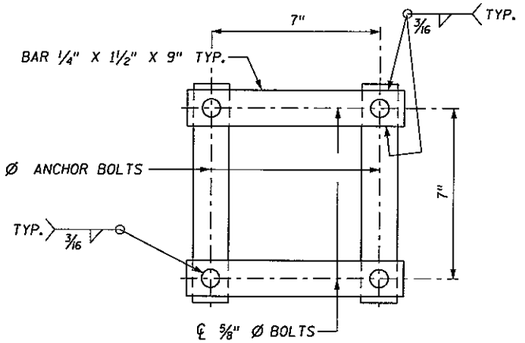
ELEVATION TYPE 1 RAILING



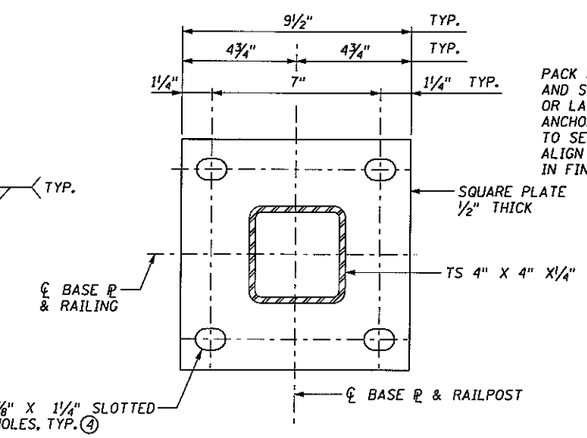
SECTION TYPE 1 RAILING



RAILING DEFLECTION JOINT DETAIL



SECTION A-A



BASE PLATE

NOTE:

ALL STRUCTURAL STEEL TUBING IN RAIL SHALL BE MN/DOT 3361.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO SPEC. 3385, TYPE A. ALL OTHER STRUCTURAL STEEL PER SPEC. 3306. GALVANIZE BOLTS, NUTS AND WASHERS PER SPEC. 3392. GALVANIZE ALL OTHER STRUCTURAL STEEL PER SPEC. 3394 AFTER FABRICATION.

① ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT FOR THE RAILING, SET NORMAL TO GRADE. DRILLED IN CONCRETE ANCHORAGES MAY BE USED. IF DRILLED ANCHORAGES ARE USED, REINFORCING SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR ANCHORS. SEE SPECIAL PROVISIONS.

FABRICATION OF METAL RAIL SHALL VERIFY INPLACE ANCHOR BOLT LOCATIONS PRIOR TO FABRICATION OF RAIL IF CAST IN PLACE ANCHORAGES ARE USED.

HORIZONTAL RAILS SHALL BE PARALLEL TO THE EDGE OF SIDEWALK PROFILE.

RAIL DEFLECTION JOINTS SHALL BE PLACED IN THE RAILING PANEL AT BRIDGE EXPANSION JOINT AND AT INTERVALS NOT TO EXCEED 20 FEET ON THE BRIDGE SUPERSTRUCTURE.

THE RAILING, BASE PLATES, PROTRUDING PORTIONS OF BOLTS, NUTS AND WASHERS SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

THE LENGTH OF METAL RAILING FOR PAYMENT SHALL BE MEASURED BETWEEN THE CENTER OF THE RAIL END POSTS, AND SHALL INCLUDE ALL ITEMS SHOWN ON THIS SHEET.

GRIND ALL WELDS SMOOTH.

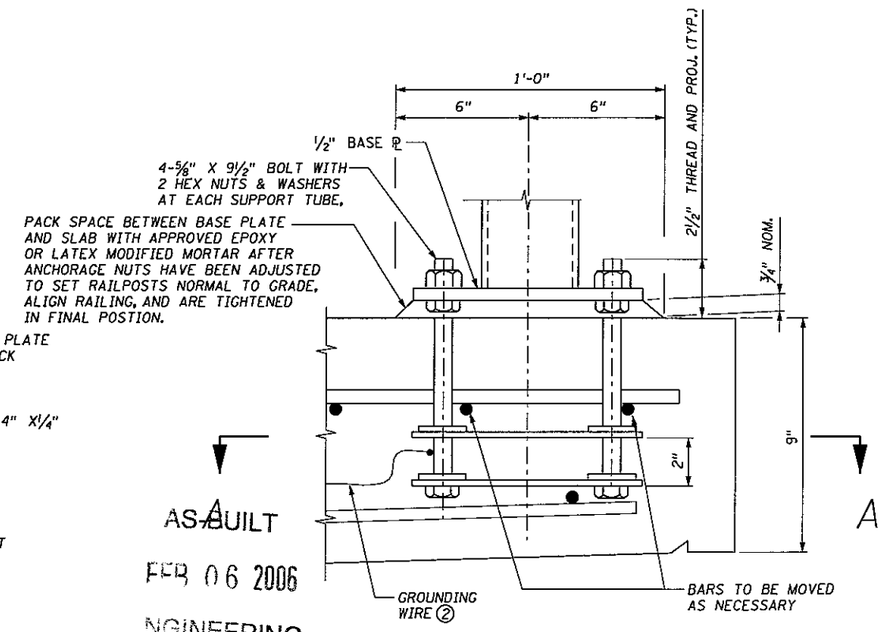
SEE BRIDGE DECK PLAN FOR POST SPACINGS.

SEE SPECIAL PROVISIONS FOR PAINT REQUIREMENTS.

② ATTACH RAIL ANCHORAGE TO PILE (1 EA. ABUT.) WITH A SOLID NO. 6 GAGE COPPER WIRE WITH AN APPROVED TYPE CLAMP OR BRAZING.

③ 1" AT DEFLECTION JOINTS AND VARIES AT EXPANSION JOINTS. (SHALL BE 1" LARGER THAN GAP IN BRIDGE EXPANSION JOINT.)

④ IF DRILLED ANCHORS ARE USED, USE 15/16" ROUND HOLES.



ANCHOR DETAIL ①

AS-BUILT
FEB 06 2006
NGINEERING

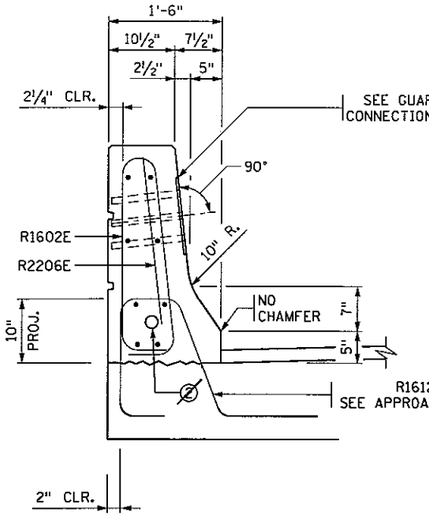
CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

TITLE: ORNAMENTAL METAL RAILING TYPE 1

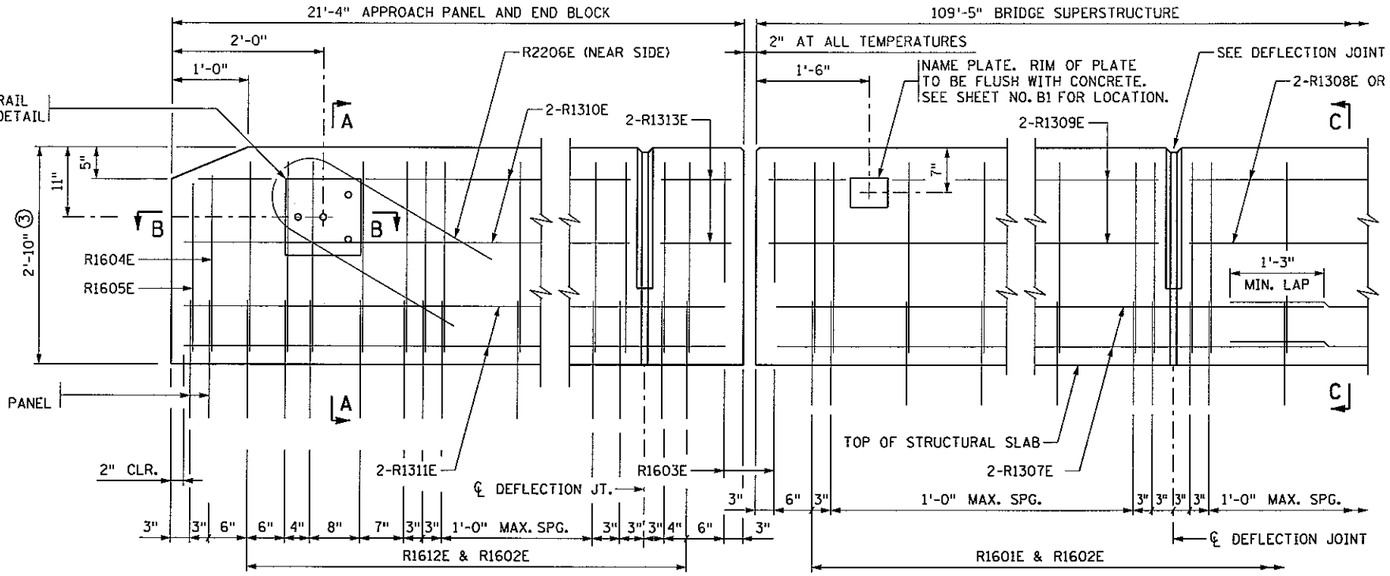
DES. RAB	DRN. GRF	APPROVED:
CHK. CGD	CHK. CGD	

S.A.P. 55-606-04
SHEET B19 OF B30 SHEETS

BRIDGE NO. 55573



SECTION A-A



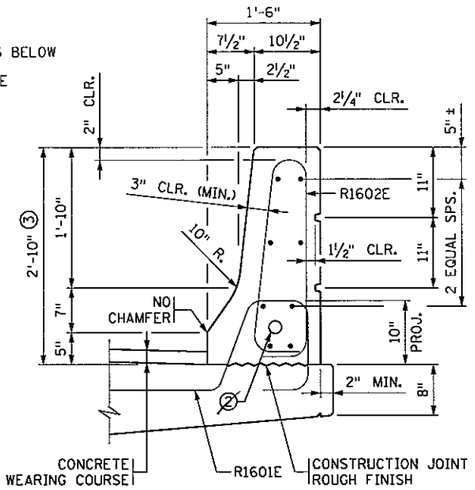
EXPANSION JOINT

(EXPANSION DEVICE NOT SHOWN)

DEFLECTION JOINT

INSIDE ELEVATION OF RAILING

(CONCRETE WEARING COURSE NOT SHOWN)



SECTION C-C

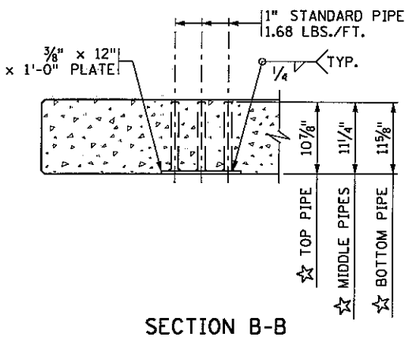
② ~~2" Ø R.S. CONDUIT (TELEPHONE) NORTH RAIL ONLY.~~

③ SEE SHEET B15 FOR RAIL HEIGHT AT EACH LOCATION.

BILL OF REINFORCEMENT FOR RAILING

	BAR	NO.	LENGTH	SHAPE	LOCATION
	R1601E	248	5'-3"		RAIL DOWEL
	R1602E	352	6'-6"		RAIL VERTICAL
	R1603E	8	4'-6"		RAIL VERTICAL
	R1604E	4	6'-0"		RAIL VERTICAL
	R1605E	4	5'-10"		RAIL VERTICAL
	R2206E	4	6'-6"		RAIL VERTICAL
①	R1307E	24	37'-3"		RAIL LONGITUDINAL
	R1308E	16	17'-8"		RAIL LONGITUDINAL
	R1309E	32	17'-10"		RAIL LONGITUDINAL
	R1310E	16	19'-7"		RAIL LONGITUDINAL
	R1311E	16	21'-0"		RAIL LONGITUDINAL
	R1612E	112	5'-10"		APPROACH DOWEL
	R1313E	16	11"		RAIL LONGITUDINAL

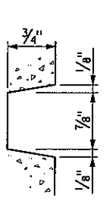
① 3 BARS PER LINE.



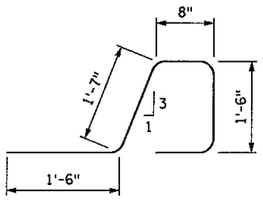
SECTION B-B

(REINFORCEMENT NOT SHOWN)

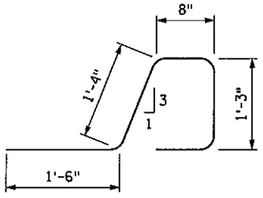
☆ DIMENSIONS INCLUDE ⅜" PLATE



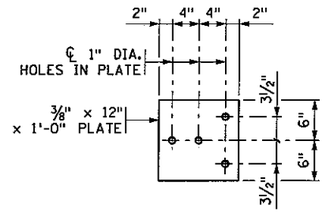
RAIL RUSTICATION



R1612E

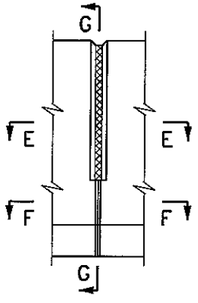


R1601E

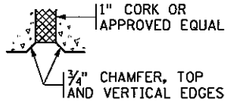


GUARDRAIL CONNECTION DETAIL

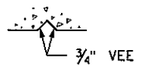
GALVANIZE AFTER FABRICATION PER Mn/DOT SPEC. 3394
ESTIMATED WEIGHT = 22 LBS



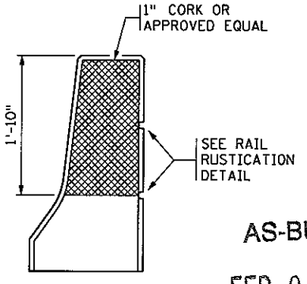
ELEVATION



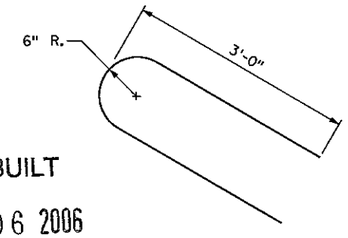
SECTION E-E



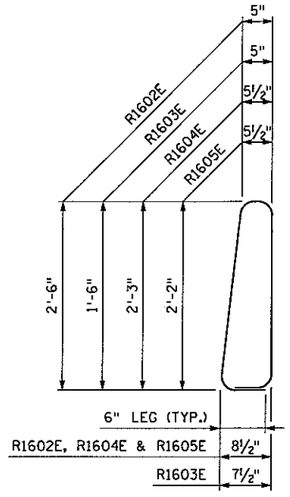
SECTION F-F



SECTION G-G



R2206E



R1602E, R1603E, R1604E & R1605E

GENERAL NOTES

LENGTH OF "TYPE F RAILING CONCRETE (3Y46A)" FOR PAYMENT SHALL BE MEASURED BETWEEN THE OUTSIDE FACES OF THE CONCRETE RAIL.

CONCRETE RAILING = 477 LBS./FT. (0.117 CU. YDS./FT.)

FINISH ALL EDGES OF RAIL WITH ½" VEE, EXCEPT WHERE OTHERWISE NOTED.

MAXIMUM SPACING OF CONCRETE DEFLECTION JOINTS SHALL BE 20 FT.

SEE SUPERSTRUCTURE SHEET FOR JOINT SPACING.

GUARDRAIL CONNECTION TO BE STRUCTURAL STEEL, Mn/DOT SPEC. 3306.

GUARDRAIL CONNECTION TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

RAIL QUANTITIES ARE INCLUDED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.

AS-BUILT

FEB 06 2006

ENGINEERING

DEFLECTION JOINT DETAILS

REVISION: 03-11-02

APPROVED: AUGUST 31, 1991

Donald J. Flemming

STATE BRIDGE ENGINEER

CERTIFIED BY Ronald Benson

PROFESSIONAL ENGINEER - RONALD BENSON

LIC. NO. 22737 10/24/2002

TITLE: CONCRETE RAILING (TYPE F) WITH INTEGRAL END POST (WITH CONCRETE WEARING COURSE)

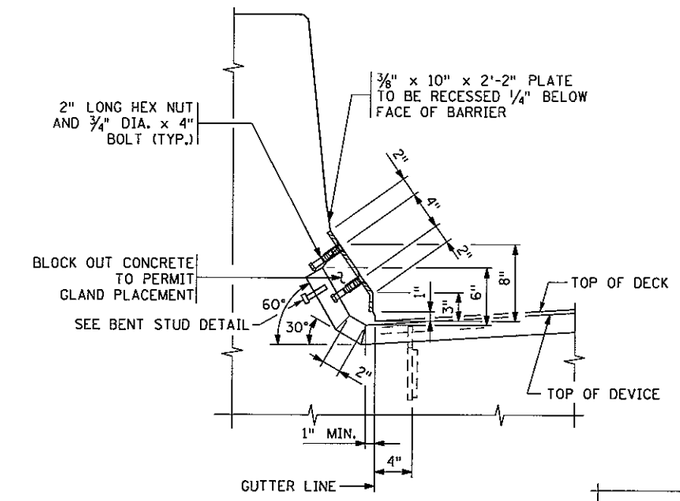
DES: RAB	DR: GRF	APPROVED: MODIFIED
CHK: CGD	CHK: CGD	

SHEET NO. B20 OF B30 SHEETS

S.A.P. 55-606-04

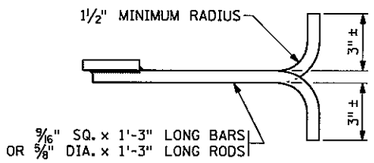
MODIFIED FIG. 5-397.117

BRIDGE NO. 55573

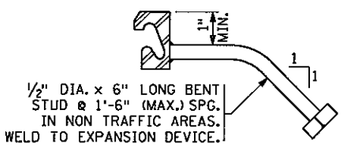


SECTION THROUGH RAILING

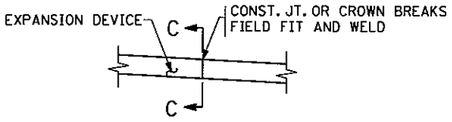
TYPE F RAILING



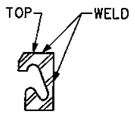
BAR-ROD DETAIL



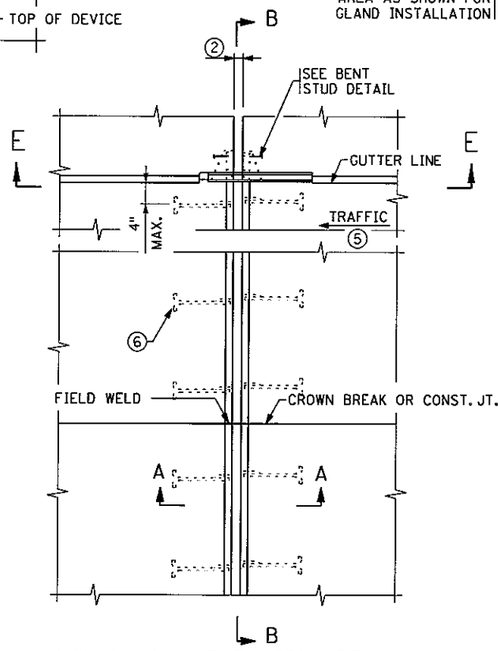
BENT STUD DETAIL



DETAIL "B"

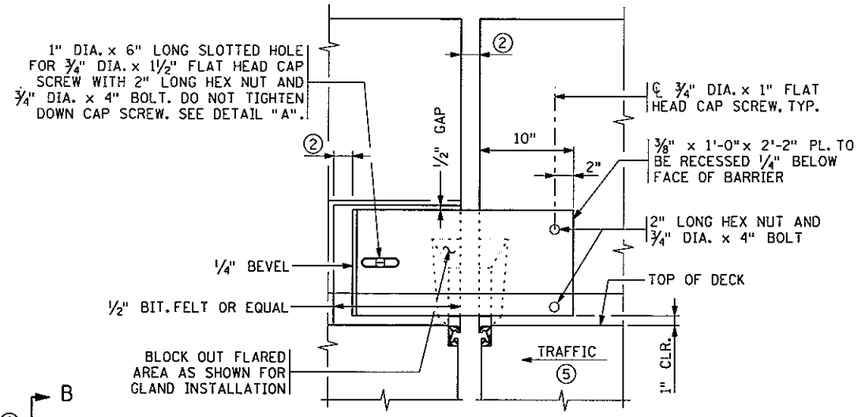


SECTION C-C

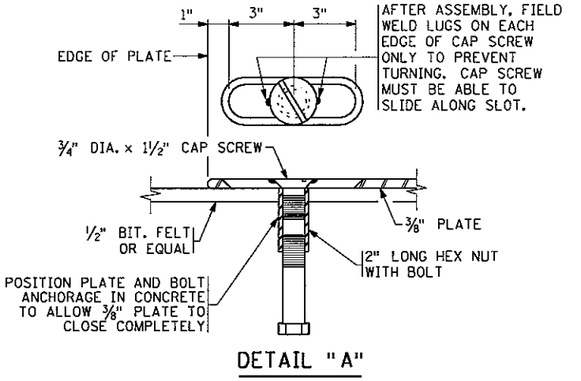


PLAN VIEW @ EXPANSION DEVICE

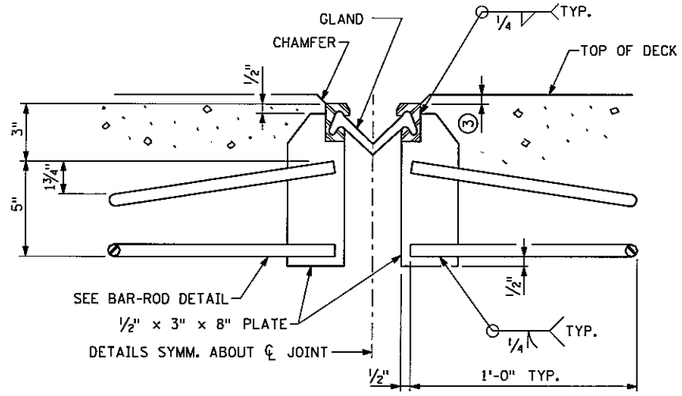
WITH STRAIGHT DEVICE



SECTION E-E
RAILING ELEVATION



DETAIL "A"



SECTION A-A

GENERAL NOTES

GALVANIZE STRUCTURAL STEEL AFTER FABRICATION AS PER MnDOT SPEC. 3394. GALVANIZE FASTENERS AS PER MnDOT SPEC. 3392.

JOINTS IN EXTRUSION SHALL BE LOCATED AT BREAKS IN TRANSVERSE PROFILE AND AS OTHERWISE REQUIRED. JOINTS SHALL BE CLOSE FIT AND WELDED. REPAIR AFTER WELDING AS PER MnDOT SPEC. 2471.3L.

STRUCTURAL STEEL SHALL COMPLY WITH MnDOT SPEC. 3306 OR MnDOT SPEC. 3309.

EXPANSION DEVICE SHALL BE STRAIGHTENED TO A TOLERANCE OF ⅛" IN 10 FT.

CAP SCREWS SHALL BE COUNTERSUNK 1/16" BELOW TOP OF PLATE.

LENGTH OF PAYMENT FOR DEVICE IS FROM OUT TO OUT OF EXTRUSION ALONG CENTERLINE OF JOINT.

PAYMENT FOR "WATERPROOF EXPANSION DEVICE, TYPE 4.0" INCLUDES ALL MATERIAL SHOWN ON FIGURES 5-397.627 AND 5-397.630.

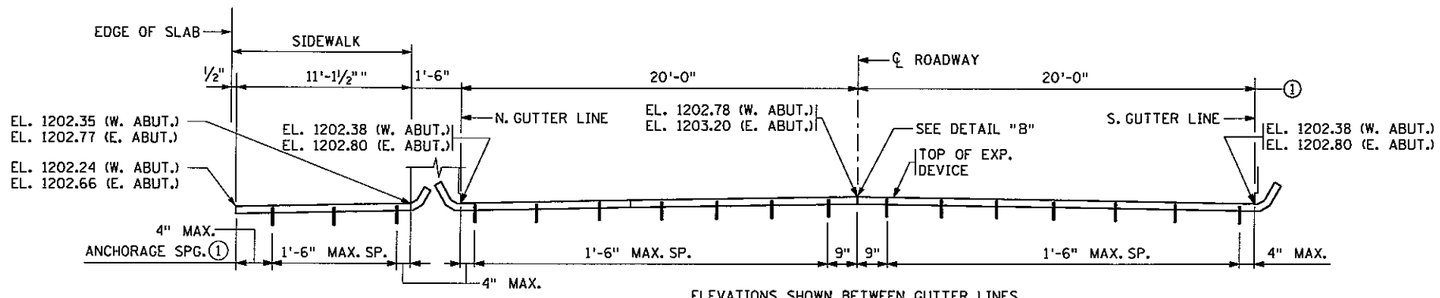
① DIMENSIONS ARE ALONG CENTERLINE OF JOINT.

② 2" AT ALL TEMPS.

③ ⅛" (¼" MAX.).

⑤ SEE SHEET NO. B1 FOR DIRECTION OF TRAFFIC.

⑥ PLACE BAR-ROD NORMAL TO JOINT ON NEW BRIDGES AND JOINT REPLACEMENTS.



SECTION B-B ~ ALONG ℄ JOINT

(LOOKING DOWN STATION)

AS-BUILT

FEB 06 2006

ENGINEERING

REVISION: 05-01-00

APPROVED: NOVEMBER 6, 1995

Donald J. Flemming
STATE BRIDGE ENGINEER

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

TITLE: WATERPROOF EXPANSION DEVICE
WITH TYPE MOD. P-2 BARRIER

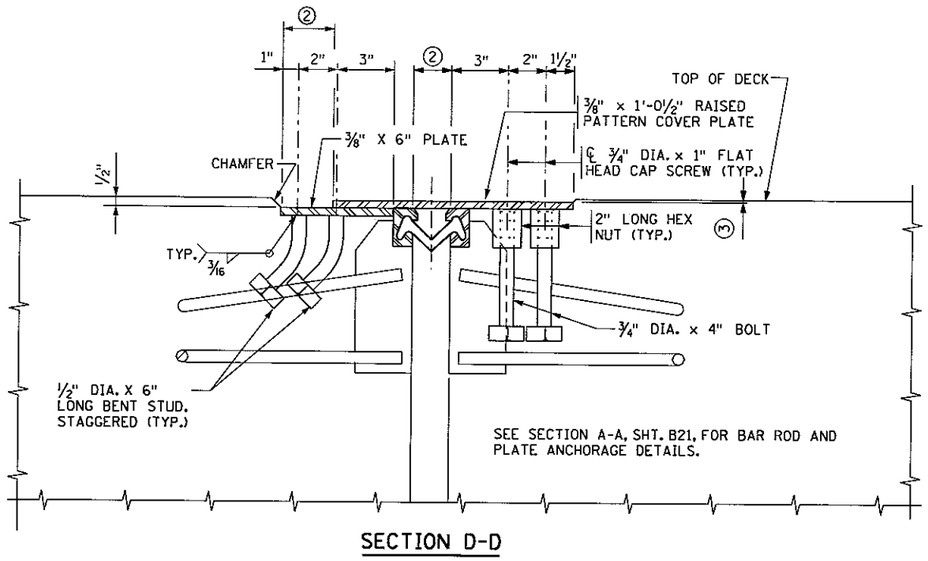
DES: RAB	DR: GRF	APPROVED: MODIFIED
CHK: CGD	CHK: CGD	

S.A.P. 55-606-04

MOD. FIG. 5-397.627

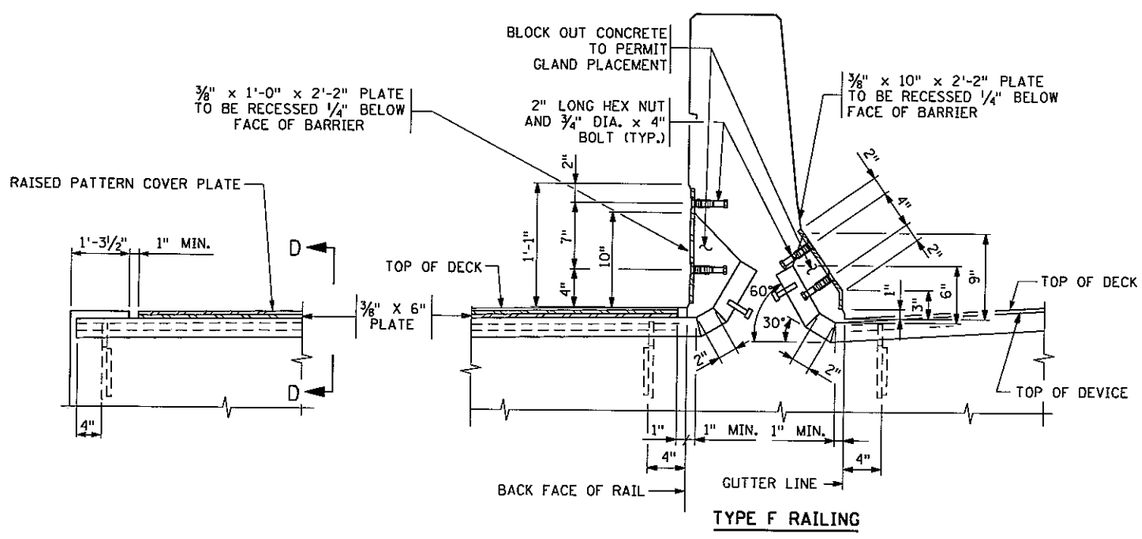
BRIDGE NO. 55573

SHEET NO. B21 OF B30 SHEETS



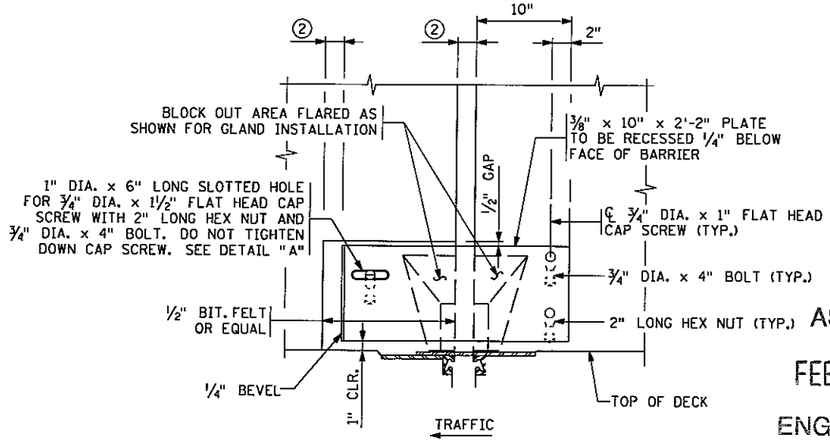
SECTION D-D

NOTE:
TRANSVERSE DECK REINFORCEMENT MAY BE SHIFTED THE MINIMUM DISTANCE REQUIRED FOR EXPANSION DEVICE PLACEMENT



TYPE F RAILING

SECTION THROUGH RAILINGS - INTEGRAL SIDEWALK



INSIDE ELEVATION
(CONCRETE PARAPET RAILING & BACK OF TYPE F RAIL)

AS-BUILT

FEB 06 2006

ENGINEERING

GENERAL NOTE

SEE DETAIL 5-397.627 FOR ADDITIONAL DETAILS AND NOTES.

REVISION: 09-29-00

APPROVED: NOVEMBER 6, 1995
Donald J. Manning
STATE BRIDGE ENGINEER

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

TITLE: WATERPROOF EXPANSION DEVICE
WITH RAISED MEDIAN OR SIDEWALK

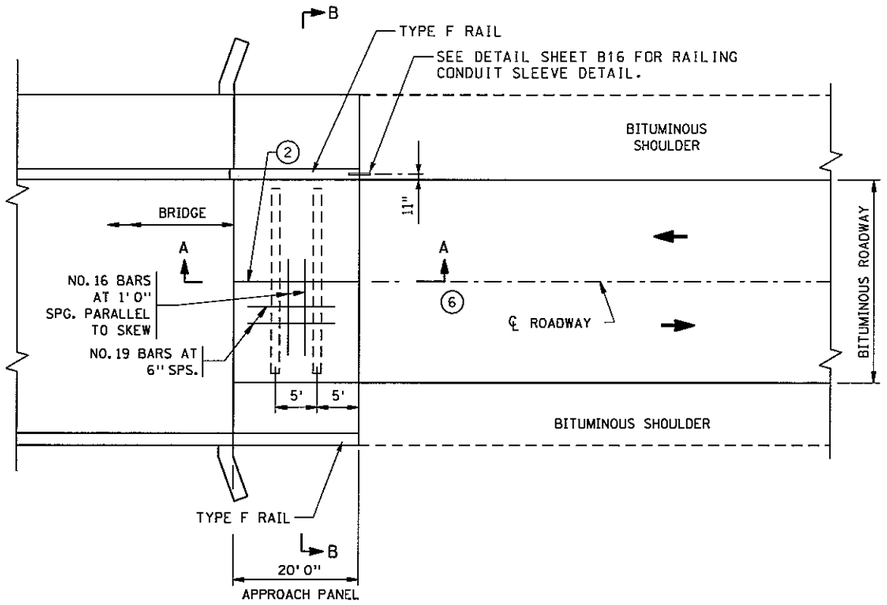
S.A.P. 55-606-04

DES: RAB	DR: GRF	APPROVED: MODIFIED
CHK: CGD	CHK: CGD	

SHEET NO. B22 OF B30 SHEETS

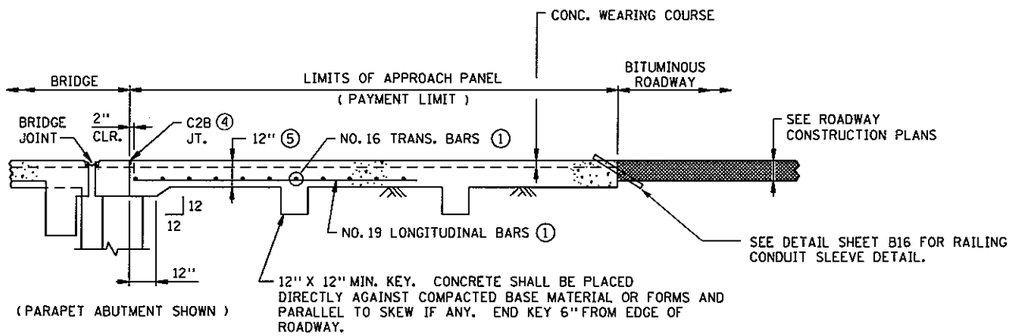
MOD. FIG. 5-397.630

BRIDGE NO. 55573



ROADWAY PLAN

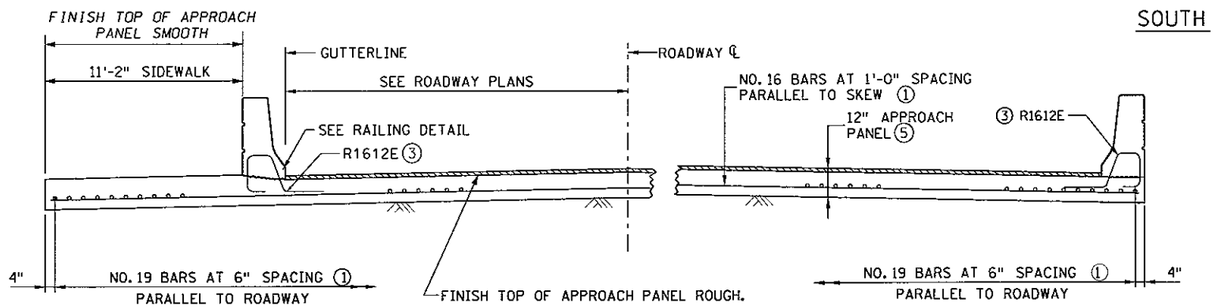
PARALLEL & NONPARALLEL WINGWALLS



SECTION A-A

(SOME REINFORCEMENT NOT SHOWN)

NORTH



SOUTH

SECTION B-B

(SEE ROADWAY PLAN VIEW)

NOTE:

RAIL CONCRETE INCLUDED IN PRICE BID FOR "TYPE F RAILING CONCRETE (3Y46A)".

RAILING REINFORCEMENT INCLUDED IN SUPERSTRUCTURE QUANTITES IN PRICE BID FOR "REINFORCEMENT BARS(EPOXY COATED)".

APPROACH PANEL CONCRETE TO BE 3X42.

APPROACH PANEL REINFORCING INCLUDED IN PRICE BID FOR"APPROACH PANELS".

NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

① ALL REINFORCEMENT IN APPROACH PANEL, SILL AND SIDEWALK SHALL BE GRADE 60 AND EPOXY COATED AS PER SPEC. 3301.

② L2KT OR L1T LONGITUDINAL JOINTS AS REQUIRED BEFORE AND AFTER CONCRETE OVERLAY IS APPLIED. SEE STANDARD PLANS MANUAL - PAVEMENT JOINT SHEET (5-297.221) FOR DETAILS.

③ SEE SHEET B20 FOR REQUIREMENTS AND SPACING.

④ SEE STANDARDS PLAN MANUAL PAVEMENT JOINT SHEET (5-297.221) FOR DETAILS.

⑤ 12" INCLUDES 2" CONCRETE WEARING COURSE. APPROACH SLAB THICKNESS SHOWN INCLUDES ANY CONCRETE OVERLAY THAT MAY BE REQUIRED. SEE BRIDGE PLANS FOR REQUIREMENTS. CONCRETE OVERLAYS TO BE INCLUDED IN BRIDGE QUANTITIES AND DONE AT THE SAME TIME BY BRIDGE CONTRACTOR.

⑥ SEE PLAN SHEET B1 FOR BRIDGE APPROACH ROADWAY INFORMATION.

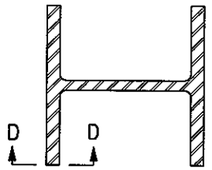
AS-BUILT

FEB 06 2006

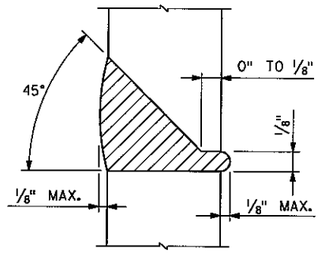
ENGINEERING

CERTIFIED BY *Ronald Benson*
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

STANDARD SHEET NO. MOD. 5-297.229	TITLE: BRIDGE APPROACH PANEL BITUMINOUS MAINLINE - JOINT AT ABUTMENT SQUARE TO 10° SKEWS	BRIDGE NO. 55573
STANDARD APPROVED: NOVEMBER 9, 1999		
REVISION DATE 2-7-2000	STATE AID PROJ. 55-606-04 DES: RAB CHK: CGD DR: GRF CHK: CGD	SHEET NO. B23 OF B30 SHEETS



SECTION AT JOINT



SECTION D-D

100% BUTT WELDED PILE SPLICE

NOTES:

A.W.S. TYPE E7016 OR E7018 (LOW-HYDROGEN) ELECTRODES SHALL BE USED FOR 100% BUTT WELDED SPLICES.

LOW-HYDROGEN ELECTRODES SHALL BE SUPPLIED IN HERMETICALLY (AIR-TIGHT) SEALED CONTAINERS.

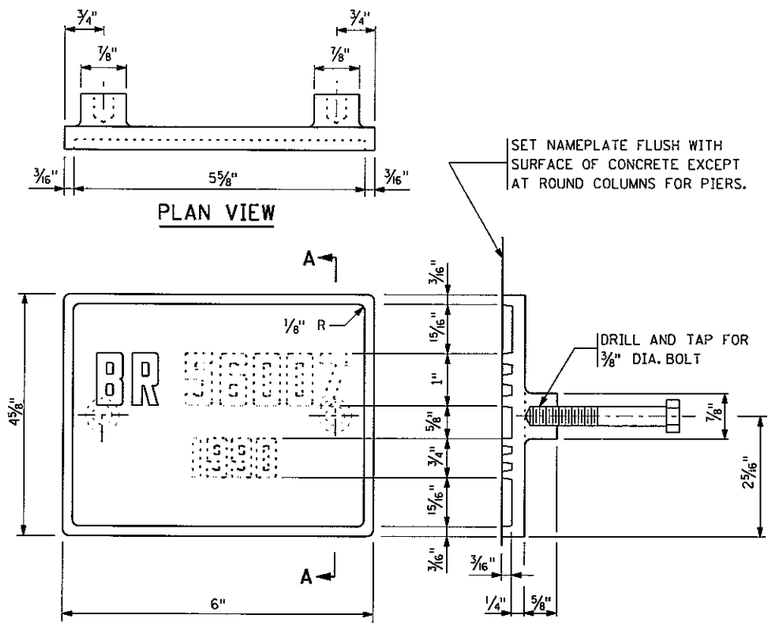
LOW-HYDROGEN ELECTRODES SHALL BE STORED IN HOLDING OVENS AT A TEMPERATURE OF NOT LESS THAN 250°F.

LOW-HYDROGEN ELECTRODES SHALL BE PLACED IN A HOLDING OVEN FOR AT LEAST 8 HOURS IF THEY HAVE BEEN EXPOSED TO THE ATMOSPHERE FOR MORE THAN 2 HOURS.

ELECTRODES WHICH HAVE 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. AND MAINTAINED AT THIS TEMPERATURE DURING WELDING.

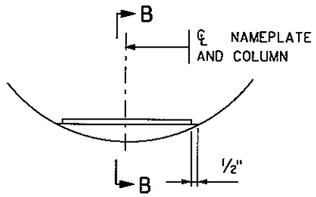
APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Donald J. Flemming STATE BRIDGE ENGINEER	PILE SPLICE (STEEL H BEARING PILES 10" TO 14")		B202



THE DASHED NUMBERS SHOWN ABOVE ARE FOR ILLUSTRATION.
DATA TO BE SHOWN ON NAMEPLATE IS AS FOLLOWS:

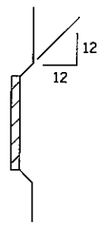
BRIDGE 55573

YEAR 2003



NAMEPLATE PLACEMENT

(ROUND CONCRETE PIER COLUMNS)



SECTION B-B



NUMBERS FOR NAMEPLATE

AS-BUILT

FEB 06 2006

ENGINEERING

NOTES:

NO SHOP DRAWING REQUIRED.

MATERIAL SHALL COMPLY WITH Mn/DOT SPEC. 3327.

LETTERS AND NUMBERS SHALL CONFORM TO THOSE SHOWN.

DRAFT ON LETTERS AND NUMBERS SHALL NOT BE MORE THAN 3" IN 12".

HORIZONTAL SPACING OF LETTERS AND NUMBERS SHALL PRODUCE A BALANCED LAYOUT IN PROPORTION TO SPACING SHOWN.

TOP SURFACE OF LETTERS, NUMBERS AND FRAMES SHALL BE BURNISHED.

FURNISH 2 STEEL BOLTS 3/8" DIA. 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.

APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Donald J. Flemming STATE BRIDGE ENGINEER	BRIDGE NAMEPLATE (FOR NEW BRIDGES)		B101

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

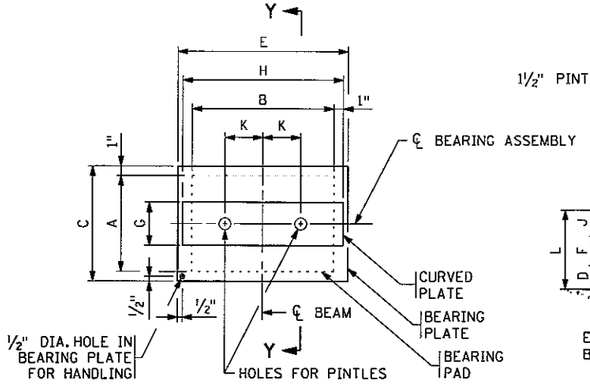
TITLE: STANDARD DETAILS

DES. RAB	DRN. GRF	APPROVED:
CHK. CGD	CHK. CGD	

S.A.P. 55-606-04

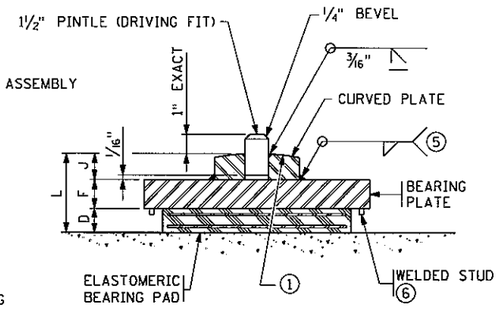
SHEET B24 OF B30 SHEETS

BRIDGE NO. 55573



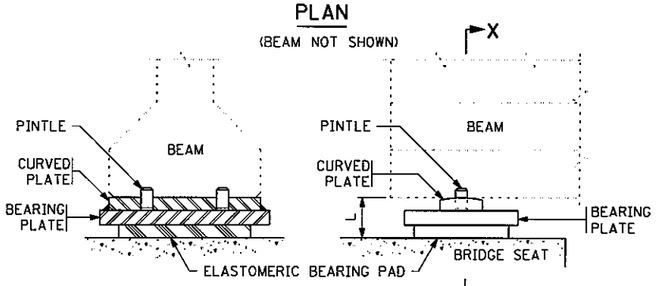
PLAN

(BEAM NOT SHOWN)



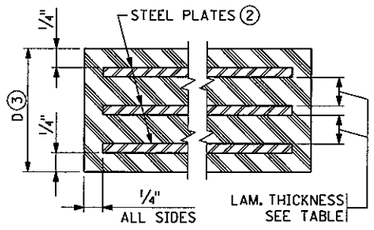
SECTION Y-Y

(ENLARGED BEARING ASSEMBLY)



SECTION X-X

END ELEVATION



SECTION THRU BEARING PAD

TABLE

ASSEMBLY TYPE	LOCATION	BEAM SIZE	BEARING PAD SIZE A	B	D	STEEL PLATES NO.	THICK.	LAMINATES NO.	THICK.	SHAPE FACTOR	BEARING PLATE SIZE C	E	F	CURVED PLATE SIZE G	H	J	PINTLE DIA.	PINTLE DISTANCE K ④	ASSY. HEIGHT L
E2	ABUTMENTS	27	10	24	1⅛	2	⅛	1	⅜	9.4	12	27	1⅛	4½	26	1⅜	1½	8	3⅝

NOTES:

ELASTOMERIC MATERIALS & PAD CONSTRUCTION SHALL COMPLY WITH Mn/DOT SPEC. 3741.

ALL STEEL PLATES SHALL COMPLY WITH Mn/DOT SPEC. 3306

PINTLES SHALL COMPLY WITH Mn/DOT SPEC. 3309.

GALVANIZE STRUCTURAL STEEL BEARING ASSEMBLY AFTER FABRICATION PER Mn/DOT SPEC. 3394, EXCEPT AS NOTED.

PAYMENT FOR BEARING ASSEMBLY SHALL INCLUDE ALL MATERIAL ON THIS DETAIL.

① THE RADIUS OF THE CURVED PLATE SHALL BE 1'-4" MINIMUM AND 2'-0" MAXIMUM. FINISH TO 250 MICRO. THE FINISHED THICKNESS OF THE PLATE MAY BE 1/16" LESS THAN SHOWN.

② DO NOT GALVANIZE THESE PLATES.

③ THE TOTAL THICKNESS SHOWN INCLUDES THE STEEL PLATES.

④ SEE DETAIL B303 FOR PINTLE DISTANCE K.

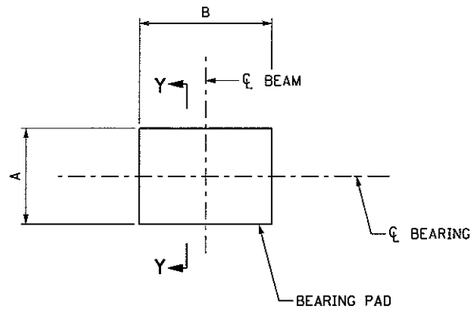
⑤ WELDING PER Mn/DOT SPEC. 2471.

⑥ 5/16" DIA. x ⅜" KNOCK-OFF WELD STUDS INSTALLED ON BEARING PLATE AROUND PERIMETER OF BEARING PAD. CENTERLINE STUD TO EDGE OF PAD DIMENSION = ½", MAX. STUD SPACING = 4".

DESIGN DATA:

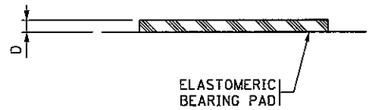
MAXIMUM HORIZONTAL LOAD IS 70 KIPS FOR 1½" PINTLES.

APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Donald J. Flemming STATE BRIDGE ENGINEER	CURVED PLATE BEARING ASSEMBLY (PRESTRESSED CONCRETE BEAMS) (EXPANSION)		B311



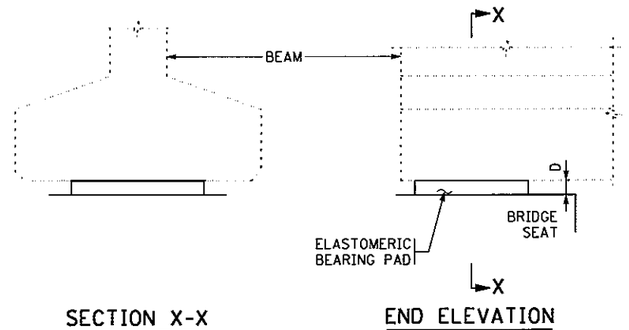
PLAN

(BEAM NOT SHOWN)



SECTION Y-Y

(ENLARGED)



SECTION X-X

END ELEVATION

TABLE

PAD TYPE	LOCATION	BEAM SIZE	BEARING PAD SIZE A	B	D	SHAPE FACTOR	BEARING PLATE SIZE C	E	F	CURVED PLATE SIZE G	H	J	PINTLE DIA.	PINTLE DISTANCE K ④	ANCHOR ROD OFFSET M ②	ASSY. HEIGHT L
F1	PIERS	27	10	24	½	7.1										

NOTES:

ELASTOMERIC MATERIALS AND PAD CONSTRUCTION SHALL COMPLY WITH Mn/DOT SPEC. 3741.

PAYMENT FOR ELASTOMERIC BEARING PADS SHALL INCLUDE ALL MATERIAL ON THIS DETAIL.

SEE DETAIL B303 FOR SOLE PLATE.

AS-BUILT

FEB 06 2006

ENGINEERING

	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
	ELASTOMERIC BEARING PAD (PRESTRESSED CONCRETE BEAMS) (FIXED)		MODIFIED B310

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/2002

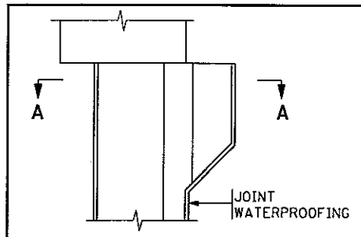
TITLE: STANDARD DETAILS

DES. RAB	DRN. GRF	APPROVED:
CHK. CGD	CHK. CGD	

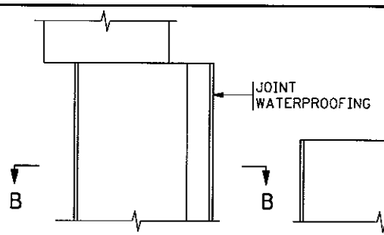
S.A.P. 55-606-04

SHEET B25 OF B30 SHEETS

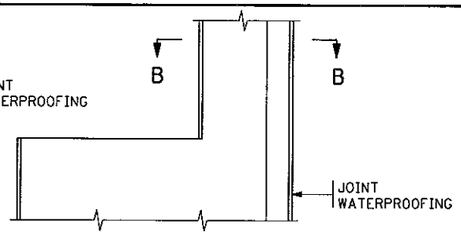
BRIDGE NO. 55573



SECTION THRU WALL

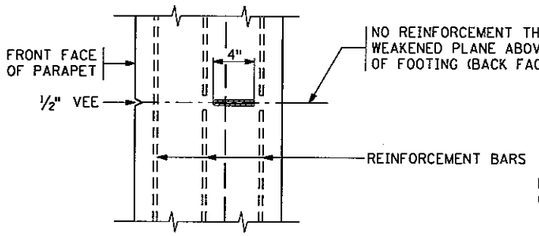


SECTION THRU WALL

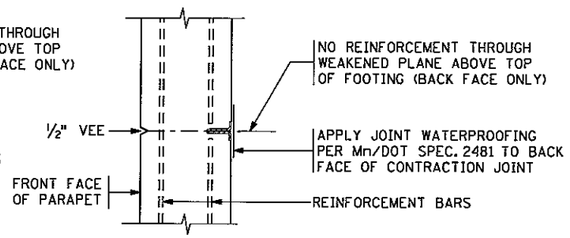


SECTION THRU BRIDGE SEAT

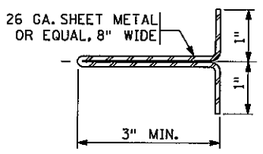
PART SECTION THRU ABUTMENT AT JOINT



SECTION A-A



SECTION B-B



BACK STRIP

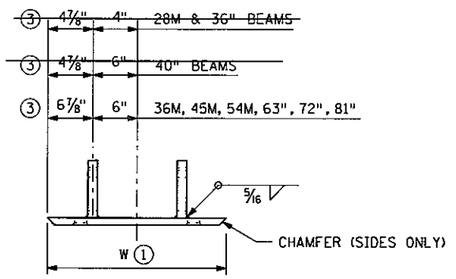
NOTES:

THE METHODS AND MATERIALS INDICATED ON THIS SHEET SHALL BE CONSIDERED AS SUGGESTED ONLY. VARIATIONS WILL BE PERMITTED, SUBJECT TO APPROVAL BY THE ENGINEER, BUT MUST PROVIDE DUMMY JOINTS OF A DEPTH SHOWN. THE SEPARATION OF THE HORIZONTAL REINFORCEMENT BARS IN THE BACK OF THE PARAPET AND BACK FACE OF THE ABUTMENT SHALL NOT BE LESS THAN 1½" NOR MORE THAN 3", CENTERED AS SHOWN, REGARDLESS OF THE PROCEDURE USED FOR FORMING THE DUMMY JOINT.

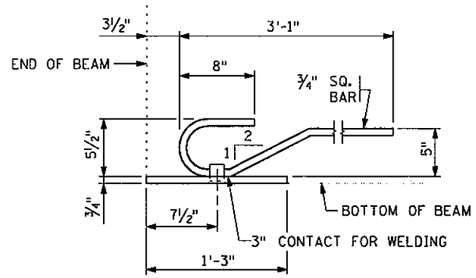
THE BACK STRIP MAY BE GALVANIZED METAL, A SUITABLE PLASTIC, OR OTHER DURABLE MATERIAL SATISFACTORY TO THE ENGINEER. THE BACK STRIP SHALL REMAIN IN PLACE AFTER THE FORMS ARE REMOVED.

THE COST OF FORMING THE JOINT SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS.

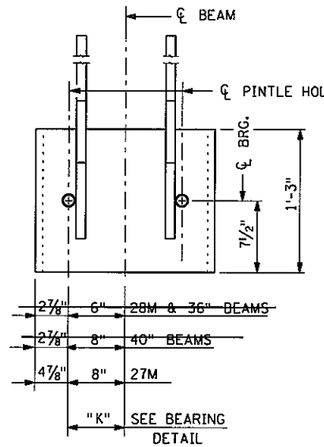
APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Donald J. Flemming STATE BRIDGE ENGINEER	CONTRACTION JOINT		B801



FRONT VIEW

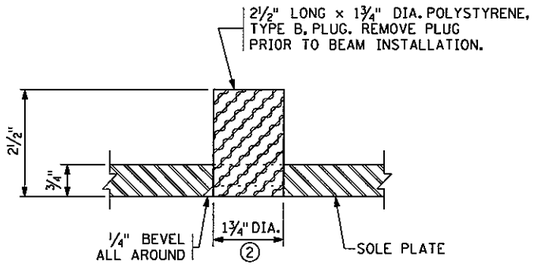


SIDE VIEW



TOP VIEW

BEAM SIZE	① W VALUE (In.)
~~28M,36"~~	~~1'-5¾"~~
~~40"~~	~~1'-9¾"~~
27M	2'-1¾"



PINTLE HOLE DETAIL

NOTES:

MATERIAL TO BE STRUCTURAL STEEL PER Mn/DOT SPEC. 3306.

SOLE PLATE FOR BEARING ASSEMBLY TO BE HOT DIPPED GALVANIZED PER Mn/DOT 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.

① DIMENSION "W" TO BE THE WIDTH AT THE BOTTOM FLANGE OF THE BEAM MINUS ¼".

② FOR 1½" DIA. PINTLES.

③ THESE DIMENSIONS MAY BE MODIFIED TO CLEAR PRESTRESSED STRANDS. HOWEVER, CHANGES MUST BE APPROVED BY THE ENGINEER.

AS-BUILT

FEB 06 2006

ENGINEERING

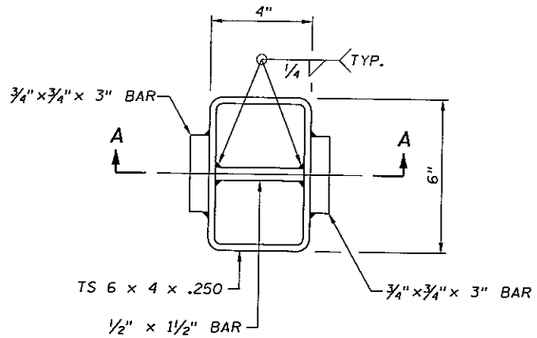
APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
Donald J. Flemming STATE BRIDGE ENGINEER	SOLE PLATE (PRESTRESSED CONCRETE BEAMS) (FOR BEARINGS WITH PINTLES)		MODIFIED B303

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER - RONALD BENSON
LIC. NO. 22737 10/24/ 2002

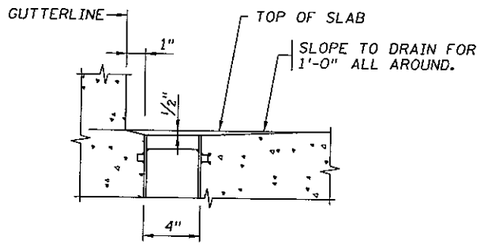
TITLE: STANDARD DETAILS

DES. RAB	DRN. GRF	APPROVED:
CHK. CGD	CHK. CGD	
S.A.P. 55-606-04		
SHEET B26 OF B30 SHEETS		

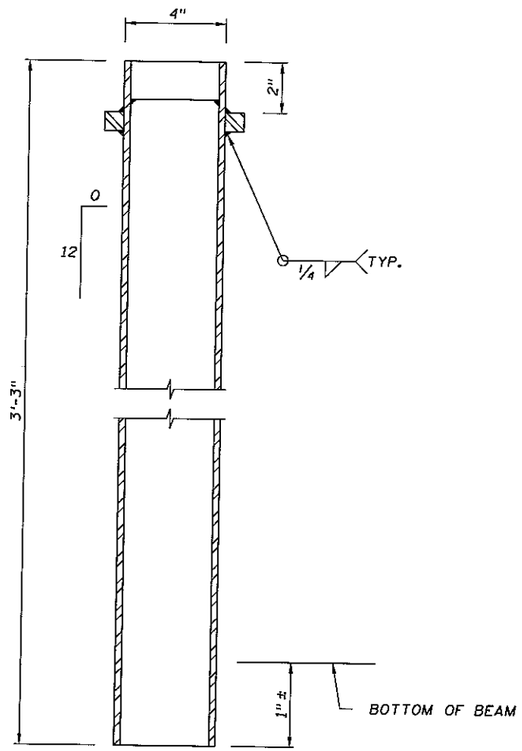
BRIDGE NO. 55573



PLAN VIEW



PLACEMENT DIAGRAM



SECTION A-A

NOTES:

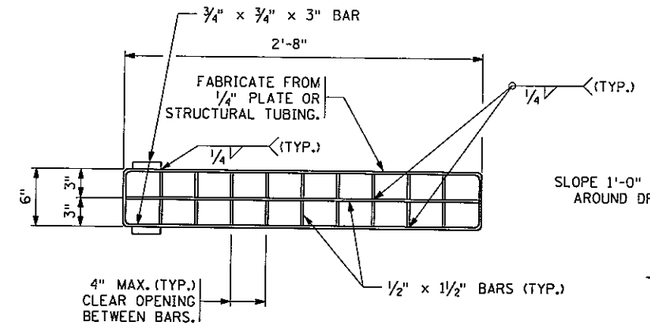
MATERIAL TO BE STRUCTURAL STEEL PER Mn/DOT SPEC. 3306.

GALVANIZE BOLTS AND WASHER PER Mn/DOT SPEC. 3392.

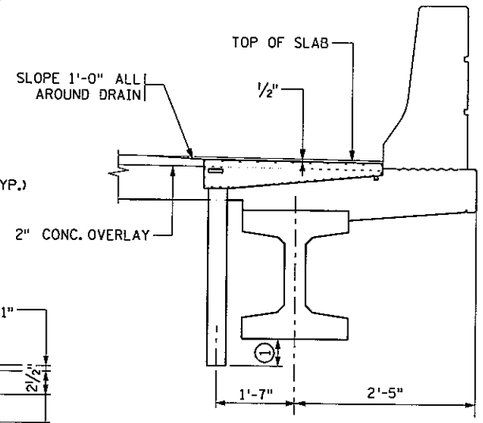
GALVANIZE OTHER MATERIALS PER Mn/DOT SPEC. 3394 AFTER FABRICATION.

PAYMENT FOR FLOOR DRAIN TYPE B702 MOD. SHALL INCLUDE ALL MATERIAL SHOWN ON THIS DETAIL.

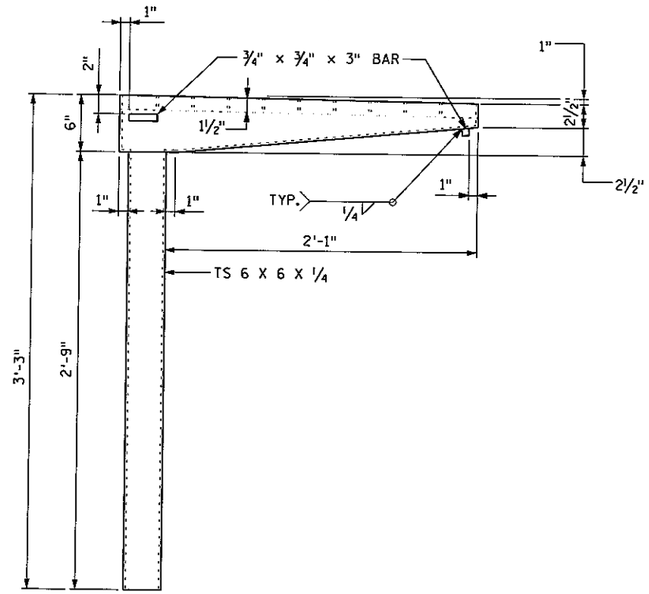
APPROVED: JULY 30, 1999 Donald J. Flemming STATE BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION BRIDGE FLOOR DRAIN (STRUCTURAL DRAIN)	REVISIONS	DETAIL NO. B702 MODIFIED



PLAN



FLOOR DRAIN PLACEMENT DIAGRAM



ELEVATION

NOTES:

MATERIAL TO BE STRUCTURAL STEEL PER Mn/DOT SPEC. 3306.

GALVANIZE MATERIAL PER Mn/DOT SPEC. 3394 AFTER FABRICATION.

PAYMENT FOR FLOOR DRAIN TYPE B706 (MOD.) SHALL INCLUDE ALL MATERIAL SHOWN ON THIS DETAIL.

① 1"± BELOW BOTTOM OF BEAM.

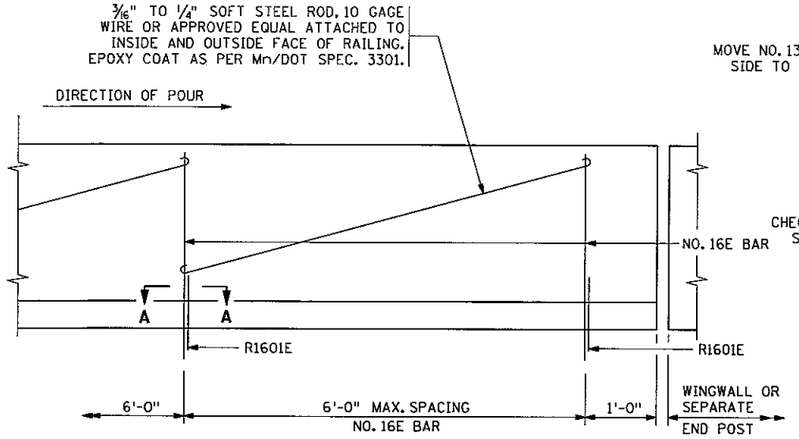
AS-BUILT

FEB 06 2006

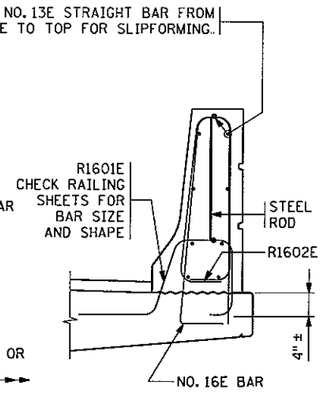
ENGINEERING

APPROVED: JULY 30, 1999 Donald J. Flemming STATE BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION BRIDGE OFFSET FLOOR DRAIN (STRUCTURAL TUBE)	REVISION	DETAIL NO. B706 MODIFIED

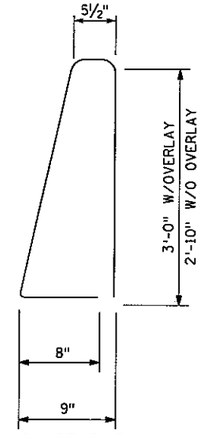
CERTIFIED BY Ronald Benson PROFESSIONAL ENGINEER – RONALD BENSON LIC. NO. 22737 10/24/2002	TITLE: STANDARD DETAILS	DES. RAB / DRN. GRF / CHK. CGD / CHK. CGD / APPROVED: S.A.P. 55-606-04 SHEET B27 OF B30 SHEETS	BRIDGE NO. 55573



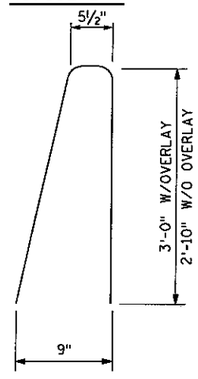
INSIDE ELEVATION OF RAILING



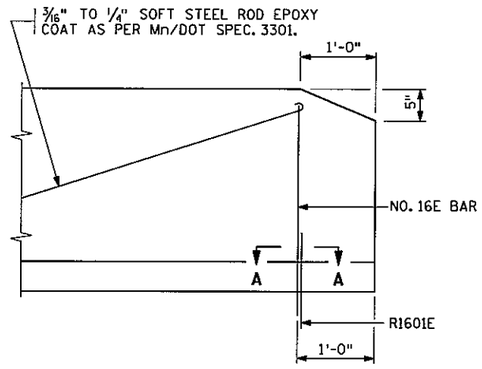
RAILING SECTION



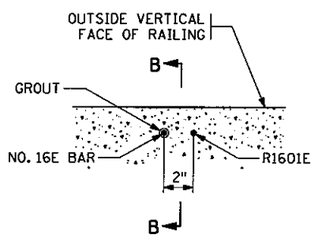
NO. 16E BAR



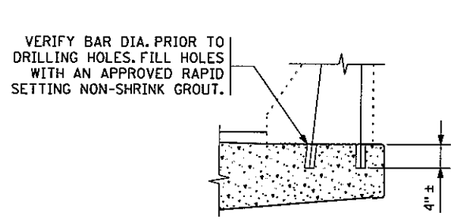
NO. 16E BAR
DRILLED IN ALTERNATE



INSIDE ELEVATION OF RAILING
AT END OF WINGWALL



SECTION A-A



SECTION B-B

INSTALLATION DETAILS
FOR NO. 16E (DRILLED IN ALTERNATE)

NOTES:

CONTRACTOR WILL TOOL V-GROOVE AT DEFLECTION JOINTS AT TIME RAIL IS CAST AND SHALL EXTEND V-GROOVE AROUND ENTIRE PERIMETER OF RAIL.

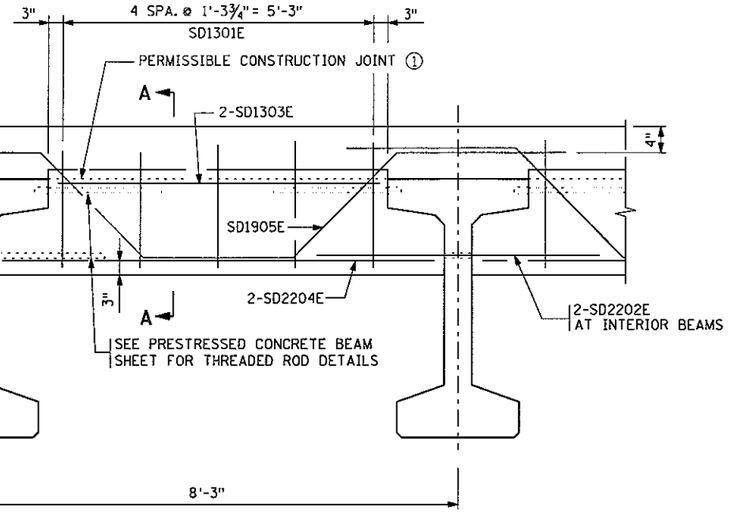
FOR ADDITIONAL DIMENSIONS, DETAILS, REINFORCEMENT AND NOTES SEE RAILING SHEET.

FORM RAIL FOR A MINIMUM OF 4' ON EACH SIDE OF EXPANSION DEVICES, LIGHT STANDARDS AND DECK DRAIN BOX OUTS.

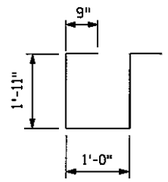
PAY QUANTITIES WILL NOT BE ADJUSTED AS A RESULT OF SELECTING THIS ALTERNATE.

USE A SIMILAR METHOD FOR TALLER RAILINGS OR MODIFIED VERSIONS OF THIS RAILING.

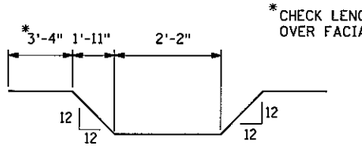
APPROVED: JULY 30, 1999 Donald J. Flemming STATE BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION CONCRETE RAILING (TYPE F) (SLIPFORM ALTERNATE)	REVISION	DETAIL NO. B830



PART TRANSVERSE SECTION
(L > 8' SHOWN)



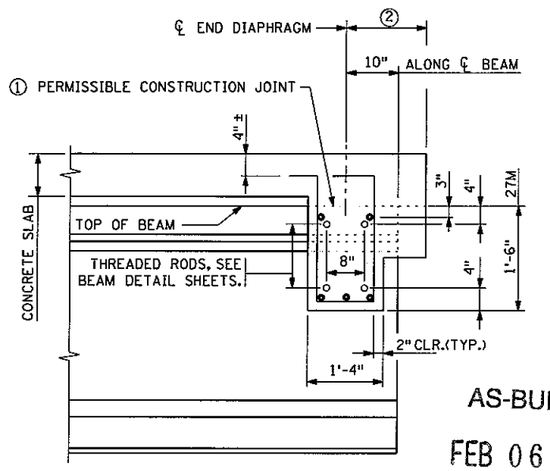
SD1301E



*CHECK LENGTH OVER FACIA BEAM

SD1905E
(IF L > 8')

LONGITUDINAL REINFORCEMENT IN BOTTOM OF DIAPHRAGM				
DISTANCE "L" ALONG ℄ OF DIAPHRAGM	BARS REQUIRED			
	STRAIGHT		BENT	
	NO.	SIZE	NO.	SIZE
UP TO 8'	2	19E	1	16E
OVER 8' TO 11'	2	22E	1	19E
OVER 11' TO 13'	2	25E	1	25E
OVER 13' TO 15'	2	29E	1	32E
OVER 15' TO 18'	2	36E	1	36E



SECTION A-A

BILL OF REINFORCEMENT FOR END DIAPHRAGM				
BAR	NO.	LENGTH	SHAPE	LOCATION
SD1301E	60	6'-4"	⊏⊐	VERTICAL TIE
SD2202E	20	5'-0"	——	LONG. THRU BEAM
SD1303E	24	5'-5"	——	LONG. TOP
SD2204E	24	7'-5"	——	LONG. BOTTOM
SD1905E	12	14'-3"	⌒	LONGITUDINAL

NOTES:

DIAPHRAGM CONCRETE TO BE MIX NO. 3Y43.

ALL DIAPHRAGM CONCRETE AND REINFORCEMENT BARS SHOWN ON THIS DETAIL TO BE INCLUDED IN PAYMENT FOR SUPERSTRUCTURE QUANTITIES.

THREADED RODS ARE INCLUDED IN PAYMENT FOR PRESTRESSED CONCRETE BEAMS.

① USE OF CONSTRUCTION JOINT REQUIRES CLEARANCE FOR EXPANSION DEVICE. WHEN CONSTRUCTION JOINT IS USED AT THIS LOCATION, DIAPHRAGM FALSEWORK SHALL REMAIN INPLACE UNTIL COMPLETION OF SLAB CURING PERIOD.

② PERPENDICULAR TO CENTERLINE OF DIAPHRAGM. SEE PLANS (SHEET B14) FOR DIMENSION.

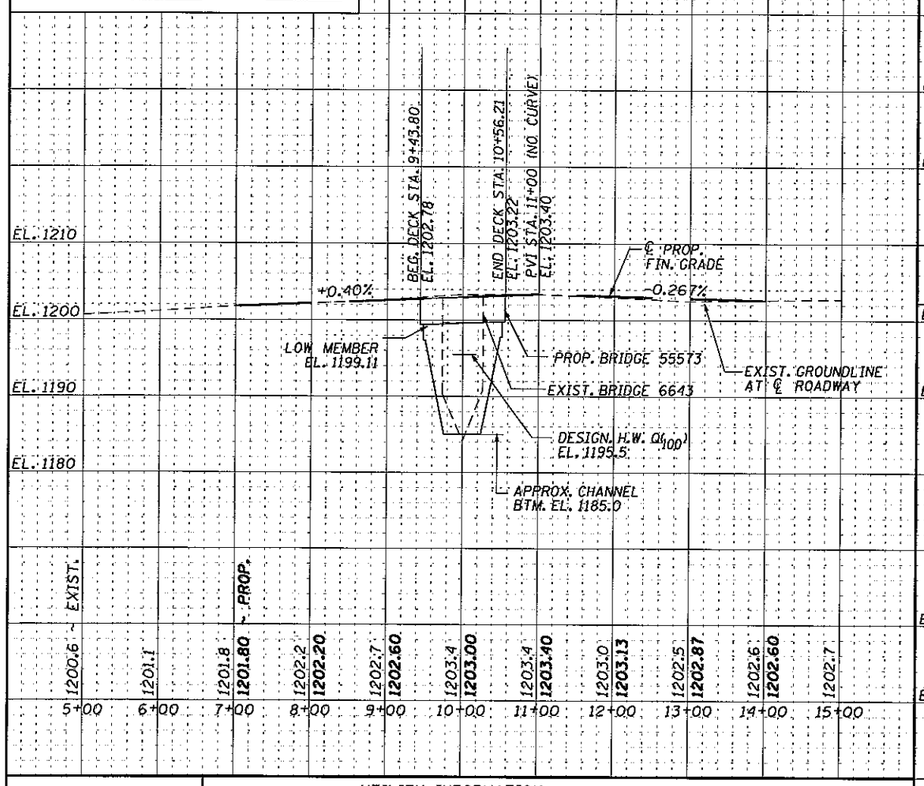
AS-BUILT
FEB 06 2006
ENGINEERING

APPROVED: JULY 30, 1999 Donald J. Flemming STATE BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION CONCRETE END DIAPHRAGM (27M, 36M, 45M - 54M PRESTRESSED CONCRETE BEAMS) (PARAPET ABUTMENT)	REVISION 01-20-00 IJh	DETAIL NO. MODIFIED B814

CERTIFIED BY Ronald Benson PROFESSIONAL ENGINEER - RONALD BENSON LIC. NO. 22737 10/24/2002	TITLE: STANDARD DETAILS	DES. RAB DRN. GRF APPROVED: CHK. CGD CHK. CGD S.A.P. 55-606-04 SHEET B28 OF B30 SHEETS	BRIDGE NO. 55573

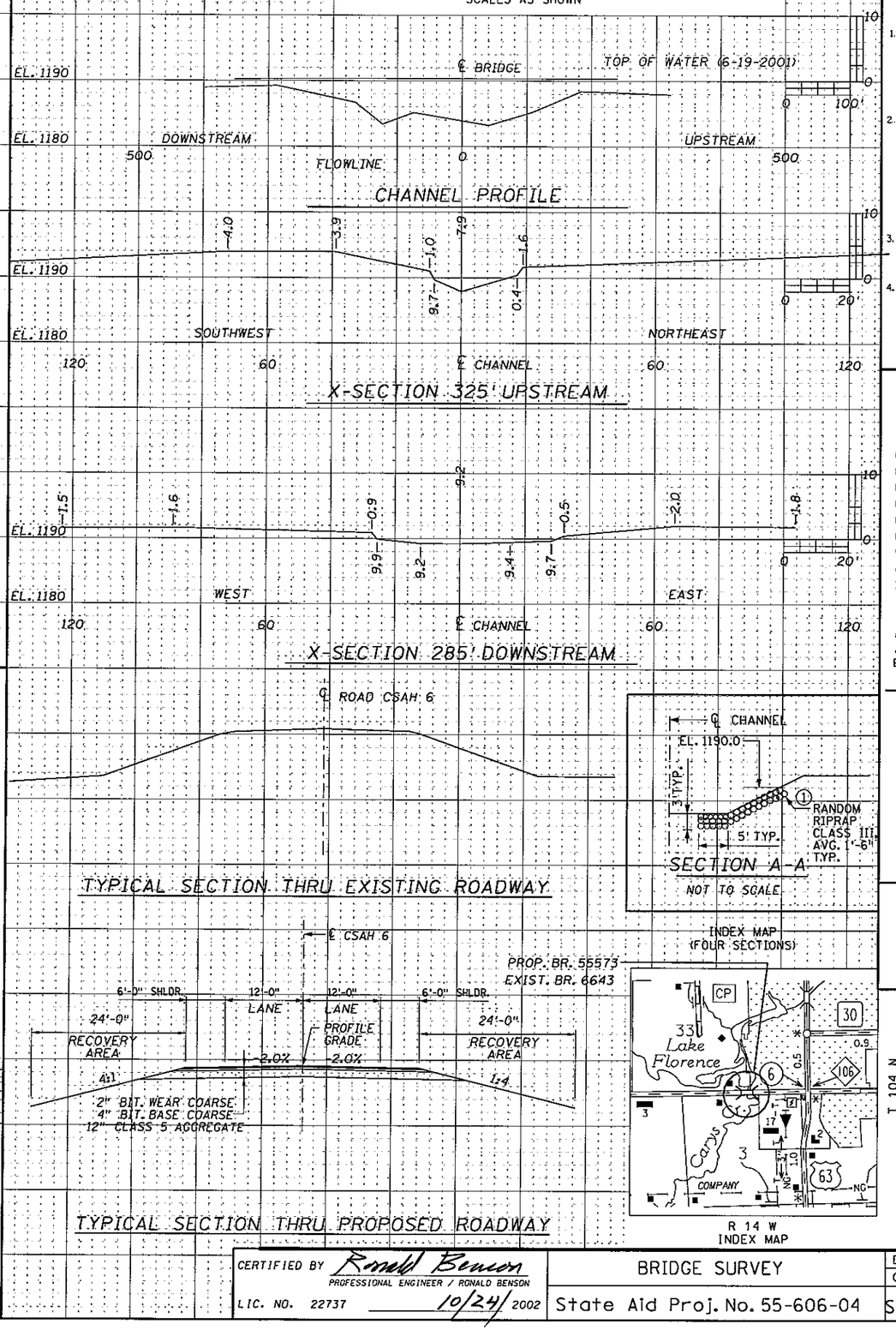
CONTRACTED PROFILE

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



TYPICAL SECTIONS & PERTINENT DATA

SCALES AS SHOWN



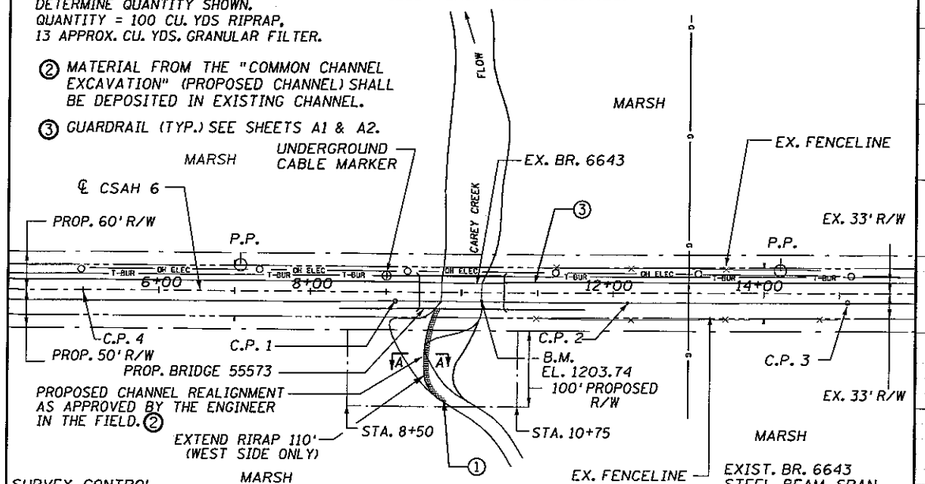
INDEX MAP (FOUR SECTIONS)

R 14 W
INDEX MAP

T 104 N

PLAT

SCALE: 0 50 100



UTILITY INFORMATION

WARNING:
DIAL GOPHER STATE ONE CALL AT 1-800-252-1166 48 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS TO OBTAIN COMPLETE UTILITY PROPERTY OWNERSHIP AND LOCATION INFORMATION.

UTILITY INFO AVAILABLE FOR PLAN PREPARATION:
PEOPLE'S COOP SERVICE 1-218-288-4004
QWEST 1-651-773-5680
PEOPLE'S NATURAL GAS 1-800-303-0752

NOTE:
FIELD VERIFY ALL UTILITIES.

(1) *APPROX. LIMITS OF RANDOM RIPRAP CLASS III BEYOND BASIC LIMITS SHOWN ON SHT B30. EXACT LIMITS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. EL. 1190.0 IN SECT. A-A USED TO DETERMINE QUANTITY SHOWN. QUANTITY = 100 CU. YDS RIPRAP, 13 APPROX. CU. YDS. GRANULAR FILTER.*

(2) *MATERIAL FROM THE "COMMON CHANNEL EXCAVATION" (PROPOSED CHANNEL) SHALL BE DEPOSITED IN EXISTING CHANNEL.*

(3) *GUARDRAIL (TYP.) SEE SHEETS A1 & A2.*

SURVEY CONTROL
C.P. 1 = PK NAIL, STA. 9+13.67, APROX. 12.0' S OF ℄ CSAH 6
C.P. 2 = PK NAIL, STA. 12+11.18, APROX. 11.7' S OF ℄ CSAH 6
C.P. 3 = PK NAIL, STA. 15+00.18, APROX. ℄ CSAH 6
C.P. 4 = PK NAIL, STA. 4+99.35, APROX. ℄ CSAH 6

Fed Proj. No.

LOCATION ENGINEER'S OBSERVATION AT BRIDGE SITE

1. Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, rec. boats.

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 11-2-2001

Stream or ditch designation CAREY CREEK
Drainage area 18.2 SQ. MI. Max. flood on record UNK. Design flood (100 yr. freq.) 3200 C.F.S.
Max. observed highwater elev. UNK. Design highwater elev 1195.5
Design mean velocity through structure 4.6 F.P.S.
Low superstructure at or above elevation 1199.4
Flowline elevation 1185.0 Skew angle 0°
Waterway area req'd. below elev. 1195.5 = 696 Sq.Ft @ Rt. angles to channel

In the interest of flood plain zoning the regional flood (100 yr. freq.) is 3200 C.F.S. at stage 1195.5 and mean velocity of 4.6 F.P.S. with 0.8 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.
EST. PIER SCOUR EL. 1170.5

FOUNDATION ENGINEERS RECOMMENDATION

DATE .....

35.5'-36.25'-35.5' PRESTRESSED CONCRETE BEAM SPANS
0° SKEW, 40' ROADWAY WIDTH, 10' SIDEWALK **AS-BUILT**

FEB 06 2006

ENGINEERING

Bridge survey sheets made from: ERICKSON ENGINEERING

Benchmark elevation 1203.74 (ASSUMED)
Location: BM. PAINTED BOLT S.E. CORNER BR. 6643.
New BM. Brss. Dsk. 1202.64

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT ..... ON CSAH 6 (T.H., C.S.A.H., C.R. etc.)
PROPOSED BRIDGE LOCATED 0.5 MILES WEST OF JCT. TH 63 OVER CAREY CREEK
SEC. 3 TWP. 104 N R. 14 W
TOWNSHIP HIGH FOREST COUNTY OLMSTED
EXISTING BRIDGE NO. 6643
PROP. BRIDGE NO. 55573

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER / RONALD BENSON
LIC. NO. 22737 10/24/2002

BRIDGE SURVEY
State Aid Proj. No. 55-606-04

DES: RAB	DRN: GRF	
CHK: CGD	CHK: CGD	

Sheet No. B29 of B30 Sheets

Bridge No. 55573

LIMITS OF RANDOM RIPRAP AS SHOWN ARE APPROX. ONLY. EXACT LIMITS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

APPROACH GRADING INCLUDED IN CONTRACT.

(1) SELECT GRANULAR BORROW BEHIND ABUTMENTS PLACED BETWEEN WINGWALL ENDS. SEE SHEET B11 FOR REQUIREMENTS.

(2) A SHORTENED VERSION OF THE BORING LOG DESCRIPTION IS GIVEN IN THE PLANS. THE COMPLETE GEOTECHNICAL EXPLORATION REPORT AND BORING LOGS ARE AVAILABLE FOR INSPECTION IN THE COUNTY ENGINEER'S OFFICE.

(3) GRANULAR FILTER IS INCLUDED IN PRICE BID FOR RANDOM RIPRAP, CLASS III. APPROX. QUANTITY = 105 CU. YDS.

33' EXIST. R/W
60' PROP. R/W
33' EXIST. R/W
50' PROP. R/W
100 ' PROP. R/W
STA. 8+50
STA. 10+75
8+50
9+00
9+50
10+00
10+50
11+00
11+50
TEST PILE NO. 1
2'-4"
31'-6"
18'-6"
TEST PILE NO. 2
℄ BRG. W. ABUT. STA. 9+46.38 EL. 1202.79
℄ PIER 1 STA. 9+81.88 EL. 1202.93
11'-0"
TEST PILE #3
FLOW
TEST PILE #4
22'-0"
℄ PIER 2 STA. 10+18.13 EL. 1203.07
TEST PILE NO. 5
RANDOM RIPRAP CLASS III AVG. 1'-6" THICK
31'-6"
90° (TYP.)
10+50
℄ BRG. W. ABUT. STA. 10+53.63 EL. 1203.21
18'-6"
1:2 SLOPE
2'-6"
1'-3"
RANDOM RIPRAP CLASS III, AVG. 1'-6" THICK
BRIDGE SEAT
TEST PILE NO. 6
2'-4"
℄ C.S.A.H. 6 & WORKING LINE
B-1
B-2
EXTEND RIPRAP 110' (WEST SIDE ONLY) SEE NOTE (1) SHEET B29.
RANDOM RIPRAP CLASS III, AVG. 3'-0" THICK
5' (TYP.)

END OF DECK STA. 9+43.80 EL. 1202.78
EXIST. GROUNDLINE AND PROP. ℄ ROADWAY
FINISH PROFILE GRADE
℄ BRG. W. ABUT. STA. 9+46.38 EL. 1202.79
LOW MEMBER EL. 1199.11
℄ PIER 1 STA. 9+81.88 EL. 1202.93
DES. H. W. @ 100' EL. 1195.5 +.04%
℄ PIER 2 STA. 10+18.13 EL. 1203.07
2'-6" TYP.
2'-0" TYP.
℄ BRG. E. ABUT. STA. 10+53.63 EL. 1203.21
END OF DECK STA. 10+56.21 EL. 1203.22
PVI 11+00 (NO CURVE) EL. 1203.46
1210
1200
1190
1180
1170
B-1 (2)
9" BIT. MAT. over 5" Aggregate Base
FILL: consisting primarily of Sandy Lean Clay, with a trace of Gravel, dark brown, wet, rather soft.
SANDY LEAN CLAY, lenses of Sand, with a trace of fibers, dark gray, wet, rather soft. (Possible Fill or Alluvium)
POORLY GRADED SAND WITH GRAVEL, mostly fine to medium grained, brownish gray, water-bearing, loose to medium dense. (Alluvium)
WEATHERED LIMESTONE, light brown, wet, hard.
END OF BORING EL. 1172.0
4 4 6 3 5 9 11 28 26 9 54
50=1" (set)
1 1.5
5'-0" TYP.
50' ± CHANNEL BOTTOM
3'-0" TYP.
APPROX. CHANNEL BTM. EL. 1185.0
5'-0" TYP.
1 1.5
6" GRANULAR FILTER. (3) INCLUDED IN PRICE BID FOR RANDOM RIPRAP, CLASS III.
RANDOM RIPRAP, CLASS III AVG. 1'-6" THICK
RANDOM RIPRAP, CLASS III AVG. 3'-0" THICK
BRIDGE CONTRACTOR SHALL EXCAVATE AND FILL TO THESE LINES FOR APPROX. 45' LT. AND 35' RT. OF ℄ RDWY. THEN TAPER AT 1:2 SLOPE TO NATURAL CHANNEL SLOPOES. INCLUDED IN PRICE BID FOR SLOPE PREPARATION.
HP 10 X 42 TEST PILES, 40 FT. LONG.
HP 10 X 57 TEST PILES, 50 FT. LONG.
B-2 (2)
9" BIT. MAT. over 5" Aggregate Base
FILL: consisting primarily of Sandy Lean Clay, with a trace of Gravel, brown to dark brown, wet, rather soft.
SANDY LEAN CLAY, lenses of Sand, with a trace of fibers, dark gray, wet, rather soft. (Possible Fill or Alluvium)
POORLY GRADED SAND WITH GRAVEL, mostly fine to medium grained, brownish gray, water-bearing, medium dense. (Alluvium)
SANDY LEAN CLAY, with weathered limestone cobbles, gray, wet, very stiff. (Glacial Till)
SANDY LEAN CLAY, with a trace of Gravel, gray, wet very stiff to hard. (Glacial Till)
WEATHERED LIMESTONE, light brown, wet, hard.
END OF BORING EL. 1169.4
4 4 5 4 12 14 21 16 32 14 18 53 1
50=½" (set)

AS-BUILT
FEB 06 2006
ENGINEERING

BORINGS SHOWN B-1, B-2 TAKEN WITH
STD 140 LB HAMMER
30 INCH DROP
2 INCH O.D. SAMPLER

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER / RONALD BENSON
LIC. NO. 22737 10/24/2002

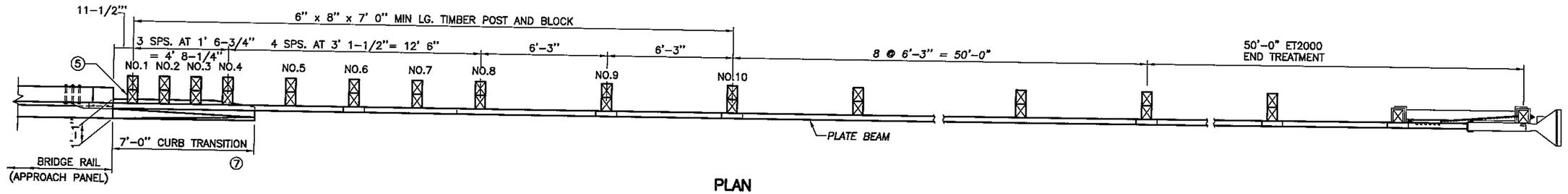
BRIDGE SURVEY PLAN & PROFILE

DES: RAB	DR: GRF	APPROVED:
CHK: CGD	CHK: CGD	

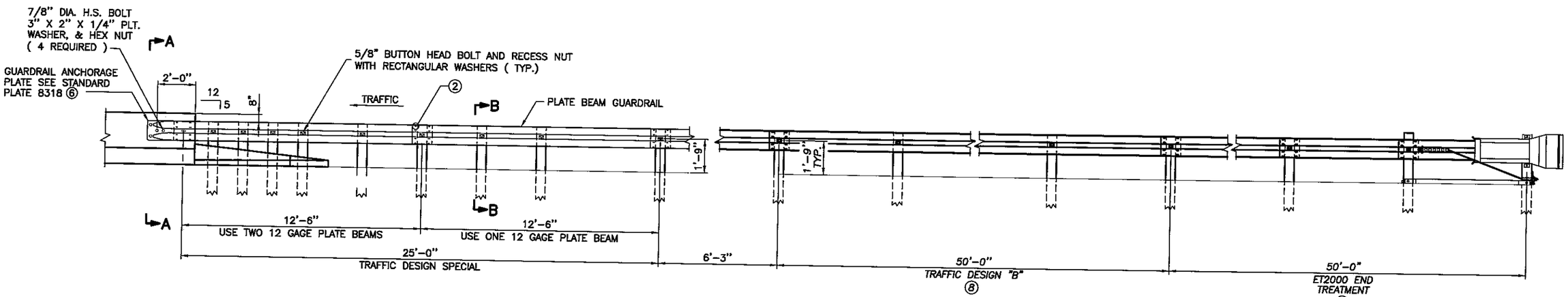
State Aid Proj. No. 55-606-04

Sheet No. B30 of B30 Sheets

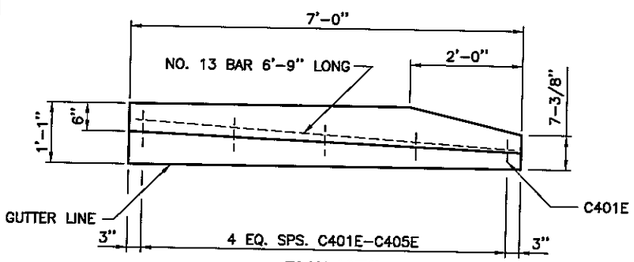
Bridge No. 55573



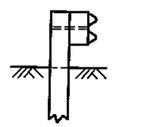
PLAN



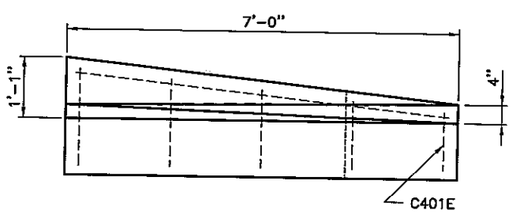
ELEVATION



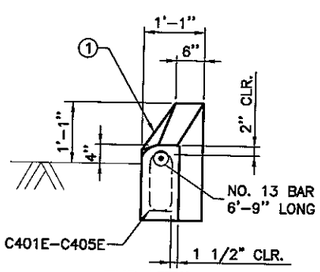
PLAN VIEW



SECTION B–B

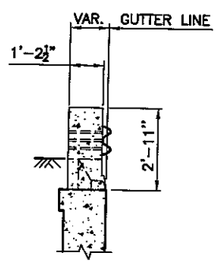


INSIDE ELEVATION

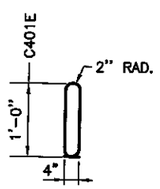


END VIEW

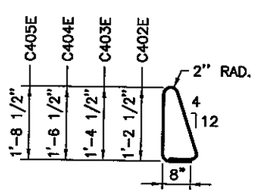
CURB TRANSITION DETAILS



SECTION A–A
(PARALLEL WINGWALL SHOWN)



C401E③



C402E–C405E③

AS-BUILT

FEB 06 2006

ENGINEERING

NOTES:

1. END OF TRANSITION TO MATCH BRIDGE RAIL SURFACE.
2. 5/8" DIA. X 1–1/4" LG. BUTTON HEAD BOLTS AND NUTS TYPICAL AT SPLICES.
3. REINFORCEMENT TO BE EPOXY COATED AS PER SPEC. 3301.
4. (NOT USED)
5. ADDITIONAL BLOCKING MAY BE REQUIRED TO CLEAR BRIDGE STRUCTURE. VERIFY IN FIELD.
6. SANDWICH ANCHOR PLATE BETWEEN RAIL BEAMS.
7. CURB TRANSITION, INCLUDING CONCRETE AND REINFORCEMENT, IS CONSIDERED INCIDENTAL TO TRAFFIC BARRIER DESIGN SPECIAL. CURB TRANSITION IS REQUIRED WITH OR WITHOUT APPROACH CURB.
8. SEE STANDARD PLATE 8307Q.
9. SEE SHEET A2.

LIST OF STANDARD PLATES	
PLATE	DESCRIPTION
8307Q	STEEL PLATE BEAM GUARDRAIL
8318C	GUARDRAIL ANCHORAGE PLATE

THE ABOVE STANDARD PLATES AS APPROVED BY THE F.H.W.A. SHALL APPLY ON THIS PROJECT.

TRAFFIC BARRIER DESIGN SPECIAL

CERTIFIED BY Ronald Benson
PROFESSIONAL ENGINEER/RONALD BENSON
LIC. NO. 22737 10/24/2002

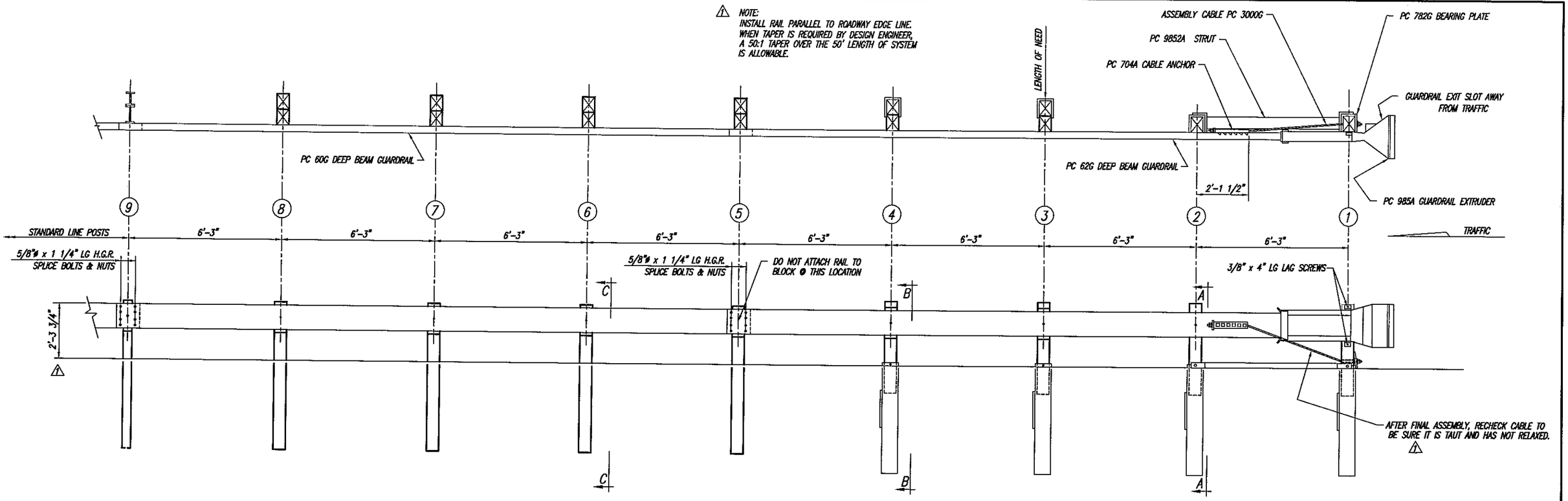
REVISION DATE 9-8-98

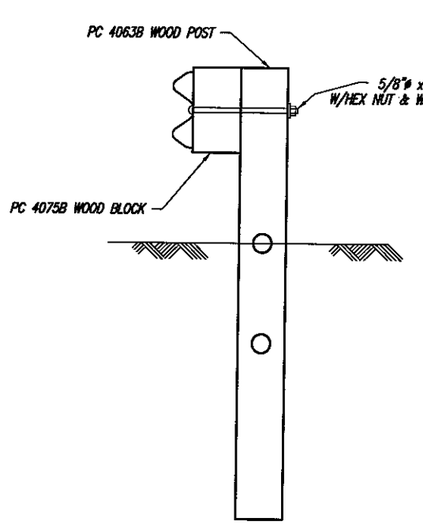
STANDARD SHEET NO. 5-297.605 MOD.
STANDARD APPROVED: JANUARY 23, 1992

TITLE: GUARDRAIL TRANSITION FOR CONCRETE SAFETY SHAPED BARRIER WITH APPROACH CURB

STATE AID PROJ. NO. 55-606-04 | SHEET NO. A1 OF 2 SHEETS | 55573

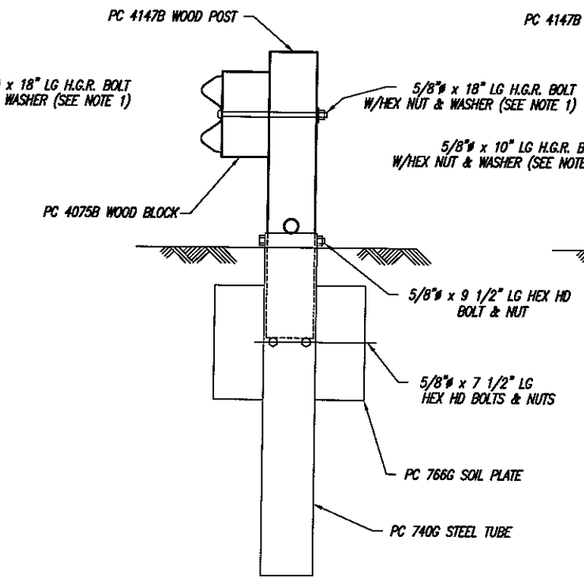
⚠ NOTE:
INSTALL RAIL PARALLEL TO ROADWAY EDGE LINE. WHEN TAPER IS REQUIRED BY DESIGN ENGINEER, A 50:1 TAPER OVER THE 50' LENGTH OF SYSTEM IS ALLOWABLE.



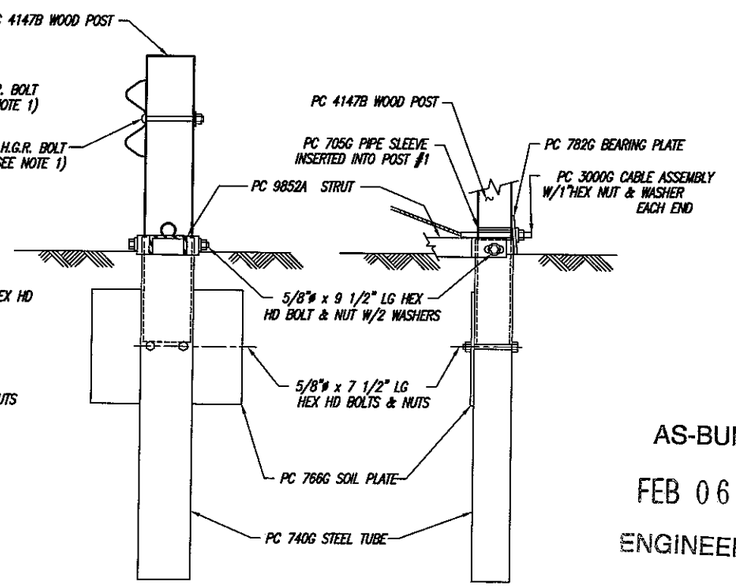


NOTE:
SECTION "C-C" IS SIMILAR ⓪ POST #5 EXCEPT RAIL IS NOT ATTACHED.

SECTION "C-C"
(TYP ⓪ POSTS #6, 7 & 8)



SECTION "B-B"
(TYP ⓪ POSTS #3 & 4)



SECTION "A-A"
(⓪ POST #2)

PARTIAL VIEW ⓪ POST #1

AS-BUILT
FEB 06 2006
ENGINEERING

NOTES:
1.) THE 5/8" FLAT WASHER IS USED UNDER THE NUT, BEHIND THE POST ONLY. NO WASHER IS USED AT THE RAIL.
2.) MANUFACTURER SUGGESTS CUSTOMER TO PROVIDE REFLECTORIZATION OF TERMINAL.
3.) SYRO ET-2000 OR APPROVED EQUAL TO BE INSTALLED WHERE SHOWN ON SHEET A1. FURNISHED AND INSTALLED AS SHOWN ON THIS SHEET INCLUDED IN BID ITEM "END TREATMENT SPECIAL".

CERTIFIED BY: Ronald Benson
PROFESSIONAL ENGINEER/RONALD BENSON

LIC. NO. 22737 10/24/2002

REV.	CHK'D	BY	DATE	REMARKS
1		BT	5-27-98	ADDED TAPER & CABLE NOTE, CHG DIM

SYRO ET-2000

ET-2000 (1997)
PLAN, ELEVATION & SECTIONS

DRAWN B.T.
CHECKED
APPROVED
DATE 4-26-97
ENG. FILE # SS265
SHT.No. E1 OF 1

TRINITY INDUSTRIES, INC. SYRO
DALLAS, TX CENTERVILLE, UT GIRARD, OH LIMA, OH FORT WORTH, TX ELIZABETHTOWN, KY

S.A.P. 55-606-04
DRAWING No. SS 265 REV. 1

SHEET A2 OF 2 SHEETS
55573