MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR UNBONDED CONCRETE OVERLAY, BITUMINOUS SHOULDERS & BRIDGE NO.55516 OVERLAY.

LOCATED ON C.S.A.H. 7 BETWEEN T.H. 52 AND T.H. 14 IN EYOTA (GEOGRAPHIC DESCRIPTION)

FROM APPROX. 49.54 m N. & 106.25 m E. OF COR. 1/4 SEC. 15 & 14 T105N – R12W. (ORION TWP) TO APPROX. 15.24 m S. OF CEN. SEC. 10 T106N – R12W. (EYOTA TWP) (LEGAL DESCRIPTION)

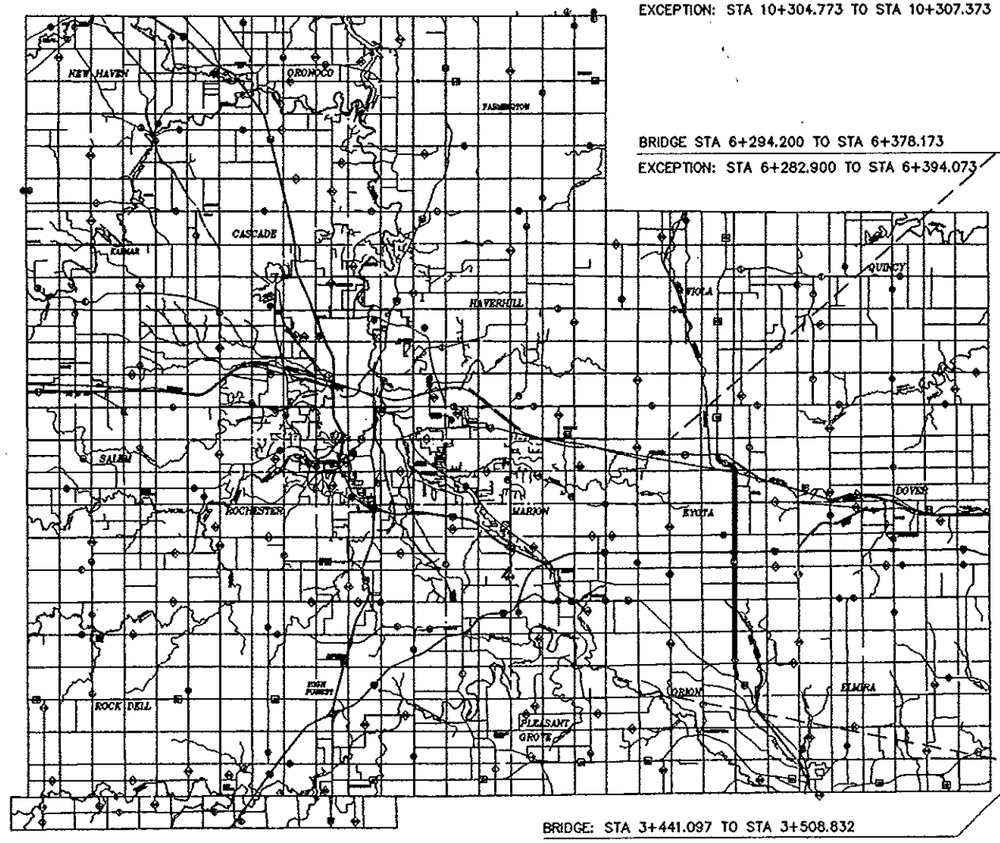
S.P. NO. 55-607-11

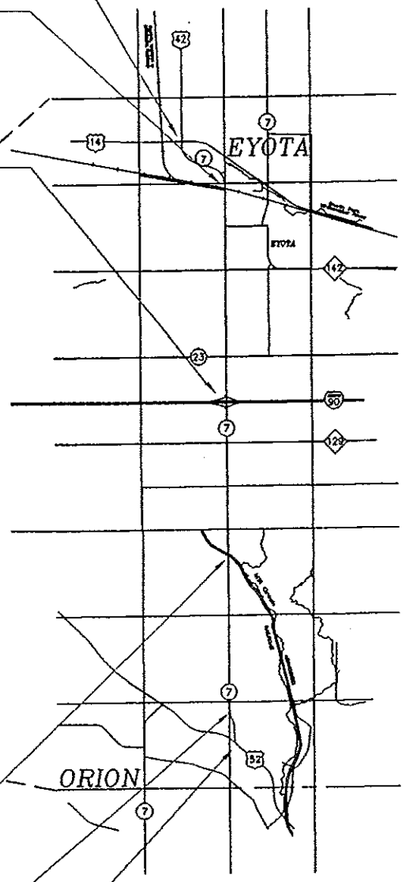
GROSS LENGTH	11 632.455	meter	11.632	Kilometer
BRIDGE-LENGTH	180.078	meter	0.180	Kilometer
EXCEPTIONS-LENGTH	167.207	meter	0.167	Kilometer
NET LENGTH	11 465.248	meter	11.465	Kilometer

END: SP 55-607-11
STA 11+637.335

RXR CROSSING
EXCEPTION: STA 10+304.773 TO STA 10+307.373

BRIDGE STA 6+294.200 TO STA 6+378.173
EXCEPTION: STA 6+282.900 TO STA 6+394.073





BRIDGE: STA 3+441.097 TO STA 3+508.832

BRIDGE: STA 0+591.416 TO STA 0+619.786
EXCEPTION: STA 0+578.864 TO STA 0+632.318

BEGIN: SP 55-607-11
STA 0+004.880

C.S.A.H. 7 PAVED UNDER
S.A.P. 55-607-05 1969
&
S.A.P. 55-607-08 1971

AS-BUILT
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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
B – BRICK
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 OH POWER POLE
OH 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 1:50 — 20m
PROFILE 1:50 — 20m HORIZ. — 2m VERT. 1:100
INDEX MAP 1:75 — 1609.3 m
CROSS SECTIONS 1:50 — 2m

ATTENTION : THIS IS A METRIC PLAN

MINN. PROJ. NO. STPX 5597(126)

GOVERNING SPECIFICATIONS

THE 1995 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX FOR PAVING

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATE OF QUANTITIES
SHEET NO. 3	STANDARD PLATES & EARTH WORK SUMMARY
SHEET NO. 4–8	TABULATIONS
SHEET NO. 8	ALIGNMENT TABULATIONS
SHEET NO. 9	TYPICAL SECTIONS & EDGE DRAIN DETAILS
SHEET NO. 10	PAVING TRANSITION DETAILS
SHEET NO. 11	TURN LANE & RES. DR. PLAN TYPICALS
SHEET NO. 12	DETAIL PLAN SHEET
SHEET NO. 13–28	PLAN SHEETS
SHEET NO. 29	DOWEL ASSEMBLY & SUPPLEMENTAL STEEL DETAILS
SHEET NO. 30–34	PAVEMENT JOINT SHEETS.
SHEET NO. 35–38	GUARDRAIL SHEETS
SHEET NO. 39–40	TRAFFIC CONTROL

INDEX FOR BRIDGE

SHEET NO. B1	GENERAL PLAN AND ELEVATIONS
SHEET NO. B2	DECK DETAILS
SHEET NO. B3–B4	EXPANSION DEVICE
SHEET NO. B5	BRIDGE APPROACH PANELS
SHEET NO. B6–B7	GUARDRAIL IMPROVEMENT WITH NEW END POSTS.

THIS PLAN CONTAINS 47 SHEETS.

DESIGN DESIGNATION (CSAH 7)

R ..... EN18(20) .....
ADT (Current Year) = 3014 (1999) Design Speed 60 km/h
ADT (Future Year) = 4521 (2019) Based on STOPPING Sight Distance
DHV (Design Hr. Vol.) = ... Height of eye 1070mm Height of object 150mm
D (Directional Distr.) = ... Design Speed not achieved at: .....
T (Heavy Commercial) = EST 15% STA. ..... TO STA. ..... km/h
SUBGRADE = K=150 STA. ..... TO STA. ..... km/h
9.1 t DESIGN
SHOULDER WIDTH 2.4 m
FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL
SOIL FACTOR = 130% TST = EST 5%

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

DATE 5/11/99 REG. NO. 19917 ENGR Wayne M Pieniek
COUNTY OLMSTED
Approved 5/11 19 99 Michael L Kludan OLMSTED COUNTY ENGINEER

DESIGN SQUAD G. CUMMINGS

Recommended for Approval D. J. Schmidt 5-12 19 99 ASST DISTRICT STATE AID ENGINEER

Recommended for Approval Donald L. Flemming 5-13 19 99 STATE BRIDGE ENGINEER

Recommended for Approval ..... 19 .....

Approved 5/17 19 99 M. L. Smith for STATE AID ENGINEER

ATTENTION–THIS IS A METRIC PLAN

S.P. NO. 55-607-11 SHEET NO. 1 OF 40 SHEETS

STATEMENT OF ESTIMATED QUANTITIES

NOTE NO.	TAB. SHEET NO.	ITEM NO.	DESCRIPTION	UNIT	PARTICIPATING	NON PARTICIPATING	TOTAL ESTIMATED QUANTITIES
		2031.501	FIELD OFFICE TYPE D	EACH	1		1
	4	2104.501	REMOVE BITUMINOUS CURB	m	220		220
	4	2104.501	REMOVE CURB & GUTTER	m	92		92
1	4	2104.503	REMOVE CONCRETE WALK	m2	65		65
	4	2104.503	REMOVE CONCRETE APPROACH PANEL	m2	184		184
	4	2104.503	REMOVE CONCRETE PAVEMENT	m2	8 572		8 572
	4	2104.503	REMOVE BITUMINOUS PAVEMENT	m2	11 743		11 743
10		2104.509	REMOVE BOX CULVERT	EACH	1		1
	4	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	m	162.7		162.7
	4	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	m	218.3		218.3
2		2104.521	SALVAGE GUARDRAIL-PLATE BEAM	m	460		460
3		2104.523	SALVAGE LIGHTING UNIT	EACH	2		2
4	3	2105.515	UNCLASSIFIED EXCAVATION	m3	2 148		(P) 2 148
	3	2105.523	COMMON BORROW (LV)	m3	17 380		17 380
	3	2105.525	TOPSOIL BORROW (LV)	m3	455		455
	3	2211.501	AGGREGATE BASE CLASS 5A	t	2 256		2 256
	3	2221.501	AGGREGATE SHOULDERING CLASS 5A	t	20 647		20 647
	4	2232.501	MILL BITUMINOUS SURFACE	m2	432		(P) 432
	4	2232.502	MILL CONCRETE PAVEMENT SURFACE	m2	2 160		(P) 2 160
	5	2301.502	CONCRETE PAVEMENT STANDARD WIDTH 200 mm	m2	72 143		(P) 72 143
	5	2301.502	CONCRETE PAVEMENT STANDARD WIDTH 225 mm	m2	8 566		(P) 8 566
	5	2301.503	CONCRETE PAVEMENT IRREGULAR WIDTH 225 mm	m2	2 849		(P) 2 849
	5	2301.511	STUCTURAL CONCRETE	m3	16 966		(P) 16 966
	5	2301.529	REINFORCEMENT BARS (EPOXY COATED)	kg	24 647		24 647
	5	2301.538	DOWEL BAR	EACH	59 613		59 613
		2301.545	CONCRETE CORING	EACH	76		76
		2301.602	DRILL & GROUT REINFORCEMENT BARS (EPOXY COATED)	EACH	96		96
		2301.603	PERMANET TERMINAL HEADER	m	26.6		26.6
	6	2331.609	BIT. MIX FOR PERM ASPH STAB ST RE COURSE	t	7 388		7 388
	6	2331.609	BITUMINOUS MATERIAL FOR MIXTURE	t	298		298
	6	2340.508	TYPE 41 WEARING COURSE MIXTURE	t	1 036		1 036
	6	2340.514	TYPE 41 BASE COURSE MIXTURE	t	4 317		4 317
	6	2340.516	TYPE 41 SHOULDER COURSE MIXTURE	t	9 363		9 363
		2501.511	600 mm R C PIPE CULVERT CLASS III	m	21.96		21.96
		2501.515	600 mm R C PIPE APRON	EACH	2		2

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STATEMENT OF ESTIMATED QUANTITIES

NOTE NO.	TAB. SHEET NO.	ITEM NO.	DESCRIPTION	UNIT	PARTICIPATING	NON PARTICIPATING	TOTAL ESTIMATED QUANTITIES
	7	2502.501	100 mm PRECAST CONCRETE HEADWALL	EACH	141		141
	7	2502.521	100 mm TP PIPE DRAIN	m	705		705
	7	2502.541	100 mm PERFORATED PE PIPE DRAIN	m	19 082		19 082
	6	2531.501	CONCRETE CURB & GUTTER DESIGN B424	m	194		194
	6	2531.501	CONCRETE CURB & GUTTER DESIGN D424	m	85		85
	6	2531.503	CONCRETE MEDIAN MOUNTABLE	m2	116		116
5		2545.602	INSTALL LIGHTING UNIT	EACH	2		2
6	8	2554.501	TRAFFIC BARRIER DESIGN SPECIAL A	m	60.96		60.96
7	8	2554.501	TRAFFIC BARRIER DESIGN SPECIAL	m	68.26		68.26
	8	2554.521	ANCHORAGE ASSEMBLY - PLATE BEAM	EACH	12		12
	8	2554.523	END TREATMENT - ENERGY ABSORBING TERMINAL	EACH	14		14
8	8	2554.602	GUARDRAIL POST SEAT	EACH	14		14
		2563.601	TRAFFIC CONTROL	LUMP SUM	1		1
		2564.603	100 mm SOLID LINE WHITE - EPOXY	m	23 268		23 268
		2564.603	100 mm SOLID LINE YELLOW - EPOXY	m	3 200		3 200
		2564.603	100 mm BROKEN LINE YELLOW - EPOXY	m	1 800		1 800
		2564.603	100 mm SOLID DOUBLE YELLOW - EPOXY	m	3 000		3 000
9,		2573.501	BALE CHECK	EACH	440		440
9		2573.502	SILT FENCE TYPE HEAVY DUTY	m	1 400		1 400
	8	2575.501	SEEDING	ha	12.4		(P) 12.4
	8	2575.502	SEED MIXTURE 50A	kg	620		620
	8	2575.502	SEED MIXTURE 110A	kg	1 240		1 240
	8	2575.505	SODDING TYPE LAWN	m2	440		440
	8	2575.511	MULCH MATERIAL TYPE-1	t	55.8		55.8
	8	2575.519	DISK ANCHORING	ha	12.4		(P) 12.4
	8	2575.532	COMMERCIAL FERTILIZER 12-12-12	kg	2 790		2 790

CONSTRUCTION NOTES

(1) INCLUDES THE COMBINATION OF CURB & WALK MEDIAN AS THE UNIT MEASURE (m2)

(2) INCULDES PLATEBEAM, TWISTED END TREATMENTS, POSTS, BLOCK AND ANCHORAGE ASSEMBLES. HAULING AND UNLOADING ALL SALVAGE MATERIAL TO THE OLMSTED CO. EYOTA SHOP LOCATED IN THE CITY OF EYOTA MN. .

(3) INCLUDES THE SALVAGE OF LIGHTING UNITS FOR RETURN TO OWNER. LIGHT POLES TO BE RELOCATED BY UTILITY COMPANY.

(4) INCLUDES EXCAVATION AT TRANSITION SECTIONS, CATTLE PASS, AND INTERCHANGE OF T.H.52 AND C.S.A.H.7

(5) TO BE INSTALLED FOR LIGHTING AT T.H.52 INTERCHANGE AS DIRECTED BY THE ENGINEER

(6) SEE STANDARD PLAN SHEETS 5-297.608M FOR GUARDRAIL IMPROVEMENT AT BRIDGE, FOR INSTALLATION. SHEETS 37 & 38

(7) SEE STANDARD PLAN SHEETS 5-297.609M FOR GUARDRAIL IMPROVEMENT AT BRIDGE, FOR INSTALLATION. SHEETS B6 & B7

(8) INCLUDES REMOVAL OF INPLACE STEEL SUPPORT BEAMS FOR INPLACE GUARDRAIL . ALSO INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS TO FURNISH & INSTALL GUARDRAIL POST SEATS AT BOX CULVERT STA, 0+078. ALSO INCLUDES CONCRETE REPAIR OF AN AREA APPROXIMATLY 1 500 mm LONG x 305 mm DEEP x 305 mm WIDE ON THE CENTER OF THE EAST HEADWALL, BEFORE POST SEAT ARE INSTALLED. ALL WORK PERFORMED MUST BE APPROVED BY THE ENGINEER.

(9) TO BE INSTALLED AT LOCATIONS ALONG PROJECT AS DIRECTED BY THE ENGINEER. SPECIFICATION 1903 DOES NOT APPLY TO THIS ITEM.

(10) TIMBER BOX CULVERT.

CERTIFIED BY Kayle M Bierneck REG. NO. 19917 5/11 1999

THE FOLLOWING STANDARD PLATES, APPROVED BY THE DEPARTMENT OF TRANSPORTATION, AND FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY TO THIS PROJECT.	
ITEM NO.	DESCRIPTION
M1070K	REINFORCED PANEL OVER CULVERTS
M1103J	TYPICAL DOWEL BAR ASSEMBLY
M1141D	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
M1150Q	CONSTRUCTION OF HEADER JOINTS
M1210F	CONCRETE PAVEMENT ADJACENT TO RAILWAY CROSSINGS
M3000L	REINFORCED CONCRETE PIPE
M3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
M3131B	PRE CAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
M3145E	CONCRETE PIPE TIES
M7100G	CONCRETE CURB AND GUTTER
M7102I	CONCRETE CURB AND GUTTER
M7105C	COCRETE MEDIAN
M7113A	CONCRETE APPROACH NOSE DETAIL
M8000I	STANDARD BARRICADES
M8307P	STEEL PLATE BEAM GUARDRAIL
M8316C	POST SEAT FOR ANCHORAGE ON FOOTING OR BOX CUVERT
M8318C	GUARDRAIL ANCHORAGE PLATE FOR BRIDGES AND BCT'S
M8335A	GUARDRAIL TRANSITION DETAIL

CONSTRUCTION NOTES

PROVIDE (3720) HOT POUR JOINT SEALER FOR LONGITUDINAL AND TRANSVERSE JOINTS.

THIS PROJECT SHALL BE A BITUMINOUS QUALITY MANAGEMENT PROJECT. BITUMINOUS MIXTURE TESTING SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH SPECIFICATION 2340.

SPREAD SALVAGED SLOPE DRESSING AND TOPSOIL BORROW ON ALL DISTURBED AREAS A MINIMUM DEPTH OF 75 mm

BASIS OF CALCULATED QUANTITES

AGGREGATE BASE CLASS 5A – 2160 kg / m3

AGGREGATE SHOULDER CLASS 5A – 2160 kg / m3

PASSRC BITUMINOUS MATERIAL MIXTURE – 50 kg / m2 / 25 mm

BTUMINOUS MATERIAL TYPE 41 MIXTURE – 60 kg / m2 / 25 mm

SEED MIXTURE 50A – 50 kg / ha APPLY TO ALL AREAS WHERE TOPSOIL HAS BEEN PLACED. (EXCEPT SODDED AREAS)

SEED MIXTURE 110A – 100 kg / ha APPLY IN CONJUNCTION WITH SEED MIX 50A.

MULCH MATERIAL TYPE 1 – 4.5 metric ton / ha.

DISC ANCHORING – ALL SEEDED AREAS.

FERTILIZER – 225 kg / ha.

TACKCOAT – 0.23 lt. / m2

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EARTHWORK TABULATION

STATION	UNCL. EXC.	EMBANKMENT (CV)	TOPSOIL EXC.	TOP SOIL EMB.	
	m3	m3	m3	m3	
0+003 TO 0+579	766	760	219	242	
0+632 TO 3+431	220	3 695	1 064	1 176	
3+518 TO 6+283	220	3 650	1 051	1 162	
6+394 TO 10+304	220	5 161	1 486	1 642	
10+307 TO 11+637	722	1 756	505	558	
TOTAL	2 148	15 022	4 325	4 780	

EARTHWORK SUMMARY

EMBANKMENT = 15 022 m3 (CV)
UNCLASSIFIED EXC. = – 2 148 m3 (CV)

COMMON BORROW 12 874 m3 (CV) x 1.35 = 17 380 m3 (LV)

TOPSOIL REQUIRED = 4 780 m3
TOPSOIL AVAILABLE = – 4 325 m3

TOPSOIL BORROW 455 m3

AGGREGATE

STATION	2211.501 AGGREGATE BASE CLASS 5A	2221.501 AGGREGATE SHOULDERING CLASS 5A			
	metric ton	metric ton			
0+003 TO 0+579	900	1 045			
0+632 TO 3+431	250	5 078			
3+518 TO 6+283	452	5 017			
6+394 TO 10+304	372	7 094			
10+307 TO 11+637	282	2 413			
TOTAL	2 256	20 647			

CERTIFIED BY Kaye M Preiwek PROFESSIONAL ENGINEER REG. NO. 19917 5/11 1999

CONCRETE REMOVAL / BIT. REMOVAL

STATION	LOCATION	2104.501 REMOVE CURB GUTTER (m)	2104.503 REMOVE CONC. MISC. (m2)	2104.503 REMOVE CONC. PAVEMENT (m2)	2104.501 REMOVE BITUMINOUS CURB (m)	2104.503 REMOVE BITUMINOUS PAVEMENT (m2)
0+003.6 TO 0+006.6	LT. & RT.					294
INTERSEC. T.H. 52 & C.S.A.H. 7	LT.	92				
0+003.6 TO 0+088	NORTH BOUND LEFT LEG			175		
0+003.6 TO 0+088	SOUTH BOUND LANE			333		
T.H. 52 TO 0+088	LT.		CONC. WALK 65			
0+088 TO 0+180	SOUTH BOUND LANE			450		
0+088 TO 0+180	NORTH BOUND LANE			782		
0+273	RES. DR. RT.					165
0+486.884 TO 0+578.884	℄			662		
0+632.318 TO 0+724.318	℄			662		
0+700	RES. DR. RT.					243
0+746	RES. DR. LT.					257
1+164	RES. DR. LT.					256
1+246	RES. DR. RT.					201
1+339	F.E. RT.					6
1+803	RES. DR. RT.					161
1+931	F.E. LT.					6
2+171 & 2+185	RES. DR. LT.					248
2+307	F.E. LT.					6
2+366	F.E. RT.					6
2+679	RES. DR. LT.					146
3+168	F.E. LT.					6
3+221	RES. DR. RT.					142
3+349.096 TO 3+431.647	℄			594		
3+431.647 TO 3+441.096	BRIDGE 55516		APPROACH 92			
3+418	F.E. LT.					6
3+508.826 TO 3+518.277	BRIDGE 55516		APPROACH 92			
3+518.277 TO 3+600.828	℄			594		
3+533 TO 3+693	RES. DR. LT.					498
3+540 TO 3+640	RES. DR. LT.				115	
3+903 TO 3+977	60th ST.					312
3+966	F.E. LT.					6
4+152	F.E. LT.					6
4+152	F.E. RT.					6
4+587	F.E. LT.					6
4+658	F.E. LT.					6
4+660	RES. DR. RT.					122
4+736 TO 4+787	55th ST. RT.					221
4+749 TO 4+819	55th ST. LT.					300
5+478 TO 5+597	CR. 129 RT.					689
5+550 TO 5+668	CR. 129 LT.					448
6+062 TO RAMP "A"	I – 90 LT.					480
6+063 TO RAMP "B"	I – 90 RT.					552
6+190.9 TO 6+282.9	℄			662		
RAMP "A"	I – 90 LT.			299		
RAMP "B"	I – 90 RT.			325		
RAMP "A" TO 6+282.9	I – 90 LT.					175
RAMP "B" TO 6+282.9	I – 90 LT.					175

CONCRETE REMOVAL / BIT. REMOVAL

STATION	LOCATION	2104.501 REMOVE CURB GUTTER (m)	2104.503 REMOVE CONC. MISC. (m2)	2104.503 REMOVE CONC. PAVEMENT (m2)	2104.501 REMOVE BITUMINOUS CURB (m)	2104.503 REMOVE BITUMINOUS PAVEMENT (m2)
6+394.073 TO RAMP "C"	I – 90 RT.					177
6+394.073 TO RAMP "D"	I – 90 LT.					192
6+394.073 TO 6+486.073	℄			662		
RAMP "C"	I – 90 RT.			161		
RAMP "D"	I – 90 LT.			217		
RAMP "C" TO 6+687	RT.					653
RAMP "D" TO 6+552	LT.					339
6+560 TO 6+674	RT.				105	
7+122 TO 7+193	CR. 23 RT.					270
7+155 TO 7+273	CR. 23 LT.					634
7+478	F.E. RT.					6
7+789	F.E. LT.					6
7+847	F.E. RT.					6
7+832 & 7+932	RES. DR. LT.					305
8+067	F.E. RT.					6
8+122	F.E. LT.					6
8+490	F.E. RT.					6
8+764 TO 8+829	30th ST. LT.					303
9+034	F.E. RT.					6
9+172	RES. DR. LT.					131
9+485 TO 9+623	W. 5th S.E. LT.					886
9+549	F.E. LT.					6
9+755	F.E. RT.					6
10+030 TO 10+158	W. 2nd ST. RT.					774
10+160	F.E. LT.					6
10+195	F.E. RT.					6
10+212.771 TO 10+304.771	℄			662		
10+288	19th S.E. LT.					270
10+307.451 TO 10+399.451	℄			662		
10+593	RES. DR. RT.					240
11+196 TO 11+210	℄			101		
11+545 TO 11+624	℄			569		
11+594 TO 11+637.335	LT.,RT.&℄T.H.14					352
TOTAL		92	249	8 572	220	11 743

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MILLING SUMMARY

STATION TO STATION	2232.502 MILL CONC. PAVEMENT (m2)	2232.501 MILL BIT. PAVEMENT	REMARKS
0+180 TO 0+210	216		
0+456.884 TO 0+486.884	216		
0+724.318 TO 0+754.318		216	
3+319.096 TO 3+349.096	216		
3+600.828 TO 3+630.828	216		
6+160.900 TO 6+190.900	216		
6+486.073 TO 6+516.073	216		
10+182.771 TO 10+212.771	216		
10+399.451 TO 10+429.451		216	
11+166 TO 11+196	216		
11+210 TO 11+240	216		
11+515 TO 11+545	216		
TOTAL	2 160	432	

SAW PAVEMENT

STATION	LOCATION	2104.511 CONCRETE (FULL DEPTH) m	2104.513 BITUMINOUS (FULL DEPTH) m
0+003.6	℄ T.H. 52	11	
0+003.6	℄ T.H. 52		104
0+180	TRANSITION	7.2	
0+486.884	TRANS. ℄ BR.55521	7.2	
0+578.884	TRANS. ℄ BR.55521	7.2	
0+632.318	TRANS. ℄ BR.55521	7.2	
0+724.318	TRANS. ℄ BR.55521	7.2	
3+349.096	TRANS. ℄ BR.55516	7.2	
3+600.828	TRANS. ℄ BR.55516	7.2	
3+966	60th ST. RT.		6
5+574	CR. 129 LT.		6
5+574	CR. 129 RT.		8
6+190.900	TRANSITION	7.2	
RAMP "A"	I – 90 LT.	5	4.8
RAMP "B"	I – 90 RT.	5	4.8
6+282.900	℄	7.2	6
6+394.073	℄	7.2	6
RAMP "C"	I – 90 RT.	7	6
RAMP "D"	I – 90 LT.	5.5	6
6+486.073	TRANSITION	7.2	
7+177	CR. 23 LT.		7
7+177	CR. 23 RT.		5
9+589	W. 5th ST. RT.		14
10+133	W. 2nd ST. RT.		8
10+212.771	TRANSITION	7.2	
10+399.451	TRANSITION	7.2	
11+196	TRANSITION	7.2	
11+210	TRANSITION	7.2	
11+545	TRANSITION	7.2	
11+624 TO 11+637.335	LT. & RT. ℄ T.H. 14		26.7
11+637.335	℄ ℄ T.H. 14	14	
TOTAL		162.7	218.3

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CONCRETE

STATION	TO	STATION	2301.502 200 mm STANDARD	2301.503 200 mm IRREGULAR	2301.502 225 mm STANDARD	2301.503 225 mm IRREGULAR	2301.511 STRUCTURAL
			m2	m2	m2	m2	m3
LT. 28 m 0+029.589		0+070.353				240	54
LT. 25 m 0+028.187		0+055.663				185	42
LT. 26.5 m 0+028.888		MEDIAN NOSE				23	5
N.B.L. 0+002.700		0+088.400				428	96
S.B.L. 0+070.353		0+088.400				530	119
0+088.400		0+180.000				440	99
0+180.000		0+210.000			216		46
0+210.000		0+456.884	1 778				356
0+456.884		0+486.884			216		46
0+486.884		0+578.884			662		149
0+632.318		0+724.318			662		149
0+724.318		0+754.318			216		46
0+754.318		3+319.096	18 466				3 693
3+319.096		3+349.096			216		46
3+349.096		3+434.996			618		139
3+514.928		3+600.828			618		139
3+600.828		3+630.828			216		46
3+630.828		6+160.900	18 216				3 643
6+160.900		6+190.900			216		46
6+190.900		6+282.900			662		149
LT. 6+225.000		RAMP "A"				300	68
RT. 6+225.000		RAMP "B"				325	73
6+394.073		6+486.073			662		149
6+486.073		6+516.073			216		46
RT. 6+447000		RAMP "C"				161	36
LT. 6+447.000		RAMP "D"				217	49
6+516.073		10+182.771	26 400				5 280
10+182.771		10+212.771			216		46
10+212.771		10+304.771			662		149
10+307.451		10+399.451			662		149
10+399.451		10+429.451			216		46
10+429.451		11+166.000	5 303				1 061
11+166.000		11+240.000			533		115
11+240.000		11+515.000	1 980				396
11+515.000		11+545.000			216		46
11+545.000		11+637.335			665		150
TOTAL			72 143		8 566	2 849	16 966

REINFORCING STEEL

STATION	TO	STATION	2301.529 L1TH JOINTS 16M	2301.529 L2KTH JOINTS 13M	2301.529 L2KTH JOINTS 16M	2301.529 SUPPLEMENTAL BARS 13M	2301.529 ① TRANSITION AREA 13M	2301.529 ① TRANSITION AREA 19M	2301.529 ① OVER CULV. 13M	2301.538 NON-SKEW DOWEL BAR	2301.602 ② TIES TO EXIST PVMT 25M
			kg	kg	kg	kg	kg	kg	kg	EACH	EACH
LT. 28 m 0+029.589		0+070.353	T	T	T	T	T	T	T	T	
LT. 25 m 0+028.187		0+055.663									
LT. 26.5 m 0+028.888		MEDIAN NOSE									
N.B.L. 0+002.700		0+088.400									
S.B.L. 0+070.353		0+088.400		157						573	
0+088.400		0+180.000	811	T	134	18			318	568	
0+180.000		0+210.000	T		T	T			T	T	
0+210.000		0+456.884									
0+456.884		0+486.884	522								
0+486.884		0+578.884	157				78	262		2 058	24
0+632.318		0+724.318	157				—	—		T	24
0+724.318		0+754.318	T				78	262			
0+754.318		3+319.096					T	T			
3+319.096		3+349.096	4 576							14 560	
3+349.096		3+434.996	141				78	262		—	
3+514.928		3+600.828	141				T	T		14 378	
3+600.828		3+630.828								T	
3+630.828		6+160.900	4 517								
6+160.900		6+190.900					78	262			
6+190.900		6+282.900	157				T	T			24
LT. 6+225.000		RAMP "A"	39			8				74	
RT. 6+225.000		RAMP "B"	43			8				80	
6+394.073		6+486.073	157			T				T	24
6+486.073		6+516.073	T				78	262			
RT. 6+447000		RAMP "C"	30			8	T	T		56	
LT. 6+447.000		RAMP "D"	22			8				40	
6+516.073		10+182.771	—			T				T	
10+182.771		10+212.771	6 500								
10+212.771		10+304.771	141				78	262	106	20 358	
10+307.451		10+399.451	145				78	262	106	T	
10+399.451		10+429.451	—				—	—	T		
10+429.451		11+166.000	1 385				156	524			
11+166.000		11+240.000					—	—			
11+240.000		11+515.000					78	262		6 868	
11+515.000		11+545.000	578								
11+545.000		11+637.335	157								
TOTAL			20 376	157	134	50	780	2 620	530	59 613	96

JOINTS

2301.538 NON-SKEW DOWEL BAR	2301.602 ② TIES TO EXIST PVMT 25M	2301.531 E1-1	2301.531 E4S
EACH	EACH	m	m
T			
573			
568			
T			
2 058	24		
T	24		
14 560			
—			
14 378			
T			
74			
80			
T	24		
56			
40			
T			
20 358			
T			
6 868			

REINFORCED PANEL LOCATIONS

STATION	DESCRIPTION	PANELS NO.	PANELS TYPE
0+173.900 TO 0+186.100	OVER DOUBLE 3050 x 2440 BOX	6	A
0+486.884	PAVEMENT TRANSITION	2	B
0+724.318	PAVEMENT TRANSITION	2	B
3+349.096	PAVEMENT TRANSITION	2	B
6+190.900	PAVEMENT TRANSITION	2	B
6+486.073	PAVEMENT TRANSITION	2	B
10+212.771	PAVEMENT TRANSITION	2	B
10+293.870 TO 10+296.870	OVER 600 mm R.C.P.	2	A
10+311.730 TO 10+314.730	OVER 600 mm R.C.P.	2	A
10+399.451	PAVEMENT TRANSITION	2	B
11+196.000	CONC. TO BIT.	2	B
11+210.000	BIT. TO CONC.	2	B
11+545.000	PAVEMENT TRANSITION	2	B

① REINFORCING STEEL PROVIDED AT PAVEMENT TRANSITION AREAS, WHERE PAVEMENT MATERIALS DIFFER BENEATH THE OVERLAY, AND WHERE CULVERTS REQUIRE ADDITIONAL REINFORCEMENT. SEE TAB FOR REINFORCEMENT LOCATIONS THIS SHEET AND DETAILS FOR SUPPLEMENTAL STEEL SHEET 29, AND CULVERT PANELS SEE STANDARD PLATE (M1070K).

② TIE BARS ARE CONSIDERED INCIDENTAL TO PAY ITEM 2301.602 DRILL AND GROUT REINFORCEMENT BARS (EPOXY COATED).

AS-BUILT
FEB 14 2001
ENGINEERING

NOTE: FOR TYPE B PANELS SEE SUPPLEMENTAL STEEL SHEET 29
FOR TYPE A PANELS SEE STANDARD PLATE (M1070K)

CERTIFIED BY Kaye M Bricnicki PROFESSIONAL ENGINEER REG. NO. 19917 4/6 1999

BITUMINOUS PAVEMENT

STATION	LOCATION	2340.508 TYPE 41 BIT. WEAR	2340.514 TYPE 41 BASE	2340.516 TYPE 41 SHLD.	2331.602 PERM ASPHALT STAB BASE (PASSRC)	2301.511 BIT. MAT'L. FOR MIXTURE (PASSRC)	INCIDENTAL TACK COAT
		metric ton	metric ton	metric ton	metric ton	metric ton	liter
0+029 TO 0+070	WEST LEG S.B.L.	60	169	40	26	3.08	
0+029 TO MEDIAN	WEST LEG MIDDLE		5		3	0.12	
0+029 TO 0+055	WEST LEG N.B.L.		44		20	0.80	
0+003 TO 0+088	RT. ℄ N.B.L.		102		47	1.88	
0+070 TO 0+088	S.B.L.		22	16	10	0.40	
0+088 TO 0+180	S.B.L.		110	80	51	2.04	
0+088 TO 0+180	N.B.L.		110	80	51	2.04	851
0+273	RES. DR. RT.			10			12
0+180 TO 0+487	LT.- ℄ -RT.			266	193	7.72	847
0+487 TO 0+579	LT.- ℄ -RT.		161	80	74	2.96	508
0+632 TO 0+724	LT.- ℄ -RT.		161	80	74	2.96	508
0+700	RES. DR. RT.			10			12
0+746	RES. DR. LT.			10			12
1+164	RES. DR. LT.			10			12
1+246	RES. DR. LT.			10			12
1+684	RES. DR. RT.			10			12
1+803	RES. DR. RT.			10			12
2+171	RES. DR. LT.			10			12
2+185	RES. DR. LT.			10			12
2+483	RES. DR. LT.			10			12
2+679	RES. DR. LT.			10			12
2+722	RES. DR. RT.			10			12
2+849	RES. DR. LT.			10			12
3+221	RES. DR. RT.			10			12
0+724 TO 3+349	LT.- ℄ -RT.			2 268	1 648	65.92	7 245
3+349 TO 3+432	LT.- ℄ -RT.		145	72	67	2.68	458
3+518 TO 3+601	LT.- ℄ -RT.		145	72	67	2.68	458
3+563	RES. DR. LT.			10			12
3+656	RES. DR. LT.			10			12
3+601 TO 6+191	LT.- ℄ -RT.			1 884	1 626	65.04	7 148
3+716	RES. DR. RT.			10			12
3+819 TO 3+983	TURN LANE RT.	80	160				305
4+660	RES. DR. RT.			10			12
4+622 TO 4+786	TURN LANE RT.	80	160				305
4+752 TO 4+916	TURN LANE LT.	80	160				305
5+427 TO 5+591	TURN LANE RT.	80	160				305
5+557 TO 5+721	TURN LANE LT.	80	160				305
6+039	RES. DR. RT.			10			12
6+191 TO 6+283	LT.- ℄ -RT.		161	80	74	2.96	508
LT. 6+225	RAMP "A"		108				138
RT. 6+225	RAMP "B"		117				150
6+394 TO 6+486	LT.- ℄ -RT.		161	80	74	2.96	508
RT. 6+447	RAMP "C"		58				74
LT. 6+447	RAMP "D"		78				100
6+486 TO 10+213	LT.- ℄ -RT.			2 795	2 340	93.60	10 287
6+605	RES. DR. RT.			10			12
7+032 TO 7+196	TURN LANE RT.	80	160				305

BITUMINOUS PAVEMENT

STATION	LOCATION	2340.508 TYPE 41 BIT. WEAR	2340.514 TYPE 41 BASE	2340.516 TYPE 41 SHLD.	2331.602 PERM ASPHALT STAB BASE (PASSRC)	2301.511 BIT. MAT'L. FOR MIXTURE (PASSRC)	INCIDENTAL TACK COAT
		metric ton	metric ton	metric ton	metric ton	metric ton	liter
7+160 TO 7+324	TURN LANE LT.	80	160				305
7+847	RES. DR. LT.			10			12
7+906	RES. DR. LT.			10			12
8+637 TO 8+801	TURN LANE RT.	80	160				305
8+767 TO 8+931	TURN LANE LT.	80	160				305
9+172	RES. DR. LT.			10			12
9+442 TO 9+606	TURN LANE RT.	80	160				305
9+986 TO 10+150	TURN LANE RT.	80	160				305
10+213 TO 10+305	LT.- ℄ -RT.		161	80	74	2.96	508
10+271 TO 10+305	TURN LANE LT.	16	32				63
10+307 TO 10+399	LT.- ℄ -RT.		161	80	74	2.96	508
10+399 TO 11+196	LT.- ℄ -RT.			689	500	20.00	2 200
10+446 TO 10+610	TURN LANE RT.	80	160				305
11+196 TO 11+210	LT.- ℄ -RT.		25	12	11	0.44	77
11+210 TO 11+545	LT.- ℄ -RT.			289	210	8.40	925
11+457	RES. DR. RT.			10			12
11+545 TO 11+637	LT.- ℄ -RT.		161	80	74	2.96	508
TOTAL		1 036	4 317	9 363	7 388	298	38 525

CONCRETE CURB & GUTTER

STATION	LOCATION	2531.501 DESIGN D424	2531.501 DESIGN B424	2531.503 CONCRETE MEDIAN MOUNTABLE TYPE (M7105C)
		m	m	m2
0+000 TO 0+047	LT.	85		
0+038 TO 0+088.4	LT.			116
3+560 TO 3+640	LT.		80	
6+560 TO 6+674	RT.		114	
TOTAL		85	194	116

NOTE: CURB ELEVATIONS WILL BE DETERMINED BY THE EDGE OF PAVEMENT ELEVATIONS.

AS-BUILT
FEB 14 2001
ENGINEERING

CERTIFIED BY Kaye M Bierneck PROFESSIONAL ENGINEER REG. NO. 19917 5/11/99

SUBSURFACE EDGE DRAINS

STATION	LOCATION	2502.521 100 mm TP PIPE DRAIN m	2502.541 100 mm PERF PE PIPE DRAIN m	2502.601 100 mm CONC. HEAD WALL EACH	HEADWALL STATION
~~0+085 TO 0+208~~	~~RT & LT~~	~~104.4~~	~~246~~	~~2 1~~	~~0+085~~ 0+090
~~0+208 TO 0+331~~	~~RT & LT~~	~~108~~	~~246~~	~~2 1~~	~~0+208~~ 0+110
~~0+331 TO 0+454~~	~~RT & LT~~	~~108.4~~	~~246~~	~~2 1~~	~~0+331~~ 0+202
~~0+454 TO 0+578~~	~~RT & LT~~	~~104.6~~	~~248~~	~~2 1~~	~~0+454~~ 0+261
~~0+633 TO 0+749~~	RT	~~58.5~~	~~116~~	1	~~0+633~~ 0+322
~~0+749 TO 0+866~~	RT	~~514.6~~	~~116~~	~~1 2~~	~~0+749~~ 0+446
~~0+865 TO 1+018~~	~~RT & LT~~	~~108.1~~	~~306~~	~~2 1~~	~~0+865~~ 0+631
~~1+018 TO 1+171~~	~~RT & LT~~	~~106.2~~	~~306~~	~~2 1~~	~~1+018~~ 0+749
~~1+171 TO 1+324~~	RT & LT	~~1014.0~~	~~306~~	2	~~1+171~~ 0+865
~~1+324 TO 1+477~~	RT & LT	~~1014.8~~	~~306~~	2	~~1+324~~ 1+018
~~1+477 TO 1+630~~	RT & LT	~~1013.7~~	~~306~~	2	~~1+477~~ 1+176
~~1+630 TO 1+783~~	RT & LT	~~1015.0~~	~~306~~	2	~~1+630~~ 1+324
~~1+783 TO 1+936~~	RT & LT	~~1012.7~~	~~306~~	2	~~1+783~~ 1+477
~~1+936 TO 2+089~~	RT & LT	~~1010.3~~	~~306~~	2	~~1+936~~ 1+630
~~2+089 TO 2+242~~	RT & LT	~~1011.6~~	~~306~~	2	~~2+089~~ 1+783
~~2+242 TO 2+395~~	RT & LT	~~1012.0~~	~~306~~	2	~~2+242~~ 1+927
~~2+395 TO 2+548~~	RT & LT	~~1011.6~~	~~306~~	2	~~2+395~~ 2+089
~~2+548 TO 2+841~~	RT & LT	~~2011.4~~	~~586~~	~~4 2~~	~~2+548 & 2+841~~ 2+242
~~2+841 TO 2+991~~	RT & LT	~~1012.7~~	~~300~~	2	~~2+991~~ 2+395
~~2+991 TO 3+141~~	RT & LT	~~1013.7~~	~~300~~	2	~~3+141~~ 2+548
~~3+141 TO 3+291~~	RT & LT	~~1012.6~~	~~300~~	2	~~3+291~~ 2+841
~~3+291 TO 3+441~~	RT & LT	~~1014.3~~	~~300~~	2	~~3+441~~ 2+991
~~3+520 TO 3+670~~	RT & LT	~~1010.1~~	~~300~~	2	~~3+520~~ 3+141
~~3+670 TO 3+819~~	RT & LT	~~1010.5~~	~~298~~	2	~~3+670~~ 3+291
~~3+819 TO 3+901~~	LT & RT	~~511.4~~	~~82~~	~~1 2~~	~~3+819~~ 3+433
~~3+901 TO 3+983~~	LT & RT	~~59.5~~	~~82~~	~~1 2~~	~~3+901~~ 3+519
~~3+983 TO 4+133~~	~~RT & LT~~	~~104.6~~	~~300~~	~~2 1~~	~~3+983~~ 3+667
~~4+133 TO 4+283~~	~~RT & LT~~	~~105.3~~	~~300~~	~~2 1~~	~~4+133~~ 3+681
~~4+283 TO 4+433~~	~~RT & LT~~	~~109.3~~	~~300~~	2	~~4+283~~ 3+819
~~4+433 TO 4+622~~	RT & LT	~~1010.2~~	~~189~~	2	~~4+433 & 4+622~~ 3+983
~~4+433 TO 4+652~~	LT & RT	~~109.5~~	~~219~~	2	~~4+433 & 4+652~~ 4+133
~~4+652 TO 4+752~~	LT & RT	~~59.8~~	~~100~~	~~1 2~~	~~4+752~~ 4+283
~~4+803 TO 4+916~~	RT & LT	~~59.6~~	~~113~~	~~1 2~~	~~4+803~~ 4+433
~~4+916 TO 5+066~~	~~RT & LT~~	~~104.8~~	~~300~~	~~2 1~~	~~4+916~~ 4+622
~~5+066 TO 5+277~~	~~RT & LT~~	~~204.5~~	~~422~~	~~4 1~~	~~5+066 & 5+277~~ 4+652
~~5+277 TO 5+427~~	RT & LT	~~1011.2~~	~~300~~	2	~~5+427~~ 4+803
~~5+427 TO 5+557~~	LT & RT	~~510.1~~	~~130~~	~~1 2~~	~~5+557~~ 4+916
~~5+591 TO 5+721~~	RT & LT	~~59.4~~	~~130~~	~~1 2~~	~~5+591~~ 5+066
~~5+721 TO 5+877~~	RT & LT	~~1010.5~~	~~312~~	2	~~5+721~~ 5+277
~~5+877 TO 6+033~~	RT & LT	~~1010.0~~	~~312~~	2	~~5+877~~ 5+427
	RT & LT	11.8		2	5+597
	RT & LT	11.2		2	5+721
	RT & LT	11.1		2	5+877

SUBSURFACE EDGE DRAINS

STATION	LOCATION	2502.521 100 mm TP PIPE DRAIN m	2502.541 100 mm PERF PE PIPE DRAIN m	2502.601 100 mm CONC. HEAD WALL EACH	HEADWALL STATION
~~6+033 TO 6+190~~	~~RT & LT~~	~~105.9~~	~~314~~	~~2 1~~	~~6+033~~ 6+028
~~6+486 TO 6+586~~	~~RT & LT~~	~~105.6~~	~~200~~	~~2 1~~	~~6+486~~ 6+095
~~6+586 TO 6+792~~	RT & LT	~~2012.7~~	~~412~~	~~4 2~~	~~6+586 & 6+792~~ 6+480
~~6+792 TO 6+912~~	~~RT & LT~~	~~105.4~~	~~240~~	~~2 1~~	~~6+912~~ 6+587
~~6+912 TO 7+032~~	RT & LT	~~1010.2~~	~~240~~	2	~~7+032~~ 6+790
~~7+032 TO 7+160~~	LT & RT	~~511.1~~	~~128~~	~~1 2~~	~~7+160~~ 6+908
~~7+198 TO 7+324~~	RT	~~510.1~~	~~128~~	~~1 2~~	~~7+324~~ 7+032
~~7+324 TO 7+454~~	RT & LT	~~1010.5~~	~~260~~	2	~~7+454~~ 7+161
~~7+454 TO 7+584~~	RT & LT	~~1010.8~~	~~260~~	2	~~7+584~~ 7+327
~~7+584 TO 7+714~~	RT & LT	~~1010.0~~	~~260~~	2	~~7+714~~ 7+454
~~7+714 TO 7+844~~	RT & LT	~~109.1~~	~~260~~	2	~~7+844~~ 7+584
~~7+844 TO 7+974~~	RT & LT	~~109.6~~	~~260~~	2	~~7+974~~ 7+714
~~7+974 TO 8+200~~	RT & LT	~~109.1~~	~~452~~	2	* ~~8+094~~ 7+844
~~8+200 TO 8+330~~	RT & LT	~~109.8~~	~~260~~	2	~~8+200~~ 7+974
~~8+330 TO 8+537~~	RT & LT	~~2011.5~~	~~414~~	~~4 2~~	~~8+330 & 8+537~~ 8+099
~~8+537 TO 8+637~~	RT & LT	~~1010.5~~	~~200~~	2	~~8+637~~ 8+200
~~8+637 TO 8+767~~	LT & RT	~~59.6~~	~~130~~	~~1 2~~	~~8+767~~ 8+330
~~8+801 TO 8+931~~	RT & LT	~~59.6~~	~~130~~	~~1 2~~	~~8+931~~ 8+537
~~8+931 TO 9+059~~	RT & LT	~~1010.0~~	~~256~~	2	~~9+059~~ 8+630
~~9+059 TO 9+187~~	~~RT & LT~~	~~106.6~~	~~256~~	~~2 1~~	~~9+187~~ 8+768
~~9+187 TO 9+315~~	~~RT & LT~~	~~105.7~~	~~256~~	~~2 1~~	~~9+315~~ 8+800
~~9+315 TO 9+442~~	RT & LT	~~59.4~~	~~127~~	~~1 2~~	~~9+442~~ 9+070
~~9+315 TO 9+460~~	LT & RT	~~510.1~~	~~145~~	~~1 2~~	~~9+460~~ 9+190
~~9+460 TO 9+606~~	LT & RT	~~59.7~~	~~146~~	~~1 2~~	~~9+606~~ 9+322
~~9+606 TO 9+733~~	~~RT & LT~~	~~105.6~~	~~254~~	~~2 1~~	~~9+733~~ 9+448
~~9+733 TO 9+860~~	~~RT & LT~~	~~105.6~~	~~254~~	~~2 1~~	~~9+860~~ 9+463
~~9+860 TO 9+986~~	~~RT & LT~~	~~104.8~~	~~252~~	~~2 1~~	~~9+986~~ 9+607
~~9+986 TO 10+150~~	LT & RT	~~512.7~~	~~164~~	~~1 2~~	* ~~10+075~~ 9+733
~~10+150 TO 10+271~~	LT & RT	~~512.2~~	~~121~~	~~1 2~~	~~10+150~~ 9+860
~~10+150 TO 10+290~~	RT & LT	~~512.9~~	~~140~~	~~1 2~~	~~10+150~~ 9+986
~~10+320 TO 10+520~~	LT & RT	~~512.7~~	~~200~~	~~1 2~~	* ~~10+380~~ 10+075
~~10+520 TO 10+670~~	LT & RT	~~511.0~~	~~150~~	~~1 2~~	~~10+520~~ 10+187
~~10+670 TO 10+820~~	LT	~~55.2~~	~~150~~	1	~~10+670~~ 10+323
~~10+820 TO 10+970~~	~~RT & LT~~	~~105.5~~	~~300~~	~~2 1~~	~~10+820~~ 10+490
~~10+970 TO 11+120~~	~~RT & LT~~	~~104.8~~	~~300~~	~~2 1~~	~~10+970~~ 10+670
~~11+120 TO 11+250~~	RT & LT	~~511.7~~	~~130~~	~~1 2~~	~~11+120~~ 10+820
~~11+250 TO 11+477~~	RT & LT	~~1010.8~~	~~227~~	2	~~11+250 & 11+477~~ 10+970
~~11+477 TO 11+624~~	RT	~~55.9~~	~~147~~	1	~~11+624~~ 11+120
	RT	5.0		1	11+250
	RT	4.4		1	11+470
	RT	3.8		1	11+574
TOTALS	-	795	20,937	142	

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S.P. 55-607-11 C.S.A.H. 7 SHEET 7 OF 40 SHEETS

ALINGMENT TABULATION

POINT NO.	POINT	STATION	CURVE DATA				COORINATES	
			DELTA	RADIUS	TANGENT	LENGTH	X	Y
	BOP	0+000.000					37872.8280	206965.5990
	PC	0+327.657					38200.1867	206951.6163
	PI	0+435.653	11°04'30"	1113.939 L	107.996	215.320	x	x
	PT	0+542.977					38413.0877	206921.7581
	PC	0+648.940					38516.1036	206896.9398
	PI	0+756.093	12°19'22"	992.578 R	107.153	213.478	x	x
	PT	0+862.418					38727.4036	206869.5567
	PI	1+629.266					39494.0770	206853.1950
	PI	1+858.658					39723.4170	206848.3120
	PI	2+793.916					40658.6680	206844.7250
	PI	3+125.228					40989.9260	206838.7340
	PI	3+163.142					41027.8340	206838.0610
	PI	3+968.160					41830.7190	206823.4430
	PI	4+768.938					42633.4310	206813.1730
	PC	5+469.954					43334.3895	206804.2069
	PI	5+574.089	00°41'39"	17187.701 R	104.135	208.268	x	x
	PT	5+678.221					43542.6510	206802.8049
	PC	6+003.511					43867.9405	206802.5859
	PI	6+114.739	00°32'47"	23323.248 L	111.228	222.453	x	x
	PT	6+225.964					44090.3897	206801.3753
	PC	6+460.226					44324.6391	206798.9832
	PI	6+557.792	00°28'55"	23192.759 L	97.566	195.131	x	x
	PT	6+655.357					44519.7491	206796.1700
	PC	7+167.857					45032.1604	206786.6255
	PI	7+309.526	01°46'56"	9108.689 R	141.669	283.316	x	x
	PT	7+451.173					45315.4626	206785.5350
	PC	7+548.372					45412.6538	206786.7797
	PI	7+677.445	01°27'20"	10161.363 L	129.073	258.132	x	x
	PT	7+806.504					45670.7792	206787.0244
	PC	8+124.793					45989.0431	206783.0150
	PI	8+224.565	00°58'18"	11767.311 L	99.772	199.540	x	x
	PT	8+324.333					46188.5347	206778.7354
	PC	8+544.507					46408.6124	206772.2293
	PI	8+657.680	01°00'03"	12957.383 R	113.173	226.341	x	x
	PT	8+770.848					46634.9013	206767.5204
	PI	8+783.462					46647.5140	206767.3680
	PI	9+588.682					47452.6990	206759.8180
	PC	10+363.236					48227.2048	206751.1727
	PI	10+619.236	72°34'59"	348.609 L	256.000	441.623	x	x
	PT	10+804.859					48557.0836	206503.2127
	PC	11+131.457					48651.3573	206190.5166
	PI	11+389.101	72°46'08"	349.659 R	257.644	444.087	x	x
	PT	11+575.544					48983.3636	205941.7988
	EOP	11+726.030					49133.8450	205940.6070

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TURF ESTABLISHMENT

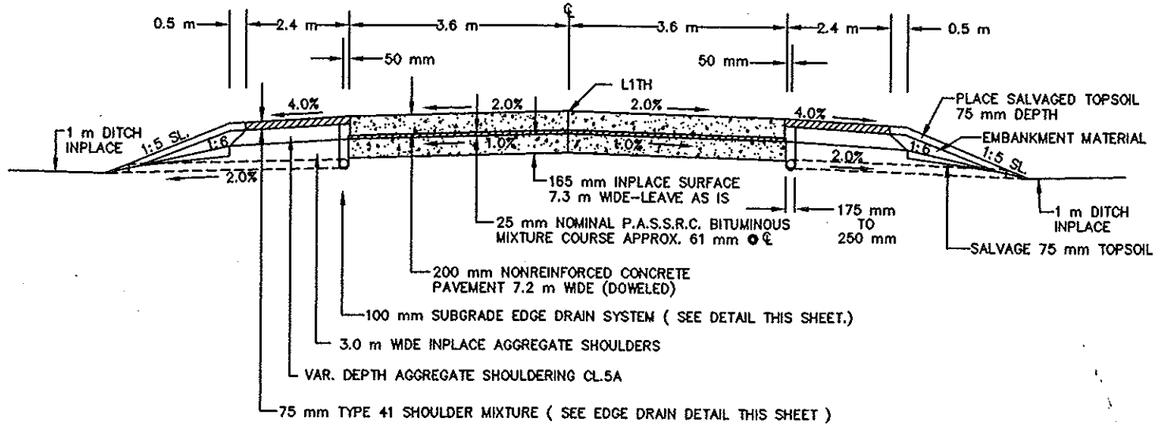
STATION	LOCATION	2575.505 SODDING TYPE EROSION	2575.502 SEED MIX 50A	2575.502 SEED MIX 110A	2575.501 SEEDING	2575.532 COMMERCIAL FERTILIZER	2575.511 MULCH TYPE 1	2575.519 DISK ANCHORING
		m2	kg	kg	ha	kg	metric ton	ha
0+003 TO 0+579	RT. & LT.		30	60	0.6	135	2.7	0.6
0+632 TO 3+431	RT. & LT.		150	300	3.0	675	13.5	3.0
3+518 TO 6+283	RT. & LT.		150	300	3.0	675	13.5	3.0
6+394 TO 10+304	RT. & LT.		220	440	4.4	990	19.8	4.4
10+307 TO 11+637	RT. & LT.		70	140	1.4	315	6.3	1.4
3+560 TO 3+640	LT.	230						
6+560 TO 6+674	RT.	210						
TOTAL		440	620	1 240	12.4	2 790	55.8	12.4

TRAFFIC BARRIER

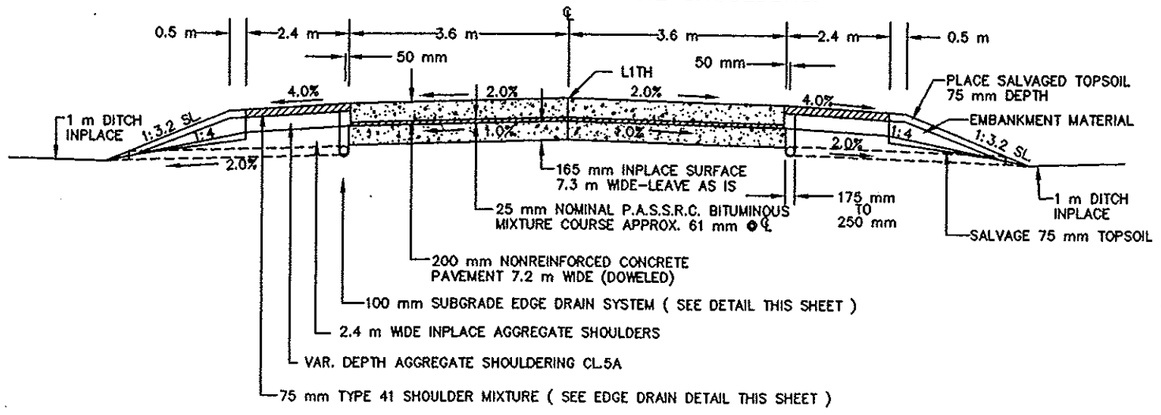
BRIDGE	LOCATION	SALVAGE 2104.521 PLATE BEAM GUARDRAIL	FURNISH AND INSTALL 2554.501 PLATE BEAM DESIGN SPECIAL A	2554.501 PLATE BEAM DESIGN SPECIAL	2554.521 ANCHORAGE PLATE M8318	2554.523 ET-2000 END TREATMENT	2554.602 GUARDRAIL POST SEAT	
		m	m	m	EACH	EACH	EACH	
* BOX CULVERT	STA. 0+078	98		25.4		3	14	
55521	STA. 0+605	128	30.48		4	4		
55516	STA. 3+474	112		42.86	4	3		
55808	STA. 6+335	122	30.48		4	4		
TOTAL		460	60.96	68.26	12	14	14	

* SEE SHEET 13 FOR DETAIL

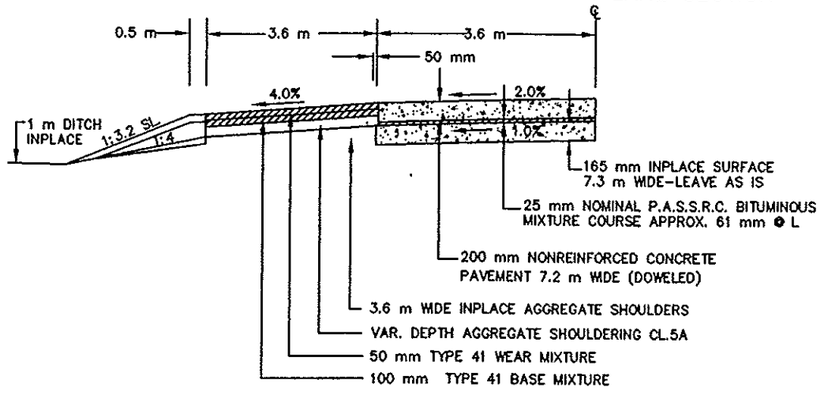
TYPICAL SECTION FROM U.S.52 STA. 0+004.880 TO STA. 3+126.761 INPLACE CONCRETE PAVEMENT IS 7.3 m WIDE AND 3.0 m WIDE AGGREGATE SHOULDERS.



TYPICAL SECTION FROM STA. 3+126.761 TO STA. 11+637.335 AT U.S.14. INPLACE CONCRETE PAVEMENT IS 7.3 m WIDE AND 2.4 m WIDE AGGREGATE SHOULDERS.



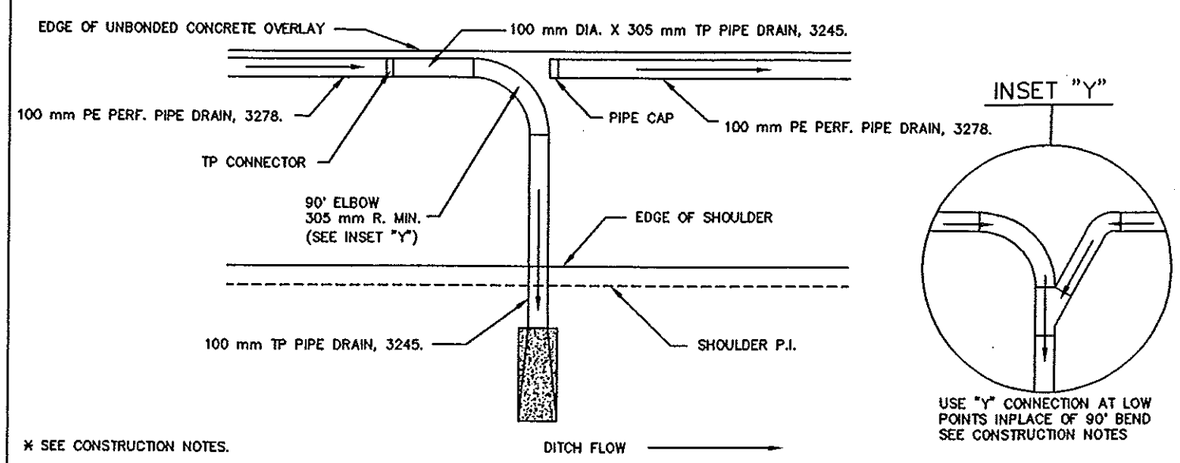
TYPICAL TURN LANE SECTION



NOTE: PERMEABLE ASPHALT STABILIZED STRESS RELIEF COURSE (PASSRC) THE (PASSRC) PLACEMENT OF APPROXIMATELY 61 mm AT ℄ AND 25 mm AT THE OUTSIDE EDGES IS FOR TRANSITION FROM 1% TO 2% SLOPE.

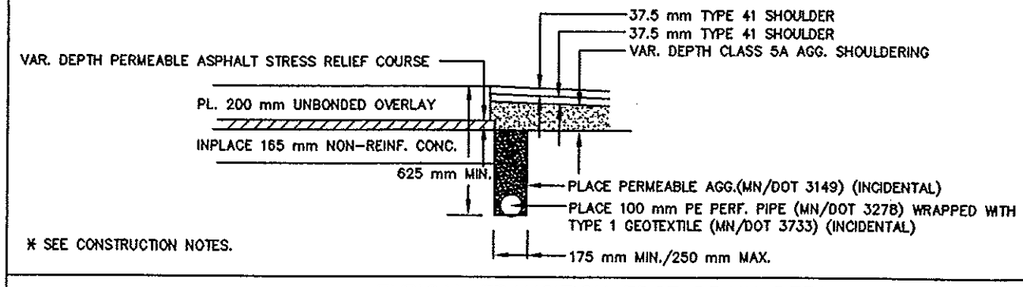
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EDGE DRAIN PLAN VIEW DETAIL



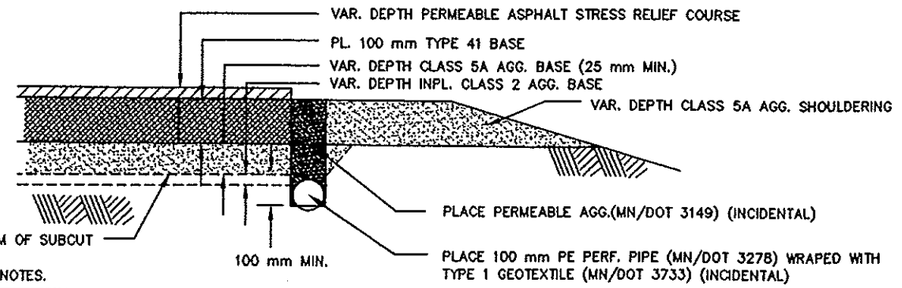
* SEE CONSTRUCTION NOTES.

TYPICAL PAVEMENT EDGE DRAIN DETAIL



* SEE CONSTRUCTION NOTES.

TYPICAL TRANSITION EDGE DRAIN DETAIL



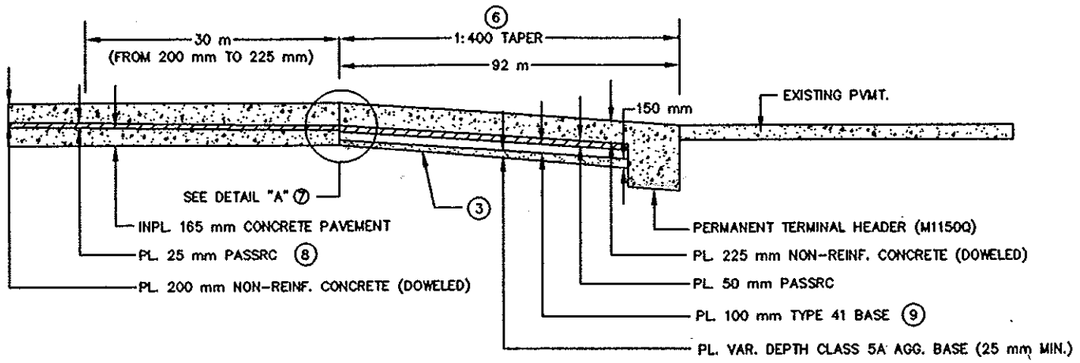
* SEE CONSTRUCTION NOTES.

* NOTES:

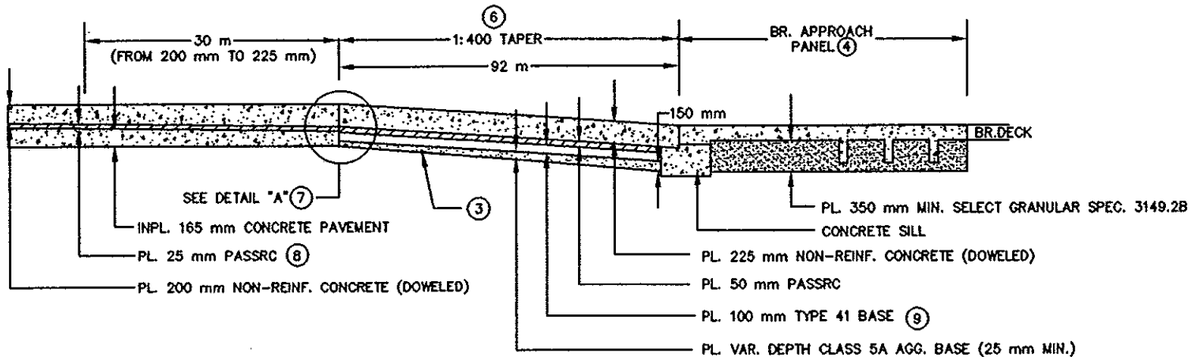
1. SEE SPECIAL PROVISIONS FOR INSTALLATION AND MATERIAL DETAILS.
2. THE FLOWLINE SHALL BE A MINIMUM OF 625 mm BELOW THE FINISHED CONCRETE PAVEMENT SURFACE.
3. EDGE DRAINS SHALL BE PLACED ALONG BOTH SIDES OF THE ROADWAY . THEY SHALL NOT BE PLACED ON THE HIGH SIDE OF SUPERELEVATED CURVES.
4. THE BOTTOM OF THE TRENCH SHALL BE SHAPED TO CRADLE THE LOWER ONE–THIRD OF THE PIPE.
5. THE UPSTREAM ENDS OF THE PERFORATED TUBING SHALL BE CAPPED.
6. PIPE GRADES SHALL FOLLOW PAVEMENT GRADES.
7. PLACE OUTLETS 305 mm MINIMUM ABOVE DITCH BOTTOM WHERE POSSIBLE, WITH AN ABSOLUTE MINIMUM OF 150 mm. A MAXIMUM SPACING OF 150 m.
8. PLACE PRECAST CONCRETE HEADWALLS AT THE OUTLETS. BACKFILL THE OUTLET TRENCHES WITH NON–GRANULAR SOIL.
9. PAYMENT FOR DRAN PIPE SHALL BE FULL COMPENSATION FOR TRENCHING, INSTALLATION, BACKFILL, COUPLING, CAPS, GEOTEXTILE, PE PIPE, COMPACTION, AND ALL OTHER ASSOCIATED WORK SHALL BE INCUDED UNDER ITEM 2502.541. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
10. DETAILS OF CONNECTION AND COUPLING TO PE TO BE APPROVED BY THE ENGINEER. PAYMENT FOR "Y" AND EXTRA CONNECTION,COUPLING AND TP PIPE TO BE INCIDENTAL TO ITEM 2502.521.

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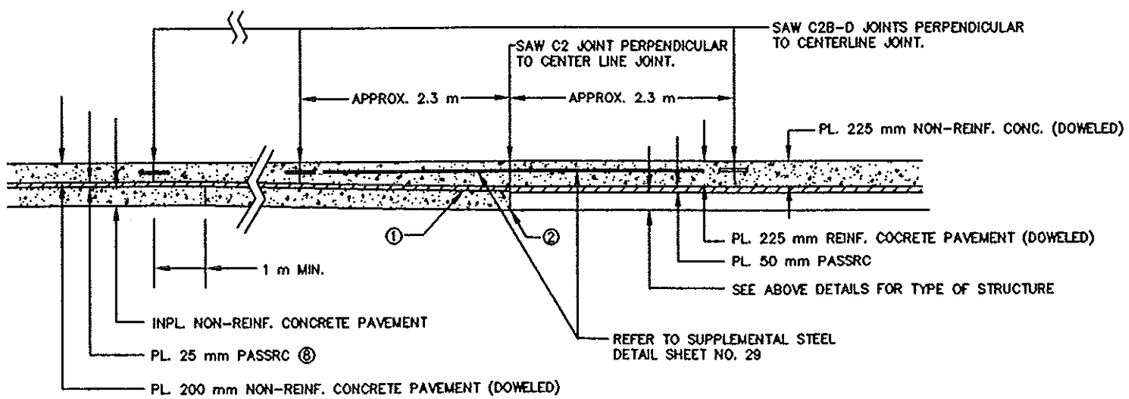
PAVING TRANSITION DETAIL AT NORTH & SOUTH PROJECT TERMINI.



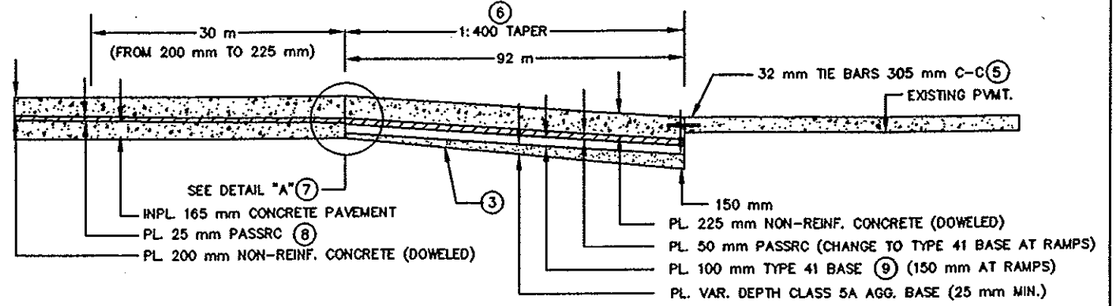
PAVING TRANSITION DETAIL AT BRIDGES



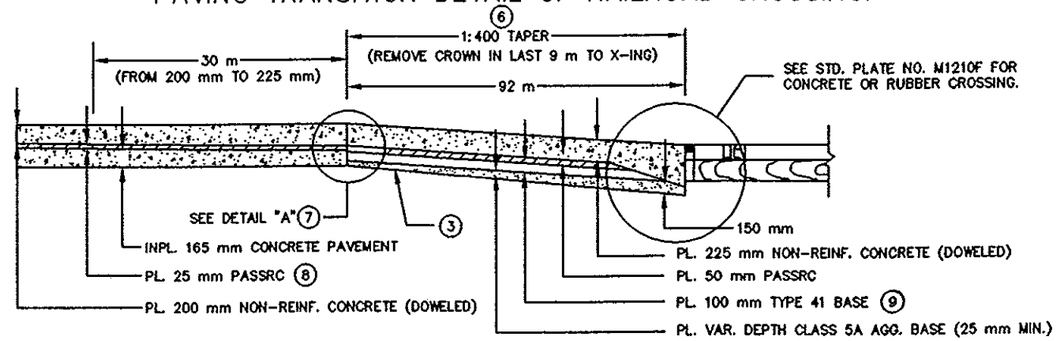
DETAIL "A"



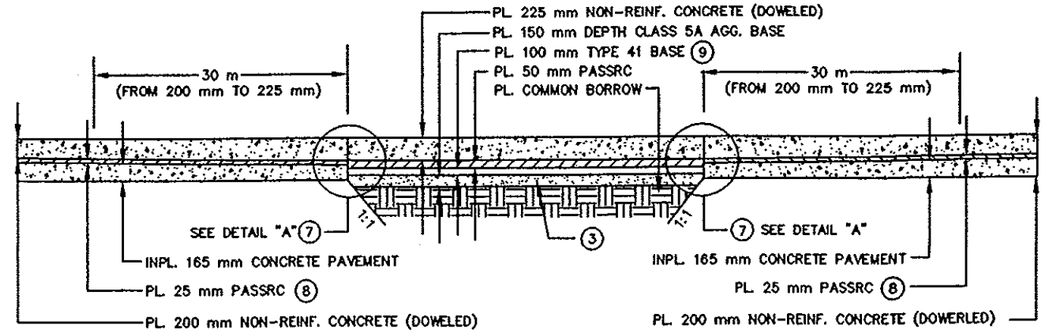
PAVING TRANSITION DETAIL OF RAMPS AT INTERSECTION OF I-90 & C.S.A.H. 7



PAVING TRANSITION DETAIL OF RAILROAD CROSSING.



PAVING TRANSITION DETAIL OF CATTLE PASS REMOVAL.



NOTES:

① MILL 25 mm AT THE END OF THE INPLACE CONCRETE PAVEMENT AND TAPER TO 0 mm AT A POINT 30 m FROM THE END OF INPLACE CONCRETE PAVEMENT PRIOR TO PLACING PASSRC.

② SAWCUT INPLACE CONCRETE PAVEMENT NEAR MID-PANEL PERPENDICULAR TO ROADWAY CENTERLINE, AND SAW C2 JOINTS DIRECTLY OVER SAWCUT.

③ ANY SUBGRADE PREPARATION REQUIRED SHALL BE INCIDENTAL WORK FOR WHICH NO ADDITIONAL COMPENSATION WILL BE MADE.

④ SEE PLAN SHEETS FOR TYPE & STYLE OF BRIDGE APPROACH PANELS.

⑤ PROVIDE FOR TIEING THE INPLACE ADJACENT PAVEMENT AT RAMPS OF I-90. DRILLING, GROUT, OR EPOXY WILL BE INCIDENTAL.

⑥ TRANSITION CROSS-SLOPE FROM 2.0% TO EXISTING CROSS-SLOPE IN TAPER AREA. TAPER 1:400 IS APPROXIMATE. THE 92 m LENGTH MAY BE ADJUSTED TO MISS INPLACE SKEWED JOINTS.

⑦ REFER TO DETAIL "A" FOR SUPPLEMENTAL REINFORCEMENT DETAIL AND MILLING REQUIREMENTS AT TRANSITION FROM OVERLAY TO PAVING ON GRADE.

⑧ 25 mm IS A NOMINAL DEPTH. CENTER LINE DEPTH IS APPROXIMATELY 61 mm. THIS IS FOR TRANSITION FROM 1% TO 2% SLOPE.

⑨ TYPE 41 BASE SHALL BE PLACED IN 50 mm LIFTS WITH TACK COAT BETWEEN EACH LAYER INCLUDING THE (PASSRC) LAYER.

• PERMEABLE ASPHALT STABILIZED STRESS RELIEF COURSE (PASSRC).

•• ALL INPLACE CL.2 AGG. BASE EXCAVATED TO MEET INPLACE STRUCTURE IS CONSIDERED UNCLASSIFIED EXCAVATION AND SHALL BE PLACED AS EMBANKMENT ON SLOPES. SEE TYPICAL SECTIONS SHEET 9

AS-BUILT

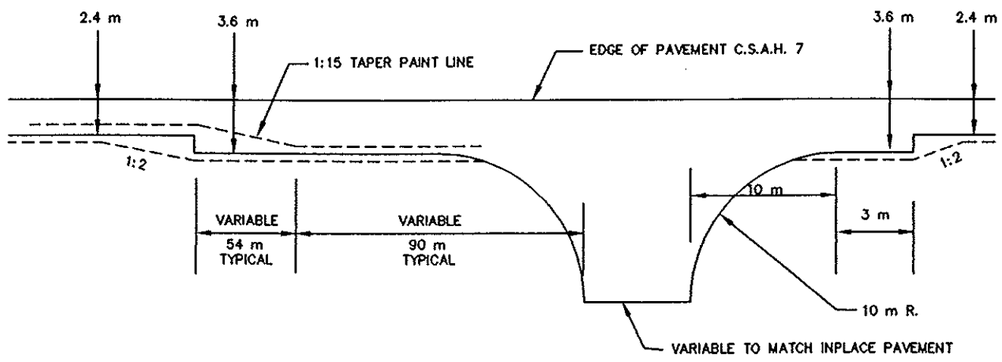
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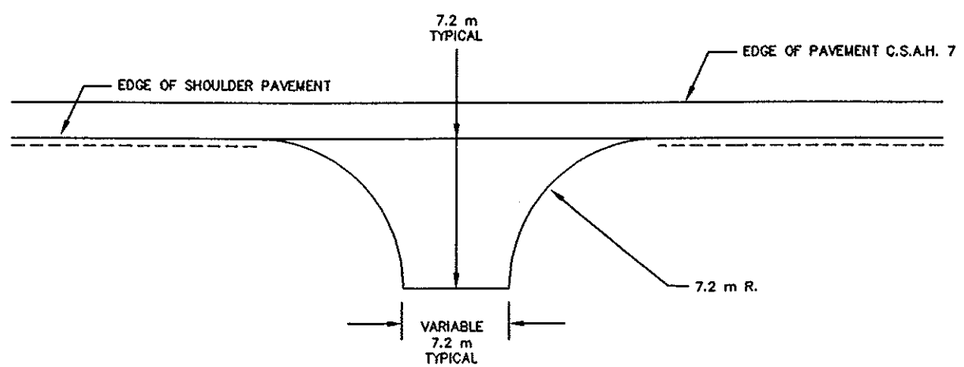
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S.P. 55 - 607 - 11 C.S.A.H. 7 SHEET 10 OF 40 SHEETS

TURNLANE PLAN TYPICAL
BITUMINOUS



TYPICAL RES. ENTRANCE



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D424 CONCRETE CURB & GUTTER

BITUMINOUS PAVEMENT

MOUNTABLE TYPE CONCRETE MEDIAN (NOSE DETAIL STD. PLATE M7113A)

CONSRUCT 12 m PERMANET HEADER

CONSRUCT 7.4 m PERMANET HEADER

P.I. LT. 29.427 m
STA. 0+026.934

P.I. LT. 31.423 m
STA. 0+033.640
SEE INSET "A"

BEGIN MEDIAN NOSE 19.3 m LT.
STA. 0+033.

RADIUS 16 m
LT. 29.878 m
STA. 0+060.100

2.4 m

RADIUS 29 m
LT. 29 m
STA. 0+070.353

P.I. 0+058.697
RT. 1 m
R=30 m
T=11.656 m

P.I. 0+059.085
CENTER LINE
R=29 m
T=11.268 m

P.I. 0+059.474
LT. 1 m
R=28 m
T=10.879 m

P.I. 0+061.416
LT. 6 m
R=23 m
T=8.936 m

42.4667°

90.0000°

CENTER LINE U.S.52
STA. 0+000.000

BEGIN: S.P. 55-607-11
STA. 0+004.886

RADIUS PT. LT. 1.6 m
STA. 0+012.580

47.5333°

RADIUS PT. LT. 17.916 m
STA. 0+027.514

RADIUS PT. LT. 1.6 m
STA. 0+045.340

D424 C.&G.

L2KTH FROM TH52 TO STA. 0+143

SEE INSET "E"

6.0 m
5 m
4.6 m
3.6 m

90.0000°

2.4 m

1.4 m

P.I. 0+004.364
RT. 5.6 m
R=30 m
T=13.211 m

88.8829°

47.5333°

90.0000°

0.6 m

3.6 m

RADIUS 30 m
RT. 35.6 m
STA. 0+017.575

RADIUS 34.662 m
RT. 42.656 m
STA. 0+018.250

46.4162°

L1TH

L2KTH

SAW

5 m

3.6 m

5.6 m

BEGIN TAPER
STA. 0+088.392

END NOSE AT
STA. 0+088.4

END TAPER
STA. 0+180

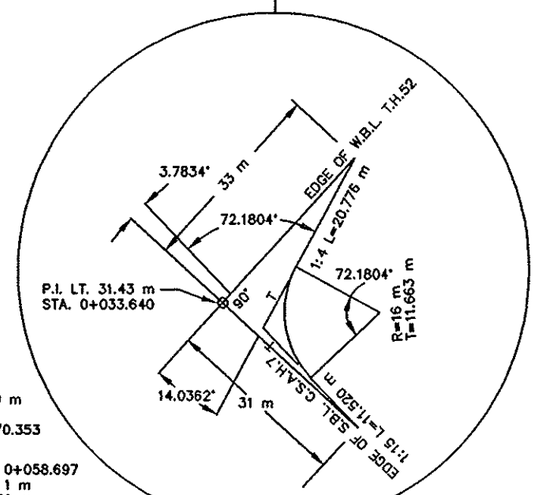
MATCH LINE STA. 0+140

0+100

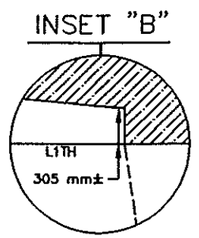
0+143

TAPER

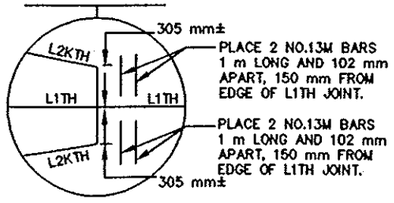
INSET "A"



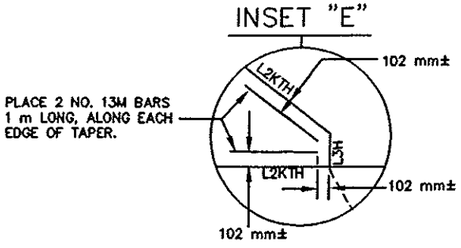
INSET "B"



INSET "C"



INSET "E"



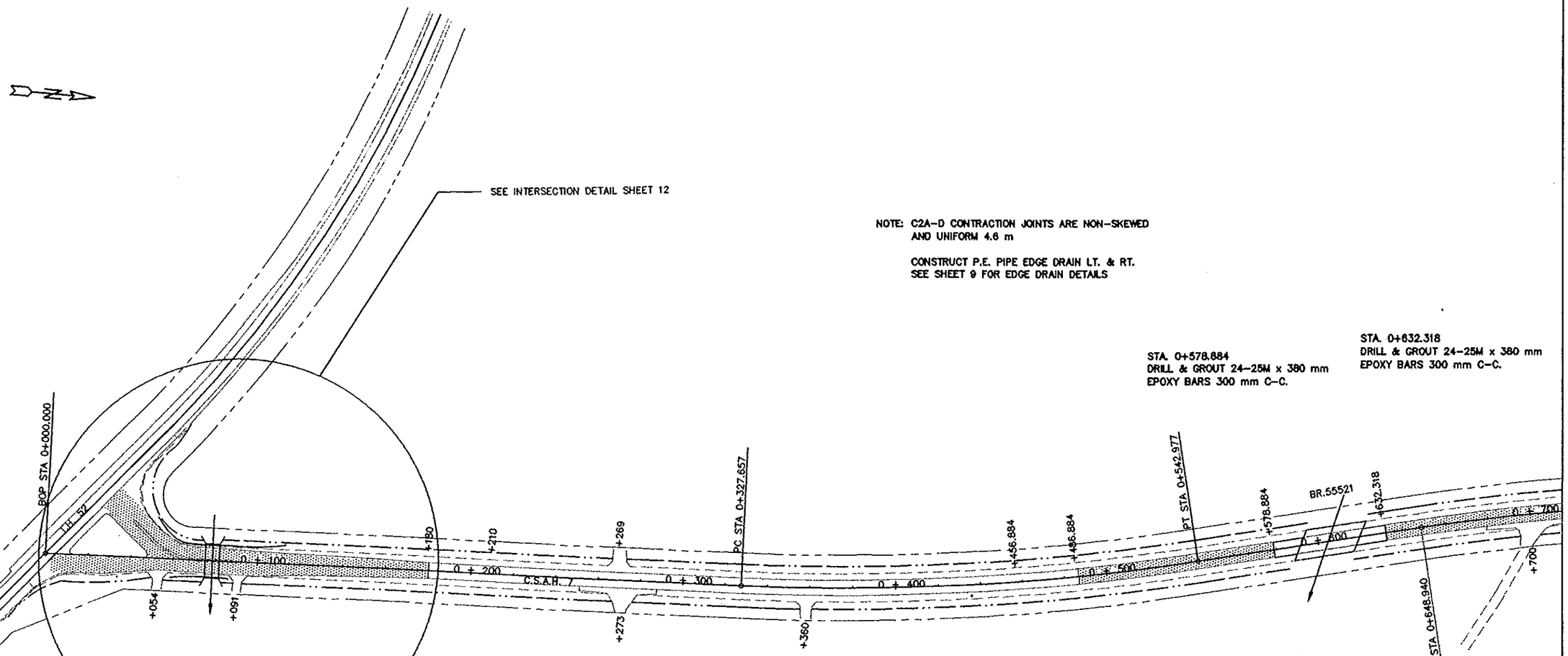
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S.P. 55-607-11 C.S.A.H. 7



NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS

STA. 0+578.884
DRILL & GROUT 24-25M x 380 mm
EPOXY BARS 300 mm C-C.

STA. 0+632.318
DRILL & GROUT 24-25M x 380 mm
EPOXY BARS 300 mm C-C.

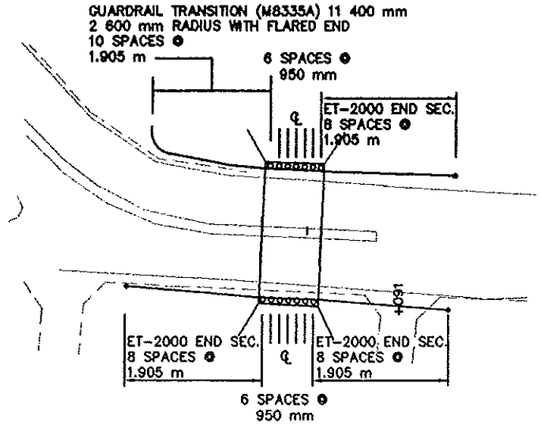
GUARDRAIL AT BRIDGE NO. 55521

4 - GUARDRAIL ANCHORAGE PLATE STD. PLT. M8318

4 - 7 620 mm OF TRAFFIC BARRIER DESIGN SPECIAL A

4 - ET-2000 GUARDRAIL END TREATMENT

GUARDRAIL TRANSITION (M8335A) 11 400 mm
2 600 mm RADIUS WITH FLARED END



LIGHTING UNITS

1 - UNIT RT. 9 m STA.0+033
1 - UNIT LT. 11 m STA.0+062
SALVAGE AND RETURN TO OWNER.
INSTALL NEW UNITS RT. & LT. ON NEW POLES
RELOCATED BY UTILITY COMPANY.

UTILITY COMPANY TO REMOVE POWER POLE FROM MEDIAN.

GUARDRAIL AT BOX CULVERT

2 - 5 700 mm OF TRAFFIC BARRIER DESIGN SPECIAL

14 - POST SEAT FOR ANCHORAGE (STD. PLT. M8316)

3 - ET-2000 GUARDRAIL END TREATMENT

1 - 14 000 mm OF TRAFFIC BARRIER DESIGN SPECIAL WITH TRANSITION (M8335A) AND FLARED END.

STA. 0+074.884 TO 0+081.634
F.&I. POST SEATS FOR ANCHORAGE
ON BOX CULVERTS.

MOVE F.E. RT STA. 0+091 NORTH TO ACCOMMODATE END OF GUARDRAIL

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CONCRETE PAVEMENT REMOVAL

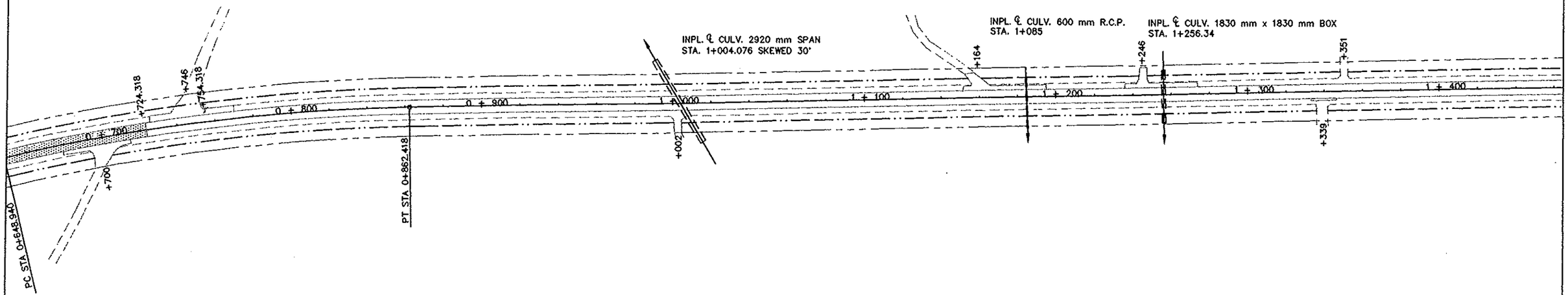
APPROX. SEED LIMITS

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PROFESSIONAL ENGINEER

S. P. 55-607-11

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

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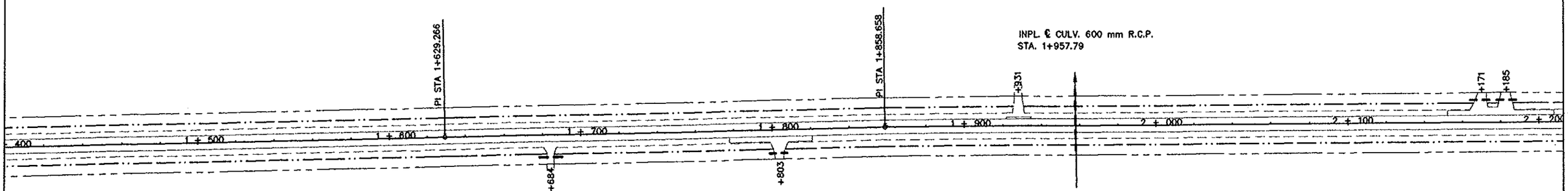
CERTIFIED BY Kyle M Poznick PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S. P. 55-607-11

SHEET 14 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT

FEB 14 2001

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CERTIFIED BY Kevin M Bjerneth PROFESSIONAL ENGINEER REG. NO. 19917 3/30 19 99

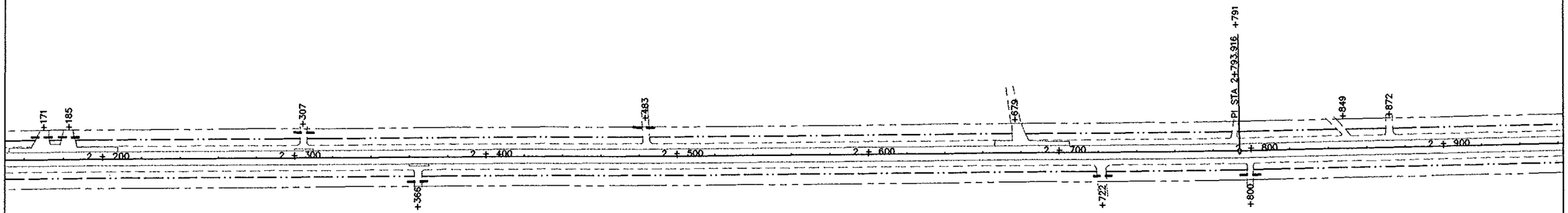
S. P. 55-607-11

SHEET 15 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS

N



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT
FEB 14 2001
ENGINEERING

CERTIFIED BY Karen M Bienick PROFESSIONAL ENGINEER REG. NO. 19317 3/30 1999

S. P. 55-607-11

SHEET 16 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

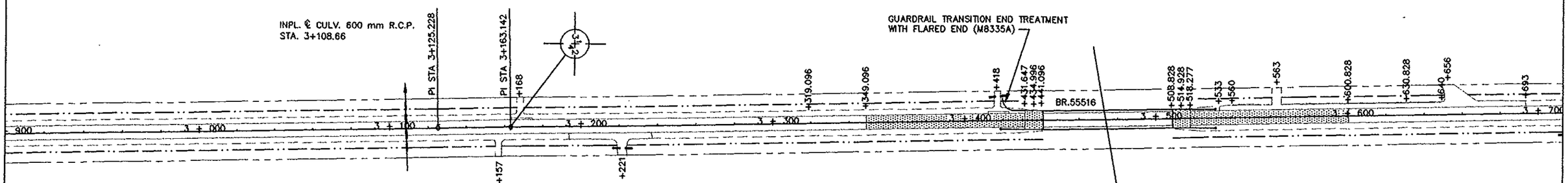
CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS

F.E. LT. STA.3+418

BRIDGE APPROACH PANELS AND
BRIDGE OVERLAY BY BRIDGE CONTRACTOR

GUARDRAIL TRANSITION END TREATMENT
WITH FLARED END (M8335A)

INPL. ℄ CULV. 600 mm R.C.P.
STA. 3+108.66



GUARDRAIL FOR BR.55516

4 – GUARDRAIL ANCHORAGE PLATE STD. PLT. M8318

4 – 7 620 mm OF TRAFFIC BARRIER DESIGN SPECIAL

3 – ET-2000 GUARDRAIL END TREATMENT

1 – 12 380 mm OF TRAFFIC BARRIER DESIGN SPECIAL WITH TRANSITION (M8335A) AND FLARED END.

CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT

FEB 14 2001

ENGINEERING

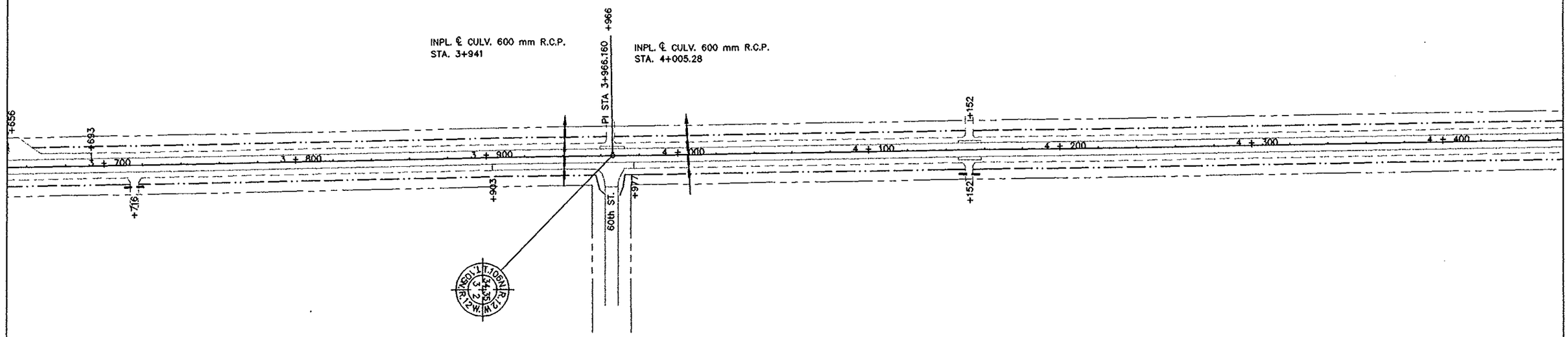
CERTIFIED BY Kaye M Baerwald PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S. P. 55-607-11

SHEET 17 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT

FEB 14 2001

ENGINEERING

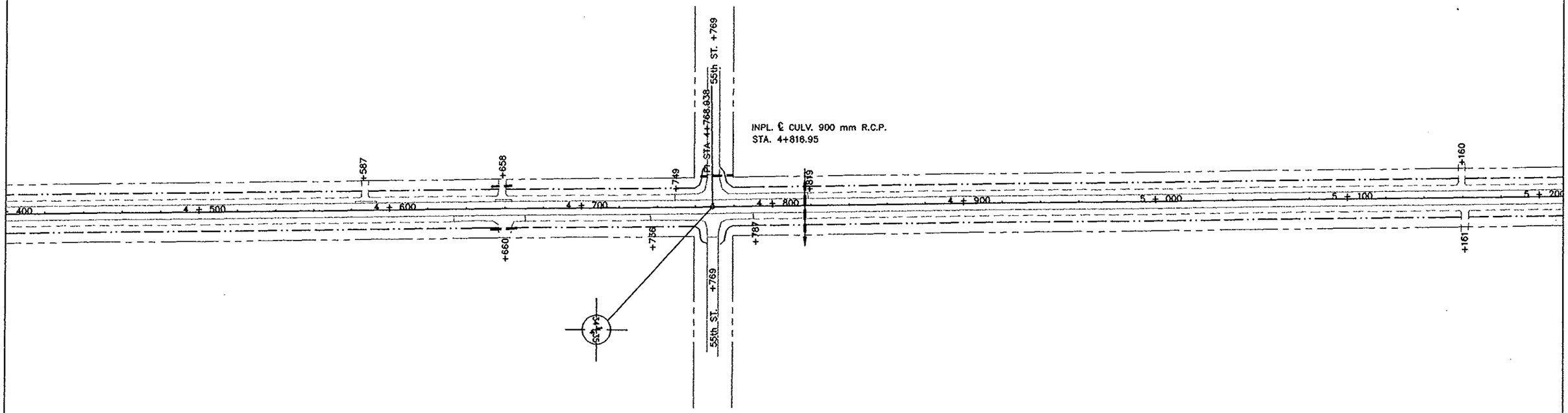
CERTIFIED BY Kaye M. Bienick PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S. P. 55-607-11

SHEET 18 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

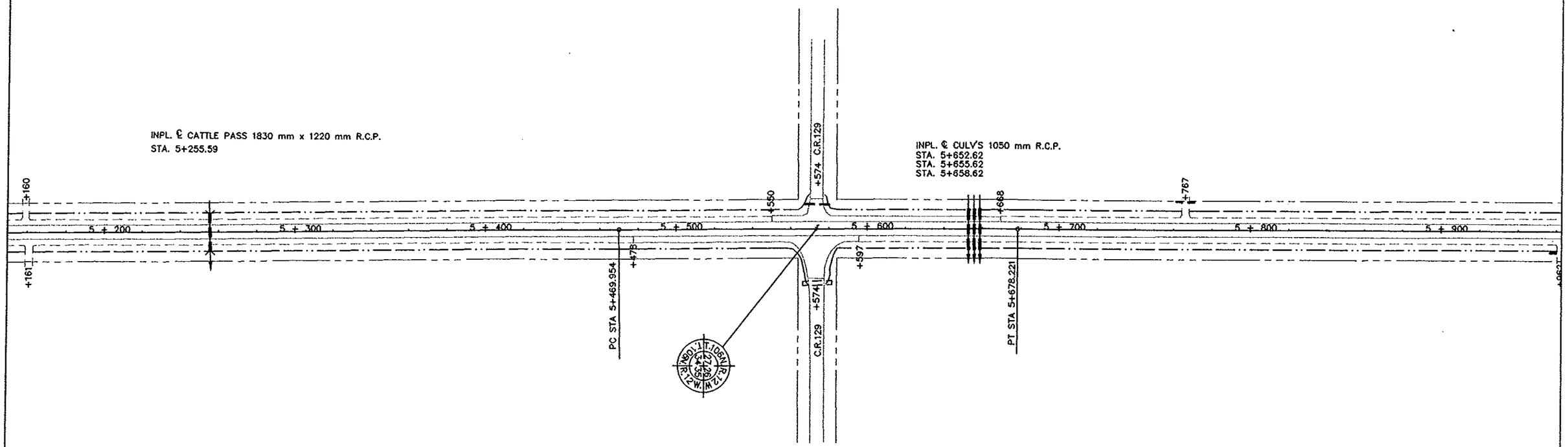
APPROX. SEED LIMITS

AS-BUILT
FEB 14 2001
ENGINEERING

CERTIFIED BY Kevin M. Polewski PROFESSIONAL ENGINEER REG. NO. 19917 3/30 19 99	S. P. 55-607-11	SHEET 19 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT
FEB 14 2001
ENGINEERING

CERTIFIED BY Kaye M Poeschl PROFESSIONAL ENGINEER REG. NO. 19917 3/20 19 99

S. P. 55-607-11

SHEET 20 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS

GUARDRAIL FOR BR.55808

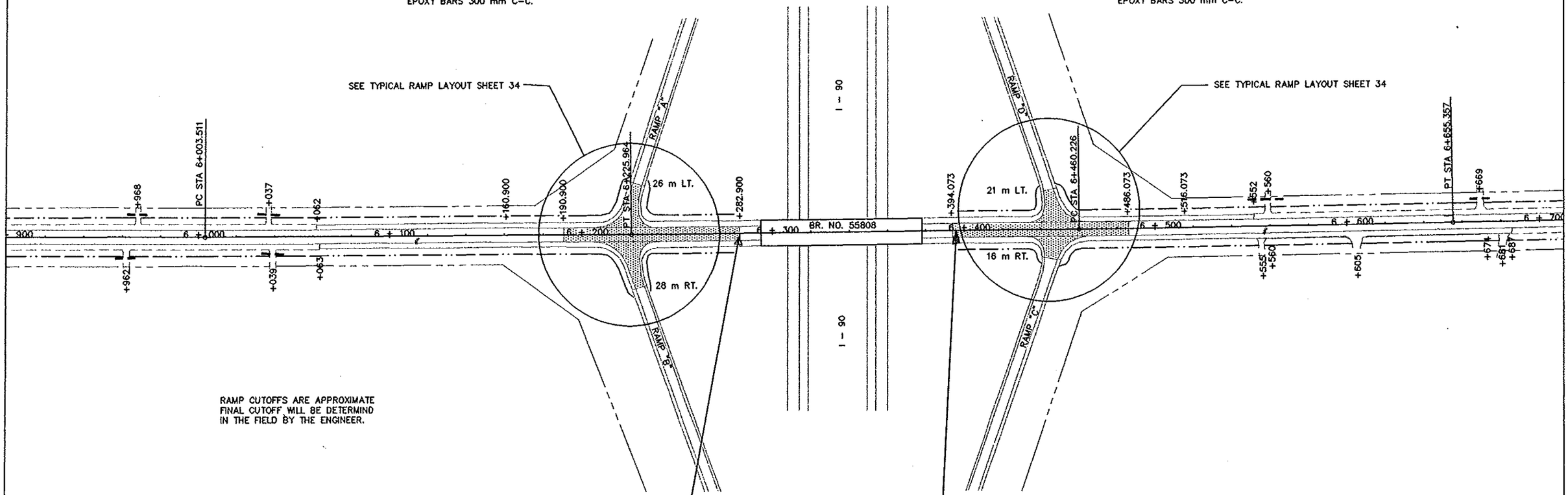
4 – GUARDRAIL ANCHORAGE PLATE STD. PLT. M8318

4 – 7 620 mm OF TRAFFIC BARRIER DESIGN SPECIAL A

4 – ET-2000 GUARDRAIL END TREATMENT

STA. 6+282.900
DRILL & GROUT 24–25 mm x 380 mm
EPOXY BARS 300 mm C–C.

STA. 6+394.073
DRILL & GROUT 24–25 mm x 380 mm
EPOXY BARS 300 mm C–C.



RAMP CUTOFFS ARE APPROXIMATE
FINAL CUTOFF WILL BE DETERMIND
IN THE FIELD BY THE ENGINEER.

CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

SOUTH END BR. 55808
STA. 6+282.900
REMOVED AND REPLACED EAST HALF
OF SILL ON S. END OF APPROACH PANEL.
REMOVED AND REPLACED CONCRETE APPROACH PANEL.
PLACED EB JOINT OVER SILL.
PLACED 4" DRAIN TILE ON S. SIDE OF SILL.
WEST HALF OF SILL REMAINED INPLACE

NORTH END BR. 55808
STA. 6+394.073
INSTALLED SILL ON NORTH END OF
APPROACH PANEL. PLACED EB JOINT
OVER SILL. PLACED 4" DRAIN TILE ON
N. SIDE OF SILL.

AS-BUILT
FEB 14 2001
ENGINEERING

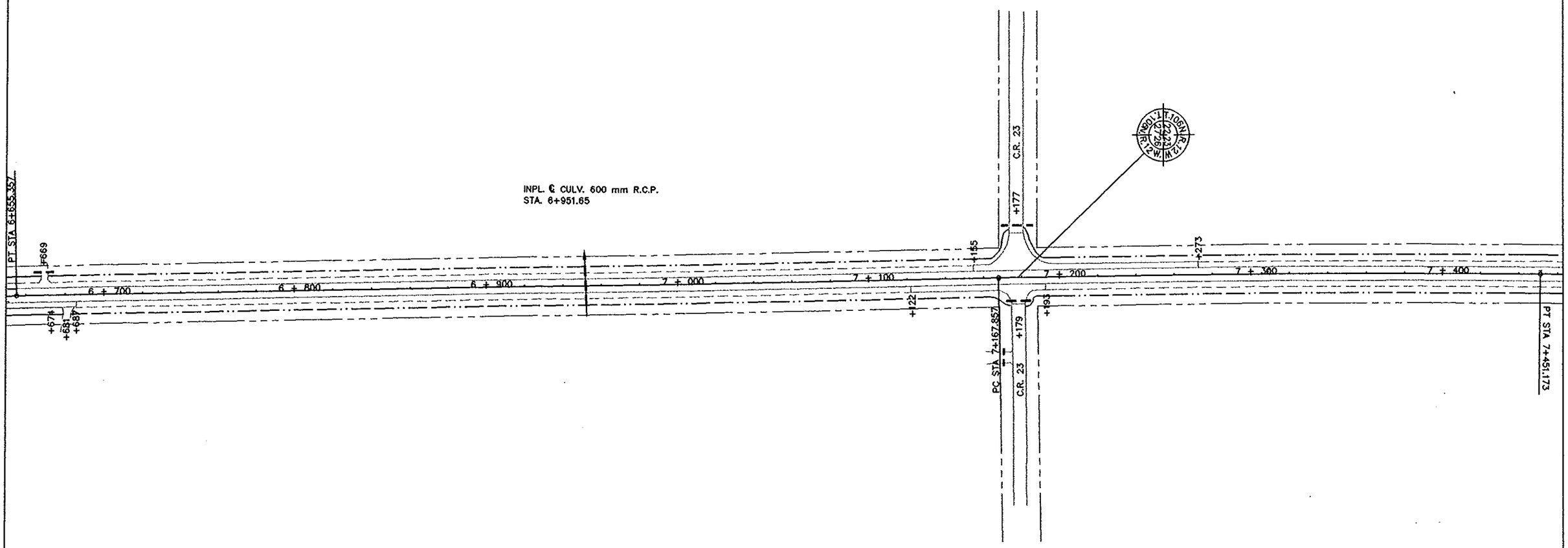
CERTIFIED BY Kaye M Reinsch PROFESSIONAL ENGINEER REG. NO. 19917 3/20 1999

S. P. 55-607-11

SHEET 21 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT
FEB 14 2001
ENGINEERING

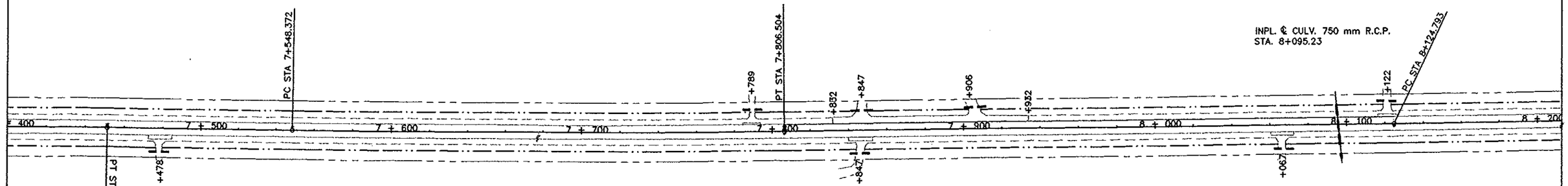
CERTIFIED BY Kevin Bierwirth PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S. P. 55-607-11

SHEET 22 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT

FEB 14 2001

ENGINEERING

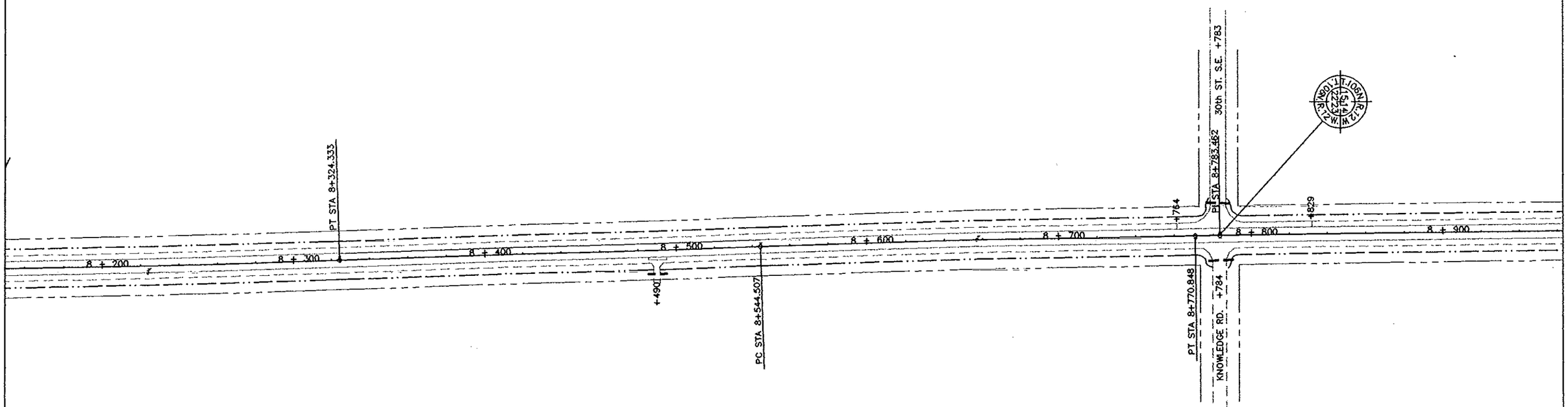
CERTIFIED BY Kevin M Pierucki PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S. P. 55-607-11

SHEET 23 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

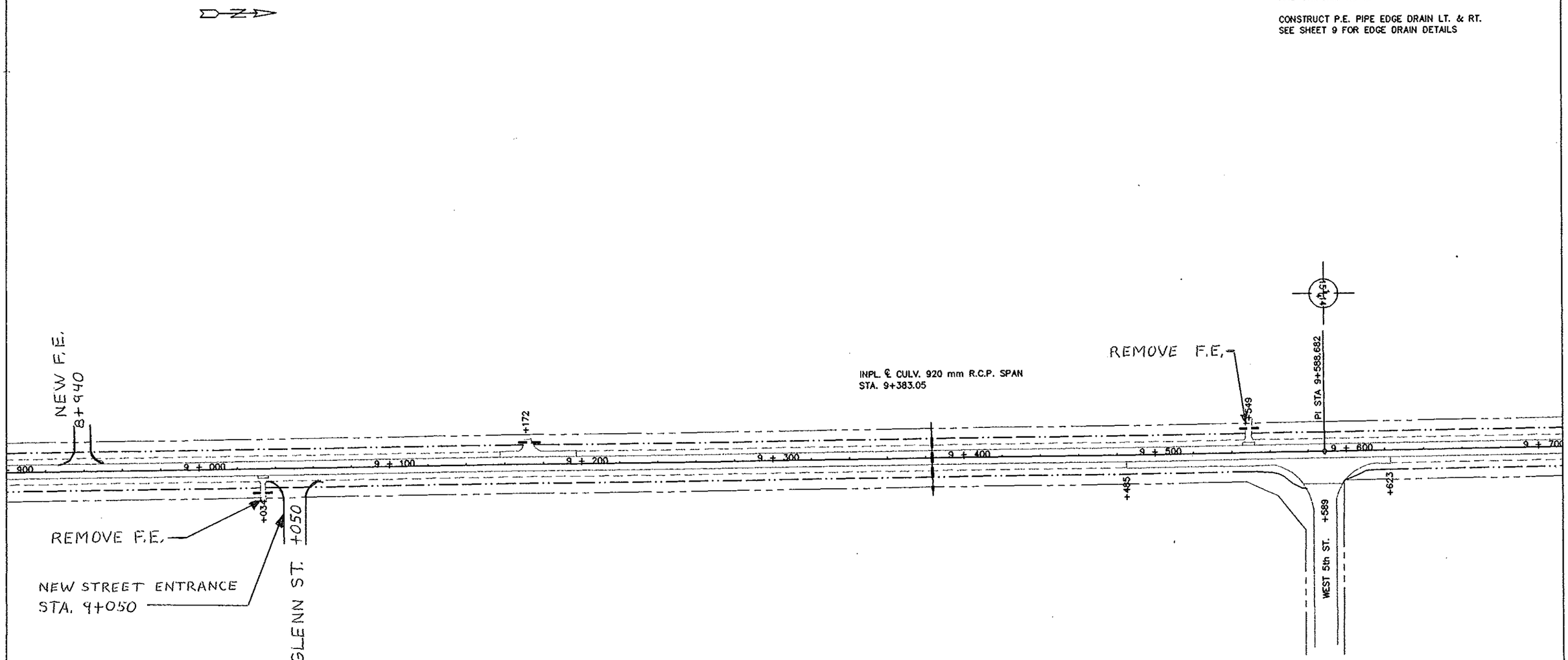
AS-BUILT
FEB 14 2001
ENGINEERING

CERTIFIED BY Kaye M. Bienvenu PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S. P. 55-607-11

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT
FEB 14 2001
ENGINEERING

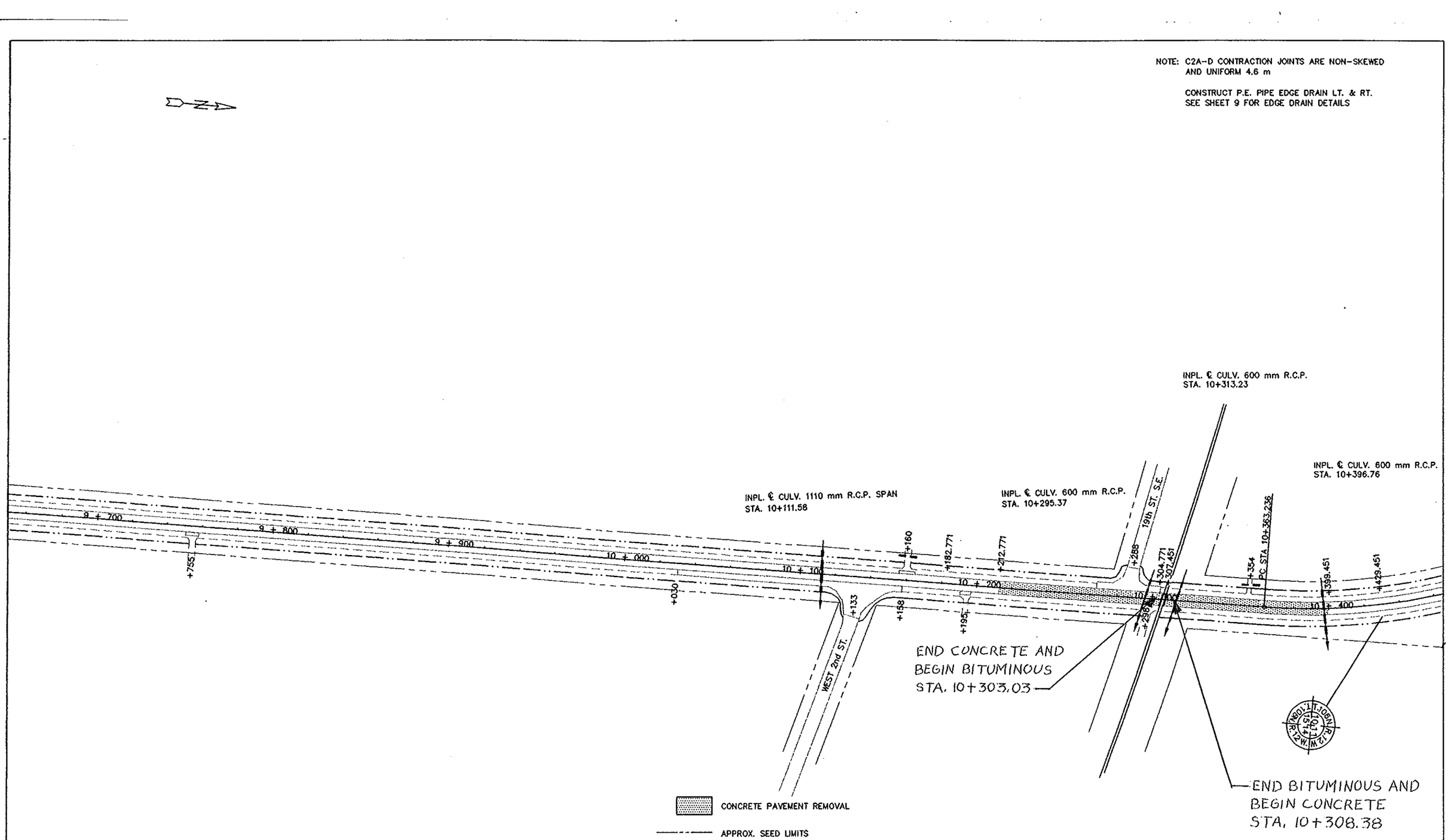
CERTIFIED BY Kevin M. Brunelli PROFESSIONAL ENGINEER REG. NO. 19917 3/30 19 99

S. P. 55-607-11

SHEET 25 OF 40 SHEETS

NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS



AS-BUILT

FEB 14 2001

ENGINEERING

CERTIFIED BY Kaye M Reinert REG. NO. 19917 3/30 19 99
PROFESSIONAL ENGINEER

S. P. 55-607-11

SHEET 26 OF 40 SHEETS

NOTE: C2A–D CONTRACTION JOINTS ARE NON–SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS

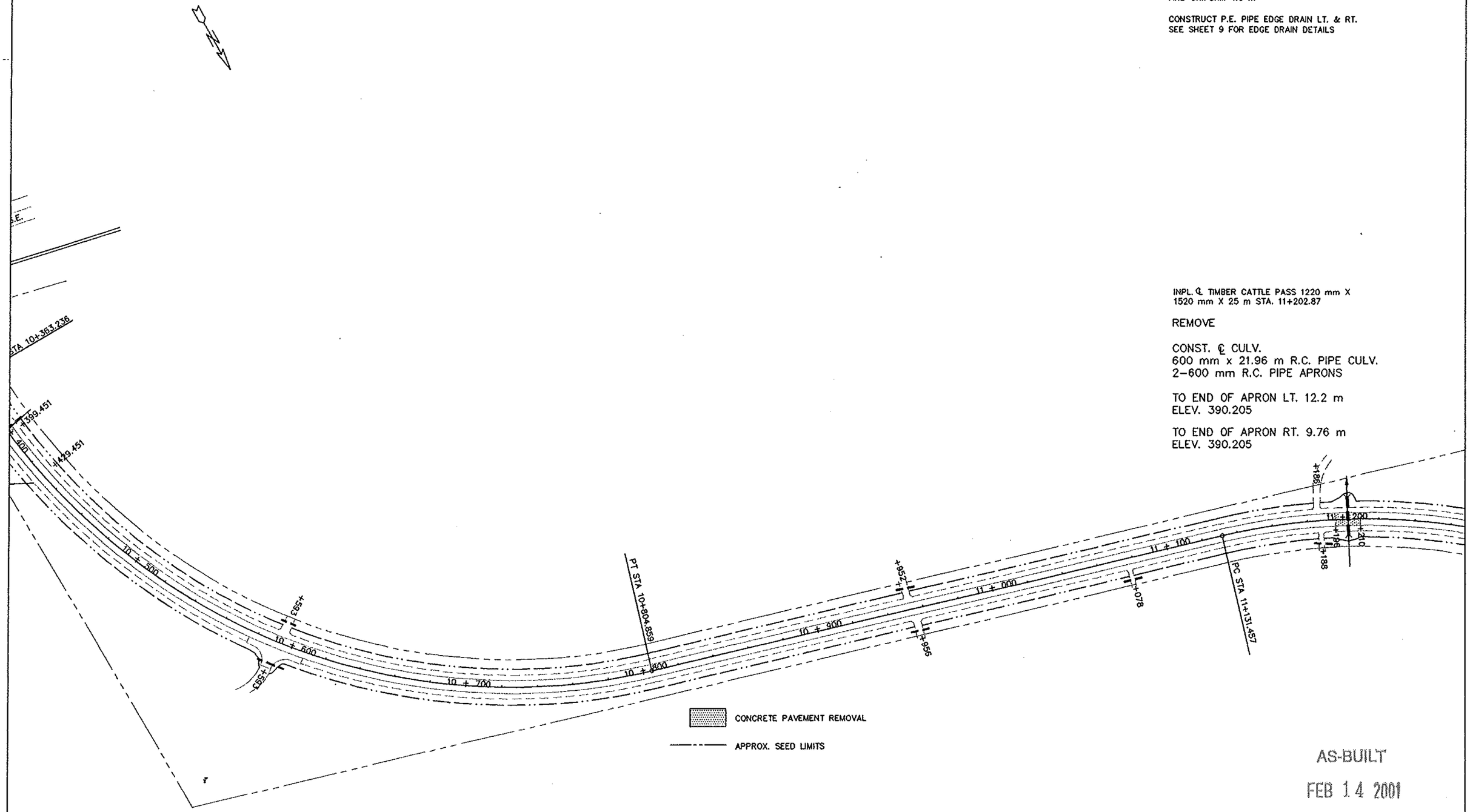
INPL. ℄ TIMBER CATTLE PASS 1220 mm X 1520 mm X 25 m STA. 11+202.87

REMOVE

CONST. ℄ CULV.
600 mm x 21.96 m R.C. PIPE CULV.
2–600 mm R.C. PIPE APRONS

TO END OF APRON LT. 12.2 m
ELEV. 390.205

TO END OF APRON RT. 9.76 m
ELEV. 390.205

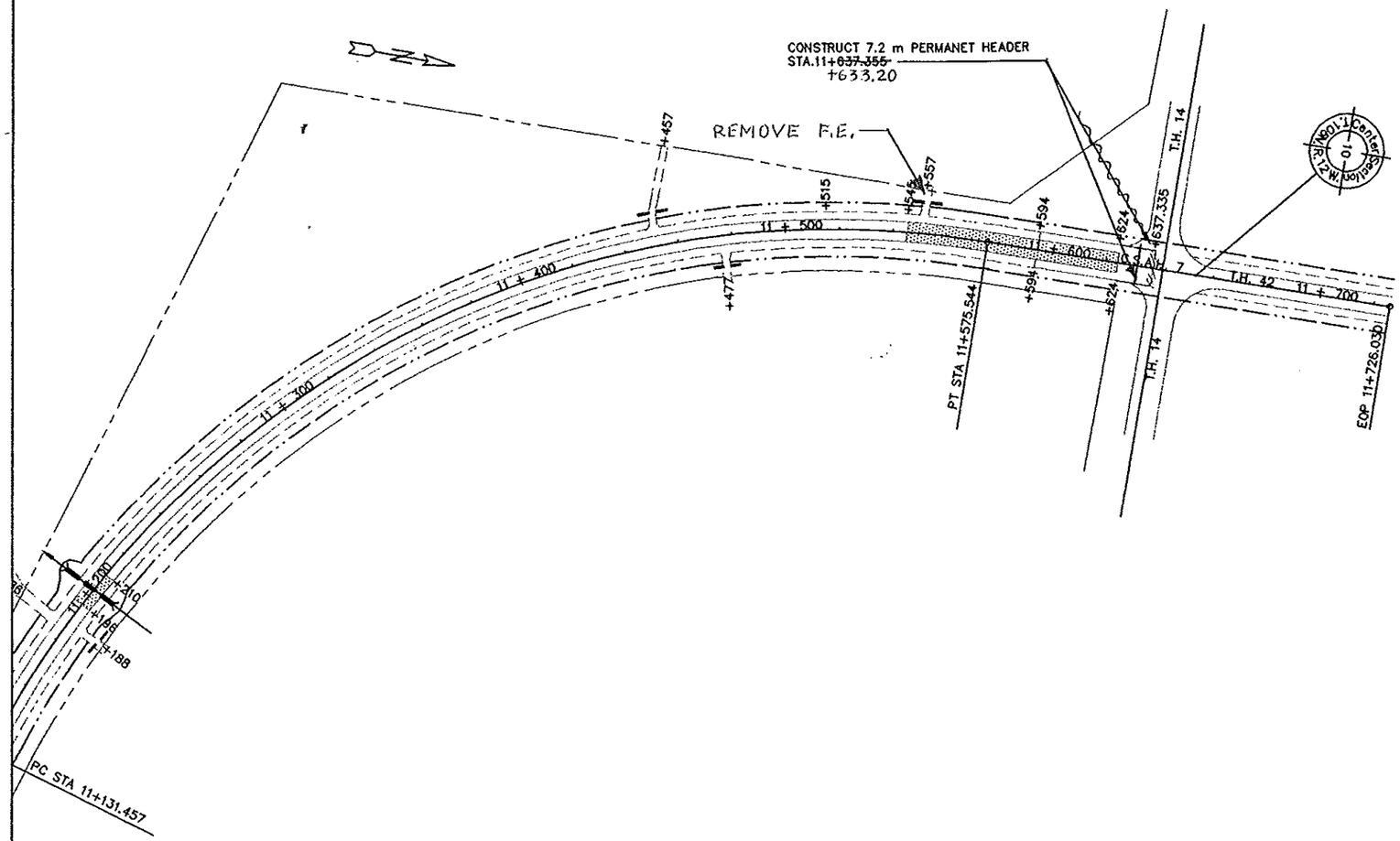


AS-BUILT
FEB 14 2001
ENGINEERING

CERTIFIED BY Kaye M Bienvenue PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S. P. 55–607–11

SHEET 27 OF 40 SHEETS



NOTE: C2A-D CONTRACTION JOINTS ARE NON-SKEWED AND UNIFORM 4.6 m

CONSTRUCT P.E. PIPE EDGE DRAIN LT. & RT.
SEE SHEET 9 FOR EDGE DRAIN DETAILS

CONCRETE PAVEMENT REMOVAL

APPROX. SEED LIMITS

AS-BUILT

FEB 14 2001

ENGINEERING

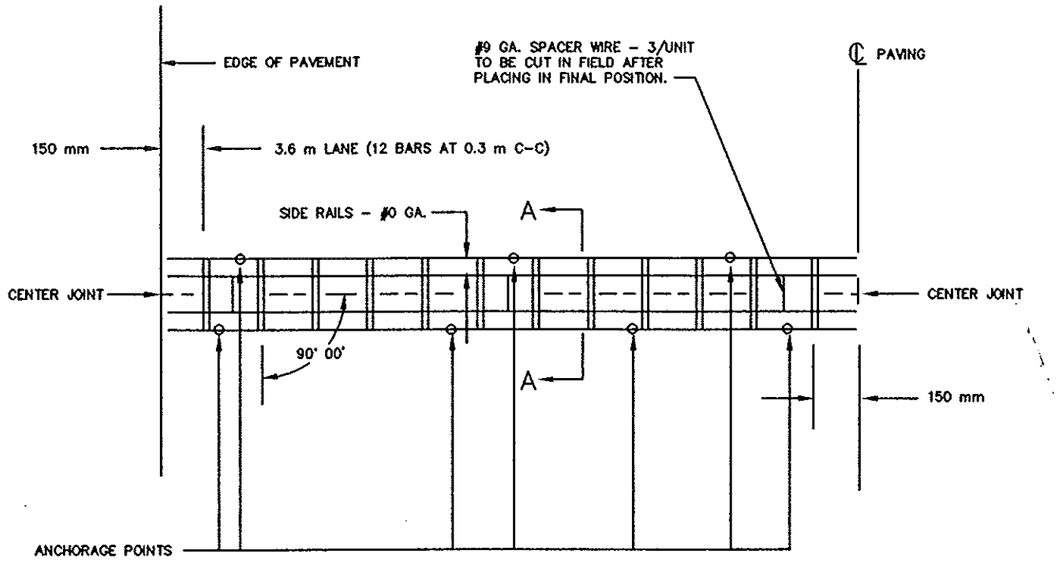
CERTIFIED BY _____ REG. NO. 19217 3/30 1999
PROFESSIONAL ENGINEER

S. P. 55-607-11

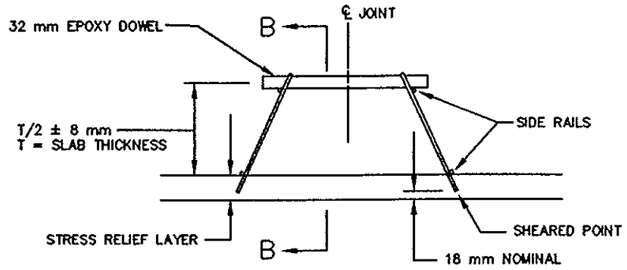
SHEET 28 OF 40 SHEETS

PLAN OF NON-SKEWED CONTRACTION JOINT DOWEL ASSEMBLY

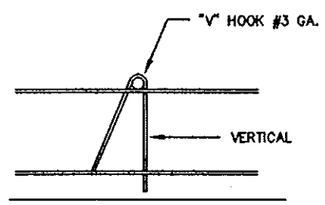
DOWEL ASSEMBLY TOP VIEW



DOWEL ASSEMBLY SIDE VIEW



SECTION A–A



SECTION B–B

NOTES:

ALL DOWELS SHALL BE 32 mm X 380 mm EPOXY DOWELS SHEARED AT BOTH ENDS.
STEEL FOR DOWELS SHALL CONFORM TO AASHTO SPEC. M31 FOR GRADE 40 (10 MIL. AFTER CURE).
EPOXY FOR DOWELS SHALL CONFORM TO ASTM SPEC. M254, TYPE B (5 TO 10 MIL. AFTER CURE).
A MINIMUM OF SEVEN ANCHORAGE POINTS ARE REQUIRED, FOUR ON THE SIDE OF THE BASKET FACING THE PAVER.

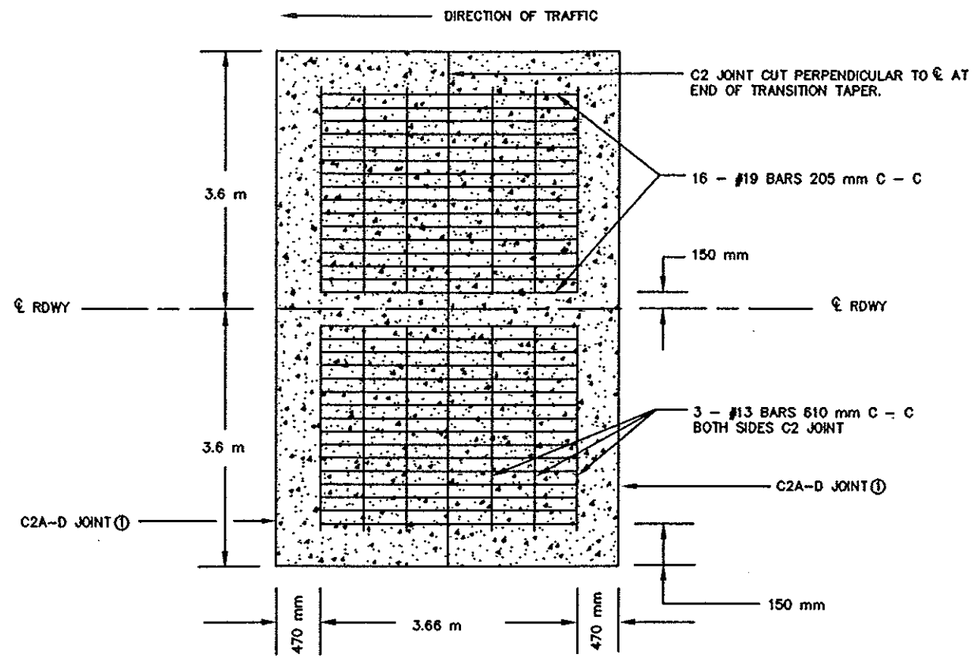
THE DOWEL BASKET ASSEMBLIES SHALL BE ANCHORED TO THE UNDERLYING PAVEMENT TO PREVENT ASSEMBLY MOVEMENT.
THE ANCHORAGE SYSTEM SHALL USE PINS OR FASTENERS OF SUFFICIENT
LENGTH AND SHANK DIAMETER (4 mm MINIMUM) TO PENETRATE INTO THE INPLACE CONCRETE PAVEMENT.

ALL JOINT SPACING WILL BE 4.6 m UNIFROM.

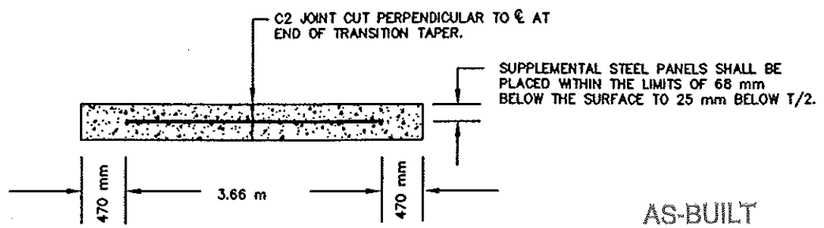
SUPPLEMENTAL STEEL DETAIL (2)

TRANSITION FROM UNBONDED OVERLY TO PAVING ON GRADE

TOP VIEW



SIDE VIEW



AS-BUILT

FEB 14 2001

ENGINEERING

GENERAL NOTES:

(1) C2A–D JOINTS WILL BE USED. SAW C2 JOINTS PERPENDICULAR TO CENTERLINE JOINT.

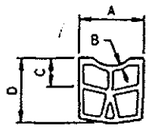
(2) PROVIDE THE SUPPLEMENTAL STEEL WHERE PAVING MATERIALS DIFFER UNDER OVERLAY . FOR CULVERT LOCATIONS REQUIRING EXTRA REINFORCEMENT SEE STANDARD PLATE M1070K.

CERTIFIED BY Kaye M Prienick PROFESSIONAL ENGINEER REG. NO. 19917 5/11 1999

S.P. 55-607-11 C.S.A.H. 7 SHEET 29 OF 40 SHEETS

REQUIRED DIMENSIONS

JOINT TYPE	TRANSVERSE
NOMINAL SEALER SIZE	21 mm USE IN ALL 10 JOINTS
A	20 mm +3.6 -1.3
B	2 mm ±0.5
C	15 mm MIN.
D	20 mm MIN.
WEB AND WALL THICKNESS, UNLESS NOTED	0.8 mm MIN.



SPEC. REFERENCE 3721

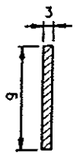
TYPICAL SHAPE FOR SATISFACTORY INSTALLATION IN JOINT (5 CELL MIN.)

CONTRACTION JOINT SEALER
PREFORMED ELASTIC TYPE

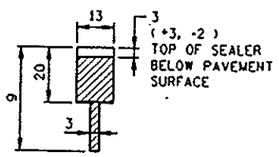
NOTES:

"A" DIMENSION SHALL APPLY AT ANY POINT THROUGHOUT "C" DEPTH. IN ITS FINAL POSITION, THE TOP CORNERS OF THE PREFORMED JOINT SEALER SHALL BE PLACED NOT LESS THAN 3 mm, NOR MORE THAN 7 mm BELOW THE PAVEMENT SURFACE.

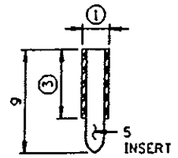
SHARP INTERNAL CORNERS WILL NOT BE PERMITTED. ALL CORNERS SHALL BE PROVIDED WITH SUITABLE FILLET. CURRENTLY APPROVED CONFIGURATIONS ARE ON FILE IN THE MATERIALS ENGINEERING SECTION, MINNESOTA DEPARTMENT OF TRANSPORTATION.



DETAIL A
FORMED & SAWED



DETAIL B ②
SAWED



DETAIL C
FORMED
(INSERT TO BE REMOVED)

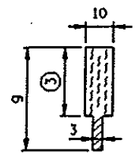
CONTRACTION JOINT CLASS DESIGNATION, DETAIL & SEALER SPEC. TABLE

CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITHOUT DOWELS	WITH DOWELS		
C1A	C1A-D	A	UNSEALED
C2B	C2B-D	B	3720
C2X	C2X-D	B OR C	3720
C3D	C3D-D	D	3721
C3X	C3X-D	C OR D	3721
C4E	C4E-D	E	POLYMERIC

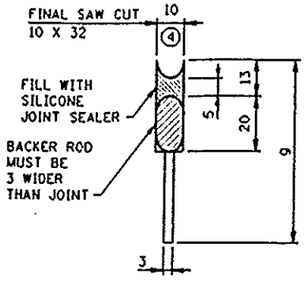
(MODIFIED C2A-D)

CONTRACTION JOINT DEPTH & DOWEL BAR TABLE ⑤

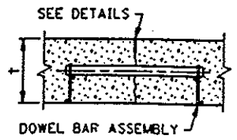
PAVEMENT THICKNESS t	CONCRETE BASE JOINT DEPTH g	DOWEL BAR DIAMETER
150-160	32	25
165-265	50	32
270-320	—	38
325-355	—	44



DETAIL D
SAWED



DETAIL E
SAWED



SECTION AT JOINT

LEGEND

C = CONTRACTION JOINT
NO. = SEALANT TYPE
1 = UNSEALED
2 = 3720
3 = 3721
4 = MOISTURE CURED POLYMERIC
LETTER = DETAIL
X = MORE THAN 1 DETAIL
-D = DOWEL BARS

EXAMPLE C2B-D

CONTRACTION JOINT NOTES:

IN CONCRETE BASE CONSTRUCTION THE CONTRACTION JOINTS SHALL BE SPACED AT 9 m INTERVALS AND AT RIGHT ANGLES TO THE LONGITUDINAL JOINTS, EXCEPT AS NOTED BELOW. WHERE THE CONCRETE BASE IS CONSTRUCTED ADJACENT TO EXISTING PAVEMENT OR BASE, THE CONTRACTION JOINTS IN THE NEW BASE SHALL MATCH THOSE IN THE EXISTING PAVEMENT OR BASE, EXCEPT THAT THE SPACING SHALL NOT BE LESS THAN 4.6 m, NOR MORE THAN 9 m.

JOINT WIDTH TOLERANCES: + 2 mm AND - 1 mm.

GENERAL NOTES:

SEE THE FOLLOWING STANDARD PLATES AND STANDARD PLAN SHEET FOR ADDITIONAL DETAILS: DOWEL BAR ASSEMBLY, M1103; CONSTRUCTION OF HEADER JOINTS, M1150; AND CONCRETE PAVEMENT WITH SKEWED JOINTS, 5-297.217M & .219M.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATION TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.

NOTES:

① **DESIGN C3X OR C3X-D** - PRIOR TO INSTALLING PREFORMED JOINT SEALER IN THE FORMED JOINT (DETAIL C), THE JOINT SHALL BE WIDENED TO A NOMINAL WIDTH OF 10 mm BY SAWING ALONG THE FULL LENGTH OF THE FORMED JOINT.

DESIGN C2X OR C2X-D - PRIOR TO SEALING FORMED JOINT (DETAIL C), WITH HOT POUR SEALER, THE JOINT SHALL BE WIDENED TO A NOMINAL WIDTH WIDTH OF 13 mm FOR A DEPTH OF 20 mm, + 3 mm, 2 mm, BY SAWING ALONG THE FULL LENGTH OF THE FORMED JOINT. THE SEALER SHALL BE FILLED TO THE SAME DEPTH AS SHOWN IN DETAIL B.

② **DESIGN C2B OR C2B-D** - PRIOR TO SEALING JOINT (DETAIL B) WITH HOT POUR JOINT SEALER, A STRIP OF PAPER 13 mm WIDE SHALL BE PLACED ON THE BOTTOM OF THE 13 mm WIDE JOINT.

③ WHEN USING PREFORMED JOINT SEALER, THE DEPTH SHALL BE 5 mm MORE THAN THE PREFORMED SEALER, WHEN COMPRESSED, TO FIT THE JOINT DESIGN WIDTH.

④ THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A 13 mm DIA. CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 13 mm BELOW THE SURFACE OF THE PAVEMENT. POLYMERIC SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEALANT BEAD THICKNESS OF 5 mm.

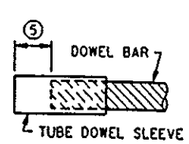
⑤ FOR UNBONDED OVERLAYS, THE JOINT DEPTH "g" SHALL BE t/3.
FOR CONCRETE PAVEMENT, THE JOINT DEPTH "g" SHALL BE t/4.

CONTRACTION JOINTS
DESIGN C

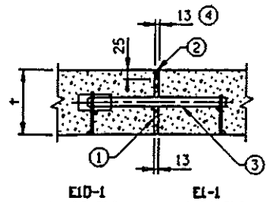
CERTIFIED BY Kaye M Brenneke REG. NO. 19917 5/11/1999

minnesota metric

REVISION DATE 10-30-98

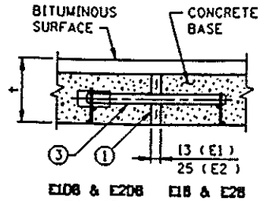


DOWEL BAR SLEEVE DETAIL



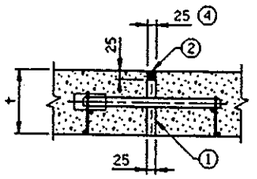
E1D-1 (W/DOWELS) E1-1 (W/O DOWELS)

DETAIL A



E1D8 & E2D8 (W/DOWELS) E1B & E2B (W/O DOWELS)

DETAIL B

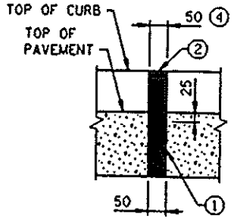


E2D-1 (W/DOWELS) E2-1 (W/O DOWELS)

DETAIL C



SECTION THRU CURB E2-1

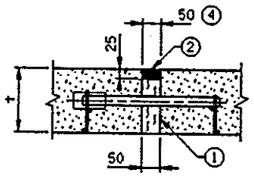


E4-1 (W/O DOWELS)

DETAIL D



SECTION THRU CURB E4-1



E4D-1 (W/DOWELS)

DETAIL E

AS-BUILT

FEB 14 2001

ENGINEERING

EXPANSION JOINTS

CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITH DOWELS	WITHOUT DOWELS		
E1D-1	E1-1	A	②
E1D8	E1B	B	UNSEALED
E2D-1	E2-1	C	②
E2D8	E2B	B	UNSEALED
	E4-1	D	②
E4D-1		E	②

LEGEND

E = EXPANSION JOINT
NO. = JOINT REFERENCE
-1 = HOT POURED SEAL ②
D = DOWEL BARS
B = CONCRETE BASE
S = CONCRETE SILL

EXAMPLE

E1D-1
- HOT POURED SEAL ②
- DOWEL BARS
- JOINT REFERENCE
- EXPANSION JOINT

NOTES:

① PREFORMED JOINT FILLER MATERIAL, SPEC. 3702.

② JOINT SEALER SPEC. 3723. TOP OF SEALER, FLUSH TO 3 mm BELOW TOP OF PAVEMENT SURFACE. MAKE TOP OF SEALER FOR CURB SECTION E JOINTS FLUSH WITH SURFACE ± 3 mm.

③ DOWEL BAR ASSEMBLY, SEE STANDARD PLATE M1103.

④ JOINT WIDTH IS EQUAL TO HALF OF THE JOINT NUMBER IN 13 mm. INTERVALS (i.e. E1 = 13 mm, E2 = 25 mm, E3 = 38 mm, E4 = 50 mm, E8 = 100 mm).

⑤ SPACE FROM END OF DOWEL BAR TO END OF SLEEVE TO BE EQUAL TO EXPANSION JOINT WIDTH.

EXPANSION JOINTS
DESIGN E

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS, EXCEPT AS NOTED.

STANDARD SHEET NO. 5-297.221M (1 OF 2)

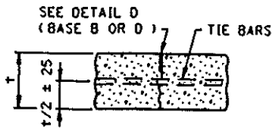
STANDARD APPROVED: JANUARY 25, 1993

TITLE: PAVEMENT JOINTS (MODIFIED)
CONTRACTION (DESIGN C) AND EXPANSION (DESIGN E)

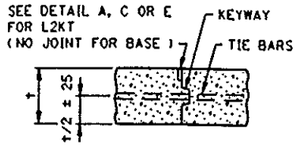
STATE PROJ. NO. 55-607-11

SHEET NO. 30 OF 40 SHEETS

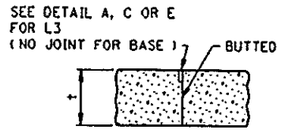
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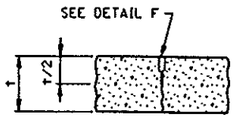
L1, L1T, L1B & L1TB



L2KT & L2KTB



L3 & L3B



L4

LONGITUDINAL JOINT CLASS DESIGNATION, DETAIL & SEALER SPECIFICATION TABLE

CLASS DESIGNATION				JOINT DETAIL	JOINT SEALER SPECIFICATION
WITHOUT TIE BARS	WITH TIE BARS	WITH KEYWAY & TIE BARS	BUTTED		
L1H	L1TH			B	3723
L1BU	L1TBU			A OR B	UNSEALED
		L2KTH		D OR E	3723
		L2KTS		C	POLYMERIC
			L3H	D OR E	3723
			L3S	C	POLYMERIC
L4S				F	SILICONE

LEGEND

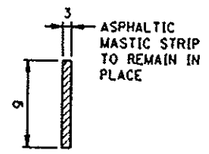
L = LONGITUDINAL JOINT
NO. = JOINT REFERENCE
K = KEYWAY
T = TIE BARS
B = CONCRETE BASE
U = UNSEALED
H = HOT POUR
S = MOISTURE CURED POLYMERIC

JOINT REFERENCE NUMBERS

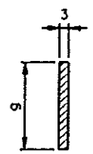
1 = SAWED TO A DEPTH OF t/3
2 = KEYED CONSTRUCTION JOINT
3 = BUTTED CONSTRUCTION JOINT
4 = SAWED TO A DEPTH OF t/2

LONGITUDINAL JOINT DEPTH TABLE ③

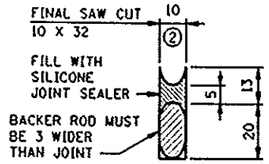
PAVEMENT THICKNESS t	CONCRETE BASE JOINT DEPTH g
150-165	50
170-190	57
195-215	65
220-230	70
235-240	75
245-360	—



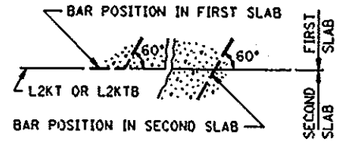
DETAIL A
(FORMED & UNSEALED)



DETAIL B
(SAWED & SEALER, SPEC. 3723)
(BASE JOINTS UNSEALED)



DETAIL C
(SAWED)



TIE BAR BENDING DETAIL

LONGITUDINAL JOINT NOTES:

TIE BARS FOR L1TB JOINTS SHALL BE THE SAME SIZE AND SPACING AS SHOWN ON STANDARD PLAN SHEETS 5-297.217M & .219M.

EXCEPT WHEN NOTED OTHERWISE IN THE PLANS, THE TIE BAR SPACING FOR ALL L2KT AND L2KTB JOINTS SHALL BE 0.8 m C. TO C. AND BENT 60° AS SHOWN.

TIE BARS IN THE L2KT AND L2KTB JOINTS SHALL BE THE SAME SIZE AND LENGTH AS USED FOR THE L1T OR L1TB JOINTS, WHEN TYING PAVEMENT TO PAVEMENT OR BASE TO BASE. TIE BARS IN THE L2KT OR L2KTB JOINTS SHALL BE NO. 13 X 0.8 m, WHEN TYING CURB AND GUTTER TO PAVEMENT OR BASE.

ALL TIE BARS SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53.

NORMALLY, TIED PAVEMENT WIDTHS SHALL NOT EXCEED 8 METERS, EXCEPT BRIDGE APPROACH PANELS AND PAVEMENT TAPERS.

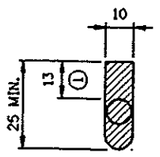
JOINT WIDTH TOLERANCE IS + 2 mm TO - 1 mm.

SPEC. 3723 SEALER - TOP OF SEALER FLUSH TO - 4 mm BELOW TOP OF PAVEMENT SURFACE.

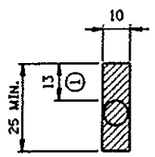
① THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 205 DEGREES C, WITH A DIAMETER 3 mm LARGER THAN THE JOINT OPENING, MAY BE PLACED 13 mm BELOW THE TOP OF THE PAVEMENT.

② THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A 13 mm DIAMETER CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 13 mm BELOW THE SURFACE OF THE PAVEMENT. SILICONE SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEALANT BEAD THICKNESS OF 5 mm.

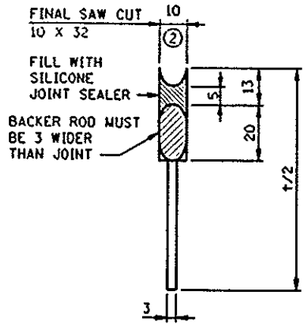
③ FOR CONCRETE PAVEMENT THE JOINT DEPTH "g" SHALL BE t/3.



DETAIL D
(FORMED & SEALED SPEC. 3723)



DETAIL E
(SAWED & SEALER SPEC. 3723)



DETAIL F
(SAWED)

AS-BUILT
FEB 14 2001
ENGINEERING

GENERAL NOTES:

SEE THE FOLLOWING STANDARD PLATES AND STANDARD PLAN SHEETS FOR ADDITIONAL DETAILS: DOWEL BAR ASSEMBLY M1103, PAVEMENT KEYWAY M1141 AND CONCRETE PAVEMENT WITH SKEWED JOINTS 5-297.216M - .219M.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATIONS TO BE USED & SPECIAL REINFORCEMENT REQUIRED.

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS, EXCEPT AS NOTED.

minnesota metric

REVISION DATE 2-19-98

STANDARD SHEET NO. 5-297.221M (2 OF 2)

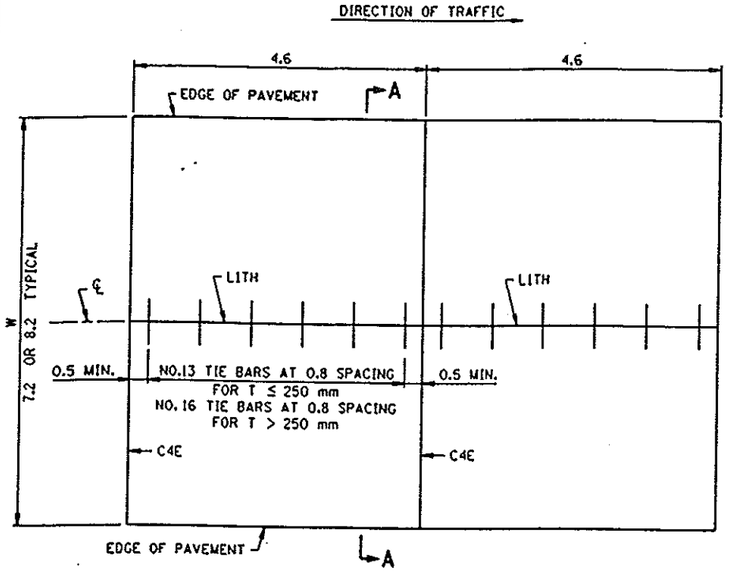
STANDARD APPROVED: JANUARY 25, 1993

TITLE: PAVEMENT JOINTS
LONGITUDINAL (DESIGN L)

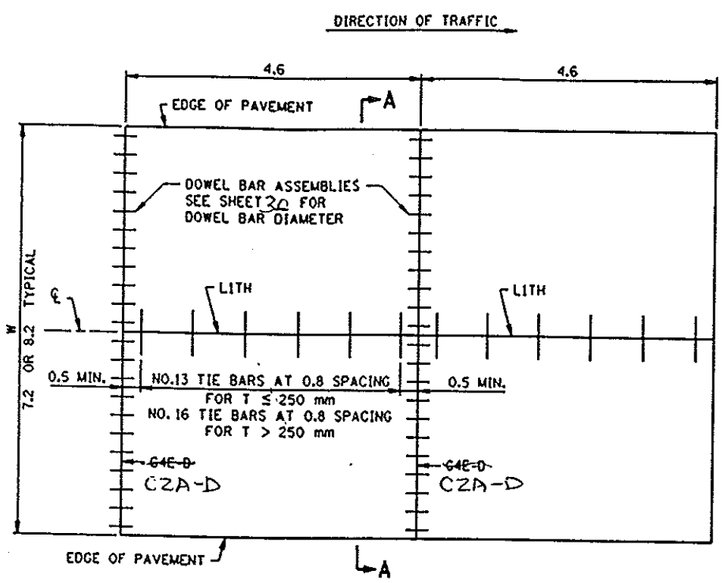
STATE PROJ. NO. 55-607-11

SHEET NO. 31 OF 40 SHEETS

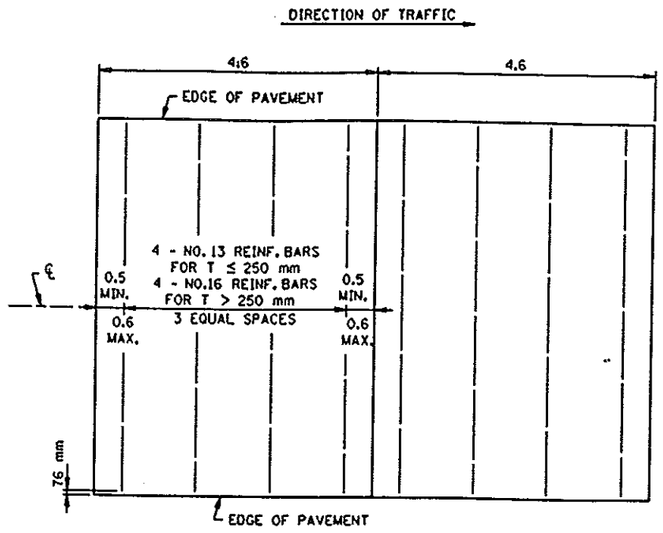
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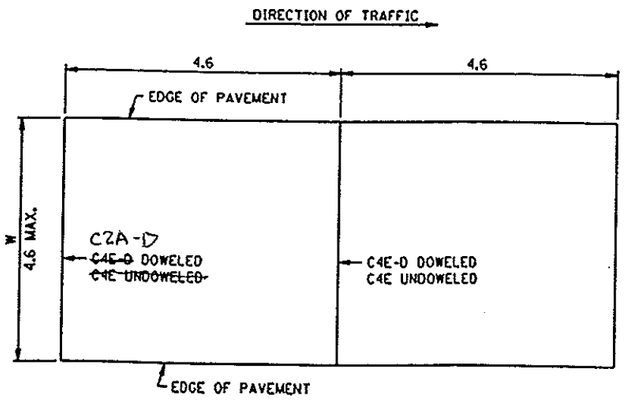
MAINLINE PAVEMENT
UNDOWELED



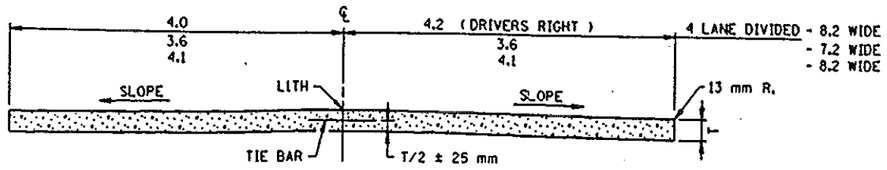
MAINLINE PAVEMENT
DOWELED



SUPPLEMENTAL PANEL REINFORCEMENT



PAVEMENT 0.6 m THRU 4.6 m WIDTH



SECTION A-A

AS-BUILT

FEB 14 2001

ENGINEERING

GENERAL NOTES:

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.

WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R.R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, ~~C4E-D~~ C2A-D.

DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE M1103.

ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 420 FOR AASHTO M-31 OR M-53. FOR ADDITIONAL REINFORCEMENT OVER CULVERTS, SEE STANDARD PLATE M1070.

TIE BARS:
USE NO. 13 BARS 0.8 m LONG, AT 0.8 m SPACING, FOR T ≤ 250 mm USE NO.16 BARS 0.9 m LONG AT 0.8 m SPACING FOR T > 250 mm.

SUPPLEMENTAL PANEL REINFORCEMENT:
PLACE IN PANELS WHERE PAVEMENT WIDTH EXTEEDS 4.6 m WITHOUT A LONGITUDINAL JOINT, AND IN THE MIDDLE LANE(S) WHERE TIED PAVEMENT WIDTH EXCEEDS 4 LANES. USE NO.13 BARS FOR PAVEMENT THICKNESS 250 mm OR LESS. USE NO.16 BARS FOR PAVEMENT THICKNESS GREATER THAN 250mm. PLACEMENT DEPTH SHALL BE PLANNED T/2 ± 25 mm.

NO MORE THAN TWO LANES SHALL BE PAVED AT THE SAME TIME.

NOTE: ALL DIMENSIONS ARE IN METERS, EXCEPT AS NOTED.

CERTIFIED BY Kaye M Bremicker REG. NO. 19917 5/11 1999

minnesota metric

STANDARD SHEET NO. 5-297.217M

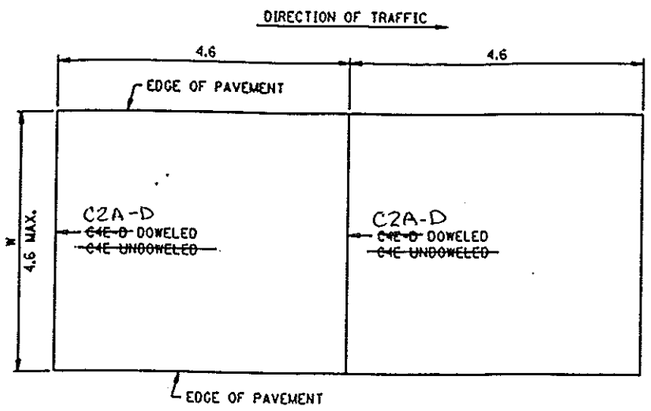
STANDARD APPROVED: OCTOBER 1, 1998

TITLE: CONCRETE MAINLINE PAVEMENT (MODIFIED)
4.6 m PANEL LENGTH

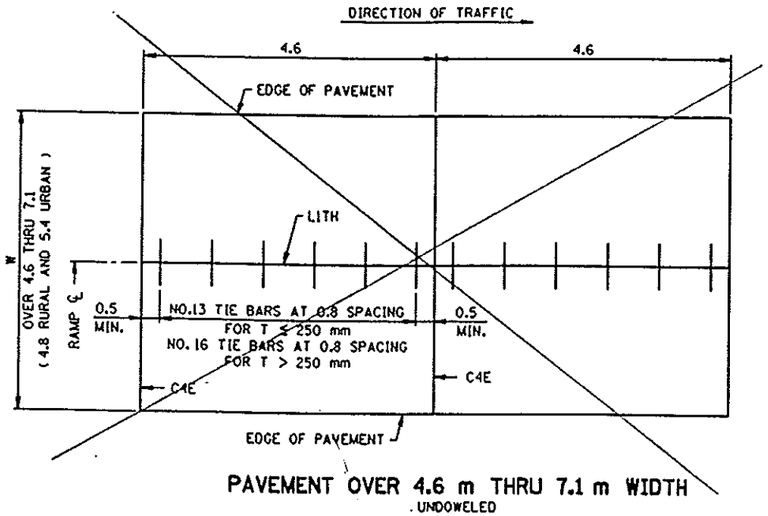
STATE PROJ. NO. 55-607-11

SHEET NO. 32 OF 40 SHEETS

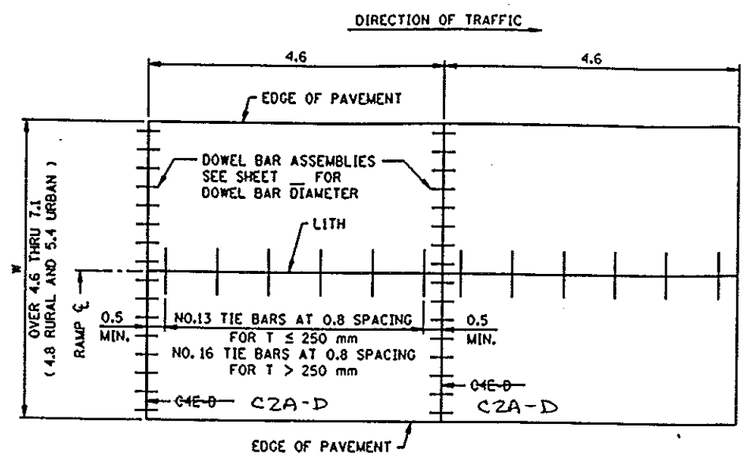
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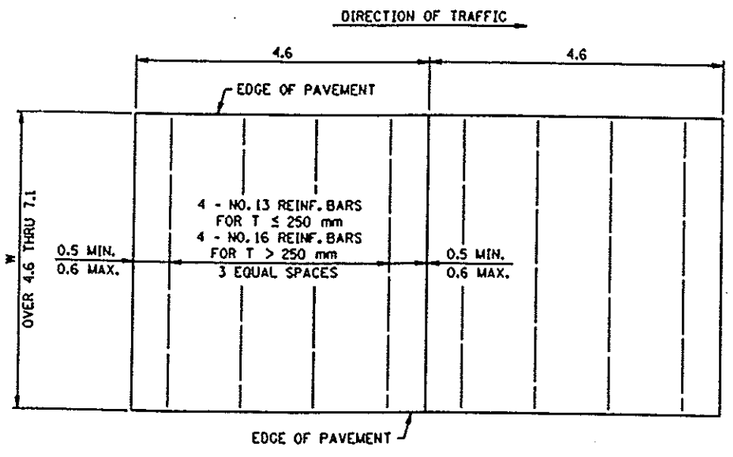
PAVEMENT 0.3 m THRU 4.6 m WIDTH



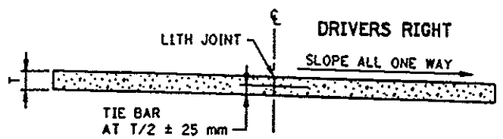
PAVEMENT OVER 4.6 m THRU 7.1 m WIDTH
UNDOWELED



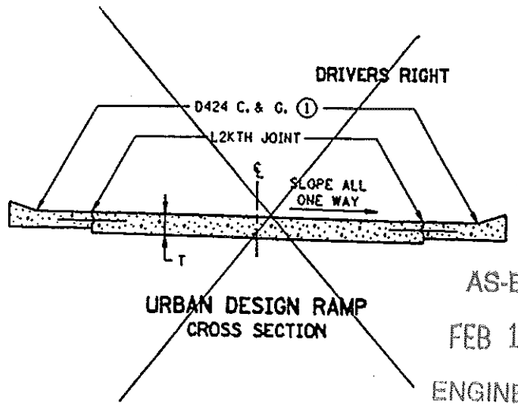
PAVEMENT OVER 4.6 m THRU 7.1 m WIDTH
DOWELED



SUPPLEMENTAL PANEL REINFORCEMENT
PANELS OVER 4.6 m THRU 7.1 m WIDTHS
IT IS PREFERRED TO ADD A LONGITUDINAL JOINT
RATHER THAN PAVE GREATER THAN 4.6 m IN WIDTH



RURAL DESIGN RAMP
SECTION A-A



URBAN DESIGN RAMP
CROSS SECTION

AS-BUILT
FEB 14 2001
ENGINEERING

GENERAL NOTES:

WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R.R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, ~~C4E-D~~ C2A-D.

DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE MI103.

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.

ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 420 FOR AASHTO M-31M OR M-53. FOR ADDITIONAL REINFORCEMENT OVER CULVERTS, SEE STANDARD PLATE MI070.

TIE BARS:
USE NO. 13 BARS 0.8 m LONG, AT 0.8 m SPACING. FOR T ≤ 250 mm USE NO.16 BARS 0.9 m LONG. AT 0.8 SPACING FOR T > 250 mm.

SUPPLEMENTAL PANEL REINFORCEMENT:
PLACE IN PANELS WHERE PAVEMENT WIDTHS EXCEED 4.6 m WITHOUT A LONGITUDINAL JOINT. USE NO. 13 BARS FOR PAVEMENT THICKNESSES 250 mm OR LESS. USE NO. 16 BARS FOR THICKNESSES OVER 250 mm. PLACEMENT DEPTH SHALL BE PLANNED T/2 ± 25 mm.

SPECIFIC NOTES:

(1) THE CONTRACTOR SHALL HAVE THE OPTION TO CONSTRUCT INTEGRANT CURBS WITH ONE LIT JOINT, LOCATED AT THE RAMP ℄ IN PLACE OF D424 CURB AND GUTTERS WITH L2KT JOINTS. IN EITHER OPTION, DOWEL BAR ASSEMBLIES WILL NOT BE REQUIRED IN THE CURB AND GUTTER AREA. PAYMENT WILL BE BASED ON THE D424 CURB AND GUTTER OPTION, REGARDLESS OF THE METHOD OF CONSTRUCTION USED.

NOTE: ALL DIMENSIONS ARE IN METERS, EXCEPT AS NOTED.

CERTIFIED BY Kaye M. Bienick REG. NO. 19917 5/11 1999

minnesota metric

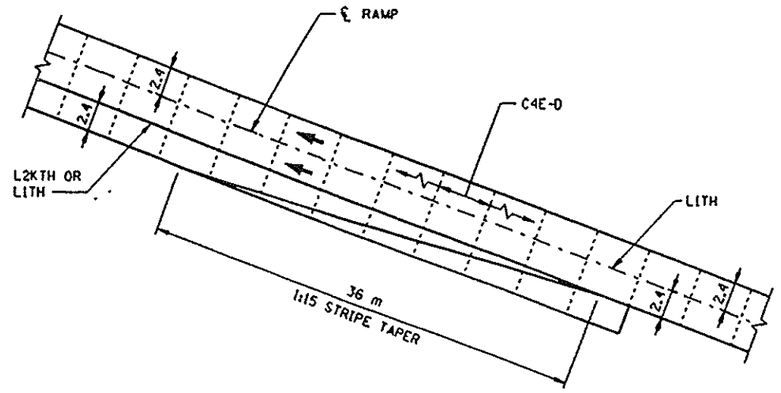
STANDARD SHEET NO. 5-297.219M
STANDARD APPROVED: OCTOBER 1, 1998

TITLE: CONCRETE RAMP PAVEMENT (MODIFIED)
4.6 m PANEL LENGTH

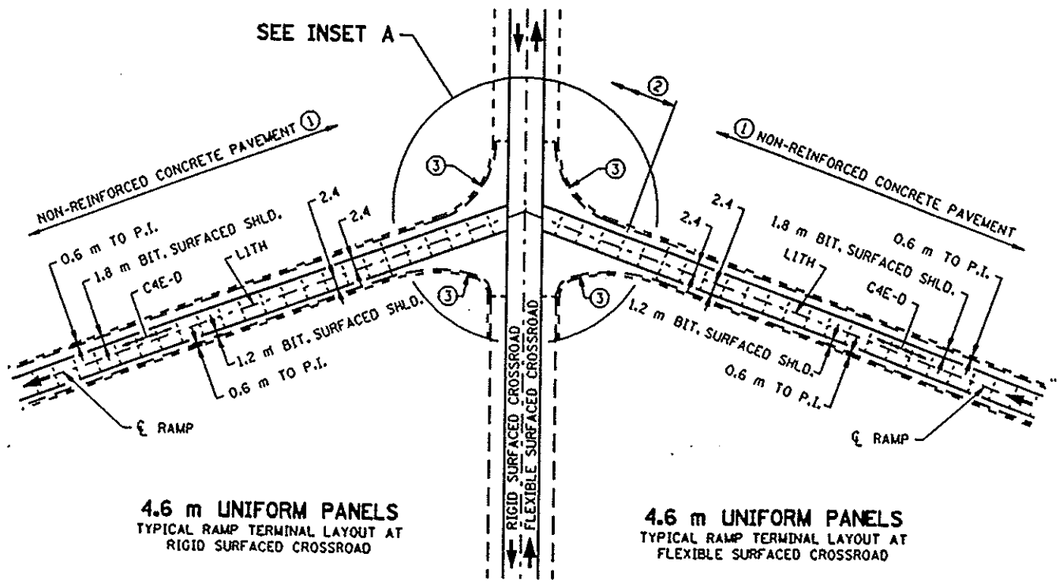
STATE PROJ. NO. 55-607-11

SHEET NO. 33 OF 40 SHEETS

FILE NAME SM219.098.SPN

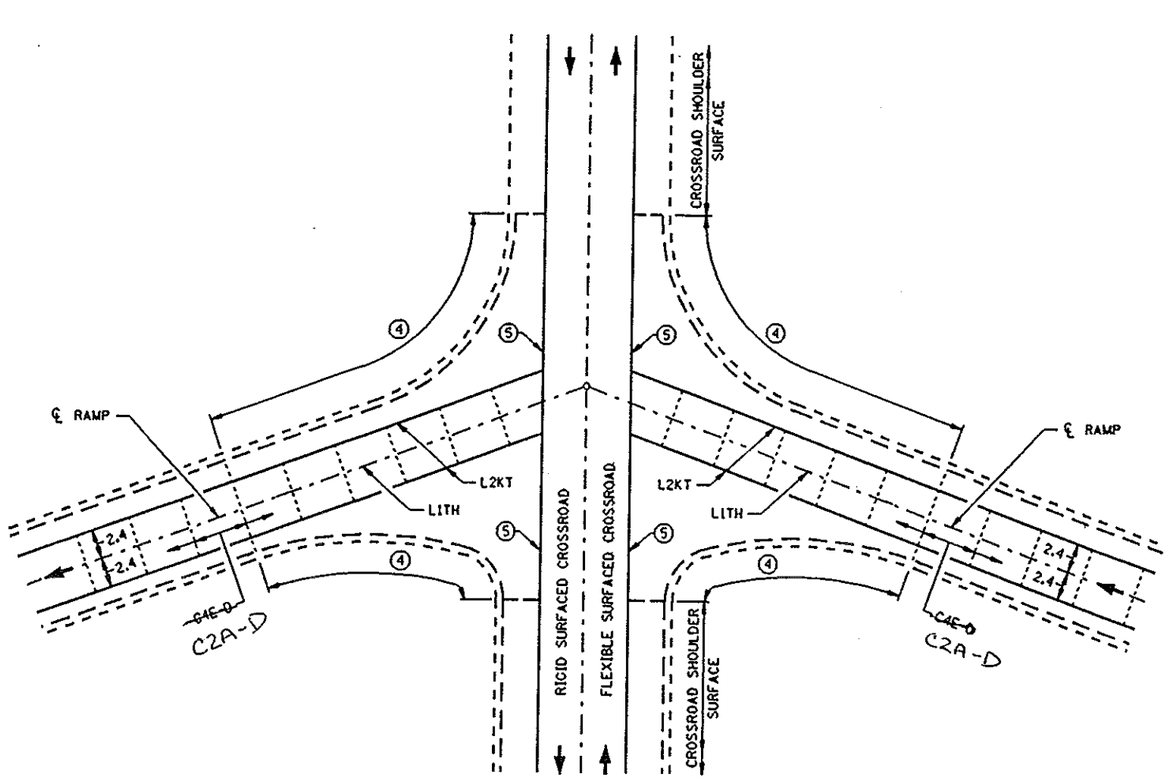


LEFT TURN WIDENING
4.6 m UNIFORM PANELS



4.6 m UNIFORM PANELS
TYPICAL RAMP TERMINAL LAYOUT AT
RIGID SURFACED CROSSROAD

4.6 m UNIFORM PANELS
TYPICAL RAMP TERMINAL LAYOUT AT
FLEXIBLE SURFACED CROSSROAD



INSET A
TYPICAL JOINT LAYOUT
AT RAMP TERMINALS
4.6 m UNIFORM PANELS

NOTES:

① SEE SHEET NO. __ FOR RAMP PAVEMENT DESIGN AND PANEL LENGTHS.
② FOR NON-REINFORCED (4.6 m UNIFORM PANEL) RAMP PAVEMENTS. WHEN SPECIFIED ELSEWHERE IN THE PLAN, A BITUMINOUS RAMP DESIGN MAY BE SUBSTITUTED FOR THE FOUR CONCRETE PANELS IMMEDIATELY ADJACENT TO A FLEXIBLE SURFACED CROSSROAD.
③ SEE ROAD DESIGN MANUAL CHAPTER 5 "AT GRADE INTERSECTIONS ". SEE SHEET NO. ____ FOR INTERSECTION RADII.
④ CONSTRUCTION JOINTS IN PAVEMENT IN THE RAMP SHOULDER SURFACE AREAS ARE TO BE LAID OUT BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER IN THE FIELD.
⑤ 6 mm BITUMINOUS FELT ALONG COMMON FACE.

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NOTE: ALL DIMENSIONS ARE IN METERS, EXCEPT AS NOTED.

CERTIFIED BY Kaye M Brenneke REG. No. 19917 5/11 1999

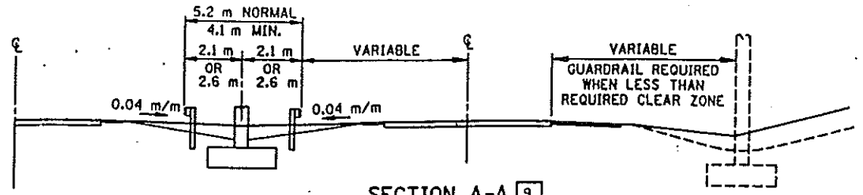
minnesota metric

STANDARD SHEET NO. 5-297.232M
STANDARD APPROVED AUGUST 24, 1998

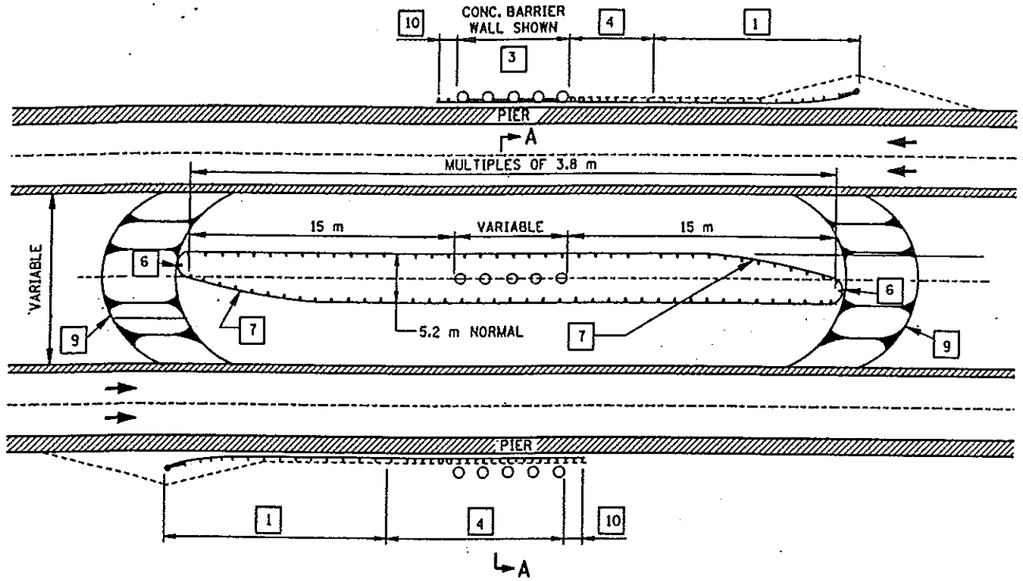
TITLE: (MODIFIED) TYPICAL RAMP TERMINAL LAYOUT AT CROSSROADS

STATE PROJ. NO. 55-607-11 SHEET NO. 34 OF 40 SHEETS

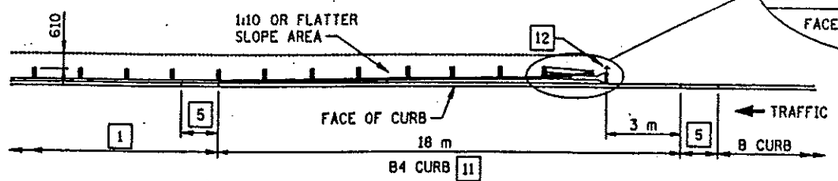
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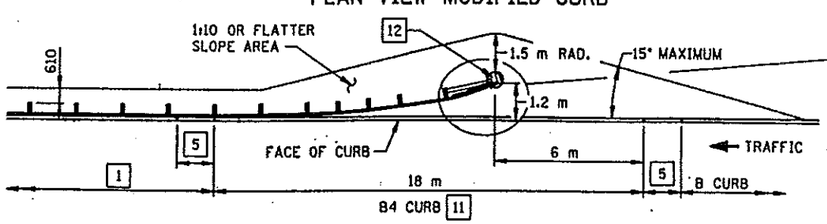
SECTION A-A [9]



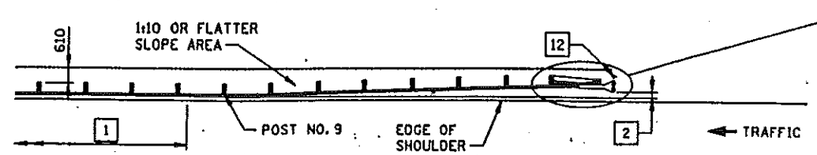
UNDERPASS-DEPRESSED MEDIAN
(DESIGN SPECIAL SHOWN)



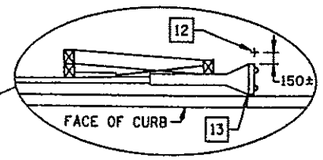
PLAN VIEW MODIFIED CURB

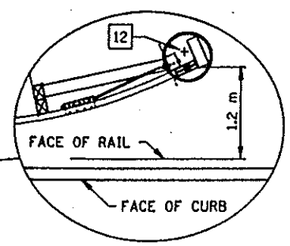


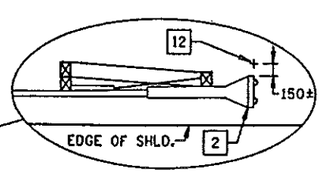
PLAN VIEW MODIFIED CURB AND SLOPE

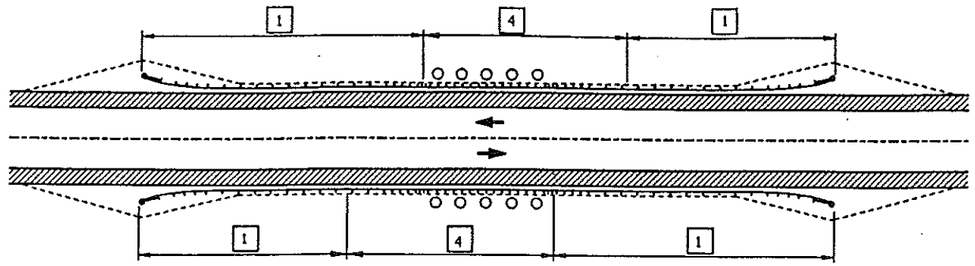


PLAN VIEW NO CURB

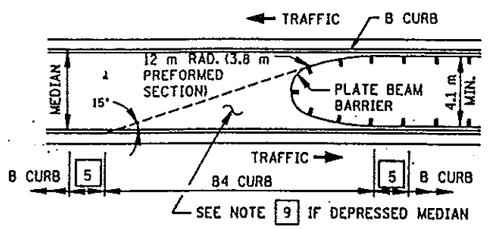




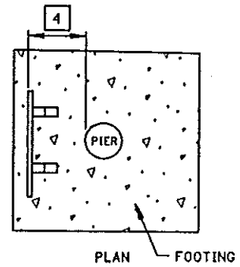




TWO-WAY UNDERPASS
(DESIGN SPECIAL SHOWN)



MODIFIED CURB AT MEDIAN
(OPTIONAL GUARDRAIL PLACEMENT SHOWN)



POST REQUIREMENTS

NOTES:

ALL GUARDRAIL POSTS SHALL BE 1.9 m CTR. TO CTR., EXCEPT WHERE NOTED.

THE LATEST APPROVED VERSION OF STANDARD PLATES SHOWN OR AS INDICATED IN THE PLANS SHALL APPLY.

WHEN THE APPROACHING PLATE BEAM FLARE CAN BE BURIED IN THE BACKSLOPE ELIMINATE THE END TREATMENT AND ADD REQUIRED RAIL LENGTH TO REACH BACKSLOPE.

[1] FOR REQUIRED L LENGTH SEE DESIGN MANUAL 10-7.03 FOR DESIGN PARAMETERS SEE STD. PLATE M8329 FOR END TREATMENT SHOWN.

[2] SET EDGE OF EXTRUDER BOX 230 mm FROM FACE OF RAIL EXTENDED FROM POST NO. 9.

[3] CONCRETE BARRIER WALL BETWEEN PIER COLUMNS MAY BE USED . SEE SHEET NO. __ OF __ FOR WALL DETAILS. CONNECT GUARDRAIL TO BARRIER WALL ANCHORAGE PLATE SEE SHEET NO. __ OF __ FOR DETAILS.

[4]

DISTANCE FROM FACE OF RAIL TO HAZARD	GUARDRAIL POST SPACING
OVER 1.2 m	1.9 m
1.2 m TO 600 mm	950 mm
LESS THAN 600 mm	DESIGN SPECIAL & [3]

[5] 1.5 m CURB TRANSITION, USE IF ADJACENT CURB IS A DIFFERENT TYPE OR HEIGHT.

[6] 1.5 m RADIUS NOSE SECTION (3.8 m PREFORMED CURVED RAIL SECTION, SEE DETAIL, ON SHEET 1 OF 2).

[7] 7.6 m OF PREFORMED (12 m RADIUS) RAIL SECTIONS.

[8] IF EMBEDMENT IS GREATER THAN 915 mm OR IF EMBEDMENT IS 760 mm TO 915 mm AND ADJACENT POSTS ARE EMBEDDED 915 mm OR MORE, POST SEAT IS NOT REQUIRED.

[9] THE MEDIAN DITCH SHALL BE FILLED TO PROVIDE AN ELEVATION OF GUARDRAIL APPROXIMATELY (WITHIN 150 mm±) THE SAME AS IF INSTALLED ON THE SHOULDER. EXTEND FILL TO GUARDRAIL NOSE AND TAPER TO MEDIAN DITCH ON 1:10 SLOPE.

[10] 3800 mm MINIMUM, IF ONE WAY TRAFFIC.

[11] IF 150 mm+ HIGH CURB, MILL TO 75 mm HEIGHT. NEW: CONSTRUCT 100 mm HIGH CURB.

[12] SNOW PLOW MARKER (X4-5) WITH A 3 kg/m DELINEATOR POST 2.4 m LG. (SPEC. 3401) DRIVEN INTO GROUND. EXTEND 915 mm ABOVE TERMINAL.

[13] SET EDGE OF EXTRUDER BOX 230 mm FROM FACE OF CURB.

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NOTE: ALL DIMENSIONS ARE IN MILLIMETERS, EXCEPT AS NOTED.

minnesota metric

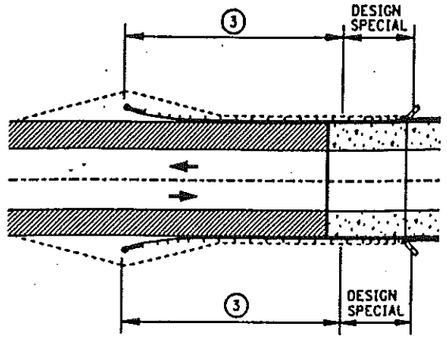
STANDARD SHEET NO. 5-297.601M (1 OF 2)
STANDARD APPROVED: MARCH 17, 1994
REVISION DATE 6-18-96

TITLE: GUARDRAIL INSTALLATIONS AT MEDIANS AND END TREATMENTS

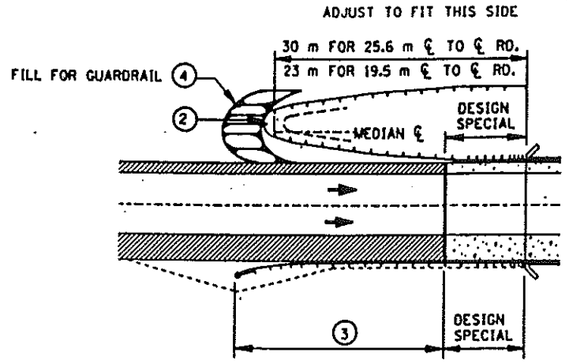
STATE PROJ. NO. 55-607-11

SHEET NO. 35 OF 40 SHEETS

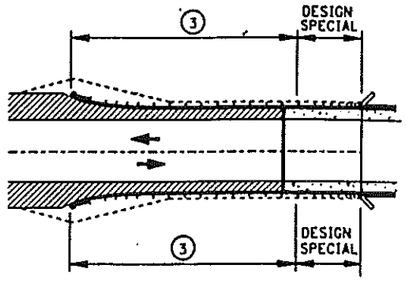
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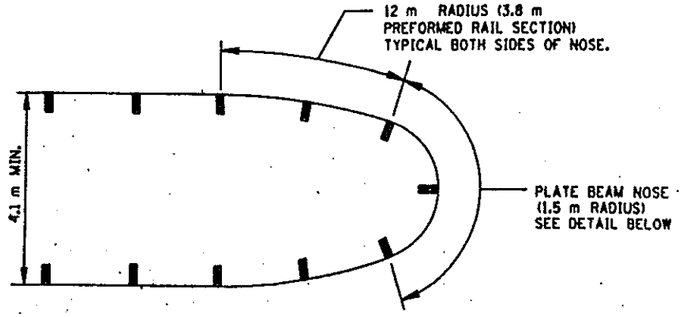
TWO - WAY BRIDGE
WITH FULL SHOULDERS



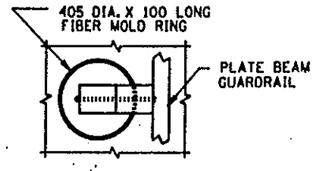
ONE - WAY BRIDGE
WITH FULL RIGHT SHOULDER



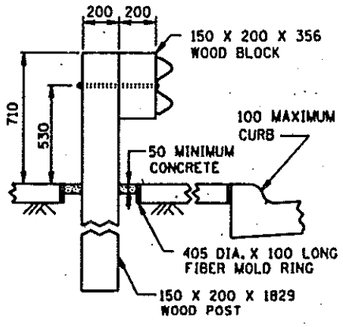
TWO - WAY BRIDGE
WITHOUT FULL SHOULDERS



OPTIONAL GUARDRAIL INSTALLATION ①



PLAN VIEW



ELEVATION

TYPICAL SECTION AT POST
SET IN CONCRETE

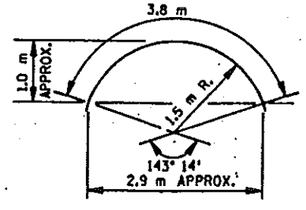


PLATE BEAM NOSE ⑤
(1.5 m RADIUS)

NOTES:

ALL GUARDRAIL POSTS SHALL BE 1.9 m CTR. TO CTR., EXCEPT WHERE NOTED.

WHEN THE APPROACHING PLATE BEAM FLARE CAN BE BURIED IN THE BACKSLOPE ELIMINATE THE END TREATMENT AND ADD REQUIRED RAIL LENGTH TO REACH BACKSLOPE.

THE LATEST APPROVED VERSION OF STANDARD PLATES SHOWN OR AS INDICATED IN THE PLANS SHALL APPLY.

① OPTIONAL GUARDRAIL AS DETERMINED BY THE DESIGNER AND SPECIFIED ON SHEET NO. ____ OF ____,

② 1.5 m RADIUS NOSE SECTION (3.8 m PREFORMED CURVED RAIL SECTION, SEE DETAIL).

③ FOR THE REQUIRED L LENGTH SEE ROAD DESIGN MANUAL 10-7.03 FOR DESIGN PARAMETERS. SEE STANDARD PLATE M8329 FOR END TREATMENT SHOWN.

④ THE MEDIAN DITCH SHALL BE FILLED TO PROVIDE AN ELEVATION OF GUARDRAIL APPROXIMATELY (WITHIN 150 mm±) THE SAME AS IF INSTALLED ON THE SHOULDER. EXTEND FILL TO GUARDRAIL NOSE AND TAPER TO MEDIAN DITCH ON 10:1 SLOPE.

⑤ STANDARD PLATE BEAM GUARDRAIL SECTION HAVING STANDARD PUNCHING AT BOTH ENDS WITH INTERMEDIATE 19 mm X 62 mm SLOT. SEE STANDARD PLATE M8307.

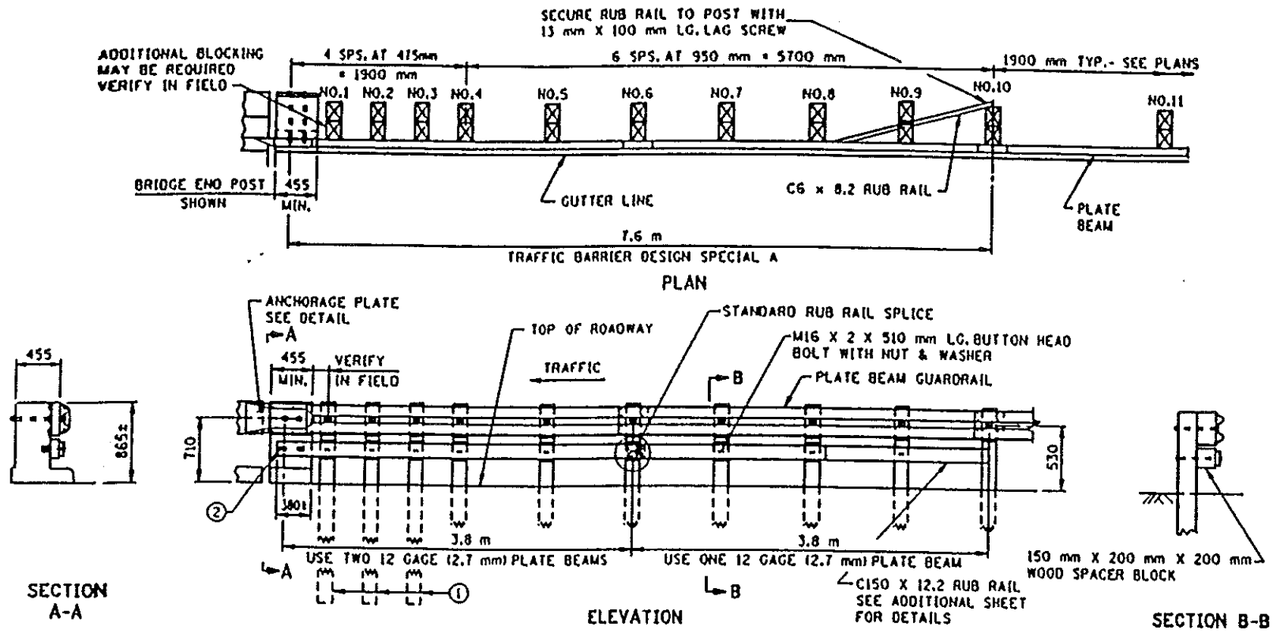
AS-BUILT
FEB 14 2001
ENGINEERING

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS, EXCEPT AS NOTED.

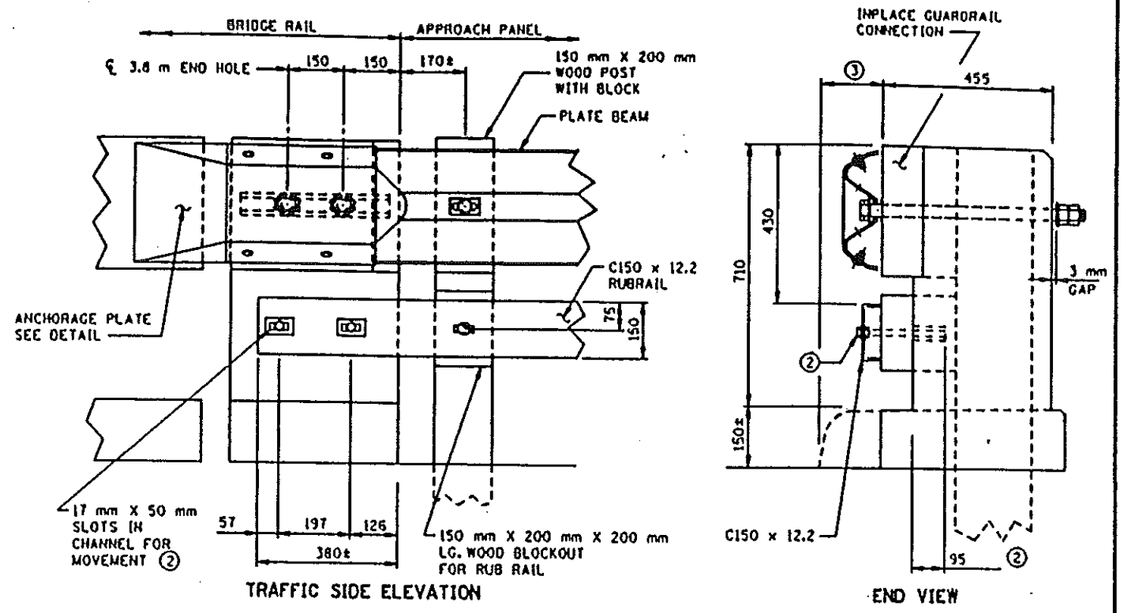
STANDARD SHEET NO.	TITLE:
5-297.601M (2 OF 2)	GUARDRAIL INSTALLATIONS AT MEDIANS AND END TREATMENTS
STANDARD APPROVED: MARCH 17, 1994	

STATE PROJ. NO. 55-607-11 SHEET NO. 36 OF 40 SHEETS

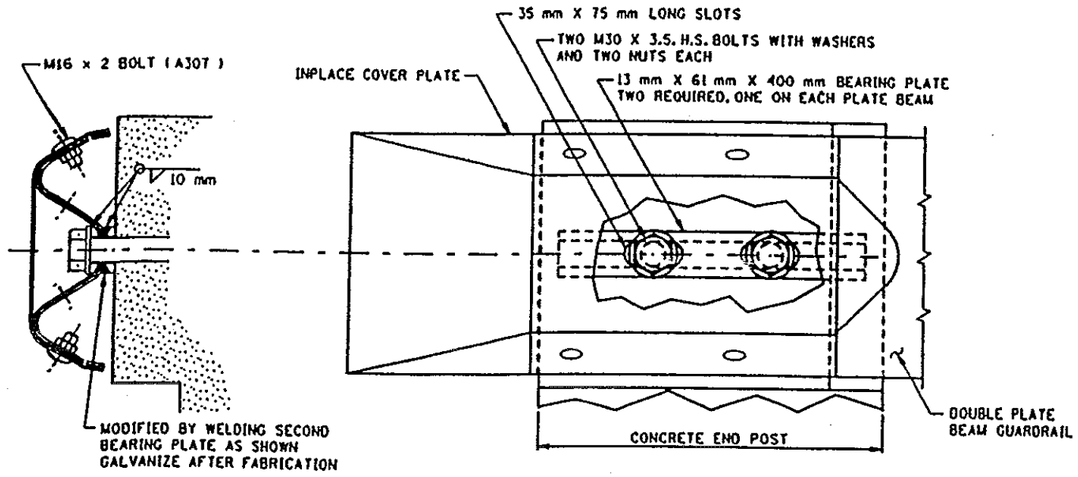
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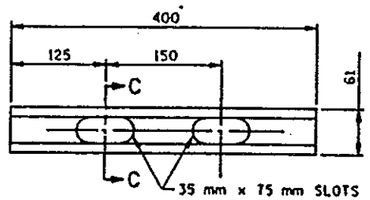
GENERAL ASSEMBLY DETAILS
(NO APPROACH CURB SHOWN)



RAIL ATTACHMENT DETAILS

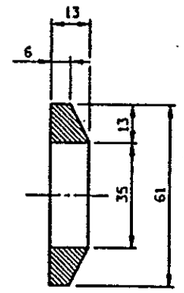


MODIFIED INPLACE ANCHORAGE PLATE DETAILS



BEARING PLATE DETAIL
(2 REQUIRED)

STRUCTURAL STEEL AS PER SPEC. 3306.
GALVANIZE AS PER SPEC. 3392.



ENLARGED SECTION C-C

NOTES:

ALL STRUCTURAL STEEL AND HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M180.

USE INPLACE END POST IF FRONT FACE VERTICAL REINFORCEMENT HAS A MINIMUM STEEL AREA OF 1930 mm^2. IF END POST STEEL AREA IS INADEQUATE CONTACT YOUR REGIONAL BRIDGE CONSTRUCTION ENGINEER.

① INSTALL ADDITIONAL 150 mm x 200 mm X 2.1 m MINIMUM LONG POST WITH 150 mm X 200 mm X 355 mm BLOCK WITH M16 X 2 BUTTON HEAD BOLT AND RECESS NUT WITH 75 mm X 45 mm X 5 mm THICK RECTANGULAR WASHER (TYP.) AT POST NO. 1 & 3.

② M16 X 2 BOLTS, NUTS & PLATE WASHERS WITH APPROVED CONCRETE ANCHORS. LOCATE CONCRETE ANCHORS TO MISS BRIDGE REINFORCEMENT.

③ WOOD SPACER BLOCKS MAY BE REQUIRED IF BRIDGE CURB PROJECTS BEYOND FACE OF PLATE BEAM.

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TRAFFIC BARRIER DESIGN SPECIAL A

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS, EXCEPT AS NOTED.

minnesota mstnc

REVISION DATE 2-3-98

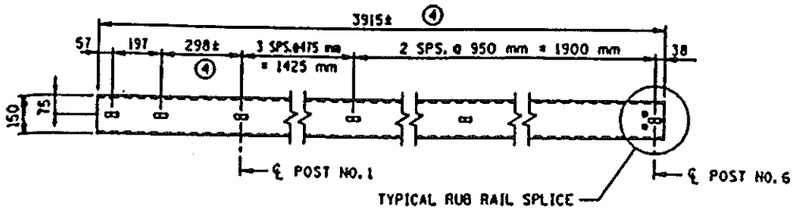
STANDARD SHEET NO. 5-297.608M (1 OF 2)

STANDARD APPROVED: MARCH 16, 1992

TITLE: GUARDRAIL IMPROVEMENTS AT ONE LINE RAIL BRIDGES INPLACE END POST AND WITH OR WITHOUT APPROACH CURB

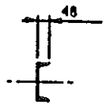
STATE PROJ. NO. 55-607-11

SHEET NO. 37 OF 40 SHEETS

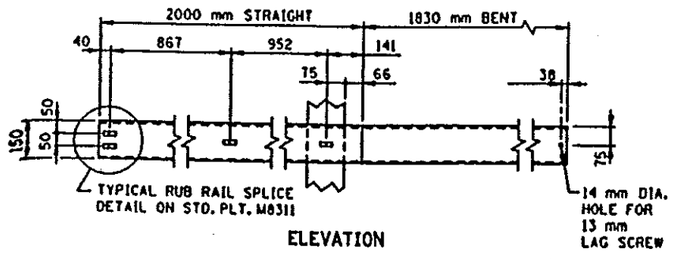


ELEVATION

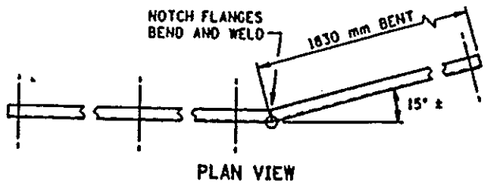
STRAIGHT SECTION



SECTION THRU RUB RAIL



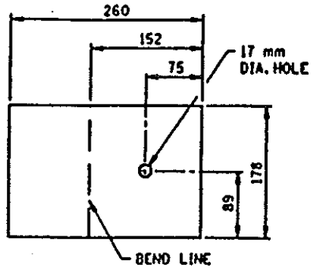
ELEVATION



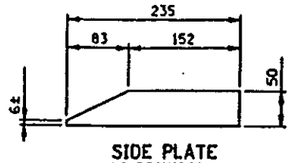
PLAN VIEW

BENT SECTION

RUB RAIL DETAILS

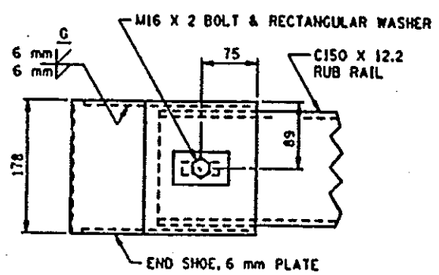


TOP PLATE

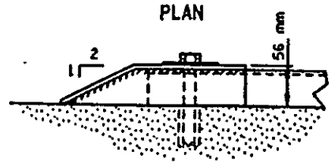


SIDE PLATE
(2 REQUIRED)

END SHOE PLATE DETAILS
(6 mm PLATE)



PLAN



SIDE ELEVATION

RUB RAIL END SHOE
(USE IF TWO WAY TRAFFIC WITH NO MEDIAN)

QUANTITIES PER BRIDGE CORNER IMPROVEMENT ①			
	DESCRIPTION	LENGTH/SIZE	NO.
	M16 X 2 CARRIAGE BOLT WITH NUT	450 mm	3
	M16 X 2 CARRIAGE BOLT WITH NUT (RUB RAIL)	510 mm MIN.	9
	M16 X 2 CARRIAGE BOLT WITH NUT	38 mm	4
	M16 X 2 BOLTS WITH CONCRETE ANCHORS	145 mm	2
	RECTANGULAR WASHER	75 mm X 45 mm X 5 mm	5
②	C150 x 12.2 RUB RAIL	3915 mm±	1 ④
②	C150 x 12.2 RUB RAIL	3830 mm	1
	10 mm THICK SPLICE PLATE (RUB RAIL)	115 mm X 195 mm	1
	12 GAGE (2.67 mm) PLATE BEAM	3.8 m	1
	150 mm x 200 mm RAIL POSTS	2.1 m MIN.	3
③	150 mm x 200 mm SPACER BLOCKS	355 mm	3
③	150 mm x 200 mm SPACER BLOCKS (RUB RAIL)	200 mm	9
	13 mm LAG SCREW	100 mm	1

NOTES:

GALVANIZE ALL HARDWARE AS PER SPEC. 3392.

USE END SHOE ON RUB RAIL IF TWO WAY TRAFFIC WITH NO MEDIAN.

RUB RAIL IS C150 x 12.2

STRUCTURAL STEEL AS PER SPEC. 3306 UNLESS OTHERWISE NOTED.

ALL SLOTTED HOLES ARE 17 mm x 50 mm.

ALL SQUARE HOLES ARE 17 mm.

GALVANIZE STRUCTURAL SHAPES AS PER SPEC. 3394 AFTER FABRICATION UNLESS OTHERWISE NOTED.

① QUANTITIES LISTED ARE FOR INFORMATIONAL PURPOSES. ANY ADDITIONAL MINOR ITEMS AND SLIGHT CHANGES IN QUANTITIES REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION. SOME ITEMS LISTED ARE FROM " A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE " AS APPROVED BY AASHTO.

② NON-STANDARD LENGTHS. SEE RUB RAIL DETAILS FOR STRAIGHT AND BENT SECTIONS.

③ ADDITIONAL BLOCKING MAY BE REQUIRED AT POST NO.1 & NO.10. AND IF BRIDGE CURB PROJECTS BEYOND FACE OF PLATE BEAM. VERIFY IN FIELD.

④ VERIFY DIMENSION IN FIELD.

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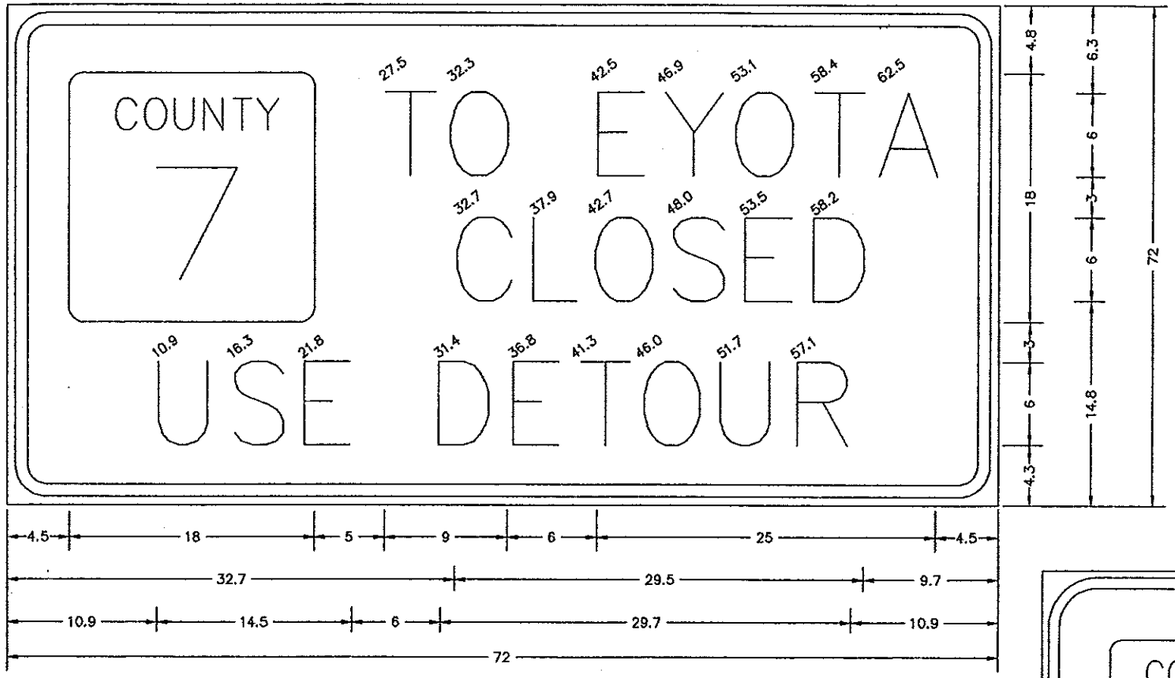
ENGINEERING

TRAFFIC BARRIER DESIGN SPECIAL A

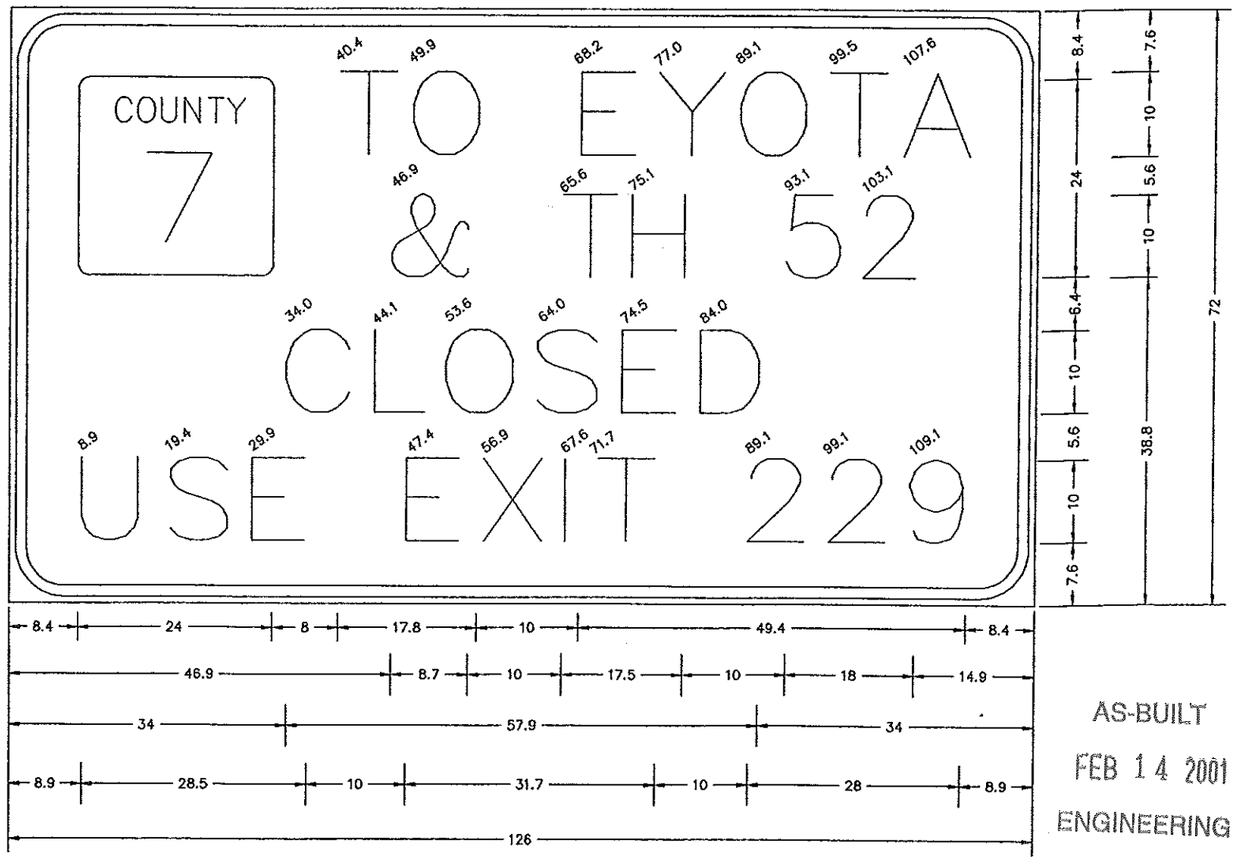
NOTE: ALL DIMENSIONS ARE IN MILLIMETERS, EXCEPT AS NOTED.

quandsute metric	STANDARD SHEET NO. 5-297.608M (2 OF 2)	TITLE: GUARDRAIL IMPROVEMENTS AT ONE LINE RAIL BRIDGES INPLACE END POST AND WITH OR WITHOUT APPROACH CURB
REVISION DATE 1-30-98	STANDARD APPROVED: MARCH 16, 1992	STATE PROJ. NO. 55-607-11 SHEET NO. 38 OF 40 SHEETS

FILE NAME SM6082C92.SPN



2.3" RADIUS, 0.9" BORDER, 0.6" INDENT, BLACK ON ORANGE
"TO EYOTA" D; "CLOSED" D; "USE DETOUR" D:



6.0" RADIUS, 1.3" BORDER, 0.8" INDENT, BLACK ON ORANGE
"TO EYOTA" E MOD; "& TH 52" E MOD; "CLOSED" E MOD; "USE EXIT 229" E MOD;

AS-BUILT
FEB 14 2001
ENGINEERING

TRAFFIC CONTROL PLAN

CERTIFIED BY Kaye M Prienick PROFESSIONAL ENGINEER REG. NO. 19917 3/30 1999

S.A.P. 55-607-11

SHEET 40 OF 46 SHEETS