FORM 129 A REV. '84

Fed. Proj. No. _____

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, STORM SEWER, CONC. CURB & GUTTER, BASE AND BITUMINOUS SURFACING.

County State Aid Highway No. 11

Between E. RIVER ROAD (C.S.A.H.) And T.H. 10

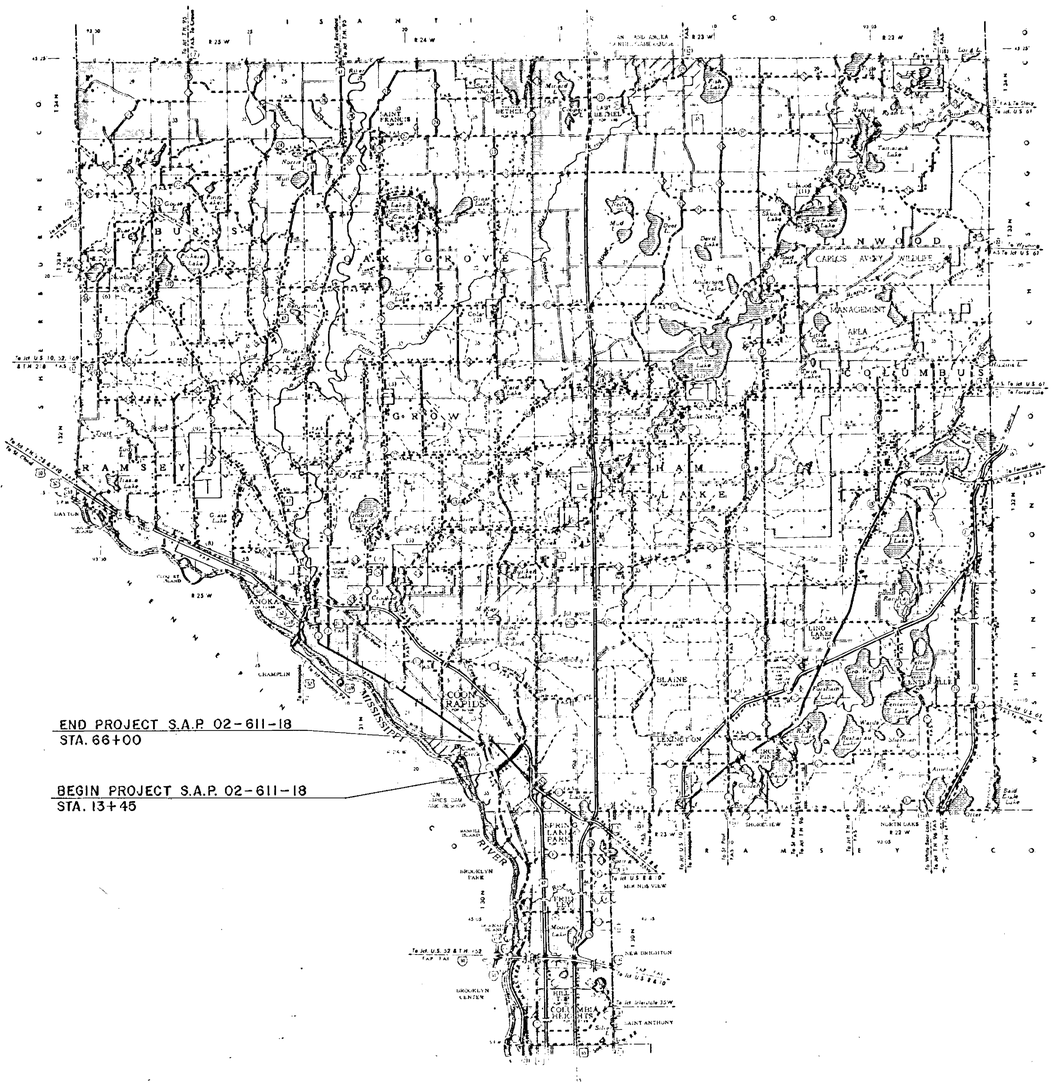
From A POINT 516' W. AND 519' N. OF THE S.W. COR. SEC. 25, T. 30, R. 24 To A POINT 562' E. AND 614' E. OF THE N. 1/4 COR. SEC. 25, T. 25, R24

Give proper reference to Sections, Township and Range

GROSS LENGTH 5255.0 FEET 0.995 MILES
BRIDGES LENGTH 0 FEET 0 MILES
EXCEPTIONS LENGTH 0 FEET 0 MILES
NET LENGTH 5255.0 FEET 0.995 MILES

CONVENTIONAL SIGNS

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)
PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
ELECTRIC POWER LINE
TELEPHONE OR TELEGRAPH LINE
JOINT TELEPHONE AND POWER
CONDUIT
TELEPHONE CABLE AERIAL
TELEPHONE CABLE UNDERGROUND
POWER CABLE UNDERGROUND
GAS MAIN
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
WATER PIPE
SEWER PIPE
DRAIN TILE
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
MANHOLE
FIRE HYDRANT
STREET LIGHT
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
CATTLE GUARD
OVERPASS (Proj. Over)
UNDERPASS (Proj. Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
MEANDER CORNER



END PROJECT S.A.P 02-611-18
STA. 66+00

BEGIN PROJECT S.A.P. 02-611-18
STA. 13+45

INDEX

SCALE

INDEX MAP — 2 Mi.
PLAN & PROFILE — VERT. 5' / HORIZ. 50'
CROSS SECTIONS — 10'
SIGNAL SYSTEM — 30'

DESIGN DESIGNATION

ADT (CURRENT YEAR) 6,000
ADT (FUTURE YEAR) 22,900
T (HEAVY COMMERCIAL) 7.5%
9 Ton Design Soil Factor A-3, R=50
Design Speed 40 MPH ESN 18, 1,221,000
Design Speed not achieved at:
STA _____ TO STA _____ MPH _____
STA _____ _____ MPH _____

STOPPING SIGHT DISTANCE BASED ON:
3.5' HEIGHT OF EYE
0.5' HEIGHT OF OBJECT

SPECIFICATIONS

THE "STANDARD" SPECIFICATIONS FOR CONSTRUCTION", 1983 EDITION AND SUPPLEMENTAL SPECIFICATIONS, DATED MAY 19, 1987 SHALL GOVERN.

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.

B. C. P. DATE: 2/11/88 REG.NO. 14148

Glen VanWormer DATE: 2/11/88 REG.NO. 9059

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

COUNTY ENGINEER - PAUL K. RUUD DATE 3/14/88

ANOKA COUNTY REG. NO. 12183 (OLSON) 6549 (RUUD)

RECOMMENDED FOR APPROVAL C. C. Weichselbaum 2/25, 1988
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL Julie Skallman 3/14, 1988

APPROVED 3-15, 1988 Ray J. Dawson
STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. _____
CITY Proj. No. 86-58 S.A.P. 02-611-18

ANOKA County, Minnesota. Plan No. 1 Sheet 1 of 31 Sheets

DAHMS PHOTO PRINT CO.
MINNEAPOLIS 1, MINN.

STATEMENT OF ESTIMATED QUANTITIES

	ITEM		UNIT	EST. QUANTITY	PARTICIPATING	NON PARTICIPATING	STORM SEWER
	2021.501	MOBILIZATION	L.S.	1	0.9	0.1	0
	2031.501	FIELD OFFICE, TYPE D	EACH	1	0.9	0.1	0
	2101.513	CLEAR & GRUB RIGHT OF WAY	L.S.	1	1	0	0
	2104.501	REMOVE RC STORM SEWER PIPE	L.F.	590	590	0	0
	2104.501	REMOVE CONC. CURB & GUTTER	L.F.	1550	1550	0	0
	2104.501	REMOVE SANITARY SEWER PIPE	L.F.	60	60	0	0
	2104.501	REMOVE COPPER WATER SERVICE	L.F.	113	0	113	0
	2104.503	REMOVE CONC. SIDEWALK	S.F.	510	510	0	0
	2104.503	REMOVE CONCRETE DRIVEWAY	S.F.	3370	3370	0	0
	2104.503	REMOVE RETAINING WALL	S.F.	200	200	0	0
	2104.505	REMOVE BITUMINOUS PAVEMENT	S.Y.	3200	3200	0	0
	2104.509	REMOVE CATCH BASIN / MANHOLE	EACH	6	6	0	0
	2104.509	REMOVE RC PIPE APRON	EACH	8	8	0	0
	2104.521	SALV. TRAFFIC BAR., DES. PLATE BEAM	L.F.	30	30	0	0
	2104.521	SALVAGE FENCE	L.F.	80	80	0	0
	2104.523	SALVAGE YARD LITE	EACH	1	1	0	0
	2104.523	SALVAGE HYDRANT ASSEMBLY	EACH	6	6	0	0
	2104.523	SALVAGE CURB STOP	EACH	9	9	0	0
	2104.523	SALVAGE CURB BOX	EACH	29	29	0	0
	2105.501	COMMON EXCAVATION (P)	C.Y.	28600	28600	0	0
	2105.525	TOPSOIL BORROW (LV)	C.Y.	600	600	0	0
	2130.501	WATER DUST CONTROL	(M)GAL	200	200	0	0
(10) (1)	2211.503	AGG. BASE PLACED, CL.-5A (P)	C.Y.	11414	10994	420	0
(2)	2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	465	465	0	0
(3)	2331.510	BINDER COURSE MIXTURE	TON	3750	3750	0	0
(4)	2331.514	BASE COURSE MIXTURE	TON	4990	4990	0	0
	2331.531	TEMPORARY LANE MARKING	RD.STA	106	106	0	0
(5)	0331.601	2" WEARING COURSE PLACED	S.Y.	46	46	0	0
(10) (6)	2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	265	247	18	0
(10) (7)	2341.508	WEARING COURSE MIXTURE	TON	4090	3820	270	0
(8)	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	4550	4550	0	0
	0411.603	CONSTRUCT STONE RETAINING WALL	S.F.	4800	4800	0	0
	2451.511	COURSE FILTER AGGREGATE (C.V.)	C.Y.	300	300	0	0
	2503.541	12" RCP STORM SEWER, DES.3006,CL V	L.F.	1403	0	120	1403
	2503.541	15" RCP STORM SEWER, DES.3006,CL V	L.F.	373	0	0	373
	2503.541	18" RCP STORM SEWER, DES.3006,CL III	L.F.	424	0	0	424
	2503.541	21" RCP STORM SEWER, DES.3006,CL IV	L.F.	1637	0	78	1559
	2503.541	24" RCP STORM SEWER, DES.3006,CL III	L.F.	501	0	0	501
	2503.541	27" RCP STORM SEWER, DES 3006 CL II	L.F.	257	0	0	257
	2503.541	30" RCP STORM SEWER, DES 3006 CL III	L.F.	537	0	0	537
	2503.541	36" RCP STORM SEWER, DES 3006 CL III	L.F.	29	0	29	0
	2503.541	42" RCP STORM SEWER, DES 3006 CL III	L.F.	696	0	0	696
	0504.602	ADJUST VALVE BOX	EACH	12	12	0	0
	2506.506	CONSTRUCT MANHOLE, DESIGN B	L.F.	118.2	0	4	114.2
	2506.506	CONSTRUCT MANHOLE, DESIGN C	L.F.	11.3	0	0	11.3
	2506.506	CONSTRUCT MANHOLE, DESIGN D	L.F.	32.4	0	0	32.4
	2506.506	CONSTRUCT MANHOLE, DESIGN E	L.F.	9.2	0	0	9.2
	2506.507	CONSTRUCT CATCH BASIN, DES. X	L.F.	64.7	0	0	64.7
	2506.507	CONSTRUCT CATCH BASIN, DES. Y	L.F.	25.3	0	0	25.3
	2506.507	CONSTRUCT CATCH BASIN, DES. 4021 8-4	L.F.	8	0	0	8
	2506.507	CONSTRUCT CATCH BASIN, DES. 4021 8-5	L.F.	5	0	0	5
	2506.511	RECONSTRUCT MANHOLES	L.F.	16.2	16.2	0	0
	2506.516	CASTING ASSEMBLIES TYPE A	EACH	25	0		25
	2506.516	CASTING ASSEMBLIES TYPE B	EACH	22	0	0	22
	2506.522	ADJUST FRAME & RING CASTING	EACH	15	15	0	0
	2506.602	CONNECT TO EXISTING MH/CB	EACH	3	0	1	2
	2521.501	4" CONCRETE WALK	S.F.	33395	0	33395	0
	2531.501	CONCRETE CURB AND GUTTER, DES. B618	L.F.	11124	11124	0	0
	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	S.Y.	940	940	0	0
	2531.507	8" CONCRETE DRIVEWAY PAVEMENT	S.Y.	330	330	0	0
(9)	2545.602	INSTALL LIGHTING UNIT	EACH	1	1	0	0
	2554.511	INST. TRAFFIC BAR., DES. PLATE BEAM	L.F.	30	30	0	0
	0557.603	INSTALL FENCE	L.F.	80	80	0	0
	2565.511	FULL TRAFFIC ACTUATED SIGNAL SYSTEM	SIG.SYS	1	1	0	0
	2575.501	ROADSIDE SEEDING	ACRE	3	3	0	0
	2575.505	SODDING	S.Y.	10150	10150	0	0
	2564.513	CONCRETE FOOTINGS	EACH	20	0	20	0
	2531.501	CONCRETE CURB & GUTTER, DESIGN B612	L.F.	1856	1856	0	0
	2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	1	1	0	0

STATEMENT OF ESTIMATED QUANTITIES

ITEM		UNIT	EST. QUANTITY	PARTICIPATING	NON PARTICIPATING	STORM SEWER
0503.602	CONNECT TO EXISTING SEWER	EACH	2	0	2	0
0503.603	8" PVC, 10-12' DEEP	L.F.	270	0	270	0
0503.602	CONNECT TO EXISTING SERVICE	EACH	5	0	5	0
0503.603	4" P.V.C. SERVICE	L.F.	100	0	100	0
0503.602	8" x 4" SADDLE	EACH	5	0	5	0
0504.602	6"x18"TAPPING SLEEVE/W 6" R.W.GV & BOX	EACH	3	0	3	0
0504.602	8"x18"TAPPING SLEEVE/W 8" R.W.GV & BOX	EACH	5	0	5	0
0504.602	12"x18" TAPPING SLEEVE/W 12" BFV	EACH	2	0	2	0
0504.603	6" DIP WATERMAIN, CL 52	L.F.	325	200	125	0
0504.603	8" DIP WATERMAIN, CL 52	L.F.	370	0	370	0
0504.603	12" DIP WATERMAIN, CL 52	L.F.	100	0	100	0
0504.602	HYDRANT	EACH	4	0	4	0
0504.602	INSTALL HYDRANT	EACH	6	6	0	0
0504.602	6" R.W. GATE VALVE AND BOX	EACH	7	0	7	0
0504.602	1" CURB STOP	EACH	20	20	0	0
0504.602	INSTALL CURB STOP	EACH	6	6	0	0
0504.602	INSTALL CURB BOX	EACH	26	26	0	0
0504.603	1" TYPE "K" COPPER	L.F.	430	430	0	0
0504.602	6" PIPE BENDS, 22 1/2 DEG.	EACH	1	1	0	0
0504.602	8" PLUG	EACH	5	0	5	0
0504.602	12" PLUG	EACH	2	0	2	0

BASIS OF ESTIMATED QUANTITIES

2331.504	BITUMINOUS MATERIAL FOR MIXTURE	5.3%
2331.510	BINDER COURSE MIXTURE	110#/S.Y./IN
2331.514	BASE COURSE MIXTURE	110#/S.Y./IN
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	6.5%
2341.508	WEARING COURSE MIXTURE	110#/S.Y./IN
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL./S.Y.

(1) CLASS 5 INCLUDES 430 C.Y. FOR APPROACHES
(2) MATERIAL INCLUDES 15.9 TONS FOR APPROACHES
(3) BINDER INCLUDES 130 TONS FOR APPROACHES
(4) BASE INCLUDES 170 TONS FOR APPROACHES
(5) INCLUDES DRIVEWAY PREPARATION & 3" AGG. BASE CLASS 5
(6) MATERIAL INCLUDES 7.8 TONS FOR APPROACHES
(7) WEAR INCLUDES 130 TONS FOR APPROACHES
(8) TACK INCLUDES 70 GAL. GAL. FOR APPROACHES
(9) INSTALL YARD LIGHT
(10) CLASS 5 INCLUDES 420 C.Y. FOR KEN'S QUIK STOP
MATERIAL INCLUDES 18 TONS FOR KEN'S QUIK STOP
WEAR INCLUDES 270 TONS FOR KEN'S QUIK STOP

GENERAL NOTES

1. THE INFORMATION ON THESE DRAWINGS, CONCERNING TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.
2. ALL SERVICE LOCATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.
3. B618 CURB AND GUTTER SHALL BE TRANSITIONED FOR FUTURE PEDESTRIAN CURB RAMPS AT ALL CURB RADII.
4. CATCH BASIN CASTING ELEVATIONS PROVIDE FOR 0.1 FOOT SUMP BELOW GUTTER GRADE.
5. ROADSIDE SEEDING SHALL INCLUDE PLACEMENT OF SEED (MIXTURE 5) AND DISC ANCHORED MULCH (TYPE 1). SEED SHALL BE APPLIED AT THE RATE OF 50 LBS./ACRE. MULCH SHALL BE MACHINE SPREAD AT THE RATE OF 2 TONS/ACRE.
6. COMMERCIAL FERTILIZER (ANALYSIS 10-10-10) SHALL BE APPLIED AT THE RATE OF 600 LBS./ACRE ON ALL SEED AND SOD AREA

STORM SEWER STRUCTURE SCHEDULE

LINE	STRUCT. NO.	LOCATION				DESIGN			M.H. & C.B. DEPTH	CASTING TYPE	TOP OF CAST	OUTLET ELEV.	DRAINS TO			BULKHEAD	REMARKS
		STATION	CONST.CL LT.	CONST.CL RT.	SURVEY LINE	M.H.	C.B.	RECONN					NO.	% GRADE	INLET ELEV.		
1	101	4+99		45'	EVERGREEN BLVD.						877.70	71.50					EXISTING MANHOLE
2	102	4+83		45'	EVERGREEN BLVD.	D			5.41	A	877.00	71.59	101	0.28	71.50		
3	103	2+25		45'	EVERGREEN BLVD.	C			7.00	A	879.30	72.30	102	0.28	71.59		
4	104	17+96		4'	Lor SBL FOLEY	D			9.62	A	882.62	73.00	103	0.28	72.30		
5	105	16+50		8'	Lor SBL FOLEY	B			4.73	A	882.40	77.67	104	2.16	74.58		
6	106	16+50	13.7'		Lor SBL FOLEY		X		3.93	B	881.80	77.87	105	1.00	77.67		
7	107	16+50		13.7'	Lor NBL FOLEY		X		3.72	B	881.87	78.15	105	1.00	77.67		
8	108	20+56		14'	Lor SBL FOLEY	B			7.63	A	881.24	73.61	104	0.24	73.00		
9	109	20+53	17'		Lor SBL FOLEY		L.P.		5.00		881.12	75.62	108	1.56	75.07		4021 8-5
10	111	20+56		13.7'	Lor NBL FOLEY		X		4.79	B	880.53	75.74	108	1.00	75.30		
11	112	22+06		12'	Lor SBL FOLEY	B			7.51	A	881.71	74.20	108	0.28	73.61		
12	113	24+50		6'	Lor SBL FOLEY	B			6.56	A	881.77	75.21	112	0.28	74.20		
13	114	24+53	13.7'		Lor SBL FOLEY		X		4.07	B	881.17	77.10	113	1.00	76.90		
14	115	24+53		13.7'	Lor NBL FOLEY		X		3.75	B	881.17	77.42	113	1.00	76.90		
15	116	27+25		6'	Lor SBL FOLEY	B			5.77	A	881.86	76.09	113	0.20	75.21		
16	117	27+22.5	17'		Lor SBL FOLEY		L.P.		4.00		881.91	77.41	116	1.50	77.11		4021 8-4
17	119	27+25		13.7'	Lor NBL FOLEY		Y		4.91	B	881.26	76.35	116	0.20	76.25		
18	PLUG	27+40		43'	Lor NBL FOLEY							76.41	119	0.20	76.35		PLUG FUTURE STUB
19	~~120~~	~~5+87~~		~~21'~~	~~COON RAPIDS BLVD.~~				~~11.65~~		~~887.80~~	~~76.15~~					~~EXISTING MANHOLE~~
20	122A	34+84	C/L		Lor NBL FOLEY	D			7.19	A	886.30	79.11	122	0.15	79.09		
21	122	34+69	C/L		Lor NBL FOLEY	E			7.01	A	886.10	79.09	123	0.40	78.41		
22	123	30+50	C/L		Lor NBL FOLEY	C			5.61	A	883.02	77.41	116	0.40	76.99		
23	124	30+50	17'		Lor SBL FOLEY		L.P.		4.00		883.16	78.66	123	0.20	77.91		4021 8-4
24	126	30+50		13.7'	Lor NBL FOLEY		Y		4.57	B	882.51	77.94	123	0.20	77.91		
25	PLUG	30+50		38'	Lor NBL FOLEY							77.99	126	0.20	77.94		PLUG FUTURE STUB
26	127	36+45	9'		Lor NBL FOLEY	D			6.25	A	885.60	79.35	122A	0.15	79.11		
27	PLUG	36+45		36'	Lor NBL FOLEY							79.39	127	0.15	79.35		PLUG FUTURE STUB
28	128	37+25		13.7'	Lor NBL FOLEY		Y		4.42	B	884.92	80.50	127	1.44	79.35		
29	129	37+25	18'		Lor SBL FOLEY	B			3.85	A	884.89	81.04	128	0.72	80.50		
30	130	37+25	25.7'		Lor SBL FOLEY		Y		3.40	B	884.50	81.10	129	0.72	81.04		
31	131	37+30	25.7'		Lor SBL FOLEY		X		3.13	B	884.50	81.37	130	0.16	81.36		
32	PLUG	37+25	50'		Lor SBL FOLEY							81.27	130	0.72	81.10		PLUG FUTURE STUB
33	132	39+60	C/L		Lor SBL FOLEY	B			5.43	A	886.95	81.52	129	0.20	81.04		
34	133	41+94	C/L		Lor SBL FOLEY	B			5.81	A	891.56	85.75	132	1.60	82.09		
35	134	41+94	13.7'		Lor SBL FOLEY		X		4.41	B	891.05	86.64	133	4.60	86.00		
36	135	2+38		14'	C/L 97TH AVE.						891.02	87.34					EXISTING CATCH BASIN
37	136	0+89		7.5'	C/L 97TH AVE.	B			4.00	A	893.45	89.45	135	1.12	88.11		
38	137	44+94	C/L		Lor SBL FOLEY	B			5.29	A	896.39	91.10	133	1.70	86.00		
39	138	44+94	13.7'		Lor SBL FOLEY		X		4.64	B	895.88	91.24	137	1.00	91.10		
40	139	44+94		13.7'	Lor NBL FOLEY		X		3.78	B	895.88	92.10	136	4.20	89.45		
41	140	55+00		6'	Lor NBL FOLEY	B			4.73	A	906.83	02.10	143	2.00	96.80		
42	141	0+86	14.5'		C/L 98th LANE		Y		3.81	B	906.37	02.56	140	1.00	02.10		
43	142	0+86		14.5'	C/L 98th LANE		X		3.52	B	906.37	02.85	141	1.00	02.56		
44	143	57+65		6'	Lor NBL FOLEY	B			5.72	A	902.27	96.55	146	0.40	96.09		
45	144	57+65		13.7'	Lor SBL FOLEY		X		4.44	B	901.88	97.44	143	1.00	96.80		
46	145	57+65		13.7'	Lor NBL FOLEY		X		5.00	B	901.88	96.88	143	1.00	96.80		
47	146	58+81		6'	Lor NBL FOLEY	B			6.98	A	902.82	95.84	148	0.32	94.85		
48	147	58+81		13.7'	Lor NBL FOLEY		X		3.75	B	902.43	98.68	146	1.00	98.60		
49	148	61+91		6'	Lor NBL FOLEY	B			7.94	A	902.79	94.85	151	0.50	94.30		
50	149	61+91	13.7'		Lor SBL FOLEY		X		4.00	B	902.46	98.46	148	1.00	97.82		
51	150	61+91		13.7'	Lor SBL FOLEY		X		4.56	B	902.46	97.90	148	1.00	97.82		
52	151	63+00		6'	Lor NBL FOLEY	B			10.08	A	904.13	94.05	154	0.40	93.65		
53	152	63+00		13.7'	Lor NBL FOLEY		Y		5.45	B	903.80	98.35	151	1.00	98.27		
54	153	62+50		30'	Lor NBL FOLEY		X		3.75	B	902.70	98.95	152	1.00	98.35		
55	154	64+00		6'	Lor NBL FOLEY	B			13.21	A	906.86	93.65	155	0.40	93.25		
56	155	64+80		66'	Lor NBL FOLEY	B			9.35	A	902.60	93.25	156	0.40	88.49		
57	156	67+18		80'	Ls	B			6.00	A	894.00	88.00					CONST. MH OVER 24"
58	PLUG	34+69		45'	Lor NBL FOLEY							7887	*	0.48			FUTURE MAIN

* FUTURE STUB

LINE	FURNISH AND INSTALL PIPE SEWER									
	12" RCP LIN.FT.	15" RCP LIN.FT.	18" RCP LIN.FT.	21" RCP LIN.FT.	24" RCP LIN.FT.	27" RCP LIN.FT.	30" RCP LIN.FT.	42" RCP LIN.FT.	CLASS	36" RCP
1										
2									III	32
3									III	255
4									III	250
5	143								V	
6	18								V	
7	39								V	
8									II	257
9		28							V	
10	40								V	
11							148		III	
12							253		III	
13	20								V	
14	52								V	
15							275		III	
16	20								V	
17				52					III	
18				30					III	
19										
20								15	III	
21					419				III	
22						330			III	
23	58								V	
24				14					III	
25				24					III	
26								176	III	
27									III	29
28				80					IV	
29				75					IV	
30				8					III	
31			5						III	
32				24					III	
33				240					IV	
34		229							V	
35	14								V	
36										
37	120								V	
38	300								V	
39	14								V	
40	63								V	
41	265								V	
42	46								V	
43	29								V	
44		116							V	
45	64								V	
46	8								V	
47			310						III	
48	8								V	
49			109						III	
50	64								V	
51	8								V	
52				100					IV	
53	8								V	
54	60								V	
55				100					IV	
56				238					IV	
57										
58									III	

STRUCTURES 110, 118, 125 DELETED.

The following Standard Plates, approved by the FEDERAL HIGHWAY ADMINISTRATION, shall apply on this project.

MN/DOT STANDARD PLATES

PLATE NO.	DESCRIPTION.
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES (1983)
3000 K	REINFORCED CONCRETE PIPE
3006 F	GASKET JOINT FOR R.C. PIPE
3145 E	CONCRETE PIPE TIES
4000 I	MANHOLE OR CATCH BASIN
4006 K	MANHOLE OR CATCH BASIN
4010 G	CONCRETE SHORT CONE AND ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4021 C	PRECAST CURB OPENING CATCH BASIN
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 D	COVER CASTING FOR MANHOLE
4126 E	CATCH BASIN FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 C	PEDESTRIAN CURB RAMP
7100 F	CONCRETE CURB AND GUTTERS
7110 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
7111 G	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
8000 B	BREAKAWAY SIGN SUPPORT (PLASTIC)
8311 B	PLATE BEAM BARRIER
8319 C	TWISTED END TREATMENT

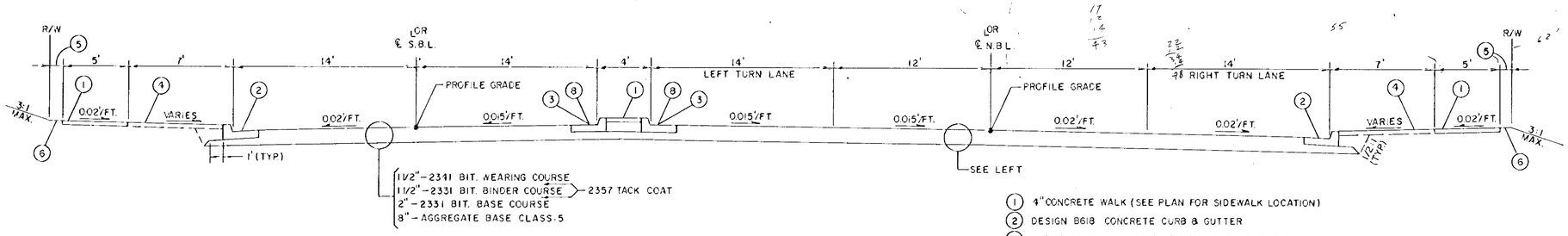
EXISTING MANHOLE STRUCTURES

LINE	STRUCT. NO.	LOCATION				REMAIN AS IS	ADJUST	RECONS.	TYPE
		STATION	CONST.CL LT.	CONST.CL RT.	SURVEY LINE				
1		14+41	12'		Lor SBL FOLEY		X		SAN
2		17+83	5'		Lor SBL FOLEY			5.4	SAN
3		19+79		2'	Lor SBL FOLEY		X		SAN
4		21+80	C/L		Lor SBL FOLEY		X		SAN
5		23+94	8'		Lor SBL FOLEY		X		SAN
6		27+70	35'		Lor SBL FOLEY		X		SAN
7		29+90	61'		Lor SBL FOLEY	X			SAN
8		32+03	73'		Lor SBL FOLEY	X			SAN
9		34+45	55'		Lor SBL FOLEY		X		SAN
10		35+62	27'		Lor SBL FOLEY		X		SAN
11		35+66	39'		Lor SBL FOLEY		X		STM
12		35+62		12'	Lor SBL FOLEY		X		SAN
13		39+00		9'	Lor SBL FOLEY			5.3	SAN
14		41+43		9'	Lor SBL FOLEY		X		SAN
15		43+17		8'	Lor SBL FOLEY		X		SAN
16		46+05		5'	Lor SBL FOLEY		X		SAN
17		49+83		10'	Lor SBL FOLEY		X		SAN
18		51+00		17'	Lor SBL FOLEY		X		SAN
19		54+48		6'	Lor SBL FOLEY		X		SAN
20		58+03		6'	Lor SBL FOLEY			5.4	SAN
21		59+42		6'	Lor SBL FOLEY		X		SAN
22		60+25	6'		Lor NBL FOLEY		X		SAN
23		62+60		2'	Lor NBL FOLEY		X		SAN
24		64+89	11'		Ls FOLEY	X			WM
25									
26									
27									
28									
29									
30									

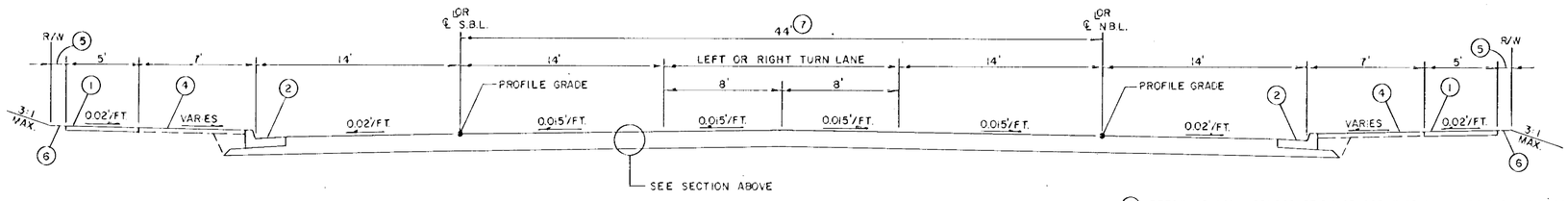
CITY PROJ.NO.86-58

State Proj. No. S.A.P.02-611-18

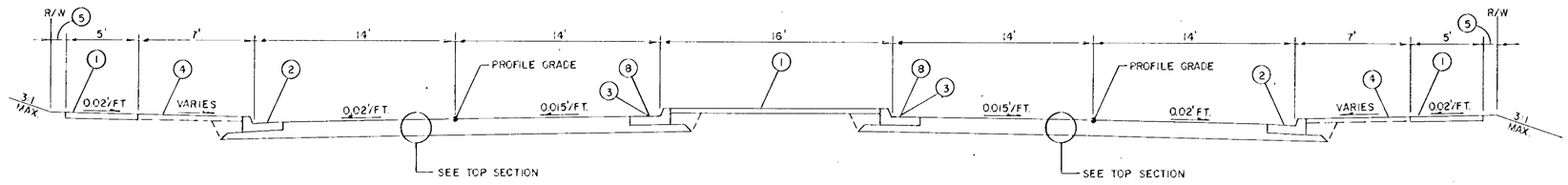
Sheet No. 3 **of** 31 **Sheets**



STA. 32+50 TO STA. 34+70
STA. 35+88 TO STA. 38+32 (REVERSE OF ABOVE)



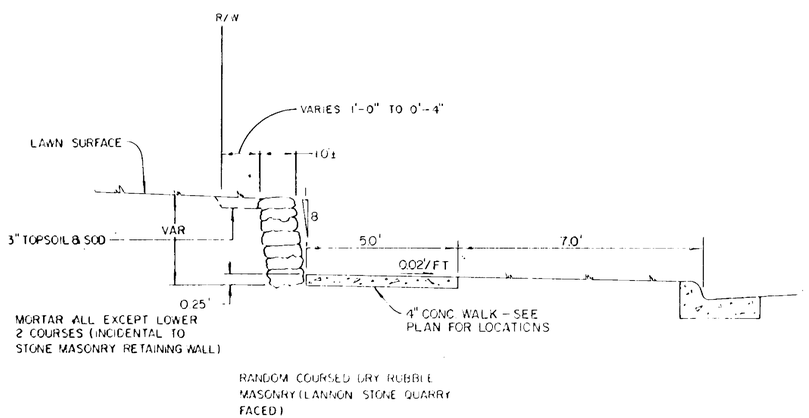
STA. 13+30 TO STA. 30+30
STA. 41+15 TO STA. 65+00



STA. 30+30 TO STA. 30+69
STA. 40+90 TO STA. 41+15

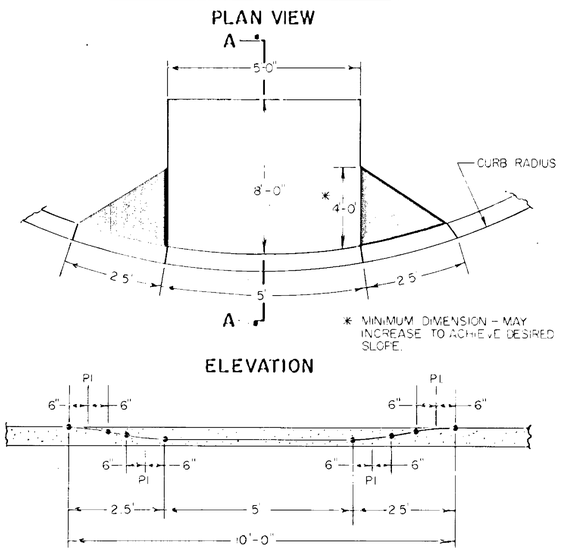
(1) 4" CONCRETE WALK (SEE PLAN FOR SIDEWALK LOCATION)
(2) DESIGN B618 CONCRETE CURB & GUTTER
(3) SLOPE GUTTER TO MATCH ADJACENT PAVEMENT SLOPE
(4) 3" TOPSOIL & SOD – SLOPE VARIES 2% MIN., 12% MAX.
(5) 2' TYPICAL. CONSTRUCT RETAINING WALLS WHERE REQUIRED. (SEE PLANS FOR LOCATIONS). SEE RETAINING WALL DETAIL.
(6) RETAINING WALL CONSTRUCTION ADJACENT TO SWK - SEE PLAN FOR LOCATIONS.
(7) WIDTH VARIES – STA. 13+30 TO STA. 22+42 AND STA 60+23 TO STA. 65+00
(8) DESIGN B612 CONCRETE CURB & GUTTER

TYPICAL SECTIONS

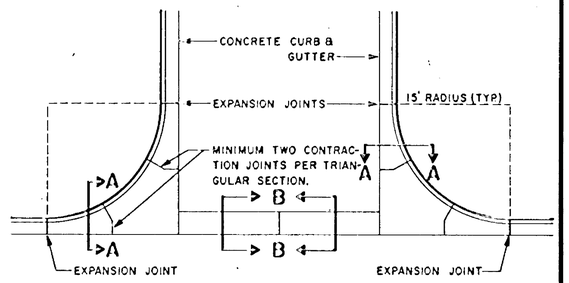


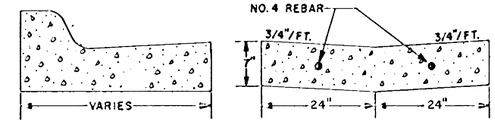
RETAINING WALL DETAIL

PEDESTRIAN RAMP DETAIL



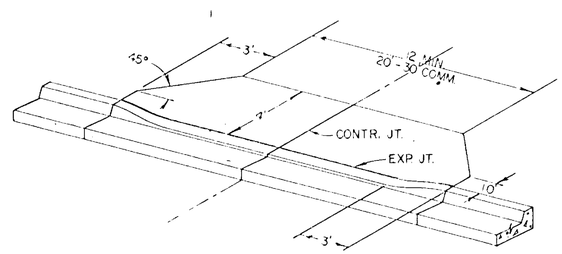
NOTE: CURB IN RADIUS SHALL BE FORMED AND POURED AS ONE UNIT WITH TRIANGULAR SECTION & V-GUTTER. CURB IS CONSIDERED PART OF TRIANGULAR SECTION FOR PAYMENT PURPOSES.

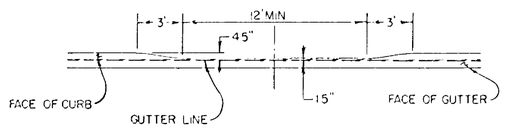


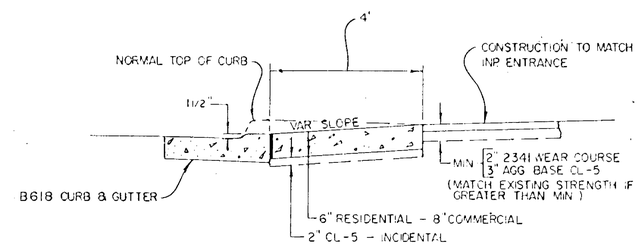


SECTION A-A SECTION B-B

CONCRETE V-GUTTER TRIANGULAR SECTION

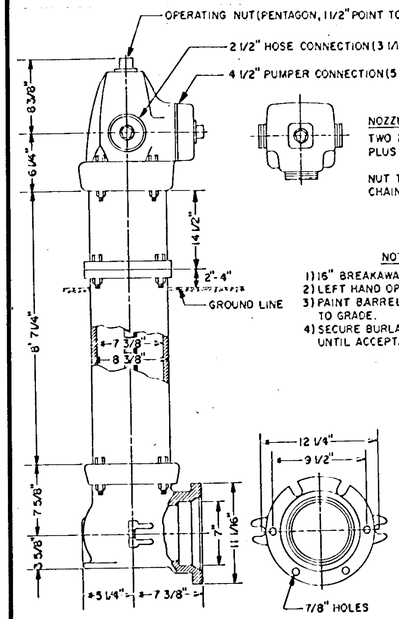






CONCRETE DRIVEWAY DETAIL

CITY PROJ. NO. 86-58

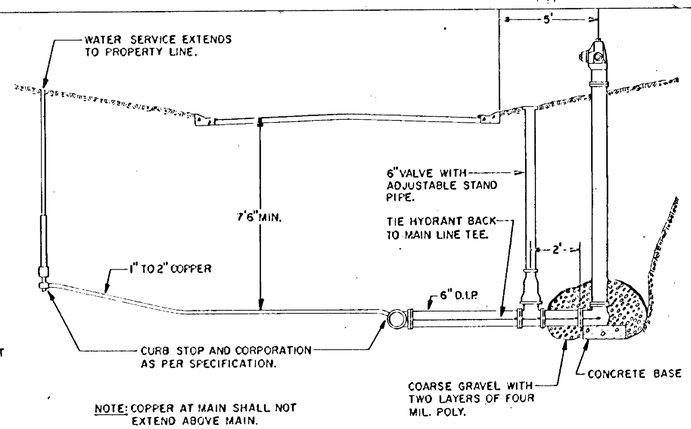


NOZZLE ARRANGEMENT
TWO 2 1/2" NOZZLES PLUS PUMPER NOZZLE.

NUT TYPE CAPS WITH CHAINS.

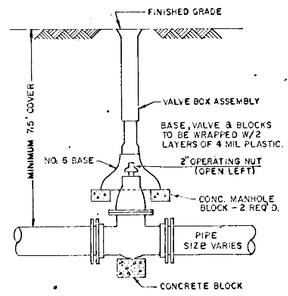
NOTES:
1) 16" BREAKAWAY SECTION.
2) LEFT HAND OPERATING NUT.
3) PAINT BARREL SECTION YELLOW TO GRADE.
4) SECURE BURLAP BAG OVER HYDRANT UNTIL ACCEPTANCE BY CITY.

HYDRANT DETAIL

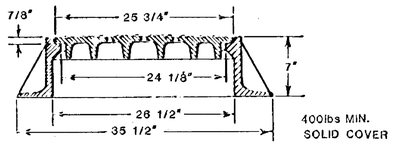


NOTE: COPPER AT MAIN SHALL NOT EXTEND ABOVE MAIN.

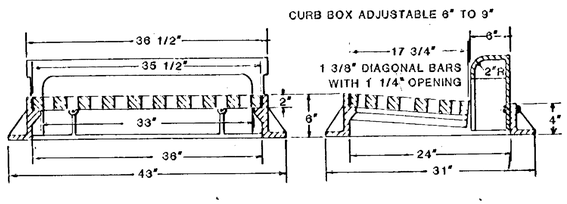
TYPICAL HYDRANT & WATER SERVICE LAYOUT



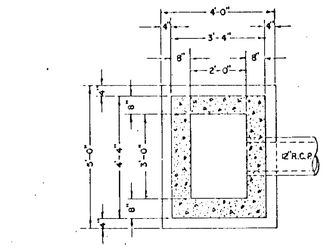
GATE VALVE & BOX INSTALLATION



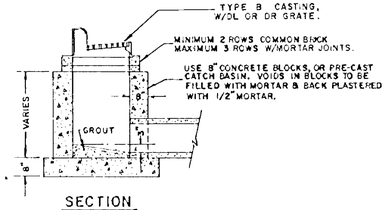
TYPE A CASTING



TYPE B CASTING

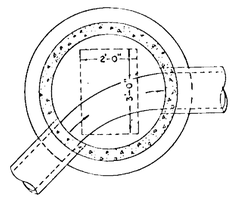


PLAN VIEW

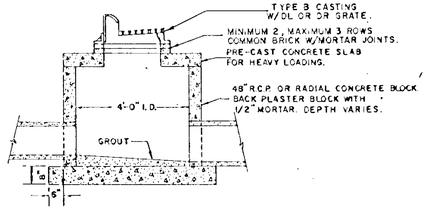


SECTION

TYPE "X" CATCH BASIN

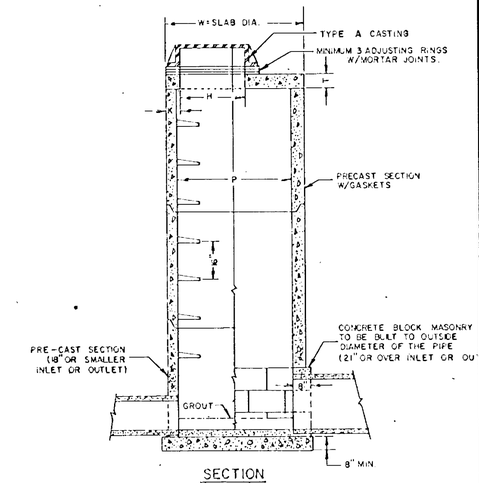


PLAN VIEW



SECTION

TYPE "Y" CATCH BASIN



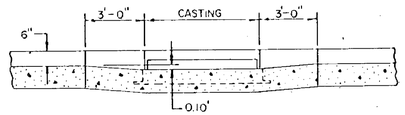
SECTION

STORM SEWER M.H. TYPE "B"(B-1) THRU "G"(G-1)

STRUCTURE SCHEDULE

DIMENSIONS	MANHOLE TYPE										
	B	B-1	C	C-1	D	D-1	E	E-1	F	F-1	G	G-1
P	48"	48"	60"	60"	72"	72"	84"	84"	96"	96"	102"	102"
K	6"	11"	7"	18"	8"	25"	9"	32"	9"	38.5"	9"	41.5"
T	6"	6"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"
W	58"	58"	72"	72"	86"	86"	100"	100"	113"	113"	113"	113"
H	TO SUIT CASTING DIMENSIONS											
OPENING	ECC	CON	ECC	CON	ECC	CON	ECC	CON	ECC	CON	ECC	CON

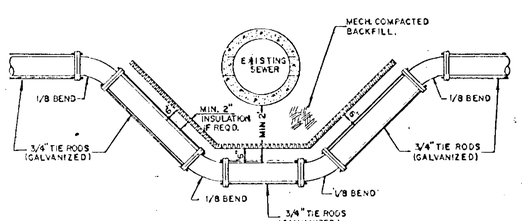
PLAN



SECTION

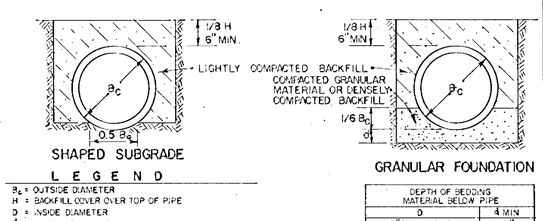
CURB & GUTTER DETAILS AT CATCH BASINS

CLASS C
L_F = 1.5



ELEVATION

LOWER WATERMAIN DETAIL



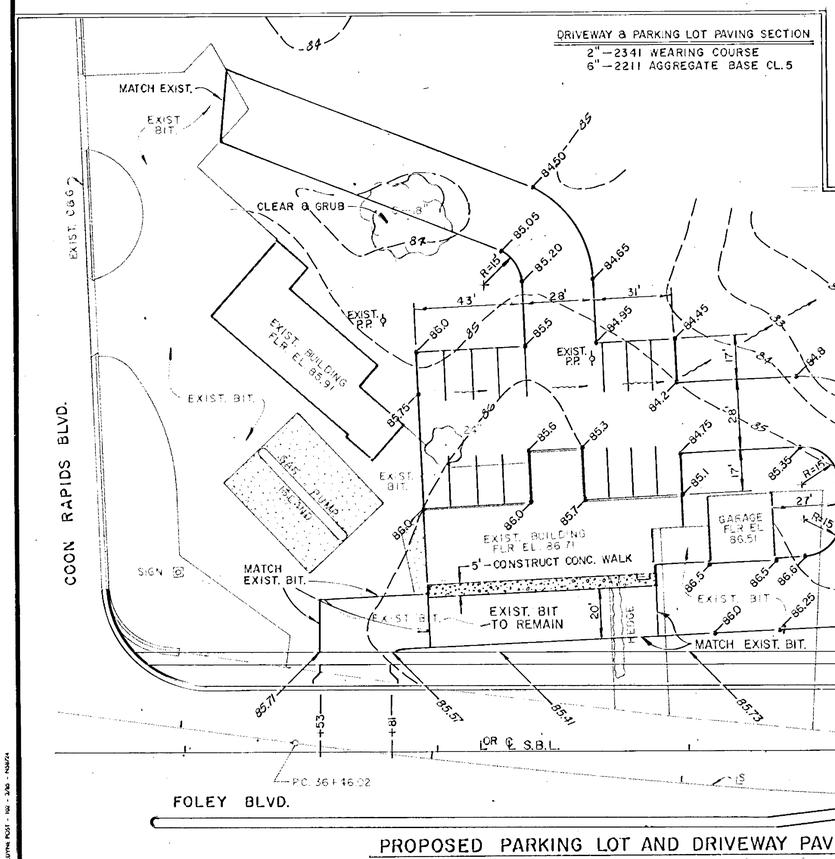
LEGEND

B_c = OUTSIDE DIAMETER
H = BACKFILL COVER OVER TOP OF PIPE
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE.
A_s = AREA OF TRAVERSE STEEL IN THE CRADLE OR ARCH EXPRESSED AS A PERCENTAGE OF AREA OF CONCRETE AT INVERT OR CROWN

DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	d MIN
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

TRENCH BEDDING - CIRCULAR PIPE

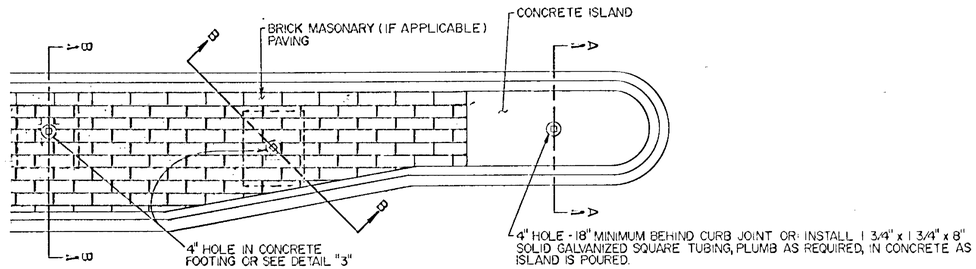
CITY PROJ.NO.86-58



PROPOSED PARKING LOT AND DRIVEWAY PAVING

DETAIL "1"

ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATION



NOTES: DASHED LINES REPRESENT THE APPROX. LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR EACH ISLAND MOUNT SIGN POST INSTALLATION. WITHIN AREAS OF BRICK MASONARY PAVING. (36" LENGTH x 48" WIDTH x 5" HEIGHT) IF THE ISLAND IS LESS THAN 48" WIDE, THE WIDTH OF THE CONCRETE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND. IF MORE THAN ONE POST IS REQUIRED FOR AN INSTALLATION, SEE DETAIL "4."

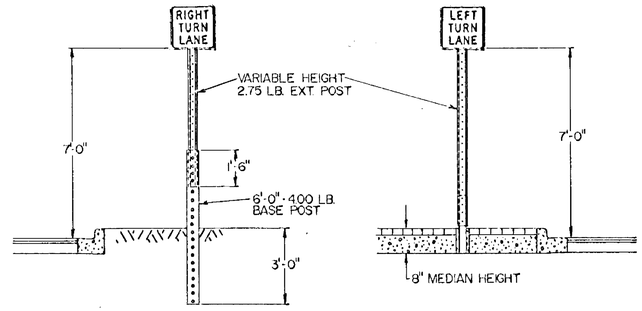
SECTION B-B: THE SOLID GALVANIZED SQUARE TUBING FOR THE DO NOT ENTER SIGNS SHALL BE SET AT THE PROPER ANGLE. REFER TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

FOR PAYMENT OF CONCRETE FOOTINGS, REFER TO THE STATEMENT OF ESTIMATED QUANTITIES, ITEM 2564.513 CONCRETE FOOTINGS.

DETAIL "5"

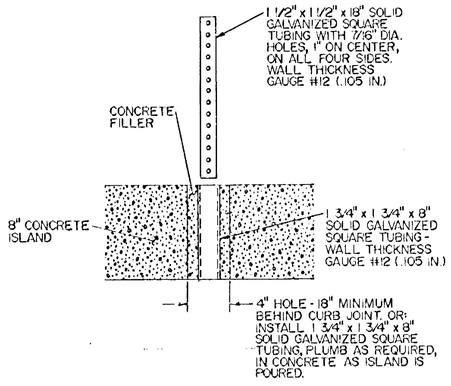
GROUND POST MOUNT SIGN INSTALLATION TYPICAL

ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATION TYPICAL



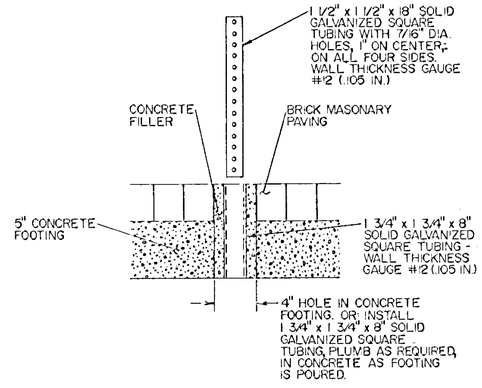
DETAIL "2"

ENLARGED SECTION A-A



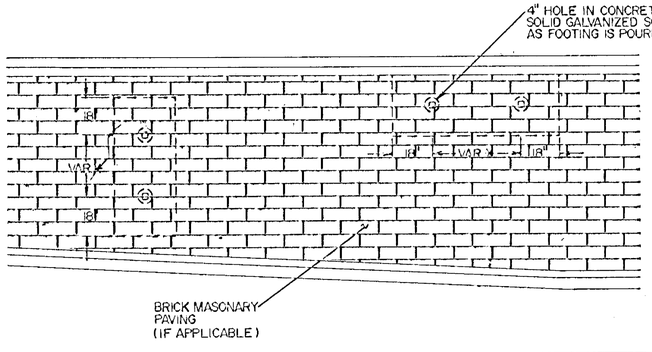
DETAIL "3"

ENLARGED SECTION B-B



DETAIL "4"

ISLAND MOUNT BREAK AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST (WITHIN AREAS OF BRICK MASONARY PAVING)



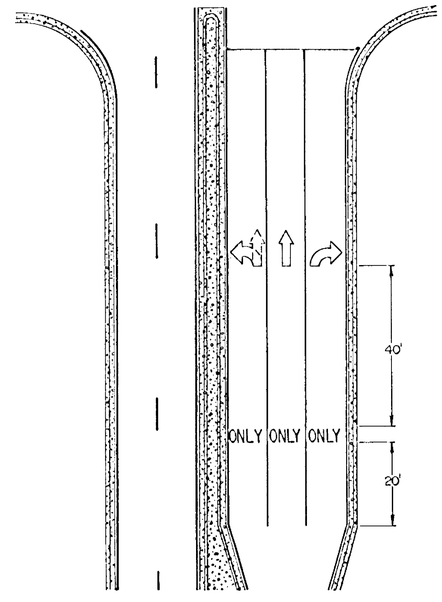
NOTES:

*: THE DISTANCE BETWEEN SIGN POSTS VARIES. REFER TO THE STANDARD SIGNS MANUAL FOR THE SPACING CHART THAT RELATES TO THE SIZE AND SHAPE OF THE INSTALLATION.

1. IF THE WIDTH OF THE ISLAND IS LESS THAN THE CONCRETE FOOTING MEASUREMENTS REQUIRED BY THIS DETAIL AND THE SPACING CHART IN THE STANDARD SIGNS MANUAL, THE LENGTH OF THE CONCRETE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND.
2. THE DIMENSIONS OF THE CONCRETE FOOTINGS FOR ANY ISLAND MOUNT SIGN INSTALLATION REQUIRING MORE THAN ONE POST WITHIN AREAS OF BRICK MASONARY PAVING WILL BE 36" WIDTH x VARIABLE X LENGTH x 5" HEIGHT.
3. DASHED LINES REPREST THE APPROX. LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST WITHIN AREAS OF BRICK MASONARY PAVING.

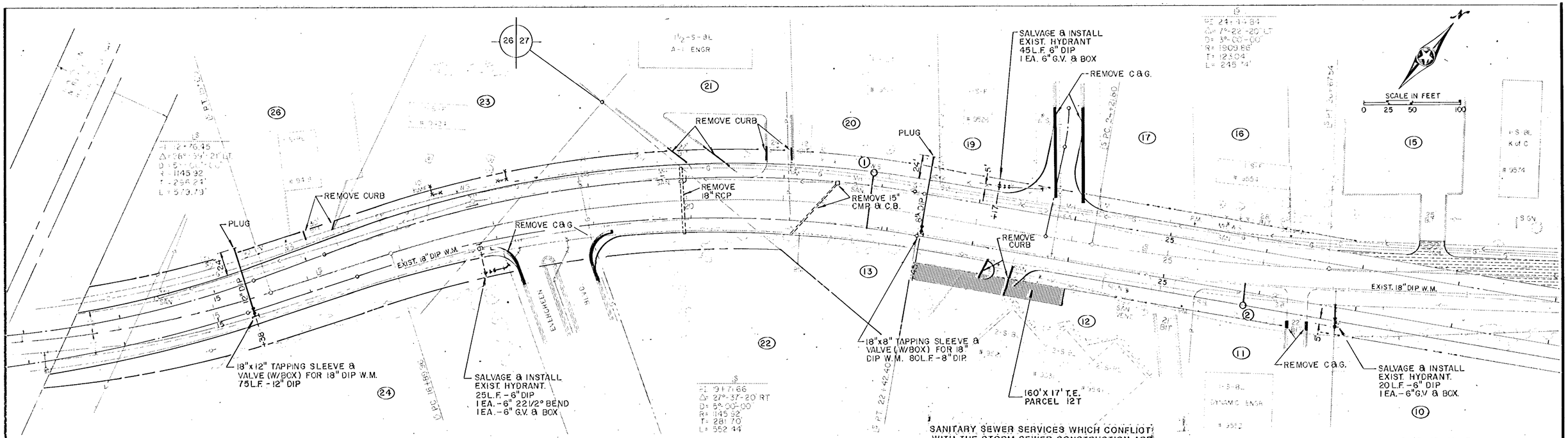
DETAIL "6"

PAVEMENT MESSAGES - LANE DESIGNATION DETAILS



ARROWS: 6'-11" HIGH
WORDS: 8'-0" HIGH

NOTE: SEE SHEETS 34-36 FOR INDIVIDUAL PAVEMENT MESSAGE TYPES AND LOCATIONS. REFER TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR LAYOUT SPECIFICATIONS.

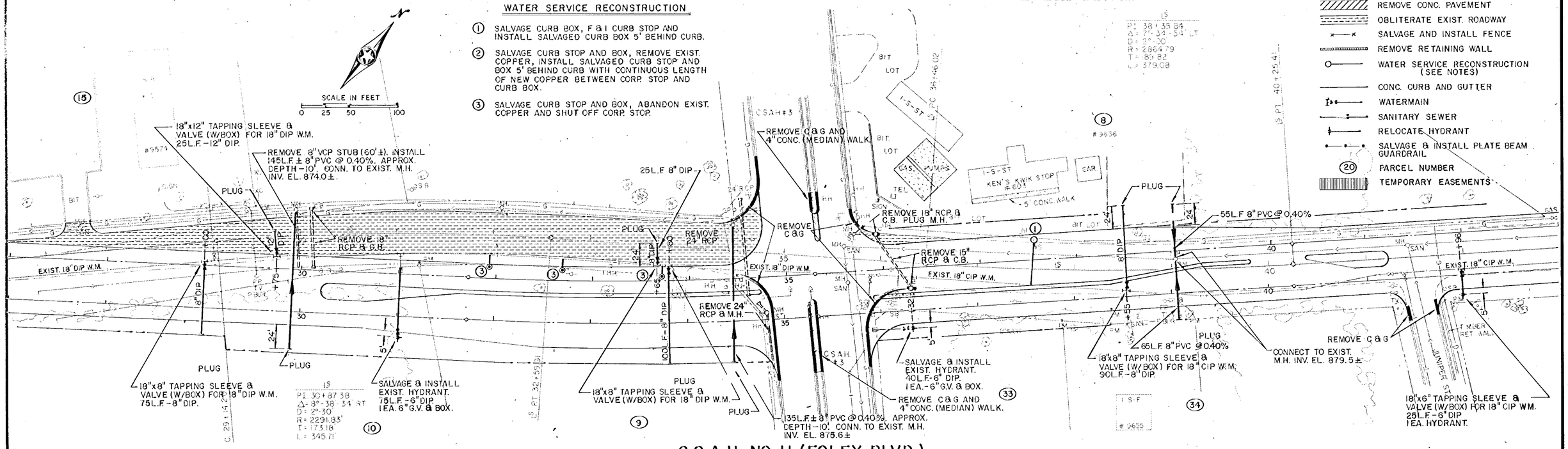


C.S.A.H. NO. 11 (FOLEY BLVD.)

SANITARY SEWER SERVICES WHICH CONFLICT WITH THE STORM SEWER CONSTRUCTION ARE TO BE RECONSTRUCTED. RECONSTRUCTION SHALL CONSIST OF CUTTING INTO THE EXISTING MAIN AND CONNECTING AN 8"x4" SADDLE, LAYING 4" PVC AS REQUIRED TO CLEAR THE STORM SEWER, AND RECONNECTING TO THE EXISTING SERVICE.

WATER SERVICE RECONSTRUCTION

1. SALVAGE CURB BOX, F & I CURB STOP AND INSTALL SALVAGED CURB BOX 5' BEHIND CURB.
2. SALVAGE CURB STOP AND BOX, REMOVE EXIST. COPPER, INSTALL SALVAGED CURB STOP AND BOX 5' BEHIND CURB WITH CONTINUOUS LENGTH OF NEW COPPER BETWEEN CORP. STOP AND CURB BOX.
3. SALVAGE CURB STOP AND BOX, ABANDON EXIST. COPPER AND SHUT OFF CORP. STOP.



C.S.A.H NO. 11 (FOLEY BLVD)

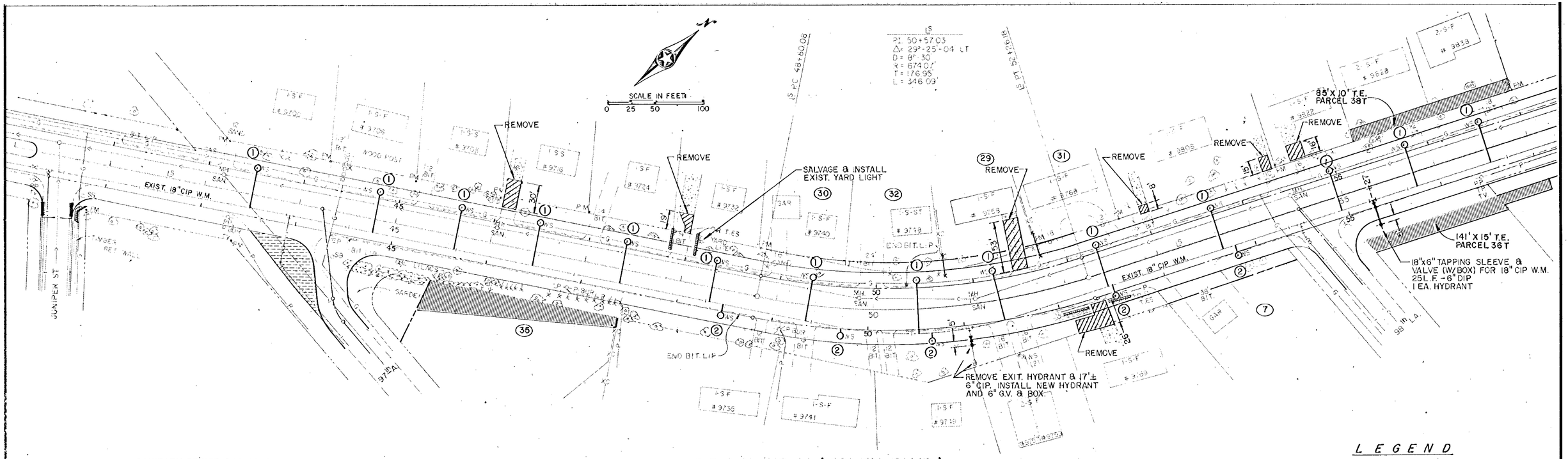
LEGEND

- PROPOSED RIGHT OF WAY
- REMOVE C & G
- REMOVE SEWERS
- REMOVE CONC. PAVEMENT
- OBLITERATE EXIST. ROADWAY
- SALVAGE AND INSTALL FENCE
- REMOVE RETAINING WALL
- WATER SERVICE RECONSTRUCTION (SEE NOTES)
- CONC. CURB AND GUTTER
- WATERMAIN
- SANITARY SEWER
- RELOCATE HYDRANT
- SALVAGE & INSTALL PLATE BEAM GUARDRAIL
- (20) PARCEL NUMBER
- TEMPORARY EASEMENTS

CITY PROJ. NO 85-58

MISCELLANEOUS SEWER AND WATER CONSTRUCTION & MISCELLANEOUS REMOVALS

State Proj. No. S.A.P. 02-611-18 **Sheet No.** 6 **of** 31 **Sheets**

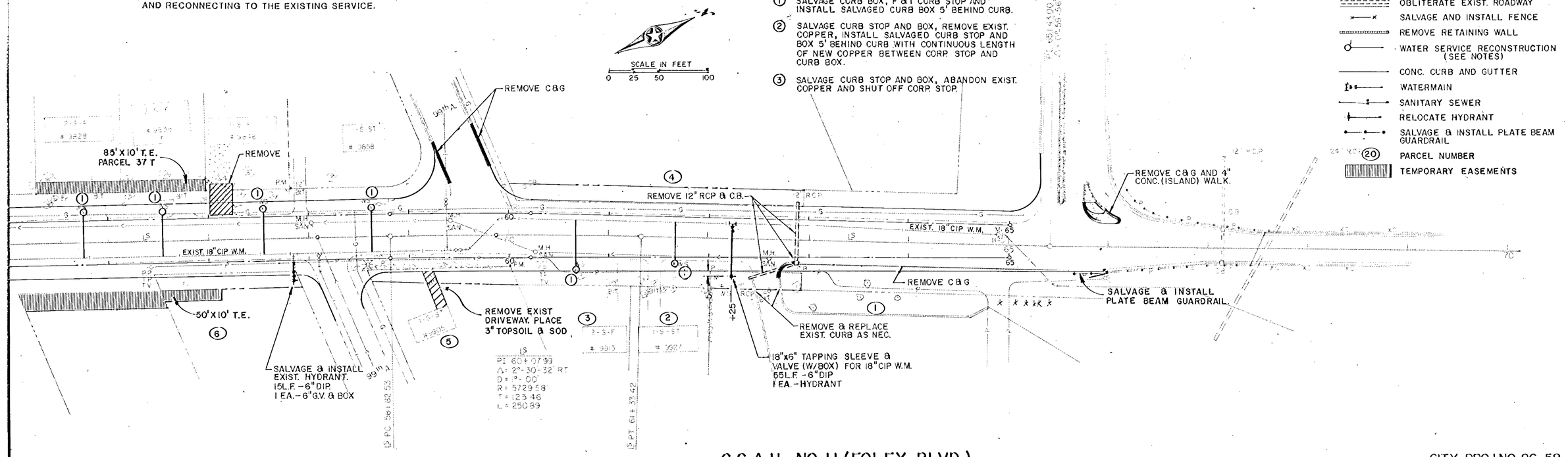


SANITARY SEWER SERVICES WHICH CONFLICT WITH THE STORM SEWER CONSTRUCTION ARE TO BE RECONSTRUCTED. RECONSTRUCTION SHALL CONSIST OF CUTTING INTO THE EXISTING MAIN AND CONNECTING AN 8"x4" SADDLE, LAYING 4" PVC AS REQUIRED TO CLEAR THE STORM SEWER, AND RECONNECTING TO THE EXISTING SERVICE.

C.S.A.H. NO. 11 (FOLEY BLVD.)

WATER SERVICE RECONSTRUCTION

1. SALVAGE CURB BOX, F & I CURB STOP AND INSTALL SALVAGED CURB BOX 5' BEHIND CURB.
2. SALVAGE CURB STOP AND BOX, REMOVE EXIST. COPPER, INSTALL SALVAGED CURB STOP AND BOX 5' BEHIND CURB WITH CONTINUOUS LENGTH OF NEW COPPER BETWEEN CORP. STOP AND CURB BOX.
3. SALVAGE CURB STOP AND BOX, ABANDON EXIST. COPPER AND SHUT OFF CORP. STOP.



LEGEND

- PROPOSED RIGHT OF WAY
- REMOVE C & G
- REMOVE SEWERS
- REMOVE CONC. PAVEMENT
- OBLITERATE EXIST. ROADWAY
- SALVAGE AND INSTALL FENCE
- REMOVE RETAINING WALL
- WATER SERVICE RECONSTRUCTION (SEE NOTES)
- CONC. CURB AND GUTTER
- WATERMAIN
- SANITARY SEWER
- RELOCATE HYDRANT
- SALVAGE & INSTALL PLATE BEAM GUARDRAIL
- (20) PARCEL NUMBER
- TEMPORARY EASEMENTS

C.S.A.H. NO. 11 (FOLEY BLVD.)

CITY PROJ.NO. 86-58

MISCELLANEOUS SEWER AND WATER CONSTRUCTION & MISCELLANEOUS REMOVALS

State Proj. No. S.A.P. 02-611-18 **Sheet No.** 7 **of** 31 **Sheets**

B.M. # 212 ELEV. 883.43
S.W. COR. CONC. WALK
STA. 16+00 LT. 90' # 9418

B.M. # 213 ELEV. 883.98
TOP HYDRANT
STA. 18+08 RT. 43'

B.M. # 214 ELEV. 881.78
R/R SPK. 20" OAK
STA. 22+67 RT. 45'

B.M. # 215 ELEV. 885.33
TOP HYDRANT
STA. 26+75 RT. 40'

C.S.A.H. NO. 11 (FOLEY BLVD.)

DRIVEWAY AT 23+73		
TOP OF CURB ELEVATIONS		
STA.	T/C LT.	T/C RT.
0+73.7	82.60	
0+78.4		82.60
0+93.8	82.75	82.80
1+33.6	MATCH EXIST.	

① ℄ ELEV. = T/C ELEV. RT.
② WIDTH = MATCH EXIST. (30' ±)

SCALE IN FEET
0 25 50 100

1) SEE SHEET NO. 13 FOR STORM SEWER PROFILES.
2) CONSTRUCT PED. RAMPS AT ALL STREET INTERSECTIONS.

CONSTRUCT RETAINING WALLS
16+76 TO 19+20 49' LT.
20+35 TO 25+62 49' LT.
24+07 TO 26+75 49' RT.

PROPOSED ℄ GRADE S.B.L.
EXISTING ℄ GRADE
PROPOSED ℄ GRADE N.B.L.

C.S.A.H. NO. 11 (FOLEY BLVD.)

U.S.G.S. BM. #217E ELEV. 885.94
STD. DISK N.E. COR. CONC. SIG. BASE
STA. 35+72 LT. 47'

℄ S.B.L. P.C. STA. 31+72.01

℄ S.B.L. P.T. STA. 35+30.22

℄ S.B.L.
P.I. = 33+51.30
Δ = 6°18'40" LT.
R = 3252.04'
T = 179.29'
L = 358.21'
D = 1°45'43"

LS
P.I. 38+35.84
Δ = 7°-34'-54" LT.
D = 2°-00'
R = 2864.79'
T = 189.82'
L = 379.08

SEE SHEET NO. 5
FOR DRIVEWAY AND PARKING
LOT DETAILS AT KEN'S KWIK
STOP.

RETAIN EXISTING BITUMINOUS

REMOVE BITUMINOUS IN
BLVD. AS DIRECTED

℄ S.B.L. P.O.T. STA. 40+22.12 =
LS P.T. STA. 40+25.41 - 22' RT.

SEE NOTE 3 BELOW

℄ S.B.L.

℄ N.B.L.

27" RCP

24" RCP

21" RCP

42" RCP

36" RCP

15" RCP

12" RCP

PLUG

L ℄ S.B.L. STA. 29+75 =
STA. 0+00 ROAD TO WEST

LS
P.I. 30+87.38
Δ = 8°-38'-34" RT.
D = 2°-30'
R = 2291.83'
T = 173.18'
L = 345.71'

LS P.C. 29+14.20

℄ N.B.L.
P.I. = 33+53.72
Δ = 6°18'40"
R = 3296.04'
T = 181.71'
L = 363.05'
D = 1°44'18"

℄ N.B.L. P.C. STA. 31+72.01

24 L.F. 21" RCP CL. III @ 0.20%
INV. EL. 78.83 AT STRUCTURE (126).

SEE SHEET NO. 12
FOR STORM SEWER.

℄ N.B.L. P.T. STA. 35+35.06

79.35 (INV. 36")
29 L.F. 36" RCP CL. III @ 0.15%
79.39

CSAH #3

1) SEE SHEET NO. 13
FOR STORM SEWER PROFILES.

2) CONSTRUCT PED. RAMPS AT
ALL STREET INTERSECTIONS.

3) 24 L.F. 21" RCP CL. III @ 0.72%
INV. EL. 81.10 AT STRUCTURE (130).

℄ N.B.L. P.O.T. STA. 40+26.96 =
LS P.T. STA. 40+25.41 - 22' LT.

CONCRETE V-GUTTER
SEE DETAIL.

BM. # 216 ELEV. 884.74
TOP HYDRANT
STA. 31+03 RT. 37'

BM. # 218 ELEV. 892.55
DBL. SPK. 20" OAK
STA. 41+00 RT. 63'

PROPOSED ℄ GRADE S.B.L.

EXISTING ℄ GRADE

PROPOSED ℄ GRADE N.B.L.

+0.40% +0.80% +0.52% +2.06% +1.92%

+0.70% -0.52%

50' V.C. M=0.07'

50' V.C. M=0.10'

50' V.C. M=0.09'

P.I. +69 EL. 83.10

P.I. +50 EL. 86.15

+83± MATCH EXIST.

+72± MATCH EXIST.

P.I. +10 EL. 85.76

P.I. +25 EL. 85.18

P.I. +25 EL. 86.22

P.I. +50 EL. 86.80

P.I. +60 EL. 86.05

+90± MATCH EXIST.

+80± MATCH EXIST.

P.I. +25 EL. 85.88

P.I. +25 EL. 85.36

P.I. +25 EL. 86.40

℄ POT. STA. 40+22.12 = LS P.T. STA. 40+25.41

℄ POT. STA. 40+26.96 = LS P.T. STA. 40+25.41

82.02 91.68

885 880 890

88325 88339 88356 88323 88394 88331 88500 88600 88634 88635 88655 88656 88634 88638 88631 88614 88616 88654 88676 88697 88707 88771 88935 89005 89054 89084 89131

+59 +81 +87 +29 +33 +65 +90 +70 +67 +31 +41 +67 +76

28 30 35 40

CITY PROJ. NO. 86-58

State Proj. No. S.A.P. 02-611-38 **Sheet No.** 9 **of** 31 **Sheets**

B.M.# 219 ELEV. 898.20
TOP S.W. COR. BOT. STEP SIDE ENT.
STA. 44+30 LT. 87' #9706

B.M.# 220 ELEV. 907.99
TOP S.W. COR. BOT. STEP FR. ENT.
STA. 48+32 LT. 81' # 9732

B.M.# 221 ELEV. 912.47
TOP S.W. COR. BOT. STEP
STA. 52+20 LT. 84' #9768

B.M.# 222 ELEV. 907.59
TOP S.W. COR. TOP STEP
STA. 55+58 LT. 100 #9828

SCALE IN FEET
0 25 50 100

℄ S.A.H. 11 STA. 44+23.3 FOLEY BLVD. =
STA. 0+00 97TH AVE.

℄ S.B.L. P.C. STA. 48+80.08

℄ N.B.L. P.C. STA. 48+80.08

℄ S.B.L. P.T. STA. 52+14.88 =
℄ S.A.H. 11 P.T. STA. 52+26.17 – 22' RT.

℄ N.B.L. P.T. STA. 52+37.47 =
℄ S.A.H. 11 P.T. STA. 52+26.17 – 22' LT.

℄ S.B.L.
P.I. = 50+51.26
Δ = 29°25'04" LT.
R = 652.07'
T = 171.18'
L = 334.80'
D = 8°47'12"

℄ S.A.H. 11
P.I. 50+57.03
Δ = 29°-25'-04" LT.
D = 8°-30'
R = 674.07'
T = 176.55'
L = 346.09'

℄ N.B.L.
P.I. = 50+62.81
Δ = 29°25'04" LT.
R = 696.07'
T = 182.73'
L = 357.39'
D = 8°47'12"

P.I. = 11+05.64
Δ = 34°00'
R = 44.83
T = 13.71'
L = 26.60'
D = 127°48'24"

TEMP. EASEMENT (35T)
TEMP. EASEMENT (36T)
TEMP. EASEMENT (37T)
TEMP. EASEMENT (38T)

JUNIPER ST.
TIMBER RET. WALL
12" RCP
WOOD POST
CONNECT TO EXIST. C.B.
MATCH EXIST.
EXIST. 12" RCP
END BIT. LIP
98TH LA.

CONSTRUCT RETAINING WALLS

42+38	TO 44+68	49' LT.
41+76	TO 43+40	49' RT.
43+40	TO 44+70	49'-70' RT.
47+16	TO 49+50	49' LT.
48+00	TO 48+80	49' RT.
50+75	TO 54+50	49' LT.

97TH AVE.		
TOP OF CURB ELEVATIONS		
STA.	T/C LT.	T/C RT.
C.C.RET.	95.00	95.50
0+55.0		94.70
0+83.4	93.85	
0+91.9	93.59	93.59
1+18.5	92.80	92.80
1+43	92.06	92.06

① ℄ ELEV. = T/C ELEV.
② WIDTH = 31' B TO B.

98TH LANE		
TOP OF CURB ELEVATIONS		
STA.	T/C LT.	T/C RT.
0+49.5		07.21
0+82.5	07.04	
0+86	07.02	07.02
0+95	07.07	07.07

① ℄ ELEV. = T/C ELEV.
② WIDTH = 31' B TO B.

1) SEE SHEET NO. 13 FOR STORM SEWER PROFILES.

2) CONSTRUCT PED. RAMPS AT ALL STREET INTERSECTIONS.

C.S.A.H. NO. 11 (FOLEY BLVD.)

PROPOSED ℄ GRADE S.B.L.
EXISTING ℄ GRADE
PROPOSED ℄ GRADE N.B.L.

P.I. +00 EL. 93.60
P.I. +50 EL. 97.20
P.I. +75 EL. 04.99
P.I. +50 EL. 05.97
P.I. +75 EL. 10.74
P.I. +90 EL. 07.64
P.I. +95 EL. 07.00

91.68 +1.92% 100' V.C. M=0.03'
+1.44% 100' V.C. M=0.25'
+3.46% 210' V.C. M=0.76'
+0.56% 50' V.C. M=0.10'
+2.12% 280' V.C. M=1.25'
-1.44% 50' V.C. M=0.06'
-0.56% 50' V.C. M=0.13'
-2.60% 04.53

CITY PROJ. NO. 86-58

State Proj. No. S.A.P. 02-611-18

Sheet No. 10 **of** 31 **Sheets**

BM. # 223 ELEV. 904.56
TOP S.W. COR. TOP STEP
STA. 58+56 LT. 86' # 9858

BM. # 224 ELEV. 904.34
DBL. SPK. 36" COTTENWOOD
STA. 63+95 LT. 110'

99TH AVE. (WEST)		
TOP OF CURB ELEVATIONS		
STA.	T/C LT.	T/C RT.
C.C.RET.	02.50	03.25
0+58.0		02.50
1+08.5	MATCH EXIST.	

① ℄ ELEV. = T/C ELEV.
③ WIDTH = 44' F TO F.

SCALE IN FEET
0 25 50 100

℄ S.B.L. P.C. STA. 58+82.53

℄ S.B.L.
P.I. = 59+52.65
Δ = 1°23'49" RT.
R = 5751.58'
T = 70.12'
L = 140.23'
D = 0°59'46"

℄ S.B.L. P.T. STA. 60+22.76 =
℄ S.B.L. P.I. − Δ = 1°13'17" RT.

℄ S.B.L. P.I. STA. 65+02.00 =
℄ P.O.T. STA. 65+01.00 − 20' RT.

P.I. 55+43.00
Δ = 0°59'56" LT.

REVISE TRAFFIC ISLAND AS SHOWN.
INSTALL B624 C&G (W/10'&2' RADII)
AND 4" CONC. WALK.

MATCH EXIST. C&G

TEMP. EASEMENT

℄ S STA. 58+09.17 FOLEY BLVD. =
STA. 0+00 99TH AVE.

℄ N.B.L. P.C. STA. 58+82.53

TEMP. EASEMENT

MATCH EXIST.

ABANDON DRIVE

℄ S STA. 59+87.84 FOLEY BLVD. =
STA. 0+00 99TH AVE.

℄ N.B.L. P.T. STA. 60+21.63 =
℄ N.B.L. P.I. − Δ = 0°12'42" LT.

℄ N.B.L. P.I. STA. 65+00.43 =
℄ P.O.T. STA. 65+01.00 − 12' LT.

MATCH EXIST. C&G

CONSTRUCT MANHOLE
OVER EXIST. 24" RCP.

1) SEE SHEET NO. 13
FOR STORM SEWER PROFILES.

2) CONSTRUCT PED. RAMPS AT
ALL STREET INTERSECTIONS.

99TH AVE. (EAST)		
TOP OF CURB ELEVATIONS		
STA.	T/C LT.	T/C RT.
C.C.RET.	03.70	
0+49.5		03.40
0+82.8	04.70	04.70

① ℄ ELEV. = T/C ELEV.
② WIDTH = 31' B TO B.

℄ N.B.L.
P.I. = 59+52.11
Δ = 1°23'49" RT.
R = 5707.58'
T = 69.58'
L = 139.15'
D = 1°00'14"

P.I. 60+07.99
Δ = 2°-30'-32" RT.
D = 1°-00'
R = 5729.58'
T = 125.46'
L = 250.89

CONSTRUCT RETAINING WALLS			
57+50	TO	57+95	49'-50' RT.
57+95	TO	58+00	49'-75' RT.
58+48	TO	58+70	49'-65' RT.
58+48	TO	60+70	49' RT.

USGS BM. # 225 ELEV. 915.89
STD. DISC. S.E. COR. BRIDGE ABUT.
STA. 68+50 RT.

C.S.A.H. NO. 11 (FOLEY BLVD.)

PROPOSED ℄ GRADE S.B.L.
PROPOSED ℄ GRADE
PROPOSED ℄ GRADE N.B.L.
EXISTING ℄ GRADE

200' V.C. M = 0.79'
100' V.C. M = 0.13'
300' V.C. M = 1.61'

−2.60%
+0.56%
−0.50%
+3.80%
+12 MATCH EXIST.

P.I. +00 EL. 01.93
P.I. +00 EL. 03.61
P.I. +75 EL. 02.23
P.I. +75 EL. 09.83
P.I. +02 EL. 10.70
P.I. +01 EL. 10.94
P.I. +60 EL. 12.20

905 900 915 910

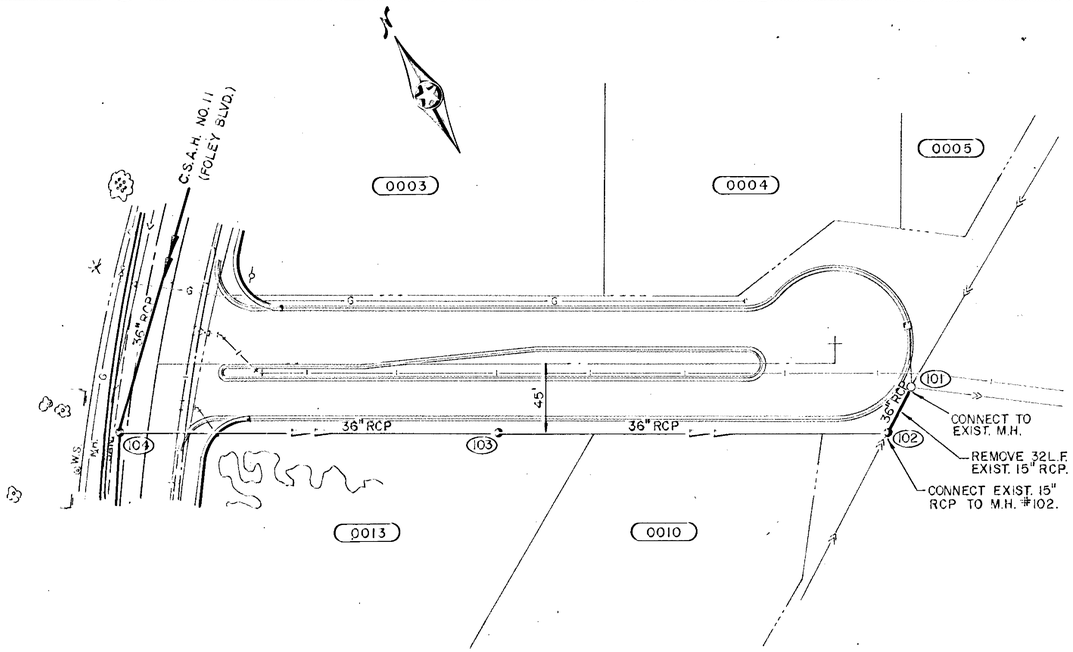
56 60 65 68

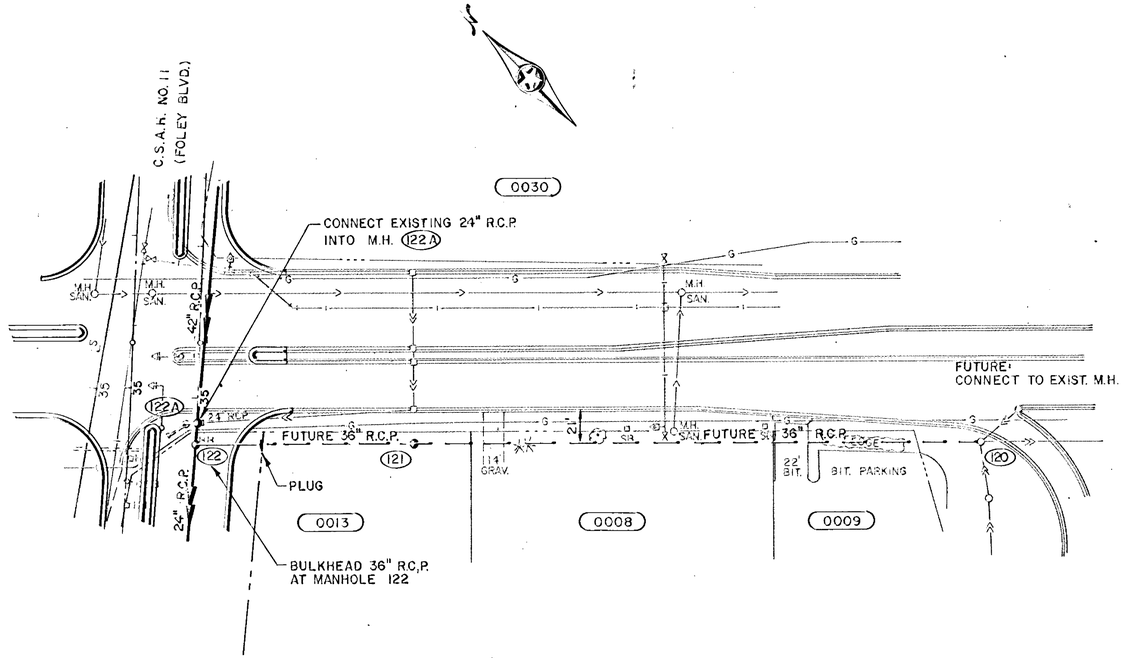
CITY PROJ. NO. 86-58

State Proj. No. S.A.P. 02-611-18

Sheet No. 11 of 31 Sheets

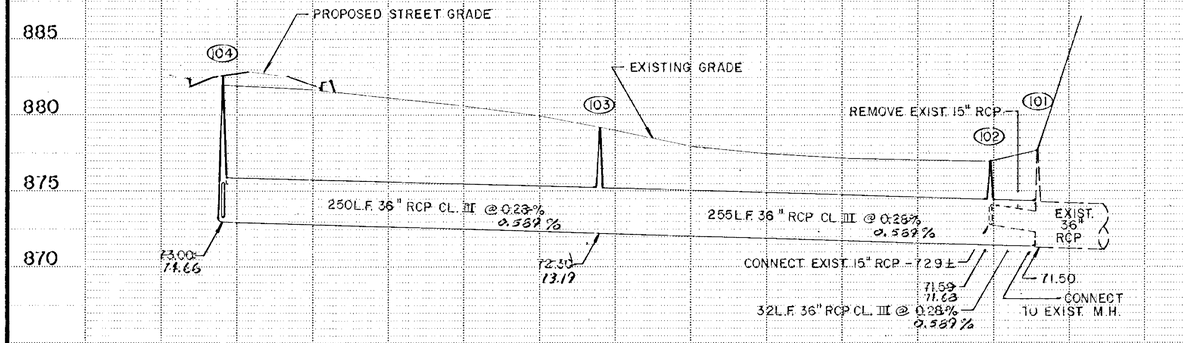
Title Sheet Deleted 1-6-15
Changes 1-7-86



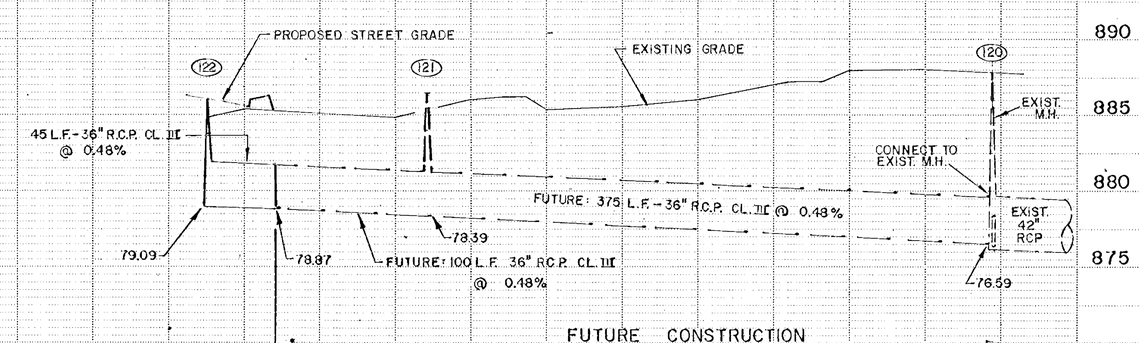


SCALE IN FEET
0 25 50 100

EVERGREEN BLVD.



C.S.A.H. NO. 3 (COON RAPIDS BLVD.)

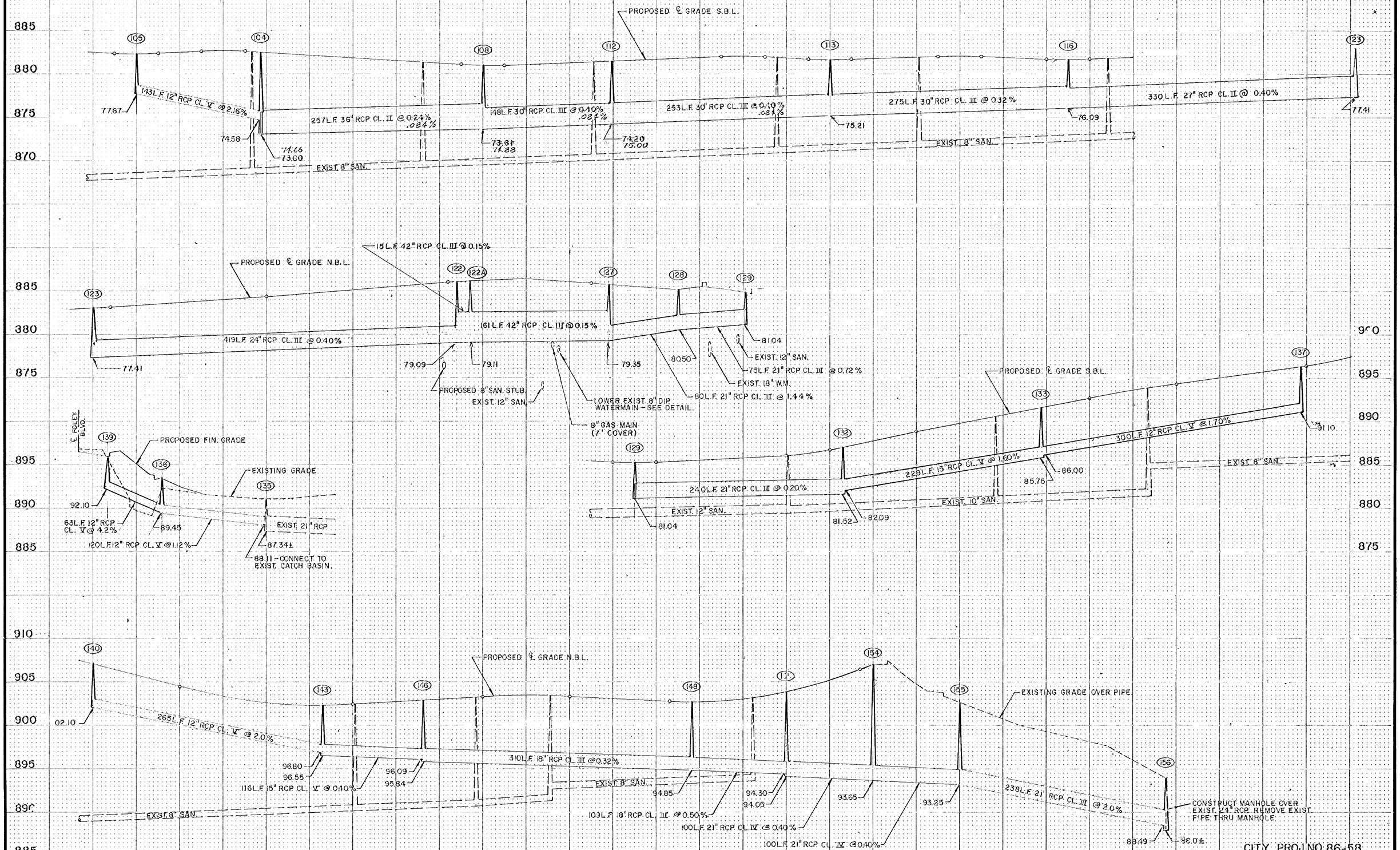


CITY PROJ. NO. 86-58

Resp. - Rev 5-8-88

State Proj. No. S.A.P. 02-611-18 **Sheet No.** 12 **of** 31 **Sheets**

Fed. Proj. No.



CITY PROJ. NO. 86-58

State Proj. No. S.A.P. 02-611-18

Sheet No. 13 of 31 Sheets

NOTES:

1) SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR THE LOCATION OF UTILITIES.

2) ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.

3) LUMINAIRES 1 AND 5 WITH CHECK SWITCH.

4) SEE SPECIAL PROVISIONS FOR SERVICE CABINET DETAILS.

5) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED EQUIPMENT.

6) DIRECTIONAL SIGNS TO BE INSTALLED ON EACH MAST ARM. SEE SPECIAL PROVISIONS.

7) REGULATORY SIGNS TO BE INSTALLED ON MAST ARMS (1) AND (4). SEE SPECIAL PROVISIONS

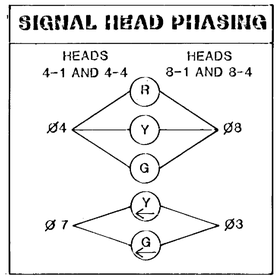
8) LOOP DETECTOR WIRES SHALL BE CROSS LINKED POLYETHYLENE (XLP) IN 1"N.M.C. SEE DETAIL SHEET 16 .

9) REMOVE AND SALVAGE EXISTING SIGNAL SYSTEM. SEE SPECIAL PROVISIONS.

10) ALL PEDESTRIAN INDICATIONS SHALL BE 12"x12".

11) A MID MAST ARM MOUNT SHALL BE INSTALLED 15 FEET FROM THE END OF EACH MAST ARM.

SIGNAL HEAD PHASING



SIGNAL INDICATIONS

FACE	PHASE	FLASH	R	Y	G	RLTA	YLTA	GLTA
1-1	1	R				12	12	12
2-1	2	R	12	12	12			
2-2	2	R	12	12	12			
4-1	4 & 7	R	12	12	12		12	12
4-2	4	R	12	12	12			
4-3	4	R	12	12	12			
4-4	4 & 7	R	12	12	12		12	12
5-1	5	R				12	12	12
6-1	6	R	12	12	12			
6-2	6	R	12	12	12			
8-1	8 & 3	R	12	12	12		12	12
8-2	8	R	12	12	12			
8-3	8	R	12	12	12			
8-4	8 & 3	R	12	12	12		12	12

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES.

SCALE IN FEET
0 30 60

(5) INPLACE MAST ARM POLE AND FOUNDATION
40 FOOT MAST ARM
MAST ARM POLE LUMINAIRE EXTENSION (D40-9)
TWO ONE WAY SIGNALS-OVERHEAD
TYPE 10A-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.P.S.(APPROX.350°)
EXTEND INTO H.H.16:
3"R.S.C.
1-12/c#12
4-1/c#10

(6) TYPE 1D
PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
TWO PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.13:
3"R.S.C.
2-12/c#12
1-3/c#12

(4) TYPE P100-A-45-D40-9
P100 POLE FOUNDATION
TWO ONE WAY SIGNALS-OVERHEAD
TYPE 10C-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.P.S.(APPROX.350°)
TWO PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.18:
3"R.S.C.
2-12/c#12
1-3/c#12
2-1/c#10

(1) TYPE P100-A-40-D40-9
P100 POLE FOUNDATION
TWO ONE WAY SIGNALS-OVERHEAD
TYPE 10C-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.P.S.(APPROX.350°)
TWO PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.2:
3"R.S.C.
2-12/c#12
1-3/c#12
4-1/c#10

(2) TYPE P100-A-45-D40-9
P100 POLE FOUNDATION
TWO ONE WAY SIGNALS-OVERHEAD
TYPE 10A-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.P.S.(APPROX 350°)
EXTEND INTO H.H. 7:
3"R.S.C.
1-12/c#12
2-1/c#10

(3) TYPE 1D
PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
TWO PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.8:
3"R.S.C.
2-12/c#12
1-3/c#12

(A) SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H.22:
2"R.S.C.
3-1/c # 6
EXTEND INTO H.H.1:
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#6
UNMETERED STREET LIGHT SERVICE
1"R.S.C.
4-1/c#10

(B) CONTROLLER AND CABINET
CABINET FOUNDATION
EXTEND INTO H.H.1:
4"R.S.C.
5-12/c#12
2-3/c#12
6-2/c#14
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#6
EXTEND INTO H.H.2:
4"R.S.C.
5-12/c#12
2-3/c#12
6-2/c#14
BETWEEN H.H.1 AND H.H.2:
2"R.S.C.
2-1/c#10

LOOP DETECTORS

NUMBER	SIZE	LOCATION	FUNCTION
D1-1	MULTIPLE	—	1
D2-1	2-6'x6'	365'	1
D3-1	MULTIPLE	—	1
D4-1	2-6'x6'	300'	1,8
D4-2	4-6'x6'	—	1
D4-3	2-6'x6'	—	7
D5-1	MULTIPLE	—	1
D6-1	2-6'x6'	365'	1
D7-1	MULTIPLE	—	1
D8-1	2-6'x6'	300'	1,8
D8-2	4-6'x6'	—	1
D8-3	2-6'x6'	—	7

NOTE: LOCATION=DISTANCE FROM STOP BAR TO DETECTOR

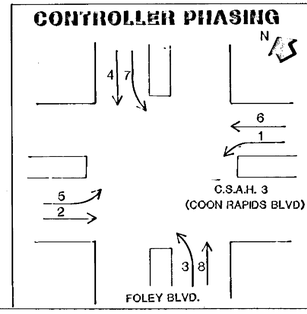
FUNCTIONS:

1) CALL AND EXTEND
2) CALL ONLY
3) EXTEND ONLY
4) CALL ONLY DENSITY
5) DELAYED CALL ONLY
6) DELAYED CALL ONLY DENSITY
7) DELAYED CALL — IMMEDIATE EXTEND
8) CARRY OVER (STRETCH)
9) ADVISORY DETECTOR
10) SAMPLING DETECTOR
11) SPECIAL DETECTOR

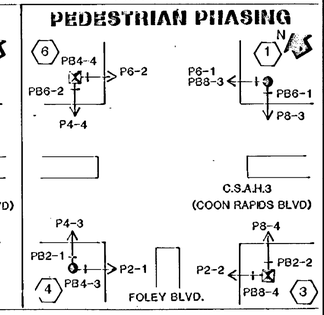
"ELECTRICAL ENGINEER CERTIFICATION"
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Robert A Eller
Date: 2/25/88 Reg.No. 5859

CITY PROJ.NO.86-58

CONTROLLER PHASING



PEDESTRIAN PHASING



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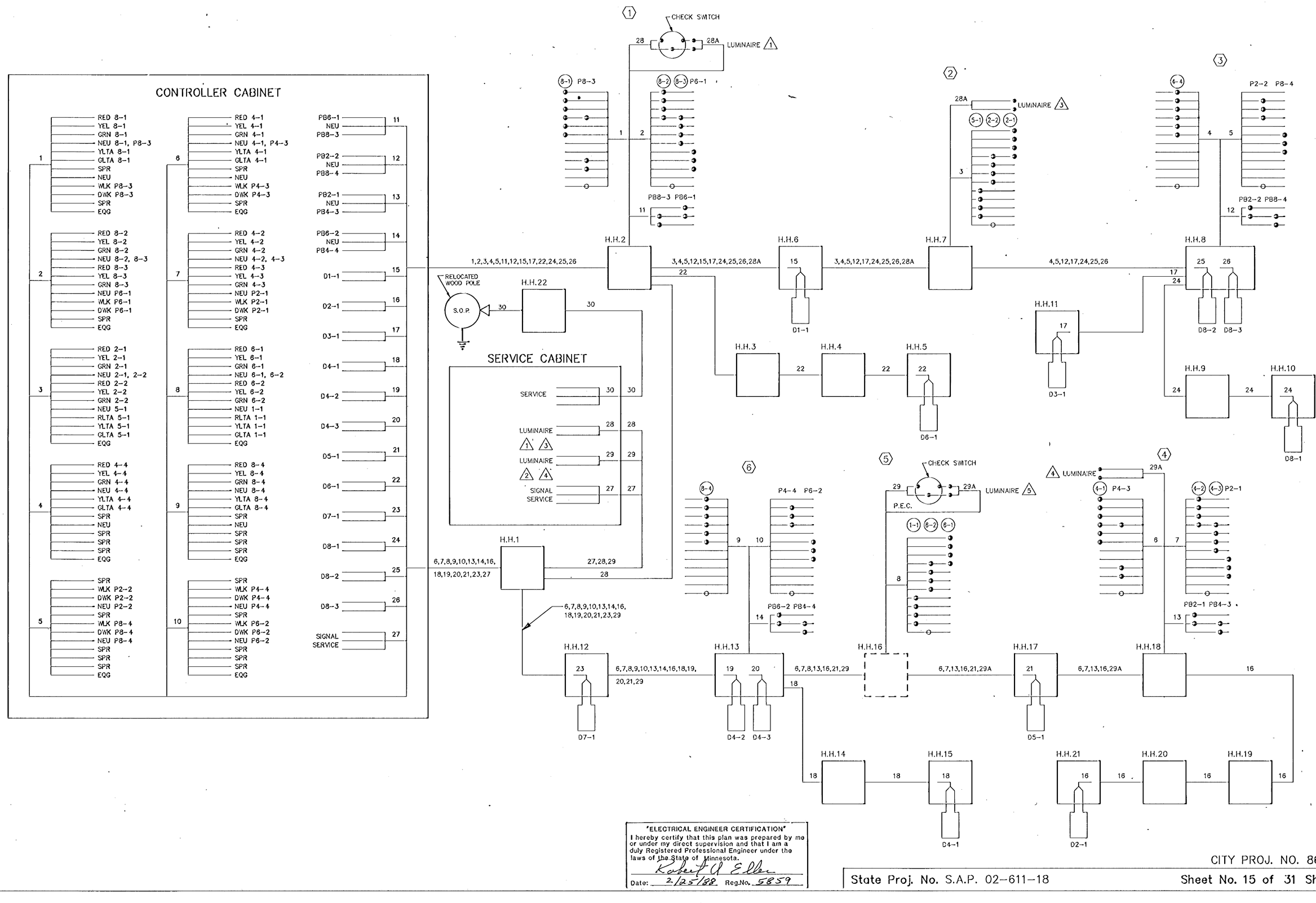

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Robert A Ellar

Date: 2/25/88 Reg.No. 5859

CITY PROJ. NO. 86-58

State Proj. No. S.A.P. 02-611-18

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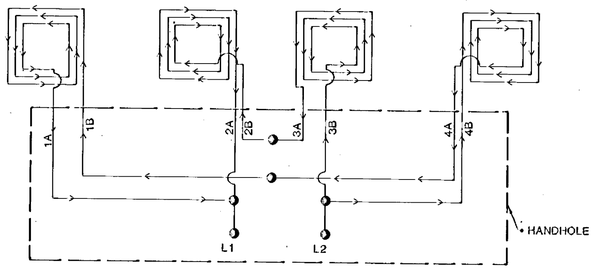
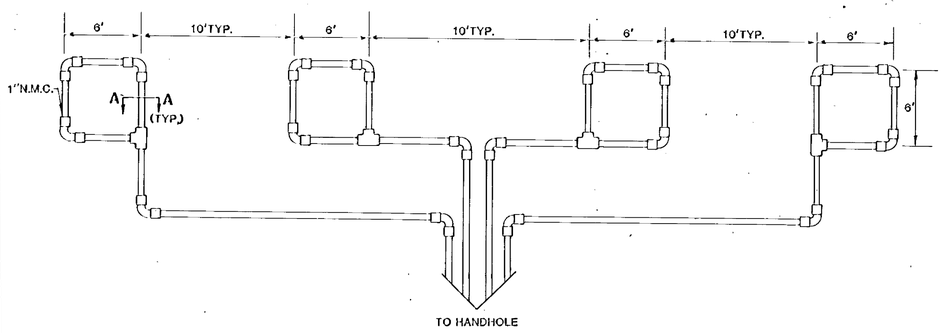
LOOP DETECTOR DETAIL "C"

PLAN VIEW
(NOT TO SCALE)



LOOP CONNECTIONS SHALL BE SPLICED IN THE HANDHOLE AS FOLLOWS :
1B TO 4A 2B TO 3A: 1A AND 2A TO L1: 3B AND 4B TO L2.
SPLICE CONTROL CABLE TO L1 AND L2 IN HANDHOLE.
ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE (1A, 1B, ect).

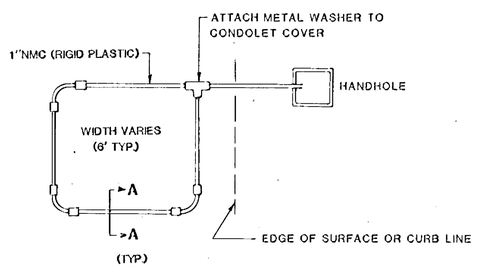


NOTES:

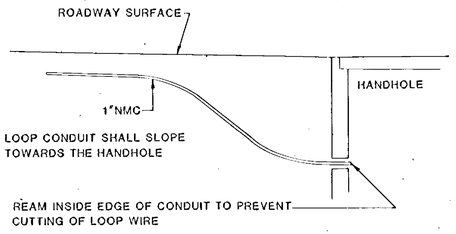
1) ALL CORNERS SHALL BE STANDARD 90°CONDUIT BENDS.
2) CONNECT WIRES IN HANDHOLES USING WESTERN UNION SPLICE, SOLDERED, TAPED & AND WATERPROOFED.
3) LOOP DETECTOR WIRES SHALL BE CROSS LINKED POLYETHLENE (XLP) SEE SPECIAL PROVISIONS.
4) LOOP WIRES SHALL BE TWISTED A MINIMUM OF 1 TURN PER 3 FEET FROM THE LOOP TO THE CONDUIT TO AND 3 TURNS PER FOOT THROUH THE CONDUIT THE HANDHOLE.
5) N.M.C. DESIGNATES NON-METALIC CONDUIT (SPEC 3803).

LOOP DETECTOR DETAIL "A"

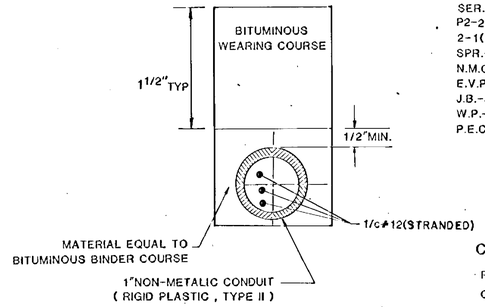
PLAN VIEW
(NOT TO SCALE)



DRAINAGE DETAILS



CROSS SECTION A-A

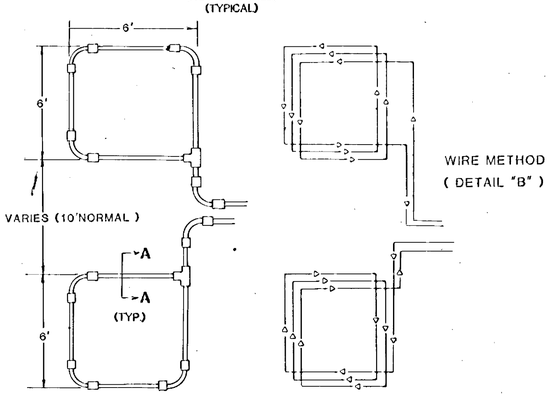


CONDUIT INSTALLATION DETAIL FOR LOOP DETECTORS

LOOP DETECTOR CONDUITS ARE TO BE INSTALLED IN 3" CUT TRENCHES AS SHOWN ON PLANS. INSTALL EACH COMPLETE DETECTOR ASSEMBLY WITH THE DETECTOR WIRE PULLED THROUGH THE COMPLETE ASSEMBLY TO HANDHOLE. WHERE APPROPRIATE, PLACE DETECTOR CONDUIT IN BITUMINOUS BINDER COURSE PRIOR TO PLACEMENT OF THE WEARING COURSE. THE DEPTH OF THE TRENCH AND THE RESULTANT PLACEMENT OF THE DETECTOR CONDUIT SHALL BE SUCH THAT THE ENTIRE DETECTOR ASSEMBLY DRAINS INTO THE HANDHOLE. BACKFILL AND COMPACT THE TRENCHES WITH MATERIAL EQUIVALENT TO THE MATERIAL REMOVED.

LOOP DETECTOR DETAIL "B"

PLAN VIEW
(NOT TO SCALE)
(TYPICAL)



CONDUITS MAY BE PLACED IN COMMON TRENCH.

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Robert A. Eller
Date: 2/25/88 Reg.No. 5959

ABBREVIATIONS

EQUIPMENT AND INDICATIONS

R, RED - RED
Y, YEL - YELLOW
G, GRN - GREEN
WLK-WALK
NEU-NEUTRAL
DWK DON'T WALK
LUM-LUMINAIRE
DNL-DOWNLIGHT
H.H.-HANDHOLE
EQG-EQUIPMENT GROUND
R.S.C.-RIGID STEEL CONDUIT
GLTA-GREEN LEFT TURN ARROW
YRTA-YELLOW RIGHT TURN ARROW
D2-1(eg)-DETECTOR-PHASE"2"
GR.R-GROUND ROD
SER.-SERVICE
P2-2 PEDESTRIAN INDICATIONS-PHASE "2"
2-1(eg)-SIGNAL HEADS-PHASE"2"
SPR.-SPARE CONDUCTORS
N.M.C.-NON METALLIC CONDUIT
E.V.P.-EMERGENCY VEHICLE PRE-EMPTION
J.B.-JUNCTION BOX
W.P.-WOOD POLE
P.E.C.-PHOTOELECTRIC CELL

CONDUCTOR COLOR CODE

R-RED
O-ORANGE
BL-BLUE
WH-WHITE
G-GREEN
BLK-BLACK
R/BLK -RED WITH BLACK TRACER
O/BLK-ORANGE WITH BLACK TRACER
BL/BLK-BLUE WITH BLACK TRACER
WH/BLK- WHITE WITH BLACK TRACER
BLK/WH BLACK WITH WHITE TRACER
G/BLK-GREEN WITH BLACK TRACER

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQPT. NO'S. — (A)
SIGNAL BASE NO. — (1)
SIGNAL FACE NO. — (1)
LUMINAIRE NO. — (1)
CONTROLLER AND CABINET
CONTROLLER AND CABINET-IN PLACE
HANDHOLE
HANDHOLE-IN PLACE
RIGID STEEL CONDUIT (R.S.C.)
RIGID STEEL CONDUIT (R.S.C.)-IN PLACE
SIGNAL FACE WITH BACKGROUND SHIELD
SIGNAL FACE W/O BACKGROUND SHIELD
SIGNAL FACE-IN PLACE
PEDESTRIAN INDICATIONS
PEDESTRIAN INDICATIONS-IN PLACE
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE
PEDESTRIAN PUSH BUTTON STATION
TRAFFIC SIGNAL PEDESTAL
TRAFFIC SIGNAL PEDESTAL-IN PLACE
TRAFFIC SIGNAL POLE AND MAST ARM
TRAFFIC SIGNAL POLE AND MAST ARM-IN PLACE
STREET LIGHT POLE AND LUMINAIRE
STREET LIGHT POLE AND LUMINAIRE-IN PLACE
MAST ARM AND LUMINAIRE
MAST ARM AND LUMINAIRE-IN PLACE
WOOD POLE
WOOD POLE-IN PLACE
SOURCE OF POWER
RAILROAD SIGNAL-IN PLACE
RIGHT OF WAY LINE
CENTER LINE — 3
EDGE OF ROADWAY
SHOULDER LINE
CURB LINE
STOP BAR
CROSSWALK

CONDUCTOR COLOR CODING

12/C#12	R	BLK	2-1/C#6
	O	WH	2-1/C#10
	BL	R	
	WH	W	3/C#12
	R/BLK	BLK	
	O/BLK	BLK	
	BL/BLK	CLEAR	2/C#14
	WH/BLK	R OR O	
	BLK	WH OR YEL	3/C#20
	BLK/WH	BLK OR BL	
	G/BLK		
	G		

NOTE:
ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

STANDARD PLATES

	PLATE NO.	DESCRIPTION
*	8110 C	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
*	8111 B	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
*	8112 C	PEDESTAL FOUNDATION
	8113 C	MAGNETIC VEHICLE DETECTOR INSTALLATION
*	8115 C	PEDESTRIAN PUSH BUTTON INSTALLATION
*	8117 F	PRECAST CONCRETE HANDHOLE
	8118 C	SERVICE EQUIPMENT AND POLE
*	8119 C	GROUND MOUNTED CABINET FOUNDATION
*	8120 H	P-80 AND P-90 POLE FOUNDATION
*	8121 B	TRANSFORMER BASE WITH POLE BASE PLATE
	8122 C	PEDESTAL AND PEDESTAL BASE
	8123 B	POLE AND MAST ARM
*	8124 D	SIGNAL HEAD MOUNTS
	8125 A	SWING-AWAY HINGE
	8126 C	P-100 POLE FOUNDATION
	8130 D	SAW CUT LOOP DETECTORS

* THESE STANDARD PLATES APPLY TO THIS PLAN

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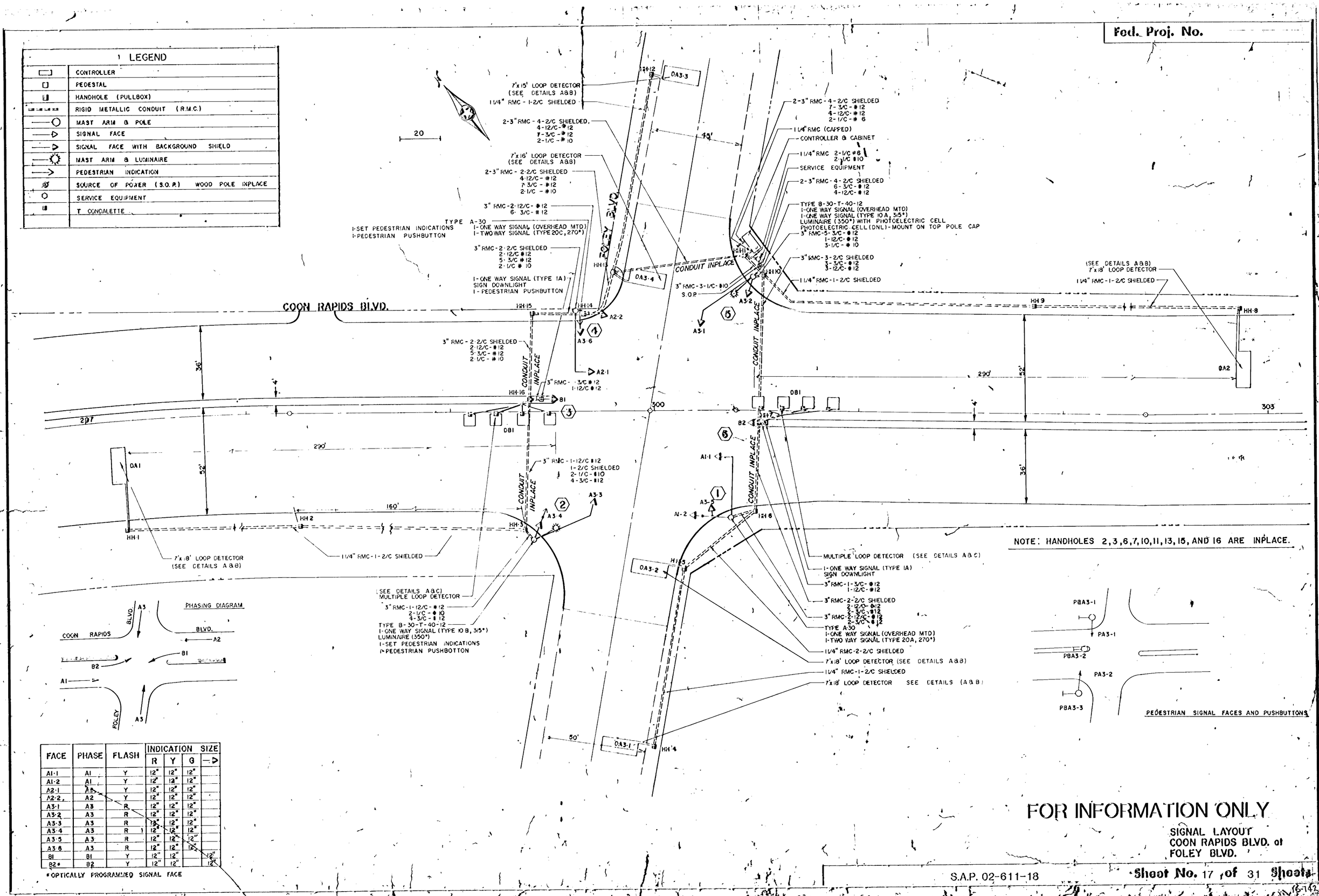
Fed. Proj. No.

LEGEND

	CONTROLLER
	PEDESTAL
	HANDHOLE (PULLBOX)
	RIGID METALLIC CONDUIT (R.M.C.)
	MAST ARM & POLE
	SIGNAL FACE
	SIGNAL FACE WITH BACKGROUND SHIELD
	MAST ARM & LUMINAIRE
	PEDESTRIAN INDICATION
	SOURCE OF POWER (S.O.P.) WOOD POLE INPLACE
	SERVICE EQUIPMENT
	T CONDALETTE



PHASING DIAGRAM

FACE	PHASE	FLASH	INDICATION SIZE R	Y	G	⟶
A1-1	A1	Y	12"	12"	12"	
A1-2	A1	Y	12"	12"	12"	
A2-1	A2	Y	12"	12"	12"	
A2-2	A2	Y	12"	12"	12"	
A3-1	A3	R	12"	12"	12"	
A3-2	A3	R	12"	12"	12"	
A3-3	A3	R	12"	12"	12"	
A3-4	A3	R	12"	12"	12"	
A3-5	A3	R	12"	12"	12"	
A3-6	A3	R	12"	12"	12"	
B1	B1	Y	12"	12"		12"
B2*	B2	Y	12"	12"		12"

*OPTICALLY PROGRAMMED SIGNAL FACE

NOTE: HANDHOLES 2,3,6,7,10,11,13,15, AND 16 ARE INPLACE.

PEDESTRIAN SIGNAL FACES AND PUSHBUTTONS

FOR INFORMATION ONLY

SIGNAL LAYOUT
COON RAPIDS BLVD. at FOLEY BLVD.

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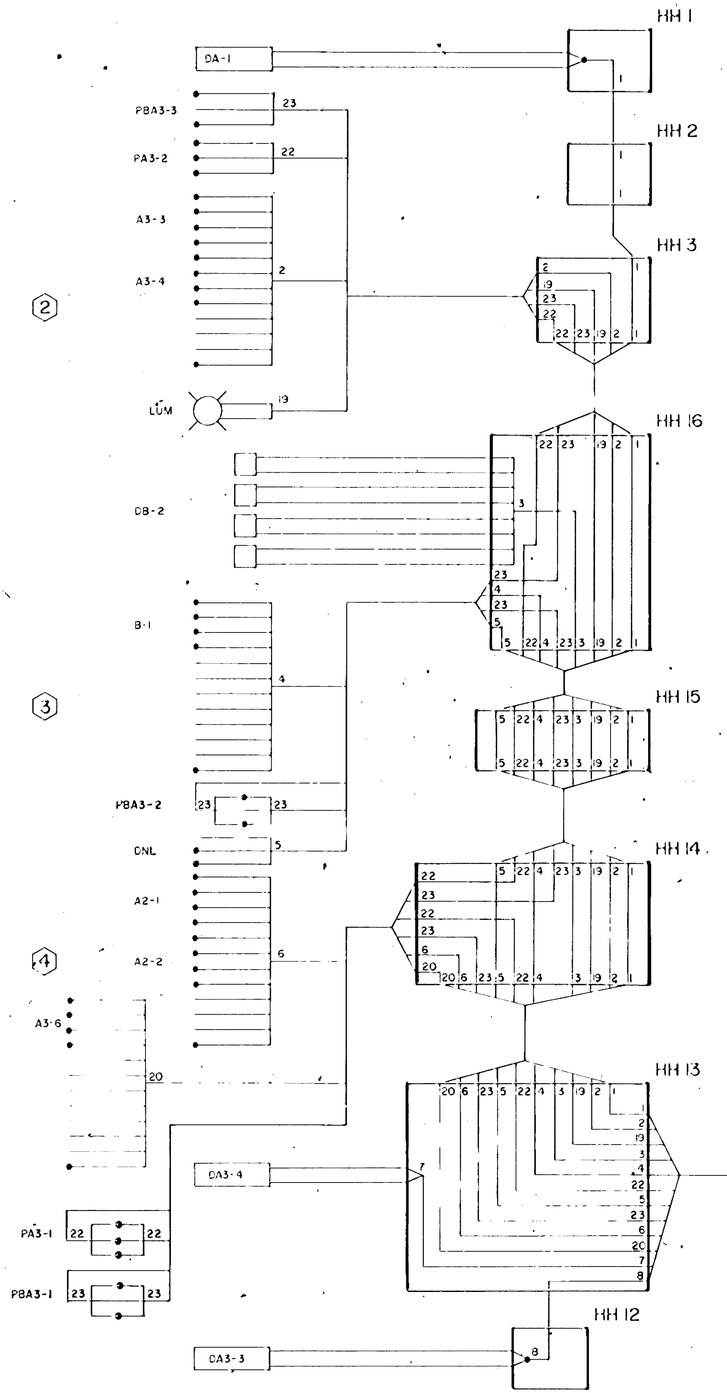
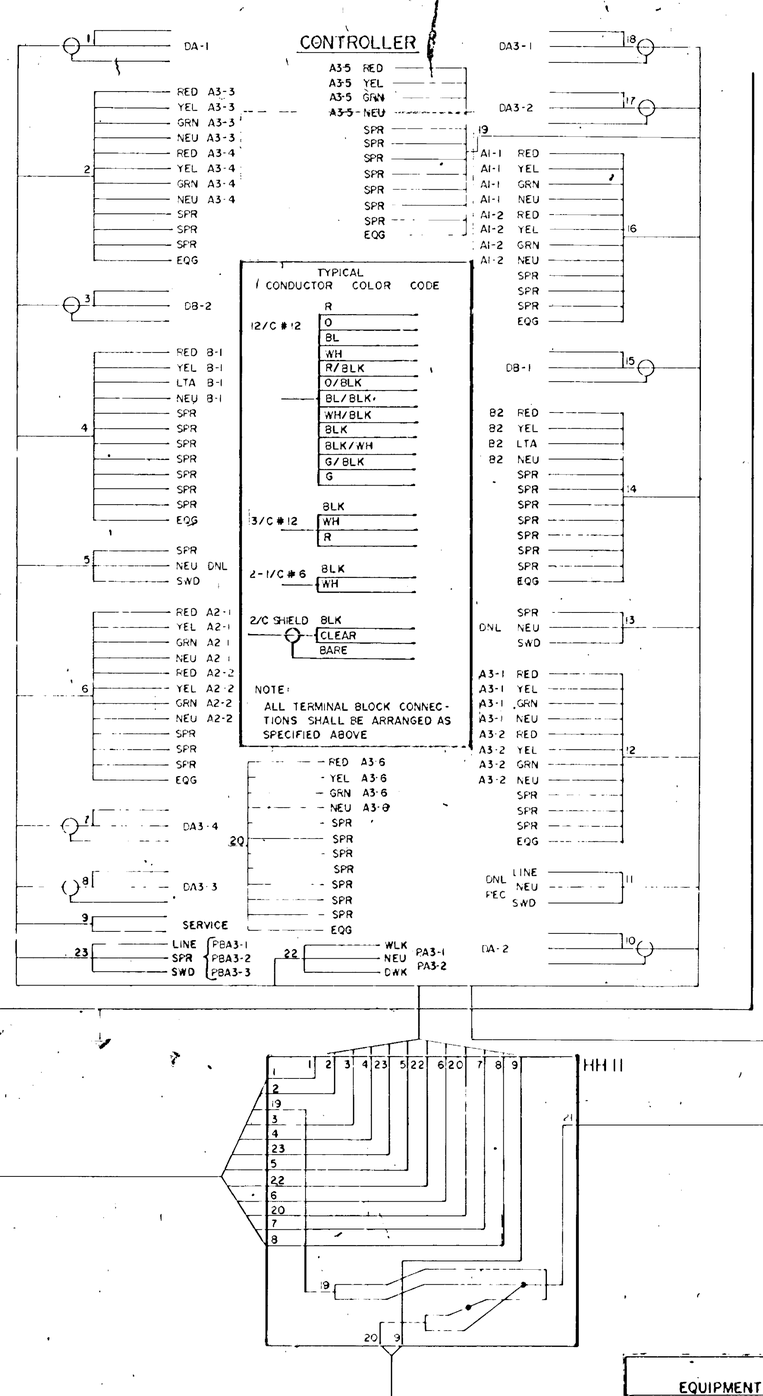
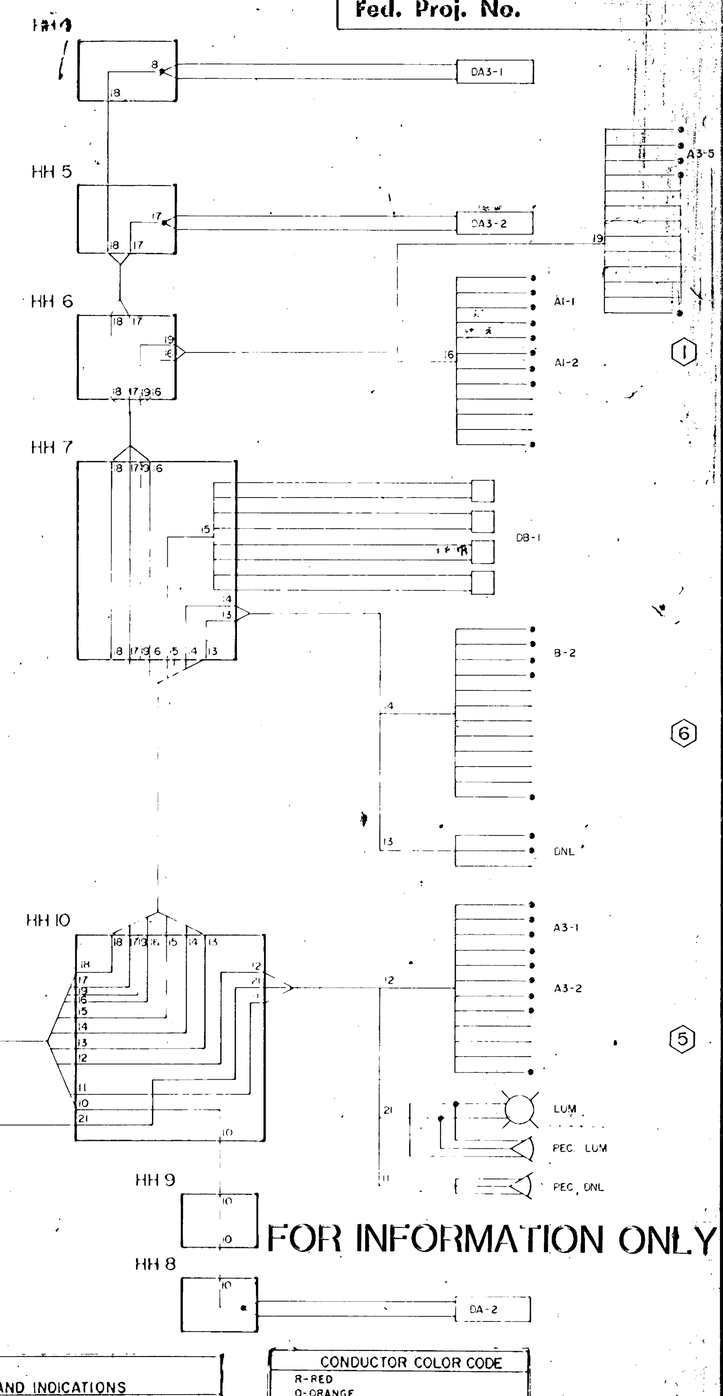
16-142C

Fed. Proj. No.







FOR INFORMATION ONLY

NOTES:

1. Provide terminal strips in the base of all standards with terminals for all conductors in standard with excention of conductors for street lights.
2. No splices are to be made in hand holes except for splices for connections and street light circuits.
3. Provide in-line fuses in base of each standard for street lights.
4. Ground conductors are not shown. Install grounding as specified.

EQUIPMENT AND INDICATIONS	
RED-RED	B3(eg)-SIGNAL HEAD-PHASE "B"
YEL-YELLOW	DA-4(eg)-DETECTOR-PHASE "A"
GRN-GREEN	HH-HANDHOLE
LTA-LEFT TURN ARROW	GR-GROUND ROD
RTA-RIGHT TURN ARROW	SERV-SERVICE
WLK-WALK	ST.LHT-STREET LIGHT
NEU-NEUTRAL	SOP-SOURCE OF POWER
DWK-DON'T WALK	SPR-SPARE CONDUCTOR
LUM-LUMINAIRE	←SPLICE
SWD-SWITCHED	PEC-PHOTOELECTRIC CELL
DNL-DOWNLIGHT	EQG-EQUIPMENT GROUND

CONDUCTOR COLOR CODE
R-RED
O-ORANGE
BL-BLUE
WH-WHITE
R/BLK-RED WITH BLACK TRACER
O/BLK-ORANGE WITH BLACK TRACER
BL/BLK-BLUE WITH BLACK TRACER
WH/BLK-WHITE WITH BLACK TRACER
BLK-BLACK
BLK/WH-BLACK WITH WHITE TRACER
G/BLK-GREEN WITH BLACK TRACER
G-GREEN

Fed. Proj. No.

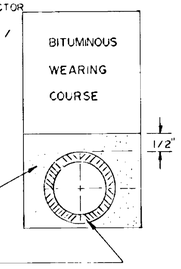
CONDUIT INSTALLATION DETAIL "A"

FOR LOOP DETECTOR

SCALE NONE

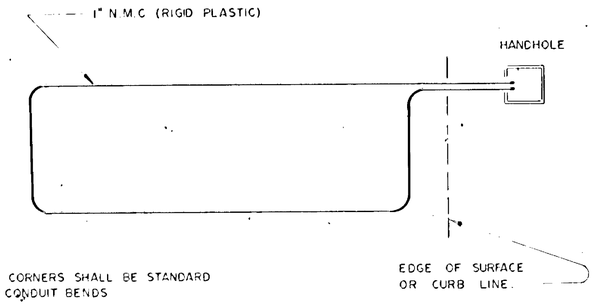
LOOP DETECTOR CONDUITS ARE TO BE INSTALLED AS FOLLOWS:

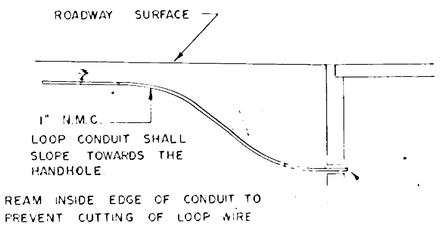
1) INSTALL THE BITUMINOUS BINDER COURSE.
2) CUT TRENCHES FOR ALL DETECTORS AND INSTALL EACH IMPLETE DETECTOR ASSEMBLY, INCLUDING WHERE SHOWN PLASTIC CONDUIT, "T" CONDALETTE, AND STEEL CONDUIT, WITH THE DETECTOR WIRE PULLED TROUGH THE COMPLETE ASSEMBLY TO / FROM THE HANDHOLE
3) REFILL THE TRENCHES WITH MATERIAL EQUAL TO THE BITUMINOUS BINDER COURSE
4) INSTALL THE BITUMINOUS WEARING COURSE



LOOP DETECTOR DETAIL "B"

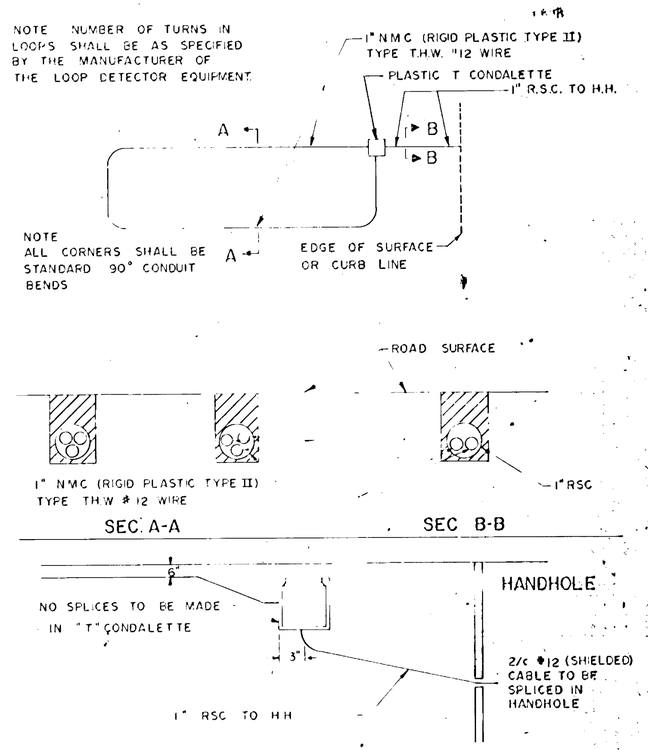
SCALE NONE





REAM INSIDE EDGE OF CONDUIT TO PREVENT CUTTING OF LOOP WIRE

LOOP DETECTOR DETAIL "C"



NOTE

LOOP CONDUIT SHALL SLOPE TOWARDS "T" CONDALETTE AND STEEL CONDUIT SHALL SLOPE TOWARDS HANDHOLE SUCH THAT ENTIRE DETECTOR INSTALLATION DRAINS INTO HANDHOLE

FOR INFORMATION ONLY

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CITY PROJ.NO.86-58

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EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | C.I. Yds. | Sub-Totals

R/W

℄

21+18 881.27
℄ 12' BIT. ENT. LT.

S.B.L.

20+94 881.35
℄ 24' BIT. ENT. LT.

S.B.L. N.B.L.

20+50 881.47

20+20 881.48
℄ 38' BIT. ENT. LT.

19+95 881.54
℄ XING RCP
INPL. 18"X 70'

19+31 881.82

19+07 881.93

18+83 882.03
NO. GUTTER EVERGREEN BLVD. RT.

SBL NBL

60 40 20 15 20 40 60 80 60

EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | C.I. Yds. | Sub-Totals

R/W

24+26 882.39

S.B.L. N.B.L.

24+07 882.35
NO. GUTTER BIT. ENT. B-618 LT.
417.005

23+76 882.15
SO. GUTTER BIT. ENT. B-618 LT.
417.005

23+40 882.21
℄ 24' BIT. ENT. RT.

23+00 882.11

22+00 881.47

S.B.L. N.B.L.

21+50 881.37

40 20 15 20 40 60

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State Proj. No. S.A.P. 02-611-18 **Sheet No.** 21 **of** 31 **Sheets**

CK'D DRAWN 12-27-11

2

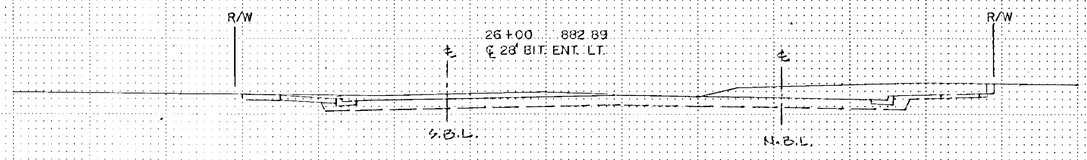
EXCAVATION EMBANKMENT

Sub-Totals	C.I. Yds.	C.I. Yds.	Sub-Totals

26+35 882.90
℄ 22' BIT. ENT. RT.

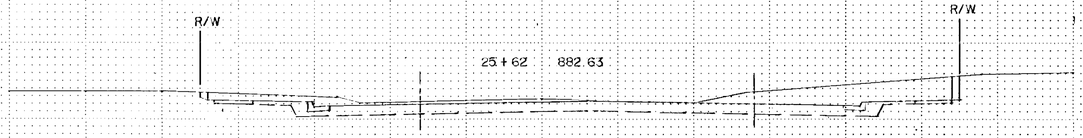
R/W R/W

26+00 882.89
℄ 28' BIT. ENT. LT.



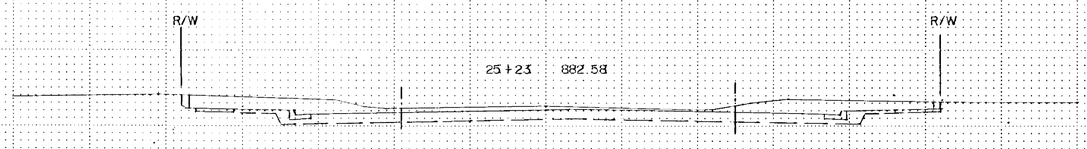
R/W R/W

25+62 882.63

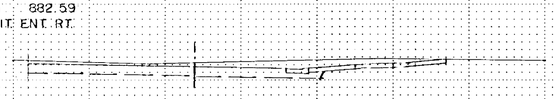


R/W R/W

25+23 882.58

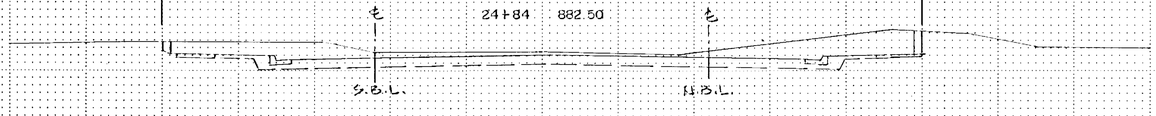


25+05 882.59
℄ 21' BIT. ENT. RT.



R/W R/W

24+84 882.50

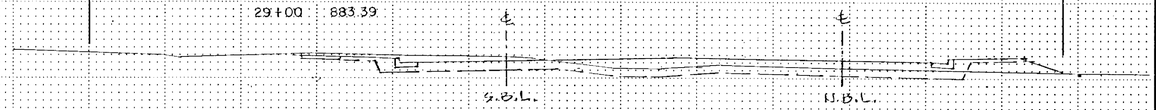


EXCAVATION EMBANKMENT

Sub-Totals	C.I. Yds.	C.I. Yds.	Sub-Totals

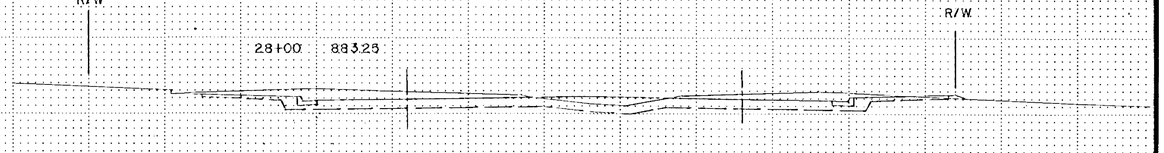
R/W R/W

29+00 883.39



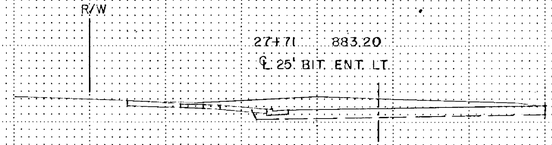
R/W R/W

28+00 883.25



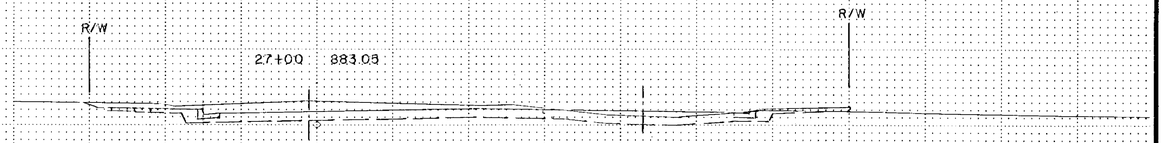
R/W

27+71 883.20
℄ 25' BIT. ENT. LT.



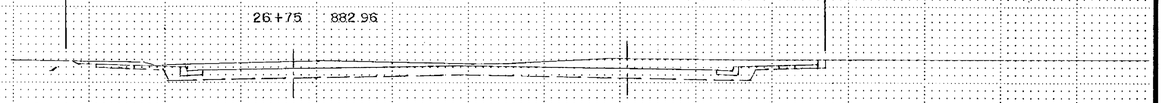
R/W R/W

27+00 883.05



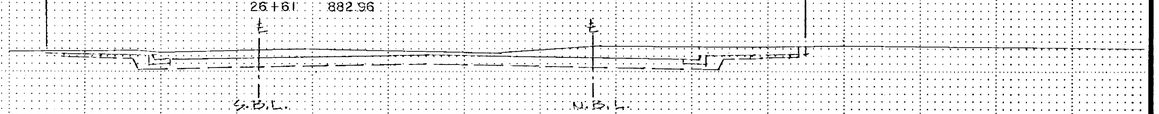
R/W R/W

26+75 882.96



R/W R/W

26+61 882.96



CITY PROJ.NO.86-58

40 20 ℄ 20 40 60 80 100

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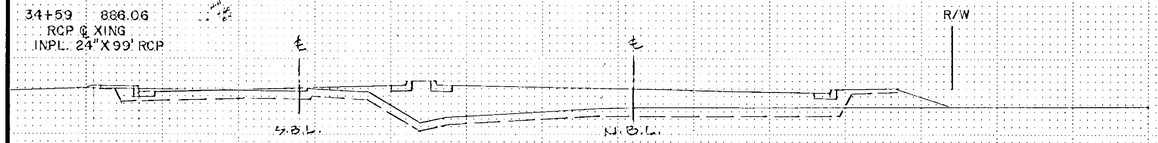
ADD Diagram 12-27-85

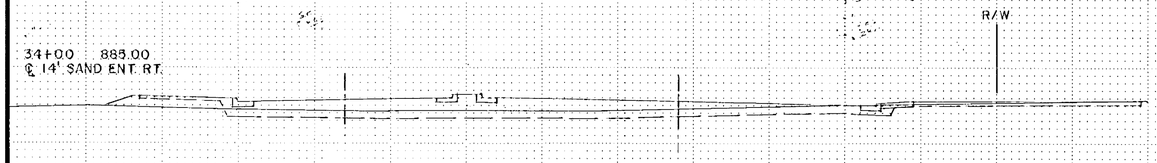
EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals

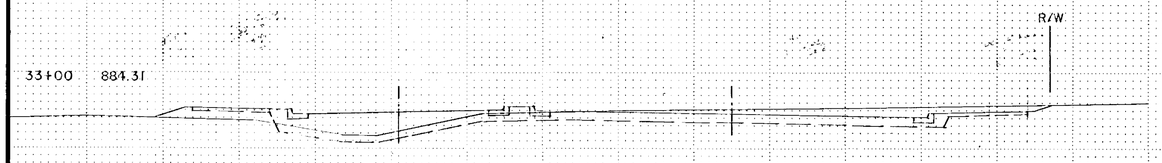
34+59 886.06
RCP ℄ XING
INPL. 24"X 99' RCP



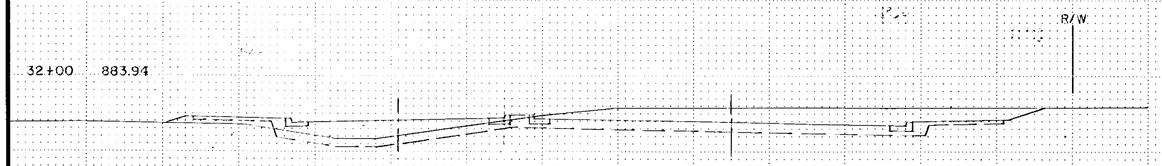
34+00 885.00
℄ 14' SAND ENT. RT.



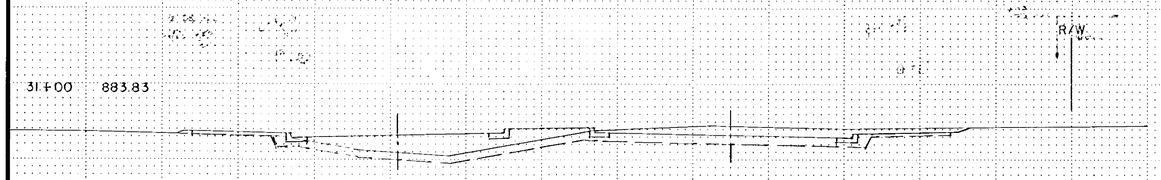
33+00 884.31



32+00 883.94



31+00 883.83



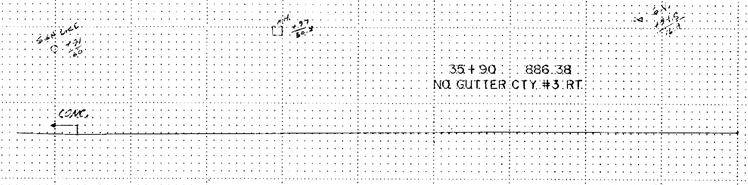
30+00 883.56

12 20 40 60 80 100 120 140 80 60

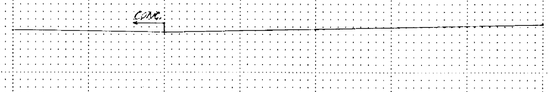
EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals

35+90 886.38
NO. GUTTER CTY. #3 RT.

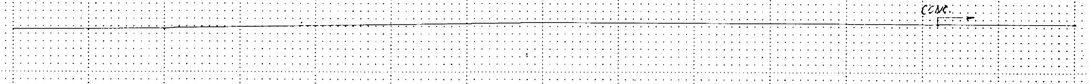


35+65 886.34
NO. GUTTER CTY. #3 LT.

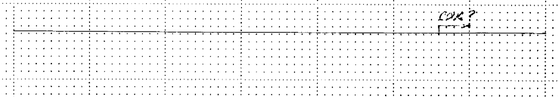


35+33 886.56
NO. GUTTER CENTER I.S. RT.

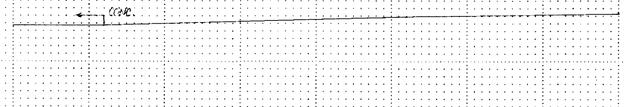
35+26 886.55
SO. GUTTER CENTER I.S. RT.



34+87 886.35
SO. GUTTER CTY. #3 RT.



34+81 886.34
SO. GUTTER CTY. #3 LT.



40 20 12 20 40 60

CITY PROJ.NO.86-58

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CB'D CONNECTION 12-27-85

EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals

R/W — ℄ — 39+00 886.97 — ℄ — R/W
S.B.L. N.B.L.

38+67 886.76
℄ 12' SAND ENT. RT.

R/W — 38+00 886.54 BIT. LOT LT. — R/W

R/W — 37+00 886.16 BIT. LOT LT. — R/W

R/W — 36+70 886.14 ℄ 129' BIT. ENT. & PKG. LOT LT. — R/W

R/W — 36+00 886.31 — ℄ — ℄ — R/W
S.B.L. N.B.L.

EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals

R/W — ℄ — 41+76 890.84 — ℄ — R/W
S.B.L. N.B.L.

41+67 890.54
NO GUTTER JUNIPER ST. RT.

41+41 890.05
SO. GUTTER JUNIPER ST. RT.

R/W — 41+00 889.51 — R/W

R/W — 40+00 887.71 — R/W

R/W — 39+31 887.07 — ℄ — ℄ — R/W
S.B.L. N.B.L.

CITY PROJ.NO.86-58

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CKD DMARTIN 12-27-88

CITY PROJ. NO. 86-58

State Proj. No. S.A.P. 02-611-18

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CK'D D. MARTIN 12-27-85

EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals

R/W

48+00 90357
℄ 16' B.I.T. CONC ENT. L.T.

10%

S.B.L.

N.B.L.

47+21 901.70

47+00 901.19
℄ 16' SAND ENT. L.T.

46+12 899.19
℄ 16' CONC. ENT.

46+00 898.94

45+54 898.02

S.B.L.

N.B.L.

EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals

49+33 905.69
℄ 19' B.I.T. ENT. RT.

R/W

49+13 905.43

S.B.L.

N.B.L.

49+00 905.25
℄ 16' SAND ENT. L.T.

48+88 905.07
℄ 12' B.I.T. ENT. RT.

48+80 904.92

48+11 903.80

S.B.L.

N.B.L.

CITY PROJ. NO. 86-58

State Proj. No. S.A.P. 02-611-18

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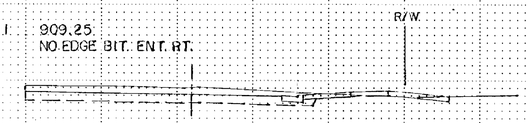
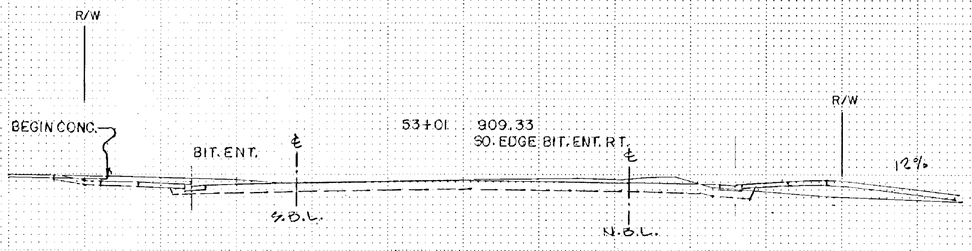
CHD DRAFTING 12-30-88

EXCAVATION EMBANKMENT

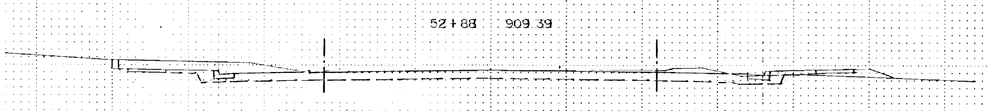
Sub-Totals	C.Y.	C.Y.	Sub-Totals

53+51 909.25
NO. EDGE BIT. ENT. RT.



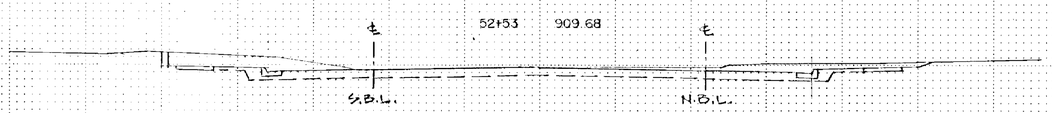


52+88 909.39



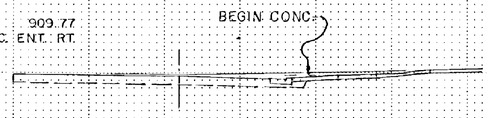
52+70 909.54
℄ 12' BIT. ENT. LT.

+1' END S/E T6 WALL



+20 SEE 12-20A!

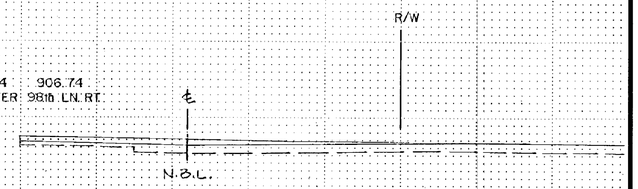
52+24 909.77
℄ 16' CONC. ENT. RT.

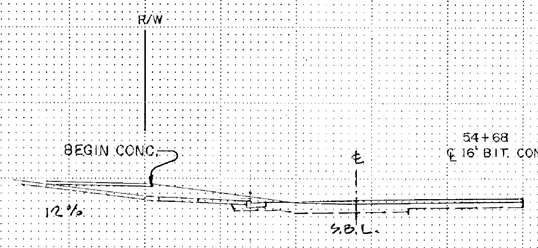


+16' END T/E WALL

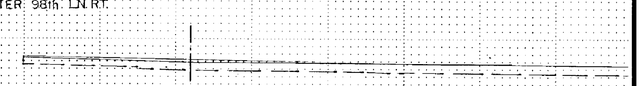
EXCAVATION EMBANKMENT

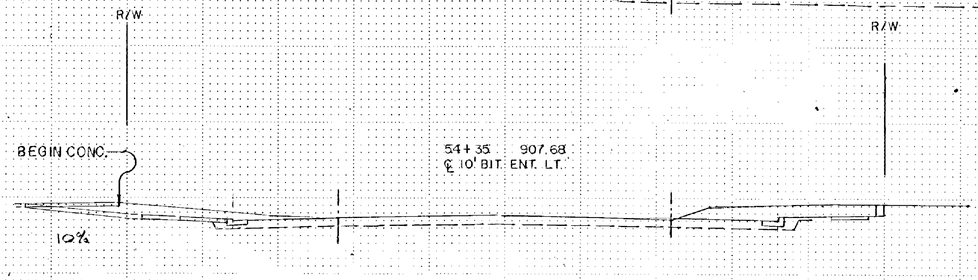
Sub-Totals	C.Y.	C.Y.	Sub-Totals

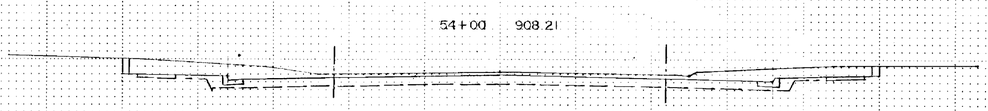


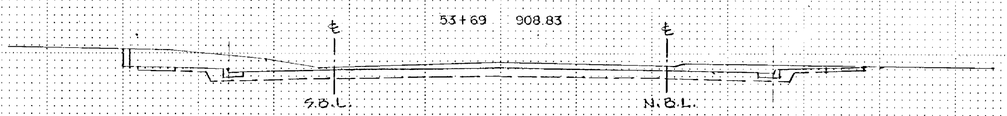


54+47 907.48
SO. GUTTER 98th. LN. RT.









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60 40 20 ℄ 20 40 60 80 60 40 20 ℄ 20 40 60

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PUBLIC WORKS DEPARTMENT CROSS SECTION SHT. NO.

PUBLIC WORKS 12-27-85

CE'D DARTN 12-30-85

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CK'D D MARTIN 12-30-85

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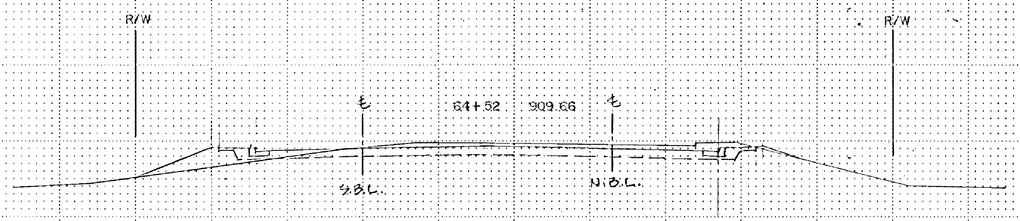
Plotted: [signature] 12-27-85

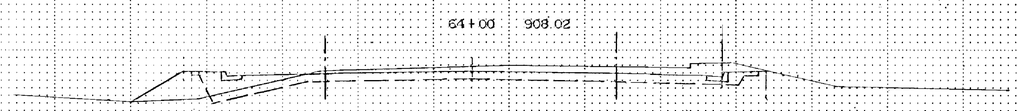
CK'D DMARTIN 12-30-85

EXCAVATION EMBANKMENT

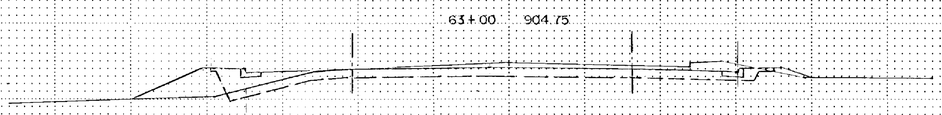
Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals



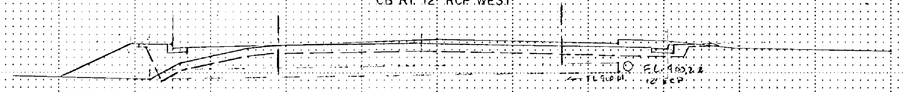
64+00 908.02



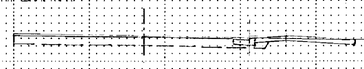
63+00 904.75



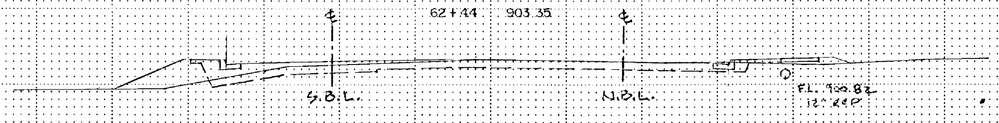
62+88 904.10
CB RT. 12° RCP WEST



62+54 903.62
℄ 26' BIT. ENT. RT.



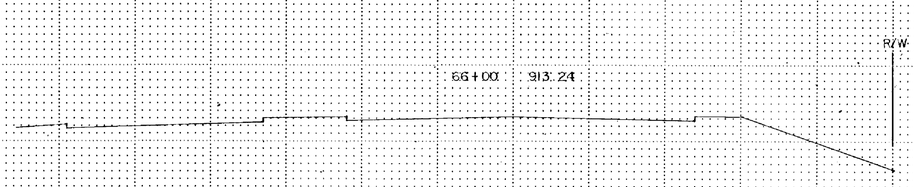
62+44 903.35



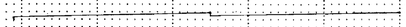
EXCAVATION EMBANKMENT

Sub-Totals | Cu. Yds. | Cu. Yds. | Sub-Totals

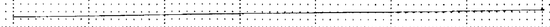
66+00 913.24



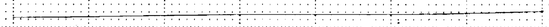
65+85 912.93
NO. GUTTER ON RAMP



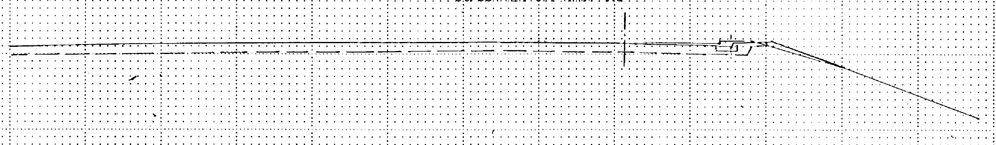
65+54 912.21
NO. GUTTER OFF RAMP
℄ ISLAND



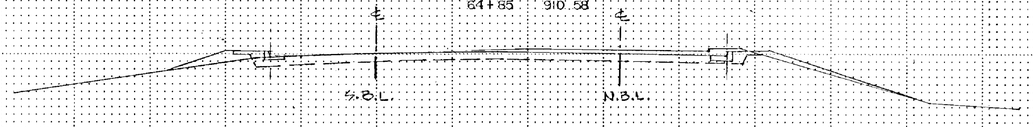
65+50 912.13
SO. GUTTER OFF RAMP
℄ ISLAND



65+31 911.69
SO. GUTTER OFF RAMP #10



64+85 910.58



CITY PROJ.NO.86-58

60 40 20 ℄ 20 40 60 80 60 40 20 ℄ 20 40 60

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TELEPHONE POLE CROSS SECTION SHT. of 31 SHEETS

C&D DRAFTING 12-30-85

Plotted: Wed 12-17-86