

PLAN SYMBOLS

- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SLOPE EASEMENT
- PRESENT RIGHT OF WAY
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY
- RIVER OR CREEK
- DRAINAGE DITCH
- CULVERT
- DROP INLET
- GAUGE RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- STONE WALL OR FENCE
- HEDGE

- LOWLAND
- TIMBER
- ORCHARD
- BRUSH
- NURSERY

- CATTLE GAURD

- OVERPASS (Highway Over)

- UNDERPASS (Highway Under)

- BRIDGE

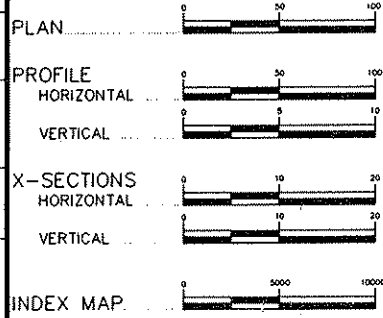
- BUILDING (One Story Frame)
- F-FRAME C-CONCRETE
- S-STONE T-TILE
- B-BRICK ST-STUCCO

- RAILROAD CROSSING BELL
- RAILROAD CROSSING GATE
- MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CAST IRON MONUMENT
- IRON PIN
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY
- GEO TECHNICAL BORINGS

UTILITY SYMBOLS

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE & POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (Cable Terminal)
- GAS MAIN
- WATERMAIN
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE T-BUR
- BURIED ELECTRIC CABLE P-BUR
- AERIAL TELEPHONE CABLE T-AE
- SEWER (Sanitary or Storm)
- SEWER MANHOLE

SCALES



MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

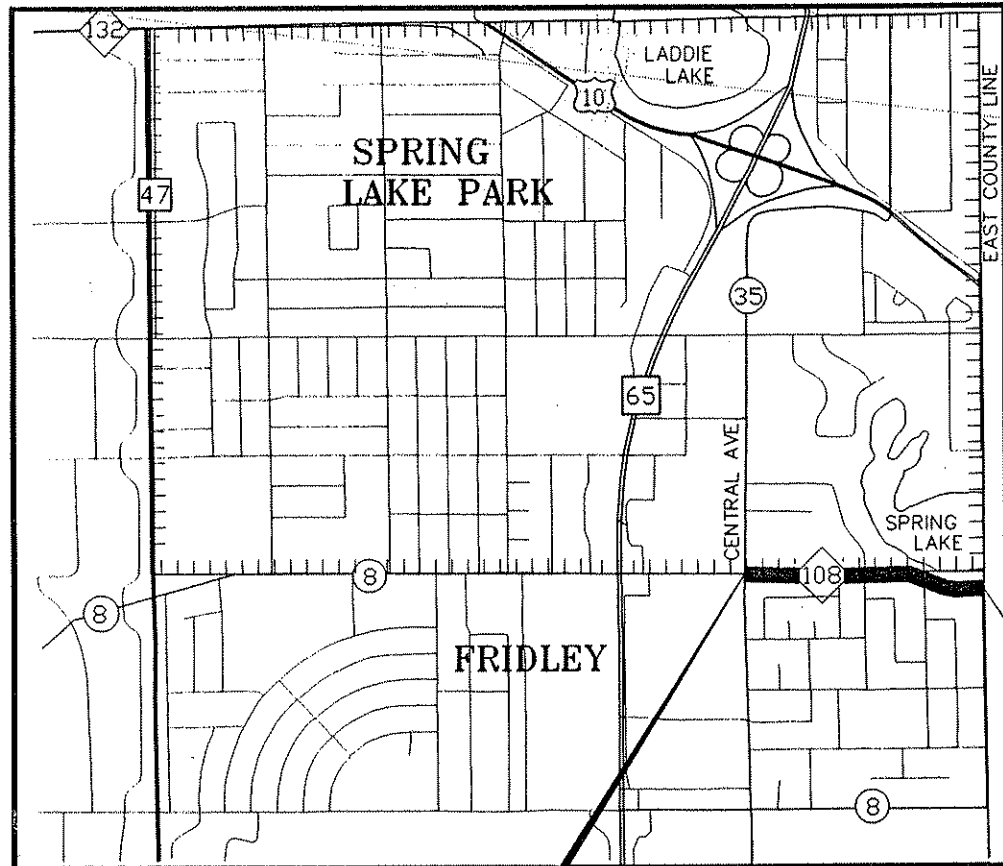
CONSTRUCTION PLAN FOR GRADING, DRAINAGE, AGGREGATE BASE, CURB AND GUTTER AND BITUMINOUS SURFACING,

LOCATED ON CR 108 BETWEEN CSAH 35 (CENTRAL AVE.) AND EAST COUNTY LINE (STINSON BLVD.) (GEOGRAPHIC DESCRIPTION)

FROM A POINT 15.50' E. AND OF THE N.1/4 COR. OF SEC. 12, T-30 N. R-23 W. TO A POINT 237.06' S. (ALONG THE EAST LINE OF SEC. 12) OF THE N.E. COR. OF SEC. 12, T-30 N. R-23 W. (LEGAL DESCRIPTION)

COUNTY PROJ. NO. 91-08-108

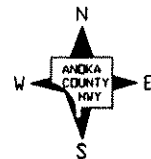
GROSS LENGTH 2,689 FEET 0.509 MILES
 BRIDGES-LENGTH 0 FEET 0 MILES
 EXCEPTIONS-LENGTH 0 FEET 0 MILES
 NET LENGTH 2,689 FEET 0.509 MILES



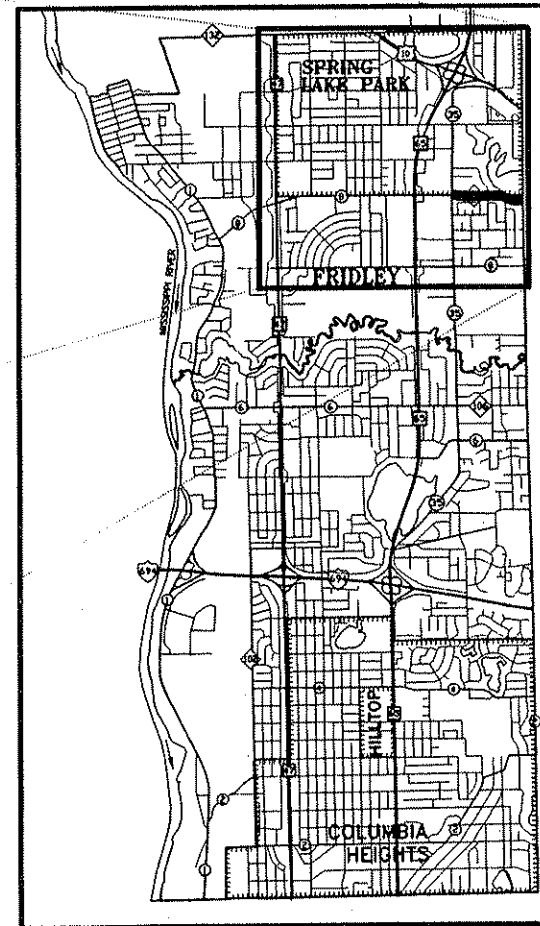
VICINITY MAP
1"=1000'

BEGIN. C.P. 91-08-108
STA. 282+93.00

END C.P. 91-08-108
STA. 309+82.00



CITIES OF
 SPRING LAKE PARK
 FRIDLEY
 HILLTOP
 COLUMBIA HEIGHTS



INDEX MAP
1"=3500'

MINN. PROJ. NO.

MINN. PROJ. NO. LOCAL FUNDS

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE MAY 2, 1994 SUPPLEMENTAL SPECIFICATIONS SHALL GOVERN.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3-5	TABULATION CHARTS
6	EARTHWORK SUMMARY/PAVEMENT CHART
7	STANDARD DETAILS
8	TYPICAL SECTIONS
9	EXISTING CONDITIONS AND REMOVAL PLAN
10	SUPERELEVATION CHART
11-12	PLAN AND PROFILE
13	STORM SEWER LATERALS
14-19	CROSS-SECTION
20-21	DETOUR PLAN

THIS PLAN CONTAINS 21 SHEETS

DESIGN DESIGNATION

EN18 ₂₀	1,842,943
R VALUE	50
ADT (1996)=	4,856
Proj. ADT (2016)=	8,255
Proj. HCADT (2016)=	619
Soil Factor	N/A
10 TON DESIGN	
Shoulder Width	6 FT.

Functional Classification HIGH DENSITY COLLECTOR
 No. of Traffic Lanes 2 No. of Parking Lanes 0
 Design Speed 45 MPH
 Based on Stopping Sight Distance
 Height of eye 3.5' Height of object 0.5
 Design Speed not achieved at:
 STA. TO STA. MPH
 STA. TO STA. MPH
 STA. TO STA. MPH

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

DATE 8/8/96 REG. NO. 20235 ENGR. *Joseph C. Ancelet* ASST. COUNTY ENGINEER
 DESIGN SQUAD M. GABRCK AND M. NAJI

Approved 8/8/96 *Joseph C. Ancelet* ANOKA COUNTY ENGINEER
 Approved 9/5/96 *Joseph C. Ancelet* CITY OF FRIDLEY ENGINEER
 Approved 9/23/96 *Joseph C. Ancelet* CITY OF SPRING LAKE ENGINEER

REVISIONS	DATE	BY

FILE NAME: \P\910808\TITLE.DWG M.N. (08-08-96)

STATEMENT OF ESTIMATED QUANTITIES

CHART NO.	ITEM NO.	ITEM	UNIT	TOTAL QUANTITIES		ANDKA COUNTY CP 91-08-108		CITY OF FRIDLEY		CITY OF SPRING LAKE		STORM SEWER ESTIMATED
				ESTIMATED	FINAL	ESTIMATED	FINAL	ESTIMATED	FINAL	ESTIMATED	FINAL	
	0013.601	CELLULAR MOBILE TELEPHONE	LUMP SUM	1		1						
	2021.501	MOBILIZATION	LUMP SUM	1		1						
	2031.501	FIELD OFFICE TYPE D	EACH	1		1						
	2101.502	CLEARING	TREE	25		25						
	2101.507	GRUBBING	TREE	26		26						
①	D 2104.501	REMOVE CULVERT PIPE	LIN FT	250		250						
	H 2104.501	REMOVE CURB AND GUTTER	LIN FT	108		108						
	I 2104.503	REMOVE WOOD RETAINING WALL	SQ FT	15		15						
②	B 2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	10,961		10,961						
③	C 2104.505	REMOVE CONCRETE PAVEMENT	SQ YD	163		163						
	F 2104.511	SAWING CONCRETE PAVEMENT	LIN FT	109		109						
	G 2104.513	SAWING BITUMINOUS PAVEMENT	LIN FT	574		574						
	2104.523	SALVAGE CASTING	EACH	3		3						
	2104.523	SALVAGE SIGN TYPE C	EACH	14		14						
④	T 2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	5		5						
	W 2105.501	COMMON EXCAVATION	CU YD	8,317 (P)		8,317 (P)						
	W 2105.525	TOPSOIL BORROW (LV)	CU YD	559		559						
⑤	2130.501	WATER	M-GAL	150		150						
	X 2211.503	AGGREGATE BASE (CV) CL-5A	CU YD	1,816 (P)		1,816 (P)						
⑥	0331.607	WEARING COURSE MIXTURE	SQ YD-IN	4,704		867		1,592		2,248		
	X 2340.508	TYPE 41 WEARING COURSE MIXTURE	TON	910		910						
	X 2340.510	TYPE 41 BINDER COURSE MIXTURE	TON	1,391		1,391						
	X 2340.514	TYPE 31 BASE COURSE MIXTURE	TON	1,669		1,669						
	X 2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1,104		1,104						
	D 0411.603	PRECAST CONCRETE STONE RETAINING WALL	SQ FT	397				397				
	0412.603	MAILBOX SUPPORT	EACH	29		29						
	AA 2503.541	12" RC PIPE SEWER, DESIGN 3006	LIN FT	210							210	
	AA 2503.541	15" RC PIPE SEWER, DESIGN 3006	LIN FT	973							973	
	AA 2503.541	18" RC PIPE SEWER, DESIGN 3006	LIN FT	411							411	
	AA 2503.541	21" RC PIPE SEWER, DESIGN 3006	LIN FT	1,258							1,258	
	AA 0503.602	CONSTRUCT BULKHEAD	EACH	3							3	
	S 0504.602	ADJUST VALVE BOX-WATER	EACH	1				1				
	Q 0504.602	RELOCATE HYDRANT & VALVE	EACH	4				4				
	R 0504.602	RELOCATE CURB STOP & BOX	EACH	4				4				
	AA 2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	LIN FT	19.7							19.7	
	AA 2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN F	LIN FT	73.8							73.8	
	AA 2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN G	LIN FT	59.8							59.8	
	AA 2506.503	RECONSTRUCT DRAINAGE STRUCTURE	LIN FT	17.5							17.5	
	CC 2506.516	CASTING ASSEMBLY	EACH	33							33	
	BB 0506.602	ADJUST FRAME & RING CASTING (SAN)	EACH	2							2	
	AA 0506.602	CONNECT TO EXISTING DRAINAGE STRUCTURE	EACH	2							2	
	AA 0506.602	CONNECT TO EXISTING SEWER	EACH	2							2	
	BB 0506.603	RECONSTRUCT SANITARY MANHOLES	LIN FT	31.7				31.7				
	M 2521.501	4" CONCRETE WALK	SQ FT	10,650				10,650				
	K 2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	6,129		3,065		2,219		845		
	E 2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	390		214		176		3		
	N 0531.602	PEDESTRIAN CURB RAMP	EACH	12				9		3		
	U 0531.604	8" CONCRETE DRIVEWAY PAVEMENT (REINFORCED)	SQ YD	259				144		115		
	0563.601	DETOUR SIGNING	LUMP SUM	1		1						
④	T 0564.602	INSTALL SIGN TYPE SPECIAL	EACH	5		5						
⑧	J 2573.501	BALE CHECK	EACH	30		30						
⑧	P 2573.502	SILT FENCE TYPE PREASSEMBLED	LIN FT	1,132		1,132						
	V 2575.501	SEEDING	ACRE	0.212		0.212						
	V 2575.502	SEED MIXTURE 600	POUND	29.2		29.2						
	V 2575.505	SODDING TYPE SALT RESISTANT	SQ YD	5977		5977						
	2575.511	MULCH MATERIAL TYPE I	TON	0.42		0.42						
	V 2575.519	DISC ANCHORING	ACRE	0.212		0.212						
	V 2575.524	TURF ESTABLISHMENT BLANKET TYPE STRAW	SQ YD	857		857						
	V 2575.532	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	POUND	177		177						
	2580.501	TEMPORARY LANE MARKING	RD STA	81		81						

INDEX OF TABULATION CHARTS

CHART	SHEET NO.	DESCRIPTION
A	3	CLEARING AND GRUBBING
B	3	BITUMINOUS REMOVAL
C	3	CONCRETE PAVEMENT REMOVAL
D	3	CULVERT PIPE REMOVAL
E	3	ENTRANCES REMOVAL AND CONSTRUCTION CHART
F	3	SAWING CONCRETE PAVEMENT
G	3	SAWING BITUMINOUS PAVEMENT
H	3	CONCRETE CURB & GUTTER REMOVAL
I	3	RETAINING WALL REMOVAL
J	3	BALE CHECK LOCATIONS
K	4	CONCRETE CURB & GUTTER CONSTRUCTION
L	4	BITUMINOUS PATH CONSTRUCTION
M	4	CONCRETE SIDEWALK CONSTRUCTION
N	4	CONCRETE PEDESTRIAN RAMPS
O	4	RETAINING WALL CONSTRUCTION
P	4	SILT FENCE
Q	4	RELOCATE HYDRANT
R	4	RELOCATE CURB STOP & BOX
S	4	ADJUST VALVE BOX-WATER
T	4	SALVAGE AND INSTALL SIGN SPECIAL
U	4	8" REINFORCED CONCRETE PATH
V	4	TURF ESTABLISHMENT
W	6	EARTHWORK SUMMARY
X	6	BASE AND BITUMINOUS QUANTITIES CHART
AA	5	STORM SEWER TABULATION
BB	5	SANITARY MANHOLES TABULATION
CC	5	DRAINAGE CASTING SCHEDULE

STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY.

PLATE NO.	DESCRIPTION
3000 L	REINFORCED CONCRETE PIPE
3006 G	GASKET JOINT FOR R.C. PIPE
4005 L	MANHOLE OR CATCH BASIN (DESIGN F)
4006 L	MANHOLE OR CATCH BASIN (DESIGN G AND DESIGN H)
4010 G	CONCRETE SHORT CONE & ADJUSTING RING
4020 G	MANHOLE OR CATCH BASIN COVER
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 E	COVER CASTING FOR MANHOLE
4126 F	CATCH BASIN FRAME CASTING
4140 D	SPECIAL GRATE CASTINGS FOR CATCH BASIN
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7111 H	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
7035 J	CONCRETE WALK AND CURB RETURNS AT ENTRANCES
7036 D	PEDESTRIAN CURB RAMP (FOR THE HANDICAPPED)
7100 G	CONCRETE CURB AND GUTTER (DES. B)
8000 I	STANDARD BARRICADES

BASIS OF PLANNED QUANTITIES

- 2340 TYPE 41 PLANT MIXED WEARING COURSE AND BINDER COURSE BITUMINOUS MIXTURE 110 LBS./SQ. YD. PER 1" THICKNESS
- 2340 TYPE 31 PLANT MIXED BASE BITUMINOUS MIXTURE 110 LBS./SQ. YD. PER 1" THICKNESS
- 2357 BITUMINOUS MATERIAL FOR TACK 0.05 GALLONS PER SQ. YD. PER LIFT APPLIED
- 2575 MULCH MATERIAL TYPE 1,2 TONS PER ACRE
- 2575 COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 500 LBS./ACRE ON ALL SEEDED AREAS
- 2575 ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENT +10% SEED MIXTURE NO. 600, 85 LBS. PER ACRE

NOTES

- ① INCLUDES ALL TYPES AND SIZES.
- ② INCLUDES ALL BITUMINOUS PAVEMENTS IRREGARDLESS OF DEPTH AND WIDTH.
- ③ INCLUDES ALL CONCRETE PAVEMENTS IRREGARDLESS OF DEPTH AND WIDTH.
- ④ MUNICIPAL STREET SIGNS.
- ⑤ FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
- ⑥ INCLUDES BIT. PATH AND DRIVEWAY (FOR DRIVEWAY CONST. SEE CHART E)
- ⑦ INCLUDES QUANTITY FOR ADDITIONAL 1/4" TO DESIGN PAVEMENT THICKNESS.
- ⑧ FOR TEMPORARY EROSION CONTROL AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

STATEMENT OF ESTIMATED QUANTITIES

REVISIONS
DATE BY
8-9-96

FILE NAME: P:\9108108\TAB-CH.DWG M.N. (08-08-96)

CLEARING AND GRUBBING (A)					
STATION	LOCATION	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
286+64	26' RT.	1		1	
286+92	28' RT.	1		1	
287+84	27' RT.	1		1	
288+05	28' RT.	1		1	
288+40	22' RT.	1		1	
288+59	26' RT.	1		1	
289+07	26' RT.	1		1	
290+07	26' RT.	1		1	
290+61	25' RT.	1		1	
291+58	26' RT.	1		1	
299+13	30' RT.	1		1	
299+37	30' RT.	1		1	
301+32	28' RT.	1		1	
301+42	30' RT.	1		1	
301+52	36' RT.	1		1	
301+55	32' RT.	1		1	
601+61	25' RT.	1		1	
302+35	24' RT.	1		1	
302+81	37' RT.	1		1	
302+84	38' RT.	1		1	
303+60	33' RT.	1		1	
303+60	23' RT.	1		1	
304+15	22' RT.	1		1	
304+15	27' RT.	1		1	
304+50	28' RT.	0		1	
308+48	23' RT.	1		1	
TOTAL		25		26	

ENTRANCES REMOVAL AND CONSTRUCTION CHART (E)														
STATION	ADDRESS	LOCATION	DESCRIPTION	REMOVAL LENGTH	INPLACE WIDTH	REPLACEMENT LENGTH	REPLACEMENT WIDTH	REMOVAL		REPLACEMENT		CONC. APRON SQ. YD.	BIT. APRON SQ. YD.	
								CONC. SQ. YD.	BIT. SQ. YD.	6" CONC. SQ. YD.	8" CONC. SQ. YD.			2" BIT. SQ. YD.
284+45		33' RT.	BITUMINOUS	22	22	20	15		55		8		11	11
285+23		33' LT.	BITUMINOUS	40	33	22	20		146				74	16
285+36		33' RT.	BITUMINOUS	22	20	15	20		54	11			9	11
286+20		33' RT.	BITUMINOUS	22	32	13	24		79	11			13	12
287+08		33' RT.	CONC & BIT	25	18	13	18	10	44	27			10	
* 287+14		33' LT.	GRAVEL	20	12				48	8			9	8
287+50		33' RT.	BITUMINOUS	24	15	13	15		152				50	9
287+70		45' LT.	BITUMINOUS	31	44	27	16		24	7			4	8
288+31		33' RT.	BITUMINOUS	25	10	13	12						7	8
289+04		33' LT.	GRAVEL	18	14	13	18		48	10			7	10
289+34		33' RT.	BITUMINOUS	24	18	13	18		48	7			12	7
289+80		33' RT.	BITUMINOUS	24	10	13	12		48	7			12	8
290+42		33' LT.	GRAVEL	17	12	15	12		33	7			18	8
290+80		33' RT.	BITUMINOUS	24	10	13	12	26		22			7	
291+68		33' LT.	CONC	18	12	15	12	26		22			7	
292+32		33' LT.	CONC	18	12	15	12		39				36	7
293+43		45' LT.	BITUMINOUS	29	11	26	12		89	14			10	11
294+88		33' RT.	BITUMINOUS	24	33	13	24							
298+32		33' RT.	GRAVEL	14	12	11	12			7			7	
298+40		33' LT.	CONC	10	12	14	12	18		21			9	
298+77		33' LT.	CONC	10	17	15	17	20		31			1	9
298+94		33' RT.	BITUMINOUS	15	16	10	16		32	9			3	9
300+15		33' RT.	BITUMINOUS	16	16	12	16		31	9				
301+10		33' RT.	GRAVEL	17	10	16	12			7				12
301+83		33' RT.	BITUMINOUS	17	22	16	22		48	12				
304+29		33' RT.	GRAVEL	19	15	15	15			8				
304+92		33' RT.	GRAVEL	19	12	16	12			7				
305+73		33' RT.	CONC	20	22	16	22	45		41			7	
306+59		33' RT.	BITUMINOUS	17	12	14	12		25	7			1	12
307+60		33' RT.	CONC	10	16	11	16	18		21			9	
TOTAL								163	995	334		258	56	176

* NO CONSTRUCTION REQUIRED

BITUMINOUS REMOVAL (B)			
STATION-STATION	LOCATION	DESCRIPTION	SQ. YD.
282+93 - 309+82	LT & RT	MAINLINE	8967
282+93 - 283+07	LT & RT	RT. TURN LINE	231
293+24	RT	BACON DRIVE	164
296+11	LT.	ARTHUR ST. N.E.	145
296+11	RT.	ARTHUR ST. N.E.	246
303+13	RT.	LAKE SIDE ROAD	133
309+76	RT.	STINSON BLVD.	80
* 21+45 - 129+45	LT & RT	ENTRANCES	995
TOTAL			10961

* SEE DRIVEWAY TABULATION CHART (E)

SAWING CONCRETE PAVEMENT (F)			
STATION	LOCATION	REMARKS	LIN. FT.
287+07	33' RT.	ENTRANCE #1360	18
291+68	33' LT.	ENTRANCE #	12
292+32	33' LT.	ENTRANCE #	12
298+39	33' LT.	ENTRANCE #1511	12
298+77	33' LT.	ENTRANCE #1545	17
305+73	33' RT.	ENTRANCE #1646	22
307+60	33' RT.	ENTRANCE #1670	16
TOTAL			109

RETAINING WALL REMOVAL (I)			
STATION	LOCATION	REMARKS	SQ. FT.
301+83	18' - 28' RT.	TIMBER	15
TOTAL			15

CONCRETE PAVEMENT REMOVAL (C)			
STATION	LOCATION	REMARKS	SQ. YDS.
287+07	33' RT.	ENTRANCE #1360	10
291+68	33' LT.	ENTRANCE #	26
292+32	33' LT.	ENTRANCE #	26
298+39	33' LT.	ENTRANCE #1511	18
298+77	33' LT.	ENTRANCE #1545	20
305+73	33' RT.	ENTRANCE #1646	45
307+60	33' RT.	ENTRANCE #1670	18
TOTAL			163

SAWING BITUMINOUS PAVEMENT (G)			
STATION	LOCATION	REMARKS	LIN. FT.
282+93	BEG. PRD.	CENTRAL AVE.	165
285+36	33' RT.	ENTRANCE #1326	20
286+20	33' RT.	ENTRANCE #1342	34
287+50	33' RT.	ENTRANCE #1376	15
288+31	33' RT.	ENTRANCE #1392	10
289+34	33' RT.	ENTRANCE #	18
289+80	33' RT.	ENTRANCE #1412	10
290+80	33' RT.	ENTRANCE #1424	10
291+25	33' RT.	ENTRANCE #1436	24
293+24	58' RT.	BACON DRIVE	30
296+11	51' LT.	ARTHUR ST.	31
298+94	33' RT.	ENTRANCE #1544	28
300+15	33' RT.	ENTRANCE #1564	16
301+83	33' RT.	ENTRANCE #1586	22
303+13	47' RT.	LAKESIDE ROAD	32
306+59	33' RT.	ENTRANCE #1658	10
309+82	END PRD.	STINSON BLVD.	83
TOTAL			574

BALE CHECK LOCATIONS (J)			
STATION	LOCATION	REMARKS	EACH
286+80	26' LT.		5
288+96	23' LT.		5
291+83	31' RT.		5
295+60	23' LT.		5
296+65	22' LT.		5
298+65	22' LT.		5
TOTAL			30

CULVERT PIPE REMOVAL (D)				
STATION	LOCATION	INPLACE	REMARKS	LIN. FT.
284+45	27' RT.	CMP	ENTRANCE #	30
285+23	34' RT.	CMP	ENTRANCE #	40
289+04	34' LT.	CMP	ENTRANCE #	30
290+40	33' LT.	CMP	ENTRANCE #	30
291+68	35' LT.	CMP	ENTRANCE #	30
292+32	36' LT.	CMP	ENTRANCE #	30
293+43	30' LT.	CMP	ENTRANCE #1435	30
291+25	33' RT.	CMP	ENTRANCE #1436	30
TOTAL				250

CONCRETE CURB & GUTTER REMOVAL (H)			
STATION	LOCATION	REMARKS	LIN. FT.
283+13	52' RT.	B-618	17
284+04	28' RT.	CURB	4
284+58	27' RT.	CURB	5
293+08	30' RT.	S-518	18
293+38	33' RT.	S-518	16
309+32	14' RT.	B-612	48
TOTAL			108

TABULATION CHARTS

- CLEARING AND GRUBBING
- BITUMINOUS REMOVAL
- CONCRETE REMOVAL
- CULVERT PIPE REMOVAL
- ENTRANCES CONSTRUCTION CHART
- SAWING CONCRETE PAVEMENT
- SAWING BITUMINOUS PAVEMENT
- CONCRETE CURB & GUTTER REMOVAL
- RETAINING WALL REMOVAL
- BALE CHECK LOCATIONS

REVISIONS	DATE	BY

FILE NAME: P:\0108108\TAB-CH-DWG.M.N. (08-08-96)

CONCRETE CURB & GUTTER CONSTRUCTION (K)

STATION - STATION	LOCATION	REMARKS	LIN. FT.
282+96 - 296+00	18' LT.	SPRING LAKE (B-618)	1349
283+15 - 293+07	18' RT.	FRIDLEY (B-618)	1040
293+40 - 295+95	18' RT.	FRIDLEY (B-618)	300
296+28 - 302+96	18' RT.	FRIDLEY (B-618)	700
296+29 - 299+48	18' LT.	SPRING LAKE (B-618)	342
299+48 - 309+82	18' LT.	FRIDLEY (B-618)	1034
303+32 - 309+63	18' RT.	FRIDLEY (B-618)	1364
TOTAL			6129

RETAINING WALL CONSTRUCTION (D)

STA. TO STA.	LOCATION	REMARKS	SQ. FT.
302+04 - 302+80	32' RT.		114
303+36 - 304+17	32' RT.		121
308+60 - 309+50	32' RT.		162
TOTAL			397

8" REINFORCED CONCRETE PATH (U)

STATION	LOCATION	REMARKS	SQ. YD.
283+03 - 283+84	63' - 35' LT	12' WIDE (SPRING LAKE)	115
301+26 - 302+14	40' - 60' LT	12' WIDE (FRIDLEY)	122
309+69	22' - 42' LT	12' WIDE (FRIDLEY)	22
TOTAL			259

SEE WATERMAIN CROSSING DETAIL SHEET (8)

BITUMINOUS PATH CONSTRUCTION (L)

STATION - STATION	LOCATION	REMARKS	SQ. FT.
283+84 - 285+09	33' LT.	SPRING LAKE	985
287+20 - 287+59	33' LT.	SPRING LAKE	318
287+75 - 288+97	33' LT.	SPRING LAKE	976
289+11 - 290+36	33' LT.	SPRING LAKE	1000
290+48 - 291+63	33' LT.	SPRING LAKE	920
291+74 - 292+25	33' LT.	SPRING LAKE	408
292+37 - 293+37	33' LT.	SPRING LAKE	800
293+49 - 295+94	33' LT.	SPRING LAKE	1960
296+34 - 298+33	33' LT.	SPRING LAKE	1592
298+45 - 298+68	33' LT.	SPRING LAKE	184
298+86 - 300+00	24' LT.	SPRING LAKE	972
300+00 - 301+26	40' LT.	FRIDLEY	1008
302+14 - 309+82	42' LT.	FRIDLEY	6154
TOTAL			17277

SILT FENCE (P)

STATION	LOCATION	REMARKS	LIN. FT.
219+50 - 292+50	32' RT.		100
300+50 - 309+82	37' - 76' LT.		1032
TOTAL			1132

RELOCATE HYDRANT (Q)

EXIST. LOCATION	REMARKS	EACH	PRDP. LOCATION
286+90	91' LT NO WORK REQUIRED		
289+19	22' RT NO WORK REQUIRED		
291+02	93' LT NO WORK REQUIRED		
293+02	36' RT	1	292+96 36' RT
295+84	35' RT	1	295+80 35' RT
302+83	26' RT	1	302+78 39' RT
309+53	19' RT	1	309+51 33' RT
TOTAL			4

RELOCATE CURB STOP & BOX (R)

EXIST. LOCATION	REMARKS	EACH	PRDP. LOCATION
299+96	19' RT	1	299+96 28' RT
301+29	25' RT	1	301+29 37' RT
302+19	22' RT	1	302+19 36' RT
305+43	27' RT	1	305+43 36' RT
TOTAL			4

ADJUST VALVE BOX-WATER (S)

STATION	LOCATION	REMARKS	EACH
391+13	34' RT	WITH HYDRANT	
296+00	40' RT	WITH HYDRANT	
302+93	23' RT	WITH HYDRANT	
309+49	10' LT	WITH HYDRANT	
395+83	7' RT	MAIN LINE	1
TOTAL			1

SALVAGE AND INSTALL SIGN SPECIAL (T)

STATION	LOCATION	REMARKS	SALVAGE	INSTALL
292+95	RT	STREET SIGN	1	1
295+85	LT	STREET SIGN	1	1
296+40	RT	STREET SIGN	1	1
302+40	RT	STREET SIGN	1	1
309+55	RT	STREET SIGN	1	1
TOTAL			5	5

CONCRETE SIDEWALK CONSTRUCTION (M)

STATION	LOCATION	REMARKS	SQ. FT.
283+34 - 284+38	28' RT		520
284+58 - 285+26	28' RT		340
285+46 - 286+07	28' RT		305
286+32 - 287+00	28' RT		340
287+17 - 287+43	28' RT		130
287+58 - 288+24	28' RT		330
288+37 - 289+25	28' RT		440
289+42 - 289+74	28' RT		160
289+86 - 290+74	28' RT		440
290+86 - 291+12	28' RT		130
291-37 - 293+00	28' RT		815
293+49 - 295+88	28' RT		1195
296+35 - 298+25	28' RT		950
298+39 - 298+85	28' RT		230
299+02 - 300+06	28' RT		470
300+22 - 301+05	28' RT		415
301+18 - 301+76	28' RT		290
301+96 - 302+83	28' RT		435
303+34 - 304+26	28' RT		460
304+39 - 304+95	28' RT		280
305+07 - 305+64	28' RT		285
305+87 - 306+54	28' RT		335
306+67 - 307+52	28' RT		425
307+68 - 309+52	28' RT		930
TOTAL			10650

CONCRETE PEDESTRIAN RAMPS (N)

STATION	LOCATION	REMARKS	EACH
282+98	63' LT	8' WIDE (SPRING LAKE)	1
283+34	28' RT	5' WIDE (FRIDLEY)	1
293+00	28' RT	5' WIDE (FRIDLEY)	1
293+48	28' RT	5' WIDE (FRIDLEY)	1
295+92	29' LT	8' WIDE (SPRING LAKE)	1
295+87	28' RT	5' WIDE (FRIDLEY)	1
296+35	28' RT	5' WIDE (FRIDLEY)	1
296+38	27' LT	8' WIDE (SPRING LAKE)	1
302+89	31' RT	5' WIDE (FRIDLEY)	1
303+32	31' RT	5' WIDE (FRIDLEY)	1
309+54	27' RT	5' WIDE (FRIDLEY)	1
309+69	18' LT	8' WIDE (FRIDLEY)	1
TOTAL			12

TURF ESTABLISHMENT (V)

STA. TO STA.	LOCATION	SOD SQ. YDS.	SEED ACRE	SEED POUND	FIBER BLANKET SQ. YDS.	FERTILIZER POUND
282+97 - 285+08	LT	333				
283+34 - 284+38	RT	162				
284+58 - 285+26	RT	73				
285+39 - 287+09	LT	297				
285+46 - 286+07	RT	65				
286+32 - 287+00	RT	73				
287+17 - 287+43	RT	29				
287+20 - 287+59	LT	267				
287+58 - 288+24	RT	70				
287+75 - 288+97	LT	323				
288+37 - 289+25	RT	96				
289+12 - 290+36	LT	332				
289+42 - 289+74	RT	33				
289+86 - 290+74	RT	96				
290+48 - 291+63	LT	303				
290+86 - 291+12	RT	28				
291-37 - 293+00	RT	190				
291+74 - 292+25	LT	134				
292+37 - 293+37	LT	264				
293+49 - 294+74	RT	150				
293+49 - 295+94	LT	556				
294+99 - 295+88	RT	130				
296+34 - 298+33	LT	530				
296+35 - 298+25	RT	229				
298+39 - 298+85	RT	52				
298+45 - 298+68	LT	25				
298+86 - 300+48	LT	147				
299+02 - 300+06	RT	87				
300+22 - 301+05	RT	102				
300+48 - 302+50	LT			6.2	533	37.5
302+50 - 305+50	LT		0.120	9.9		60.0
305+50 - 308+00	LT		0.092	7.6		46.0
308+00 - 309+82	LT			5.5	324	33.5
301+18 - 301+76	RT	94				
301+96 - 302+83	RT	122				
303+34 - 304+26	RT	132				
304+39 - 304+95	RT	76				
305+07 - 305+64	RT	90				
305+87 - 306+54	RT	125				
306+67 - 307+52	RT	98				
307+68 - 309+52	RT	164				
TOTAL		5977	0.212	29.20	857	177.0

TABULATION CHARTS

- CONCRETE CURB & GUTTER CONSTRUCTION
- BITUMINOUS PATH CONSTRUCTION
- CONCRETE SIDEWALK CONSTRUCTION
- CONCRETE PEDESTRIAN RAMPS
- RETAINING WALL CONSTRUCTION
- SILT FENCE
- RELOCATE HYDRANT
- RELOCATE CURB STOP & BOX
- ADJUST VALVE BOX-WATER
- SALVAGE AND INSTALL SIGN SPECIAL
- TURF ESTABLISHMENT

REVISIONS	DATE	BY

FILE NAME: P:\9108108\TAB-CH.DWG M.N. (08-08-96)

STORM SEWER TABULATION

(AA)

STRUCT.	STATION	LDC	REMARKS	MH/CB	DESIGN	PAY HT. LIN. FT.	TOP OF CASTING ELEVATION	OUTLET ELEVATION	RE-CONST. LIN. FT.	FURNISH AND INSTALL					DRAINS TD	GRADE IN%	PIPE LOWER ELEVATION
										CASTING ASSEMBLY	12" RCP LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	21" RCP LIN. FT.			
201	307+80	16.9'	LT	CB	G	3.78	909.19	905.19		A	34				202	1.00	904.85
202	307+80	16.9'	RT	CB	F	5.00	910.07	904.85		A		190			204	0.96	903.03
203	305+90	16.9'	LT	CB	G	3.79	907.37	903.37		A	34				204	1.00	903.03
204	305+90	16.9'	RT	CB	F	5.65	908.89	903.03		A		115			205	0.39	902.58
205	304+75	16.9'	RT	CB	F	4.95	907.74	902.58		A		100			207	0.39	902.19
206	303+75	16.9'	LT	CB	G	3.78	906.53	902.53		A		34			207	1.00	902.19
207	303+75	16.9'	RT	CB	G	4.41	906.82	902.19		A		225			208	0.57	900.91
208	301+50	16.9'	RT	CB	F	5.12	906.24	900.91		A		195			210	0.57	899.80
209	299+55	16.9'	LT	CB	G	3.78	905.76	901.76		A	34				210	5.76	899.80
210	299+55	16.9'	RT	CB	G	4.34	904.35	899.80		A			95		213	0.44	899.38
211	298+65	22.0'	LT	CB	H	3.16	904.22	901.18		B	5				212	4.00	900.98
212	298+60	16.9'	LT	CB	G	3.78	904.98	900.98		A	34				213	4.71	899.38
213	298+60	16.9'	RT	CB	G	4.03	903.62	899.38		A			195		216	0.45	898.50
214	296+65	16.9'	LT	CB	G	4.58	903.84	899.38		B	5				215	4.00	899.18
215	296+65	22.0'	LT	CB	G	3.73	903.13	899.18		A	34				216	2.00	898.50
216	296+65	16.9'	RT	CB	G	4.13	902.85	898.50		A			105		219	0.55	897.92
217	295+60	23.0'	LT	CB	H	4.12	902.54	898.54		B	6				218	4.67	898.26
218	295+60	16.9'	LT	CB	G	3.85	902.33	898.26		A		34			219	1.00	897.92
219	295+60	16.9'	RT	CB	G	4.21	902.35	897.92		A				377	221	0.35	896.60
220	291+83	31.0'	RT	CB	H	4.12	902.03	898.03		B	14				221	2.50	898.38
221	291+83	16.9'	RT	CB	F	6.72	903.54	896.60		A				287	224	0.35	895.60
222	288+96	23.0'	LT	CB	H	4.23	902.54	898.43		B	6				223	2.00	898.31
223	288+96	16.9'	LT	CB	G	3.78	902.31	898.31		A		34			224	1.00	897.97
224	288+96	16.9'	RT	CB	F		902.45	895.60		A				13	225	0.60	895.52
225	288+84	12.0'	RT	MH	F	7.21	902.61	895.52		C				409	229	0.58	893.15
226	286+80	26.1'	LT	CB	H	4.12	901.99	897.99		B	4				3	4.00	897.83
227	284+75	24.9'	LT	CB	G	3.78	901.61	897.61		A		7			228	1.00	897.83
228	284+82	21.8'	LT	MH	F	9.93	901.75	891.60		C					3		
229	284+75	16.9'	RT	CB	F	8.41	901.78	893.15		A				172	230	0.70	891.89
230	283+02	16.9'	LT	MH	F	11.13	902.87	891.95		C							
3	286+80	23.0'	LT	MH	INPL		903.25		5.50	C					4		
4	288+79	21.2'	LT	MH	INPL		903.35		5.95	C					5		
5	288+81	18.8'	RT	MH	INPL		903.32		6.05	C							
224	288+96	16.9'	RT	CB	F	9.66	902.45	892.57					16		5	11.62	890.71
229	284+75	16.9'	RT	CB			901.78	893.15					39		228	3.97	891.60
TOTAL						153.27				17.50	33	210	973	411	1258		

G	59.77
F	73.77
H	19.73

SANITARY MANHOLES TABULATION

(BB)

STATION	LDC	OWNERSHIP	INPLACE ELEV.	INPLACE RING	PROPOSED ELEV.	PROPOSED RING	TYPE OF CONNECT SECTION	MH. IN WHEEL TRACK	BOTTOM OF RECONST. ELEV.	CASTING HIGHT	RECONST. HIGHT	REMARKS	
284+99	23'	RT	FRIDLEY	901.99	1.0	902.48	1.49	CONCENTRIC	NO	ADJUST	0.58		
288+25	23'	RT	FRIDLEY	902.83	2.7	903.23	3.10	CONCENTRIC	NO	896.13	0.58	6.52	
291+45	23'	RT	FRIDLEY	903.44	2.0	904.04	2.60	CONCENTRIC	NO	897.44	0.58	6.02	
296+10	15'	RT	FRIDLEY	903.79	1.5	902.72	0.43	CONCENTRIC	NO	ADJUST	0.58		
299+80	9'	RT	FRIDLEY	905.44	2.0	904.17	0.73	ECCENTRIC	YES	899.44	0.58	4.15	
300+90	26'	LT	FRIDLEY	905.89	1.0	906.58	1.69	CONCENTRIC	NO	ADJUST	0.58		
302+88	19'	LT	FRIDLEY	907.27	1.8	907.78	2.31	CONCENTRIC	NO	901.47	0.58	5.73	
306+42	4'	RT	FRIDLEY	909.92	1.8	908.62	0.50	ECCENTRIC	YES	904.12	0.58	3.92	
308+07	5'	RT	FRIDLEY	911.10	2.7	910.38	1.98	CONCENTRIC	NO	904.40	0.58	5.40	
TOTAL											31.72		

DRAINAGE CASTING SCHEDULE

(CC)

ASS'Y TYPE	NO REQ'D	FRAME CASTING	GRATE CASTING	CURB BOX CASTING	RING CASTING	COVER CASTING
A	21	801	810	821-B		
B	6				700-7	720
C	6				700-7	716
TOTAL		33				

TABULATION CHARTS

CULVERT TABULATION
STORM SEWER TABULATION
DRAINAGE CASTING SCHEDULE

FILE NAME: P:\91081081TAB-CH-DWG M.N. (08-08-96)

REVISIONS	BY	DATE

EARTHWORK SUMMARY (W)

EXCAVATION

COMMON EXCAVATION . . . 8,327 CU.YD. } REGULAR . . . 4,604 CU.YD. ①
} SUBCUT . . . 3,785 CU.YD.
} TOPSOIL . . . 1,400 CU.YD.

BALANCE

TOPSOIL
 TOPSOIL DRESSING (CV) - [TOPSOIL STRIPPING (EV) × SHRINKAGE FACTOR] = EXCESS(-) OR SHORTAGE(+)
 1,749 - (1,400 × 0.85) = 559 CU.YD. SHORTAGE

SELECT GRANULAR BORROW
 SEL.SGRAN(CV)+SUBCUT - [REGULAR EXCAVATION (EV) × SHRINKAGE FACTOR] - [SUBCUT EXCAVATION × SHRINKAGE FACTOR] = EXCESS(-) OR SHORTAGE(+)
 1,785 + 3,785 - [(4,604 + 1,462) × 0.85] - (3,785 × 0.90) = -507 CU.YD. EXCESS

EMBANKMENT (CV)

SELECT GRANULAR . . . 1,785 CU.YD.
 SUBCUT . . . 3,785 CU.YD.
 TOPSOIL . . . 1,749 CU.YD.

SOIL FACTORS:

- (1) REGULAR GRADING AND TOPSOIL DRESSING (EV TO CV): 85% SHRINKAGE
- (2) SUBCUT COMPACTION (EV TO CV): 90% SHRINKAGE
- (3) SELECT GRANULAR BORROW (CV TO LV): 120% SWELL

① INCLUDES 1,462 CU.YD. CONCRETE AND BITUMINOUS REMOVAL. CONCRETE AND BITUMINOUS PAVEMENT REMOVALS WILL BE PAID UNDER ITEM 2104.

SOILS AND CONSTRUCTION NOTES:

1. TOP OF GRADING GRADE IS DEFINED AS THE BOTTOM OF THE AGGREGATE BASE.
2. IN FILL AREAS, THE SUBGRADE SHALL BE CONSTRUCTED WITH SELECTED GRADING MATERIAL.
3. SELECTED GRADING MATERIALS SHALL CONSIST OF SELECT GRANULAR MATERIALS.
4. GRANULAR MATERIAL, REGARDLESS OF SOURCE, SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B.
5. COMPACTION OF THE GRADING PORTION OF THIS PROJECT SHALL BE BY THE "SPECIFIED DENSITY METHOD".
6. TEST ROLLING WILL NOT BE REQUIRED.
7. BITUMINOUS OR CONCRETE ITEMS REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE EITHER RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF 2104.3C3 WITH NO DIRECT COMPENSATION MADE THEREFORE.
8. DISPOSITION OF EXCESS EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 2105.3D WITH NO DIRECT COMPENSATION THEREFORE.
9. WHERE MATCHING INTO THE INPLACE ROADWAY AT THE ENDS OF CONSTRUCTION, CUT VERTICALLY TO THE TOP OF THE GRADING GRADE, AND THEN AT A 20:1 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
10. WHERE CONNECTING NEW SURFACING TO AN INPLACE PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING THE INPLACE PAVEMENT.
11. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES PRIOR TO PLACING BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING CONCRETE OR BITUMINOUS SURFACES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT UNIFORM RATE OF 0.03 TO 0.05 GALLONS PER SQUARE YARD BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE FOR UNDILUTED EMULSION (AS SUPPLIED FROM THE REFINERY); ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357.
12. COMPACTION OF ALL OF THE BITUMINOUS COURSES SHALL BE BY THE "MODIFIED SPECIFIED DENSITY METHOD".
13. COMPACTION OF THE AGGREGATE BASE LAYERS SHALL BE BY THE "SPECIFIED DENSITY METHOD".
14. PLACE MINIMUM 4 INCHES TOPSOIL OR SLOPE DRESSING ON ALL AREAS DISTURBED BY CONSTRUCTION AND SCHEDULED FOR PERMANENT TURF ESTABLISHMENT. FERTILIZE WITH COMMERCIAL FERTILIZER, ANALYSIS 10-10-10, AT A RATE OF 500 POUND PER ACRE.
15. USE MIXTURE 600 SEED AND TYPE 1 MULCH OR EROSION BLANKET IN AREAS TO BE SEEDED.
16. SOD ALL DISTURBED LAWNS.
17. ALL SOD UTILIZED WITHIN THE PROJECT LIMITS SHALL MEET THE REQUIREMENTS OF SPEC. 3878.2C (SALT RESISTANT SOD).
18. ORGANIC AND NONGRANULAR EXCAVATED MATERIAL MAY BE USED IN EMBANKMENT CONSTRUCTION IN AREAS OUTSIDE OF A 1 1/2:1 SLOPE FROM THE BACK OF CURB, OR GRADING P.I.
19. BITUMINOUS REMOVAL QUANTITY BASED ON SQUARE YARDS REMOVED. IN PLACE SURFACE ASSUMED TO BE 5 INCH IN DEPTH (2" BIT. ENT.). CONTRACTOR SHALL INVESTIGATE AND MAKE OWN DETERMINATION OF ACTUAL PAVEMENT DEPTH.
20. ALL EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF GRADING OPERATIONS.

BASE AND BITUMINOUS QUANTITIES CHART (X)

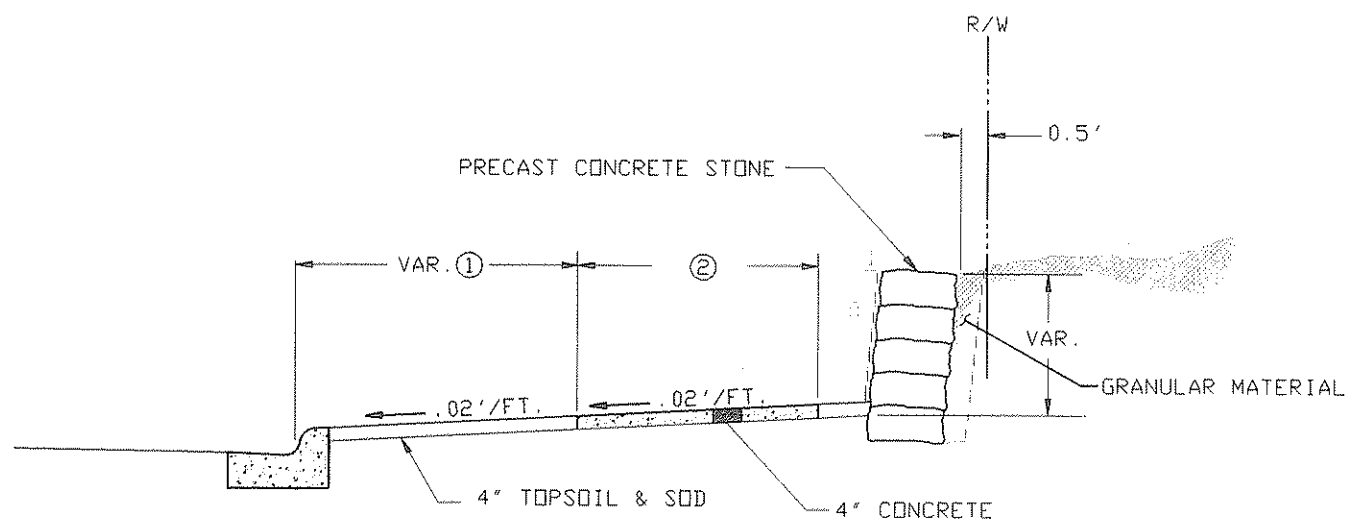
STATION - STATION	LOCATION	DESCRIPTION	BIT. SURFACE CONSTRUCTION		BIT. WEAR		BIT. BINDER		BIT. BASE		BITUMINOUS TACK COAT	AGGREGATE BASE CL-5A
			SG. YD.	DEPTH	TON	DEPTH	TON (1)	DEPTH	TON (1)	GALLON	DEPTH	CU. YD.
282+93 - 309+82	12' LT & RT	MAIN LINE	7170.50	1.50'	591.58	2.25'	887.37	2.75'	1084.56	717.07	5'	995.93
282+93 - 287+24	6' RT	SHOUL DER	215.50	1.50'	17.78	2.25'	26.67	2.75'	32.52	21.55	5'	51.00
282+93 - 287+24	14' LT	LEFT TURN LINE	618.00	1.50'	50.99	2.25'	76.48	2.75'	93.47	61.80	5'	106.92
287+24 - 309+82	6' LT	SHOUL DER	1129.00	1.50'	93.14	2.25'	139.71	2.75'	170.76	112.90	5'	267.27
287+24 - 309+82	6' RT	SHOUL DER	1129.00	1.50'	93.14	2.25'	139.71	2.75'	170.76	112.90	5'	267.27
292+77 - 293+70	47' RT	BACON DR.	153.00	1.50'	12.62	2.25'	23.49	2.75'	23.14	15.30	5'	25.90
295+69 - 296+59	51' LT	ARTHUR N.E.	189.00	1.50'	15.59	2.25'	29.38	2.75'	28.59	18.90	5'	30.90
295+65 - 296+58	48' RT	ARTHUR N.E.	189.00	1.50'	15.59	2.25'	29.38	2.75'	28.59	18.90	5'	30.90
302+50 - 303+50	47' RT	LAKESIDE RD.	161.00	1.50'	13.28	2.25'	25.15	2.75'	24.35	16.10	5'	26.23
309+34 - 309+82	47' RT	STINSON BLVD.	82.00	1.50'	6.77	2.25'	13.20	2.75'	12.40	8.20	5'	13.69
			11036.00		910.48		1391.00		1669.22	1103.62		1816.00

① INCLUDES AN ADDITIONAL 1/4" THICKNESS TO THE PLANNED QUANTITY.

REVISIONS	BY	DATE
DATE		

PRECAST CONCRETE STONE RETAINING WALL DETAIL

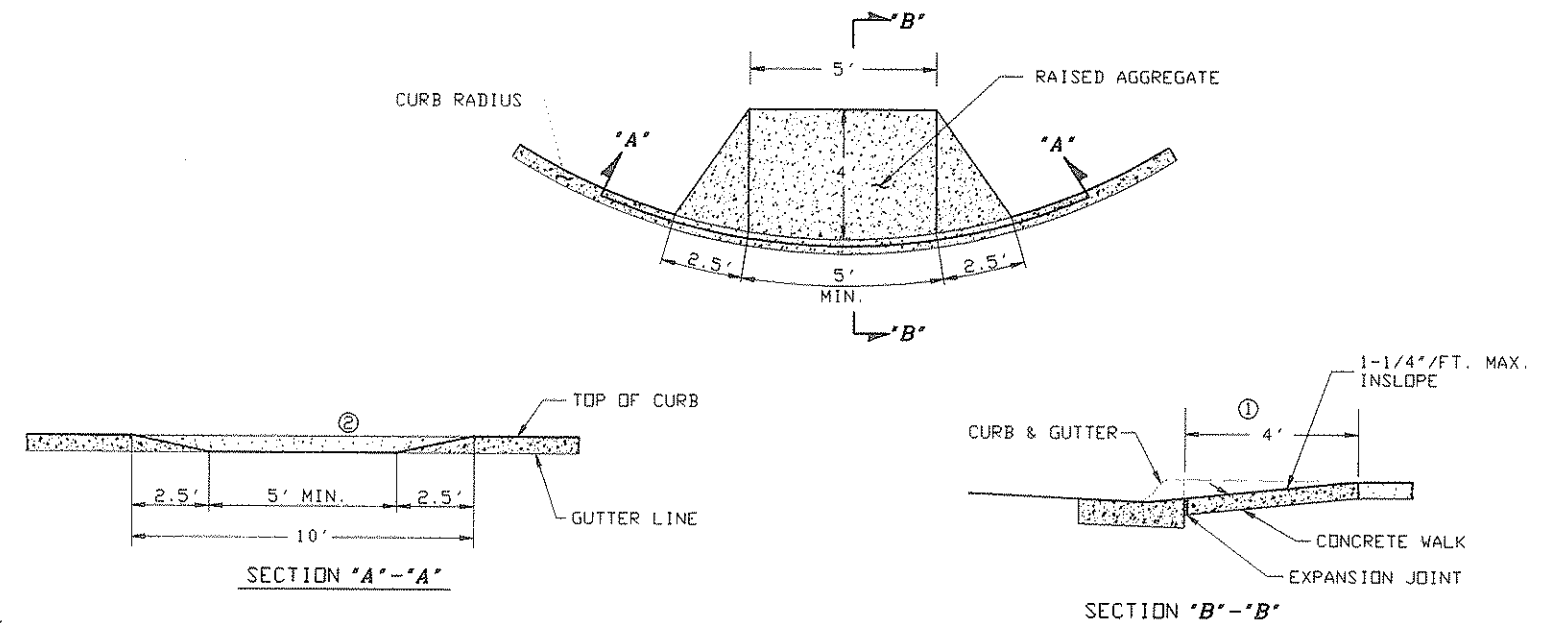
FOR LOCATION SEE CHART D, SHEET 4.



- ① SEE PLANS AND X-SECTION FOR BOULEVARD WIDTHS.
- ② 5' CONC. SIDEWALK

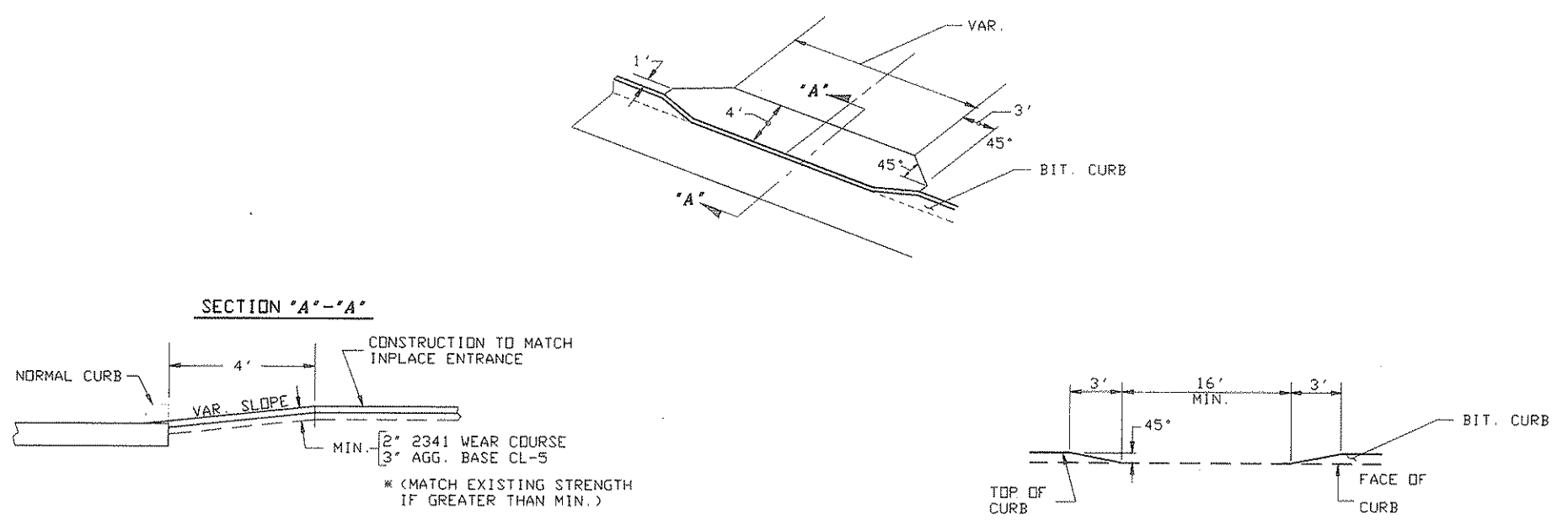
PEDESTRIAN RAMP DETAIL

FOR LOCATION SEE CHART N, SHEET 4.



- NOTE:
- ① MINIMUM DIMENSION - MAY INCREASE TO ACHIEVE DESIRED SLOPE.
 - ② 4' MIN. VALLEY FROM GUTTER LINE SHOULD HAVE A SMOOTH TRANSITION TO ACCOMMODATE WHEELCHAIR PEDESTRIAN.

BITUMINDOUS APRON DETAIL



* (MATCH EXISTING STRENGTH IF GREATER THAN MIN.)

ALL OTHER APRONS PER STANDARD PLATES 7035

STANDARD DETAILS

REVISIONS	DATE	BY

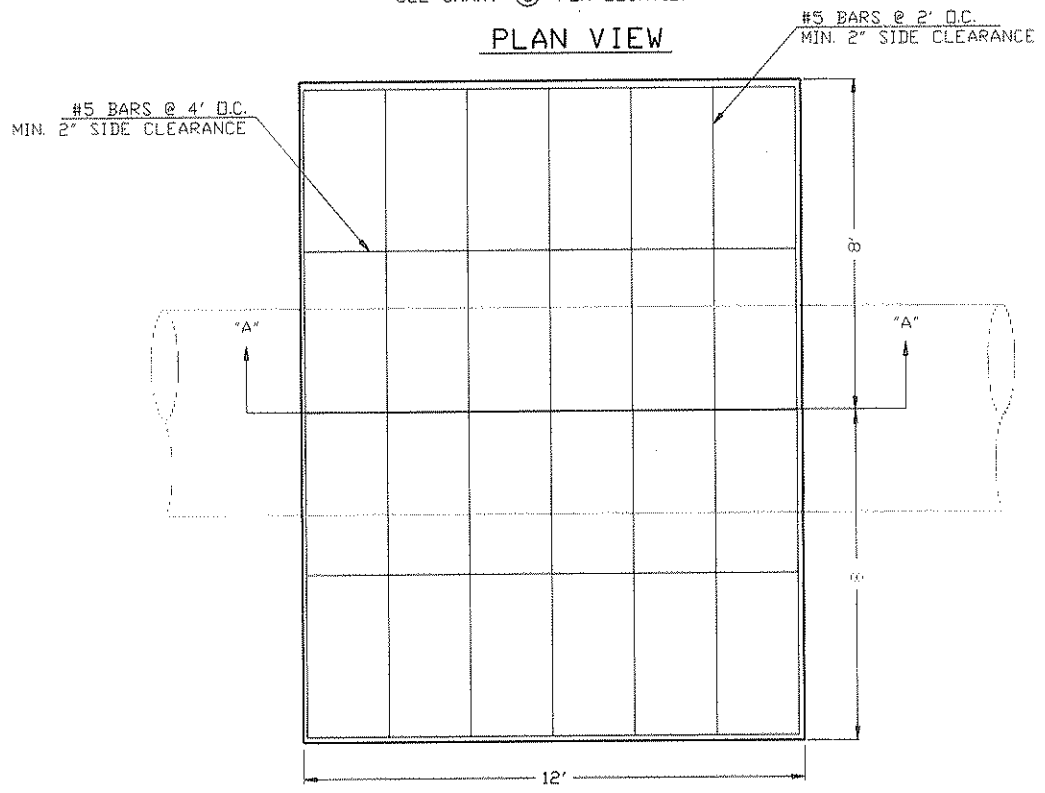
FILE NAME: P:\9108108\TAB-CHLOWG M.N. (08-08-96)

WATERMAIN CROSSING DETAIL
(8' CONCRETE PATH)

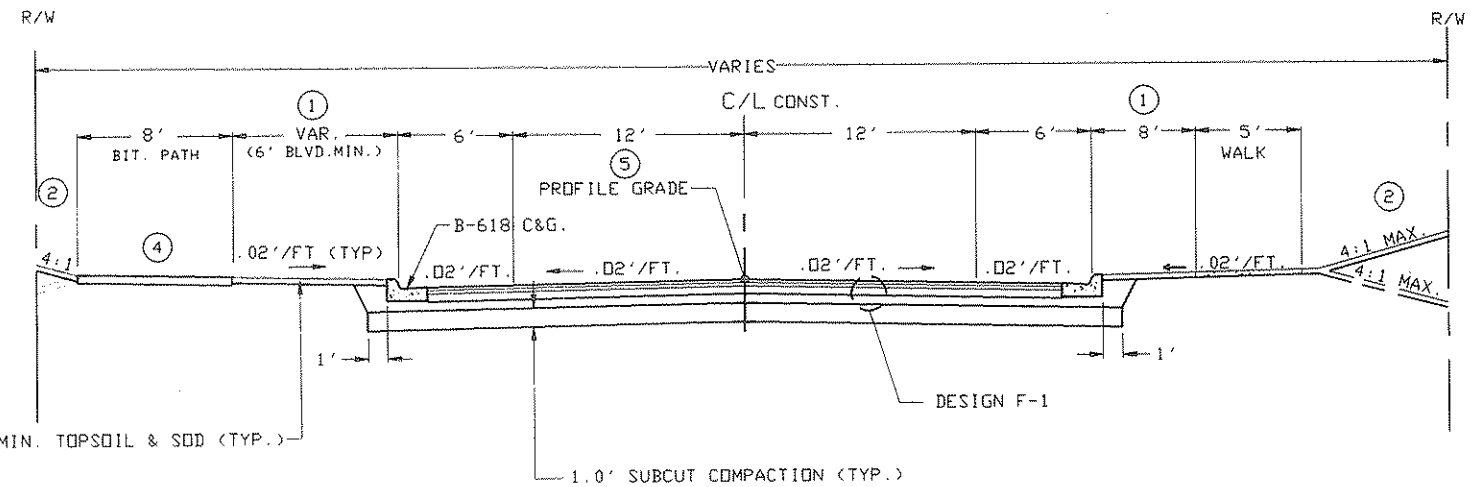
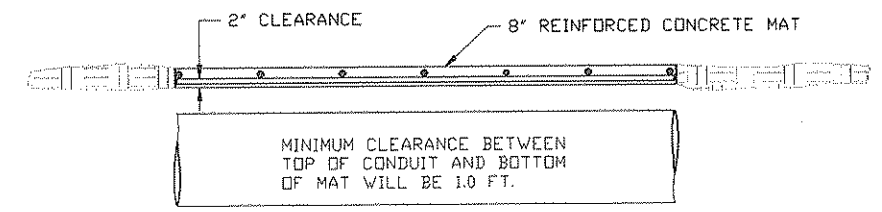
SEE CHART ① FOR LOCATION

OSBORNE ROAD (C.R. 108)-MAINLINE

(STA. 287+24 TO STA. 319+82)

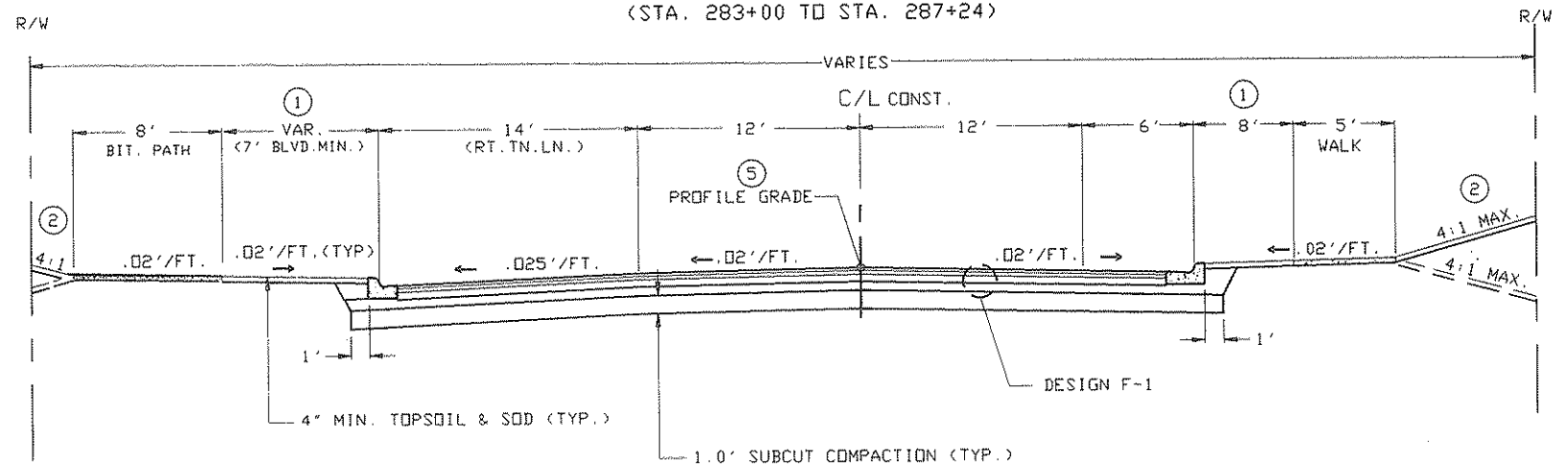


SECTION "A"-"A"



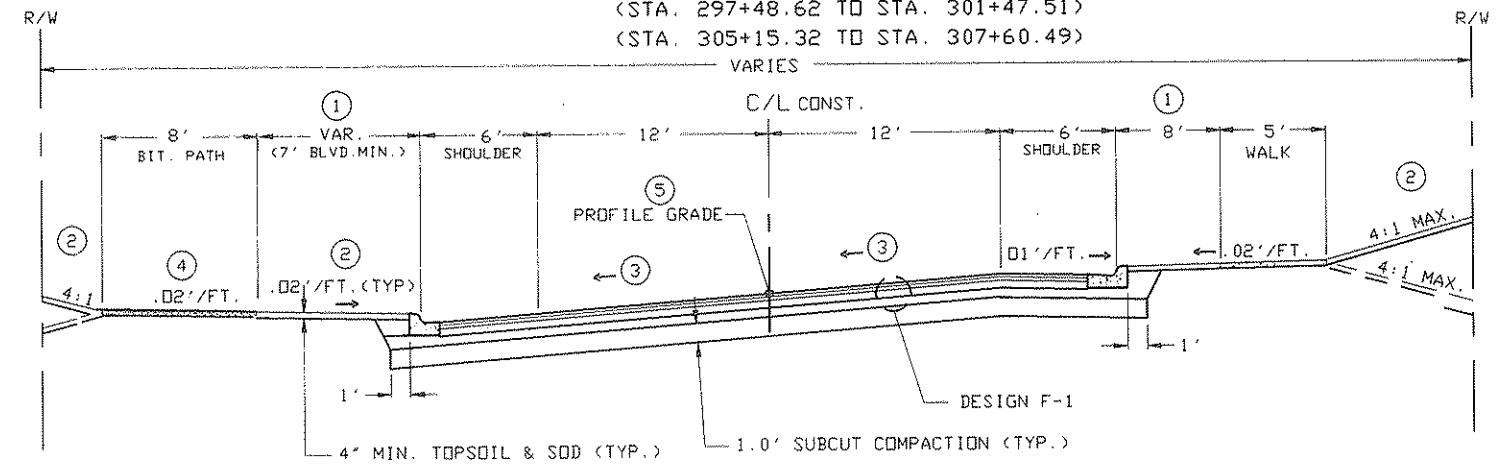
OSBORNE ROAD (C.R. 108)-TURN LANE

(STA. 283+00 TO STA. 287+24)



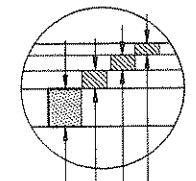
OSBORNE ROAD (C.R. 108)- SUPER ELEVATION

(STA. 297+48.62 TO STA. 301+47.51)
(STA. 305+15.32 TO STA. 307+60.49)



DESIGN F-1

ALL TRAVEL LANES & SHOULDERS



- 1-1/2" TYPE 41 WEARING COURSE-SPEC. 2340
BITUMINOUS MIXTURE DESIGNATION: 41WEA500SSY
- 2" TYPE 41 OR 42 BINDER COURSE-SPEC. 2340
BITUMINOUS MIXTURE DESIGNATION: 31BIB50000Y
- 2 1/2" TYPE 31 OR 32 BASE COURSE-SPEC 2340
BITUMINOUS MIXTURE DESIGNATION: 41BBB50000Y
- 5' AGGREGATE BASE CLASS 5A-SPEC. -2211
- TACK COAT-SPEC. 2357, TO BA APPLIED BETWEEN ALL BITUMINOUS LIFTS.

GENERAL NOTES

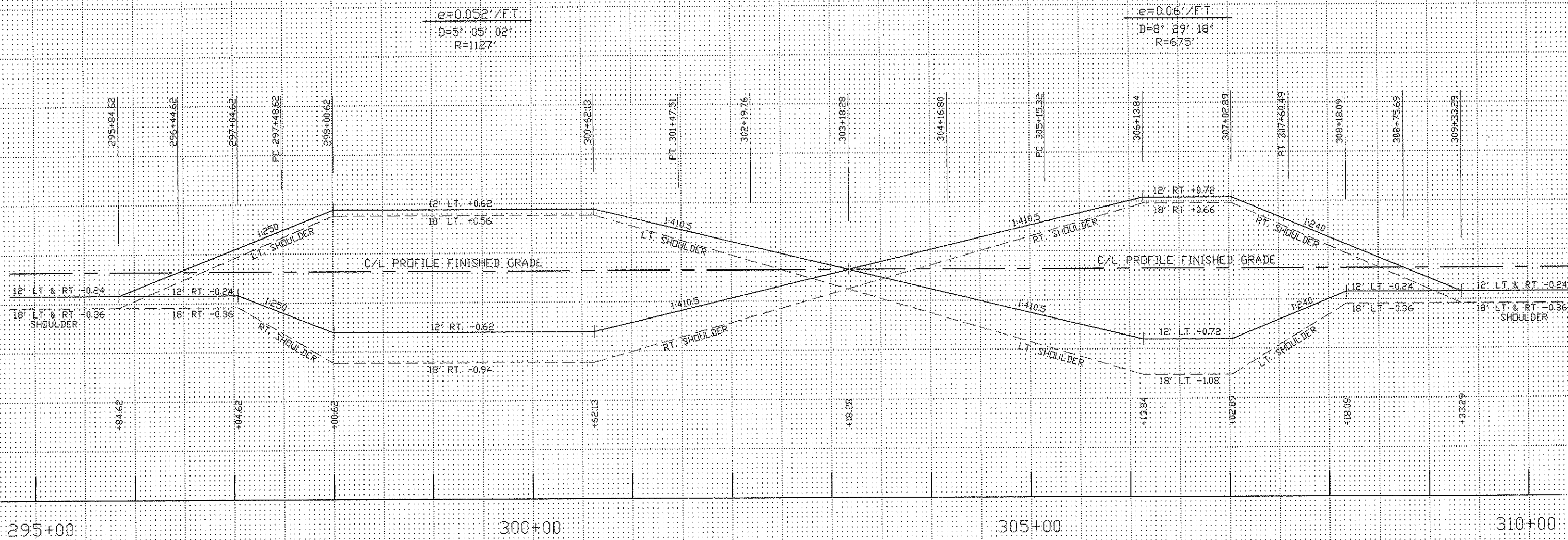
- ① 1.5' OBSTACLE FREE ZONE REQUIRED FROM FACE OF CURB.

- ① SEE PLAN PROFILE AND CROSS SECTIONS FOR MODIFIED BLVD. WIDTH AND SLOPE.
- ② SEE CROSS SECTIONS FOR MODIFIED BACKSLOPES.
- ③ SEE SUPERELEVATION CHART FOR MODIFIED CROSS SLOPES
- ④ SEE CROSS SECTION FOR LOCATION AND SLOPE.
- ⑤ PROFILE GRADE IS THE SAME AS FINISH GRADE.

TYPICAL SECTIONS

REVISIONS	DATE	BY

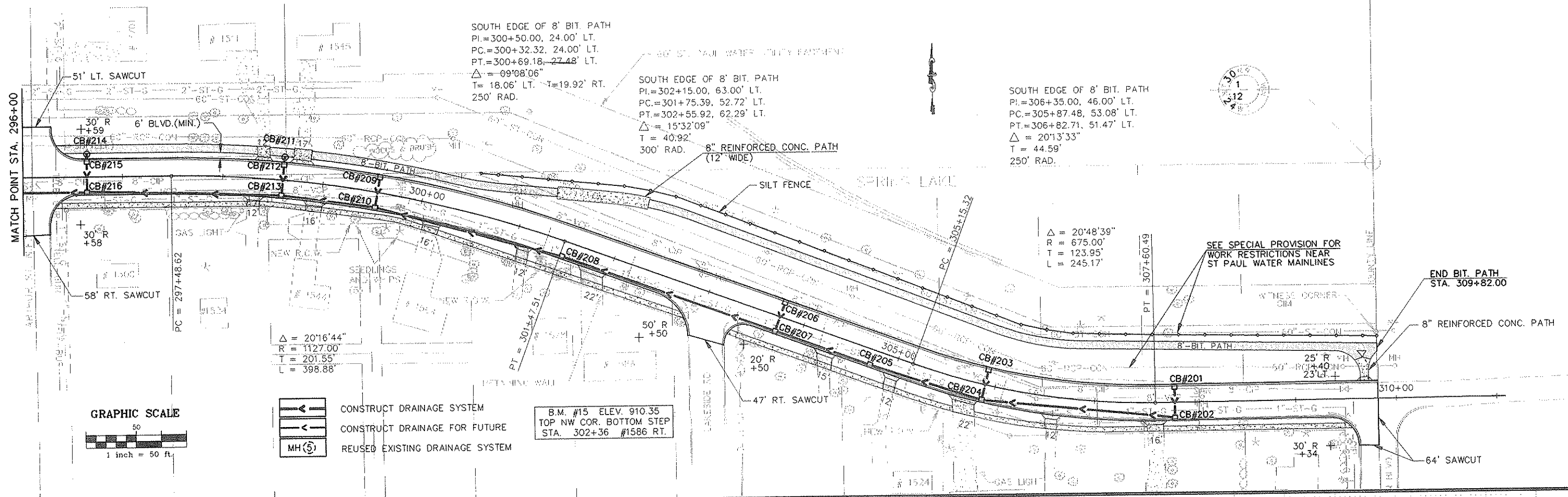
SUPERELEVATION CHART
DESIGN SPEED 45 MPH



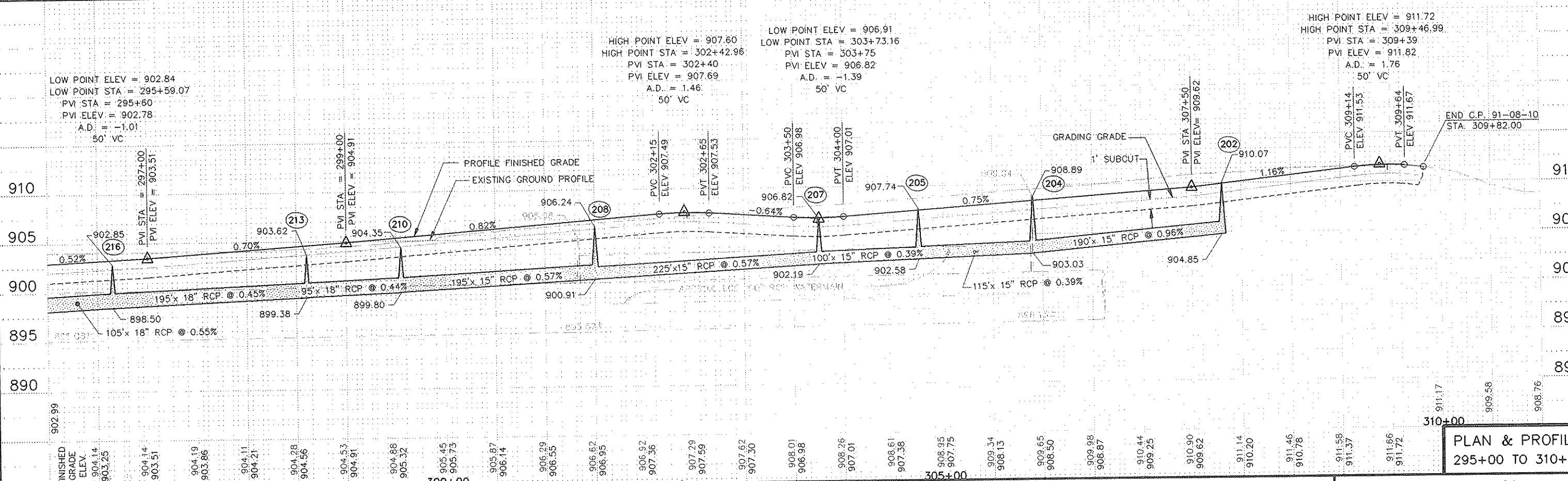
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REVISIONS	DATE	BY

SUPERELEVATION CHART

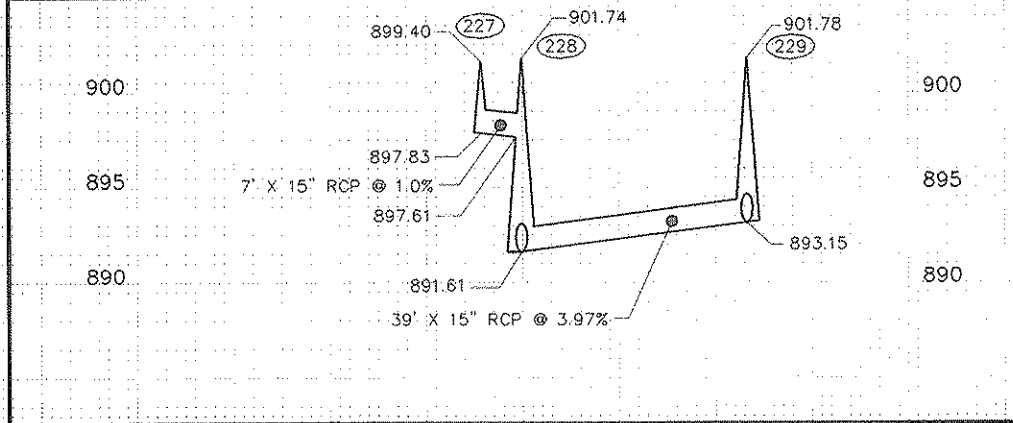
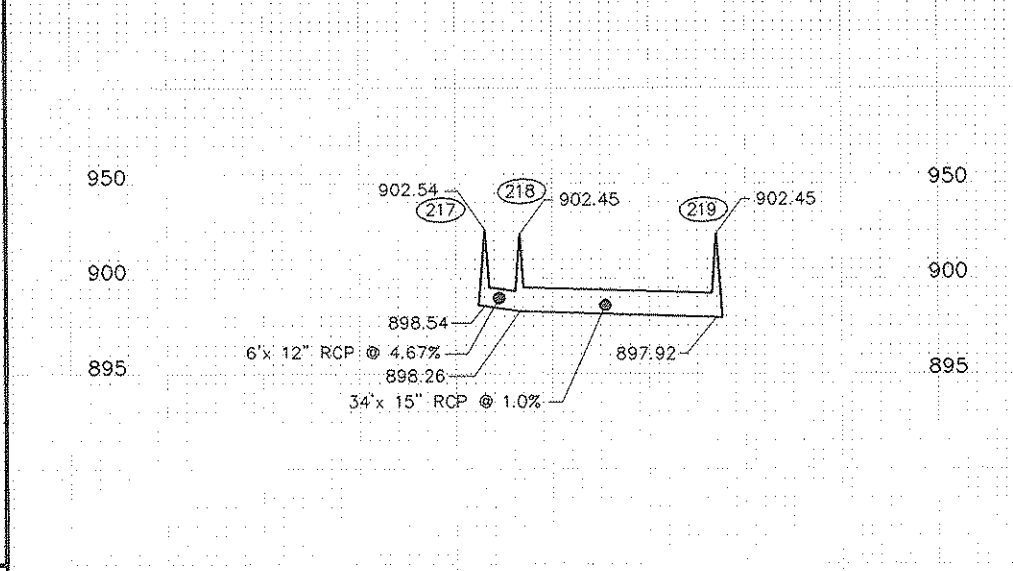
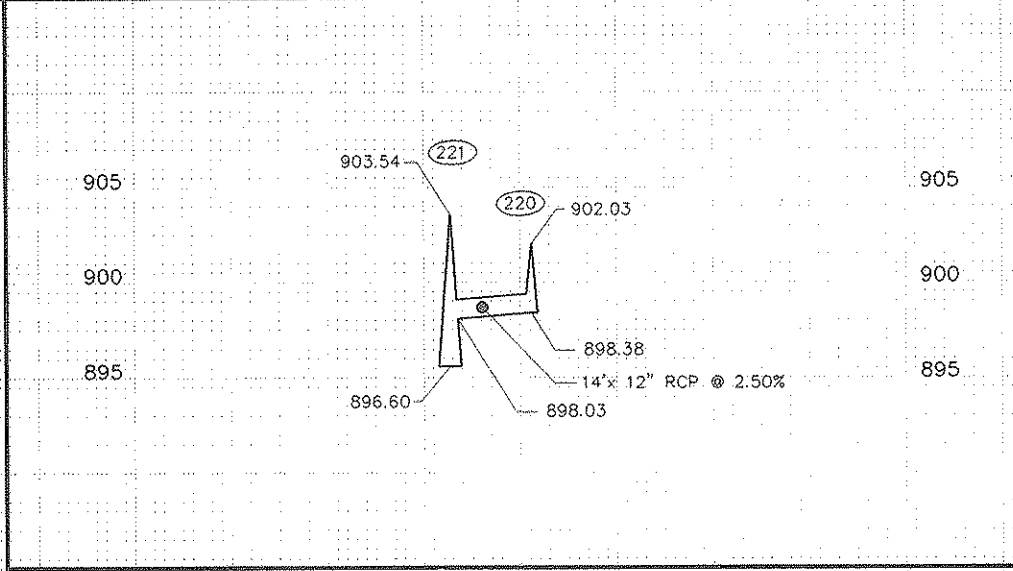
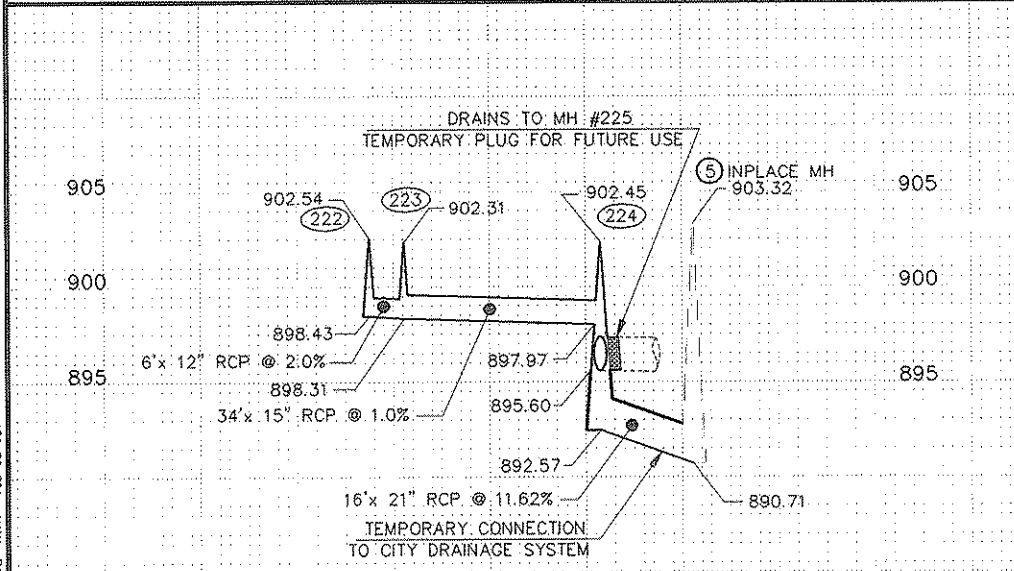
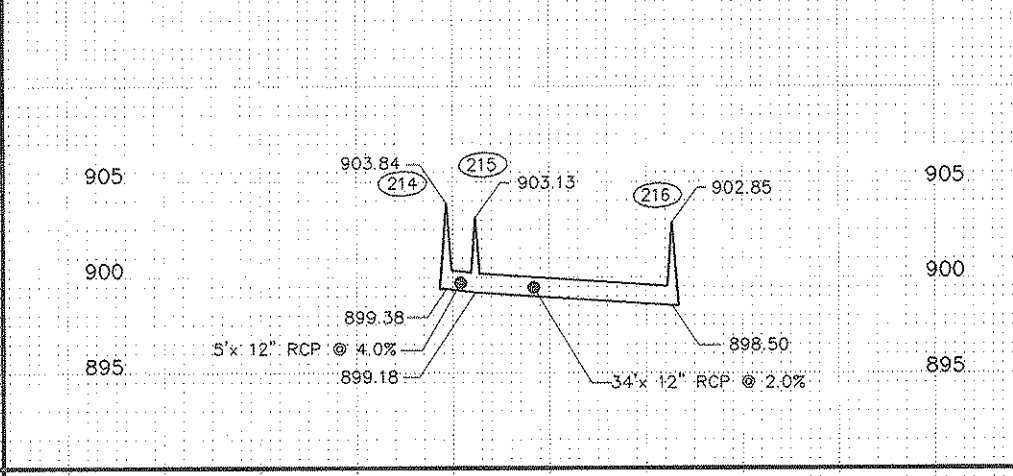
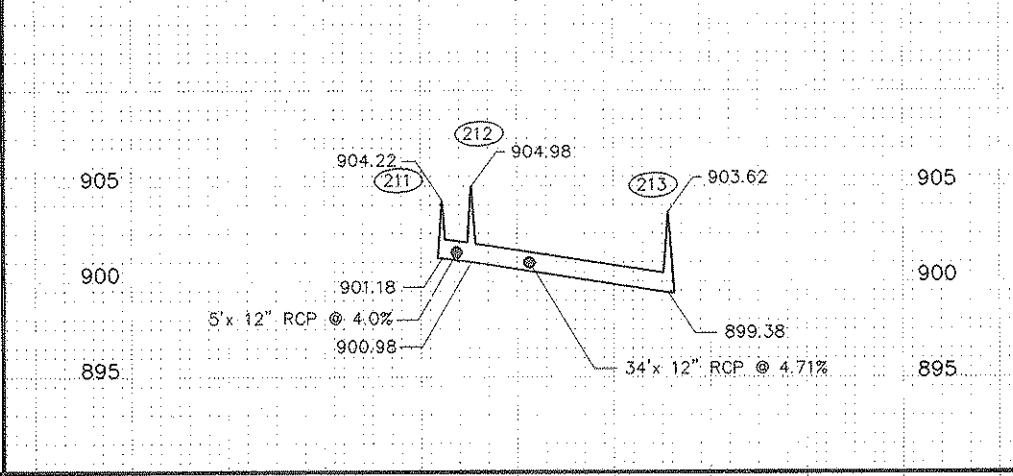
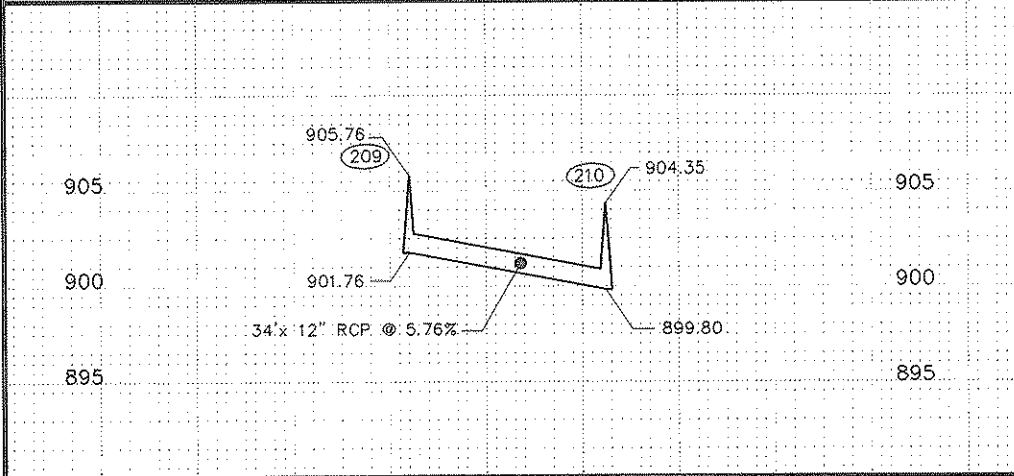
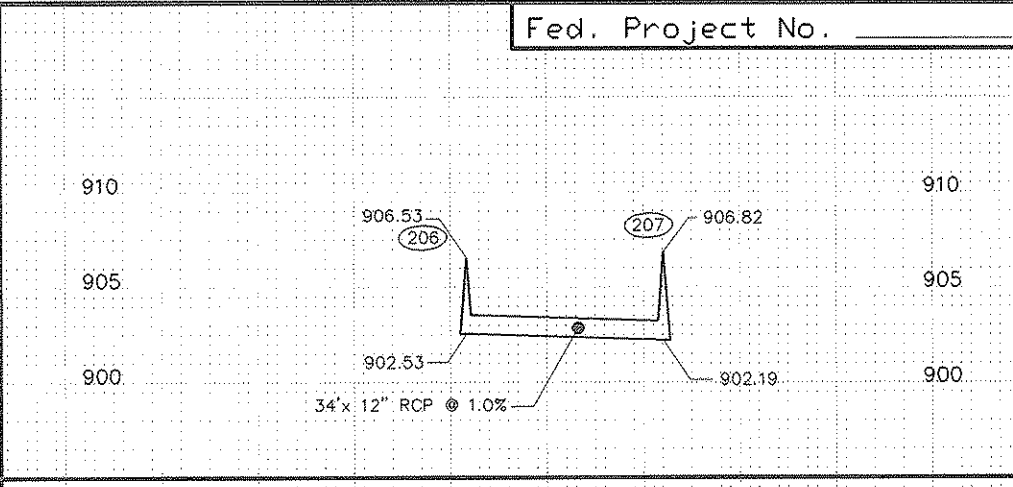
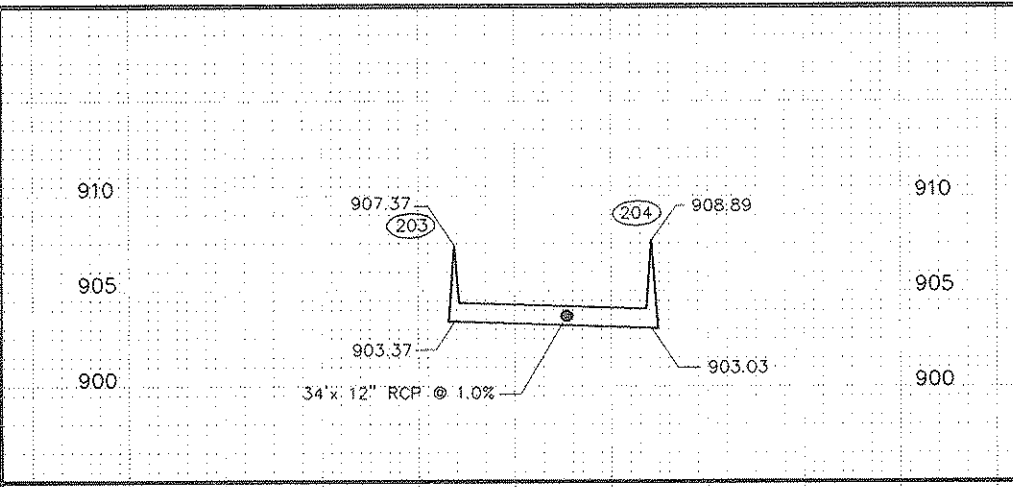
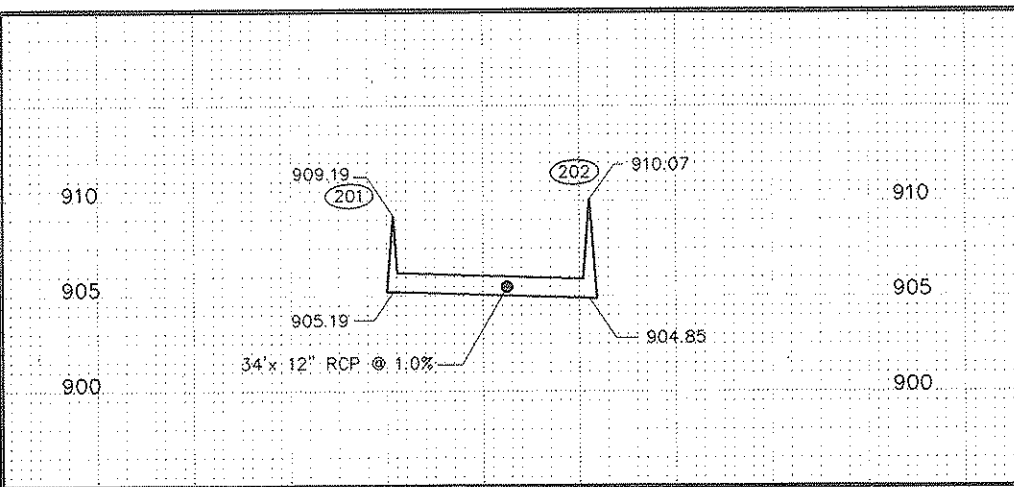


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REVISIONS	DATE	BY
1	8-9-96	[Signature]

PLAN & PROFILE
 295+00 TO 310+00

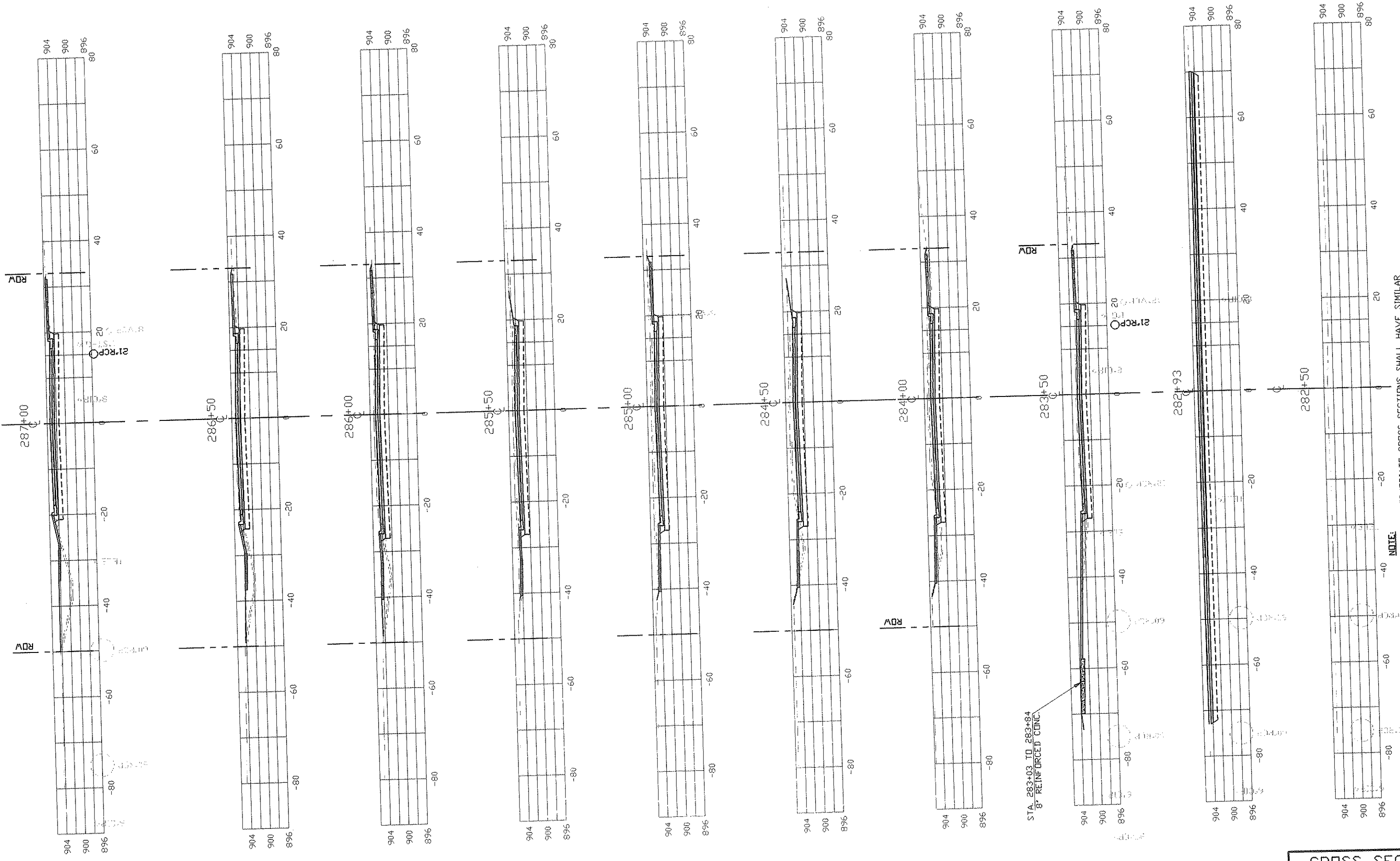


REVISIONS	DATE	BY

STORM SEWER
LATERALS

REVISIONS	DATE	BY

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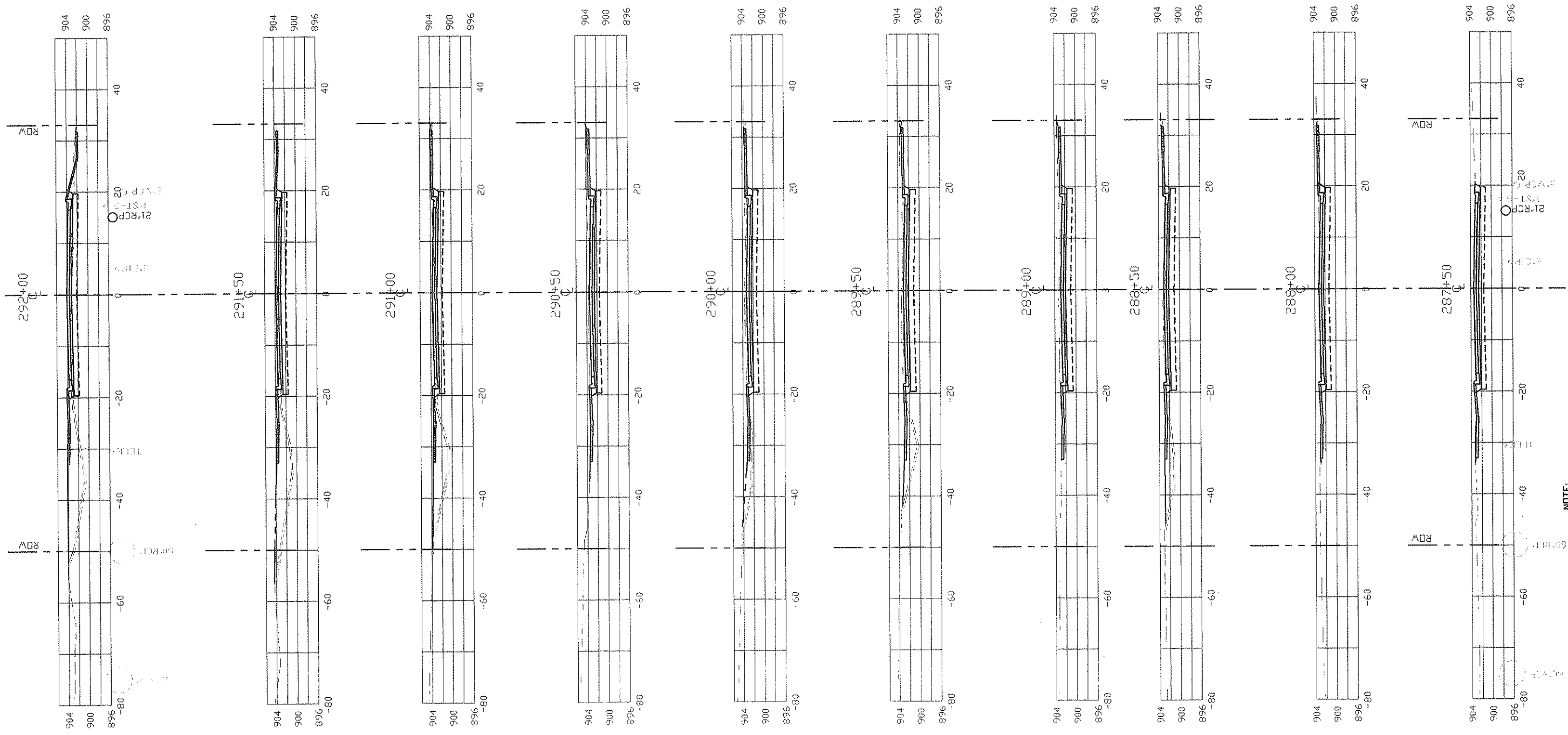
STA. 283+03 TO 283+84
8" REINFORCED CONC.

NOTE:
 1. ALL INTERMEDIATE CROSS SECTIONS SHALL HAVE SIMILAR UTILITIES AS SHOWN.
 2. UTILITIES SHOWN ON THESE STREET CROSS SECTIONS ARE APPROXIMATED. CONTRACTOR SHALL POTHOLE AND VERIFY ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CROSS SECTION
 STA. 282+50 TO 287+00

REVISIONS	DATE	BY

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NOTE:
 1. ALL INTERMEDIATE CROSS SECTIONS SHALL HAVE SIMILAR UTILITIES AS SHOWN.
 2. UTILITIES SHOWN ON THESE STREET CROSS SECTIONS ARE APPROXIMATED. CONTRACTOR SHALL POHOLE AND VERIFY ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

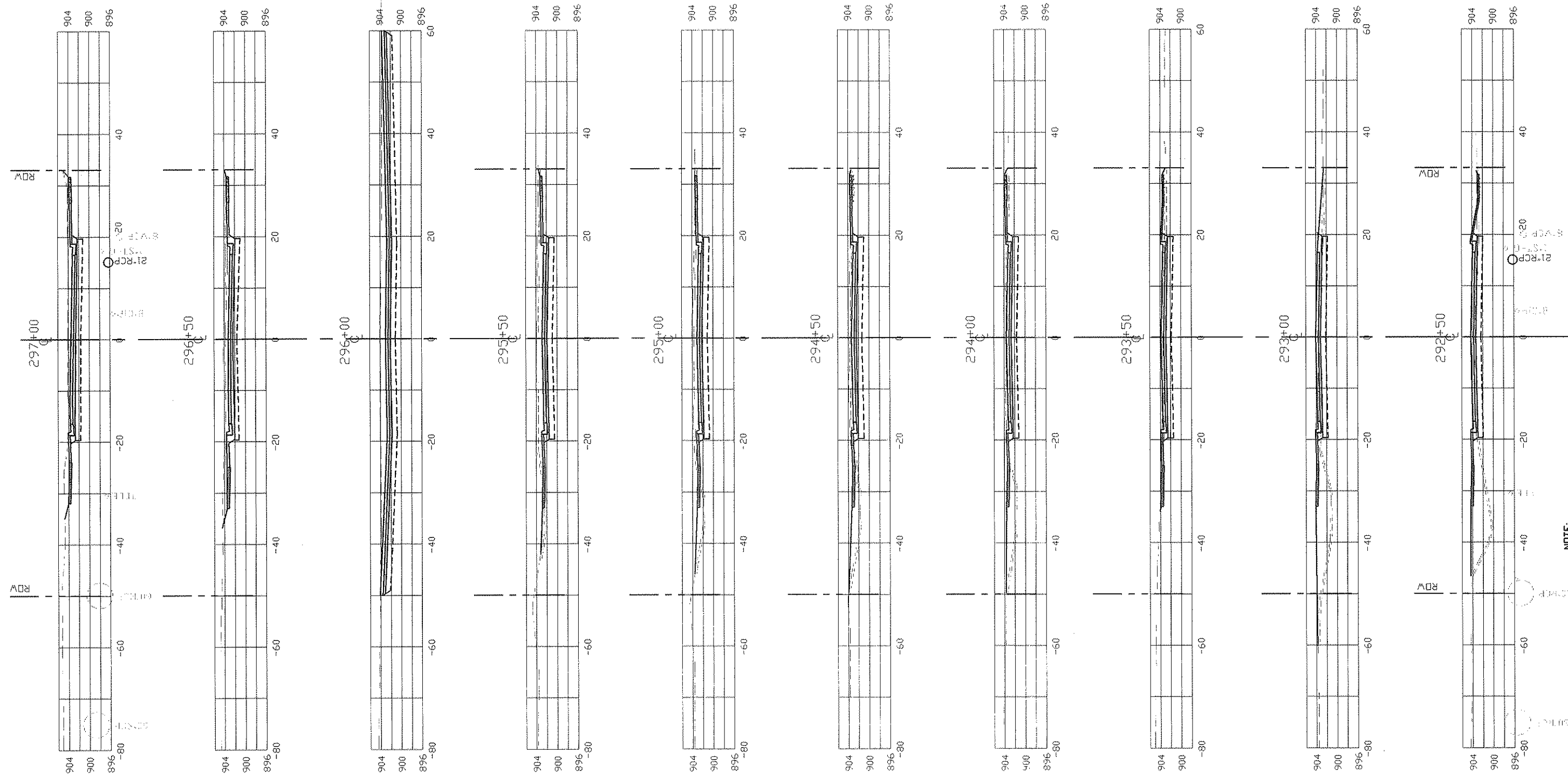
CROSS SECTION
 STA. 287+50 TO 292+00

S.A.P. _____ S.P. _____ C.P. 91-08-108

Sheet No. 15 of 21 Sheets

REVISIONS	DATE	BY

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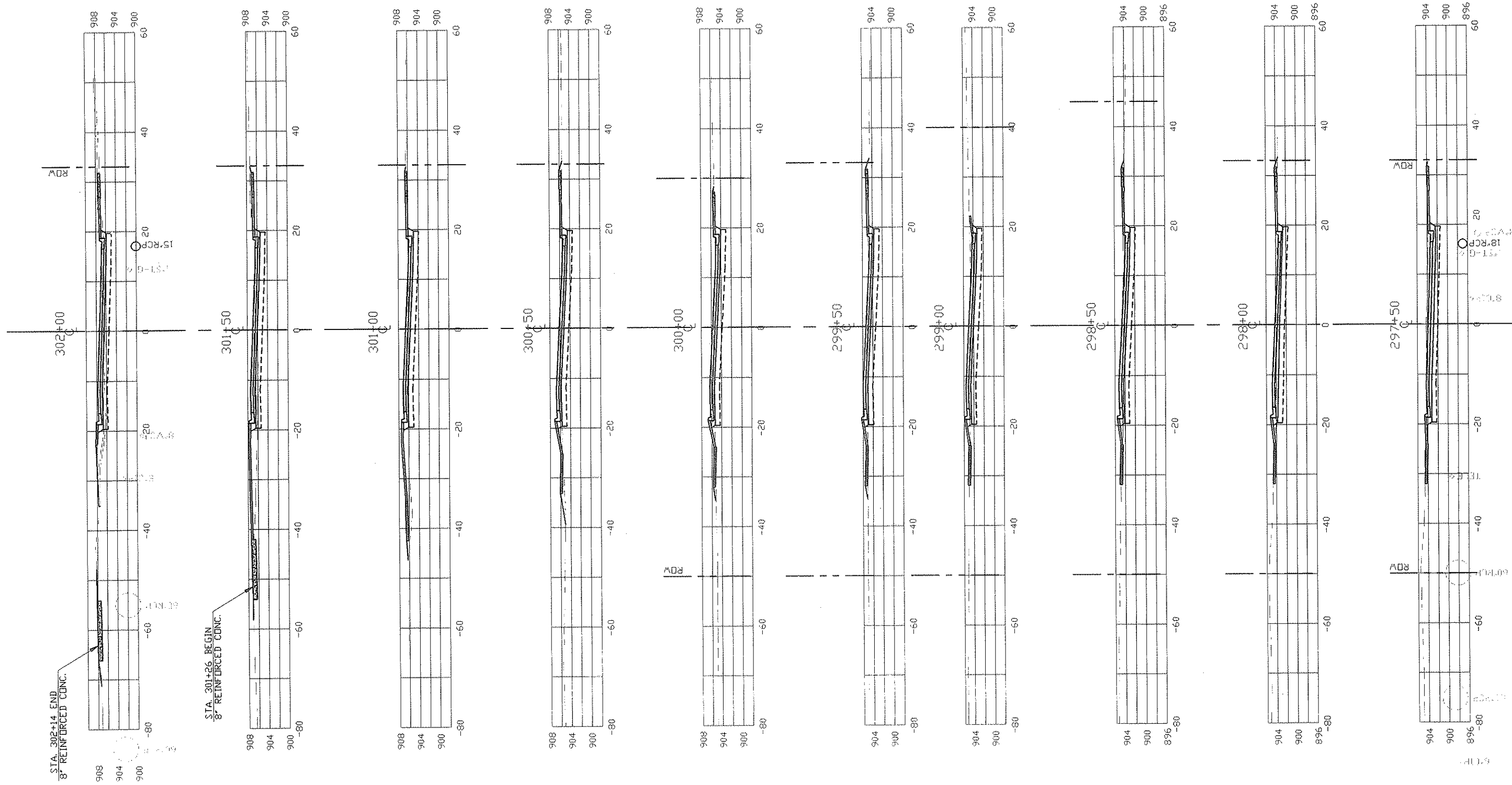


NOTE:
 1. ALL INTERMEDIATE CROSS SECTIONS SHALL HAVE SIMILAR UTILITIES AS SHOWN.
 2. UTILITIES SHOWN ON THESE STREET CROSS SECTIONS ARE APPROXIMATED. CONTRACTOR SHALL POTHOLE AND VERIFY ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CROSS SECTION
 STA. 292+50 TO 297+00

DATE	REVISIONS BY	DATE	BY

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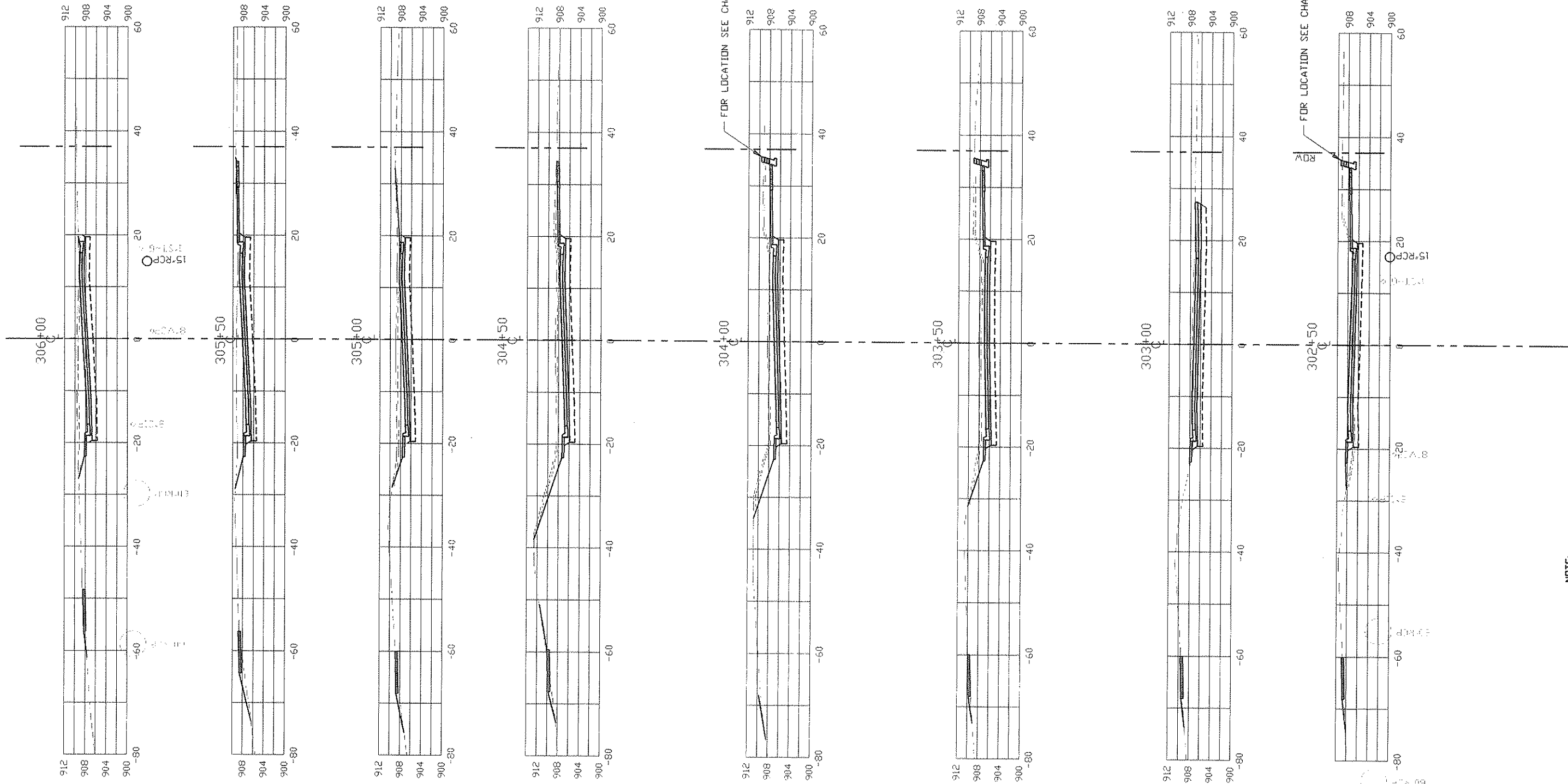


NOTE:
 1. ALL INTERMEDIATE CROSS SECTIONS SHALL HAVE SIMILAR UTILITIES AS SHOWN.
 2. UTILITIES SHOWN ON THESE STREET CROSS SECTIONS ARE APPROXIMATED, CONTRACTOR SHALL POTHOLE AND VERIFY ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CROSS SECTION
 STA. 297+50 TO 302+00

REVISIONS	DATE	BY

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FOR LOCATION SEE CHART D, SHEET 4.

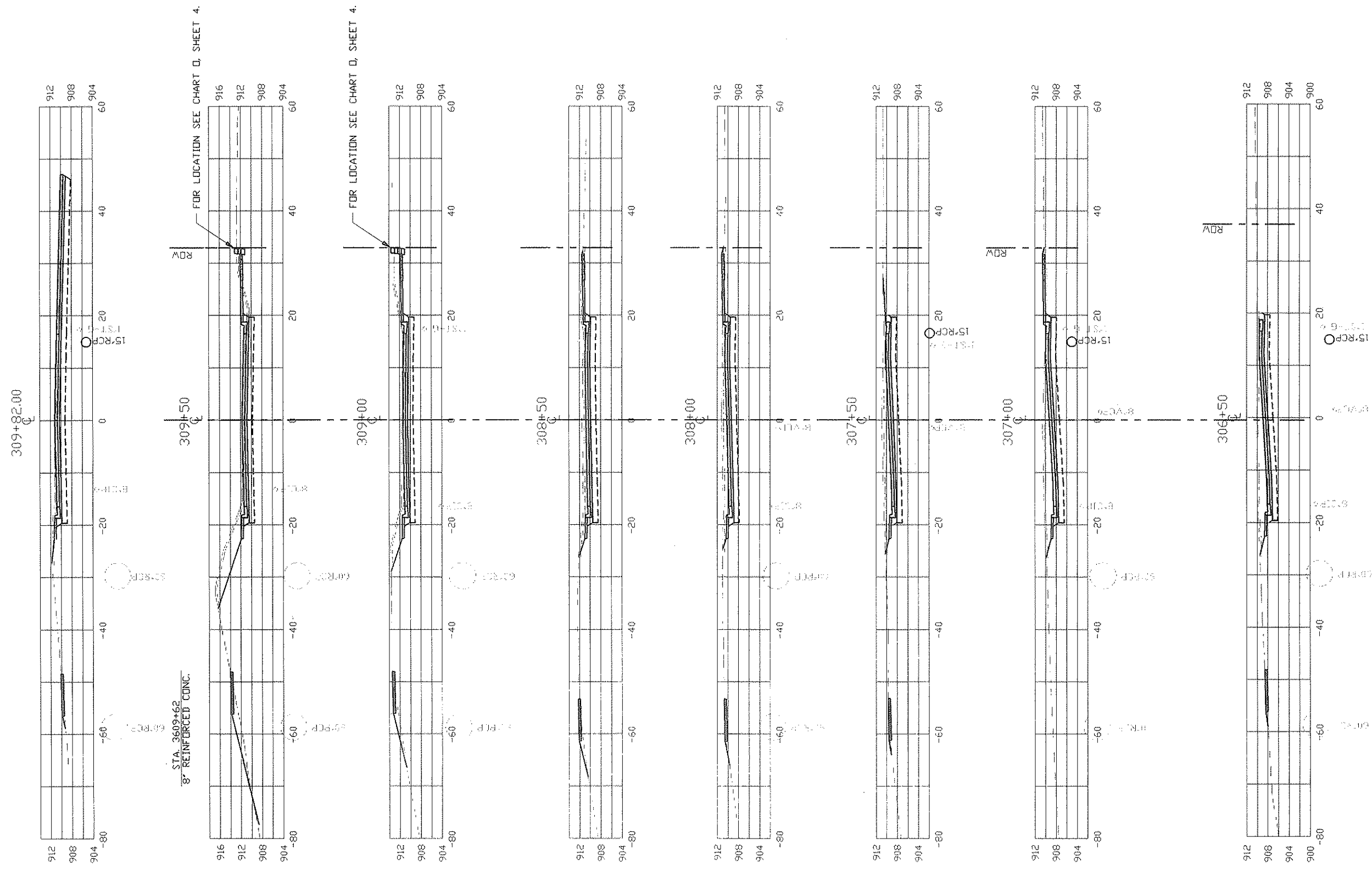
FOR LOCATION SEE CHART D, SHEET 4.

NOTE:
 1. ALL INTERMEDIATE CROSS SECTIONS SHALL HAVE SIMILAR UTILITIES AS SHOWN.
 2. UTILITIES SHOWN ON THESE STREET CROSS SECTIONS ARE APPROXIMATED; CONTRACTOR SHALL POTHOLE AND VERIFY ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CROSS SECTION
 STA. 302+50 TO 306+50

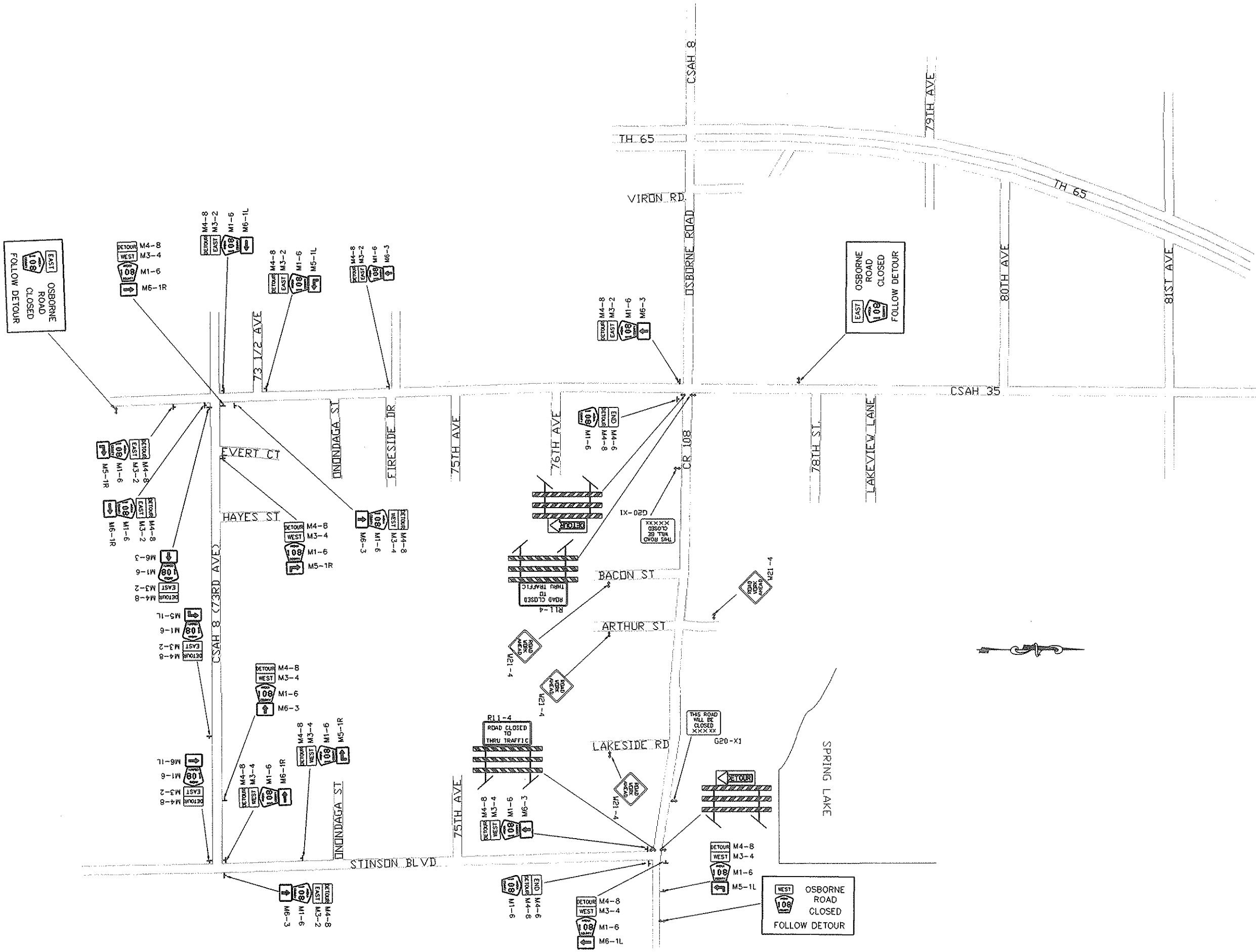
REVISIONS		
DATE	BY	BY

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NOTE:
 1. ALL INTERMEDIATE CROSS SECTIONS SHALL HAVE SIMILAR UTILITIES AS SHOWN.
 2. UTILITIES SHOWN ON THESE STREET CROSS SECTIONS ARE APPROXIMATED. CONTRACTOR SHALL POTHOLE AND VERIFY ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CROSS SECTION
 STA. 307+00 TO 309+82



CR108.DWG 3/5/96

REVISIONS	DATE	BY

DETOUR
CR 108

M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY	M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY			
W21-4	48' x 48'		• 4	G20-X2MDD	96' x 72'		• 2			
FLASHER	TYPE 'A'		• 2	G20-X2MDD	96' x 72'		• 1			
R11-4	60' x 30"			G20-X2MDD	96' x 72'					
TYPE III	8 FOOT			M4-8	24' x 12'		M5-1 L		• 2	
M4-10R	48' x 18"		• 1	M3-2	21' x 12'		M5-1 R		• 1	
TYPE III	8 FOOT			M1-6	24' x 24'		M6-1 L		• 2	
					21' x 15'		M6-1 R		• 1	
M4-10L	48' x 18"		• 1			M6-3		• 4		
TYPE III	8 FOOT									
G20-X1	60' x 48"		• 2	M4-8	24' x 12'		M5-1 L		• 1	
				M3-4	21' x 12'		M5-1 R		• 2	
M4-6	24' x 12'		• 2	M1-6	24' x 24'		M6-1 L		• 1	
M4-8	24' x 12'							21' x 15'	M6-1 R	
M1-6	24' x 24'							M6-3		• 2

NOTES:

- 1) ALL BARRICADES SHALL BE PROPERLY WEIGHTED WITH SANDBAGS.
- 2) ALL BARRICADES SHALL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
- 3) ALL BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 4) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED APRIL 1995.
- 5) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.

REVISIONS	DATE	BY

DETOUR PLAN
C.R. 108