

PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
PRESENT RIGHT OF WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER

SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH
POLE LINE
JOINT TELEPHONE AND POWER
ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL TELEPHONE CABLE
TERMINAL
GAS MAIN
WATER MAIN

CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE-MAINHOLE
ELECTRIC MAINHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER, (SANITARY OR STORM)
SEWER MAINHOLE

FEET MILES
GROSS LENGTH 1,520 = 0.2879
BRIDGE LENGTH 0 = 0
EXCEPTION 0 = 0
NET LENGTH 1,520 = 0.2879
PLAN
PROFILE HORIZ.
PROFILE VERT.
CROSS SECTIONS
LAYOUT MAP

RAMSEY COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION PLAN: FOR GRADING, AGGREGATE BASE, BITUMINOUS BASE AND SURFACING, STORM SEWER, CONCRETE CURB AND GUTTER.

HAMLIN AVENUE BETWEEN: HOYT AVENUE AND LARPEN TEUR AVENUE

FROM: A POINT 200 FEET SOUTH OF THE SOUTHWEST CORNER OF THE
NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION
22, T.29N., R.23W.
TO: THE NORTH QUARTER CORNER OF SECTION 22, T.29N., R.23W.

COUNTY PROJECT NO. 132-01
FALCON HEIGHTS M.S.A. NO. 124-106-01
ST. PAUL M.S.A. NO. 164-145-31

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4	ENTRANCE DETAILS, CLEAR & GRUB AND HYDRANT CHARTS
5	EXISTING DRAINAGE CHART
6	PROPOSED DRAINAGE CHARTS
7-9	PLAN AND PROFILE SHEETS
10-20	CROSS SECTIONS
21	PLAN AND PROFILE, FALCON HEIGHTS ALLEY
22	CROSS SECTIONS, FALCON HEIGHTS ALLEY

THIS PLAN CONTAINS 22 SHEETS

END CO. PROJ. NO. 132-01
STA. 52+20.00



BEGIN CO. PROJ. NO. 132-01
STA. 37+00.00

DESIGN DESIGNATION

ADT CURRENT YEAR (1983) 5,550
ADT FUTURE YEAR (2002) 6,950
Σ N 20 1,000,000
DESIGN LOAD 10 TON
STABILOMETER R VALUE 15
DESIGN SPEED 30 MPH
DHV 700
DIRECTIONAL DISTRIBUTION 60-40
HCAOT 8 %

NOTE: SECTION NUMBERS ARE
FROM "THE SOUTH"

PIT DATA

PIT NO. Located in
Dead Haul
PIT NO. Located in
Dead Haul

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT
OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR
CONSTRUCTION SHALL GOVERN."

DESIGN SQUAD BJ, HH, KL, DJ, SB DATE 3/20/85
DRAWN BY DATE
CHECKED BY DATE

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

DATE 5-30-85 REG. NO. 13501 ENGR. Larry K. Feltner

RECOMMENDED FOR APPROVAL DATE 8-9-85

RECOMMENDED FOR APPROVAL DATE 8-21-85

RECOMMENDED FOR APPROVAL DATE 8-9-85

APPROVED DATE 3-24-86

RECOMMENDED FOR APPROVAL DATE 8-9-85

APPROVED DATE 6-4-85

RECOMMENDED FOR APPROVAL DATE 8-7-85

APPROVED DATE 8-20-85

RECOMMENDED FOR APPROVAL DATE 8-9-85

RECOMMENDED FOR APPROVAL DATE 10-15-85

APPROVED DATE 8-12-85

RECOMMENDED FOR APPROVAL DATE 9-12-85

APPROVAL DATE 10/15/85

DATE	SHEET NO.	BY
10/25/85	Sheets 2, 4, 6, 3, 20	L.K.F.

COUNTY PROJ. NO. 132-01 FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31

Sheet No. 1 of 22 Sheets

27-104

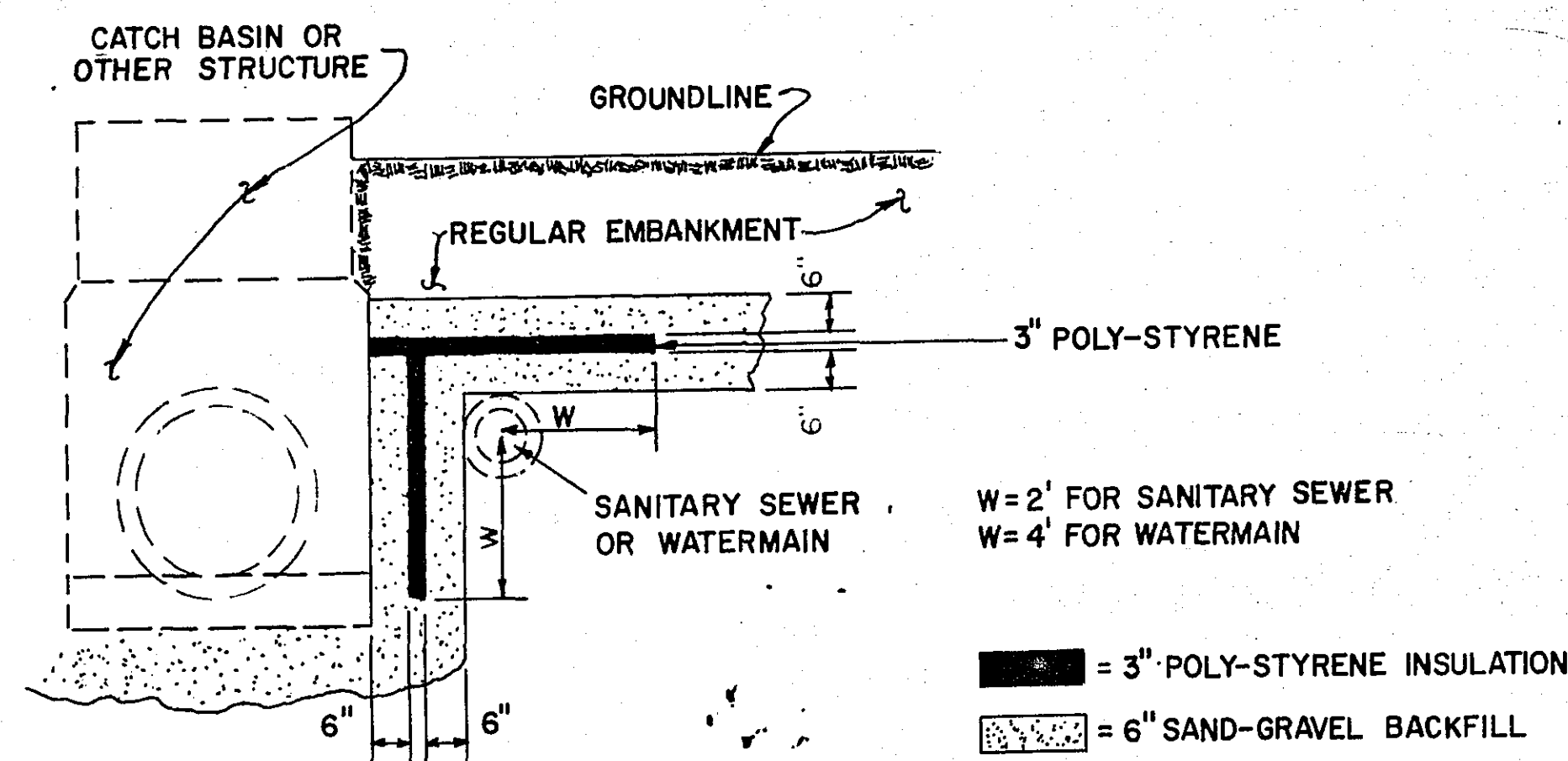
STATEMENT OF ESTIMATED QUANTITIES				TOTAL		FALCON HEIGHTS M.S.A. 124-106-01		CITY OF ST. PAUL M.S.A. 164-145-31		NON-PARTICIPATING	
ITEM NO	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	
2021.501	MOBILIZATION	L.S.	1		.5		.5				
2101.502	CLEARING	EACH	5		3		2				
2101.507	GRUBBING	EACH	7		3		4				
2104.501	REMOVE PIPE SEWER	L.F.	946		785		161				
2104.501	REMOVE CONCRETE CURB	L.F.	1331		422		909				
2104.503	REMOVE SIDEWALK	S.F.	3649		1976		1673				
2104.505	REMOVE CONCRETE PAVEMENT	S.Y.	357		283		74				
2104.509	REMOVE CATCH BASIN	EACH	20		15		5				
2104.509	REMOVE MANHOLE	EACH	1		1		0				
2104.501	REMOVE BITUMINOUS CURB	LF	775		391		384				
(11) 2105.501	COMMON EXCAVATION (P)	C.Y.	15158		7305		7853				
(10) 2105.521	GRANULAR BORROW (LV)	C.Y.	890		383		507				
(1) 2105.525	TOPSOIL BORROW (LV)	C.Y.	214		99		115				
(2) 2130.501	WATER	(M)GAL.	9		4.5		4.5				
(7) 2211.501	AGGREGATE BASE CL.6	TON	4001		1965		2036				
2211.501	AGGREGATE BASE CL.4	TON	3076		1451		1625				
2211.501	AGGREGATE BASE CL.3	TON	3076		1451		1625				
(5) 0301.604	SAWCUT CONCRETE PAVEMENT	L.F.	242		163		79				
(6) 0331.603	SAWCUT BITUMINOUS PAVEMENT	L.F.	581		220		361				
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	97		47.5		49.5				
(8) 2331.510	BINDER COURSE MIXTURE	TON	775		385.5		389.5				
(8) 2331.514	BASE COURSE MIXTURE	TON	1223		594		629				
(3,8) 2331.508	WEARING COURSE MIXTURE	TON	38		38		0				
(8) 2361.508	WEARING COURSE MIXTURE	TON	464		231		233				
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	895		440		455				
2361.504	ASPHALT CEMENT	TON	32		15.5		16.5				
2503.541	15" R.C. PIPE SEWER DESIGN 3006 CL.V	L.F.	756		535		221				
2503.541	12" R.C. PIPE SEWER DESIGN 3006 CL.V	L.F.	85				85				
2506.508	CONSTRUCT MANHOLE DESIGN A OR F	EACH	3		2		1				
2506.509	CONSTRUCT CATCH BASIN DESIGN SPECIAL	EACH	18		10		8				
2506.511	RECONSTRUCT MANHOLE	L.F.	24		12.3		11.7				
2506.521	INSTALL CASTING	EACH	6		3		3				
2506.522	ADJUST FRAME AND RING CASTING	EACH	18		6		12				
2521.501	4" CONCRETE WALK	S.F.	4960		2319		2641				
0521.604	SAWCUT CONCRETE SIDEWALK	L.F.	311		182		129				
2551.501	CONCRETE CURB AND GUTTER DESIGN B6-24	L.F.	4107		1765		2342				
25531.507	6" CONCRETE DRIVEWAY PAVEMENT	S.Y.	589		403		186				
(9) 2571.502	F. & P. CLEVELAND NORWAY MAPLE 2.5" CAL. B. & B.	TREE	4		2		2				
(9) 2571.502	F. & P. WHITE ASH 2.5" CAL. B. & B.	TREE	1		1						
(1) 2575.505	SODDING	S.Y.	2334		1084		1250				
(4) 2575.531	FERTILIZER ANALYSIS 12-12-12	TON	.09		.04		.05				
(9) 2571.502	F. & P. IRONWOOD 2.5" CAL. B. & B.	TREE	2				2				
0504.602	ADJUST VALVE BOX	EACH	10		5		5				
0504.605	3" WATERMAIN INSULATION	SQ.YD.	58		19		39				
0565.602	LOOP DETECTOR 6'X6'	EACH	2				2				
0565.602	LOOP DETECTOR 6'X10'	EACH	2				2				
NON-PARTICIPATING M.S.A.-FALCON HEIGHTS ALLEY											
2104.501	REMOVE PIPE SEWER	L.F.	100						100		
2104.509	REMOVE CATCH BASIN	EACH	1						1		
(11) 2105.501	COMMON EXCAVATION (P)	C.Y.	279						279		
(7) 2211.501	AGGREGATE BASE CL.6	TON	340						340		
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	9						9		
(8) 2331.508	WEARING COURSE MIXTURE	TON	78						78		
(8) 2331.510	BINDER COURSE MIXTURE	TON	78						78		
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	48						48		
2503.541	15" R.C. PIPE SEWER DESIGN 3006 CL.V	L.F.	379						379		
2506.509	CONSTRUCT SURFACE DRAIN DESIGN A OR F	EACH	2						2		

STANDARD DETAIL PLATES	
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 I	(2 PAGES) REINFORCED CONCRETE PIPE
3006 D	(2 PAGES) GASKET JOINT FOR R.C. PIPE
4000 I	MANHOLE OR CATCH BASIN (BRICK, CONCRETE, MASONRY UNITS OR CAST-IN PLACE CONC.)
4005 K	MANHOLE OR CATCH BASIN
4010 F	CONCRETE SHORT CONE AND ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4108 E	MANHOLE ADJUSTING RING
4110 D	COVER CASTING FOR MANHOLE
4180 H	MANHOLE OR CATCH BASIN STEP
4140 D	SPECIAL GRATE CASTINGS FOR CATCH BASIN
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 C	PEDESTRIAN CURB RAMP (FOR THE HANDICAPPED)
7100 F	CONCRETE CURB & GUTTER (DESIGN B & DESIGN V)
8000 I	(2 PAGES) STANDARD BARRICADES
8130 D	SAW CUT LOOP DETECTORS

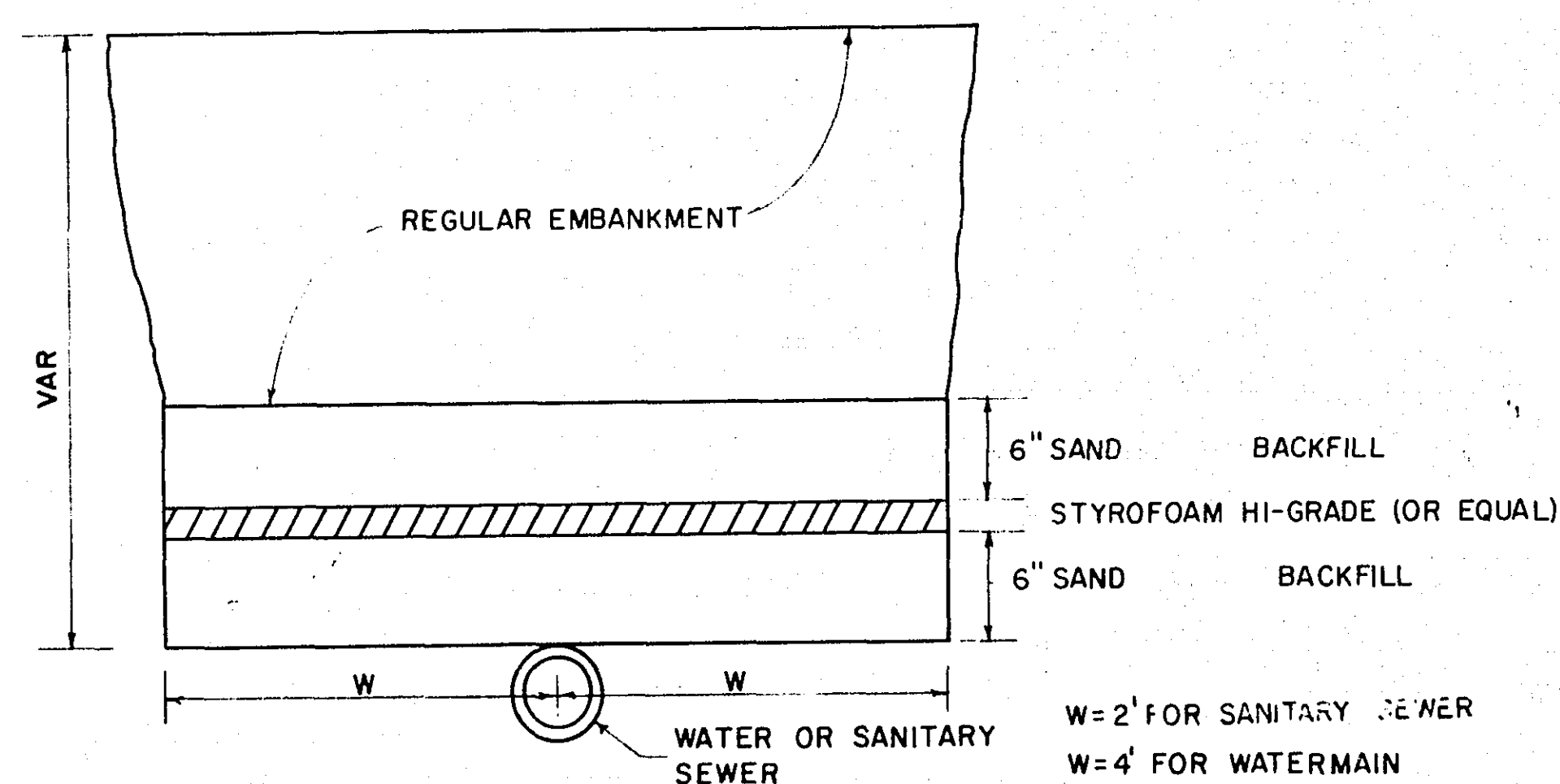
QUANTITY NOTES	
(1)	AREAS TO BE TOPSOILED AND SODDED HAVE BEEN INCREASED 5% TO ALLOW FOR ADDITIONAL AREA ON SLOPES.
(2)	FOR DUST CONTROL.
(3)	INCLUDES BITUMINOUS FOR ENTRANCES AND ALLEYS.
(4)	ESTIMATED AT 350 POUNDS PER ACRE.
(5)	FOR PAVEMENT AND C. & G. REMOVAL.
(6)	FOR PAVEMENT, ALLEY AND ENTRANCE REMOVAL.
(7)	THE CONTRACTOR IS ADVISED THAT HE MAY USE AGGREGATE BASE, CLASS 6 OR, AS AN ALTERNATE, HE MAY USE 100% CRUSHED MATERIAL WHICH MEETS THE REQUIREMENTS OF CLASS 5 IN TABLE 3138-1 OF THE MN/DOH STANDARD SPECIFICATIONS.
(8)	OIL CONTENT - PERCENT 2331 BASE COURSE MIXTURE - 4.8% 2331 BINDER COURSE MIXTURE - 4.8% 2331 WEARING COURSE MIXTURE - 6.2% 2361 WEARING COURSE MIXTURE - 6.8%
(9)	THE FURNISHING & PLANTING OF SHADE TREES SHALL BE AT THE APPROXIMATE LOCATION OF CLEARING & GRUBBING SEE PLAN SHEETS FOR LOCATIONS AS DIRECTED BY ENG.
(10)	TO BE USED IN AREAS OF SUBGRADE CORRECTION
(11)	DENOTES PLAN QUANTITY

REVISIONS	DATE BY	REVISIONS	DATE BY
QUANTITIES	10/25/85 JZ		

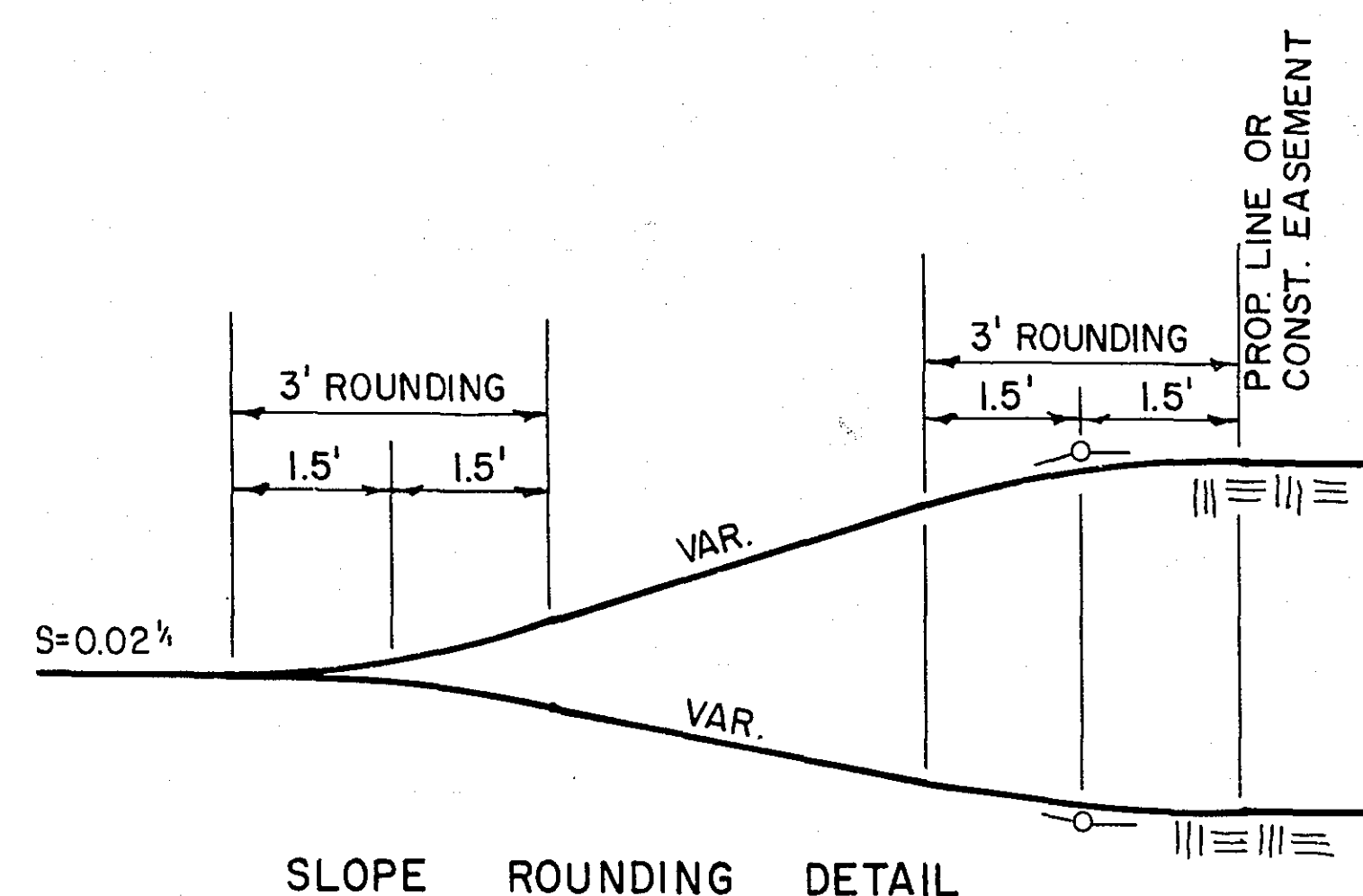
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Harry R. Zeller
 Date 7-17-85 Reg. No. 13501



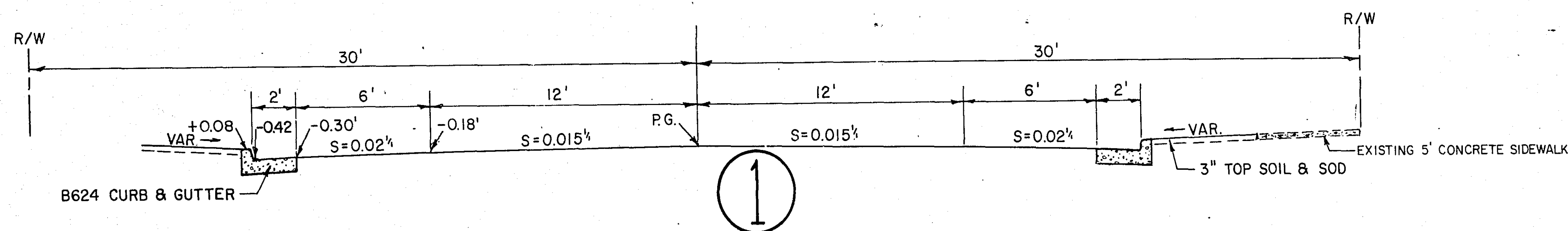
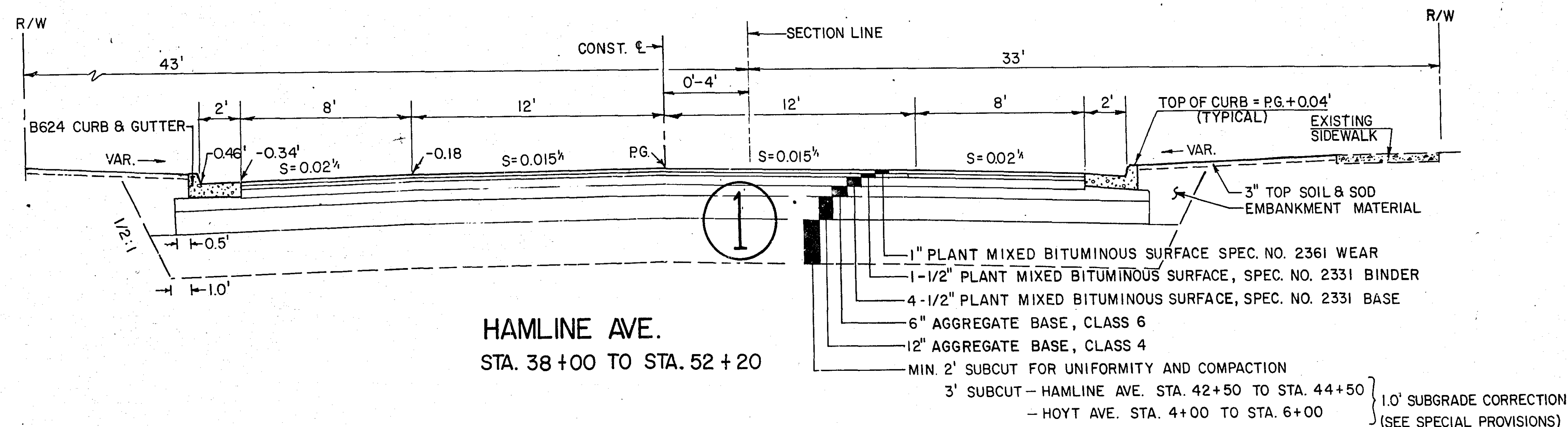
WATER AND SANITARY SEWER INSULATION DETAIL



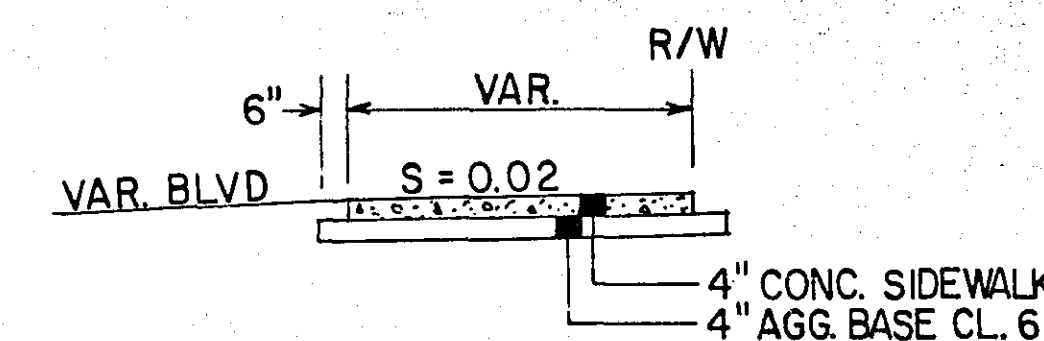
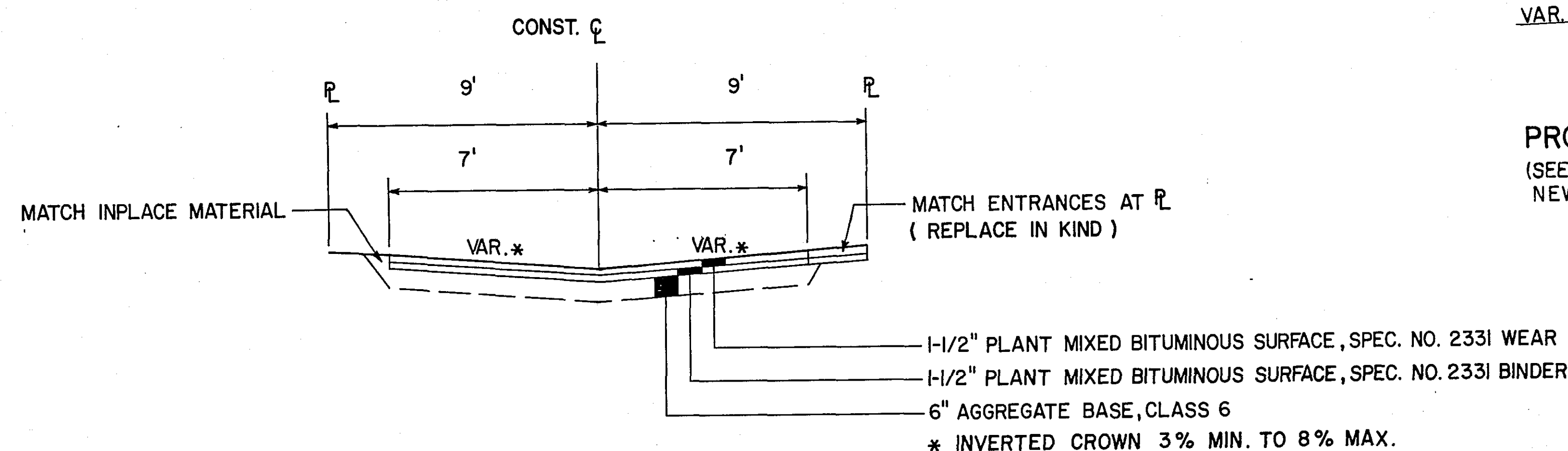
WATER AND SANITARY SEWER INSULATION DETAIL



TYPICAL SECTIONS



HOYT AVE.
STA. 2+00 TO STA. 7+00



PROPOSED SIDEWALK TYPICAL
(SEE PLAN SHEETS FOR LOCATIONS OF NEW CONSTRUCTION & REPLACEMENT.)

NOTE: DEPRESS CURB AT ALL INTERSECTIONS
AS PER STANDARD PLATE 7036.

COUNTY PROJ. NO. 132-01 FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31 Sheet No. 3 of 22 Sheets

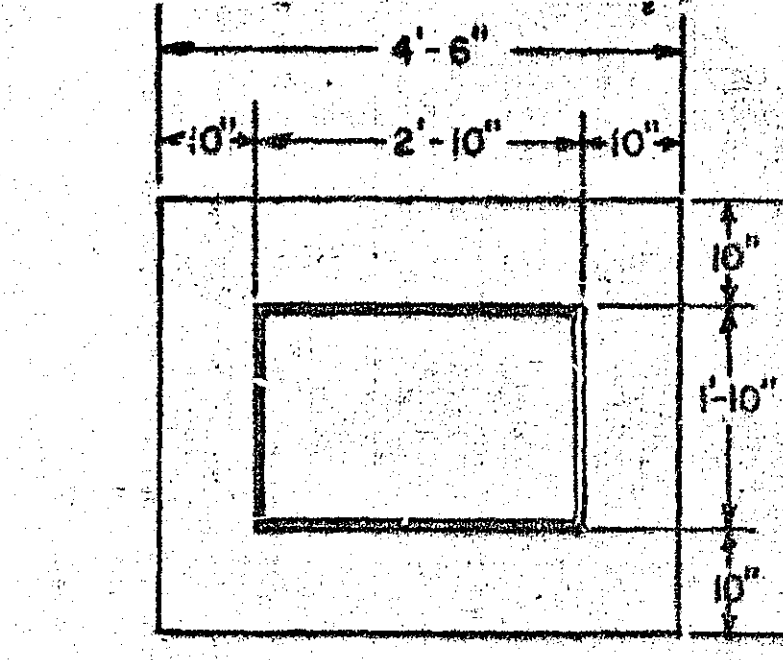
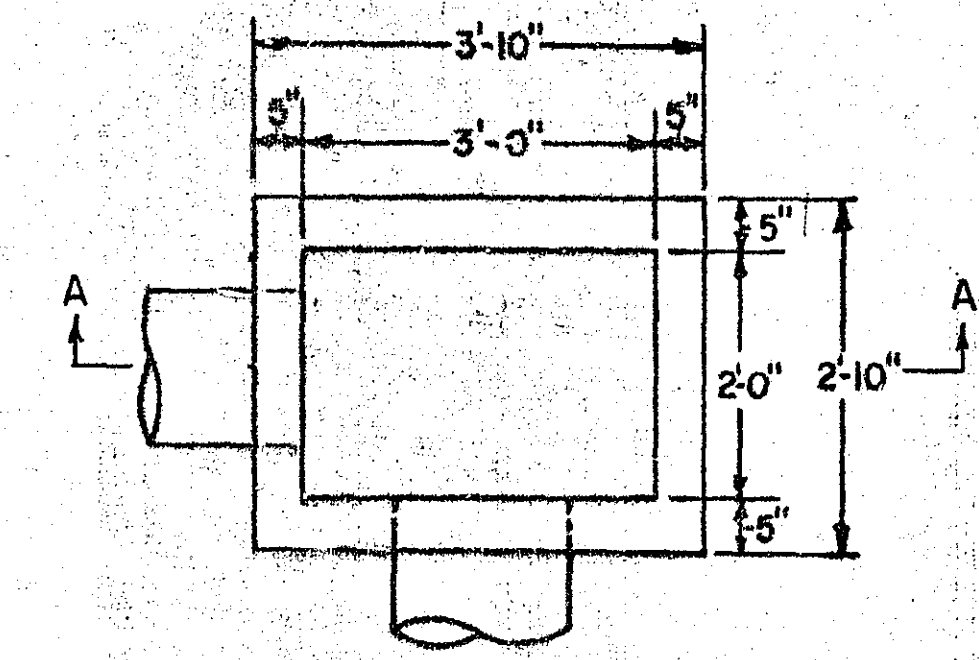
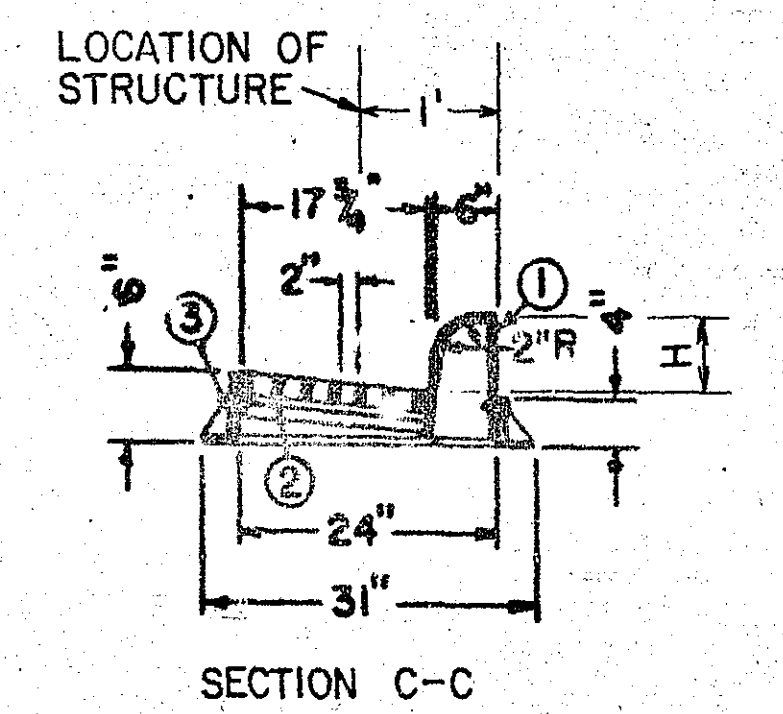
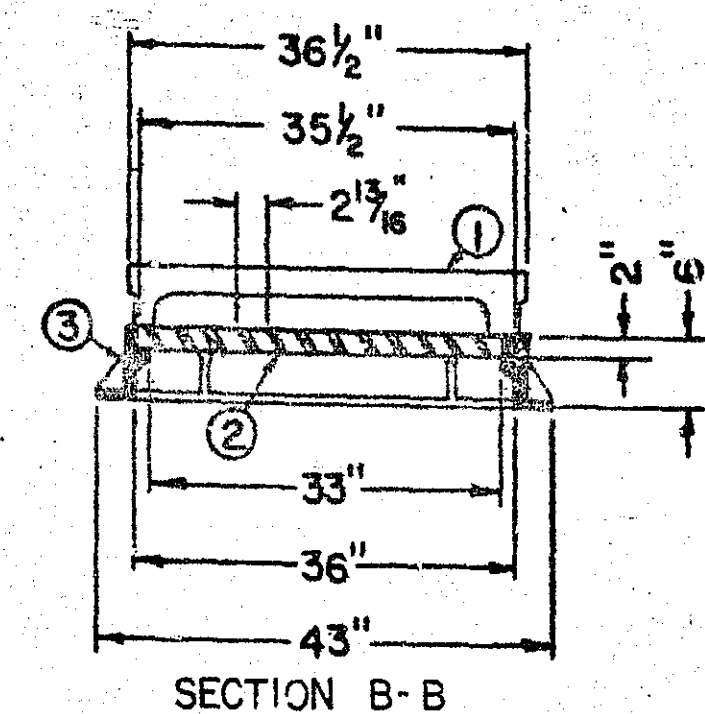
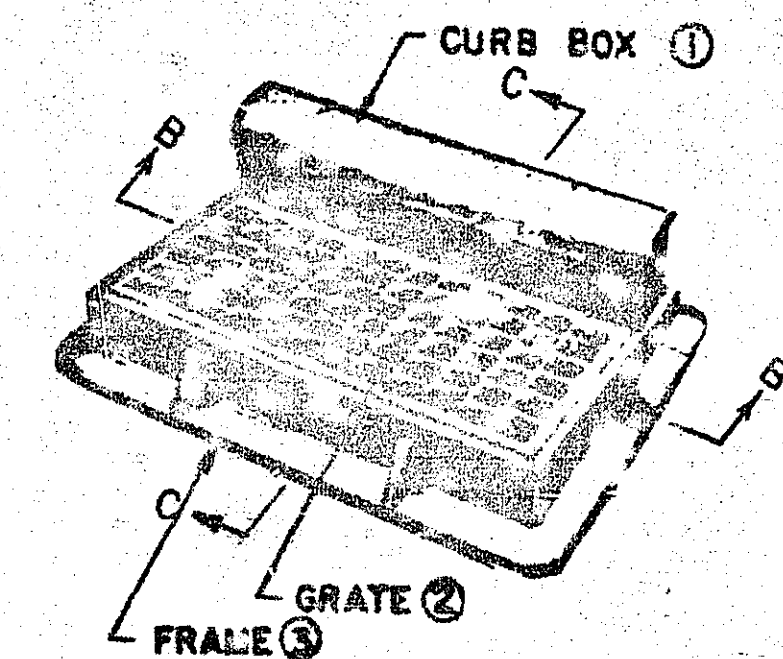
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date 7-17-85 Reg. No. 13501

EXISTING DRAINAGE CHART

STATION	LOCATION	NO.	TYPE	DESIGN	CONST. HEIGHT LIN. FT.	CASTING ASSEMBLY	ELEVATION				ADJUST CASTING ASSEMBLY	RECONSTRUCT CATCH BASIN OR MANHOLE LIN. FT.	INSTALL CASTING ASSEMBLY	FURNISH AND INSTALL PIPE SEWER					APPROX.	CLASS	DRAINS TO		REMARKS							
							PROFILE	ORIGINAL GRATE OR RING	NEW GRATE OR RING	C.B. OR M.H. INVERT				REINFORCED CONCRETE PIPE							CORRUGATED STEEL PIPE					STRUCTURE NO.	INVERT EL.			
NOTE: EXISTING STRUCTURES ARE LOCATED OFF SURVEY AND SECTION LINE																														
37+19	RT. 2'	1	M.H.	SAN.				940.66	—	924.56																	SOUTH			
38+05	RT. 25	2	M.H.	GAS				941.12	940.98	941.14	931.78																	BY OTHERS		
38+18	LT. 14'	3	M.H.	WATER				941.16	940.94	940.82	—																	BY OTHERS		
38+50	RT. 17	4	M.H.	GAS				941.09	940.98	940.77	933.0																	BY OTHERS		
38+56	RT. 26	5	M.H.	GAS				941.07	941.00	941.11	932.1																	BY OTHERS		
39+33	LT. 43	6	C.B.	STORM				940.78	941.18	—	938.58														9		REMOVE			
39+34	CL	7	M.H.	SAN.				940.78	941.23	940.72	921.83	1													1					
39+47	RT. 1	8	M.H.	SAN.				940.78	941.15	940.72	925.35	1													7					
39+55±	LT. 7 ±	9	M.H.	STORM				940.77	—	940.70	936.0 ±		3.7	1											50		UNABLE TO LOCATE			
39+63	LT. 50	10	C.B.	STORM				940.75	941.02	—	938.42														9		REMOVE			
39+73	LT. 23	11	M.H.	SAN.				940.69	940.81	940.34	924.31		3.7	1											7					
40+10	RT. 8	12	M.H.	SAN.				940.19	940.37	939.99	930.37	1													16					
40+17	LT. 19	13	M.H.	GAS				940.06	940.30	939.80	932.80																	BY OTHERS		
40+76	LT. 32	14	M.H.	ELEC.				938.94	939.85	939.18	932.15																	BY OTHERS		
40+79	LT. 24'	15	M.H.	SAN.				938.88	938.85	938.52 ±	925.25	1													11					
42+23	RT. 10'	16	M.H.	SAN.				936.28	936.44	936.04	—	1													25		UNABLE TO OPEN			
42+44	LT. 28	17	C.B.	STORM				936.01	936.85	—	—														18		REMOVE			
42+56	LT. 33	18	M.H.	STORM				935.88	936.83	—	933.13														21		REMOVE			
42+63	LT. 51	19	C.B.	STORM				935.81	936.96	—	—														18		REMOVE			
42+77	RT. 18	20	C.B.	STORM				935.68	936.18	—	932.88														21		REMOVE			
42+78	RT. 8	21	M.H.	STORM				935.67	—	935.47	—	2.3	1												28		UNABLE TO OPEN			
42+78	LT. 21	22	M.H.	SAN.				935.67	936.26	935.37	926.26	1													15					
42+93	LT. 54	23	C.B.	STORM				935.56	937.16	—	933.02														18		REMOVE			
43+09	LT. 25	24	M.H.	SAN.				935.46	936.14	935.04 ±	926.52	1													22					
44+10	CL	25	M.H.	SAN.				935.43	935.91	935.35	—	1													33		UNABLE TO OPEN			
44+10	LT. 30	26	C.B.	STORM				935.43	935.21	—	932.26														28		REMOVE			
44+10	RT. 18	27	C.B.	STORM				935.43	935.20	—	932.35														28		REMOVE			
44+16	RT. 6	28	M.H.	STORM				935.46	935.47	935.29	930.83	1													31					
45+49	LT. 18	29	C.B.	STORM				937.04	937.37	—	—															DITCH	REMOVE - PLUG PIPE			
45+93	LT. 50	30	C.B.	STORM				937.92	939.02	—	—														31		REMOVE - PLUG PIPE			
46+04	RT. 6	31	M.H.	STORM				938.15	938.47	937.98	929.47		4.0'	1												EAST	PLUG PIPES AS DIRECTED			
46+07	LT. 26	32	M.H.	SAN.				938.21	939.08	937.7 ±	926.97	1													24					
46+09	RT. 2	33	M.H.	SAN.				938.25	938.82	938.14	—															EAST	UNABLE TO OPEN			
46+25	LT. 44	34	C.B.	STORM				938.58	938.85	—	—														30		REMOVE (UNABLE TO OPEN)			
46+42	LT. 21	35	C.B.	STORM				938.93	939.02	—	936.44														29		REMOVE			
46+48	RT. 18	36	C.B.	STORM				939.05	938.97	—	935.64														31		REMOVE			
47+79	LT. 21	37	C.B.	STORM				941.73	941.65	—	939.15														35		REMOVE			
48+12	CL	38	M.H.	SAN.				942.31	942.61	942.23	929.31	1													33					
49+13	LT. 22	39	M.H.	STORM				943.69	943.47	943.37	938.05		4.9	1		29'									41	937.76				
49+13	LT. 52	40	C.B.	STORM				943.69	943.47	—	940.47														39		REMOVE			
49+14	RT. 6	41	M.H.	STORM				943.70	943.75	943.53	—		5.4	1											31		UNABLE TO OPEN			
49+22	RT. 16	42	C.B.	STORM				943.81	943.65	—	940.62														41		REMOVE			
49+27	LT. 25	43	M.H.	SAN.				943.88	943.98	943.46 ±	—	1													32		UNABLE TO OPEN			
49+43	LT. 52	44	C.B.	STORM				944.09	944.03	—	941.34														40		REMOVE			
49+65	LT. 26	45	C.B.	STORM				944.39	944.08	—	940.12														46		REMOVE			
49+65	LT. 22	46	S.D.	STORM				944.39	943.92	—	939.42														39		REMOVE			
50+19	CL	47	M.H.	SAN.				945.03	944.85	944.95	930.65	1													38					
50+85	LT. 26	48	C.B.	STORM				945.28	944.70	—	939.91														43		REMOVE			
50+85	LT. 125	49	C.B.	STORM				945.28	943.80	943.8 ±	940.27	1													48		REMOVE UNDER FALCON			
52+20	LT. 36	50	M.H.																									HEIGHTS ALLEY RECONST.		
52+28	RT. 1	51	M.H.																											
52+32	RT. 11	52	M.H.																											
				HOYT AVE.																										
5+39	LT. 6	50	M.H.	SAN.				940.16	940.15	940.05	933.85	1														52				
5+41	CL	51	M.H.	SAN.				940.15	940.29	940.13	921.29	1														EAST				
5+69	LT. 6	52	M.H.	STORM				940.01	940.10	939.90	933.70	1														EAST				
6+95	RT. 20	53	C.B.	STORM				939.8	938.98	938.98 ±	933.88	1																		
7+00	LT. 21	54	C.B.	STORM				939.8	939.29	—	—																	LEAVE AS IS		
								TOTALS				18	24	29'															REMOVALS: 21	

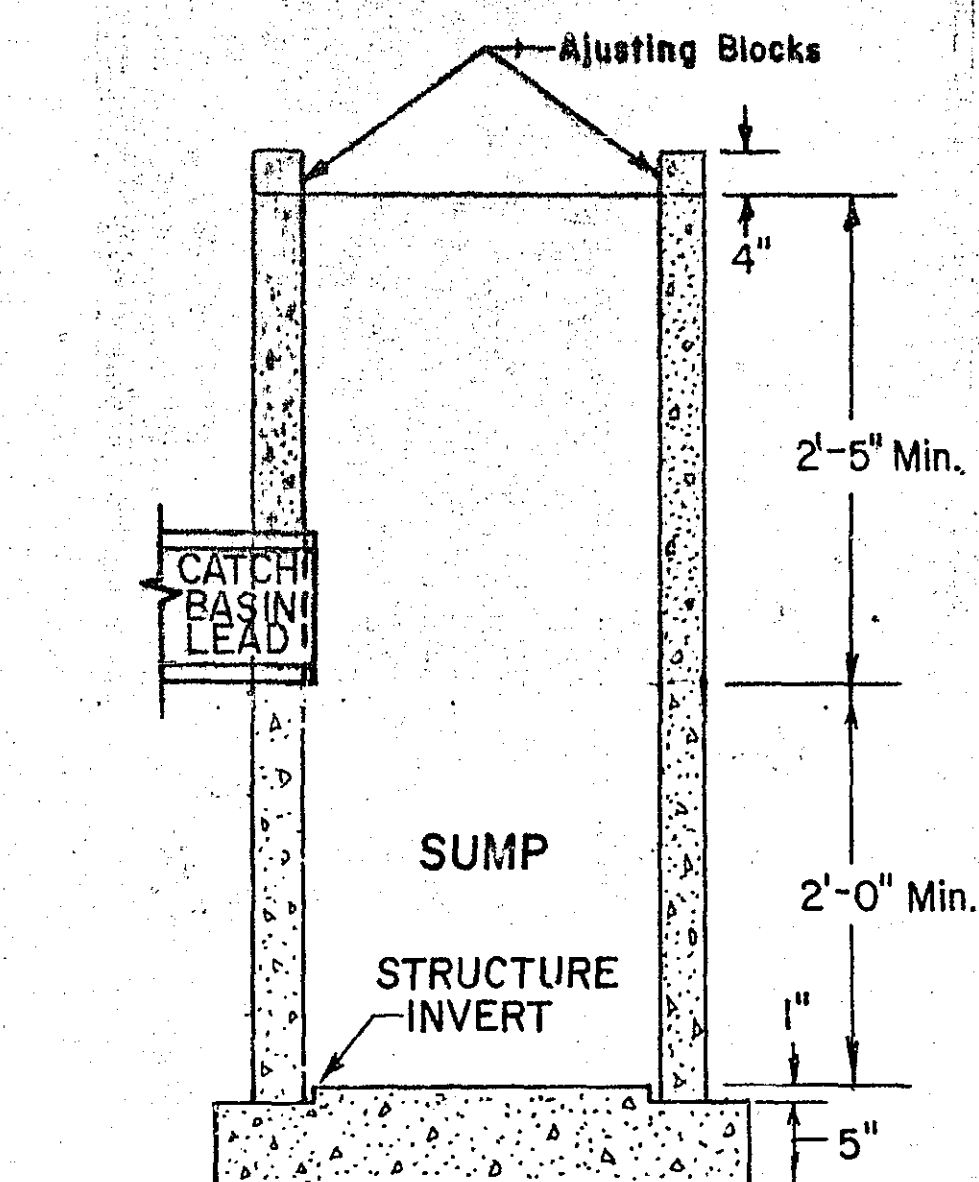
CASTING ASSEMBLY (FOR DESIGN SPECIAL CATCH BASIN)

- NOTES:
- MATERIALS: CAST GRAY IRON, CLASS 30, MN/DOT SPEC. REFERENCE 3321
 - CURB BOX HEIGHT SHALL BE ADJUSTABLE 6" TO 9"



CATCH BASIN PLAN

BASE SLAB PLAN



SECTION A-A ELEVATION VIEW

NOTE: CONSTRUCT SUMPS IN ALL CATCH BASINS.

- NOTES:
- TO BE USED WITH NEENAH R-3067-L OR EQUAL.
 - PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED.
 - ALTERNATE CAST-IN-PLACE BASE SLAB CAN BE USED.
 - INSTALL AS PER MN/DOT STD. PLATE NO. 7111E
 - REINFORCING: SINGLE LINE STEEL WIRE FABRIC. WALL=W 3.5xW30 HAVING A AREA OF NOT LESS THAN .21 SQ. IN. PER. FOOT OF HEIGHT. BASE=W 4.0 X W4.0 HAVING A AREA OF NOT LESS THAN .16 SQ. IN. PER. FOOT OF HEIGHT

- ALTERNATE BLOCK CONSTRUCTION NOTES:
- DIMENSION "H" SHALL BE THE HEIGHT OF CURB PLUS 0.1
 - MORTAR JOINT THICKNESS SHALL BE 3/8"
 - ALL JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR.
 - BLOCK DIMENSIONS SHALL BE 3 5/8" (OR 7 5/8") D. x 7 5/8" W. x 15 5/8" L.

EXISTING DRAINAGE CHART

CASTINGS—A= RING CASTING MN/DOT NO. 700-7, COVER CASTING NO. 712 (INCLUDE WITH STRUCTURE, NOT SEPARATE PAY ITEM).
B= NEENAH INLET FRAME, GRATE, & CURB BOX NO. R-3067L OR EQUAL (INCLUDE WITH STRUCTURE, NOT SEPARATE PAY ITEM).

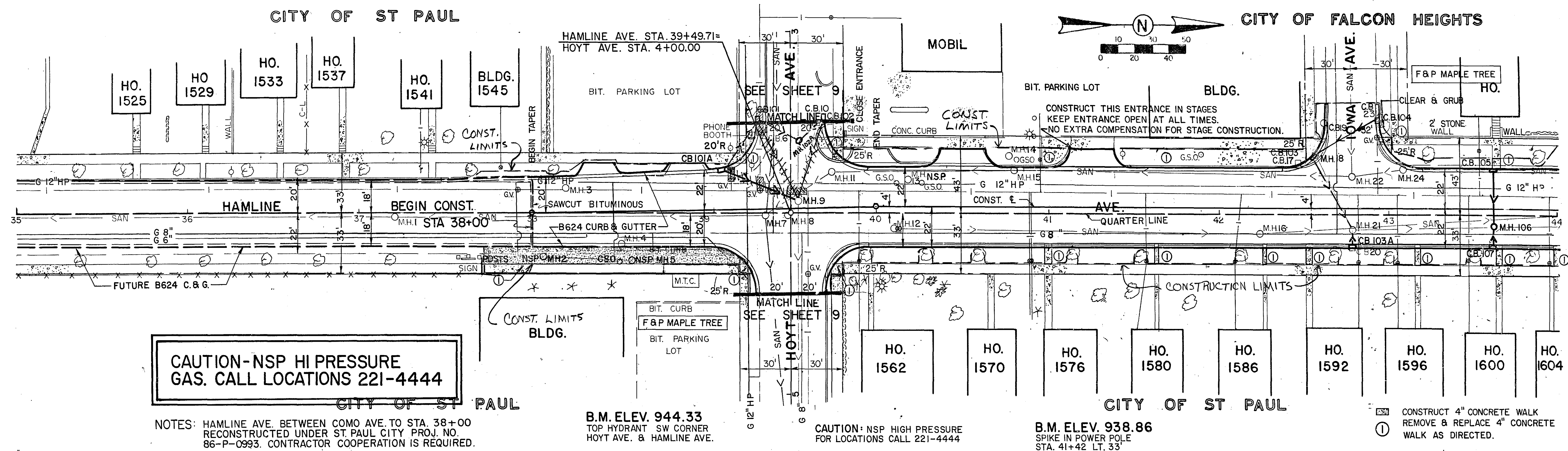
MANHOLES & CATCH BASINS SPEC., DETAIL ON THIS SHEET.
A. OR F, MN/DOT STD. PLATE NO. 4000 OR 4005

PROPOSED DRAINAGE CHART

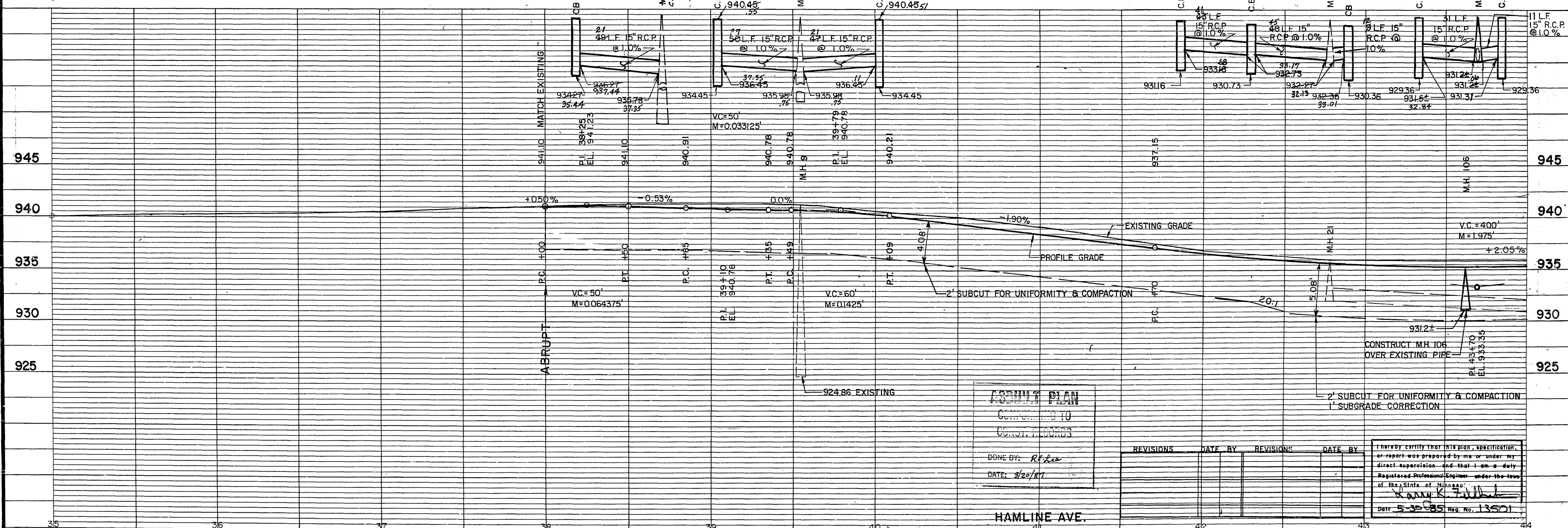
STATION	LOCATION	NO.	TYPE	DESIGN	CONST. HEIGHT LIN. FT.	CASTING ASSEMBLY	ELEVATION			ADJUST CASTING ASSEMBLY	RECONSTRUCT CATCH BASIN OR MANHOLE LIN. FT.	INSTALL CASTING ASSEMBLY	FURNISH AND INSTALL PIPE SEWER						APRON	CLASS	DRAINS TO		REMARKS					
							PROFILE	ORIGINAL GRATE OR RING	NEW GRATE OR RING				C.B. or M.H. INVERT	REINFORCED CONCRETE PIPE				CORRUGATED STEEL PIPE				STRUCTURE NO.		INVERT EL.				
NOTE: PROPOSED STRUCTURES ARE LOCATED OFF THE CONSTRUCTION CENTERLINE.																												
39+30	LT. 49'	101	C.B.	SPEC.	6.0	B	940.78		940.45	934.45			50'													9	935.95	
39+70	LT. 49'	102	C.B.	SPEC.	6.0	B	940.71		940.45	934.45			47'													9	935.98	
42+56	LT. 29'	103	C.B.	SPEC.	4.5	B	935.88		935.22	930.73			46'													21	932.27	
42+93	LT. 49'	104	C.B.	SPEC.	5.3	B	935.56		936.50	931.16			43'													103	932.73	
43+63	LT. 22.5'	105	C.B.	SPEC.	5.5	B	935.32		934.78	929.36			31'													106	931.20	
43+63	RT. 10'	106	M.H.	A OR F	4.1±	A	935.32		935.17	931.2±																28		CONSTRUCT OVER EXIST. PIPE
43+63	RT. 22.5'	107	C.B.	SPEC.	5.5	B	935.32		934.78	929.36			11'													106	931.20	
45+94	LT. 49'	108	C.B.	SPEC.	5.3	B	937.94		938.16	932.10			60'													31	933.50	
46+25	LT. 43'	109	C.B.	SPEC.	6.0	B	938.58		938.60	932.40			30'													108	934.10	
46+62	LT. 22.5'	110	C.B.	SPEC.	6.7	B	939.34		938.80	932.81			42'													109	934.40	
46+62	RT. 22.5'	112	C.B.	SPEC.	6.7	B	939.34		938.80	933.58			58'													31	935.00	
49+13	LT. 49'	113	C.B.	SPEC.	5.6	B	943.69		942.90	937.30			30'													39	939.00	
49+24	RT. 22.5'	114	C.B.	SPEC.	6.0	B	943.84		943.30	937.38			13'													41	939.25	
49+43	LT. 49'	115	C.B.	SPEC.	5.5	B	944.09		943.10	937.60			30'													113	939.30	
49+75	LT. 22.5'	116	C.B.	SPEC.	6.0	B	944.59		944.05	938.13			4'													117	940.09	
49+75	LT. 17'	117	M.H.	A OR F	5.7	A	944.59		944.31	938.31			62'													39	938.05	
50+87	LT. 17'	118	M.H.	A OR F	5.3	A	945.29		945.01	938.78			112'													117	938.31	
42+78	RT. 22.5'	103A	C.B.	SPEC.	4.9	B	935.67		935.13	930.36			9'													21	932.27	
39+10	LT. 22.5'	101A	C.B.	SPEC.	6.0	B	940.81		940.27	934.27			49'													9	935.78	
HOYT AVE.																												
6+50	LT. 19.7	121	C.B.	SPEC.	5.0	B			934.90				40													122		
60+50	RT. 19.7	122	C.B.	SPEC.	5.5	B			934.50				45													53		
CATCH BASIN INVERTS LISTED ABOVE																												
ARE BOTTOM OF 2.0' SUMPS. SEE																												
DETAIL SHEET NO. 5 AND PLAN SHEETS																												
FOR CATCH BASIN LEADS																												
NON PARTICIPATING M.S.A. - FALCON HEIGHTS ALLEY																												
NOTE: PROPOSED STRUCTURES ARE LOCATED OFF THE ALLEY CENTERLINE																												
1+50	CL	119	S.D.	A OR F	5.0	C	944.09		943.94	939.19			129													118	938.78	
4+00	CL	120	S.D.	A OR F	4.7	C	944.52		944.37	939.94			250													119	939.19	
</																												

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

 INSULATE UTILITIES

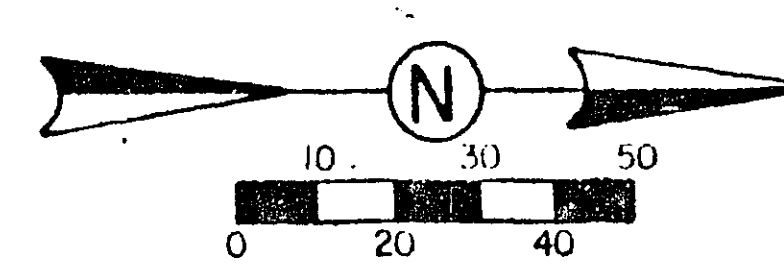


**NOTE: CONSTRUCT PEDESTRIAN CURB RAMPS
AS PER Mn/DOT STD. PLT. NO. 7036**



TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

NOTE: SPECIAL GUTTER GRADES LEFT
 STA. 44+75 TO 45+25 = +1.44%
 STA. 45+25 TO 45+75 = +2.6%

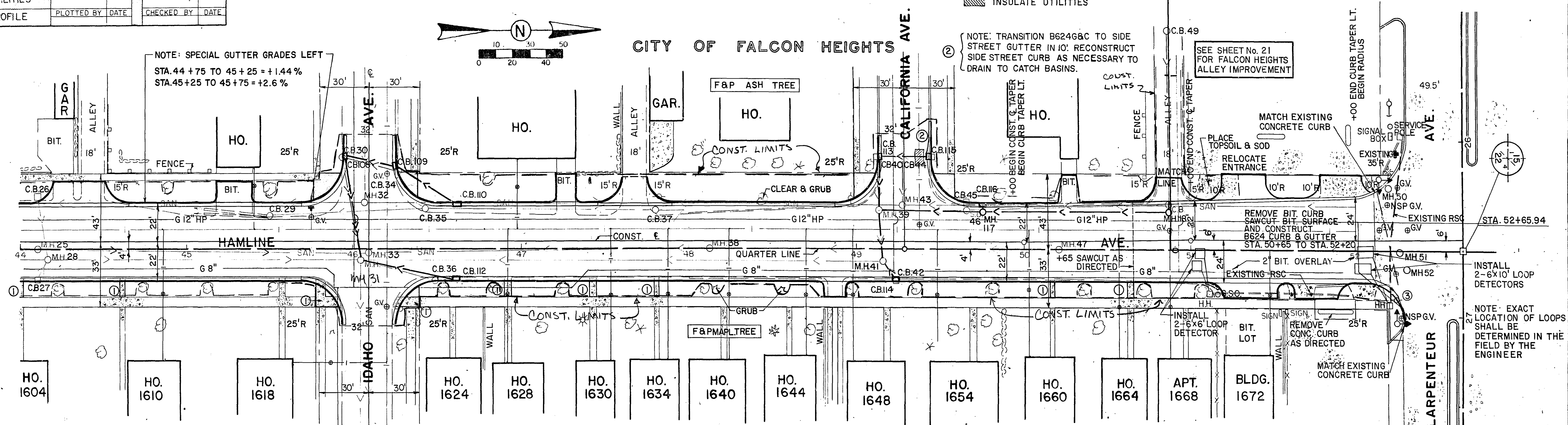


CITY OF FALCON HEIGHTS

INSULATE UTILITIES

NOTE: TRANSITION B624G&C TO SIDE STREET GUTTER IN 10'. RECONSTRUCT SIDE STREET CURB AS NECESSARY TO DRAIN TO CATCH BASINS.

SEE SHEET No. 21 FOR FALCON HEIGHTS ALLEY IMPROVEMENT



CAUTION - NSP HI PRESSURE GAS. CALL LOCATIONS 221-4444

B.M. ELEV. 941.29
 TOP HYDRANT SW CORNER
 IDAHO AVE. & HAMLINE AVE.

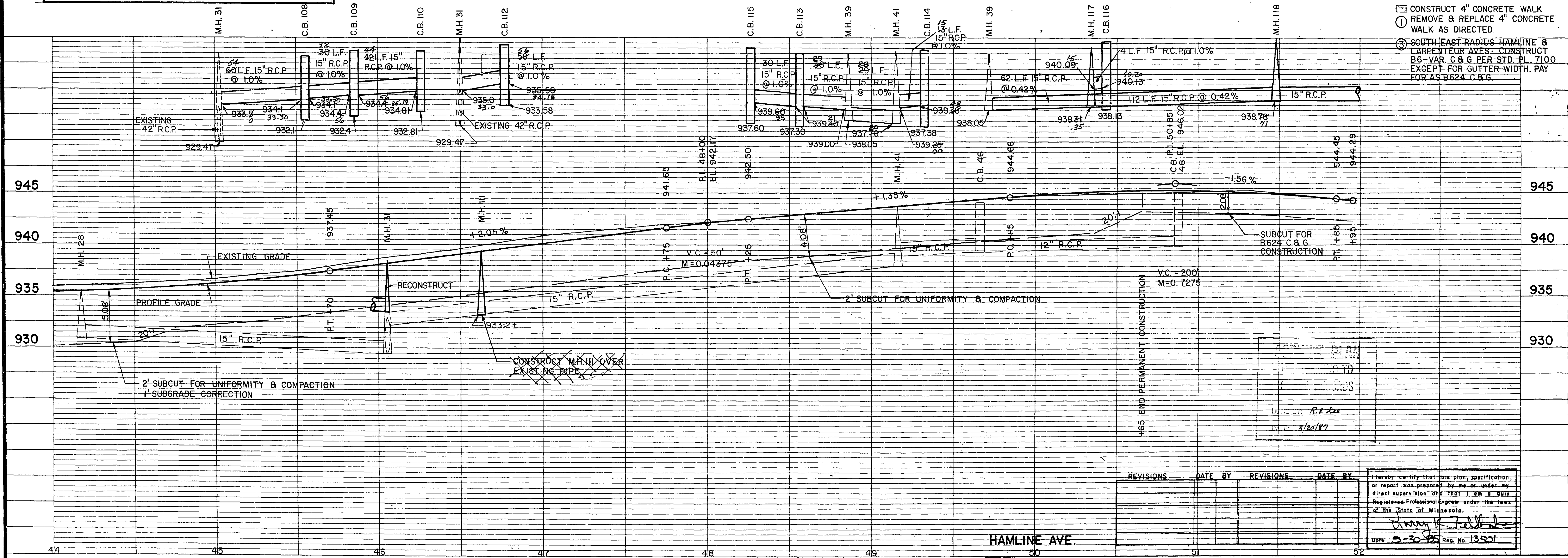
CITY OF ST PAUL

CAUTION - NSP HIGH PRESSURE FOR LOCATIONS CALL 221-4444

NOTE: CONSTRUCT PEDESTRIAN CURB RAMPS AS PER Mn/DOT STD. PLT. NO. 7036

B.M. ELEV. 947.49
 TOP HYDRANT SW CORNER
 LARPELLEUR AVE. & HAMLINE AVE.

- CONSTRUCT 4" CONCRETE WALK
- REMOVE & REPLACE 4" CONCRETE WALK AS DIRECTED.
- SOUTH EAST RADIUS HAMLINE & LARPELLEUR AVES. CONSTRUCT B6-VAR C&G PER STD. PL. 7100 EXCEPT FOR CUTTER WIDTH. PAY FOR AS B624 C&G.



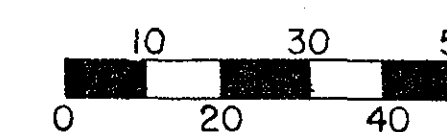
REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
 Date 3/20/87
 Reg. No. 13521

HAMLINE AVE.

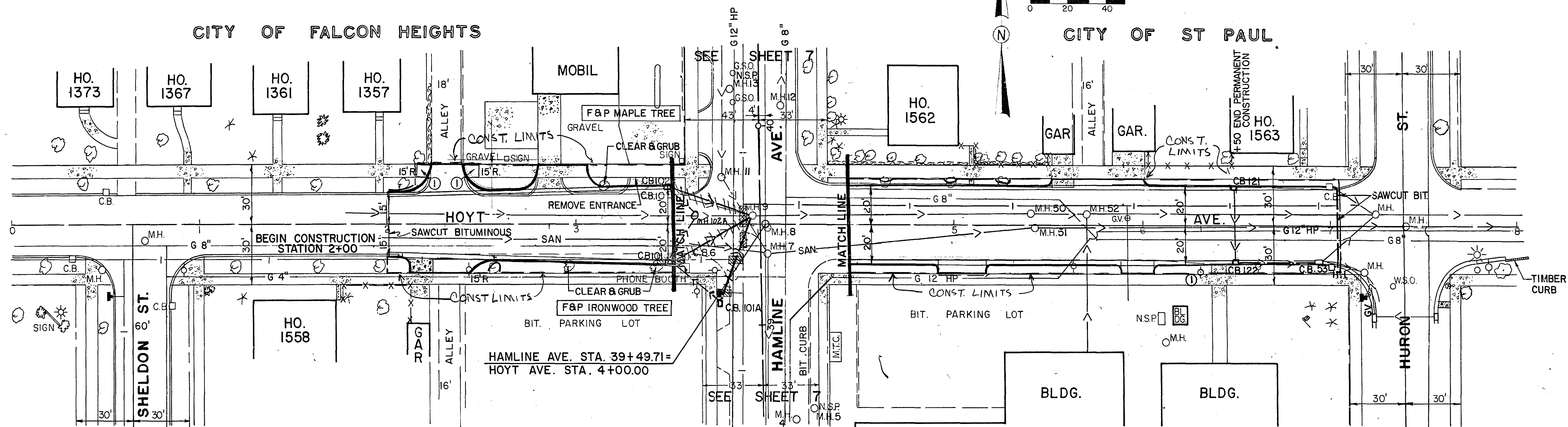
TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

INSULATE UTILITIES



CITY OF FALCON HEIGHTS

CITY OF ST PAUL



B.M. ELEV. 947.75
TOP HYDRANT SW CORNER
SHELDON ST. & HOYT AVE.

CITY OF ST PAUL

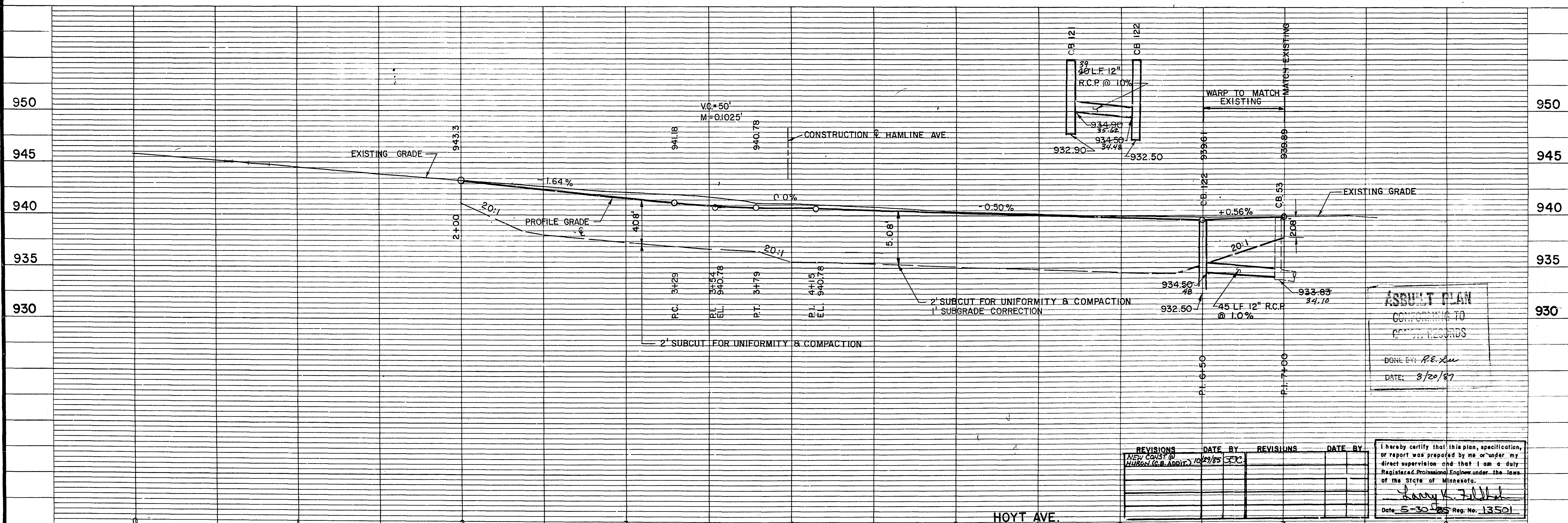
**NOTE: CONSTRUCT PEDESTRIAN CURB RAMPS
AS PER Mn/DOT STD. PLT. NO. 7036**

CAUTION: NSP HIGH PRESSURE
FOR LOCATIONS CALL 221-4444

CITY OF ST PAUL

B.M. ELEV. 942.18
TOP HYDRANT SW CORNER
HURON ST. & HOYT AVE.

① REMOVE & REPLACE 4" CONCRETE
WALK AS DIRECTED.



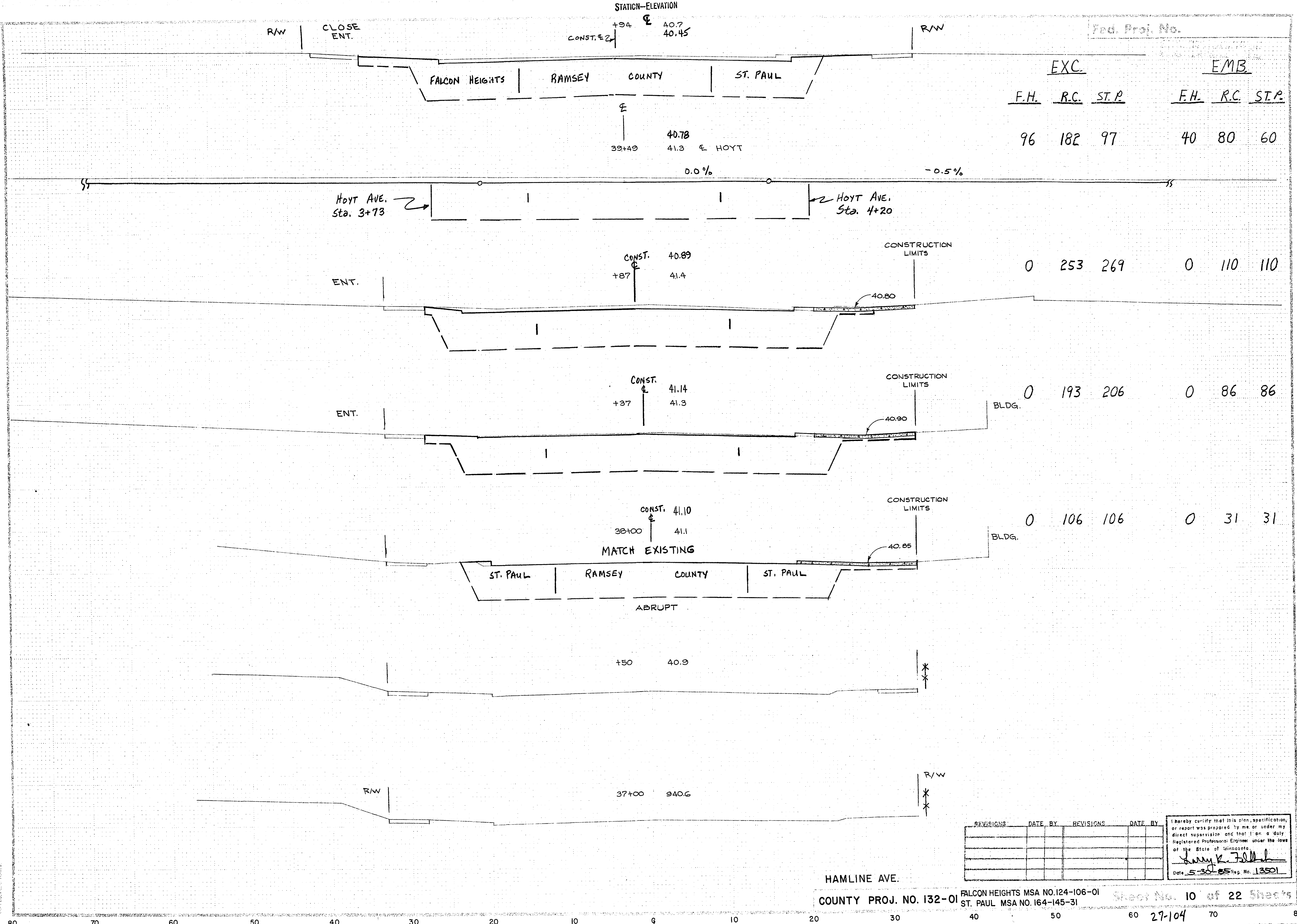
ASBUILT PLAN
CONFORMING TO
CITY RECORDS

DONE BY: R.E. Lu
DATE: 3/20/87

I hereby certify that this plan, specification,
or report 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.
Larry K. Fildes
Date: 5-30-87 Reg. No. 13501

REVISIONS	DATE BY	REVISIONS	DATE BY
NEW CONST. @ HURON (C.R. ADDITION)	10/27/85 J.C.C.		

HOYT AVE.



Proj. No.

EXC			EMB		
F.H.	R.C.	ST.P.	F.H.	R.C.	ST.P.
96	182	97	40	80	60

0	253	269	0	110	110
---	-----	-----	---	-----	-----

0	193	206	0	86	86
---	-----	-----	---	----	----

0	106	106	0	31	31
---	-----	-----	---	----	----

REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification, or report 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.

Larry K. Follmer

Date 5-30-85 Reg. No. 13501

STATION-ELEVATION
E

Fed. Proj. No.

EXC.

EMB

F.H. R.C. S.T.P.

F.H. R.C. S.T.P.

CONST. E

35.55

+94

36.0

263 268 153

77 100 50

HO.

GRANULAR BORROW
29 50 29

SUBGRADE CORRECTION

(GRANULAR BORROW)

35.68

+78

36.0

106 78 44

HO.

30 28 14

GRANULAR BORROW
8 14 8

IOWA AVE.

SUBGRADE CORRECTION

(GRANULAR BORROW)

36.62

42+00

36.9

+30 BEGIN 1' SUBGRADE CORRECTION

367 380 209

HO.

107 139 69

GRANULAR BORROW
40 69 40

BLDG.

37.52

+50

38.0

123 221 120

HO.

44 89 44

GRANULAR BORROW
13 22 13

FALCON HTS.

RAMSEY COUNTY

ST. PAUL

38.03

41+23

38.7

61 110 59

HO.

24 48 24

ENT.

339.42

40+50

340.1

167 302 160

65 130 65

CONST. E

R/W

ENT.

R/W

HO.

121 228 124

50 100 50

HAMLIN AVE.

REVISIONS	DATE	BY	REVIS	CNS	DATE	BY

I hereby certify that this plan, specification, or report 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.
Amey K. Felder
Date 5-30-85 Reg. No. 13591

COUNTY PROJ. NO. 132-01 FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31

Sheet No. 11 of 22 Sheets

27-104

70

80

STATION-ELEVATION
E

Fed. Proj. No.

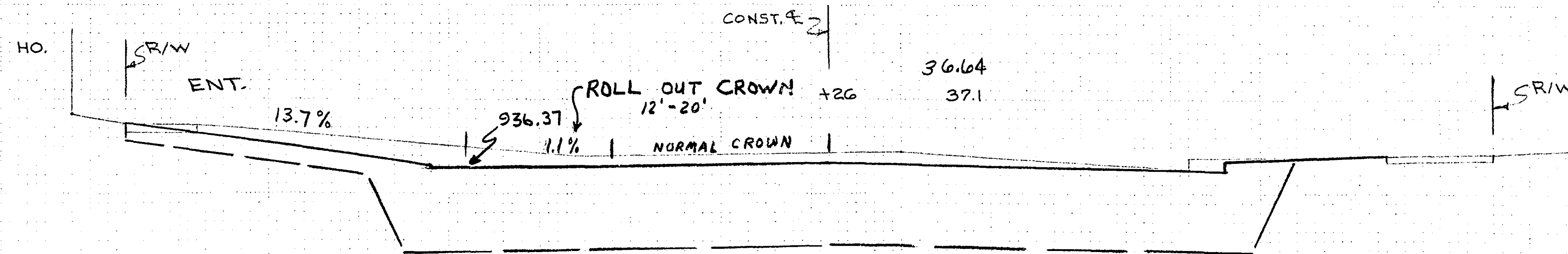
EXC.

EMB

F.H. R.C. ST.P.

F.H. R.C. ST.P.

+25 SPECIAL GUTTER GRADE PT. BEGIN +2.66%



62 95 52

HO

21 43 21

70 121 62

23 46 23

GRANULAR BORROW

7 12 7

GUTTER EL. 935.69

45+00

36.26

36.7

FALCON HTS.

RAMSEY COUNTY

ST. PAUL

NOTE { +75 BEGIN SPECIAL GUTTER GRADE (+1.44%)

935.53 GUTTER GRADE NORMAL CROWN

ALLEY

+43

35.64

36.2

+80 END 1' SUBGRADE CORRECTION

152 183 150

51 101 51

GRANULAR BORROW

30 51 30

SUBGRADE CORRECTION

(GRANULAR BORROW)

ENT.

+24

35.51

36.0

54 91 48

17 34 17

GRANULAR BORROW

10 17 10

SUBGRADE CORRECTION

(GRANULAR BORROW)

35.35

44+00

35.9

66 115 59

HO

21 43 21

GRANULAR BORROW

12 21 12

SUBGRADE CORRECTION

(GRANULAR BORROW)

CONST. E

935.33

43+50

935.8

133 240 131

HO

44 86 44

GRANULAR BORROW

26 44 26

SUBGRADE CORRECTION

(GRANULAR BORROW)

HAMLIN AVE.

REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification, or report 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.
Larry J. [Signature]
Date 5-30-85 Reg. No. 13591

COUNTY PROJ. NO. 132-01
FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31

Sheet No. 12 of 22 Sheets

27-104

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

EXC.

EMB

F.H.	R.C.	ST.P.	HO	F.H.	R.C.	ST.P.
171	236	135		50	100	50

R/W 2

CONST. E
+44 38.97
38.5

R/W

3:1

38.84
+38 39.4

18 25 15 6 11 6

38.58
+25 39.1

58 54 44 21 23 17

38.25
46+09 38.9 & IDAHO AVE.

101 68 70 33 28 22

37.92
+93 38.5

101 68 71 33 28 22

R/W 2

+75 END SPECIAL GUTTER GRADE

GUTTER EL. 936.90

CONST. E
45+50 37.06
37.4

R/W

179 173 137 64 176 49

FALCON HTS.

RAMSEY COUNTY

ST. PAUL

HAMLINE AVE.

REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date 5-30-85 Reg. No. 13501

STATION-ELEVATION
E

Fed. Proj. No.

EXC.

EMB

F.H. R.C. S.T.P.

F.H. R.C. S.T.P.

90 120 71

32 57 28

104 99 57

36 46 23

79 136 76

32 64 32

119 188 104

44 86 44

82 126 68

28 57 28

189 288 159

60 121 60

SOUTH G. L.

C.B.

R/W 2

8' MATCH

CONST. E

43.67

43.7

5' R/W

ENT.

43.32

43.4

42.84

42.9

FALCON HTS.

RAMSEY COUNTY

ST. PAUL

42.12

42.2

41.51

41.9

ALLEY

CONST. E

940.12

940.9

5' R/W

R/W 2

3' 1

HAMLIN AVE.

COUNTY PROJ. NO. 132-01 FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31

Sheet No. 14 of 22 Sheets

27-104

REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification, or report 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.
Harry J. Jell
Date: 5-30-85 Reg. No. 13901

STATION-ELEVATION
E

Fed. Proj. No.

EXC.

EMB

F.H. R.C. S.T.P.

F.H. R.C. S.T.P.

12 0 8

5 0 5

17 0 11

9 0 9

73 108 71

42 36 42

52 90 54

22 44 22

222 208 121

85 100 50

104 - -

37 - -

SEE SHEETS
No. 21 & 22
FOR ALLEY
RECONSTRUCTION

-0.91%

ALLEY

+65 BEGIN BITUMINOUS OVERLAY
+65 END PERMANENT CONSTRUCTION
+65 END 20:1 SUBCUT TAPER (-2.33')

+25 END FULL DEPTH SUBCUT - BEGIN 20:1 SUBCUT TAPER

NORTH G.L.

C.B.

FALCON HEIGHTS

RAMSEY COUNTY

ST. PAUL

CENTERLINE CALIFORNIA AVE.

HAMLIN AVE.

COUNTY PROJ. NO. 132-01 FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31

Sheet No. 15 of 22 Sheets

27-164

REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification, or report 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.
James K. Follmer
Date 5-30-85 Reg. No. 13501

25	56	24	9	25	9
----	----	----	---	----	---

89	198	79	28	87	28
----	-----	----	----	----	----

20	47	17	5	16	5
----	----	----	---	----	---

11	34	10	1	5	1
----	----	----	---	---	---

CONST. ϵ

43.3

2+00 43.3

MATCH EXISTING

BEGIN 20:1 SUBCUT TAPER (2.33')

CONC. ENT.

CONC. ENT.

ALLEY

ALLEY

FALCON
HTS.

RAMSEY COUNTY

ST. PAUL

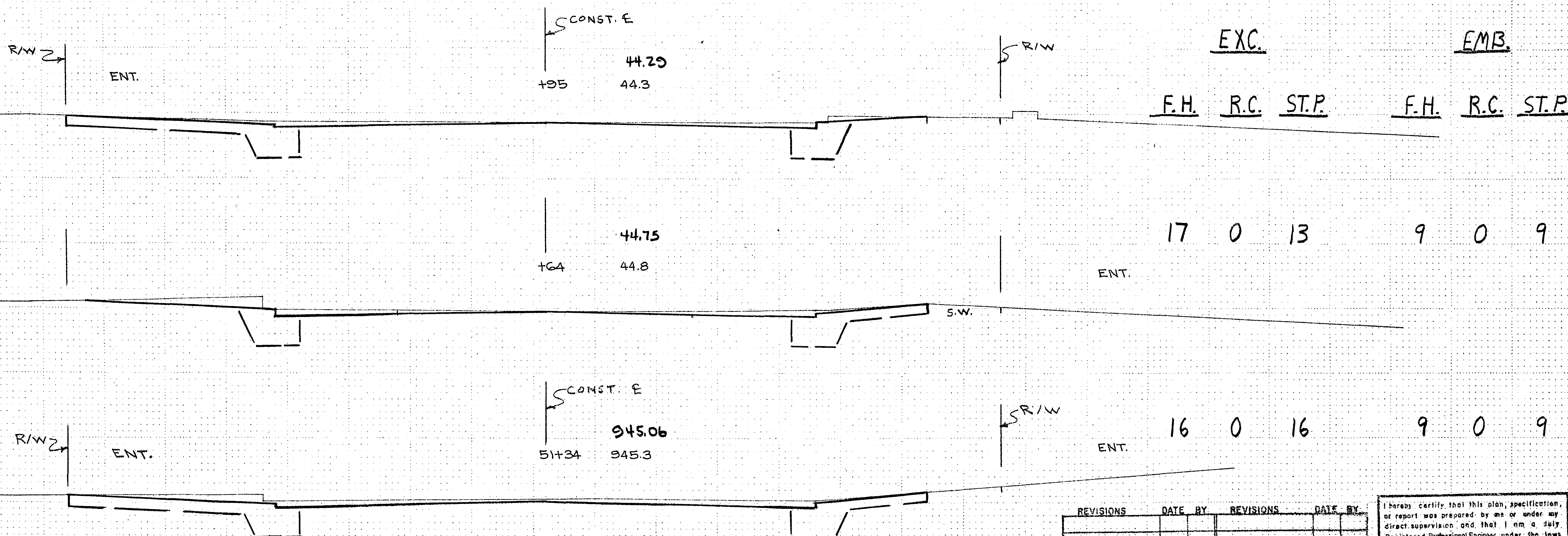
HOYT AVE.

COUNTY PROJ. NO. 132-01 FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31

01 Sheet No. 17 of 22 Sheets

27-104

END OVERLAY STA. 52+25±



HAMLIN AVE.

COUNTY PROJ. NO. 132-01

FALCON HEIGHTS MSA NO. 124-106-01
 ST. PAUL MSA NO. 164-145-31

Sheet No. 16 of 22 Sheets

27-104

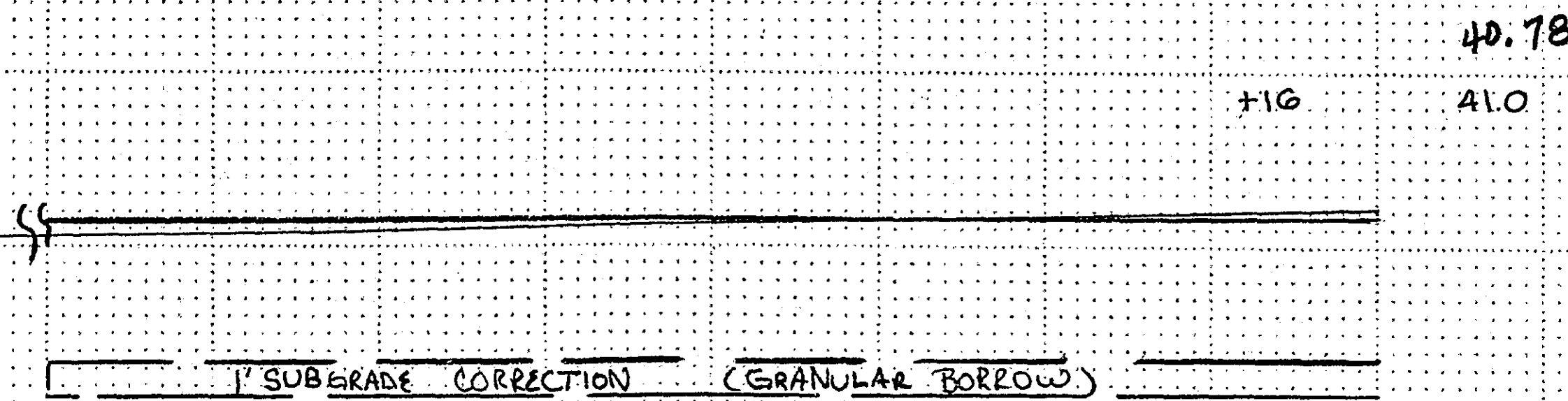
REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification or report 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.
Larry K. Zillman
 Date 5-30-05 Reg. No. 13501

STATION-ELEVATION
E

Fed. Proj. No.

EXCAVATION EMBANKMENT
TOTALS SUB-TOTALS



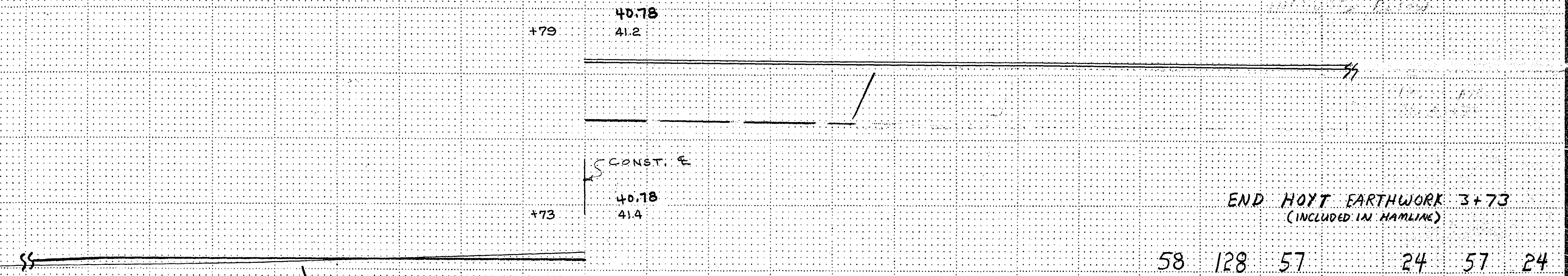
E HAMLINE AVE.

EXC.			EMB.		
F.H.	R.C.	ST.P.	F.H.	R.C.	ST.P.
-	143	119	-	53	43

GRANULAR BORROW
27 22

SEE HAMLINE AVE. X-SECTIONS

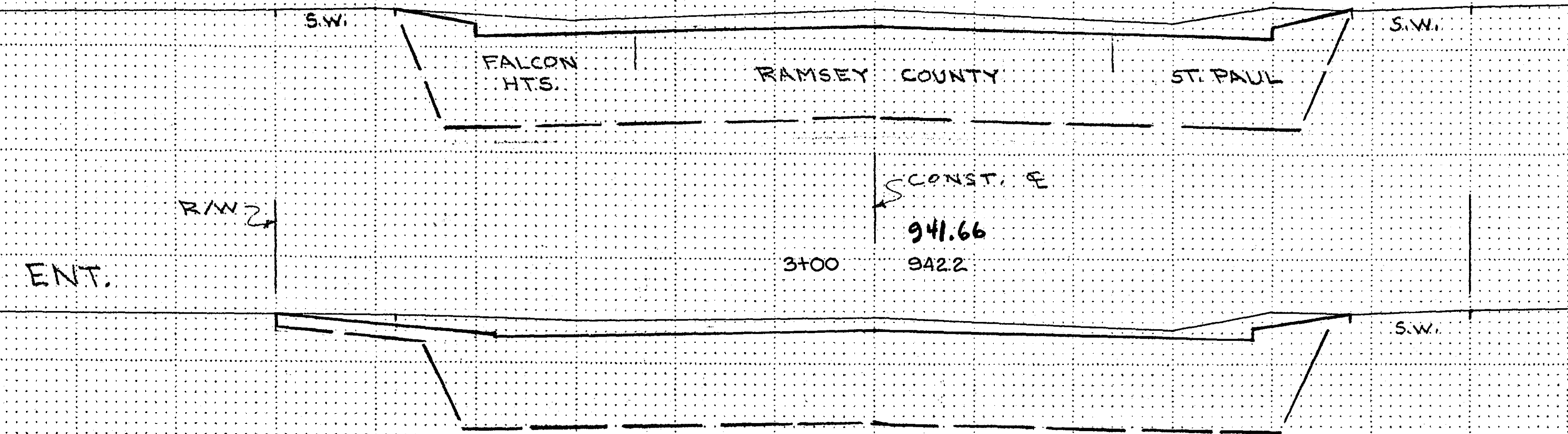
3+80 BEGIN 1' SUBGRADE CORRECTION (20:1)



END HOYT EARTHWORK 3+73
(INCLUDED IN HAMLINE)

58	128	57	24	57	24
----	-----	----	----	----	----

CLOSE
CONC. ENT.



80	169	79	29	73	29
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HOYT AVE.

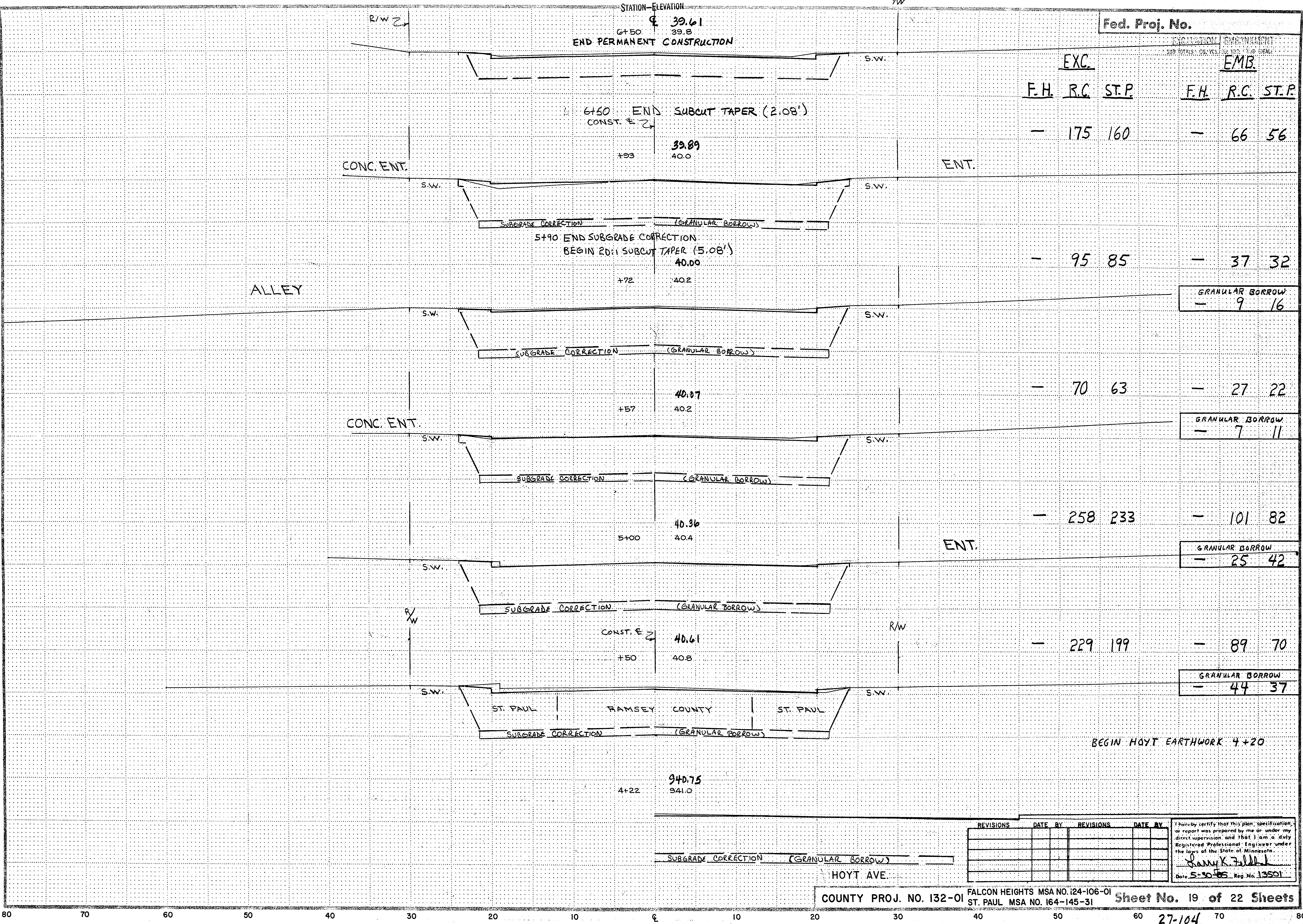
COUNTY PROJ. NO. 132-01

FALCON HEIGHTS MSA NO. 124-106-01
ST. PAUL MSA NO. 164-145-31

Sheet No. 18 of 22 Sheets

REVISIONS	DATE	BY	REVISIONS	DATE	BY

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date 5-30-85 Reg. No. 13501



Fed. Proj. No.		
EXC.	EMB.	
F.H.	R.C.	ST.P.

-	175	160
-	66	56

-	95	85
-	37	32

GRANULAR BORROW		
-	9	16

-	70	63
-	27	22

GRANULAR BORROW		
-	7	11

-	258	233
-	101	82

GRANULAR BORROW		
-	25	42

-	229	199
-	89	70

GRANULAR BORROW		
-	44	37

BEGIN HOYT EARTHWORK 4+20

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Larry K. Feldt

Date 5-30-65 Reg. No. 13501

STATION-ELEVATION

Fed. Proj. No.

HO.

8+00 39.4

HO.

EARTHWORK SUMMARY

EXC.

EMB x 1.3

TOTAL
EMB

EXCESS

GRAN.
BORROW

ST. PAUL

+54 39.8 GUTTERLINE HURON AVE.

HAMLIN AVE	3350	1307	1699	1651	175
HOYT AVE	1125	401	521	604	128
TOTAL	4475	1708	2220	2255	303

FALCON HTS.

+39 39.8 C HURON AVE.

HAMLIN AVE.	3645	1271	1652	1993	175
HOYT AVE.	283	96	125	158	0
TOTAL	3928	1367	1777	2151	175

RAMSEY CO.

+23 39.8 GUTTERLINE HURON AVE.

HAMLIN AVE.	5153	2171	2822	2331	300
HOYT AVE.	1602	636	827	775	112
TOTAL	6755	2807	3649	3106	412

GRAND TOTALS 15158 5882 7646 7512 890

939.8

7+00 939.8

END TEMPORARY CONSTRUCTION
WARP BITUMINOUS TO MATCH EXISTING

GRADE AS DIRECTED

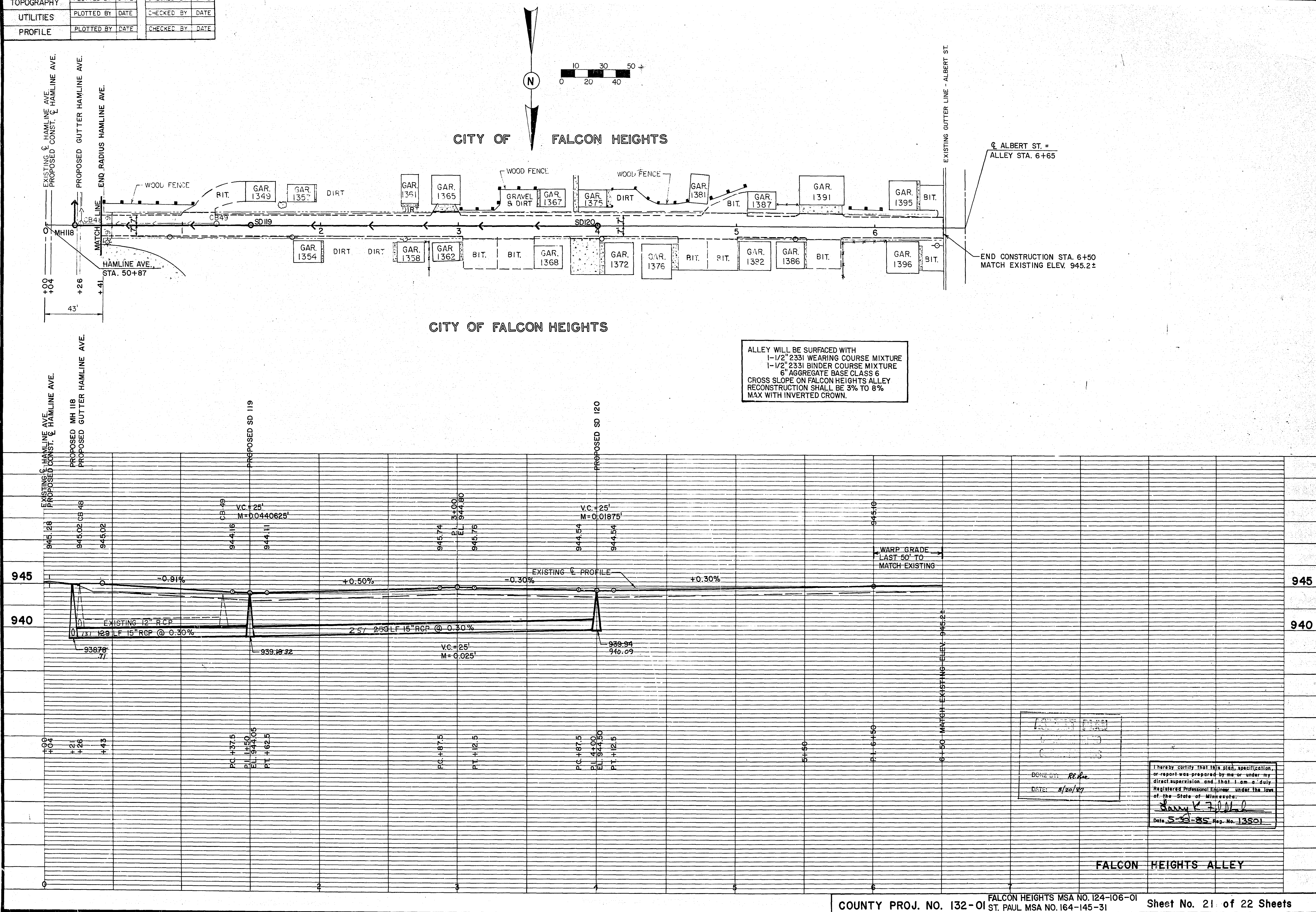
REVISIONS	DATE BY	REVISIONS	DATE BY
EXISTING GRADE	REV. S. K. H.		

I hereby certify that this plan, specification, or report 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.
Samuel J. Felt
Date 5-10-85 Reg. No. 13501

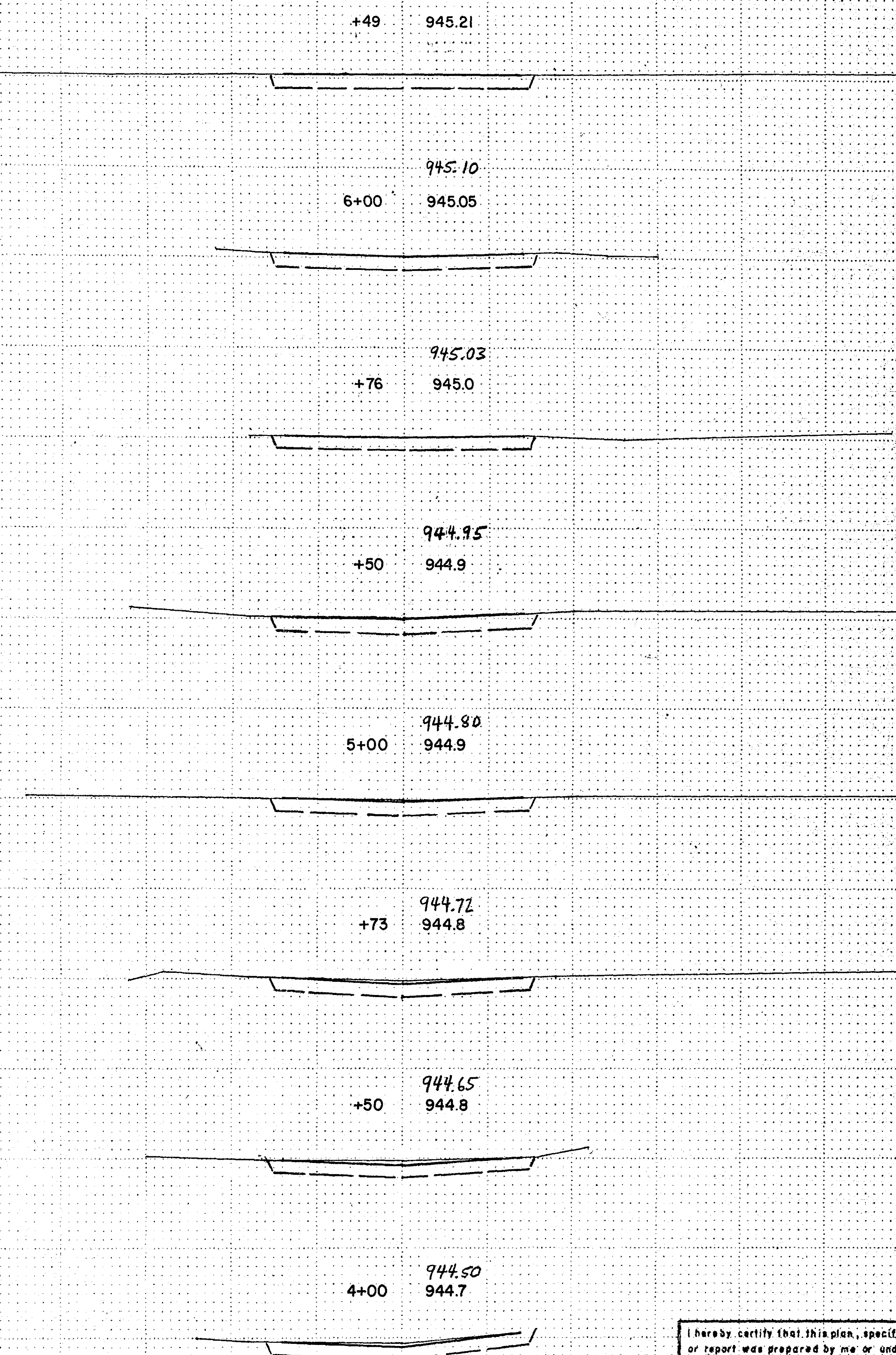
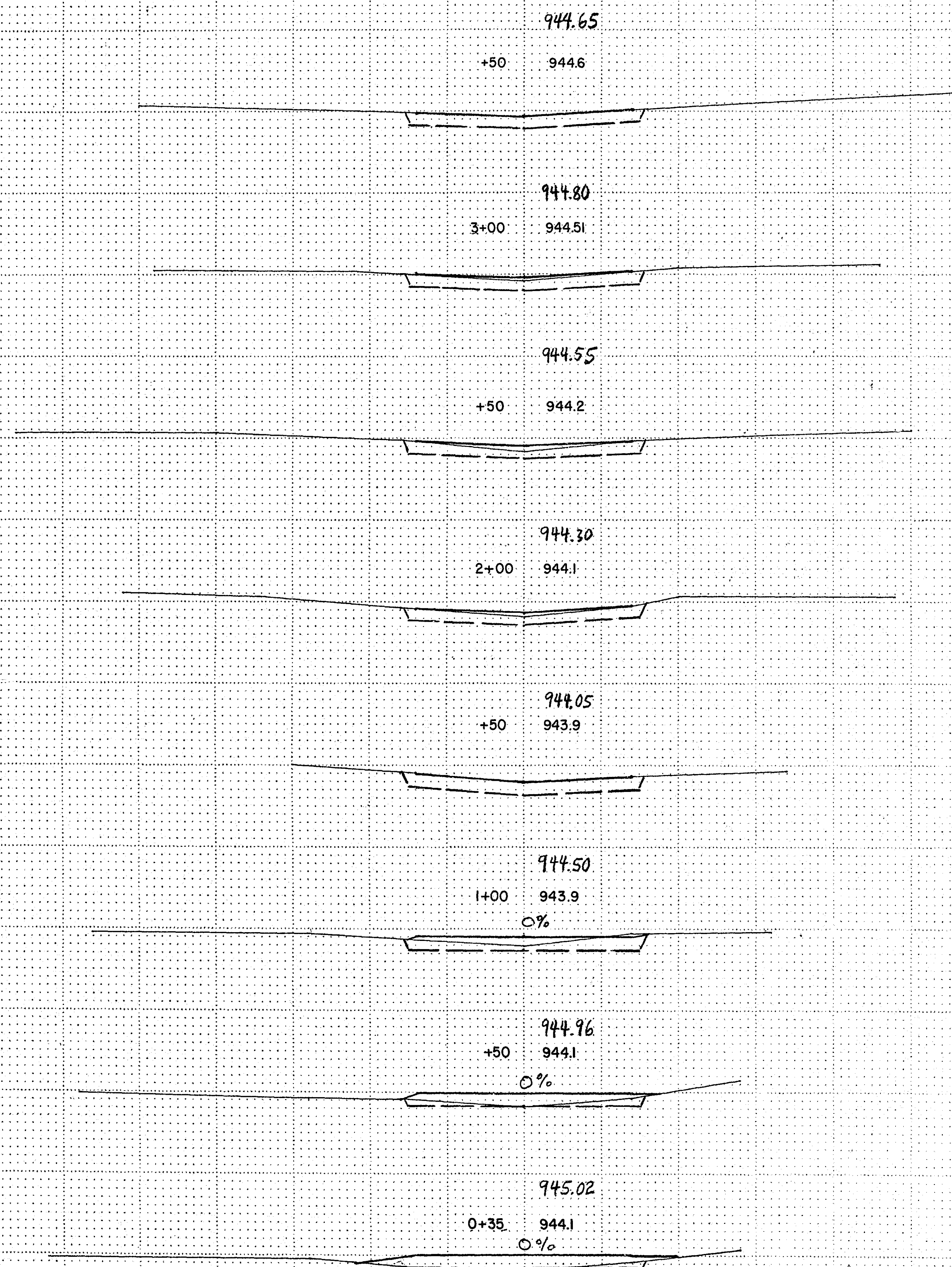
HOYT AVE.

27-104

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE



MATCH EXISTING +50 - ELEV. 945.21±



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Larry K. Feldhal

Date 5-30-85 Reg. No. 13501