

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

5150
 73.00

CONSTRUCTION PLAN FOR GRADING, DRAINAGE, AGGREGATE BASE, BITUMINOUS SURFACING, CONC. C&G, SAN. SEW, WATERMAIN

LOCATED ON 105TH AVE. N.E. (C.R. 87) BETWEEN T.H. 65 AND RADISSON ROAD (C.R. 52) (Geographic Description)

FROM _____ TO _____ (Legal Description)

COUNTY PROJECT NO. 88-22-87 STATE AID PROJ. NO. _____

GROSS LENGTH	5150 FEET	0.975 MILES	GROSS LENGTH	_____ FEET	_____ MILES
BRIDGES-LENGTH	0 FEET	0 MILES	BRIDGES-LENGTH	_____ FEET	_____ MILES
EXCEPTIONS-LENGTH	0 FEET	0 MILES	EXCEPTIONS-LENGTH	_____ FEET	_____ MILES
NET LENGTH	5150 FEET	0.975 MILES	NET LENGTH	_____ FEET	_____ MILES

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	TITLE
1	TITLE
2-3	TRAFFIC CONTROL PLAN
4	ESTIMATED QUANTITIES AND DETAILS
5	DRAINAGE TABULATIONS AND DETAILS
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17	SANITARY SEWER AND WATERMAIN
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22	TRAFFIC SIGNAL DETAILS
23-43	CROSS SECTIONS

THIS PLAN CONTAINS 43 SHEETS

DESIGN DESIGNATION

EN18 20	662,000
R Value	70
ADT (1990)	4800
Proj. ADT (2010)	8600
Proj. HCADT ()	340
Soil Factor	_____
_____ 10 Ton Design	_____
Shoulder Width	NONE

Design Speed 50 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 Aug 1, 1988 REG. NO. 9092 ENGR. *Paul K. Ruid* CONSULTANT

- Recommended for Approval _____ 19
 PAUL K. RUID, ANOKA CO. ENGINEER, RES. NO. 6549
- Recommended for Approval _____ 19
 JON G. OLSON, ASSIST. CO. ENGINEER-CONST., RES. NO. 1283
- Recommended for Approval _____ 19
 WILLIAM A. SIROVEN, ASSIST. CO. ENGR.-ADM., RES. NO. 14738
- Recommended for Approval _____ 19
 DISTRICT STATE AID ENGINEER
- Recommended for Approval _____ 19
 STATE AID PLANS AND SPECS ENGINEER
- Approved _____ 19
 STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
 DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. _____ CO. PROJ. NO. 88-22-87
 STATE PROJ. NO. _____ SHEET NO. 1 OF 43 SHEETS

PLANS SYMBOLS

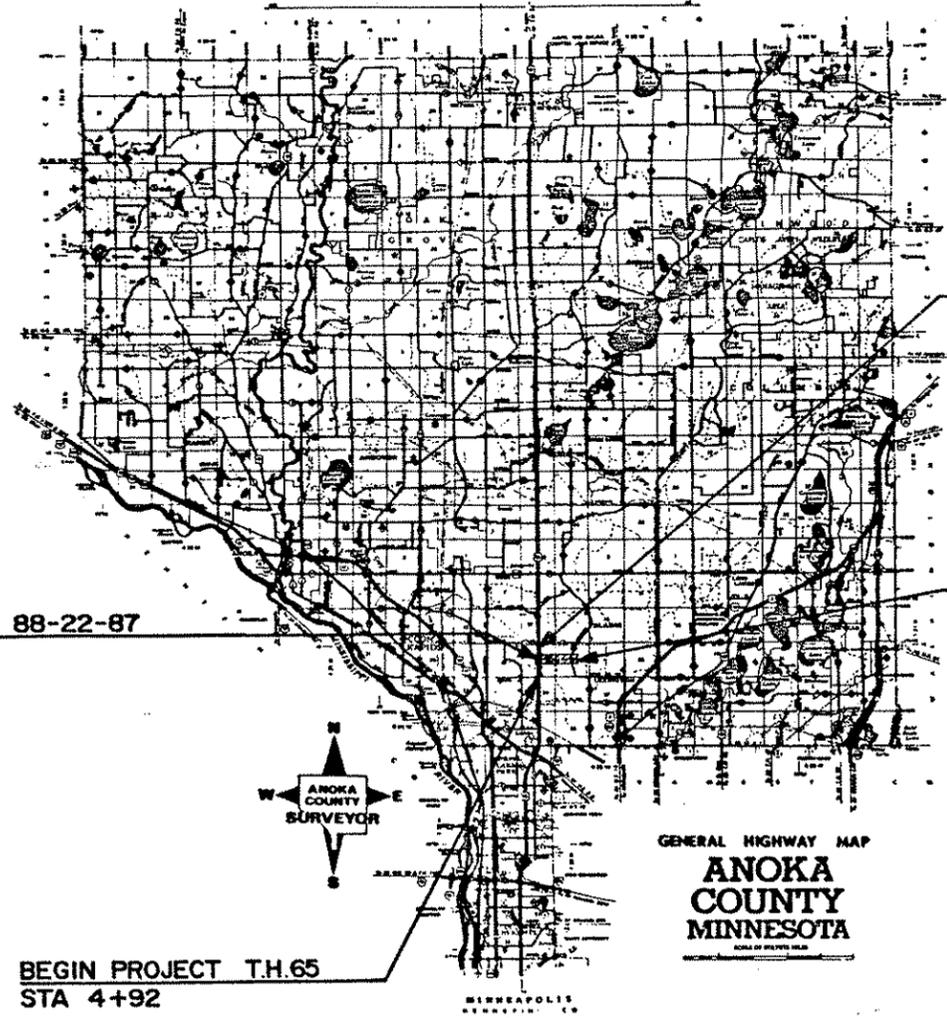
- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- RIGHT-OF-WAY LINE
- RIGHT-OF-WAY LINE
- SLOPE EASEMENT
- PRESENT RIGHT-OF-WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Acadpa Land Lines)
- VACATED PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT-OF-WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- DRAIN TILE
- CLAY PIT
- DROP PILE
- CLAYD RAIL
- BAMBOO 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
- NEARBY 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
- S - STONE
- B - BRICK
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY

UTILITIES SYMBOLS

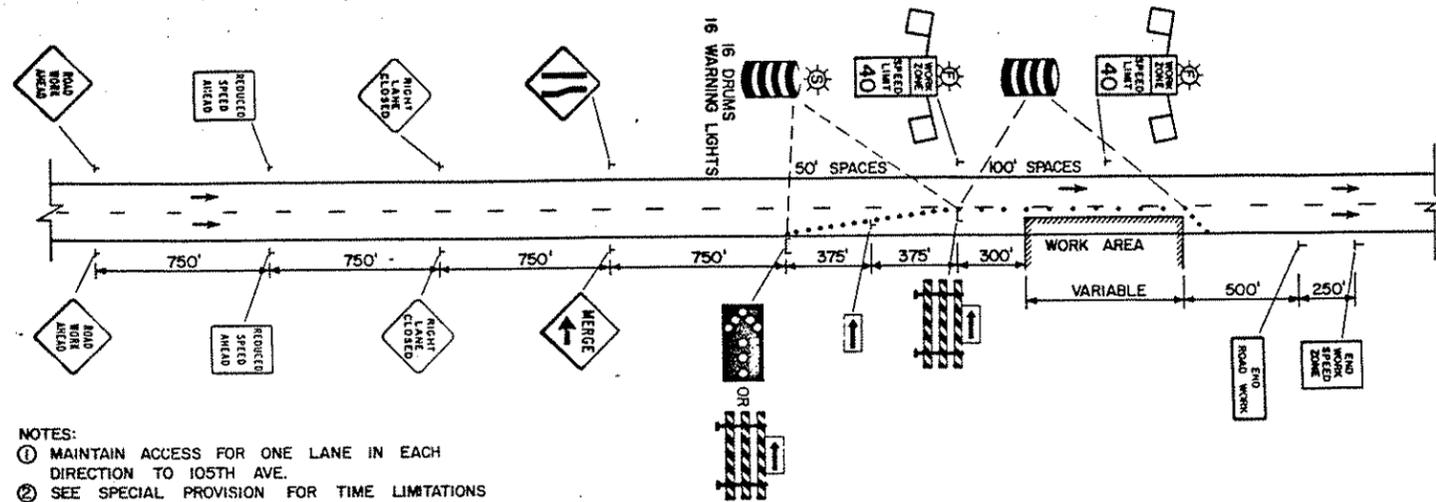
- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE AND POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (TELEPHONE CABLE TERMINAL)
- GAS MAIN
- WATER MAIN
- CONDUIT
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE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

SCALES

PLAN	1" = 50'
PROFILE HORIZ.	1" = 50'
VERT.	1" = 5'
INDEX MAP	1" = 2.7 MILES
GENERAL LAYOUT	_____

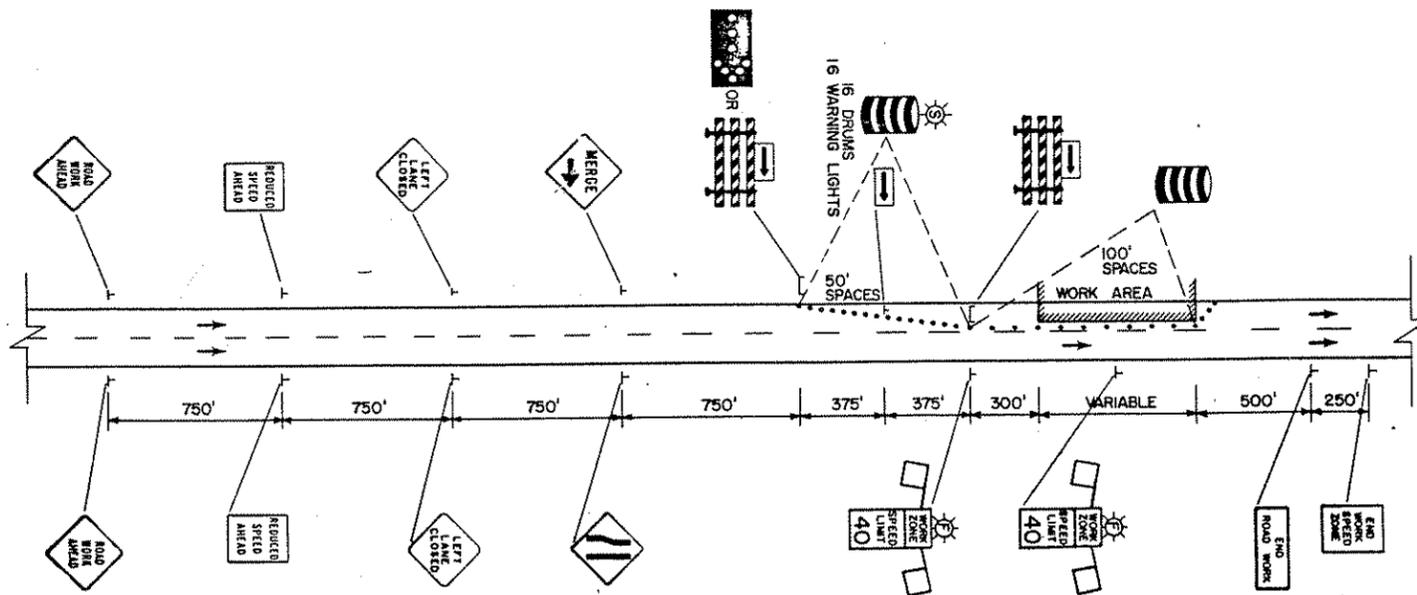


TITLE SHEET 1/10/88 Order Form 432 REV. 2-88



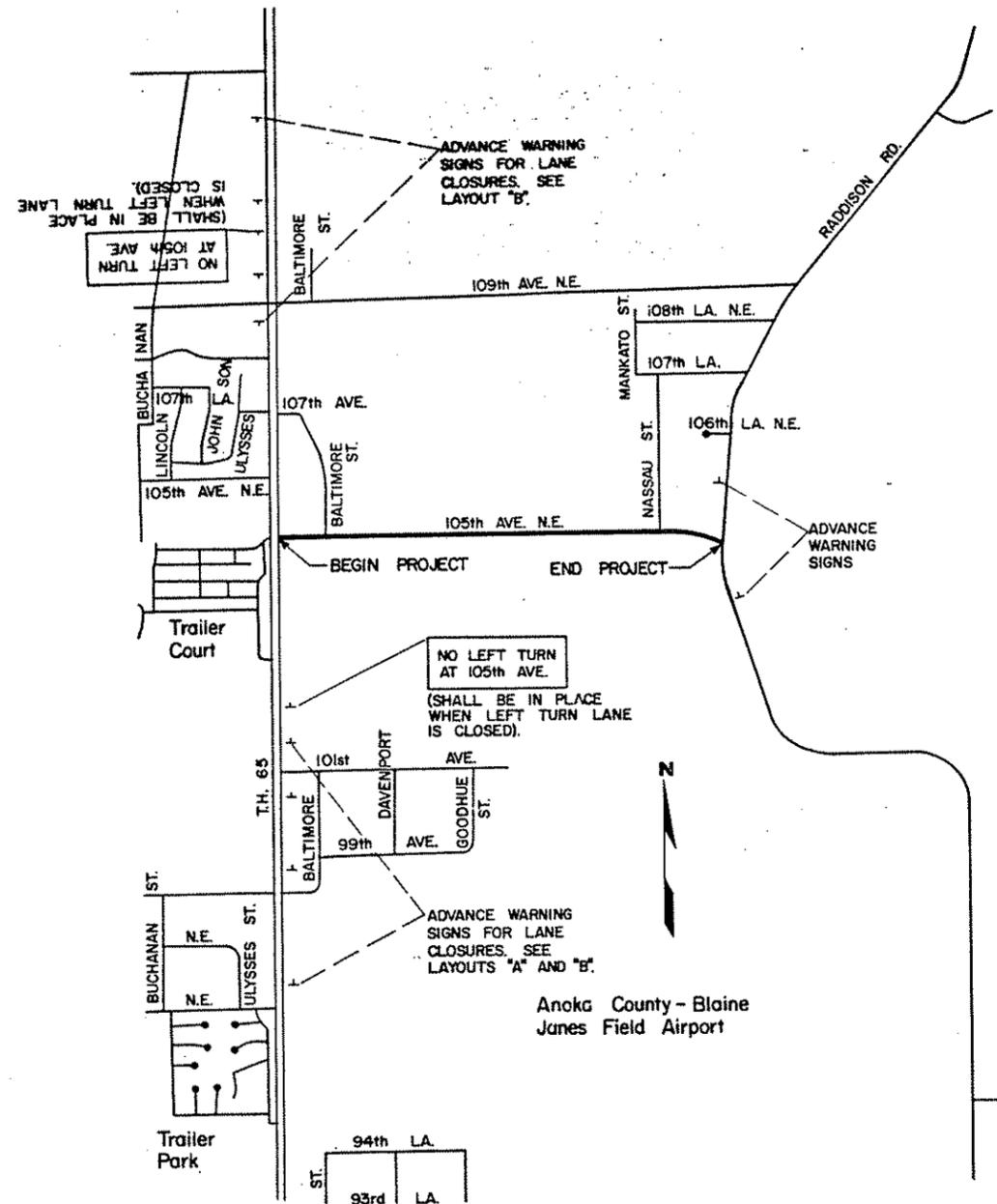
- NOTES:
- ① MAINTAIN ACCESS FOR ONE LANE IN EACH DIRECTION TO 105TH AVE.
 - ② SEE SPECIAL PROVISION FOR TIME LIMITATIONS ON LANE CLOSURES.

LAYOUT "A"-RIGHT LANE CLOSURE ON T.H.65
NO SCALE

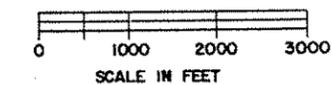


- NOTES:
- ① LEFT TURN LANES AND MEDIAN OPENING AT 105TH AVE. MAY BE CLOSED WHEN LEFT LANES ON T.H.65 ARE CLOSED.
 - ② SEE SPECIAL PROVISIONS FOR TIME LIMITATIONS ON LANE CLOSURES.

LAYOUT "B"-LEFT LANE CLOSURE ON T.H.65
NO SCALE



PROJECT LOCATION MAP



DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED	DRAWN	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
RDC	JEC	
CHECKED		
RCL		
		Robert D. Clare
		DATE 8-1-89 REG NO. 4860

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

TRAFFIC CONTROL PLAN
SHEET NO. 3 OF 43 SHEETS

CO. PROJ. NO. 88-22-87

COMMISSION NO.

9326

STATEMENT OF ESTIMATED QUANTITIES

NO.	SPEC. NO.	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES
1	2021.501	MOBILIZATION	LS	1.0	
2	2031.501	FIELD OFFICE, TYPE D	EA	1.0	
3	2101.511	CLEARING AND GRUBBING	LS	1.0	
4	2104.501	REMOVE CULVERT PIPE	LF	1050.0	
5	2104.501	REMOVE FENCE	LF	1252.0	
6	2104.513	SAWING BITUMINOUS PAVEMENT	LF	2448.0	
7	2104.521	SALVAGE FENCE	LF	402.0	
8	2104.521	SALVAGE 72" CS PIPE	LF	80.0	
9	2104.523	SALVAGE GUARD POSTS	EA	9.0	
10	2105.501	COMMON EXCAVATION	CY	19684.0	
11	2105.505	MUCK EXCAVATION	CY	41628.0	
12	2105.507	SUBGRADE EXCAVATION	CY	4472.0	
13	2105.521	GRANULAR BORROW (EV)	CY	56000.0	
14	2112.501	SUBGRADE PREPARATION	RD. STA.	40.5	
15	2130.501	WATER	M GAL	500.0	
16	2211.503	AGGREGATE BASE PLACED, CLASS 5A	CY	10136.0	
17	2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	906.0	
18	2331.510	BINDER COURSE MIXTURE	TON	7324.0	
19	2331.514	BASE COURSE MIXTURE	TON	9765.0	
20	2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	214.0	
21	2341.508	WEARING COURSE MIXTURE	TON	3743.0	
22	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	4439.0	
23	2501.511	18" RC PIPE CULVERT, CL. III	LF	33	
24	2501.511	72" RC PIPE CULVERT, CL. III	LF	210.0	
25	2501.515	18" RC PIPE APRON	EA	5.0	
26	2501.515	21" RC PIPE APRON	EA	1.0	
27	2501.515	30" RC PIPE APRON	EA	1.0	
28	2501.515	36" RC PIPE APRON	EA	1.0	
29	2501.515	72" RC PIPE APRON	EA	4.0	
30	2503.511	12" RC PIPE SEWER, CL. III	LF	525.4	
31	2503.511	15" RC PIPE SEWER, CL. III	LF	875.1	
32	2503.511	18" RC PIPE SEWER, CL. III	LF	769.6	
33	2503.511	21" RC PIPE SEWER, CL. III	LF	129.6	
34	2503.511	24" RC PIPE SEWER, CL. III	LF	577.8	
35	2503.511	27" RC PIPE SEWER, CL. III	LF	483.0	
36	2503.511	30" RC PIPE SEWER, CL. III	LF	657.5	
37	2503.511	36" RC PIPE SEWER, CL. III	LF	583.1	
38	2506.507	CONSTRUCT CB, DES. C OR G	LF	56.1	
39	2506.507	CONSTRUCT CB, DES. A OR F	LF	37.9	
40	2506.507	CONSTRUCT CB, DES. 4020E-60	LF	44.2	
41	2506.507	CONSTRUCT CB, DES. 4020E-72	LF	23.5	
42	2506.507	CONSTRUCT MH, DES. 4020E-72	LF	8.8	
43	2506.516	CASTING ASSEMBLY	EA	33	
44	2521.501	4" CONCRETE WALK	SF	22759.0	
45	2521.501	6" CONCRETE WALK	SF	1595.0	
46	2531.501	CONCRETE CURB AND GUTTER, DES B612	LF	844.0	
47	2531.501	CONCRETE CURB AND GUTTER, DES B618	LF	10734.0	
48	2531.503	CONCRETE MEDIAN	SY	403.0	
49	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SY	154.0	
50	2564.531	F & I SIGN PANELS, TYPE C	SF	252.0	
51	2564.531	F & I SIGN PANELS, TYPE D	SF	133.0	
52	2564.532	TRAFFIC CONTROL	LS	1.0	
53	2573.501	BALE CHECK	EA	24.0	
54	2573.502	SILT FENCE, HEAVY DUTY	LF	100.0	
55	2575.501	SEEDING	AC	3.5	
56	2575.502	SEED, MIXTURE NO. 900	LBS	160.0	
57	2575.505	SODDING, TYPE - EROSION CONTROL	SY	431.0	
58	2575.511	MULCH MATERIAL TYPE I	TON	7.1	
59	2575.519	DISK ANCHORING	AC	3.5	
60	2575.531	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	TON	1.0	
61	2580.501	TEMPORARY LANE MARKING	RD. STA.	20.0	
62	0331.601	2" WEARING COURSE MIXTURE PLACED	SY	320.0	
63	0503.511	18" RC PIPE SAN SEW. CL V 16'-18'	LF	144.0	
64	0503.511	12" PVC SAN SEW. 16'-18'	LF	380.0	
65	0503.511	8" PVC SAN SEW. 0'-10'	LF	293.0	
66	0503.511	8" PVC SAN SEW. 10'-12'	LF	386.0	
67	0503.511	8" PVC SAN SEW. 12'-14'	LF	328.0	
68	0503.511	8" PVC SAN SEW. 14'-16'	LF	161.0	
69	0503.511	8" PVC SAN SEW. 16'-18'	LF	53.0	
70	0503.602	STANDARD MANHOLE	EA	6.0	
71	0503.603	EXTRA DEPTH OF MANHOLE	LF	34.5	
72	0503.603	4" PVC SERVICE LATERAL	LF	385.0	
73	0503.603	8" X 4" PVC WYE	EA	6.0	
74	0503.611	GRANULAR FOUNDATION	TON	100.0	
75	0504.602	F & I 12" GV & BOX	EA	3.0	
76	0504.602	F & I 10" GV & BOX	EA	3.0	
77	0504.602	F & I 8" GV & BOX	EA	1.0	
78	0504.602	F & I HYDRANT	EA	4.0	
79	0504.602	WATER SERVICE CONNECTION	EA	6.0	
80	0504.603	12" DIP WATERMAIN	LF	519.0	
81	0504.603	10" DIP WATERMAIN	LF	1230.0	
82	0504.603	8" DIP WATERMAIN	LF	85.0	
83	0504.603	F & I HYDRANT BRANCH LINE (6" DIP)	LF	110.0	
84	0504.603	1-1/2" COPPER SERVICE PIPE	LF	325.0	
85	0504.620	F & I MJ DIP FITTINGS	LBS	3075.0	
86	0557.603	INSTALL FENCE	LF	402.0	

STATEMENT OF ESTIMATED QUANTITIES

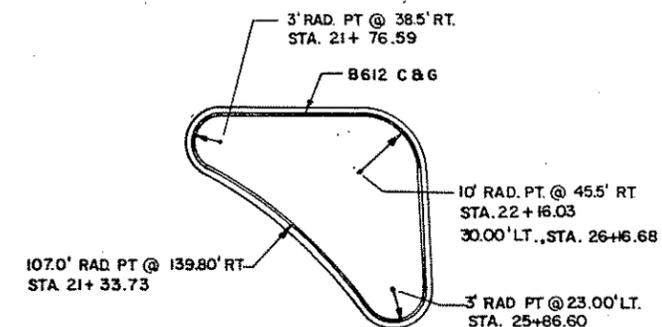
NO.	SPEC. NO.	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES
87	0564.602	PAVT MESSAGE (LT. ARROW) POLY PREFORM	EA	34.0	
88	0564.602	PAVT MESSAGE (RT. ARROW) POLY PREFORM	EA	10.0	
89	0564.602	PAVT MESSAGE (LT.-THRU ARROW) POLY PREFORM	EA	2.0	
90	0564.602	PAVT MESSAGE (ONLY) POLY PREFORM	EA	2.0	
91	0564.603	4" WIDE SOLID LINE WHITE-PAINT	LF	3710.0	
92	0564.603	4" WIDE BROKEN LINE WHITE-PAINT	LF	10635.0	
93	0564.603	8" WIDE SOLID LINE WHITE-PAINT	LF	690.0	
94	0564.603	12" WIDE STOP LINE WHITE-PAINT	LF	250.0	
95	0564.603	24" WIDE STOP LINE WHITE-PAINT	LF	140.0	
96	0564.603	4" WIDE SOLID LINE YELLOW-PAINT	LF	11490.0	
97	0564.603	4" WIDE BROKEN LINE YELLOW-PAINT	LF	9120.0	
98	0564.603	4" WIDE DOUBLE SOLID LINE YELLOW-PAINT	LF	205.0	
99	0564.604	CROSSWALK MARKING-POLY PREFORM	SF	1860.0	
100	0565.511	REVISE FULL TRAF. ACT.-TRAF. CONTROL SYSTEM	SIS. SYS.	1.0	

NOTES:

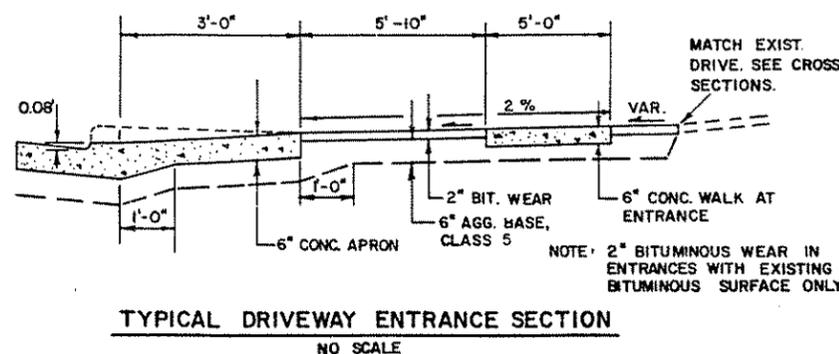
- (P) PLANNED QUANTITIES.
- INCLUDES AGGREGATE SHOULDERING, CLASS 5.
- INCLUDES 600 CY ESTIMATED FOR TEMPORARY WIDENING.
- INCLUDES SHOULDER MIXTURE.
- FOR ENTRANCES. INCLUDES 3 INCHES COMPACTED AGGREGATE BASE, CLASS 5.
- INCLUDES GV & BOX.

STANDARD PLATE LIST

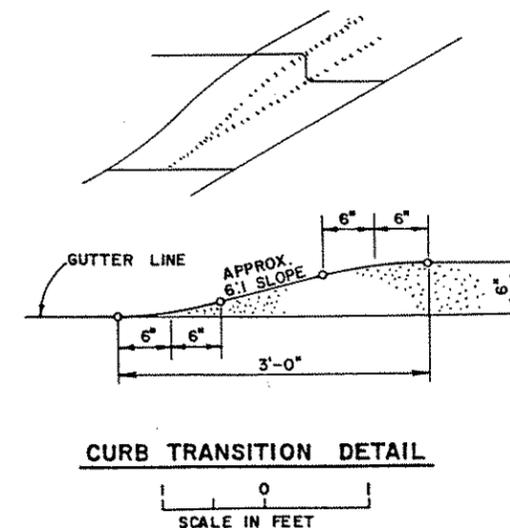
3000K	REINFORCED CONCRETE PIPE (3 SHEETS)
3006F	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
3040F	CORRUGATED METAL PIPE CULVERT
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123I	METAL APRON FOR C.S. PIPE
3124B	METAL APRON CONNECTION
3133B	RIPRAP AT RCP OUTLETS
3134B	RIPRAP AT CMP OUTLETS
3145E	CONCRETE PIPE TIES
3221C	CORRUGATED STEEL PIPE COUPLING BAND (3 SHEETS)
4000I	MANHOLE OR CATCH BASIN
4002E	MANHOLE OR CATCH BASIN
4005K	MANHOLE OR CATCH BASIN
4006K	MANHOLE OR CATCH BASIN
4010G	CONCRETE SHORT CONE & ADJUSTING RING
4011D	PRECAST CONCRETE BASE
4020E	MANHOLE OR CATCH BASIN
4101C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110D	COVER CASTING FOR MANHOLE
4129F	CATCH BASIN FRAME CASTING
4151B	GRATE CASTING FOR CATCH BASIN
4160D	CURB BOX CASTING FOR CATCH BASIN
4180H	MANHOLE OR CATCH BASIN STEP
7035J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036C	PEDESTRIAN CURB RAMP
7100F	CONCRETE CURB AND GUTTERS
7111G	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
8000I	STANDARD BARRICADES (2 SHEETS)
8110C	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8111B	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8112C	PEDESTAL FOUNDATION
8115C	PEDESTRIAN PUSH BUTTON INSTALLATION
8119C	GROUND MOUNTED CABINET FOUNDATION
8120H	P-80 AND P-90 POLE FOUNDATIONS
8121B	TRANSFORMER BASE WITH POLE BASE FOUNDATION
8122C	PEDESTAL AND PEDESTAL BASE
8123B	POLE AND MAST ARM
8124D	MAST ARM SIGNAL HEAD MOUNTS
8130D	SAW CUT LOOP DETECTORS
9322I	CHAIN LINK FENCE (2 SHEETS)



ISLAND DETAIL
AT DAVENPORT STREET
NO SCALE



TYPICAL DRIVEWAY ENTRANCE SECTION
NO SCALE



CURB TRANSITION DETAIL
SCALE IN FEET

NO.	DATE	BY	DESCRIPTION

DESIGNED	RCL	TJV
DRAWN		
CHECKED	RCL	

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: 2/1/88 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

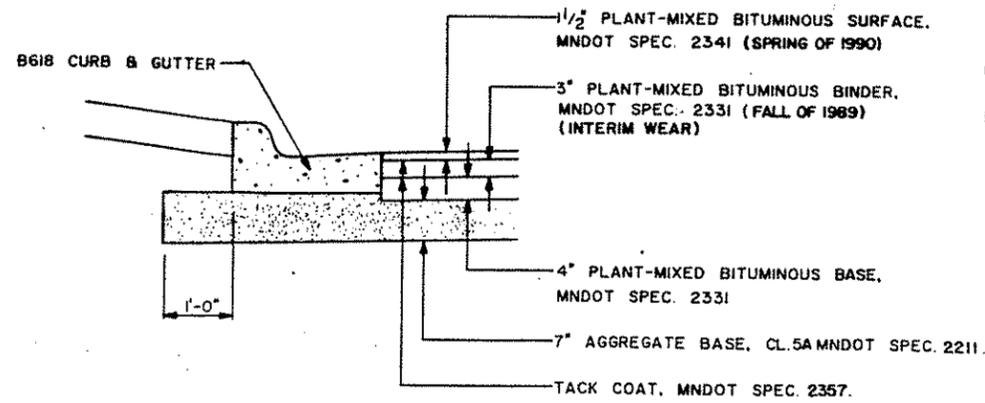
TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

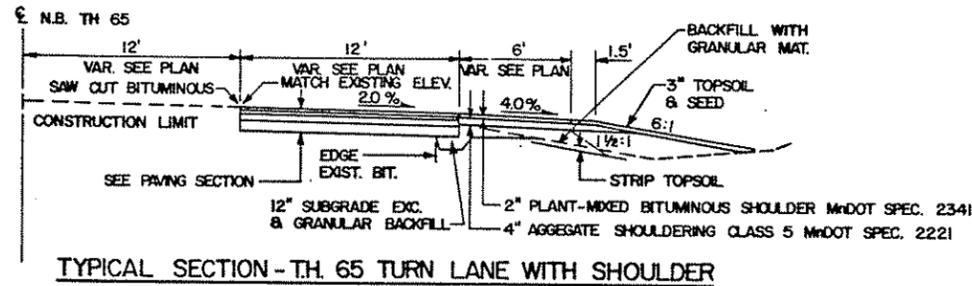
ESTIMATED QUANTITIES AND DETAILS
SHEET NO. 4 OF 43 SHEETS

COMMISSION NO.
9326

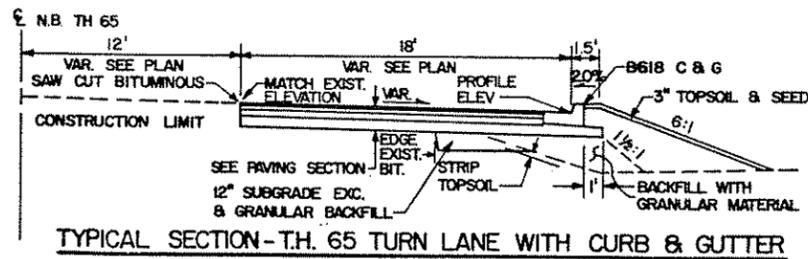
CO. PROJ. NO. 88-22-87



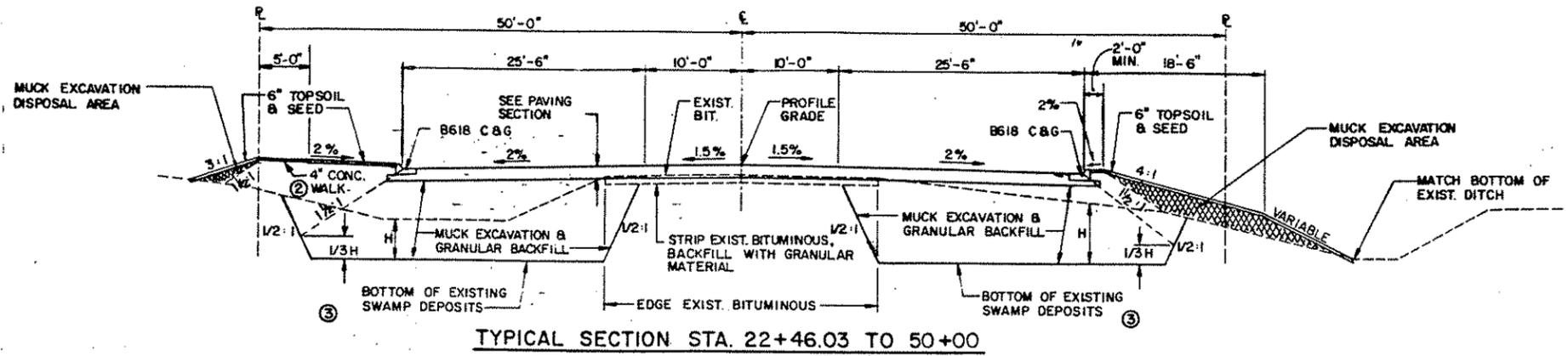
PAVING SECTION



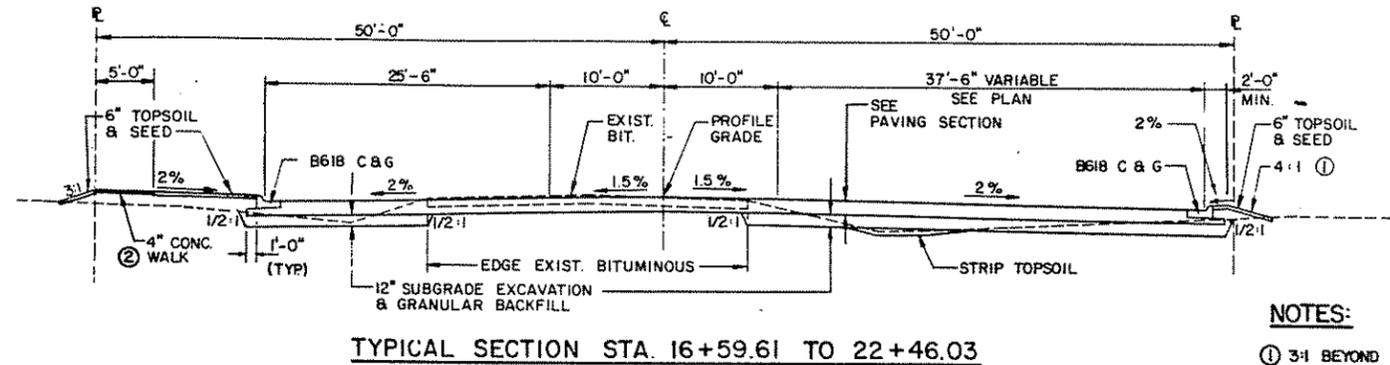
TYPICAL SECTION - TH. 65 TURN LANE WITH SHOULDER



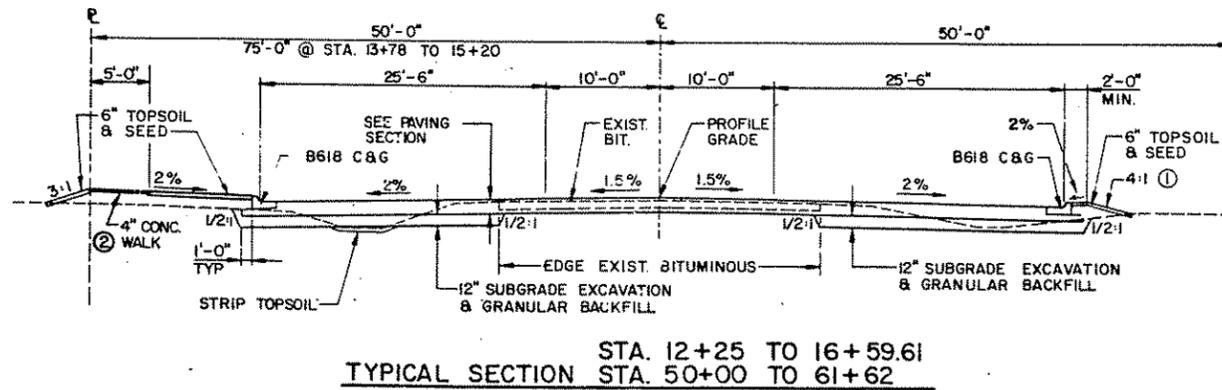
TYPICAL SECTION - TH. 65 TURN LANE WITH CURB & GUTTER



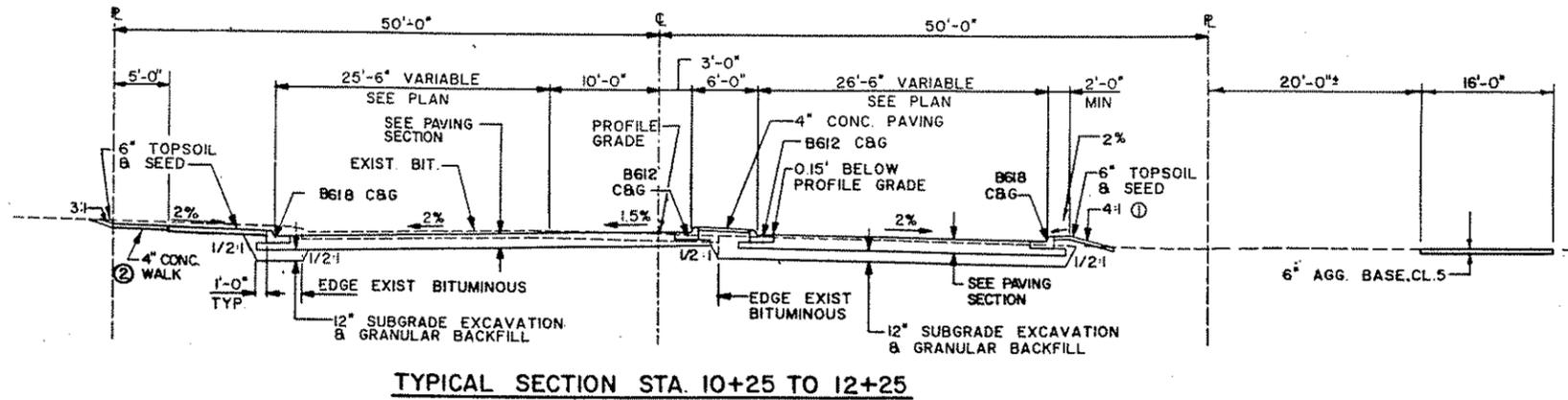
TYPICAL SECTION STA. 22+46.03 TO 50+00



TYPICAL SECTION STA. 16+59.61 TO 22+46.03



TYPICAL SECTION STA. 12+25 TO 16+59.61
TYPICAL SECTION STA. 50+00 TO 61+62

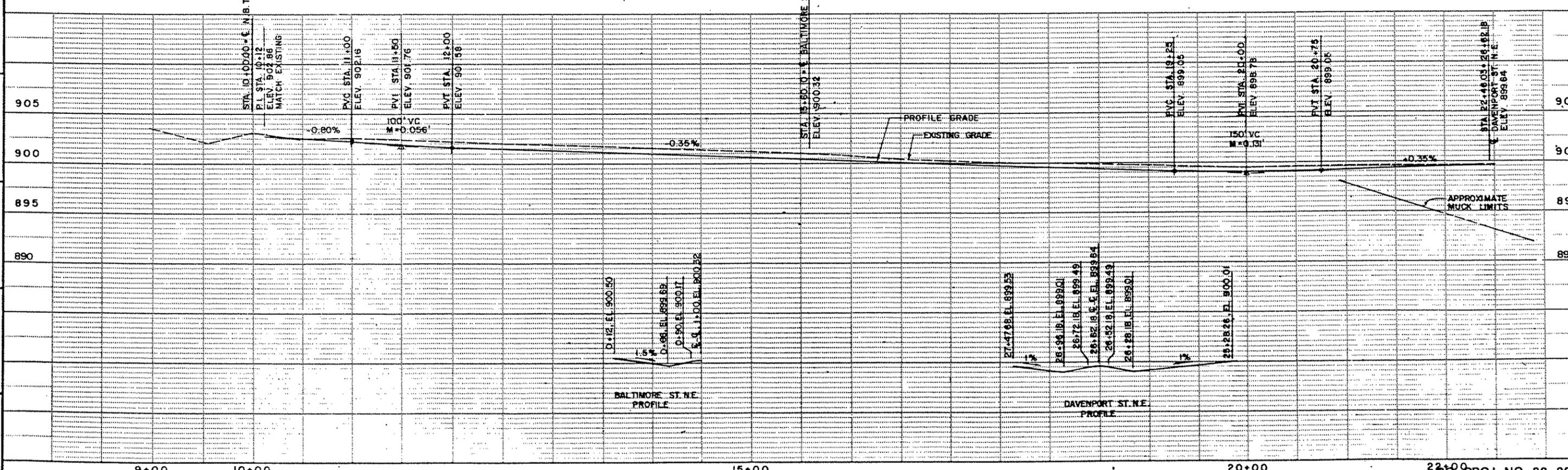
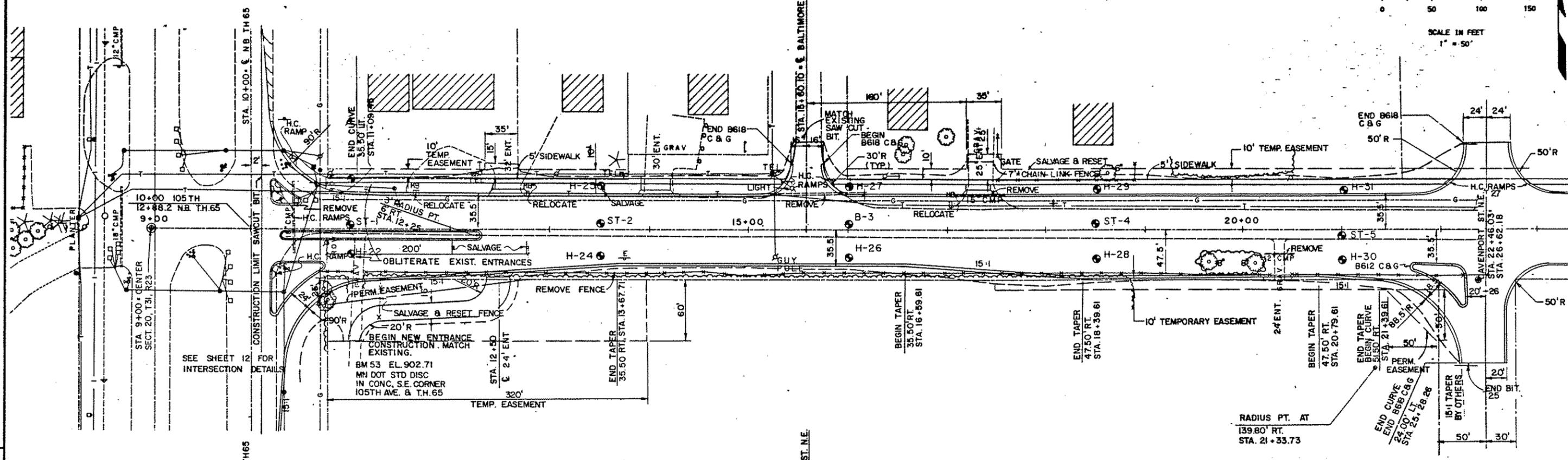
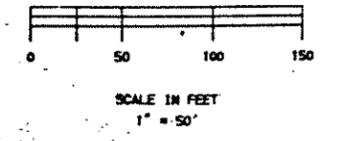


TYPICAL SECTION STA. 10+25 TO 12+25

- NOTES:
- ① 3:1 BEYOND 18.5' FROM FACE OF CURB (TYP.)
 - ② CONC. WALK IS 6" THROUGH ENTRANCES. PLACE 6" MIN. GRANULAR MATERIAL BENEATH ALL CONC. WALK.
 - ③ MUCK EXCAVATION LIMITS ESTIMATED TO BE FROM STA. 21+00 TO STA. 50+00

ORIGINAL SUBMIT BY DATE FIELDBOOK BY DATE
 AS BUILT BY DATE FIELDBOOK BY DATE

DESIGNED DRAWN		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	TKDA ENGINEERS ARCHITECTS PLANNERS	TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED SAINT PAUL, MINNESOTA	ANOKA COUNTY 105TH AVE. N.E.	CO. PROJ. NO. 88-22-87	
NO.	DATE					REVISIONS	COMMISSION NO. 9326
CHECKED		DATE	TYPICAL SECTIONS SHEET NO. 6 OF 43 SHEETS				



ORIGINAL SURVEY FIELD BOOK	DATE	BY	STAKING FIELD BOOK	DATE	BY	AS BUILT FIELD BOOK	DATE	BY
-------------------------------	------	----	-----------------------	------	----	------------------------	------	----

9+00 10+00 15+00 20+00 22+36.03

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL CGN

CHECKED
RCL

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

Ronald City
DATE 8/1/00 REG NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

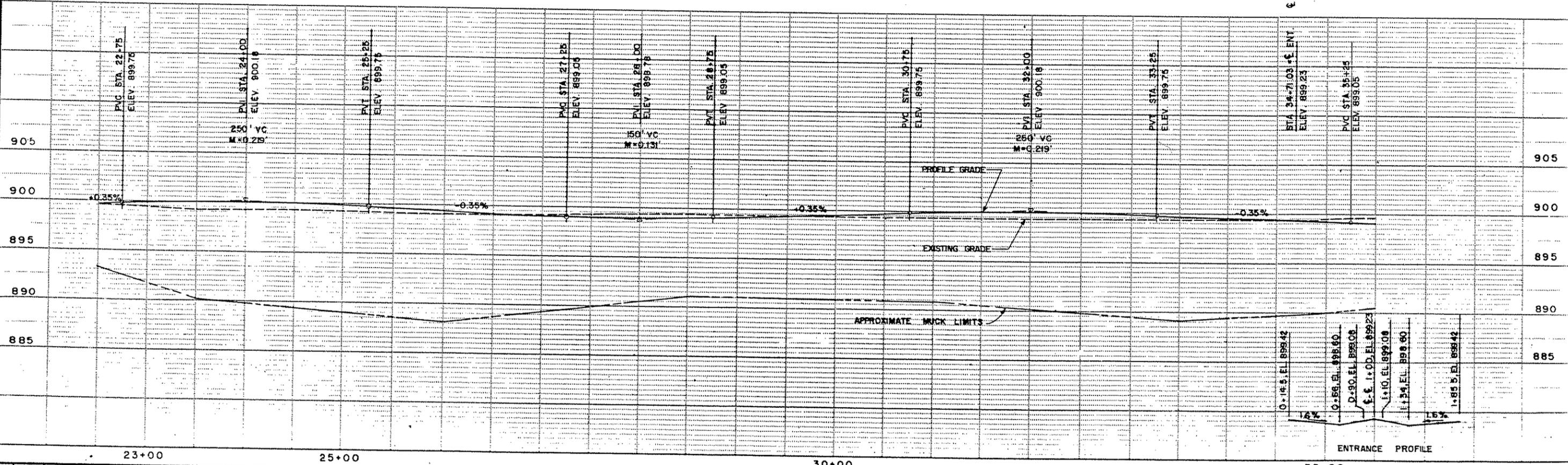
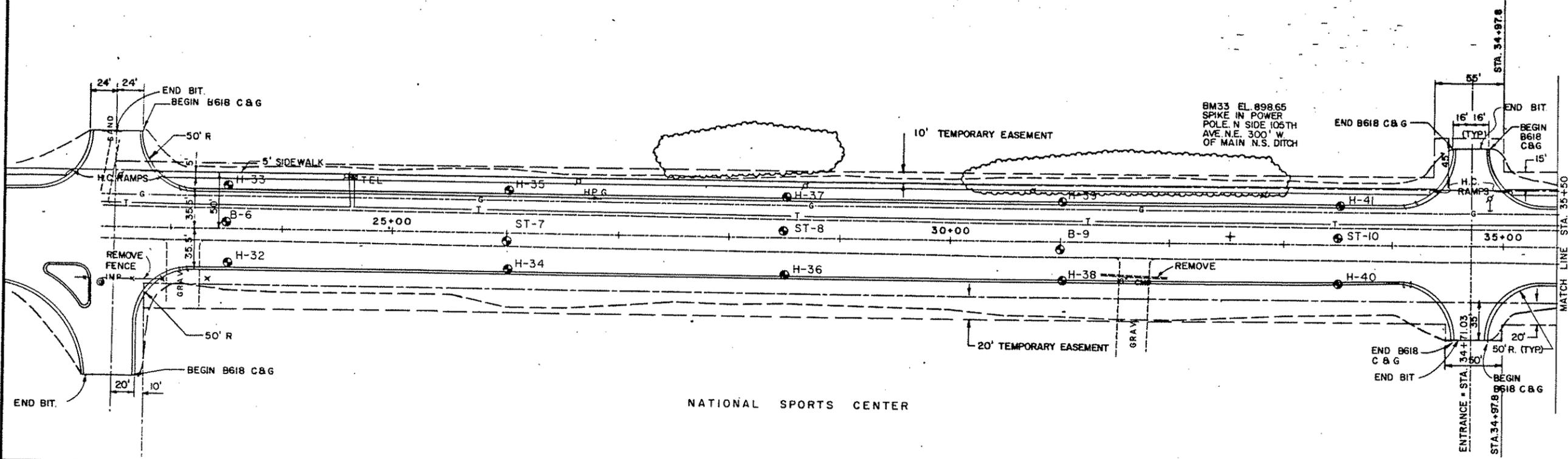
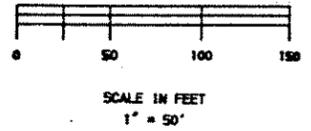
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY,
105TH AVE. N.E.

PLAN AND PROFILE
9+00 TO 22+36.03

SHEET NO. 7 OF 43 SHEETS

COMMISSION NO.
9326



ORIGINAL SURVEY	BY	DATE	AS BUILT	BY	DATE
FIELD BOOK	BY	DATE	FIELD BOOK	BY	DATE
STAKING	BY	DATE	FIELD BOOK	BY	DATE

NO.	DATE	BY	DESCRIPTION

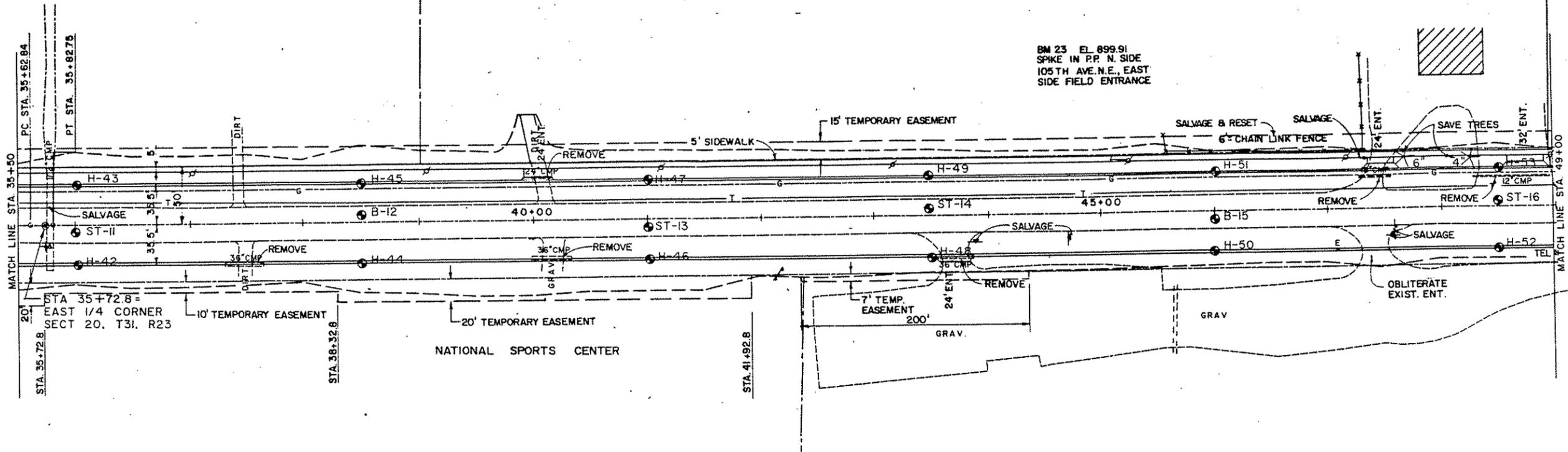
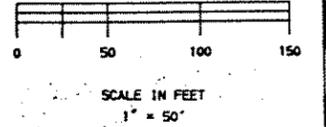
DESIGNED RCL CGN
 DRAWN
 CHECKED RCL
 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 DATE 8/1/89 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

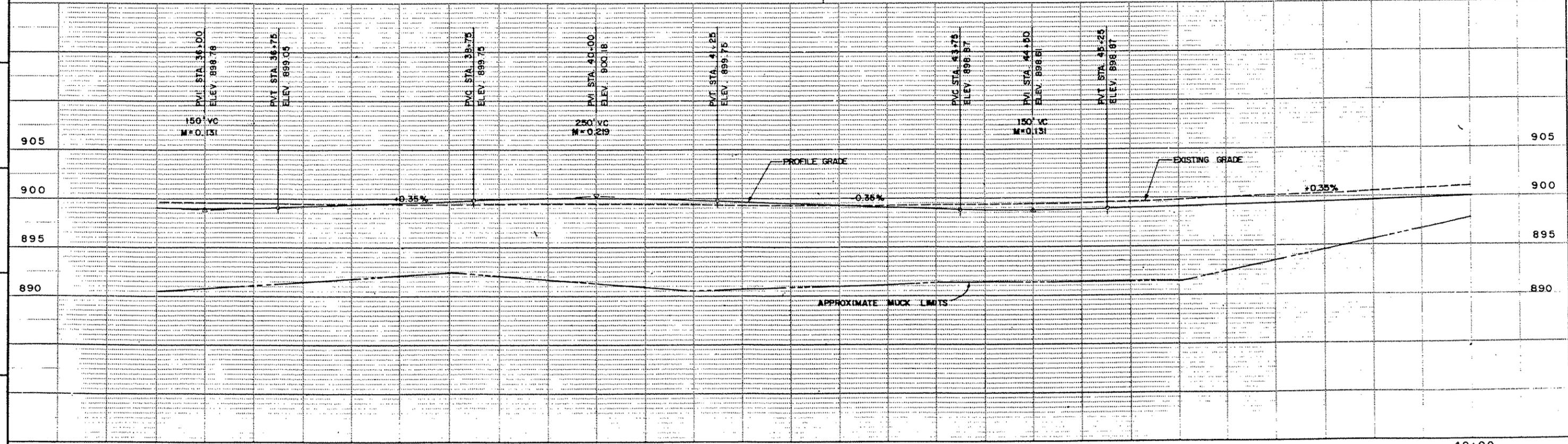
CO. PROJ. NO. 88-22-87
 PLAN AND PROFILE
 22+36.03 TO 35+50.
 SHEET NO. 8 OF 43 SHEETS
 COMMISSION NO. 9326

PI STA. 35+72.8
 $\Delta = 0^\circ 47' 47''$ (LT)
 D = 4'
 R = 1432.40'
 T = 9.96'
 L = 19.91'

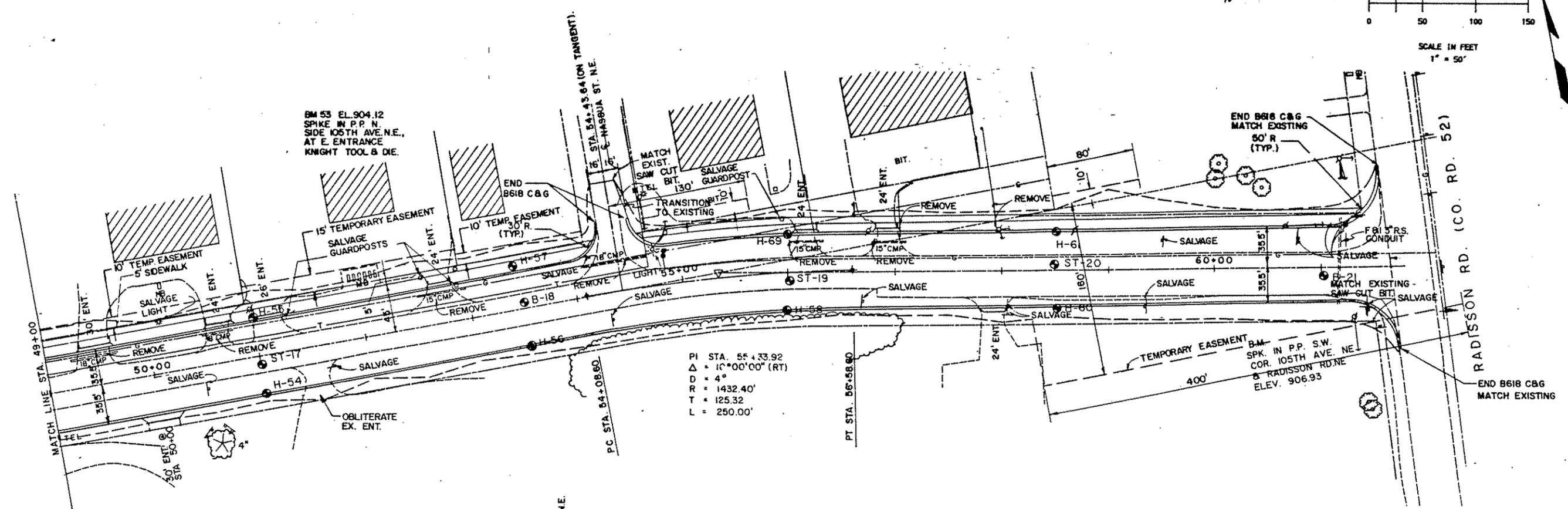
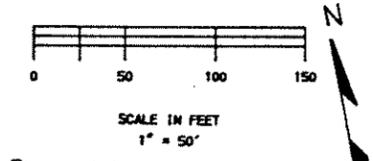


BM 23 EL. 899.91
 SPIKE IN P.P. N. SIDE
 105TH AVE. N.E., EAST
 SIDE FIELD ENTRANCE

ORIGINAL SURVEY STAKING BY DATE FIELD BOOK BY DATE
 AS BUILT BY DATE

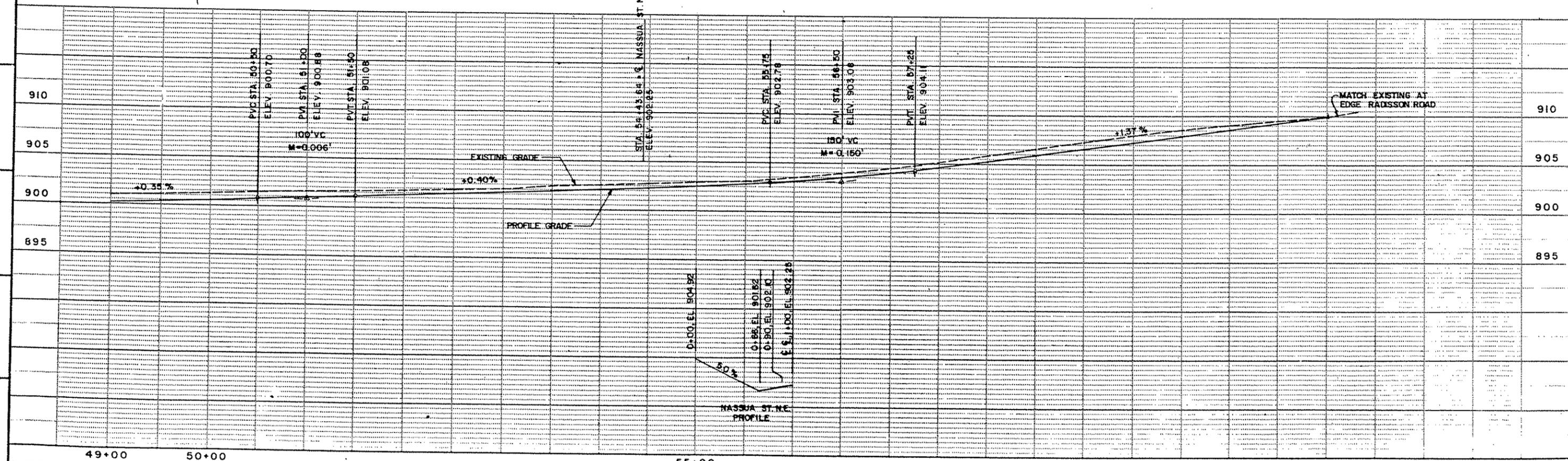


35+00	40+00	45+00	CO. PROJ. NO. 88-22-87
NO. DATE BY	DESIGNED DRAWN RCL CGN CHECKED RCL	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA DATE 4/1/87 REG. NO. 9092	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED SAINT PAUL, MINNESOTA
ANOKA COUNTY 105TH AVE. N.E.		PLAN AND PROFILE 35+50 TO 49+00 SHEET NO. 9 OF 43 SHEETS	
			COMMISSION NO. 9326



PI STA. 55+33.92
 $\Delta = 10^{\circ}00'00''$ (RT)
 $D = 4^{\circ}$
 $R = 1432.40'$
 $T = 125.32'$
 $L = 250.00'$

B.M. IN P.P. S.W. COR. 105TH AVE. NE & RADISSON RD. NE ELEV. 906.93

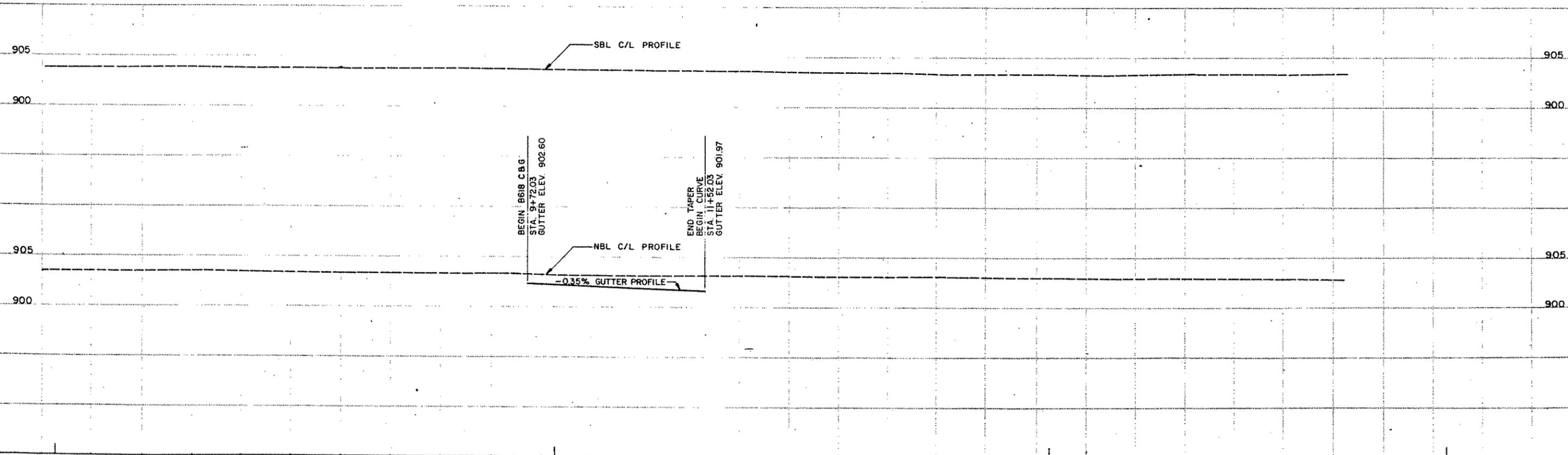
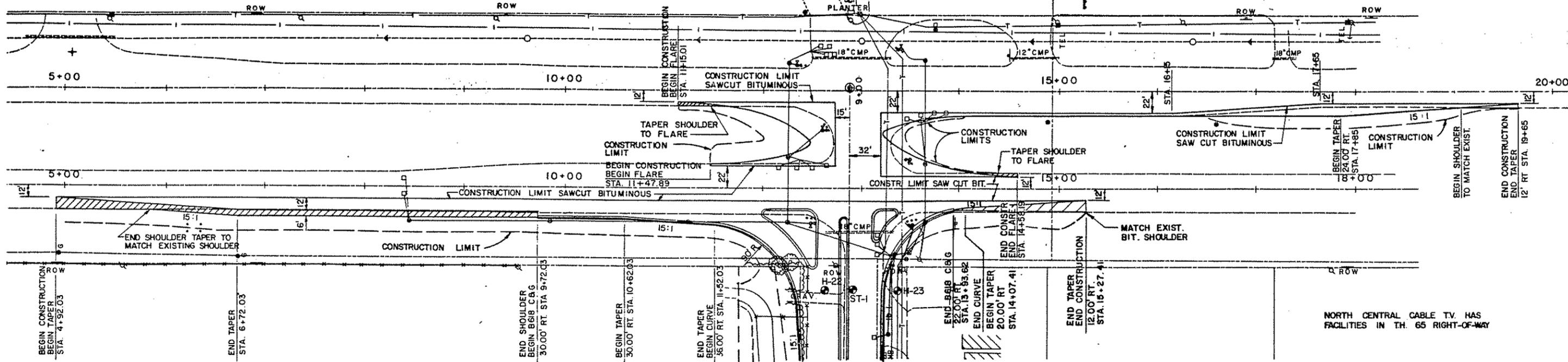
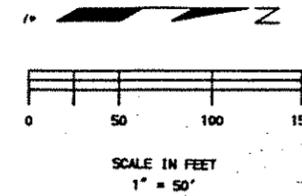


ORIGINAL SURVEY BY DATE FIELD BOOK BY DATE AS BUILT BY DATE
 FIELD BOOK BY DATE FIELD BOOK BY DATE

DESIGNED DRAWN RCL CGN		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 TKDA ENGINEERS ARCHITECTS PLANNERS TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED SAINT PAUL, MINNESOTA	ANOKA COUNTY 105TH AVE. N.E.	PLAN AND PROFILE 49+00 TO 62+00 SHEET NO. 10 OF 43 SHEETS	COMMISSION NO. 9326
CHECKED RCL					
NO. DATE BY DESCRIPTION REVISIONS		DATE 8/1/83 REG. NO. 2092			

BM 53 EL. 902.71
 MN DOT STD DISC
 IN CONC. S.E. CORNER
 105TH AVE & TH. 65

SEE SHEET 12 FOR
 INTERSECTION DETAILS



DESIGNED	DRAWN	CHECKED	DATE
STARTING	BY	DATE	DATE
FIELD BOOK	BY	DATE	DATE
AS BUILT	BY	DATE	DATE

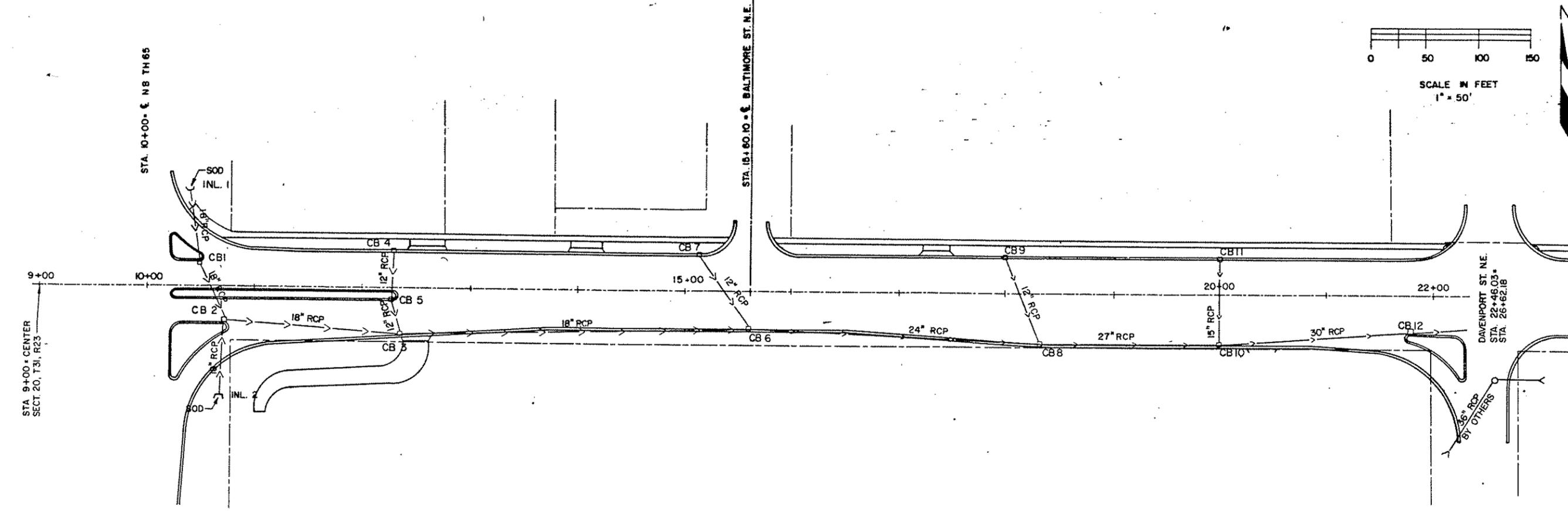
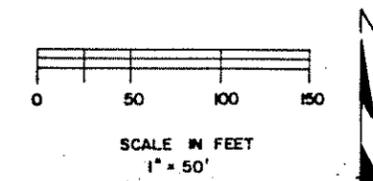
NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
 RCL CGN
 CHECKED
 RCL
 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 8/1/89 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ KING DUVALL ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87 19+00
PLAN AND PROFILE
 T.H. 65
 SHEET NO. 11 OF 43 SHEETS
 COMMISSION NO. 9326



Station	Structure	Rim Elev.	N. Inv. Elev.	S. Inv. Elev.	E. Inv. Elev.	Notes
900	CB 2	901.49	897.08	897.08	897.08	
900	INLET 2	897.46				
900	CB 4	900.68	897.00	897.00	897.00	
900	CB 5	901.19	896.78	896.78	896.78	
900	CB 3	900.47	896.61	896.21	896.21	
900	CB 7	899.67	895.21	895.21	895.21	
900	CB 6	899.50	894.79	893.99	894.39	
900	CB 9	898.42	894.76	894.76	894.76	
900	CB 8	898.31	893.33	893.33	893.53	
900	CB 11	898.09	894.04	894.04	894.04	
900	CB 10	897.85	892.86	893.86	893.06	
900	INLET 1	897.78				
900	CB 1	902.00	897.41	897.41	897.41	
900	CB 2	901.49	897.08	897.08	897.08	
900	CB 3	900.47	896.61	896.21	896.21	
900	CB 6	899.50	894.79	893.99	894.39	
900	CB 8	898.31	893.33	893.33	893.53	
900	CB 10	897.85	892.86	893.86	893.06	
900	CB 12	898.60	892.52	892.52	892.52	

ORIGINAL SURVEY BY: DATE: FIELD BOOK BY: DATE: AS BUILT BY: DATE: FIELD BOOK BY: DATE:

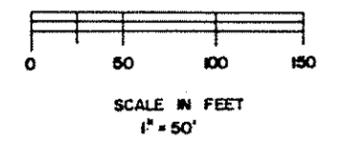
NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN: RCL CGN
 CHECKED: RCL
 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: 2/11/83 REG. NO. 9092

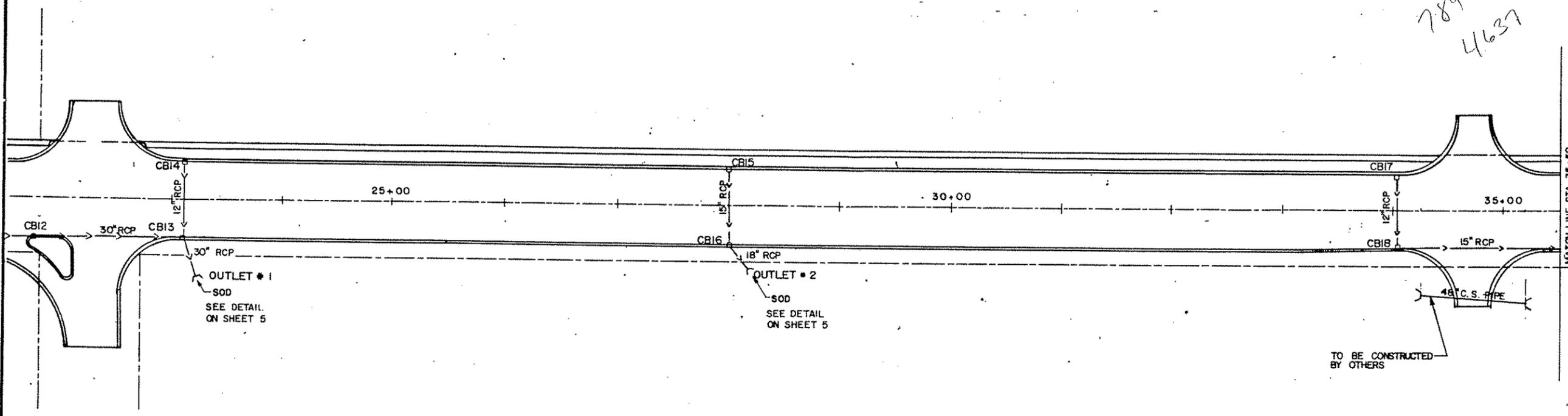
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
DRAINAGE PLAN
 9+00 TO 22+36.03
SHEET NO. 13 OF 43 SHEETS
 COMMISSION NO. 9326



784
4637



STATIONING	DESCRIPTION	ELEVATIONS	PIPE SIZES	GRADIENTS	NOTES
900	CBI4	RIM ELEV. 899.02 S. INV. ELEV. 894.45	12" RCP		
900	CBI3	RIM ELEV. 899.02 S. INV. ELEV. 892.27 N. INV. ELEV. 893.47 W. INV. ELEV. 892.27	30" RCP		
895	EXISTING TEL EXISTING GAS			1.42%	
890	12" x 66.8" RCP CL II				
900	CBI3	RIM ELEV. 899.02 S. INV. ELEV. 892.27 N. INV. ELEV. 893.47 W. INV. ELEV. 892.27	30" x 130" RCP CL II	0.19%	OUTLET # 1
895	EXISTING TEL EXISTING GAS			0.22%	
890	30" x 130" RCP CL II				
900	CBI5	RIM ELEV. 898.09 S. INV. ELEV. 893.54	15" RCP		
900	CBI6	RIM ELEV. 898.09 S. INV. ELEV. 892.21 N. INV. ELEV. 892.41	18" RCP		OUTLET # 2
895	EXISTING TEL EXISTING GAS			1.04%	
890	15" x 66.8" RCP CL II			0.62%	
890	15" x 54.5" RCP CL II (W/APRON)				
900	CBI7	RIM ELEV. 898.55 S. INV. ELEV. 894.08	12" RCP		
900	CBI8	RIM ELEV. 898.65 S. INV. ELEV. 892.88 N. INV. ELEV. 893.08	15" RCP		
895	EXISTING TEL EXISTING GAS			1.45%	
890	12" x 66.8" RCP CL II				
890	15" x 197" RCP CL III			0.19%	

ORIGINAL SURVEY BY DATE FIELD BOOK BY DATE
ASBESTOS FIELD BOOK BY DATE

MATCH LINE STA. 35+50

TO BE CONSTRUCTED BY OTHERS

NO.	DATE	BY	DESCRIPTION

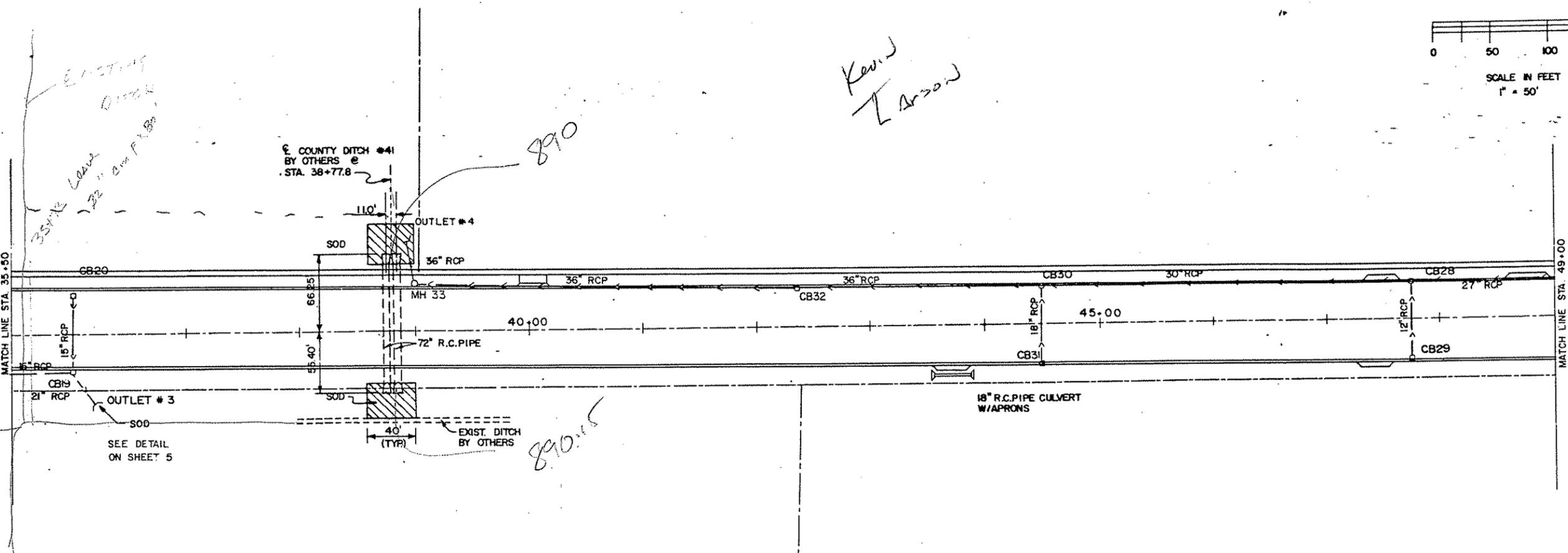
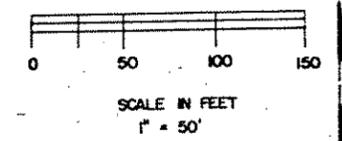
DESIGNED DRAWN BY RCL CGN
CHECKED BY RCL
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
DATE 8/1/15 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

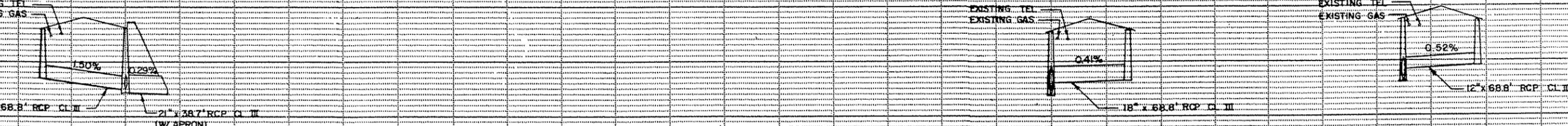
ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
DRAINAGE PLAN
22+36.03 TO 35+50
SHEET NO. 14 OF 43 SHEETS

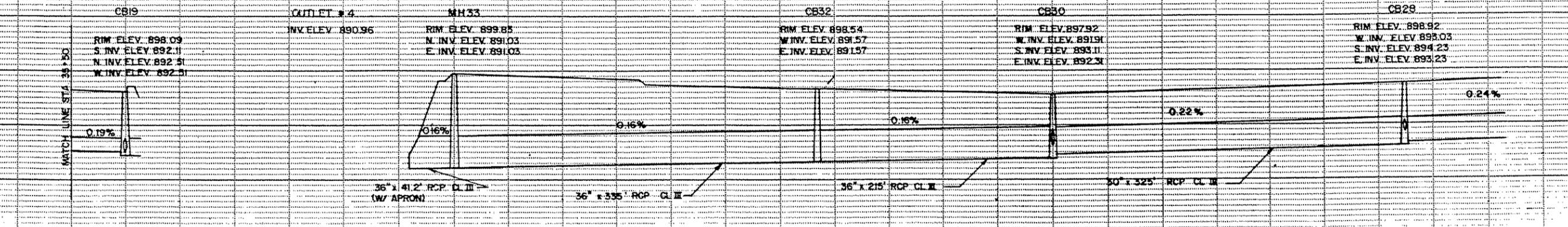
COMMISSION NO.
9326



CB20	CB19	OUTLET # 3	CB30	CB31	CB28	CB29
RIM ELEV. 898.09 S. INV. ELEV. 893.54	RIM ELEV. 898.09 S. INV. ELEV. 892.11 N. INV. ELEV. 892.51 W. INV. ELEV. 892.51	INV. ELEV. 892.00	RIM ELEV. 897.92 W. INV. ELEV. 891.91 S. INV. ELEV. 895.11 E. INV. ELEV. 892.31	RIM ELEV. 897.92 N. INV. ELEV. 893.39	RIM ELEV. 898.92 W. INV. ELEV. 893.03 S. INV. ELEV. 894.23 E. INV. ELEV. 893.23	RIM ELEV. 898.92 N. INV. ELEV. 894.59



CB19	OUTLET # 4	MH 33	CB32	CB30	CB29
RIM ELEV. 898.09 S. INV. ELEV. 892.11 N. INV. ELEV. 892.51 W. INV. ELEV. 892.51	INV. ELEV. 890.96	RIM ELEV. 899.85 N. INV. ELEV. 891.03 E. INV. ELEV. 891.03	RIM ELEV. 898.54 W. INV. ELEV. 891.57 E. INV. ELEV. 891.57	RIM ELEV. 897.92 W. INV. ELEV. 891.91 S. INV. ELEV. 893.11 E. INV. ELEV. 892.31	RIM ELEV. 898.92 W. INV. ELEV. 893.03 S. INV. ELEV. 894.23 E. INV. ELEV. 893.23



36" x 41.2' RCP CL II (W/ APRON)	36" x 335' RCP CL II	36" x 215' RCP CL II	30" x 325' RCP CL II
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ORIGINAL SURVEY BY DATE FIELD BOOK BY DATE
 STAKING BY DATE FIELD BOOK BY DATE
 AS BUILT BY DATE

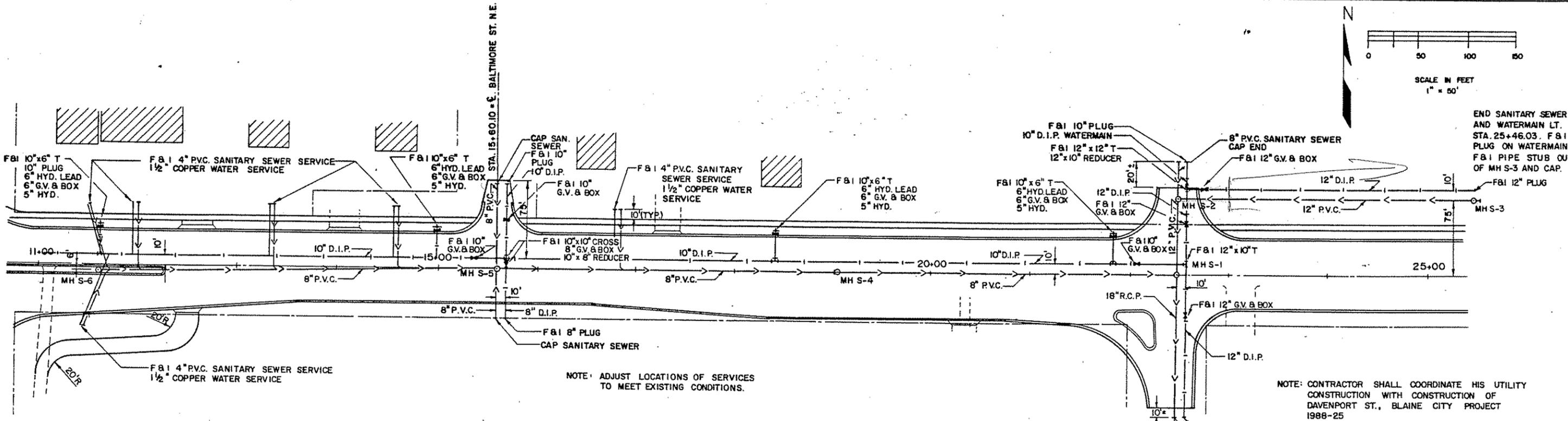
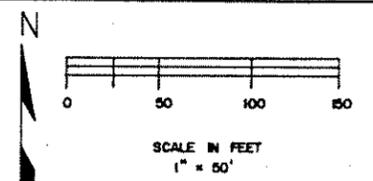
NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN RCL CGN
 CHECKED RCL
 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.
Kevin Larson
 DATE 8/1/03 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

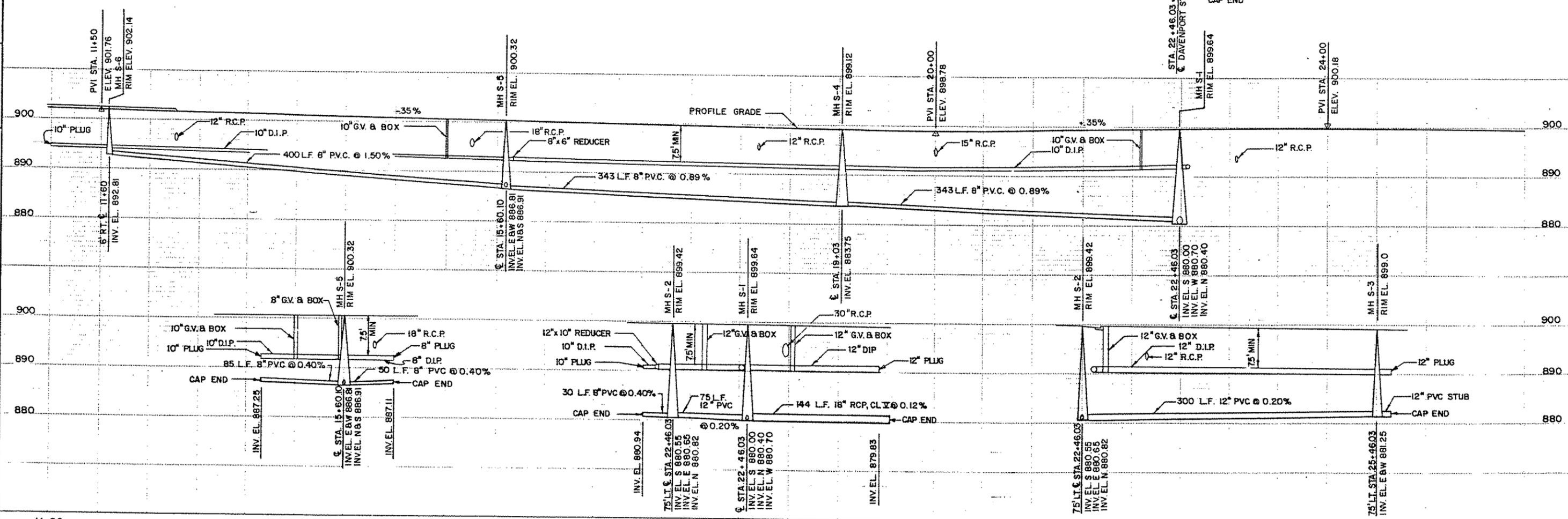
ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
DRAINAGE PLAN
 35+50 TO 49+00
SHEET NO. 15 OF 43 SHEETS
 COMMISSION NO. 9326

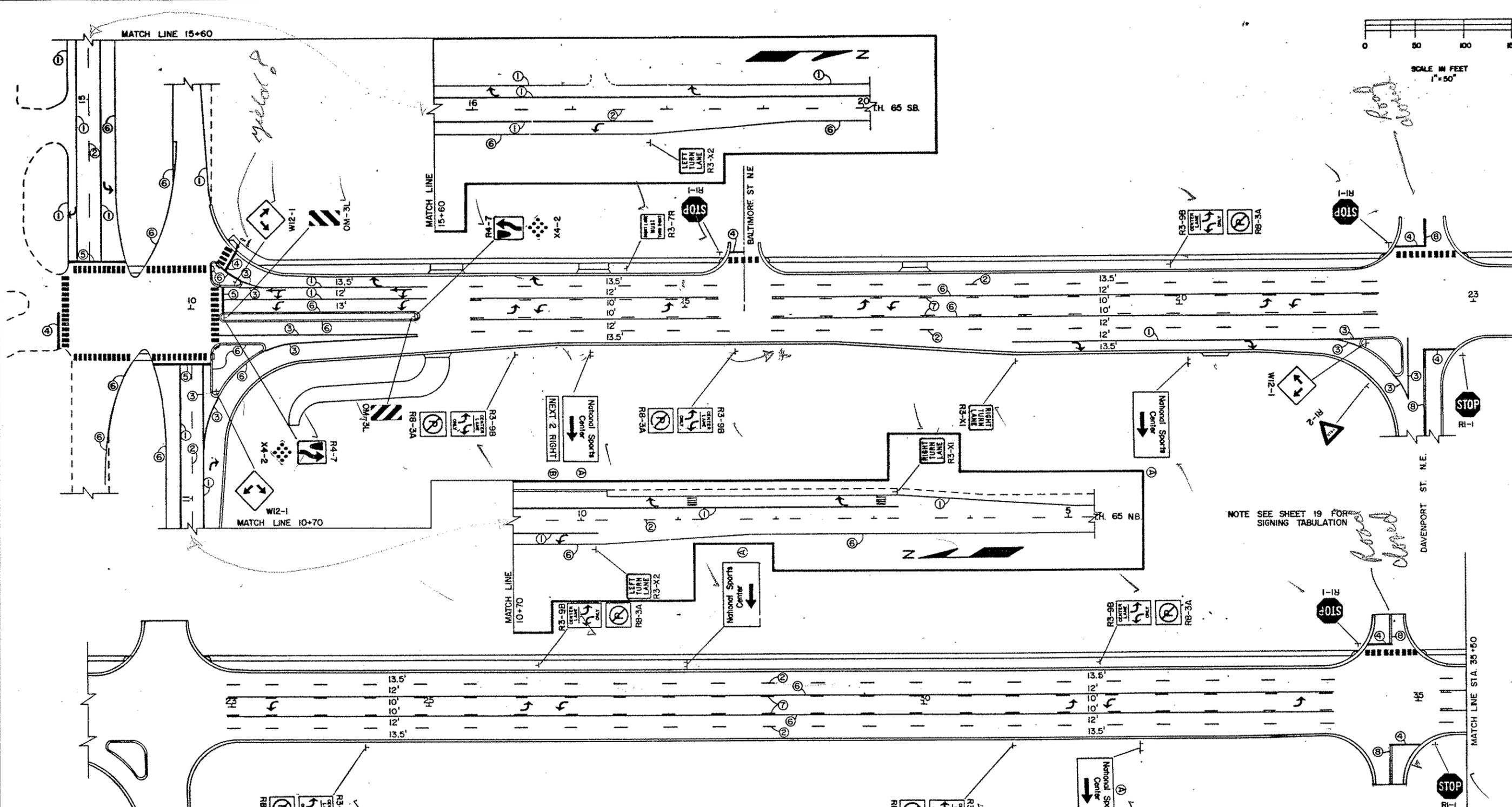
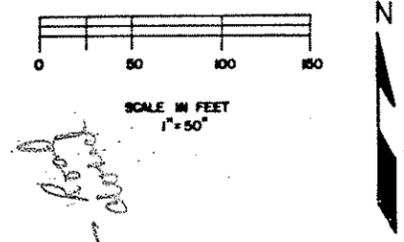


NOTE: ADJUST LOCATIONS OF SERVICES TO MEET EXISTING CONDITIONS.

NOTE: CONTRACTOR SHALL COORDINATE HIS UTILITY CONSTRUCTION WITH CONSTRUCTION OF DAVENPORT ST., BLAINE CITY PROJECT 1988-25



11+00	15+00	20+00	25+00	CO. PROJ. NO. 88-22-87																
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">DESIGNED</td> <td style="width:10%;">DRAWN</td> <td colspan="2">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</td> </tr> <tr> <td>RCL</td> <td>CGN</td> <td colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;"> TKDA ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINN. 55104 </td> </tr> <tr> <td>CHECKED</td> <td>RCL</td> </tr> <tr> <td colspan="2">DATE: 2/1/87</td> <td colspan="2">9092</td> </tr> </table>				DESIGNED	DRAWN	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		RCL	CGN	 TKDA ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINN. 55104		CHECKED	RCL	DATE: 2/1/87		9092		ANOKA COUNTY 105TH AVE. N.E.	SANITARY SEWER AND WATERMAIN SHEET NO. 17 OF 43 SHEETS	COMMISSION NO. 9326
DESIGNED	DRAWN	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																		
RCL	CGN	 TKDA ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINN. 55104																		
CHECKED	RCL																			
DATE: 2/1/87		9092																		



ITEM	SPEC. NO.	PLAN LEGEND	UNIT	QUANTITY				TOTAL
				9+00 TO 23+00	23+00 TO 35+00	35+00 TO 49+00	49+00 TO 62+00	
PAV'T MESSAGE (LT. ARROW) POLY PREFORM	0564.602	(4)	EACH	13	6	7	8	34
PAV'T MESSAGE (RT. ARROW) POLY PREFORM	0564.602	(5)	EACH	10	-	-	-	10
PAV'T MESSAGE (LT.-THRU ARROW) P-PREF.	0564.602	(6)	EACH	2	-	-	-	2
PAV'T MESSAGE (ONLY) POLY PREFORM	0564.602	(7)	EACH	2	-	-	-	2
4" SOLID LINE WHITE - PAINT	0564.603	(1)	LIN. FT.	3710	-	-	-	3710
4" BROKEN LINE WHITE - PAINT	0564.603	(2)	LIN. FT.	3255	2240	2800	2340	10,635
8" SOLID LINE WHITE - PAINT	0564.603	(3)	LIN. FT.	690	-	-	-	690

ITEM	SPEC. NO.	PLAN LEGEND	UNIT	QUANTITY				TOTAL
				9+00 TO 23+00	23+00 TO 35+00	35+00 TO 49+00	49+00 TO 62+00	
12" STOP LINE WHITE - PAINT	0564.603	(4)	LIN. FT.	125	55	-	-	250
24" STOP LINE WHITE - PAINT	0564.603	(5)	LIN. FT.	140	-	-	-	140
4" SOLID LINE YELLOW - PAINT	0564.603	(6)	LIN. FT.	4110	2240	2800	2340	11,490
4" BROKEN LINE YELLOW - PAINT	0564.603	(7)	LIN. FT.	1740	2240	2800	2340	9120
4" DBL SOLID LINE YELLOW - PAINT	0564.603	(8)	LIN. FT.	115	70	-	20	205
CROSSWALK MARKING - POLY PREFORM	0564.604	(9)	SQ. FT.	1575	165	-	120	1860

ORIGINAL SURVEY	BY	DATE	AS BUILT	BY	DATE
FIELD BOOK	BY	DATE	FIELD BOOK	BY	DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED RDC
DRAWN CGN
CHECKED RCL

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 D. Clark
DATE 8-1-89 REG. NO. 4860

TKDA
ENGINEERS ARCHITECTS PLANNERS

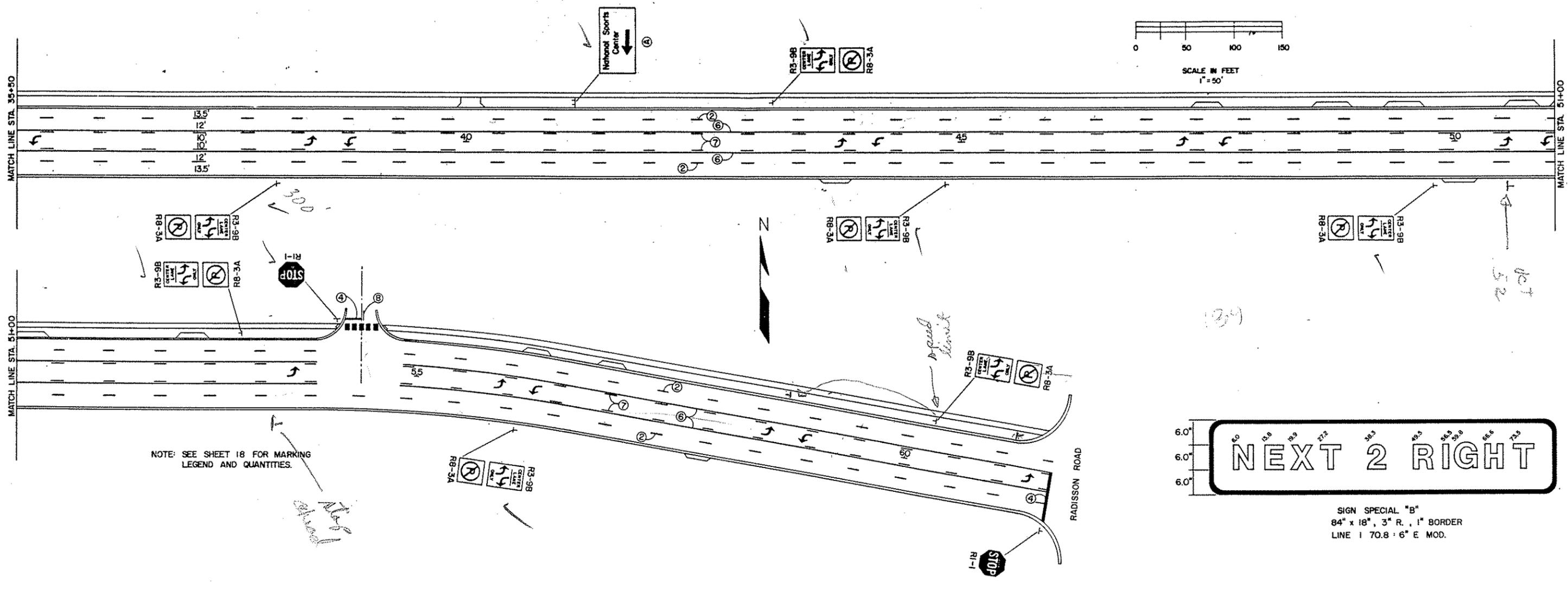
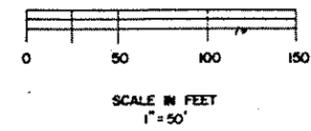
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

105TH AVE. N.E.
ANOKA COUNTY

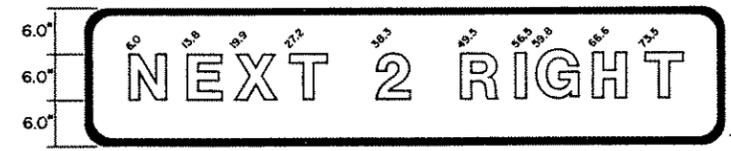
SIGNING AND MARKING PLAN
SHEET NO. 18 OF 43 SHEETS

CO. PROJ. NO
88-22-87

COMMISSION NO.
9326



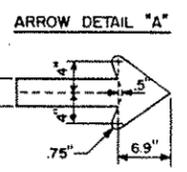
NOTE: SEE SHEET 18 FOR MARKING LEGEND AND QUANTITIES.



SIGN SPECIAL "B"
84" x 18", 3" R., 1" BORDER
LINE 1 70.8 : 6" E MOD.



SIGN SPECIAL "A"
84" x 42", 6" R., 1.25" BORDER
LINE 1 70.0 : 6" - 4.5" E MOD
LINE 2 30.6 : 6" - 4.5" E MOD
LINE 3 20.0 : SEE ARROW DETAIL "A"
USE LT. OR RT. ARROW AS SHOWN ON PLANS



SIGNS					
CODE NO.	PANEL LEGEND	PANEL SIZE (INCHES)	PANEL AREA (SQ. FT.)	NO. OF SIGNS	TOTAL AREA (SQ. FT.)
R1-1	STOP	30 x 30	6.25	7	43.75
R1-2	YIELD	36 x 36 x 36	3.90	1	3.90
R3-X1	RIGHT TURN LANE	30 x 30	6.25	2	12.50
R3-X2	LEFT TURN LANE	30 x 30	6.25	2	12.50
R3-7R	RIGHT LANE MUST TURN RIGHT	30 x 30	6.25	1	6.25
R8-3A	NO PARKING	24 x 24	4.00	14	56.00
R3-9B	CENTER LANE ONLY	24 x 36	6.00	14	84.00
R4-7	KEEP RIGHT	24 x 30	5.00	2	10.00
W12-1	DOUBLE ARROW	24 x 24	4.00	3	12.00
X4-2	HAZARD MARKER	18 x 18	2.25	2	4.50
OM-3L	OBJECT MARKER	12 x 36	3.00	2	6.00
SPEC (A)	NATIONAL SPORT CENTER	84 x 42	24.50	5	122.50
SPEC (B)	NEXT 2 RIGHT	84 x 18	10.50	1	10.50
				TOTAL	384.40

NOTE: SIGNS SPEC. (A) (B) ARE TYPE D.
ALL OTHER SIGNS ARE TYPE C.

ORIGINAL SURVEY BY DATE
 STAMPING BY DATE
 AS BUILT BY DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN RDC JEC
 CHECKED RCL
 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 D. Clow
 DATE 9-1-89 REG. NO. 4860

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

105TH AVE. N.E.
 ANOKA COUNTY

SIGNING AND MARKING PLAN
 SHEET NO. 19 OF 43 SHEETS

CO. PROJ. NO. 88-22-87

COMMISSION NO.
 9326

NOTES:

- 1.) ALL SIGNAL FACES SHALL BE 12" 3 SECTION R-Y-G EXCEPT FACE NO.'S 1-1, 1-2, 5-1 WHICH SHALL BE 12" 3 SECTION RLTA - YLTA - GLTA.
- 2.) ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.
- 3.) A MID-MAST ARM MOUNT SHALL BE LOCATED 12' FROM THE END OF THE MAST ARM AT POLES (1), (6).
- 4.) ALL PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
- 5.) LUMINAIRE  SHALL HAVE A PHOTOELECTRIC CELL AND CHECK SWITCH.
- 6.) SIGNALS SYSTEMS FLASH MODE SHALL BE ALL RED.
- 7.) INPLACE SIGNAL SYSTEM ITEMS THAT SHALL REMAIN IN SERVICE AS PART OF THE PROPOSED SYSTEM ARE SHOWN WITH UNSCREENED LINES. ITEMS THAT ARE TO BE REMOVED, SALVAGED, OR ABANDONED ARE SHOWN WITH SCREENED LINES.
- 8.) SEE SPECIAL PROVISIONS FOR STATE FURNISHED EQUIPMENT.

LOOP DETECTORS			
NUMBER	SIZE	FUNCTION	LOCATION
D1-1	2-6'X6'	1	0' & 35'
D2-1 *	6'X6'	1	440'
D2-2 *	6'X6'	1	440'
D4-1 *	4-6'X6'	2	0' & 10'
D5-1	2-6'X6'	1	0' & 35'
D6-1 *	6'X6'	1	0' & 480'
D6-2 *	6'X6'	1	0' & 480'
D8-1	6'X6'	3	120'
D8-2	2-6'X6'	2	0' & 15'
D8-3	2-6'X6'	2	0' & 15'

* DETECTORS INPLACE
 LOOP DETECTOR FUNCTIONS:
 1 = CALL AND EXTEND.
 2 = DELAYED CALL-IMMEDIATE EXTEND.
 3 = EXTEND ONLY.
 LOCATION = DISTANCE FROM STOP LINE TO DETECTORS.

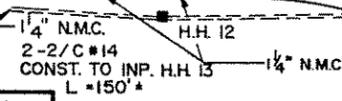
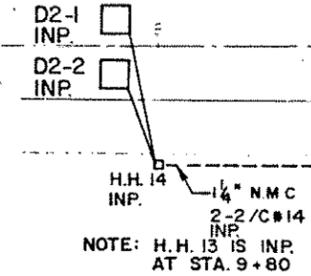
(3) TYPE P90-A-35
 P90 POLE FOUNDATION
 1- ONE WAY SIGNAL OVERHEAD
 TYPE 30A - POLE MOUNTED -90°
 TYPE 20B - POLE MOUNTED -270°
 1 PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)
 EXTEND INTO H.H.14:
 3" N.M.C.
 1-12/C#12
 3-3/C#12

(4) FURNISH AND INSTALL
 TYPE 30A - POLE MOUNTED AT 270°
 1 - PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)

(4) INPLACE AND TO REMAIN IN SERVICE:
 TYPE A-25-D40-9
 ONE WAY SIGNAL OVERHEAD
 TYPE 10B - POLE MOUNTED AT 0°
 TYPE 10A - POLE MOUNTED AT 270°
 ONE PEDESTRIAN PUSH BUTTON
 EXTENDED INTO H.H. 15:
 3" R.S.C., 1-12/C#12
 2-3/C#12, 2-1/C#10
 LUMINAIRE - P.E.C., STREET LIGHT CHECK SWITCH

(5) FURNISH AND INSTALL
 1- SET PEDESTRIAN INDICATIONS
 1- PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)
 EXTEND INTO H.H. 3:
 1-3/C#12

(5) INPLACE AND TO REMAIN IN SERVICE:
 SIGNAL PEDESTAL (TYPE 1B)
 1- PEDESTRIAN PUSH BUTTON
 EXTENDED INTO H.H.3:
 3" R.S.C.
 1-12/C#12
 1-3/C#12



PLACE 3" R.S.C. AND CONNECT TO EXIST.
 3" R.S.C. INP
 2-12/C#12
 6-3/C#12
 2-1/C#10
 2-2/C#14

PLACE 3" R.S.C. AND CONNECT TO EX.
 3" R.S.C. INP TO REMAIN
 PLACE:
 3-12/C#12
 4-3/C#12
 3-2/C#14

(6) TYPE P90-A-35
 P90 POLE FOUNDATION
 2- ONE WAY SIGNALS OVERHEAD
 TYPE 30A - POLE MOUNTED -0°
 TYPE 20B - POLE MOUNTED -270°
 1 - PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)
 EXTEND INTO H.H.2:
 3" R.S.C.
 2-12/C#12
 2-3/C#12

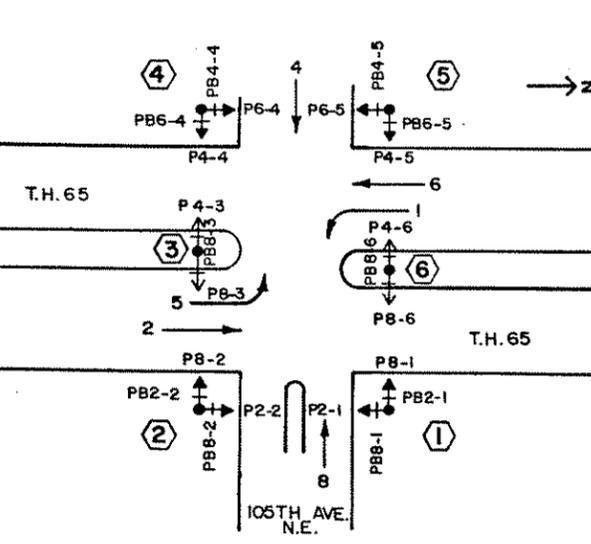
(C) CONTROLLER AND CABINET (CABINET FOUNDATION) EXTEND INTO H.H. 2:
 4" R.S.C.
 3-12/C#12
 4-3/C#12
 3-2/C#14
 EXTEND INTO H.H. 8:
 4" R.S.C.
 5-12/C#12
 10-3/C#12
 7-2/C#14

(1) TYPE P90-A-35-D40-9 (DAVIT AT 355°)
 P90 POLE FOUNDATION
 2- ONE WAY SIGNALS OVERHEAD
 TYPE 10B - POLE MOUNTED -0°
 TYPE 10B - POLE MOUNTED -270°
 2- PEDESTRIAN PUSH BUTTONS WITH SIGNS (RIO-4C)
 LUMINAIRE - 250 WATT H.P.S. - P.E.C.
 STREET LIGHT CHECK SWITCH
 EXTEND INTO H.H.9:
 3" N.M.C.
 2-12/C#12
 2-3/C#12
 2-1/C#10

(B) METER AND DISCONNECT SWITCH MOUNT ON PAD WITH CONTROLLER CABINET
 EXTEND INTO CONTROLLER:
 1 1/4" R.S.C.
 2-1/C#6
 1-1/C#6 BR. GR.
 EXTEND INTO H.H.8:
 1 1/4" R.S.C.
 4-1/C#10

9) THE FOLLOWING INPLACE SIGNAL SYSTEM EQUIPMENT SHALL BE SALVAGED:
 (a) STA. 12+50, 35' RT.
 SIGNAL PEDESTAL, TYPE 1B
 1- PEDESTRIAN PUSH BUTTON
 (b) STA. 12+60, 57' LT.
 TYPE A-35
 TWO WAY SIGNAL OVERHEAD
 TYPE 10B - POLE MOUNTED
 TYPE 10A - POLE MOUNTED
 1- PEDESTRIAN PUSH BUTTON
 (c) STA. 13+50, 28' LT.
 SIGNAL PEDESTAL, TYPE 2D
 1- PEDESTRIAN PUSH BUTTON
 (d) STA. 13+53, 36' RT.
 TYPE A-35-D40-9
 ONE WAY SIGNAL OVERHEAD
 LUMINAIRE - P.E.C.
 STREET LIGHT CHECK SWITCH
 TYPE 10B - POLE MOUNTED
 TYPE 10A - POLE MOUNTED
 1- PEDESTRIAN PUSH BUTTON

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



(2) SIGNAL PEDESTAL (TYPE 1D)
 2 PEDESTRIAN PUSH BUTTONS WITH SIGN (RIO-4C)
 EXTEND INTO H.H.10:
 3" R.S.C.
 1-12/C#12
 2-3/C#12

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN RDC CGN
 CHECKED RDC
 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
 Paul D. Cerna
 DATE 8-1-83 REG NO. 4860

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

SIGNAL PLAN
 INTERSECTION LAYOUT
 SHEET NO. 20 OF 43 SHEETS

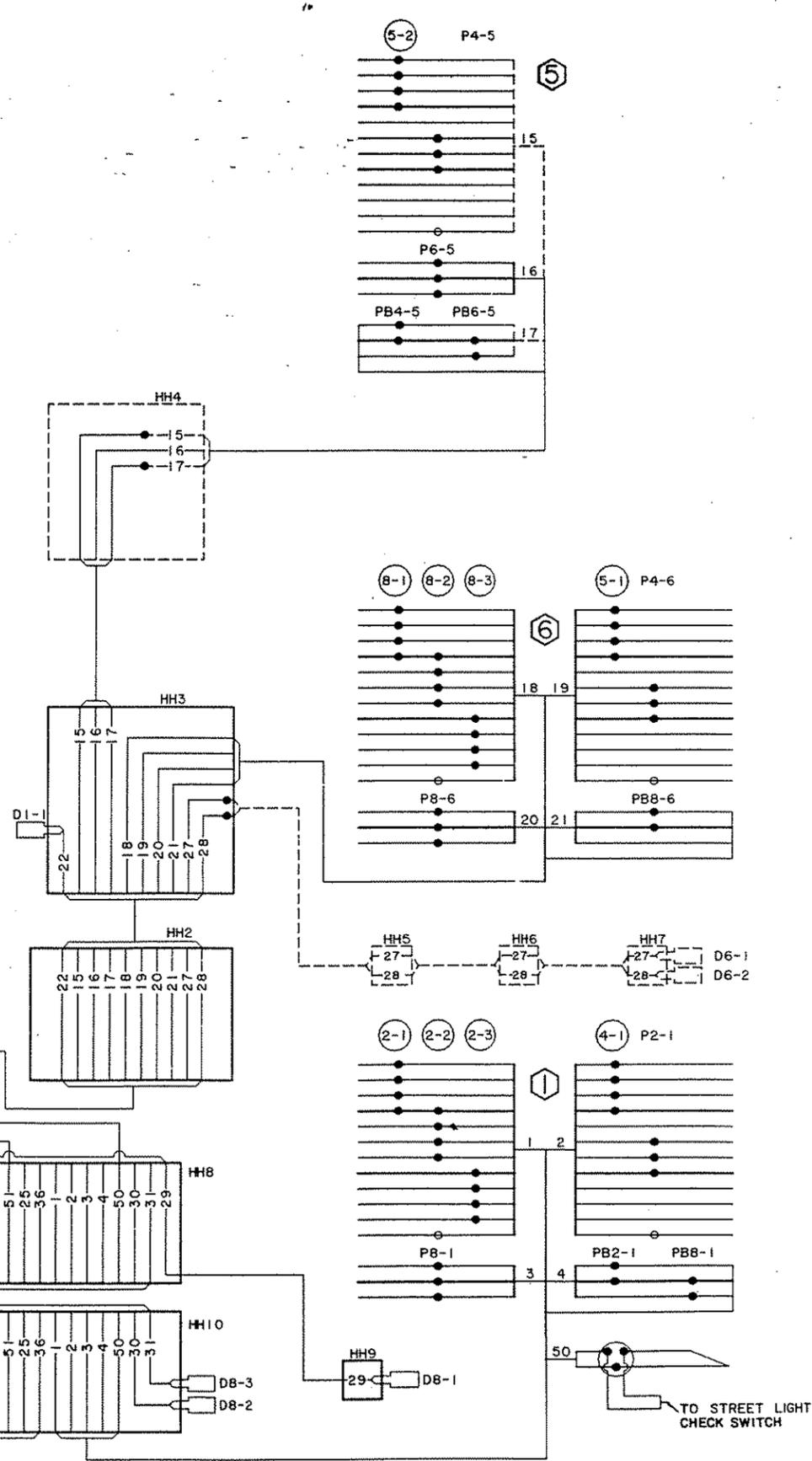
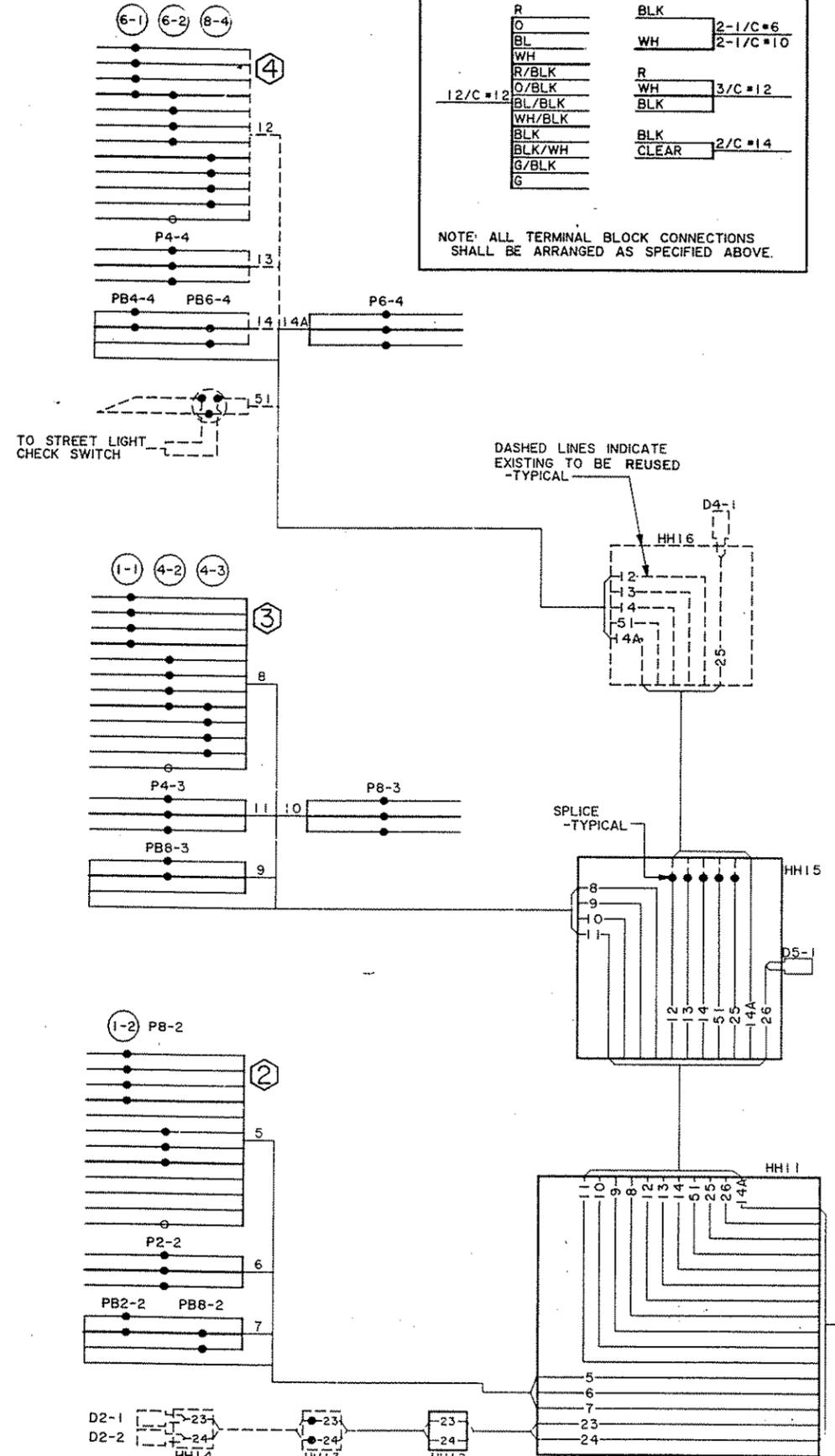
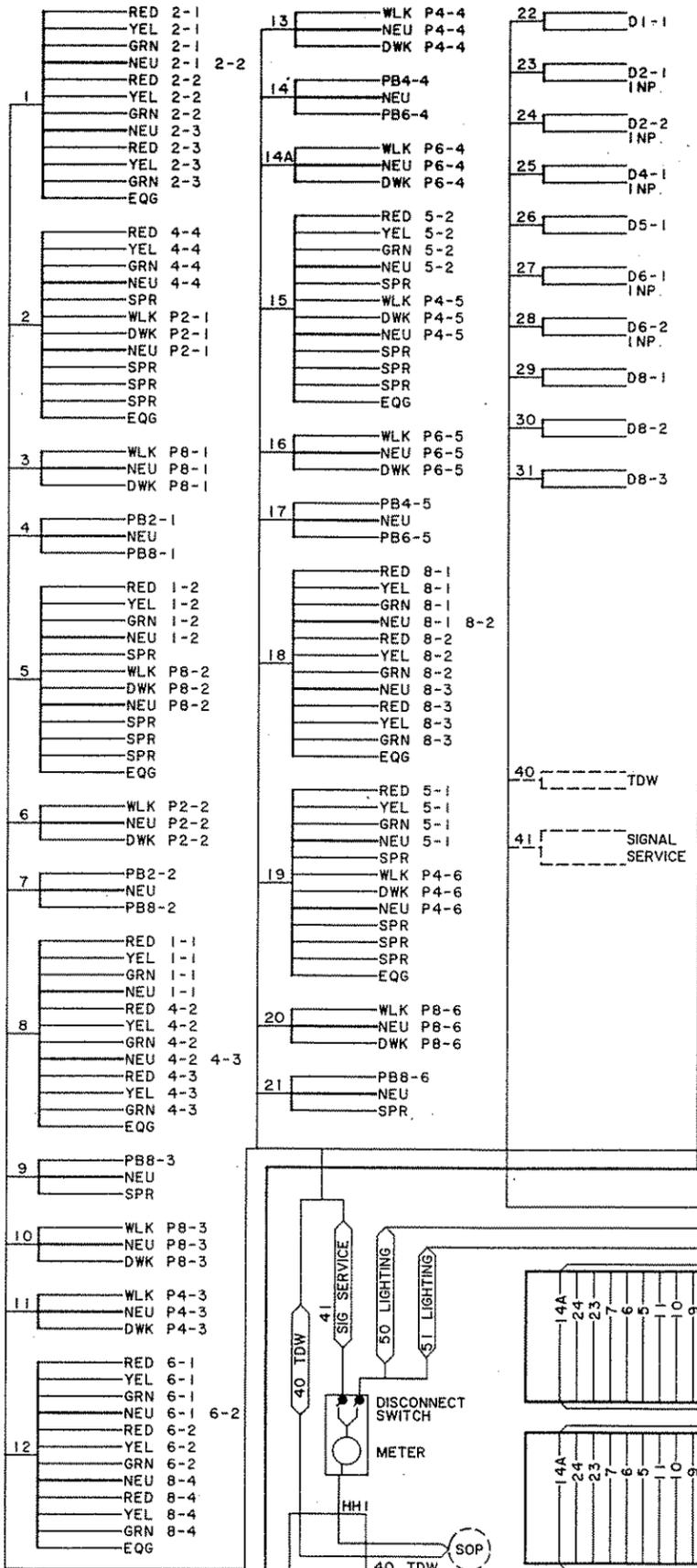
COMMISSION NO.
 9326

CONDUCTOR COLOR CODING

R	BLK	2-1/C=6
O	WH	2-1/C=10
BL		
WH	R	3/C=12
R/BLK	WH	3/C=12
O/BLK	BLK	
BL/BLK	BLK	2/C=14
WH/BLK	CLEAR	2/C=14
BLK		
BLK/WH		
G/BLK		
G		

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

CONTROLLER CABINET



GENERAL SURVEY BY DATE FIELDWORK BY DATE
 STAFFING BY DATE FIELDWORK BY DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN JEB BLK
 CHECKED JEB
 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 1/24/2009 REG NO. 8943

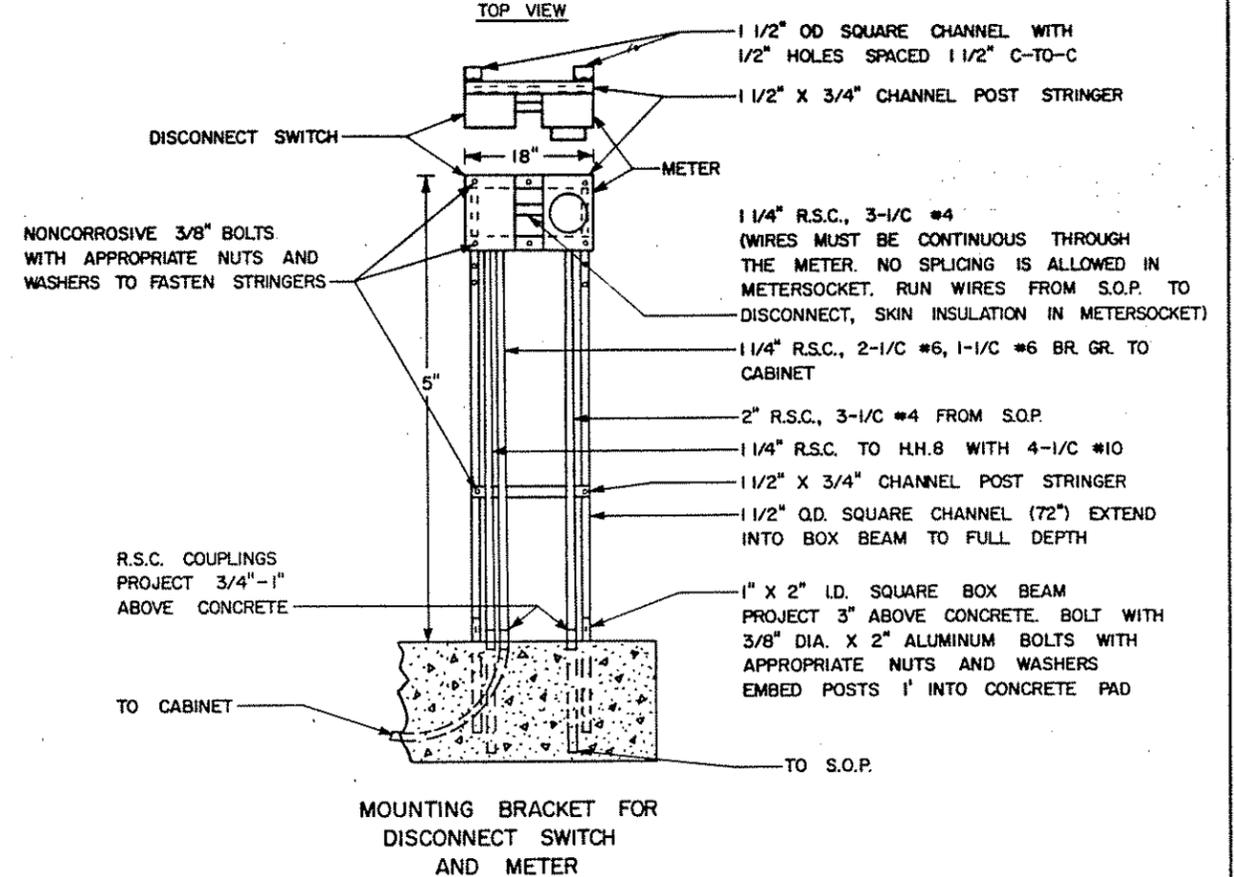
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

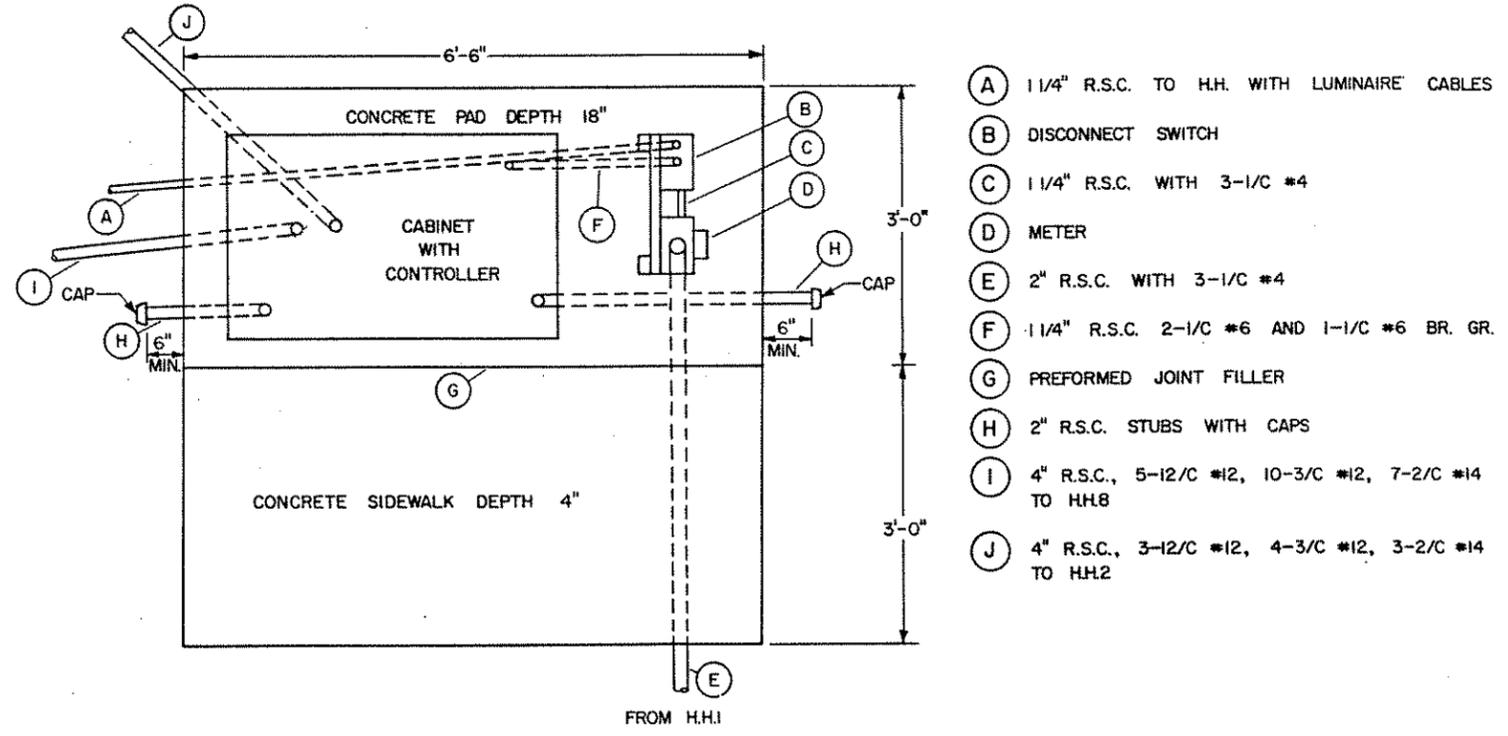
SIGNAL PLAN
 FIELD WIRING DIAGRAM
 SHEET NO. 21 OF 43 SHEETS

COMMISSION NO.
 9326

CO. PROJ. NO. 88-22-87



MOUNTING BRACKET FOR DISCONNECT SWITCH AND METER



CONCRETE PAD WITH CABINET, CONTROLLER, METER AND DISCONNECT SWITCH
SEE INTERSECTION LAYOUTS FOR CONDUIT AND CABLE INFORMATION

ORIGINAL SURVEY	DATE	BY
FIELDWORK	DATE	BY
STAMPING	DATE	BY
REVISIONS	DATE	BY

NO.	DATE	BY	DESCRIPTION

DESIGNED	DRAWN	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	
RDC	JEC		
CHECKED			
RDC			
		DATE	REG. NO.
		8-21-89	4860

TKDA
ENGINEERS ARCHITECTS PLANNERS

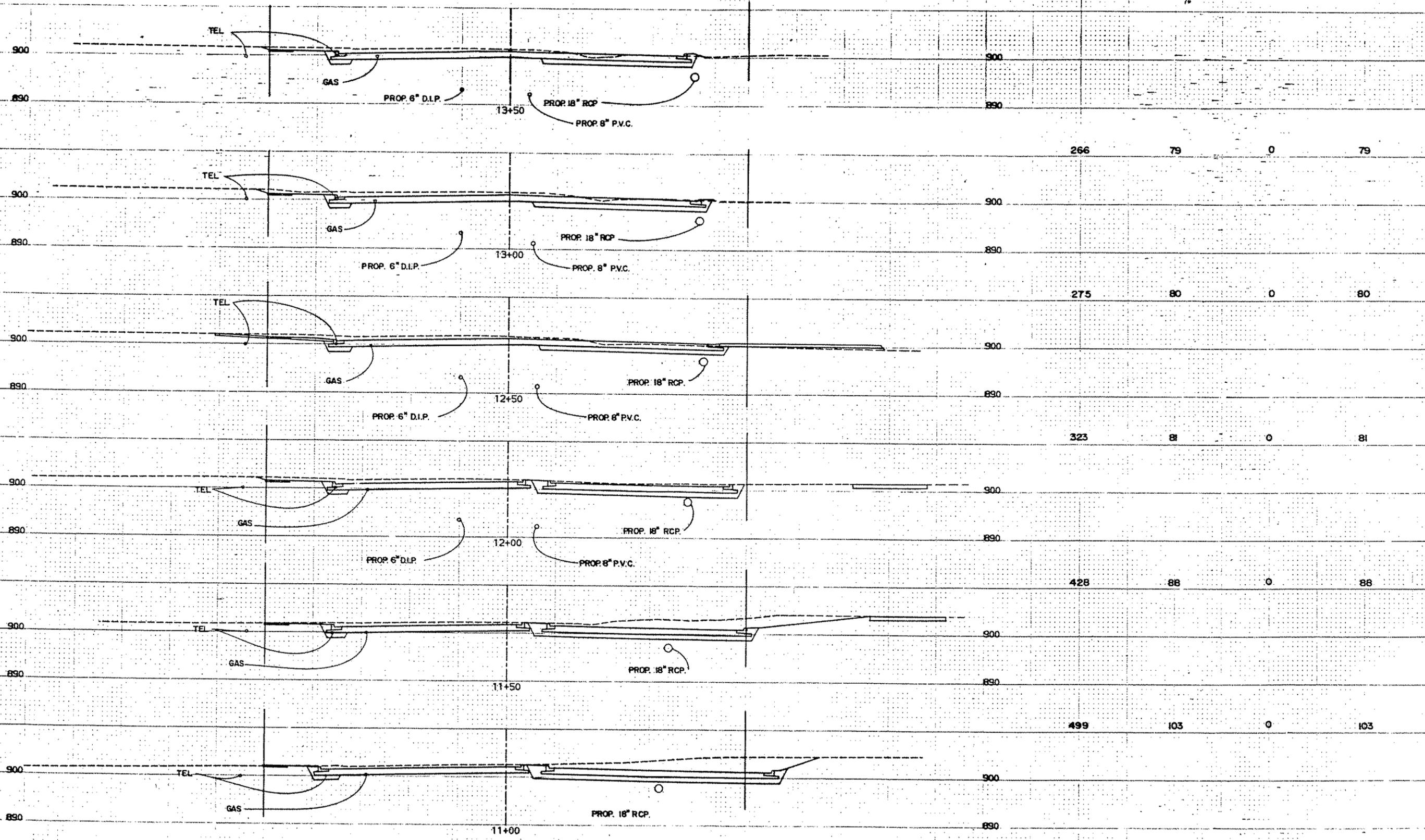
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

TRAFFIC SIGNAL DETAILS
SHEET NO. 22 OF 43 SHEETS

COMMISSION NO.
9326

CO. PROJ. NO. 88-22-87



Station	Common Exc.	Subgrade Exc.	Muck Exc.	Granular Bor.
13+50	266	79	0	79
13+00	275	80	0	80
12+50	323	81	0	81
12+00	428	88	0	88
11+50	499	103	0	103

ORIGINAL SURVEY BY DATE
 STAKING BY DATE
 AS BUILT BY DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN RCL TV
 CHECKED RCL
 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 8/1/85 REG. NO. 9092

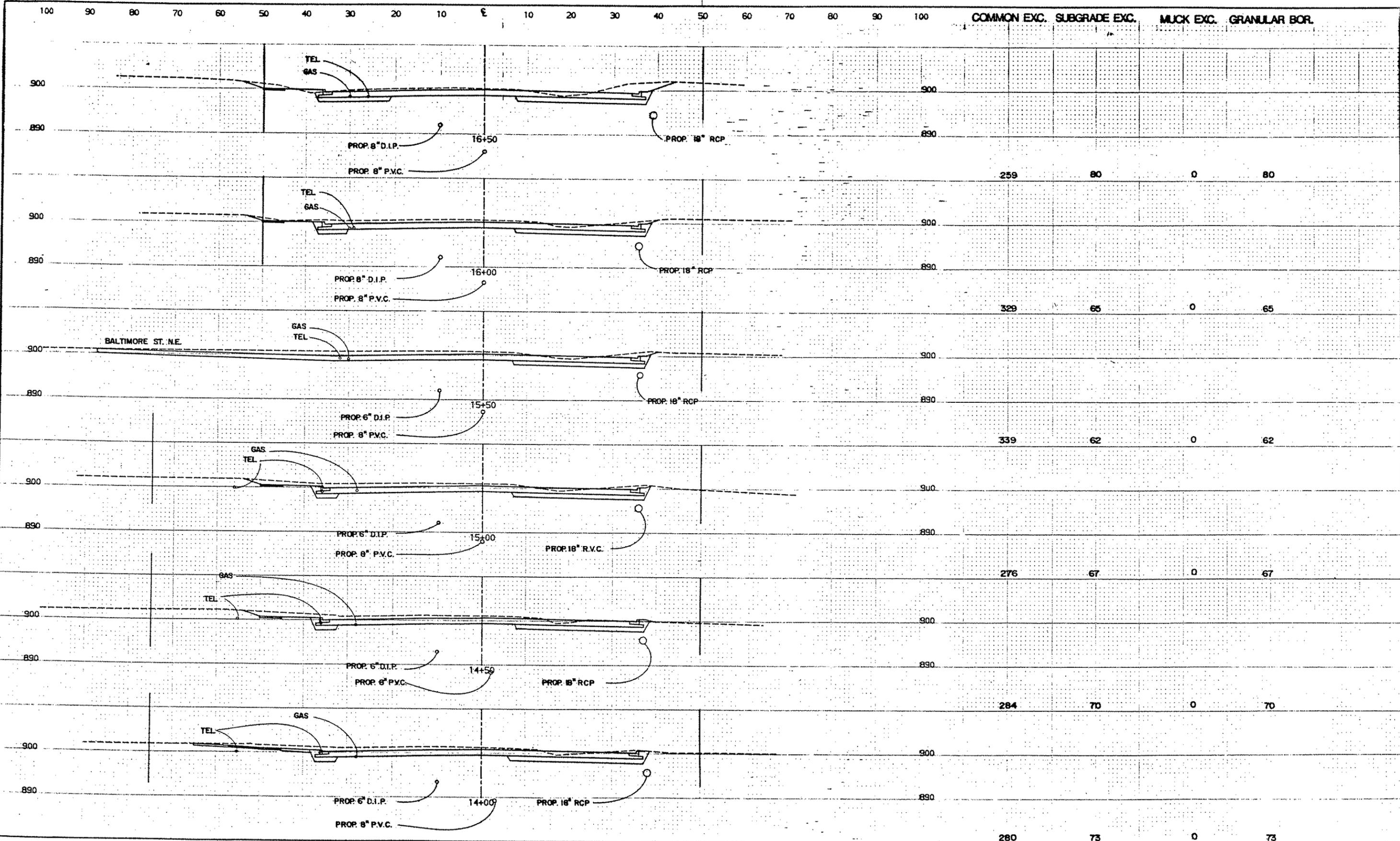
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 11+00 TO 13+50
 SHEET NO. 23 OF 43 SHEETS

CO. PROJ. NO. 88-22-87
 COMMISSION NO. 9326

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



Station	Common Exc.	Subgrade Exc.	Muck Exc.	Granular Bor.
16+50	259	80	0	80
16+00	329	65	0	65
15+50	339	62	0	62
15+00	276	67	0	67
14+50	284	70	0	70
14+00	280	73	0	73

CHECKED BY DATE
 DRAWN BY DATE
 STAMPED BY DATE
 AS BUILT BY DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Ronald King
DATE 8/18/82 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

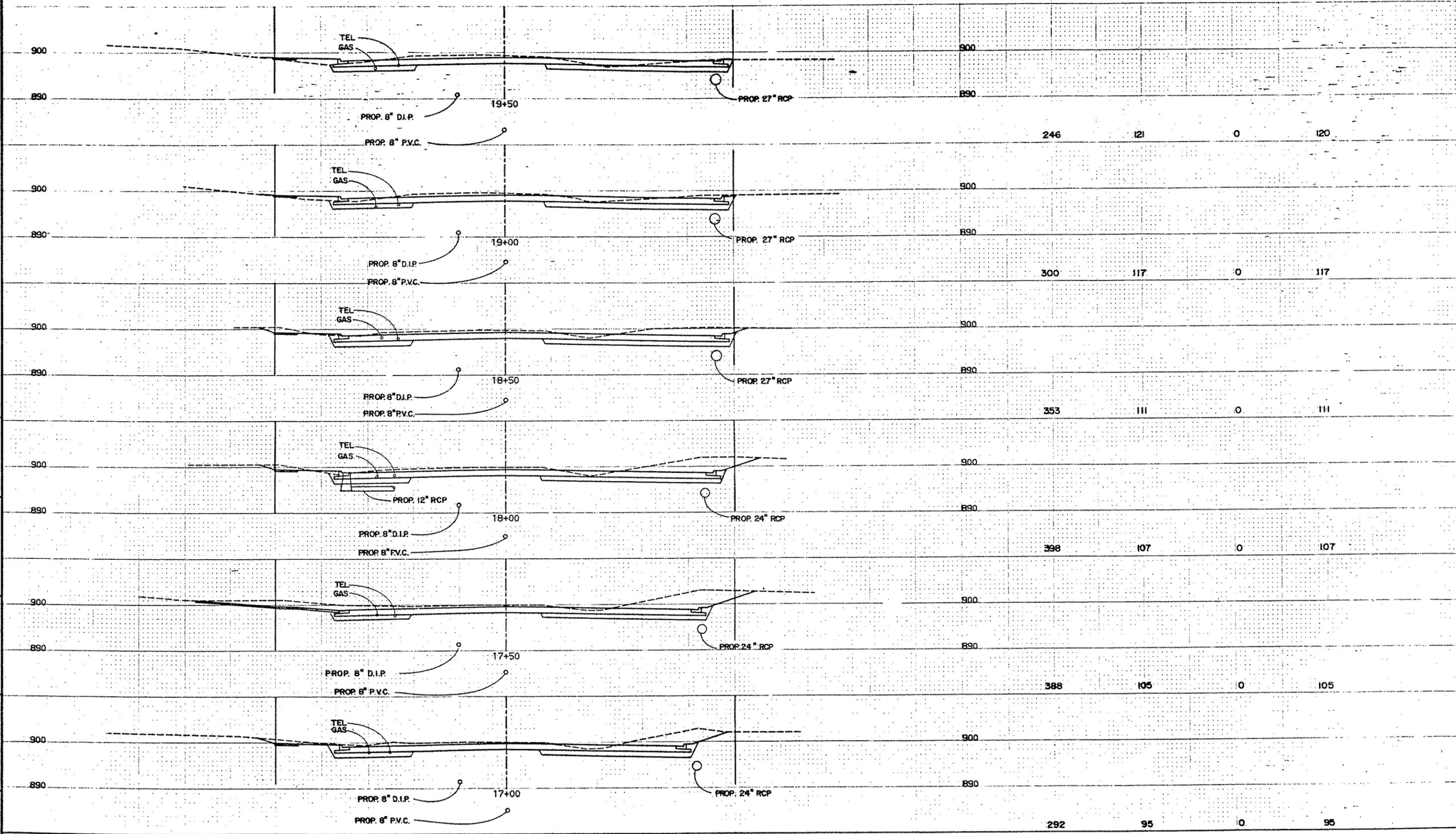
ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
14+00 TO 16+50
SHEET NO. 24 OF 43 SHEETS

CO. PROJ. NO. 88-22-87
COMMISSION NO.
9326

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

ORIGINAL SURVEY BY DATE
 CHECKED BY DATE
 STAKING BY DATE
 AS BUILT BY DATE

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Ronald King
DATE 8/1/85 REG. NO. 9092

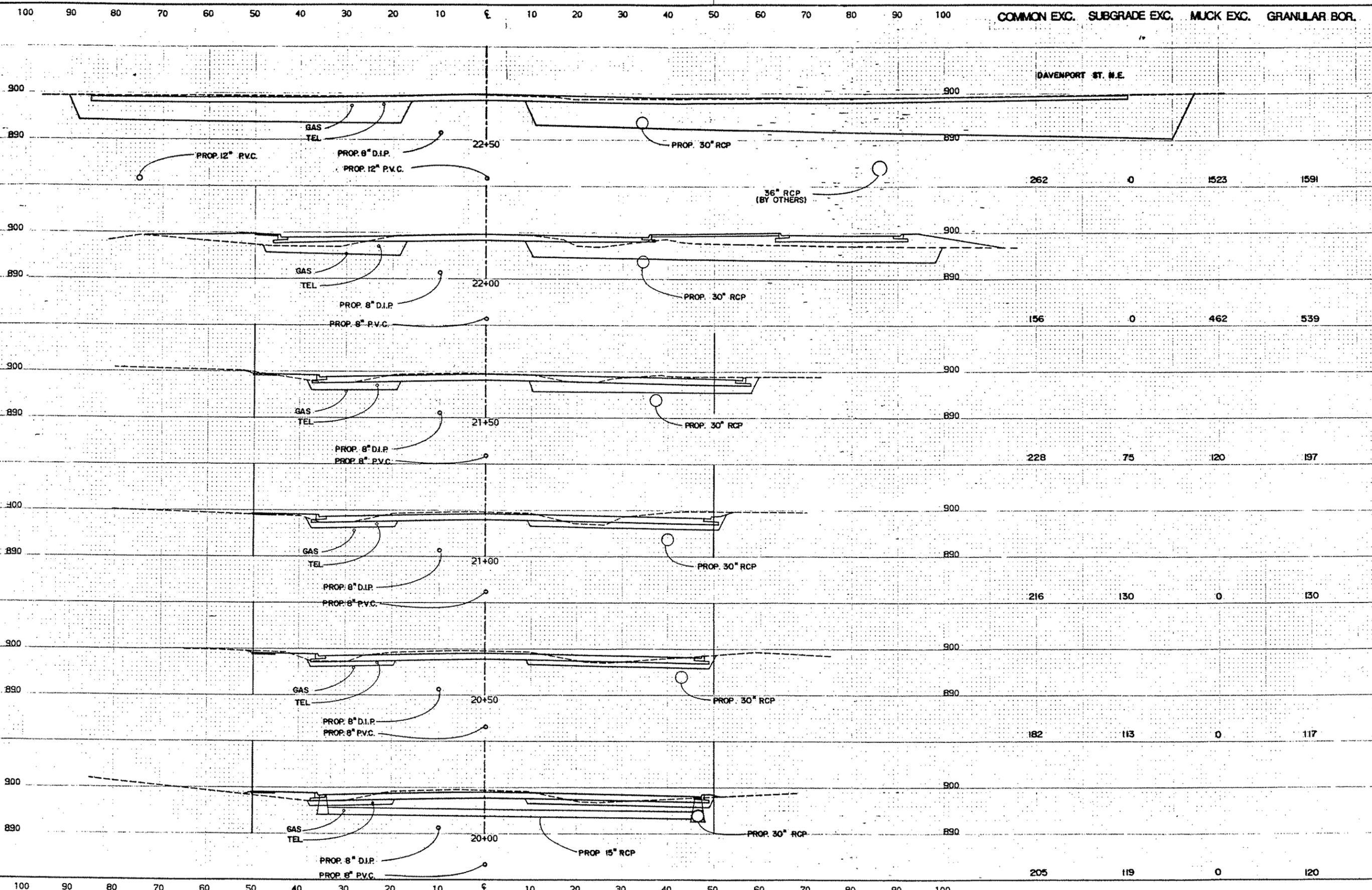
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
17+00 TO 19+50
SHEET NO. 25 OF 43 SHEETS

COMMISSION NO.
9326



AS BUILT BY DATE
 STAKING BY DATE
 REVISIONS BY DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Ronald C. King
DATE 8/1/85 REG. NO. 9092

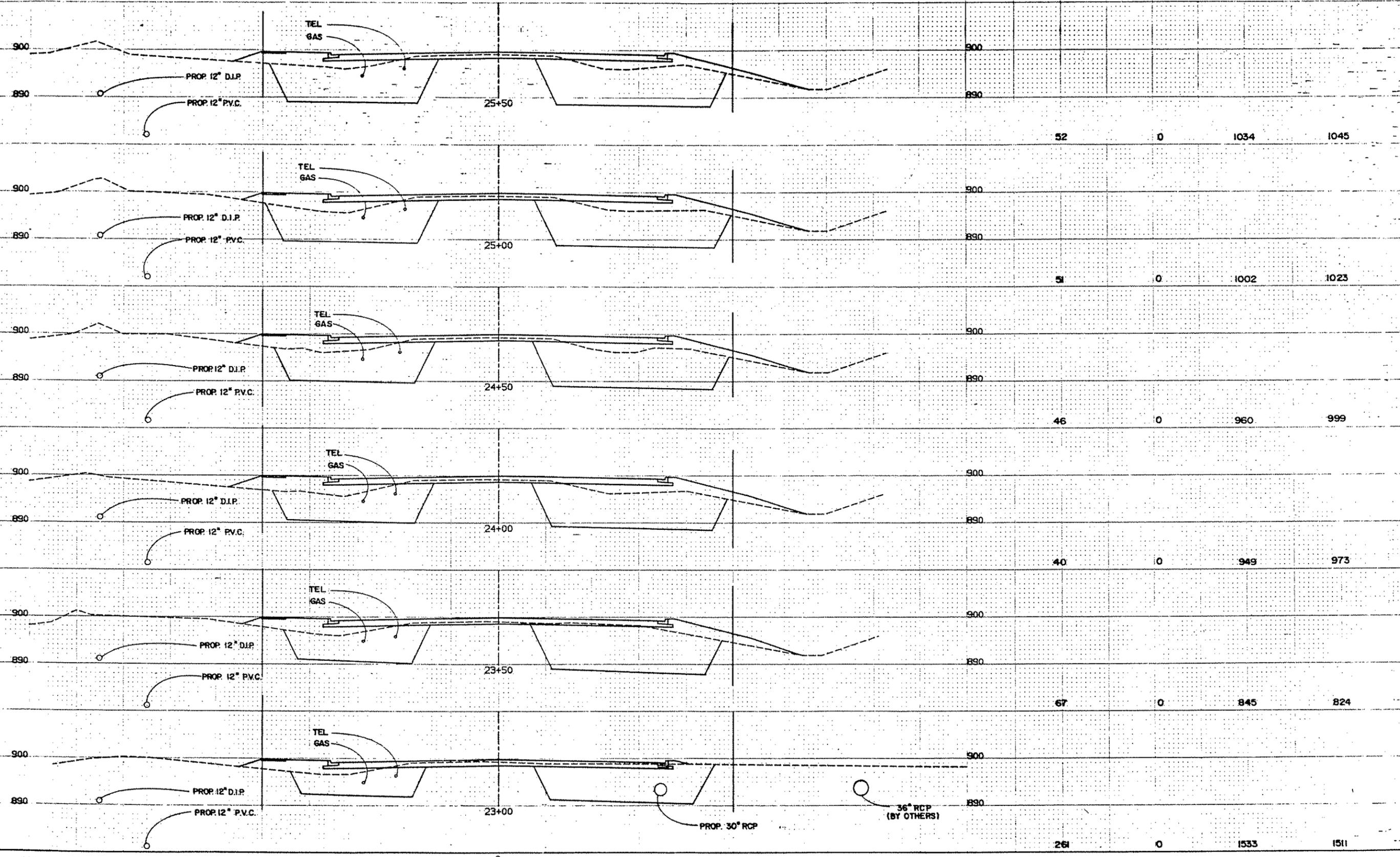
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
20+00 TO 22+50
SHEET NO. 26 OF 43 SHEETS

COMMISSION NO.
9326



ORIGINAL SURVEY BY DATE
 STAKING BY DATE
 AS BUILT CHECKED BY DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Ronald King
DATE 2/1/87 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

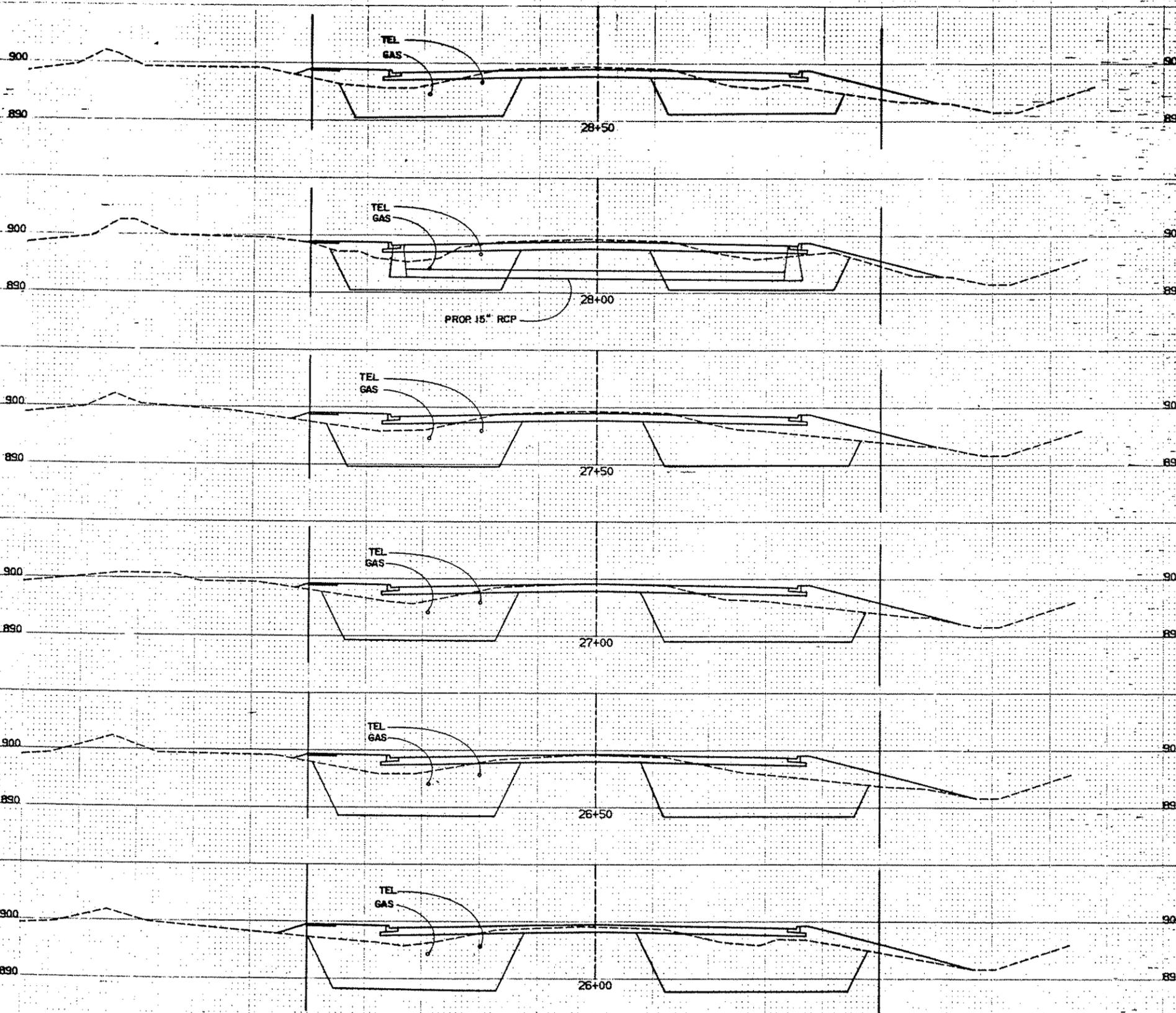
CO. PROJ. NO. 88-22-87

CROSS SECTIONS
23+00 TO 25+50

SHEET NO. 27 OF 43 SHEETS

COMMISSION NO.
9326

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100



121	0	652	684
119	0	745	768
93	0	854	873
71	0	952	977
56	0	1077	1085
48	0	1116	1098

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

GENERAL SURVEY BY DATE
 STAKING BY DATE
 AS BUILT BY DATE

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV
CHECKED
RCL

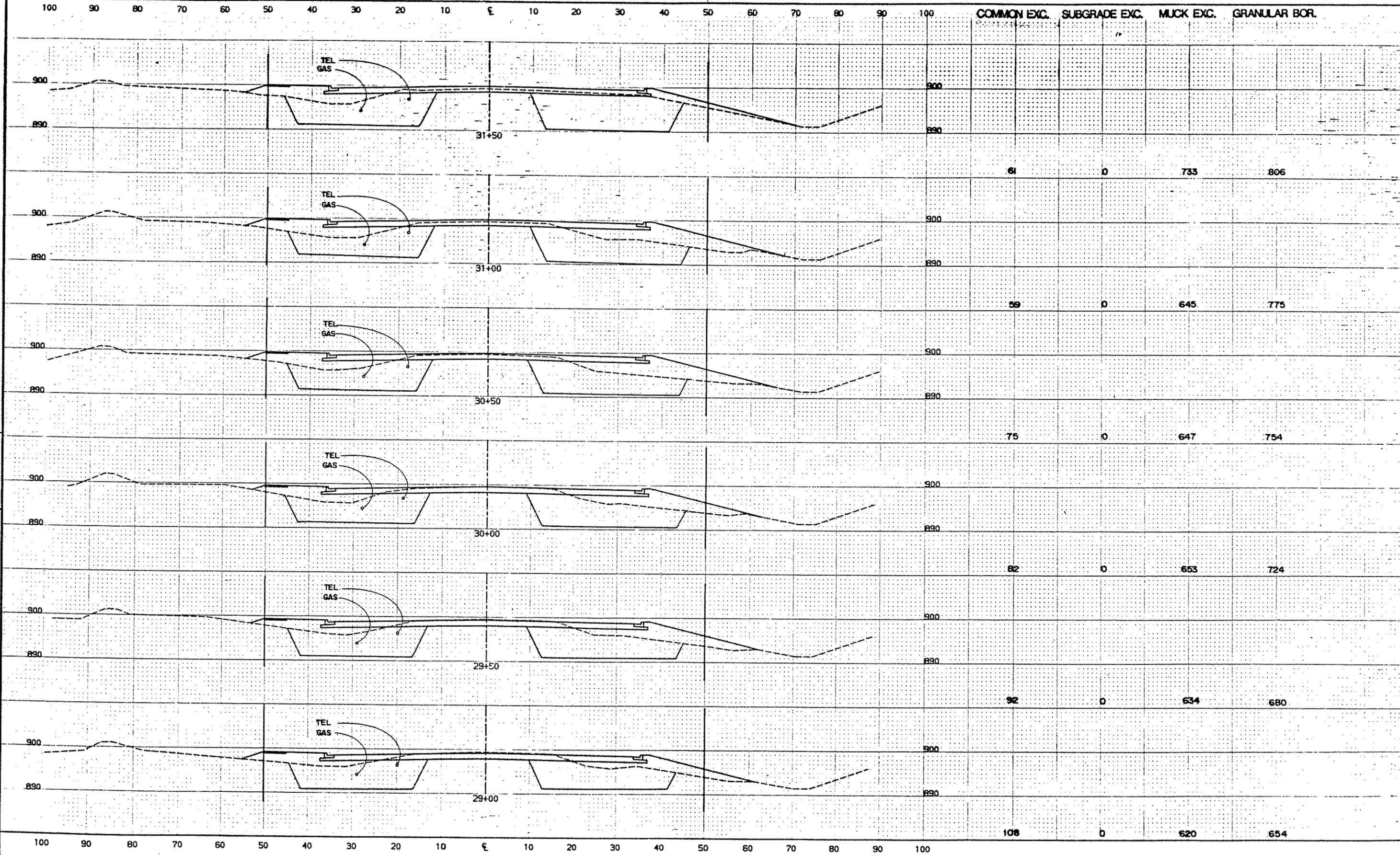
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Ronald C. King
 DATE 8/1/88 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 26+00 TO 28+50
 SHEET NO. 28 OF 43 SHEETS

COMMISSION NO.
 9326



ORIGINAL SURVEY BY DATE FIELD BOOK BY DATE
 AS BUILT BY DATE FIELD BOOK BY DATE

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
 RCL TV
 CHECKED
 RCL
 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 DATE *2/1/87* REG. NO. 9092

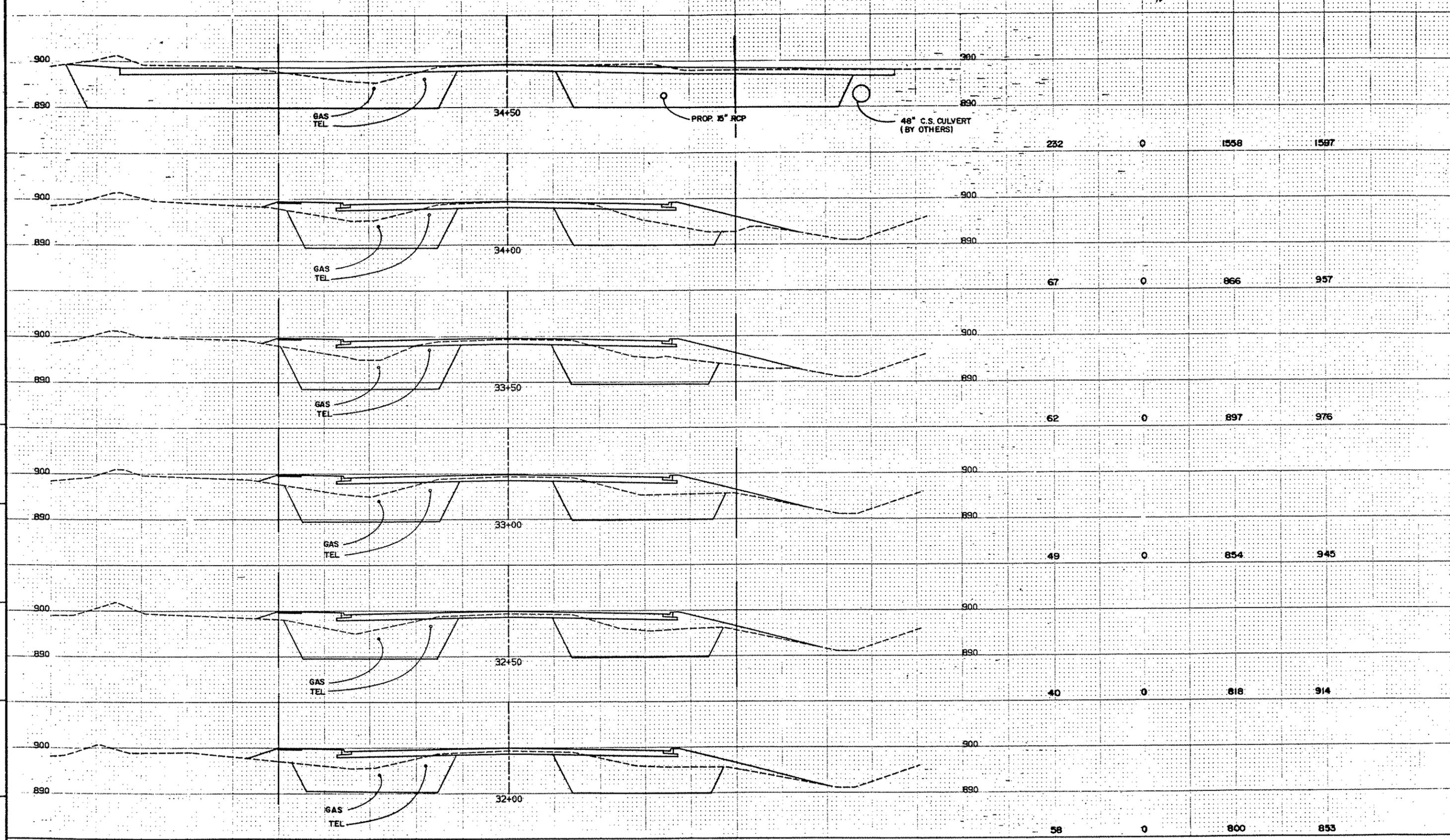
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
 COMMISSION NO. 9326
 CROSS SECTIONS 29+00 TO 31+50
 SHEET NO. 29 OF 43 SHEETS

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

ORIGINAL SURVEY BY DATE
 FIELD BOOK BY DATE
 STAKING BY DATE
 AS BUILT BY DATE

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION
REVISIONS			

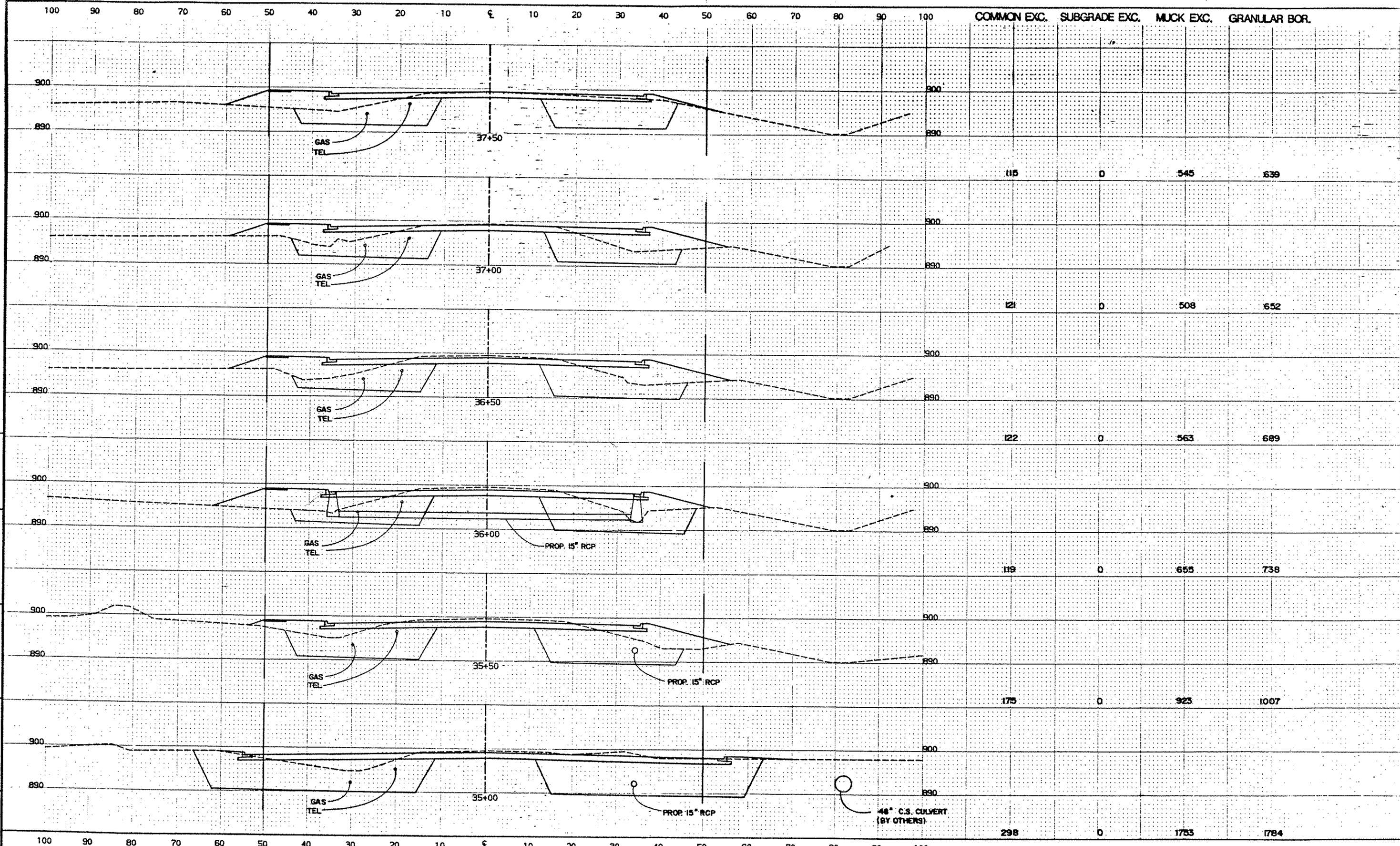
DESIGNED DRAWN
 RCL TV
 CHECKED
 RCL
 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Ronald King
 DATE 2/1/89 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 32+00 TO 34+50
 SHEET NO. 30 OF 43 SHEETS

COMMISSION NO.
 9326



ORIGINAL SURVEY BY DATE
 FIELD BOOK BY DATE
 STAKING BY DATE
 AS BUILT FIELD BOOK BY DATE

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

NO.	DATE	BY	DESCRIPTION

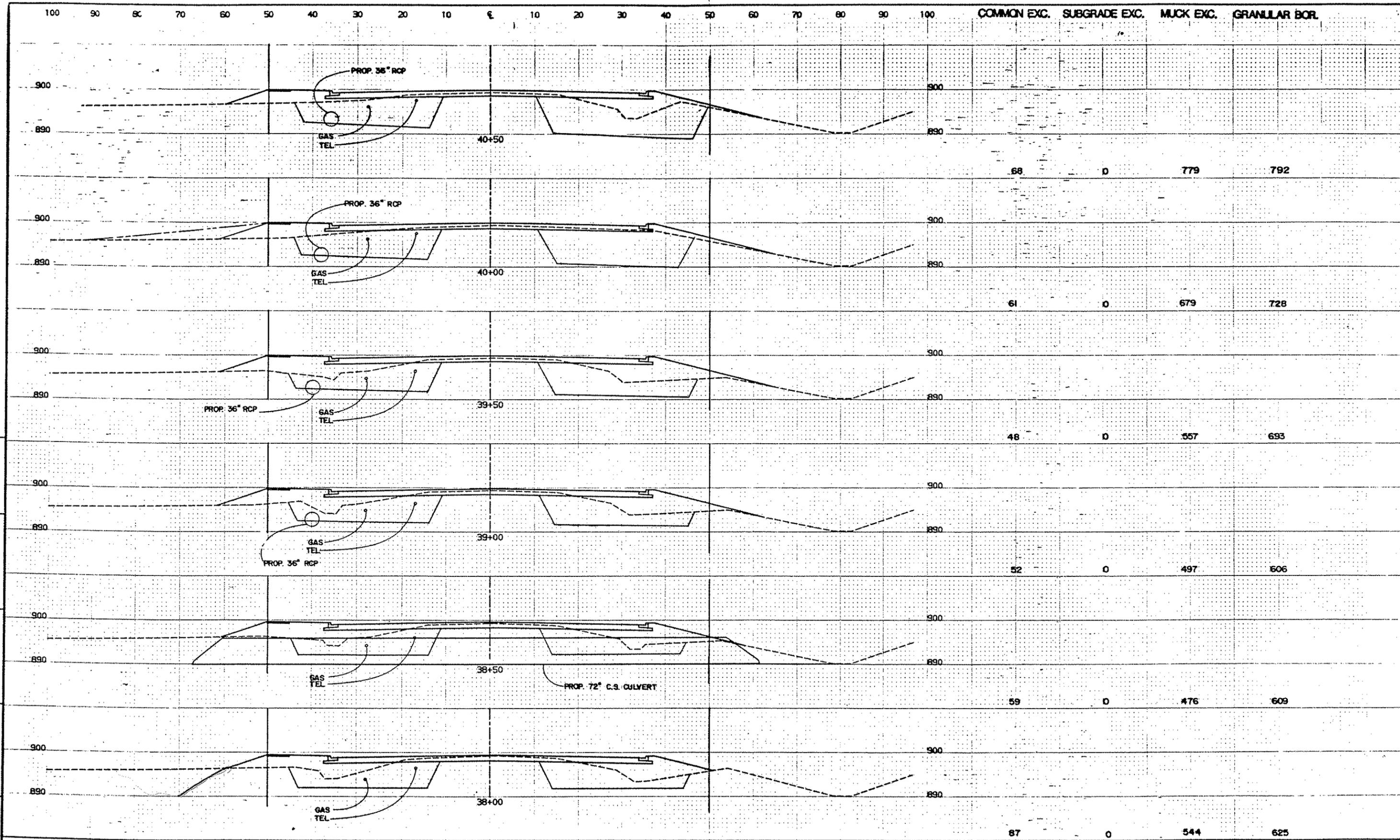
DESIGNED DRAWN RCL TV
 CHECKED RCL
 REVISIONS

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.
Ronald C. King
 DATE 8/1/83 REG. NO. 9092

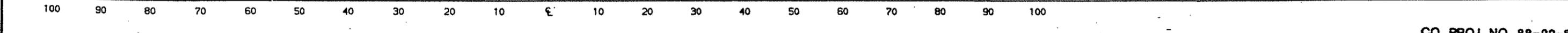
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
 COMMISSION NO. 9326
CROSS SECTIONS 35+00 TO 37+50
SHEET NO. 31 OF 43 SHEETS



ORIGINAL SURVEY BY DATE
 STAKING BY DATE
 AS BUILT BY DATE



NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Reynold City
DATE *8/1/83* REG. NO. *9092*

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

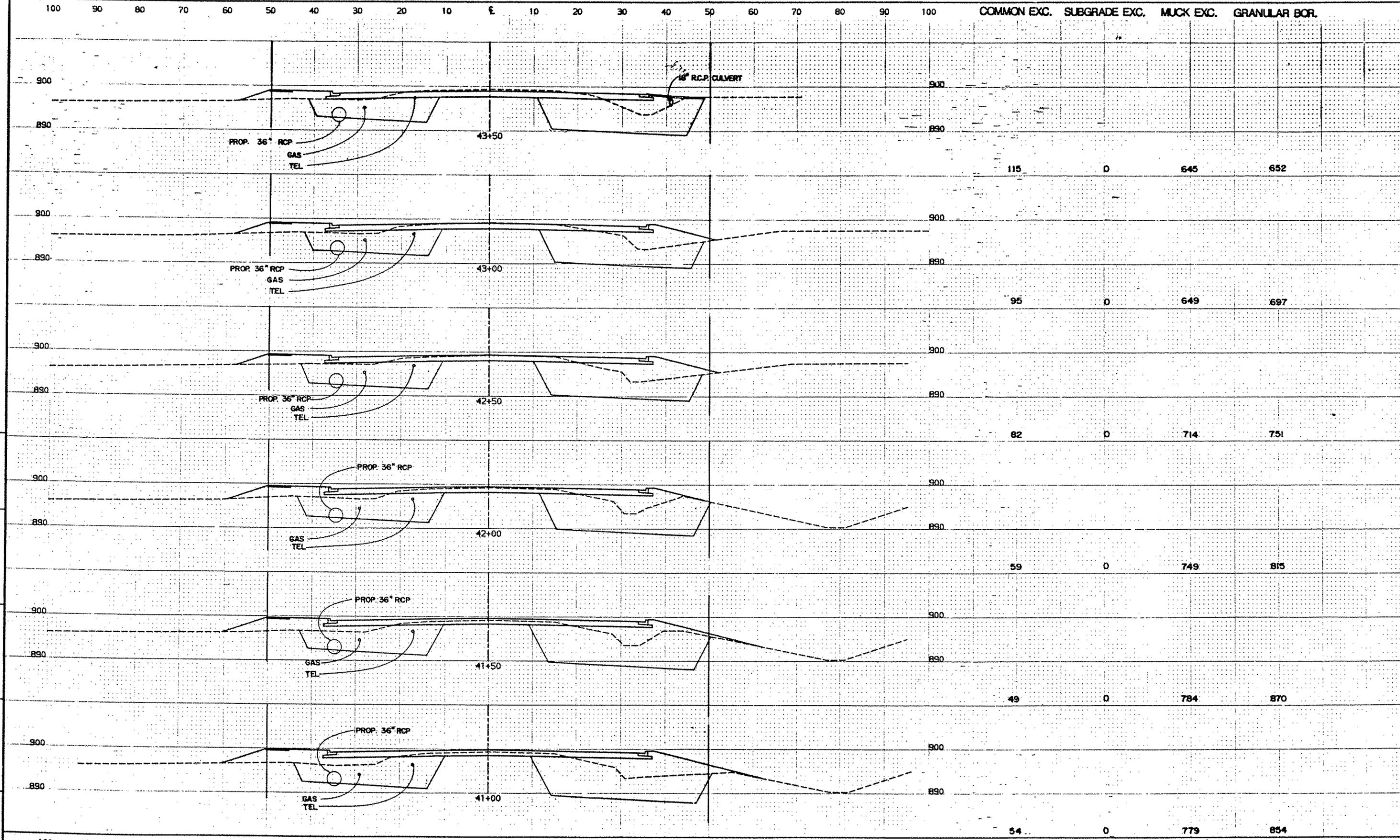
ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
38+00 TO 40+50
SHEET NO. 32 OF 43 SHEETS

COMMISSION NO.
9326

CO. PROJ. NO. 88-22-87

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



ORIGINAL SURVEY FIELDWORK BY DATE
 STAKING FIELDWORK BY DATE
 AS BUILT FIELDWORK BY DATE

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Ronald C. King
DATE 6/1/88 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

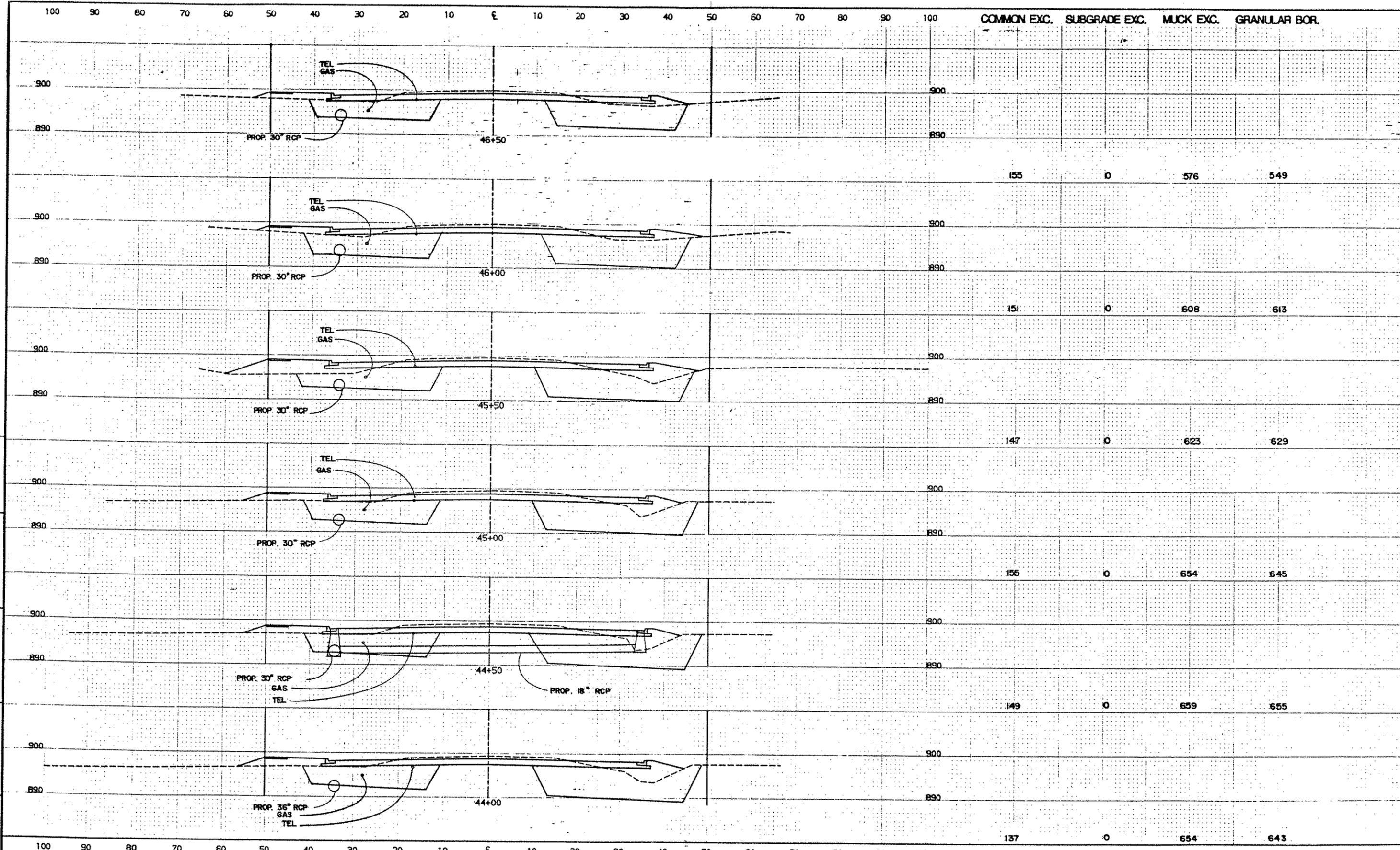
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
41+00 TO 43+50
SHEET NO. 33 OF 43 SHEETS

COMMISSION NO.
9326

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BORL.



ORIGINAL SURVEY BY DATE
 STAKING BY DATE
 AS BUILT BY DATE

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 137 0 654 643

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
 RCL TV
 CHECKED
 RCL

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

Frank C. King
 DATE 11/19/87 REG. NO. 9032

TKDA
 ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

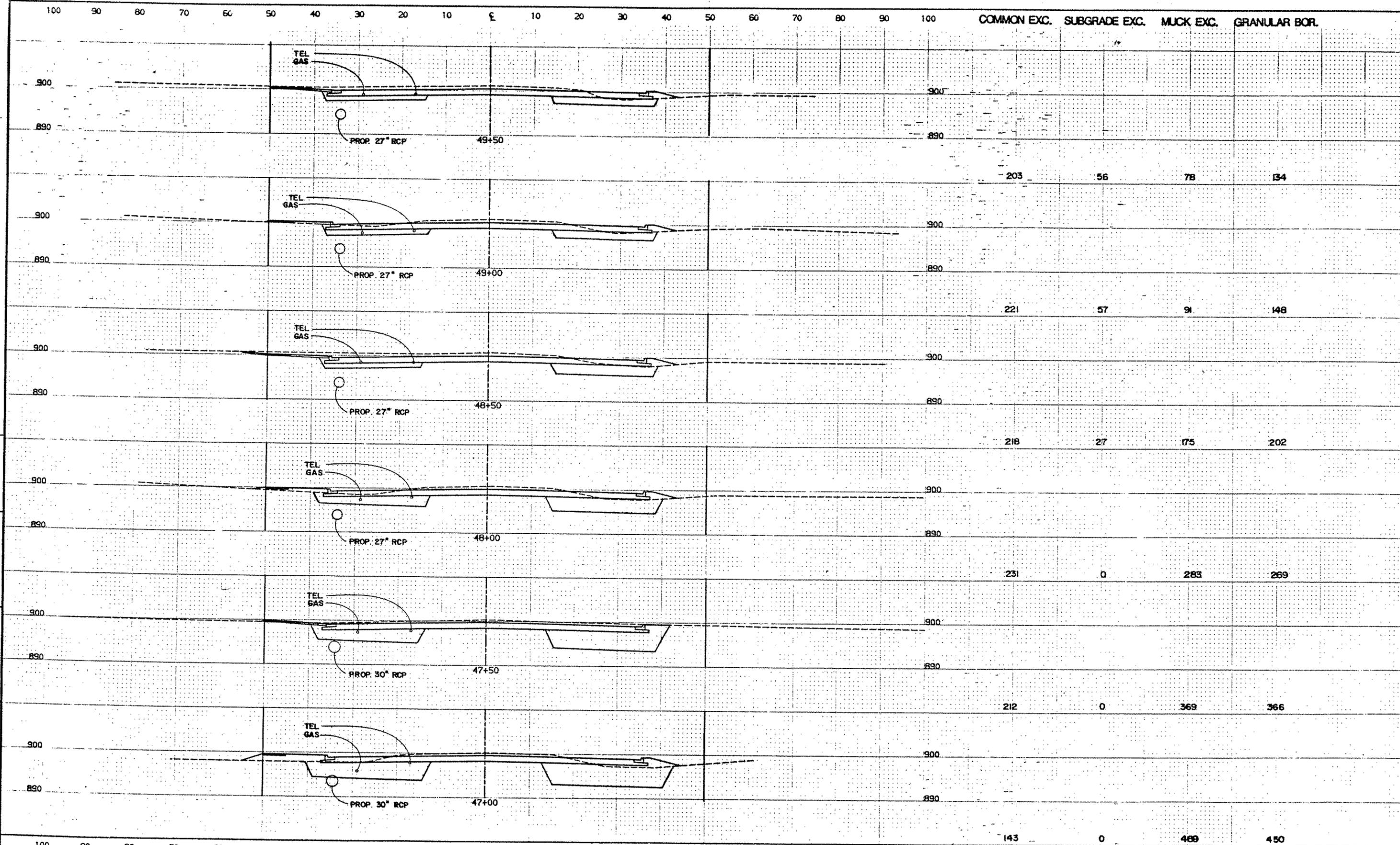
CO. PROJ. NO. 88-22-87

CROSS SECTIONS
 44+00 TO 46+50

SHEET NO. 34 OF 43 SHEETS

COMMISSION NO.
 9326

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



ORIGINAL SURVEY FIELD BOOK BY DATE
 AS BUILT FIELD BOOK BY DATE

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NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
 RCL TV
 CHECKED
 RCL

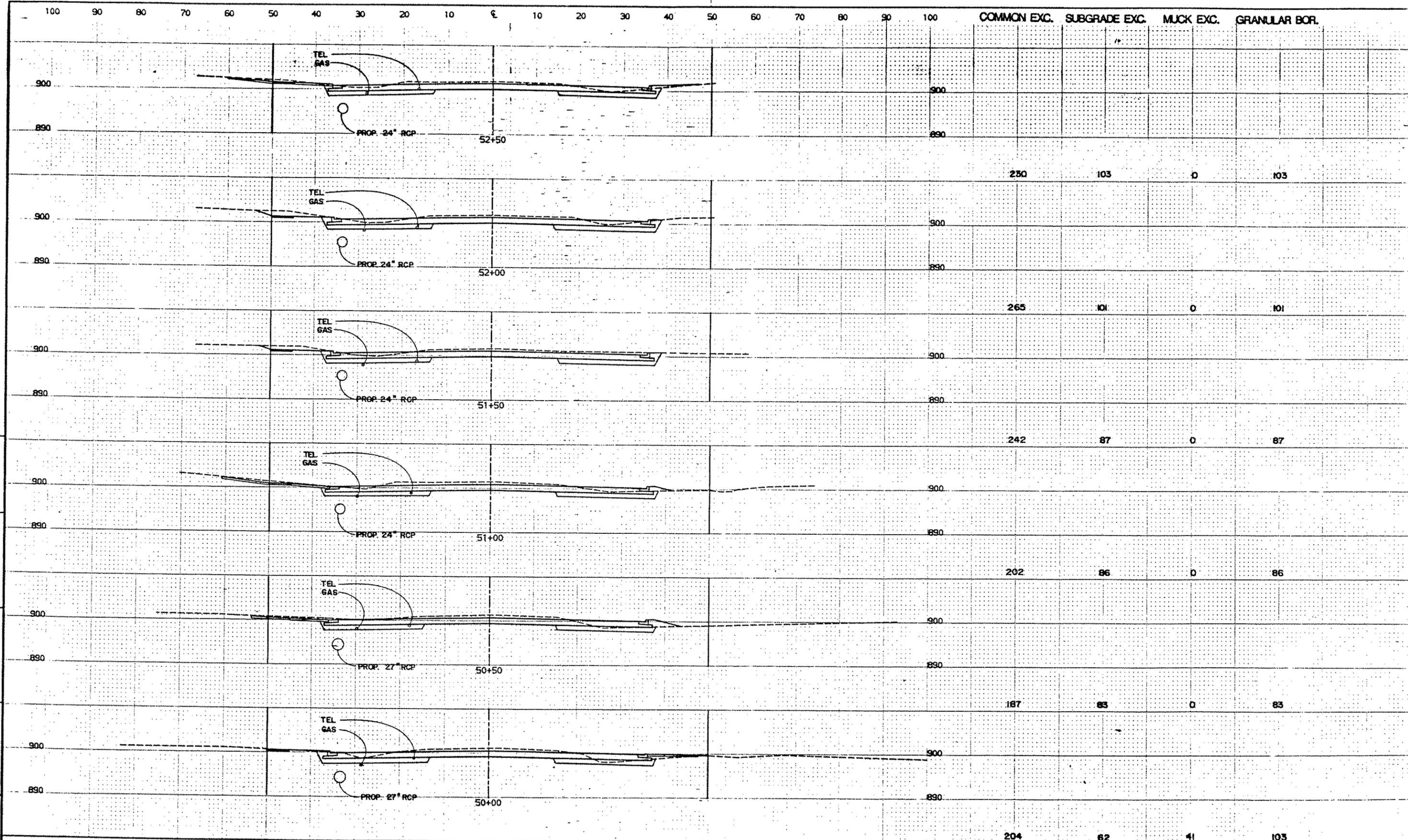
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 DATE 11/18/88 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
 CROSS SECTIONS
 47+00 TO 49+50
 SHEET NO. 35 OF 43 SHEETS
 COMMISSION NO.
 9326

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



CHECKED BY DATE
 STAKING BY DATE
 AS BUILT BY DATE

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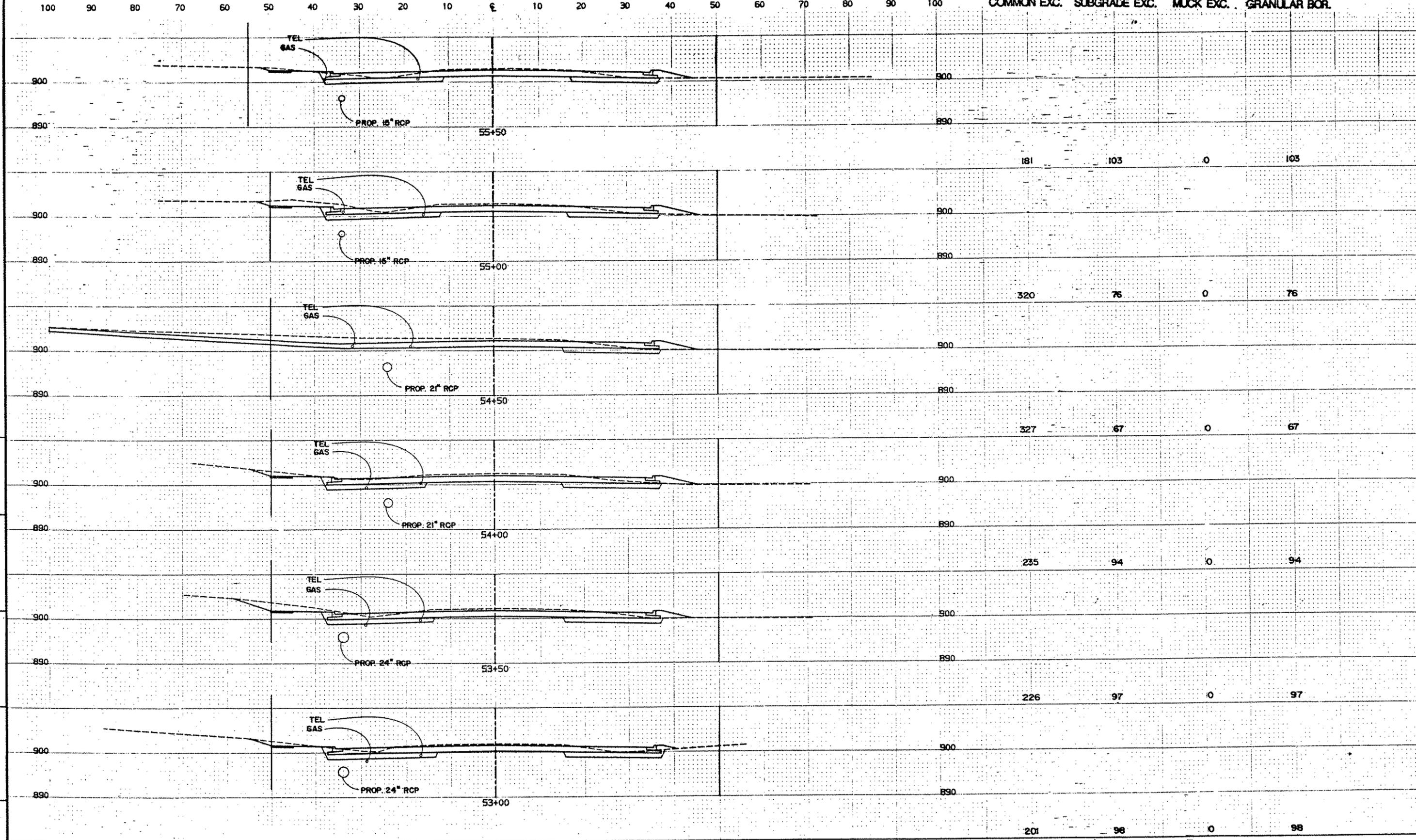
NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN RCL TV
 CHECKED RCL
 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
Ronald King
 DATE 8/10/87 REG. NO. 9092

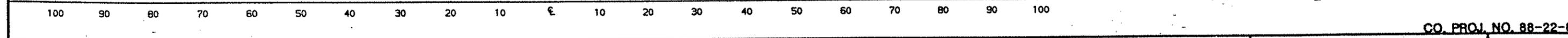
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
 CROSS SECTIONS
 50+00 TO 52+50
 SHEET NO. 36 OF 43 SHEETS
 COMMISSION NO.
 9326



ORIGINAL SURVEY BY DATE
 CHECKED BY DATE
 AS BUILT BY DATE



CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL - TV

CHECKED
RCL

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

Ronald Cohen
DATE 8/1/89 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

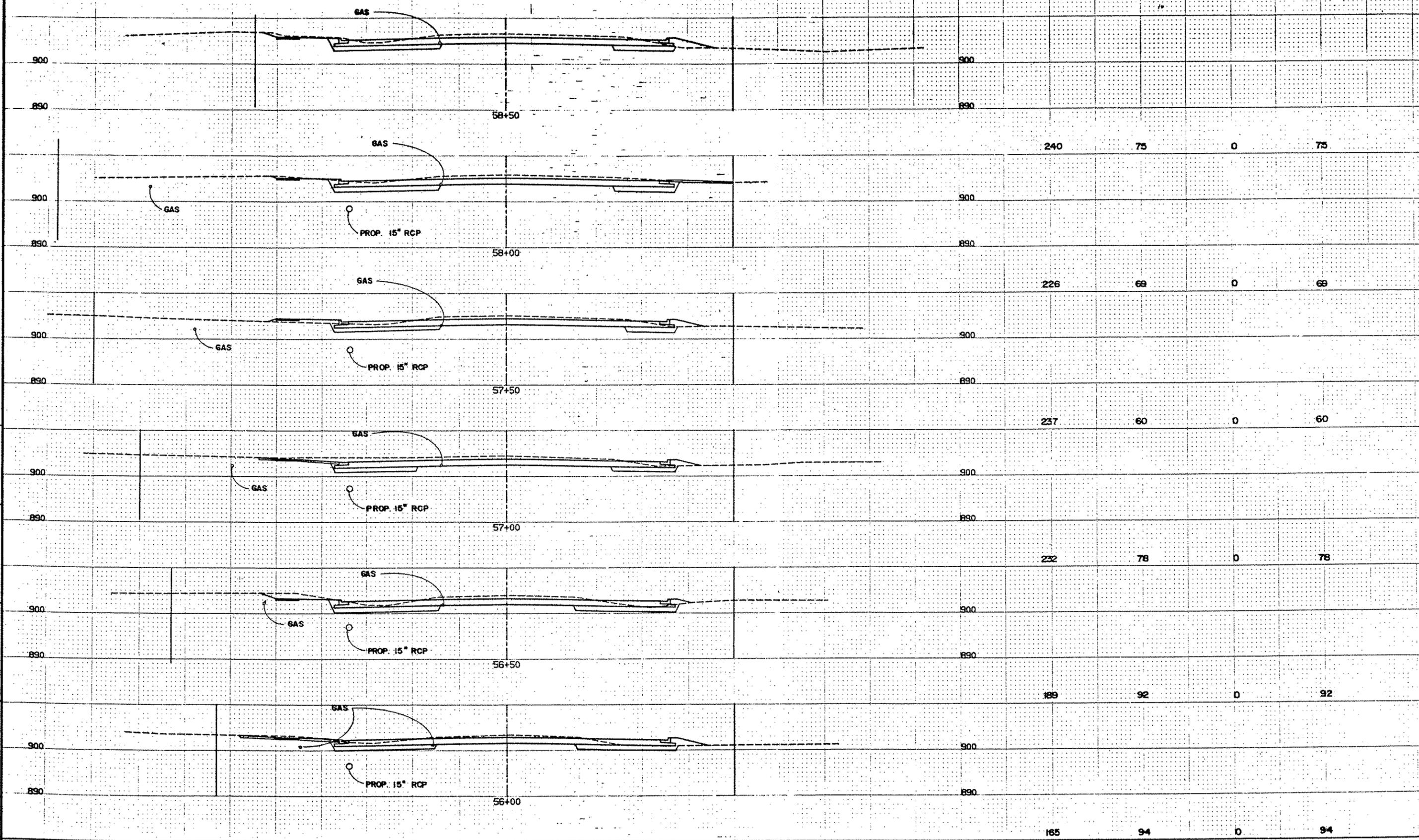
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
53+00 TO 55+50
SHEET NO. 37 OF 43 SHEETS

COMMISSION NO.
9326

100 90 80 70 60 50 40 30 20 10 € 10 20 30 40 50 60 70 80 90 100 COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



ORIGINAL SURVEY BY DATE
 FIELDWORK BY DATE
 STAKING BY DATE
 HYDRAULIC BY DATE
 AS BUILT BY DATE

100 90 80 70 60 50 40 30 20 10 € 10 20 30 40 50 60 70 80 90 100 185 94 0 94

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

[Signature]
DATE 8/18/87 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
56+00 TO 58+50
SHEET NO. 38 OF 43 SHEETS

COMMISSION NO.
9326

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100



100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

CO. PROJ. NO. 88-22-87

ORIGINAL DRAWN BY DATE
 REVISIONS BY DATE
 AS BUILT BY DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV
CHECKED
RCL

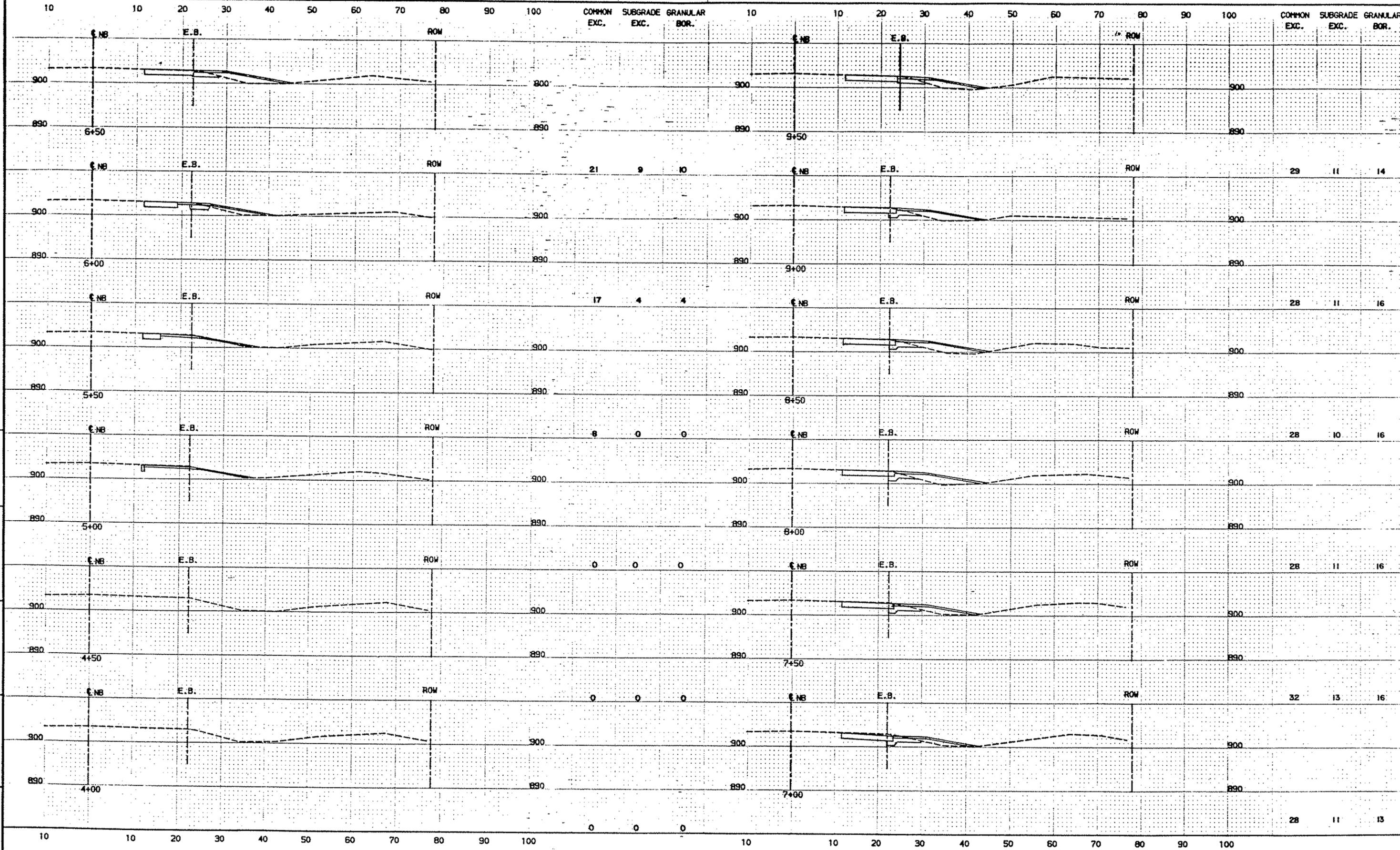
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 DATE 8/1/89 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 59+00 TO 61+50
 SHEET NO. 39 OF 43 SHEETS

COMMISSION NO.
 9326



ORIGINAL SURVEY BY: FREDERICK BY: DATE: _____
 STAKING BY: FREDERICK BY: DATE: _____
 AS BUILT FIELDWORK BY: DATE: _____

NO.	DATE	BY	DESCRIPTION

DESIGNED: RCL
 DRAWN: TV
 CHECKED: RCL
 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.
Ronald King
 DATE: 8/1/83 REG. NO. 2092

TKDA

ENGINEERS ARCHITECTS PLANNERS

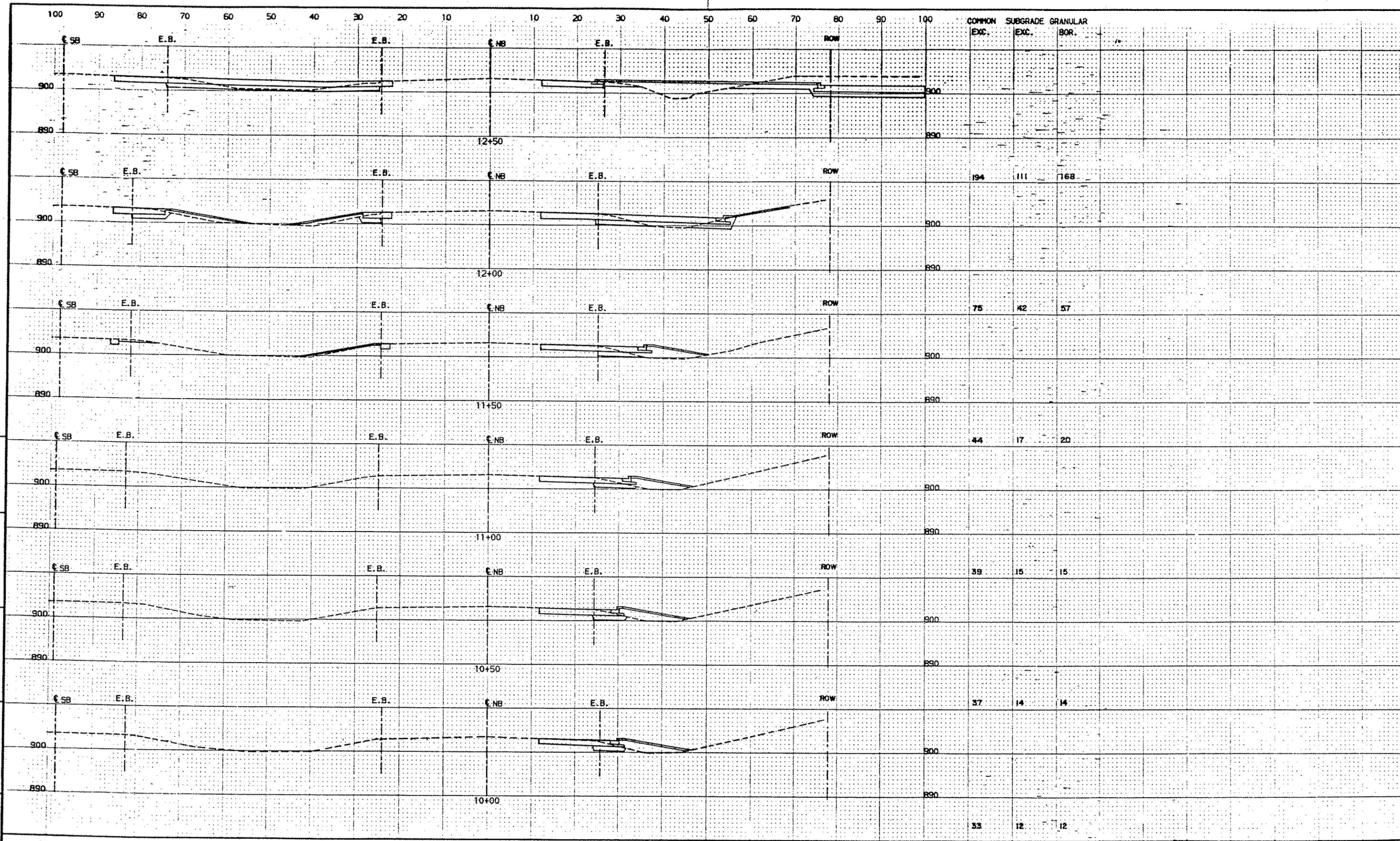
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

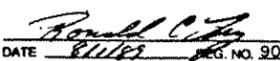
CROSS SECTIONS TH65
4+00 TO 9+50
SHEET NO. 40 OF 43 SHEETS

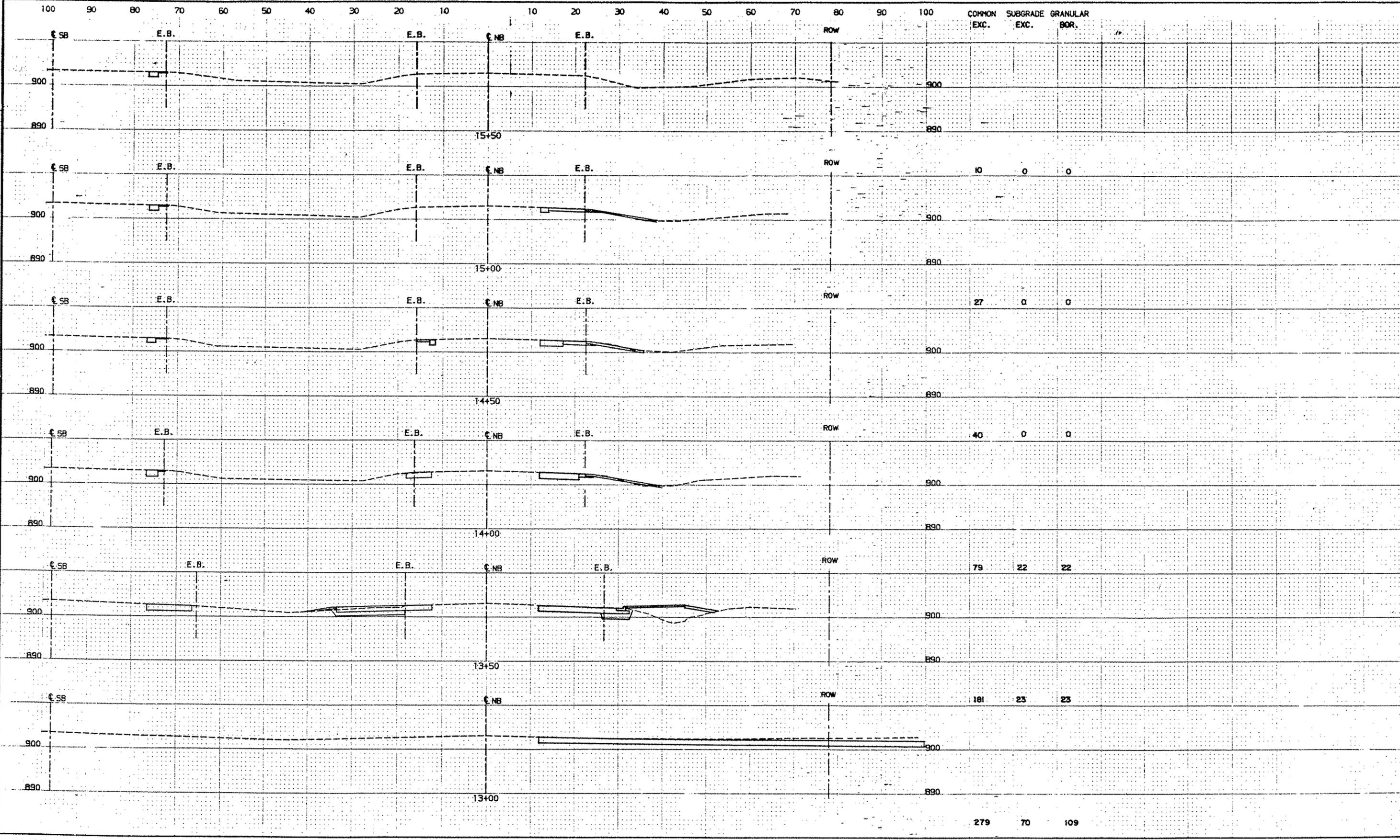
CO. PROJ. NO. 88-22-87

COMMISSION NO.
9326



SURVEY BY DATE FIELD BOOK BY DATE
 STAKING BY DATE FIELD BOOK BY DATE
 AS BUILT FIELD BOOK BY DATE

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY	DESCRIPTION													DESIGNED DRAWN RCL TV CHECKED RCL	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 <u>8/1/87</u> REG. NO. 9092	<h1 style="margin: 0;">TKDA</h1> ENGINEERS ARCHITECTS PLANNERS <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY 105TH AVE. N.E.	CO. PROJ. NO. 88-22-87 CROSS SECTIONS TH65 10+00 TO 12+50 SHEET NO. 41 OF 43 SHEETS COMMISSION NO. 9326
NO.	DATE	BY	DESCRIPTION																		



ORIGINAL SURVEY BY DATE
 CHECKED BY DATE
 STAKING BY DATE
 AS BUILT BY DATE

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV
CHECKED
RCL

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Ronald C. King
 DATE 8/1/89 REG. NO. 30932

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

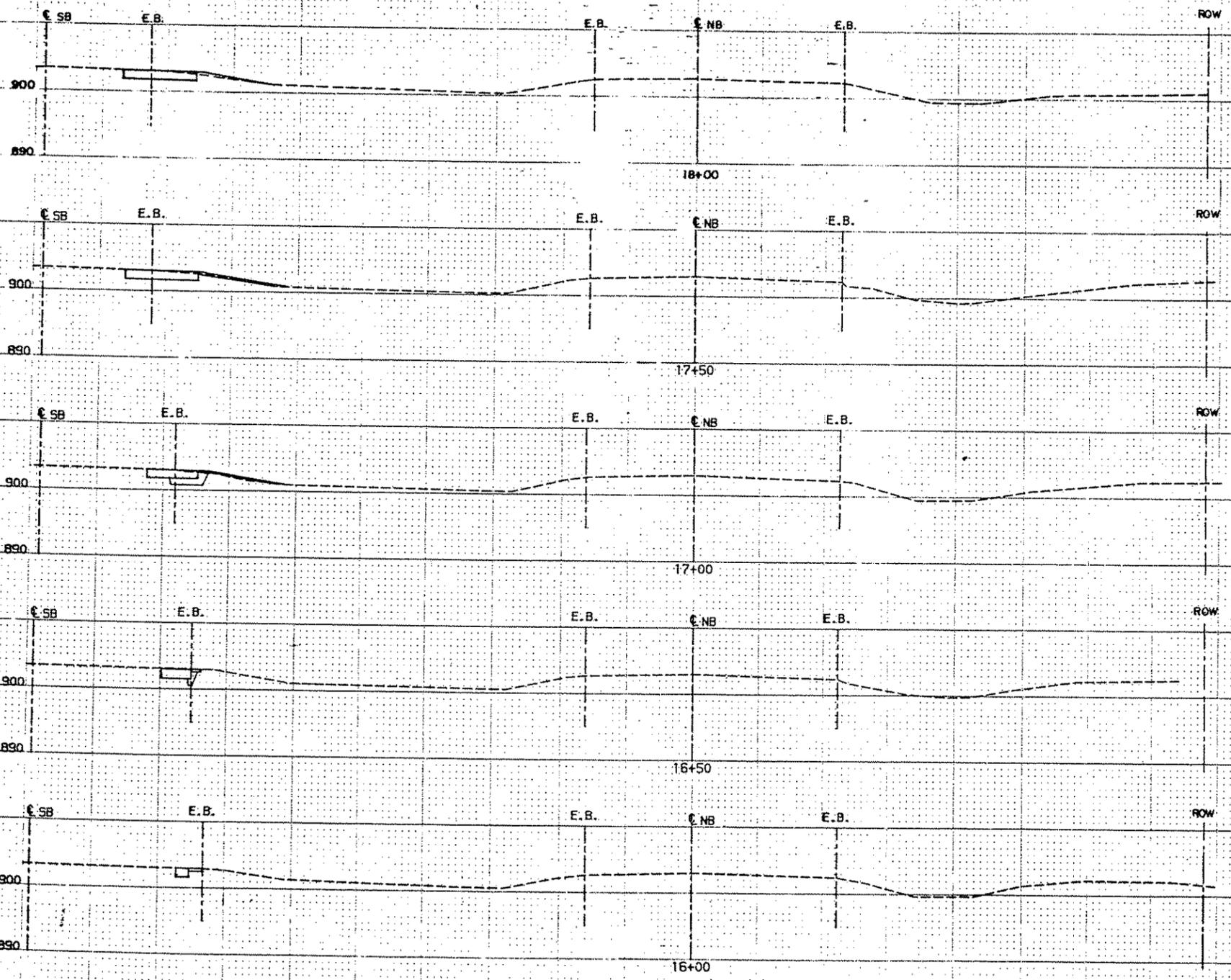
ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS TH65
 13+00 TO 15+50
 SHEET NO. 42 OF 43 SHEETS

COMMISSION NO.
 9326

100 90 80 70 60 50 40 30 20 10 10 20 30 40 50 60 70 80 90 100

COMMON SUBGRADE GRANULAR
EXC. EXC. BOR.



Station	Common Exc.	Subgrade Exc.	Granular Bor.
18+00	47	0	0
17+50	27	0	0
17+00	21	15	15
16+50	14	7	7
16+00	8	1	1

GENERAL SURVEY FIELDBOOK BY DATE
 STAKING FIELDBOOK BY DATE
 AS BUILT FIELDBOOK BY DATE

100 90 80 70 60 50 40 30 20 10 10 20 30 40 50 60 70 80 90 100

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN RCL TV
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Ronald King
 DATE 8/1/89 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS TH65
 16+00 TO 18+00
 SHEET NO. 43 OF 43 SHEETS

COMMISSION NO.
 9326