

**PLAN SYMBOLS**

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

LOWLAND.....  
 TIMBER.....  
 ORCHARD.....  
 BRUSH.....  
 NURSERY.....  
 CATTLE GAURD.....  
 OVERPASS (Highway Over).....  
 UNDERPASS (Highway Under).....  
 BRIDGE.....  
 BUILDING (One Story Frame).....  
 F-FRAME C-CONCRETE  
 S-STONE T-TILE  
 B-BRICK ST-STUCCO  
 RAILROAD CROSSING BELL.....  
 RAILROAD CROSSING GATE.....  
 MANHOLE.....  
 CATCH BASIN.....  
 FIRE HYDRANT.....  
 CAST IRON MONUMENT.....  
 IRON PIN.....  
 GRAVEL PIT.....  
 SAND PIT.....  
 BORROW PIT.....  
 ROCK QUARRY.....

**UTILITY SYMBOLS**

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

**SCALES**

PLAN  
 0 5m 10m 20m

PROFILE  
 HORIZONTAL 0 5m 10m 20m  
 VERTICAL 0 0.5m 1m 2m

X-SECTIONS  
 HORIZONTAL 0 1m 2m 4m  
 VERTICAL 0 1m 2m 4m

INDEX MAP 0.5km 0 1km 2km



# MINNESOTA DEPARTMENT OF TRANSPORTATION

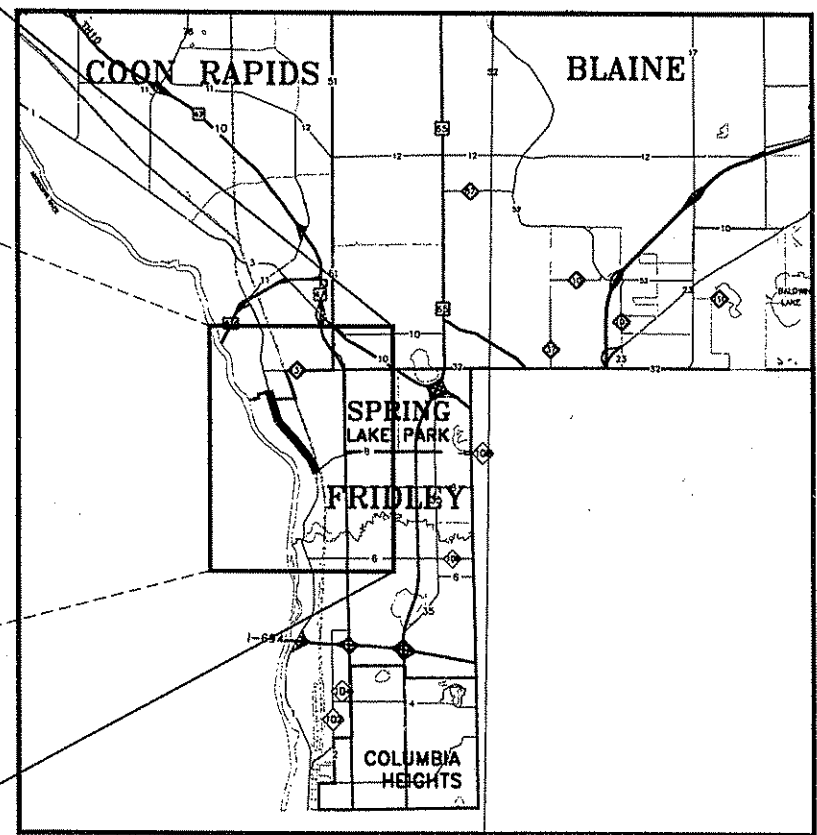
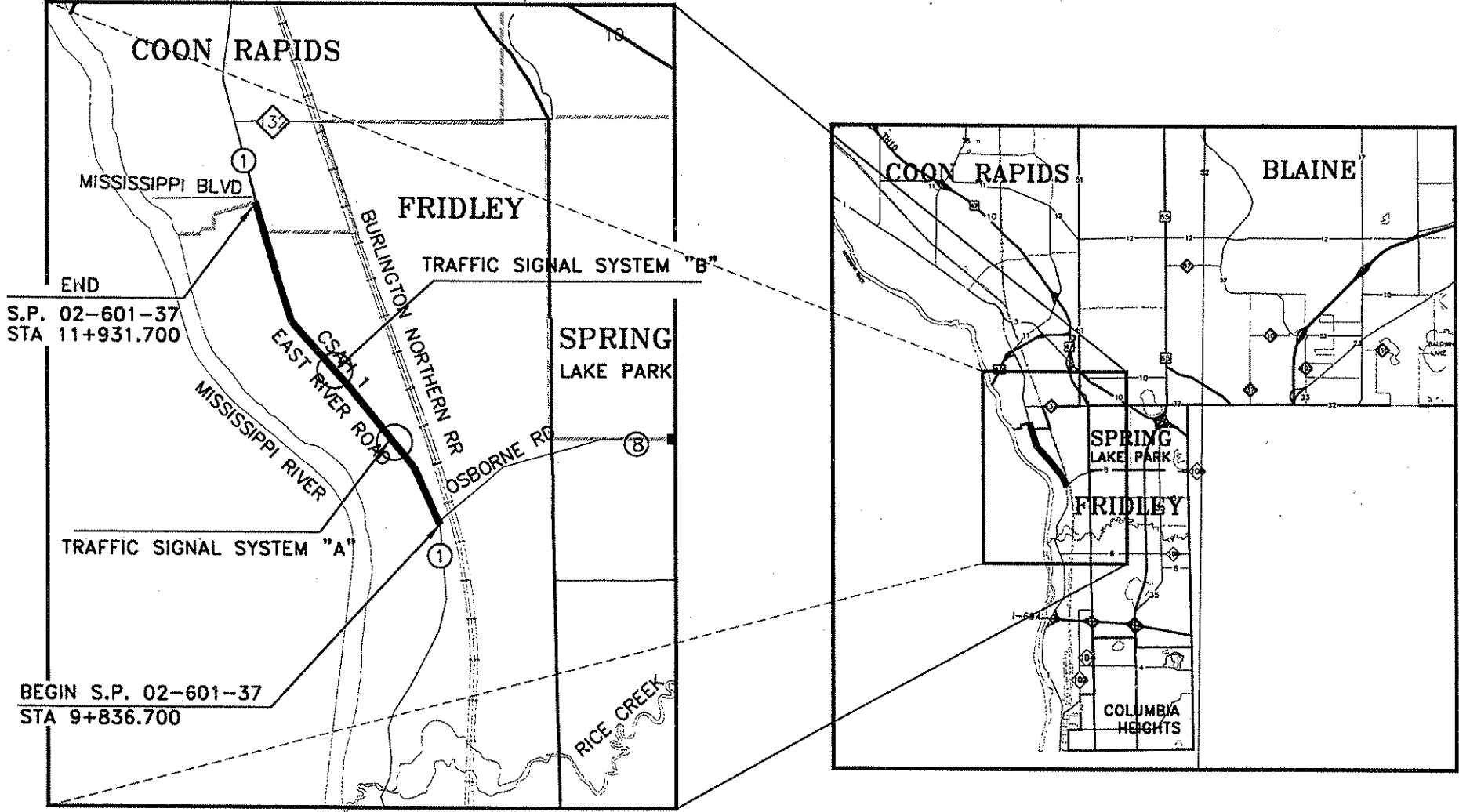
## ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, DRAINAGE, AGGREGATE BASE, BITUMINOUS SURFACING, CURB & GUTTER, SIGNAL SYSTEMS, CONCRETE WALK, AND BITUMINOUS PATH.

LOCATED ON C.S.A.H. 1 FROM C.S.A.H. 8 (OSBORNE RD) TO MISSISSIPPI BLVD in the cities of Fridley and Coon Rapids (Geographic Description)

STATE PROJ. NO. 02-601-37  
C.S.A.H. 1

GROSS LENGTH	2095.000 METERS	2.095 KILOMETERS
BRIDGES-LENGTH	0.000 METERS	0.000 KILOMETERS
EXCEPTIONS-LENGTH	0.000 METERS	0.000 KILOMETERS
NET LENGTH	2095.000 METERS	2.095 KILOMETERS



MINN. PROJ. NO. \_\_\_\_\_  
 MINN. PROJ. NO. STP 0298 (123)

**GOVERNING SPECIFICATIONS**  
 THE 1995 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - JANUARY 1998."

**INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
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4 - 8	TABULATION CHARTS
9	STANDARD DETAILS PLAN
10	EARTHWORK SUMMARY / PAVEMENT CHART
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13	TYPICAL SECTIONS
14	ALIGNMENT PLANS
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16 - 18	EXISTING CONDITION AND REMOVAL PLAN
19	SUPERELEVATION CHART
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38 - 59	CROSS-SECTION
60 - 61	DETOUR LAYOUT AND TAB.
62 - 68	SIGNING AND STRIPING PLANS
69 - 80	TRAFFIC SIGNAL SYSTEMS
81 - 93	TRAFFIC CONTROL PLANS

THIS PLAN CONTAINS 93 SHEETS

**DESIGN DESIGNATION**

ESAL <sub>20</sub>	3 968 553
R VALUE	50
ADT (1998) =	20 516
Proj. ADT (2018) =	34 877
Proj. HCADT (2018) =	2 616
Soil Factor	NA
	8.2 METRIC TON DESIGN

Functional Classification ARTERIAL HIGH DENSITY  
 No. of Traffic Lanes 4 No. of Parking Lanes 0  
 Design Speed 80 Km/h  
 Based on: Stopping Sight Distance  
 Height of eye 1070 mm Height of object 150 mm  
 Design Speed not achieved at: \_\_\_\_\_  
 STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH \_\_\_\_\_  
 STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH \_\_\_\_\_

**BIKE PATH DESIGN DESIGNATION BLOCK**  
 Design Speed 30 Km/h  
 Based on: Stopping Sight Distance  
 Height of eye 1400 mm Height of object 0 mm

Approved 1/25/98 [Signature]  
 Approved 1/19/98 [Signature]  
 Approved 1/1/98 [Signature]  
 [Signature] Date 1/6/99  
 [Signature] Date 1/7/99  
 Approved for State and Federal Aid Funding: State Aid Engineer

NO.	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260137\PLAN\TITLE-1.DWG



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 1/18/98 REG. NO. 12183

DRAWN BY MN DATE 4/30/98  
 DESIGN BY K&J DATE 4/30/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

TITLE SHEET  
 Sheet 1 of 93 Sheets



STATEMENT OF ESTIMATED QUANTITIES


CHART NO.	ITEM NO.	ITEM	UNIT	TOTAL QUAN.	ANOKA COUNTY S.P. 02-601-37		CITY OF FRIDLEY S.A.P. 127-020-20		CITY OF COON RAPIDS S.A.P. 114-020-18		STORM SEWER			
					PARTICIPATING		NON-PART.		PARTICIPATING		NON-PART.		EST.	FINAL
					FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.		
	2506.501	CONST DRAINAGE STRUCTURE DESIGN 3000 mm 4020	m	6.26								6.26		
①	Q	2506.516 CASTING ASSEMBLY	EACH	120										
	L-P	2506.522 ADJUST FRAME AND RING CASTING	EACH	20								119		
	P	2506.602 CONSTRUCT SANITARY MANHOLE SPECIAL	EACH	1								2		
		2506.602 INSTALL CONTROL STRUCTURE	EACH	1										
	P	2506.603 RECONSTRUCT SANITARY MANHOLES	m	15.08								1		
		2511.515 GEOTEXTILE FILTER TYPE IV	m <sup>2</sup>	35.0										
		2511.604 ARTICULAR CONCRETE RIP-RAP	m <sup>2</sup>	39.1								35.0		
												39.1		
R	2521.501	100mm CONCRETE WALK	m <sup>2</sup>	6 221										
R	2521.501	125mm CONCRETE WALK	m <sup>2</sup>	20				6 213			8			
R	2521.501	150mm CONCRETE WALK	m <sup>2</sup>	86				86						
R	2521.501	200mm CONCRETE WALK (REINFORCED)	m <sup>2</sup>	62				62						
T	2531.501	CONCRETE CURB AND GUTTER, DESIGN B618	m	3 624	2 431									
T	2531.501	CONCRETE CURB AND GUTTER, DESIGN B612	m	3 087	2 923							1 131		
D	2531.507	150 mm CONCRETE DRIVEWAY PAVEMENT	m <sup>2</sup>	442	216							62		
D	2531.507	200 mm CONCRETE DRIVEWAY PAVEMENT	m <sup>2</sup>	55	39							164		
W	2531.602	PEDESTRIAN CURB RAMP	EACH	36								226		
												16		
												35		
I	2540.602	RELOCATE MAIL BOX SUPPORT	EACH	16	16									
S	2557.501	WIRE FENCE DESIGN 1.8 - 9322	m	231	231									
		2557.603 INSTALL FENCE	m	272	272									
		2563.601 DETOUR SIGNING	LUMP SUM	1	1									
		2563.601 TRAFFIC CONTROL STAGE 1	LUMP SUM	1	1									
		2563.601 TRAFFIC CONTROL STAGE 2	LUMP SUM	1	1									
		2563.601 TRAFFIC CONTROL STAGE 3	LUMP SUM	1	1									
		2563.601 TRAFFIC CONTROL STAGE 4	LUMP SUM	1	1									
		2563.602 RAISED PAVEMENT MARKER TEMPORARY	EACH	1 800	1 800									
		2563.602 RELOCATE RAISED PAVT MARKER TEMP	EACH	275	275									
FF	2564.531	SIGN PANELS TYPE C	m <sup>2</sup>	82.6	82.6									
		2564.537 INSTALL SIGN TYPE SPECIAL	EACH	19	19									
FF	2564.602	HAZARD MARKER X4-2	EACH	22	22									
FF	2564.602	END OF ROADWAY MARKER X4-11	EACH	4	4									
FF	2564.602	CLEARANCE MARKER X4-4	EACH	10	10									
		2564.602 PAVEMENT MESSAGE (LEFT ARROW) POLY PREFORM	EACH	6	6									
		2564.602 PAVEMENT MESSAGE (RIGHT ARROW) POLY PREFORM	EACH	5	5									
		2564.602 INTERNALLY LIT SIGN TYPE "D"	EACH	7	7									
②		2564.603 100 mm SOLID LINE WHITE - PAINT	m	9 183	9 183									
③		2564.603 100 mm BROKEN LINE WHITE - PAINT	m	2 590	2 590									
④		2564.603 100 mm SOLID LINE YELLOW - PAINT	m	4 533	4 533									
⑤		2564.603 100 mm BROKEN LINE YELLOW - PAINT	m	23	23									
⑥		2564.603 100 mm DOUBLE SOLID LINE YELLOW - PAINT	m	3 525	3 525									
		2564.603 600 mm SOLID LINE YELLOW - PAINT	m	15	15									
		2564.603 600 mm SOLID LINE WHITE - POLY PREFORMED	m	64	64									
		2564.603 900 mm SOLID LINE WHITE - POLY PREFORMED	m	150	150									
		2565.511 FULL T ACT T CONTROL SIGNAL SYSTEM "A"	SIG SYS	1	0.67							0.33		
		2565.511 FULL T ACT T CONTROL SIGNAL SYSTEM "B"	SIG SYS	1	0.50							0.50		
		2565.601 EMERGENCY VEHICLE PRE-EMPTION SYSTEM "A"	LUMP SUM	1	1									
		2565.601 EMERGENCY VEHICLE PRE-EMPTION SYSTEM "B"	LUMP SUM	1	1									
		2565.602 PVC HANDHOLE (METAL FRAME AND COVER)	EACH	22	22									
		2565.603 35mm RIGID STEEL CONDUIT - INTERCONNECT	m	1310										
		2565.603 53mm RIGID STEEL CONDUIT - INTERCONNECT	m	220										
		2565.603 78mm RIGID STEEL CONDUIT - INTERCONNECT	m	30										
		2565.603 6 PAIR #19 - INTERCONNECT	m	550										
⑧		2573.501 BAILE CHECK	EACH	200	200									
⑦		2573.502 SILT FENCE TYPE PREASSEMBLED	m	200	200									
		2573.505 FLOTATION SILT CURTAIN TYPE MOVING WATER	m	16	16									
Z	2575.501	SEEDING	ha	1.72	1.72									
Z	2575.502	SEED MIXTURE 70A	kg	87.5	87.5									
Z	2575.505	SODDING, TYPE SALT RESISTANT	m <sup>2</sup>	11 884	11 884									
		2575.511 MULCH MATERIAL TYPE I	t	5.7	5.7									
		2575.519 DISK ANCHORING	ha	2.4	2.4									
⑩	Z	2575.523 EROSION CONTROL BLANKETS CATEGORY 3	m <sup>2</sup>	2 560	2 560									
	Z	2575.531 COMMERCIAL FERTILIZER ANALYSIS 10-10-10	kg	269	269									
		2580.501 TEMPORARY LANE MARKING	RD STA	4 190	4 190									
⑬		2581.501 REM PREFORMED PLASTIC MARKING	m	4 880	4 880									

INDEX OF TABULATION CHARTS

CHART	SHEET No.	DESCRIPTION
A	4-5	CLEARING AND GRUBBING
B	5	REMOVE BRICK SIGN
C	5	REMOVE DECORATIVE WALL
D	5	ENTRANCES REMOVAL AND CONSTRUCTION
E	5	REMOVE CONCRETE CURB AND GUTTER
F	5	REMOVE BRICK MEDIAN
G	5	REMOVE BITUMINOUS PAVEMENT
H	5	SAWING BITUMINOUS PAVEMENT
I	6	MAIL BOX SALVAGE AND INSTALL
J	6	REMOVE BITUMINOUS FLUME
K	6	REMOVE CONCRETE PAVEMENT
L	26	EXISTING DRAINAGE TABULATION
M	6	REMOVE RETAINING WALL
N	6	SALVAGE GUARDRAIL
O	6	SILT FENCE LOCATION
P	6	SANITARY SEWER MODIFICATION
Q	6	SANITARY CASTING SCHEDULE
R	6	CONSTRUCT CONCRETE WALK
S	7	FENCE CONSTRUCTION
T	7	CONSTRUCT CONCRETE CURB AND GUTTER
U	7	CONSTRUCT BITUMINOUS PATH
V	7	CONSTRUCT MODULAR BLOCK RETAINING WALL
W	7	TURF ESTABLISHMENT
X	7	CONSTRUCT CONC. PEDESTRIAN RAMP
Y	7	ADJUST VALVE BOX-WATER
Z	7	RELOCATE CURB STOP & BOXES
AA	8	RELOCATE HYDRANT AND VALVE
BB	8	PUBLIC UTILITY
CC	10	EARTHWORK SUMMARY
DD	10	BASE AND BITUMINOUS QUANTITIES CHART
EE	27-28	DRAINAGE TABULATION
FF	67	SIGN TYPE "C" & DELINATORS

CONSTRUCTION NOTES

- ① INCLUDES ALL BITUMINOUS PAVEMENTS REGARDLESS OF DEPTH AND WIDTH.
- ② SALVAGE TO ANOKA COUNTY HIGHWAY DEPARTMENT. CONTACT ARVID GUTZWILLER, MAINTINANCE SUPERVISOR, AT (612) 862-4226 BEFORE SALVAGING.
- ③ FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
- ④ INCLUDES 40 m<sup>2</sup> FOR AGGREGATE APPROACHES AND ENTRANCES (150 mm THICK).
- ⑤ TRENCH RESTORATION INCLUDES 160 mm CLASS 5 AGG BASE AND 200 mm BIT. MIXTURE (SEE SPECIAL PROVISIONS) TRENCH RESTORATION IS TO BE USED FOR TRAFFIC MAINT. DURING UTILITY & OTHER MISC. CONSTRUCTION
- ⑥ FOR DEPRESSED MEDIAN NOSE (STD. PLATE M7109) AND MEDIAN ISLAND.
- ⑦ FOR EROSION CONTROL AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ⑧ FOR USE AT STORM SEWER INLETS AND DITCH CHECKS.
- ⑨ FOR SANITARY SEWER CONSTRUCTION.
- ⑩ FOR PEDESTRIAN SHELTER CONSTRUCTION.
- ⑪ ONE (1) CASTING IS USED FOR SANITARY SEWER CONSTRUCTION, THE REMAINING ARE FOR STORM SEWER CONSTRUCTION
- ⑫ INCLUDES 4,180 m FOR TRAFFIC CONTROL STAGING.
- ⑬ INCLUDES 2,170 m FOR TRAFFIC CONTROL STAGING.
- ⑭ INCLUDES 850 m FOR TRAFFIC CONTROL STAGING.
- ⑮ INCLUDES 3,115 m FOR TRAFFIC CONTROL STAGING.
- ⑯ 100mm
- ⑰ INCLUDES MAINTENANCE.
- ⑱ FOR PIPE FOUNDATION CORRECTIONS TO BE USED AT THE DIRECTION OF THE ENGINEER IN THE FIELD DURING CONSTRUCTION.
- ⑳ TO BE USED FOR INSULATING WATERMAIN AT STORM SEWER CROSSING WHERE NECESSARY.

				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: 3/4/99 REG. NO. 12183		DRAWN BY: MN DATE: 03/04/99 DESIGN BY: KGJ DATE: 03/04/99 CHECKED BY: LR DATE: 03/04/99		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. 02-601-37 STATE PROJECT NO. 114-020-18 STATE PROJECT NO. 127-020-20 COUNTY PROJECT NO. _____		STATEMENT OF ESTIMATED QUANTITIES Sheet 3 of 93 Sheets	
NO	DATE	BY	CKD	APPR	REVISION								
NAME: 02-EsQunt.dwg	3-4-99	8:36:49 am	EST										



CLEARING AND GRUBBING (CONTINUED) (A)

Table with columns: STATION, LOCATION, CLEARING (EACH, ha), GRUBBING (EACH, ha). Rows include stations 11+622.49 to 11+718.62.

REMOVE BRICK SIGN (B)

Table with columns: STATION, LOC., DESCRIPTION, EACH. Rows include stations 10+179.50 to 10+617.40.

REMOVE MASONRY WALL (C)

Table with columns: STATION, LOC., DESCRIPTION, EACH. Rows include stations 10+612.20 and 10+644.20.

REMOVE CONCRETE CURB AND GUTTER (E)

Table with columns: STA. TO STA., DESCRIPTION, m. Rows include stations 10+079.65 to 11+732.76.

REMOVE BRICK MEDIAN (F)

Table with columns: STA. TO STA., DESCRIPTION, m². Rows include stations 10+067.00 and 10+132.00.

REMOVE BITUMINOUS PAVEMENT (G)

Table with columns: STATION TO STATION, LOCATION, DESCRIPTION, m². Rows include stations 10+065.58 to 11+802.00.

DRIVEWAY BITUMINOUS REMOVAL AND CONSTRUCTION (D)

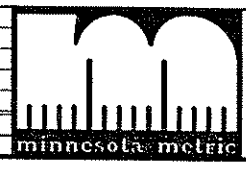
Large table with columns: STATION, ADDRESS, LOCATION, DESCRIPTION, SAWCUT, REMOVAL, REPLACEMENT, APRON. Rows include stations 10+094.76 to 11+726.19.

SAWING BITUMINOUS PAVEMENT (H)

Table with columns: STATION TO STATION, LOCATION, DESCRIPTION, m. Rows include stations 10+060.00 to 10+060.00.

- TABULATION CHARTS
CONTINUED CLEARING AND GRUBBING
REMOVE BRICK SIGN
REMOVE MASONRY WALL
DRIVEWAY BITUMINOUS REMOVAL AND CONSTRUCTION
REMOVE CONCRETE CURB AND GUTTER
REMOVE BRICK MEDIAN
REMOVE BITUMINOUS PAVEMENT
SAWING BITUMINOUS PAVEMENT

Table with columns: NO, DATE, BY, CKD, APPR, REVISION. Includes project name and 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.

DRAWN BY: MN DATE: 3/4/99
DESIGN BY: KBT DATE: 11/99
CHECKED BY: LR DATE: 7/99



ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37
STATE PROJECT NO. 127-020-20
STATE PROJECT NO. 114-020-18
COUNTY PROJECT NO.

TABULATION CHARTS
Sheet 5 of 93 Sheets

MAIL BOX SALVAGE AND INSTALL (I)

Table with 5 columns: STATION, ADDRESS, LOC., DESCRIPTION, EACH. Lists mail box salvage and installation work with stations ranging from 10+995.75 to 11+734.20. Total: 16.

REMOVE RETAINING WALL (M)

Table with 5 columns: STATION - STATION, LOC., REMARKS, m. Lists retaining wall removal work with stations from 10+342.00 to 11+266.20. Total: 119.60.

REMOVE BITUMINOUS FLUME (J)

Table with 5 columns: STATION TO STATION, DESCRIPTION, REMARKS, EACH. Lists bituminous flume removal work with stations from 10+328.50 to 11+237.65. Total: 8.

SALVAGE GUARDRAIL (N)

Table with 5 columns: STATION - STATION, LOC., REMARKS, m. Lists guardrail salvage work with stations from 10+424.80 to 10+457.30. Total: 32.00.

SILT FENCE LOCATION (O)

Table with 6 columns: STATION - STATION, LOCATION, REMARKS, m, m. Lists silt fence locations with stations from 10+422.00 to 11+245.00. Total: 200.00 m, 16.00 m.

REMOVE CONCRETE PAVEMENT (K)

Table with 5 columns: STATION - STATION, LOCATION, REMARKS, m². Lists concrete pavement removal work with stations from 10+317.50 to 11+385.50. Total: 29.00.

CONSTRUCT CONCRETE WALK (R)

Large table with 8 columns: STATION TO STATION, LOC., DESCRIPTION, 100mm m², 125mm m², 150mm m², 200mm m². Lists concrete walk construction work with stations from 9+826.74 to 11+925.00. Total: 6220.80 unadjusted, 6221.00 adjusted.

SANITARY SEWER MODIFICATIONS (P)

Table with 15 columns: STATION, LOCATION, INPL., EXISTING SAN. SEWER (INPLACE TOP ELEV., PROP. TOP ELEV., ADJUST EACH, RECONST. m), NEW CONST. (DESIGN, TOP CAST ELEV., INVERT ELEV., PAY HT. m, F. & I. CASTING ASSEMBLY, F. & I. GATE VALVE, F. & I. 150mm TEE, F. & I. 150mm PLUG), REMARKS. Lists sanitary sewer modifications with stations from 10+092.934 to 11+707.998. Total: 18 stations, 15.08 m.

SANITARY CASTING SCHEDULE (Q)

Table with 6 columns: ASS'Y TYPE, NO., REQ'D., FRAME CASTING, GRATE CASTING, RING CASTING, COVER CASTING. Lists sanitary casting schedule with ASS'Y S-A, NO. 1, FRAME CASTING, GRATE CASTING, RING CASTING 700-B, COVER CASTING 716.

TABULATION CHARTS

- MAIL BOX SALVAGE AND INSTALL
REMOVE BITUMINOUS FLUME
REMOVE CONCRETE PAVEMENT
REMOVE RETAINING WALL
SALVAGE GUARDRAIL
SILT FENCE LOCATION
SANITARY SEWER MODIFICATION
SANITARY CASTING SCHEDULE
CONSTRUCT CONCRETE WALK

Table with 5 columns: NO, DATE, BY, CKD, APPR, REVISION. Lists project revisions.

MINNESOTA METRIC logo and text: 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: 3/4/99. REG. NO: 12183.

ANOKA COUNTY logo and text: DRAWN BY MN DATE 3/4/99, DESIGN BY KBJ DATE 3/4/99, CHECKED BY LR DATE 3/4/99.

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37, STATE PROJECT NO. 127-020-20, STATE PROJECT NO. 114-020-18, COUNTY PROJECT NO. \_\_\_\_\_

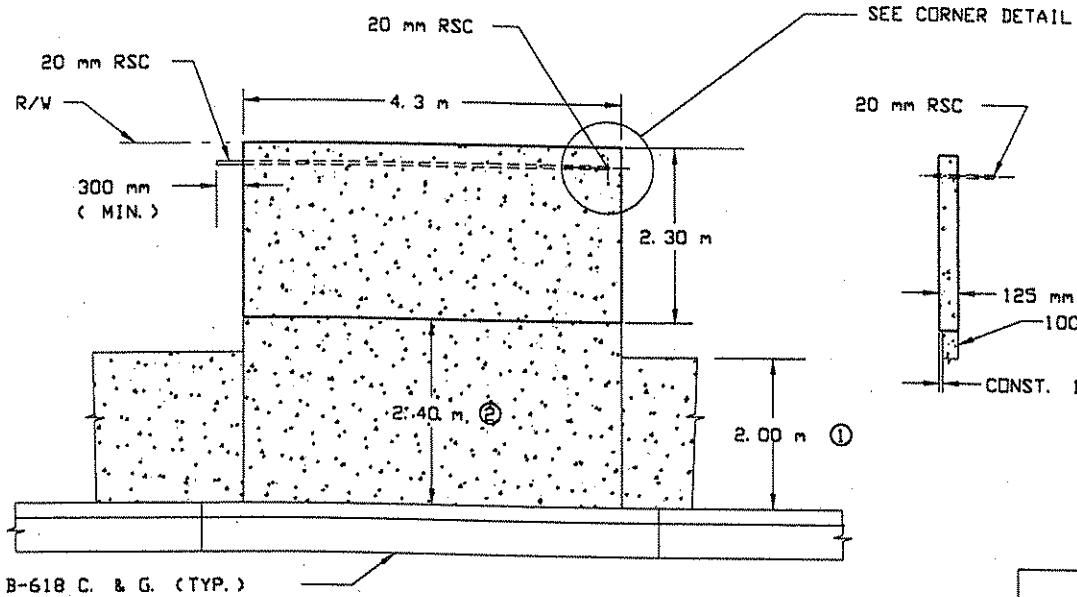
TABULATION CHARTS







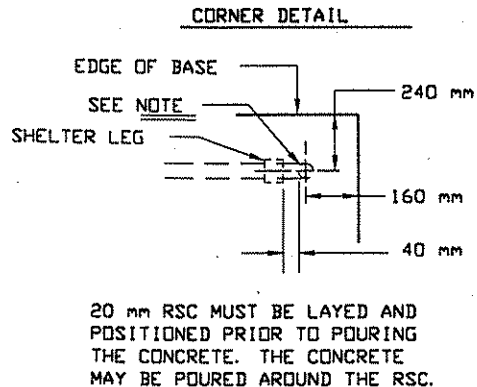
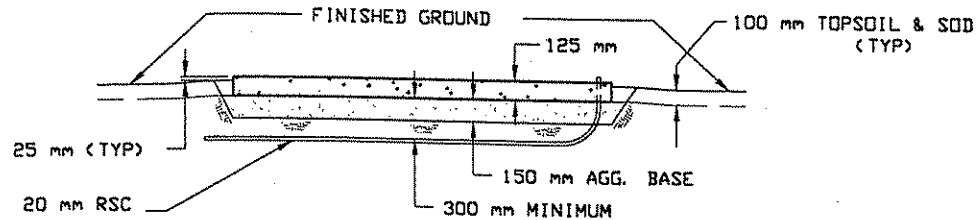
**PASSENGER SHELTER PAD**  
FOR LOCATION SEE CHART R



- NOTES:**
1. SAWCUT OPENINGS IN EXISTING CONCRETE OR ASPHALT 38 mm WIDER THAN CAST-IN-PLACE SLAB ON ALL SIDES.
  2. SET BASE AT LEAST 13 mm HIGHER THAN ADJACENT CONCRETE OR ASPHALT.
  3. INSTALL ASPHALT RAMP AT DOORWAYS WHERE DIFFERENCE IN ELEVATION IS MORE THAN 13 mm
  4. SHAPE EXISTING GROUND TO DRAIN AROUND BASE.
  5. DRAWING NOT TO SCALE - USE DIMENSIONS SHOWN.

B-618 C. & G. (TYP.)

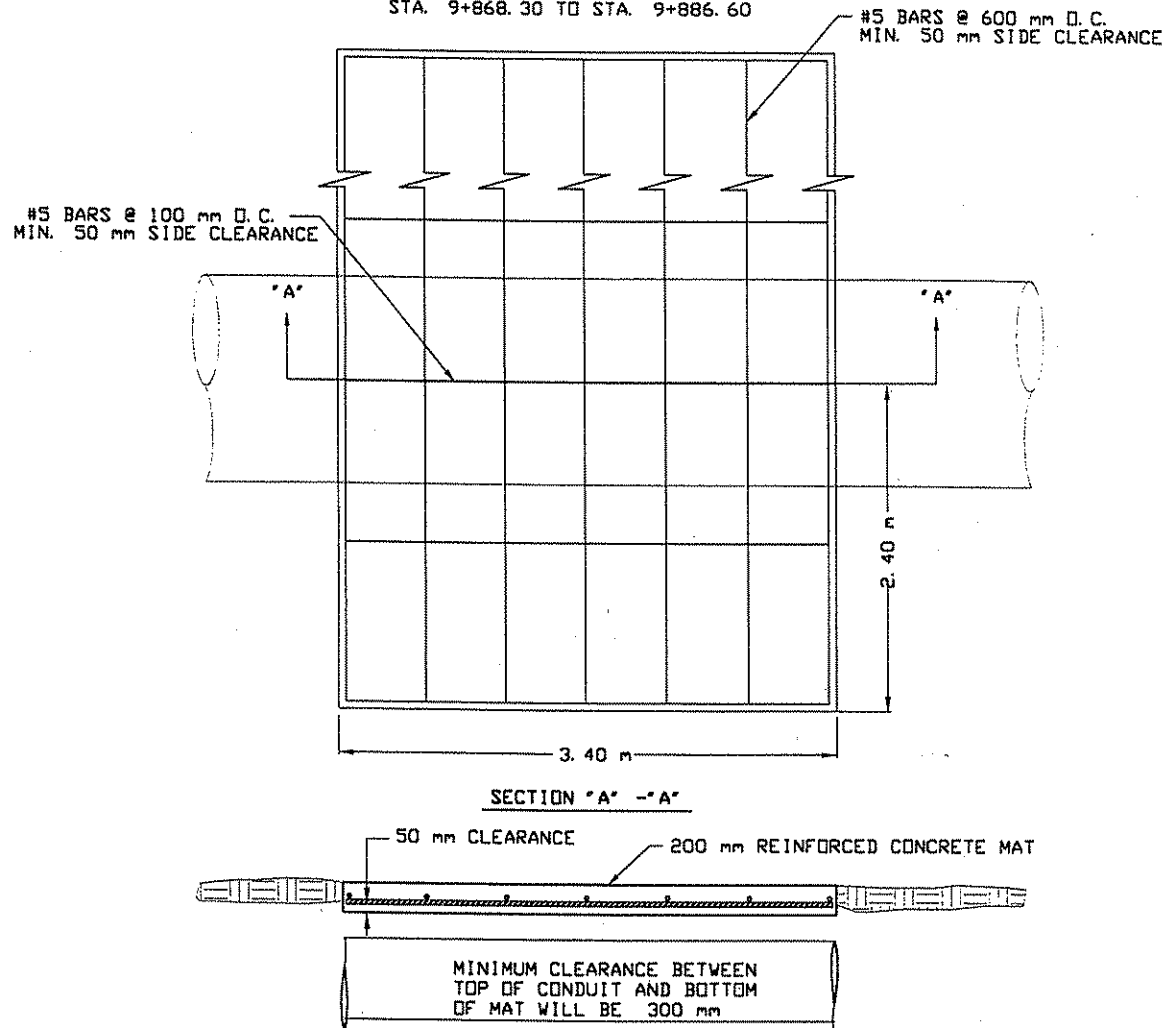
- 1 BOARDING PADS TO BE 2.00 m X 20.00 m (EXCEPT WHERE R/W PROHIBITS)
- 2 OPTIMUM CONDITION EXCEPT WHERE R/W PROHIBITS



Fed. Project No. \_\_\_\_\_

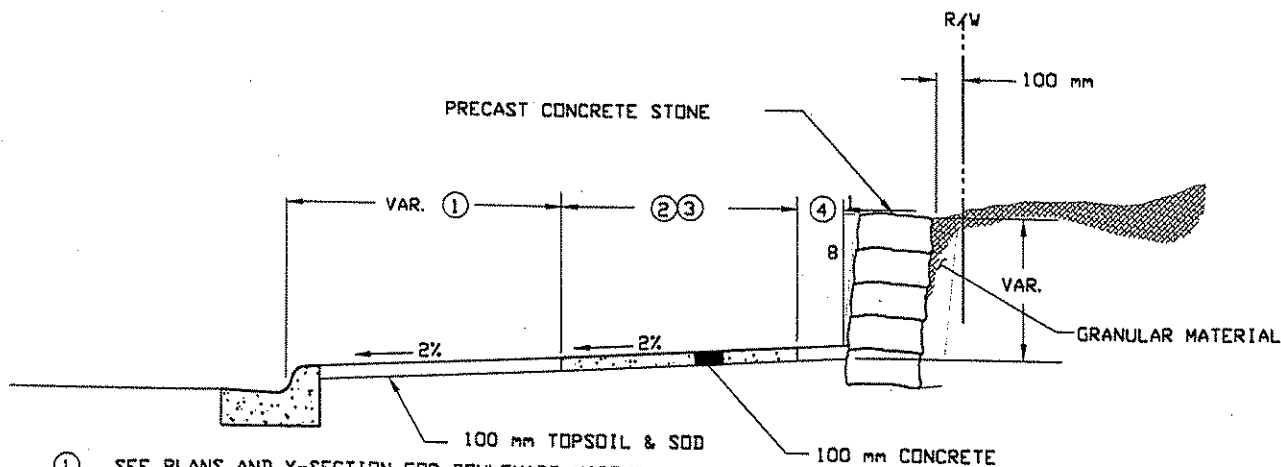
**WATERMAIN CROSSING DETAIL**

PLAN VIEW  
STA. 9+868.30 TO STA. 9+886.60



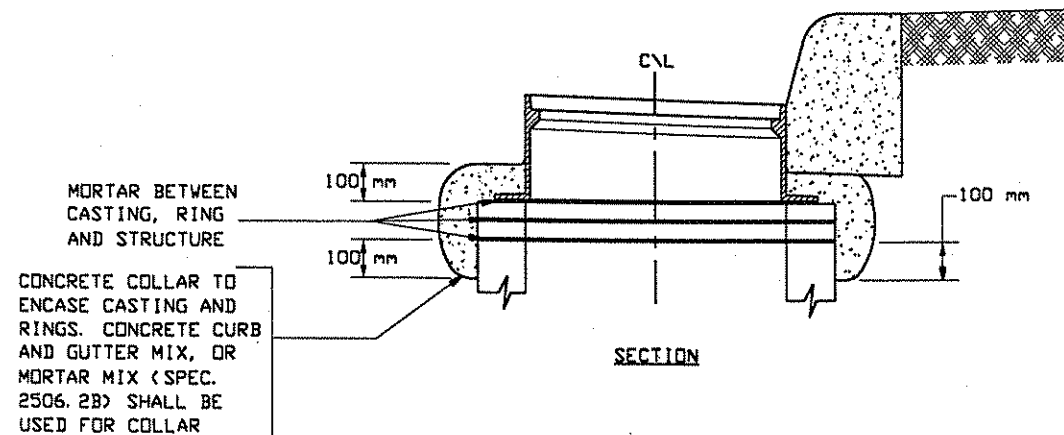
**MODULAR BLOCK RETAINING WALL DETAIL**

FOR LOCATION SEE CHART AA



- 1 SEE PLANS AND X-SECTION FOR BOULEVARD WIDTHS.
- 2 1.50 m CONC. SIDEWALK OR 3.0 m BIT. BIKE PATH
- 3 SEE TYPICAL SEC. FOR LOC. SPECIAL SLOPE
- 4 0.50 m MIN. CLEAR ZONE ADJ. TO BIT. PATH, 0.45 m MIN. ADJ. TO 1.5 m CONCRETE WALK

**CONCRETE ENCASED CASTING**



NO	DATE	BY	CKD	APPR	REVISION



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: 3/11/99 REG. NO. 12183

DRAWN BY: MN DATE 03/04/99  
DESIGN BY: KGJ DATE 03/04/99  
CHECKED BY: LR DATE 03/04/99

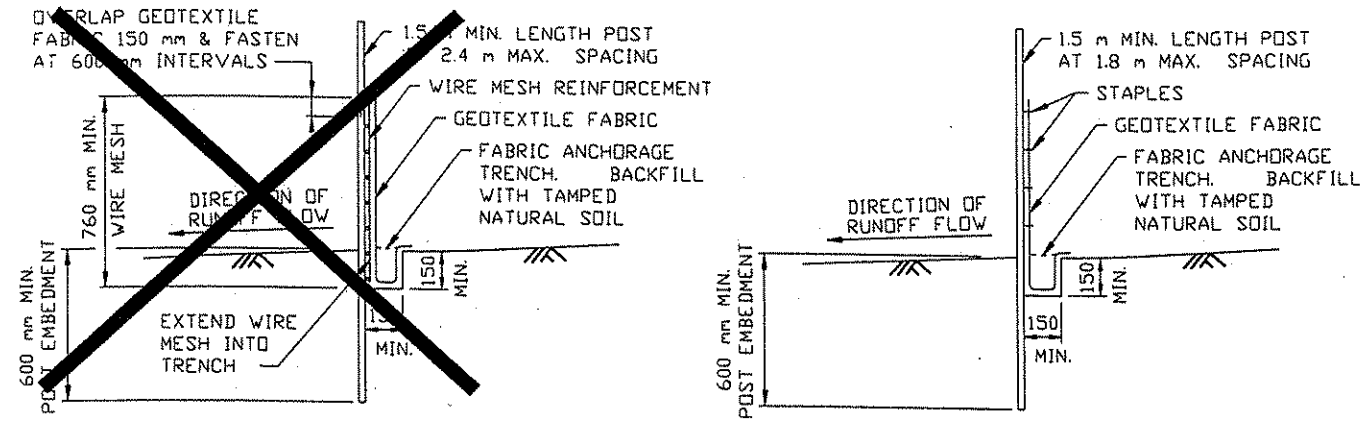


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
STATE PROJECT NO. 127-020-20  
STATE PROJECT NO. 114-020-18  
COUNTY PROJECT NO.

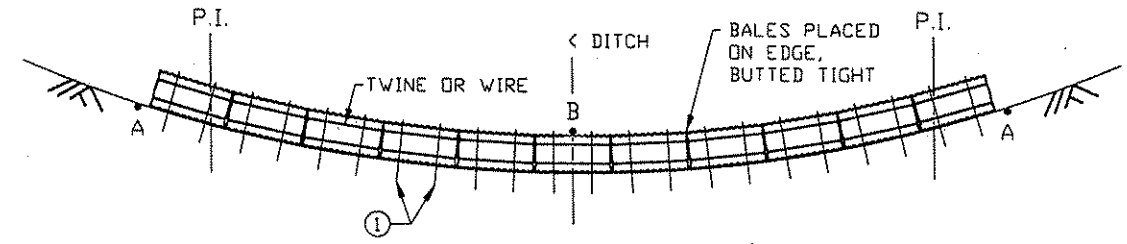
STANDARD DETAILS  
PLAN  
Sheet 9 of 93 Sheets





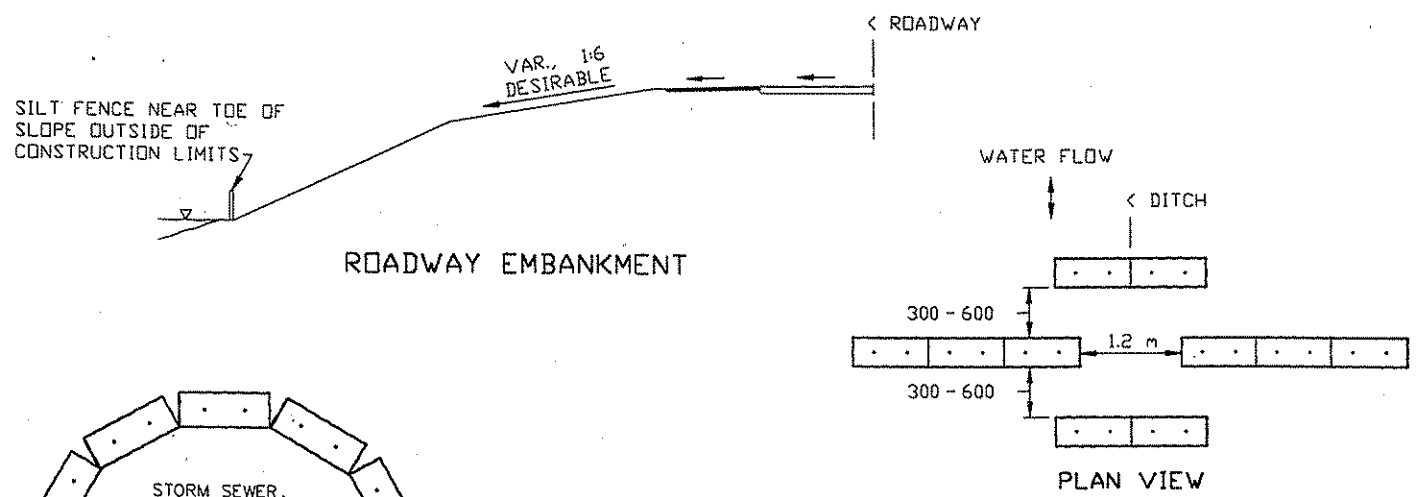
**SILT FENCE DETAILS**  
 TO PROTECT AREAS FROM SHEET FLOW  
 ( SEE SPEC. 3886 )

DESIGN CRITERIA:  
 MAXIMUM CONTRIBUTING AREA: 1.2 ha

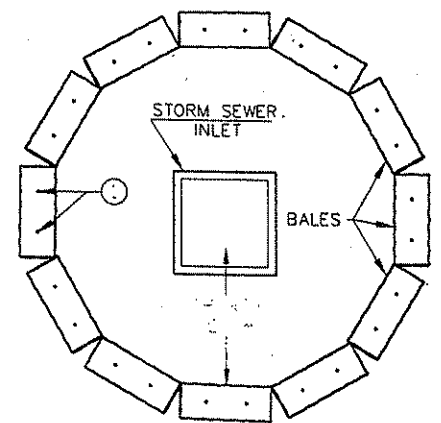


NOTE:  
 POINT A MUST BE HIGHER THAN POINT B

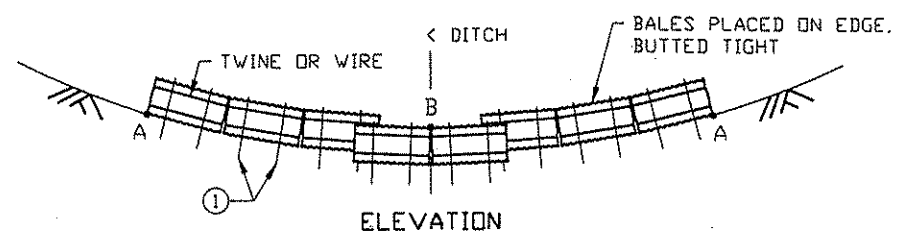
**BALE DITCH SEDIMENT CHECK**



**ROADWAY EMBANKMENT**

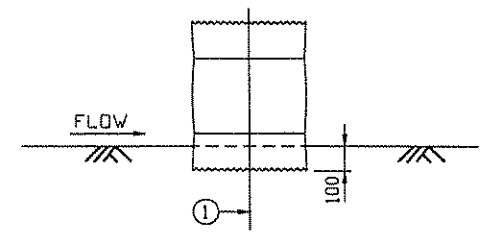


**BALE CHECK TO PROTECT STORM SEWER INLETS**



NOTE:  
 POINT A MUST BE HIGHER THAN POINT B

**BALE DITCH VELOCITY CHECKS**  
 ( WILL REQUIRE A MINIMUM OF 10 BALES PER SITE )



**BALE CHECK DETAIL**

RECOMMENDED SPACING BETWEEN DITCH CHECKS	
DITCH GRADE (%)	SPACING ( m )
2	30
4	23
6	15
8	12
10	8

DESIGN CRITERIA:

	BALE	ROCK
STORM FREQUENCY:	2 YR. - 24 HR.	10 YR. - 24 HR.
MAX. FLOW VELOCITY:	1.5 m/s	3.6 m/s
MAX. DITCH GRADE:	5%	
MAX. DRAINAGE AREA:	0.8 ha	2.0 ha

NOTE:  
 TWO 50 mm X 50 mm WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 250 mm MINIMUM.

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

NO	DATE	BY	CKD	APPR	REVISION

NAME: 11-TEMPEROS.DWG 02-24-99



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 3/4/99 REG. NO. 12183

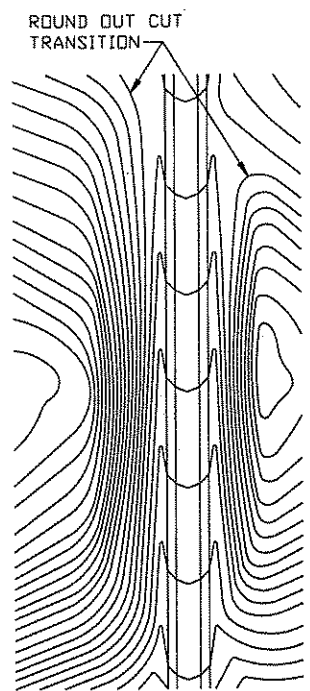
DRAWN BY: MN DATE 3/4/99  
 DESIGN BY: KGJ DATE 3/4/99  
 CHECKED BY: LR DATE 3/4/99



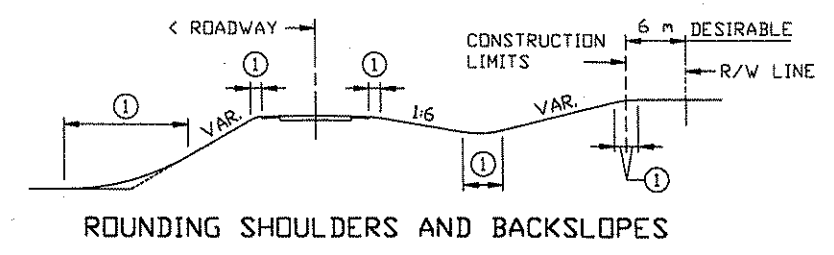
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

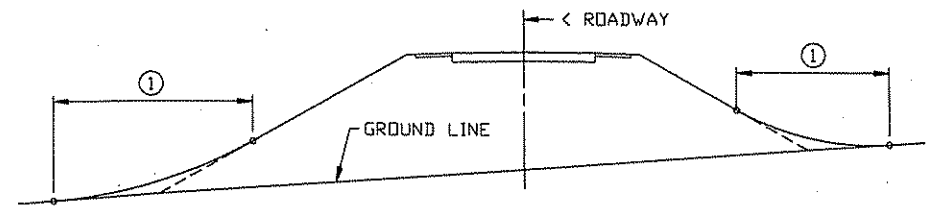
TEMPORARY EROSION CONTROL  
 Sheet 11 of 93 Sheets



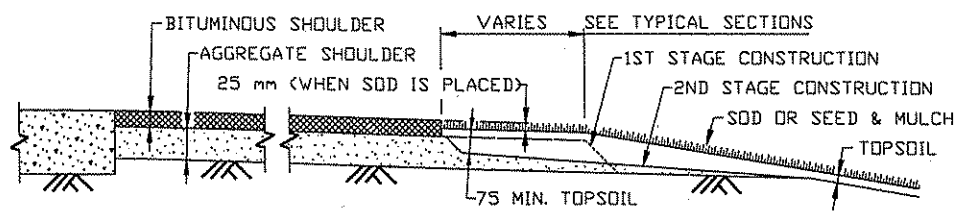
CONTOURING ROAD CUTS



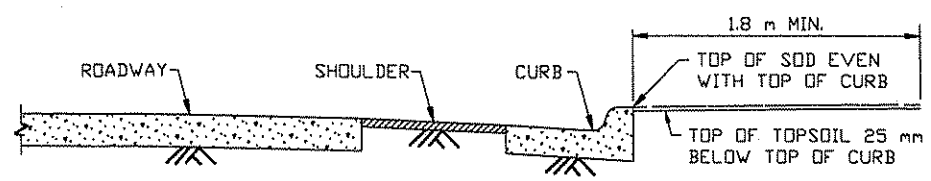
ROUNDING SHOULDERS AND BACKSLOPES



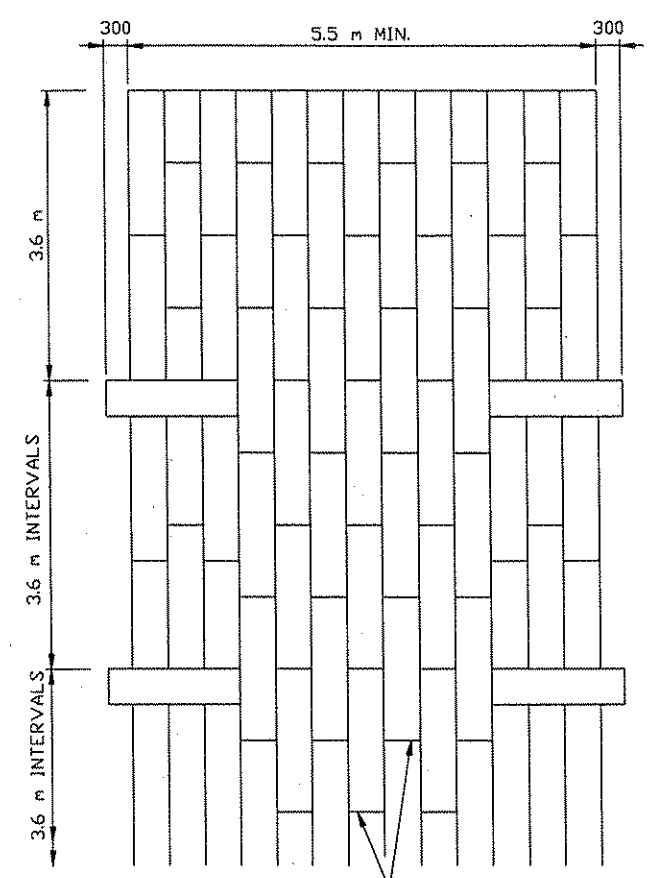
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



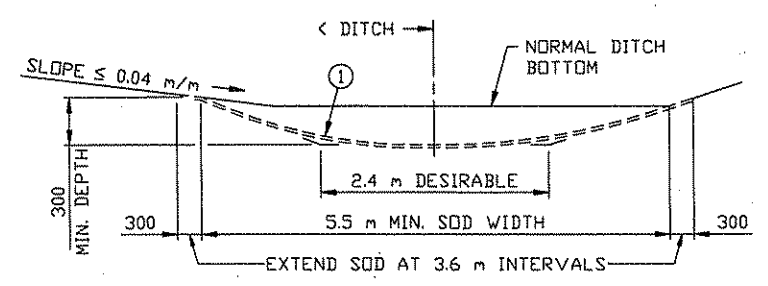
SHAPING AND TOPSOILING INSLOPES



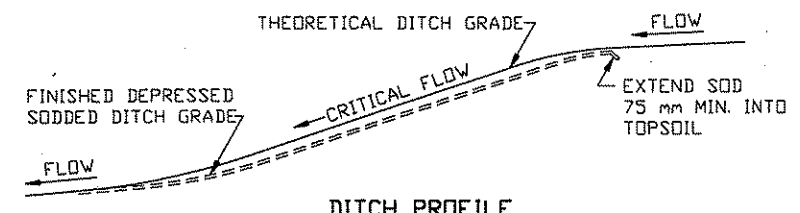
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



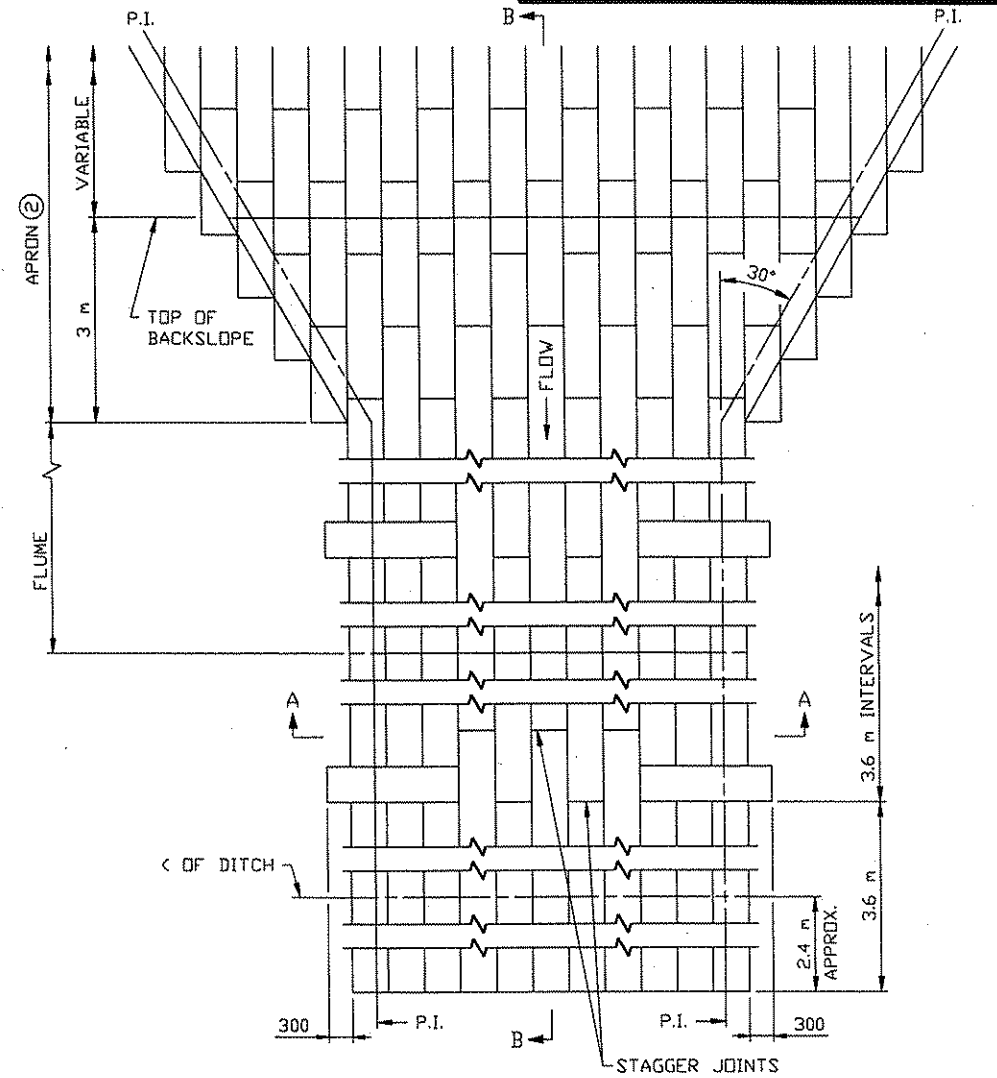
STAGGER JOINTS  
PLAN VIEW



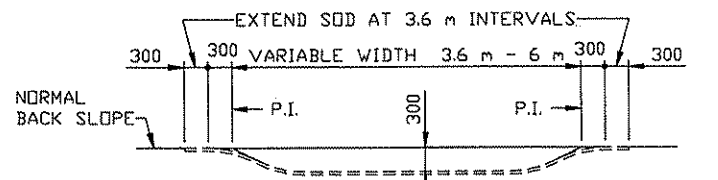
SODDED DITCH CROSS SECTION  
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 0.04 m/m), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



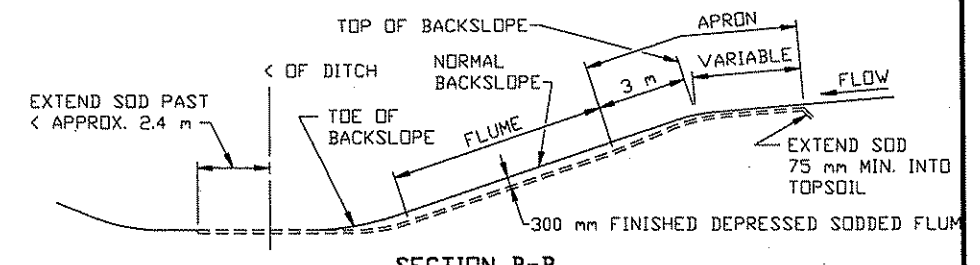
DITCH PROFILE  
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B

SODDED FLUME DETAILS

- NOTES:  
 SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.  
 ① FOR ROUNDING, SEE ROAD DESIGN MANUAL.  
 ② CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

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

STANDARD SHEET No. 5-297.404

NO	DATE	BY	CHKD	APPR	REVISION



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.  
 DATE 4/12/98 REG. NO. 12183

DRAWN BY MN DATE 11/20/98  
 DESIGN BY KGI DATE 11/20/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

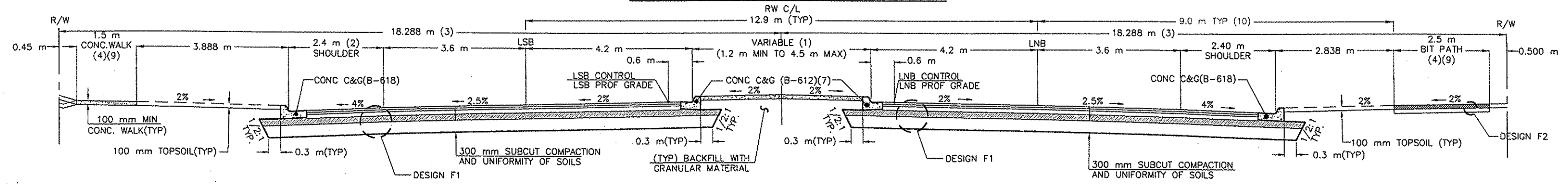


ANOKA COUNTY  
 HIGHWAY DEPT.

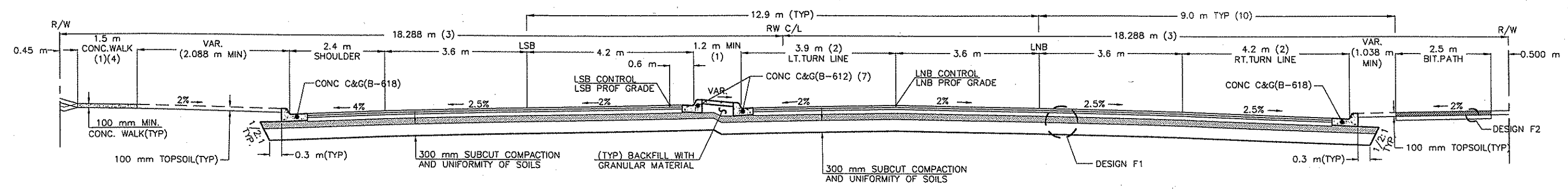
STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

PERMANENT EROSION CONTROL  
 ALONG ROADWAYS, DITCHES AND FLUME  
 Sheet 12 of 93 Sheets

**TYPICAL MAINLINE CONSTRUCTION**

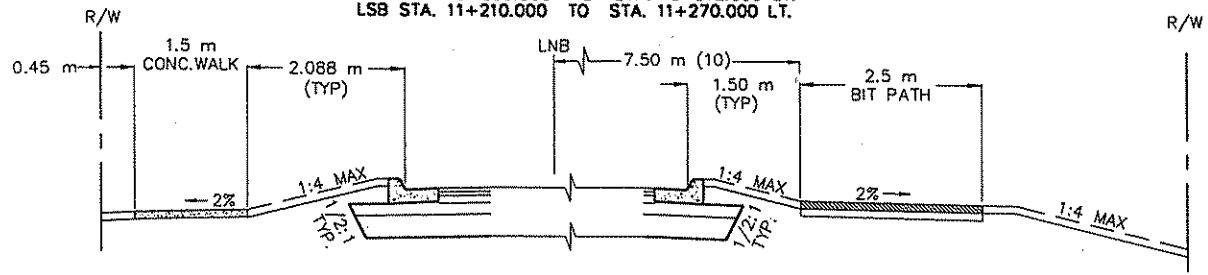


**TYPICAL TURN BAY CONSTRUCTION**



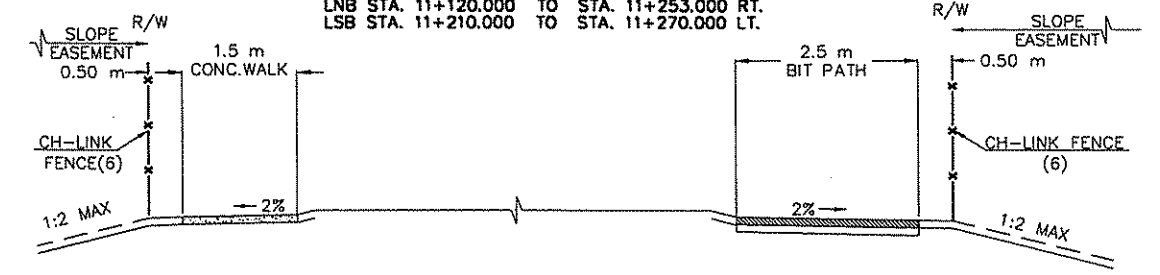
**SPECIAL SIDEWALK AND BIT. PATH CONSTRUCTION**

LNB STA. 11+120.000 TO STA. 11+253.000 RT.  
 LSB STA. 10+895.000 TO STA. 10+912.000 LT.  
 LSB STA. 11+210.000 TO STA. 11+270.000 LT.

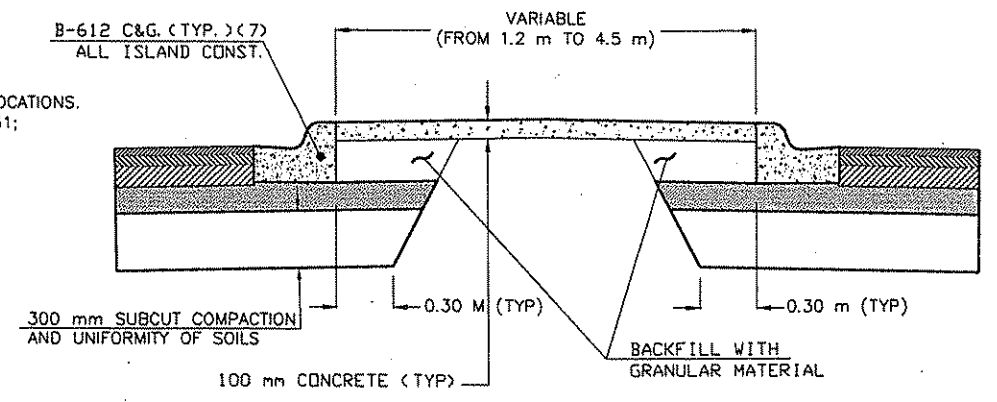


**SPECIAL F&I FENCE CONSTRUCTION**

LNB STA. 10+440.000 TO STA. 10+478.000 RT.  
 LNB STA. 11+120.000 TO STA. 11+253.000 RT.  
 LSB STA. 11+210.000 TO STA. 11+270.000 LT.



**DETAIL "A"**



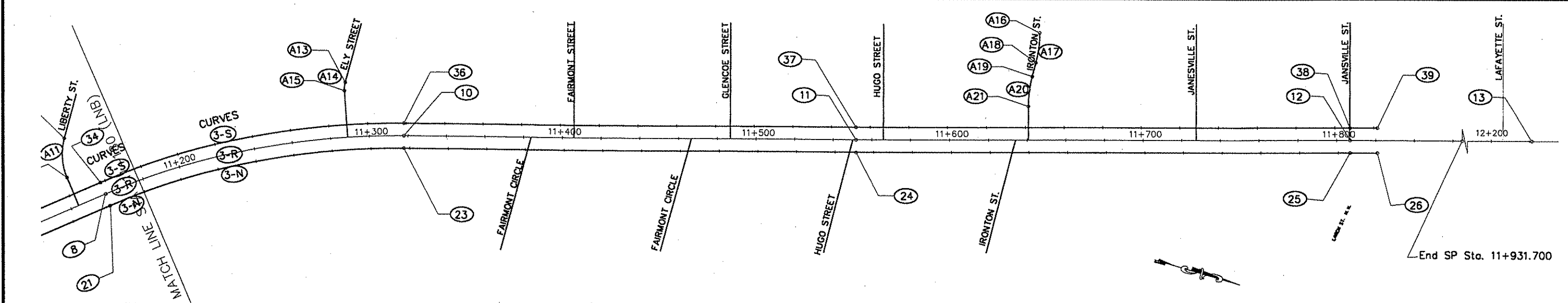
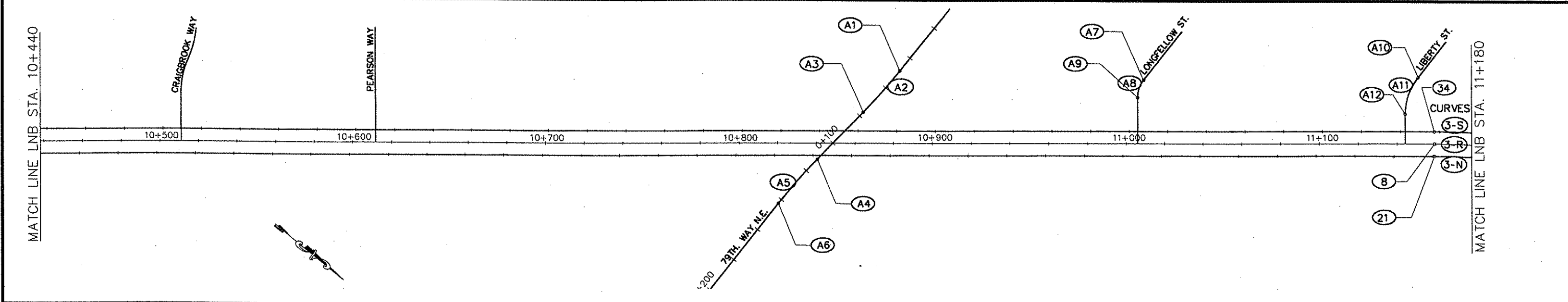
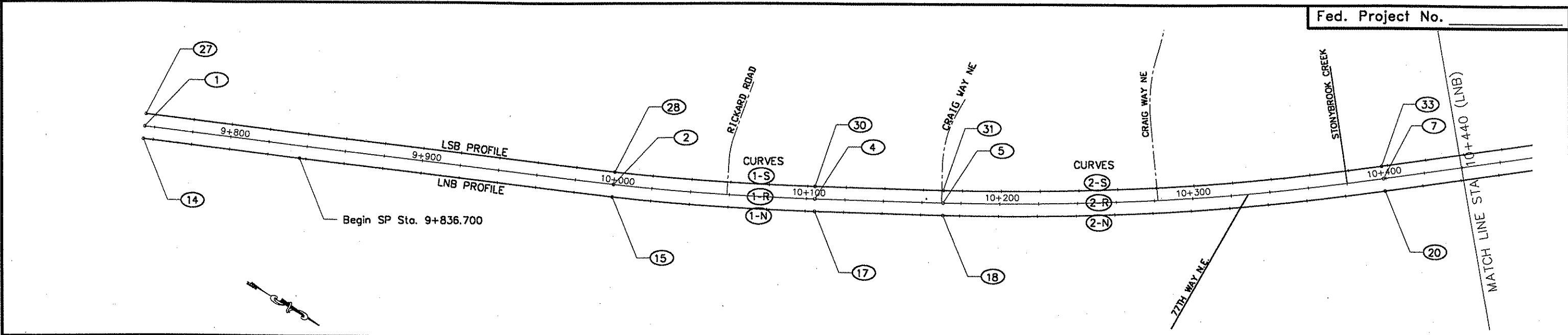
**DESIGN F-2**  
BITUMINOUS PATH

50 mm TYPE HVWE47540C  
 100 mm AGGREGATE BASE CLASS 5

**DESIGN F-1**

40 mm TYPE HVWE47540C  
 60 mm TYPE HVNW37540C  
 120 mm TYPE MVNW35035B  
 180 mm AGGREGATE BASE CLASS 5

- (1) SEE PLAN AND PROFILE SHEET FOR LOCATION.
- (2) SEE CHART DD FOR RT. TURN LANE LOCATION.
- (3) SEE PLAN AND PROFILE SHEET FOR VAR. R/W WIDTHS LOCATIONS.
- (4) CONCRETE SIDEWALK ONLY FROM STA 11+805 TO 11+931; BITUMINOUS PATH AND CONCRETE SIDEWALK ONLY FROM STA. 9+836.700 TO 10+060.000
- (5) SEE CHART DD FOR LT. TURN LANE LOCATION
- (6) F&I CHAIN LINK FENCE AT R/W LINE IN 1:2 SLOPE AREAS. SEE CHART S FOR LOCATION.
- (7) B612 C&G IN MEDIAN AND FREE RIGHT ISLAND CONST.
- (8) 1.5m LNB 11+120 - 11+253 RT.  
1.5m LSB 11+210 - 11+260 LT.  
SEE PLAN VIEW FOR TRANSITIONS.
- (9) 0.5 m CLEAR ZONE REQUIRED
- (10) STA. 11+117 TO 11+250, 7.50 m LT LNB.



NO	DATE	BY	CKD	APPR	REVISION



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 11/17/98 REG. NO. 12183

DRAWN BY MN DATE 4/30/98  
 DESIGN BY EGJ DATE 11/20/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

ALIGNMENT PLAN

Sheet 14 of 93 Sheets

ALIGNMENT TABULATION												
CURVE NO.	POINT NO.	POINT TYPE	LOCATION	CURVE DATA					COORDINATES			
				COURSE	DELTA	RADIUS(m)	TANGENT(m)	LENGTH(m)	NORTHING	EASTING	AZIMUTH	
R/W CENTERLINE ALIGNMENT												
	1	PI	LRW STA. 9+754.82							20612.8633	270726.8336	335°31'59"
	2	PC	LRW STA. 10+000.00	N24°28'01"W						20836.0257	270625.2876	
1-R	3	PI	LRW STA. 10+052.16	N29°35'52"W	05°07'51"	1164.25	52.16	104.26		20883.5046	270603.6832	150°24'09"
	4	PT	LRW STA. 10+104.26							20928.8612	270577.9194	
	5	PC	LRW STA. 10+170.76							20986.6841	270545.0744	
2-R	6	PI	LRW STA. 10+285.00	N39°16'18"W	09°40'26"	1350.00	114.24	227.94		20353.8287	269565.5876	320°43'42"
	7	PT	LRW STA. 10+398.70							21174.4577	270416.3356	
	8	PC	LRW STA. 11+159.17							21763.1771	269934.9584	
3-R	9	PI	LRW STA. 11+239.60	N15°57'52"W	23°18'27"	390.00	80.44	158.65		21825.4471	269884.0421	164°02'08"
	10	PT	LRW STA. 11+317.81							21902.7800	269861.9000	
	11	PI	LRW STA. 11+551.64	N16°19'55"W	00°22'03"					22127.5900	269797.6000	343°40'05"
	12	PI	LRW STA. 11+807.03	N15°59'25"W	00°20'30"					22372.6800	269725.8000	344°00'35"
	13	PI	LRW STA. 12+221.16							22770.7800	269611.7000	
LNB ALIGNMENT												
	14	PI	LNB STA. 9+754.82	N24°28'01"W						20615.5346	270732.7040	335°31'59"
	15	PC	LNB STA. 10+000.00							20838.6948	270631.1591	
1-N	16	PI	LNB STA. 10+052.45	S29°35'51"E	05°07'51"	1170.70	52.46	104.84		20886.4377	270609.4347	150°24'09"
	17	PT	LNB STA. 10+104.83							20932.0465	270583.5276	
	18	PC	LNB STA. 10+171.33							20989.8698	270550.6827	
2-N	19	PI	LNB STA. 10+286.12	N39°16'18"W	09°40'26"	1356.45	114.79	229.03		21089.6783	270493.9887	320°43'42"
	20	PT	LNB STA. 10+400.36							21178.5405	270421.3289	
	21	PC	LNB STA. 11+160.83							21767.2600	269940.0000	
3-N	22	PI	LNB STA. 11+239.94	S15°57'52"E	23°18'27"	383.55	79.11	156.02		21828.5000	269889.9000	164°02'08"
	23	PT	LNB STA. 11+316.86							21904.5600	269868.1000	
	24	PI	LNB STA. 11+550.71	N16°19'55"W	00°22'03"					22129.3900	269803.8000	343°40'05"
	25	PI	LNB STA. 11+806.10	N15°59'25"W	00°20'30"					22374.4700	269732.0000	344°00'35"
	26	PI	LNB STA. 11+819.88							22587.7200	269728.2000	
LSB ALIGNMENT												
	27	PI	LSB STA. 9+754.82	N24°28'01"W						20615.5346	270732.7040	335°31'59"
	28	PC	LSB STA. 10+000.00							20838.6948	270631.1591	
1-S	29	PI	LSB STA. 10+051.87	N29°35'52"W	05°07'51"	1157.80	51.87	103.68		20886.4377	270609.4347	150°24'09"
	30	PT	LSB STA. 10+103.68							20932.0465	270583.5276	
	31	PC	LSB STA. 10+170.18							20989.8698	270550.6827	
2-S	32	PI	LSB STA. 10+283.87	N39°16'18"W	09°40'26"	1343.55	113.69	226.85		21089.6783	270493.9887	320°43'42"
	33	PT	LSB STA. 10+397.03							21178.5405	270421.3289	
	34	PC	LSB STA. 11+160.83							21767.2600	269940.0000	
3-S	35	PI	LSB STA. 11+239.26	N15°57'52"W	23°18'27"	396.45	81.77	161.27		21828.5000	269889.9000	164°02'08"
	36	PT	LSB STA. 11+318.77							21904.5600	269868.1000	
	37	PI	LSB STA. 11+552.58	N16°19'55"W	00°22'03"					22129.3900	269803.8000	343°40'05"
	38	PI	LSB STA. 11+807.97	N15°59'25"W	00°20'30"					22374.4700	269732.0000	344°00'35"
	39	PI	LSB STA. 11+821.80							22387.7200	269728.2000	
CITY STREETS												
	A1	PC	STA. 0+048.52	79TH. WAY N.E.	N89°25'32"E					21525.8123	270080.1650	270°34'28"
A2	A2	PI	STA. 0+062.92	79TH. WAY N.E.		05°29'40"	300.00	14.40	28.77			
	A3	PT	STA. 0+077.29	79TH. WAY N.E.	N85°04'48"W					21524.7220	270108.9020	274°55'12"
	A4	PC	STA. 0+111.72	79TH. WAY N.E.	N85°04'48"W					21521.7688	270143.2086	274°55'12"
A5	A5	PI	STA. 0+127.16	79TH. WAY N.E.		05°53'28"	300.00	15.44	30.85	21520.4449	270158.5883	
	A6	PT	STA. 0+142.57	79TH. WAY N.E.	N89°07'27"W					21520.7065	270174.0226	270°52'33"
	A7	PC	STA. 0+072.39	LONG FELLOW ST.	N89°17'50"E					21625.9874	270004.0753	270°42'10"
A8	A8	PI	STA. 0+077.48	LONG FELLOW ST.		38°34'09"	14.55	5.09	9.79	21626.0498	270009.1658	
	A9	PT	STA. 0+082.19	LONG FELLOW ST.	N50°43'42"E					21629.2724	270013.1070	309°16'18"
	A10	PC	STA. 0+072.39	LIBERTY STREET	N89°00'36"E					21734.7178	269913.3049	270°59'24"
A11	A11	PI	STA. 0+077.48	LIBERTY STREET		38°13'09"	31.00	10.74	20.68	21734.9151	269924.0436	
	A12	PT	STA. 0+082.19	LIBERTY STREET	N88°56'51"E					21741.7139	269932.3584	271°03'09"
	A13	PC	STA. 0+091.53	FLY STREET	N88°56'49"E					21866.1637	269844.0056	271°03'11"
A14	A14	PI	STA. 0+093.77	FLY STREET		19°10'44"	13.26	2.24	4.44	21866.2049	269846.2454	
	A15	PT	STA. 0+095.97	FLY STREET	N69°46'05"E					21866.9796	269848.3475	290°13'55"
	A16	PC	STA. 0+123.99	IRONTON STREET	N74°01'42"E					22203.3092	269717.6977	285°58'18"
A17	A17	PI	STA. 0+131.83	IRONTON STREET		14°39'30"	61.00	7.85	15.61	22205.4680	269725.2406	
	A18	PT	STA. 0+139.59	IRONTON STREET	N88°41'12"E					22205.6479	269733.0844	271°18'48"
	A19	PC	STA. 0+147.04	IRONTON STREET	N88°41'12"E					22205.8186	269740.5298	271°18'48"
A20	A20	PI	STA. 0+154.89	IRONTON STREET		14°39'30"	61.00	7.85	15.61	22205.9984	269748.3736	
	A21	PT	STA. 0+162.65	IRONTON STREET	N74°01'42"E					22208.1572	269755.9165	285°59'09"

NO	DATE	BY	CKD	APPR	REVISION



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.

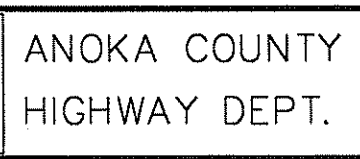
*[Signature]*

DATE 11/13/98 REG. NO. 12183

DRAWN BY M.N. DATE 4/30/98

DESIGN BY K.G.J. DATE 4/30/98

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



STATE PROJECT NO. 02-601-37

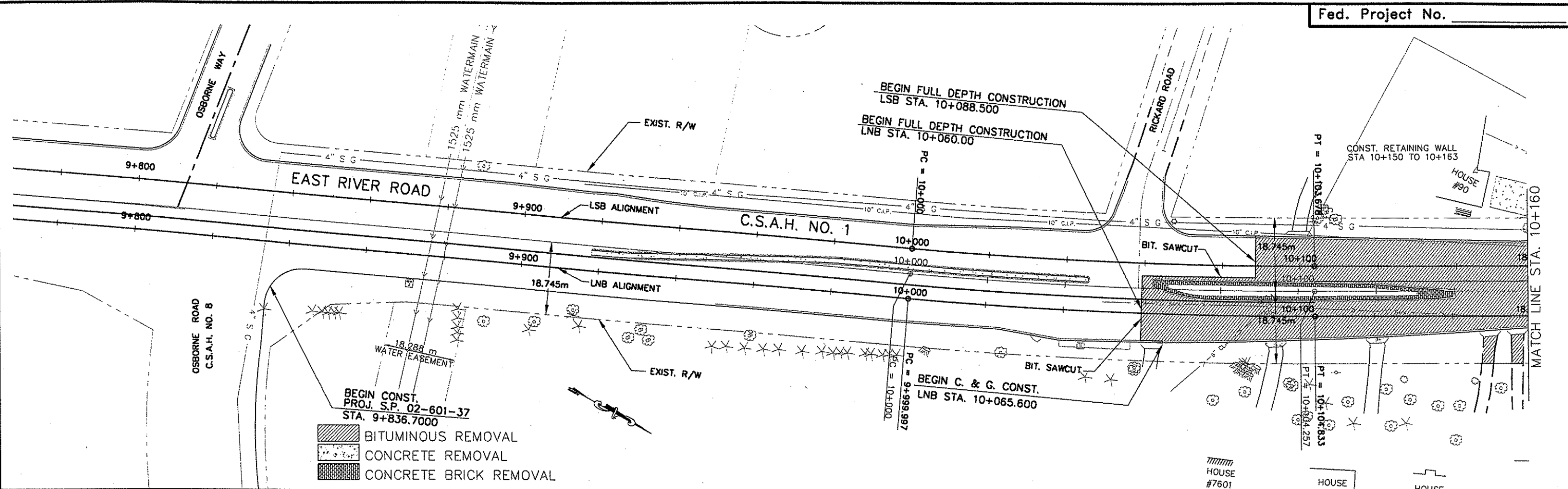
STATE PROJECT NO. 127-020-20

STATE PROJECT NO. 114-020-18

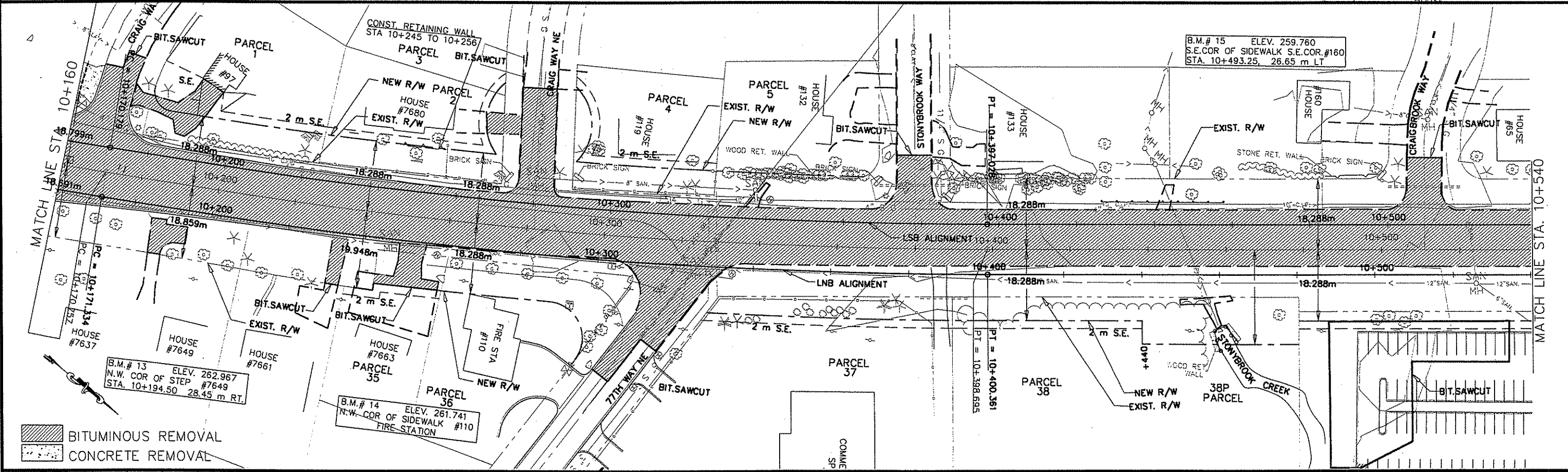
COUNTY PROJECT NO. \_\_\_\_\_

ALIGNMENT TABULATION

Sheet 15 of 93 Sheets



- BITUMINOUS REMOVAL
- CONCRETE REMOVAL
- CONCRETE BRICK REMOVAL



- BITUMINOUS REMOVAL
- CONCRETE REMOVAL

NO	DATE	BY	CKD	APPR	REVISION



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 11/13/95 REG. NO. 12183

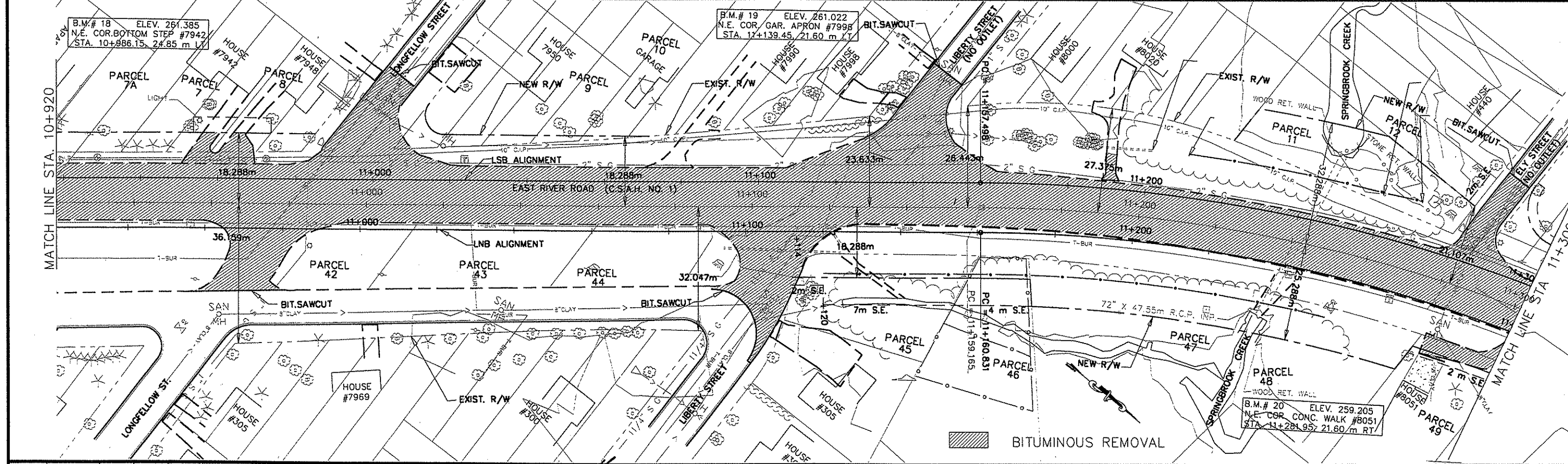
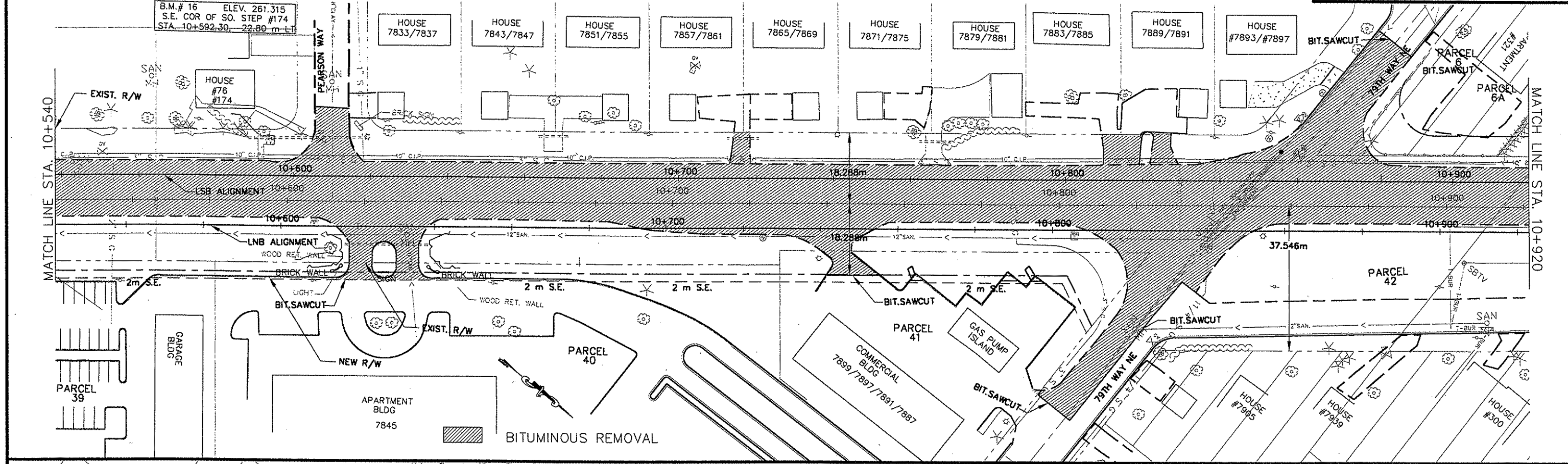
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 DESIGN BY KGJ DATE 11/30/95  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**EXISTING CONDITION AND REMOVAL PLAN**  
 STA. 9+800 TO STA. 10+540  
 Sheet 16 of 93 Sheets





NO	DATE	BY	CKD	APPR	REVISION



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 11/13/98 REG. NO. 12183

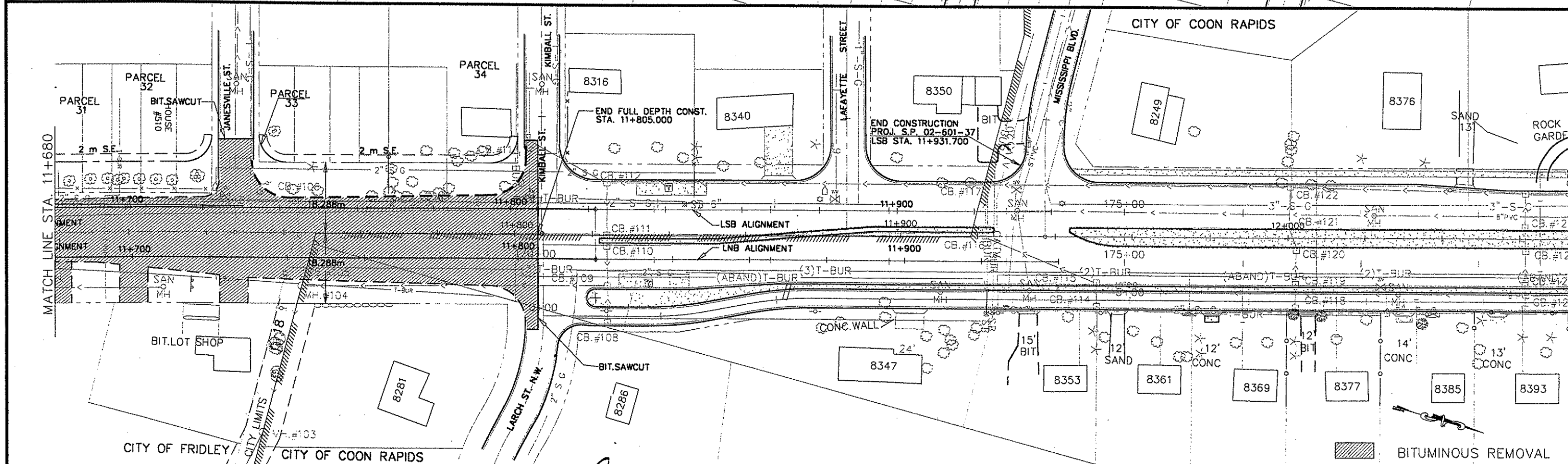
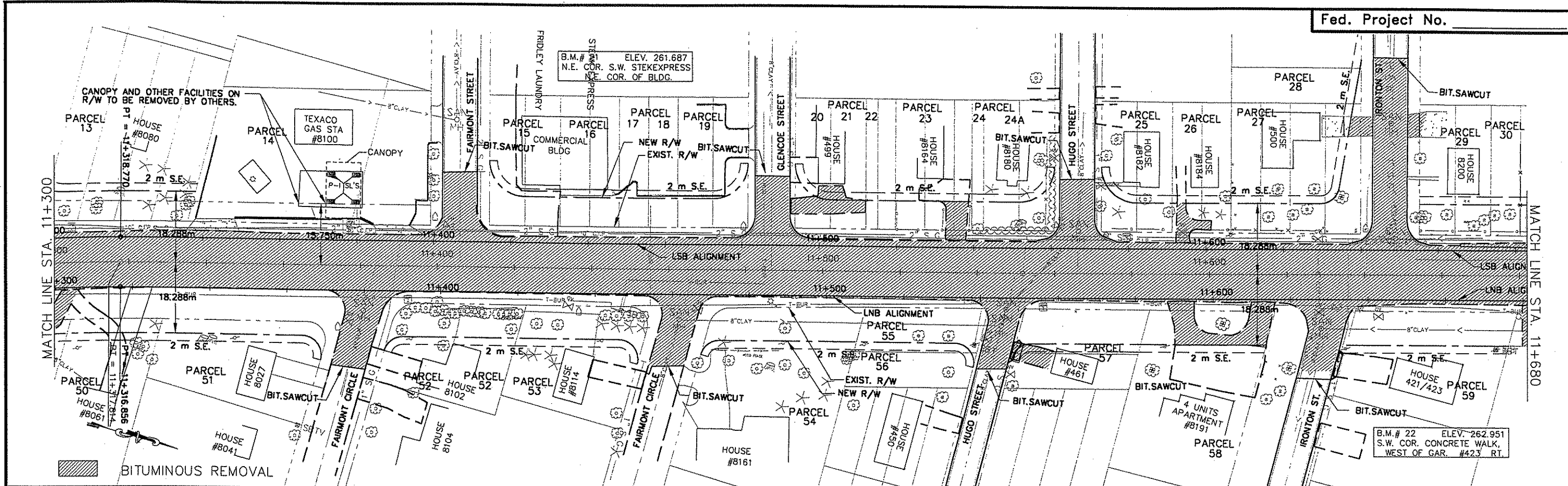
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 DESIGN BY KRT DATE 4/20/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



**ANOKA COUNTY  
 HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO.

**EXISTING CONDITION  
 AND REMOVAL PLAN**  
 STA. 10+540 TO STA. 11+300  
 Sheet 17 of 93 Sheets



NO	DATE	BY	CHKD	APPR	REVISION



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 11/13/98 REG. NO. 12183

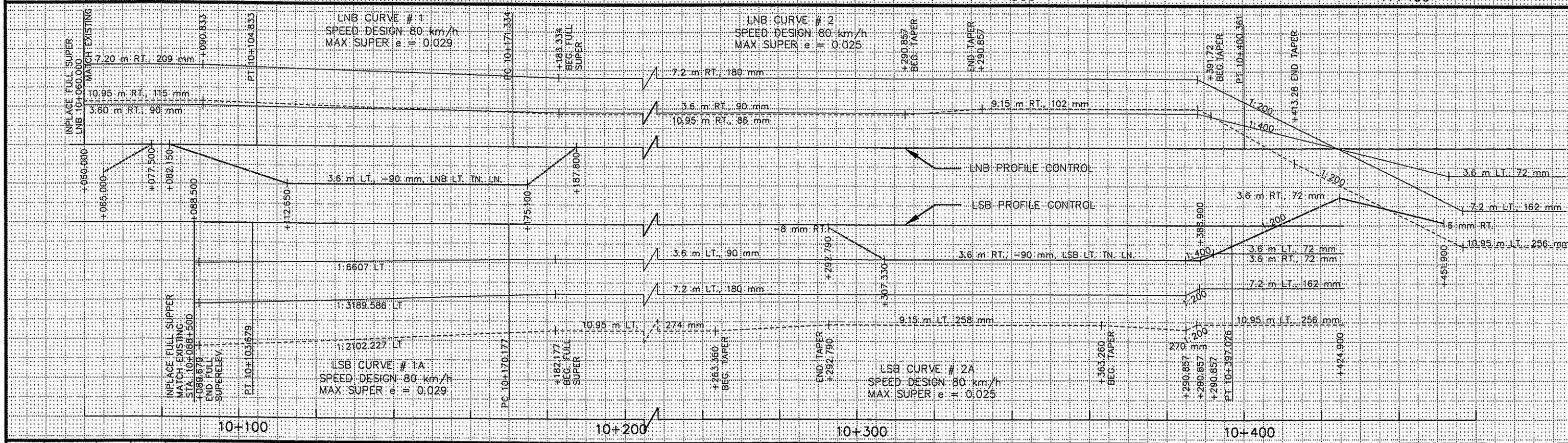
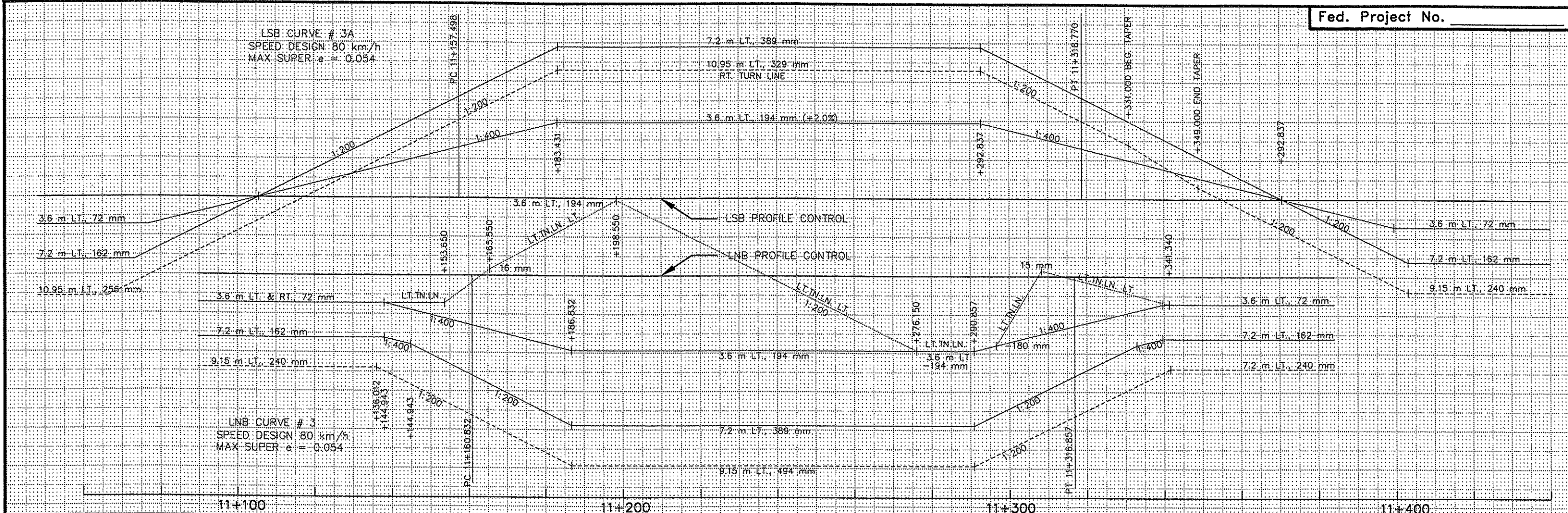
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 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_



**ANOKA COUNTY  
 HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**EXISTING CONDITION  
 AND REMOVAL PLAN**  
 STA. 11+300 TO 11+931.700  
 Sheet 18 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260137\plan\super-19.0WG 11-10-98



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: 11/12/98 REG. NO. 12183

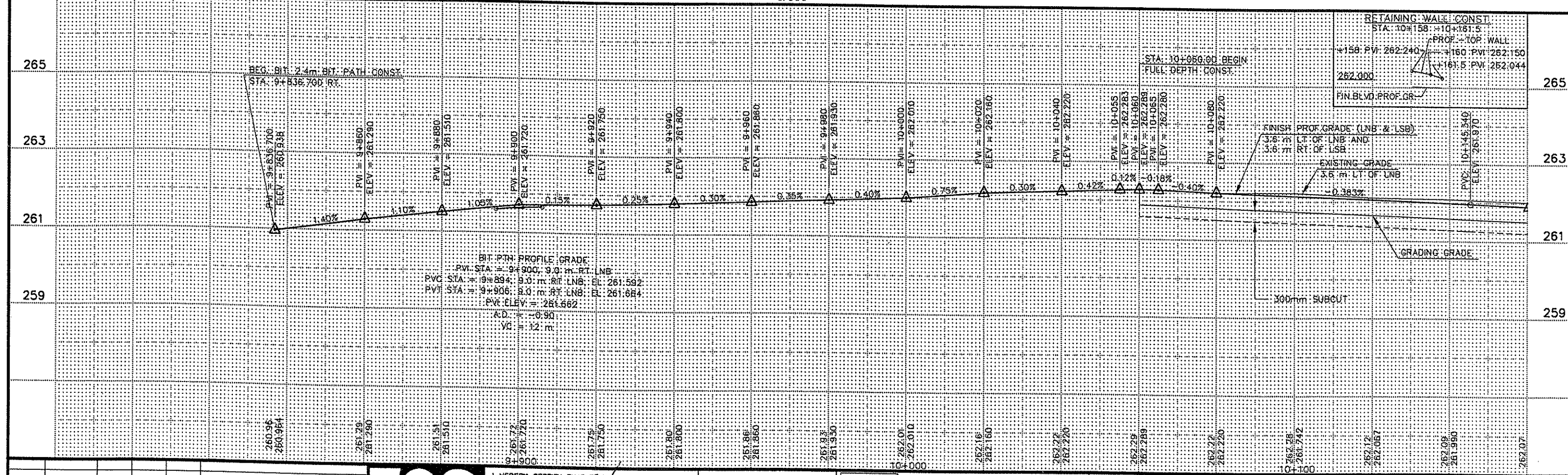
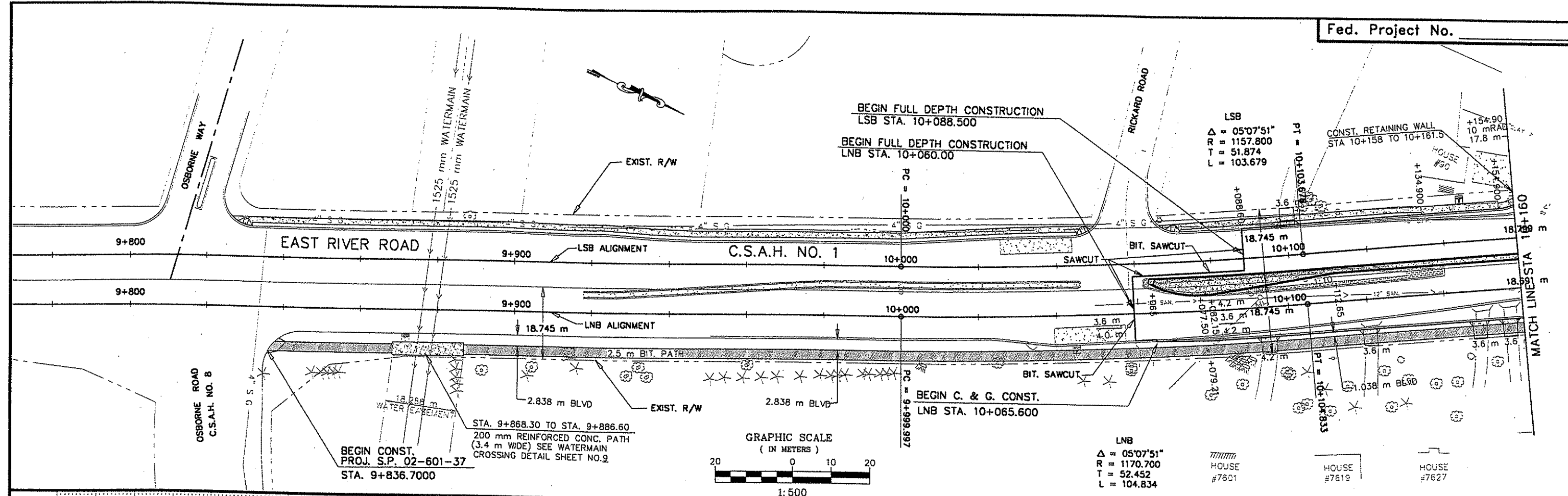
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ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

SUPERELEVATION  
 Sheet 19 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: 20-PlanP.dwg 3-4-99 9:31:28 am EST



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.

DATE: 3/4/99 REG. NO. 12185

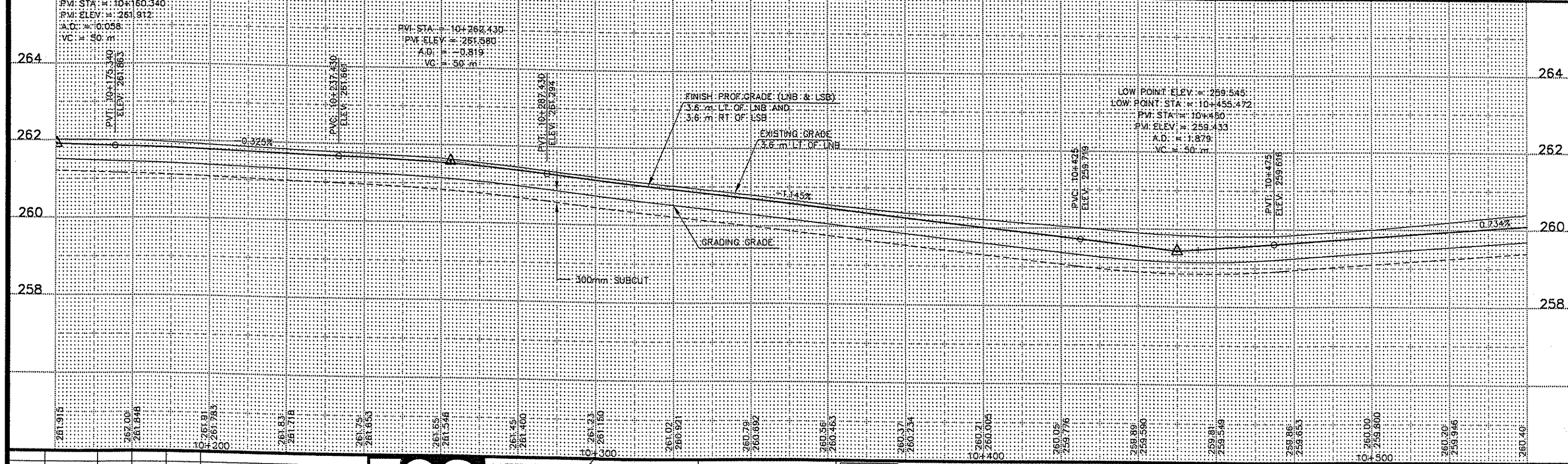
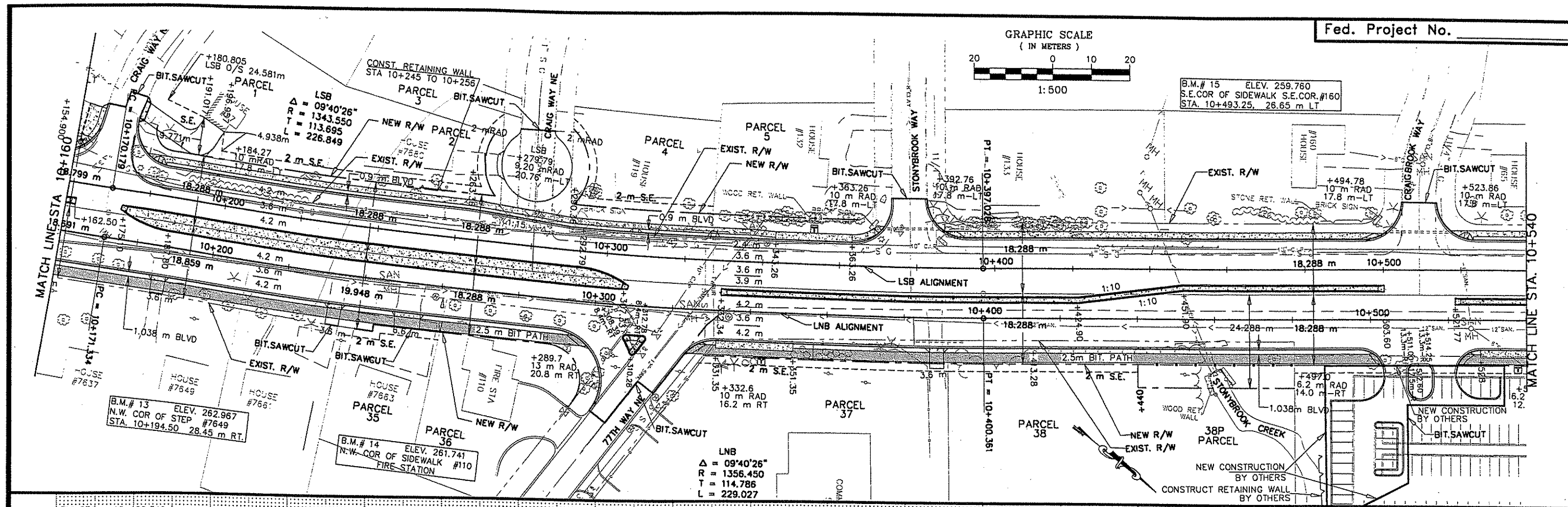
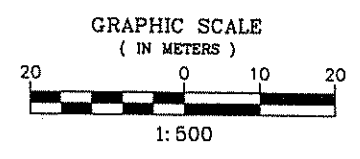
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 CHECKED BY: LR DATE 03/04/99



ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO.

PLAN AND PROFILE  
 STA. 9+800 TO STA. 10+160  
 Sheet 20 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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: 3/4/99 REG. NO. 12183

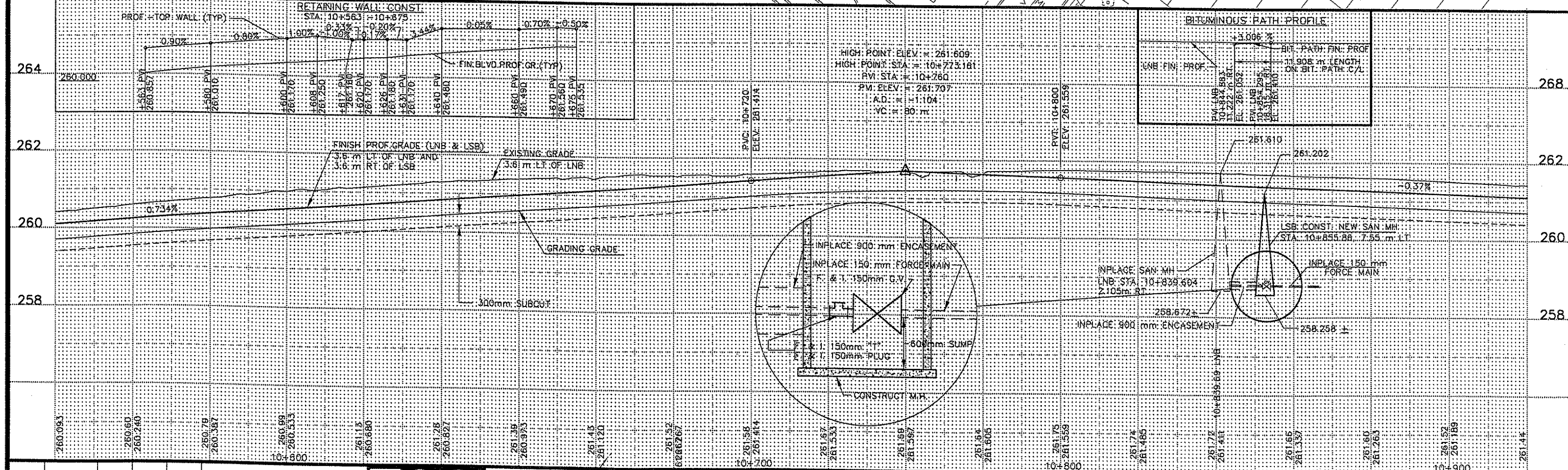
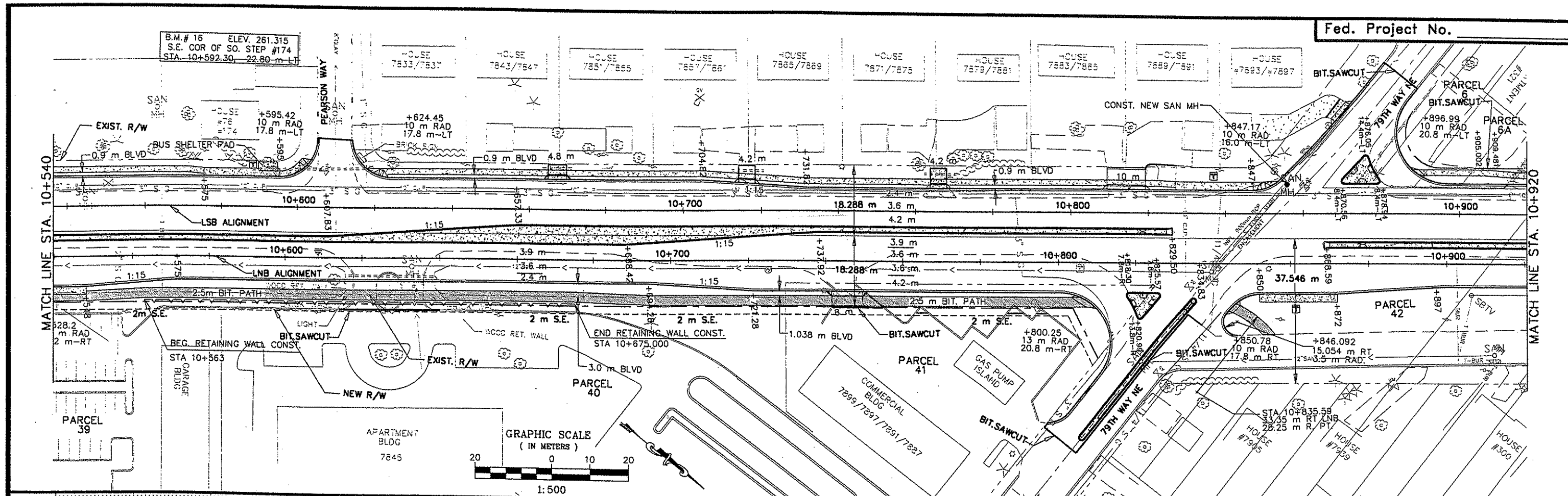
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**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**PLAN AND PROFILE**  
 STA. 10+160 TO STA. 10+540  
 Sheet 21 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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: 3/4/99 REG. NO. 2189

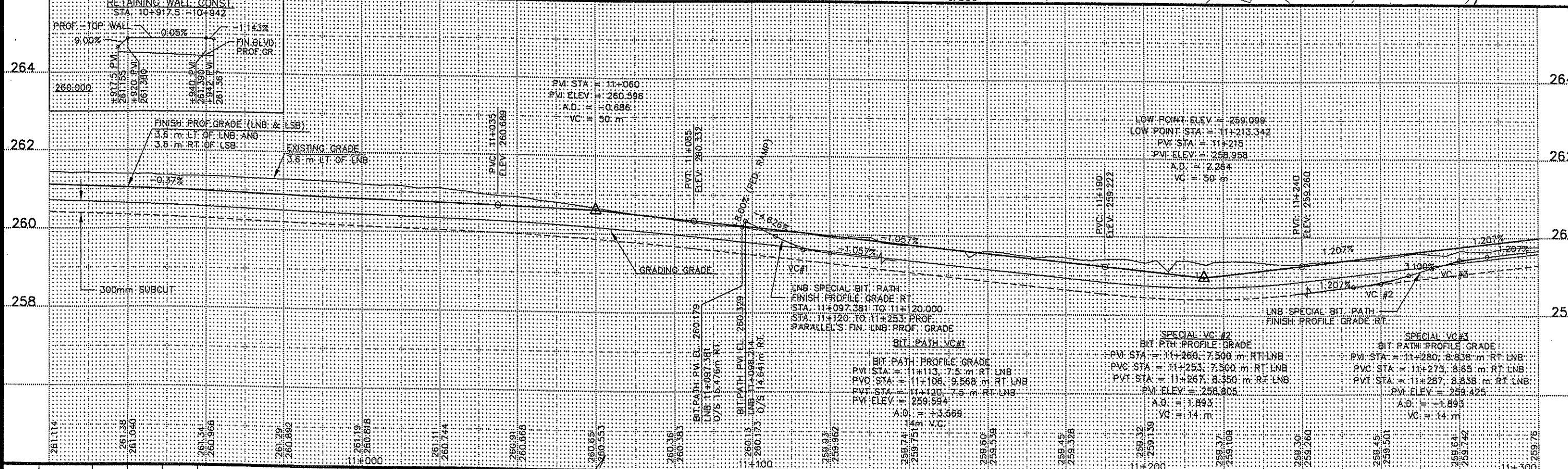
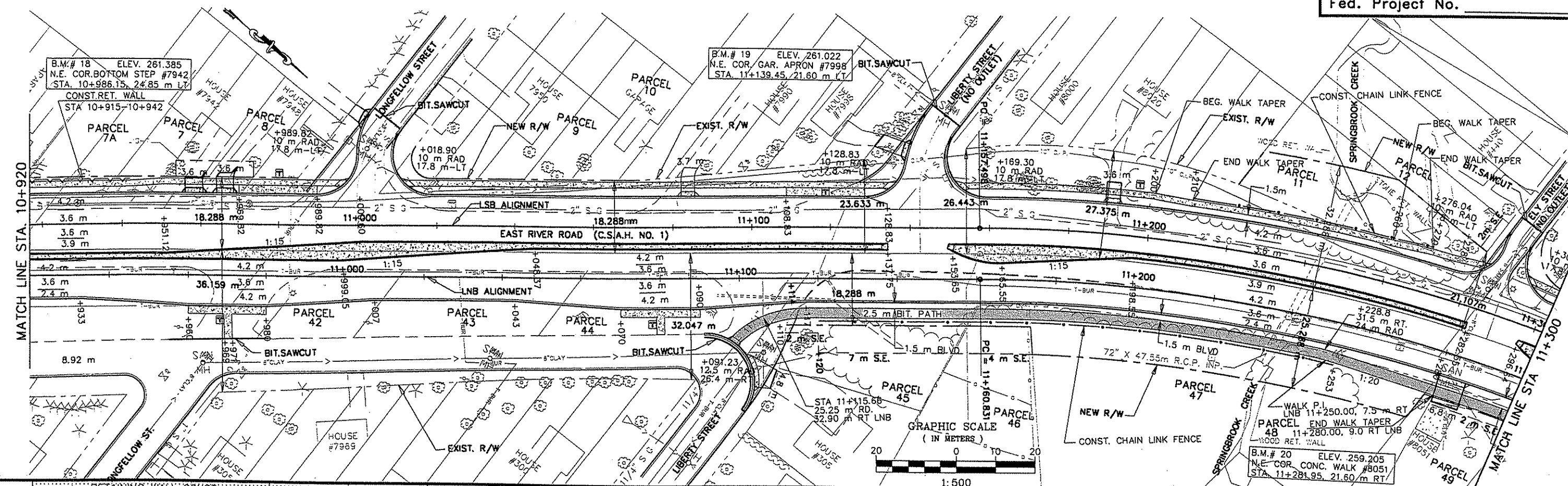
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 DESIGN BY: KJG DATE 03/04/99  
 CHECKED BY: LR DATE 03/04/99



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**PLAN AND PROFILE**  
 STA. 10+540 TO STA. 10+920  
 Sheet 22 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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: 3/14/99 REG. NO. 2183

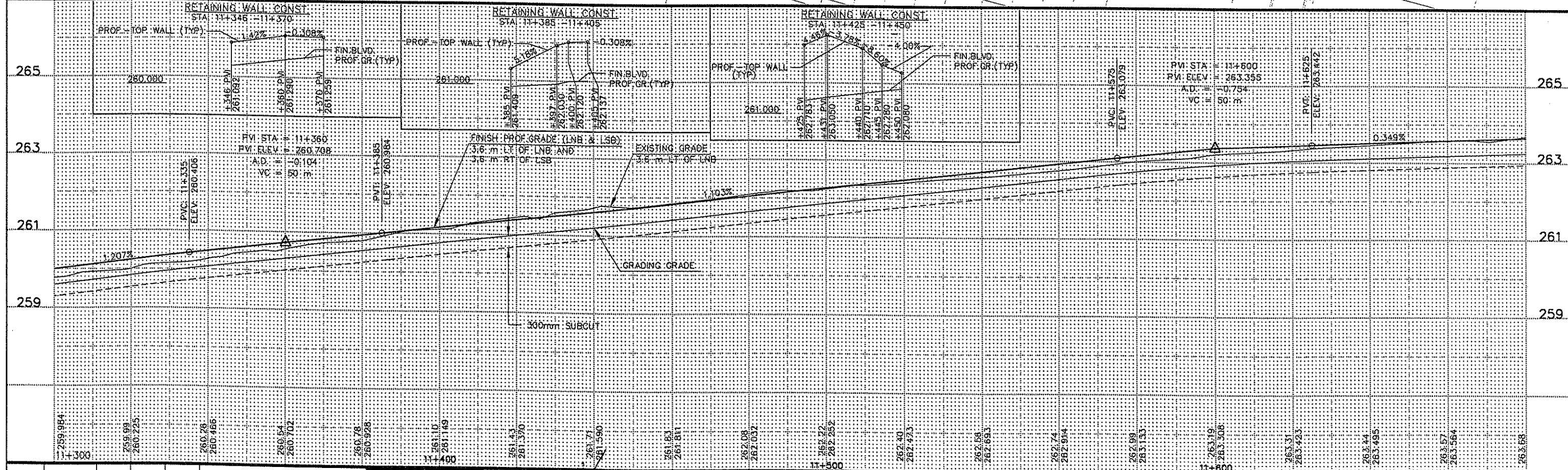
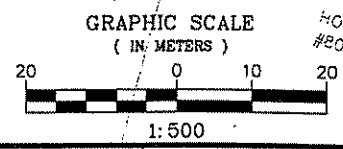
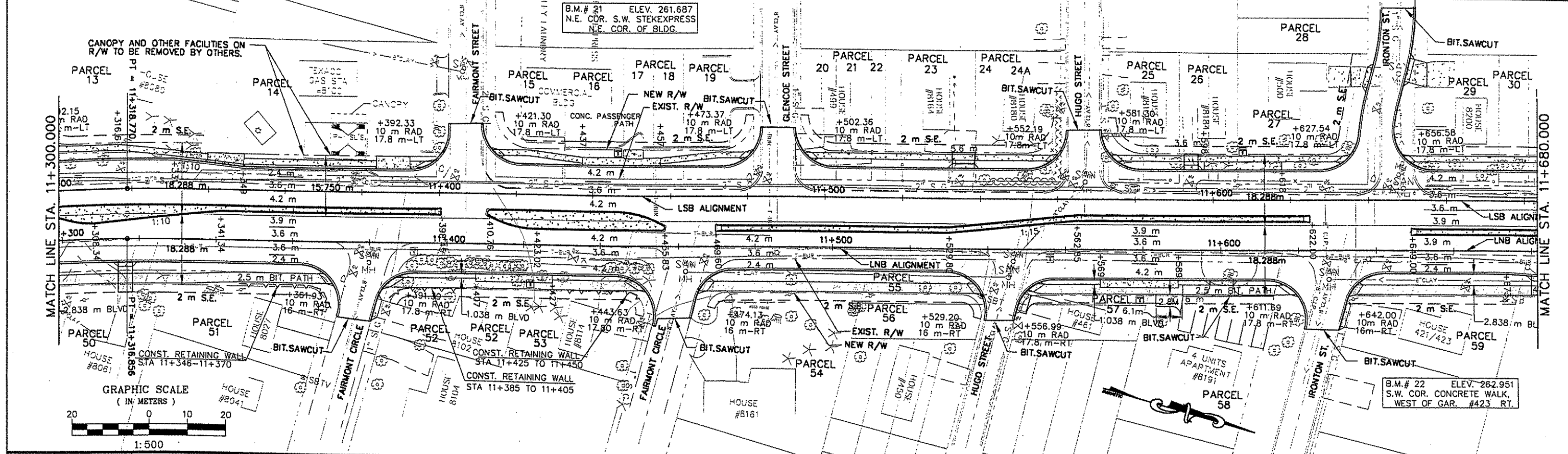
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 DESIGN BY: KGJ DATE: 03/04/99  
 CHECKED BY: LR DATE: 03/04/99



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO.

**PLAN AND PROFILE**  
 STA. 10+920 TO STA. 11+300  
 Sheet 23 of 93 Sheets



NO	DATE	BY	CHKD	APPR	REVISION



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.

DATE: 3/4/99 REG. NO. 2183

DRAWN BY: MN DATE 03/04/99  
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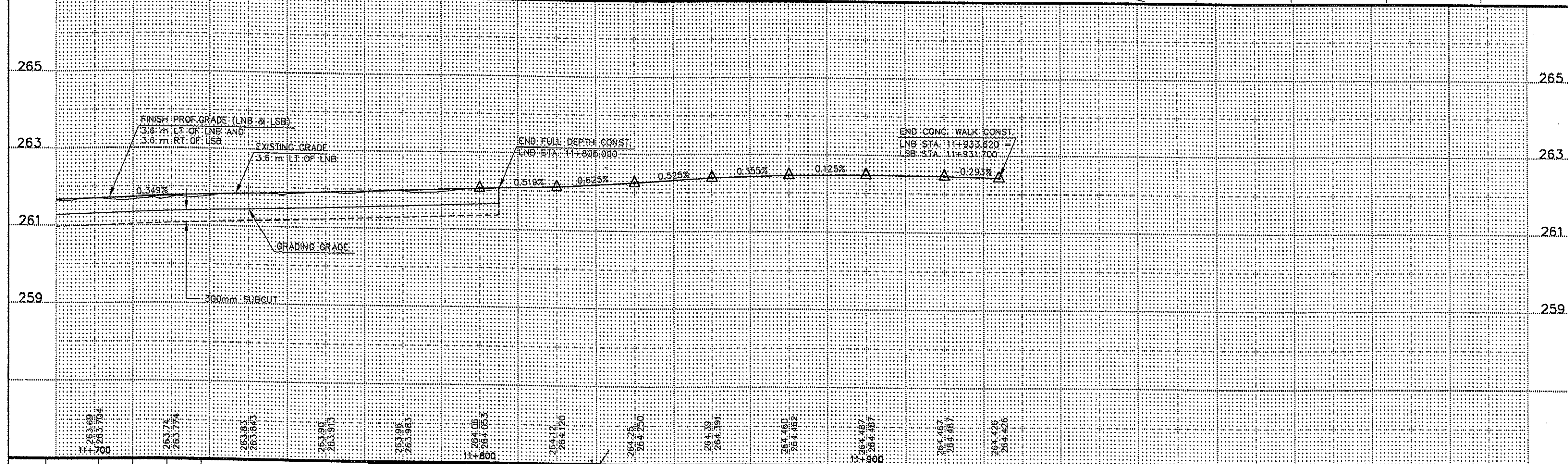
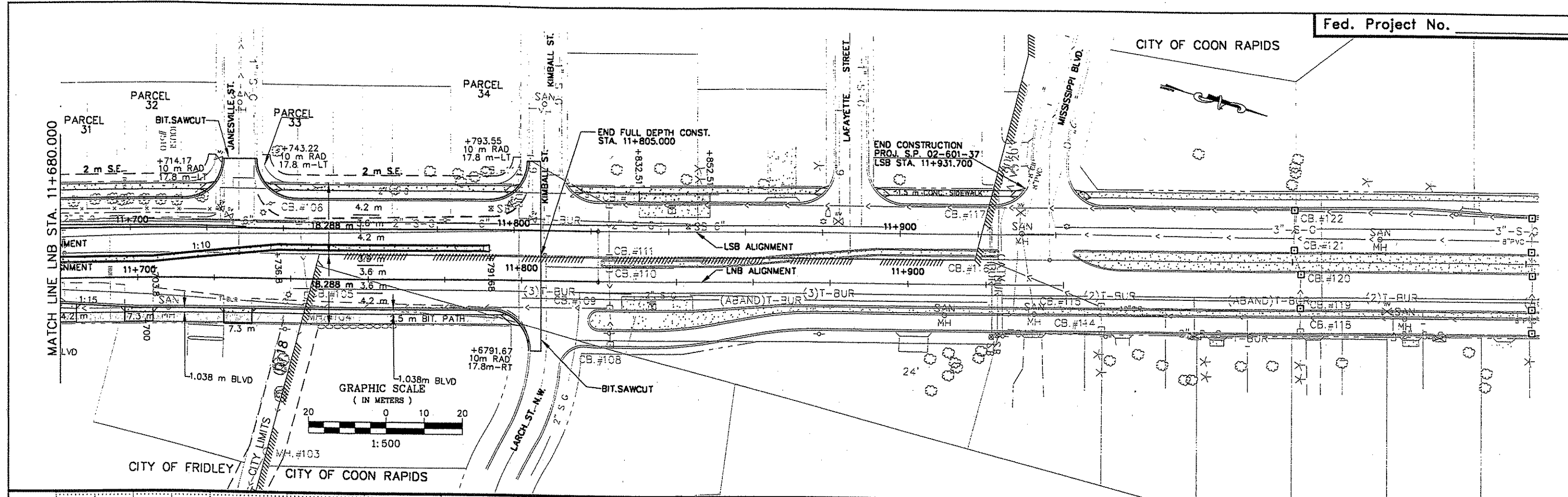


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

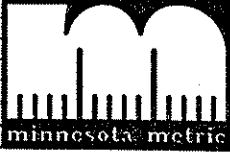
STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**PLAN AND PROFILE**  
 STA. 11+300 TO STA. 11+680  
 Sheet 24 of 93 Sheets





NO	DATE	BY	CKD	APPR	REVISION



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.

DATE: 3/4/99 REG. NO. 2183

DRAWN BY: MN DATE: 03/04/99  
 DESIGN BY: KGJ DATE: 03/04/99  
 CHECKED BY: LR DATE: 03/04/99

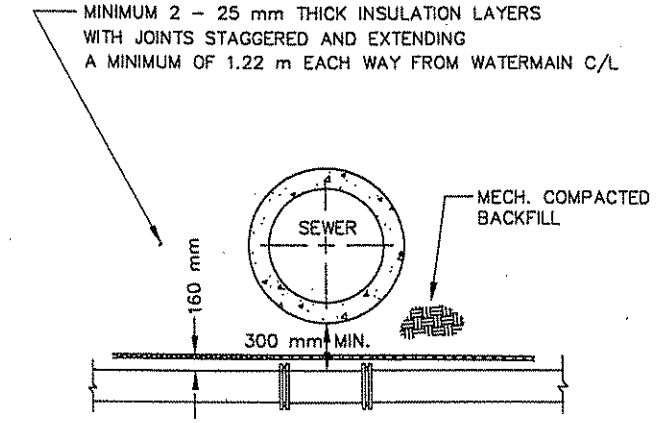


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**PLAN AND PROFILE**  
 STA. 11+680 TO STA. 11+805  
 Sheet 25 of 93 Sheets

ALIGNMENT	STA - STA	OFFSET	ITEM	REMOVE				ADJUST	NOTES
				MH OR CB (EACH)	PIPE SEWER (m)	APRON (EACH)	PIPE CULVERT (m)		
LNB ALIGNMENT	10+372.7-10+390.5	22.5 LT - 23.0 LT	450 mm CMP				19.5		
LNB ALIGNMENT	10+440.8	32.5 LT	MANHOLE						1
LNB ALIGNMENT	10+443.5	28.4 LT	MANHOLE						1
LNB ALIGNMENT	10+440.8-10+443.5	32.5 LT - 29.4 LT	1200 mm RCP						1
LNB ALIGNMENT	10+443.5-10+460.0	29.4 LT - 14.9 RT	1200 mm RCP		46.2				
LNB ALIGNMENT	10+446.1	79.5 LT	MANHOLE						1
LNB ALIGNMENT	10+442.5	41.8 LT	CATCH BASIN						1
LNB ALIGNMENT	10+440.8-10+442.5	32.5 LT - 41.8 LT	1500 mm RCP						1
LNB ALIGNMENT	10+442.5-10+446.1	41.8 LT - 79.5 LT	1500 mm RCP						1
LNB ALIGNMENT	10+435.7-10+443.5	23.9 LT-28.4 LT	375 mm RCP				9.0		
LNB ALIGNMENT	10+443.5-10+452.8	28.4 LT-25.7 LT	375 mm RCP				10.5		
LNB ALIGNMENT	10+503.7-10+522.2	22.8 LT - 22.8 LT	450 mm CMP				18.3		
LNB ALIGNMENT	10+592.4-10+623.3	22.7 LT - 23.0 LT	450 mm CMP				30.9		
LNB ALIGNMENT	10+667.3-10+675.2	23.4 LT - 23.6 LT	375 mm CMP				7.8		
LNB ALIGNMENT	10+716.5-10+724.5	23.3 LT - 23.3 LT	375 mm CMP				8.4		
LNB ALIGNMENT	10+764.0-10+773.5	23.8 LT - 23.8 LT	375 mm CMP				9.6		
LNB ALIGNMENT	10+787.0	58.8 RT	CATCH BASIN	1					
LNB ALIGNMENT	10+793.9	64.8 RT	MANHOLE	1					
LNB ALIGNMENT	10+797.1	66.5 RT	CATCH BASIN	1					
LNB ALIGNMENT	10+787.0-10+797.1	58.8 RT - 66.5 RT	300 mm RCP				12.8		
LNB ALIGNMENT	10+784.8-10+793.9	75.0 RT - 64.8 RT	375 mm RCP		14.5				
LNB ALIGNMENT	10+810.5-10+831.2	23.6 LT - 23.7 LT	450 mm CMP				21.7		
LNB ALIGNMENT	11+000.6	34.5 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+008.4	28.0 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+021.6	21.7 LT	MANHOLE	1					
LNB ALIGNMENT	11+132.5	24.8 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+152.0	25.9 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+000.6 - 11+008.4	34.5 LT - 28.0 LT	300 mm RCP		9.8				
LNB ALIGNMENT	11+008.4 - 11+021.6	28.0 LT - 21.7 LT	300 mm RCP		15.0				
LNB ALIGNMENT	11+021.6 - 11+132.5	21.7 LT - 24.8 LT	300 mm RCP		111.0				
LNB ALIGNMENT	11+132.5 - 11+152.0	24.8 LT - 25.9 LT	300 mm RCP		19.5				
LNB ALIGNMENT	11+152.0 - 11+171.0	25.9 LT - 24.2 LT	300 mm RCP & APRON		17.8	1			
LNB ALIGNMENT	11+070.8 - 11+089.3	35.4 RT - 48.8 RT	300 mm RCP & APRON		20.8	1			
LNB ALIGNMENT	11+081.2	42.4 RT	CATCH BASIN	1					
LNB ALIGNMENT	11+086.8	46.8 RT	MANHOLE	1					
LNB ALIGNMENT	11+089.3	48.8 RT	CATCH BASIN	1					
LNB ALIGNMENT	11+086.8 + 11+106.0	46.5 RT - 21.8 RT	600 mm RCP & APRON		30.5	1			
LNB ALIGNMENT	11+106.0 + 11+124.7	21.8 RT - 18.1 RT	600 mm RCP & APRON		18.7	1			
LNB ALIGNMENT	11+095.7 - 11+120.0	10.5 RT - 18.2 RT	450 mm CMP				25.5		
LNB ALIGNMENT	11+177.5 - 11+180.0	32.0 RT - 60.0 RT	375 mm RCP & APRON		26.2	1			
LNB ALIGNMENT	11+235.5 - 11+248.5	13.5 RT - 29.5 LT	1800 mm RCP & APRON			1	45.3		
LNB ALIGNMENT	11+730.0 - 11+743.4	52.5 RT - 7.4 RT	525 mm RCP		48.5				
LNB ALIGNMENT	11+743.4 - 11+742.3	7.4 RT - 16.5 LT	525 mm RCP		24.2				
LNB ALIGNMENT	11+742.3	16.5 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+743.8	6.0 RT	CATCH BASIN	1					
LNB ALIGNMENT	11+743.4	7.4 RT	MANHOLE						2
LNB ALIGNMENT	11+802.3	31.7 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+823.0	19.5 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+802.3 - 11+823.0	31.7 LT - 19.5 LT	300 mm RCP		24.2				
LNB ALIGNMENT	11+823.0	19.5 LT - 17.0 RT	525 mm RCP		36.0				
LNB ALIGNMENT	11+823.0	6.5 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+823.0	3.0 LT	CATCH BASIN	1					
LNB ALIGNMENT	11+823.0	7.0 RT	CATCH BASIN	1					
LNB ALIGNMENT	11+823.0	16.0 RT	CATCH BASIN	1					
TOTALS				19	462.9	6	199.8	1	



WATERMAIN INSULATION



MIN. 2 - 25 mm THICK INSULATION LAYERS WITH JOINTS STAGGERED AND EXTENDING A MIN. OF 1.22 m EACH WAY FROM WATERMAIN C/L

GENERAL STORM SEWER NOTES:  
 PROVIDE STEPS IN ALL DRAINAGE STRUCTURES GREATER THAN 1.2 m IN DEPTH. STEPS WILL BE CONSIDERED INCIDENTAL TO DRAINAGE STRUCTURE CONSTRUCTION.  
 DRAINAGE STRUCTURE LOCATIONS ARE GIVEN AT CENTER OF GRATE CASTING. TOP OF CASTING ELEVATIONS ARE MEASURED AT FLOW LINES.  
 PIPE APRON LOCATIONS AND ELEVATIONS ARE GIVEN AT END OF APRON.  
 PROVIDE INSULATION FOR EXISTING WATERMAINS WITHIN 600 mm PROXIMITY OF PROPOSED STORM SEWER PIPES. SEE DETAIL ABOVE.

NOTES:  
 1. LEAVE AS IS  
 2. REMOVE EXISTING MANHOLE CASTING (INCIDENTAL) AND REPLACE WITH CASTING ASSEMBLY B-1, ADJUST TO FIT CURB. TC=263.742

NO	DATE	BY	CKD	APPR	REVISION



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.  
*Ricky J. Keel*  
 DATE 3-3-99 REG. NO. 20410



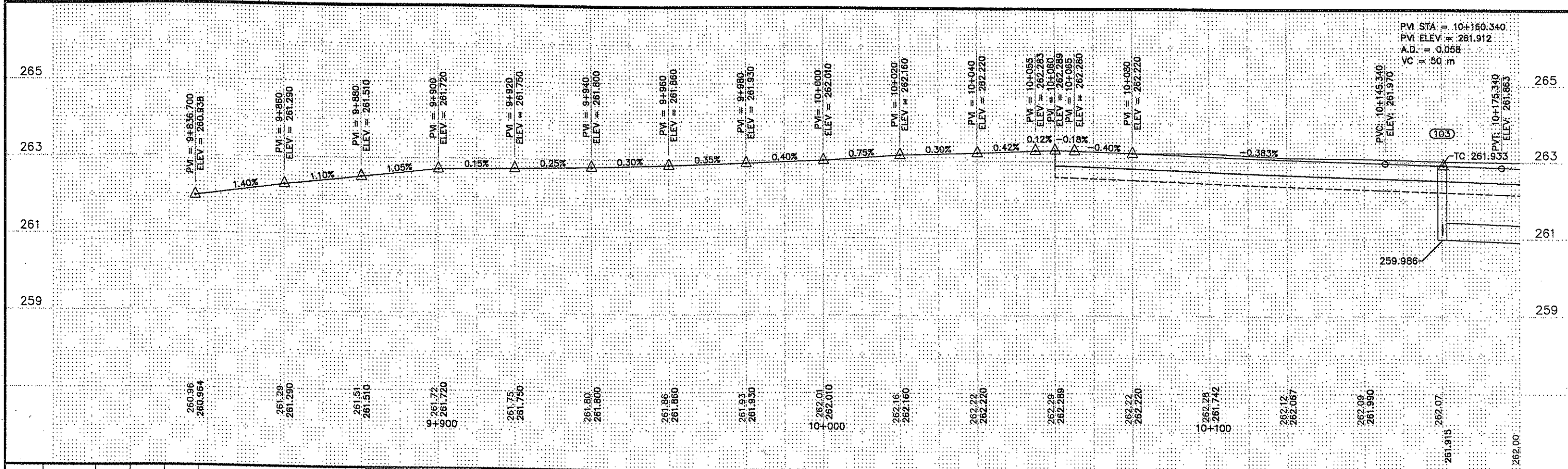
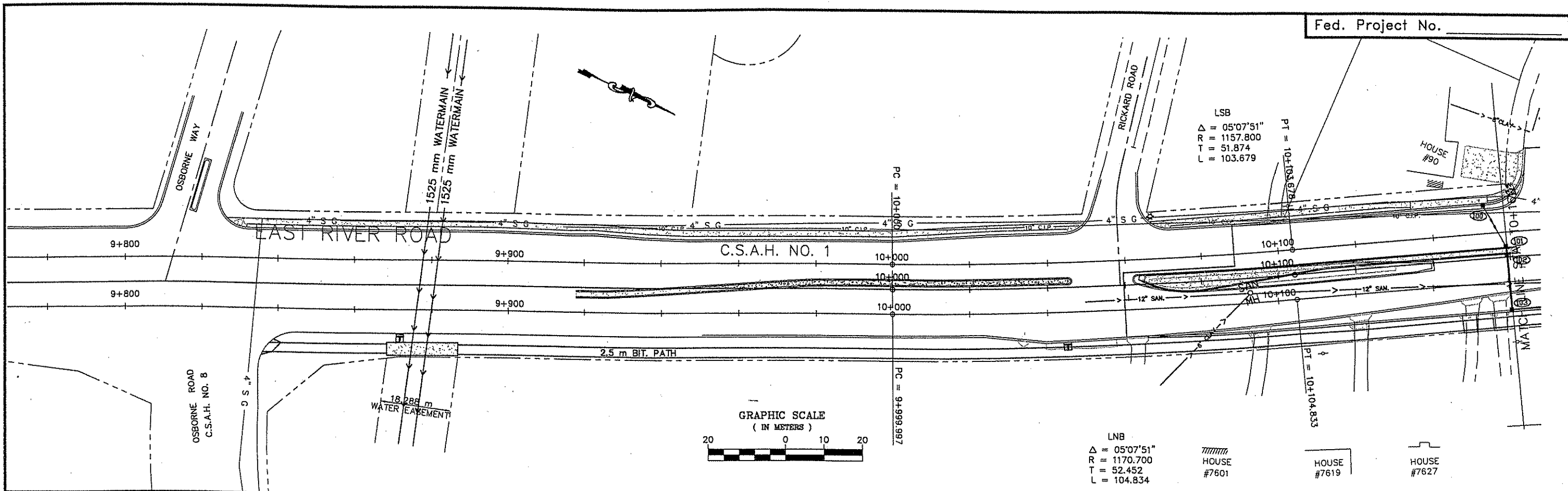
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

EXISTING DRAINAGE  
 TABULATION  
 Sheet 26 of 93 Sheets







NO	DATE	BY	CKD	APPR	REVISION

NAME: 20-PlanP.dwg 81098 14032



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.

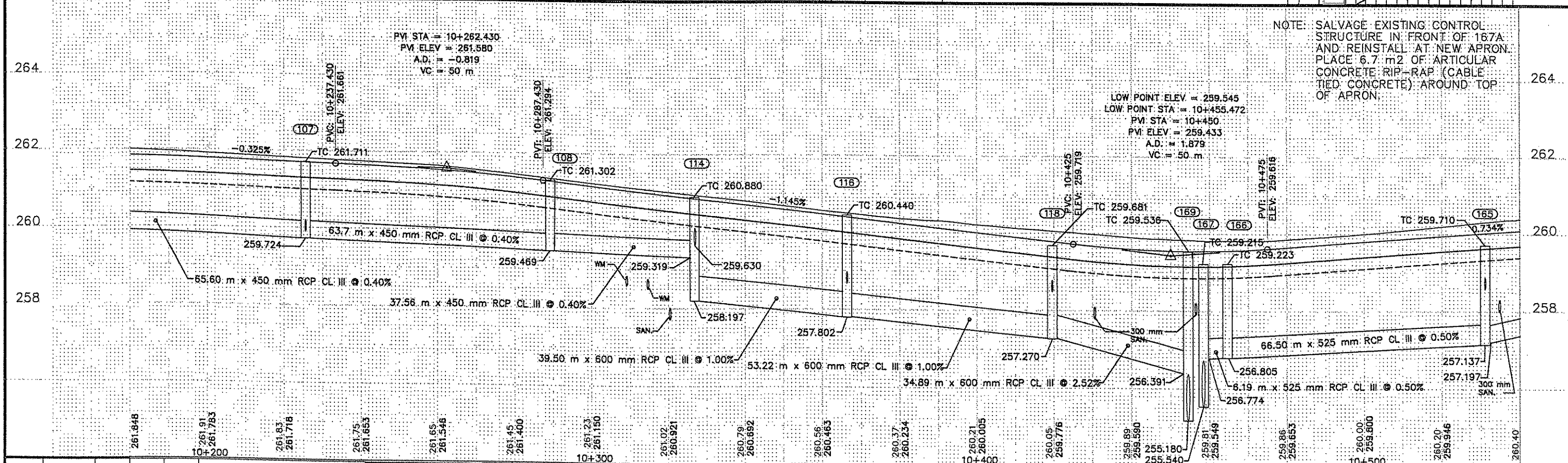
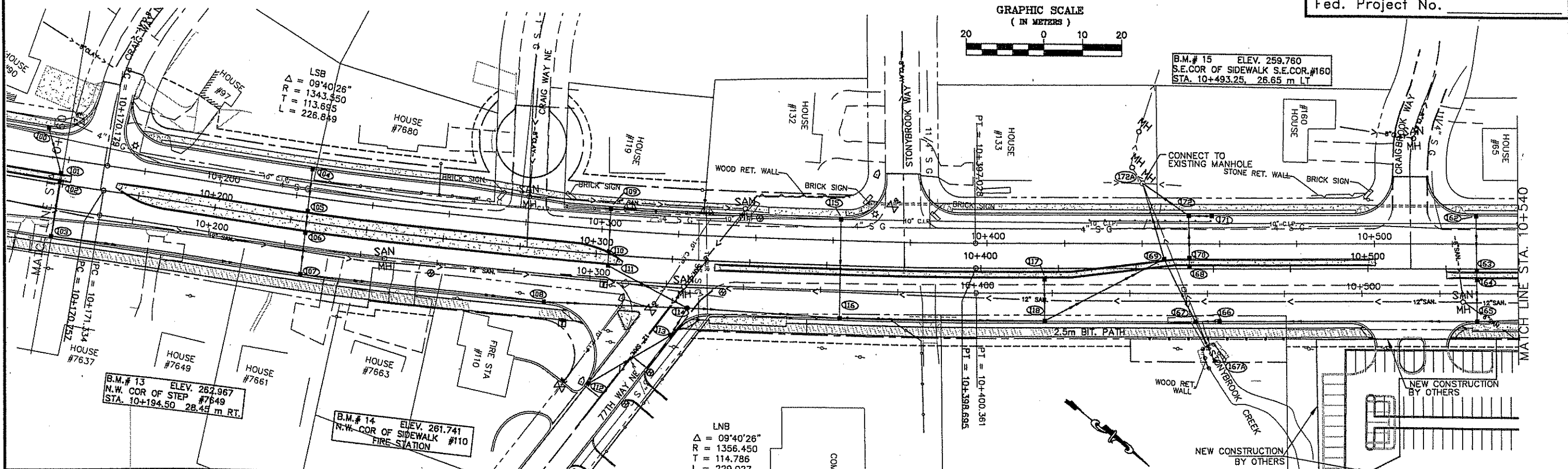
*Rudy J. Keel*  
 DATE 3-3-99 REG. NO. 20410



ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

DRAINAGE PLAN AND PROFILE  
 STA. 880+000 TO STA. 10+160  
 Sheet 29 of 93 Sheets



NOTE: SALVAGE EXISTING CONTROL STRUCTURE IN FRONT OF 167A AND REINSTALL AT NEW APRON. PLACE 6.7 m<sup>2</sup> OF ARTICULAR CONCRETE RIP-RAP (CABLE TIED CONCRETE) AROUND TOP OF APRON.

NO.	DATE	BY	CHKD	APPR	REVISION

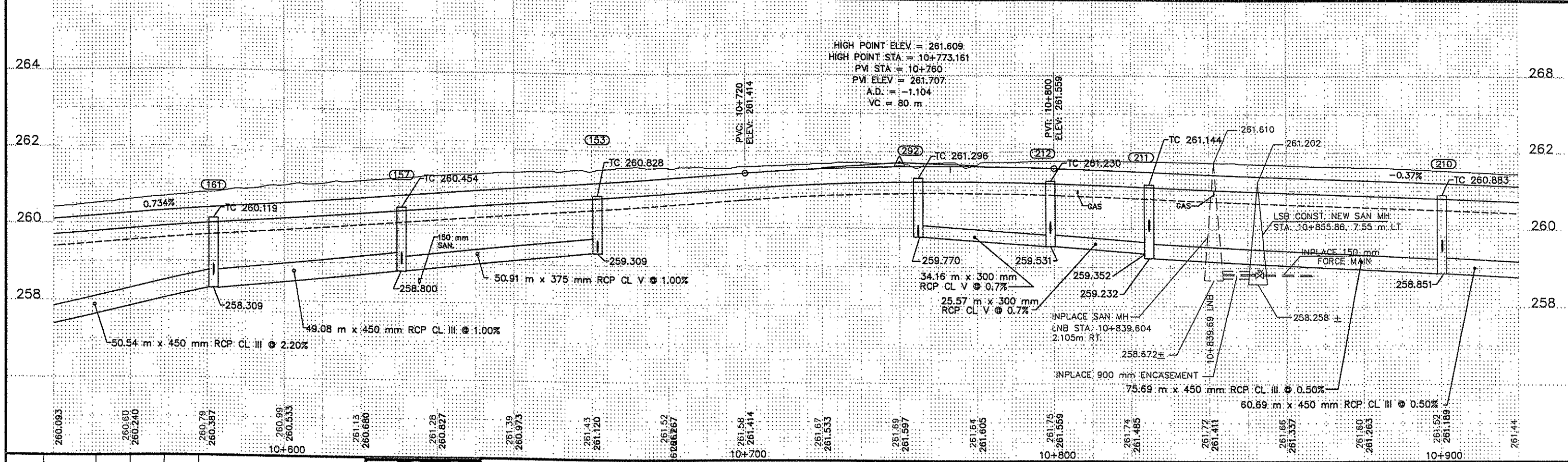
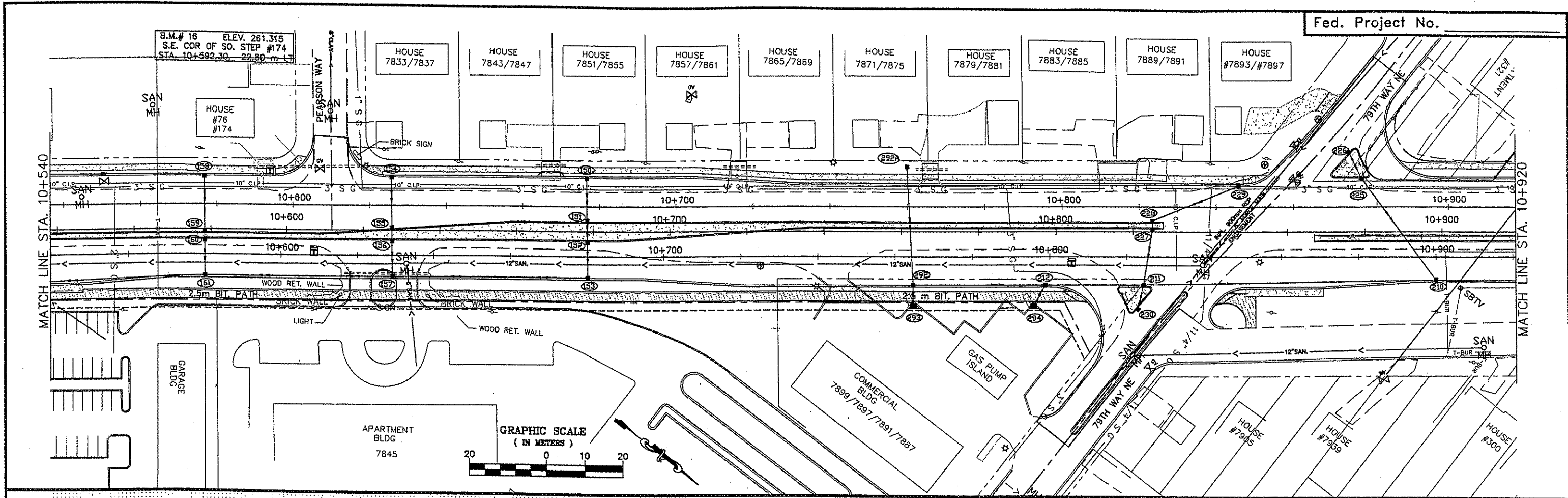
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
*Randy J. Kell*  
 DATE 3-3-99 REG. NO. 20410



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

DRAINAGE PLAN  
AND PROFILE  
STA. 10+160 TO STA. 10+540  
Sheet 30 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION

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.

*Ruby J. Keck*

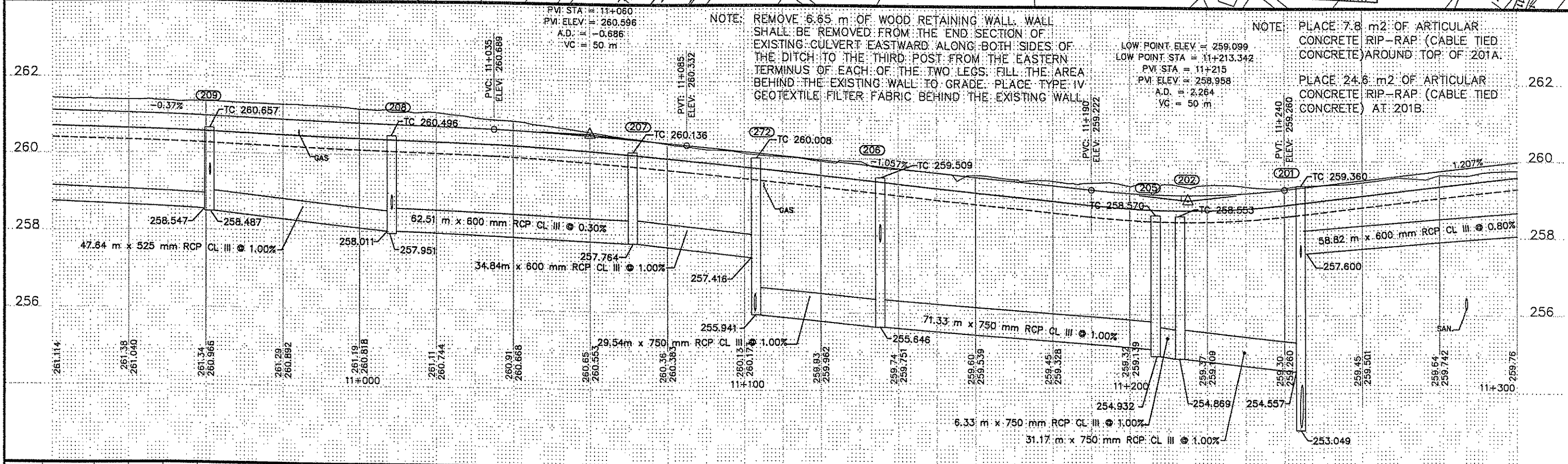
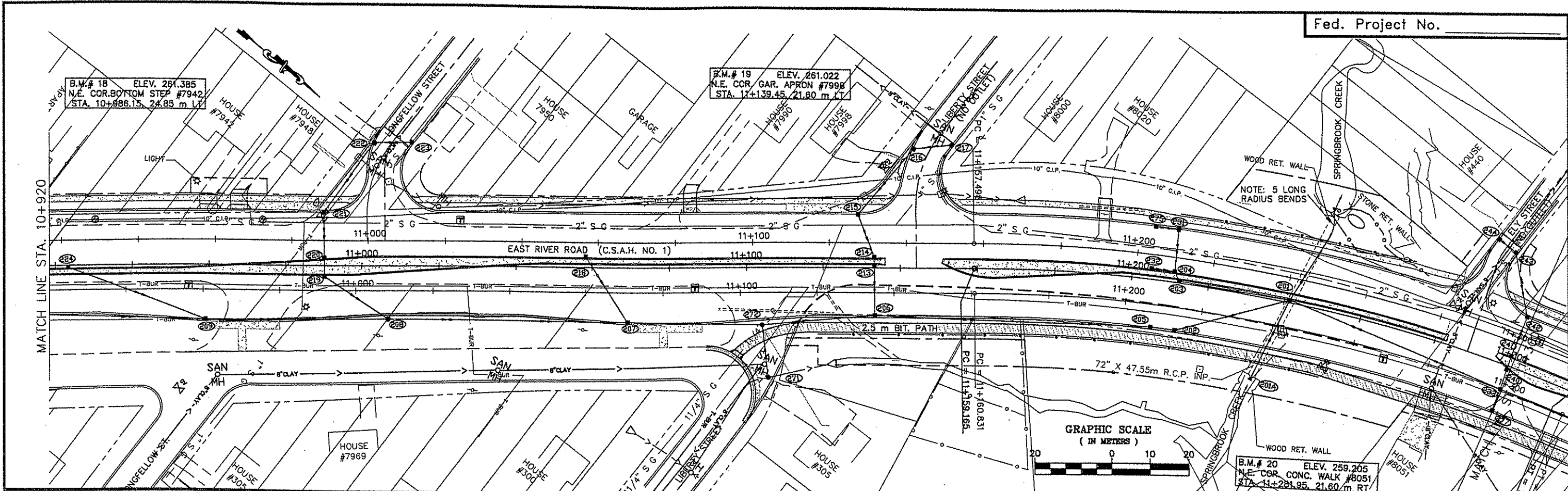
DATE 3-3-99 REG. NO. 20410



**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**DRAINAGE PLAN AND PROFILE**  
 STA. 10+540 TO STA. 10+920  
 Sheet 31 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: 23-PlanP.dwg 81098 52322

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.

*Ruby J. Keel*

DATE 3-3-99 REG. NO. 20410

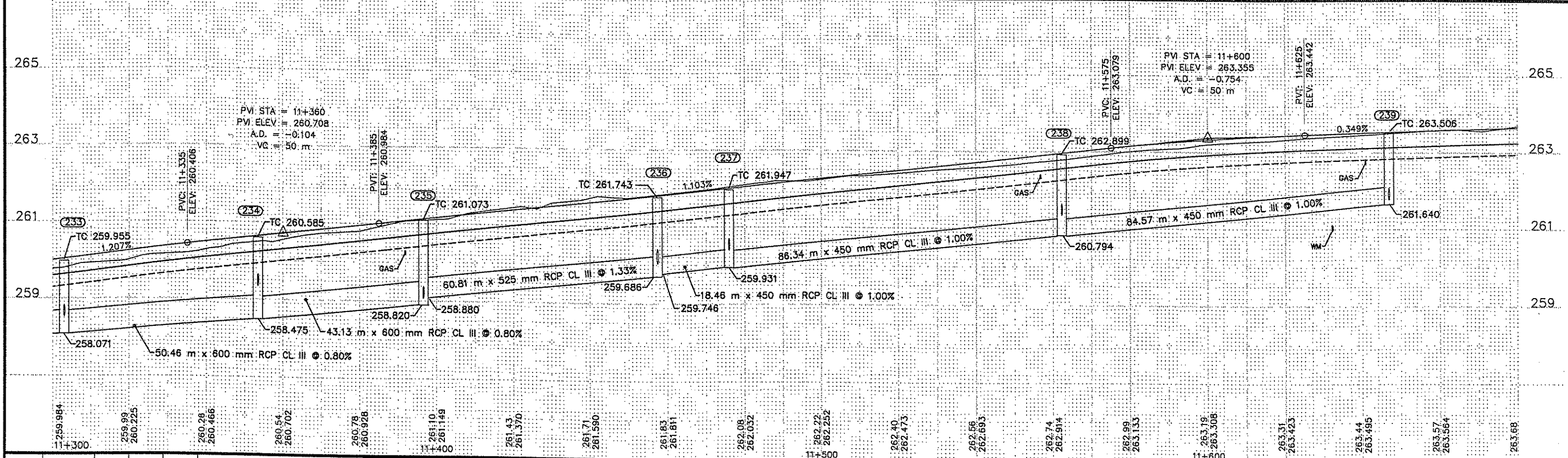
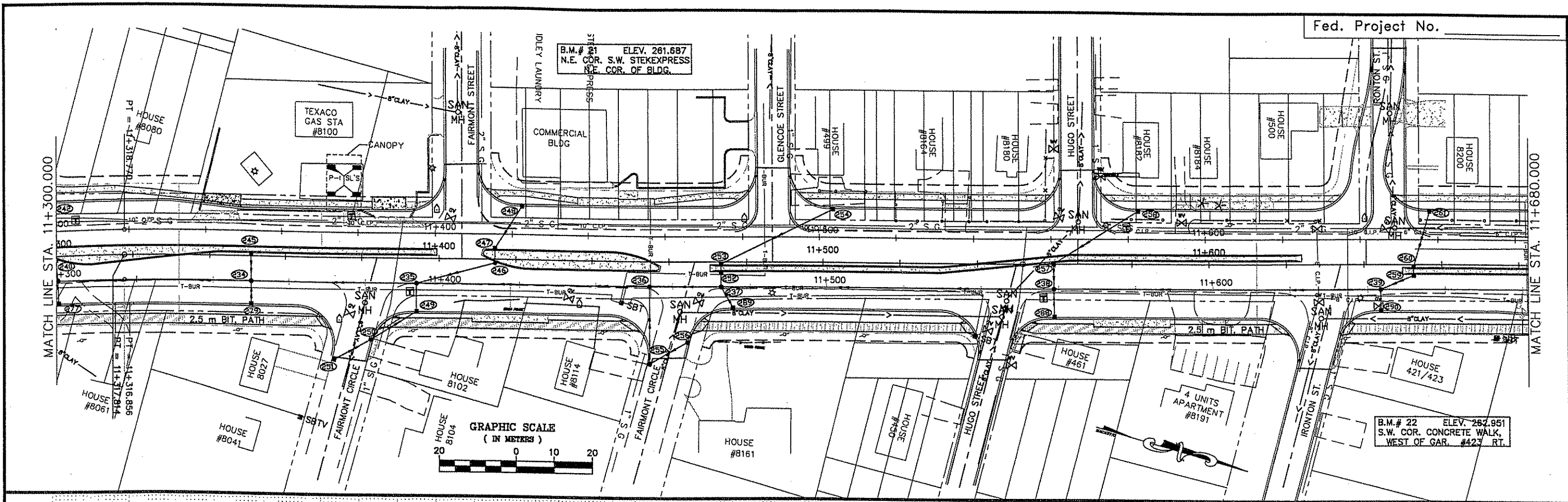


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
STATE PROJECT NO. 127-020-20  
STATE PROJECT NO. 114-020-18  
COUNTY PROJECT NO. \_\_\_\_\_

DRAINAGE PLAN  
AND PROFILE  
STA. 10+920 TO STA. 11+300  
Sheet 32 of 93 Sheets





NO	DATE	BY	CKD	APPR	REVISION

NAME: 24-PlanP.dwg 81098 53946



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.

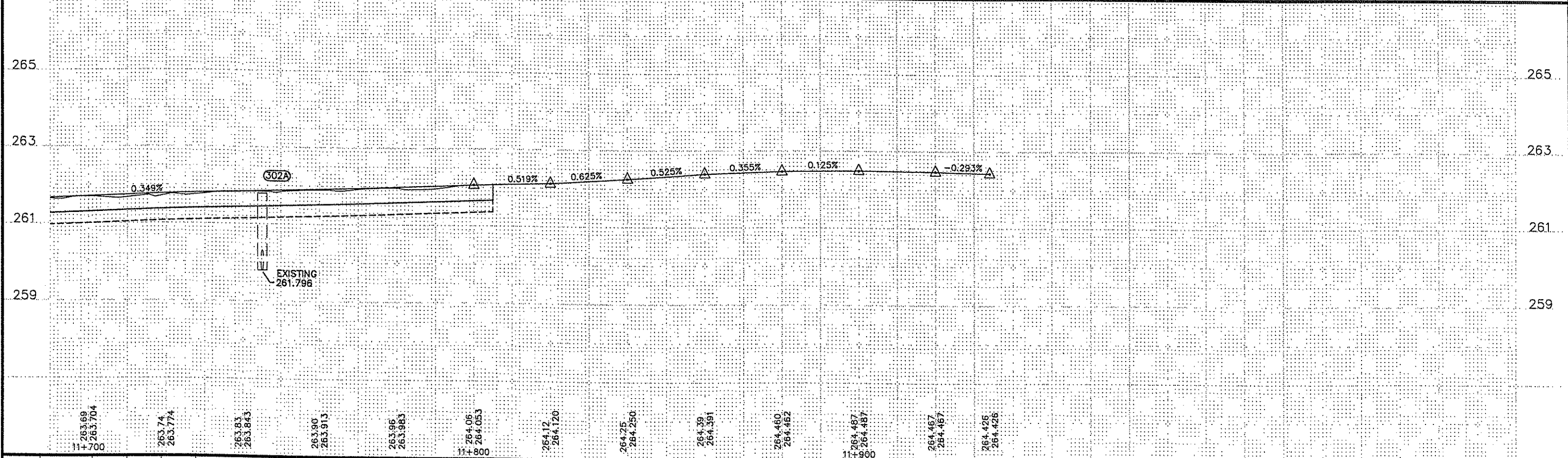
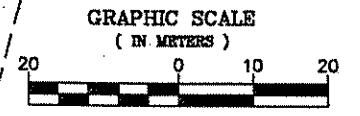
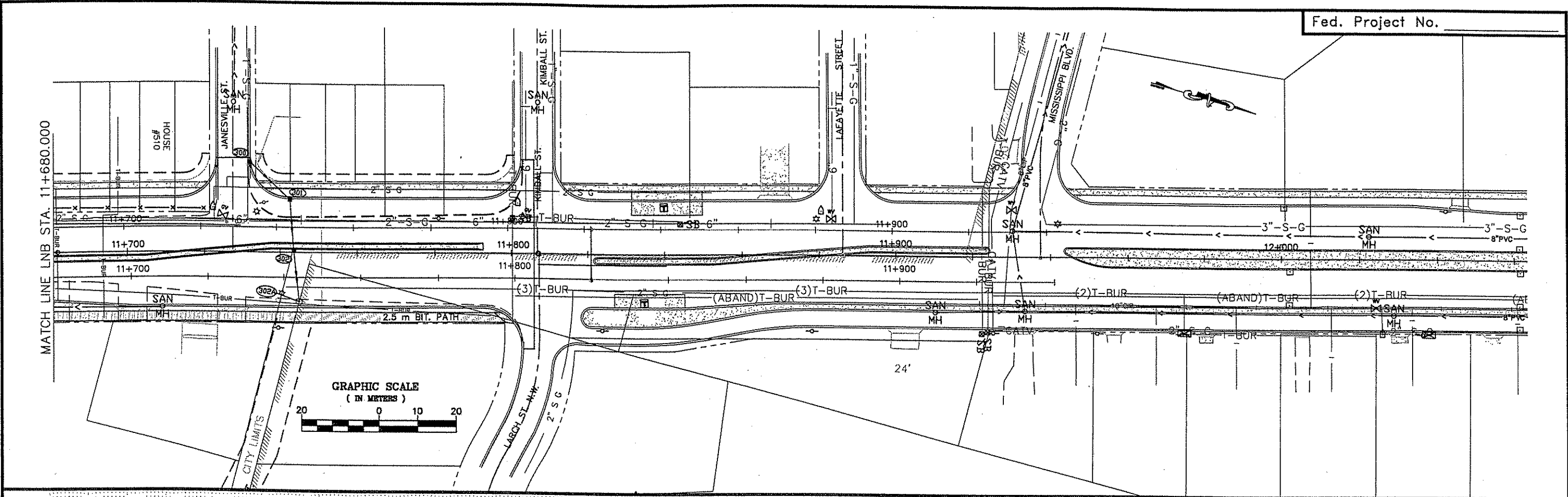
*Reda J. Keel*  
 DATE: 3-3-99 REG. NO. 20410



**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**DRAINAGE PLAN AND PROFILE**  
 STA. 11+300 TO STA. 11+680  
 Sheet 33 of 93 Sheets



263.69 263.704 11+700	263.74 263.774	263.83 263.843	263.90 263.913	263.96 263.983	264.05 264.053	264.12 264.120	264.25 264.250	264.39 264.391	264.460 264.462	264.487 264.487	264.467 264.467	264.426 264.426
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NO	DATE	BY	CKD	APPR	REVISION



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.

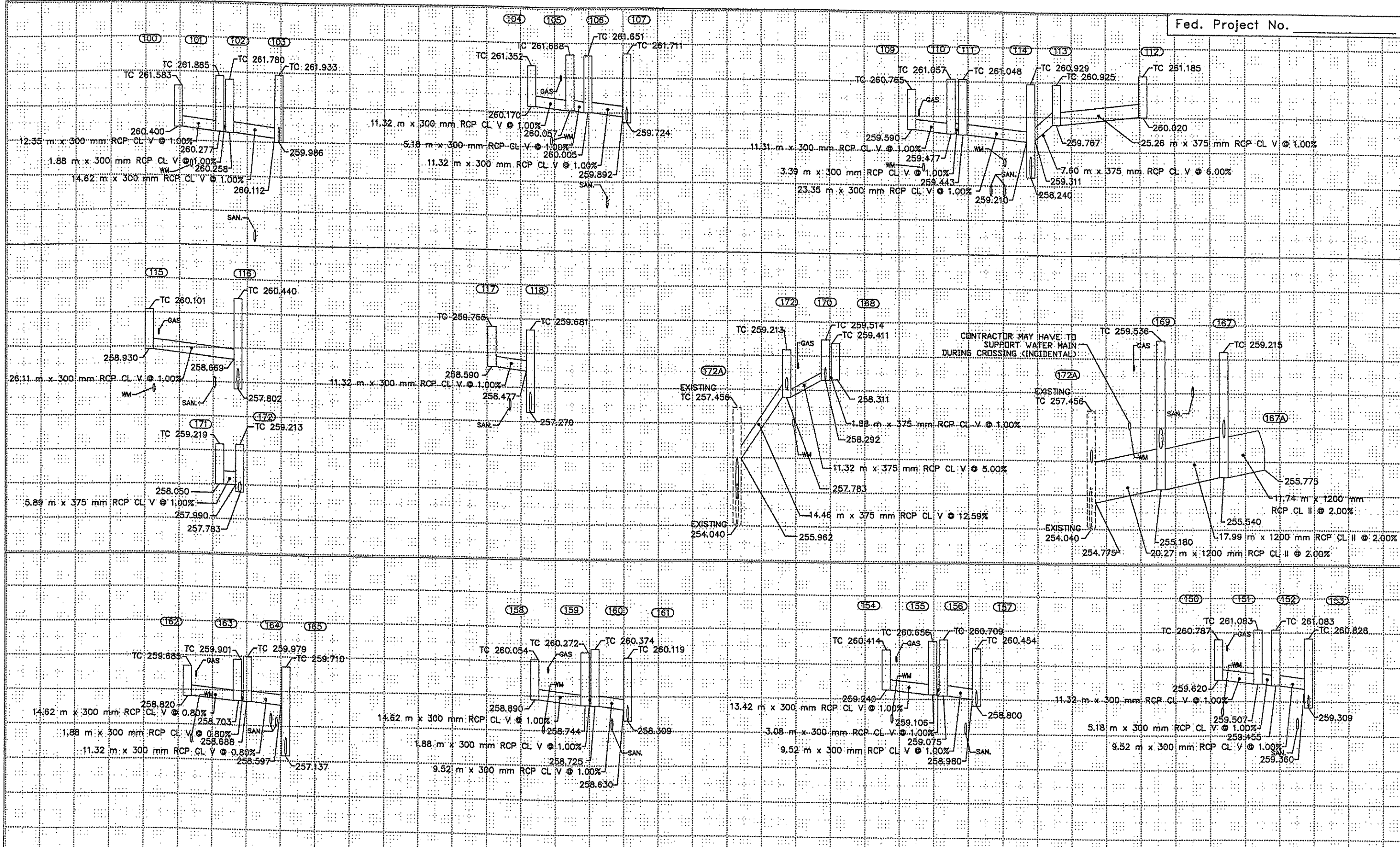
*Rudy J. Keel*  
 DATE 3-3-99 REG. NO. 20410



**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**DRAINAGE PLAN AND PROFILE**  
 STA. 11+680 TO STA. 11+805  
 Sheet 34 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: n:\anoka\9708\dwg\30-profilep.dwg					



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.

*Rodney J. Keel*

DATE 3-5-99 REG. NO. 20410

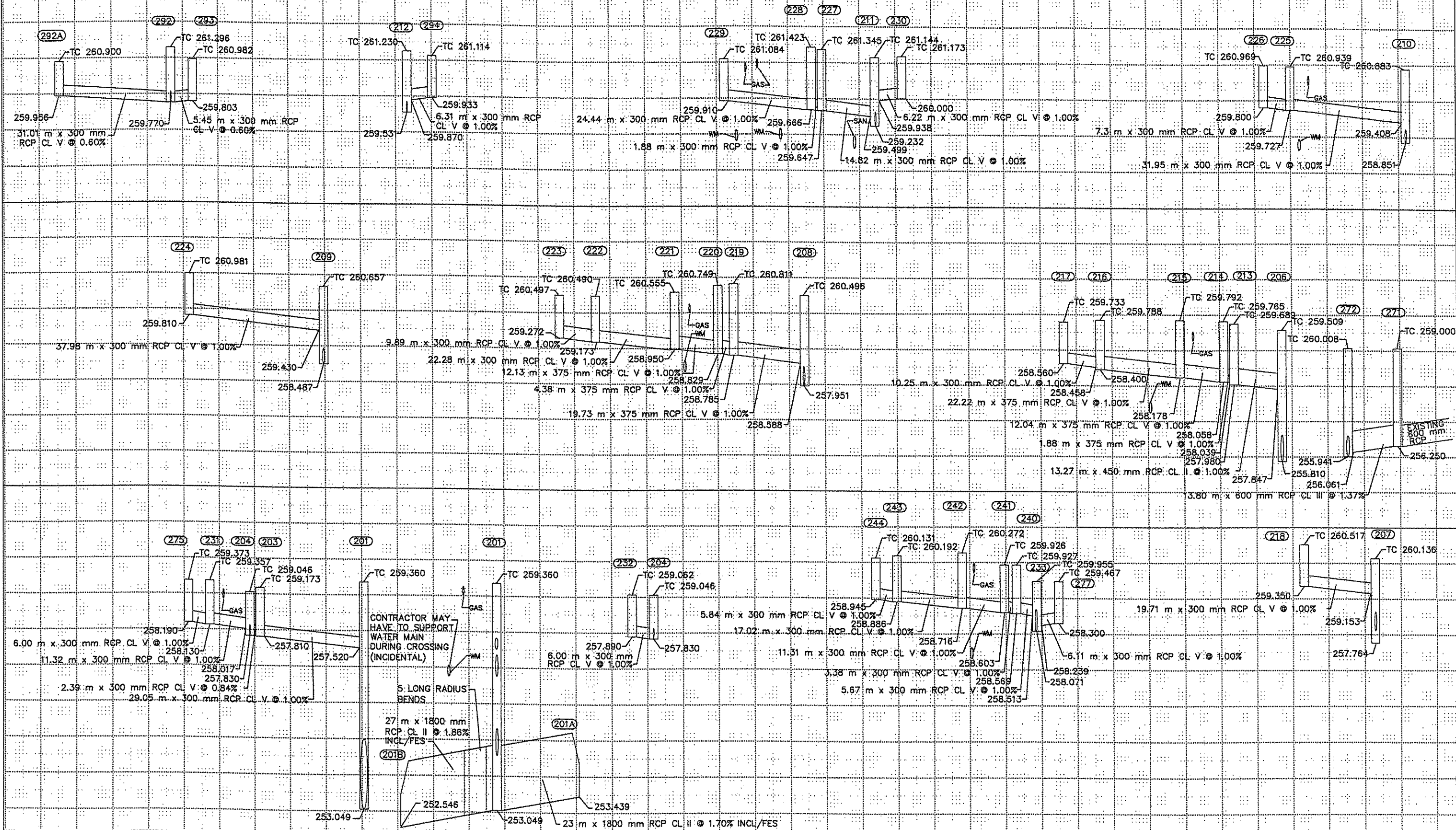


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
STATE PROJECT NO. 127-020-20  
STATE PROJECT NO. 114-020-18  
COUNTY PROJECT NO. \_\_\_\_\_

MISC. STORM PROFILES

Sheet 35 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: n:\anoka\9708\dwg\31-profilep.dwg					



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.

*Randy J. Keel*

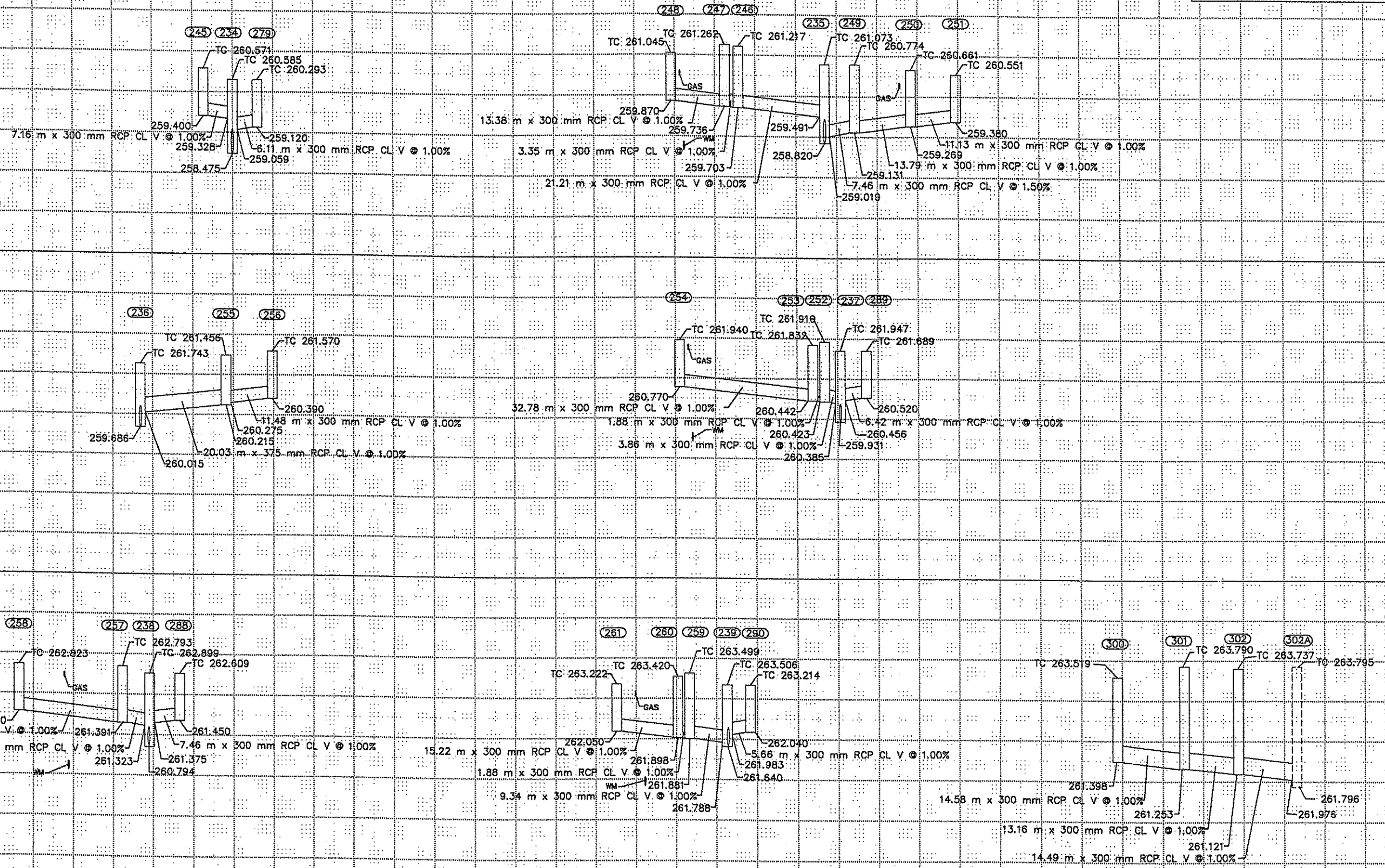
DATE 3-3-99 REG. NO. 20410



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
STATE PROJECT NO. 127-020-20  
STATE PROJECT NO. 114-020-18  
COUNTY PROJECT NO. \_\_\_\_\_

MISC. STORM PROFILES  
Sheet 36 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: n:\anoka\9708\dwg\32-profilep.dwg					



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.

*Roddy J. Keel*

DATE 3-3-99 REG. NO. 20410

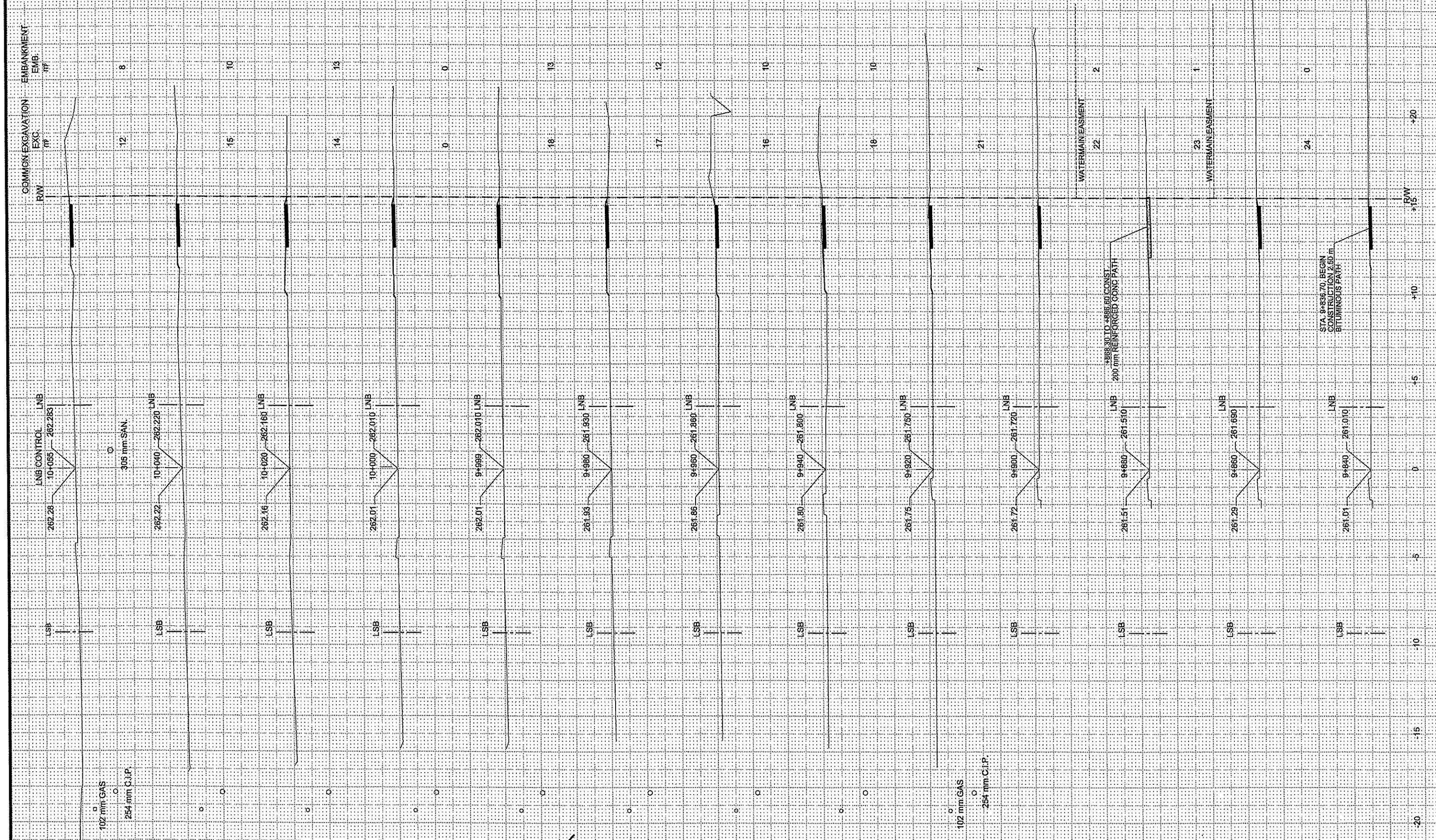


**ANOKA COUNTY HIGHWAY DEPT.**

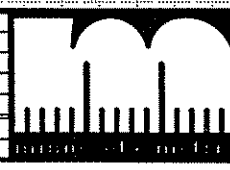
STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

MISC. STORM PROFILES

Sheet 37 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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

DATE 01/13/98 REG. NO. 12183

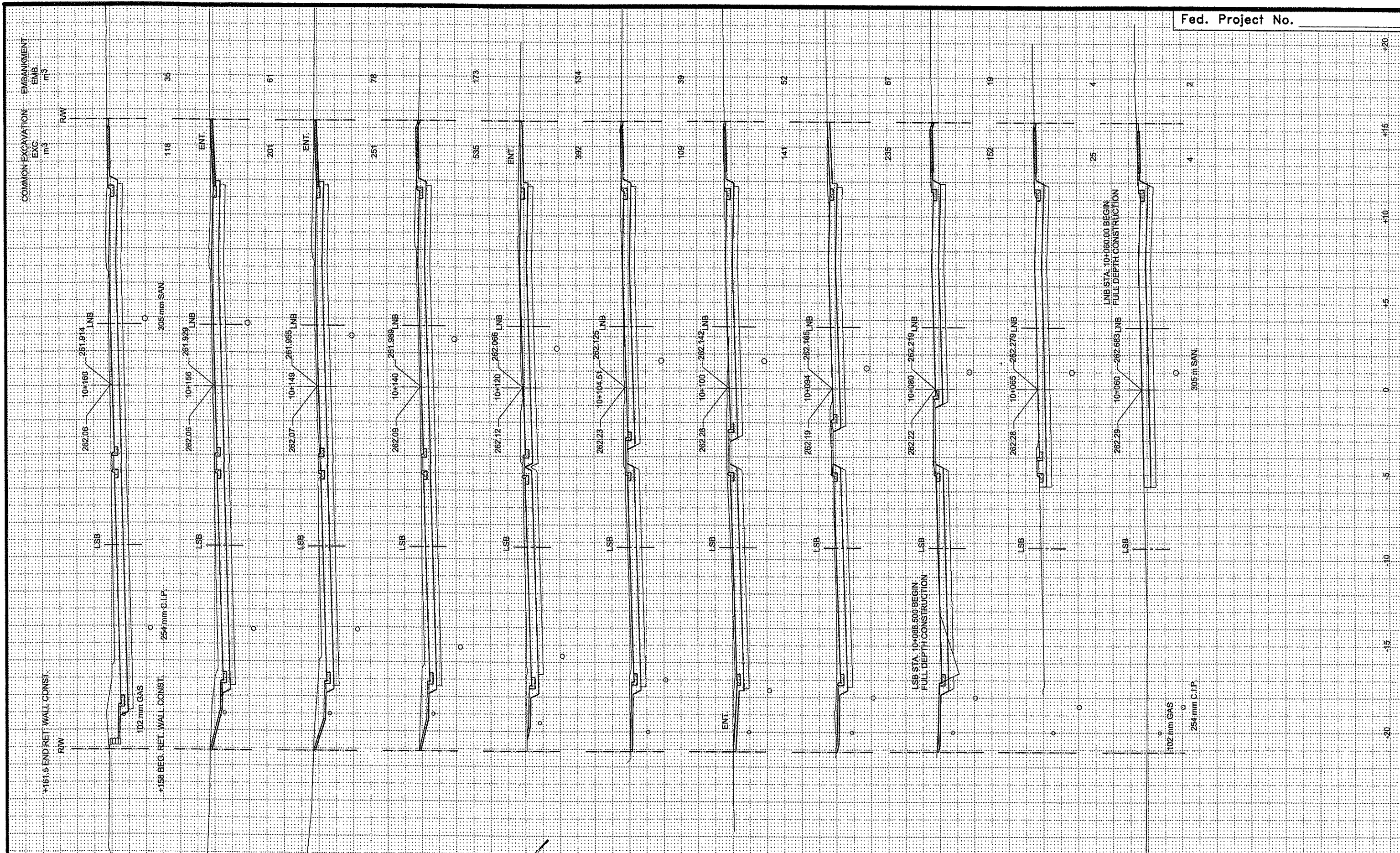
DRAWN BY MN DATE 10/28/98  
 DESIGN BY KGJ DATE 10/28/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

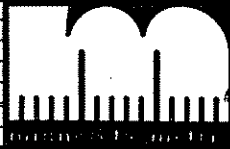
STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**CROSS-SECTION**  
 STA 9+840.000 TO 10+055.000  
 Sheet 38 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: SECT2.dwg 11/29/98 23502



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 12/16/98 REG. NO. 12183

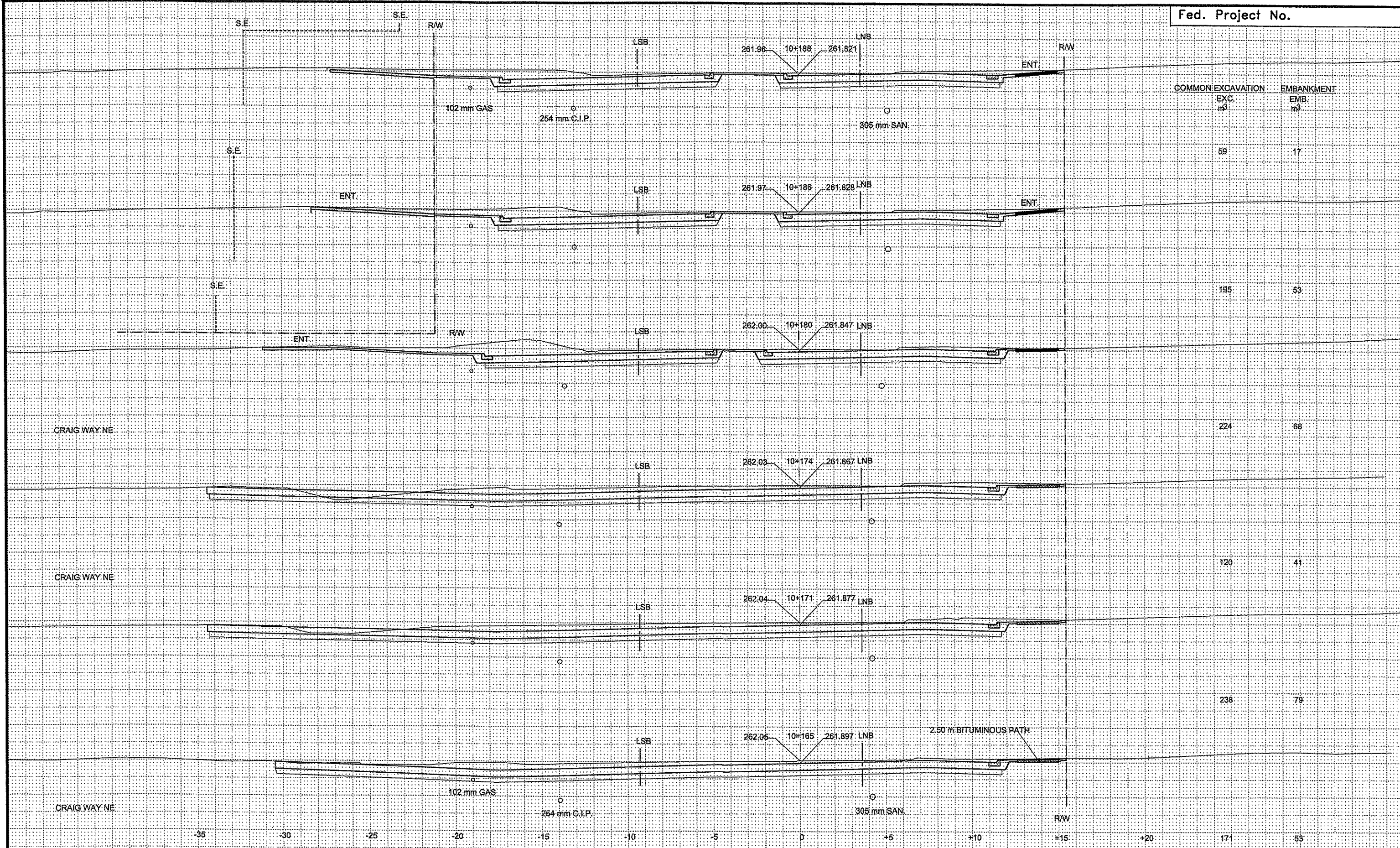
DRAWN BY MN DATE 11/3/98  
 DESIGN BY KGJ DATE 11/3/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



**ANOKA COUNTY  
 HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**CROSS- SECTION**  
 STA 10+060.000 TO 10+160.000  
 Sheet 39 of 93 Sheets



	COMMON EXCAVATION EXC. m <sup>3</sup>	EMBANKMENT EMB. m <sup>3</sup>
	59	17
	195	53
	224	68
	120	41
	238	79
	171	53

NO	DATE	BY	CKD	APPR	REVISION
1	8/17/98	MN			
2	11/25/98	K&J			
3	12/13/98				



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.

DATE 12/13/98 REG. NO. 12183

DRAWN BY MN DATE 8/17/98  
 DESIGN BY K&J DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

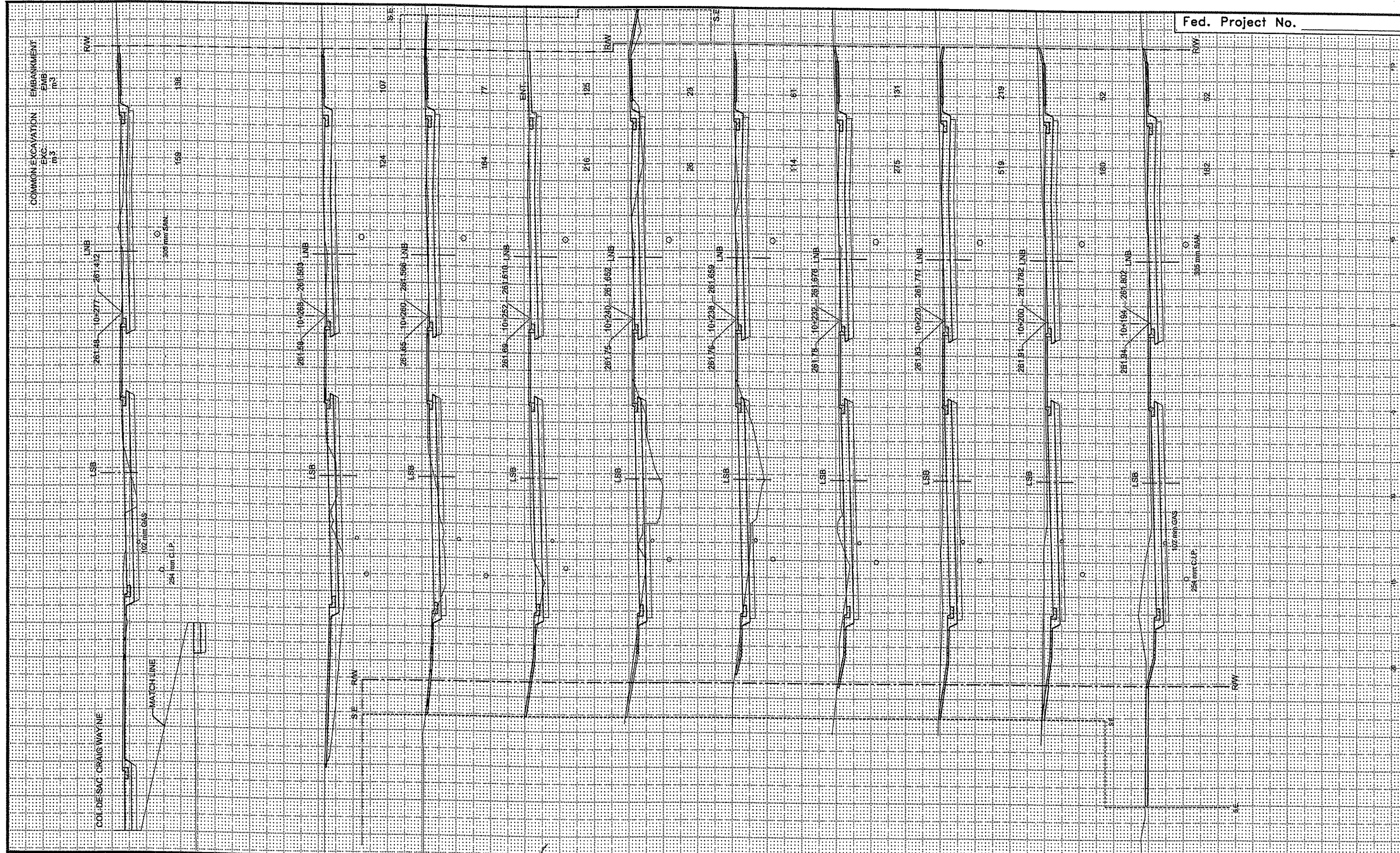


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 10+165.00 TO 10+188.00  
 Sheet 40 of 93 Sheets





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 3/4/99 REG. NO. 12183

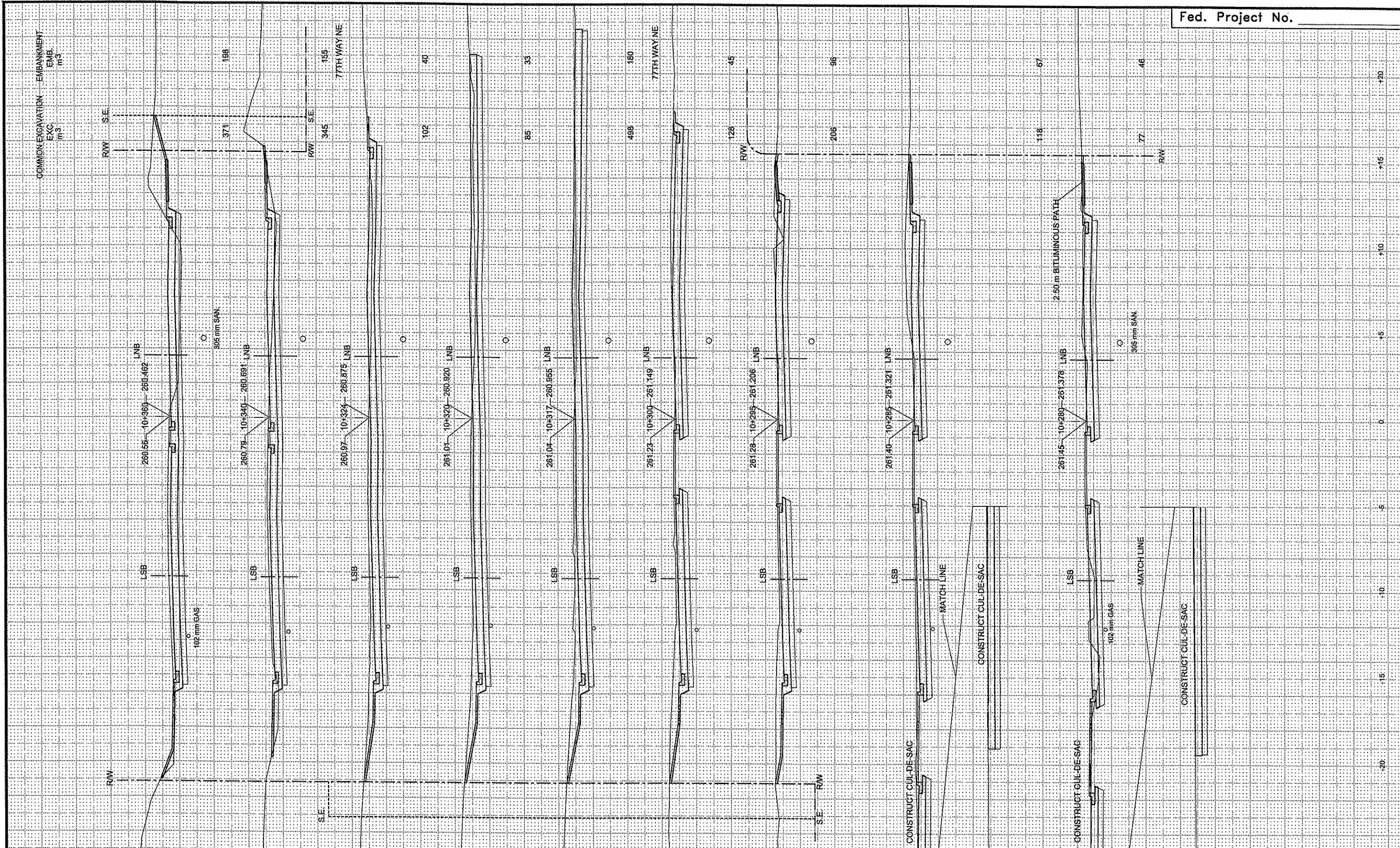
DRAWN BY HN DATE 03/01/99  
 DESIGN BY KGJ DATE 03/01/99  
 CHECKED BY LR DATE 03/01/99



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**CROSS- SECTION**  
 STA 10+194.000 TO 10+277.000  
 Sheet 41 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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 11/13/98 REG. NO. 12183

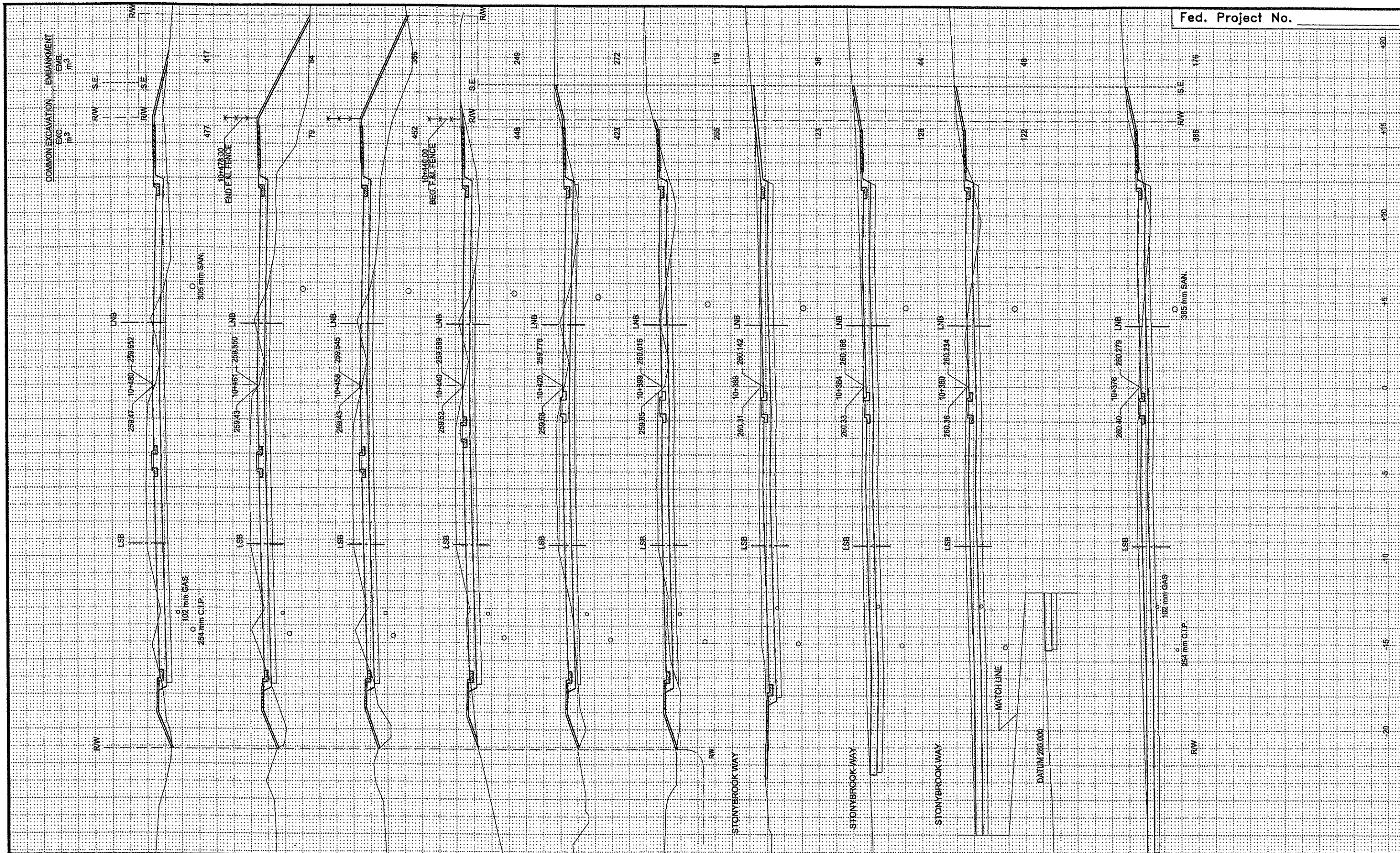
DRAWN BY MN DATE 11/25/98  
 DESIGN BY KGJ DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 10+280.000 TO 10+360.000  
 Sheet 42 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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 11/13/98 REG. NO. 12183

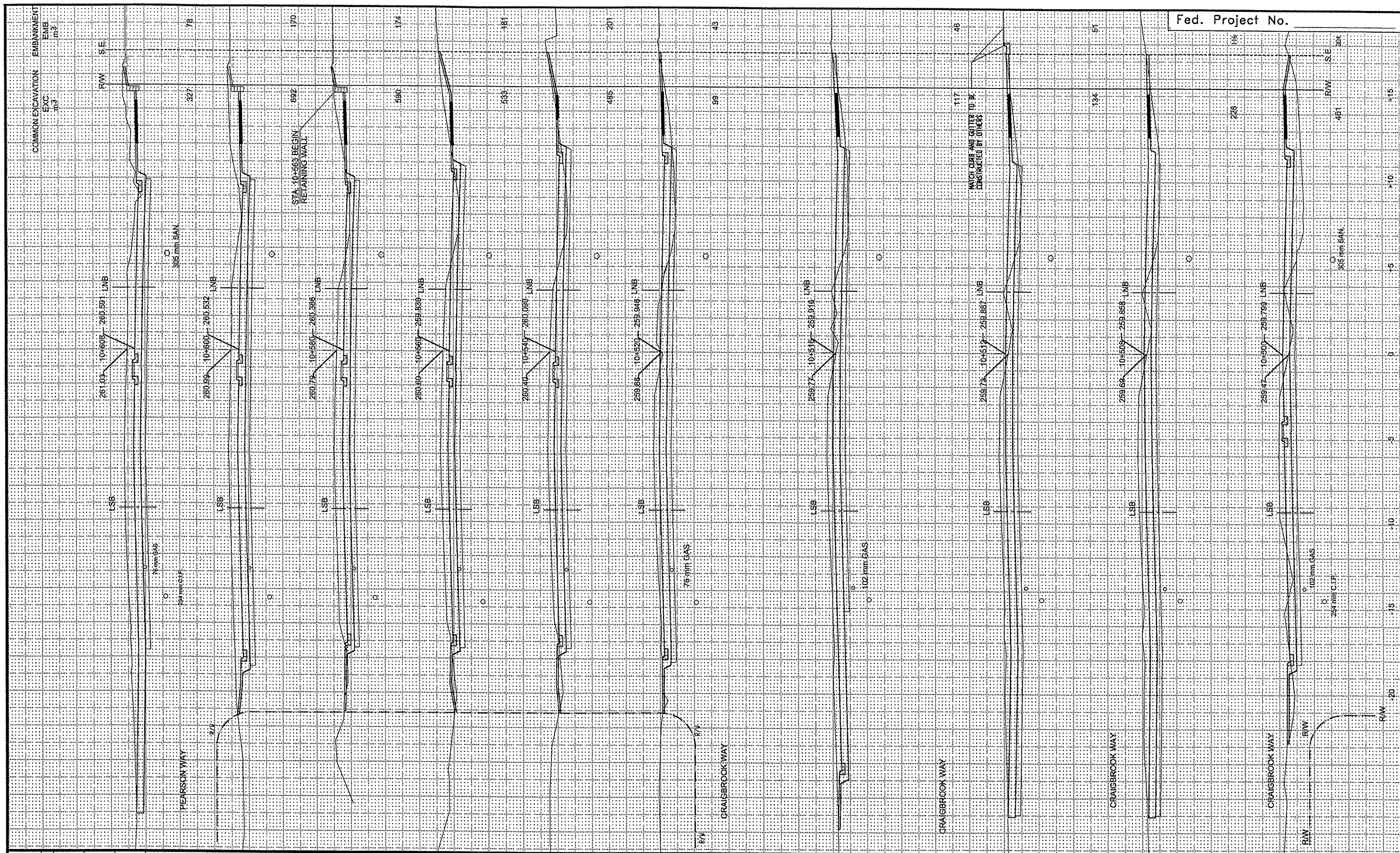
DRAWN BY MN DATE 11/25/98  
 DESIGN BY R.G.J. DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**CROSS-SECTION**  
 STA 10+376.000 TO 10+480.000  
 Sheet 43 of 93 Sheets



NO.	DATE	CKD	APPR	REVISION
1	12-28-98			
2	10-44-24			an EST

BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 12/28/98 REG. NO. 25066

DRAWN BY PGL DATE 9/10/98  
 DESIGN BY KGJ DATE 12/28/98  
 CHECKED BY LR DATE 12/28/98



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 10+500.000 TO 10+608.000  
 Sheet 44 of 93 Sheets



NO.	DATE	BY	CKD	APPR	REVISION
NAME	SECT8.dwg	12-22-98	5:51:58 pm EST		



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 12/23/98 REG. NO. 25066

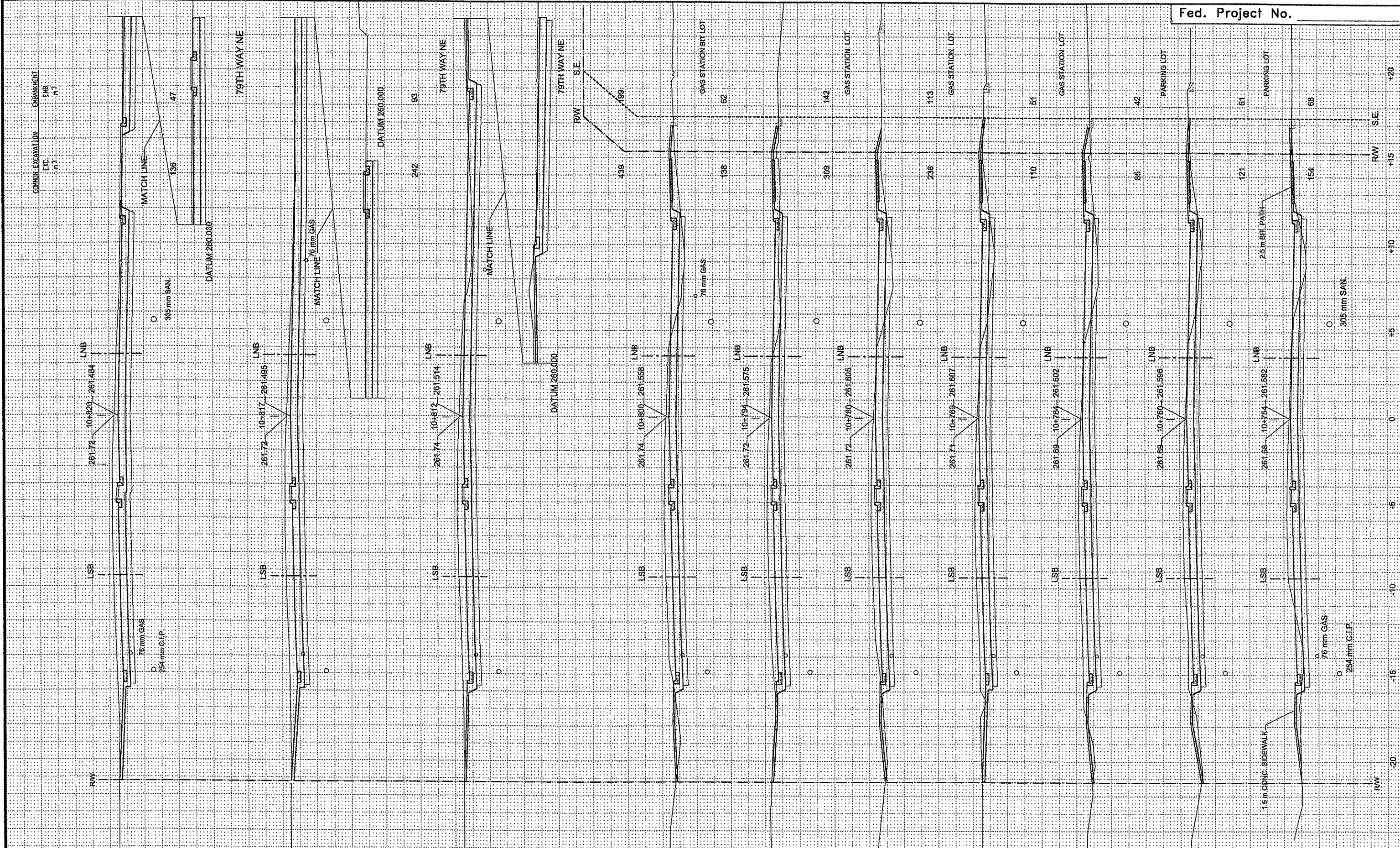
DRAWN BY MN DATE 12/22/98  
 DESIGN BY KGJ DATE 12/22/98  
 CHECKED BY LR DATE 12/22/98



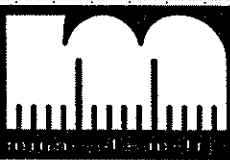
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS- SECTION  
 STA 10+617.000 TO 10+747.000  
 Sheet 45 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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 4/23/98 REG. NO. 12183

DRAWN BY MN DATE 4/23/98  
 DESIGN BY KGJ DATE 4/23/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

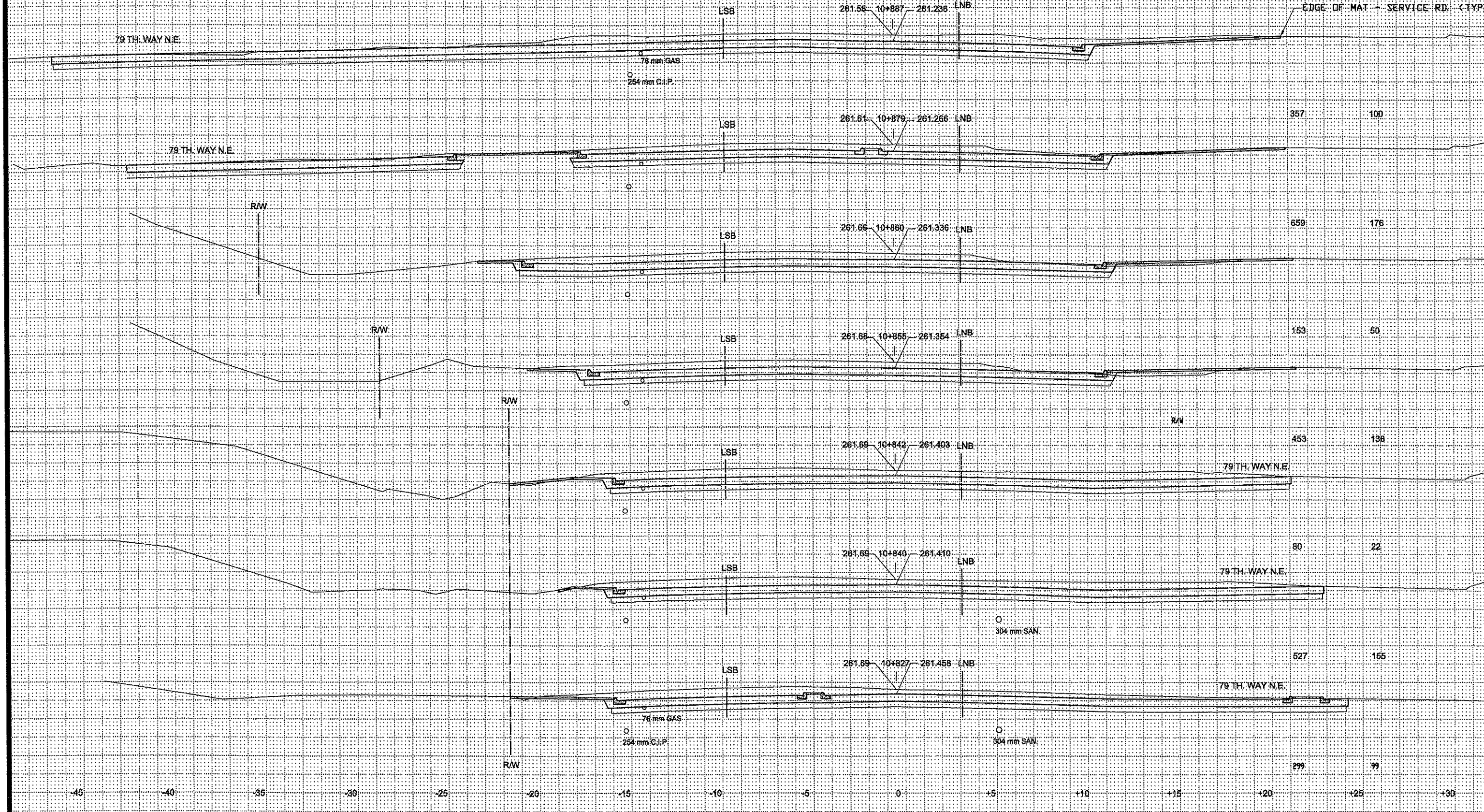


ANOKA COUNTY  
 HIGHWAY DEPT.

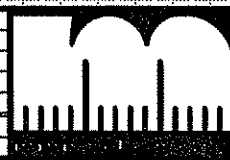
STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 10+754.000 TO 10+820.000  
 Sheet 46 of 93 Sheets

COMMON EXCAVATION    EMBANKMENT  
 EXC. #3                      EMB. #3  
 EDGE OF MAT - SERVICE RD. (TYP)



NO.	DATE	BY	CKD	APPR	REVISION



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 1/13/98 REG. NO. 12183

DRAWN BY MJN DATE 1/25/98  
 DESIGN BY KAJ DATE 1/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



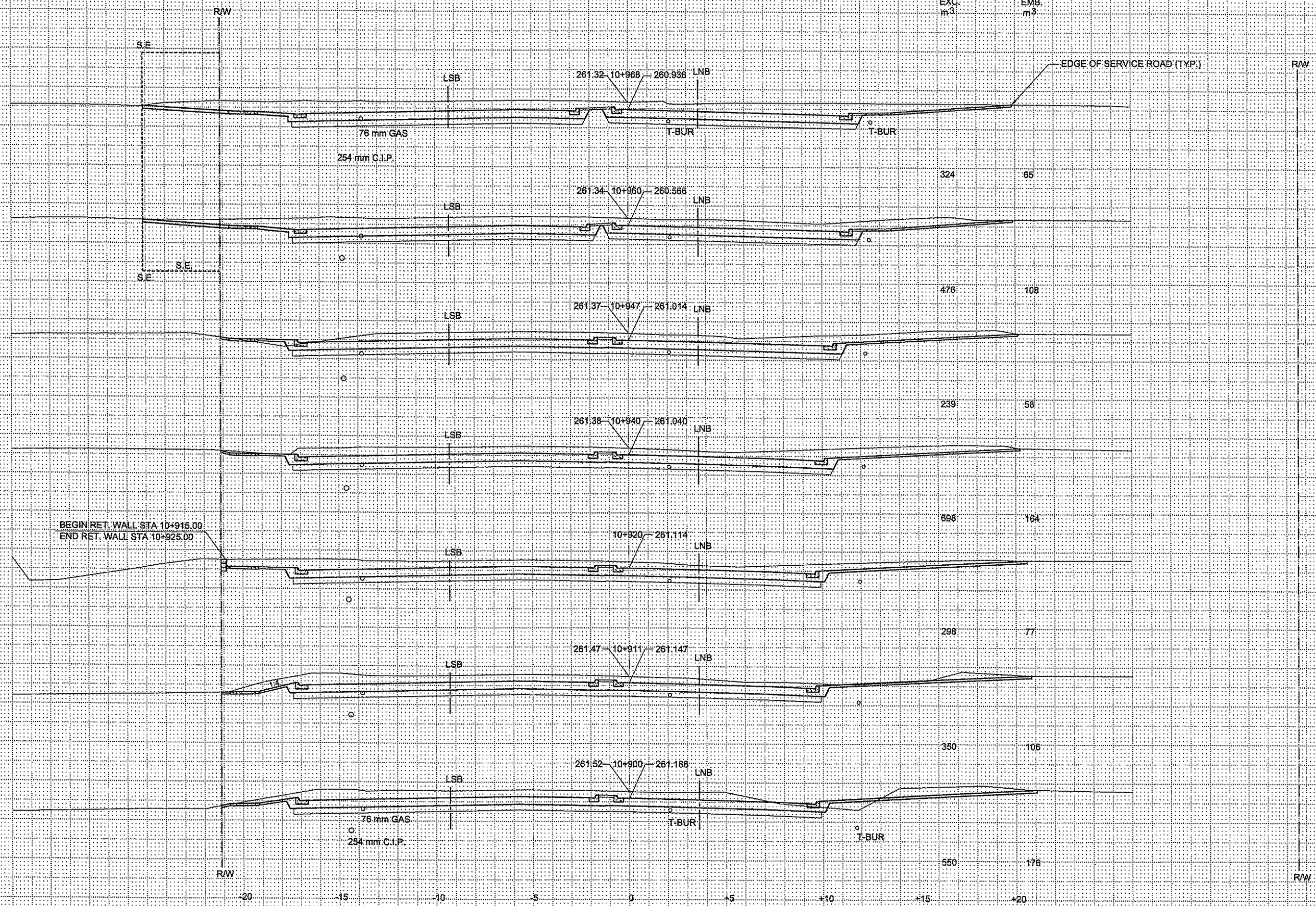
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

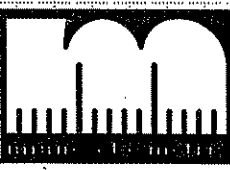
CROSS-SECTION  
 STA 10+827.000 TO 10+887.000  
 Sheet 47 of 93 Sheets

COMMON EXCAVATION  
EXC.  
m<sup>3</sup>

EMBANKMENT  
EMB.  
m<sup>3</sup>



NO.	DATE	BY	CKD	APPR	REVISION



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 11/13/98 REG. NO. 12183

DRAWN BY MN DATE 1/25/98  
 DESIGN BY KGJ DATE 1/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 10+900.000 TO 10+968.000  
 Sheet 48 of 93 Sheets





NO.	DATE	BY	CKD	APPR	REVISION



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 11/25/98 REG. NO. 12183

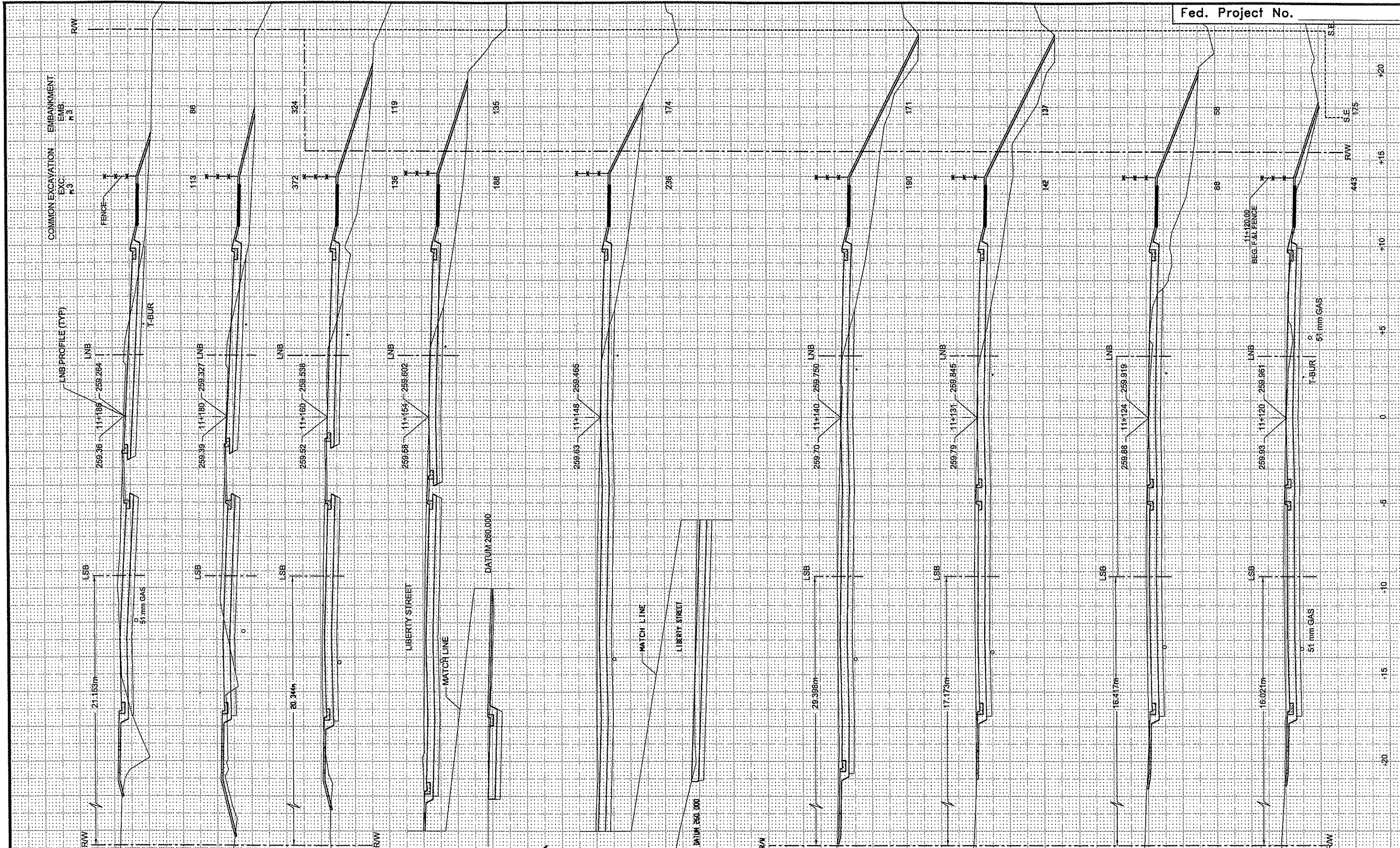
DRAWN BY MN DATE 11/25/98  
 DESIGN BY HGJ DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 10+980.000 TO 11+100.000  
 Sheet 49 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

DATE 11/13/98 REG. NO. 62183

DRAWN BY MN DATE 11/25/98  
 DESIGN BY KaJ DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

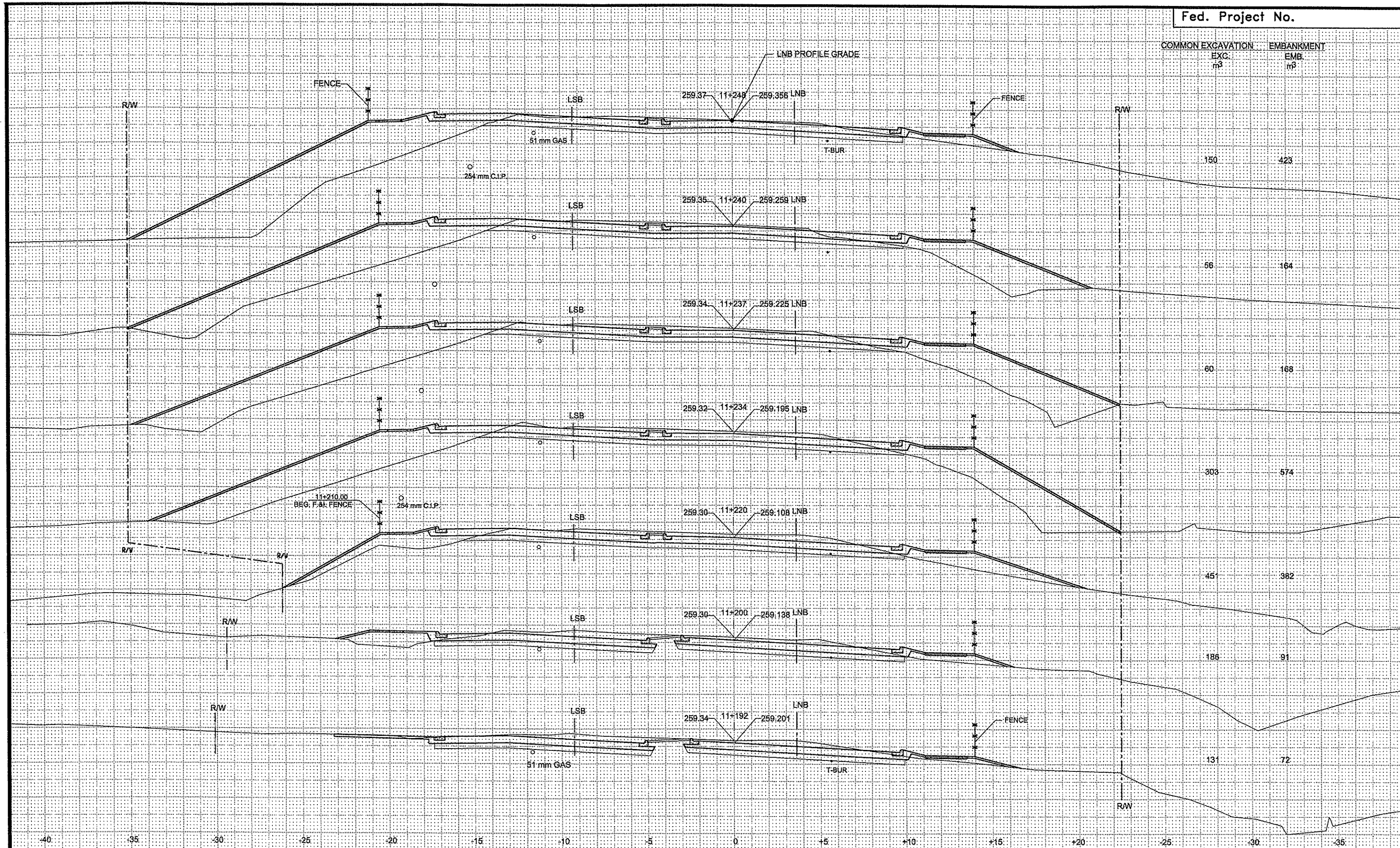


ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 11+120.00 TO 11+186.000  
 Sheet 50 of 93 Sheets

COMMON EXCAVATION	EMBANKMENT
EXC. m³	EMB. m³
150	423
56	164
60	168
303	574
451	382
186	91
131	72



NO	DATE	BY	CKD	APPR	REVISION



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

DATE 11/13/98 REG. NO. 12183

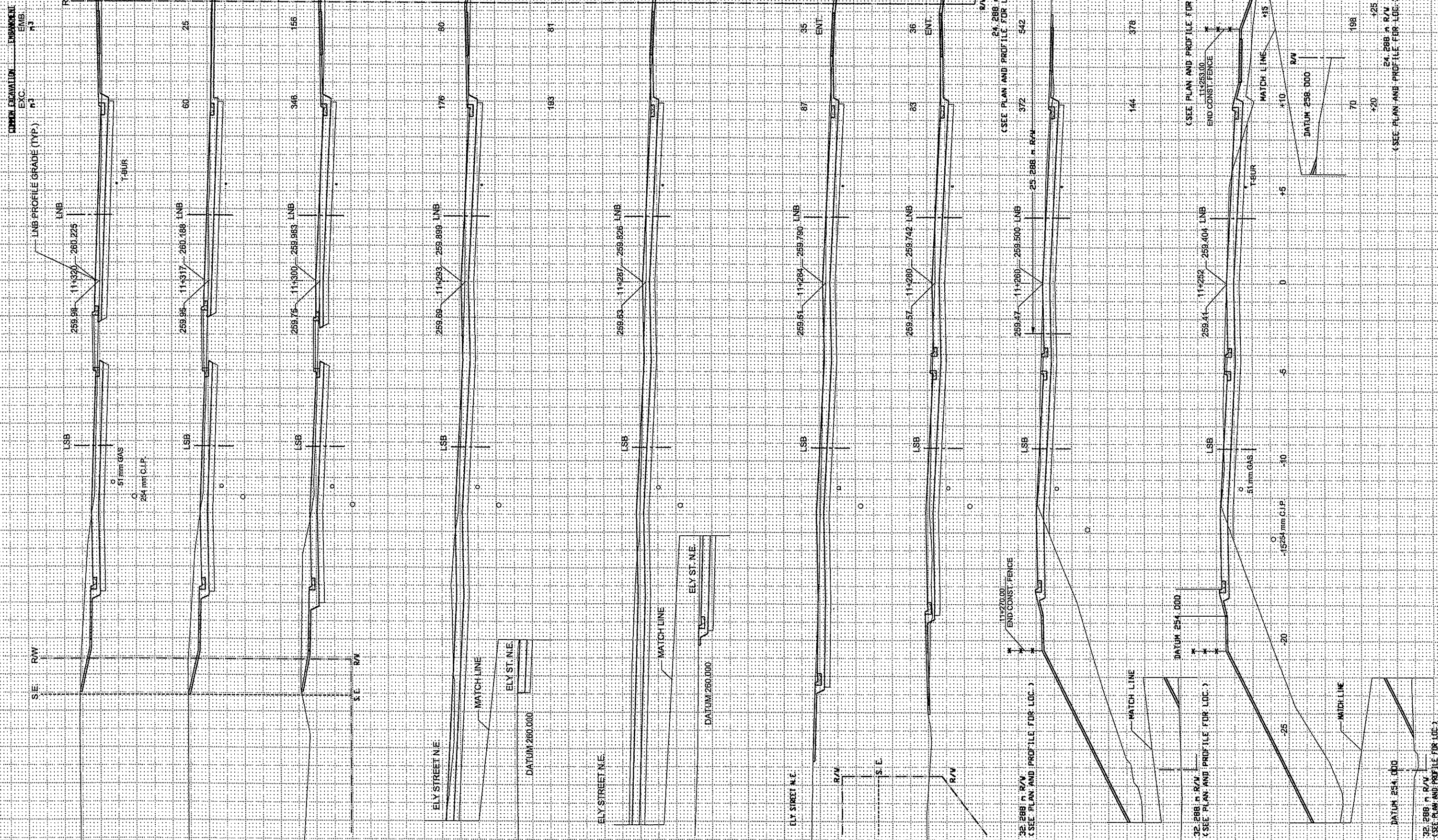
DRAWN BY MN DATE 11/25/98  
 DESIGN BY KGJ DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 11+192.000 TO 11+248.000  
 Sheet 51 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION
1	8-17-98				

NAME: SECT15.dwg 8-17-98 5:48:20 pm EST



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 11/13/98 REG. NO. 62183

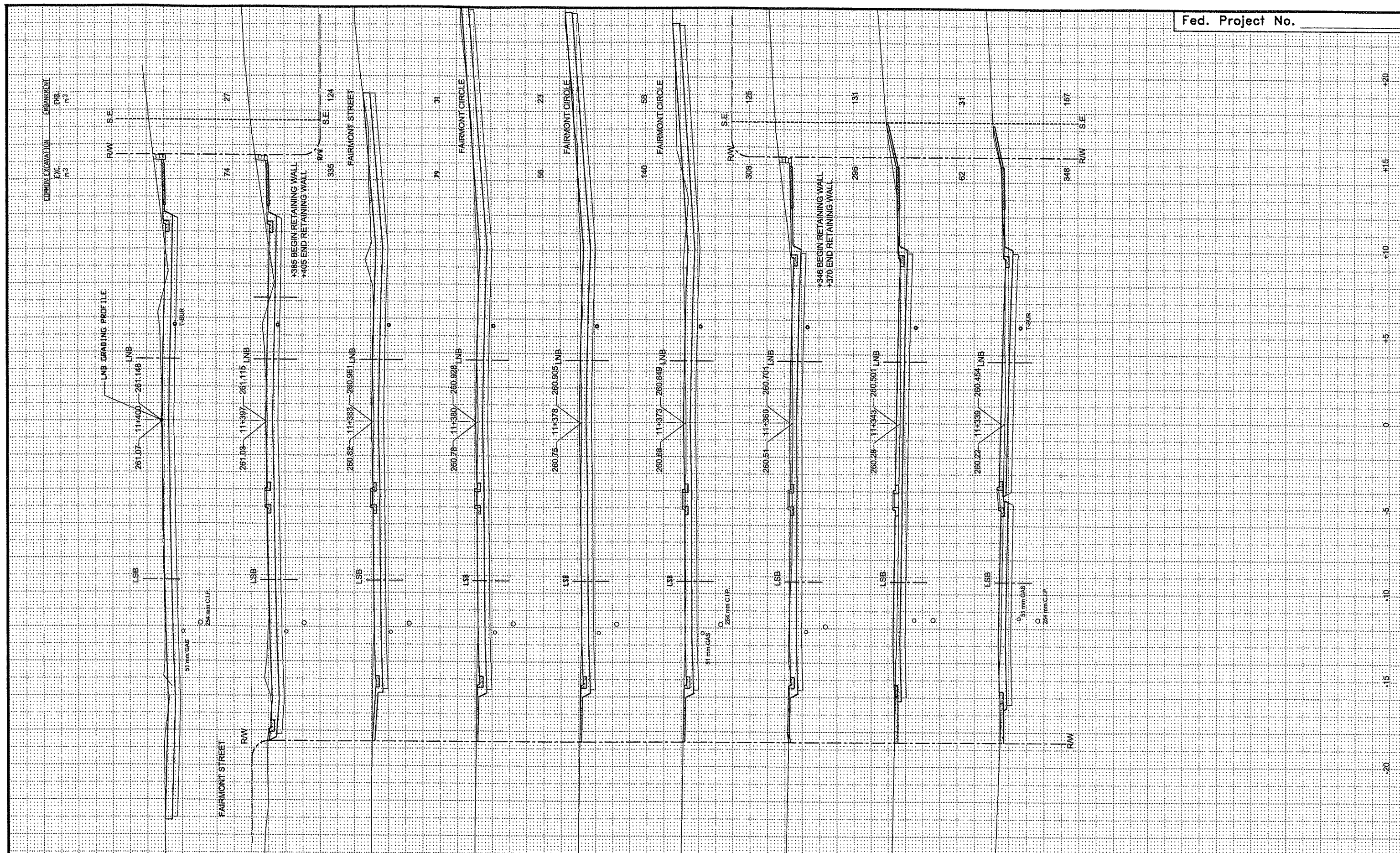
DRAWN BY MN DATE 11/27/98  
 DESIGN BY K&J DATE 11/24/98  
 CHECKED BY DATE



ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO.

CROSS-SECTION  
 STA 11+252.000 TO 11+320.000  
 Sheet 52 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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 11/3/98 REG. NO. 12183

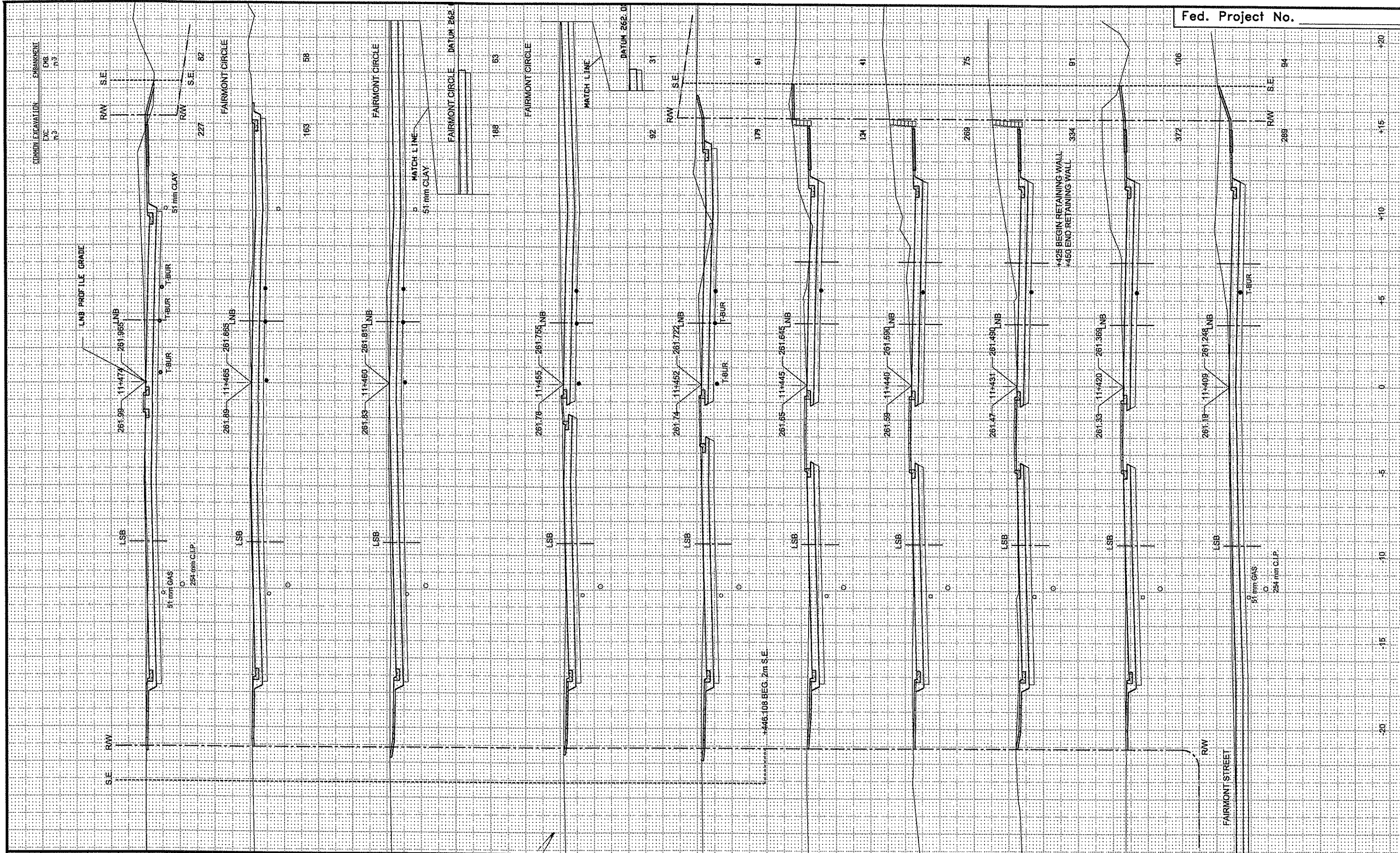
DRAWN BY MN DATE 11/25/98  
 DESIGN BY LGJ DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



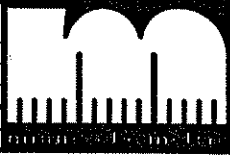
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 11+339.000 TO 11+400.000  
 Sheet 53 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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 11/16/98 REG. NO. 62183

DRAWN BY MN DATE 11/25/98  
 DESIGN BY R.G.J. DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 11+409.000 TO 11+474.000  
 Sheet 54 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: SECT18.dwg 3/99 114813



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: 2/4/99 REG. NO. 12153

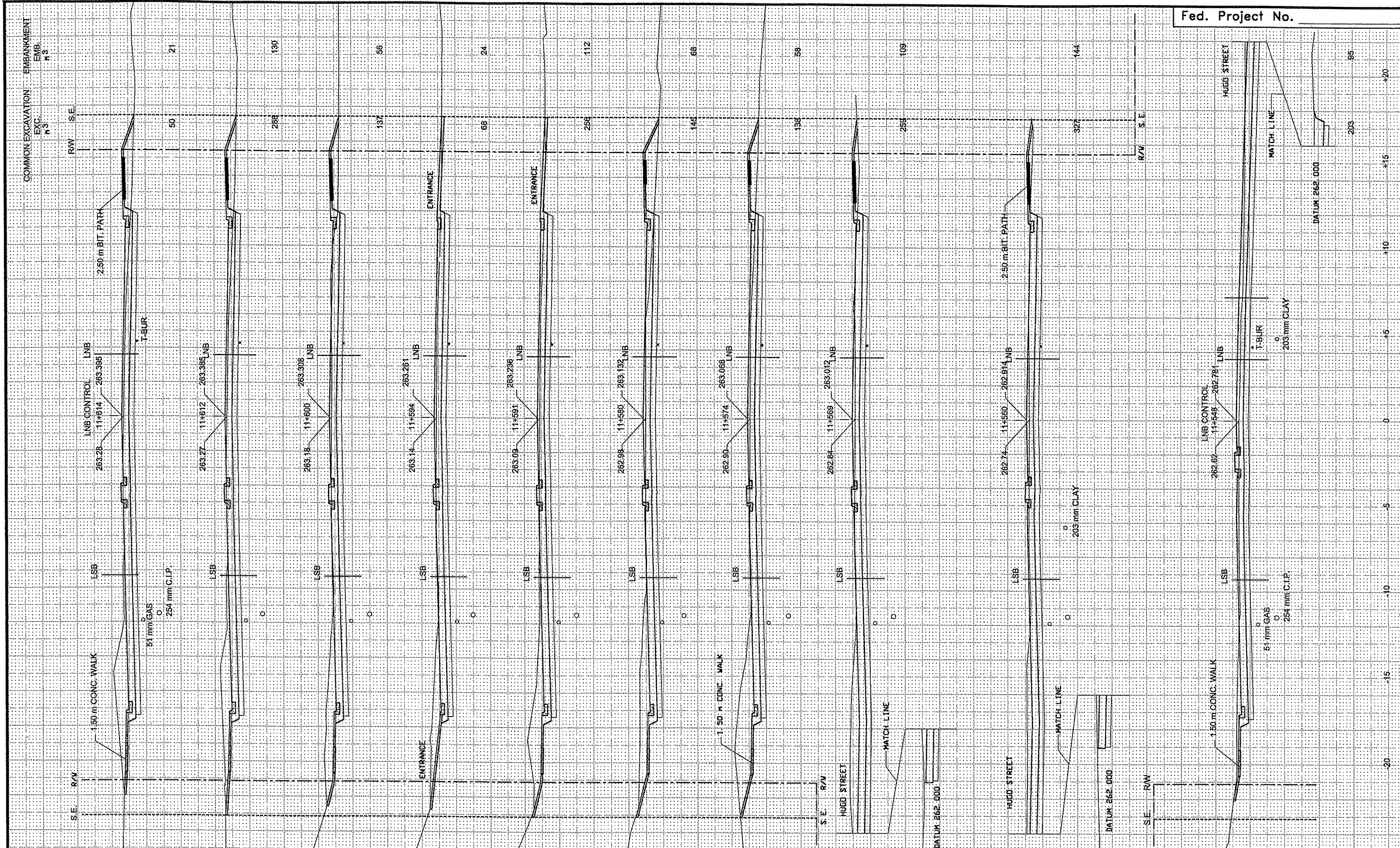
DRAWN BY \_\_\_\_\_ MN DATE 03/01/99  
 DESIGN BY \_\_\_\_\_ KGJ DATE 03/01/99  
 CHECKED BY \_\_\_\_\_ LR DATE 03/01/99



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS- SECTION  
 STA 11+480.000 TO 11+540.000  
 Sheet 55 of 93 Sheets



NO.	DATE	BY	CKD	APPR	REVISION



BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 DATE 11/13/98 REG. NO. 62183

DESIGNED BY *KGJ* DATE 11/25/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

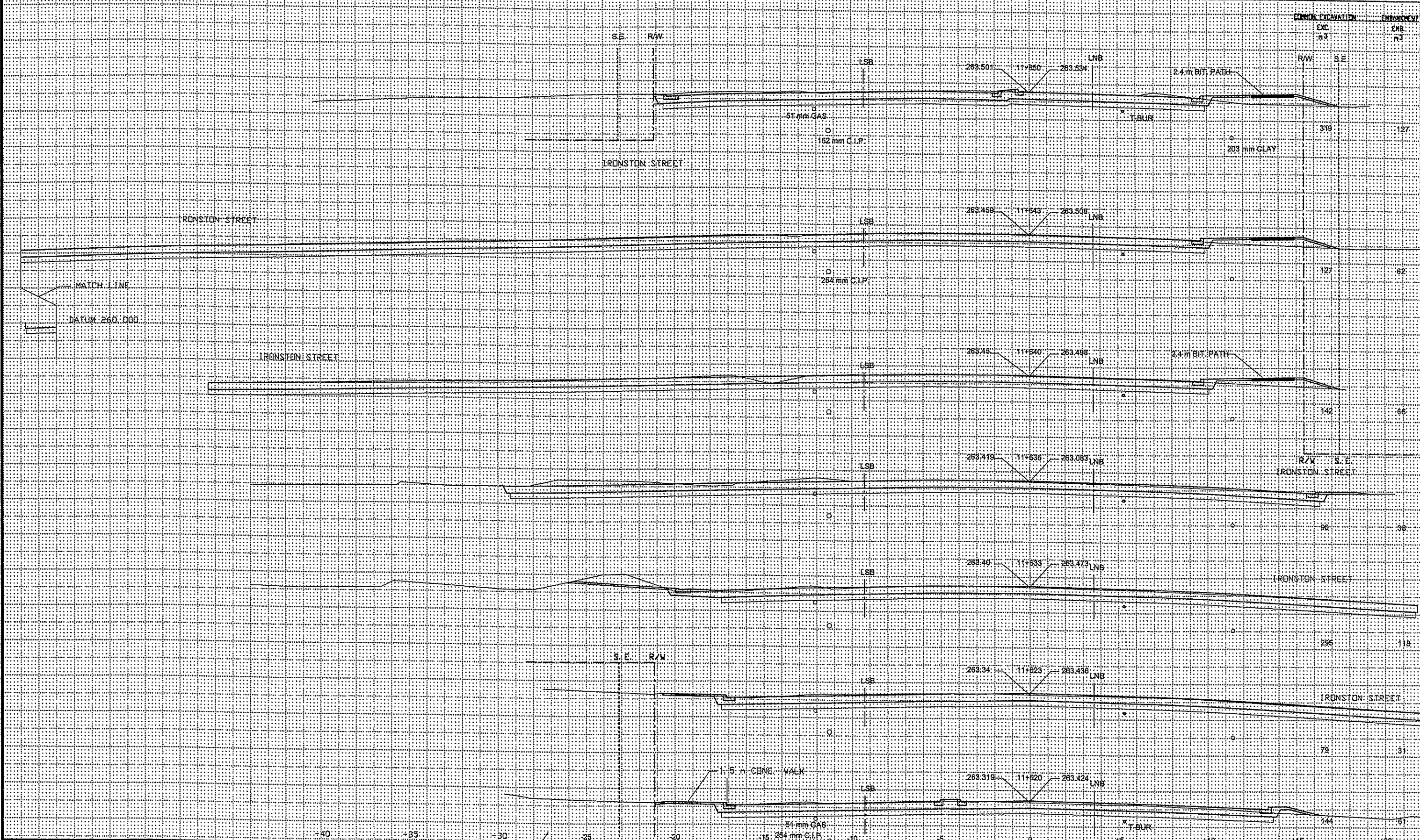


ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 11+548.000 TO 11+614.000  
 Sheet 56 of 93 Sheets





NO	DATE	BY	CKD	APPR	REVISION



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 3/4/99 REG. NO. 12182

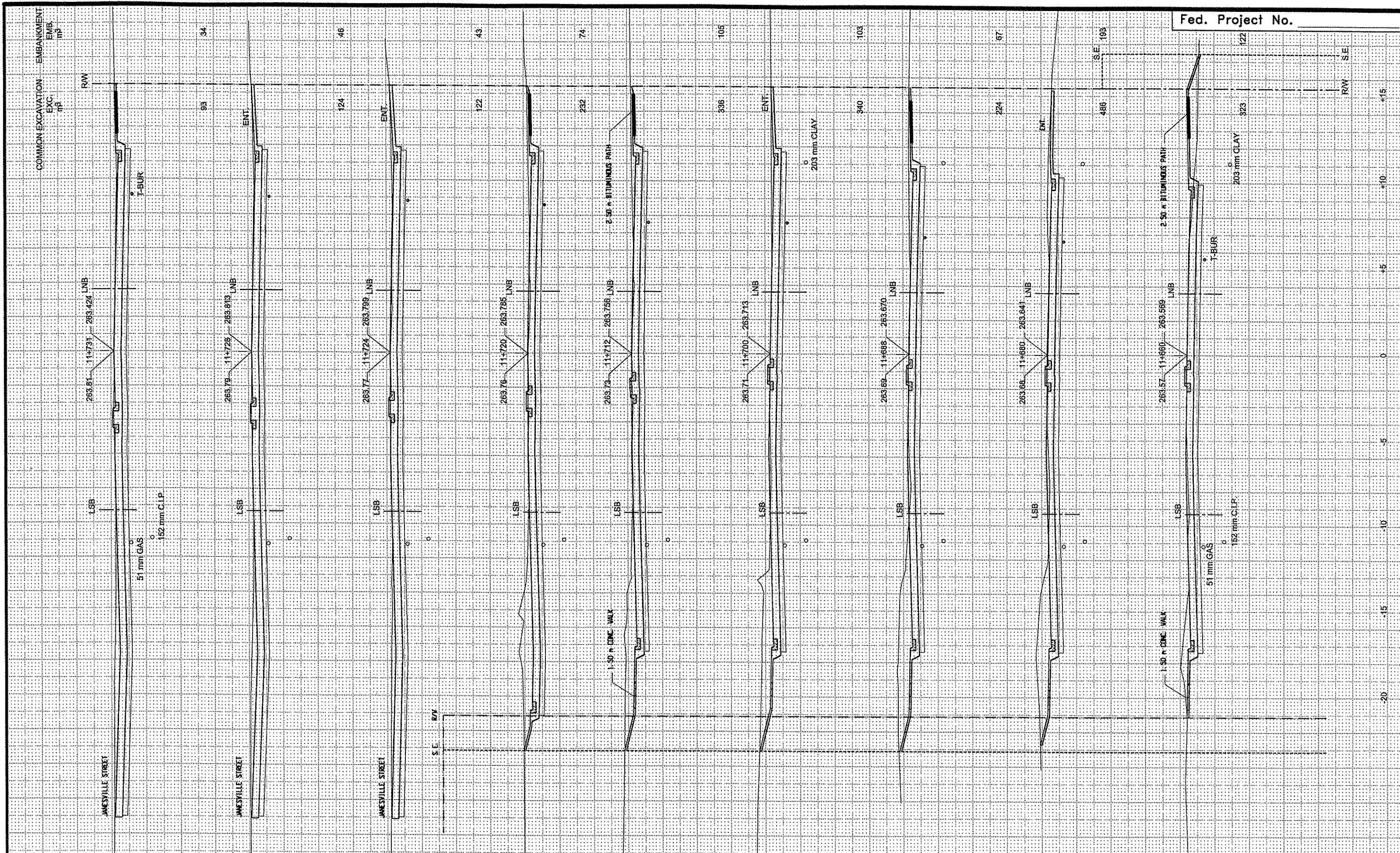
DRAWN BY: HN DATE 02/01/99  
 DESIGN BY: KGJ DATE 02/01/99  
 CHECKED BY: LR DATE 02/01/99



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO.

CROSS-SECTION  
 STA 11+620.000 TO 11+650.000  
 Sheet 57 of 93 Sheets



NO	DATE	BY	CKD	APPR	REVISION



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 11/23/98 REG. NO. 12183

DRAWN BY MAN DATE 11/23/98

DESIGN BY KGI DATE 11/23/98

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37

STATE PROJECT NO. 127-020-20

STATE PROJECT NO. 114-020-18

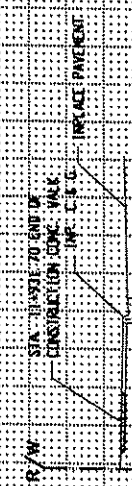
COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
STA 11+660.000 TO 11+731.000

Sheet 58 of 93 Sheets

COMMON EXCAVATION  
EXC  
mp

EMBANKMENT  
EMB  
mp



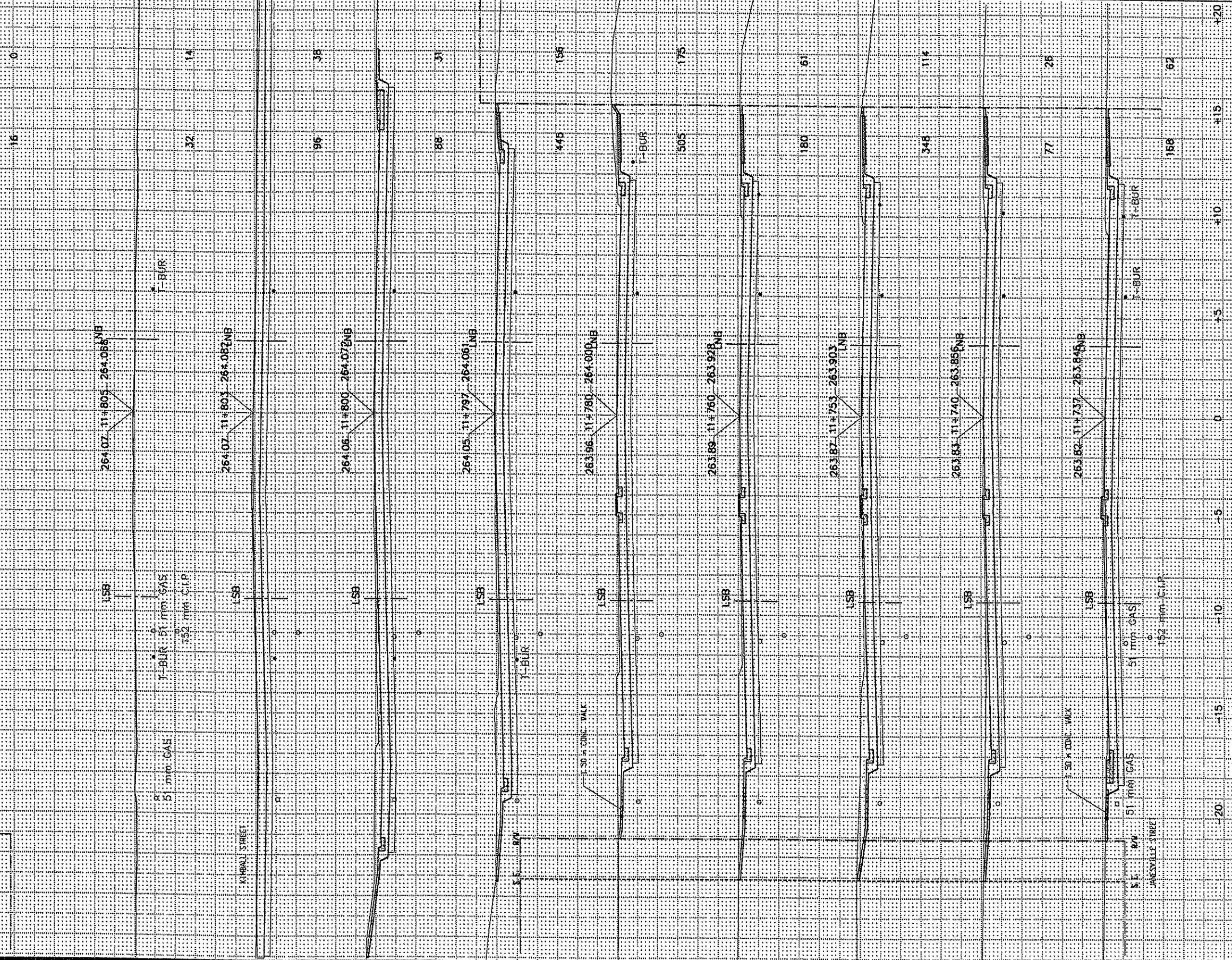
5' min. GAS  
T-BUR 51 mm GAS  
152 mm C.I.P.

KIMBALL STREET

5' min. CONC. WALK

5' min. GAS  
152 mm C.I.P.

JONESVILLE STREET



NO	DATE	BY	CKD	APPR	REVISION
NAME	SECT22.dwg	3499	125014		



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 12/1/99 REG. NO. 12187

DRAWN BY MN DATE 03/01/99  
 DESIGN BY KGJ DATE 03/01/99  
 CHECKED BY LR DATE 03/01/99



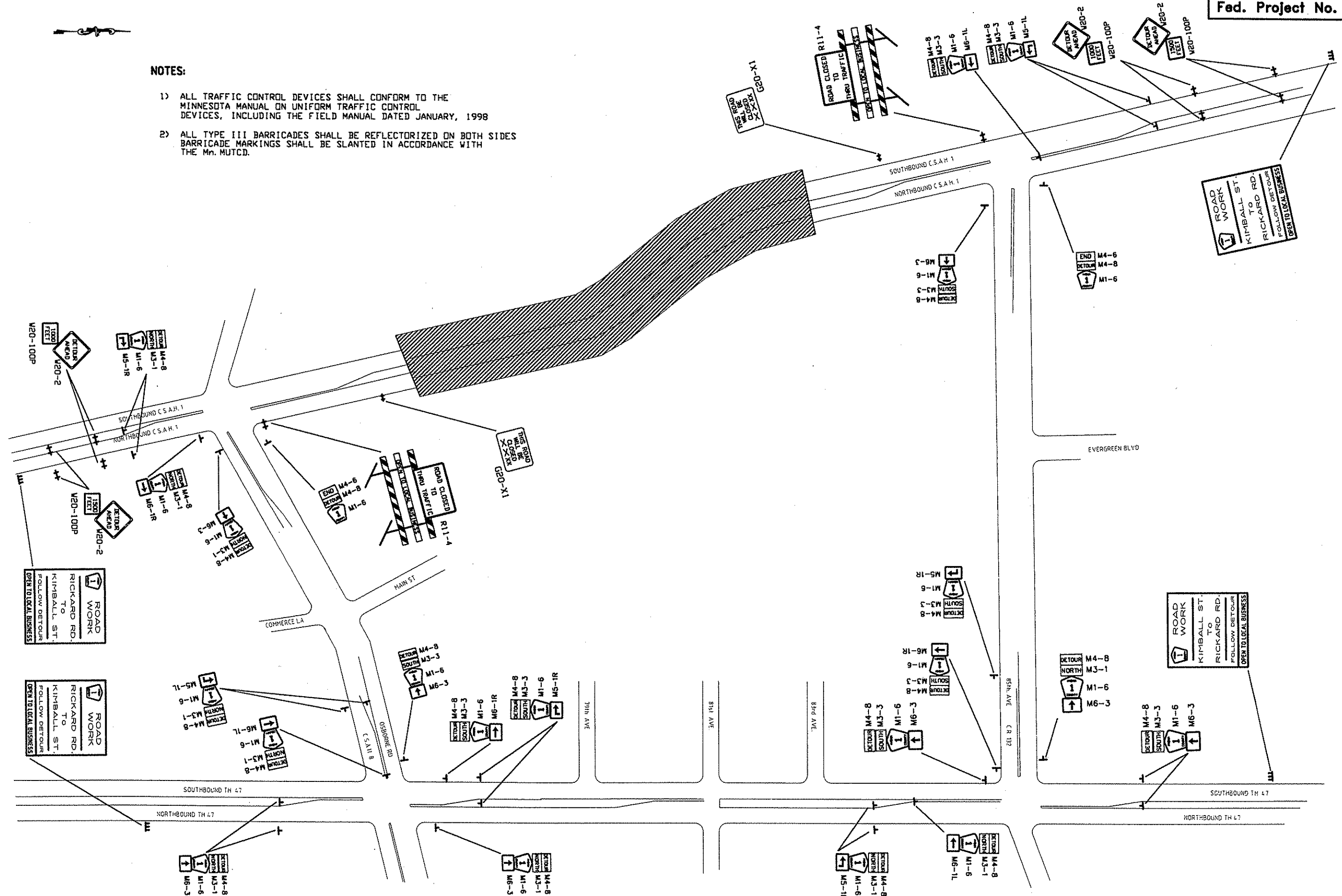
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

CROSS-SECTION  
 STA 11+737.000 TO 11+805.000  
 Sheet 59 of 93 Sheets

**NOTES:**

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 1998
- 2) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE Mn. MUTCD.



NO	DATE	BY	CHKD	APPR	REVISION



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.

*John A. Sall*  
 DATE 8/27/98 REG. NO. 12183

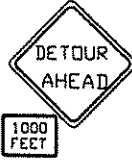
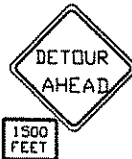

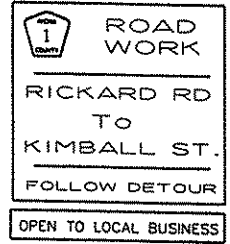
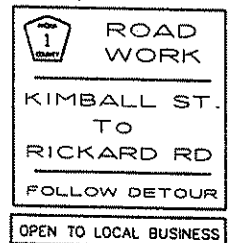

DRAWN BY D.M. DATE 3/98  
 DESIGN BY D.M. DATE 3/98  
 CHECKED BY J.P./R.B. DATE 6/98






**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

**DETOUR C.S.A.H. 1**

Sheet 60 of 93 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY
W20-2	48' x 48'		• 4
W20-100P	24' x 18'		
W20-2	48' x 48'		• 4
W20-100P	24' x 18'		
R11-4	60' x 30'		• 2
SIGN SPECIAL	84' x 12'		
TYPE III	8 FOOT		
G20-X2	96' x 84'		• 2
SIGN SPECIAL	96' x 12'		
G20-X2	96' x 84'		• 2
SIGN SPECIAL	96' x 12'		
G20-X1	60' x 48'		• 2

M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY
M4-8	24' x 12'		• 2
M3-1	24' x 12'		
M1-6	24' x 24'		• 4
	21' x 15'		
M4-8	24' x 12'		• 2
M3-3	24' x 12'		
M1-6	24' x 24'		• 2
	21' x 15'		
M4-6	24' x 12'		• 2
M4-8	24' x 12'		
M1-6	24' x 24'		

LETTER SIZE 'SC'  
BLACK ON ORANGE

LETTER SIZE '6C'  
BLACK ON ORANGE

LETTER SIZE '6C'  
BLACK ON ORANGE

SIGN TO BE INSTALLED A MINIMUM OF TEN DAYS  
PRIOR TO ACTUAL CLOSING DATE OF ROAD  
CLOSURE AND IMPLEMENTATION OF DETOUR SIGNING.  
SIGNS TO BE REMOVED AT TIME OF DETOUR INSTALLATION.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 1998
- ALL BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE Mn. MUTCD.

NO	DATE	BY	CKD	APPR	REVISION



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.

DATE 3/14/99 REG. NO. 12183

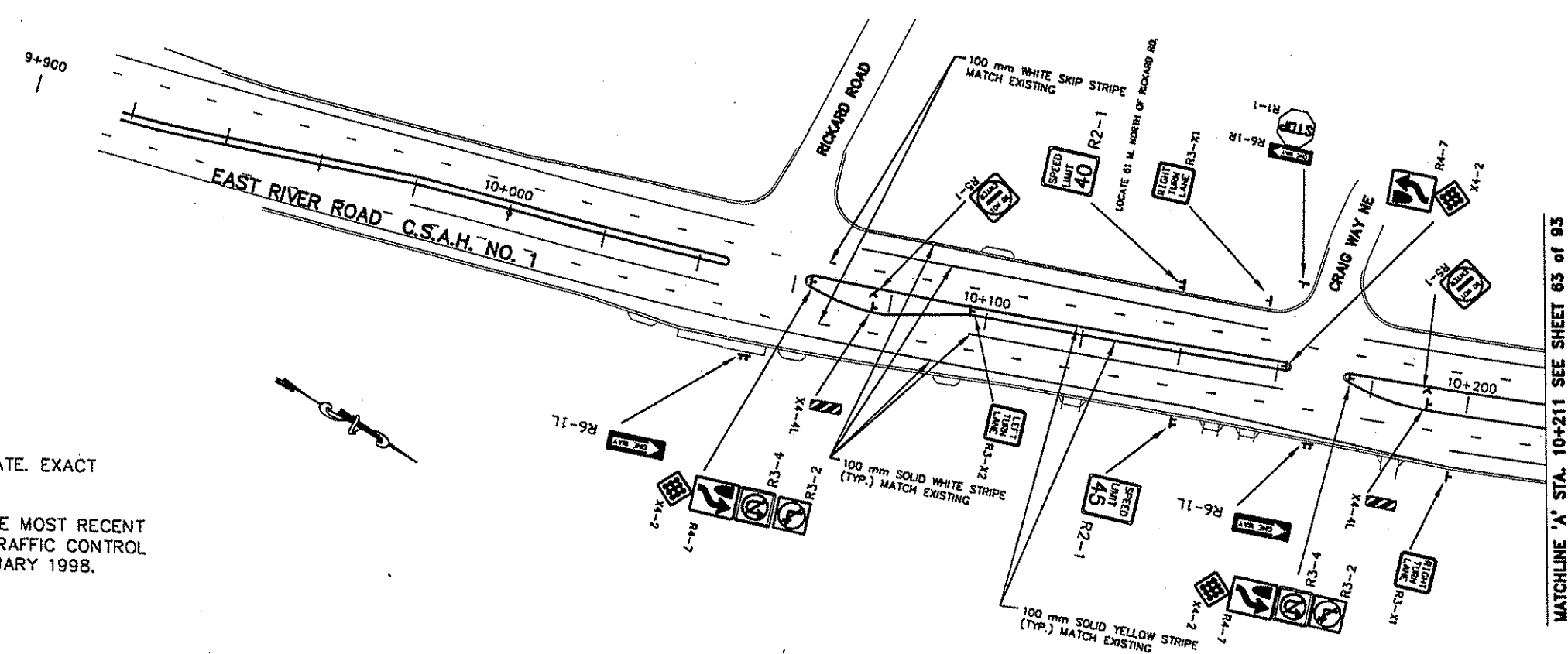
DRAWN BY D.M. DATE 3/98  
 DESIGN BY D.M. DATE 3/98  
 CHECKED BY J.P./R.B. DATE 5/98



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. 127-020-20  
 STATE AID PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

DETOUR QUANTITY  
C.S.A.H. 1  
Sheet 61 of 93 Sheets



**NOTES:**

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 1998.

MATCHLINE 'A' STA. 10+211 SEE SHEET 63 OF 93

NO	DATE	BY	CHKD	APPR	REVISION



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 3/4/99 REG. NO. 12183

DRAWN BY Dm DATE 3/99  
 DESIGN BY Dm DATE 3/99  
 CHECKED BY BR DATE 3/99

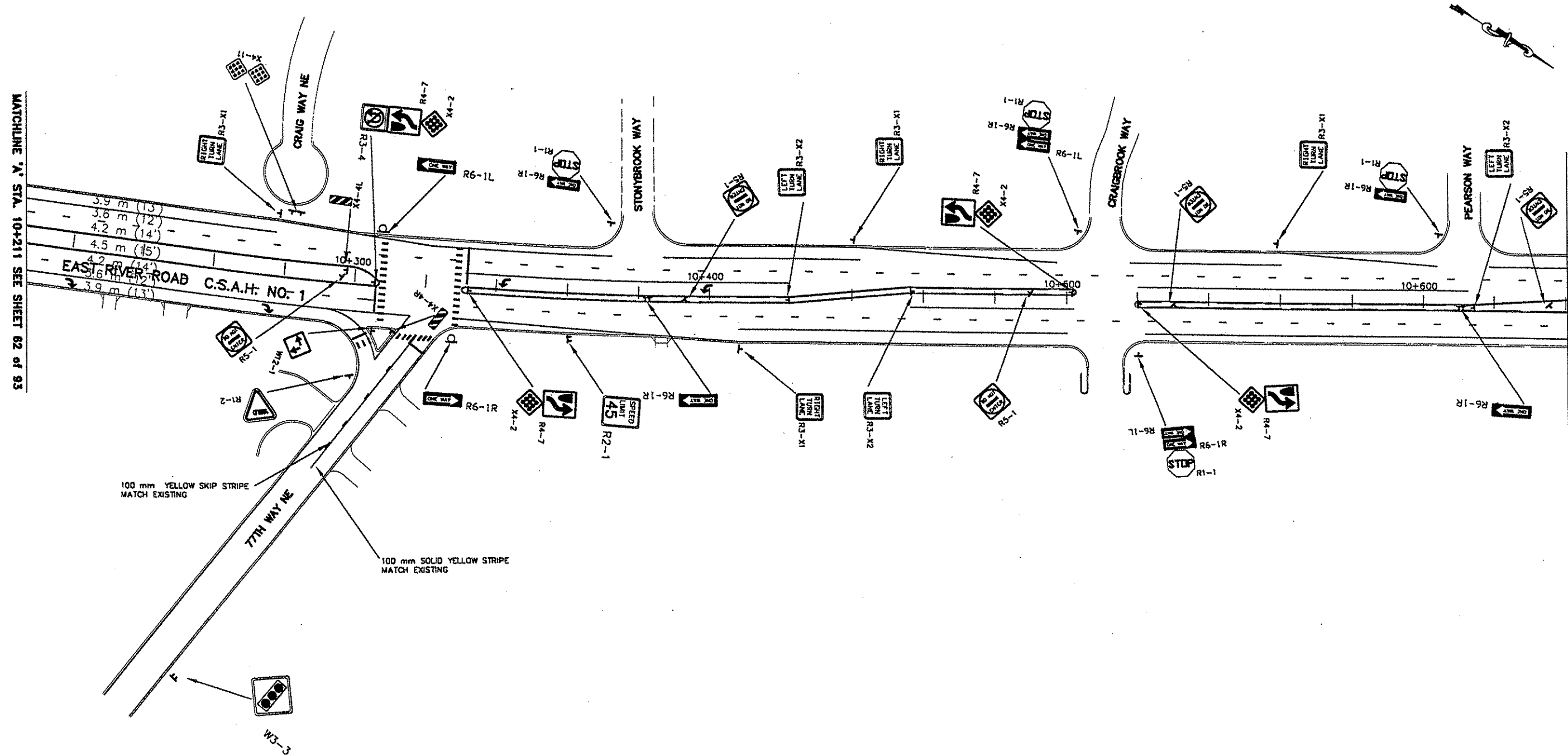


**ANOKA COUNTY  
 HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE AID PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**SIGNING /  
 STRIPING DETAILS**

Sheet 62 of 93 Sheets



100 mm YELLOW SKIP STRIPE MATCH EXISTING

100 mm SOLID YELLOW STRIPE MATCH EXISTING

NOTES:

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 1998.

NO	DATE	BY	CHKD	APPR	REVISION



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.

DATE 3/4/99 REG. NO. 12185

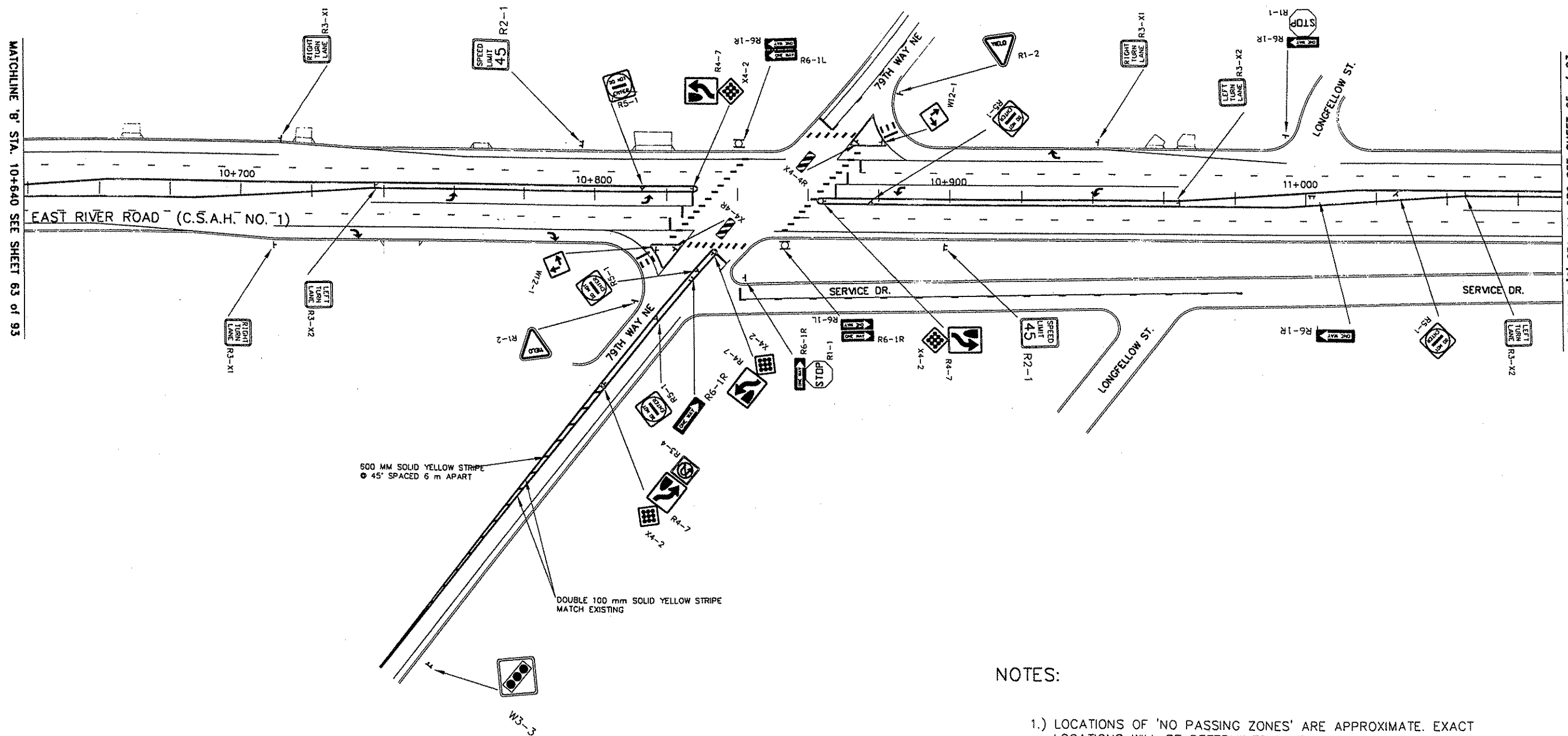
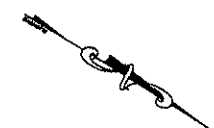
DRAWN BY DM DATE 3/99  
 DESIGN BY DM DATE 3/99  
 CHECKED BY LR DATE 3/99



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE AID PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

SIGNING / STRIPING DETAILS  
 Sheet 63 of 93 Sheets



MATCHLINE 'B' STA. 10+640 SEE SHEET 63 OF 93

MATCHLINE 'C' STA. 11+072 SEE SHEET 65 OF 93

NOTES:

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 1998.

NO	DATE	BY	CKD	APPR	REVISION



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 3/4/99 REG. NO. R2183

DRAWN BY DM DATE 3/99  
 DESIGN BY DM DATE 3/99  
 CHECKED BY LR DATE 3/99

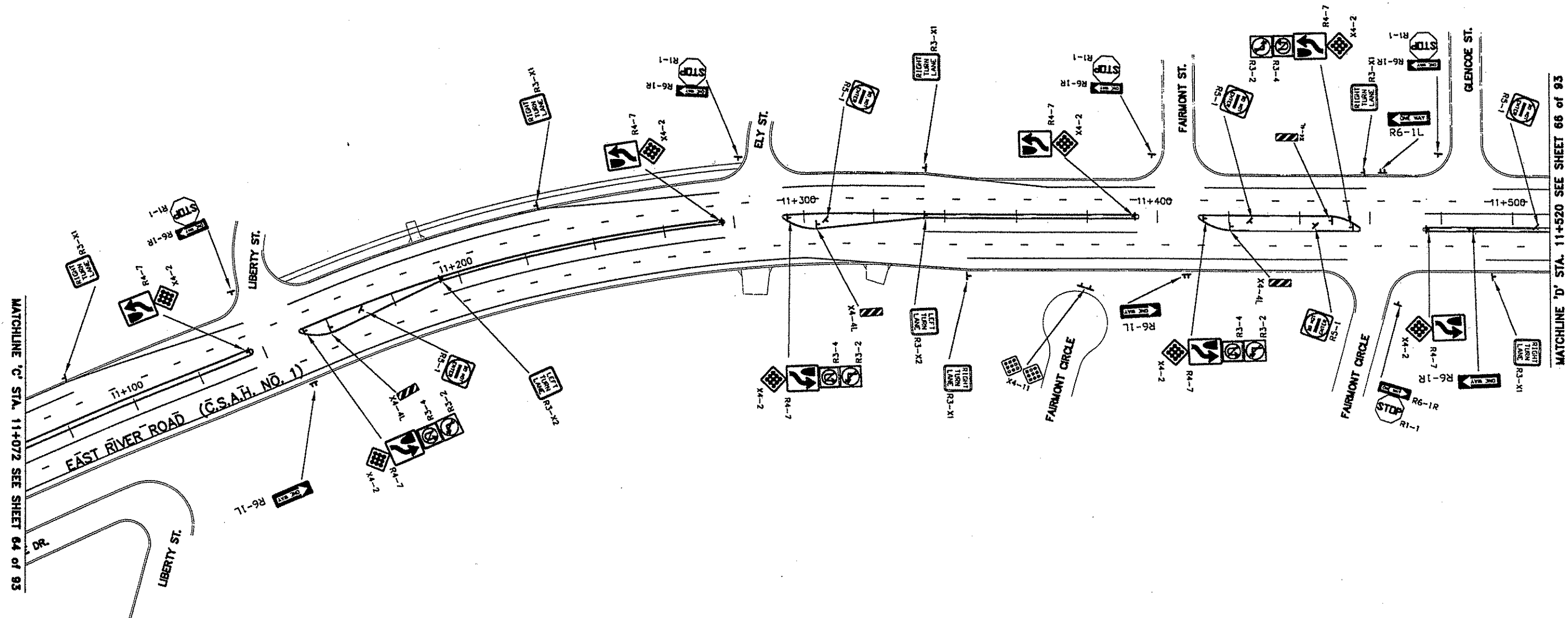


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE AID PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

SIGNING /  
STRIPING DETAILS





MATCHLINE 'C' STA. 11+072 SEE SHEET 64 OF 93

MATCHLINE 'D' STA. 11+520 SEE SHEET 66 OF 93

**NOTES:**

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 1998.

NO	DATE	BY	CHKD	APPR	REVISION



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 3/4/99 REG. NO. 12183

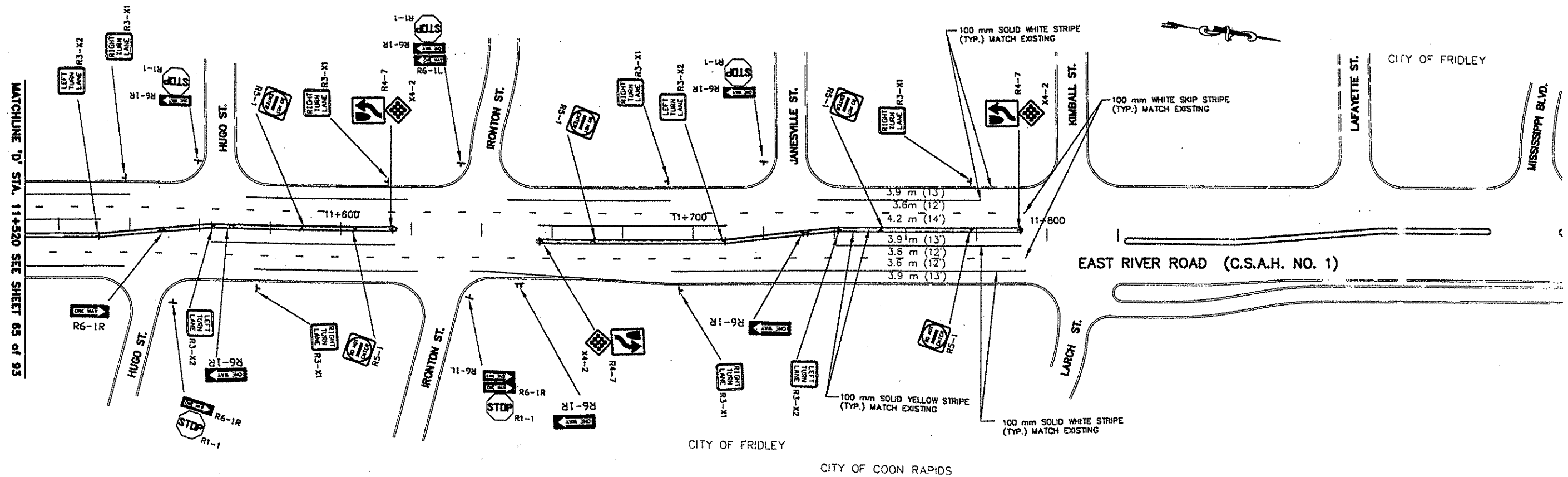
DRAWN BY DM DATE 3/99  
 DESIGN BY DM DATE 3/99  
 CHECKED BY LR DATE 3/99



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE AID PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**SIGNING / STRIPING DETAILS**  
 Sheet 65 of 93 Sheets



MATCHLINE 'D' STA. 11+920 SEE SHEET 65 OF 93

**NOTES:**

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 1998.

NO	DATE	BY	CHKD	APPR	REVISION



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 3/4/99 REG. NO. 12183

DRAWN BY DM DATE 3/99  
 DESIGN BY DM DATE 3/99  
 CHECKED BY LR DATE 3/99



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE AID PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

**SIGNING /  
STRIPING DETAILS**

Sheet 66 of 93 Sheets

M. U. T. C. D. CODE	SIZE	PANEL AREA		INSERT	No. of ISLAND MOUNT INSTALL		No. GROUND POST MOUNT INSTALL		MOUNTING HEIGHT		M. U. T. C. D. CODE	SIZE	PANEL AREA		INSERT	No. of ISLAND MOUNT INSTALL		No. GROUND POST MOUNT INSTALL		MOUNTING HEIGHT	
		FT. <sup>2</sup>	M <sup>2</sup>		FT.	M	FT.	M	FT.	M			FT. <sup>2</sup>	M <sup>2</sup>		FT.	M	FT.	M		
R1-1	30" x 30"	6.25	.581	STOP	0	17	1	7.0'	2.13		W3-3	36" x 36"	9.00	.836	Signal	0	2	2	7.0'	2.13	
R1-2	36" x 36" x 36"	3.90	.362	YIELD	0	3	1	7.0'	2.13		W12-1	24" x 24"	4.00	.372	Warning	3	0	1	4.0'	1.22	
R2-1	36" x 48"	12.00	1.115	SPEED LIMIT 40	0	1	2	7.0'	2.13		X4-2	18" x 18"			Sign	22	0	⑤			
R2-1	36" x 48"	12.00	1.115	SPEED LIMIT 45	0	4	2	7.0'	2.13		X4-11	18" x 18"			Sign	0	4	1	4.0'	1.22	
R3-2	24" x 24"	4.00	.372	No Left Turn	6	0	①				X4-4L	12" x 36"			Striping	7	0	1	4.0'	1.22	
R3-4	24" x 24"	4.00	.372	No Right Turn	8	0	①				X4-4R	12" x 36"			Striping	3	0	1	4.0'	1.22	
R3-X1	30" x 30"	6.25	.581	RIGHT TURN LANE	0	21	1	7.0'	2.13												
R3-X2	30" x 30"	6.25	.581	LEFT TURN LANE	13	0	1	7.0'	2.13												
R4-7	24" x 30"	5.00	.465	Right Arrow	22	0	1	7.0'	2.13												
R5-1	30" x 30"	6.25	.581	DO NOT ENTER	22	0	1	7.0'	2.13												
R6-1R	36" x 12"	3.00	.279	ONE WAY	17	0	②														
R6-1L	36" x 12"	3.00	.279	ONE WAY	4	0	④														
R6-1R	48" x 18"	6.00	.557	ONE WAY	8	1	2	7.0'	2.13												
R6-1L	48" x 18"	6.00	.557	ONE WAY	0	5	2	7.0'	2.13												

- \*1. MOUNTED BACK TO BACK WITH R4-7
- \*2. MOUNTED ABOVE R1-1 (STOP)
- \*3. MOUNTED ON SIGNAL POLE
- \*4. MOUNTED BACK TO BACK WITH R6-1R ABOVE R1-1
- \*5. MOUNTED BELOW R4-7

NOTES:

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 1998.

NO	DATE	BY	CHKD	APPR	REVISION



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.

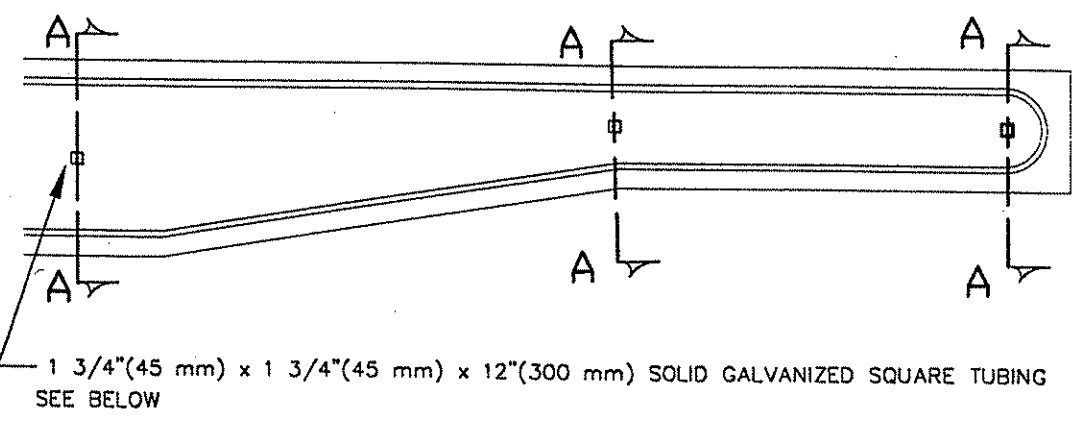
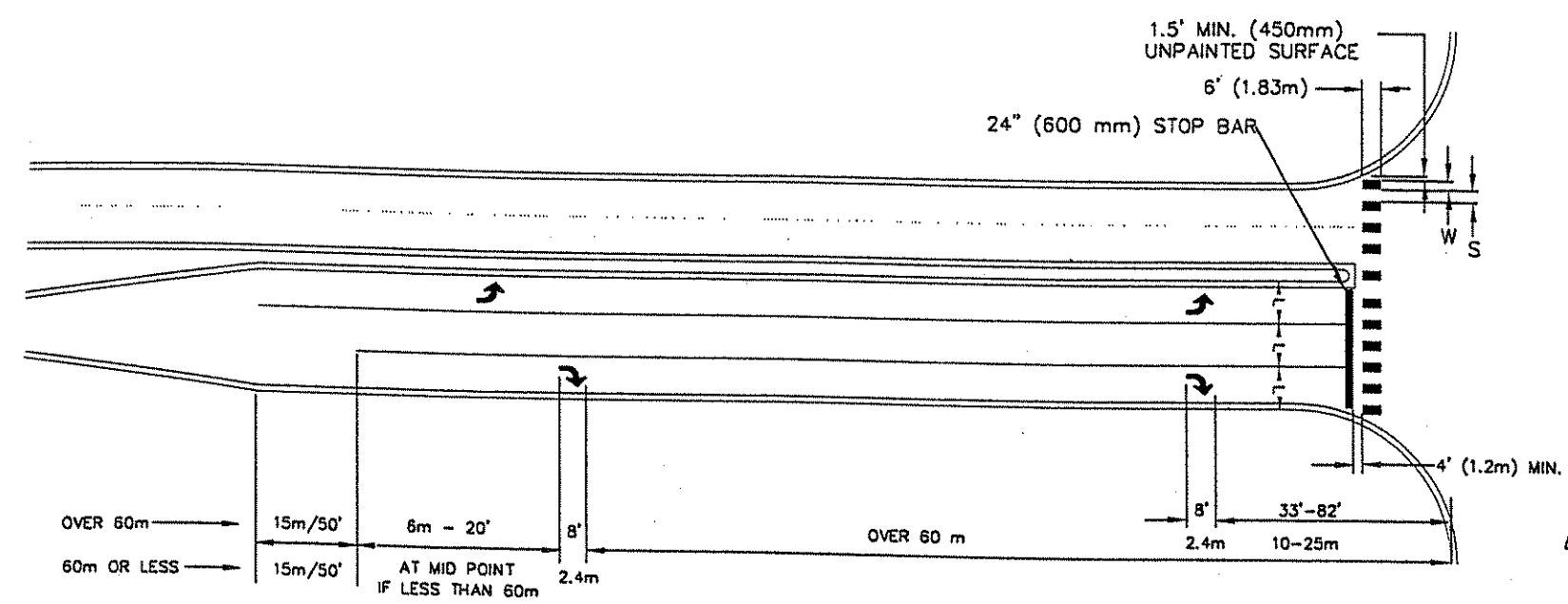
DATE 3/4/99 REG. NO. 12183

DRAWN BY DM DATE 3/99  
 DESIGN BY DM DATE 3/99  
 CHECKED BY LR DATE 3/99



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
 STATE PROJECT NO. 127-020-20  
 STATE AID PROJECT NO. 114-020-18  
 COUNTY PROJECT NO. \_\_\_\_\_

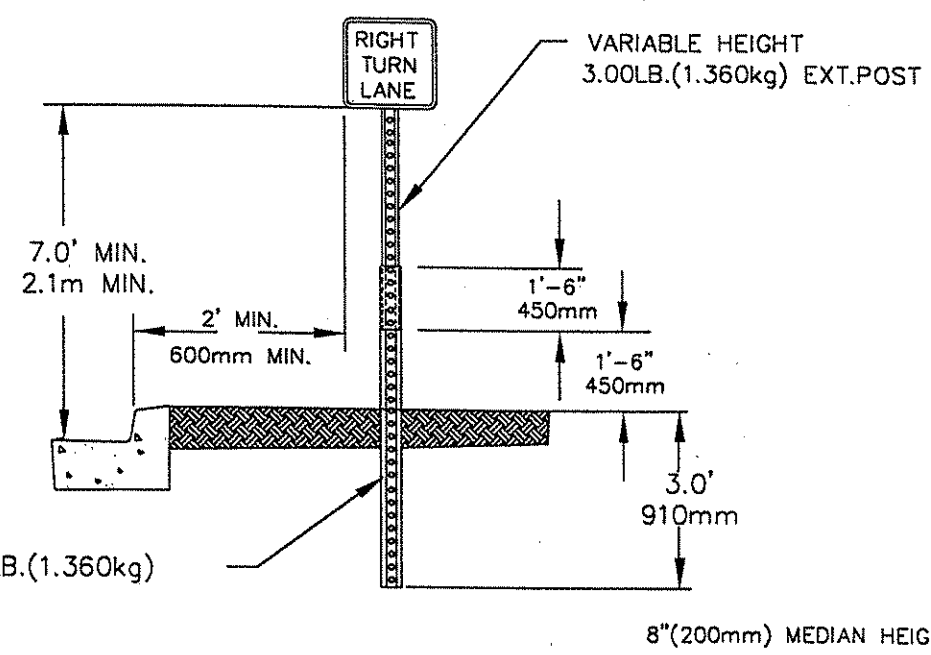


(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

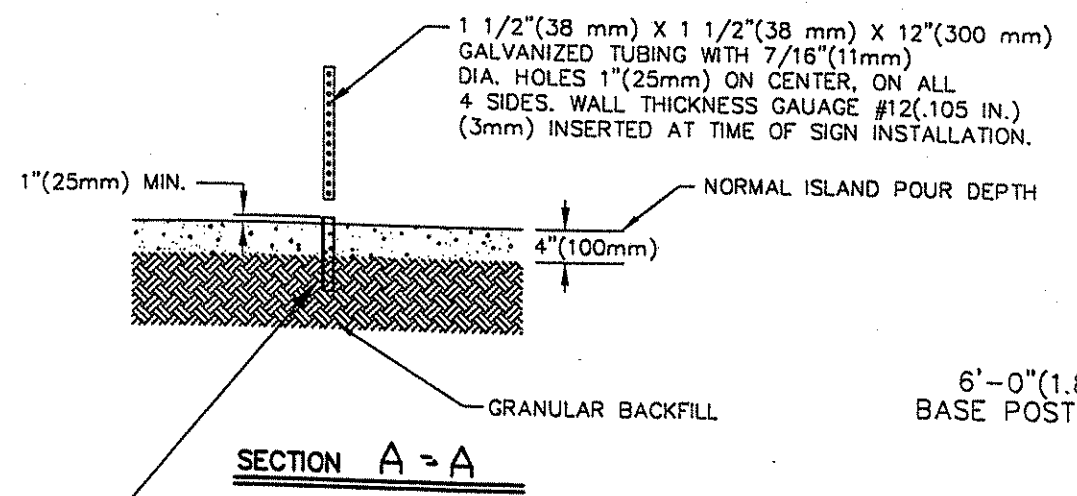
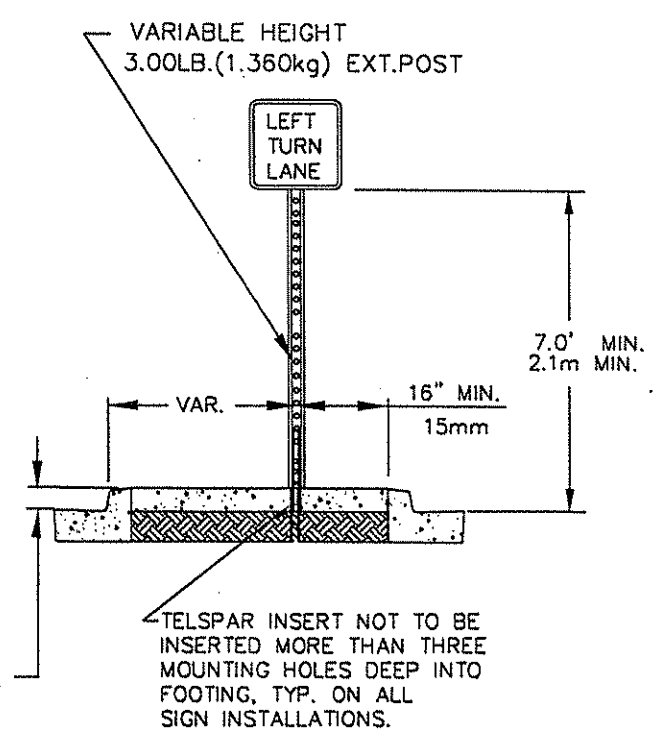
- NOTES: CROSSWALKS:**
- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
  - 2.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
  - 3.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
  - 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
  - 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3mm) NSIDE LANE.

(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	WIDTH OF SPACE
2.7m	600mm	750mm
3.0m	750mm	750mm
3.3m	750mm	900mm
3.6m	900mm	900mm
4.0m	900mm	1100mm

**GROUND POST MOUNT SIGN  
INSTALLATION TYPICAL**



**ISLAND MOUNT BREAK-AWAY SIGN  
INSTALLATION TYPICAL**



6'-0"(1.83m) 3.00 LB.(1.360kg) BASE POST

INSTALL 1 3/4"(45MM) X 1 3/4"(45mm) X 12"(300 mm) SOLID WALL GALVANIZED SQUARE TUBING BEFORE CONCRETE POUR. HAMMER INTO GROUND SO THAT 1" (25mm) OF TUBE IS ABOVE TOP OF CURB. RE-PLUMB AT TIME OF POUR.

NO	DATE	BY	CKD	APPR	REVISION



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 3/8/99 REG. NO. 12183

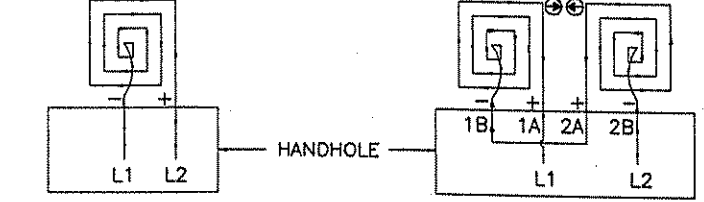
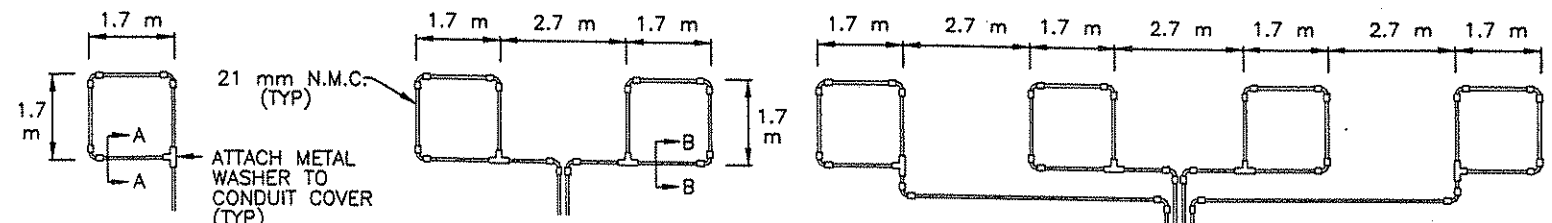
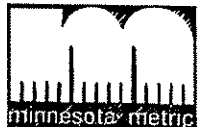
DRAWN BY DM DATE 3/99  
DESIGN BY DM DATE 3/99  
CHECKED BY LR DATE 3/99



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 02-601-37  
STATE PROJECT NO. 127-020-20  
STATE AID PROJECT NO. 114-020-18  
COUNTY PROJECT NO.

SIGNING / STRIPING DETAILS  
Sheet 68 of 93 Sheets



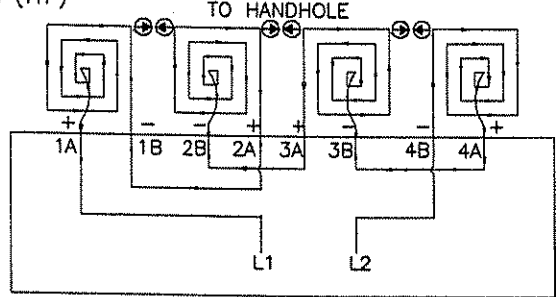
**LOOP DETECTOR  
DETAIL 'A'**  
(LOOP PHASING FOR  
SINGLE CONNECTION)

LOOP CONNECTIONS SHALL BE  
LABELED AND SPLICED IN THE  
HANDHOLE AS FOLLOWS:

- L1 TO 1A
- 1B TO 2A
- 2B TO L2

**LOOP DETECTOR  
DETAIL 'B'**  
(LOOP PHASING FOR  
SERIES CONNECTION)

LOOP RETURN CONDUITS  
MAY BE PLACED IN COMMON  
TRENCH (TYP)

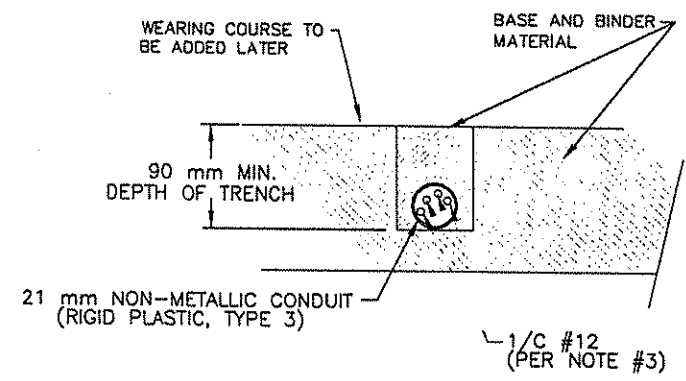


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED  
IN THE HANDHOLE AS FOLLOWS:

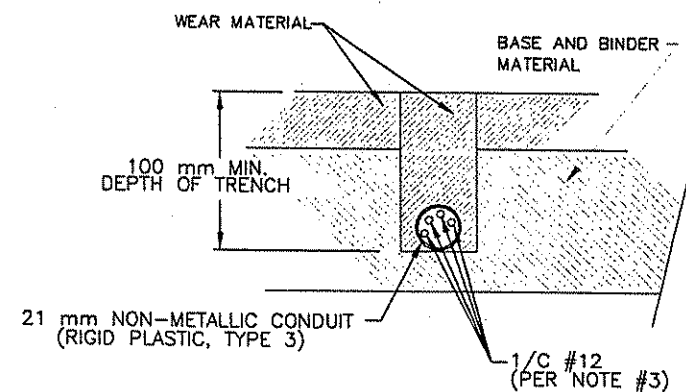
- L1 TO 1A
- 1B TO 2A
- 2B TO 3A
- 3B TO 4A
- 4B TO L2

SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE.  
ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE  
(1A, 1B, ECT)

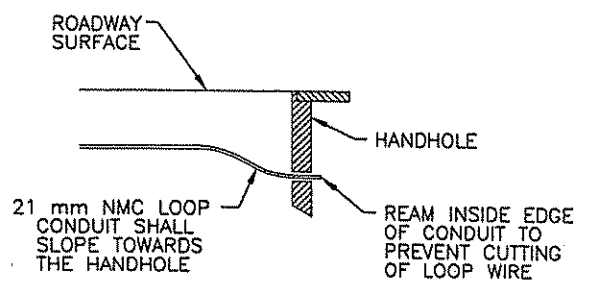
**LOOP DETECTOR  
DETAIL 'C'**  
(LOOP PHASING FOR  
SERIES CONNECTION)



**SECTION A-A**  
DETAIL FOR LOOP INSTALLATION  
IN NEW ROADWAY



**SECTION B-B**  
DETAIL FOR LOOP INSTALLATION  
IN EXISTING ROADWAY



**DRAINAGE DETAIL**

**LOOP DETECTOR WIRING**

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER 0.3 METER (1 FOOT) THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 1.7 m x 1.7 m THRU 1.7 m x 4.3 m SHALL HAVE (4) TURNS.
- 7) LOOPS 1.7 m x 4.6 m AND LARGER SHALL HAVE (2) TURNS.

**LEGEND OF SYMBOLS**

CONTROLLER AND SERVICE EQUIP. NO's	
SIGNAL BASE NO.	
SIGNAL FACE NO.	
LUMINAIRE NO.	
CONTROLLER AND CABINET	
CONTROLLER AND CABINET - IN PLACE	
HANDHOLE	
HANDHOLE - IN PLACE	
RIGID STEEL CONDUIT (RSC)	
RIGID STEEL CONDUIT (RSC) - IN PLACE	
SIGNAL FACE WITH BACKGROUND SHIELD	
SIGNAL FACE W/O BACKGROUND SHIELD	
SIGNAL FACE - IN PLACE	
PEDESTRIAN INDICATORS	
PEDESTRIAN INDICATORS - IN PLACE	
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	
PEDESTRIAN PUSH BUTTON STATION	
TRAFFIC SIGNAL PEDESTAL	
TRAFFIC SIGNAL PEDESTAL - IN PLACE	
TRAFFIC SIGNAL POLE AND MAST ARM	
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	
STREET LIGHT POLE AND LUMINAIRE	
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	
MAST ARM AND LUMINAIRE	
MAST ARM AND LUMINAIRE - IN PLACE	
WOOD POLE	
WOOD POLE - IN PLACE	
SOURCE OF POWER	
RAILROAD SIGNAL - IN PLACE	
RIGHT OF WAY LINE	
CENTERLINE	
EDGE OF ROADWAY	
SHOULDERLINE	
CURB LINE	
STOP BAR	

**ABBREVIATIONS**

3-1(EG)	SIGNAL HEAD PHASE "3" - NO "1"	P2-1(EG)	PEDESTRIAN INDICATION PHASE "2" - NO. "1"
BR. GR.	BARE GROUND	PB	PUSH BUTTON
CH. SW.	CHECK SWITCH	PB2-1(EG)	PUSH BUTTON PHASE "2" - NO. "1"
CLR	CLEAR	PEC	PHOTOELECTRIC CELL
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"	PED	PEDESTRIAN
DWK	DON'T WALK	R	RED
EQG	EQUIPMENT GROUND	R&S	REMOVE AND SALVAGE
EVP	EMERGENCY VEHICLE PRE-EMPTION	RLTA	RED LEFT TURN ARROW
F&I	FURNISH AND INSTALL	RRTA	RED RIGHT TURN ARROW
FL	FLASH/FLASHING	RSC	RIGID STEEL CONDUIT
G	GREEN	SOP	SOURCE OF POWER
GLTA	GREEN LEFT TURN ARROW	SPR	SPARE
GRN	GREEN	ST. LHT	STREET LIGHT
GR. R	GROUND ROD	STA	STATION
GRTA	GREEN RIGHT TURN ARROW	SW	SWITCH
GTHA	GREEN THRU ARROW	SWD	SWITCHED
HH	HANDHOLE	S&R	SALVAGE AND REINSTALL
HPS	HIGH PRESSURE SODIUM	TDW	TELEPHONE DROP WIRE
JB	JUNCTION BOX	WLK	WALK
LUM	LUMINAIRE	YEL	YELLOW
NEU	NEUTRAL	YLA	YELLOW LEFT TURN ARROW
NMC	NONMETALLIC CONDUIT	YRTA	YELLOW RIGHT TURN ARROW
		YTHA	YELLOW THRU ARROW

**CONDUCTOR COLOR CODE**

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

**STANDARD PLATES**  
THESE STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

PLATE NO.	DESCRIPTION
* MB110 D	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
* MB111 C	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
* MB112 C	PEDESTAL FOUNDATION
MB113 C	MAGNETIC VEHICLE DETECTOR INSTALLATION
* MB114 A	PVC HANDHOLE/PULLBOX
MB115 D	PEDESTRIAN PUSH BUTTON INSTALLATION
* MB118 C	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
* MB119 C	GROUND MOUNTED CABINET FOUNDATION
* MB120 K	PAB5 POLE FOUNDATION
* MB121 D	TRANSFORMER BASE AND POLE BASE PLATE
* MB122 C	PEDESTAL AND PEDESTAL BASE
* MB123 D	POLE AND MAST ARM
* MB124 E	MAST ARM SIGNAL HEAD MOUNTS
* MB126 F	PA90 AND PA100 POLE FOUNDATION

\* - APPLIES TO THIS PROJECT

NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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.  
*John M. [Signature]*  
 Date: 3/10/98 Reg. No. 22457



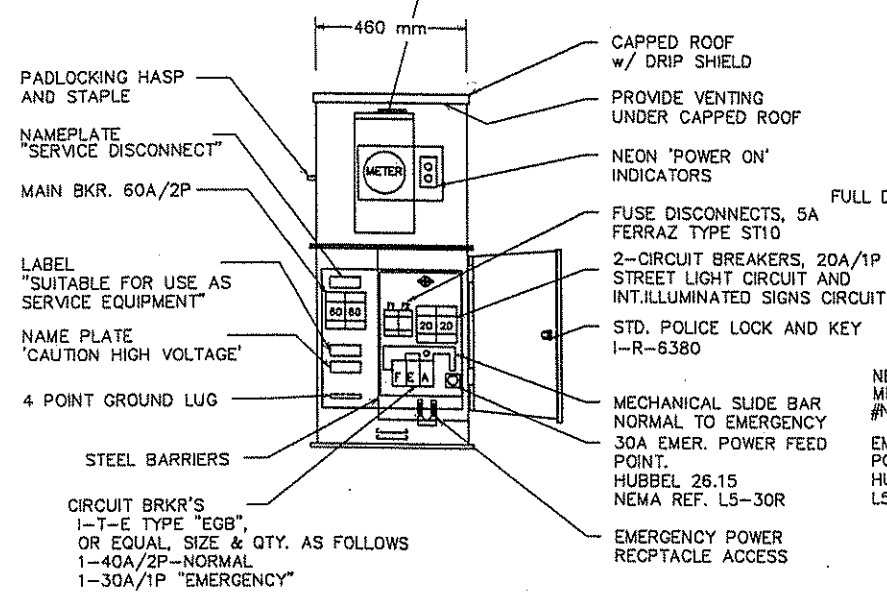
ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

TRAFFIC SIGNAL SYSTEMS  
 DETAILS & STANDARD PLATES  
 EAST RIVER ROAD (CSAH 1) AT 77TH WAY NE/  
 79TH WAY NE

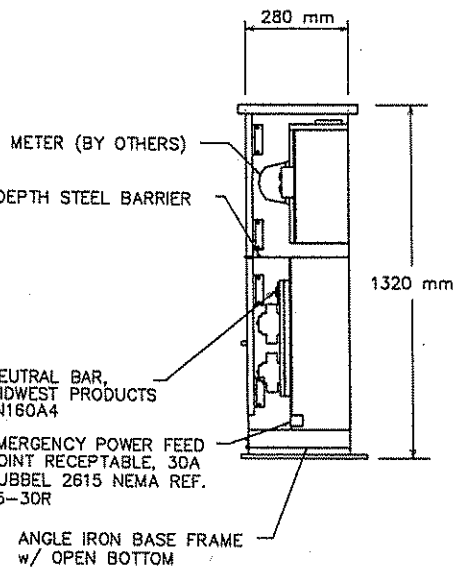
FILE NO.	69
ANOKC9708	
DATE	93

**SIGNAL SERVICE CABINET**

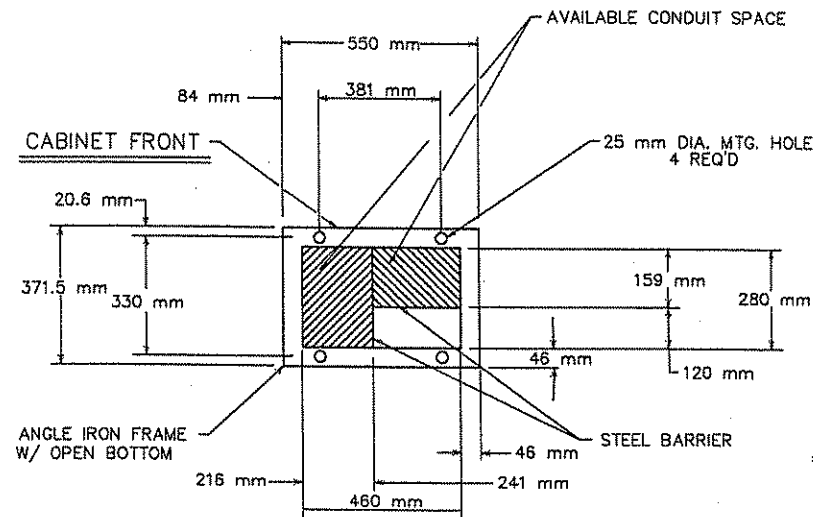
N.S.P. METER SOCKET, 5-TERMINAL  
w/ POSITIVE BY-PASS MECHANISM  
MILBANK CAT. No. U-2272-RL



**FRONT ELEV.**

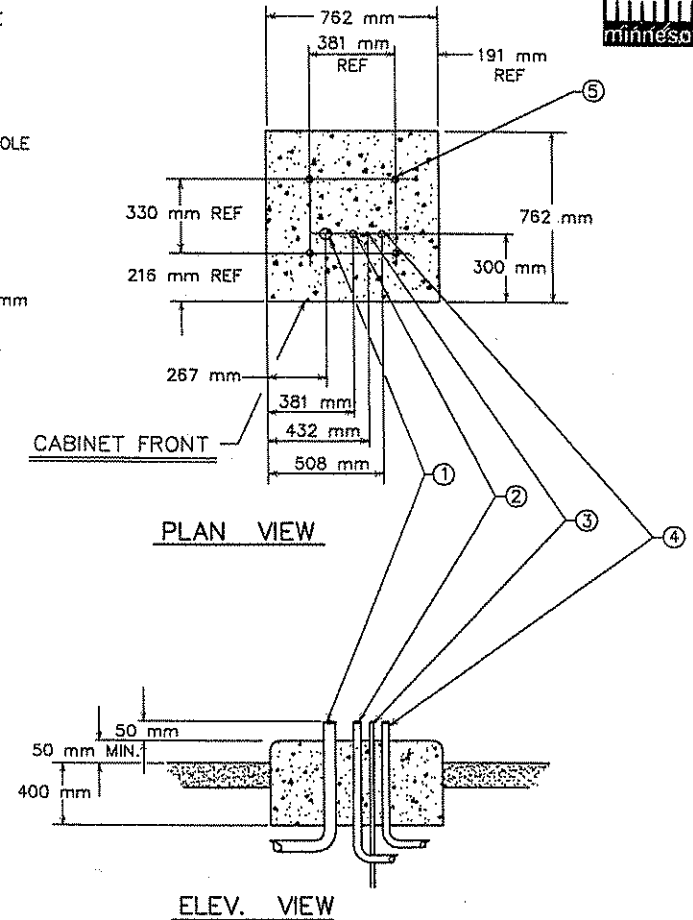


**RIGHT SIDE ELEV.**



**BASE VIEW**

**SERVICE CABINET FOUNDATION**

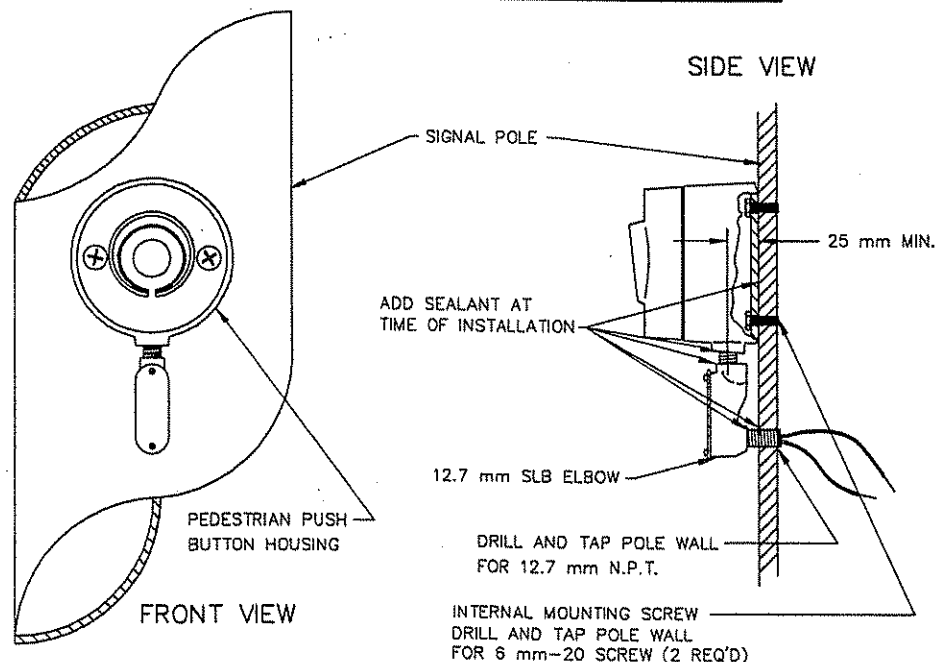


- ① 53 mm RSC FROM SOURCE OF POWER
- ② 35 mm RSC TO CONTROLLER CABINET
- ③ GROUNDING ROD
- ④ 53 mm RSC TO HANDHOLE (FOR STREET LIGHTING)
- ⑤ ANCHOR BOLT LOCATIONS (4 REQUIRED)

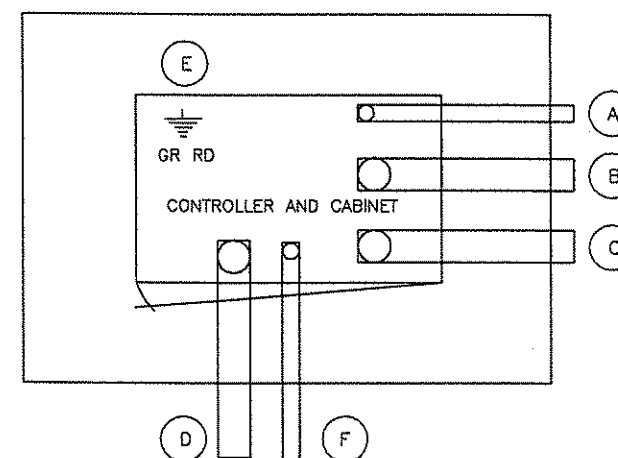
**CONSTRUCTION NOTES**

ENCLOSURE SHALL BE FABRICATED FROM #12 GA. ALL WELDED COLD ROLLED STEEL FOR OUTDOOR WEATHER PROOF SERVICE. DOORS TO BE GASKETED, ALL HINGES, PINS AND LOCKS TO BE OF NON CORRODING CONSTRUCTION. CABINET TO BE PRIMED INSIDE AND OUT WITH RUST INHIBITING PRIMER. FINISH PER MN/DOT #3527.  
 ENCLOSURE SHALL BE 'UL' APPROVED

**MAST ARM POLE PEDESTRIAN PUSH BUTTON DETAIL**



- (A) 35 mm R.S.C. FOR SERVICE CONNECTION
- (B) 103 mm R.S.C. TO HH
- (C) 103 mm R.S.C. TO HH
- (D) 78 mm R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).
- (E) 15.8 mm DIA X 4.6 m GROUND ROD
- (F) 53 mm R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).



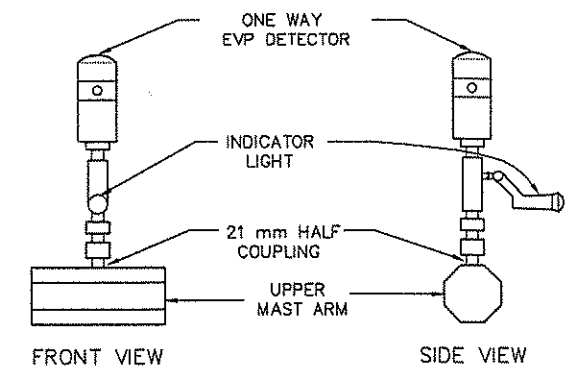
CONCRETE FOUNDATION  
 SEE MN/DOT STANDARD PLATE NO. MB119C FOR DIMENSIONS.

SEE INTERSECTION LAYOUT FOR CONDUIT & CABLE INFORMATION

**TYPICAL CONTROLLER CABINET PAD LAYOUT**

NO SCALE

**EVP DETECTOR AND LIGHT MOUNTING DETAIL ON MAST ARM**



NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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: 3/10/98 Reg. No. 22457



ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

TRAFFIC SIGNAL SYSTEMS  
 DETAILS  
 EAST RIVER ROAD (CSAH 1) AT 77TH WAY NE/  
 79TH WAY NE

FILE NO. ANOKC9708  
 DATE



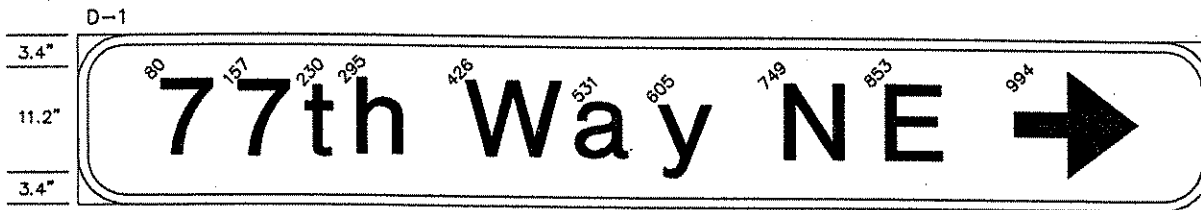
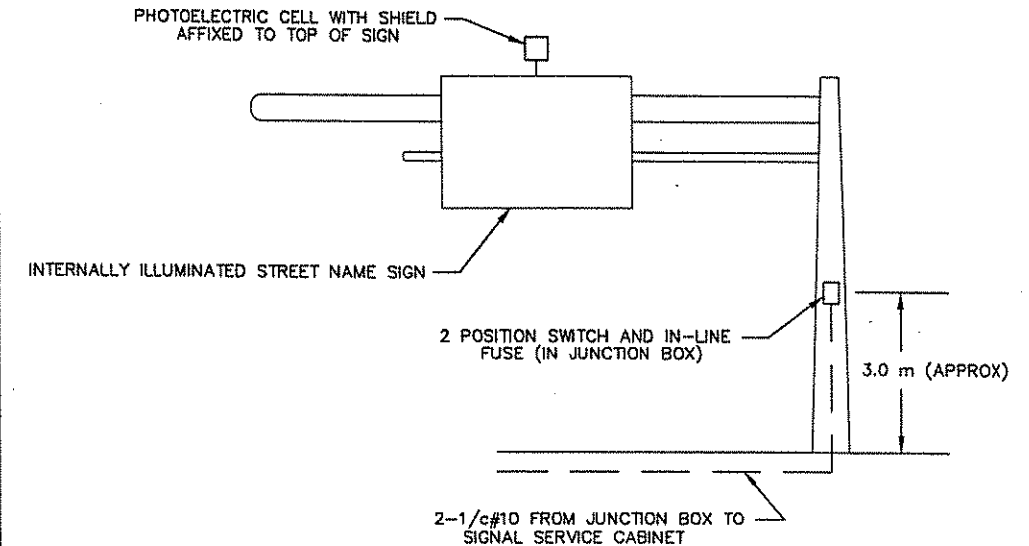
TYPE "D" SIGNS - F & I									
SIGNAL SYSTEM	SIGN PANEL	SIZE (inches)	SIZE (meters)	NO. REQ.	NO. POSTS PER SIGN	POST SPACING (mm)	AREA (sq.meters) PER SIGN	POLE NO.	a
A	D-1	120x18	3.05x0.46	1	3	1145	1.40	1	4.8 m
A	D-2	120x18	3.05x0.46	1	3	1145	1.40	3	8.5 m
A	D-3	120x18	3.05x0.46	1	3	1145	1.40	4	1.2 m
B	D-4	102x18	2.60x0.46	1	3	1145	1.20	1	8.5 m
B	D-5	120x18	3.05x0.46	1	3	1145	1.40	3	2.4 m
B	D-6	102x18	2.60x0.46	1	3	1145	1.20	4	8.5 m
B	D-7	120x18	3.05x0.46	1	3	1145	1.40	6	2.4 m
TYPE "C" SIGNS - F & I									
A	R6-1L	36x12	0.91x0.30	1	①	-	0.28	3	-
A	R6-1R	36x12	0.91x0.30	1	①	-	0.28	1	-
B	R6-1L	36x12	0.91x0.30	2	①	-	0.28	1,4	-

NOTES:

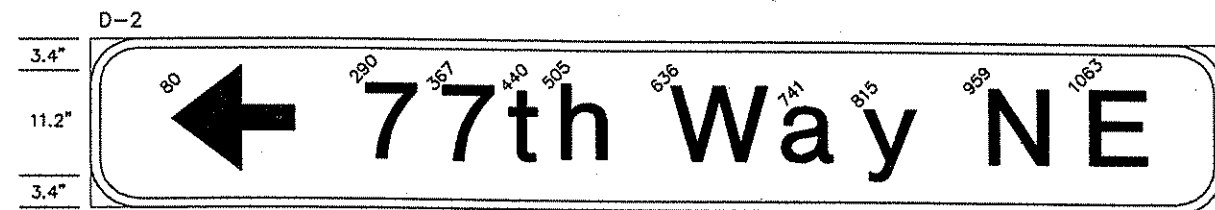
- COLOR FOR SIGNS D-1, D-2, D-4 AND D-6 SHALL BE WHITE LEGEND AND BORDER ON BLUE BACKGROUND, FULLY REFLECTORIZED.
- COLOR FOR SIGNS D-3, D-5 AND D-7 SHALL BE WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- FOR STRUCTURAL DETAILS, TYPE "D" SIGNS, SEE DETAILS AND STANDARD SIGNS MANUAL.
- FOR TYPE "D" STRINGER AND PANEL-JOINT DETAIL, SEE DETAILS AND STANDARD SIGNS MANUAL.
- TYPE "C" SIGN PANELS SHALL BE FURNISHED AND INSTALLED BY SIGNAL CONTRACTOR INCIDENTAL TO ITEM NO. 2565.511 FOR EACH SIGNAL SYSTEM. SEE SPECIAL PROVISIONS.
- TYPE "D" SIGN PANELS SHALL BE INTERNALLY ILLUMINATED STREET NAME SIGN PANELS. SEE SPECIAL PROVISIONS AND DETAILS ON THIS SHEET FOR FURTHER INFORMATION.
- ALL INTERNALLY ILLUMINATED SIGN PANELS SHALL BE MEASURED AND PAID FOR BY THE SIGNAL CONTRACTOR UNDER ITEM NO. 2564.602 (INTERNALLY LIT SIGN-TYPE "D"-SIGNALS).
- SEE STANDARD SIGNS MANUAL FOR ARROW DETAILS.
- ① = SIGN PANEL TO BE MOUNTED ON MAST ARM POLE AS DIRECTED IN SPECIAL PROVISIONS.

INTERNALLY ILLUMINATED STREET NAME SIGN ELECTRICAL DETAILS

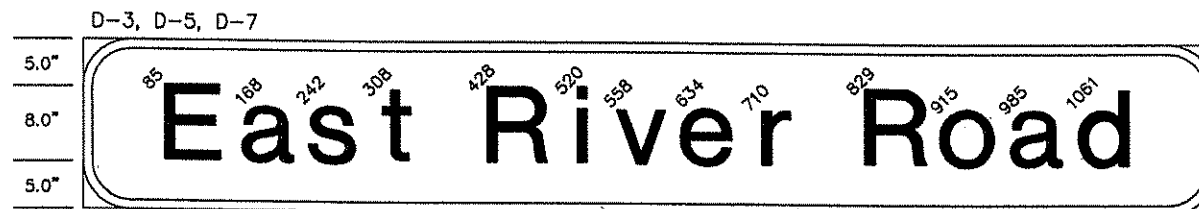
EACH SIGN (ONE PER MAST ARM POLE) IS TO BE FED WITH SEPARATE WIRES FROM THE SIGNAL SERVICE CABINET.



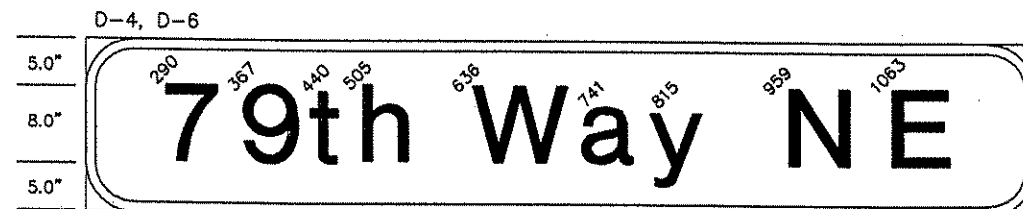
D-1  
120"x18", 3"R, 1.0"B.  
Line 1 104.4: 8"-6" E MOD., 5-13 ARROW 0



D-2  
120"x18", 3"R, 1.0"B.  
Line 1 104.4: 5-13 ARROW 180, 8"-6" E MOD.

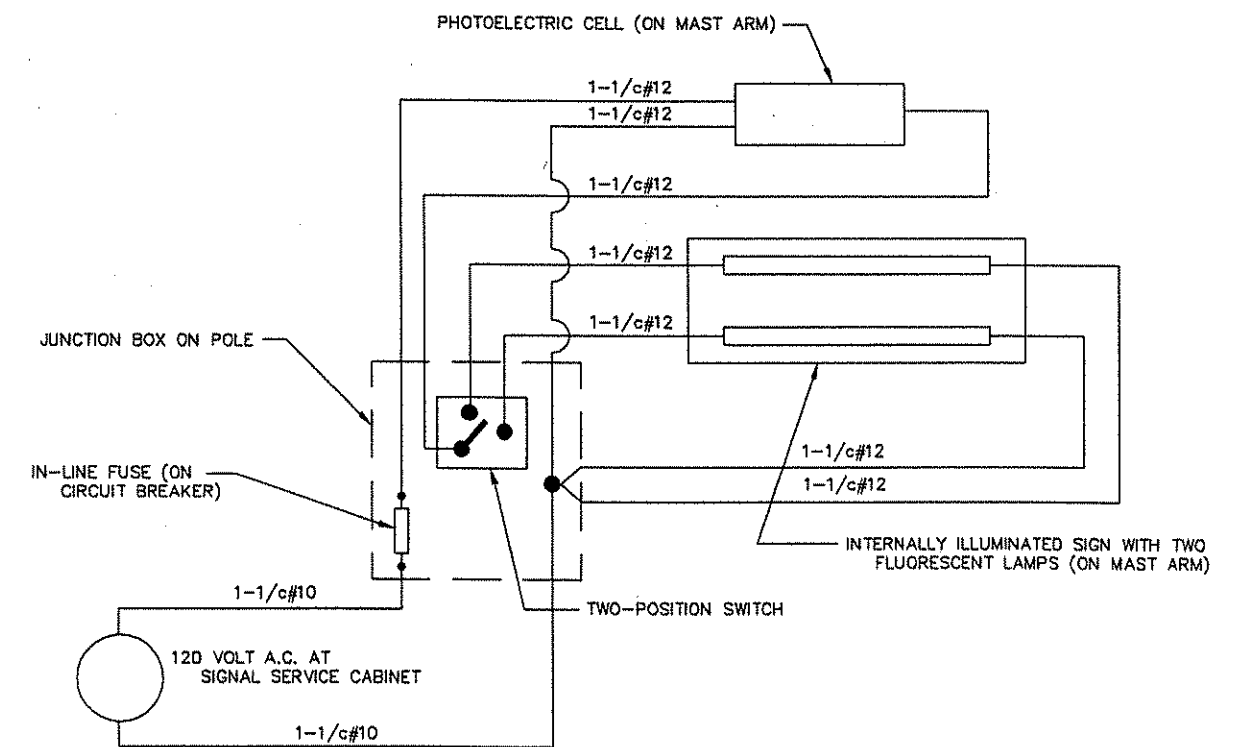


D-3, D-5, D-7  
120"x18", 3"R, 1.0"B.  
Line 1 102.6: 8"-6" E MOD.



D-4, D-6  
102"x18", 3"R, 1.0"B.  
Line 1 84.5: 8"-6" E MOD.

NOTE: ALL DIMENSIONS OF DETAILED SIGN PANELS ARE IN INCHES.



NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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: 3/10/98 Reg. No. 22457



ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

TRAFFIC SIGNAL SYSTEMS  
 MAST ARM SIGNING DETAILS  
 EAST RIVER ROAD (CSAH 1) AT 77TH WAY NE/  
 79TH WAY NE

FILE NO. ANOKC9708  
 DATE  
 71  
 93

NOTES:

- LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- LOOP DETECTOR WRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 21 mm N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
- NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, PER Mn/DOT STANDARD PLATE NO. MB114A.
- EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
- EACH PEDESTRIAN INDICATION SHALL BE A ONE SECTION HAND/WALKING PERSON INDICATION. SEE SPECIAL PROVISIONS.
- ALL "RED" VEHICLE SIGNAL INDICATIONS AND ALL "HAND" PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
- SEE SPECIAL PROVISIONS REGARDING REMOVAL AND SALVAGING OF INPLACE SIGNAL SYSTEM (INCIDENTAL TO ITEM NO.2565.511).
- INPLACE ITEMS TO BE REUSED INPLACE AS PART OF THE NEW SIGNAL SYSTEM SHALL BE PROTECTED AND MAINTAINED INPLACE. SEE SPECIAL PROVISIONS.
- SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGN PANELS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
- CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE SIGNAL FACE.
- A 21 mm HALF COUPLING, 21 mm PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED APPROX. 1.8 m FROM THE LEFT END OF MAST ARM 3 AND APPROX. 8.0 m FROM THE LEFT END OF MAST ARMS 1 AND 4 (FOR EVP).
- (S & R) = SALVAGE AND REINSTALL.
- (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM NO. 2565.511.

LOOP DETECTORS			
NUMBER	SIZE (m)	LOCATION	FUNCTION
D1-1	2-1.7x1.7	8 m & 15 m	1
D1-2	2-1.7x1.7	1.5 m & 10.5 m	1
D2-1	1.7x1.7	100 m	1
D2-2	1.7x1.7	100 m	1
D4-1	1.7x1.7	INPLACE	3,8
D4-2	3-1.7x1.7	AS SHOWN	7
D4-3	1.7x4.6	AS SHOWN	7
D6-1	1.7x1.7	100 m	1
D6-2	1.7x1.7	100 m	1

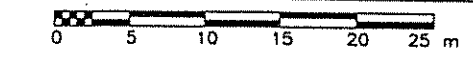
NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

LOOP DETECTORS FUNCTIONS:

- CALL AND EXTEND
- CALL ONLY
- EXTEND ONLY
- CALL ONLY DENSITY
- DELAYED CALL ONLY
- DELAYED CALL ONLY DENSITY
- DELAYED CALL- IMMEDIATE EXTEND
- CARRY OVER (STRETCH)
- ADVISORY DETECTOR
- SAMPLING DETECTOR
- SPECIAL DETECTOR

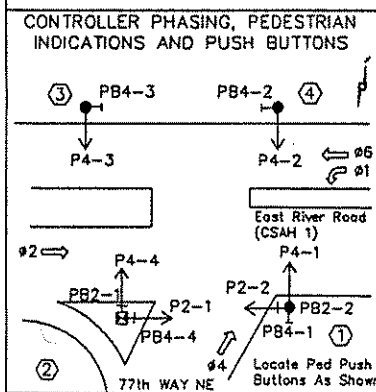
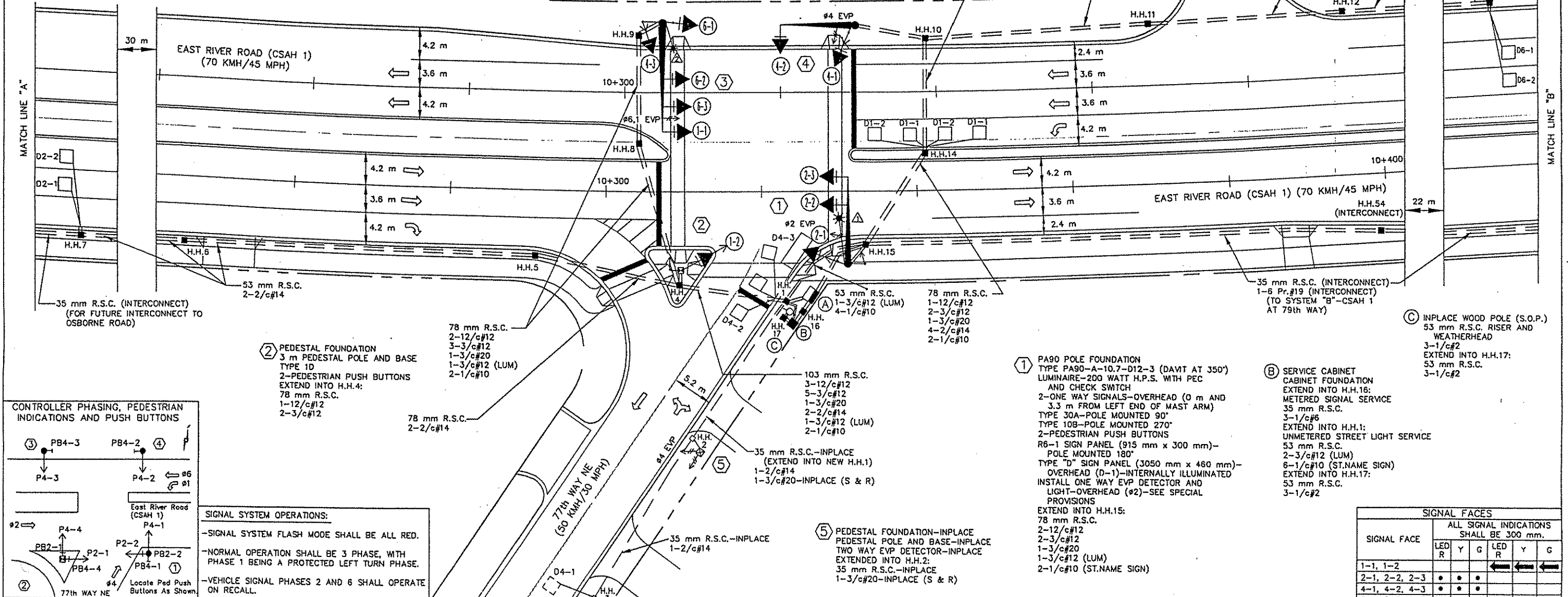
- ④ PA90 POLE FOUNDATION  
TYPE PA90-A-9.1  
ONE WAY SIGNAL-OVERHEAD  
TYPE 10B-POLE MOUNTED 0°  
PEDESTRIAN PUSH BUTTON  
TYPE "D" SIGN PANEL (3050 mm x 460 mm)-  
OVERHEAD (D-3)-INTERNALLY ILLUMINATED  
INSTALL ONE WAY EVP DETECTOR  
AND LIGHT-OVERHEAD (#4)-  
SEE SPECIAL PROVISIONS  
EXTEND INTO H.H.10:  
78 mm R.S.C.  
1-12/c#12  
2-3/c#12  
1-3/c#20  
2-1/c#10 (ST.NAME SIGN)

- ③ PA100 POLE FOUNDATION  
TYPE PA100-A-13.7-D12-3 (DAVIT AT 350°)  
LUMINAIRE-200 WATT H.P.S. WITH PEC  
AND CHECK SWITCH  
3-ONE WAY SIGNALS-OVERHEAD (0 m, 3.3 m  
AND 6.9 m FROM LEFT END OF MAST ARM)  
TYPE 10B-POLE MOUNTED 90°  
TYPE 10A-POLE MOUNTED 270°  
PEDESTRIAN PUSH BUTTON  
R6-1 SIGN PANEL (915 mm x 300 mm)-  
POLE MOUNTED 0°  
TYPE "D" SIGN PANEL (3050 mm x 460 mm)-  
OVERHEAD (D-2)-INTERNALLY ILLUMINATED  
INSTALL ONE WAY EVP DETECTOR AND LIGHT-  
OVERHEAD (#6.1)-SEE SPECIAL PROVISIONS  
EXTEND INTO H.H.9:  
78 mm R.S.C.  
2-12/c#12  
3-3/c#12  
1-3/c#20  
1-3/c#12 (LUM)  
2-1/c#10 (ST.NAME SIGN)



- ① INSTALL CONTROLLER AND CABINET  
(FURNISHED BY COUNTY)  
CABINET FOUNDATION  
EXTEND INTO H.H.16:  
METERED SIGNAL SERVICE  
35 mm R.S.C.  
3-1/c#6  
EXTEND INTO H.H.1:  
103 mm R.S.C.  
3-12/c#12  
5-3/c#12  
1-3/c#20  
1-3/c#20-INPLACE (S & R)  
5-2/c#14

- EXTEND INTO H.H.15:  
103 mm R.S.C.  
3-12/c#12  
4-3/c#12  
2-3/c#20  
4-2/c#14  
1-6 Pr.#19 (INTERCONNECT)  
STUB OUT 1-53 mm R.S.C. AND 1-78 mm R.S.C.  
FROM CABINET TO SOUTH (THREAD AND CAP BOTH  
ENDS-FOR FUTURE USE)



SIGNAL SYSTEM OPERATIONS:  
-SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.  
-NORMAL OPERATION SHALL BE 3 PHASE, WITH PHASE 1 BEING A PROTECTED LEFT TURN PHASE.  
-VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

- ② PEDESTAL FOUNDATION  
3 m PEDESTAL POLE AND BASE  
TYPE 1D  
2-PEDESTRIAN PUSH BUTTONS  
EXTEND INTO H.H.4:  
78 mm R.S.C.  
1-12/c#12  
2-3/c#12

- ① PA90 POLE FOUNDATION  
TYPE PA90-A-10.7-D12-3 (DAVIT AT 350°)  
LUMINAIRE-200 WATT H.P.S. WITH PEC  
AND CHECK SWITCH  
2-ONE WAY SIGNALS-OVERHEAD (0 m AND  
3.3 m FROM LEFT END OF MAST ARM)  
TYPE 30A-POLE MOUNTED 90°  
TYPE 10B-POLE MOUNTED 270°  
2-PEDESTRIAN PUSH BUTTONS  
R6-1 SIGN PANEL (915 mm x 300 mm)-  
POLE MOUNTED 180°  
TYPE "D" SIGN PANEL (3050 mm x 460 mm)-  
OVERHEAD (D-1)-INTERNALLY ILLUMINATED  
INSTALL ONE WAY EVP DETECTOR AND  
LIGHT-OVERHEAD (#2)-SEE SPECIAL  
PROVISIONS  
EXTEND INTO H.H.15:  
78 mm R.S.C.  
2-12/c#12  
2-3/c#12  
1-3/c#20  
1-3/c#12 (LUM)  
2-1/c#10 (ST.NAME SIGN)

- ③ SERVICE CABINET  
CABINET FOUNDATION  
EXTEND INTO H.H.16:  
METERED SIGNAL SERVICE  
35 mm R.S.C.  
3-1/c#6  
EXTEND INTO H.H.1:  
UNMETERED STREET LIGHT SERVICE  
53 mm R.S.C.  
2-3/c#12 (LUM)  
6-1/c#10 (ST.NAME SIGN)  
EXTEND INTO H.H.17:  
53 mm R.S.C.  
3-1/c#2

SIGNAL FACES						
SIGNAL FACE	ALL SIGNAL INDICATIONS SHALL BE 300 mm.					
	LED R	Y	G	LED R	Y	G
1-1, 1-2						
2-1, 2-2, 2-3	•	•	•	•	•	•
4-1, 4-2, 4-3	•	•	•	•	•	•
6-1, 6-2, 6-3	•	•	•	•	•	•

NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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Date: 6/11/98 Reg. No. 22457



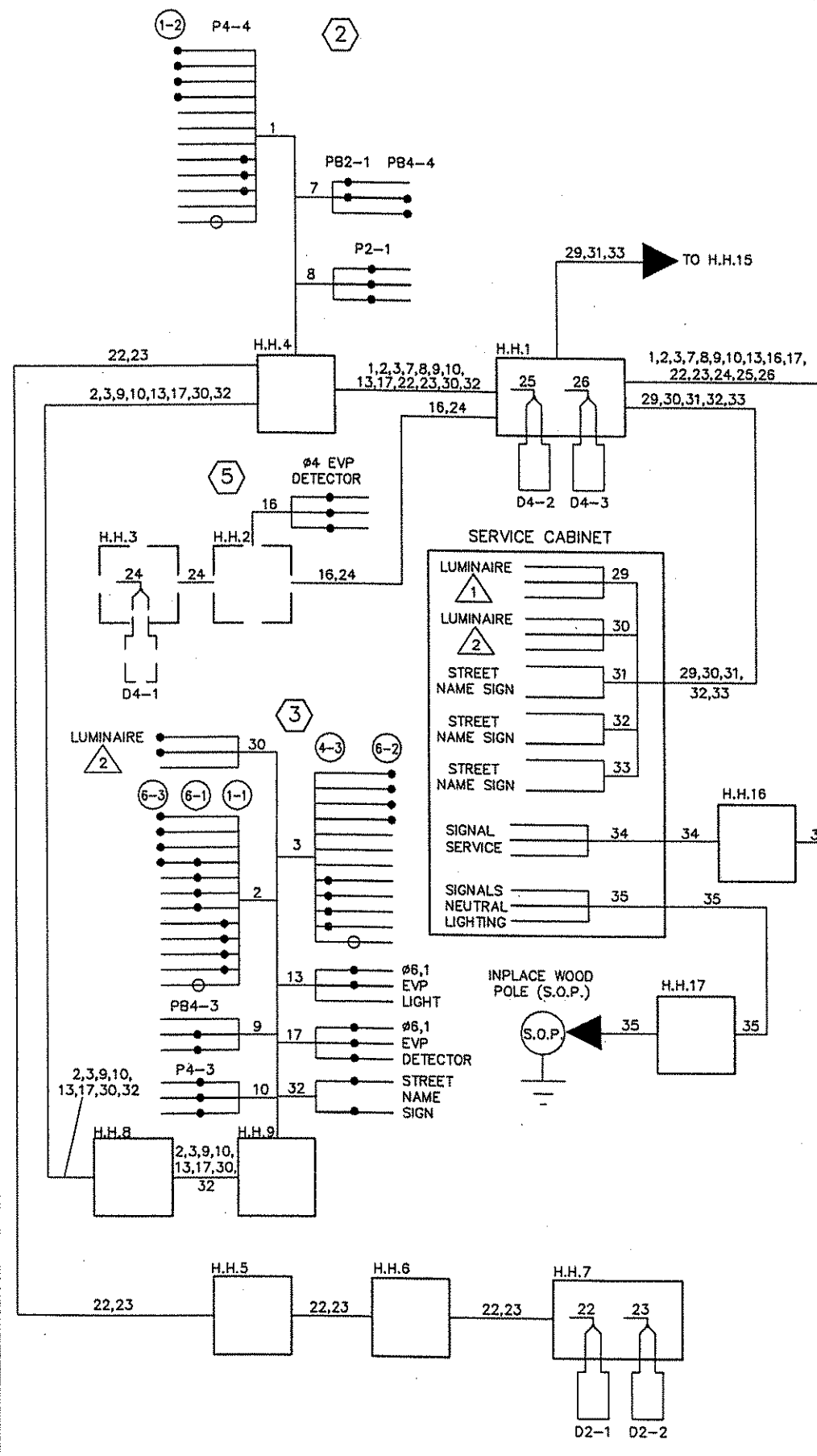
ANOKA COUNTY, MINNESOTA  
CITY OF FRIDLEY  
S.P. 02-601-37  
S.P. 127-020-20

TRAFFIC SIGNAL SYSTEM "A"  
INTERSECTION LAYOUT  
EAST RIVER ROAD (CSAH 1) AT 77TH WAY NE

FILE NO. ANOKC9708  
DATE  
72  
93

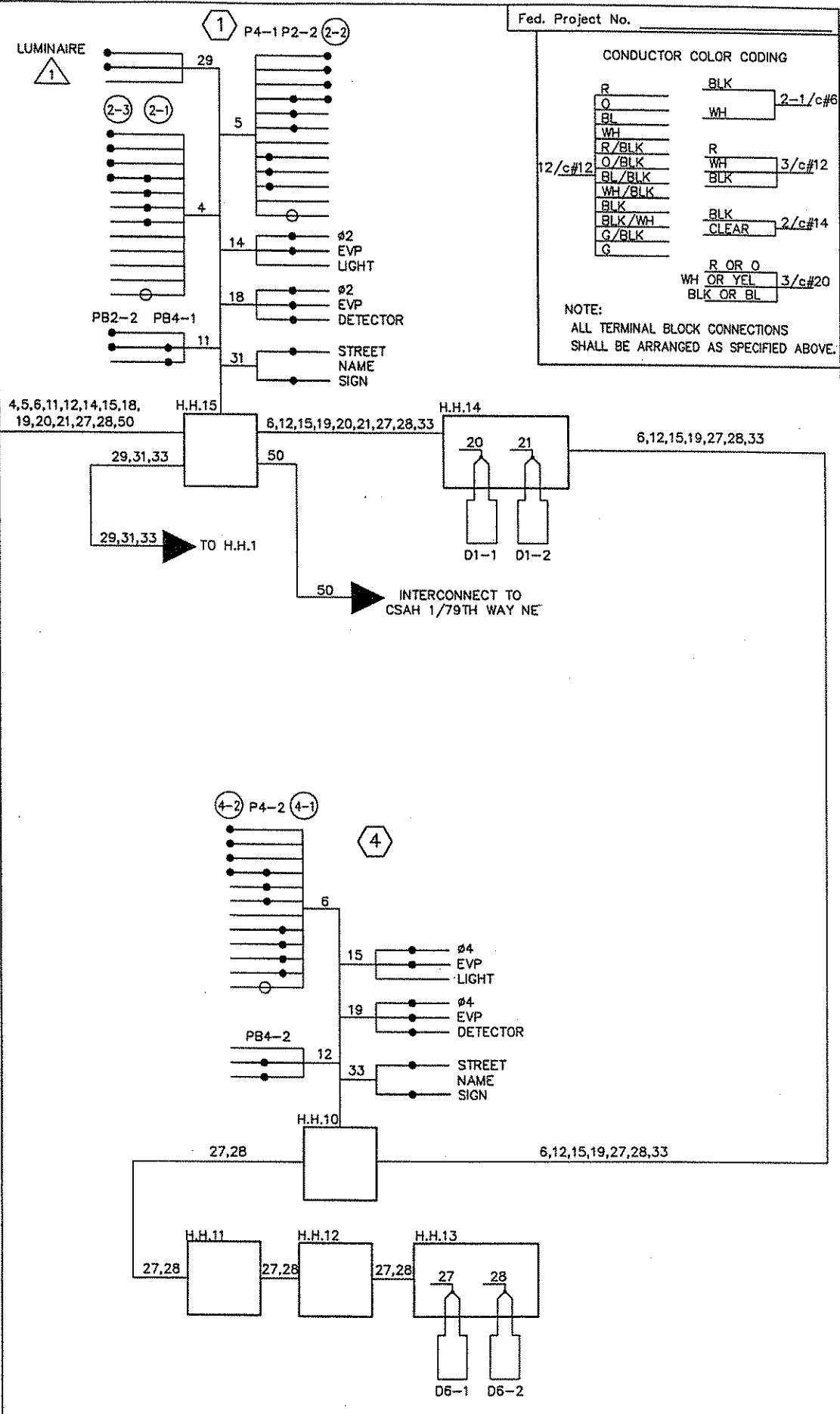


CONTROLLER CABINET



- RLTA 1-2
  - YLTA 1-2
  - GLTA 1-2
  - NEU 1-2
  - SPR
  - SPR
  - NEU P4-4
  - WLK P4-4
  - DWK P4-4
  - SPR
  - EQG
- RED 6-3
  - YEL 6-3
  - GRN 6-3
  - NEU 6-3, 6-1
  - RED 6-1
  - YEL 6-1
  - GRN 6-1
  - NEU 1-1
  - RLTA 1-1
  - YLTA 1-1
  - GLTA 1-1
  - EQG
- RED 6-2
  - YEL 6-2
  - GRN 6-2
  - NEU 6-2
  - SPR
  - SPR
  - NEU 4-3
  - RED 4-3
  - YEL 4-3
  - GRN 4-3
  - EQG
- RED 2-3
  - YEL 2-3
  - GRN 2-3
  - NEU 2-3, 2-1
  - RED 2-1
  - YEL 2-1
  - GRN 2-1
  - NEU
  - SPR
  - SPR
  - SPR
  - EQG
- RED 2-2
  - YEL 2-2
  - GRN 2-2
  - NEU 2-2, P2-2
  - WLK P2-2
  - DWK P2-2
  - SPR
  - NEU P4-1
  - WLK P4-1
  - DWK P4-1
  - SPR
  - EQG
- RED 4-2
  - YEL 4-2
  - GRN 4-2
  - NEU 4-2, P4-2
  - WLK P4-2
  - DWK P4-2
  - SPR
  - NEU 4-1
  - RED 4-1
  - YEL 4-1
  - GRN 4-1
  - EQG

- PB2-1
- NEU
- PB4-4
- P2-1 WLK
- P2-1 NEU
- P2-1 DWK
- SPR
- NEU
- PB4-3
- P4-3 WLK
- P4-3 NEU
- P4-3 DWK
- PB2-2
- NEU
- PB4-1
- SPR
- NEU
- PB4-2
- #6,1
- EVP
- LIGHT
- #2
- EVP
- LIGHT
- #4
- EVP
- LIGHT
- (INPLACE)
- #4
- EVP
- DETECTOR
- #6,1
- EVP
- DETECTOR
- #2
- EVP
- DETECTOR
- #4
- EVP
- DETECTOR
- D1-1
- D1-2
- D2-1
- D2-2
- D4-1
- D4-2
- D4-3
- D6-1
- D6-2
- SIGNAL
- SERVICE
- 50



Fed. Project No. \_\_\_\_\_

CONDUCTOR COLOR CODING	
R	BLK
O	WH
BL	2-1/c#6
WH	R
R/BLK	WH
O/BLK	3/c#12
BL/BLK	BLK
WH/BLK	BLK
BLK	2/c#14
BLK/WH	CLEAR
G/BLK	R OR O
G	WH OR YEL
	3/c#20
	BLK OR BL

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

NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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.

*John M. [Signature]*  
 Date: 5/10/98 Reg. No. 22457



ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

TRAFFIC SIGNAL SYSTEM "A"  
 FIELD WIRING DIAGRAM  
 EAST RIVER ROAD (CSAH 1) AT 77TH WAY NE

FILE NO.	73
ANOKC9708	
DATE	93

- NOTES:
- 1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
  - 3) LOOP DETECTOR WRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 21 mm N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
  - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, PER Mn/DOT STANDARD PLATE NO.M8114A.
  - 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
  - 6) EACH PEDESTRIAN INDICATION SHALL BE A ONE SECTION HAND/WALKING PERSON INDICATION. SEE SPECIAL PROVISIONS.
  - 7) ALL "RED" VEHICLE SIGNAL INDICATIONS AND ALL "HAND" PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
  - 8) SEE SPECIAL PROVISIONS REGARDING REMOVAL AND SALVAGING OF INPLACE SIGNAL SYSTEM (INCIDENTAL TO ITEM NO.2565.511).
  - 9) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGN PANELS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
  - 10) CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE SIGNAL FACE.
  - 11) A 21 mm HALF COUPLING, 21 mm PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED APPROX. 1.8 m FROM THE LEFT END OF EACH MAST ARM (FOR EVP).
  - 12) VEHICLE SIGNAL FACES 3-2 AND 4-2 SHALL BE OPTICALLY PROGRAMMED SIGNAL FACES. SEE SPECIAL PROVISIONS.
  - 13) (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM NO. 2565.511.

LOOP DETECTORS			
NUMBER	SIZE (m)	LOCATION	FUNCTION
D1-1	2-1.7x1.7	6 m & 15 m	1
D1-2	2-1.7x1.7	1.5 m & 10.5 m	1
D2-1	1.7x1.7	100 m	1
D2-2	1.7x1.7	100 m	1
D3-1	1.7x3.0	35 m	3,8
D3-2	3-1.7x1.7	AS SHOWN	7
D3-3	2-1.7x1.7	AS SHOWN	7
D4-1	1.7x3.6	35 m	3,8
D4-2	2-1.7x1.7	AS SHOWN	7
D4-3	2-1.7x1.7	AS SHOWN	7
D4-4	3-1.7x1.7	AS SHOWN	1
D5-1	2-1.7x1.7	6 m & 15 m	1
D5-2	2-1.7x1.7	1.5 m & 10.5 m	1
D6-1	1.7x1.7	100 m	1
D6-2	1.7x1.7	100 m	1

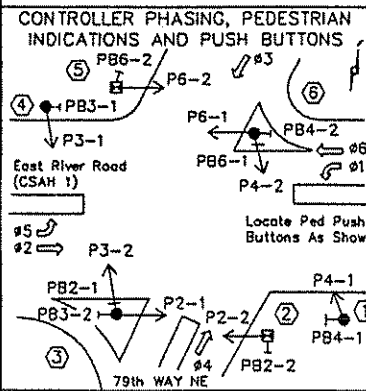
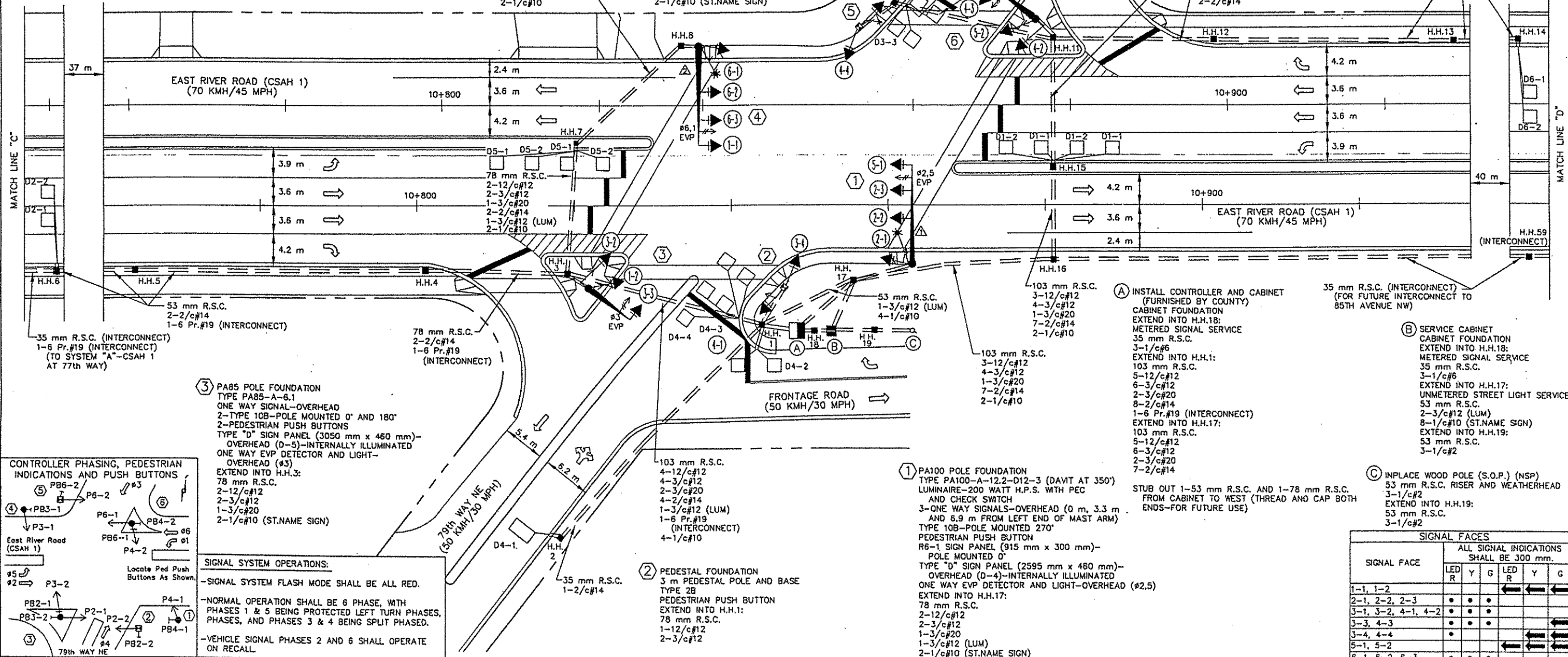
NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

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

- 5) PEDESTAL FOUNDATION  
3 m PEDESTAL POLE AND BASE  
TYPE 2B  
PEDESTRIAN PUSH BUTTON  
EXTEND INTO H.H.9:  
78 mm R.S.C.  
1-12/c#12  
2-3/c#12

- 4) PA100 POLE FOUNDATION  
TYPE PA100-A-12.2-D12-3 (DAVT AT 350')  
LUMINAIRE-200 WATT H.P.S. WITH PEC  
AND CHECK SWITCH  
3-ONE WAY SIGNALS-OVERHEAD (0 m, 3.3 m  
AND 6.9 m FROM LEFT END OF MAST ARM)  
TYPE 10B-POLE MOUNTED 270°  
PEDESTRIAN PUSH BUTTON  
R6-1 SIGN PANEL (915 mm x 300 mm)-  
POLE MOUNTED 0°  
TYPE "D" SIGN PANEL (2595 mm x 460 mm)-  
OVERHEAD (D-6)-INTERNALLY ILLUMINATED  
ONE WAY EVP DETECTOR AND LIGHT-  
OVERHEAD (#6.1)  
EXTEND INTO H.H.8:  
78 mm R.S.C.  
2-12/c#12  
2-3/c#12  
1-3/c#20  
1-3/c#12 (LUM)  
2-1/c#10 (ST.NAME SIGN)

- 6) PA85 POLE FOUNDATION  
TYPE PA85-A-6.1  
ONE WAY SIGNAL-OVERHEAD  
2-TYPE 10B-POLE MOUNTED 0° AND 180°  
2-PEDESTRIAN PUSH BUTTONS  
TYPE "D" SIGN PANEL (3050 mm x 460 mm)-  
OVERHEAD (D-7)-INTERNALLY ILLUMINATED  
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#4)  
EXTEND INTO H.H.11:  
78 mm R.S.C.  
2-12/c#12  
2-3/c#12  
1-3/c#20  
2-1/c#10 (ST.NAME SIGN)



SIGNAL SYSTEM OPERATIONS:  
-SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.  
-NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASES, PHASES 3 & 4 BEING SPLIT PHASES.  
-VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL

- A) INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)  
CABINET FOUNDATION  
EXTEND INTO H.H.18:  
METERED SIGNAL SERVICE  
35 mm R.S.C.  
3-1/c#6  
EXTEND INTO H.H.1:  
103 mm R.S.C.  
3-12/c#12  
4-3/c#12  
1-3/c#20  
7-2/c#14  
2-1/c#10
- B) SERVICE CABINET CABINET FOUNDATION  
EXTEND INTO H.H.18:  
METERED SIGNAL SERVICE  
35 mm R.S.C.  
3-1/c#6  
EXTEND INTO H.H.17:  
UNMETERED STREET LIGHT SERVICE  
53 mm R.S.C.  
2-3/c#12 (LUM)  
8-1/c#10 (ST.NAME SIGN)  
EXTEND INTO H.H.19:  
53 mm R.S.C.  
3-1/c#2
- C) INPLACE WOOD POLE (S.O.P.) (NSP)  
53 mm R.S.C. RISER AND WEATHERHEAD  
3-1/c#2  
EXTEND INTO H.H.19:  
53 mm R.S.C.  
3-1/c#2

SIGNAL FACES						
SIGNAL FACE	ALL SIGNAL INDICATIONS SHALL BE 300 mm.					
	LED R	Y	G	LED R	Y	G
1-1, 1-2						
2-1, 2-2, 2-3	•	•	•	•	•	•
3-1, 3-2, 4-1, 4-2	•	•	•	•	•	•
3-3, 4-3	•	•	•			
3-4, 4-4	•					
5-1, 5-2						
6-1, 6-2, 6-3	•	•	•	•	•	•

NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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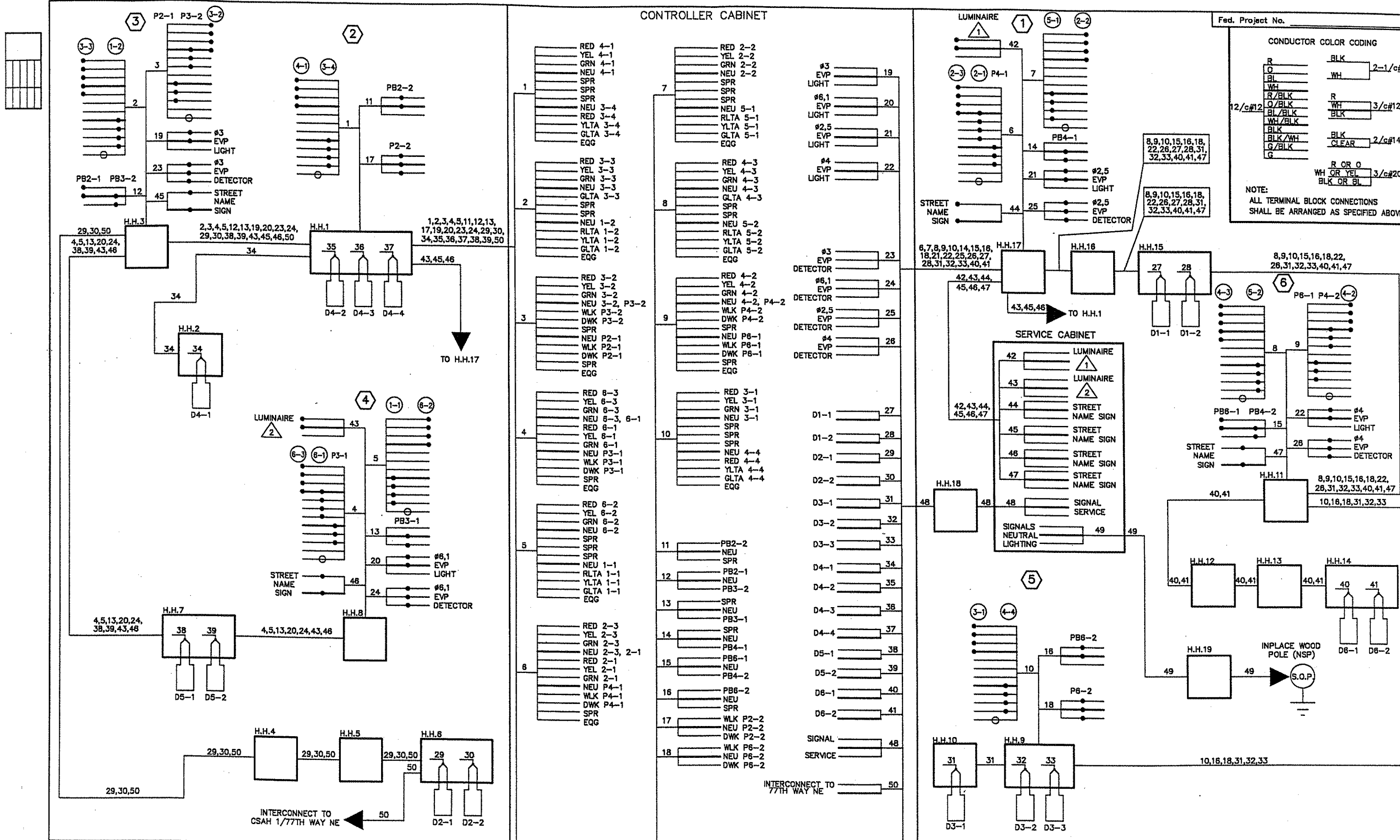
*John M. Jones*  
Date: 6/11/98 Reg. No. 22457



ANOKA COUNTY, MINNESOTA  
CITY OF FRIDLEY  
S.P. 02-601-37  
S.P. 127-020-20

TRAFFIC SIGNAL SYSTEM "B"  
INTERSECTION LAYOUT  
EAST RIVER ROAD (CSAH 1) AT 79TH WAY NE

FILE NO.  
ANOKC9708  
DATE  
74  
93



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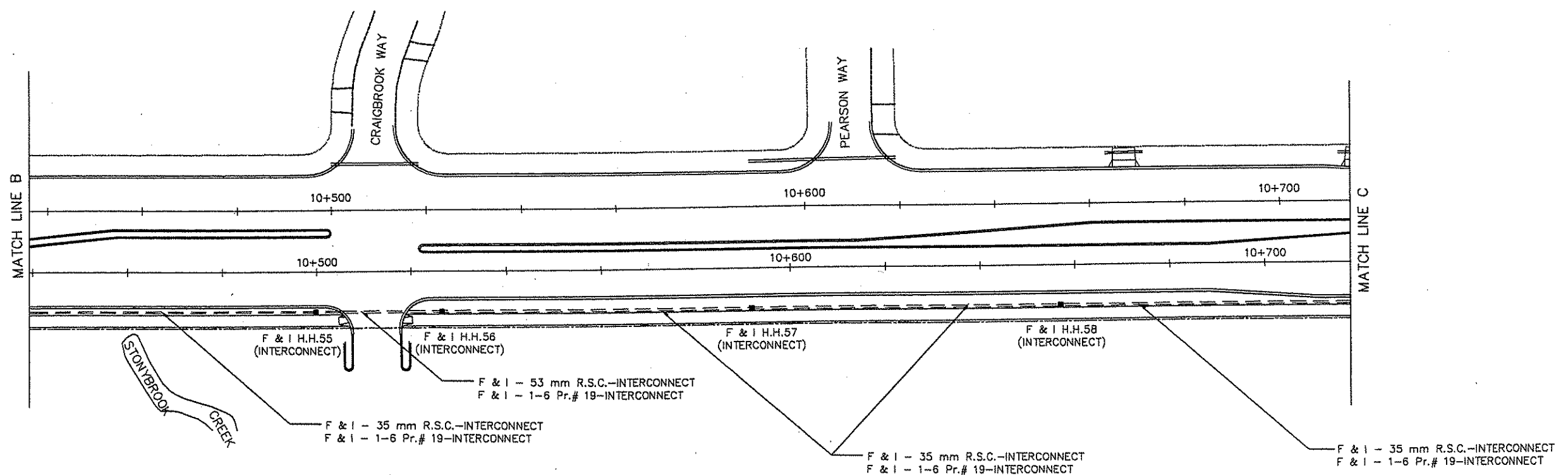
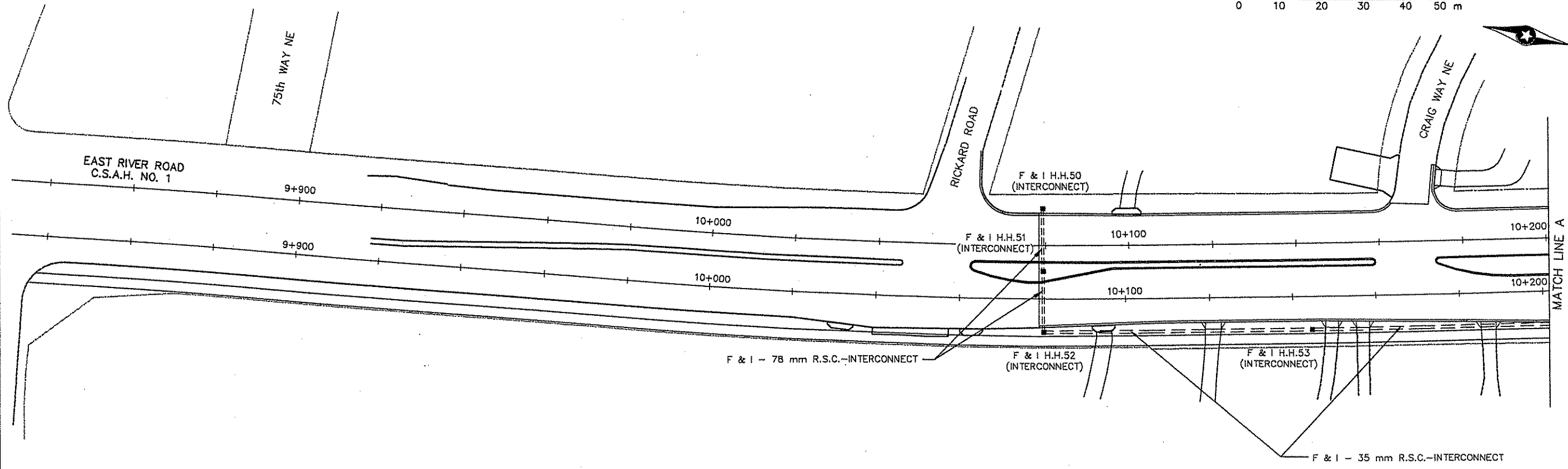
*John M. King*  
Date: 11/16/98 Reg. No. 22457



**ANOKA COUNTY, MINNESOTA**  
CITY OF FRIDLEY  
S.P. 02-601-37  
S.P. 127-020-20

**TRAFFIC SIGNAL SYSTEM "B"**  
FIELD WIRING DIAGRAM  
EAST RIVER ROAD (CSAH 1) AT 79TH WAY NE

FILE NO. ANOKC9708  
DATE  
75  
93



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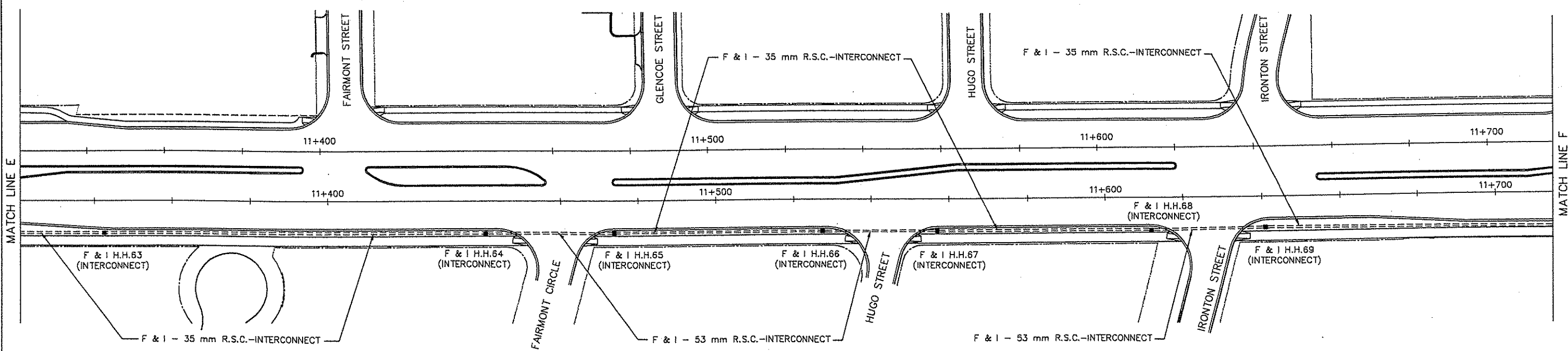
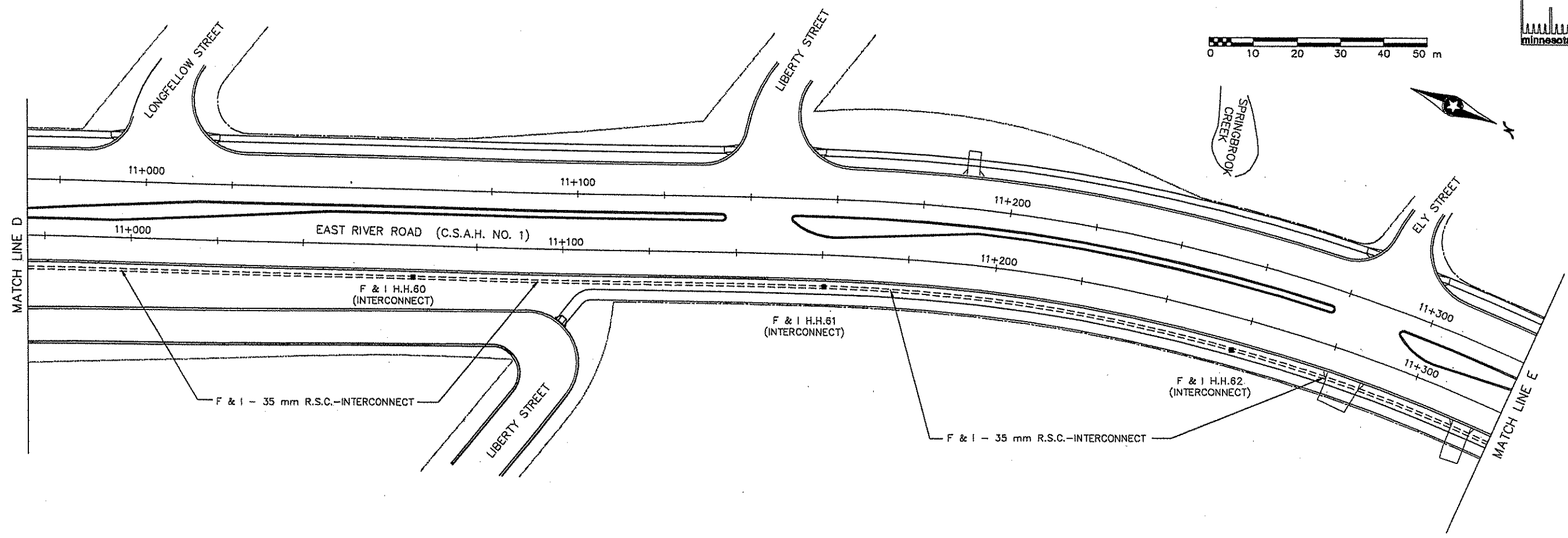
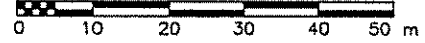
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ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

TRAFFIC SIGNAL INTERCONNECT  
 MATCH LINES  
 EAST RIVER ROAD (CSAH 1) (BETWEEN  
 OSBORNE ROAD AND 79TH WAY NE)

FILE NO. ANOKC9708	76
DATE	93



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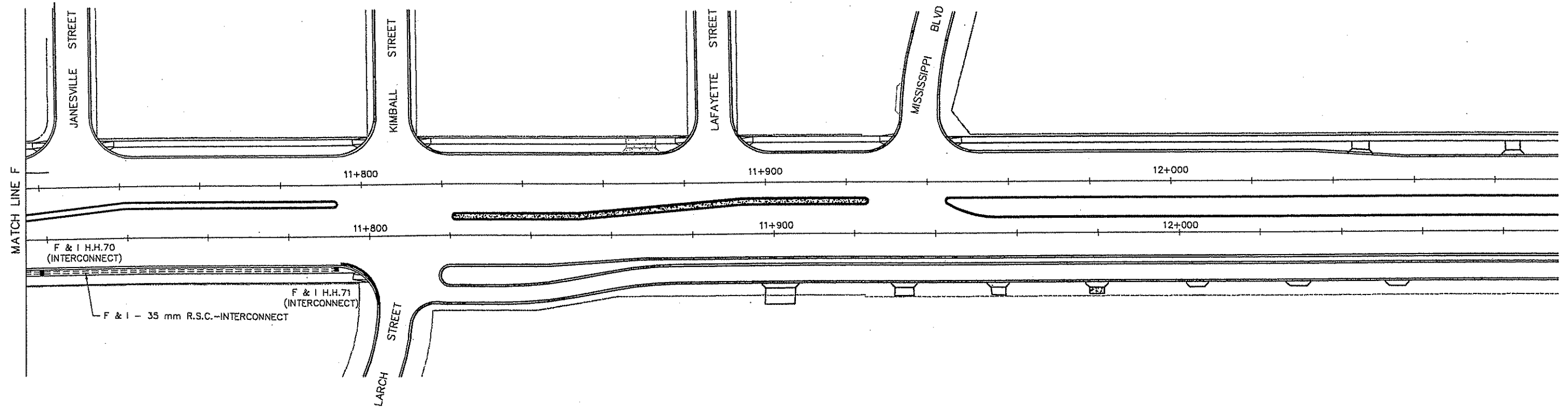
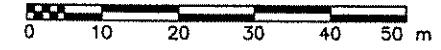
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 S.P. 02-601-37  
 S.P. 127-020-20

TRAFFIC SIGNAL INTERCONNECT  
 MATCH LINES  
 EAST RIVER ROAD (CSAH 1) (BETWEEN  
 79TH WAY NE AND 85TH AVENUE)

FILE NO.	77
ANOKC9708	
DATE	93



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*John M. Jones*  
 Date: 3/10/98 Reg. No. 22457



ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

TRAFFIC SIGNAL INTERCONNECT  
 MATCH LINES  
 EAST RIVER ROAD (CSAH 1) (BETWEEN  
 79TH WAY NE AND 85TH AVENUE)

FILE NO. ANOKC9708	78
DATE	93

① 40' WOOD POLE FOUNDATION  
 TYPE 10A MOUNTED AT 90°  
 TYPE 10A MOUNTED AT 270°  
 LUMINAIRE AND EXTENSION (BY OTHERS)  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 JUNCTION BOX #1  
 2" R.S.C. RISER AND WEATHERHEAD  
 2-12/C #12  
 1-3/C #12

② 40' WOOD POLE-CLASS 2  
 TYPE 10A MOUNTED AT 270°  
 TYPE 10B MOUNTED AT 180°  
 TYPE 10B MOUNTED AT 0°  
 2-DOWN GUY, GUARD, AND ANCHORS  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 JUNCTION BOX #2  
 2" R.S.C. RISER AND WEATHERHEAD  
 3-12/C #12  
 1-3/C #12  
 2-2/C #14  
 1 1/4" R.S.C. RISER BELOW JUNCTION BOX #2  
 EXTEND INTO HH 6 WITH:  
 2-2/C #14

③ 40' WOOD POLE-CLASS 2  
 TYPE 30A POLE MOUNTED AT 90°  
 TYPE 10A MOUNTED AT 270°  
 LUMINAIRE AND EXTENSION (BY OTHERS)  
 2-DOWN GUY, GUARD, AND ANCHORS  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 PEDESTRIAN WALK  
 JUNCTION BOX #3  
 2" R.S.C. RISER AND WEATHERHEAD  
 1-12/C #12  
 1-3/C #12  
 4-2/C #14  
 1-3/C #20  
 2" R.S.C. RISER BELOW JUNCTION BOX #3  
 EXTEND INTO HH 3 WITH:  
 1-12/C #12  
 1-3/C #12  
 4-2/C #14  
 1-3/C #20

④ 8' PEDESTAL POLE AND BASE  
 PEDESTAL FOUNDATION  
 TYPE 4A  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 PEDESTRIAN WALK (SEE DETAIL "A")  
 2" R.S.C. EXTENDED INTO HH 3 WITH:  
 1-12/C #12  
 1-3/C #12

⑤ 40' WOOD POLE-CLASS 2  
 TYPE 10B POLE MOUNTED AT 180°  
 TYPE 30A POLE MOUNTED AT 0°  
 2-DOWN GUY, GUARD AND ANCHORS  
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS  
 PEDESTRIAN WALK  
 JUNCTION BOX #5  
 2-2" R.S.C. RISERS  
 EXTEND INTO HH 1 WITH:  
 6-12/C #12  
 3-3/C #12  
 6-2/C #14  
 3-3/c #20  
 2-2" R.S.C. RISERS AND WEATHERHEADS  
 ABOVE J.B. 5 WITH:  
 5-12/c #12  
 3-3/c #12  
 6-2/c #14  
 3-3/c #20

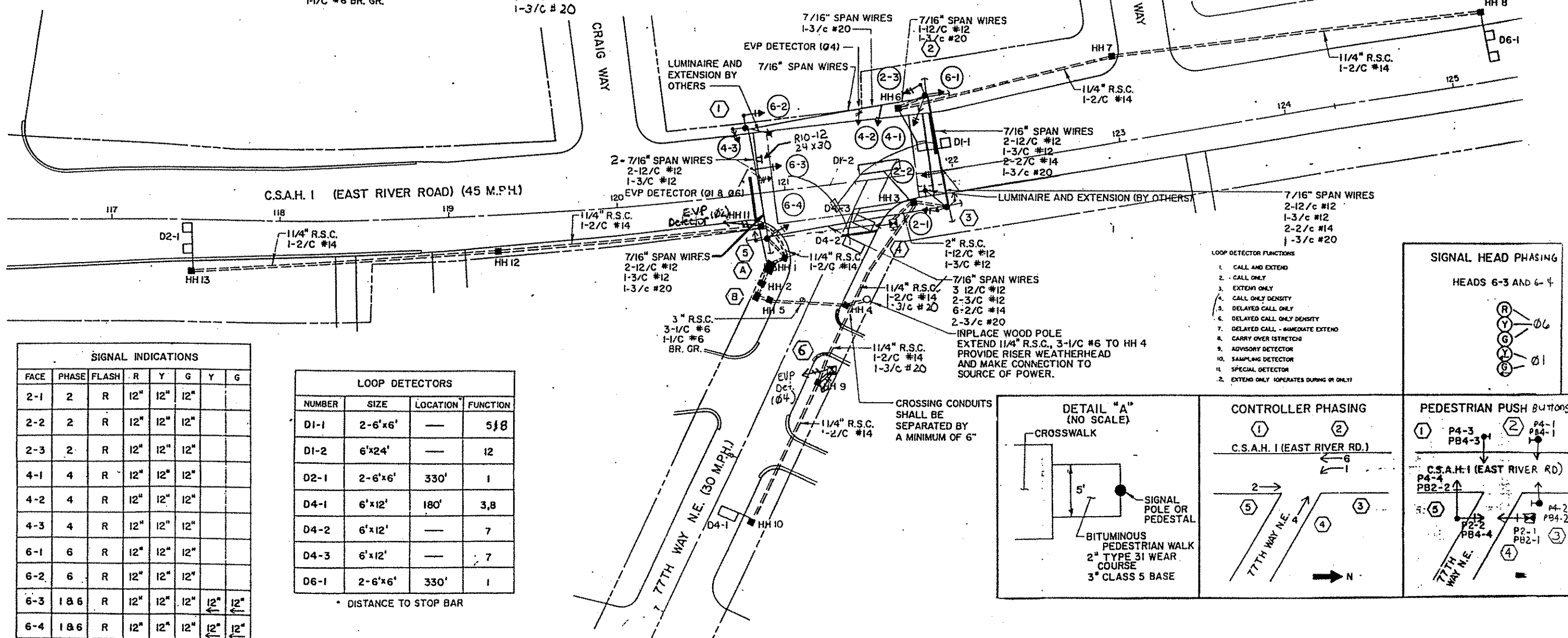
⑥ CONTROLLER AND CABINET  
 CABINET FOUNDATION  
 EXTEND 2-3" R.S.C.  
 INTO HH 1 WITH:  
 6-12/C #12  
 3-3/C #12  
 7-2/C #14  
 4-3-3/c #20  
 EXTEND INTO HH 2  
 METERED SIGNAL SERVICE  
 1-1/4" R.S.C.  
 3-1/c #6

⑦ SERVICE CABINET  
 CABINET FOUNDATION  
 EXTEND INTO HH 2  
 METERED SIGNAL SERVICE  
 1 1/4" R.S.C.  
 3-1/C #6  
 EXTEND INTO HH 5  
 2" R.S.C.  
 3-1/C #6  
 1-1/C #6 BR. GR.

⑧ 8' PEDESTAL POLE AND BASE  
 PEDESTAL FOUNDATION  
 2-WAY EVP DETECTOR  
 EXTEND INTO HH 9:  
 1 1/4" R.S.C.  
 1-3/C #20

NOTES:

- SEE SPECIAL PROVISIONS FOR CONTRACTOR'S RESPONSIBILITY FOR LOCATION OF UTILITIES.
- ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.
- LUMINAIRE AT LOCATIONS 1 AND 3 TO BE INSTALLED BY OTHERS.
- SEE SPECIAL PROVISIONS FOR ANOKA COUNTY SERVICE CABINET DETAILS.
- HANDHOLES SHALL BE CONCRETE WITH CONCRETE COVERERS.
- LOOP DETECTOR WIRES SHALL BE CROSS LINKED POLYETHYLENE (CLP) IN 1" R.M.C. SEE SPECIAL PROVISIONS.
- ALL PEDESTRIAN INDICATORS SHALL BE 12" x 12"
- CONTRACTOR SHALL INSTALL COUNTY FURNISHED CONTROLLER AND CABINET. SEE SPECIAL PROVISIONS.
- CONTRACTOR SHALL RESTORE AREAS DISTURBED DURING CONSTRUCTION SOO SHALL BE USED ON THE SOUTHEAST CORNER OF THE INTERSECTION, SEED SHALL BE USED ON ALL OTHER AREAS. SEE SPECIAL PROVISIONS.
- CONTRACTOR SHALL INSTALL CITY-FURNISHED EVP DETECTOR LEAD-IN CABLE AND PEDIAN LIGHTS AT LOCATIONS INDICATED IN THE PLANS. THE CITY SHALL HAVE THE OPTION OF ADDING ONE ADDITIONAL EVP DETECTOR AT A LOCATION TO BE DETERMINED AT THE TIME OF INSTALLATION.

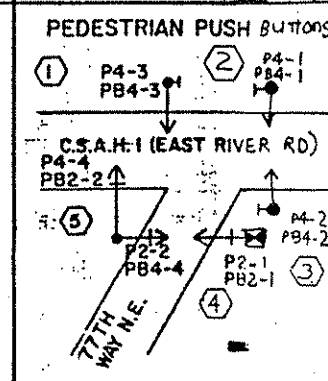
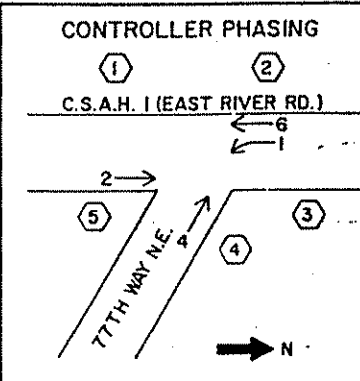
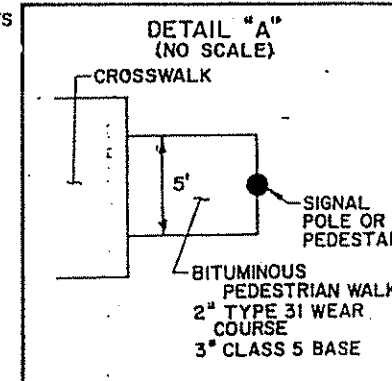
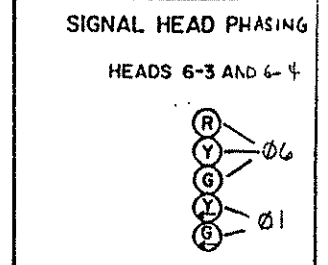


SIGNAL INDICATIONS							
FACE	PHASE	FLASH	R	Y	G	Y	G
2-1	2	R	12"	12"	12"		
2-2	2	R	12"	12"	12"		
2-3	2	R	12"	12"	12"		
4-1	4	R	12"	12"	12"		
4-2	4	R	12"	12"	12"		
4-3	4	R	12"	12"	12"		
6-1	6	R	12"	12"	12"		
6-2	6	R	12"	12"	12"		
6-3	1 & 6	R	12"	12"	12"	12"	12"
6-4	1 & 6	R	12"	12"	12"	12"	12"

LOOP DETECTORS			
NUMBER	SIZE	LOCATION	FUNCTION
D1-1	2-6'x6'	—	5 & 8
D1-2	6'x24'	—	12
D2-1	2-6'x6'	330'	1
D4-1	6'x12'	180'	3, 8
D4-2	6'x12'	—	7
D4-3	6'x12'	—	7
D6-1	2-6'x6'	330'	1

\* DISTANCE TO STOP BAR

- LOOP DETECTOR FUNCTIONS
- CALL AND EXTEND
  - CALL ONLY
  - EXTEND ONLY
  - CALL ONLY DENSITY
  - DELAYED CALL ONLY
  - DELAYED CALL ONLY DENSITY
  - DELAYED CALL - IMMEDIATE EXTEND
  - CARRY OVER DISTRICT
  - ADVISORY DETECTOR
  - SAMPLING DETECTOR
  - SPECIAL DETECTOR
  - EXTEND ONLY (OPERATES DURING OR ONLY)



NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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: 3/10/98 Reg. No. 22457

ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

INPLACE SIGNAL SYSTEM "A"  
 FOR INFORMATION ONLY  
 EAST RIVER ROAD (CSAH 1) AT 77TH WAY NE

FILE NO. ANOKC9708  
 DATE  
 79  
 93

**NOTES:**

- 1) ALL HANDHOLES ARE CONCRETE WITH TYPE "C" COVERS.
- 2) ALL PEDESTRIAN INDICATIONS ARE 9"x 9".
- 3) ALL SIGNAL FACES ARE 12"-3 SECTION R-Y-G, EXCEPT THAT SIGNAL FACES B2, B3, C2 AND C3 12"-4 SECTION R-Y-G-GLTA.



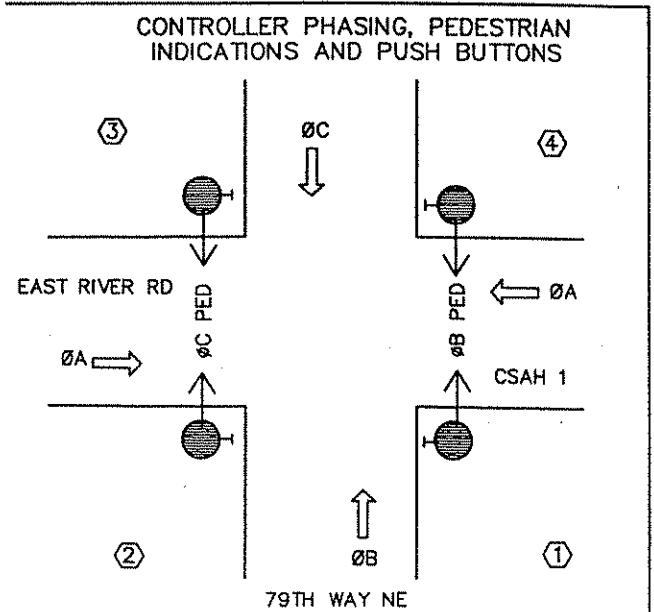
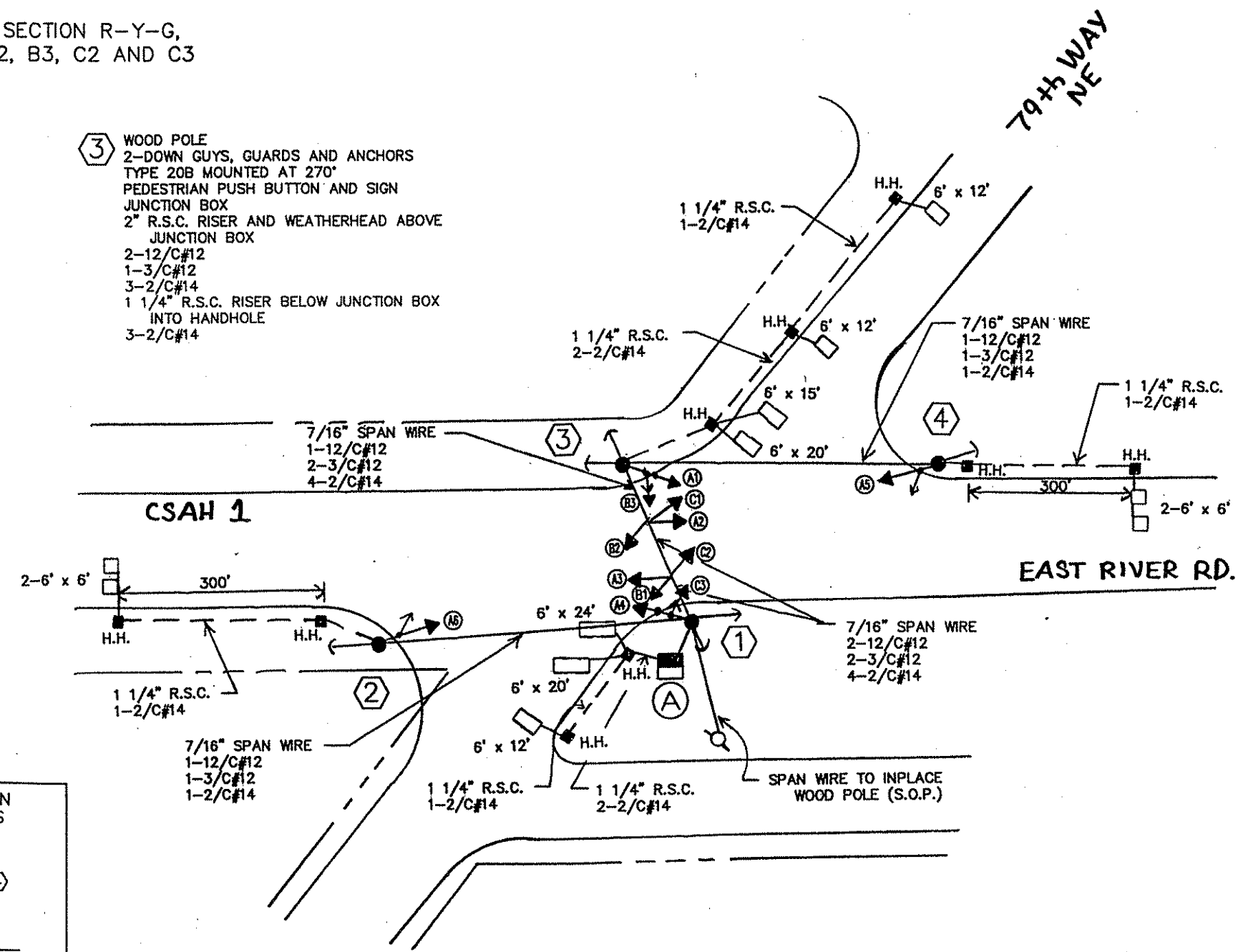
③ WOOD POLE  
 2-DOWN GUYS, GUARDS AND ANCHORS  
 TYPE 20B MOUNTED AT 270°  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 JUNCTION BOX  
 2" R.S.C. RISER AND WEATHERHEAD ABOVE  
 JUNCTION BOX  
 2-12/C#12  
 1-3/C#12  
 3-2/C#14  
 1 1/4" R.S.C. RISER BELOW JUNCTION BOX  
 INTO HANDHOLE  
 3-2/C#14

④ WOOD POLE  
 DOWN GUY, GUARD AND ANCHOR  
 TYPE 10B MOUNTED AT 0°  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 JUNCTION BOX  
 2" R.S.C. RISER AND WEATHERHEAD ABOVE  
 JUNCTION BOX  
 1-12/C#12  
 1-3/C#12  
 1-2/C#14  
 1" N.M.C. RISER BELOW JUNCTION BOX  
 INTO HANDHOLE  
 1-2/C#14

① WOOD POLE  
 2-DOWN GUYS, GUARDS AND ANCHORS  
 TYPE 20B MOUNTED AT 270°  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 JUNCTION BOX  
 2-2" R.S.C. RISERS AND WEATHERHEADS  
 EXTEND INTO CONTROLLER CABINET  
 4-12/C#12  
 4-3/C#12  
 5-2/C#14  
 METER AND DISCONNECT-WOOD POLE MOUNTED  
 1 1/4" R.S.C. RISER AND WEATHERHEAD ABOVE METER  
 1 1/4" R.S.C. RISER BELOW DISCONNECT INTO  
 CONTROLLER CABINET

② WOOD POLE  
 DOWN GUY, GUARD AND ANCHOR  
 TYPE 10B MOUNTED AT 270°  
 PEDESTRIAN PUSH BUTTON AND SIGN  
 JUNCTION BOX  
 2" R.S.C. RISER AND WEATHERHEAD ABOVE  
 JUNCTION BOX  
 1-12/C#12  
 1-3/C#12  
 1-2/C#14  
 1 N.M.C. RISER BELOW JUNCTION BOX  
 INTO HANDHOLE  
 1-2/C#14

Ⓐ CONTROLLER AND CABINET  
 CABINET FOUNDATION  
 EXTENDED TO SIGNAL SYSTEM:  
 4-12/C#12  
 4-3/C#12  
 7-2/C#14



NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

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.  
*John M. Gray*  
 Date: 3/10/18 Reg. No. 22457

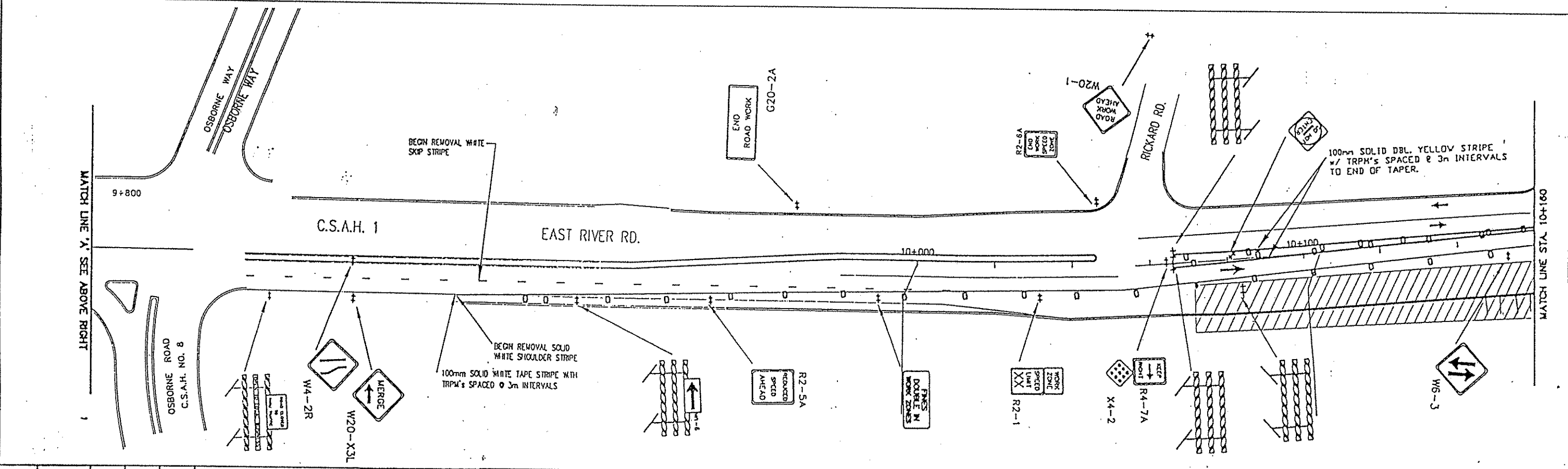
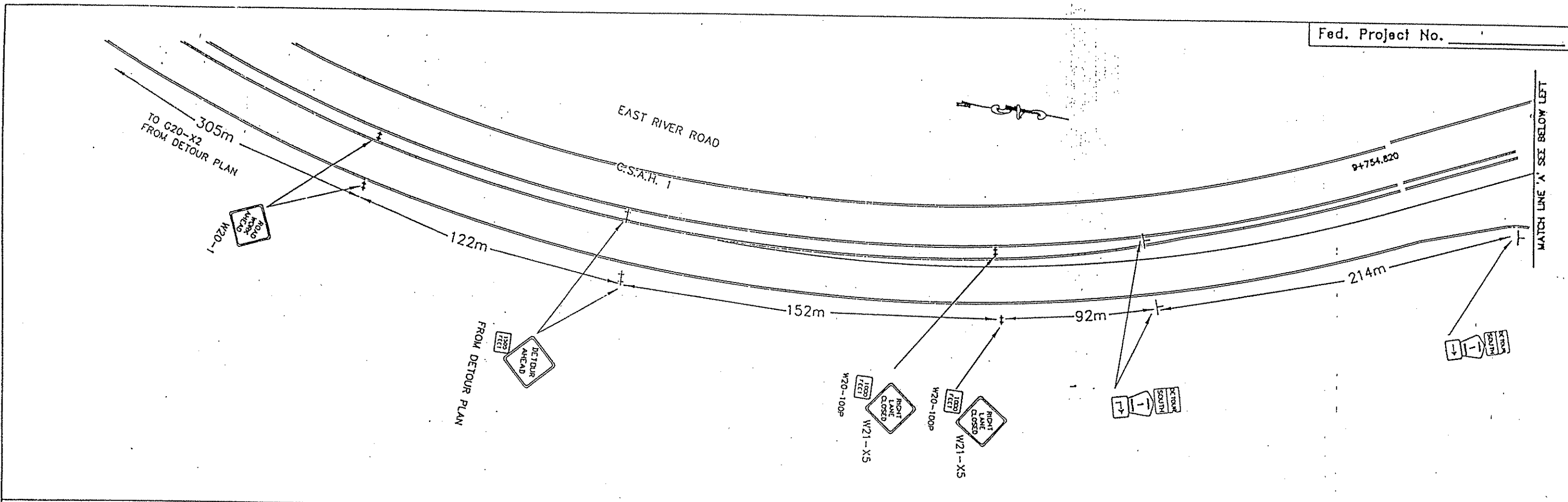


ANOKA COUNTY, MINNESOTA  
 CITY OF FRIDLEY  
 S.P. 02-601-37  
 S.P. 127-020-20

INPLACE SIGNAL SYSTEM "B"  
 FOR INFORMATION ONLY  
 EAST RIVER ROAD (CSAH 1) AT 79TH WAY NE

FILE NO. ANOKC9708	80
DATE	93





NO	DATE	BY	CHKD	APPR	REVISION



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

DATE 8/22/98 REG. NO. 12183

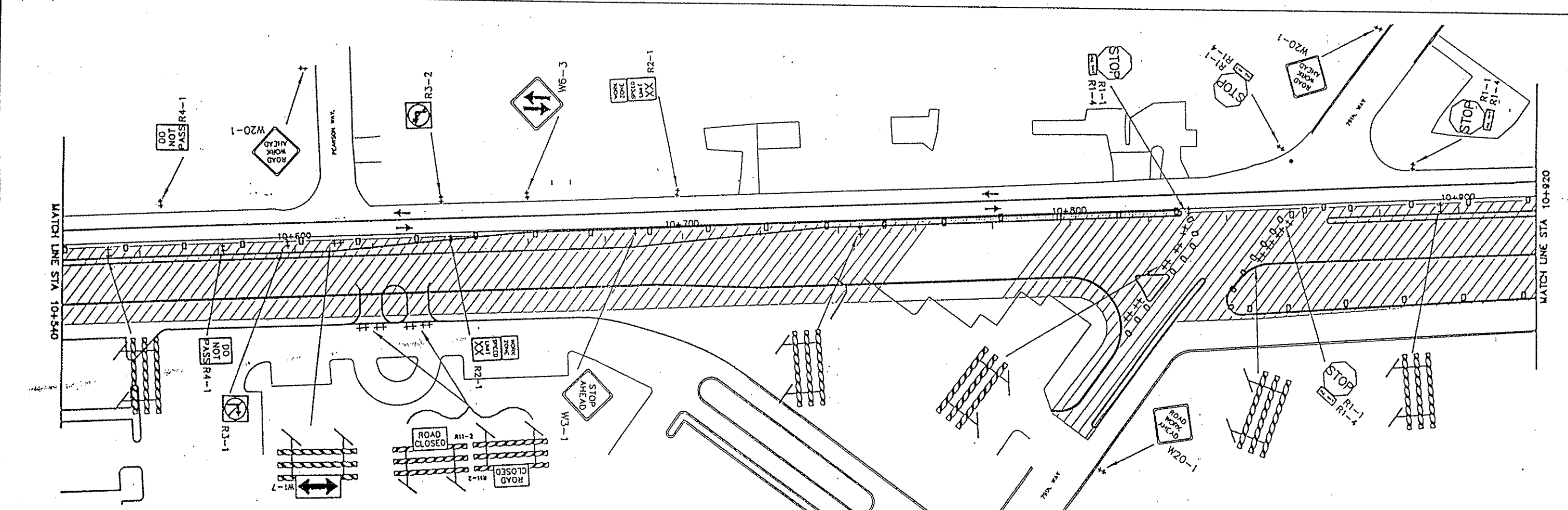
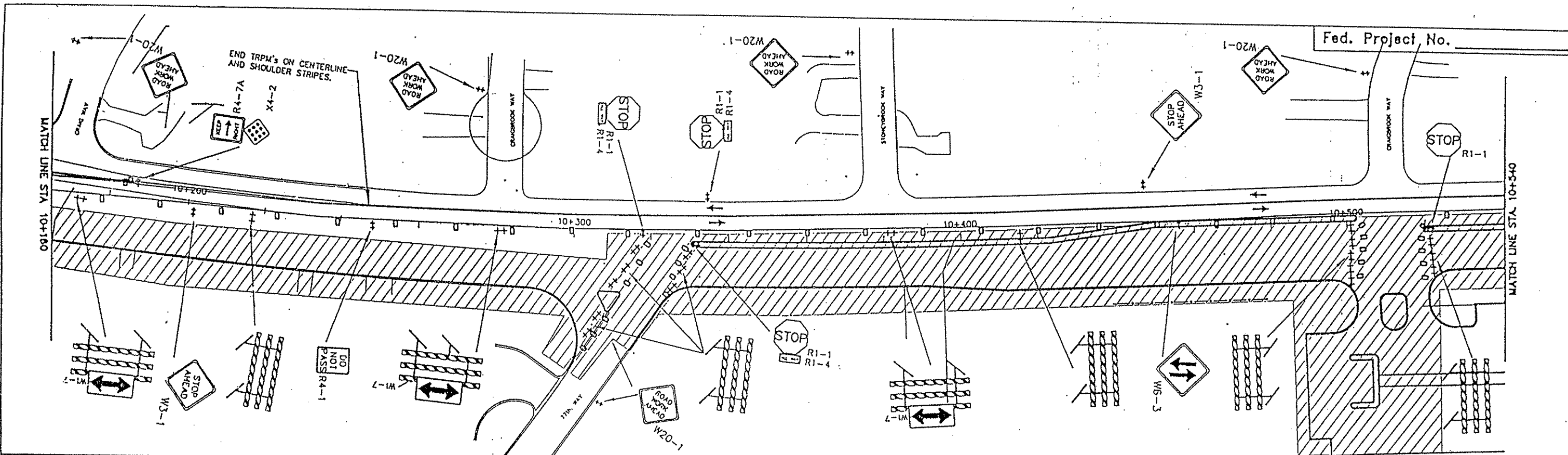
DRAWN BY DW DATE 4/98  
 DESIGN BY DM DATE 1/25/98  
 CHECKED BY JP DATE 1/25/98

**ANOKA COUNTY HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

**STAGE 2**  
 550m IN ADVANCE OF PROJECT TO STA. 10+160  
 Sheet 81 of 93 Sheets

Fed. Project No. \_\_\_\_\_



NO	DATE	BY	CHK	APPR	REVISION



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

DATE 8/27/98 REG. NO. 12183

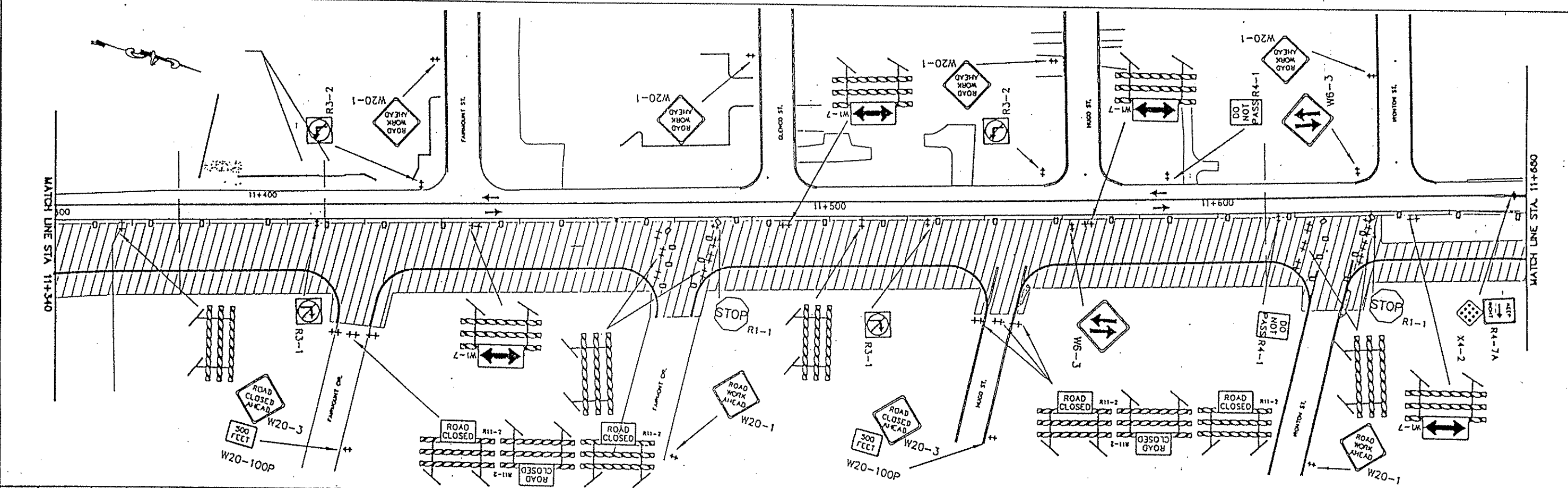
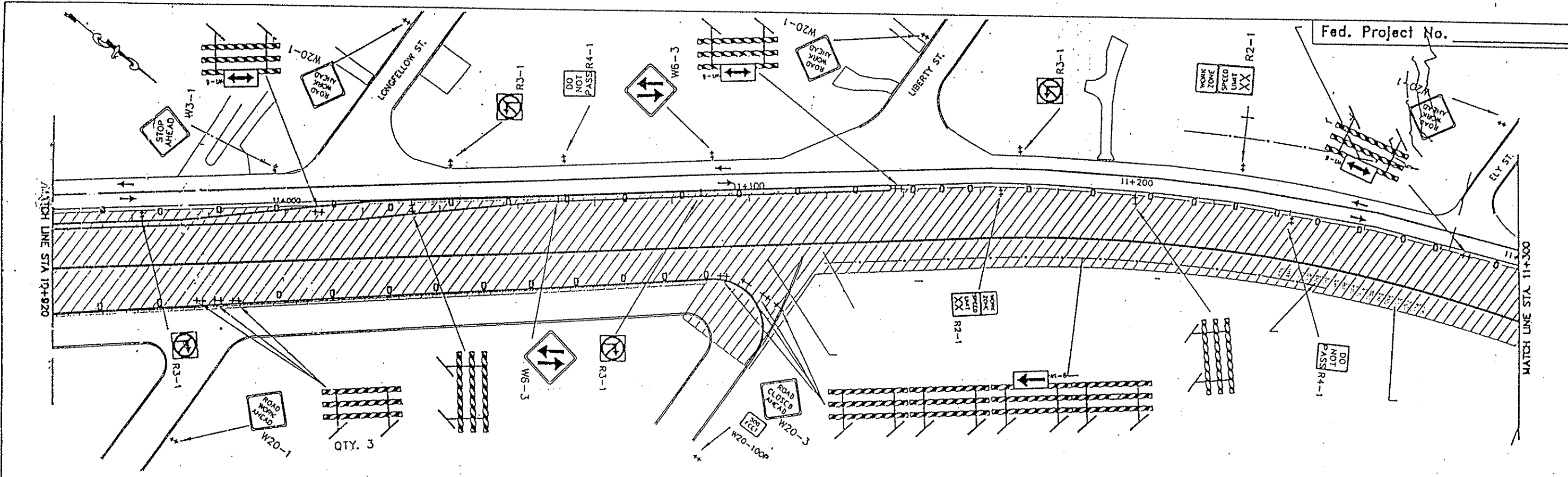
DRAWN BY: D.M. DATE: 4/98  
 DESIGN BY: D.M. DATE: 11/25/98  
 CHECKED BY: J.P. DATE: 11/25/98

**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE 2  
 STA 10+180 TO 10+920  
 Sheet 82 of 93 Sheets

Fed. Project No. \_\_\_\_\_



NO	DATE	BY	CHKD	APPR	REVISION



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

DATE 12/21/95 REQ. NO. 12183

DRAWN BY D.V. DATE 5/28  
 DESIGN BY D.M. DATE 11/25/98  
 CHECKED BY J.P. DATE 11/25/98

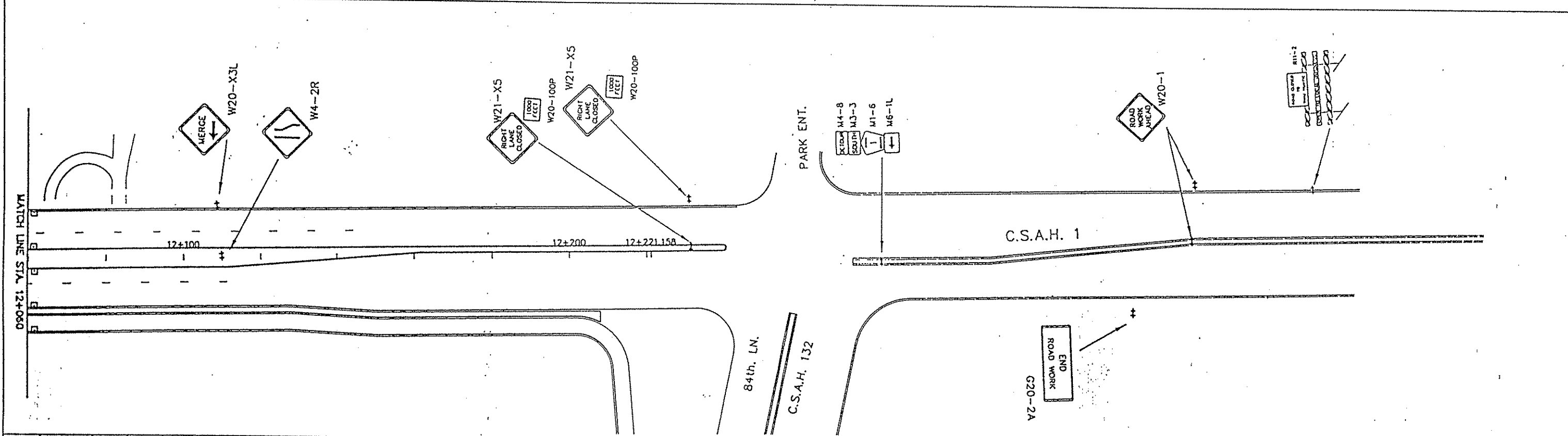
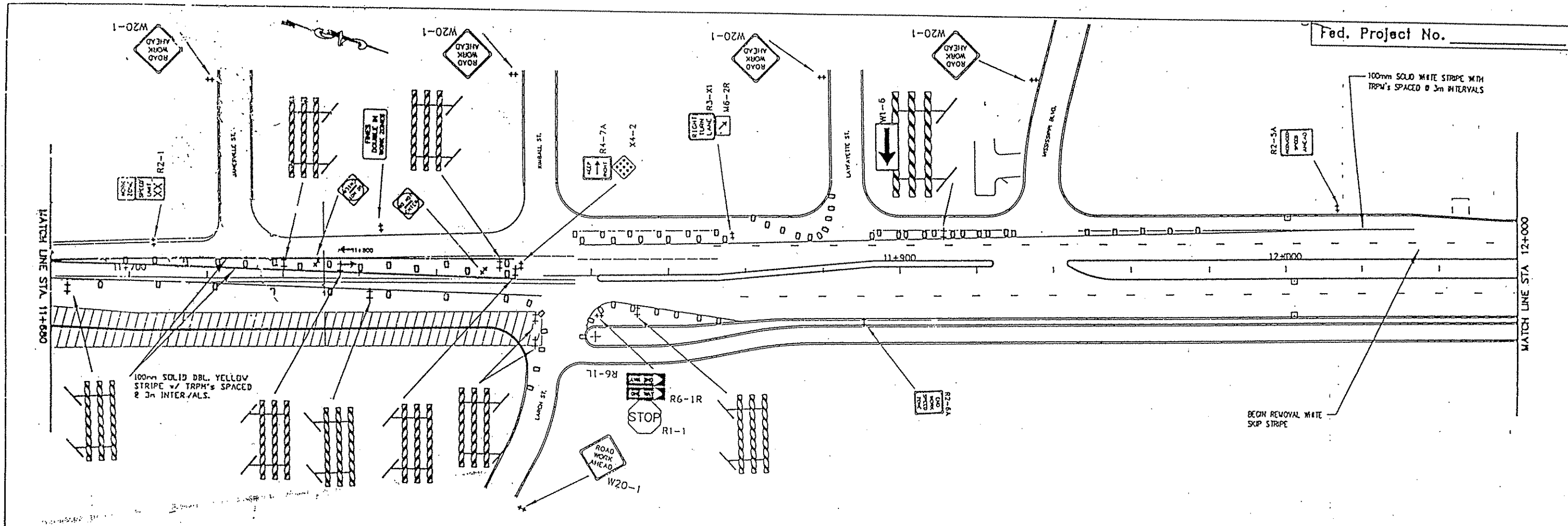


**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

**STAGE 2**  
 STA 10+940 TO 11+650  
 Sheet 83 of 93 Sheets

Fed. Project No. \_\_\_\_\_



NO	DATE	BY	CHKD	APPR	REVISION



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

DATE 8/22/98 REG. NO. 12183

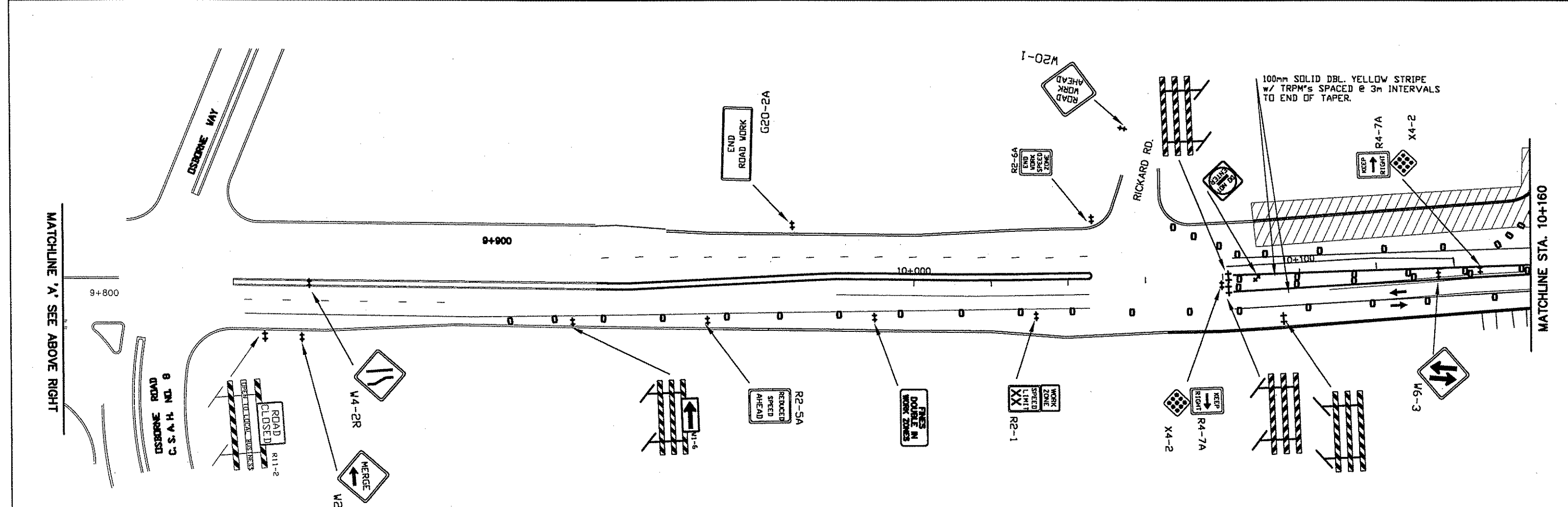
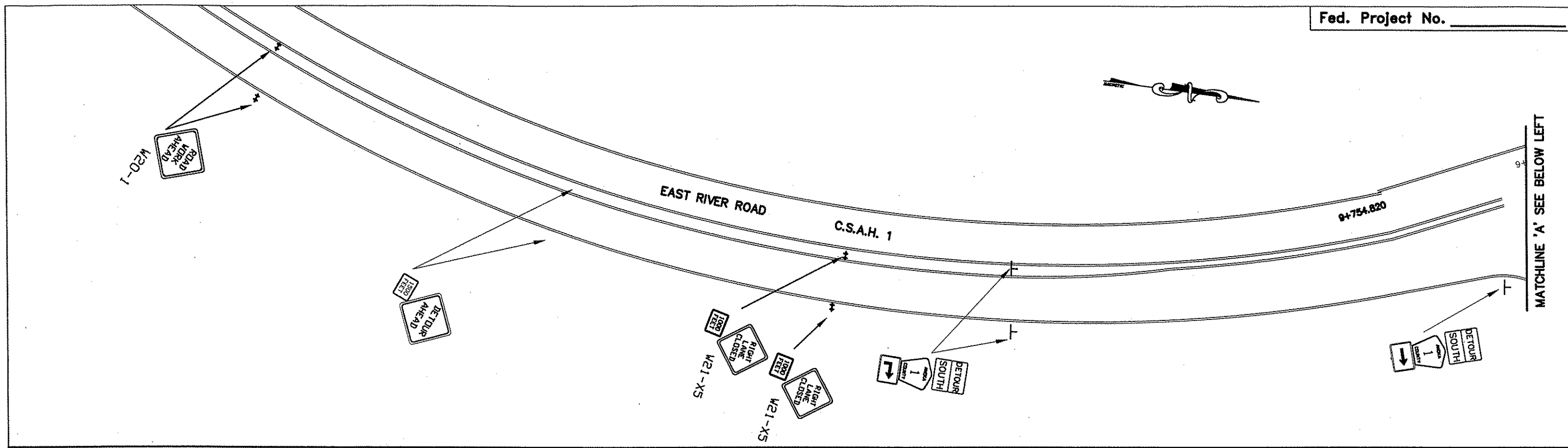
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 CHECKED BY: J.P. DATE: 11/25/98

**ANOKA COUNTY HIGHWAY DEPT.**

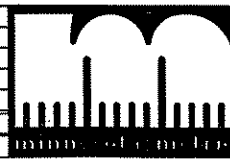
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 STATE AID PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE 2  
 STA 11+580 TO  
 550m BEYOND PROJECT

Sheet 84 of 93 Sheets



NO.	DATE	BY	CHKD	APPR	REVISION



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 8/27/98 REG. NO. 2183

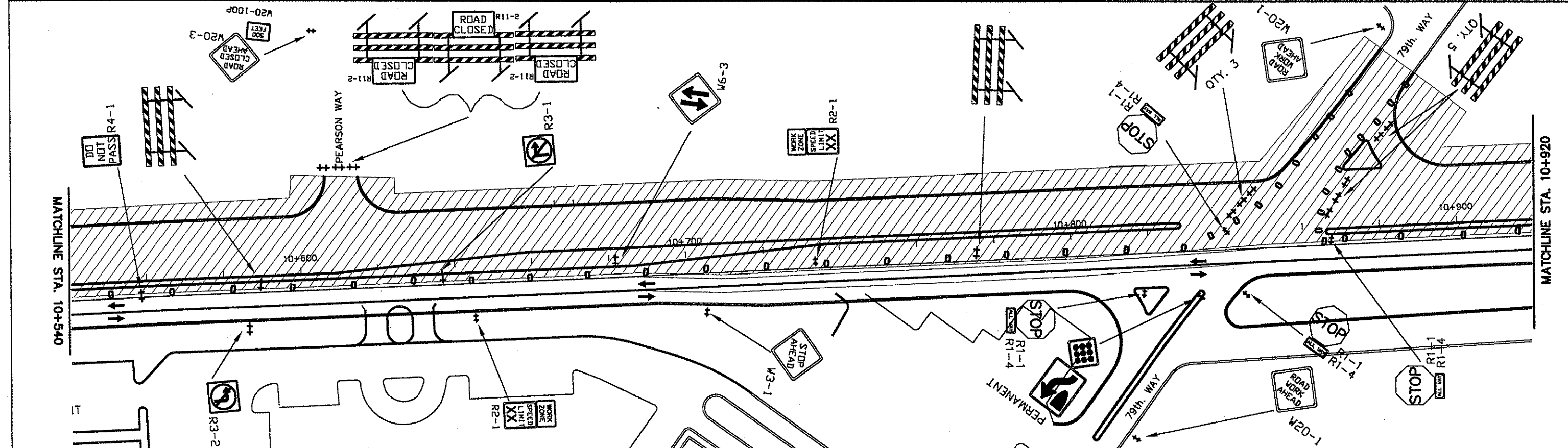
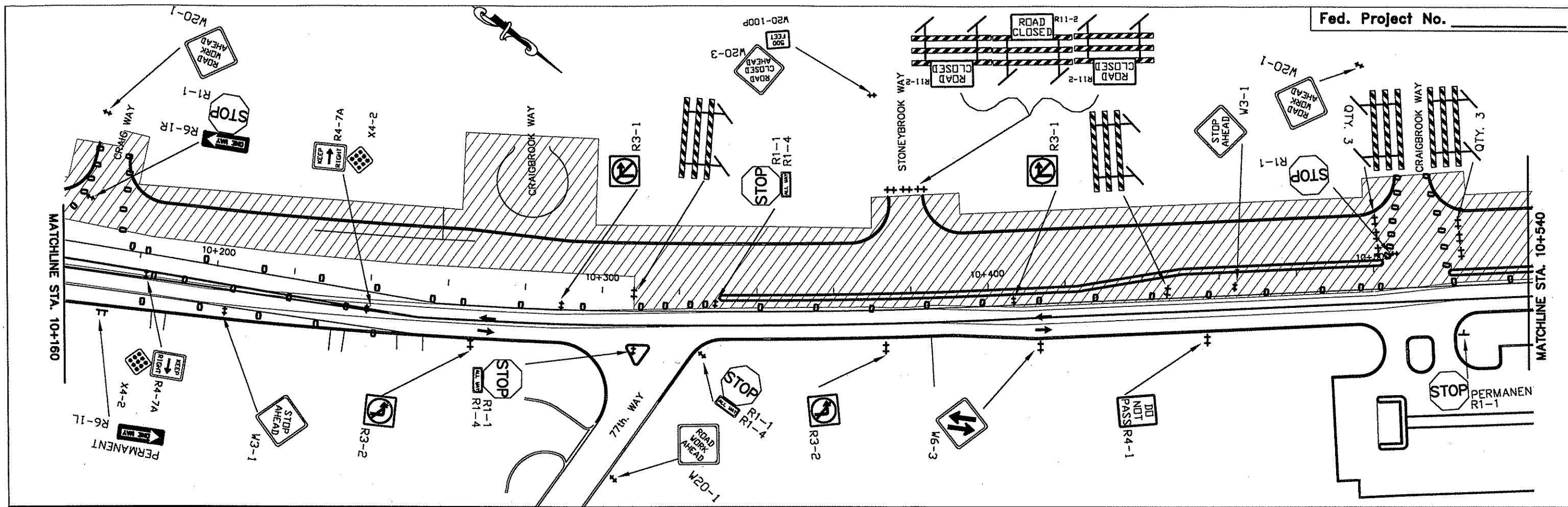
DRAWN BY D.M. DATE 5/98  
 DESIGN BY D.M. DATE 11/98  
 CHECKED BY J.P. DATE 11/98



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

**STAGE 3**  
 550m IN ADVANCE OF  
 PROJECT TO STA. 10+160  
 Sheet 85 of 93 Sheets



NO	DATE	BY	CHK	APPR	REVISION



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 8/22/98 REG. NO. 2183

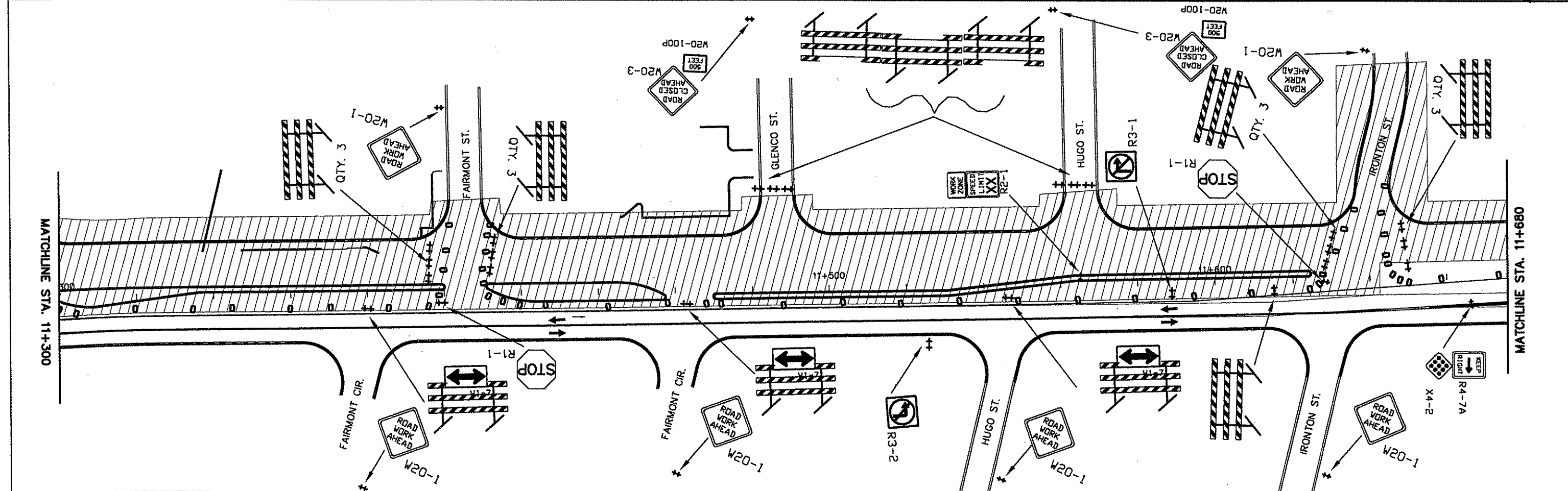
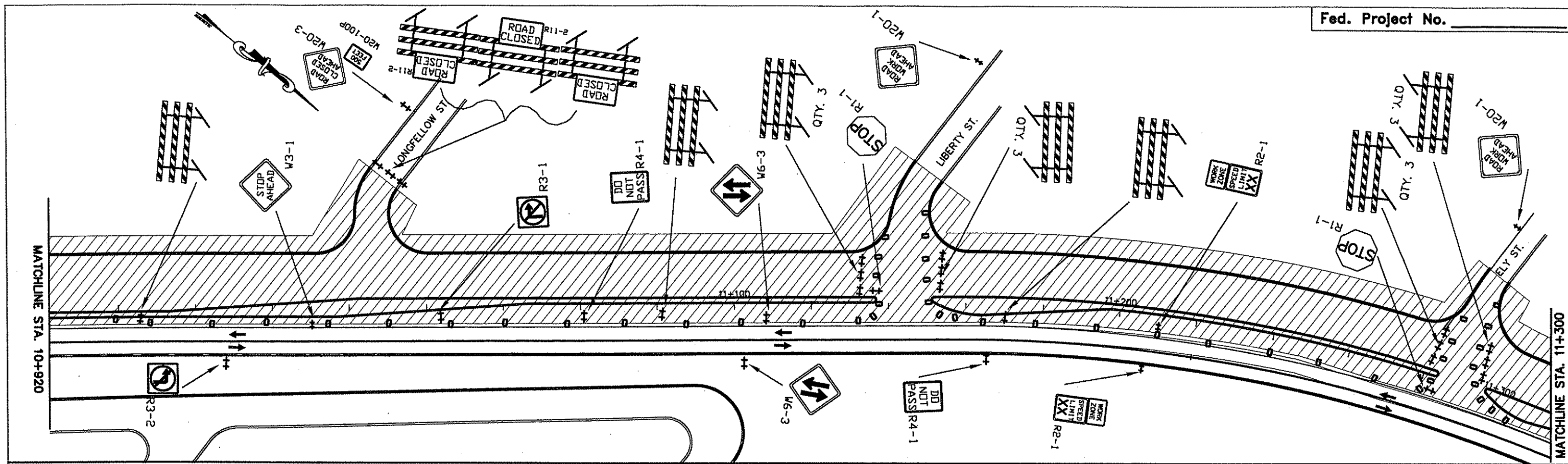
DRAWN BY D.M. DATE 5/98  
 DESIGN BY K.O. DATE 11/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE 3  
 STA 10+160 TO 10+920  
 Sheet 86 of 93 Sheets



NO	DATE	BY	CHKD	APPR	REVISION



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 8/29/98 REG. NO. 2183

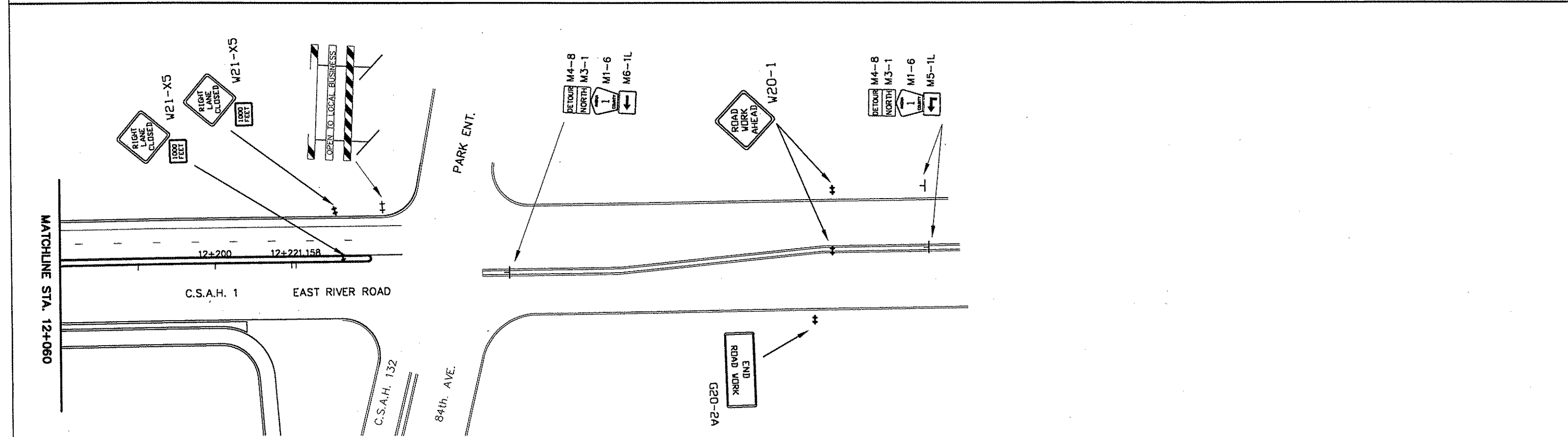
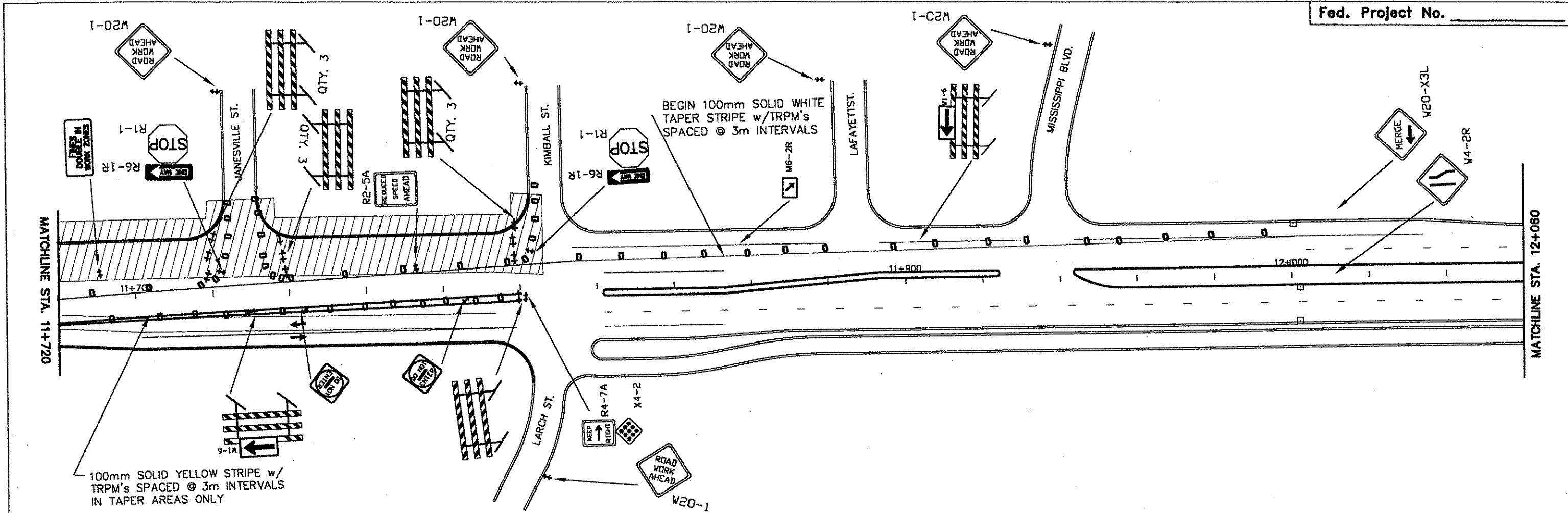
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 DESIGN BY K.O. DATE 11/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

**STAGE 3**  
 STA 10+920 TO 11+680  
 Sheet 87 of 93 Sheets



NO	DATE	BY	CHKD	APPR	REVISION



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 8/22/98 REG. NO. 12183

DRAWN BY D.M. DATE 5/98  
 DESIGN BY K.O. DATE 4/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

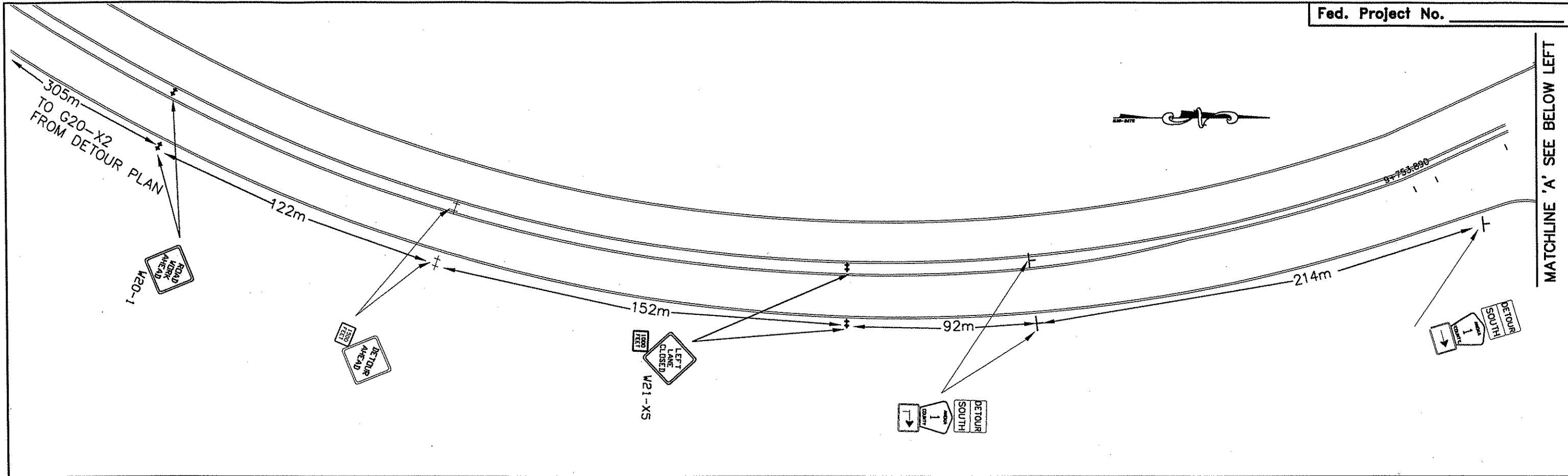


ANOKA COUNTY  
 HIGHWAY DEPT.

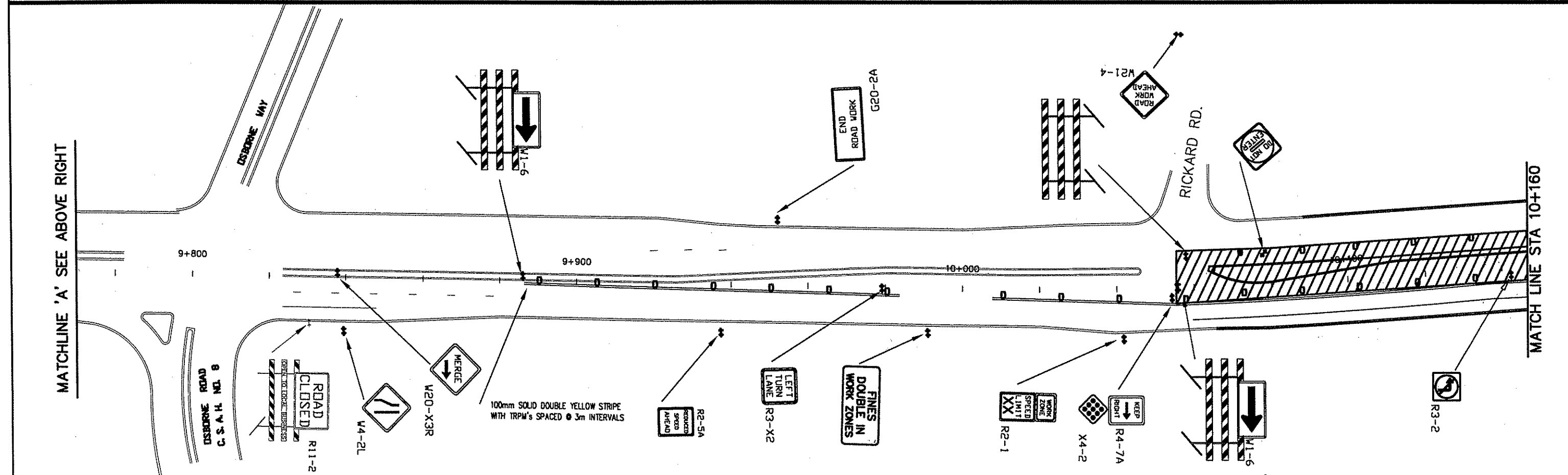
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 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE 3  
 STA. 11+880 TO  
 550m BEYOND PROJECT  
 Sheet 88 of 93 Sheets





MATCHLINE 'A' SEE BELOW LEFT



MATCHLINE 'A' SEE ABOVE RIGHT

MATCHLINE STA 10+160

NO	DATE	BY	CHK	APPR	REVISION



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 8/25/98 REG. NO. 12193

DRAWN BY: DM DATE: 5/98  
 DESIGN BY: Ko DATE: 11/98  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

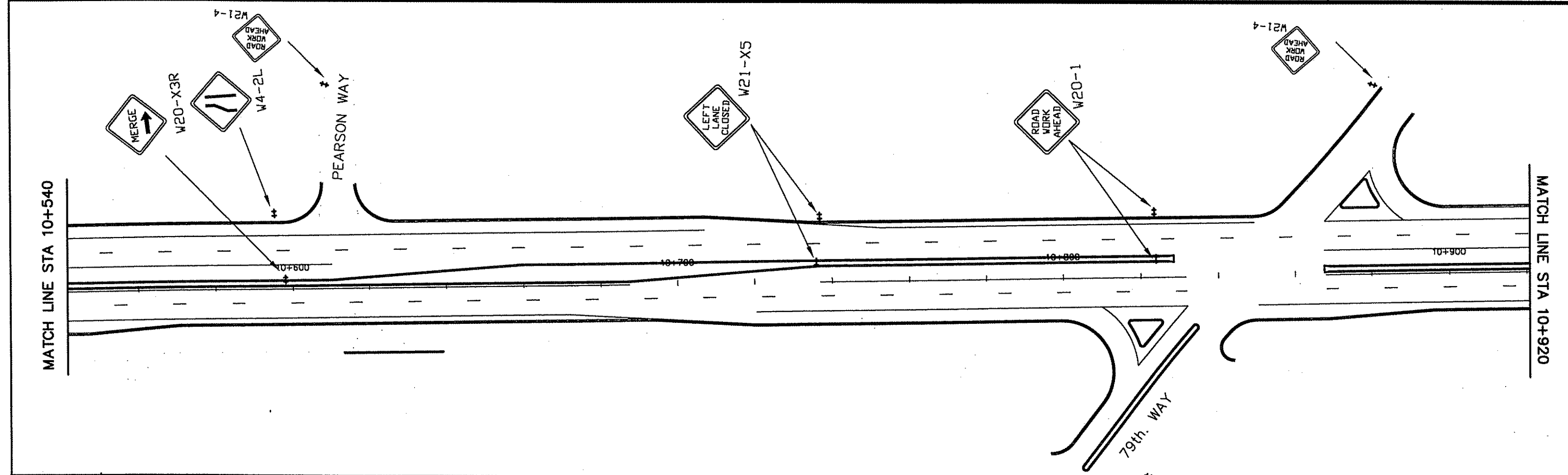
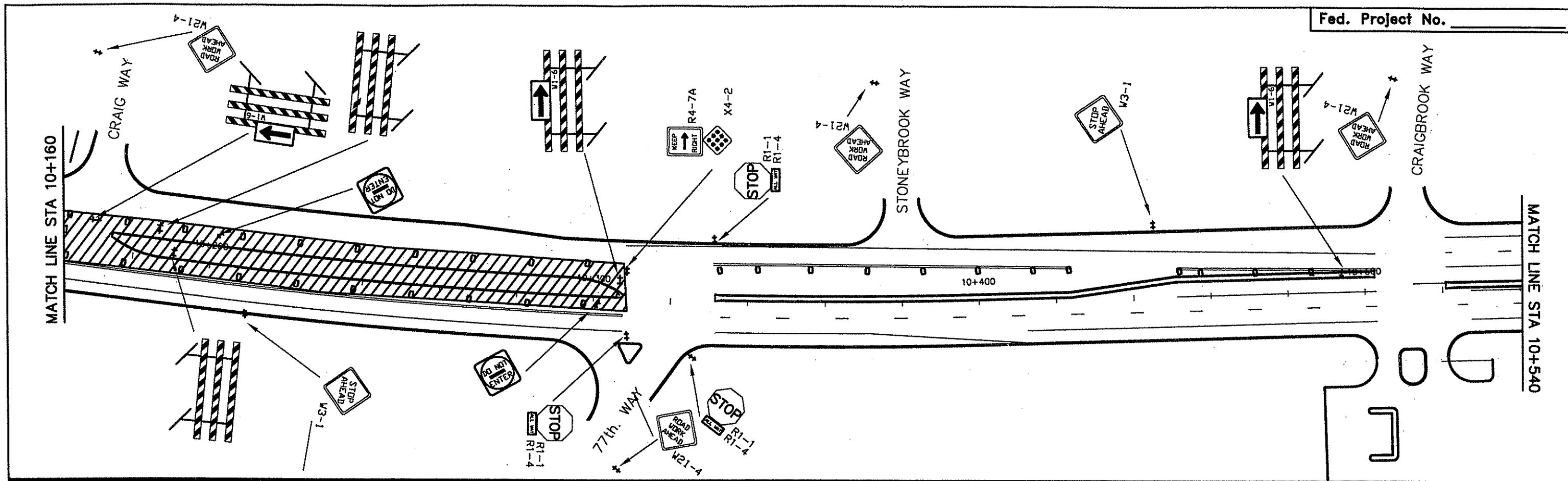


ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE 4  
 550m BEFORE PROJECT  
 TO STA. 10+160

Sheet 89 of 93 Sheets



NO	DATE	BY	CHKD	APPR	REVISION



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 8/27/98 REG. NO. \_\_\_\_\_

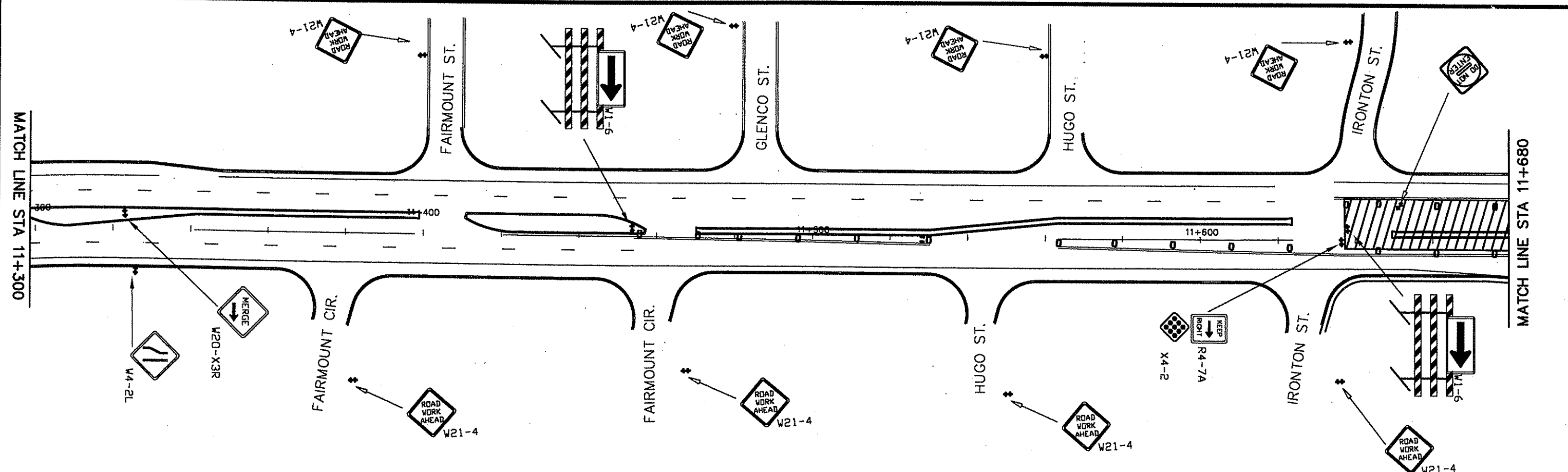
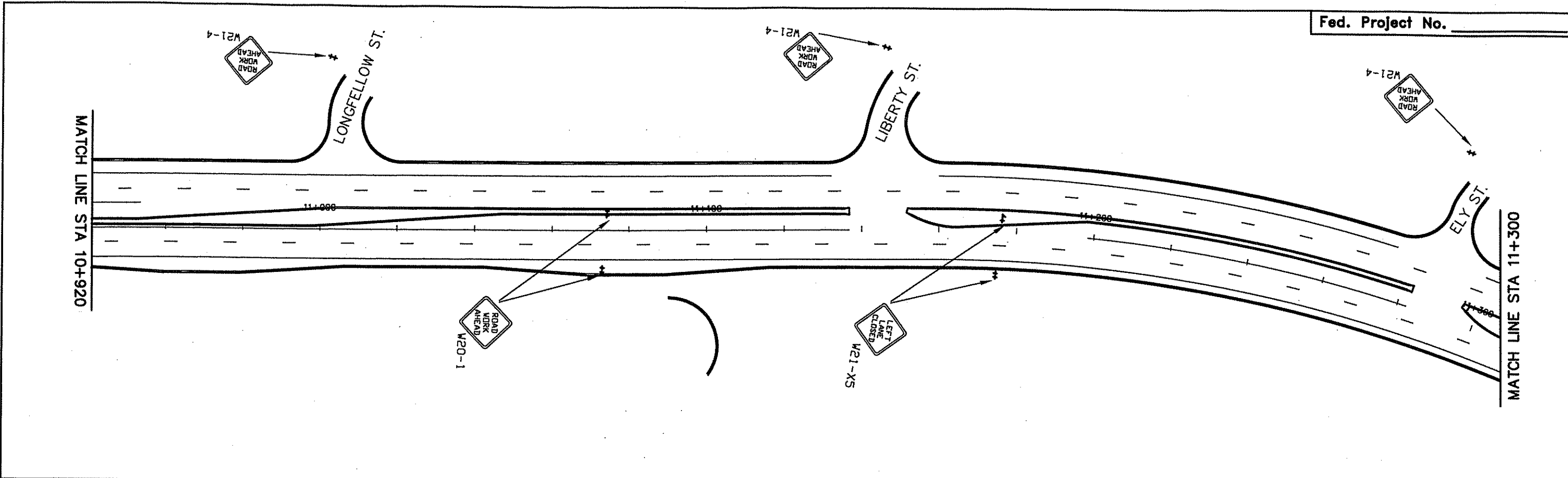
DRAWN BY DM DATE 5/98  
 DESIGN BY Ko DATE 1/98  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-801-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE 4  
 STA 10+160 TO 10+920  
 Sheet 90 of 93 Sheets



NO	DATE	BY	CHK	APPR	REVISION



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 8/27/98 REG. NO. 12182

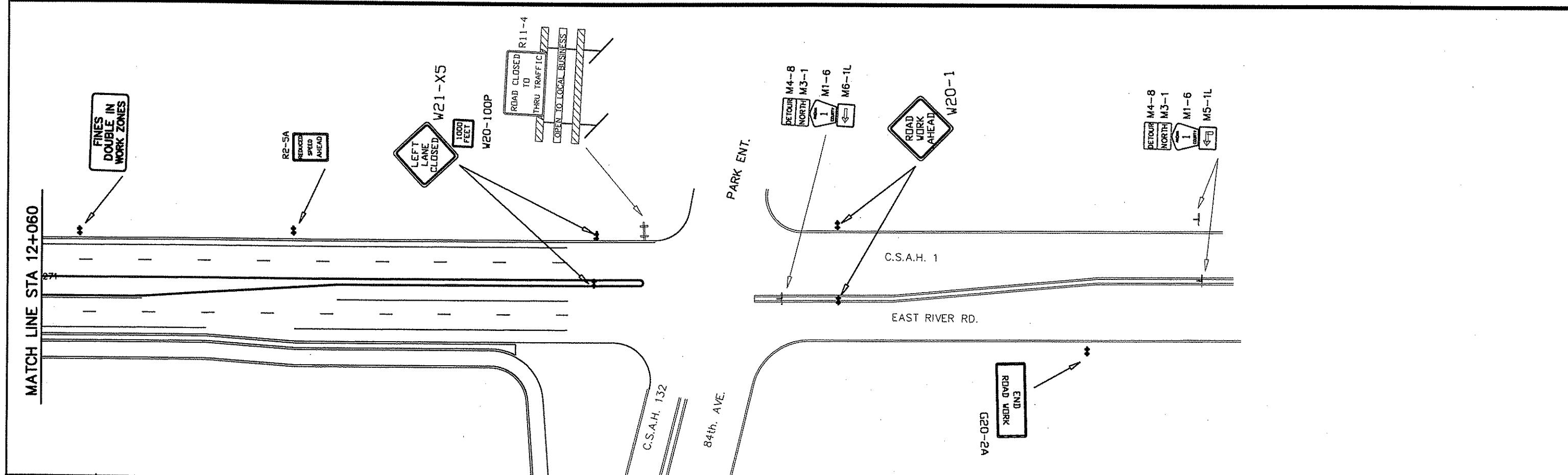
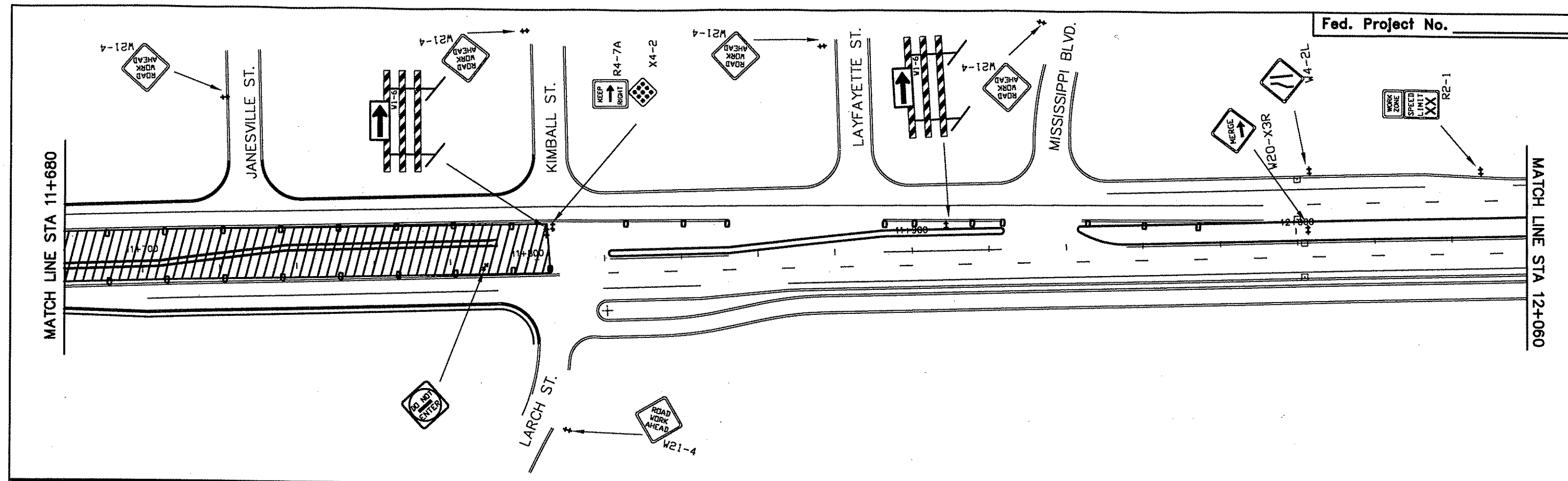
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 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



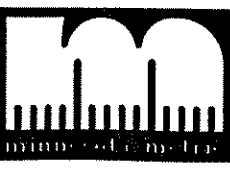
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

**STAGE 4**  
 STA 10+920 TO 11+680  
 Sheet 91 of 93 Sheets



NO	DATE	BY	CHKD	APPR	REVISION



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: 5/27/98 REG. NO. 12183

DRAWN BY: DM DATE: 5/98  
 DESIGN BY: KO DATE: 11/98  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 02-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE 4  
 STA 11+680 TO  
 550m BEYOND PROJECT  
 Sheet 92 of 93 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	STAGE II	STAGE III	STAGE IV
			QTY	QTY	QTY
R1-1	48' x 48'	STOP	13	15	3
R1-4	18' x 6'	STOP	7	7	3
R2-1	24' x 30'	SPEED LIMIT XX	6	5	2
R2-5A	24' x 30'	REDUCED SPEED AHEAD	2	2	1
R2-6A	24' x 30'	END WORK SPEED ZONE	2	1	0
R2-X6P	24' x 18'	WORK ZONE	6	5	2
R3-1	24' x 24'	NO LEFT TURN	5	5	0
R3-2	24' x 24'	NO RIGHT TURN	5	5	1
R3-X1	30' x 30'	RIGHT TURN LANE	1	1	0
R3-X2	30' x 30'	LEFT TURN LANE	0	0	1
R4-1	24' x 30'	DO NOT PASS	7	4	0
R4-7A	24' x 30'	KEEP RIGHT	4	6	4
R5-1	30' x 30'	NO ENTRY	3	3	5
R6-1R	36' x 12'	ONE WAY	1	2	0
R6-1L	36' x 12'	ONE WAY	1	2	0
R11-2	48' x 30'	ROAD CLOSED	8	15	0
TYPE III L	8 FT.	BARRICADE	21	4	12
TYPE III R	8 FT.	BARRICADE	64	76	0
V1-6	48' x 24'	ARROW	3	2	9
V1-7	48' x 24'	ARROW	11	3	0

M. U. T. C. D. CODE	SIZE	INSERT	STAGE II	STAGE III	STAGE IV
			QTY	QTY	QTY
V3-1a	48' x 48'	DIAMOND	4	4	2
V4-2L	48' x 48'	DIAMOND	0	0	4
V4-2R	48' x 48'	DIAMOND	2	2	0
V6-3	48' x 48'	DIAMOND	7	5	0
V20-1	48' x 48'	ROAD WORK AHEAD	28	23	31
V20-100P	24' x 18'	500 FEET	3	5	0
V20-100P	24' x 18'	1000 FEET	4	4	31
V20-3	48' x 48'	ROAD CLOSED AHEAD	3	5	0
V20-X3L	48' x 48'	MERGE	2	2	0
V20-X3R	48' x 48'	MERGE	0	0	4
V21-X5R	48' x 48'	RIGHT LANE CLOSED	4	3	0
V21-X5R	48' x 48'	LEFT LANE CLOSED	0	0	8
X4-2	18' x 18'	DIAMOND	4	6	0
M6-2R	21' x 15'	ARROW	1	1	0
G20-2A	48' x 24'	END ROAD WORK	2	2	2

Fed. Project No. \_\_\_\_\_

M. U. T. C. D. CODE	SIZE	INSERT	STAGE II QTY	STAGE III QTY	STAGE IV QTY
R16-X14	66' x 36'	FINES DOUBLE IN WORK ZONES	2	2	2
REBOUNDABLE DRUM		DRUM	281	291	98

NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 1998.
2. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 3m INTERVALS.
3. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES, AND BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NO	DATE	BY	CHKD	APPR	REVISION

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 3/4/99 REG. NO. 12185

DRAWN BY DM DATE 3/99  
 DESIGN BY DM DATE 3/99  
 CHECKED BY LR DATE 3/99



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 06-601-37  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. \_\_\_\_\_

STAGE QUANTITIES  
EAST RIVER ROAD  
C.S.A.H. 1  
Sheet 93 of 93 Sheets