

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY TH 242 (MAIN STREET)

AGREEMENT NO. 83440
ANOKA COUNTY
SP 0212-42 (TH 242-242)
STPX 0202(260)
METRO DIVISION

GOVERNING SPECIFICATIONS:
THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS FOR CONSTRUCTION' SHALL GOVERN.
ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING 'FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS', DATED JANUARY, 2001.

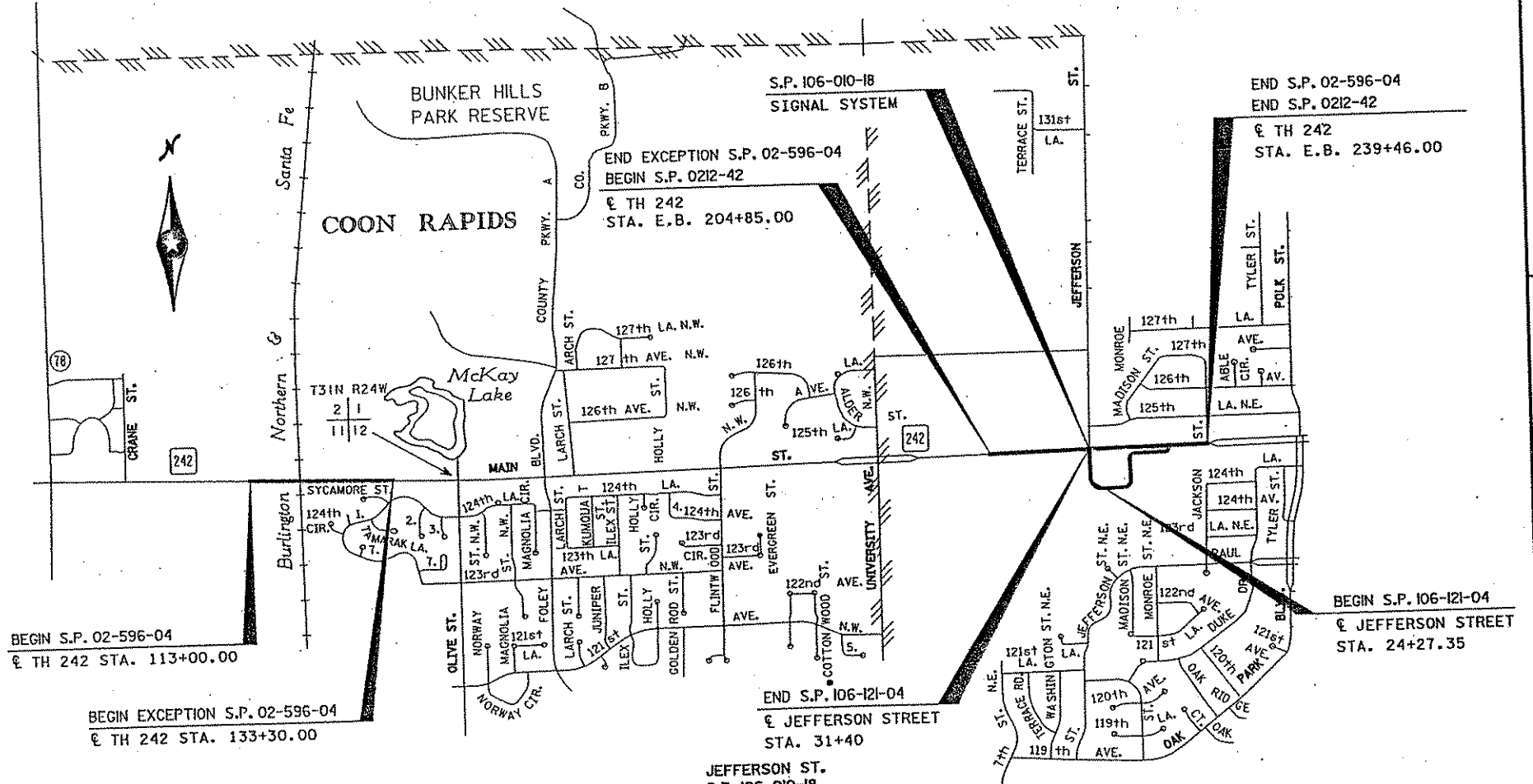
- PLAN SYMBOLS**
- STATE LINE
 - COUNTY LINE
 - TOWNSHIP OR RANGE LINE
 - SECTION LINE
 - QUARTER LINE
 - SIXTEENTH LINE
 - RIGHT-OF-WAY LINE
 - PRESENT RIGHT-OF-WAY LINE
 - CONTROL OF ACCESS LINE
 - PROPERTY LINE (Except Land Lines)
 - VACATED PLATTED PROPERTY
 - CORPORATE OR CITY LIMITS

- TRUNK HIGHWAY CENTER LINE
- CONC. RETAINING WALL
- RAILROAD
- RAILROAD RIGHT-OF-WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- DRAIN TIE
- CULVERT
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOODEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SNOW FENCE
- STONE WALL OR FENCE
- HEDGE
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- MEANDER CORNER
- MAIL BOX
- SPRINGS
- MARSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATCH BASIN
- FIRE HYDRANT
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F-FRAME
- S-STONE
- B-BRICK
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY
- SOIL BORING

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

CONSTRUCTION PLAN FOR GRADING, DRAINAGE, PAVING, CONCRETE CURB & GUTTER AND SIGNAL SYSTEM

LOCATED ON TH 242 (MAIN STREET) FROM 1700 FT. E. OF CRANE STREET TO 480 FT. W. OF OLIVE STREET, IN COON RAPIDS AND FROM 1300 FT. E. OF UNIVERSITY AVE. TO 450 FT. W. OF POLK STREET, IN BLAINE



DESIGN DESIGNATION FOR:	TH 242 S.P. 02-596-04	TH 242 S.P. 0212-42	JEFFERSON ST. S.P. 106-010-18 S.P. 106-121-04 S.P. 02-596-04
FUNCTIONAL CLASSIFICATION	HIGH DENSITY ARTERIAL	HIGH DENSITY ARTERIAL	COLLECTOR
NO. OF TRAFFIC LANES	2	2	2
NO. OF PARKING LANES	0	0	0
STRUCTURAL DESIGN	10' TON	10' TON	10' TON
R-VALUE	60	60	60
DESIGN SPEED	55 MP/H	60 MP/H	35 MP/H
STOPPING SIGHT DISTANCE BASED ON:			
HEIGHT OF EYE	3.5'	3.5'	3.5'
HEIGHT OF OBJECT	0.5'	0.5'	0.5'
ADT (CURRENT YEAR) (2002)	20,000	24,000	3,000
ADT (FUTURE YEAR) (2022)	33,000	42,000	3,000
ESALS	5,600,000	6,970,000	506,000
HCADT	12,646.00 FEET	2,395 MILES	712.65 FEET
GROSS LENGTH	0 FEET	0 MILES	0 FEET
BRIDGES-LENGTH	1,555.00 FEET	1,355 MILES	0 FEET
EXCEPTIONS-LENGTH	5,491.00 FEET	1,040 MILES	712.65 FEET
NET-LENGTH	REF. POINT 004+00 TO 136	REF. POINT 007+00 TO 104	712.65 FEET
REF. POINT			0.135 MILES

PROJECT LOCATION PLAN _____ 50'

COUNTY ANOKA PROFILE _____ VERT. 10'

DIVISION METRO INDEX MAP _____ 2000'

GENERAL LAYOUT _____ 200'

CROSS SECTIONS _____ VERT. 10'

_____ HOR. 10'

I HEREBY CERTIFY THAT THE FINAL REVISIONS, IF ANY, OF THIS PLAN WERE MADE 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 _____ REG. NO. _____
STATE PROJ. NO. _____ S.P. 02-596-04
S.P. 0212-42 (TH 242-242) S.P. 106-121-04
S.P. 106-010-18

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SHEETS 30 AND 31 NOT USED
THIS PLAN CONTAINS 137 SHEETS

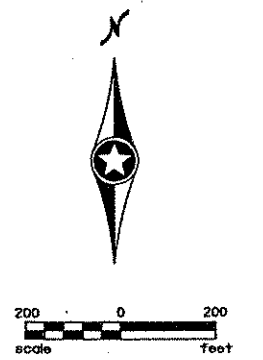
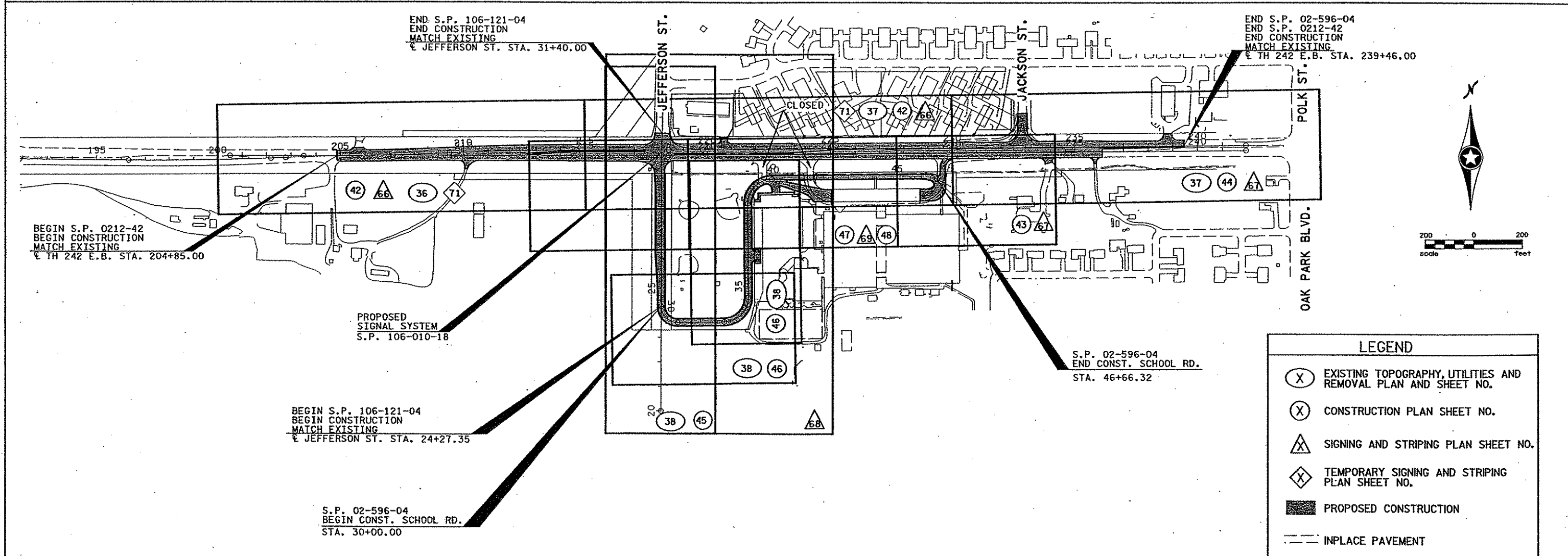
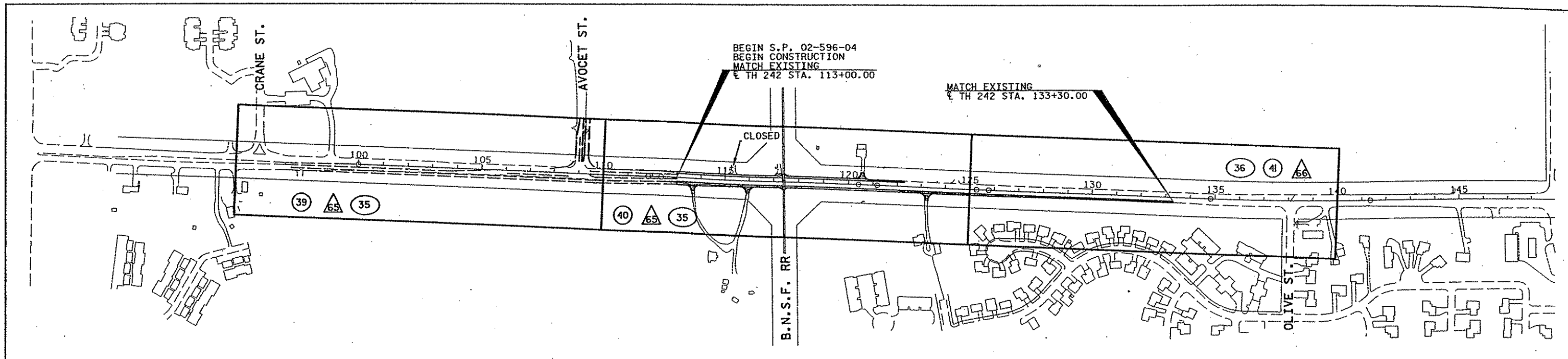
SRI CONSULTING GROUP, INC.

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.

Print Name: NATHAN A. WILL
ENGR. Nathan A. Will
License # 26391 Date 6-28-02

APPROVED	<u>Janet Kelly</u>	9 July 02	DATE
CITY OF BLAINE ENGINEER			
APPROVED	<u>Robert Winters</u>	7/9/02	DATE
ANOKA COUNTY ENGINEER			
APPROVED	<u>Richard Mathison</u>	7/10/02	DATE
METRO DIVISION TRANSPORTATION ENGINEER			
APPROVED	<u>Joe Korzanic</u>	7/11/02	DATE
METRO DIVISION MATERIALS ENGINEER			
APPROVED	<u>Bruce A. Davis</u>	7/10/02	DATE
METRO DIVISION WATER RESOURCES ENGINEER			
APPROVED	<u>D. B. E...</u>	7/11/02	DATE
METRO DIVISION TRAFFIC ENGINEER			
APPROVED	<u>Janet Kelly</u>	7/23/02	DATE
STATE PRE-LETTING ENGINEER			
APPROVED	<u>Delbert W. Linder</u>	7/25/02	DATE
OFFICE OF LAND MANAGEMENT APPROVAL DIRECTOR, LAND MANAGEMENT			
APPROVED	<u>Patt G. Loken</u>	7/16/02	DATE
STATE DESIGN ENGINEER			
APPROVED	<u>Nathan A. Will</u>	7/16/02	DATE
METRO ASSISTANT DIVISION ENGINEER - STATE AID			
REVIEWED FOR COMPLIANCE WITH STATE AND FEDERAL AID RULES/POLICY			
APPROVED FOR STATE AND FEDERAL AID FUNDING: STATE AID ENGINEER			

THIS PLAN AND/OR SPECIFICATION WAS PREPARED SPECIFICALLY FOR THIS PROJECT, AND ANY RE-USE OF DETAILS OR SPECIFICATIONS ON OTHER PROJECTS IS NOT INTENDED OR AUTHORIZED BY THE DESIGNER. LIABILITY FOR ANY RE-USE IS THE RESPONSIBILITY OF THE PERSON, AGENCY, OR CORPORATION USING PLAN OR SPECIFICATION DATA FROM THIS PROJECT.



LEGEND	
(X)	EXISTING TOPOGRAPHY, UTILITIES AND REMOVAL PLAN AND SHEET NO.
(X)	CONSTRUCTION PLAN SHEET NO.
(X)	SIGNING AND STRIPING PLAN SHEET NO.
(X)	TEMPORARY SIGNING AND STRIPING PLAN SHEET NO.
(Shaded Area)	PROPOSED CONSTRUCTION
(Dashed Line)	INPLACE PAVEMENT

P:\SIV\110474102\pic...102.dwg
 #PLOTTER#
 #SCALE#
 06/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.GLA DATE: Mar. 07, 2002

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL 4-02
 CHECKED BY: N. WILL 5-02
 COMM. NO. 0014102



ANOKA COUNTY
 GENERAL LAYOUT
 TH 242
 STA. 100+00 TO STA. 242+00

SHEET
 2
 OF
 139

STATEMENT OF ESTIMATED QUANTITIES

TAB	NOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	S.P. 02-596-04 TH 242 ACCESS MANAGEMENT				
						S.P. 02-596-04		S.P. 106-121-04		S.P. 0212-42 (12)
						TH 242 @ BNSF RR	SCHOOL ROAD	JEFFERSON STREET	TH 242	
						ROADWAY QUANTITIES	ROADWAY QUANTITIES	STORM SEWER QUANTITIES	ROADWAY QUANTITIES	STORM SEWER QUANTITIES
		2021.501	MOBILIZATION	LUMP SUM	1	0.3	0.1	0.1		0.5
		2031.501	FIELD OFFICE TYPE D	EACH	1	0.3	0.1	0.1		0.5
(A)		2101.502	CLEARING	TREE	14		14			
(A)		2101.507	GRUBBING	TREE	14		14			
(G)		2102.502	PAVEMENT MARKING REMOVAL	LIN FT	8800	4500		100		4200
(B)		2104.501	REMOVE PIPE CULVERTS	LIN FT	768	50	70			648
(B)		2104.501	REMOVE CURB AND GUTTER	LIN FT	1089		1089			
(23)		2104.501	REMOVE GUARD RAIL-PLATE BEAM	LIN FT	1050					1050
(B)	(2)	2104.503	REMOVE CONCRETE WALK	SQ FT	6469		5907			562
(B)		2104.503	REMOVE CONCRETE MEDIAN	SQ FT	9170					9170
(B)		2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	7155	1918				5237
		2104.509	REMOVE PIPE APRON	EACH	8					8
(B)		2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	9320	3087	470			5763
		2104.521	SALVAGE GUARD RAIL-PLATE BEAM	LIN FT	700					700
		2104.523	SALVAGE SIGN TYPE C	EACH	38		4			34
		2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	2		2			
(24)		2104.601	HAUL SALVAGED MATERIAL	LUMP SUM	1					1
(B)		2104.603	SAWING CONCRETE WALK	LIN FT	90		80			10
(L)		2105.501	COMMON EXCAVATION	(P) CU YD	32515	1792	4728	9086		16909
(L)		2105.505	MUCK EXCAVATION	CU YD	7575			2779		4796
(L)	(15)	2105.522	SELECT GRANULAR BORROW (LV)	CU YD	41121				17863	23258
(L)	(14)	2105.522	SELECT GRANULAR BORROW (CV)	(P) CU YD	2131					2131
(L)		2105.523	COMMON BORROW (CV)	CU YD	4738	734	2404	1600		
		2105.601	DEWATERING	LUMP SUM	1					1
(18)		2105.601	EXCAVATION SPECIAL 1	LUMP SUM	1					1
(16)		2105.604	GEOTEXTILE FABRIC TYPE V	SQ YD	10945			4156		6789
		2130.501	WATER	MGAL	100	25	25	25		25
(C)	(3)	2211.503	AGGREGATE BASE (CV) CLASS 5	CU YD	8332	1213	1796	402		4921
(B)		2232.501	MILL BITUMINOUS SURFACE (1.5")	SQ YD	12657	1306				11351
(C)		2350.502	TYPE MV3 NON WEARING COURSE MIXTURE (C)	TON	4290	417	641	298		2934
(C)		2350.502	TYPE HV3 NON WEARING COURSE MIXTURE (C)	TON	1872	359				1513
(C)		2350.501	TYPE MV3 WEARING COURSE MIXTURE (C)	TON	1119	54	386	179		500
(C)		2350.501	TYPE HV3 WEARING COURSE MIXTURE (C)	TON	2016	325				1691
(C)		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1912	319	234	109		1250
		2451.609	AGGREGATE FOUNDATION	TON	100		50		50	
(H)		2501.511	15" CS PIPE CULVERT	LIN FT	34					34
(H)		2501.511	18" CS PIPE CULVERT	LIN FT	55					55
(H)		2501.511	48" CS PIPE CULVERT	LIN FT	53					53
(H)		2501.515	15" GS PIPE APRON	EACH	2					2
(H)		2501.515	18" GS PIPE APRON	EACH	1					1
(H)		2501.515	18" RC PIPE APRON	EACH	2		1			1
(H)		2501.515	24" RC PIPE APRON	EACH	1				1	
(H)		2501.515	27" RC PIPE APRON	EACH	1				1	
(H)		2501.567	18" CS SAFETY APRON & GRATE DESIGN 3128	EACH	2					2
(H)		2501.567	48" RC SAFETY APRON & GRATE DESIGN 3132	EACH	1					1
(19)		2502.521	4" PE PIPE DRAIN	LIN FT	160					160
(H)		2503.541	12" RC PIPE SEWER DESIGN 3006	LIN FT	632		310		322	
(H)		2503.541	15" RC PIPE SEWER DESIGN 3006	LIN FT	49				49	
(H)		2503.541	18" RC PIPE SEWER DESIGN 3006	LIN FT	433		74		236	123
(H)		2503.541	24" RC PIPE SEWER DESIGN 3006	LIN FT	98					98
(H)		2503.541	27" RC PIPE SEWER DESIGN 3006	LIN FT	40				40	
(H)		2503.541	48" RC PIPE SEWER DESIGN 3006	LIN FT	28					28

SEE SHEET 5 FOR NOTES.

02.egg
 11/11/2002
 REVISIONS
 NAME: 4102.EGA DATE: Mar. 07, 2002

NO	DATE	BY	CHKD	APPR	REVISION

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 7/12-02 License: 26391

STATE AID PROJECT NO. S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY D. FITCHORN 8-02
 DESIGNED BY M. HANSEN 5-02
 CHECKED BY N. WILL 5-02

COMM. NO. 0014102



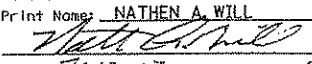
ANOKA COUNTY
 STATEMENT OF ESTIMATED QUANTITIES
 TH 242

STATEMENT OF ESTIMATED QUANTITIES

TAB	NOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	S.P. 02-596-04 TH 242 ACCESS MANAGEMENT					
						S.P. 02-596-04			S.P. 106-121-04		S.P. 0212-42 (12)
						TH 242 @ BNSF RR	SCHOOL ROAD		JEFFERSON STREET		TH 242
						ROADWAY QUANTITIES	ROADWAY QUANTITIES	STORM SEWER QUANTITIES	ROADWAY QUANTITIES	STORM SEWER QUANTITIES	ROADWAY QUANTITIES
(H)		2506.501	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	25.9			12.0		13.9	
(H)		2506.501	CONST DRAINAGE STRUCTURE DESIGN H	LIN FT	14.0			10.3			3.7
(H)		2506.501	CONST DRAINAGE STRUCTURE DESIGN SD	LIN FT	3.6			3.6			
(H)		2506.501	CONST DRAINAGE STRUCTURE DES 48-4020	LIN FT	9.2			4.8		4.4	
(H)		2506.501	CONST DRAINAGE STRUCTURE DES 60-4020	LIN FT	8.0					8.0	
(I)		2506.516	CASTING ASSEMBLY	EACH	15			8		6	1
(H)		2511.501	RANDOM RIPRAP CL II	CU YD	68.3			3.9		11.3	53.1
(D)	(4)	2521.501	4" CONCRETE WALK	SQ FT	6718			6258			460
(D)		2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	4033			4033			
(D)		2531.501	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	1313			229	1084		
(D)		2531.503	CONCRETE MEDIAN (DESIGN SPECIAL)	SQ YD	3246						3246
	(20)	2533.504	CONCRETE MEDIAN BARRIER DESIGN 8337	LIN FT	955						955
(H)		2554.509	GUIDE POSTS TYPE B	EACH	8						8
		2554.511	INSTALL TRAFFIC BARRIER DESIGN B8307	LIN FT	700						700
		2554.521	ANCHORAGE ASSEMBLY-PLATE BEAM	EACH	1						1
	(21)	2554.523	END TREATMENT-ENERGY ABSORBING TERMINAL	EACH	1						1
		2554.602	IMPACT ATTENUATOR BARRELS	EACH	22						22
(M)	(22)	2557.501	WIRE FENCE DESIGN 60-9322	LIN FT	1257						1257
		2557.522	METAL BRACE ASSEMBLY	EACH	4						4
		2557.527	ELECTRICAL GROUND	EACH	2						2
		2563.601	TRAFFIC CONTROL	LUMP SUM	1	0.10	0.10		0.20		0.60
(G)		2563.602	RAISED PAVEMENT MARKER TEMPORARY	EACH	150						150.0
(J)		2564.531	SIGN PANELS TYPE C	SQ FT	221.75						221.75
		2564.537	INSTALL SIGN TYPE C	EACH	25						25
		2564.537	INSTALL SIGN TYPE SPECIAL	EACH	2		2				
(N)		2564.554	SNOW PLOW MARKER X4-5	EACH	2						2
(K)		2564.602	PAVEMENT MESSAGE (LEFT ARROW) EPOXY	EACH	5						5
(K)		2564.602	PAVEMENT MESSAGE (RIGHT ARROW) EPOXY	EACH	1						1
(K)		2564.602	PAVEMENT MESSAGE (RIGHT-THRU ARROW) EPOXY	EACH	1						1
(K)		2564.602	PAVEMENT MESSAGE (LT ARROW) POLY PREFORMED	EACH	7				2		5
(K)		2564.602	PAVEMENT MESSAGE (RT-THRU ARROW) POLY PREFORMED	EACH	3				2		1
(K)		2564.602	PAVEMENT MESSAGE (RT ARROW) POLY PREFORMED	EACH	6						6
(K)		2564.603	4" SOLID LINE WHITE-EPOXY	LIN FT	15948	4701	890				10357
(K)		2564.603	4" DOUBLE SOLID LINE YELLOW-EPOXY	LIN FT	6177	2312		900			2965
(K)		2564.603	24" STOP LINE WHITE-EPOXY	LIN FT	259	56					203
(K)		2564.603	24" SOLID LINE YELLOW-EPOXY	LIN FT	195	60		30			105
(K)		2564.603	4" SOLID LINE WHITE-POLY PREFORMED	LIN FT	1690						1690
(K)		2564.603	4" DOUBLE SOLID LINE YELLOW-POLY PREFORMED	LIN FT	1560						1560
(K)		2564.603	4" SOLID LINE YELLOW-POLY PREFORMED	LIN FT	4805						4805
(K)		2564.603	24" STOP LINE WHITE-POLY PREFORMED	LIN FT	146			32			114
(K)		2564.603	24" SOLID LINE YELLOW-POLY PREFORMED	LIN FT	223						223
(G)		2564.603	4" SOLID LINE WHITE-PAINT	LIN FT	1000						1000
		2564.603	4" SOLID LINE YELLOW-PAINT	LIN FT	11400						11400
(G)		2564.603	4" DOUBLE SOLID LINE YELLOW-PAINT	LIN FT	3400						3400
(K)		2564.618	ZEBRA CROSSWALK WHITE-EPOXY	SQ FT	234						234
(K)		2564.618	ZEBRA CROSSWALK WHITE-POLY PREFORMED	SQ FT	216						216
	(11)	2565.601	TRAFFIC CONTROL INTERCONNECTION	LS	1						1
	(5)	2565.616	TEMPORARY SIGNAL SYSTEM	SYS	1			0.5			0.5

SEE SHEET 5 FOR NOTES.

12.000
 4102.EGB
 07/11/2002

I hereby certify that this plan, specification, or report 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. Print Name: <u>NATHAN A. WILL</u>  Date: <u>7-12-02</u> License # <u>26391</u>					STATE AID PROJECT NO. S.P. 106-010-18 S.P. 106-121-04 S.P. 0212-42 S.P. 02-596-04		DRAWN BY: <u>D. FITCHORN</u> DATE: <u>8-02</u> DESIGNED BY: <u>M. HANSEN</u> DATE: <u>5-02</u> CHECKED BY: <u>N. WILL</u> DATE: <u>5-02</u> COMM. NO. <u>001402</u>		ANOKA COUNTY STATEMENT OF ESTIMATED QUANTITIES TH 242		SHEET 4 OF 139
REVISION NO. DATE BY CKD APPR					NAME: 4102.EGB DATE: Mar. 07, 2002						



CONSTRUCTION / SOILS NOTES

GRADING, BASE AND SURFACE

- 1 "TOP OF GRADING SUBGRADE" IS DEFINED AS THE BOTTOM OF CLASS 5 AGGREGATE BASE.
- 2 "SUITABLE GRADING MATERIAL" ON THIS PROJECT, WHETHER OBTAINED LOCALLY OF FROM BORROW, SHALL CONSIST OF ALL SOILS EXCEPT TOPSOIL, DEBRIS, PEAT MUCK AND ORGANIC OR OTHER UNSTABLE MATERIAL.
- 3 "GRANULAR MATERIAL" SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B1.
- 4 "SELECT GRANULAR MATERIAL" SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B2.
- 5 "COMMON BORROW" SHALL MEET THE REQUIREMENTS OF SUITABLE GRADING MATERIAL.
- 6 STRIP ALL TOPSOIL AND IN PLACE SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. FOR ESTIMATING PURPOSES, THE DEPTH OF TOPSOIL AVAILABLE IS CONSIDERED TO BE 6 INCHES.
- 7 ALL TOPSOIL STRIPPING WILL BE CONSIDERED TO BE COMMON EXCAVATION.
- 8 PROVIDE FOR SUBGRADE CORRECTIONS AND SUBCUTS FOR UNIFORMITY AND COMPACTION AND EMBANKMENT CONSTRUCTION DETAILS AS INDICATED IN THE TYPICAL SECTIONS. SELECTED GRADING SOILS FROM THE ROADBED OR ADJACENT CUTS SHALL BE USED IN THE LOWER PORTION OF THE NEW CONSTRUCTION AND THE GRANULAR MATERIAL AND/OR SELECT GRANULAR MATERIAL SHALL BE USED IN THE UPPER PORTION.
- 9 IN ANY PROPOSED WIDENING CONSTRUCTION, THE CONTRACTOR SHOULD STRIVE TO SUBSTANTIALLY MATCH THE SOILS IN PLACE IN THE UPPER 3 FEET OF THE ROADWAY TO BE WIDENED. GRANULAR BACKFILL SHOULD NOT BE PERMITTED ADJACENT TO IN PLACE NON-GRANULAR SOILS IN ORDER TO PREVENT AN ABRUPT SOILS DIFFERENTIAL.
- 10 BLANK
- 11 COMPACTION OF THE AGGREGATE BASE LAYER SHALL BE OBTAINED BY THE "PENETRATION INDEX METHOD" MNDOT SPEC. 2211.3 C3.
- 12 COMPACTION OF THE GRADING PORTIONS OF PERMANENT CONSTRUCTION SHALL BE OBTAINED BY THE "SPECIFIED DENSITY METHOD" MNDOT SPEC. 2211.3 C1.
- 13 THE BOTTOM OF ALL SUBCUTS SHALL BE SHAPED AND COMPACTED BY THE "QUALITY COMPACTION METHOD" WITH A MINIMUM OF 4 PASSES OF AN APPROVED ROLLER.
- 14 TEST ROLLING SHALL NOT BE REQUIRED ON THIS PROJECT.
- 15 WHERE WIDENING ADJACENT TO EXISTING PAVEMENT, EXCAVATIONS SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF THE EXISTING PAVEMENT. CUT VERTICALLY TO THE BOTTOM OF THE PROPOSED SURFACING, THEN 2V:1H TO THE BOTTOM OF THE RECOMMENDED SUBGRADE TREATMENT.
- 16 WHERE MATCHING NEW SURFACING, AT CROSSROADS OR PROJECT TERMINI, TO EXISTING PAVEMENTS, CUT VERTICALLY TO THE BOTTOM OF THE PROPOSED SURFACING, THEN 1V:20H TO THE BOTTOM OF THE RECOMMENDED SUBGRADE TREATMENT.
- 17 PROVIDE 1V:20H LONGITUDINAL TAPERS BETWEEN CHANGES IN SUBGRADE AND SUBCUT DEPTHS.
DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
- 18 PROVIDE FOR A UNIFORM BITUMINOUS TACK COAT BETWEEN ALL BITUMINOUS COURSES. THE TACK COAT SHALL BE IN ACCORDANCE WITH MN/DOT SPECIFICATION 2357 WITH THE FOLLOWING MODIFICATIONS:
 1. THE TACK COAT SHALL CONSIST OF EMULSIFIED ASPHALT (CSS-1 OR CSS-1H) AND SHALL BE APPLIED BETWEEN ALL BITUMINOUS COURSES.
 2. THE TACK COAT SHALL BE APPLIED AT A UNIFORM RATE OF 0.03 TO 0.05 GAL/SY BETWEEN BITUMINOUS LAYERS AND 0.07 TO 0.10 GAL/SY ON MILLED BITUMINOUS SURFACES AND CONCRETE.
- 19 STABILIZING AGGREGATE SHALL BE INCORPORATED INTO THE SUBGRADE TO ACHIEVE SATISFACTORY SURFACE STABILITY AT LOCATIONS DEEMED NECESSARY BY THE ENGINEER, IN ACCORDANCE WITH THE PROVISIONS OF SPEC. 2105.3G. GRANULAR MATERIAL WHICH IS FURNISHED BY THE CONTRACTOR SHALL BE STABILIZED, IF NECESSARY, AT THE CONTRACTOR'S EXPENSE. WHERE STABILIZING AGGREGATE IS DEEMED NECESSARY, IT SHALL BE APPLIED AT A RATE OF APPROXIMATELY 200 LBS/SY.

REMOVALS

- 20 PROVIDE FOR THE REMOVAL AND DISPOSAL OF ANY IN PLACE SURFACING, OTHER STRUCTURES OR DEBRIS THAT WOULD INTERFERE WITH CONSTRUCTION. BITUMINOUS AND CONCRETE DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE RECYCLED TO THE EXTENT ALLOWED IN BASE AND SURFACING ITEMS OR DISPOSED OF OUTSIDE OF THE RIGHT-OF-WAY IN ACCORDANCE WITH MNDOT SPEC. 2104.3C.
- 21 PROVIDE A SAWCUT AT THE TERMINI PROPOSED CONSTRUCTION, WHEN CONNECTING TO IN PLACE PAVEMENT AND WHEN PLACING NEW PAVEMENT ADJACENT TO EXISTING PAVEMENT IN ORDER TO PROVIDE A UNIFORM JOINT.

CONSTRUCTION / SOILS NOTES

TURF ESTABLISHMENT

- 22 PLACE A MINIMUM OF 6 INCHES OF TOPSOIL ON ALL AREAS SCHEDULED FOR PERMANENT TURF ESTABLISHMENT.
- 23 SEEDING REQUIREMENTS ON THIS PROJECT ARE AS FOLLOWS:
 - A. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED OR SODDED PER THE PERMANENT TURF ESTABLISHMENT PLANS.
 - B. PROVIDE COMMERCIAL GRADE OF SLOW RELEASE FERTILIZER, ANALYSIS 22-5-10, OR EQUIVALENT ON ALL AREAS TO BE SEEDED OR SODDED AT A RATE OF 200 LBS/ACRE.
 - C. PERMANENT TURF ESTABLISHMENT AND EROSION CONTROL MEASURES SHALL BE CONSTRUCTED WITH 14 DAYS OF ROUGH GRADING IN ALL AREAS AS CONSTRUCTION IS COMPLETED, INCLUDING DRAINAGE DITCHES ALONG ALL SURCHARGE AREAS.

MISCELLANEOUS

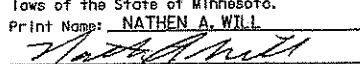
- 24 WHENEVER THE WORD "INCIDENTAL" IS USED IN THIS PLAN, IT SHALL MEAN THIS WORK WILL BE INCIDENTAL FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.
- 25 ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, DATED JANUARY 2001.
- 26 THE CONTRACTOR IS HEREBY REMINDED OF HIS RESPONSIBILITY UNDER STATE LAW TO CONTACT ALL UTILITIES THAT MAY HAVE FACILITIES IN THE AREA. CONTACT MUST BE MADE THROUGH GOPHER STATE ONE-CALL.
- 27 WHERE SEDIMENT DEPOSITS IN WATERS OF THE STATE, THE MATERIAL MUST BE REMOVED IN 7 DAYS.
- 28 THE EXISTING PAVEMENT THICKNESSES ARE ASSUMED TO BE AS FOLLOWS:
 - TH 242 EXISTING BUS SHOULDERS AT B.N.S.F. RR - 7" BITUMINOUS
 - TH 242 EXISTING SHOULDERS NEAR JEFFERSON ST. - 5" BITUMINOUS
 - BITUMINOUS DRIVEWAYS AND SCHOOL PARKING LOT - 4" DRIVEWAY PAVEMENT REMOVAL INCLUDED IN COMMON EXCAVATION.
 - THE CONTRACTOR SHALL INVESTIGATE AND MAKE OWN DETERMINATION OF ACTUAL PAVEMENT DEPTHS AND TYPES.

THE FOLLOWING STANDARD PLATES APPROVED BY THE DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

MN/DOT STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000 L	REINFORCED CONCRETE PIPE
3001 B	REINFORCED CONCRETE REDUCER PIPE
3002 B	REINFORCED CONCRETE INCREASER PIPE
3006 G	GASKET JOINT FOR R.C. PIPE
3007 C	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3124 B	METAL APRON CONNECTION
3128 H	METAL SAFETY APRON & GRATE
3132 A	GRATE FOR 4:1 PRECAST CONCRETE APRONS
3133 C	RIPRAP AT RCP OUTLETS
3134 C	RIPRAP AT CMP OUTLETS
3145 E	CONCRETE PIPE TIES
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
4005 L	MANHOLE OR CATCH BASIN TYPE A & B CONE SECTIONS PRECAST - DESIGN F
4006 L	MANHOLE OR CATCH BASIN PRECAST - DESIGNS G AND H
4010 H	CONC. SHORT CONE & ADJUSTING RING
4011 E	PRECAST CONCRETE BASE
4020 I	MANHOLE OR CATCH BASIN COVER
4024 A	48" DIA. PRECAST SHALLOW DEPTH CATCH BASIN - DESIGN SD
4101 D	RING CASTING FOR MANHOLE OR CATCH BASIN
4108 F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4110 F	COVER CASTING FOR MANHOLE
4129 G	CATCH BASIN FRAME CASTING (FOR SQUARE GRATE) - CASTING NO. 802A
4143 E	STOOL GRATE & CONCRETE FRAME
4154 B	CATCH BASIN GRATE CASTING
4160 D	CURB BOX CASTING FOR CATCH BASIN - CASTING NO. 823A AND 833A
4180 J	MANHOLE OR CATCH BASIN STEP
7035 L	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 E	PEDESTRIAN CURB RAMP
7100 G	CONCRETE CURB & GUTTER
7105 C	CONCRETE MEDIAN (MOUNTABLE TYPE)
7109 C	MEDIAN NOSE AND ISLAND
7111 J	INSTALLATION & REINFORCEMENT OF CATCH-BASIN CASTINGS
7113 A	CONCRETE APPROACH NOSE DETAIL
8000 I	STANDARD BARRICADES
8150 B	INSTALLATION OF CULVERT MARKERS
8307 Q	STEEL PLATE BEAM GUARDRAIL
9000 D	APPROACHES AND ENTRANCES
9102 D	TURF ESTABLISHMENT AREAS (AT PIPE CULVERT ENDS)
9322 J	CHAIN LINK FENCE

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 PLOTTER
 SCALES
 07/18/2002

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL

 Date: 7-18-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY DATE
 D. FITCHORN 8-02
 DESIGNED BY
 N. WILL 5-02
 CHECKED BY
 N. WILL 5-02
 COMM. NO.
 001402



ANOKA COUNTY
 CONSTRUCTION/SOILS NOTES, STANDARD PLATES
 TH 242

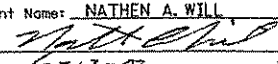
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(L) EARTHWORK TABULATION						
STATION	EXCAVATION TOTALS (EV)			EMBANKMENT TOTALS (CV)		
	COMMON EXCAVATION (CY)	TOPSOIL STRIPPING (CY)	MUCK EXCAVATION (CY)	SELECTED GRADING (CY)	SELECT GRAN MATL (CY)	SLOPE DRESSING (CY)
113+00.00						
113+50.00	40	23	0	26	0	12
113+65.50	13	3	0	5	0	2
114+00.00	28	10	0	12	0	5
114+50.00	39	19	0	11	0	8
115+00.00	38	18	0	9	0	8
115+33.10	55	21	0	6	0	12
115+50.00	35	15	0	3	0	9
116+00.00	55	24	0	18	0	14
116+50.00	35	8	0	16	0	4
117+00.00	39	8	0	6	0	3
117+50.00	52	8	0	6	0	2
118+00.00	55	19	0	7	0	10
118+50.00	43	22	0	8	0	13
119+00.00	39	19	0	13	0	10
119+50.00	43	22	0	12	0	12
120+00.00	43	16	0	7	0	9
120+55.30	40	15	0	22	0	9
121+00.00	32	19	0	24	0	12
121+50.00	33	25	0	27	0	16
122+00.00	30	32	0	42	0	20
122+50.00	21	32	0	50	0	19
123+00.00	13	24	0	44	0	14
123+24.00	7	8	0	13	0	4
123+50.00	9	8	0	11	0	4
124+00.00	17	16	0	16	0	9
124+50.00	14	12	0	12	0	6
125+00.00	14	17	0	19	0	9
125+50.00	12	20	0	28	0	11
126+00.00	12	21	0	33	0	12
126+50.00	12	20	0	28	0	11
127+00.00	13	18	0	23	0	11
127+50.00	13	16	0	19	0	10
128+00.00	11	15	0	19	0	10
128+50.00	10	14	0	17	0	8
129+00.00	11	13	0	13	0	8
129+50.00	13	15	0	13	0	9
130+00.00	13	15	0	14	0	9
130+50.00	13	14	0	14	0	9
131+00.00	12	14	0	14	0	9
131+50.00	12	15	0	16	0	9
132+00.00	12	15	0	15	0	10
132+50.00	13	15	0	12	0	9
133+00.00	13	12	0	11	0	8
SUBTOTAL (TH 242-RR):	1077	715	0	734	0	408

(L) EARTHWORK TABULATION						
STATION	EXCAVATION TOTALS (EV)			EMBANKMENT TOTALS (CV)		
	COMMON EXCAVATION (CY)	TOPSOIL STRIPPING (CY)	MUCK EXCAVATION (CY)	SELECTED GRADING (CY)	SELECT GRAN MATL (CY)	SLOPE DRESSING (CY)
208+00.00						
208+50.00	10	61	0	0	400	7
209+00.00	12	63	0	0	437	8
209+51.00	13	67	0	0	480	9
210+10.00	17	80	0	0	604	11
210+50.00	14	55	0	0	436	8
211+00.00	19	69	0	0	580	10
211+50.00	22	70	0	0	600	11
212+00.00	26	70	0	0	600	12
212+50.00	21	70	0	0	613	11
213+00.00	27	70	0	0	612	12
213+50.00	38	71	0	0	615	14
214+00.00	38	71	0	0	634	14
214+50.00	43	72	0	0	633	16
215+00.00	47	73	0	0	637	16
215+50.00	52	74	0	0	659	15
216+00.00	36	73	0	0	776	12
216+50.00	34	72	0	0	752	12
217+00.00	64	45	0	0	563	17
217+50.00	94	38	0	0	318	20
SUBTOTAL (TH 242-SURCHARGE):	627	1264	0	0	10949	235
30+01.00						
30+50.00	145	62	0	100	0	32
31+00.00	208	58	0	31	0	28
31+50.00	188	54	0	5	0	23
32+00.00	169	53	0	5	0	22
32+50.00	118	47	0	5	0	16
33+00.00	49	44	0	11	0	13
33+50.00	8	46	0	28	0	16
34+00.00	0	49	0	35	0	18
34+50.00	16	48	0	37	0	17
35+00.00	20	48	0	87	0	17
35+50.00	6	50	0	163	0	19
36+00.00	17	52	0	215	0	20
36+25.00	17	27	0	120	0	8
36+50.00	10	27	0	118	0	8
37+00.00	2	52	0	214	0	20
37+50.00	1	51	0	175	0	20
38+00.00	4	49	0	139	0	18
38+50.00	8	46	0	111	0	15
39+00.00	34	36	0	52	0	11
39+50.00	69	18	0	6	0	16
40+00.00	64	13	0	3	0	13
40+50.00	40	18	0	2	0	3
41+00.00	26	18	0	8	0	6
41+50.00	21	9	0	10	0	8
42+00.00	24	14	0	8	0	8
42+50.00	29	27	0	6	0	8
43+00.00	39	27	0	4	0	8
43+50.00	48	27	0	4	0	7
44+00.00	52	27	0	4	0	7
44+50.00	50	27	0	4	0	7
45+00.00	49	27	0	4	0	7
45+50.00	50	27	0	4	0	7
46+00.00	43	27	0	5	0	7
46+50.00	55	36	0	5	0	11
SUBTOTAL (SCHOOL ROAD):	1679	1241	0	1728	0	464
SUBTOTAL (SCHOOL PARKING LOT):	1770	38	0	676	0	65

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 06/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL

 Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN 8-02
 DESIGNED BY: M. HANSEN 5-02
 CHECKED BY: K. BERTELSEN 5-02
 COMM. NO. 0014102



ANOKA COUNTY
 EARTHWORK TABULATION AND SUMMARY
 TH 242

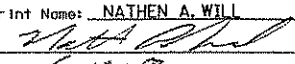
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(L) EARTHWORK TABULATION						
STATION	EXCAVATION TOTALS (EV)			EMBANKMENT TOTALS (CV)		
	COMMON EXCAVATION (CY)	TOPSOIL STRIPPING (CY)	MUCK EXCAVATION (CY)	SELECTED GRADING (CY)	SELECT GRAN MATL (CY)	SLOPE DRESSING (CY)
205+00.00						
205+50.00	41	7	0	0	11	6
206+00.00	34	3	0	0	10	0
206+50.00	38	6	0	0	11	4
207+00.00	58	25	0	0	15	24
207+50.00	66	41	0	0	19	39
208+00.00	168	21	0	0	23	44
208+50.00	281	0	0	0	27	52
209+00.00	294	0	0	0	28	52
209+51.00	341	3	0	0	35	56
210+10.00	453	4	0	0	48	65
210+50.00	332	4	0	0	33	44
211+00.00	431	5	0	0	39	53
211+50.00	437	0	0	0	35	47
212+00.00	433	0	0	0	36	46
212+50.00	432	0	0	0	36	45
213+00.00	462	6	0	0	43	50
213+50.00	477	13	0	0	50	55
214+00.00	478	15	0	0	50	57
214+50.00	503	20	0	0	51	61
215+00.00	530	22	0	0	52	62
215+50.00	548	26	0	0	51	67
216+00.00	575	30	0	0	50	72
216+50.00	603	34	0	0	50	78
217+00.00	546	19	0	0	44	63
217+50.00	364	0	0	0	19	42
218+10.00	148	0	0	0	0	25
218+50.00	0	0	0	0	0	0
219+00.00	27	19	0	0	14	13
219+50.00	62	45	0	0	34	30
220+00.00	68	49	0	0	39	33
220+71.00	89	37	0	0	50	27
221+00.00	37	13	0	0	21	10
221+50.00	77	45	0	0	39	30
222+00.00	207	48	0	0	39	54
222+50.00	298	60	0	0	39	72
223+00.00	168	59	0	0	39	47
223+50.00	62	42	0	0	39	25
224+00.00	124	47	0	0	39	41
224+50.00	172	59	0	0	36	55
225+00.00	98	54	0	0	34	38
225+50.00	43	42	0	0	35	23
226+00.00	43	46	0	0	36	26
226+50.00	46	51	0	0	37	30
227+00.00	46	52	0	0	39	30
227+50.00	52	53	0	0	42	31
228+00.00	67	57	0	0	45	35
228+50.00	75	58	0	0	47	36
229+00.00	69	52	0	0	47	30
229+61.00	96	53	0	0	51	28
230+00.00	86	34	0	0	28	19
230+50.00	151	43	0	0	38	27
231+00.00	196	41	0	0	39	30
231+50.00	194	39	0	0	34	30
232+00.00	165	34	0	0	29	29
232+50.00	101	17	0	0	19	22
232+87.70	28	3	0	0	8	7
233+50.00	41	8	0	0	13	7
234+00.00	28	12	0	0	11	8
234+50.00	31	28	0	0	18	19

(L) EARTHWORK TABULATION						
STATION	EXCAVATION TOTALS (EV)			EMBANKMENT TOTALS (CV)		
	COMMON EXCAVATION (CY)	TOPSOIL STRIPPING (CY)	MUCK EXCAVATION (CY)	SELECTED GRADING (CY)	SELECT GRAN MATL (CY)	SLOPE DRESSING (CY)
235+00.00	44	37	0	0	24	29
235+50.00	58	42	0	0	23	35
235+83.50	29	24	0	0	11	20
236+50.00	58	22	0	0	24	18
237+00.00	72	9	0	0	25	7
237+50.00	80	9	0	0	25	8
238+00.00	85	9	0	0	24	9
238+50.00	88	8	0	0	24	10
238+79.90	29	2	0	0	7	4
239+46.00	6	4	0	0	0	4
SUBTOTAL (TH 242):	12669	1770	0	0	2131	2295
10+13.00						
10+50.00	0	85	732	0	829	19
11+00.00	0	91	1302	0	1303	42
11+50.00	0	72	1031	0	1047	34
12+00.00	0	50	757	0	785	25
12+50.00	0	47	649	0	677	25
13+00.00	6	42	325	0	345	20
13+50.00	7	37	0	0	7	15
14+00.00	2	38	0	0	2	16
14+50.00	13	36	0	0	37	14
14+85.00	31	22	0	0	59	9
SUBTOTAL (TEMPORARY ACCESS):	59	520	4796	0	5091	219
24+50.00						
25+00.00	643	83	0	71	0	51
25+50.00	671	85	0	74	0	52
26+00.00	713	88	0	80	0	53
26+50.00	751	95	0	86	0	56
27+00.00	763	99	0	88	0	60
27+50.00	760	102	0	87	0	63
28+00.00	768	105	0	86	0	66
28+50.00	769	105	0	86	0	66
29+00.00	777	102	0	86	0	63
29+50.00	396	95	0	339	0	56
30+00.00	3	95	0	517	0	47
SUBTOTAL (JEFFERSON):	7014	1054	0	1600	0	633
24+50.00						
25+00.00	0	81	187	0	979	51
25+50.00	0	84	291	0	1147	51
26+00.00	0	89	312	0	1276	51
26+50.00	0	102	314	0	1342	51
27+00.00	0	114	329	0	1361	51
27+50.00	0	116	333	0	1348	51
28+00.00	0	119	322	0	1356	51
28+50.00	0	121	297	0	1373	51
29+00.00	0	121	246	0	1413	51
29+50.00	0	71	148	0	724	51
SUBTOTAL (JEFFERSON-SURCHARGE):	0	1018	2779	0	12319	510
TOTAL	24836	7620	7575	4738	30490	4829

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 \$SCALE#...
 06/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL

 Date: 6-12-02 License # 26391

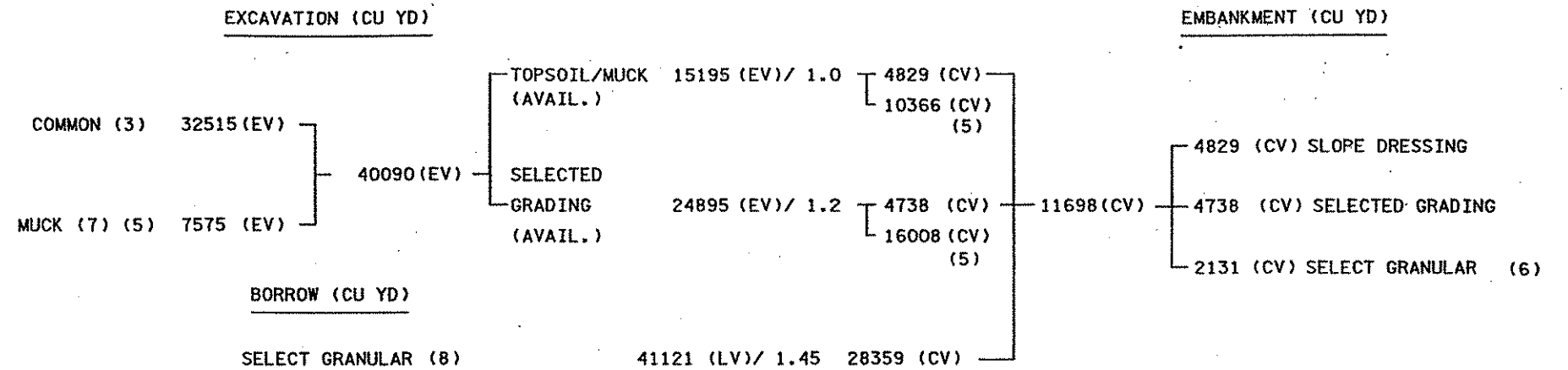
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY DATE
 D. FITCHORN 8-02
 DESIGNED BY
 M. HANSEN 5-02
 CHECKED BY
 K. BERTELSEN 5-02
 COMM. NO.
 004102

ANOKA COUNTY
 EARTHWORK TABULATION AND SUMMARY
 TH 242

SHEET
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 OF
 139

EARTHWORK BALANCE (1) (2)

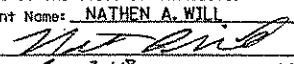


NOTES:

- (1) SEE CONSTRUCTION/SOIL NOTES FOR MATERIAL DEFINITIONS AND ADDITIONAL INFORMATION.
- (2) 120% SHRINKAGE FACTOR USED FROM EXCAVATED VOLUME (EV) TO COMPACTED VOLUME (CV), EXCEPT FOR TOPSOIL. 145% SHRINKAGE FACTOR USED FROM LOOSE VOLUME (LV) TO COMPACTED VOLUME (CV), EXCEPT FOR TOPSOIL. SHRINKAGE FACTORS ARE ASSUMED VALUES, USED ONLY FOR THE PURPOSE OF ESTIMATED QUANTITIES. IT SHALL BE UNDERSTOOD THAT NO WARRANTY IS MADE OR IMPLIED AS TO THE ACCURACY, SUFFICIENCY, OR RELIABILITY OF THE SHRINKAGE FACTOR.
- (3) QUANTITY INCLUDES 7,620 CU.YD. (EV) OF TOPSOIL STRIPPING (ASSUMED TO BE 6" THICK). SEE TYPICAL SECTIONS FOR ADDITIONAL INFORMATION.
- (5) EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE DISPOSED OF OUTSIDE THE PROJECT LIMITS.
- (6) QUANTITY FOR SELECT GRANULAR IN TH 242 ROADWAY SECTION. INPLACE FROM SURCHARGE SECTION.
- (7) MUCK EXCAVATION FOR TEMPORARY ACCESS. FINAL MUCK EXCAVATION LIMITS SHALL BE DETERMINED AND DIRECTED BY THE ENGINEER IN THE FIELD.
- (8) QUANTITY FOR SURCHARGING TH 242 AND JEFFERSON AND ALSO TO FILL AREAS UNDER TEMPORARY ACCESS.

32.eto
 PLOTTER
 #SCALE#
 06/11/2002

NO	DATE	BY	CKD	APPR	REVISION
NAME: 4102.ETC DATE: May. 09, 2002					

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL

 Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
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 0014102



ANOKA COUNTY
 EARTHWORK TABULATION AND SUMMARY
 TH 242

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(C) AGGREGATE AND BITUMINOUS SUMMARY							
ALIGNMENT	AGGREGATE		BITUMINOUS				TACK (gal)
	SELECT GRANULAR	CLASS 5 BASE	TYPE MV 3 NON-WEAR MVNW35035C	TYPE HV 3 NON-WEAR HVNW36540C	TYPE MV 3 WEAR MVWE35035C	TYPE HV 3 WEAR HVWE36540C	
	(cu yd)	(cu yd)	(ton)	(ton)	(ton)	(ton)	
E.B. T.H. 242 (STA 113+00 TO 117+40)	0	217	79	68	20	57	58
E.B. T.H. 242 (STA 117+40 TO 122+30)	0	208	71	61	0	55	54
E.B. T.H. 242 (STA 122+30 TO 133+30)	0	408	137	118	11	112	108
W.B. T.H. 242 (STA 113+00 TO 117+40)	0	186	64	55	13	49	48
W.B. T.H. 242 (STA 117+40 TO 122+30)	0	194	66	57	10	52	51
W.B. T.H. 242 (STA 122+30 TO 133+30)	0	0	0	0	0	0	0
E.B. T.H. 242 (STA 204+84 TO 209+50)	0	0	0	0	0	0	0
E.B. T.H. 242 (STA 209+50 TO 217+43)	0	387	215	121	0	172	86
E.B. T.H. 242 (STA 217+43 TO 225+30)	0	483	279	162	0	215	115
E.B. T.H. 242 (STA 225+30 TO 232+18)	0	324	184	99	0	157	71
E.B. T.H. 242 (STA 232+18 TO 236+13)	0	177	101	53	0	90	38
E.B. T.H. 242 (STA 236+13 TO 239+46)	0	0	0	0	0	0	0
W.B. T.H. 242 (STA 204+84 TO 209+50)	1496	294	162	99	0	113	70
W.B. T.H. 242 (STA 209+50 TO 217+43)	10319	954	536	361	0	305	256
W.B. T.H. 242 (STA 217+43 TO 225+30)	497	664	400	238	0	293	169
W.B. T.H. 242 (STA 225+30 TO 232+18)	531	732	374	272	0	169	193
W.B. T.H. 242 (STA 232+18 TO 236+13)	132	117	78	28	0	99	20
W.B. T.H. 242 (STA 236+13 TO 239+46)	105	232	124	80	0	78	57
JEFFERSON STREET	0	402	298	0	179	0	109
SCHOOL ROAD (STA 30+00 TO 38+38)	0	739	382	0	230	0	139
SCHOOL ROAD (STA 38+38 TO 44+00)	0	430	181	0	109	0	66
SCHOOL ROAD (STA 44+00 TO T.H. 242 230+06)	0	192	78	0	47	0	29
PARKING LOT	0	434	267	0	161	0	97
BITUMINOUS DRIVEWAYS	0	211	0	0	210	0	0
TEMPORARY ROAD	0	347	214	0	129	0	78
PROJECT TOTALS:	13080	8332	4290	1872	1119	2016	1912

AGGREGATE BASE CLASS 5 INCLUDES AGGREGATE BASE UNDER CONCRETE MEDIANS AND CONCRETE WALKS.

12.fbc

PLOTTERS
SCALE
07/18/2002

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 7-18-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: M. HANSEN DATE: 5-02
 CHECKED BY: G. HELSETH DATE: 5-02
 COMM. NO. 0014102



ANOKA COUNTY
 TABULATIONS
 TH 242

SHEET
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 OF
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ALIGNMENT	MISCELLANEOUS REMOVAL AND SAWING							
	BITUMINOUS PAVEMENT (sq yd)	CURB AND GUTTER (lin ft)	REMOVE			SAWING		MILLING BITUMINOUS SURFACE (1.5") (sq yd)
			PIPE CULVERT (STORM) (lin ft)	CONCRETE WALK (sq ft)	CONCRETE MEDIAN (sq ft)	BITUMINOUS PAVEMENT (lin ft)	CONCRETE WALK (lin ft)	
E.B. T.H. 242 (STA 113+00 TO 117+40)	288	0	0	0	0	472	0	194
E.B. T.H. 242 (STA 117+40 TO 122+30)	346	0	0	0	0	502	0	215
E.B. T.H. 242 (STA 122+30 TO 133+30)	625	0	50	0	0	1121	0	489
W.B. T.H. 242 (STA 113+00 TO 117+40)	320	0	0	0	0	472	0	193
W.B. T.H. 242 (STA 117+40 TO 122+30)	339	0	0	0	0	520	0	215
W.B. T.H. 242 (STA 122+30 TO 133+30)	0	0	0	0	0	0	0	0
E.B. T.H. 242 (STA 204+84 TO 209+50)	0	0	0	0	0	0	0	0
E.B. T.H. 242 (STA 209+50 TO 217+43)	927	0	0	0	0	703	0	1379
E.B. T.H. 242 (STA 217+43 TO 225+30)	1088	0	342	562	0	890	10	1615
E.B. T.H. 242 (STA 225+30 TO 232+18)	782	0	110	0	250	450	0	1356
E.B. T.H. 242 (STA 232+18 TO 236+13)	489	0	0	0	1470	440	0	900
E.B. T.H. 242 (STA 236+13 TO 239+46)	0	0	0	0	4100	0	0	0
W.B. T.H. 242 (STA 204+84 TO 209+50)	568	0	0	0	0	515	0	838
W.B. T.H. 242 (STA 209+50 TO 217+43)	772	0	0	0	0	695	0	1252
W.B. T.H. 242 (STA 217+43 TO 225+30)	389	0	196	0	0	830	0	1984
W.B. T.H. 242 (STA 225+30 TO 232+18)	117	0	0	0	0	630	0	286
W.B. T.H. 242 (STA 232+18 TO 236+13)	0	0	0	0	3350	30	0	1166
W.B. T.H. 242 (STA 236+13 TO 239+46)	106	0	0	0	0	580	0	572
JEFFERSON STREET	0	0	0	0	0	0	0	0
SCHOOL ROAD (STA 30+00 TO 38+38)	0	45	0	0	0	120	0	0
SCHOOL ROAD (STA 38+38 TO 44+00)	0	642	70	3520	0	300	80	0
SCHOOL ROAD (STA 44+00 TO T.H. 242 230+06)	0	402	0	2387	0	50	0	0
PROJECT TOTALS:	7155	1089	768	6469	9170	9320	90	12657

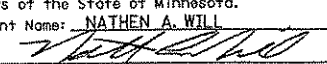
ALIGNMENT	CURB & GUTTER AND WALK			
	C&G DESIGN B624 (lin ft)	C&G DESIGN B618 (lin ft)	4in CONCRETE WALK (sq ft)	CONCRETE MEDIAN DESIGN SPECIAL (sq yd)
	E.B. T.H. 242 (STA 113+00 TO 117+40)	0	0	0
E.B. T.H. 242 (STA 117+40 TO 122+30)	0	0	0	0
E.B. T.H. 242 (STA 122+30 TO 133+30)	0	0	0	0
W.B. T.H. 242 (STA 113+00 TO 117+40)	0	0	0	0
W.B. T.H. 242 (STA 117+40 TO 122+30)	0	0	0	0
W.B. T.H. 242 (STA 122+30 TO 133+30)	0	0	0	0
E.B. T.H. 242 (STA 204+84 TO 209+50)	0	0	0	0
E.B. T.H. 242 (STA 209+50 TO 217+43)	0	0	0	320
E.B. T.H. 242 (STA 217+43 TO 225+30)	0	0	460	563
E.B. T.H. 242 (STA 225+30 TO 232+18)	0	0	0	1377
E.B. T.H. 242 (STA 232+18 TO 236+13)	0	0	0	791
E.B. T.H. 242 (STA 236+13 TO 239+46)	0	0	0	195
W.B. T.H. 242 (STA 204+84 TO 209+50)	0	0	0	0
W.B. T.H. 242 (STA 209+50 TO 217+43)	0	0	0	0
W.B. T.H. 242 (STA 217+43 TO 225+30)	0	0	0	0
W.B. T.H. 242 (STA 225+30 TO 232+18)	0	0	0	0
W.B. T.H. 242 (STA 232+18 TO 236+13)	0	0	0	0
W.B. T.H. 242 (STA 236+13 TO 239+46)	0	0	0	0
JEFFERSON STREET	1084	0	0	0
SCHOOL ROAD (STA 30+00 TO 38+38)	229	1495	0	0
SCHOOL ROAD (STA 38+38 TO 44+00)	0	1722	3942	0
SCHOOL ROAD (STA 44+00 TO T.H. 242 230+06)	0	816	2316	0
PROJECT TOTALS:	1313	4033	6718	3246

QUANTITIES FOR CONCRETE MEDIAN ARE INCLUDED IN THE EASTBOUND STATIONS ONLY.

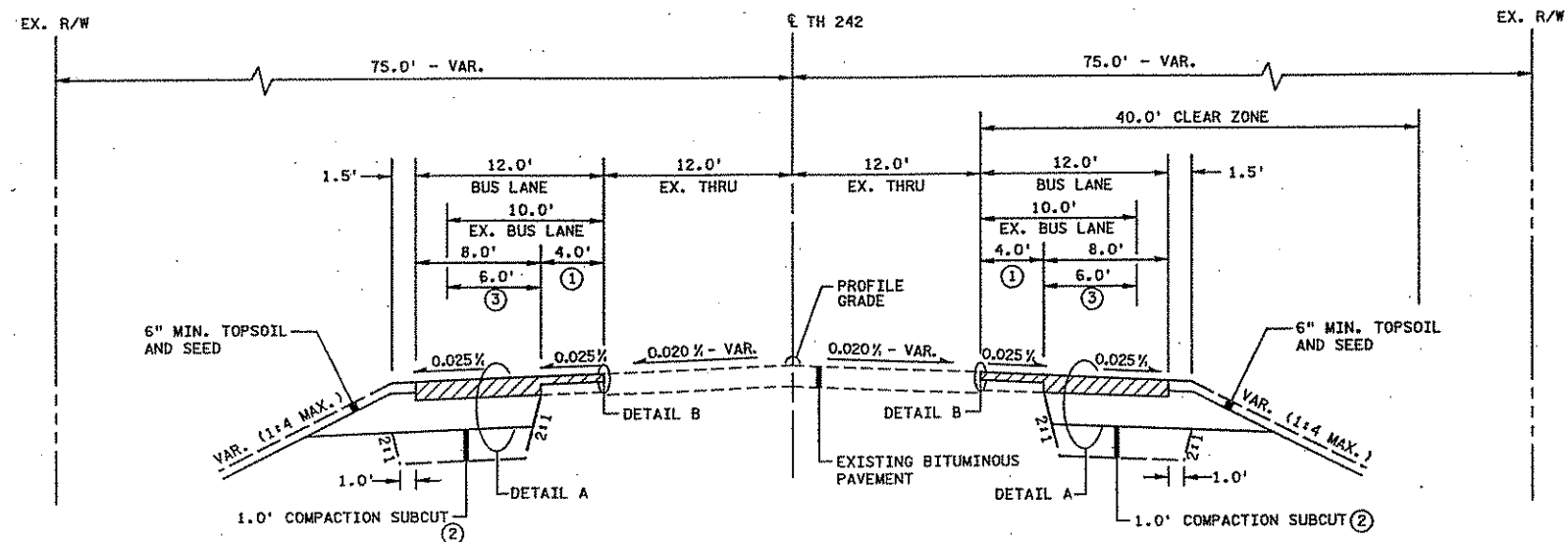
(M) FENCE CONSTRUCTION		
ALIGNMENT	FURNISH AND INSTALL TYPE 60-9322 (FT)	NOTE
E.B. T.H. 242 (STA 217+43 TO 225+30)	673	CHAIN LINK
E.B. T.H. 242 (STA 225+30 TO 232+18)	584	CHAIN LINK
PROJECT TOTALS:	1257	

(A) CLEARING AND GRUBBING		
ALIGNMENT	CLEARING (tree)	GRUBBING (tree)
	SCHOOL ROAD (STA 30+00 TO 38+38)	1
SCHOOL ROAD (STA 38+38 TO 44+00)	7	7
SCHOOL ROAD (STA 44+00 TO T.H. 242 230+06)	6	6
PROJECT TOTALS:	14	14

22. fbd
 07/11/2002
 SCALES
 1/4" = 1'-0"
 DATE: Sep. 26, 2001

NO. DATE BY CKD APPR REVISION		I hereby certify that this plan, specification, or report 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. Print Name: <u>NATHAN A. WILL</u>  Date: <u>7-12-02</u> License # <u>26391</u>		STATE AID PROJECT NO. S.P. 106-010-18 S.P. 106-121-04 S.P. 0212-42 S.P. 02-596-04		DRAWN BY DATE D. FITCHORN 8-02 DESIGNED BY M. HANSEN 5-02 CHECKED BY G. HELSETH 5-02 COMM. NO. 004102		ANOKA COUNTY TABULATIONS TH 242		SHEET 11 OF 139
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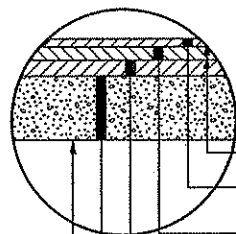




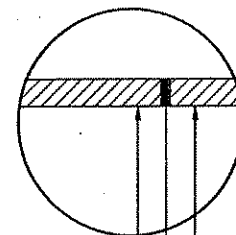
TH 242
 TH 242 STA. 113+00.00 TO STA. 113+30.00 (SOUTH BUS SHOULDER)
 TH 242 STA. 113+00.00 TO STA. 122+29.00 (NORTH BUS SHOULDER)

GENERAL NOTES:
 ALL CROSS SLOPES ARE FOOT PER FOOT.

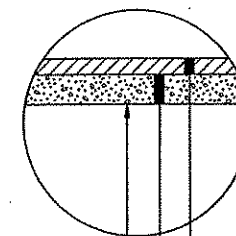
- NOTES:
- ① MILL AND OVERLAY INPLACE BITUMINOUS PAVEMENT PER DETAIL B.
 - ② SUBCUT FOR UNIFORMITY AND COMPACTION (MN/DOT SPEC. 2212) MODIFIED TO A 1.0' DEPTH. PAID FOR AS COMMON EXCAVATION AND INCLUDED THAT QUANTITY.
 - ③ SAWCUT AND REMOVE EXISTING SHOULDER.



DETAIL A
 BUS SHOULDER



DETAIL B



DETAIL C
 DRIVEWAY PAVEMENT

D:\AGI\11\047\1102\016 12.fwg
 SRF#
 PLOTTER#
 SCALES#
 07/17/2002

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: 7-17-02 License # 26391

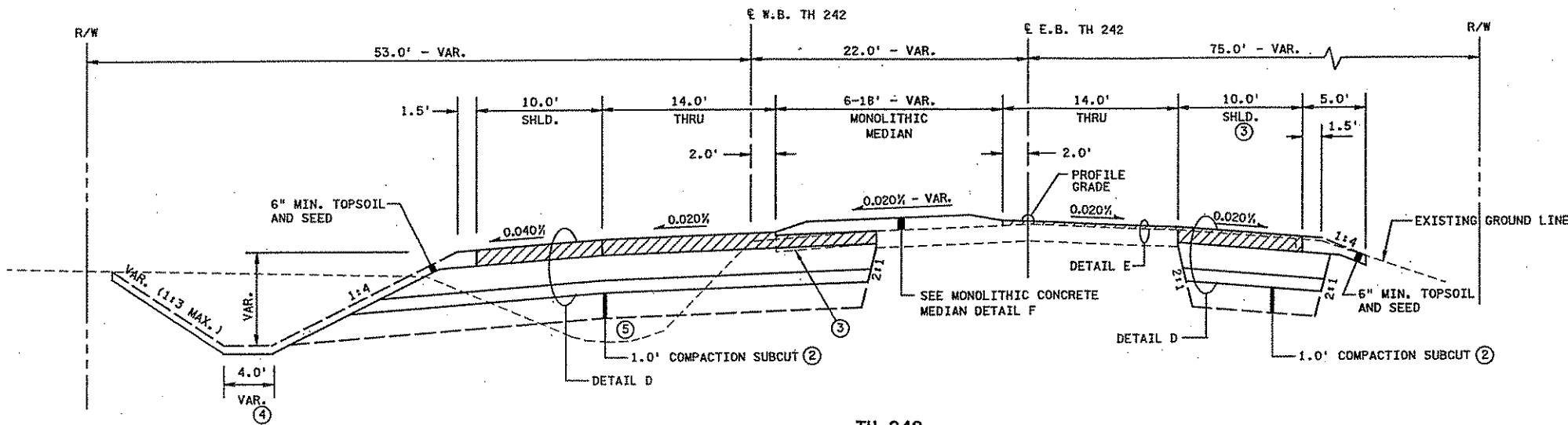
STATE AID PROJECT NO.
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D. FITCHORN 8-02
 DESIGNED BY
N. WILL 4-02
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N. WILL 5-02
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 004102

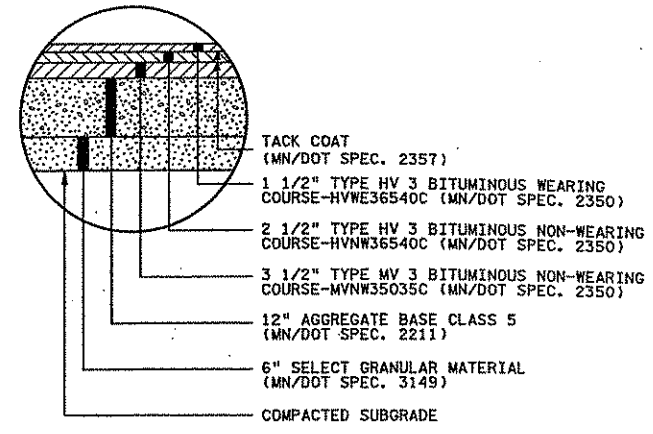


ANOKA COUNTY
 TYPICAL SECTIONS
 TH 242

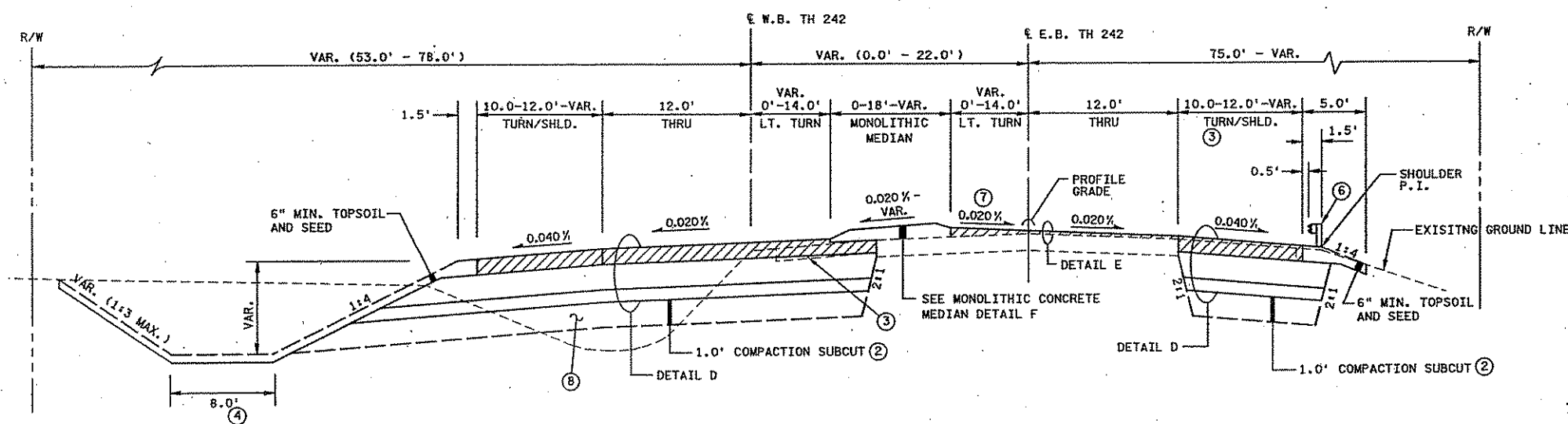
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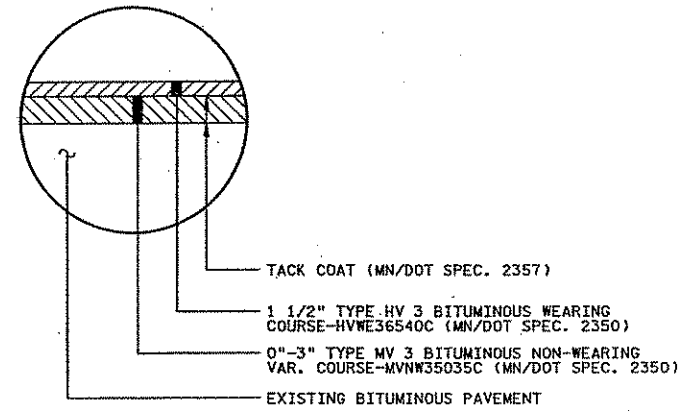
TH 242
STA. 225+24.2 TO STA. 236+12.7



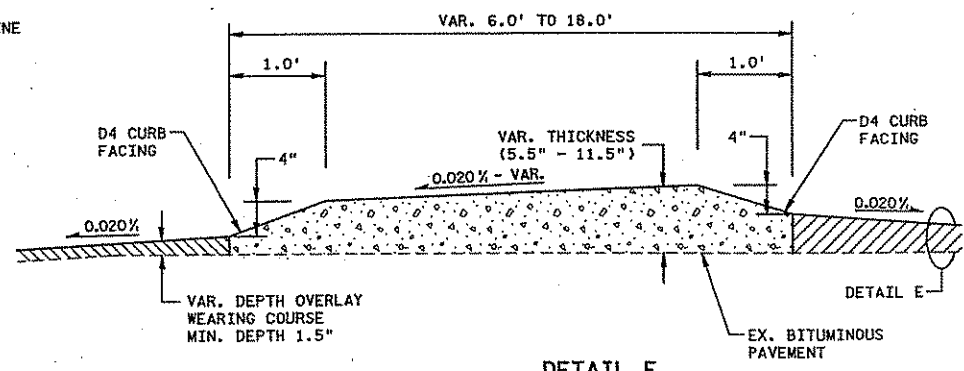
DETAIL D



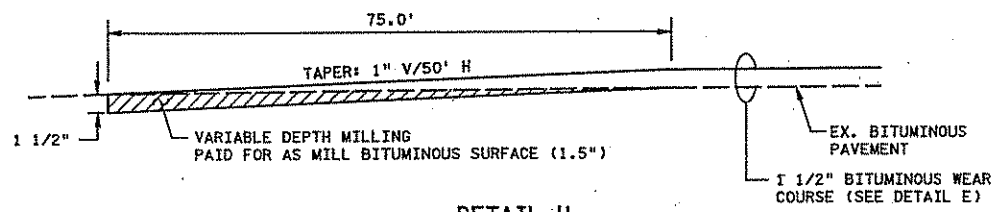
TH 242
STA. 204+85.0 TO STA. 225+24.2



DETAIL E



DETAIL F
CONCRETE MEDIAN DESIGN SPECIAL



DETAIL H
BITUMINOUS OVERLAY TRANSITION
STA. 204+85 TO STA. 205+60 (TH 242)
STA. 238+71 TO STA. 239+46 (TH 242)
STA. 235+38.33 TO STA. 236+13.33 (TH 242)
STA. 30+54 TO STA. 31+35 (JEFF)

- NOTES:
- ② SUBCUT FOR UNIFORMITY AND COMPACTION (MN/DOT SPEC. 2112) MODIFIED TO A 1.0' DEPTH. PAID FOR AS COMMON EXCAVATION AND INCLUDED THAT QUANTITY.
 - ③ SAWCUT AND REMOVE EXISTING SHOULDER.
 - ④ 4.0' DITCH BOTTOM: STA. 224+50 TO STA. 232+30 (LT)
2.0' DITCH BOTTOM: STA. 219+00 TO STA. 224+00 (LT)
SEE CROSS SECTIONS FOR DITCH ELEVATIONS.
 - ⑤ BACKFILL WITH SUITABLE GRADING MATERIAL.
 - ⑥ TRAFFIC BARRIER DESIGN B8307, MN/DOT SPEC. 2554
E.B. TH 242 STA. 210+60 TO STA. 218+80.
 - ⑦ TURN LANE PAVEMENT SLOPE VARIES - SEE CONSTRUCTION PLANS.
E.B. TH 242 STA. 217+25 TO STA. 218+21.
 - ⑧ SEE SHEET 15 FOR MUCK EXCAVATION AND SURCHARGE TYPICAL SECTIONS.

GENERAL NOTES:
ALL CROSS SLOPES ARE FOOT PER FOOT.

12.158
 4/11/04 7:41:02 PM
 4/11/04 7:41:02 PM
 07/17/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.TSB DATE: Apr. 09, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Signature: *[Signature]*
 Date: 7-12-02 License # 26391

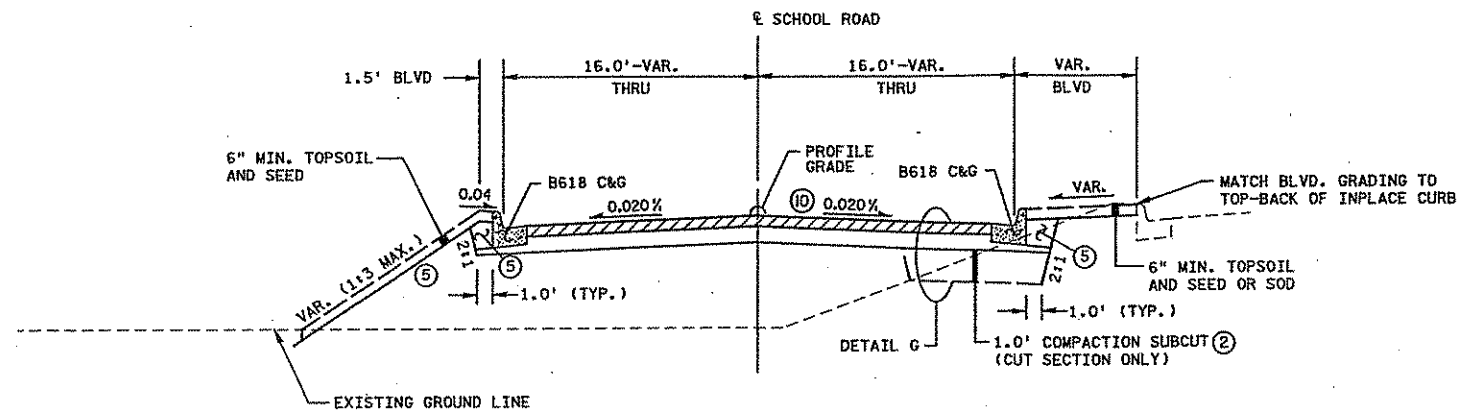
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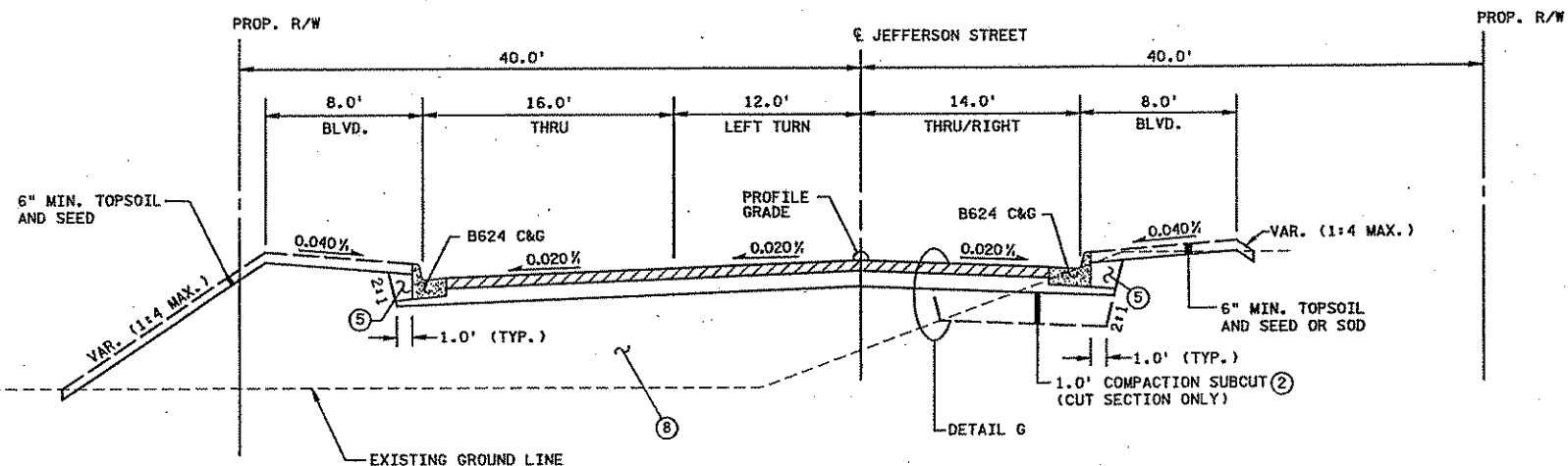


ANOKA COUNTY
 TYPICAL SECTIONS
 TH 242

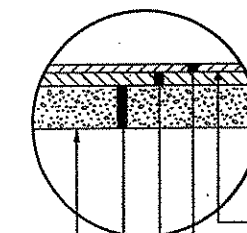
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SCHOOL ROAD
STA. 31+00 TO STA. 40+50



JEFFERSON STREET
STA. 24+27.35 TO STA. 29+70.00

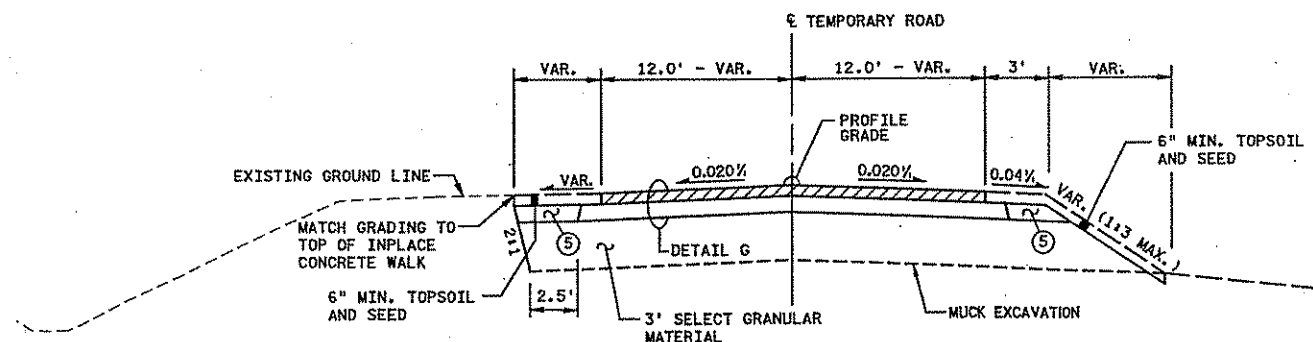


- TACK COAT (MN/DOT SPEC. 2357)
- 1 1/2" TYPE MV 3 BITUMINOUS WEARING COURSE-MVWE35035C (MN/DOT SPEC. 2350)
- 2 1/2" TYPE MV 3 BITUMINOUS NON-WEARING COURSE-MVNW35035C (MN/DOT SPEC. 2350)
- 8" AGGREGATE BASE CLASS 5 (MN/DOT SPEC. 2211)
- COMPACTED SUBGRADE

DETAIL G

GENERAL NOTES:
ALL CROSS SLOPES ARE FOOT PER FOOT.

- NOTES:
- (2) SUBCUT FOR UNIFORMITY AND COMPACTION (MNDOT SPEC. 2112) MODIFIED TO A 1.0' DEPTH. PAID FOR AS COMMON EXCAVATION AND IN THAT QUANTITY.
 - (5) BACKFILL WITH SUITABLE GRADING MATERIAL.
 - (8) SEE SHEET 15 FOR MUCK EXCAVATION AND SURCHARGE TYPICAL SECTIONS.
 - (10) CROSS SLOPE REVERSES TO 0.020 FT/FT FROM SCHOOL ROAD STA. 40+50 TO STA. 40+55. GUTTER "TIPPED" OUT. SEE SHEET 53 FOR DETAILS.



TEMPORARY SCHOOL ACCESS ROAD
STA. 10+22 TO STA. 14+90

12.750
 PLOTTER
 07/18/2002

NO	DATE	BY	CHKD	APPR	REVISION

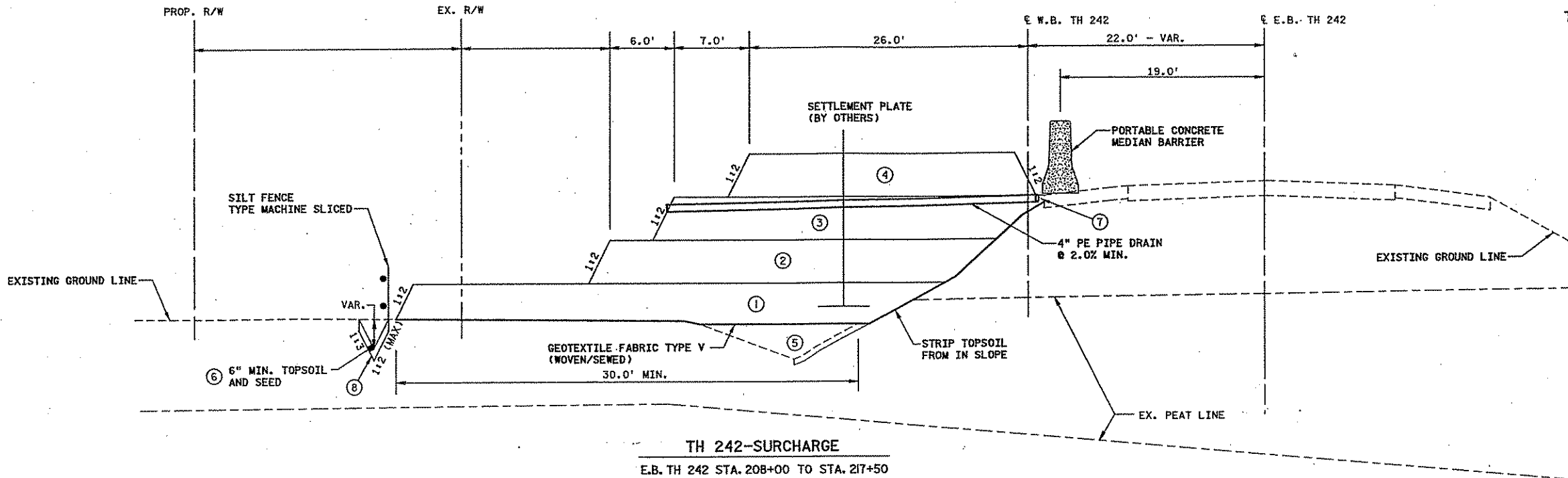
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: **7-18-02** License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04
 DRAWN BY: **D. FITCHORN** DATE: **8-02**
 DESIGNED BY: **N. WILL** DATE: **4-02**
 CHECKED BY: **N. WILL** DATE: **5-02**
 COMM. NO. 001402

SRF CONSULTING GROUP, INC.

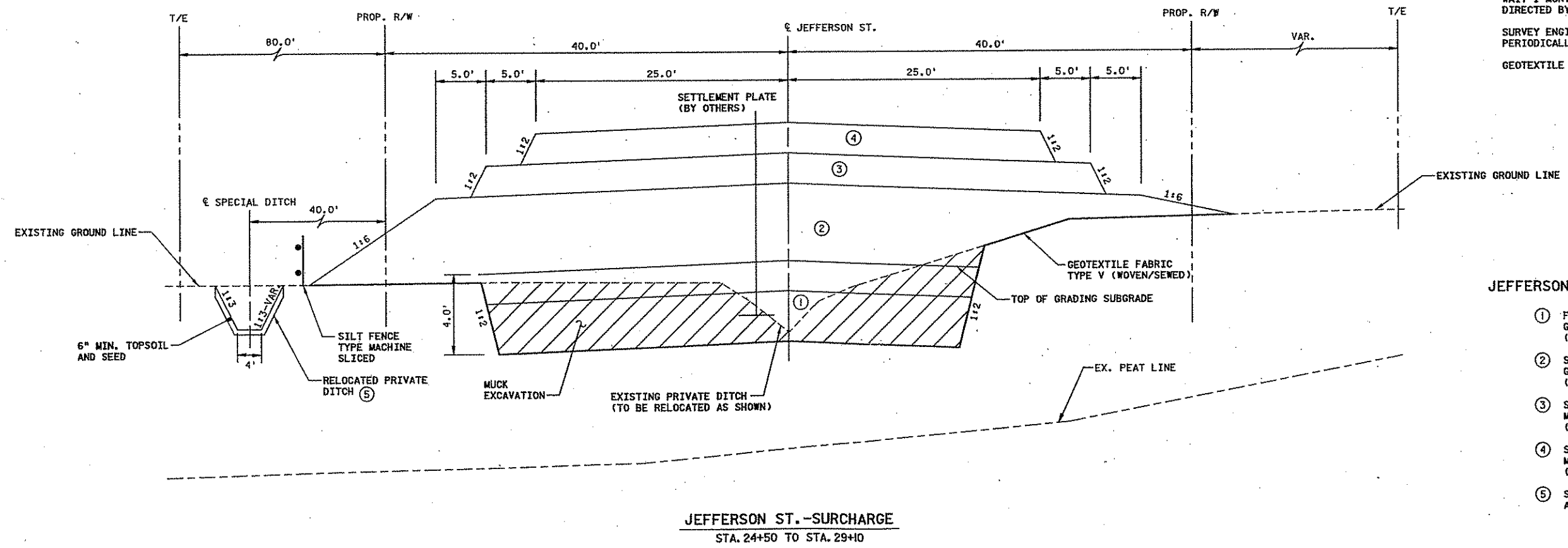
ANOKA COUNTY
 TYPICAL SECTIONS
 TH 242

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- TH 242 NOTES:**
- ① FIRST STAGE-EMBANKMENT BERM - 2-2.5' SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2)
 - ② SECOND STAGE-EMBANKMENT FILL - 2' MAX. SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2)
 - ③ FINAL STAGE-EMBANKMENT FILL - 1-2' MAX. SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2)
 - ④ SURCHARGE STAGE - 2' SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2)
 - ⑤ FILL WITH UNSUITABLE MATERIAL (ORGANIC SILT, PEAT)
 - ⑥ SEE CROSS SECTIONS FOR DITCH ELEVATIONS AND SLOPES
 - ⑦ CONSTRUCT 0.5' SWALE BETWEEN EDGE OF PAVEMENT AND SURCHARGE MATERIAL AND GRADE TO DRAIN TO 4" P.E. PIPE DRAIN. COORDINATE PLACEMENT OF 4" PERF. PIPE AND TEMPORARY DRAINAGE BEHIND AND THRU CONCRETE BARRIER WITH ENGINEER. (INCIDENTAL)
 - ⑧ BACK SLOPE WILL REMAIN CONSTRUCTED FOR SURCHARGE THROUGHOUT REMAINDER OF PROJECT. SEE CROSS SECTIONS FOR DETAILS

- GENERAL NOTES:**
- SEE SHEET 52 FOR SETTLEMENT PLATE LOCATIONS.
 - WAIT 1 MONTH MINIMUM BETWEEN STAGES OF FILL OR AS DIRECTED BY THE ENGINEER.
 - SURVEY ENGINEER WILL SHOOT SETTLEMENT PLATES PERIODICALLY TO DETERMINE WHEN TO PLACE NEXT LIFT OF FILL.
 - GEOTEXTILE FABRIC TYPE V SHALL HAVE SEWN SEAMS. (INCIDENTAL)



- JEFFERSON STREET NOTES:**
- ① FIRST STAGE-EMBANKMENT FILL - 3' MAX. SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2) (PLACE IN TWO 1.5' LIFTS)
 - ② SECOND STAGE-EMBANKMENT FILL - 3' MAX. SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2) (PLACE IN TWO 1.5' LIFTS)
 - ③ SURCHARGE STAGE - 3' MAX. SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2) (PLACE IN TWO 1.5' LIFTS)
 - ④ SURCHARGE STAGE - 3' MAX. SELECT GRANULAR MATERIAL (MN/DOT SPEC. 3149.2B2) (PLACE IN TWO 1.5' LIFTS)
 - ⑤ SEE CROSS SECTIONS FOR DITCH ELEVATIONS AND SLOPES

N:\GIV\1\047\4102\p10...j2.tsd
 \$PLOTTER\$
 \$SCALE\$
 07/17/2002

NO	DATE	BY	CRD	APPR	REVISION

NAME: 4102.TSD DATE: Apr. 09, 2002

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY D. FITCHORN 8-02
DESIGNED BY K. HERMAN 4-02
CHECKED BY N. WILL 5-02
COMM. NO. 004102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
TYPICAL SECTIONS
TH 242

SHEET 15 OF 139

(E) EXISTING PUBLIC UTILITIES								
ALIGNMENT	STATION	TO	STATION	OFFSET		IN PLACE UTILITY	LEAVE AS IS	ADJUST AS NEEDED
				LEFT (FT)	RIGHT (FT)			
CONNEXUS ENERGY								
TH 242	112+17					BURIED ELECTRIC CROSSING	X	
TH 242	112+90	TO	206+20		68 TO 72	POWER POLES	X	
TH 242	113+00	TO	239+46		70	OH TRANSMISSION LINE	X	
TH 242	116+95	TO	117+01	70 TO 72		POWER POLES	X	
TH 242	121+28					BURIED ELECTRIC CROSSING	X	
E.B. TH 242	209+22	TO	240+10		69 TO 73	POWER POLES	X	
E.B. TH 242	218+63			71		LIGHT POLE		X
E.B. TH 242	218+32				70	LIGHT POLE		X
E.B. TH 242	221+14	TO	224+53	48 TO 59		BURIED ELECTRIC	X	
E.B. TH 242	221+18					BURIED ELECTRIC CROSSING	X	
E.B. TH 242	221+95				55	LIGHT POLE		X
E.B. TH 242	224+52					BURIED ELECTRIC CROSSING	X	
E.B. TH 242	227+30					BURIED ELECTRIC CROSSING	X	
E.B. TH 242	227+31	TO	232+66	49 TO 85		BURIED ELECTRIC	X	
E.B. TH 242	229+90				41	LIGHT POLE		X
E.B. TH 242	232+95				30	LIGHT POLE	X	
E.B. TH 242	240+07					BURIED ELECTRIC CROSSING	X	
JEFFERSON	23+11				36	POWER POLE	X	
JEFFERSON	29+12				39	POWER POLE	X	
RELIANT ENERGY (MINNEGASCO)								
TH 242	113+00	TO	209+00	43 TO 68		BURIED 4" STEEL GAS	X	
TH 242	118+50					GAS CROSSING		X
TH 242	204+85	TO	226+33		62 TO 67	BURIED 4" STEEL GAS	X	
TH 242	209+00	TO	210+50	67 TO 68		BURIED 4" STEEL GAS		X
TH 242	210+50	TO	217+50	67 TO 68		BURIED 4" STEEL GAS	X	
TH 242	217+50	TO	224+50	67 TO 68		BURIED 4" STEEL GAS		X
TH 242	224+50	TO	229+50	67 TO 68		BURIED 4" STEEL GAS	X	
TH 242	229+50	TO	235+00	67 TO 68		BURIED 4" STEEL GAS		X
TH 242	235+00	TO	239+46	67 TO 68		BURIED 4" STEEL GAS	X	
E.B. TH 242	226+33					GAS CROSSING	X	
E.B. TH 242	226+34			CL OF JACKSON ST		BURIED 3" STEEL GAS	X	
E.B. TH 242	226+36	TO	239+46		56 TO 57	BURIED 4" STEEL GAS	X	
QWEST								
TH 242	113+00	TO	119+50		28 TO 37	BURIED TELEPHONE		X
TH 242	119+50	TO	221+50		28 TO 37	BURIED TELEPHONE	X	
TH 242	221+50	TO	224+50		28 TO 37	BURIED TELEPHONE		X
TH 242	224+50	TO	239+46		28 TO 37	BURIED TELEPHONE	X	
TH 242	116+49					BURIED TELEPHONE CROSSING	X	
E.B. TH 242	207+37	TO	217+69	26 TO 68		OH TELEPHONE	X	
E.B. TH 242	210+40	TO	217+64		24 TO 35	OH TELEPHONE	X	
E.B. TH 242	217+64	TO	221+50		54 TO 60.0	BURIED TELEPHONE	X	
E.B. TH 242	221+50	TO	222+50		54 TO 60.0	BURIED TELEPHONE		X
E.B. TH 242	222+50	TO	232+16		54 TO 60.0	BURIED TELEPHONE	X	
E.B. TH 242	217+62	TO	232+18		60 TO 65	BURIED TELEPHONE	X	
SCHOOL RD	39+85	TO	41+61	16 TO 20		BURIED TELEPHONE	X	
BURLINGTON NORTHERN SANTA FE RAILROAD								
TH 242	117+23	&	117+29	26	26	RR SIGNAL & GATE	X	
TH 242	117+58	&	117+52	28	28	RR SIGNAL & GATE	X	
GREAT RIVER ENERGY								
JEFFERSON	29+12				39	TRANSMISSION POLE	X	
AT&T BROADBAND								
E.B. TH 242	218+80				72	BURIED TV		X

NOTES:

THE "LEAVE AS IS" AND "ADJUST BY OTHER" COLUMNS ARE BASED UPON THE BEST INFORMATION AVAILABLE AND MAY NOT REFLECT THE THE ACTUAL EFFECTS ON THE UTILITIES BY CONSTRUCTION. ACTUAL DETERMINATION WILL BE MADE IN THE FIELD DURING CONSTRUCTION.

UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL UTILITIES IN THE FIELD.

ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS UNLESS NOTED.

UTILITY COMPANY INFORMATION
CONNEXUS ENERGY ATTN: CARY TRACY 14601 RAMSEY BLVD. ANOKA, MN 55303 PHONE 763-323-2765
NORTHERN NATURAL GAS ATTN: MIKE WALEENBERG 6579 420TH ST. NORTH BRANCH, MN 55056 PHONE 952-492-8255
RELIANT ENERGY (MINNEGASCO) ATTN: STEVE GUHANICK 700 WEST LINDEN AVENUE P.O. BOX 1165 MINNEAPOLIS, MN 55440-1165 PHONE 612-321-5421
QWEST ATTN: MIKE RUDE 425 MONROE STREET ANOKA, MN 55303 PHONE 763-712-5004
AT&T BROADBAND ATTN: DAVE KNAPP 1238 GREY FOX ROAD ARDEN HILLS, MN 55112 PHONE 651-493-5355

UTILITY COMPANY INFORMATION
CITY OF COON RAPIDS ATTN: DOUG VIERZBA 11155 ROBINSON DRIVE NW COON RAPIDS, MN 55433-3761 PHONE 763-767-6465
Mn/DOT ATTN: ROGER VANDENHEUVEL 6000 MINNEHAHA AVENUE ST. PAUL, MN 55111 PHONE 612-725-2311
BURLINGTON NORTHERN SANTA FE RAILROAD ATTN: MIKE HILLMAN 80 44TH AVENUE NE MINNEAPOLIS, MN 55421 PHONE 763-782-3492
GREAT RIVER ENERGY ATTN: CRAIG PORKER 17845 EAST HIGHWAY 10 P.O. BOX 800 ELK RIVER, MN 55330 PHONE 763-241-2367

12.fbb
 08/11/2002
 402.TBB

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 402.TBB DATE: Mar, 07, 2002

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

Print Name: NATHAN A. WILL

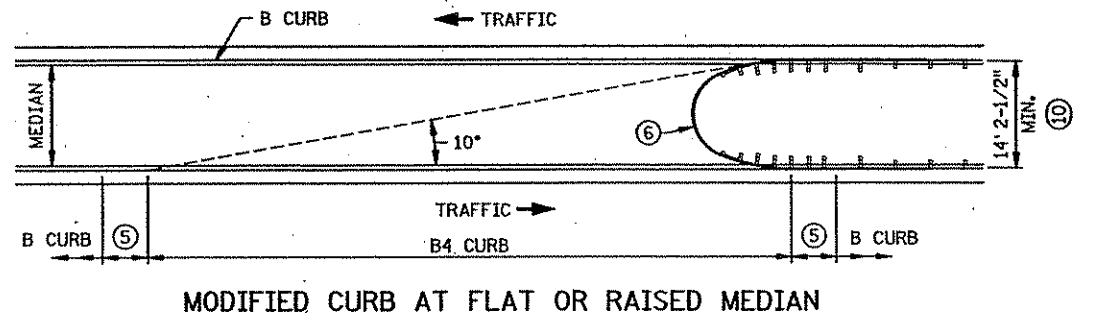
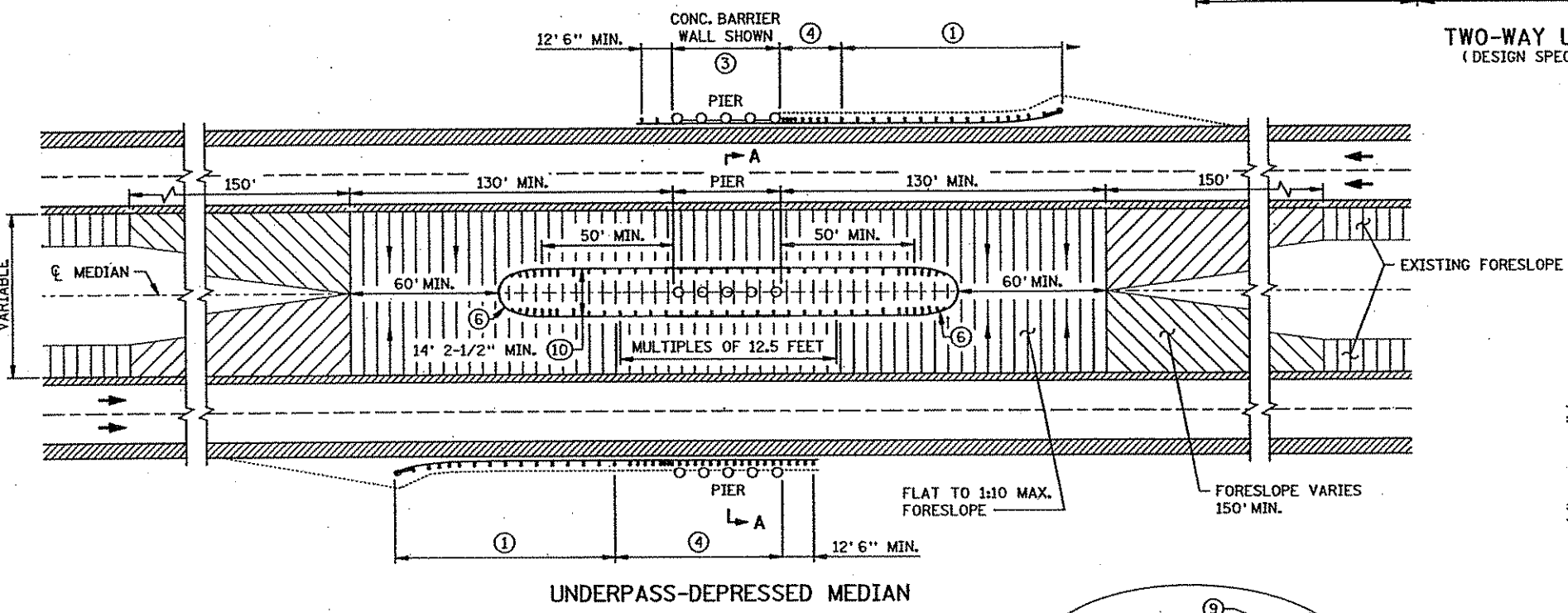
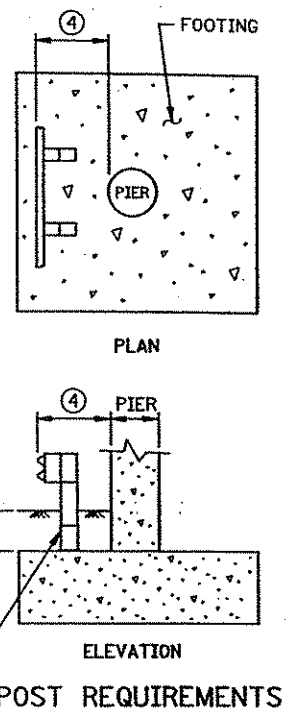
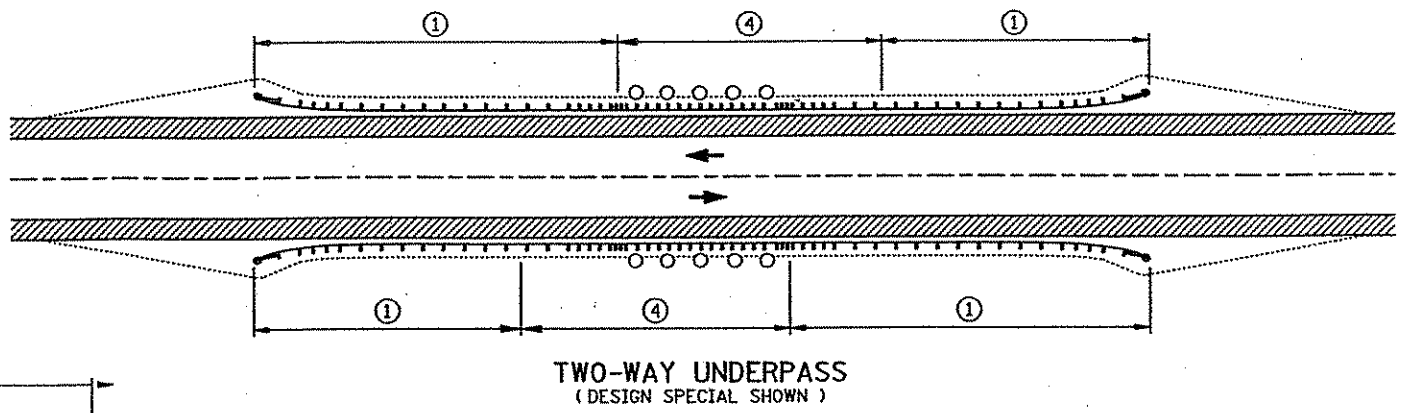
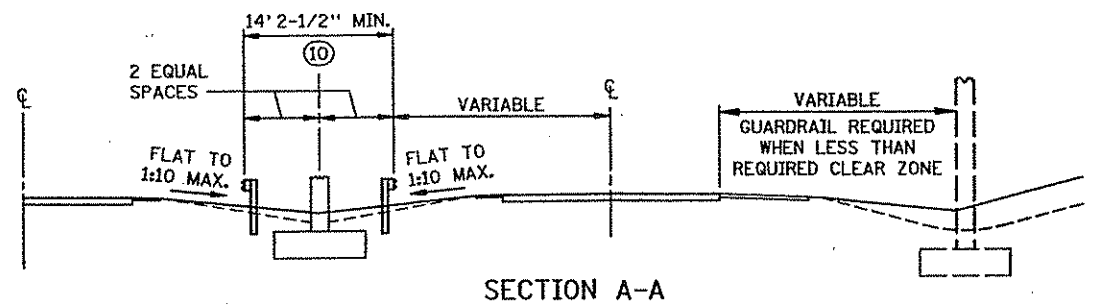
Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

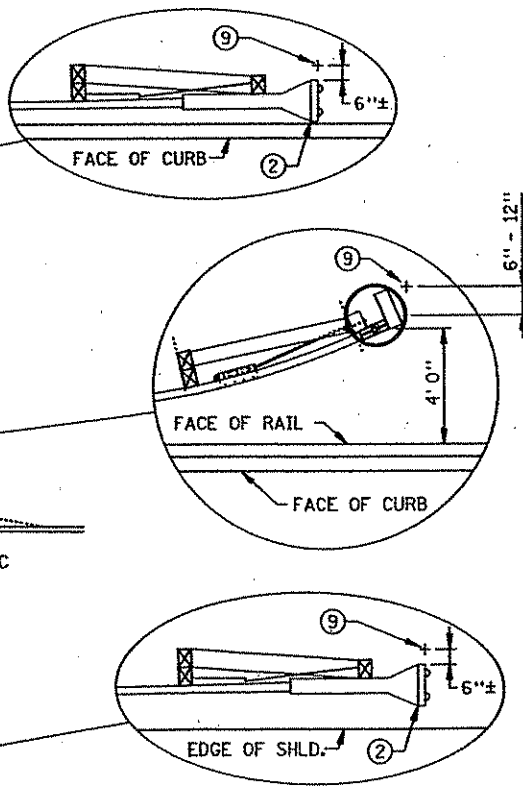
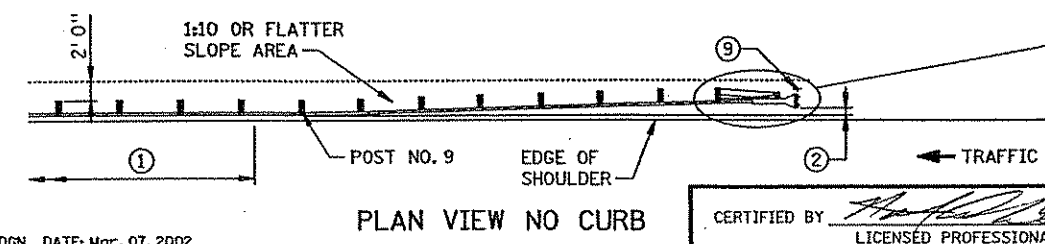
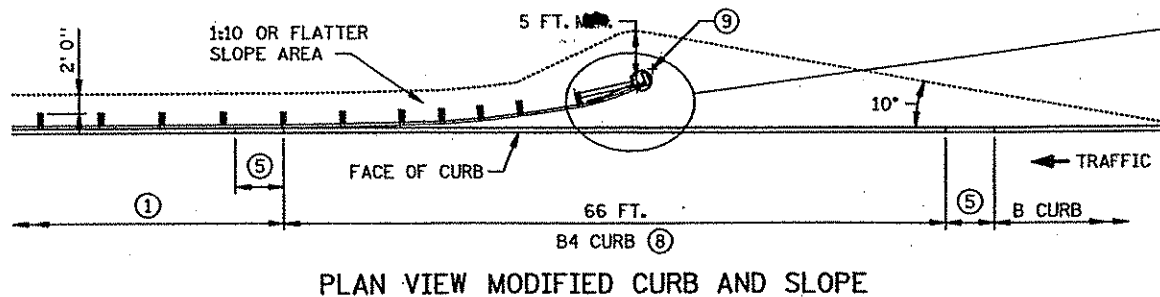
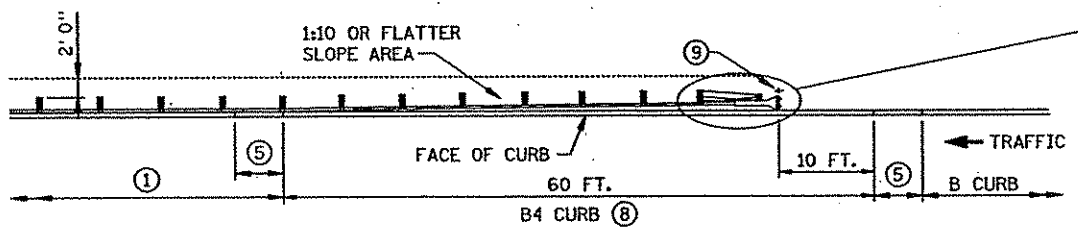
DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: S. THONGVANH DATE: 5-02
 CHECKED BY: G. HELSETH DATE: 5-02
 COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

PLOTTED/REVISED: \$\$\$@DATE\$\$\$\$
 \$\$\$@PATHFILENAME\$\$\$
 \$\$\$@PLOTNAME\$\$\$
 PATH & FILE NAME:
 FILE NAME: GMEEND.DGN
 NAME: GMEEND.DGN DATE: Mar. 07, 2002



- NOTES:**
- ALL GUARDRAIL POSTS SHALL BE 6' 3\"/>

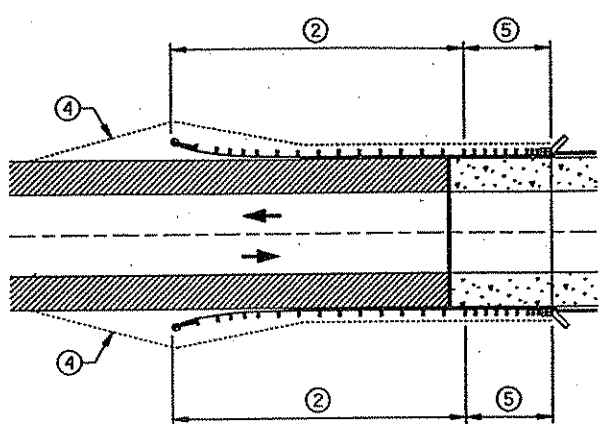


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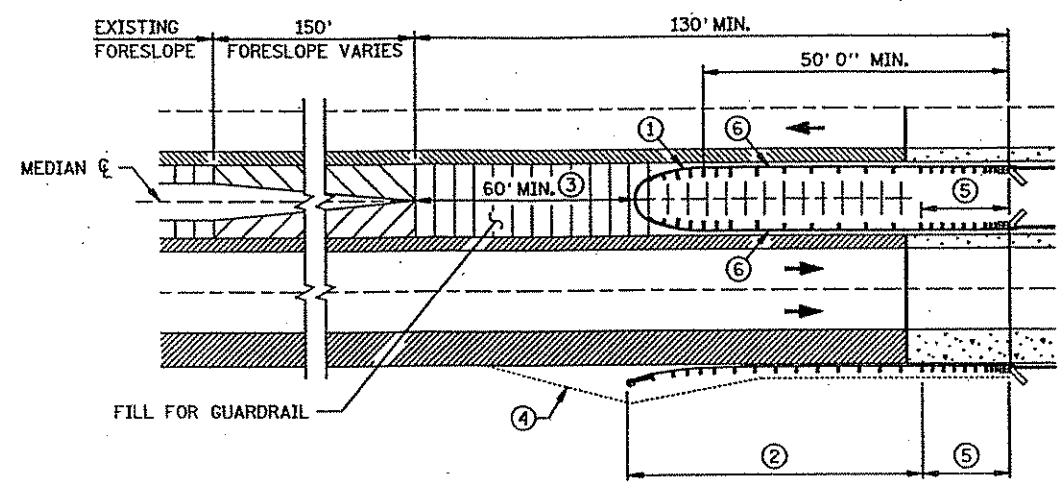
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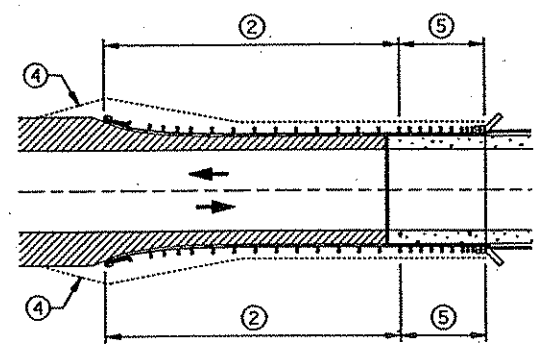
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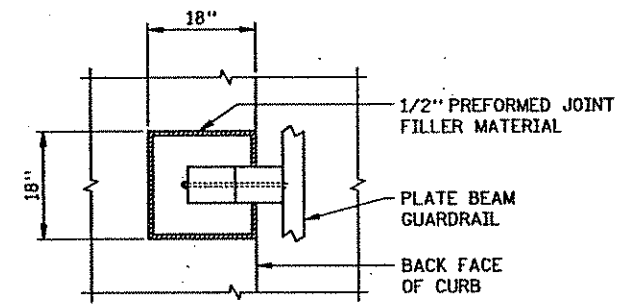
TWO - WAY BRIDGE WITH FULL SHOULDERS



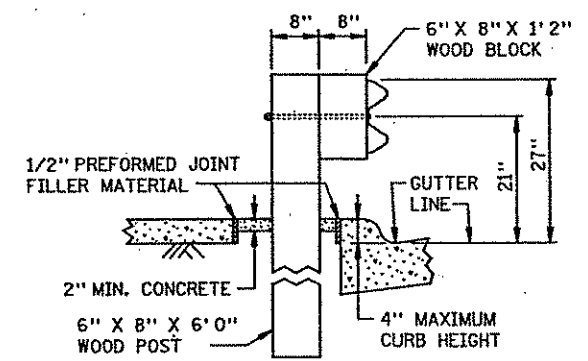
ONE - WAY BRIDGE WITH FULL RIGHT SHOULDER



TWO - WAY BRIDGE WITHOUT FULL SHOULDERS



PLAN VIEW



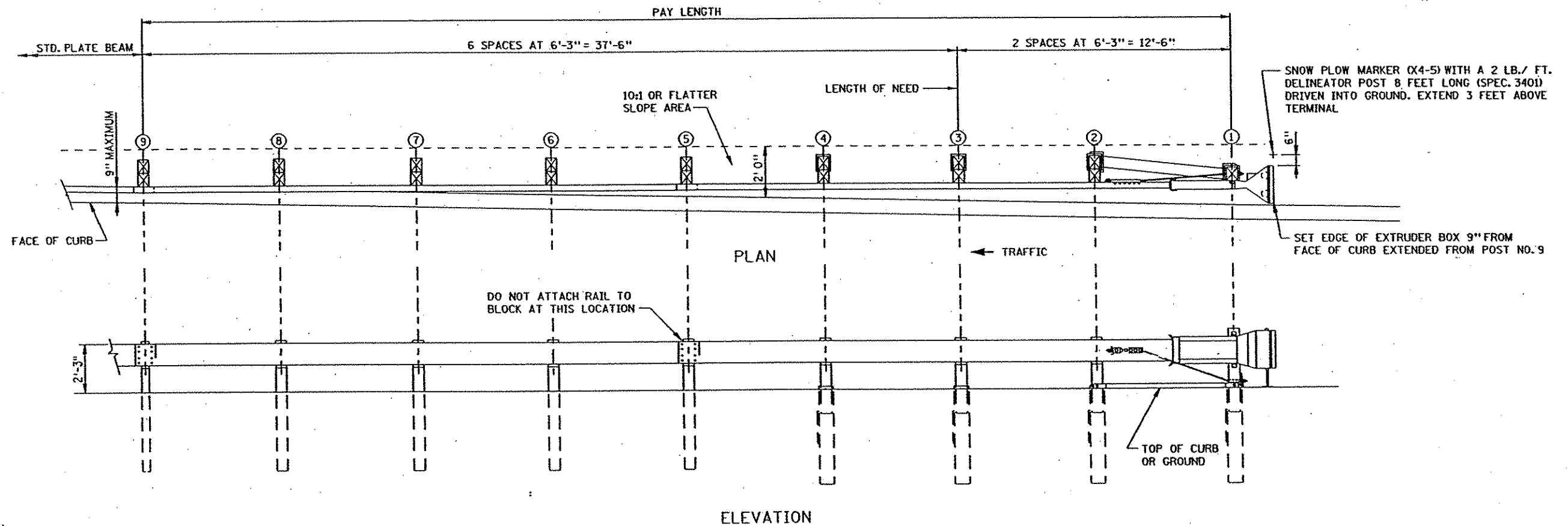
ELEVATION

TYPICAL SECTION AT POST SET IN CONCRETE

NOTES:

- ALL GUARDRAIL POSTS SHALL BE 6'3" CENTER TO CENTER, EXCEPT WHERE NOTED.
- WHEN THE APPROACHING PLATE BEAM FLARE CAN BE BURIED IN THE BACKSLOPE ELIMINATE THE END TREATMENT AND ADD REQUIRED RAIL LENGTH TO REACH BACKSLOPE.
- THE LATEST APPROVED VERSION OF STANDARD PLATES SHOWN OR AS INDICATED IN THE PLANS SHALL APPLY.
- ① THREE BEAM BULLNOSE, SEE SHEETS 33A, 34.
- ② FOR THE REQUIRED L LENGTH SEE ROAD DESIGN MANUAL 10-7.03 FOR DESIGN PARAMETERS. SEE STANDARD PLATE 8329 FOR END TREATMENT SHOWN.
- ③ FORESLOPE FLAT TO 1:10 MAXIMUM.
- ④ 1:10 SLOPE P.I. APPROACH GRADING VARIES WITH TERMINAL TYPE.
- ⑤ PLATE BEAM GUARDRAIL ATTACHMENTS TO FIXED OBJECTS REQUIRE AN APPROVED TRANSITION SECTION.
- ⑥ 1:15 MAXIMUM TAPER ALLOWED ON APPROACH SIDE OF THE BULLNOSE BEGINNING AT POST NO. 5. TAPER MAY BE GREATER THAN 1:15 FOR OBSTACLES ON OPPOSING ROADWAY SIDE.

SHEET 2 OF 2	GUARDRAIL INSTALLATIONS AT MEDIANS AND END TREATMENTS
CERTIFIED BY <i>[Signature]</i> LICENSE NO. 26391 DATE 6-12-02	REFERENCE DATE 6-15-2001
S.P. 0212-42; S.P. 02-596-04; S.P. 106-010-18; S.P. 106-121-04	
Sheet No. 18 of 139 Sheets	



NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.ETR DATE: Apr. 09, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 001402

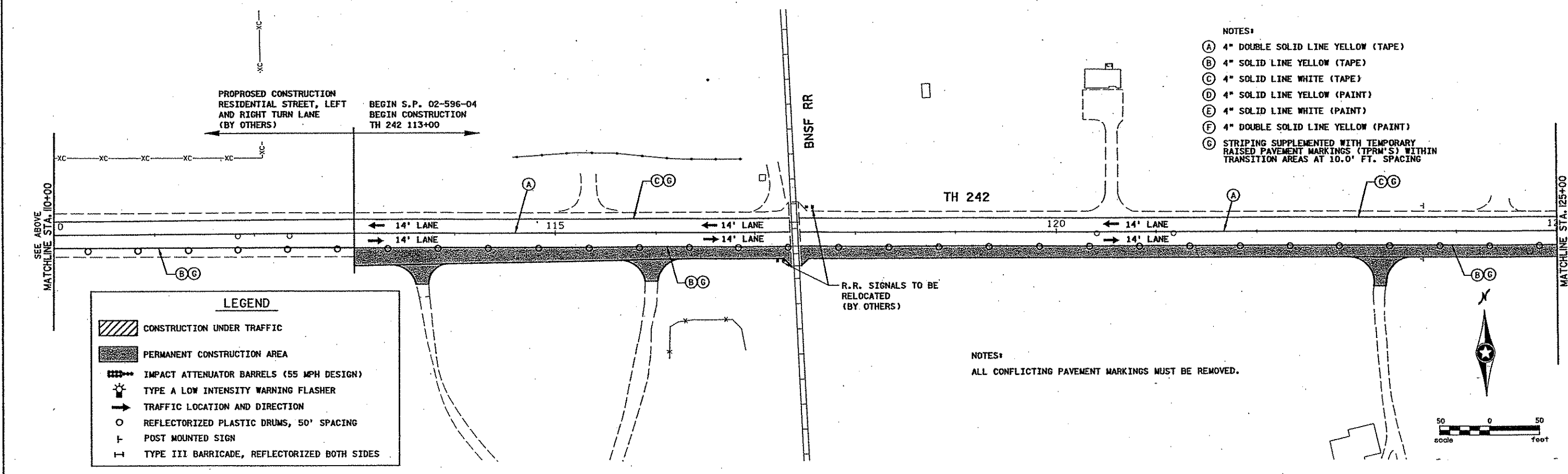
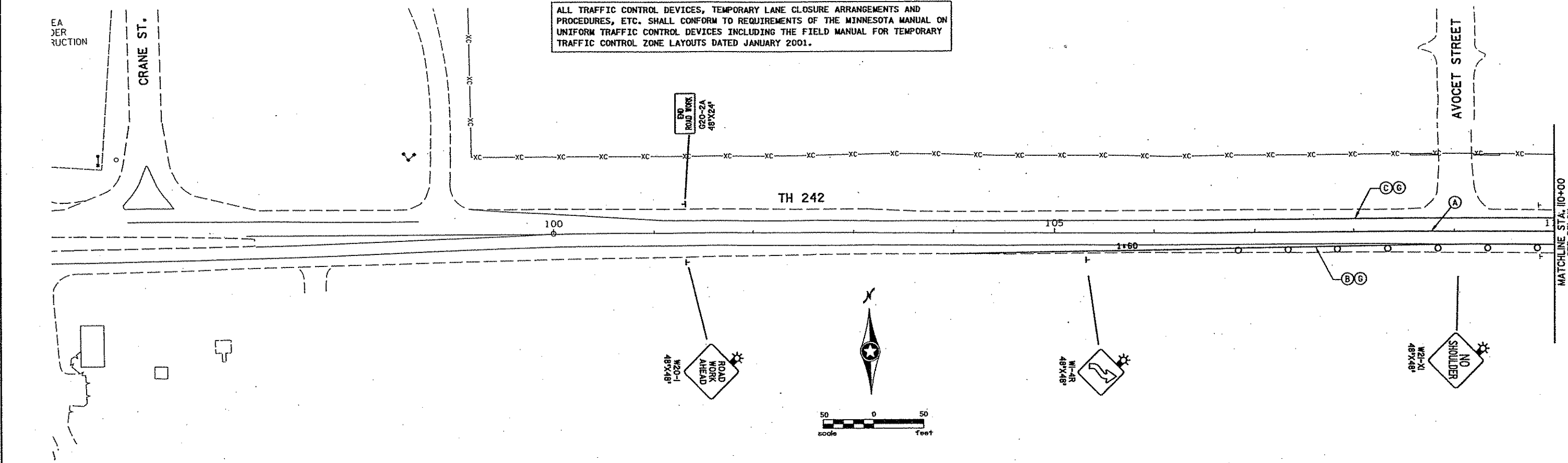


ANOKA COUNTY
 ET-2000 END TREATMENT
 TH 242
 ENGLISH

SHEET
 19
 OF
 139

M:\ACTIV\11\047\4102\pic 22.dwg
 APR 9 11:02 AM
 NATHAN A. WILL
 06/11/2002

ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.



- NOTES:
- (A) 4" DOUBLE SOLID LINE YELLOW (TAPE)
 - (B) 4" SOLID LINE YELLOW (TAPE)
 - (C) 4" SOLID LINE WHITE (TAPE)
 - (D) 4" SOLID LINE YELLOW (PAINT)
 - (E) 4" SOLID LINE WHITE (PAINT)
 - (F) 4" DOUBLE SOLID LINE YELLOW (PAINT)
 - (G) STRIPING SUPPLEMENTED WITH TEMPORARY RAISED PAVEMENT MARKINGS (TPRM'S) WITHIN TRANSITION AREAS AT 10.0' FT. SPACING

LEGEND

	CONSTRUCTION UNDER TRAFFIC
	PERMANENT CONSTRUCTION AREA
	IMPACT ATTENUATOR BARRELS (55 MPH DESIGN)
	TYPE A LOW INTENSITY WARNING FLASHER
	TRAFFIC LOCATION AND DIRECTION
	REFLECTORIZED PLASTIC DRUMS, 50' SPACING
	POST MOUNTED SIGN
	TYPE III BARRICADE, REFLECTORIZED BOTH SIDES

NOTES:
ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED.

32.plg
 PLOTTER
 06/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.HIA DATE: Apr. 02, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**
 Date: *6-12-02* License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

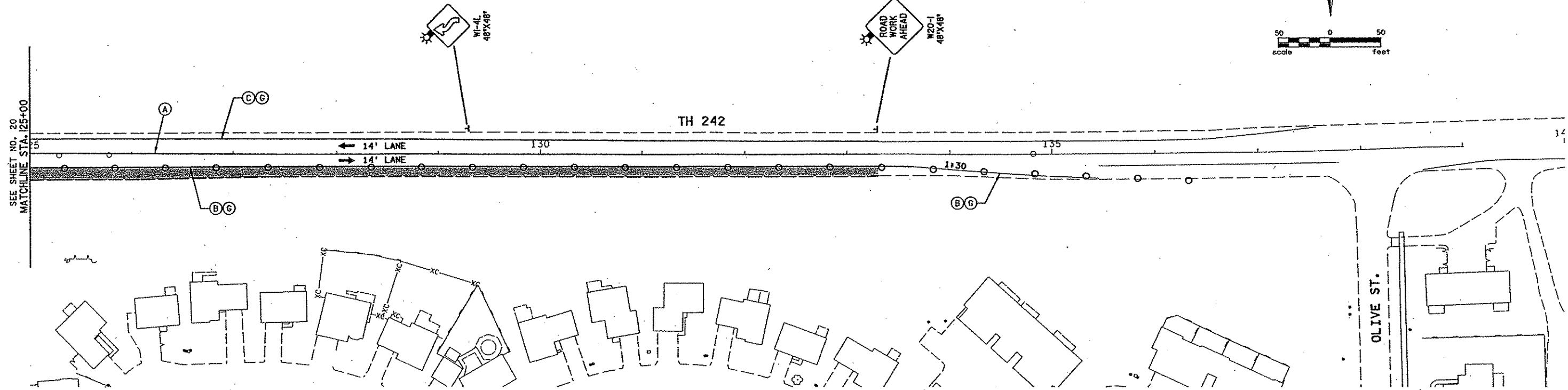
DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 001402



ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE I

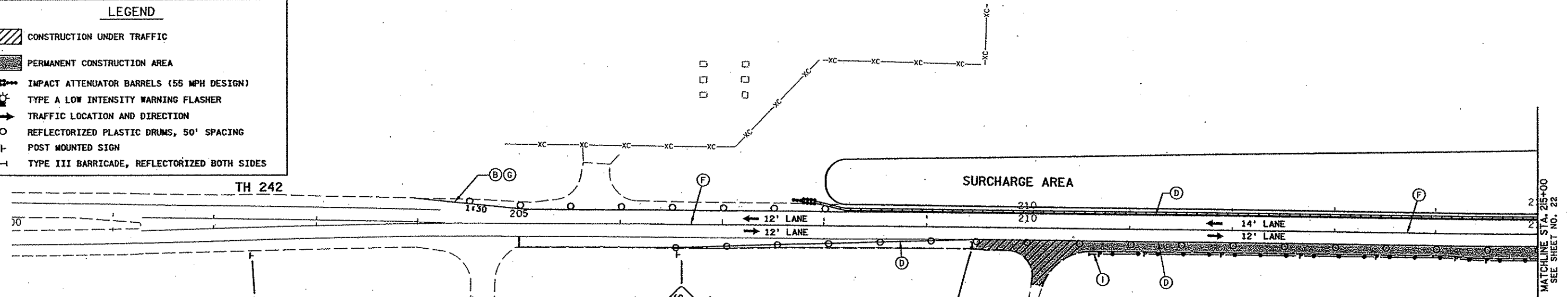
SHEET
 20
 OF
 139

ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.



LEGEND

- CONSTRUCTION UNDER TRAFFIC
- PERMANENT CONSTRUCTION AREA
- IMPACT ATTENUATOR BARRELS (55 MPH DESIGN)
- TYPE A LOW INTENSITY WARNING FLASHER
- TRAFFIC LOCATION AND DIRECTION
- REFLECTORIZED PLASTIC DRUMS, 50' SPACING
- POST MOUNTED SIGN
- TYPE III BARRICADE, REFLECTORIZED BOTH SIDES



- NOTES:
- (A) 4" DOUBLE SOLID LINE YELLOW (TAPE)
 - (B) 4" SOLID LINE YELLOW (TAPE)
 - (C) 4" SOLID LINE WHITE (TAPE)
 - (D) 4" SOLID LINE YELLOW (PAINT)
 - (E) 4" SOLID LINE WHITE (PAINT)
 - (F) 4" DOUBLE SOLID LINE YELLOW (PAINT)
 - (G) STRIPING SUPPLEMENTED WITH TEMPORARY RAISED PAVEMENT MARKINGS (TPRM'S) WITHIN TRANSITION AREAS AT 10.0' FT. SPACING

- NOTES:
- (1) SALVAGE AND INSTALL PLATE BEAM GUARDRAIL ON THE SOUTH SIDE OF TH 242. CONSTRUCT END TREATMENT-ENERGY ABSORBING TERMINAL.
- GENERAL NOTES:
- ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED.



4102.HIB
 4/2/02
 06/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.HIB DATE: Apr. 02, 2002

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

Print Name: NATHAN A. WILL

[Signature]

Date: 6-12-02 License # 26391

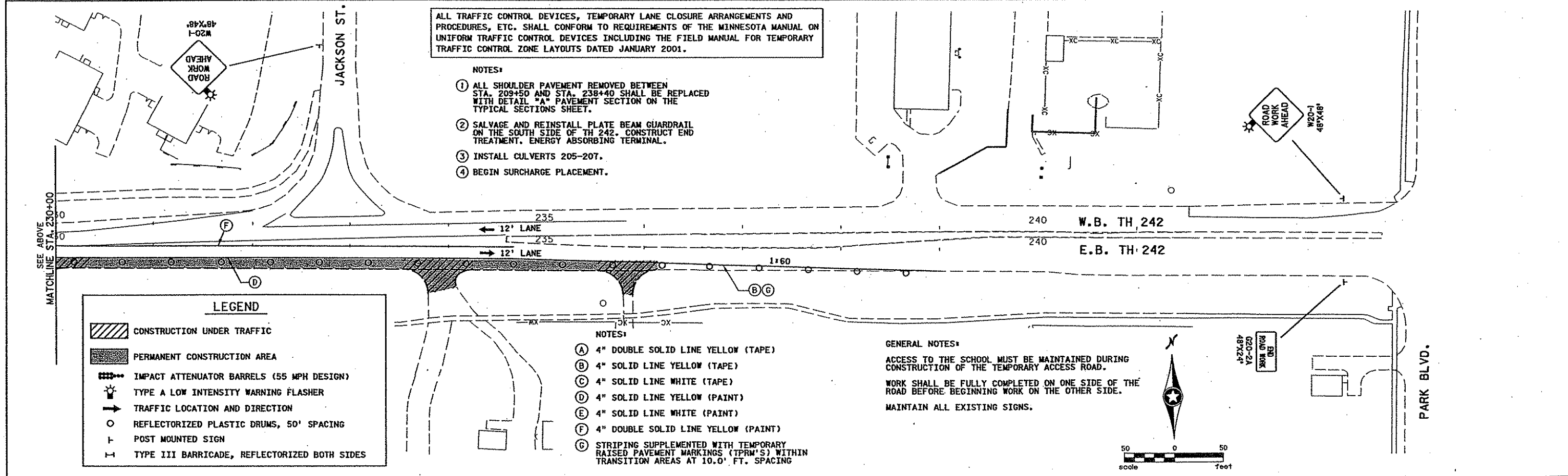
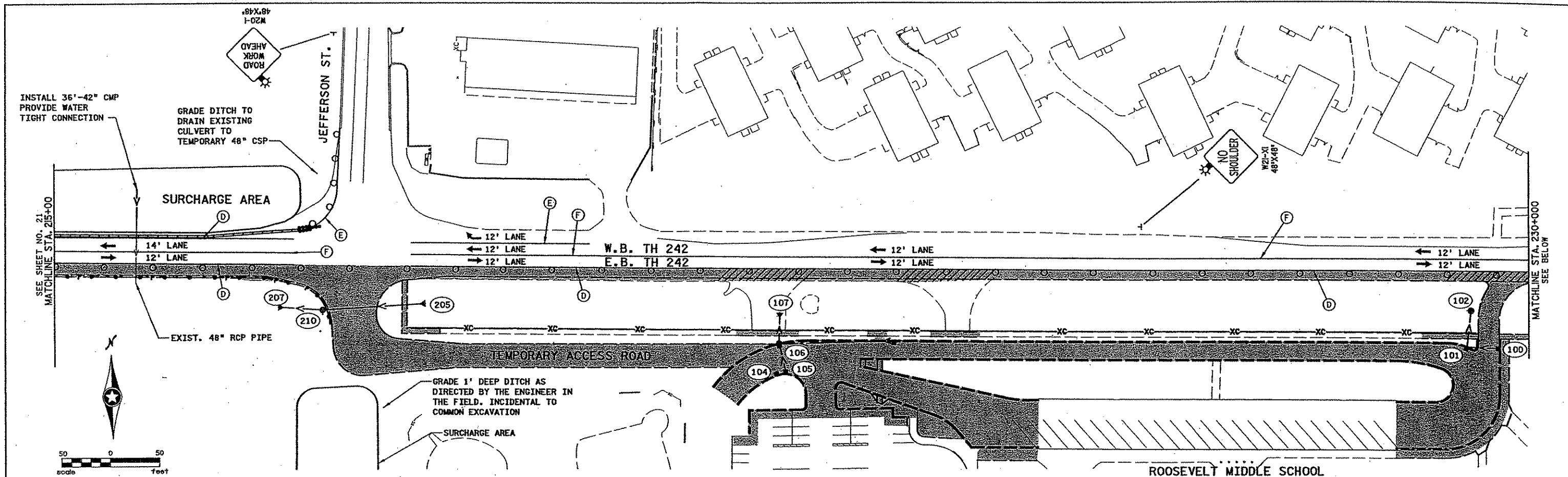
STATE AID PROJECT NO.
 S.P. 106-010-1B
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN 8-02
 DESIGNED BY: N. WILL 4-02
 CHECKED BY: N. WILL 5-02
 COMM. NO. 0014102



ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE I

SHEET
 21
 OF
 139



ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.

- NOTES:
- ALL SHOULDER PAVEMENT REMOVED BETWEEN STA. 209+50 AND STA. 238+40 SHALL BE REPLACED WITH DETAIL "A" PAVEMENT SECTION ON THE TYPICAL SECTIONS SHEET.
 - SALVAGE AND REINSTALL PLATE BEAM GUARDRAIL ON THE SOUTH SIDE OF TH 242. CONSTRUCT END TREATMENT, ENERGY ABSORBING TERMINAL.
 - INSTALL CULVERTS 205-207.
 - BEGIN SURCHARGE PLACEMENT.

LEGEND

- CONSTRUCTION UNDER TRAFFIC
- PERMANENT CONSTRUCTION AREA
- IMPACT ATTENUATOR BARRELS (55 MPH DESIGN)
- TYPE A LOW INTENSITY WARNING FLASHER
- TRAFFIC LOCATION AND DIRECTION
- REFLECTORIZED PLASTIC DRUMS, 50' SPACING
- POST MOUNTED SIGN
- TYPE III BARRICADE, REFLECTORIZED BOTH SIDES

- NOTES:
- (A) 4" DOUBLE SOLID LINE YELLOW (TAPE)
 - (B) 4" SOLID LINE YELLOW (TAPE)
 - (C) 4" SOLID LINE WHITE (TAPE)
 - (D) 4" SOLID LINE YELLOW (PAINT)
 - (E) 4" SOLID LINE WHITE (PAINT)
 - (F) 4" DOUBLE SOLID LINE YELLOW (PAINT)
 - (G) STRIPING SUPPLEMENTED WITH TEMPORARY RAISED PAVEMENT MARKINGS (TPRM'S) WITHIN TRANSITION AREAS AT 10.0' FT. SPACING

GENERAL NOTES:

ACCESS TO THE SCHOOL MUST BE MAINTAINED DURING CONSTRUCTION OF THE TEMPORARY ACCESS ROAD.

WORK SHALL BE FULLY COMPLETED ON ONE SIDE OF THE ROAD BEFORE BEGINNING WORK ON THE OTHER SIDE.

MAINTAIN ALL EXISTING SIGNS.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.HIC DATE: Apr. 02, 2002

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

Print Name: NATHAN A. WILL

Date: 6-12-02 License: 26391

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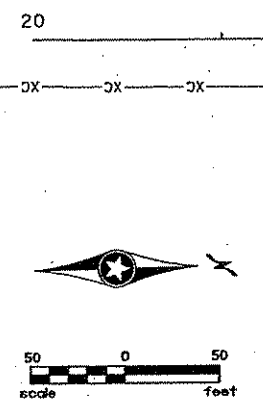
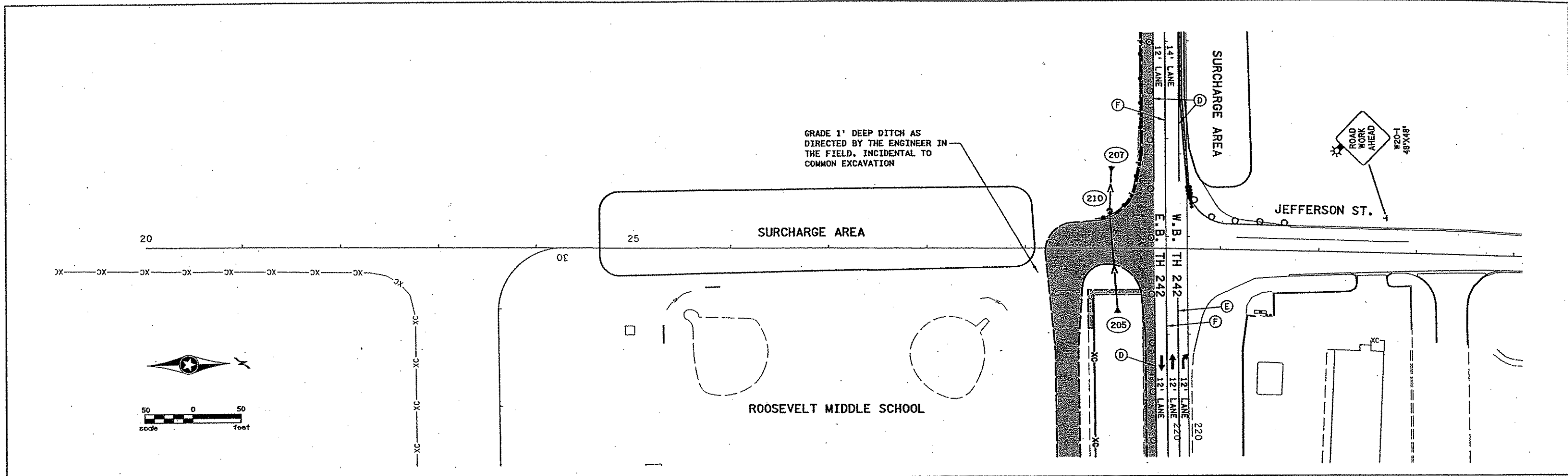
DRAWN BY: D. FITCHORN DATE: 8-02
DESIGNED BY: N. WILL 4-02
CHECKED BY: N. WILL 5-02
COMM. NO. 0014102



ANOKA COUNTY
STAGING AND TRAFFIC CONTROL PLAN
TH 242
STAGE I

SHEET
22
OF
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 06/11/2002



ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.

LEGEND	
	CONSTRUCTION UNDER TRAFFIC
	PERMANENT CONSTRUCTION AREA
	IMPACT ATTENUATOR BARRELS (55 MPH DESIGN)
	TYPE A LOW INTENSITY WARNING FLASHER
	TRAFFIC LOCATION AND DIRECTION
	REFLECTORIZED PLASTIC DRUMS, 50' SPACING
	POST MOUNTED SIGN
	TYPE III BARRICADE, REFLECTORIZED BOTH SIDES

- NOTES:
- (D) 4" SOLID LINE YELLOW (PAINT)
 - (E) 4" SOLID LINE WHITE (PAINT)
 - (F) 4" DOUBLE SOLID LINE YELLOW (PAINT)

02.H18
 APR 9 2002
 856/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

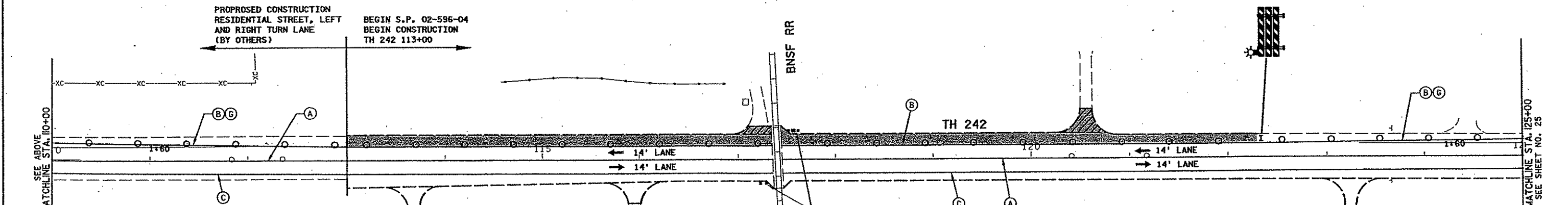
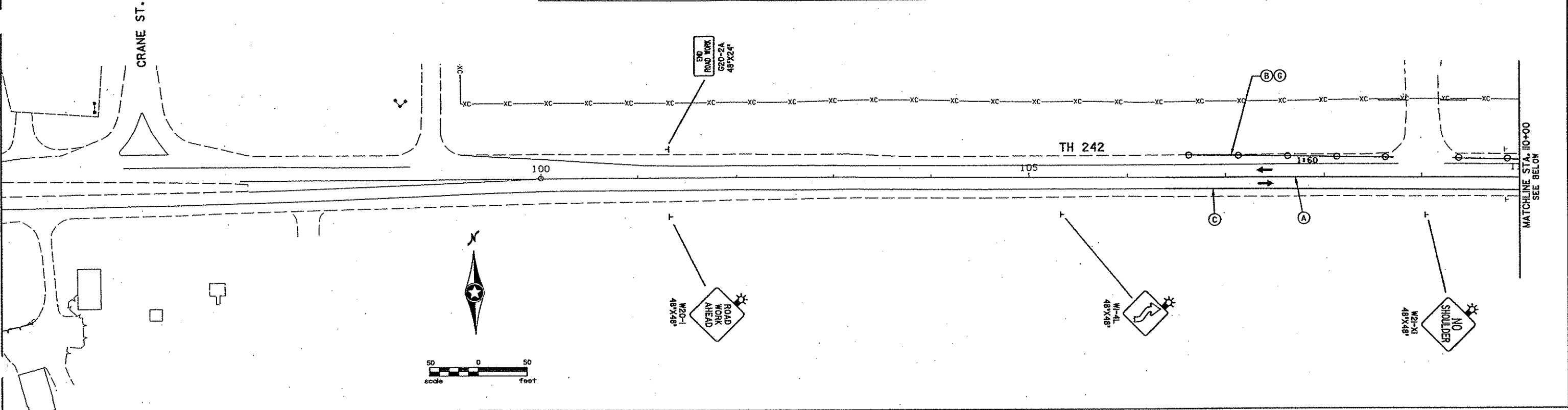
DRAWN BY: **D. FITCHORN** DATE: **8-02**
 DESIGNED BY: **N. WILL** DATE: **4-02**
 CHECKED BY: **N. WILL** DATE: **5-02**
 COMM. NO. **001402**



ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE I

SHEET
 23
 OF
 139

ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.



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 - (G) STRIPING SUPPLEMENTED WITH TEMPORARY RAISED PAVEMENT MARKINGS (TPRM'S) WITHIN TRANSITION AREAS AT 10.0' FT. SPACING
- GENERAL NOTES:**
- ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.H2A DATE: Mar. 14, 2002

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Print Name: **NATHAN A. WILL**

Nathan A. Will

Date: 6-12-02 License # 26391

STATE AID PROJECT NO. S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
DESIGNED BY: N. WILL DATE: 4-02
CHECKED BY: N. WILL DATE: 5-02
COMM. NO. 0014102

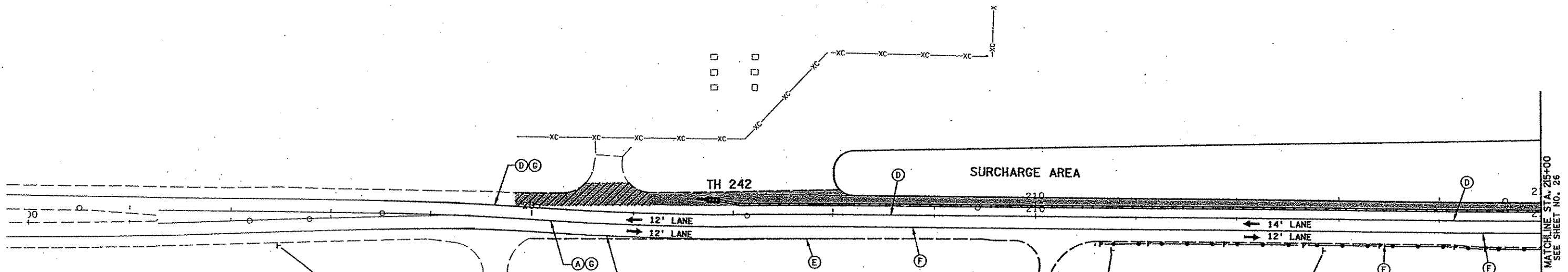
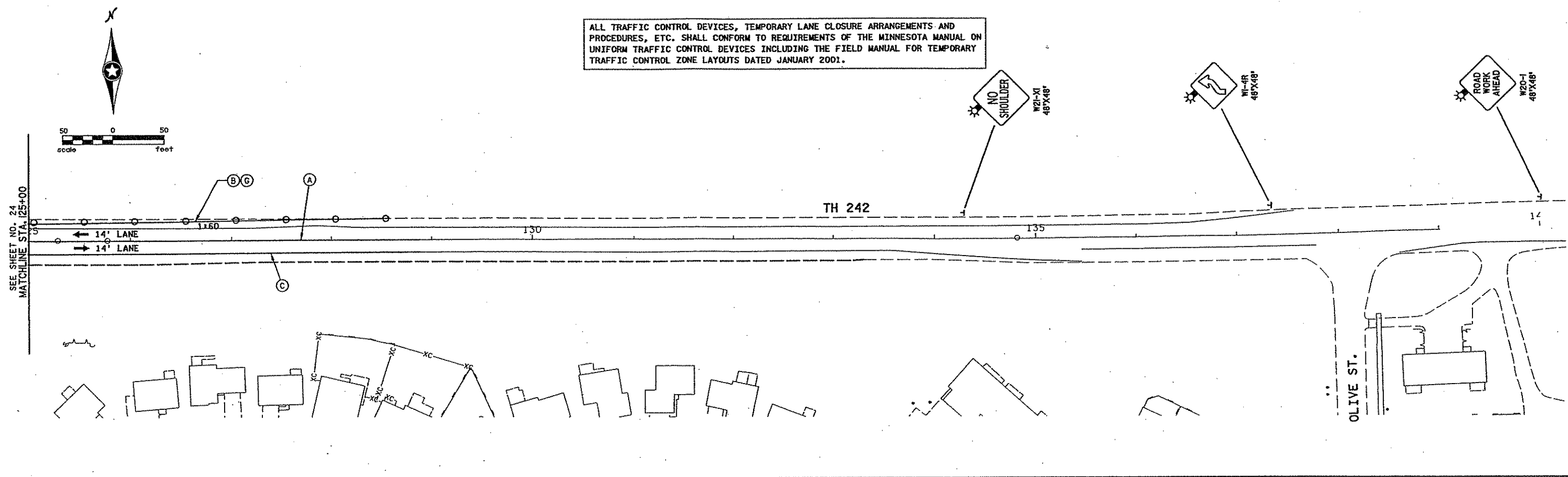


ANOKA COUNTY
STAGING AND TRAFFIC CONTROL PLAN
TH 242
STAGE 2

SHEET 24 OF 139

06/11/2002

ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.



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12.H2B
 4/10/02
 4/10/02
 4/10/02
 4/10/02

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.H2B DATE: Apr. 02, 2002

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Date: 6-12-02 License # 26391

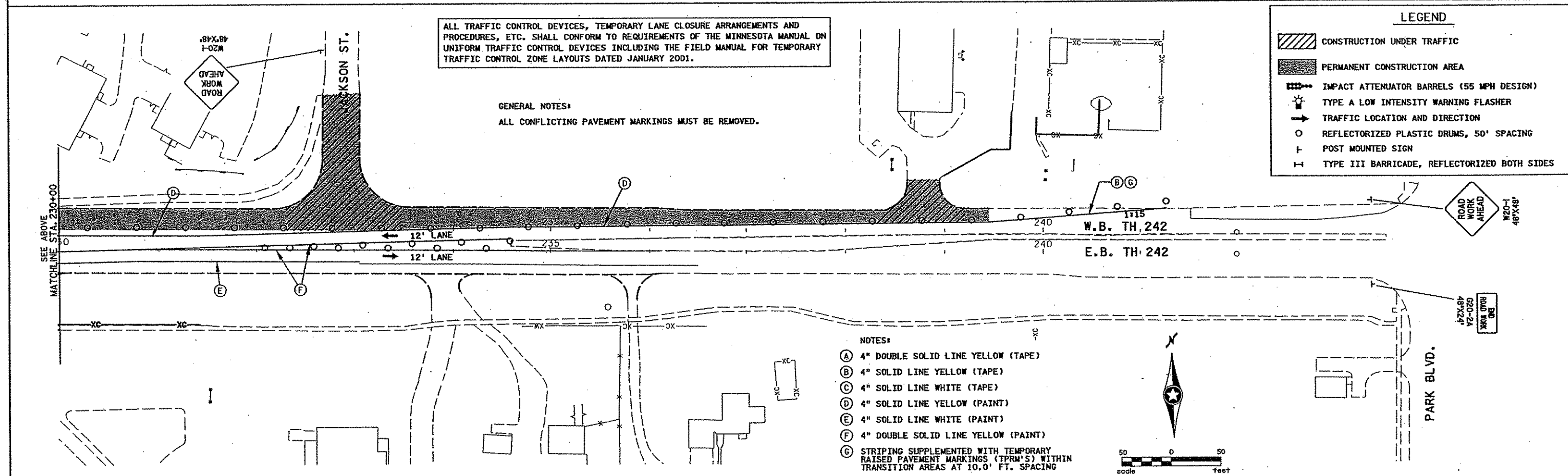
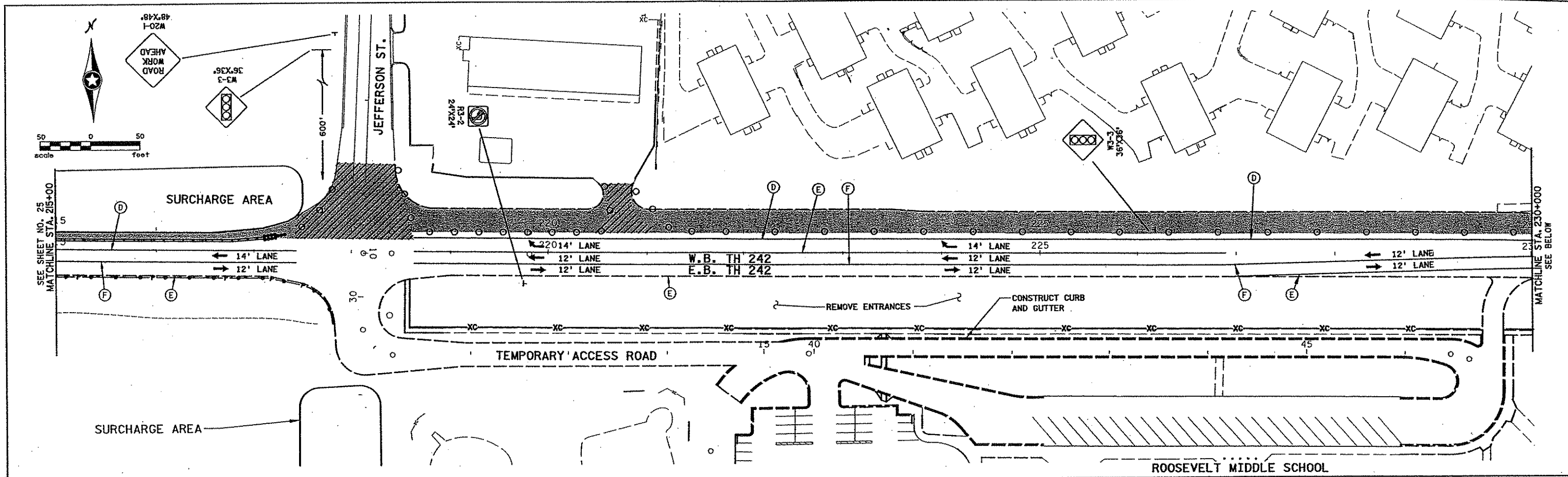
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102

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ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE 2

SHEET
 25
 OF
 139



ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.

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S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY DATE
D. FITCHORN 8-02
DESIGNED BY
N. WILL 4-02
CHECKED BY
N. WILL 5-02
COMM. NO.
0014102



ANOKA COUNTY
STAGING AND TRAFFIC CONTROL PLAN
TH 242
STAGE 2

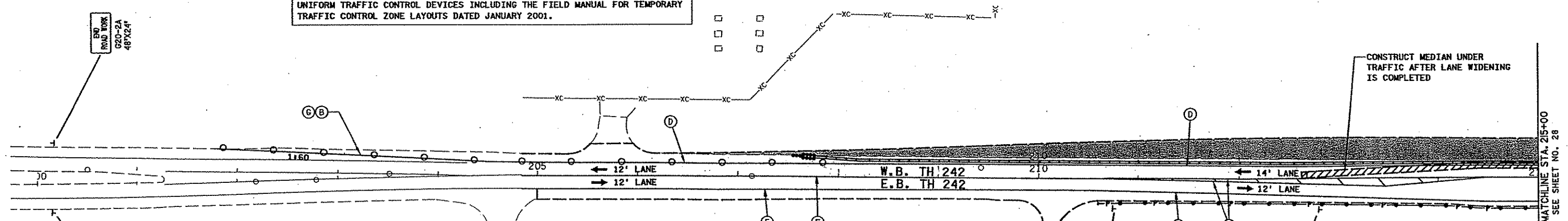
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 06/11/2002

NO DATE BY CKD APPR REVISION
NAME: 4102.H2C DATE: Apr. 02, 2002

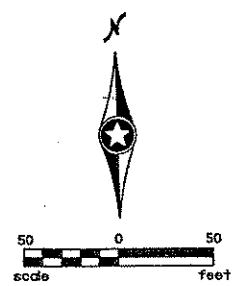
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 08/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.H3A DATE: Apr. 02, 2002

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 Print Name: NATHAN A. WILL
 Date: 6-12-02 License # 26391

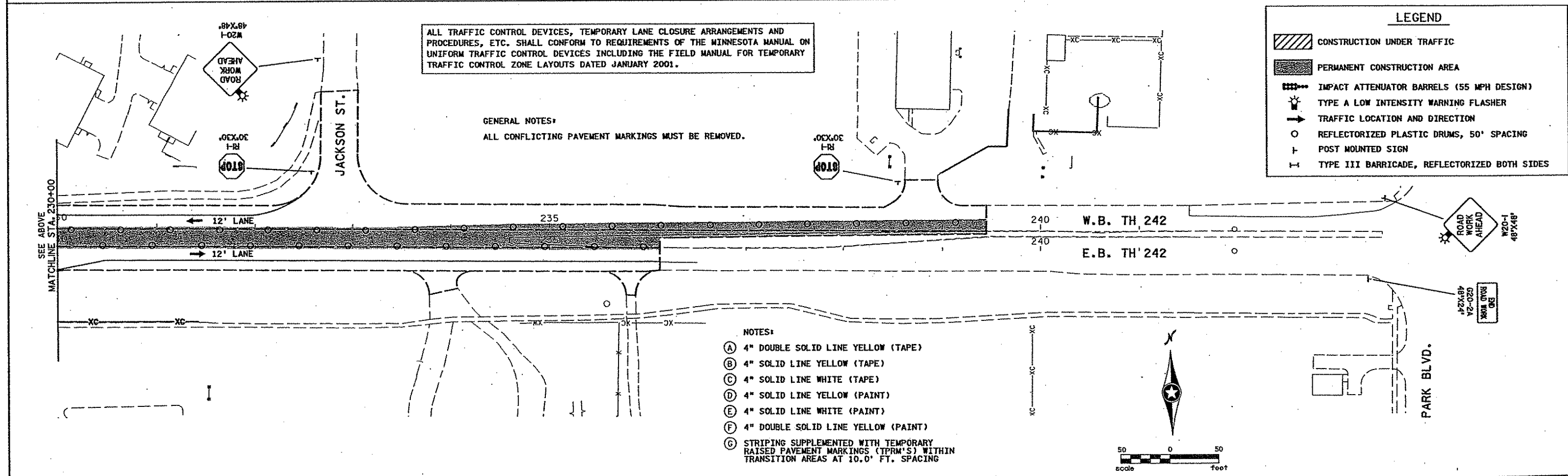
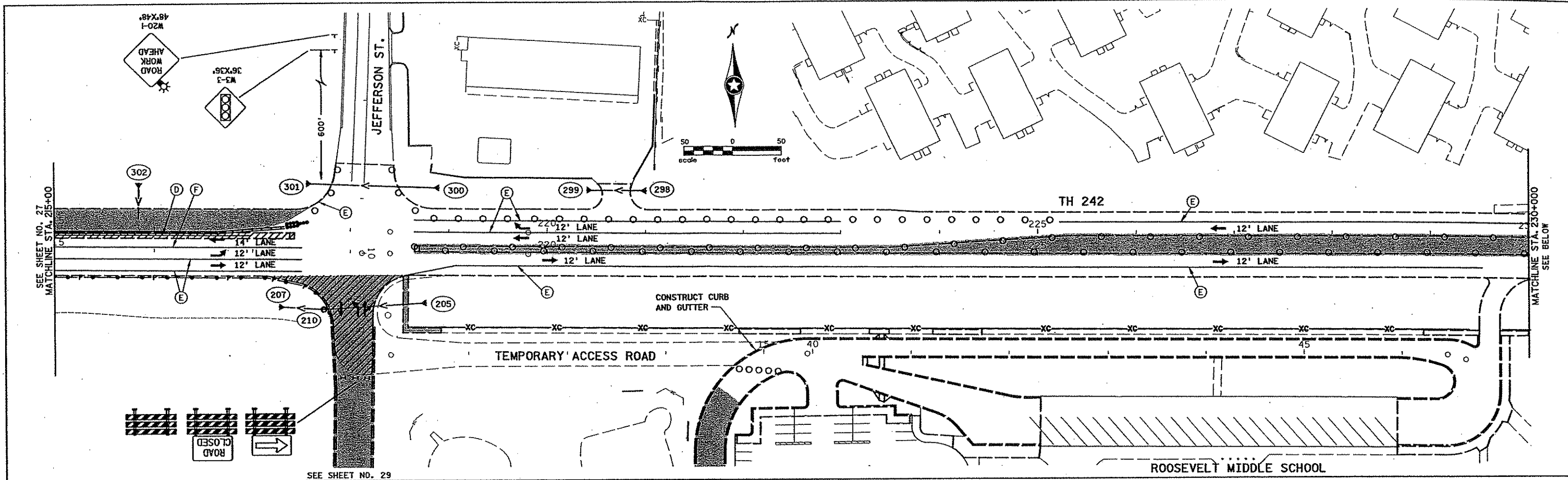
STATE AID PROJECT NO.
 S.P. 106-010-1B
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL 4-02
 CHECKED BY: N. WILL 5-02
 COMM. NO. 001402



ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE 3

SHEET 27 OF 139



ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.

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2-733
 PROJECT NO. 4102.H3B
 DATE: APR. 02, 2002

NO.	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.H3B DATE: Apr. 02, 2002

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Print Name: NATHAN A. WILL

Date: Apr 02 License # 26391

STATE AID PROJECT NO.
S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04









DRAWN BY D. FITCHORN DATE 8-02
DESIGNED BY N. WILL DATE 4-02
CHECKED BY N. WILL DATE 5-02
COMM. NO. 001402



ANOKA COUNTY
STAGING AND TRAFFIC CONTROL PLAN
TH 242
STAGE 3

SHEET 28 OF 139

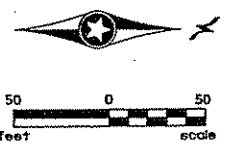
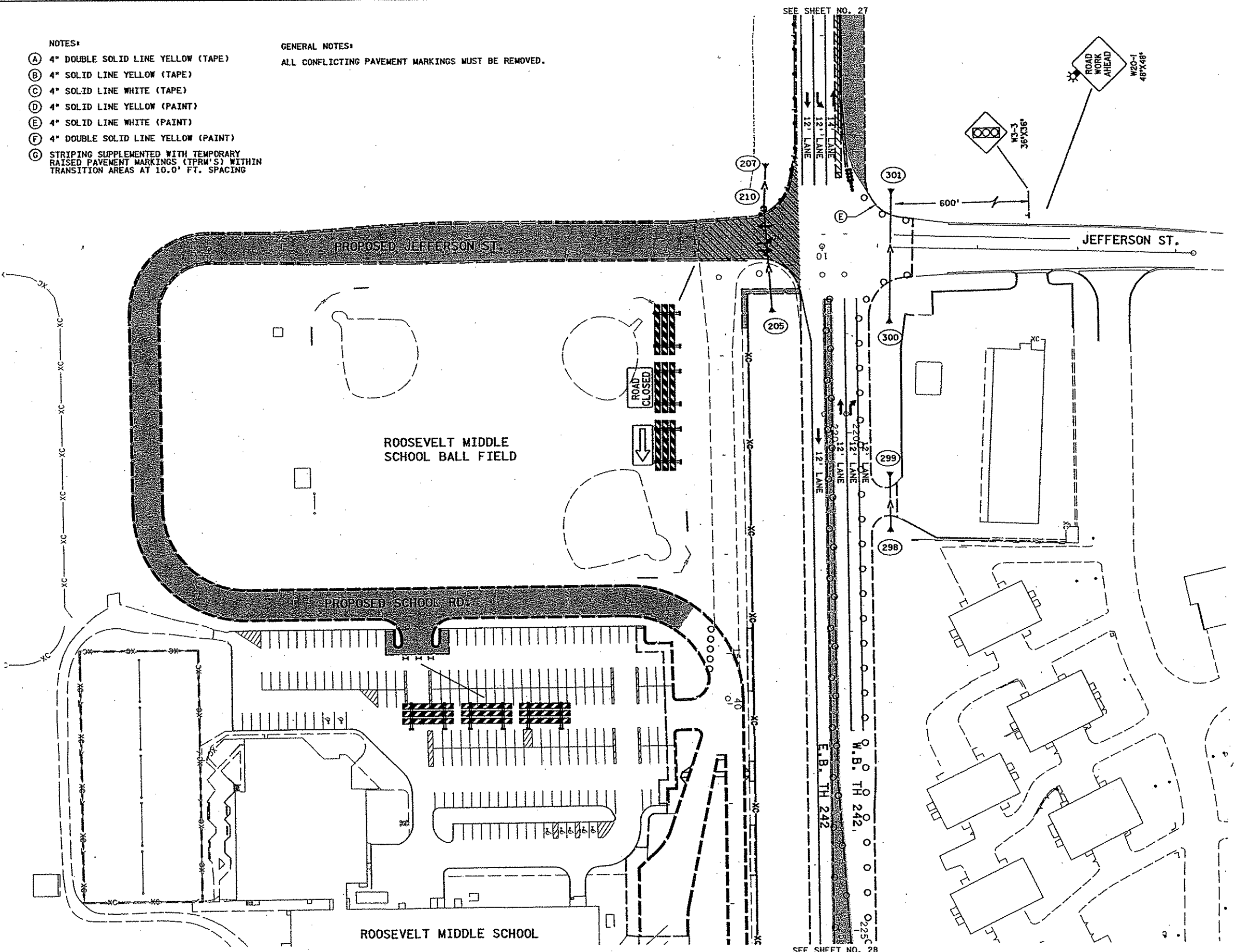
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GENERAL NOTES:
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12-1330
 11/04/11 11:04 AM
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 06/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.H3C DATE: Apr. 02, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 6-12-02 License: 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04








DRAWN BY: D. FITCHORN DATE: 8-02
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SRF CONSULTING GROUP, INC.

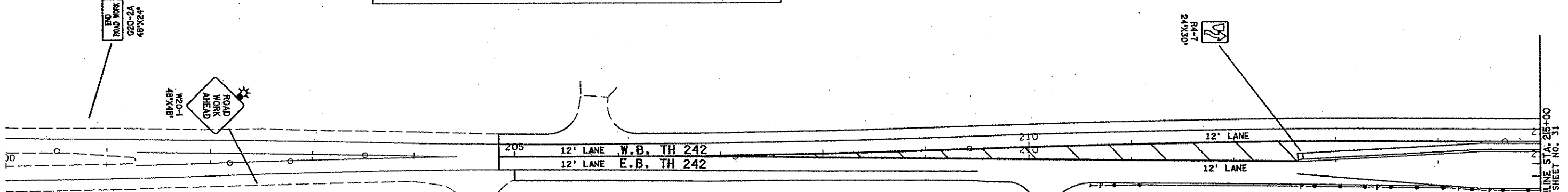
ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE 3

SHEET 29 OF 139

LEGEND

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GENERAL NOTES:
 ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED.
 COMPLETE ALL LEVELING WORK REQUIRED ON EXISTING PAVEMENT AND PLACE WEAR COURSE PRIOR TO PERMANENT STRIPING PLACEMENT.
 INSTALL PERMANENT SIGNING AND STRIPING AS SHOWN ON THE SIGNING AND STRIPING PLAN SHEETS.

MATCHLINE STA. 215+00
SEE SHEET NO. 31

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 #PLOTTER#
 #SCALE#
 06/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.H4A DATE: Apr. 02, 2002

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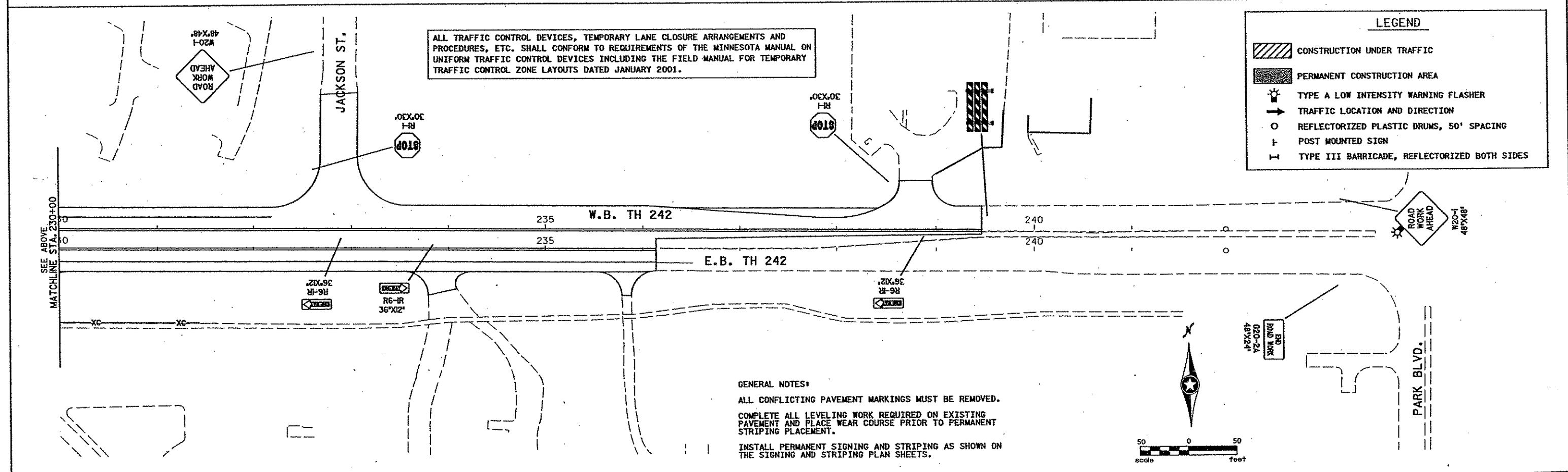
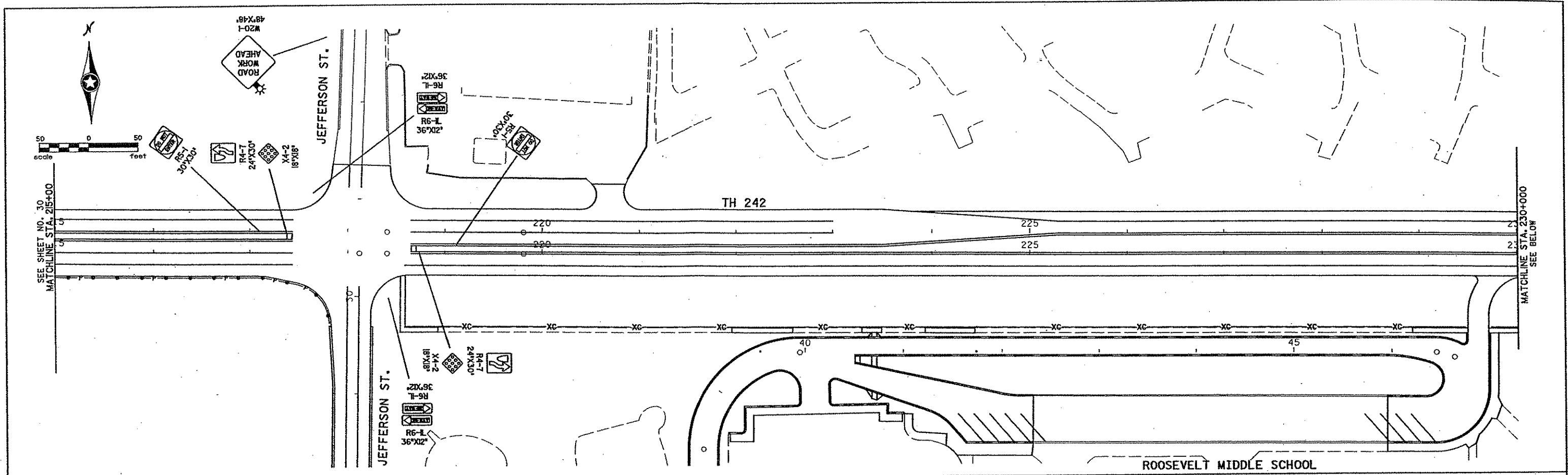
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 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL 4-02
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 COMM. NO. 0014102



ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE 4

SHEET
 30
 OF
 139



4102.H4B
 2.146
 08/11/2002

NO.	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.H4B DATE: Apr. 02, 2002

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SRF CONSULTING GROUP, INC.

ANOKA COUNTY
 STAGING AND TRAFFIC CONTROL PLAN
 TH 242
 STAGE 4

SHEET 31 OF 139

STAGING NARRATIVE

STAGE 1

- * Construct widening of south side of TH 242 between stations 113+00 and 133+30.
- * Complete all permanent construction on the south side of TH 242 from Jefferson Street to the east end of the project limits.
- * Install temporary 48" CMP at station 215+83.88.
- * Begin surcharge placement along north side of TH 242 and proposed Jefferson Street.
- * Complete muck removal and construct Temporary School Access Road.
- * Remove and reinstall guardrail on the south side of TH 242.
- * Install permanent culverts: 205-207.
- * Install signal.
- * Perform grading to allow for temporary drainage.

STAGE 2

- * Construct widening on north side of TH 242 between stations 113+00 and 122+30 as well as stations 204+84 and 239+50.
- * Install signing and striping per Temporary Signing and Striping Plan Sheet.
- * Continue surcharge placement. Install 4" perf pipe along edge of pavement for TH 242 surcharge to allow for drainage during the final stage of surcharge placement.

STAGE 3

- * Remove surcharge and complete remaining portion of permanent construction on the north side of TH 242 from station 204+85 to Jefferson Street (do not place wear course).
- * Remove surcharge and complete permanent construction of Jefferson Street and School Road.
- * Construct concrete median from stations 218+60 to 239+45.
- * Remove Temporary School Access Road after Jefferson St. and School Road construction is completed and install the remaining portion of curb and gutter along School Road.

STAGE 3a

- * Construct concrete median from stations 212+65 to 217+45.
- * After median is constructed, complete all leveling and milling work as required on existing pavement and install the wear course on TH 242 from station 204+85 to 239+46. Mill areas to match into the existing pavement as shown on the removal plan sheets and detail H in the typical sections.
- * Install permanent signing and striping after the above work is completed.
- * Realign signal heads.

(F) TRAFFIC CONTROL SIGN TABULATION						
SIGN LEGEND	SIGN DESIGNATION	SIGN	SIGN COLOR	STAGE 1 QUANTITY	STAGE 2 QUANTITY	STAGE 3 QUANTITY
	R3-30AD	36"X30"	BLACK ON WHITE		1	1
	R4-7	24"X30"	BLACK ON WHITE			3
	W1-4L	30"X30"	BLACK ON ORANGE	1	1	
	W1-4R	30"X30"	BLACK ON ORANGE	1	1	
	W20-1	48"X48"	BLACK ON ORANGE	6	6	7
	W21-X1	48"X48"	BLACK ON ORANGE	4	2	
	W3-3	36"X36"	BLACK, GREEN, RED ON YELLOW		3	2
	G20-2A	48"X24"	BLACK ON ORANGE	4	4	4
	PSD			170	60	130
	TYPE 3			2	4	4
	R3-2	24"X24"	BLACK ON WHITE		1	

(G) STAGING PAVEMENT MARKING TABULATION						
T.H. 242	PAVEMENT MARKING REMOVAL	PAINT			REMOVABLE PREFORMED PLASTIC MARKING	RAISED PAVEMENT MARKER TEMPORARY
		4" DOUBLE SOLID LINE YELLOW	4" SOLID LINE WHITE	4" SOLID LINE YELLOW		
	(LIN FT)	(LIN FT)	(LIN FT)	(LIN FT)	(LIN FT)	(LIN FT)
STAGE 1	2500	3400	1000	6500	6400	130
STAGE 2	6300				7900	20
STAGE 3				4900		
TOTAL	8800	3400	1000	11400	14300	150

ALL TRAFFIC CONTROL DEVICES, TEMPORARY LANE CLOSURE ARRANGEMENTS AND PROCEDURES, ETC. SHALL CONFORM TO REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS DATED JANUARY 2001.

P:\AG\11\047\4102\p10
 SRF
 PLOTTER
 SCALE
 07/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**

 Date: **7-12-02** License # 26391

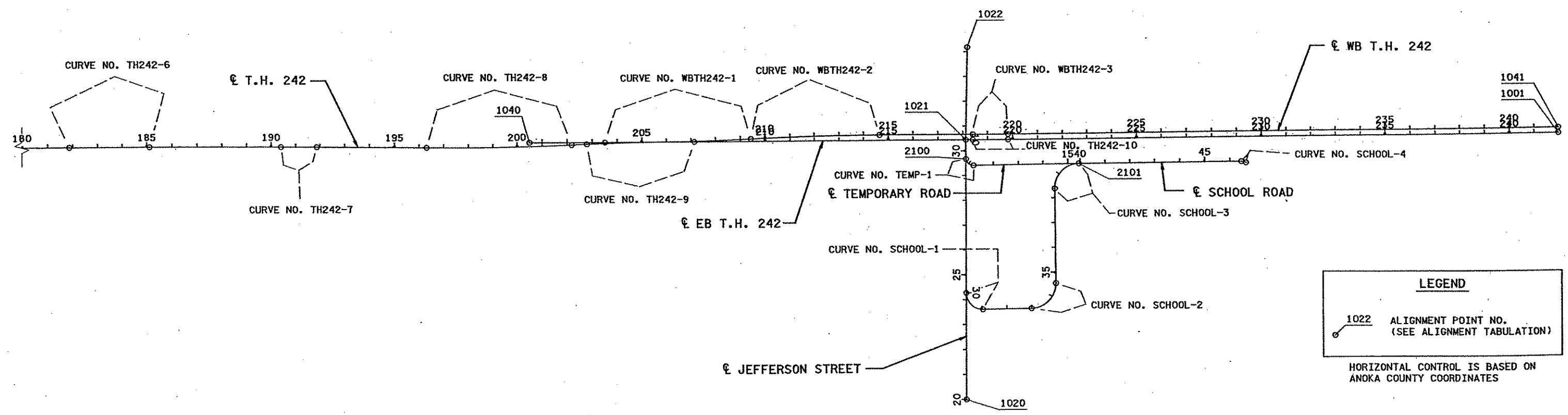
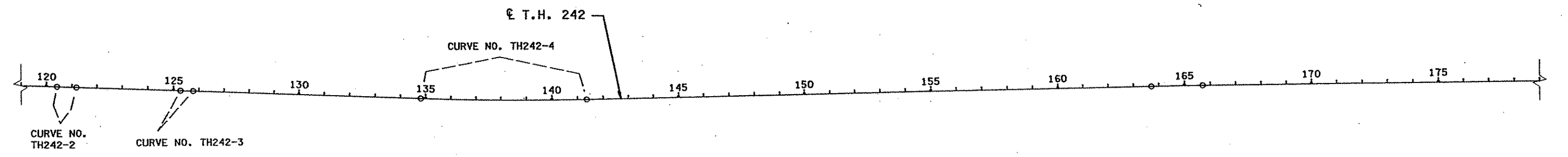
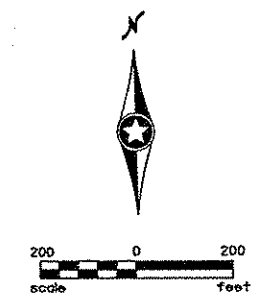
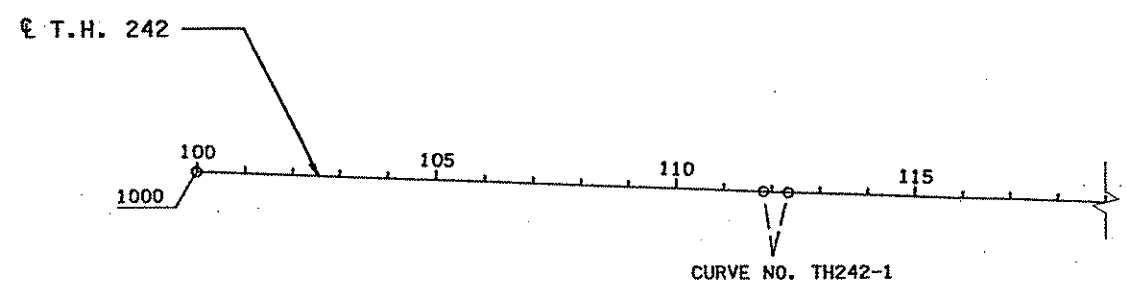
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: **D. FITCHORN** DATE: **8-02**
 DESIGNED BY: **M. HANSEN** DATE: **5-02**
 CHECKED BY: **N. WILL** DATE: **6-02**
 COMM. NO. 0014102



ANOKA COUNTY
 TRAFFIC CONTROL TABULATIONS
 TH 242

SHEET
 32
 OF
 139



LEGEND

1022 ALIGNMENT POINT NO.
(SEE ALIGNMENT TABULATION)

HORIZONTAL CONTROL IS BASED ON ANOKA COUNTY COORDINATES

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.APA DATE: Apr. 03, 2002

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 12-02 License # 26391

STATE AID PROJECT NO.
S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY: D. FITCHORN
DESIGNED BY: N. WILL
CHECKED BY: N. WILL
DATE: 8-02
4-02
5-02
COMM. NO. 0014102



ANOKA COUNTY
ALIGNMENT PLAN
TH 242

SHEET
33
OF
139


h:\g111\047\4102\plan
 #PRF
 #PLOTTER
 #SCALE
 08/11/2002

PT. NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			Δ	D	R	T	L	X	Y	
JEFFERSON STREET										
1020	POT	20+00.00						502,880.481	157,953.646	
1021	POT	30+44.34						502,882.402	158,997.987	
1022	POT	34+18.18						502,890.432	159,371.739	
SCHOOL ROAD										
SCHOOL-1	PC	30+00.00						502,881.267	158,381.000	
	PI	30+66.99	90° 51' 12.14" LT	86° 48' 42.43"	66.000'	66.990'	104.656'	502,881.144	158,314.010	PI
	CC							502,947.267	158,380.878	
SCHOOL-2	PT	31+04.66						502,948.128	158,314.884	89° 15' 07.33"
	PC	32+99.18						503,142.640	158,317.423	
	PI	33+98.69	89° 42' 49.62" LT	57° 17' 44.81"	100.000'	99.502'	156.580'	503,242.133	158,318.722	PI
SCHOOL-3	CC							503,141.334	158,417.415	
	PT	34+55.76						503,241.331	158,418.221	359° 32' 17.71"
	PC	38+37.72						503,238.253	158,800.169	
SCHOOL-4	PI	39+37.64	89° 57' 09.18" RT	57° 17' 44.81"	100.000'	99.917'	156.997'	503,237.448	158,900.083	PI
	CC							503,338.250	158,800.975	
	PT	39+94.72						503,337.361	158,900.971	89° 29' 26.90"
SCHOOL-5	PC	46+46.66						503,989.271	158,906.764	
	PI	46+56.70	28° 53' 07.95" RT	146° 54' 44.12"	39.000'	10.045'	19.662'	503,993.315	158,906.854	PI
	CC							503,989.618	158,867.766	
PT	46+66.32						504,008.153	158,902.080	118° 22' 34.85"	
T.H. 242										
1000	POT	100+00.00						491,074.013	159,060.806	
TH242-1	PC	111+83.41						492,256.511	159,014.265	
	PI	112+09.45	0° 07' 48.67" LT	0° 15' 00.00"	22,918.312'	26.037'	52.074'	492,282.528	159,013.241	PI
	CC							493,157.827	181,914.847	
TH242-2	PT	112+35.49						492,308.548	159,012.276	92° 07' 25.27"
	PC	120+40.84						493,113.351	158,982.432	
	PI	120+79.17	0° 11' 29.79" RT	0° 15' 00.00"	22,918.312'	38.322'	76.643'	493,151.647	158,981.012	PI
TH242-3	CC							492,264.072	136,079.862	
	PT	121+17.49						493,189.937	158,979.464	92° 18' 55.05"
	PC	125+28.14						493,600.250	158,962.875	
TH242-4	PI	125+52.96	0° 07' 26.79" LT	0° 15' 00.00"	22,918.312'	24.822'	49.643'	493,625.051	158,961.872	PI
	CC							494,526.115	181,862.477	
	PT	125+77.78						493,649.855	158,960.923	92° 11' 28.26"
TH242-5	PC	134+81.85						494,553.268	158,926.356	
	PI	138+08.83	3° 16' 07.91" LT	0° 30' 00.00"	11,459.156'	326.975'	653.773'	494,880.004	158,913.855	PI
	CC							494,991.398	170,377.133	
TH242-6	PT	141+35.63						495,206.921	158,920.005	88° 55' 20.35"
	PC	163+70.61						497,441.508	158,962.040	
	PI	164+70.74	0° 30' 02.37" RT	0° 15' 00.00"	22,918.312'	100.132'	200.263'	497,541.623	158,963.923	PI
TH242-7	CC							497,872.555	136,047.782	
	PT	165+70.87						497,641.750	158,964.932	89° 25' 22.72"
	PC	181+86.78						499,257.580	158,981.205	
TH242-8	PI	183+49.18	0° 48' 43.00" RT	0° 15' 00.00"	22,918.312'	162.391'	324.777'	499,419.963	158,982.841	PI
	CC							499,488.385	136,064.056	
	PT	185+11.56						499,582.353	158,982.175	90° 14' 05.71"
TH242-9	PC	190+40.12						500,110.911	158,980.008	
	PI	191+13.73	0° 22' 04.91" RT	0° 15' 00.00"	22,918.312'	73.606'	147.212'	500,184.517	158,979.706	PI
	CC							500,016.943	136,061.888	
TH242-10	PT	191+87.34						500,258.119	158,978.931	90° 36' 10.62"
	PC	196+31.57						500,702.329	158,974.256	
	PI	199+25.22	2° 56' 08.93" LT	0° 30' 00.00"	11,459.156'	293.646'	587.163'	500,995.958	158,971.166	PI
TH242-11	CC							500,822.917	170,432.778	
	PT	202+18.73						501,289.361	158,983.119	87° 40' 01.70"
	PC	202+78.72						501,349.296	158,985.561	
TH242-12	PI	204+96.52	2° 10' 40.03" RT	0° 30' 00.00"	11,459.156'	217.805'	435.557'	501,566.921	158,994.427	PI
	CC							501,815.740	147,535.902	
	PT	207+14.28						501,784.725	158,995.016	89° 50' 41.73"
TH242-13	PC	218+40.34						502,910.783	158,998.064	
	PI	219+10.61	0° 21' 04.93" LT	0° 15' 00.00"	22,918.312'	70.274'	140.548'	502,981.057	158,998.254	PI
	CC							502,848.753	181,916.292	
PT	219+80.89						503,051.329	158,998.875	89° 29' 36.79"	
1001	POT	241+97.36						505,267.716	159,018.467	

PT. NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			Δ	D	R	T	L	X	Y	
W.B. T.H. 242										
1040	POT	200+50.00						501,120.684	158,993.418	
WBTH242-1	PC	203+51.21						501,421.889	158,992.421	
	PI	206+46.99	2° 57' 25.69" LT	0° 30' 00.00"	11,459.156'	295.779'	591.427'	501,717.667	158,991.443	PI
	CC							501,459.801	170,451.514	
WBTH242-2	PT	209+42.63						502,013.101	159,005.724	87° 13' 56.72"
	PC	209+42.63						502,013.101	159,005.724	
	PI	212+03.93	2° 36' 45.01" RT	0° 30' 00.00"	11,459.156'	261.295'	522.500'	502,274.092	159,018.341	PI
WBTH242-3	CC							502,566.402	147,559.934	
	PT	214+65.13						502,535.387	159,019.048	89° 50' 41.73"
	PC	218+40.47						502,910.724	159,020.064	
1041	PI	219+10.68	0° 21' 04.93" LT	0° 15' 00.86"	22,896.312'	70.207'	140.413'	502,980.930	159,020.254	PI
	CC							502,848.753	181,916.292	
	PT	219+80.89						503,051.329	159,020.874	89° 29' 36.79"
1041	POT	241+97.36						505,267.521	159,040.466	
TEMPORARY ROAD										
2100	POT	10+00.00						502,882.402	158,997.987	
TEMP-1	PC	10+77.80						502,882.709	158,920.187	
	PI	11+03.92	82° 04' 59.76" LT	190° 58' 09.35"	30.000'	26.117'	42.979'	502,886.684	158,894.374	PI
	CC							502,912.359	158,924.753	
2101	PT	11+20.78						502,912.798	158,894.757	89° 09' 41.26"
	POT	15+45.39						503,337.361	158,900.971	

2.dwg
 PLOTTER:
 \$SCALE:
 06/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL

 Date: 05-10-02 License # 26391

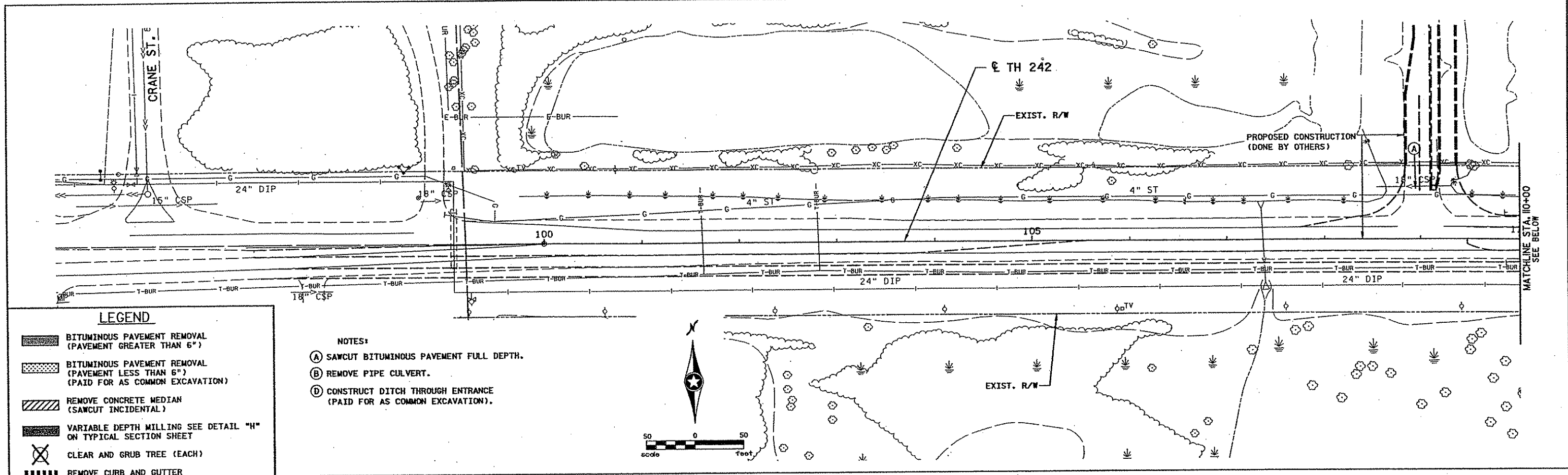
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY V.G. LEE 4-02
 DESIGNED BY N. WILL 4-02
 CHECKED BY N. WILL 5-02
 COMM. NO. 0014102



ANOKA COUNTY
 ALIGNMENT TABULATION
 TH 242

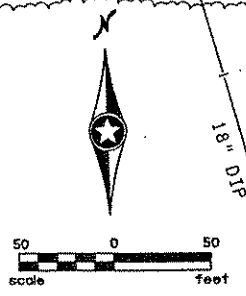
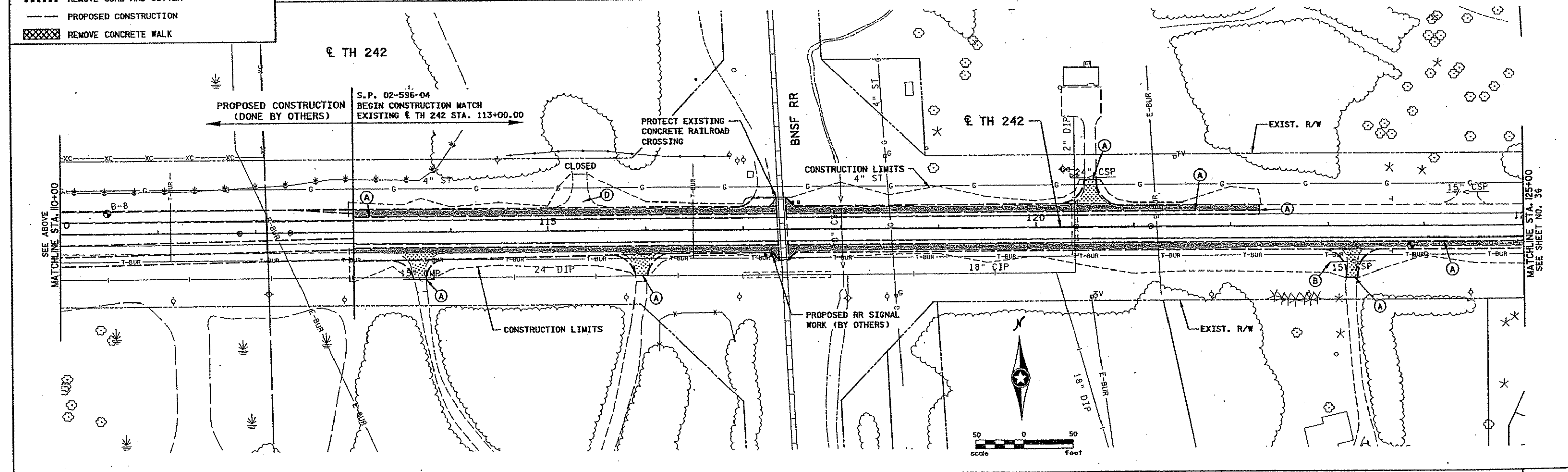
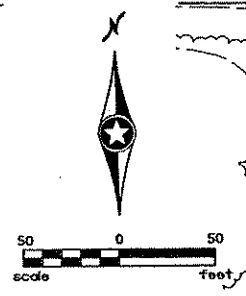
SHEET
 34
 OF
 139



LEGEND

- BITUMINOUS PAVEMENT REMOVAL (PAVEMENT GREATER THAN 6")
- BITUMINOUS PAVEMENT REMOVAL (PAVEMENT LESS THAN 6") (PAID FOR AS COMMON EXCAVATION)
- REMOVE CONCRETE MEDIAN (SAWCUT INCIDENTAL)
- VARIABLE DEPTH MILLING SEE DETAIL "H" ON TYPICAL SECTION SHEET
- CLEAR AND GRUB TREE (EACH)
- REMOVE CURB AND GUTTER
- PROPOSED CONSTRUCTION
- REMOVE CONCRETE WALK

- NOTES:**
- (A) SAWCUT BITUMINOUS PAVEMENT FULL DEPTH.
 - (B) REMOVE PIPE CULVERT.
 - (D) CONSTRUCT DITCH THROUGH ENTRANCE (PAID FOR AS COMMON EXCAVATION).



2-100
 PLOTTER
 SCALE
 06/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.TPA DATE: Sep. 27, 2001

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 6-12-01 License # 26391

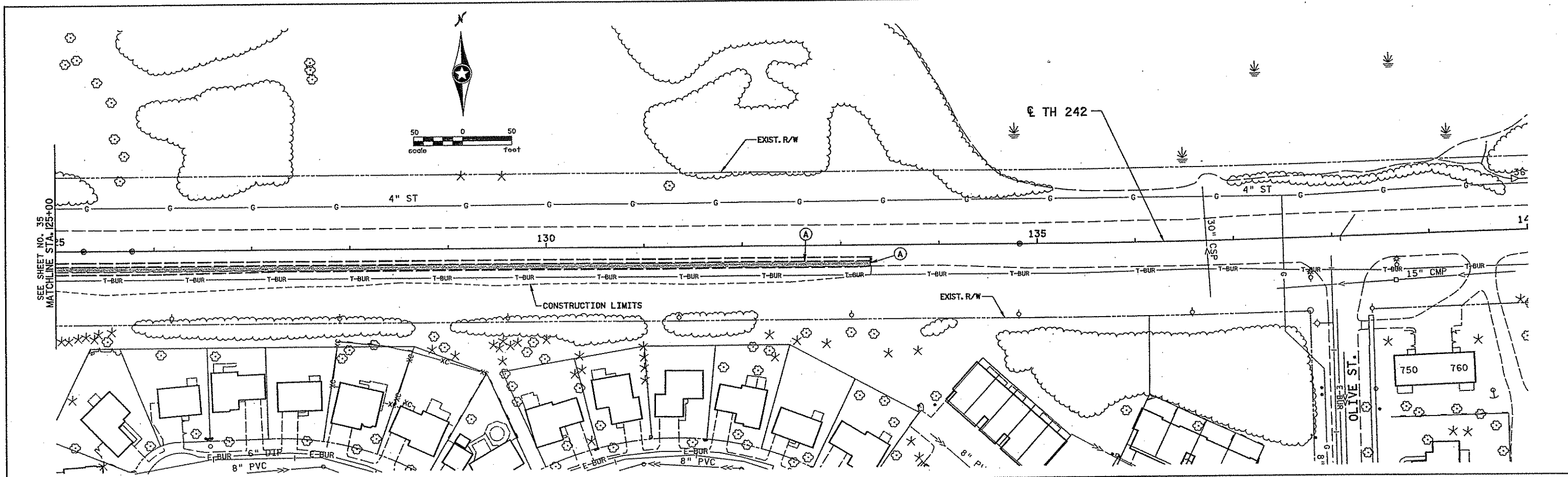
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

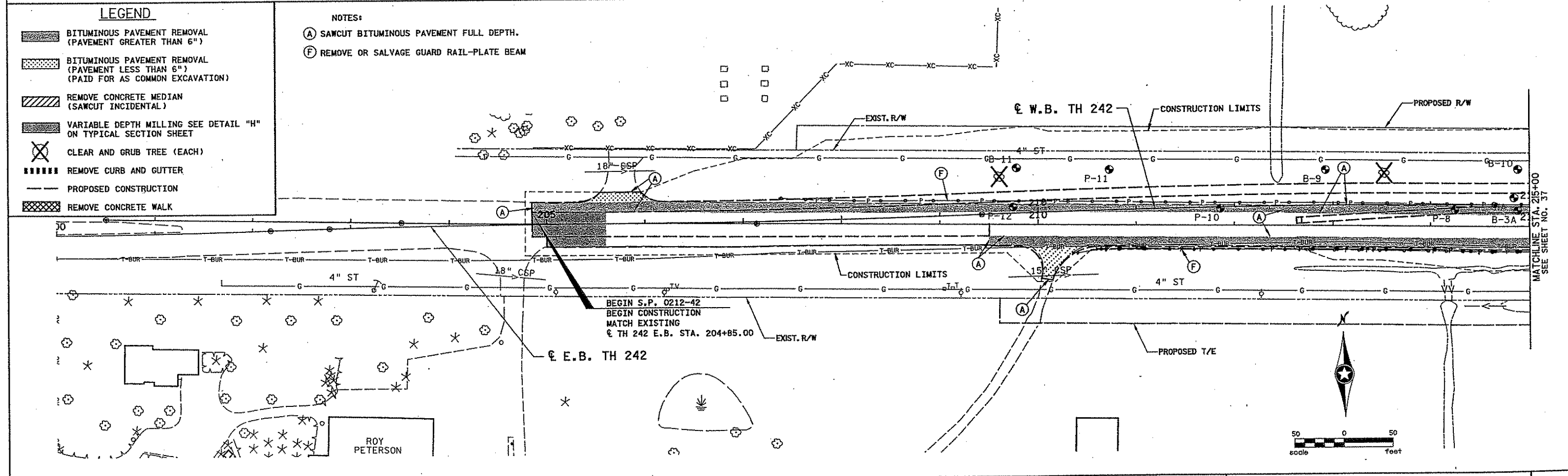
ANOKA COUNTY
 EXISTING TOPOGRAPHY, UTILITIES AND REMOVAL PLANS
 TH 242
 STA. 100+00 TO STA. 125+00

SHEET 35 OF 139



- LEGEND**
- BITUMINOUS PAVEMENT REMOVAL (PAVEMENT GREATER THAN 6")
 - BITUMINOUS PAVEMENT REMOVAL (PAVEMENT LESS THAN 6") (PAID FOR AS COMMON EXCAVATION)
 - REMOVE CONCRETE MEDIAN (SAWCUT INCIDENTAL)
 - VARIABLE DEPTH MILLING SEE DETAIL "H" ON TYPICAL SECTION SHEET
 - CLEAR AND GRUB TREE (EACH)
 - REMOVE CURB AND GUTTER
 - PROPOSED CONSTRUCTION
 - REMOVE CONCRETE WALK

- NOTES:**
- (A) SAWCUT BITUMINOUS PAVEMENT FULL DEPTH.
 - (F) REMOVE OR SALVAGE GUARD RAIL-PLATE BEAM



NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.TPB DATE: Mar. 07, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: **7-12-02** License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-1B
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

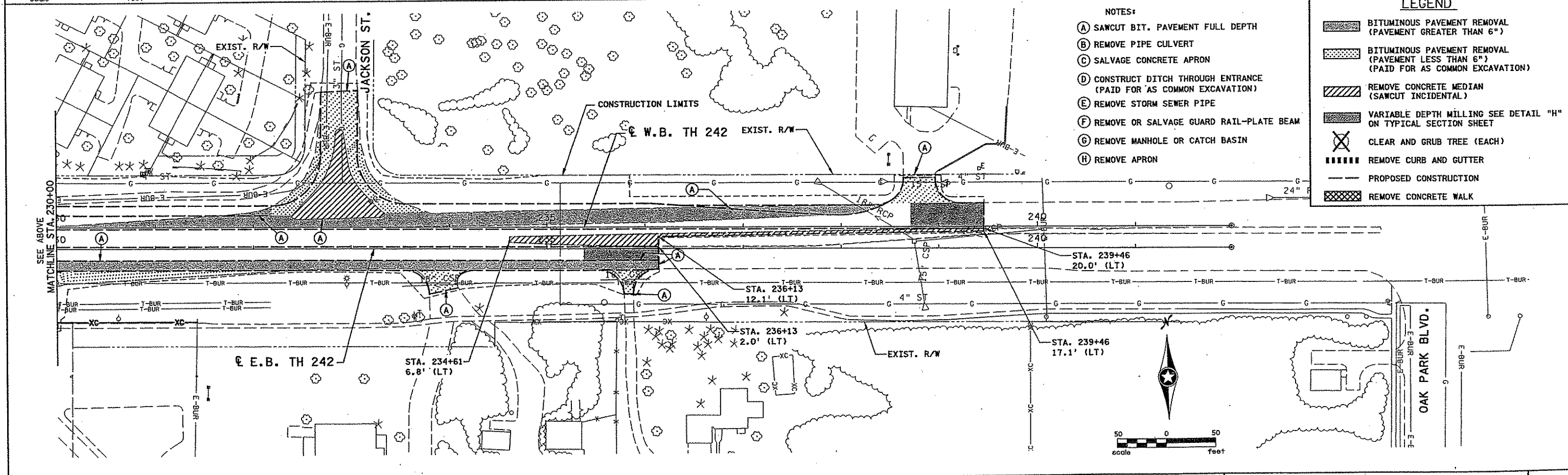
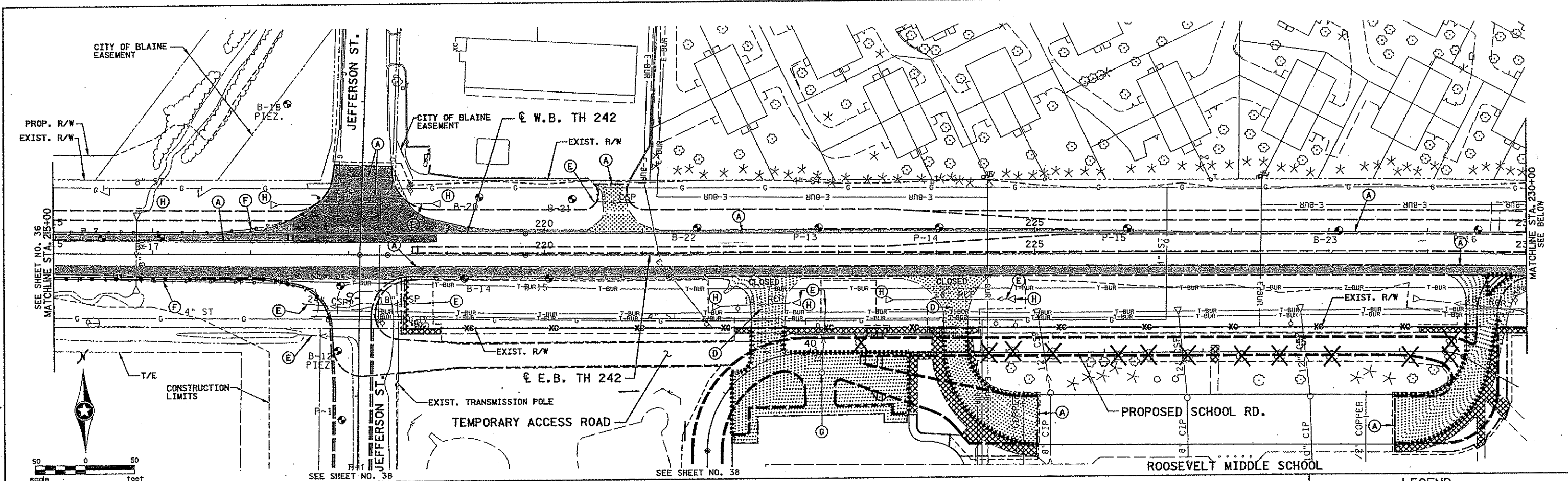
DRAWN BY: **D. FITCHORN** DATE: **8-02**
 DESIGNED BY: **N. WILL** DATE: **4-02**
 CHECKED BY: **N. WILL** DATE: **5-02**
 COMM. NO.: **0014102**

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
 EXISTING TOPOGRAPHY, UTILITIES AND REMOVAL PLANS
TH 242
 STA. 125+00 TO STA. E.B. 215+00

SHEET 36 OF 139

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 PLG1111041102AP101
 SRF# TFR#
 SDCAL#S
 07/11/2002











- NOTES:**
- (A) SAWCUT BIT. PAVEMENT FULL DEPTH
 - (B) REMOVE PIPE CULVERT
 - (C) SALVAGE CONCRETE APRON
 - (D) CONSTRUCT DITCH THROUGH ENTRANCE (PAID FOR AS COMMON EXCAVATION)
 - (E) REMOVE STORM SEWER PIPE
 - (F) REMOVE OR SALVAGE GUARD RAIL-PLATE BEAM
 - (G) REMOVE MANHOLE OR CATCH BASIN
 - (H) REMOVE APRON
- LEGEND**
- [Pattern] BITUMINOUS PAVEMENT REMOVAL (PAVEMENT GREATER THAN 6")
 - [Pattern] BITUMINOUS PAVEMENT REMOVAL (PAVEMENT LESS THAN 6") (PAID FOR AS COMMON EXCAVATION)
 - [Pattern] REMOVE CONCRETE MEDIAN (SAWCUT INCIDENTAL)
 - [Pattern] VARIABLE DEPTH MILLING SEE DETAIL "H" ON TYPICAL SECTION SHEET
 - [Symbol] CLEAR AND GRUB TREE (EACH)
 - [Pattern] REMOVE CURB AND GUTTER
 - [Line] PROPOSED CONSTRUCTION
 - [Pattern] REMOVE CONCRETE WALK

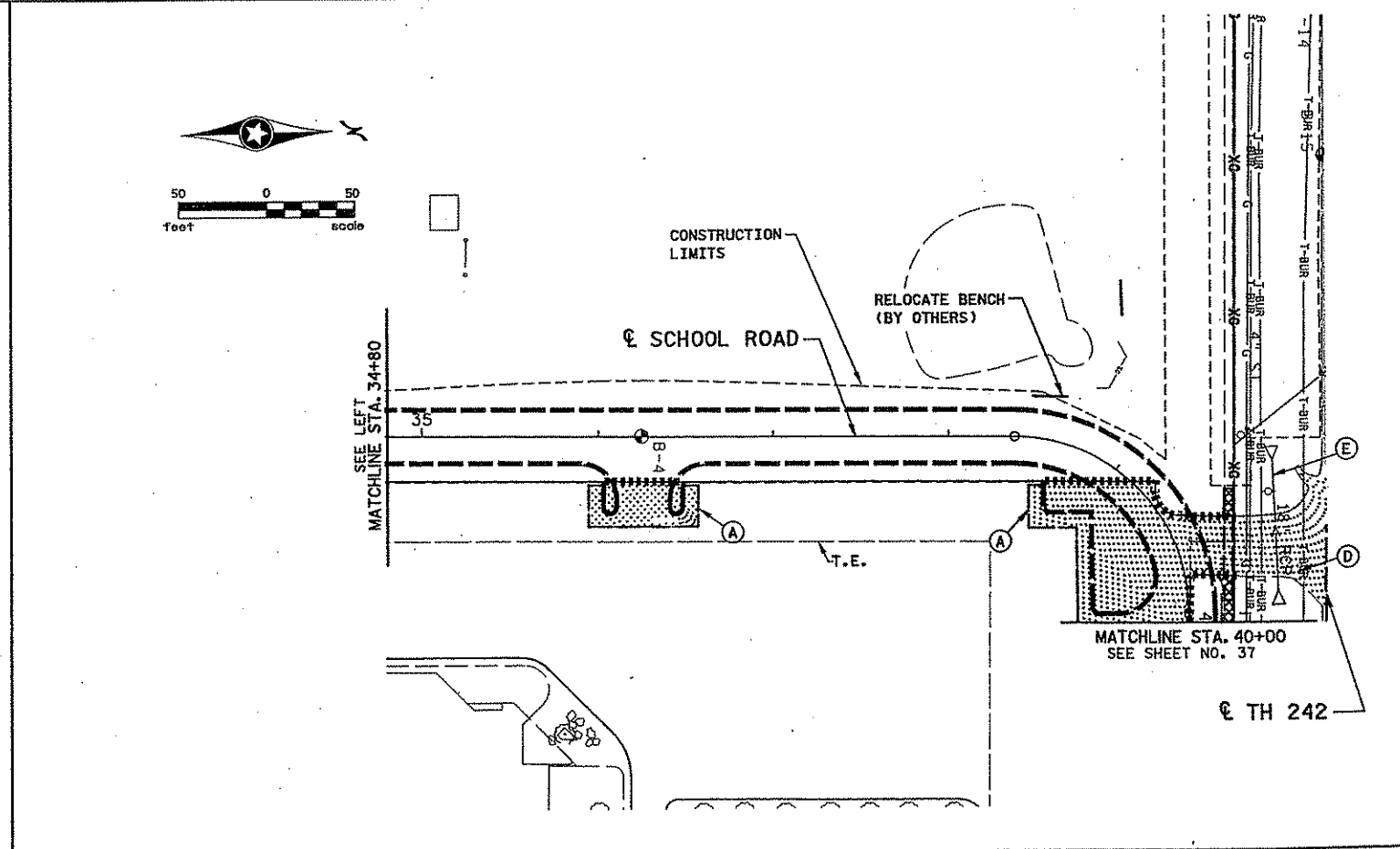
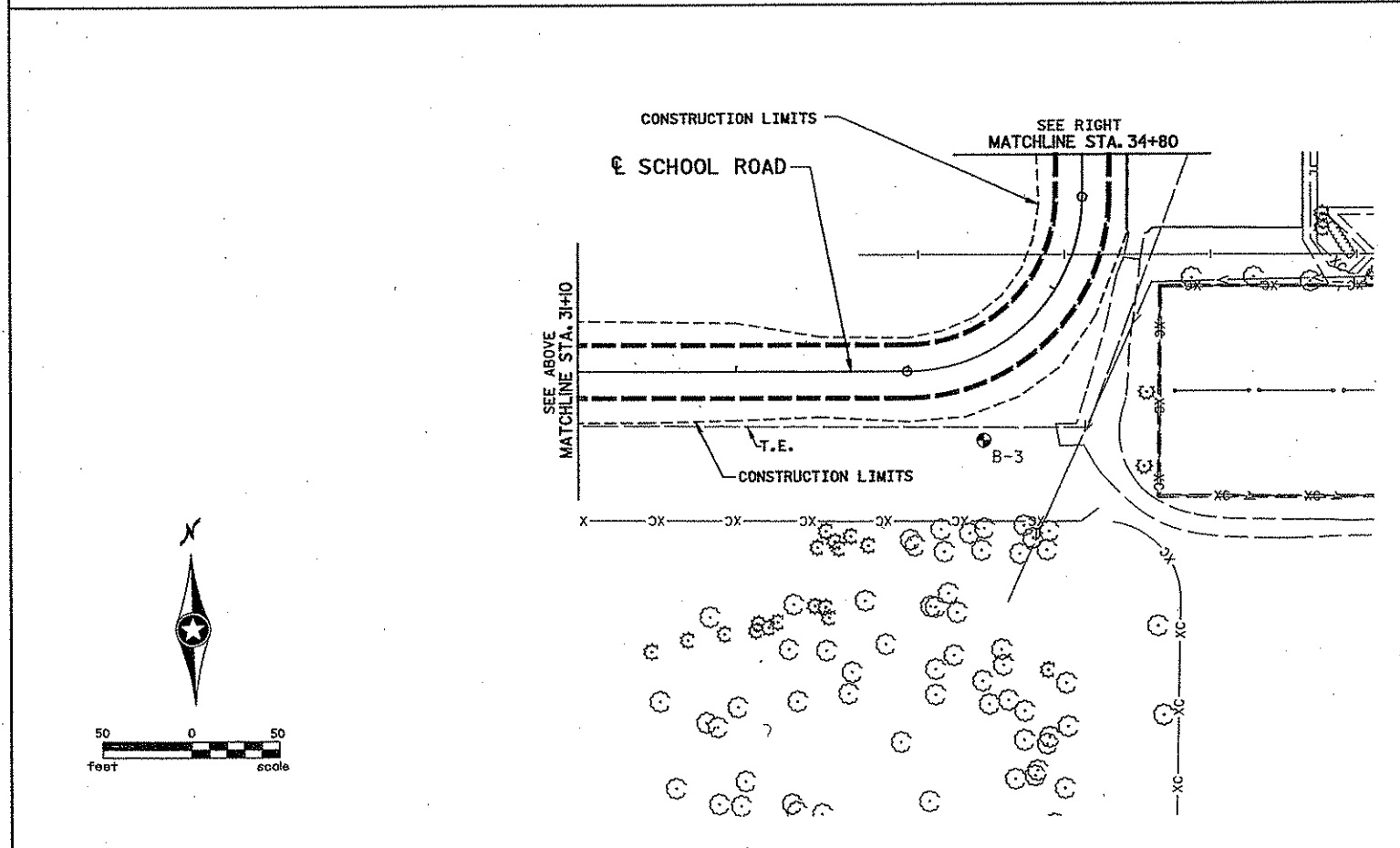
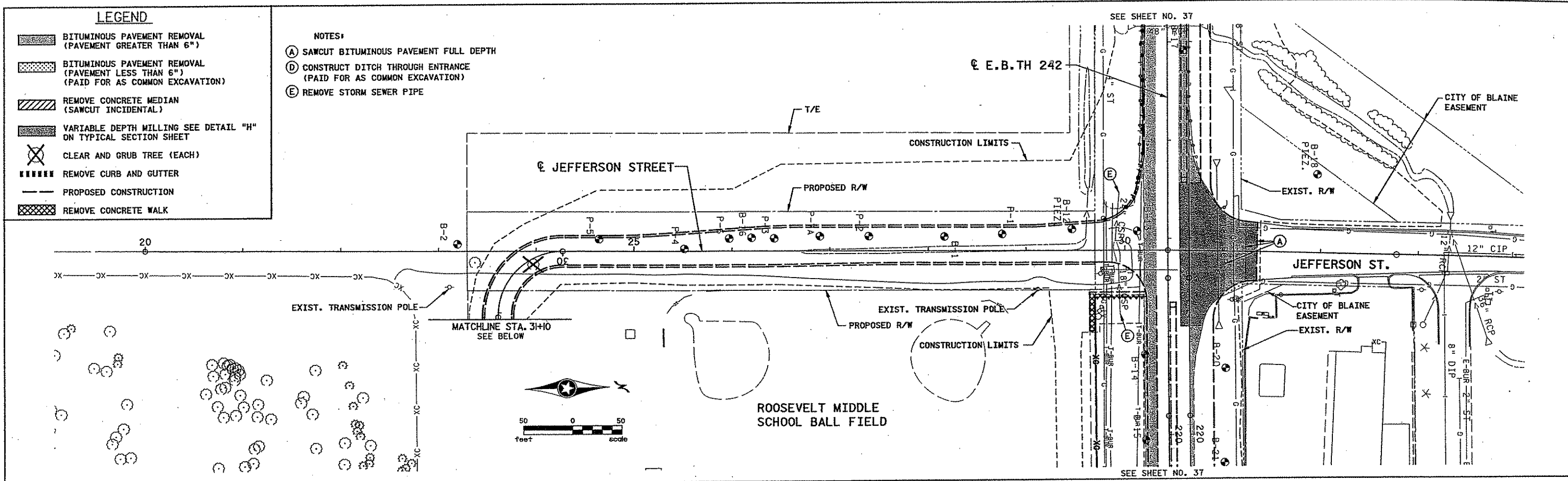
NO. DATE BY CKD APPR REVISION	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Print Name: NATHAN A. WILL <i>Nathan A. Will</i> Date: 7-12-02 License # 26391	STATE AID PROJECT NO. S.P. 106-010-18 S.P. 106-121-04 S.P. 0212-42 S.P. 02-596-04	DRAWN BY D. FITCHORN DATE 8-02 DESIGNED BY N. WILL 4-02 CHECKED BY N. WILL 5-02 COMM. NO. 0014102		ANOKA COUNTY EXISTING TOPOGRAPHY, UTILITIES AND REMOVAL PLANS TH 242 STA E.B. 215+00 TO STA. 240+00	SHEET 37 OF 139
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P:\2002\11\04\4102\4102.dwg
 \$PRG\$
 \$PLOTTERS\$
 \$SCALES\$
 07/11/2002

LEGEND

-  BITUMINOUS PAVEMENT REMOVAL (PAVEMENT GREATER THAN 6")
-  BITUMINOUS PAVEMENT REMOVAL (PAVEMENT LESS THAN 6") (PAID FOR AS COMMON EXCAVATION)
-  REMOVE CONCRETE MEDIAN (SAWCUT INCIDENTAL)
-  VARIABLE DEPTH MILLING SEE DETAIL "H" ON TYPICAL SECTION SHEET
-  CLEAR AND GRUB TREE (EACH)
-  REMOVE CURB AND GUTTER
-  PROPOSED CONSTRUCTION
-  REMOVE CONCRETE WALK

- NOTES:**
- (A) SAWCUT BITUMINOUS PAVEMENT FULL DEPTH
 - (D) CONSTRUCT DITCH THROUGH ENTRANCE (PAID FOR AS COMMON EXCAVATION)
 - (E) REMOVE STORM SEWER PIPE



.tpe
 \$PLOTTER\$
 \$SCALE\$
 07/18/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.TPE DATE: Mar. 01, 2002

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 7-18-02 License # 26391

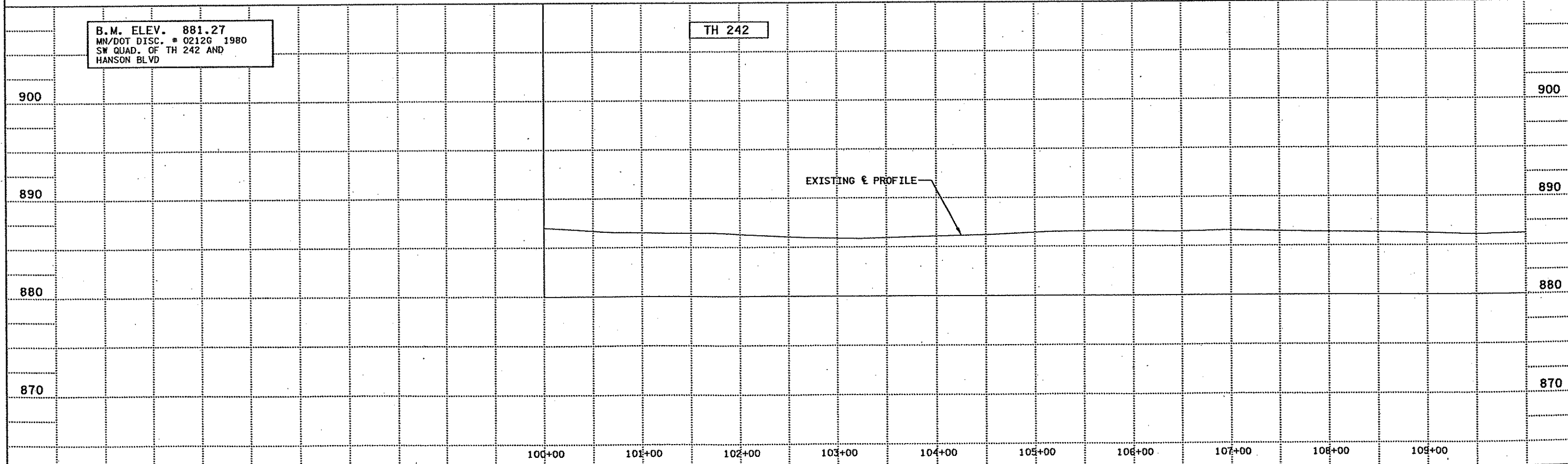
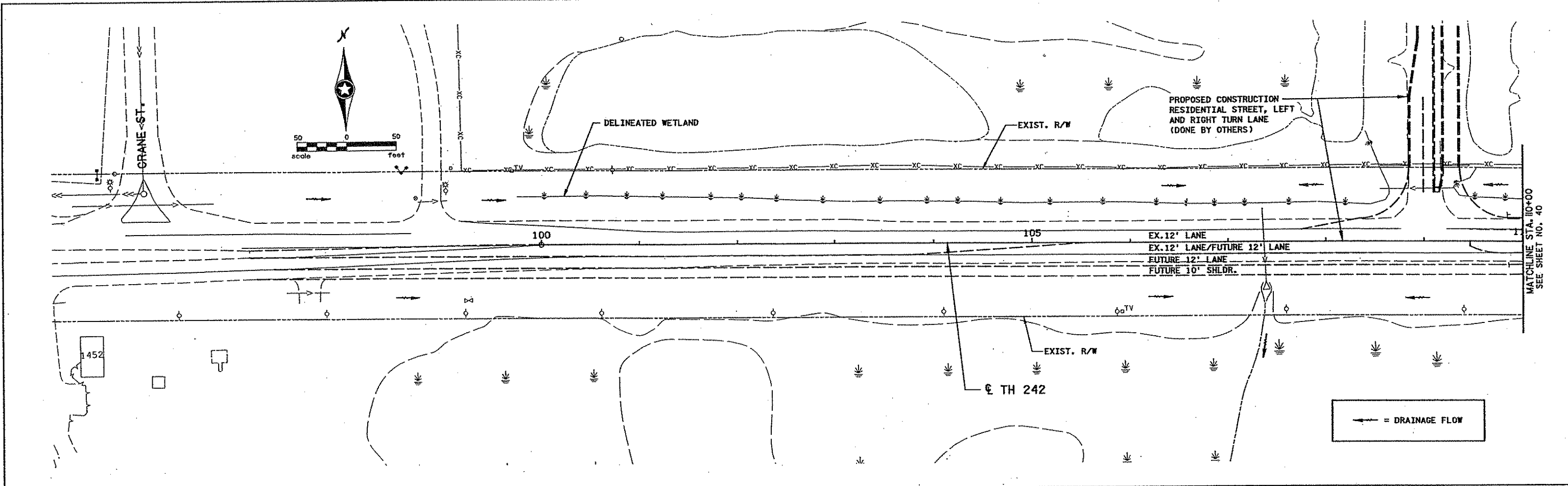
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
 EXISTING TOPOGRAPHY, UTILITIES AND REMOVAL PLANS
 TH 242
 STA. 20+00 TO STA. 34+00 (JEFFERSON STREET)

SHEET 38 OF 139



NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.CPA DATE: Mar. 07, 2002

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

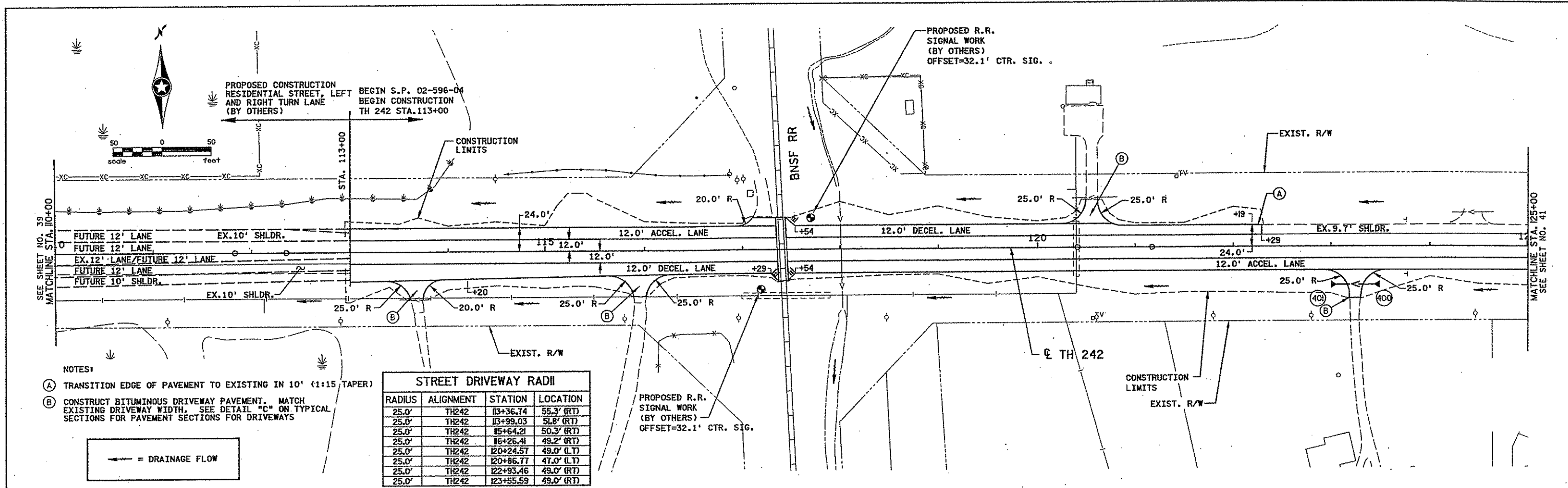
DRAWN BY: D. FITCHORN DATE: 8-02
DESIGNED BY: N. WILL DATE: 4-02
CHECKED BY: N. WILL DATE: 5-02
COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
CONSTRUCTION PLAN
TH 242
STA. 100+00 TO STA. 110+00

SHEET 39 OF 139

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 PLOTTER#
 SCALE#
 06/11/2002



SEE SHEET NO. 39
MATCHLINE STA. 110+00

MATCHLINE STA. 125+00
SEE SHEET NO. 41

- NOTES:
- (A) TRANSITION EDGE OF PAVEMENT TO EXISTING IN 10' (1:15 TAPER)
 - (B) CONSTRUCT BITUMINOUS DRIVEWAY PAVEMENT. MATCH EXISTING DRIVEWAY WIDTH. SEE DETAIL "C" ON TYPICAL SECTIONS FOR PAVEMENT SECTIONS FOR DRIVEWAYS

STREET DRIVEWAY RADII			
RADIUS	ALIGNMENT	STATION	LOCATION
25.0'	TH242	113+36.74	55.3' (RT)
25.0'	TH242	113+99.03	58.8' (RT)
25.0'	TH242	115+64.21	50.3' (RT)
25.0'	TH242	116+26.41	49.2' (RT)
25.0'	TH242	120+24.57	49.0' (LT)
25.0'	TH242	120+86.77	47.0' (LT)
25.0'	TH242	122+93.46	49.0' (RT)
25.0'	TH242	123+55.59	49.0' (RT)

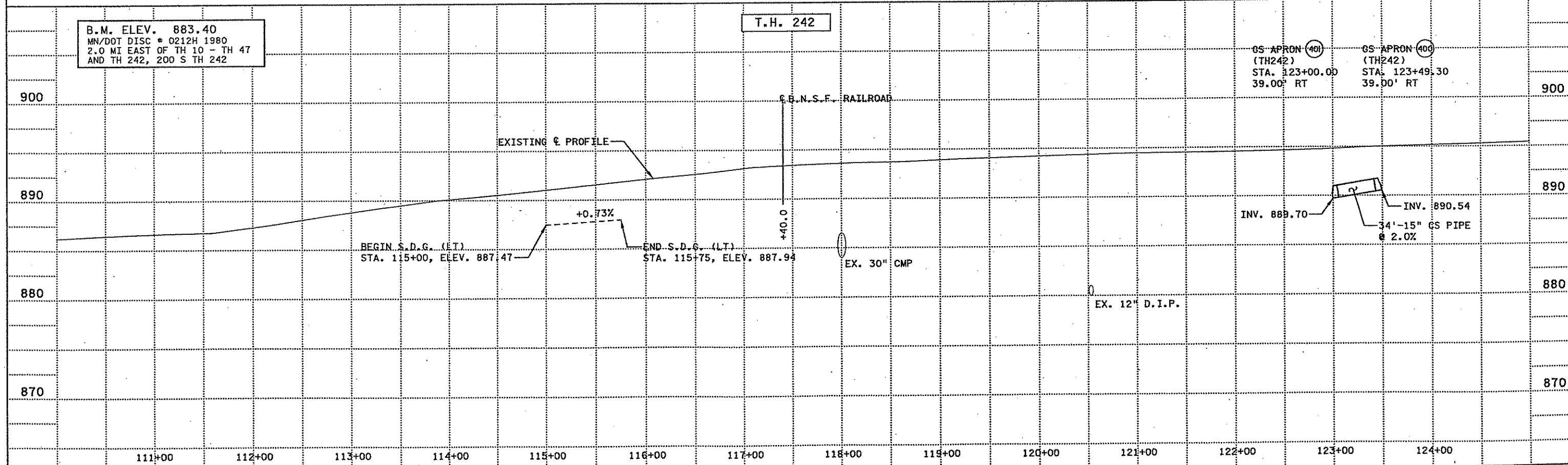


B.M. ELEV. 883.40
MN/DOT DISC # 0212H 1980
2.0 MI EAST OF TH 10 - TH 47
AND TH 242, 200 S TH 242

T.H. 242

65" APRON (400)
(TH242)
STA. 123+00.00
39.00' RT

65" APRON (400)
(TH242)
STA. 123+49.30
39.00' RT



05b
 11/11/04T\4102.dwg
 PLOTTER
 SCALES
 07/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.CPB DATE: Mar., 07, 2002

I hereby certify that this plan, specification, or report 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.
Print Name: **NATHAN A. WILL**
Nathan A. Will
Date: 7-12-02 License # 26391

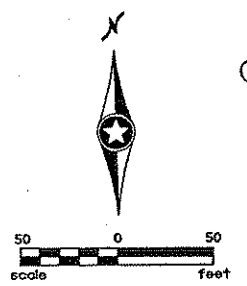
STATE AID PROJECT NO.
S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04.

DRAWN BY: **D. FITCHORN** DATE: **8-02**
DESIGNED BY: **N. WILL** DATE: **4-02**
CHECKED BY: **N. WILL** DATE: **5-02**
COMM. NO. 0014102

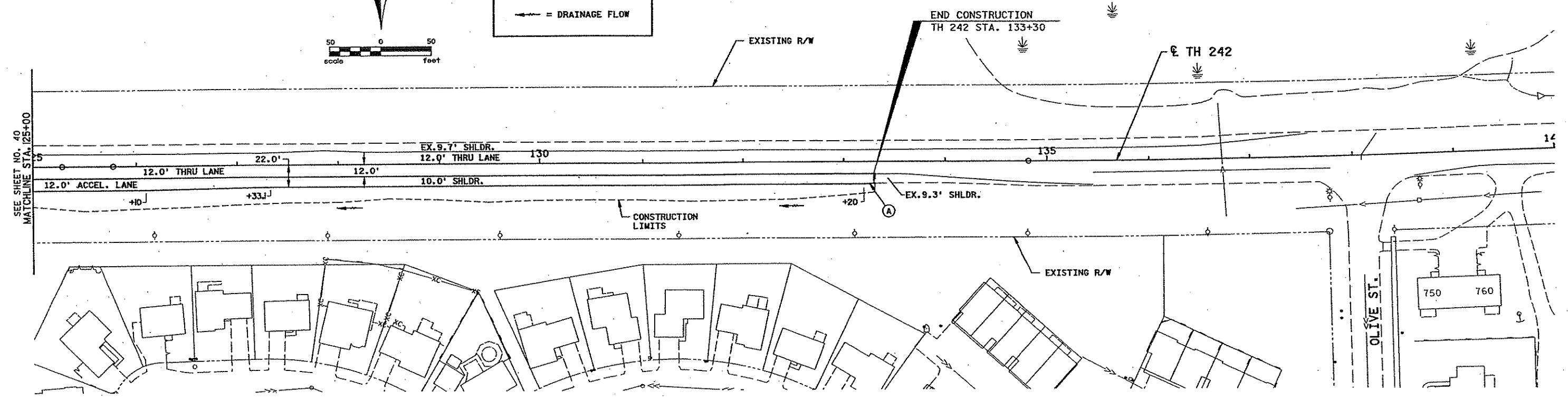


ANOKA COUNTY
CONSTRUCTION PLAN
TH 242
STA. 110+00 TO STA. 125+00

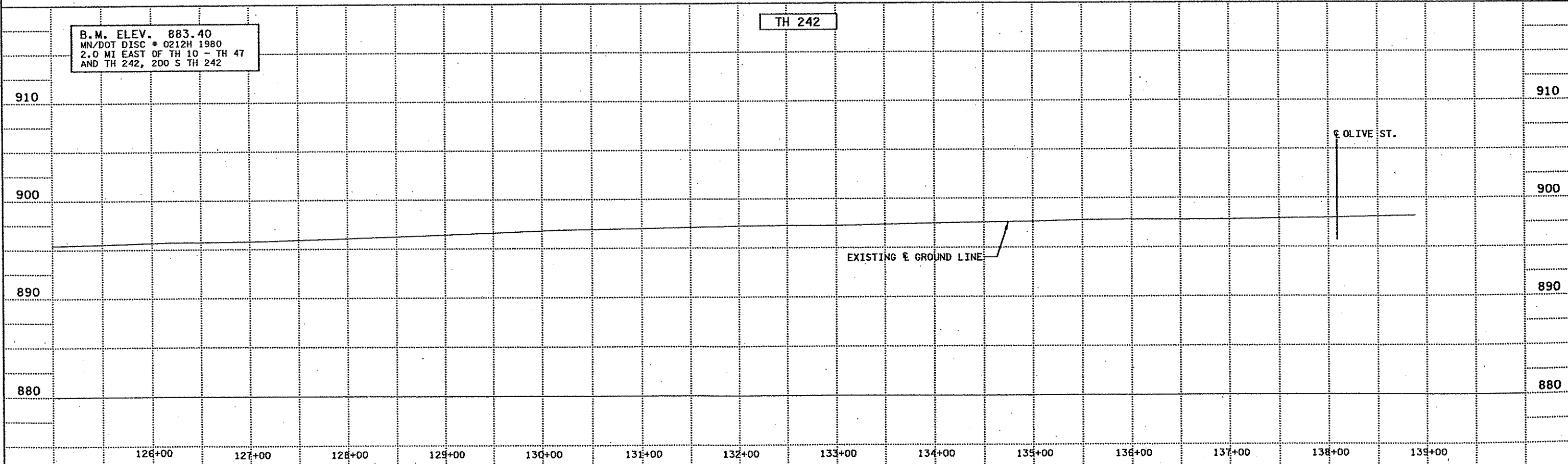
SHEET
40
OF
139



NOTES:
 (A) TRANSITION EDGE OF PAVEMENT TO EXISTING IN 10' (1:15 TAPER)



B.M. ELEV. 883.40
 MN/DOT DISC # 0212H 1980
 2.0 MI EAST OF TH 10 - TH 47
 AND TH 242, 200 S TH 242



NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.CPC DATE: Mar. 07, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY DATE
 D. FITCHORN 8-02
 DESIGNED BY
 N. WILL 4-02
 CHECKED BY
 N. WILL 5-02
 COMM. NO.
 001902



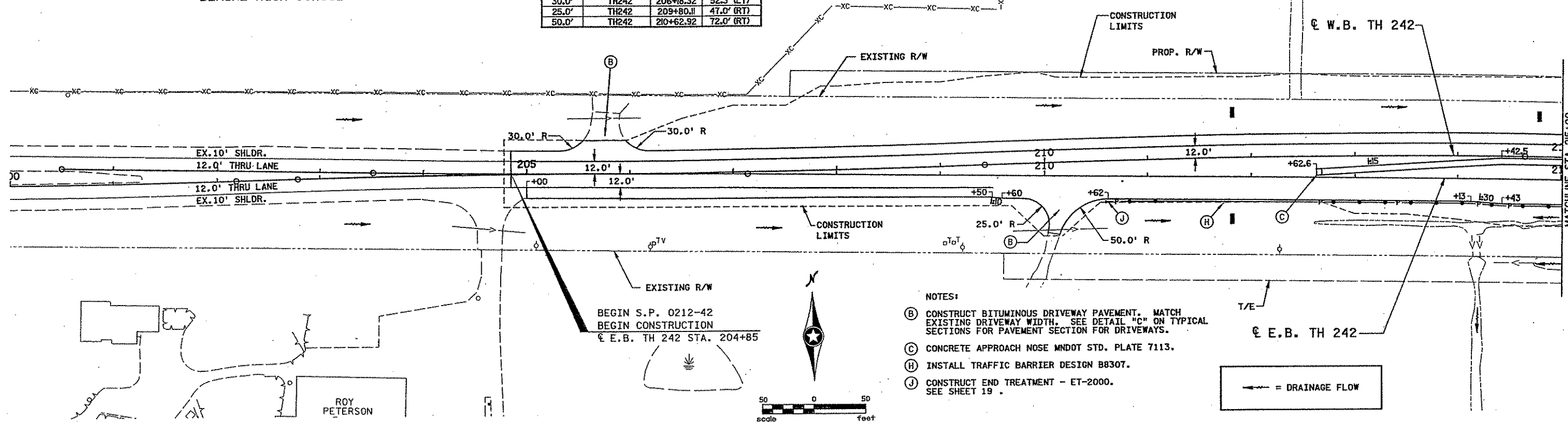
ANOKA COUNTY
 CONSTRUCTION PLAN
 TH 242
 STA. 125+00 TO STA. 140+00

SHEET
 41
 OF
 139

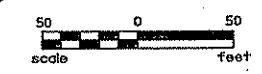
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 \$CPL\$ C:\PLT
 06/11/2002

BLAINE HIGH SCHOOL

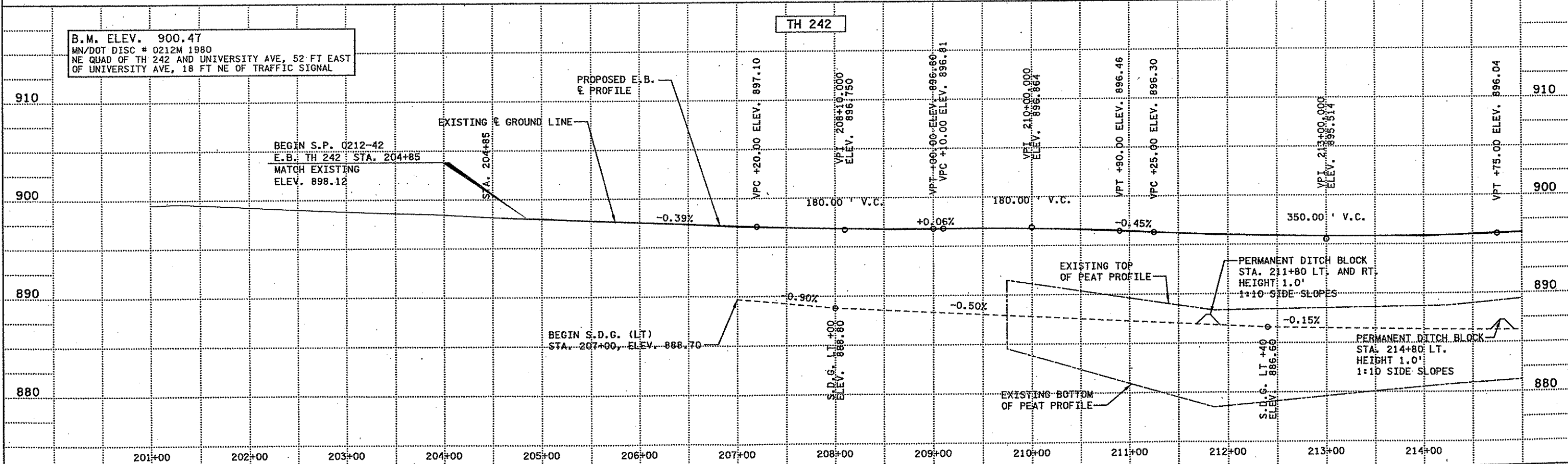
STREET RADII			
RADIUS	ALIGNMENT	STATION	LOCATION
30.0'	TH242	205+31.94	52.2' (LT)
30.0'	TH242	206+18.32	52.3' (LT)
25.0'	TH242	209+80.11	47.0' (RT)
50.0'	TH242	210+62.92	72.0' (RT)



- NOTES:
- (B) CONSTRUCT BITUMINOUS DRIVEWAY PAVEMENT. MATCH EXISTING DRIVEWAY WIDTH. SEE DETAIL "C" ON TYPICAL SECTIONS FOR PAVEMENT SECTION FOR DRIVEWAYS.
 - (C) CONCRETE APPROACH NOSE MNDOT STD. PLATE 7113.
 - (H) INSTALL TRAFFIC BARRIER DESIGN B8307.
 - (J) CONSTRUCT END TREATMENT - ET-2000. SEE SHEET 19.



B.M. ELEV. 900.47
 MN/DOT DISC # 0212M 1980
 NE QUAD OF TH 242 AND UNIVERSITY AVE, 52 FT EAST OF UNIVERSITY AVE, 18 FT NE OF TRAFFIC SIGNAL



NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.CPD DATE: Mar. 07, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO.: 0014102



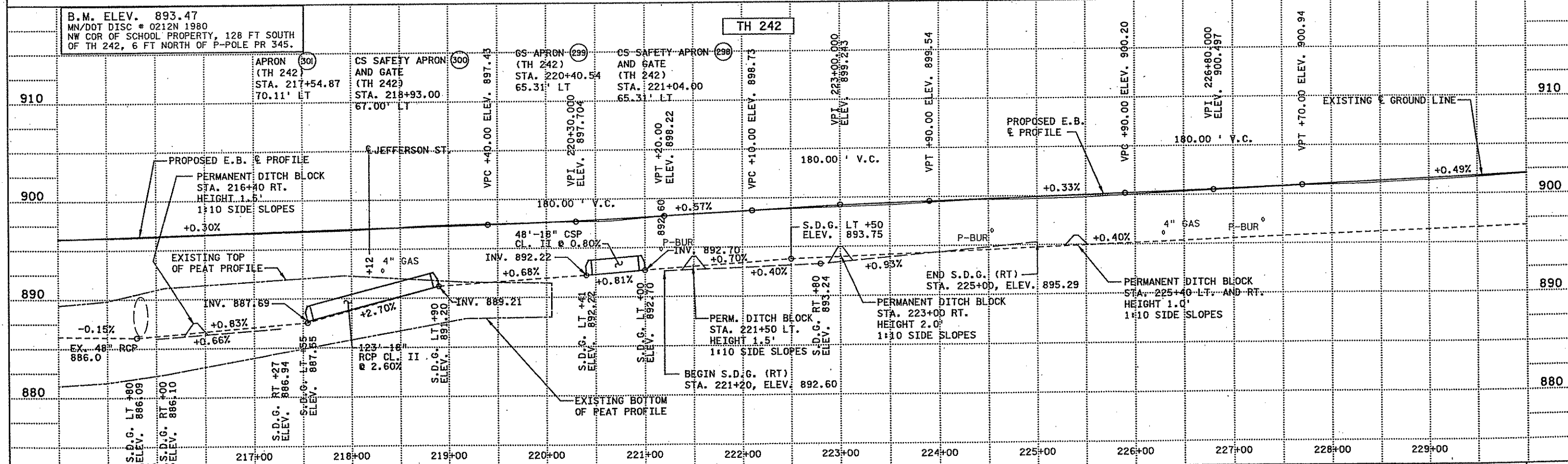
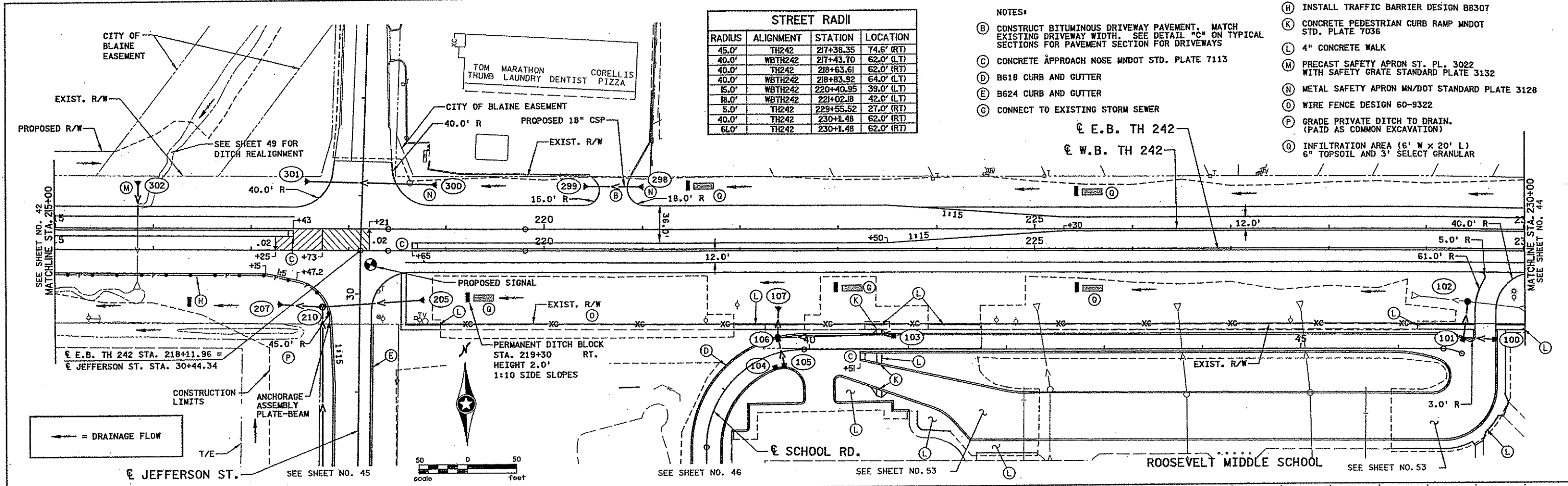
ANOKA COUNTY
 CONSTRUCTION PLAN
 TH 242
 E.B. STA. 200+00 TO STA. 215+00

SHEET
 42
 OF
 139

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 #PLOTTER#
 #SCALE#
 07/11/2002

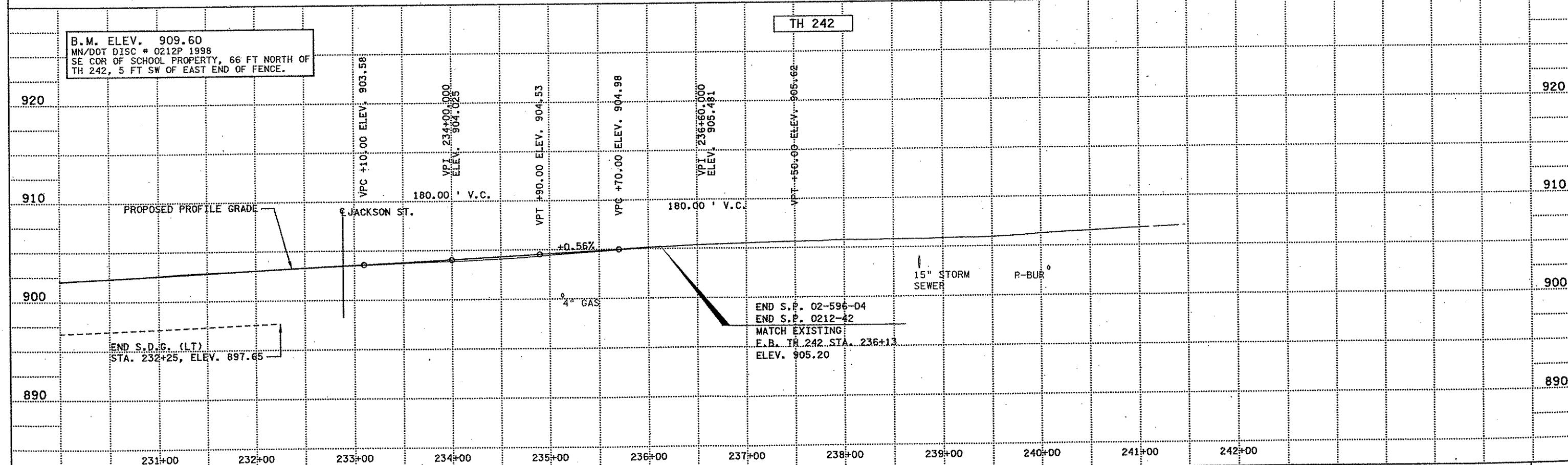
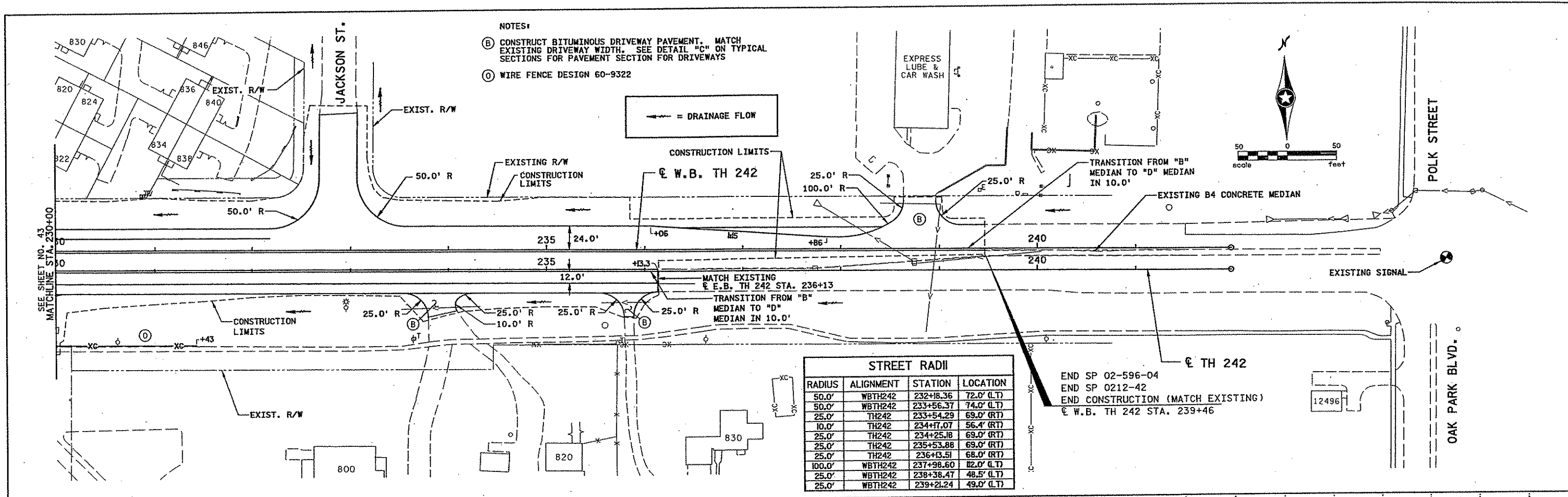
RADIUS	ALIGNMENT	STATION	LOCATION
45.0'	TH242	217+38.35	74.6' (RT)
40.0'	WBTH242	217+43.70	62.0' (LT)
40.0'	TH242	218+63.61	62.0' (RT)
40.0'	WBTH242	218+83.92	64.0' (LT)
15.0'	WBTH242	220+40.95	39.0' (LT)
18.0'	WBTH242	221+02.18	42.0' (LT)
5.0'	TH242	229+55.52	27.0' (RT)
40.0'	TH242	230+11.48	62.0' (RT)
60.0'	TH242	230+11.48	62.0' (RT)

- NOTES:
- (B) CONSTRUCT BITUMINOUS DRIVEWAY PAVEMENT. MATCH EXISTING DRIVEWAY WIDTH. SEE DETAIL "C" ON TYPICAL SECTIONS FOR PAVEMENT SECTION FOR DRIVEWAYS
 - (C) CONCRETE APPROACH NOSE MNDOT STD. PLATE 7113
 - (D) B618 CURB AND GUTTER
 - (E) B624 CURB AND GUTTER
 - (G) CONNECT TO EXISTING STORM SEWER
 - (H) INSTALL TRAFFIC BARRIER DESIGN B8307
 - (K) CONCRETE PEDESTRIAN CURB RAMP MNDOT STD. PLATE 7036
 - (L) 4" CONCRETE WALK
 - (M) PRECAST SAFETY APRON ST. PL. 3022 WITH SAFETY GRATE STANDARD PLATE 3132
 - (N) METAL SAFETY APRON MNDOT STANDARD PLATE 3128
 - (O) WIRE FENCE DESIGN 60-9322
 - (P) GRADE PRIVATE DITCH TO DRAIN. (PAID AS COMMON EXCAVATION)
 - (Q) INFILTRATION AREA (6' W X 20' L) 6" TOPSOIL AND 3' SELECT GRANULAR



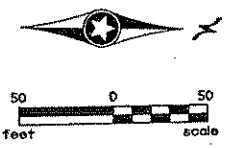
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Print Name: NATHAN A. WILL Date: 7-12-02 License # 26391		STATE AID PROJECT NO. S.P. 106-010-18 S.P. 106-121-04 S.P. 0212-42 S.P. 02-596-04	DRAWN BY D. FITCHORN DESIGNED BY N. WILL CHECKED BY N. WILL COMM. NO. 001402	DATE 8-02 4-02 5-02	SRF CONSULTING GROUP, INC.	ANOKA COUNTY CONSTRUCTION PLAN TH 242 E.B. STA 215+00 TO STA. 230+00	SHEET 43 OF 139
---	--	---	---	---	-----------------------------------	---	------------------------

NAME: 4102.CPE DATE: Mar. 07, 2002
 NO. DATE BY CKD APPR REVISION
 4102.CPE 07/11/2002



NO		DATE	BY	CHKD	APPR	REVISION
NAME: 4102.CPF DATE: Mar. 07, 2002						
I hereby certify that this plan, specification, or report 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. Print Name: <u>NATHAN A. WILL</u> Date: <u>7-12-02</u> License # <u>26391</u>						
STATE AID PROJECT NO.		DRAWN BY		DATE		
S.P. 106-010-18		D. FITCHORN		8-02		
S.P. 106-121-04		DESIGNED BY		4-02		
S.P. 0212-42		N. WILL		5-02		
S.P. 02-596-04		CHECKED BY		COMM. NO.		ANOKA COUNTY CONSTRUCTION PLAN TH 242 E.B. STA. 230+00 TO STA. 242+00
		N. WILL		001402		SHEET 44 OF 139

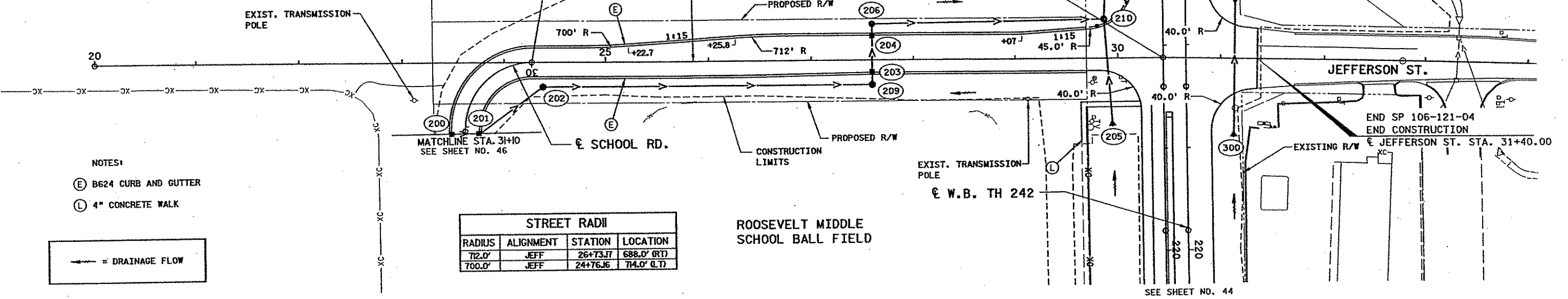
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 07/11/2002



NOTES:
 (E) B624 CURB AND GUTTER
 (L) 4" CONCRETE WALK

BEGIN S.P. 106-121-04
 @ JEFFERSON ST. STA. 24+27.35 =
 @ SCHOOL ST. STA. 30+00.00

GRADE DITCH TO DRAIN. PAID AS COMMON EXCAVATION



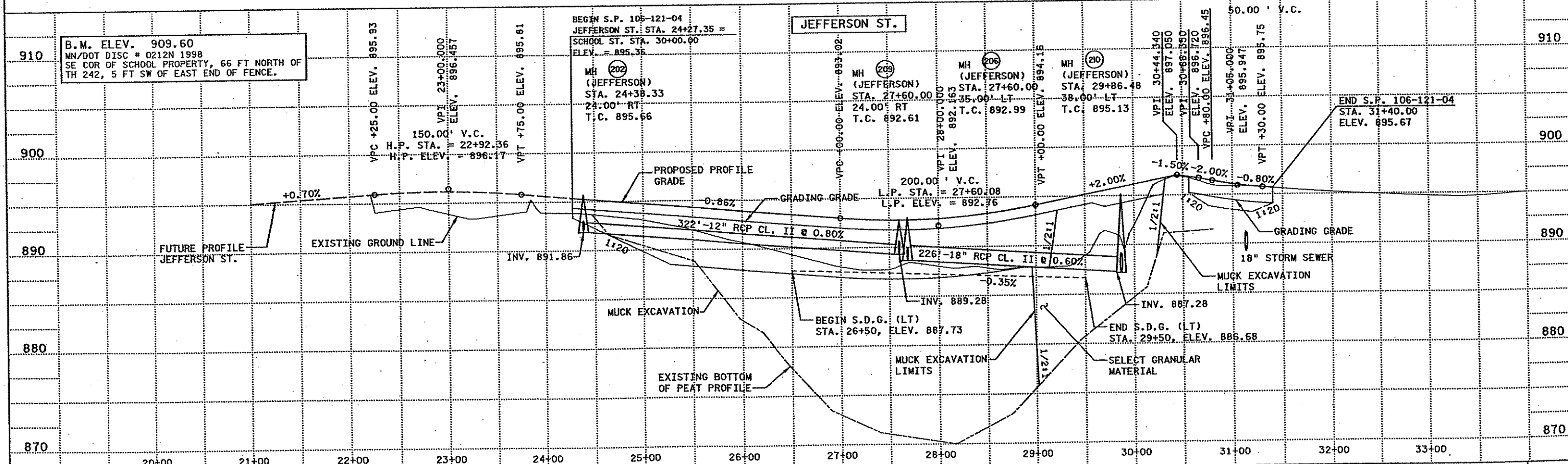
NOTES:
 (E) B624 CURB AND GUTTER
 (L) 4" CONCRETE WALK



STREET RADII			
RADIUS	ALIGNMENT	STATION	LOCATION
712.0'	JEFF	26+73.17	688.0' RT
700.0'	JEFF	24+76.16	714.0' LT

ROOSEVELT MIDDLE SCHOOL BALL FIELD

SEE SHEET NO. 44



B.M. ELEV. 909.60
 MN/DOT DISC # 0212N 1998
 SE COR OF SCHOOL PROPERTY, 66 FT NORTH OF TH 242, 5 FT SW OF EAST END OF FENCE.

BEGIN S.P. 106-121-04
 JEFFERSON ST. STA. 24+27.35 =
 SCHOOL ST. STA. 30+00.00
 ELEV. = 895.35

JEFFERSON ST.

END S.P. 106-121-04
 STA. 31+40.00
 ELEV. 895.67

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 6-13-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY D. FITCHORN DATE 8-02
 DESIGNED BY N. WILL 4-02
 CHECKED BY N. WILL 5-02
 COMM. NO. 0014102

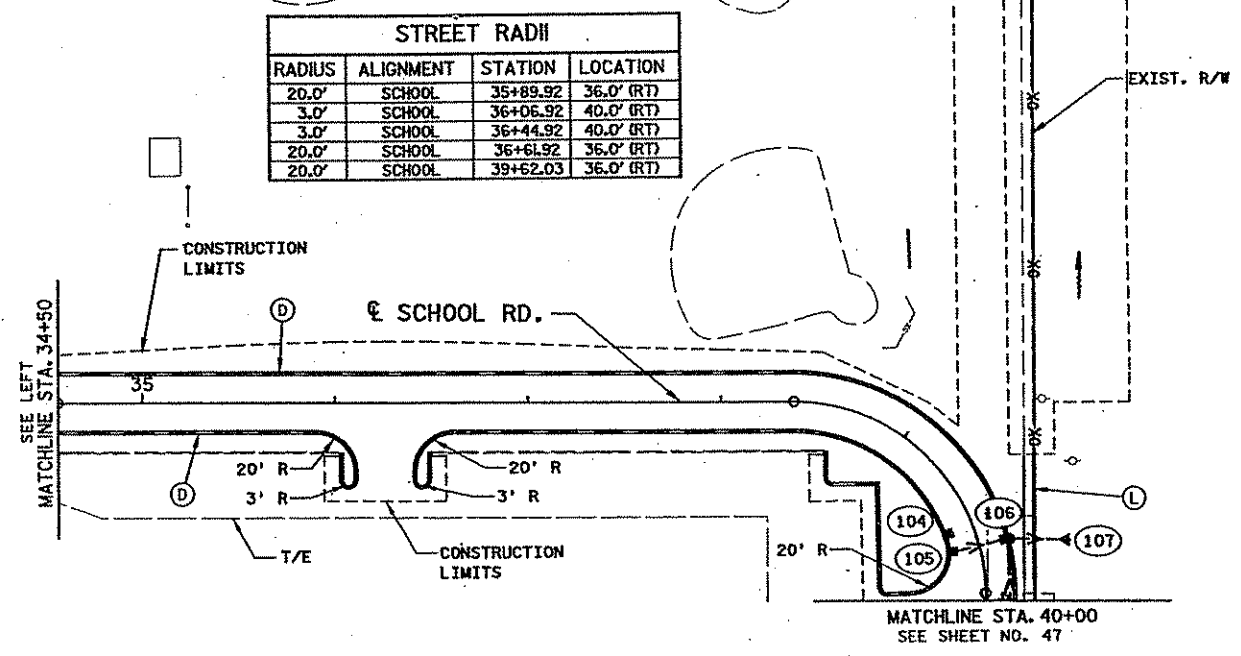
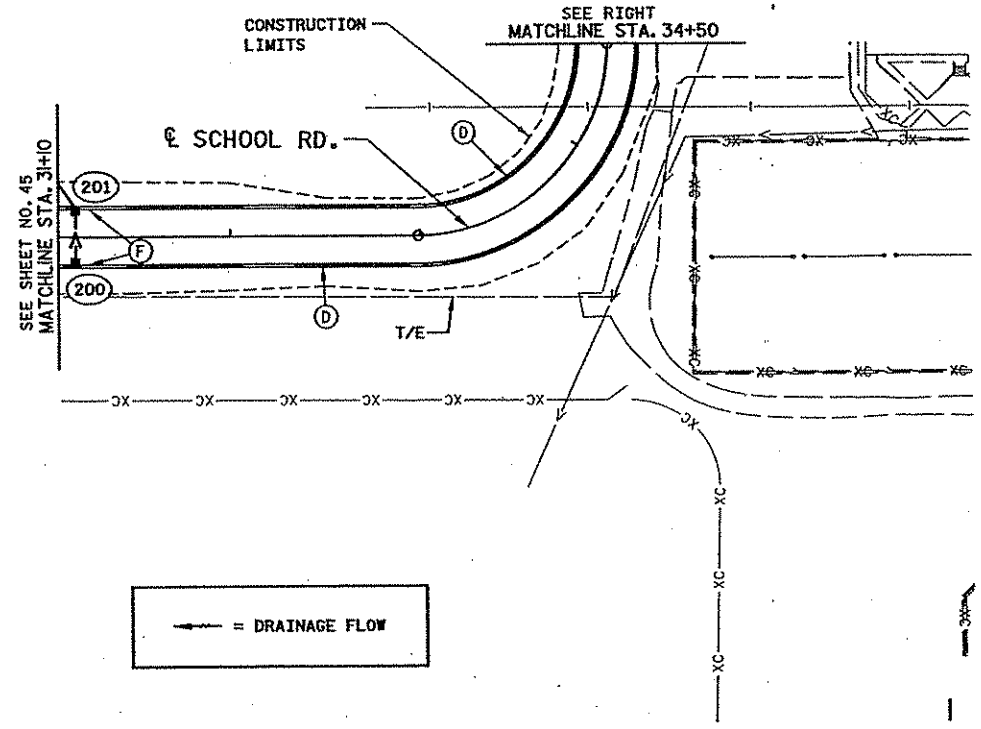


ANOKA COUNTY
 CONSTRUCTION PLAN
 TH 242
 STA. 20+00 TO STA. 34+00 (JEFFERSON ST.)

SHEET 45 OF 139

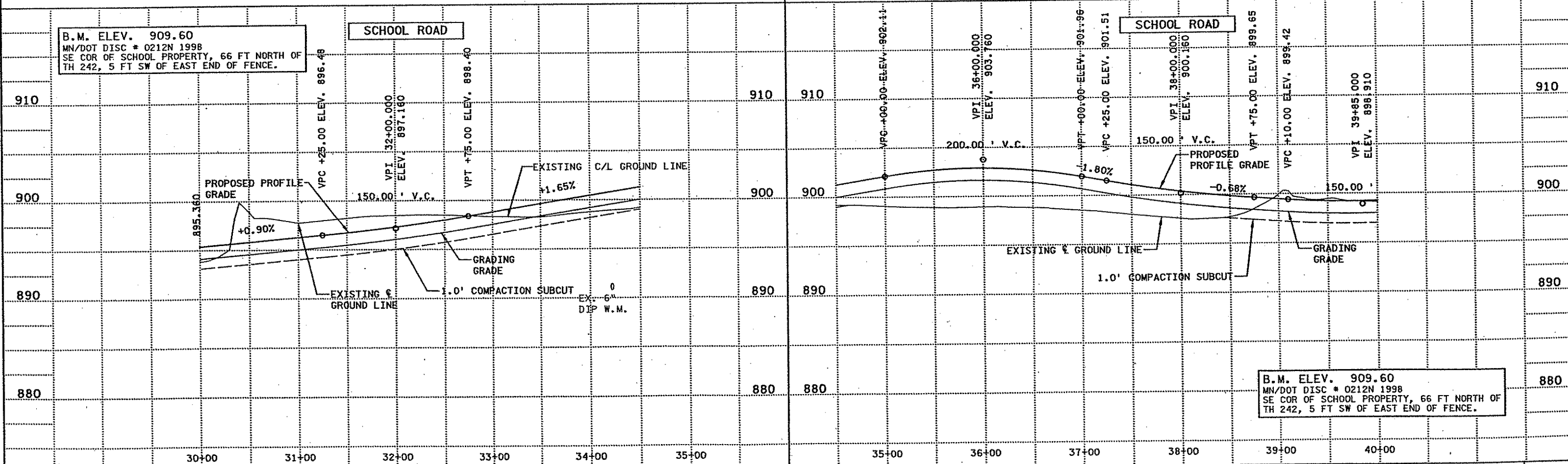
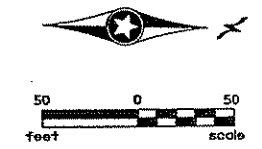
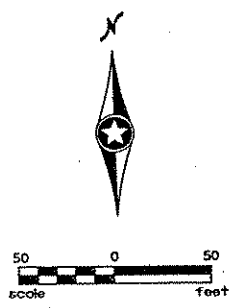
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 PLOTTER#
 \$SCALE#
 06/11/2002

NAME: 4102.CPG DATE: Aug. 28, 2001



STREET RADII			
RADIUS	ALIGNMENT	STATION	LOCATION
20.0'	SCHOOL	35+89.92	36.0' (RT)
3.0'	SCHOOL	36+06.92	40.0' (RT)
3.0'	SCHOOL	36+44.92	40.0' (RT)
20.0'	SCHOOL	36+61.92	36.0' (RT)
20.0'	SCHOOL	39+62.03	36.0' (RT)

- NOTES:
- (D) B618 CURB AND GUTTER
 - (F) 10' CURB TRANSITION (INCIDENTAL)
 - (L) 4" CONCRETE WALK



B.M. ELEV. 909.60
 MN/DOT DISC # 0212N 1998
 SE COR OF SCHOOL PROPERTY, 66 FT NORTH OF
 TH 242, 5 FT SW OF EAST END OF FENCE.

B.M. ELEV. 909.60
 MN/DOT DISC # 0212N 1998
 SE COR OF SCHOOL PROPERTY, 66 FT NORTH OF
 TH 242, 5 FT SW OF EAST END OF FENCE.

2.0ph
 4/11/2002
 NAME: 4102.CPH DATE: Mar. 07, 2002

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: *6/12/02* License # 26391

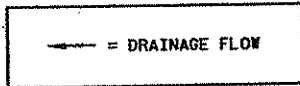
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: **D. FITCHORN** DATE: 8-02
 DESIGNED BY: **N. WILL** DATE: 4-02
 CHECKED BY: **N. WILL** DATE: 5-02
 COMM. NO. 0014102

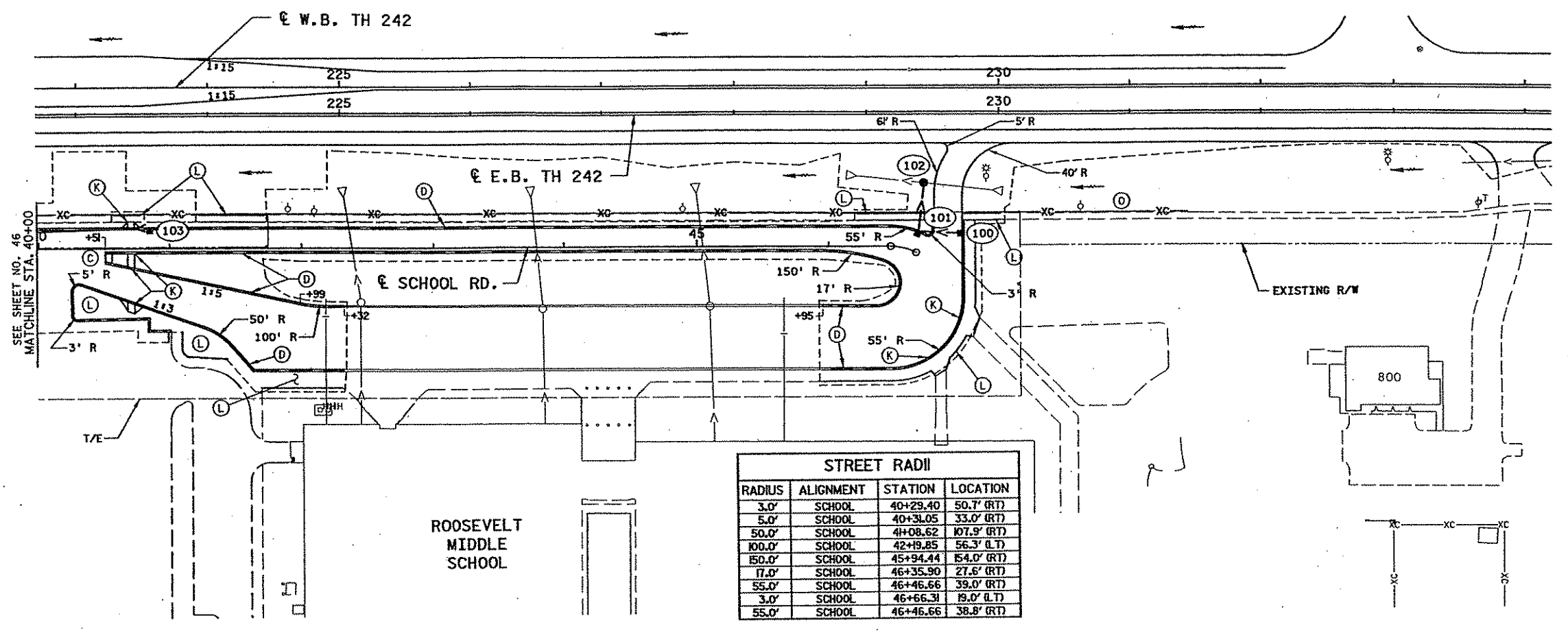
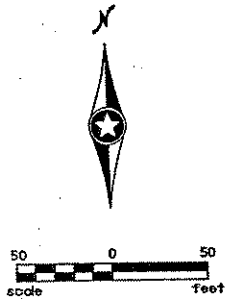


ANOKA COUNTY
 CONSTRUCTION PLAN
 TH 242
 STA. 30+00 TO STA. 40+00 (SCHOOL RD.)

SHEET 46 OF 139

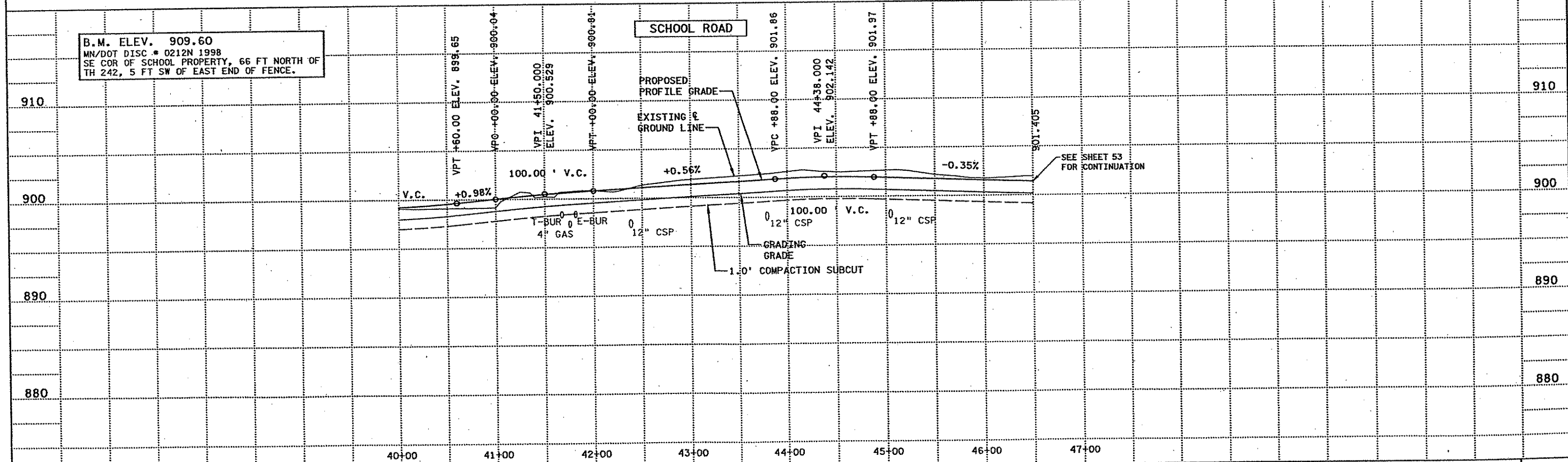


- NOTES:
- (C) CONCRETE APPROACH NOSE MNDOT STD. PLATE 7113
 - (D) B618 CURB AND GUTTER
 - (K) CONCRETE PEDESTRIAN CURB RAMP MNDOT STD. PLATE 7036
 - (L) 4" CONCRETE WALK
 - (O) WIRE FENCE DESIGN 60-9322



STREET RADII			
RADIUS	ALIGNMENT	STATION	LOCATION
3.0'	SCHOOL	40+29.40	50.7' (RT)
5.0'	SCHOOL	40+31.05	33.0' (RT)
50.0'	SCHOOL	41+08.62	107.9' (RT)
100.0'	SCHOOL	42+19.85	56.3' (LT)
150.0'	SCHOOL	45+94.44	154.0' (RT)
17.0'	SCHOOL	46+35.90	27.6' (RT)
55.0'	SCHOOL	46+46.66	39.0' (RT)
3.0'	SCHOOL	46+66.31	19.0' (LT)
55.0'	SCHOOL	46+46.66	38.8' (RT)

B.M. ELEV. 909.60
 MN/DOT DISC # 0212N 1998
 SE COR OF SCHOOL PROPERTY, 66 FT NORTH OF
 TH 242, 5 FT SW OF EAST END OF FENCE.



H:\ACTIV\11\0474\102\p\ans\...c.dpl
 PLOTTERS
 SCALES
 06/11/2002

NO	DATE	BY	CHK	APPR	REVISION

NAME: 4102.CPI DATE: Mar. 07, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-D10-18
 S.P. 106-I21-04
 S.P. 0212-42
 S.P. 02-596-04

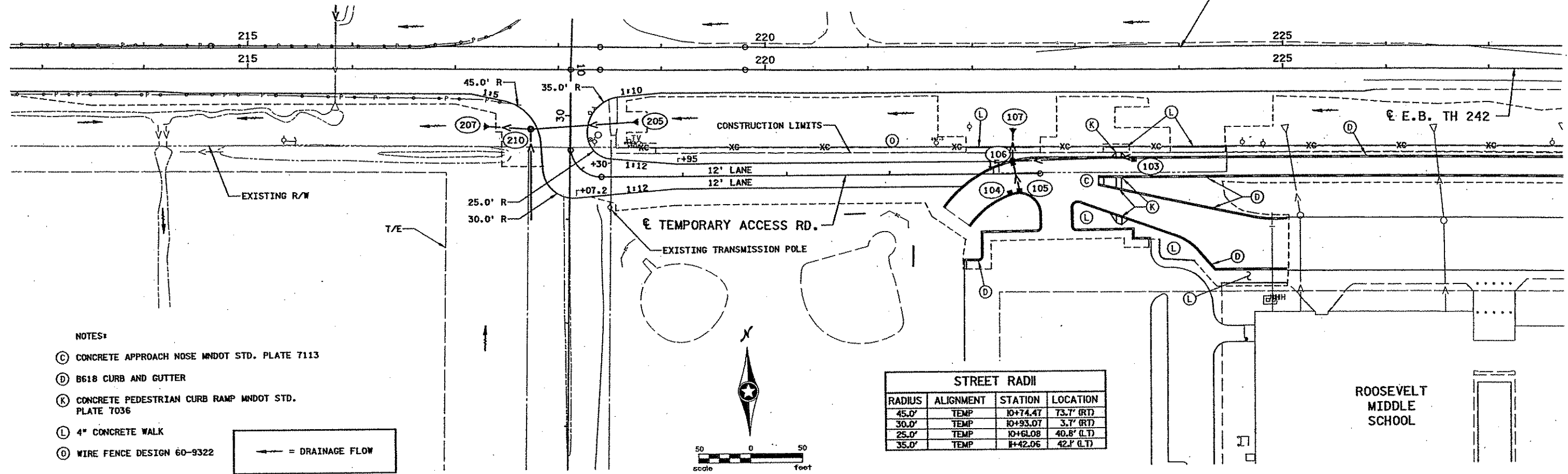
DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL 4-02
 CHECKED BY: N. WILL 5-02
 COMM. NO. 004102

SRE CONSULTING GROUP, INC.

ANOKA COUNTY
 CONSTRUCTION PLAN
 TH 242
 STA. 40+00 TO STA. 46+66 (SCHOOL RD.)

SHEET 47 OF 139

W.B. TH 242



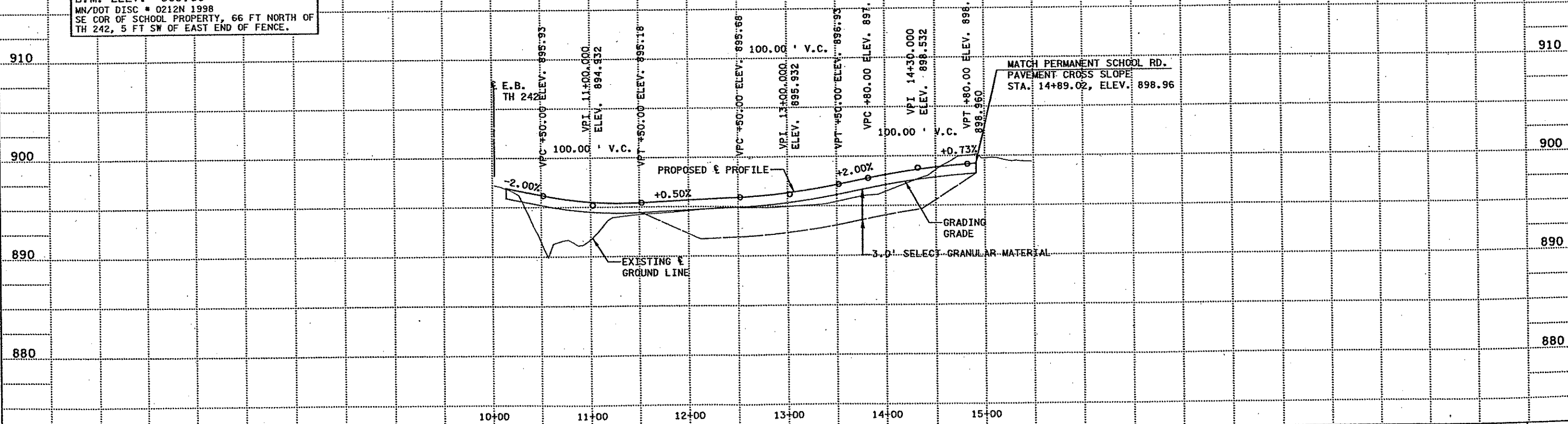
- NOTES:
- (C) CONCRETE APPROACH NOSE MNDOT STD. PLATE 7113
 - (D) B618 CURB AND GUTTER
 - (K) CONCRETE PEDESTRIAN CURB RAMP MNDOT STD. PLATE 7036
 - (L) 4" CONCRETE WALK
 - (O) WIRE FENCE DESIGN 60-9322
- ← = DRAINAGE FLOW

STREET RADII			
RADIUS	ALIGNMENT	STATION	LOCATION
45.0'	TEMP	10+74.47	73.7' (RT)
30.0'	TEMP	10+93.07	3.7' (RT)
25.0'	TEMP	10+61.08	40.8' (LT)
35.0'	TEMP	11+42.06	42.1' (LT)

ROOSEVELT MIDDLE SCHOOL

B.M. ELEV. 909.60
 MN/DOT DISC # 0212N 1998
 SE COR OF SCHOOL PROPERTY, 66 FT NORTH OF
 TH 242, 5 FT SW OF EAST END OF FENCE.

TEMPORARY ACCESS ROAD



PLOTTER # 4102.CPH
 DATE: Mar. 20, 2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.CPH DATE: Mar. 20, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 10-12-02 License # 26391

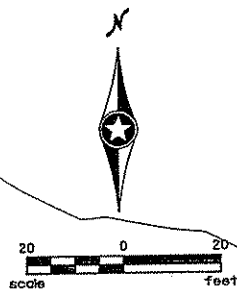
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN
 DESIGNED BY: N. WILL
 CHECKED BY: N. WILL
 COMM. NO. 0014102



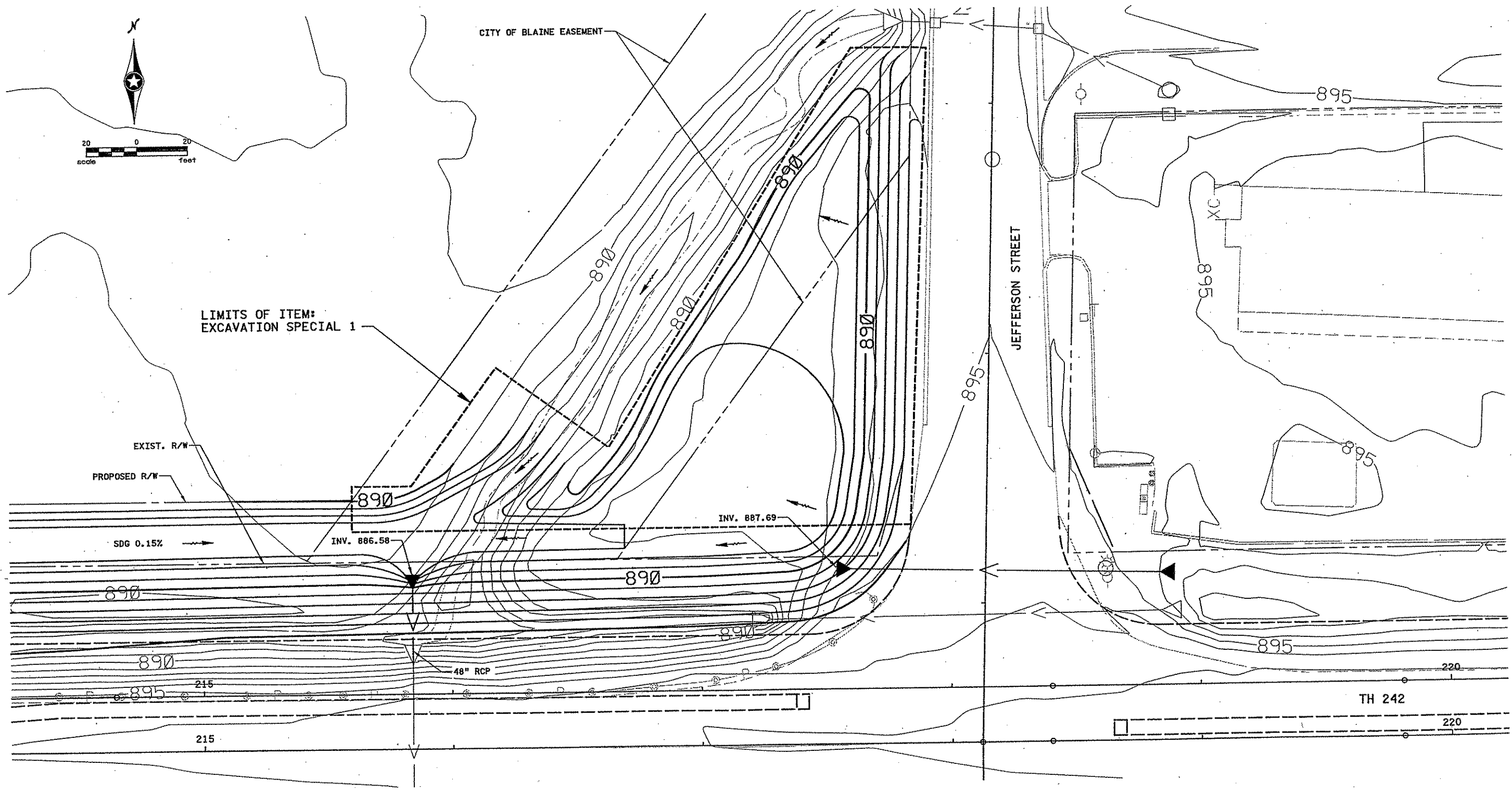
ANOKA COUNTY
 TEMPORARY CONSTRUCTION PLAN
 TH 242
 STA. 10+00 TO STA. 15+05

SHEET 48 OF 139



CITY OF BLAINE EASEMENT

LIMITS OF ITEM:
EXCAVATION SPECIAL 1



H:\101111047\4102\plans\... .spc
 \$PREP\$
 \$PLOTTER\$
 \$SCALE\$
 07/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.GPA DATE: Jun. 11, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: 7-12-02 License # 26391

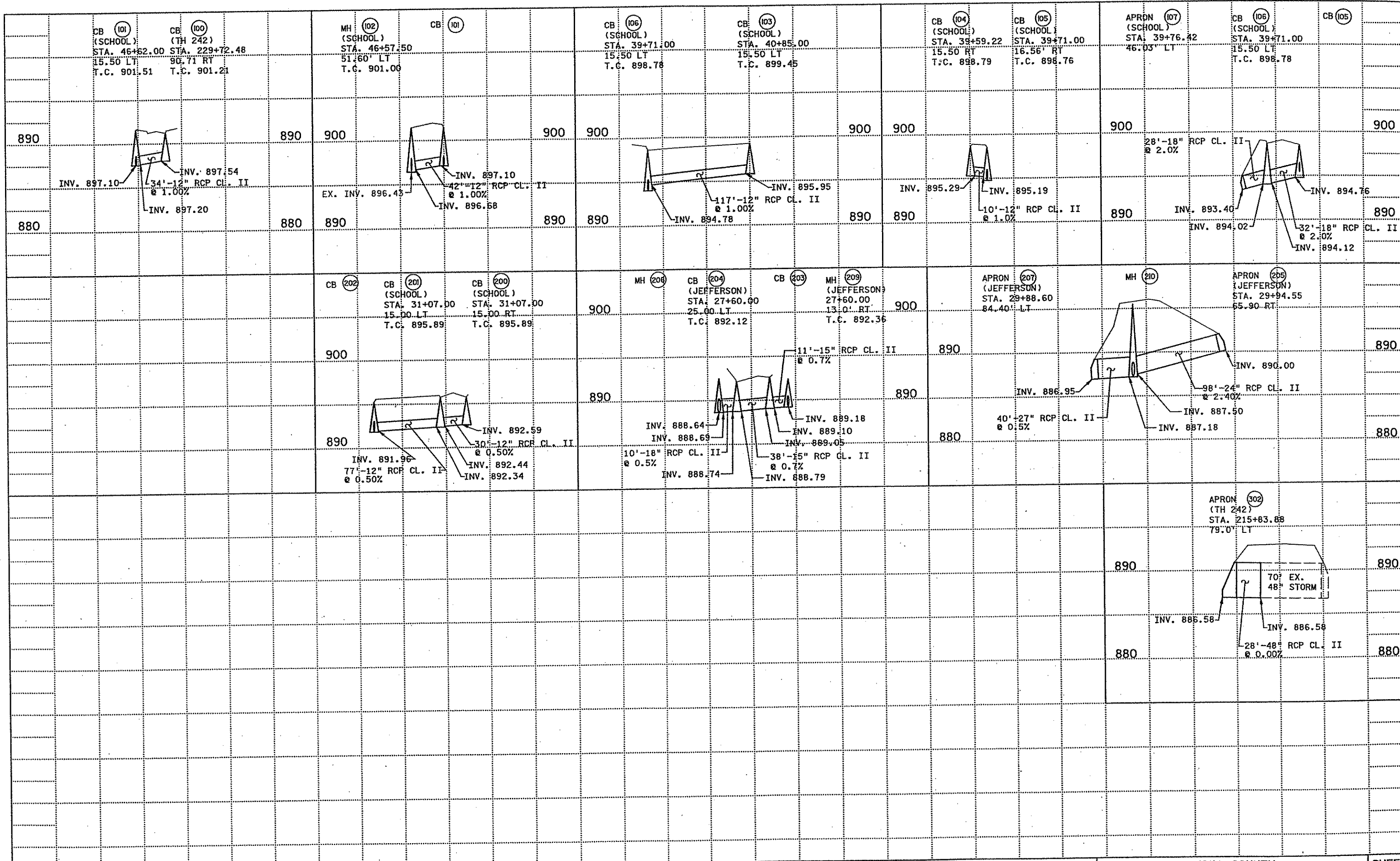
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY DATE
 D. FITCHORN 8-02
 DESIGNED BY
 N. WILL 4-02
 CHECKED BY
 N. WILL 5-02
 COMM. NO.
 0014102



ANOKA COUNTY
 GRADING PLAN
 TH 242
 TH 242 AND JEFFERSON STREET

SHEET
 49
 OF
 139



P:\AG\11\04\1102\plans
 SRF
 PLOTTER
 SCALE
 07/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.MPA DATE: Mar. 07, 2002

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: B. FITCHORN DATE: 8-02
 DESIGNED BY:
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102



ANOKA COUNTY
 MISCELLANEOUS STORM PROFILES
 TH 242

SHEET
 50
 OF
 139

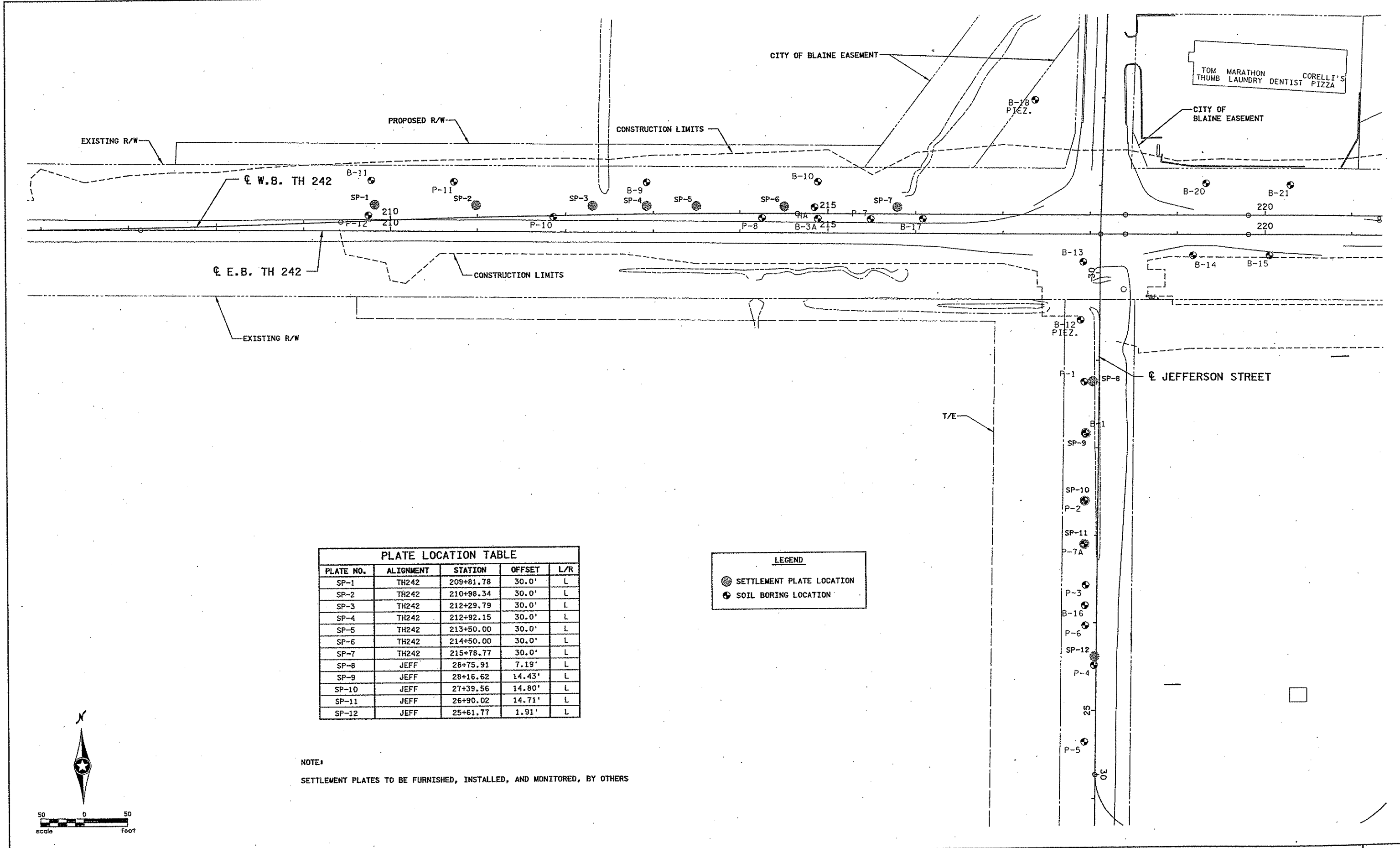
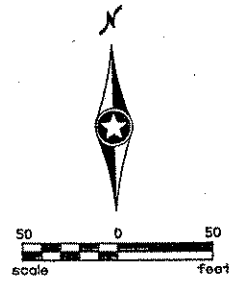


PLATE LOCATION TABLE				
PLATE NO.	ALIGNMENT	STATION	OFFSET	L/R
SP-1	TH242	209+81.78	30.0'	L
SP-2	TH242	210+98.34	30.0'	L
SP-3	TH242	212+29.79	30.0'	L
SP-4	TH242	212+92.15	30.0'	L
SP-5	TH242	213+50.00	30.0'	L
SP-6	TH242	214+50.00	30.0'	L
SP-7	TH242	215+78.77	30.0'	L
SP-8	JEFF	28+75.91	7.19'	L
SP-9	JEFF	28+16.62	14.43'	L
SP-10	JEFF	27+39.56	14.80'	L
SP-11	JEFF	26+90.02	14.71'	L
SP-12	JEFF	25+61.77	1.91'	L

LEGEND

- SETTLEMENT PLATE LOCATION
- ⊕ SOIL BORING LOCATION

NOTE:
SETTLEMENT PLATES TO BE FURNISHED, INSTALLED, AND MONITORED, BY OTHERS



I:\Projects\11047\4102\Spl\ans...
 4/9/02
 SRF PLOTTER
 8SCALE
 07/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.SPL DATE: Apr. 09, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY
 V.G. LEE
 DESIGNED BY
 N. WILL
 CHECKED BY
 N. WILL
 DATE
 4-02
 4-02
 4-02
 COMM. NO.
 0014102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
 SETTLEMENT PLATE LAYOUT
 TH 242

SHEET
 52
 OF
 139

MATCH EXISTING

POINT	ELEVATION	STATION	OFFSET
1	900.72	224+34.17	194.03' RT
2	901.45	224+68.35	141.53' RT
3	900.32	224+09.43	167.90' RT
4	899.42	223+22.37	104.43' RT
5	899.32	223+22.37	110.43' RT
6	899.22	222+99.33	129.38' RT
7	899.35	222+98.69	153.32' RT
8	899.64	223+56.15	153.03' RT
9	899.68	223+56.16	162.24' RT
10	899.76	223+71.60	162.31' RT
11	898.90	222+64.92	153.90' RT
12	899.60	222+08.25	155.91' RT
13	899.80	222+07.44	182.15' RT
14	899.91	221+92.09	182.99' RT

← DRAINAGE FLOW

• = ELEVATIONS SHOWN ARE TO TOP OF FLOW LINE

GENERAL NOTES:

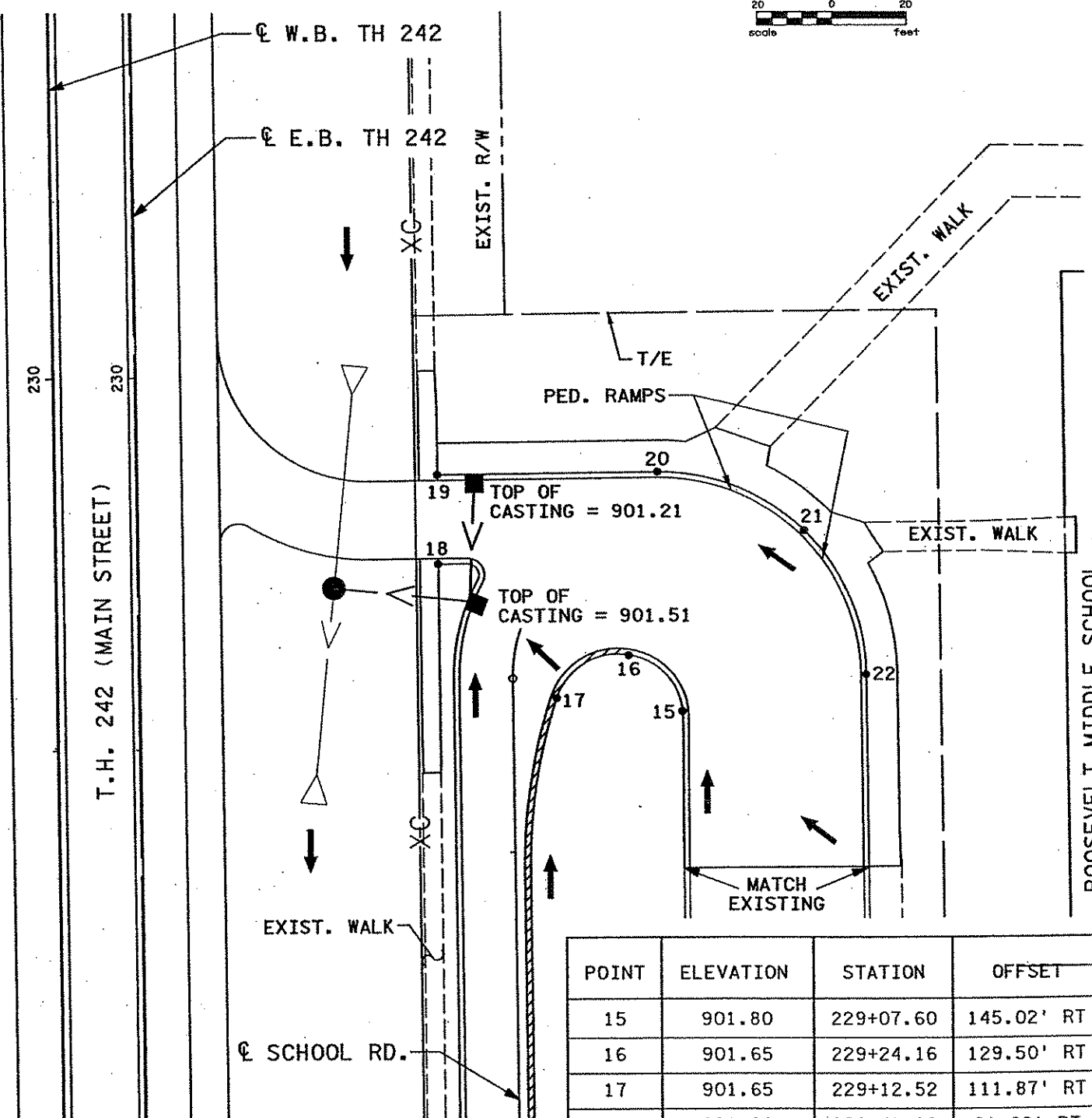
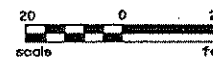
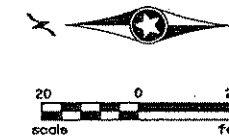
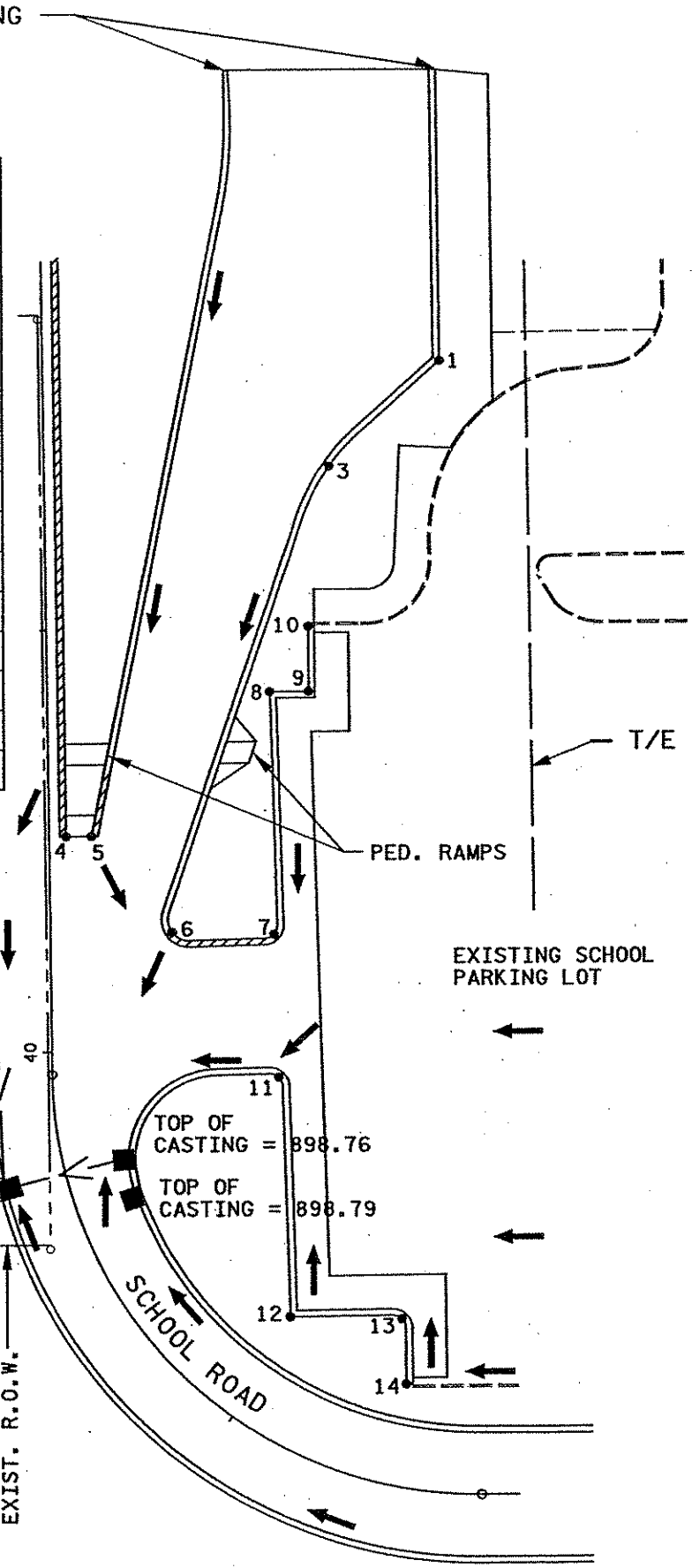
ALL STATION/OFFSET LOCATIONS ARE BASED OFF OF E.B. TH 242 ALIGNMENT AND ARE TO THE FLOW LINE.

 CURB AND GUTTER TIPPED OUT AT 2%



WEST SCHOOL ROAD

EXIST. R.O.W.



EAST SCHOOL ROAD

POINT	ELEVATION	STATION	OFFSET
15	901.80	229+07.60	145.02' RT
16	901.65	229+24.16	129.50' RT
17	901.65	229+12.52	111.87' RT
18	901.60	229+48.98	81.02' RT
19	901.25	229+72.98	80.88' RT
20	901.40	229+72.98	135.79' RT
21	901.60	229+66.54	165.01' RT
22	901.80	229+18.73	194.18' RT

4-000

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.CDA DATE: Apr. 03, 2002

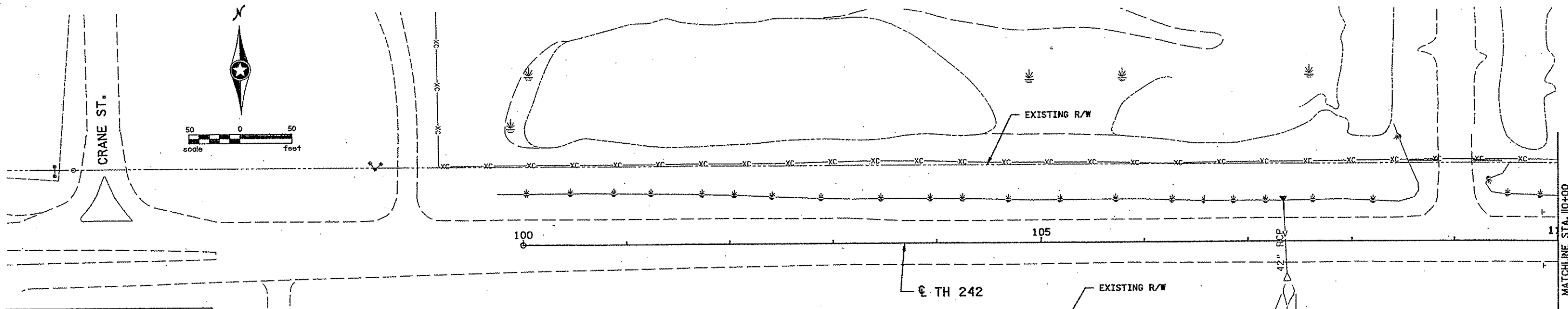
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: *6-12-02* License: 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: V.G. LEE DATE: 4-01
 DESIGNED BY: N. WILL DATE: 4-01
 CHECKED BY: N. WILL DATE: 4-01
 COMM. NO. 0014102



ANOKA COUNTY
 INTERSECTION DETAILS
 TH 242
 SHEET 53 OF 139

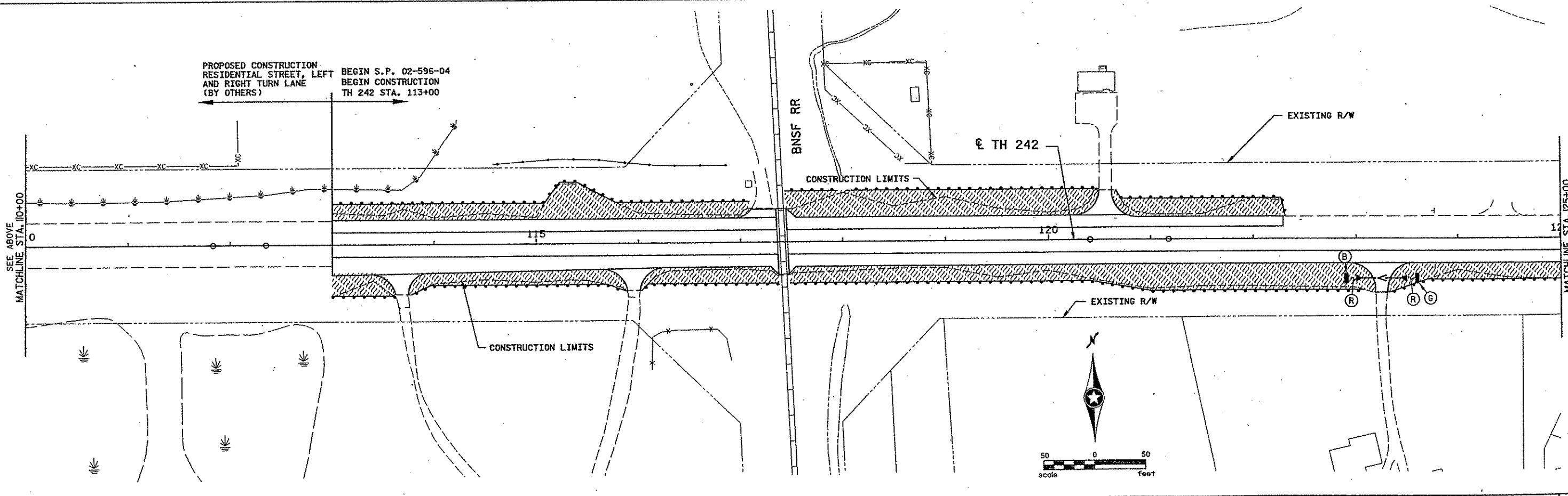


LEGEND

- SODDING TYPE SALT RESISTANT
- SEED MIXTURE 60B / MULCH MATERIAL TYPE I
- EROSION CONTROL BLANKETS CATEGORY 2
- SILT FENCE, TYPE MACHINE SLICED
- (B) TEMPORARY DITCH CHECK TYPE 3
- (G) TEMPORARY DITCH CHECK TYPE 6
- (S) SODDING TYPE EROSION
- (R) RIPRAP

NOTES:
 SEED MIXTURE 60B APPLICATION RATE 100 LB/ACRE.
 MULCH MATERIAL TYPE 1 APPLICATION RATE 2 TON/ACRE.
 COMMERCIAL FERTILIZER ANALYSIS 22-5-10 APPLICATION RATE 200 LB/ACRE. FERTILIZER WILL BE APPLIED TO BOTH AREAS AS DESIGNATED BY SODDED AND SEEDED.
 IF SEDEMENT DEPOSITS IN A WATER OF THE STATE, IT MUST BE REMOVED WITHIN 7 DAYS.

MATCHLINE STA. 110+00 SEE BELOW



PROPOSED CONSTRUCTION. RESIDENTIAL STREET, LEFT AND RIGHT TURN LANE (BY OTHERS) BEGIN S.P. 02-596-04
 BEGIN CONSTRUCTION TH 242 STA. 113+00

MATCHLINE STA. 125+00 SEE SHEET NO. 95

DATE: 07/11/2002
 SCALE: 1"=40'
 PLOTTER: 2400
 4102.TEA

NO.	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.TEA DATE: Mar. 07, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILJ
 Date: 7-12-02 License # 26391

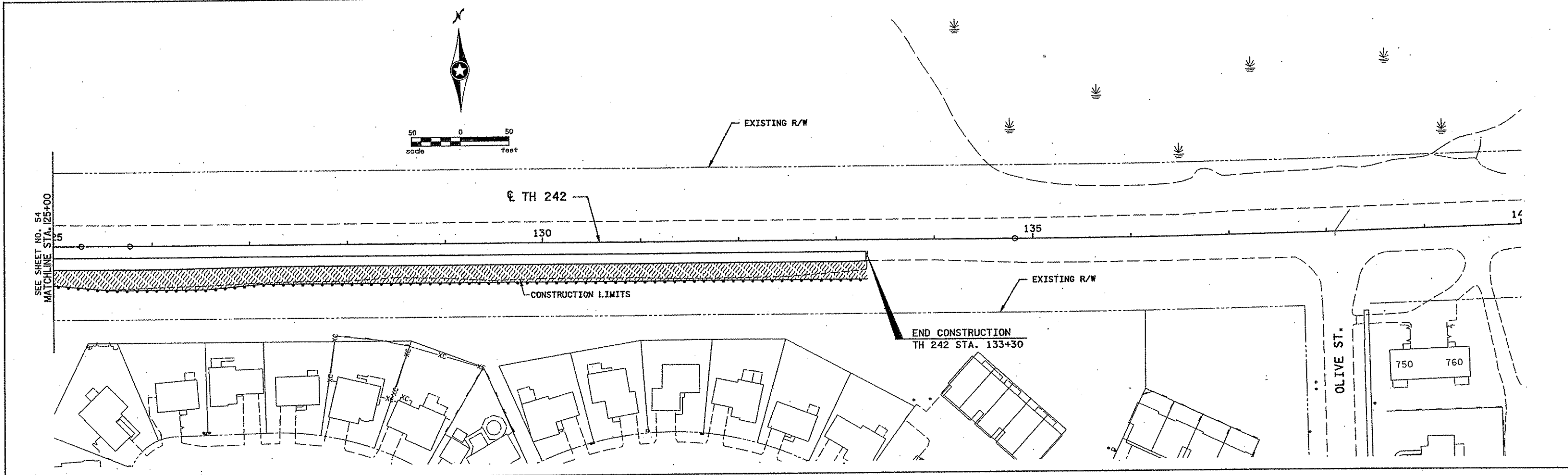
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILJ 4-02
 CHECKED BY: N. WILJ 5-02
 COMM. NO. 001402



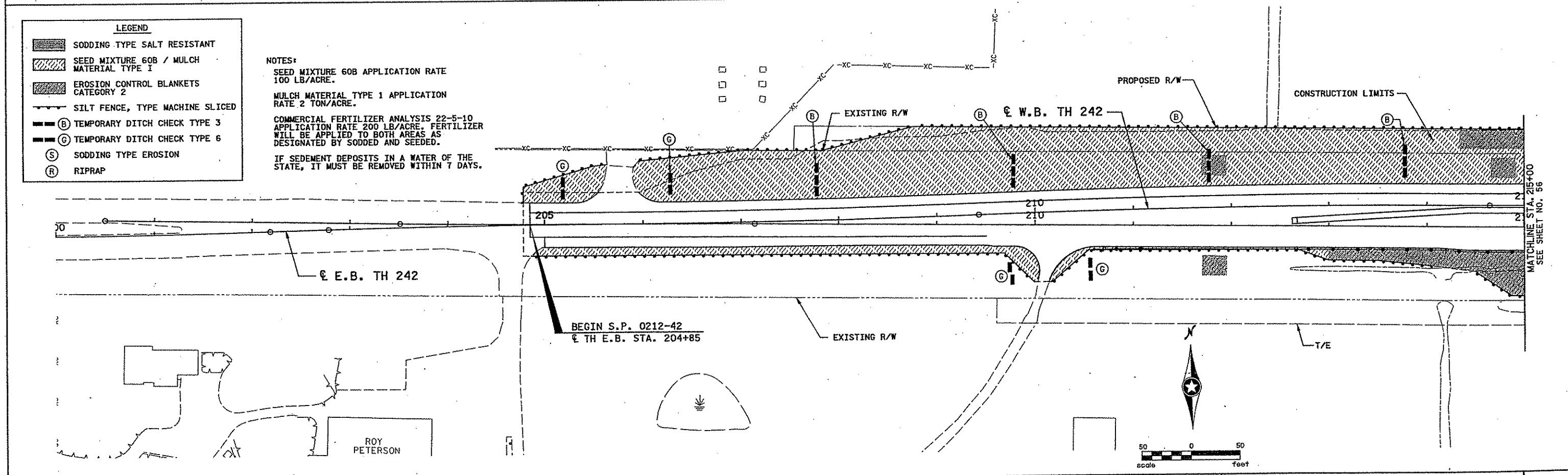
ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL PLANS
 TH 242
 STA. 113+00 TO STA. 125+00

SHEET 54 OF 139



- LEGEND**
- SODDING TYPE SALT RESISTANT
 - SEED MIXTURE 60B / MULCH MATERIAL TYPE 1
 - EROSION CONTROL BLANKETS CATEGORY 2
 - SILT FENCE, TYPE MACHINE SLICED
 - TEMPORARY DITCH CHECK TYPE 3
 - TEMPORARY DITCH CHECK TYPE 6
 - SODDING TYPE EROSION
 - RIPRAP

NOTES:
 SEED MIXTURE 60B APPLICATION RATE 100 LB/ACRE.
 MULCH MATERIAL TYPE 1 APPLICATION RATE 2 TON/ACRE.
 COMMERCIAL FERTILIZER ANALYSIS 22-5-10 APPLICATION RATE 200 LB/ACRE. FERTILIZER WILL BE APPLIED TO BOTH AREAS AS DESIGNATED BY SODDED AND SEEDED.
 IF SEDIMENT DEPOSITS IN A WATER OF THE STATE, IT MUST BE REMOVED WITHIN 7 DAYS.



NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.TEB DATE: Mar. 07, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

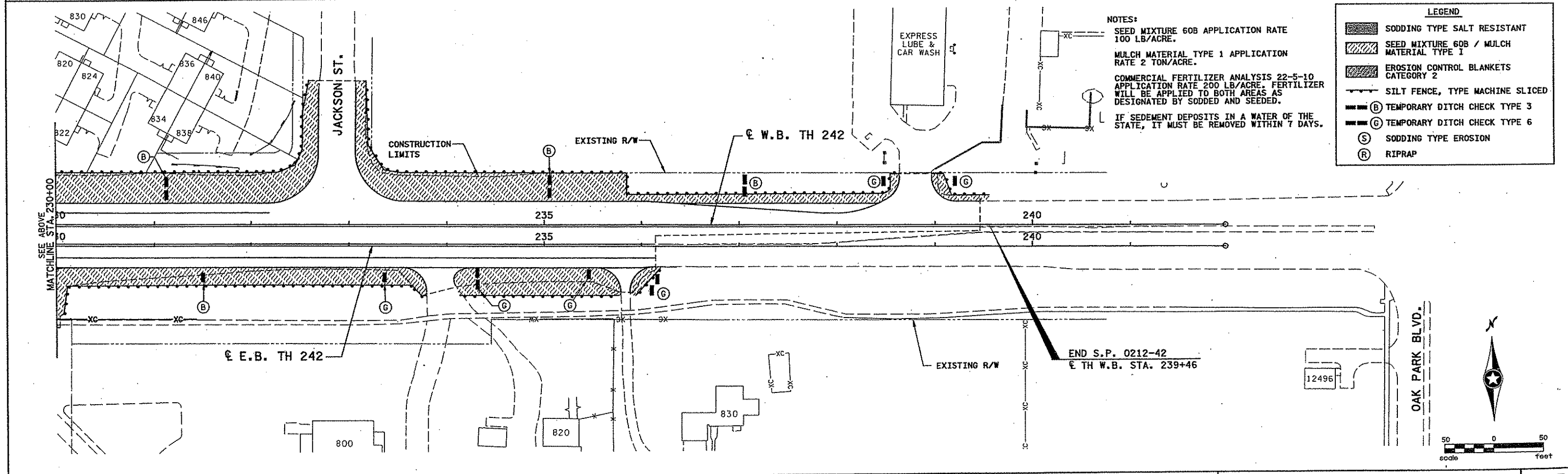
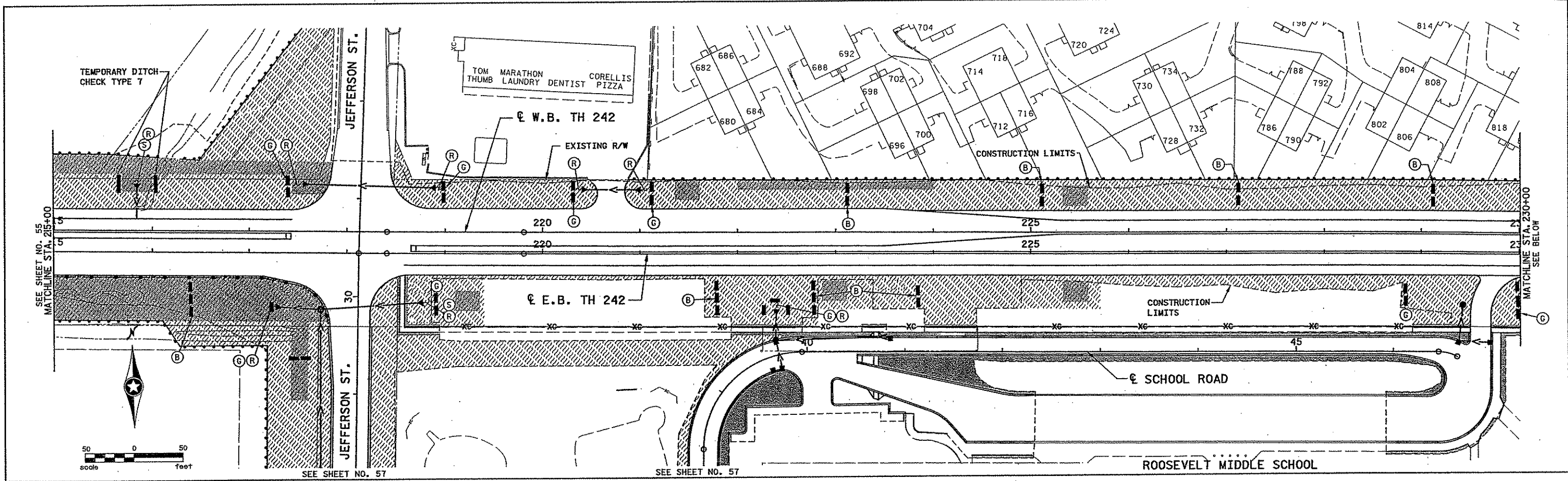
DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 004102



ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL PLANS
 TH 242
 STA. 125+00 TO STA. 215+00

SHEET 55 OF 139

PL:G:\11\047\102\plan\...-1.eb
 #PLOTTER#
 #SCALE#
 07/11/2002



NOTES:

SEED MIXTURE 60B APPLICATION RATE 100 LB/ACRE.

MULCH MATERIAL TYPE 1 APPLICATION RATE 2 TON/ACRE.

COMMERCIAL FERTILIZER ANALYSIS 22-5-10 APPLICATION RATE 200 LB/ACRE. FERTILIZER WILL BE APPLIED TO BOTH AREAS AS DESIGNATED BY SODDED AND SEEDED.

IF SEDEMENT DEPOSITS IN A WATER OF THE STATE, IT MUST BE REMOVED WITHIN 7 DAYS.

LEGEND	
	SODDING TYPE SALT RESISTANT
	SEED MIXTURE 60B / MULCH MATERIAL TYPE 1
	EROSION CONTROL BLANKETS CATEGORY 2
	SILT FENCE, TYPE MACHINE SLICED
	TEMPORARY DITCH CHECK TYPE 3
	TEMPORARY DITCH CHECK TYPE 6
	SODDING TYPE EROSION
	RIPRAP

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.TED DATE: Mar. 07, 2002

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 7-18-02 License # 26391

STATE AID PROJECT NO. S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY D. FITCHORN DATE 8-02
DESIGNED BY N. WILL DATE 4-02
CHECKED BY N. WILL DATE 5-02
COMM. NO. 0014102

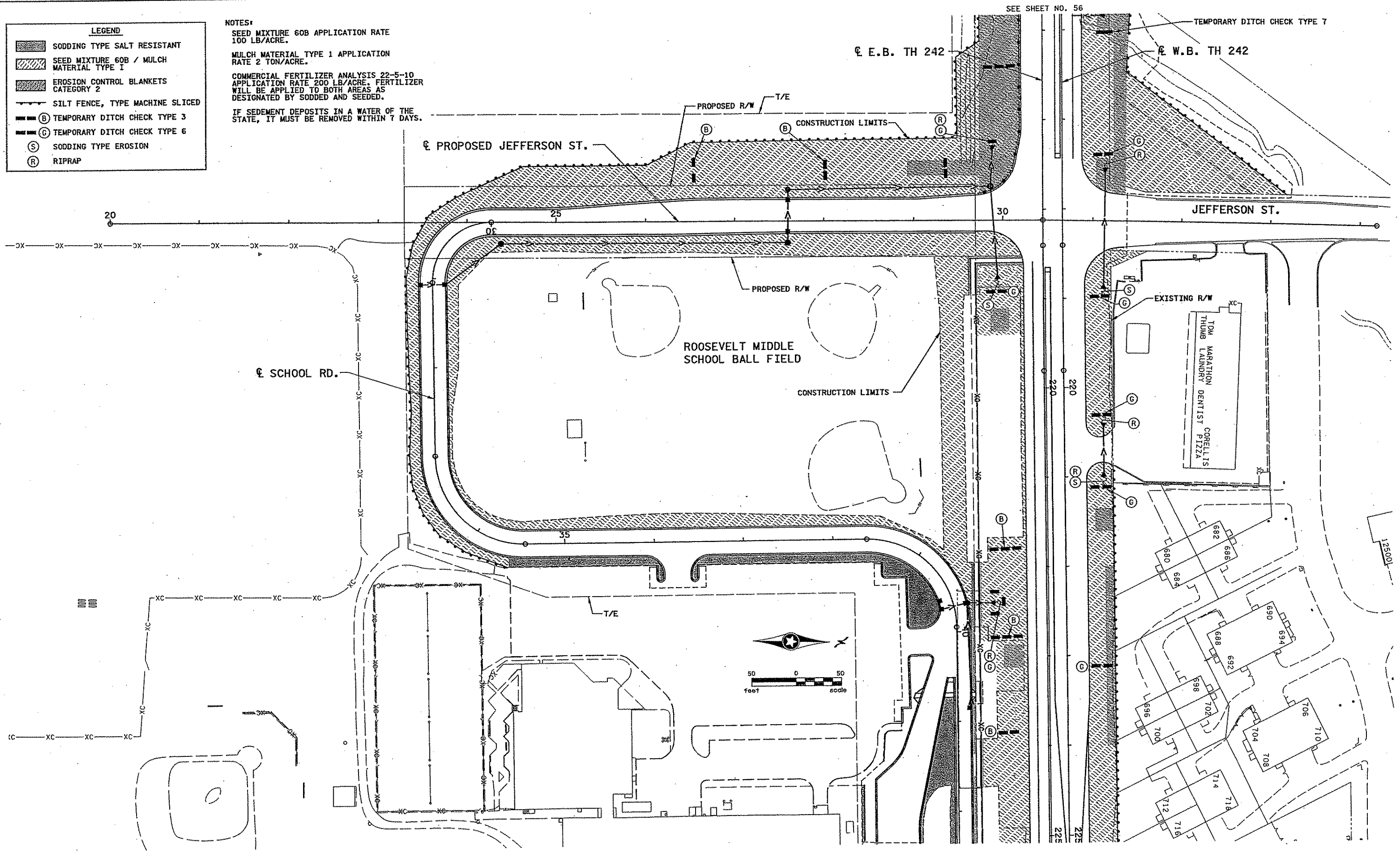
SRF CONSULTING GROUP, INC.

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 4/18/02
 4/18/02
 4/18/02

LEGEND

	SODDING TYPE SALT RESISTANT
	SEED MIXTURE 60B / MULCH MATERIAL TYPE 1
	EROSION CONTROL BLANKETS CATEGORY 2
	SILT FENCE, TYPE MACHINE SLICED
	TEMPORARY DITCH CHECK TYPE 3
	TEMPORARY DITCH CHECK TYPE 6
	SODDING TYPE EROSION
	RIPRAP

NOTES:
 SEED MIXTURE 60B APPLICATION RATE 100 LB/ACRE.
 MULCH MATERIAL TYPE 1 APPLICATION RATE 2 TON/ACRE.
 COMMERCIAL FERTILIZER ANALYSIS 22-5-10 APPLICATION RATE 200 LB/ACRE. FERTILIZER WILL BE APPLIED TO BOTH AREAS AS DESIGNATED BY SODDED AND SEEDED.
 IF SEDIMENT DEPOSITS IN A WATER OF THE STATE, IT MUST BE REMOVED WITHIN 7 DAYS.



SEE SHEET NO. 56

M:\GIS\11\047\1102\plans\... .reo
 SRF#
 PLOTTER#
 SCALE#
 07/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.TEE DATE: Apr. 04, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 7-12-02 License # 26391

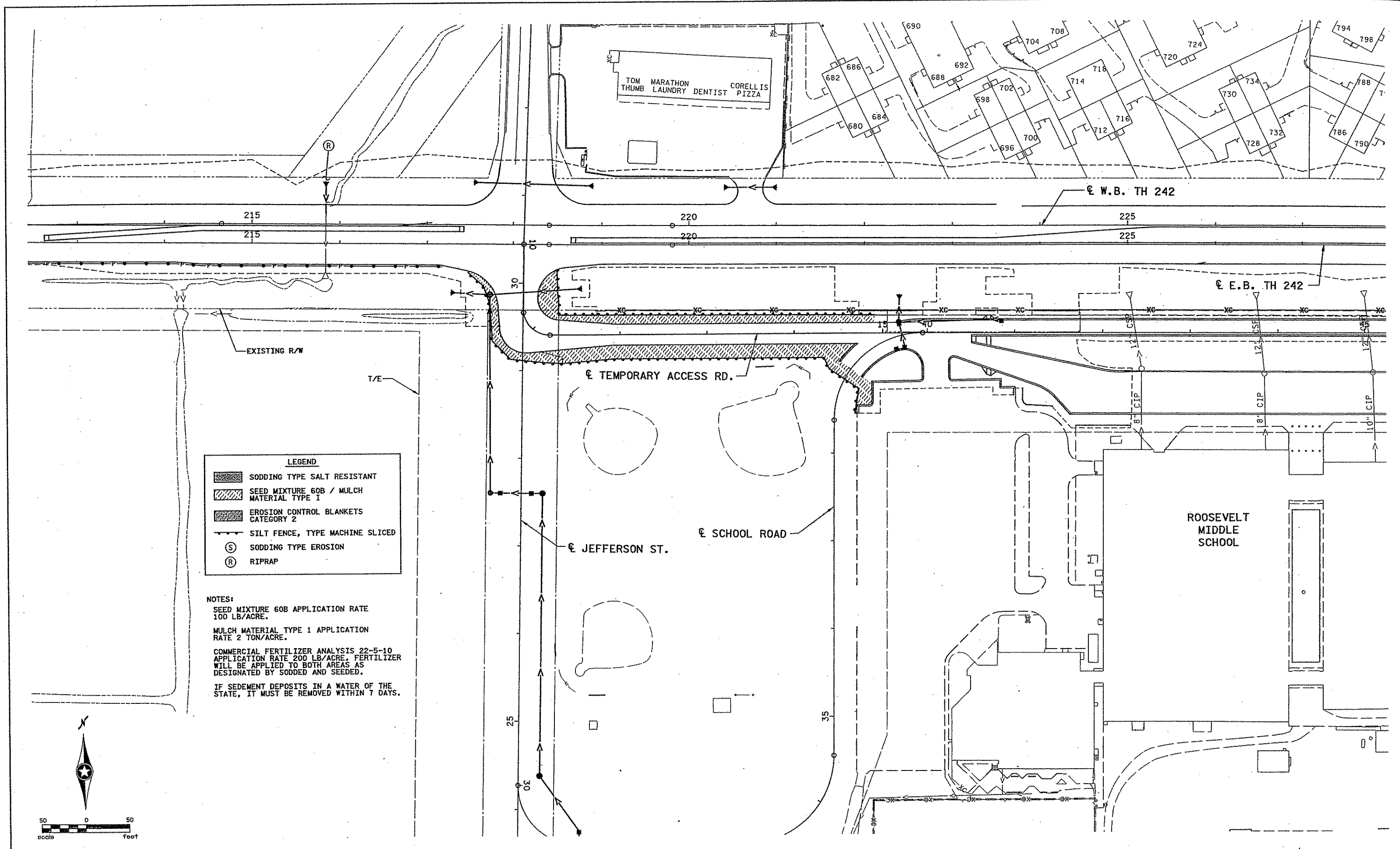
STATE AID PROJECT NO.
 S.P. 106-010-1B
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL PLANS
 TH 242
 STA. 20+00 TO STA. 34+00 (JEFFERSON ST)

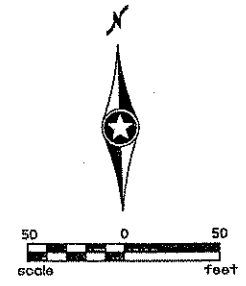
SHEET 57 OF 139



LEGEND

	SODDING TYPE SALT RESISTANT
	SEED MIXTURE 60B / MULCH MATERIAL TYPE 1
	EROSION CONTROL BLANKETS CATEGORY 2
	SILT FENCE, TYPE MACHINE SLICED
	SODDING TYPE EROSION
	RIPRAP

NOTES:
 SEED MIXTURE 60B APPLICATION RATE 100 LB/ACRE.
 MULCH MATERIAL TYPE 1 APPLICATION RATE 2 TON/ACRE.
 COMMERCIAL FERTILIZER ANALYSIS 22-5-10 APPLICATION RATE 200 LB/ACRE. FERTILIZER WILL BE APPLIED TO BOTH AREAS AS DESIGNATED BY SODDED AND SEEDED.
 IF SEDEMENT DEPOSITS IN A WATER OF THE STATE, IT MUST BE REMOVED WITHIN 7 DAYS.



NO	DATE	BY	CKD	APPR	REVISION

NAME: 402.TEF DATE: Apr. 04, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL 4-02
 CHECKED BY: N. WILL 5-02
 COMM. NO. 0014102

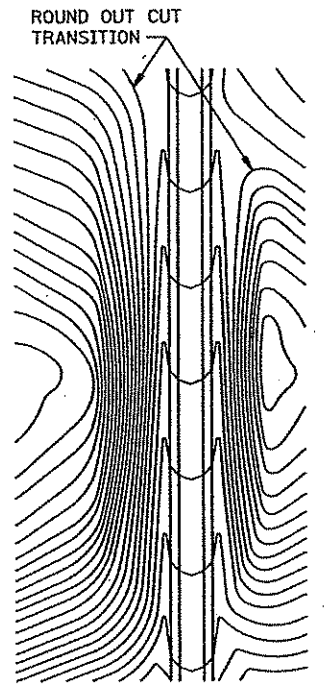
SRE CONSULTING GROUP, INC.

ANOKA COUNTY
 TURF ESTABLISHMENT PLAN AND EROSION CONTROL
 TH 242
 TEMPORARY ACCESS ROAD

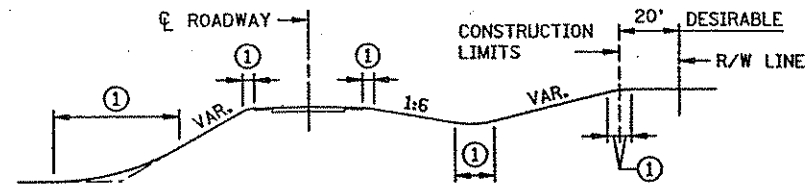
SHEET 58 OF 139

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 SRF# 402.TEF
 SDC/LS
 07/11/2002

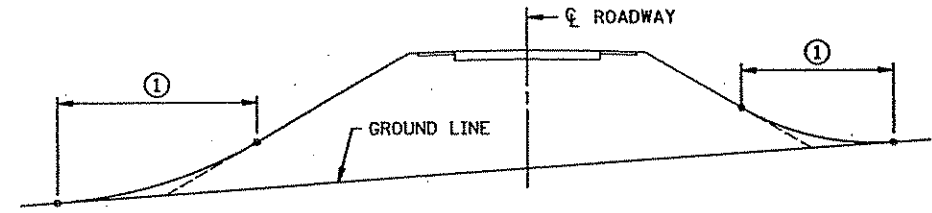
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 FILE NAME S404L90.SPN



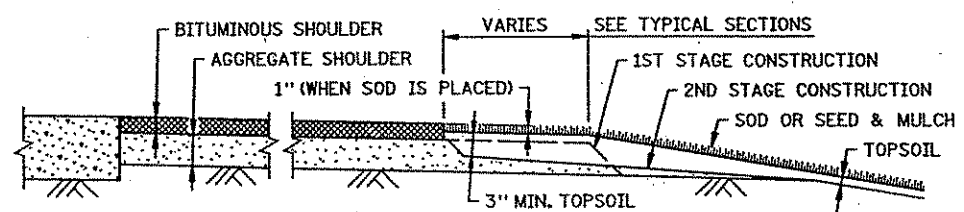
CONTOURING ROAD CUTS



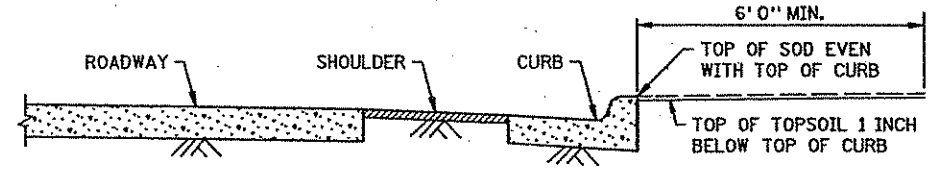
ROUNDING SHOULDERS AND BACKSLOPES



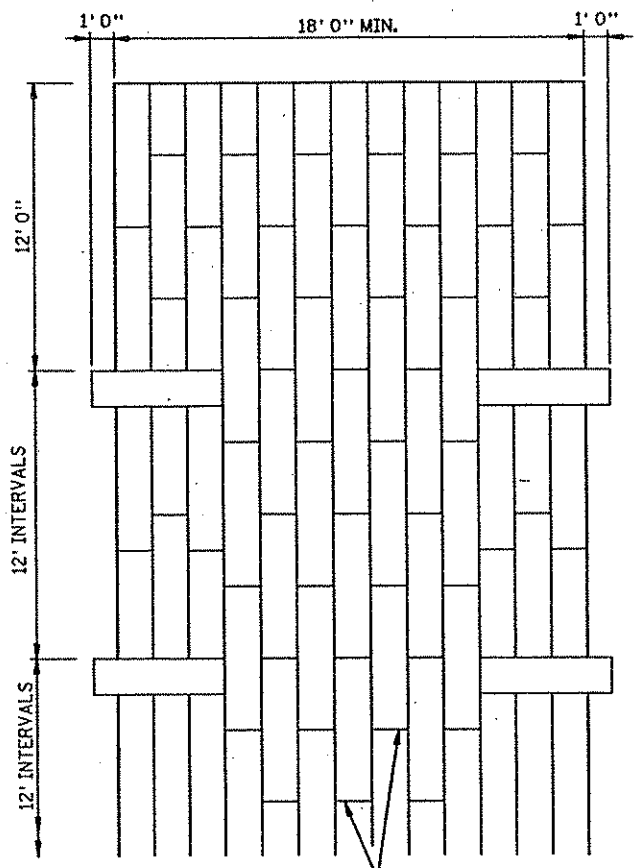
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



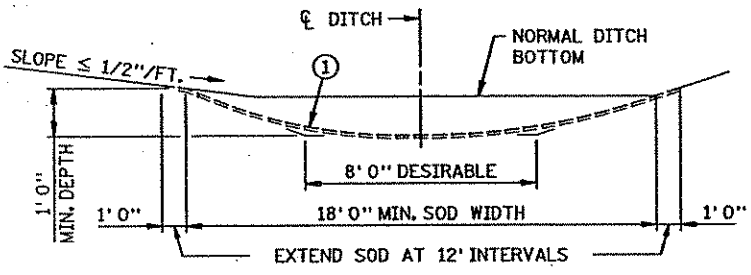
SHAPING AND TOPSOILING INSLOPES



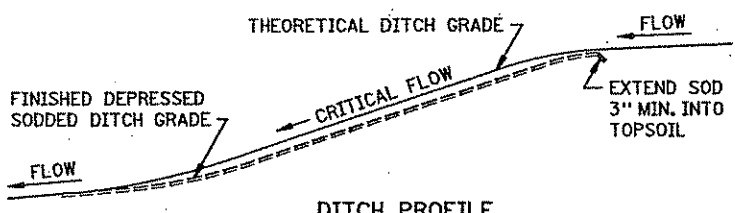
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



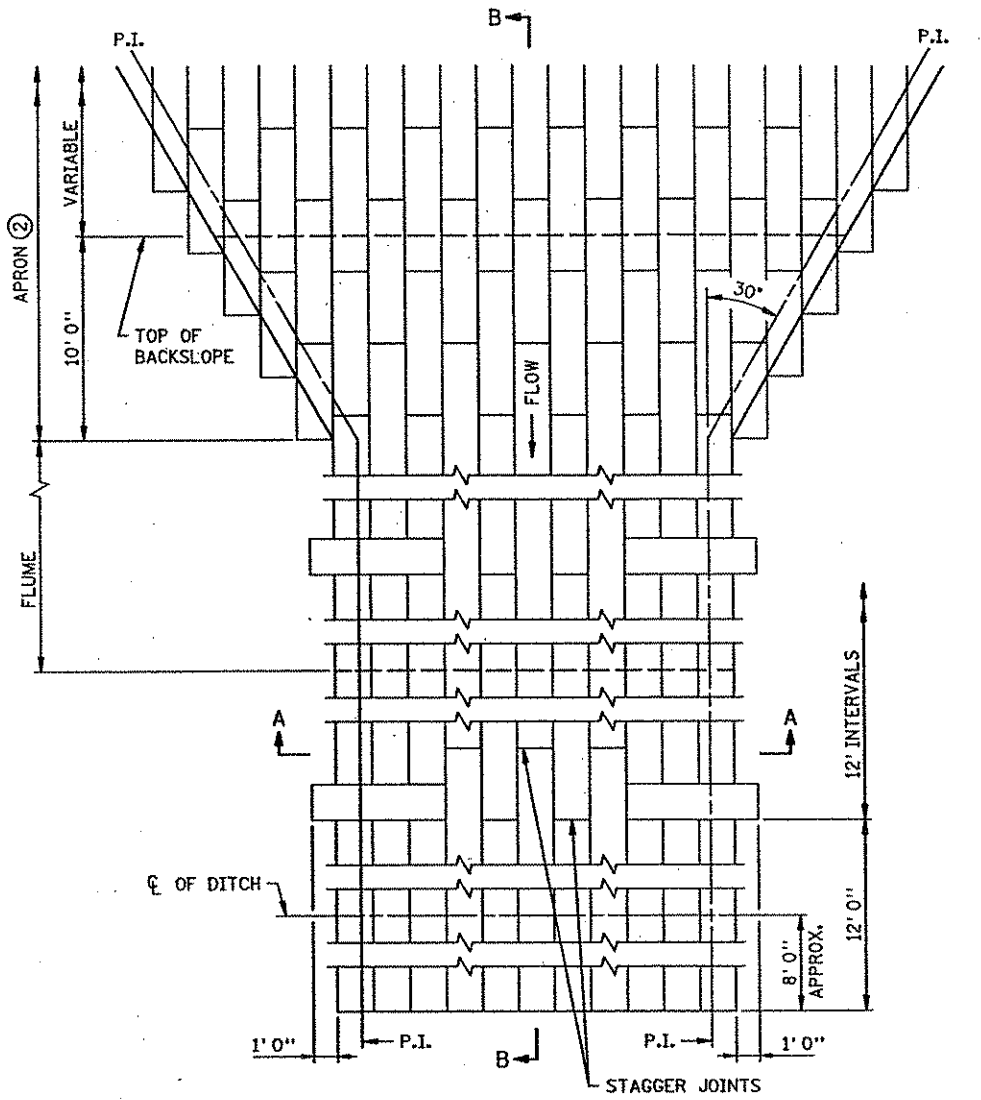
STAGGER JOINTS
PLAN VIEW



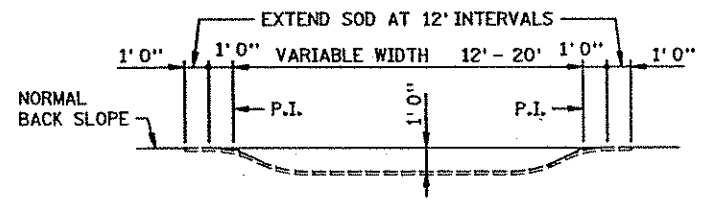
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



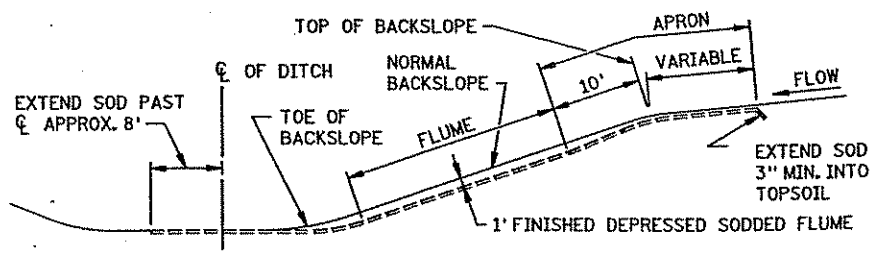
DITCH PROFILE
SODDED DITCH DETAILS



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.

REVISION DATE
10-26-2000

STANDARD SHEET NO. 5-297.404	TITLE
STANDARD APPROVED: DECEMBER 19, 1990	

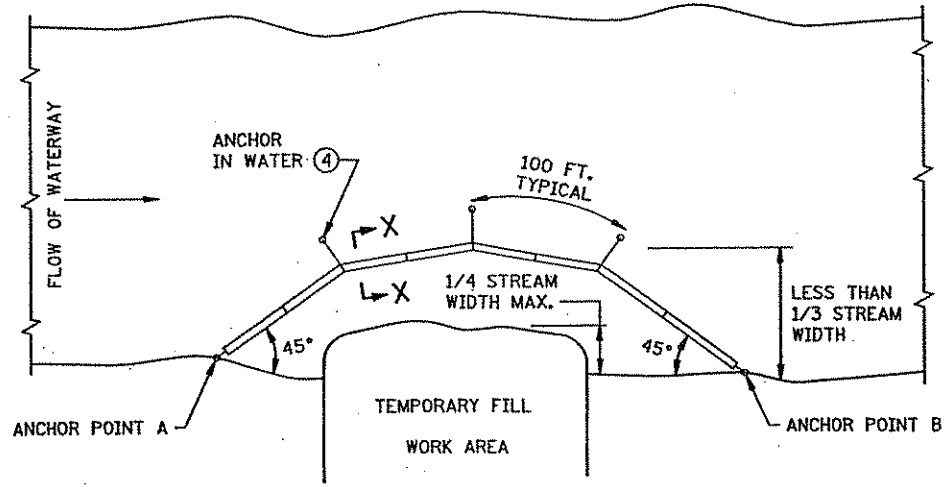
PERMANENT EROSION CONTROL
 ALONG ROADWAYS, DITCHES AND FLUMES

PLOTTED/REVISED: \$\$\$DATE\$\$\$

\$\$\$PATHFILENAME\$\$\$

PATH & FILE NAME:

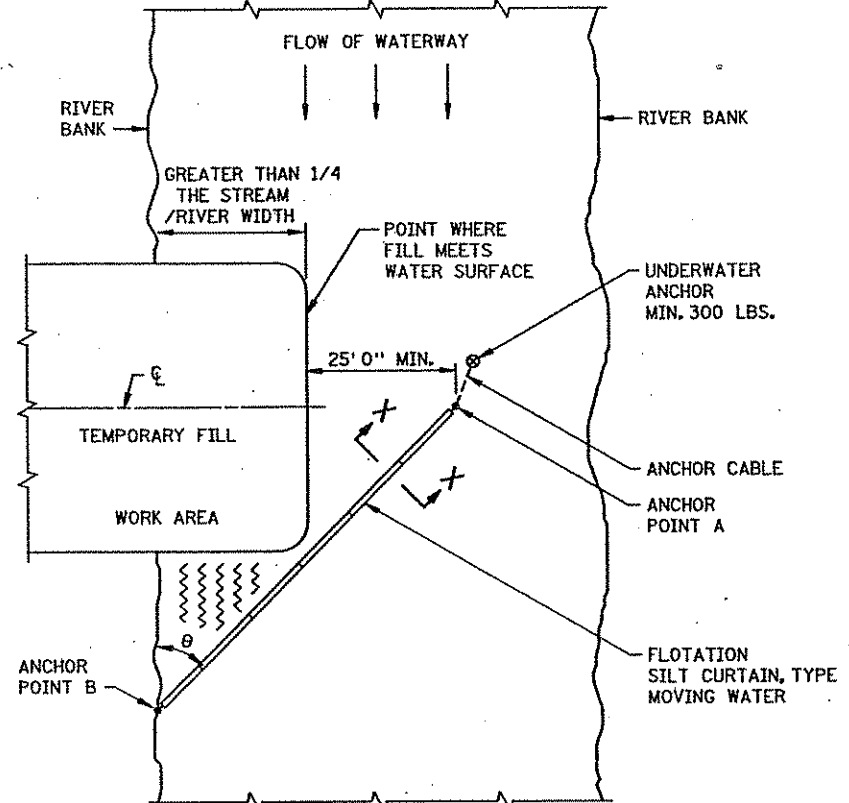
IPLLOT NAME: \$\$\$IPLLOTNAME\$\$\$
FILE NAME S405IG01.SPN



PLAN VIEW
FLOTATION SILT CURTAIN - TYPE WORK AREA
(SPEC. 3887.)

FOR CONTAINING OVERFLOWS FROM WEIRS, STANDPIPES, SETTLING PONDS

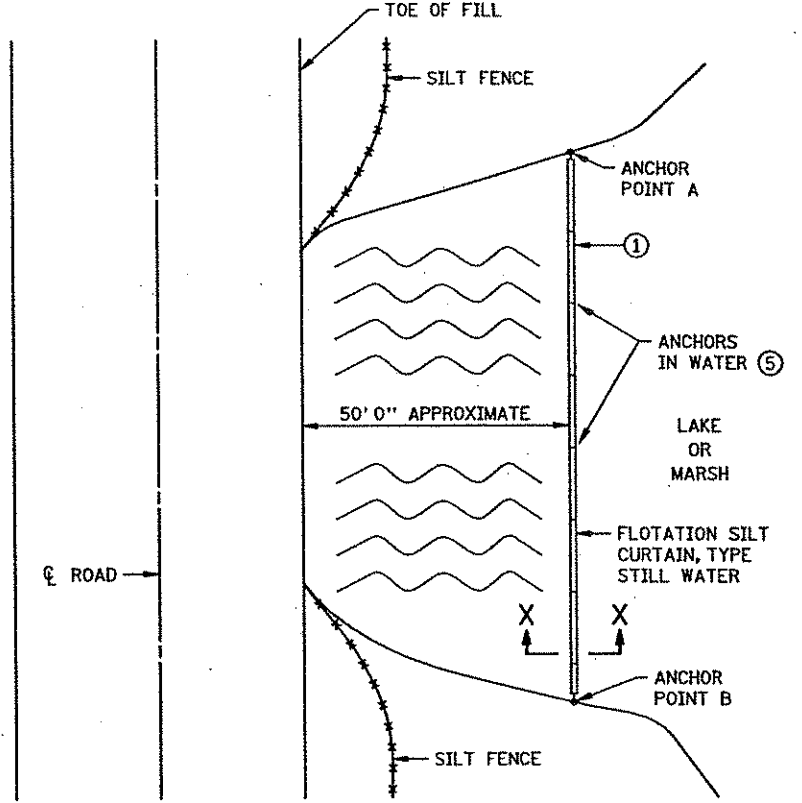
DESIGN GUIDELINES:
WHEN TEMPORARY FILL ENCLOSES LESS THAN 1/4 OF THE WIDTH OF STREAM.
MAXIMUM WATER VELOCITY: 5 FT./SEC.
MAXIMUM WATER DEPTH: 11 FT.



∠ θ	RIVER VELOCITY
45°	SLOW, LESS THAN 3 FT./SEC.
35°	MODERATE, 3 - 5 FT./SEC.

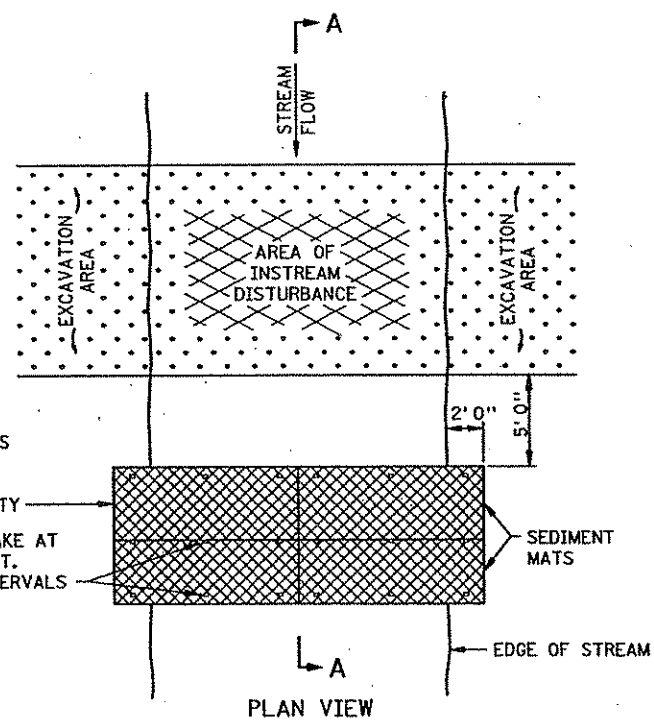
PLAN VIEW
FLOTATION SILT CURTAIN - TYPE MOVING WATER
(SPEC. 3887.)

DESIGN GUIDELINES:
WHEN TEMPORARY FILL ENCLOSES MORE THAN 1/4 BUT LESS THAN 1/3 WIDTH OF THE STREAM.
MAXIMUM WATER DEPTH: 11 FT. ①
MINIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.

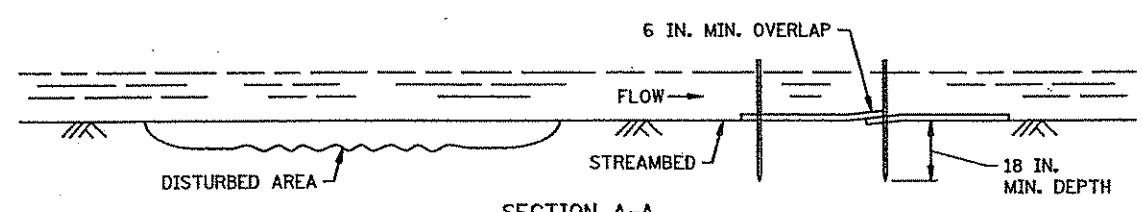


PLAN VIEW
FLOTATION SILT CURTAIN - TYPE STILL WATER
(SPEC. 3887.)

DESIGN GUIDELINES:
MAXIMUM WATER DEPTH: 11 FT. ①
MINIMUM WATER DEPTH: 3 FT.



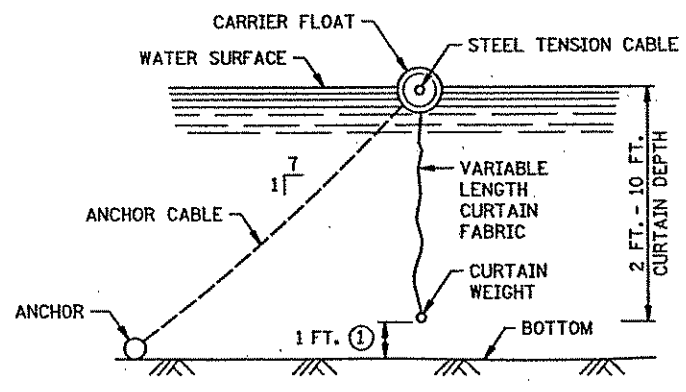
PLAN VIEW



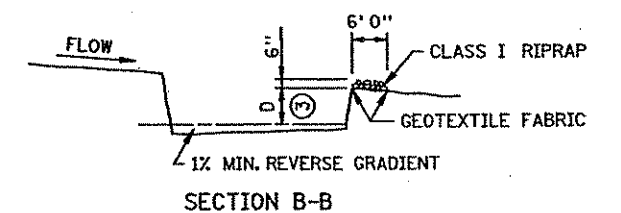
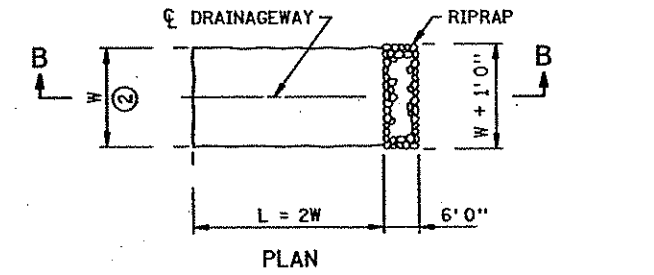
SECTION A-A
SEDIMENT MAT
(SPEC. 3894.)

TYPICAL STREAMBED INSTALLATION

DESIGN GUIDELINES:
MAXIMUM FLOW VELOCITY: 5 FT./SEC.
MAXIMUM FLOW DEPTH: 2 FT.



SECTION X-X
FLOTATION SILT CURTAINS
(SPEC. 3887.)



SECTION B-B
SEDIMENT TRAP DETAIL
(SPEC. 2573.)

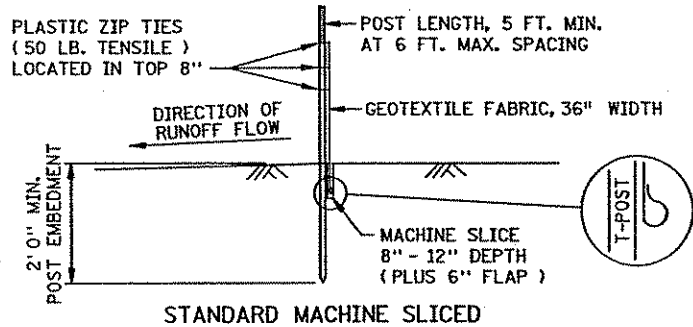
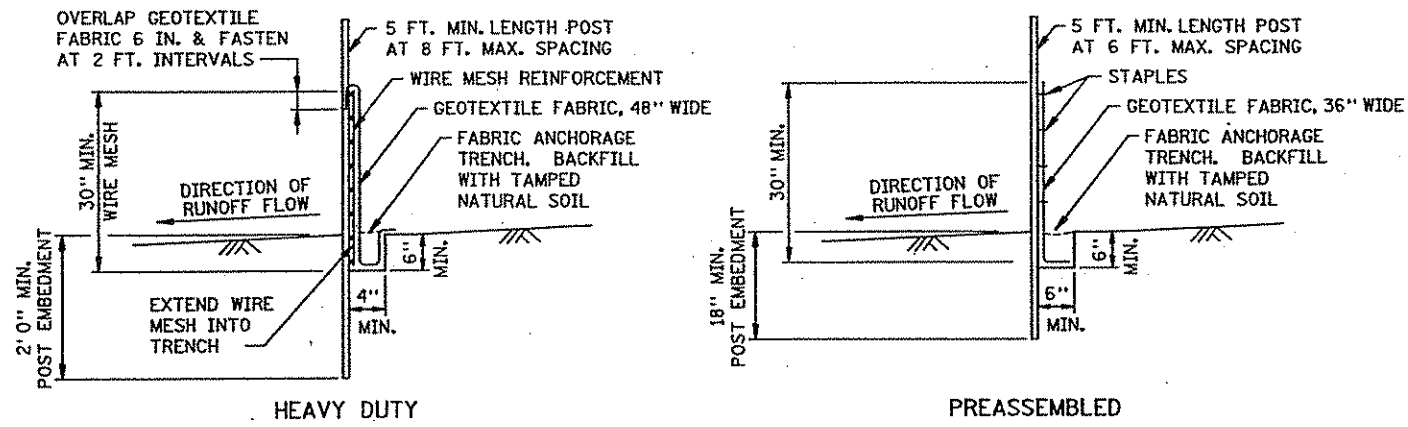
- NOTES:**
SEE SPECS. 2573, 3887 & 3894.
- ① CURTAIN 1 FT. FROM BOTTOM
 - ② W = 10 FT. MIN., 20 FT. MAX.
 - ③ D = 2 FT.
 - ④ 100 FT. MAX. SPACING BETWEEN ANCHORS, MIN. 40 LBS.
 - ⑤ USE ENOUGH ANCHORS TO HOLD SILT CURTAIN IN PLACE.

STANDARD SHEET NO.
5-297.405 (1 OF 4)
STANDARD APPROVED:
July 30, 2001

TITLE:

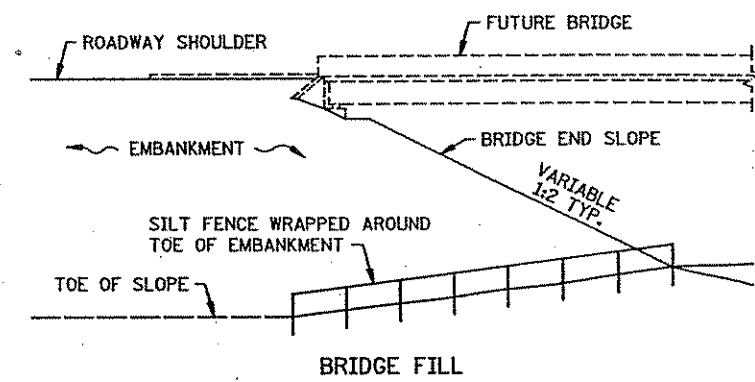
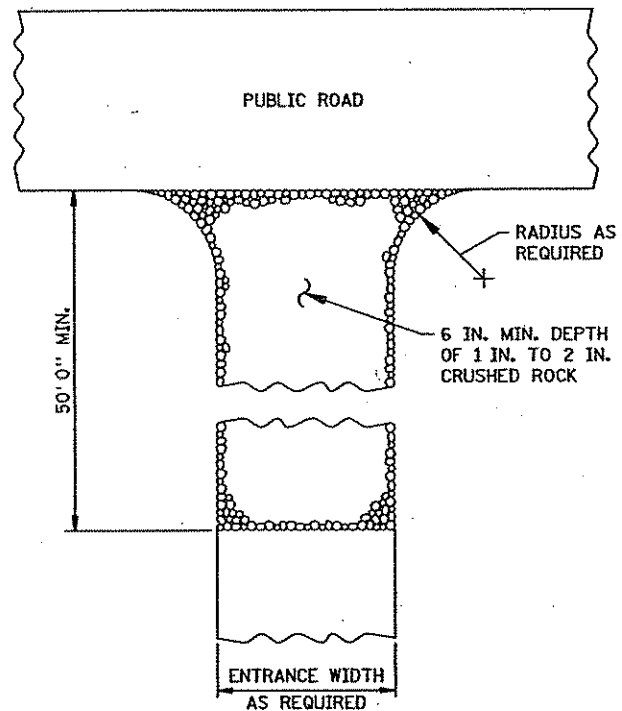
TEMPORARY EROSION CONTROL

PLOTTED/REVISED: \$\$\$@DATE\$\$\$
 \$\$\$@PATHFILENAME\$\$\$
 \$\$\$@IPLOTNAME\$\$\$
 \$\$\$@IPLOTNAME\$\$\$ PATH & FILE NAME:
 FILE NAME: S4052G01.SPN

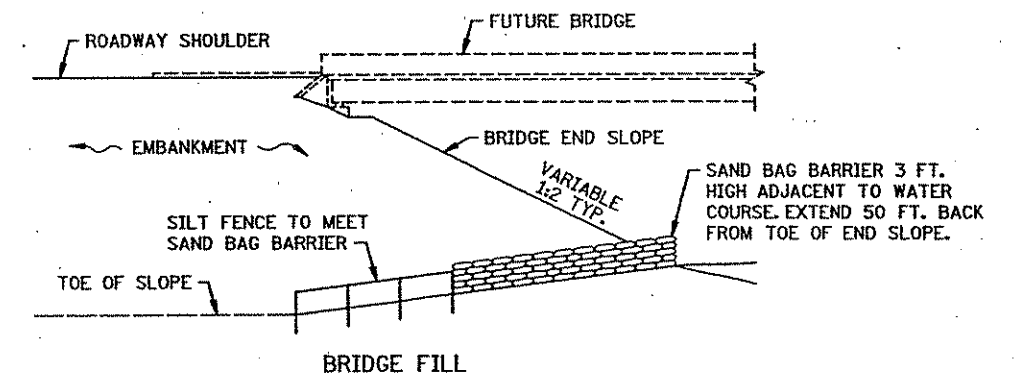


DESIGN GUIDELINES:
 MAXIMUM CONTRIBUTING AREA: 3 ACRES

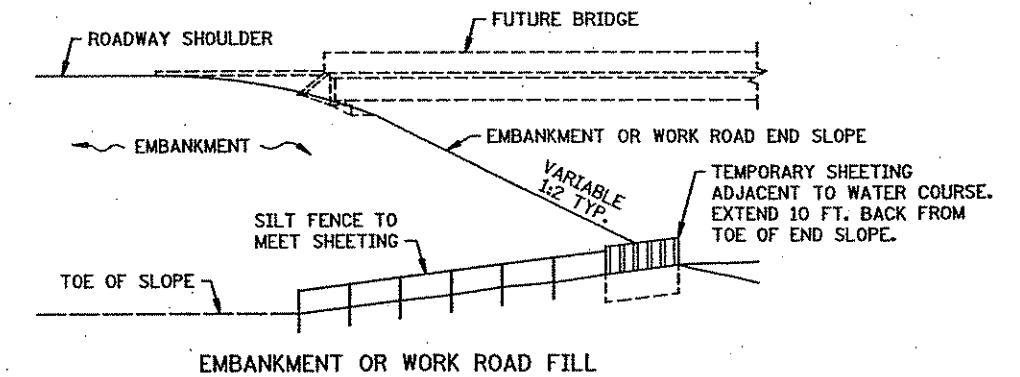
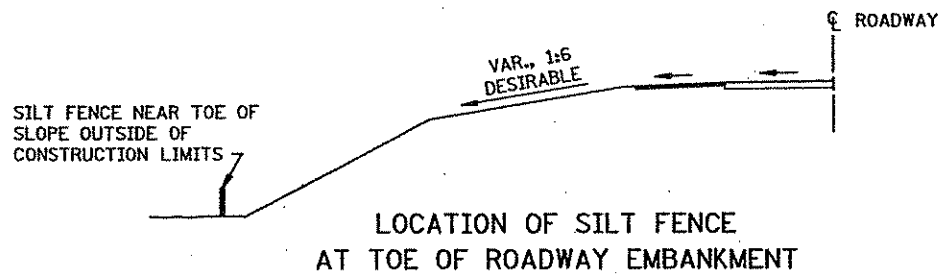
SILT FENCE DETAILS
 TO PROTECT AREAS FROM SHEET FLOW
 (SEE SPEC. 3886)



DESIGN GUIDELINES:
 WATER COURSE FLOW VELOCITY: STAGNANT
 CONTRIBUTING SLOPE AREA: 1/2 ACRE



DESIGN GUIDELINES:
 MAX. WATER COURSE FLOW VELOCITY: 7 FT./SEC.
 CONTRIBUTING SLOPE AREA: 1 ACRE

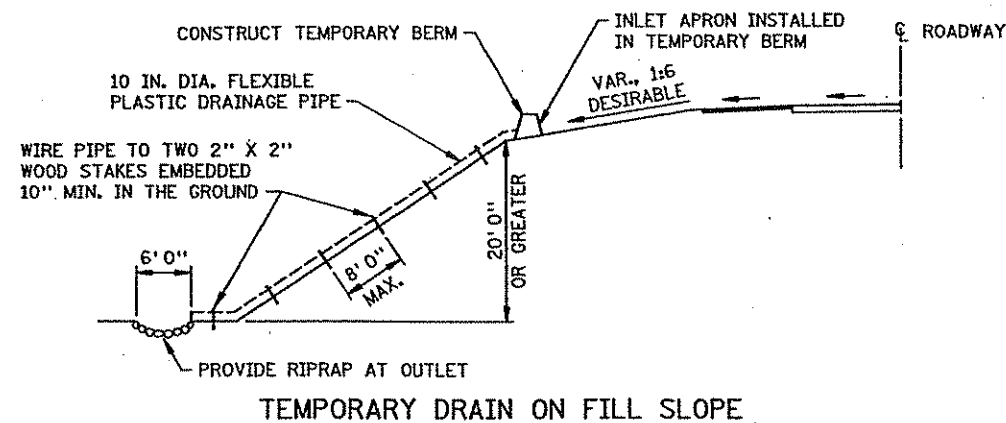


DESIGN GUIDELINES:
 MAX. WATER COURSE FLOW VELOCITY: 15 FT./SEC.
 CONTRIBUTING SLOPE AREA: 3 ACRES

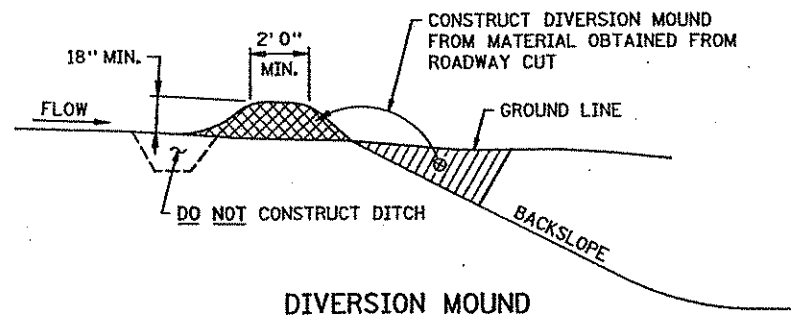
SILT FENCE AT BRIDGE EMBANKMENT

NOTES:
 SEE SPECS. 2573 & 3886.

① ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE DRIVING ON MAIN ROAD. THIS WILL PREVENT AUTO DAMAGE. WE NEED TO KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS.



DESIGN GUIDELINES:
 STORM FREQUENCY: 2 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 3 ACRES



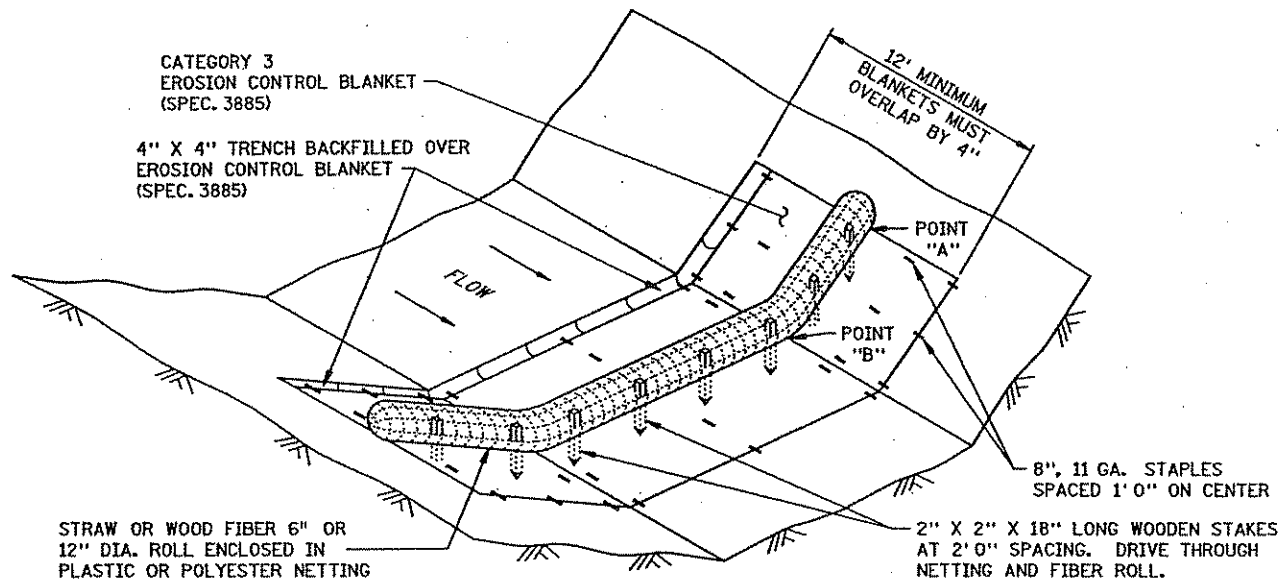
DESIGN GUIDELINES:
 STORM FREQUENCY: 10 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 5 ACRES
 MAXIMUM DIVERSION: GRADE 5%

STANDARD SHEET NO.
 5-297.405 (2 OF 4)
 STANDARD APPROVED:
 JULY 30, 2001

TITLE:

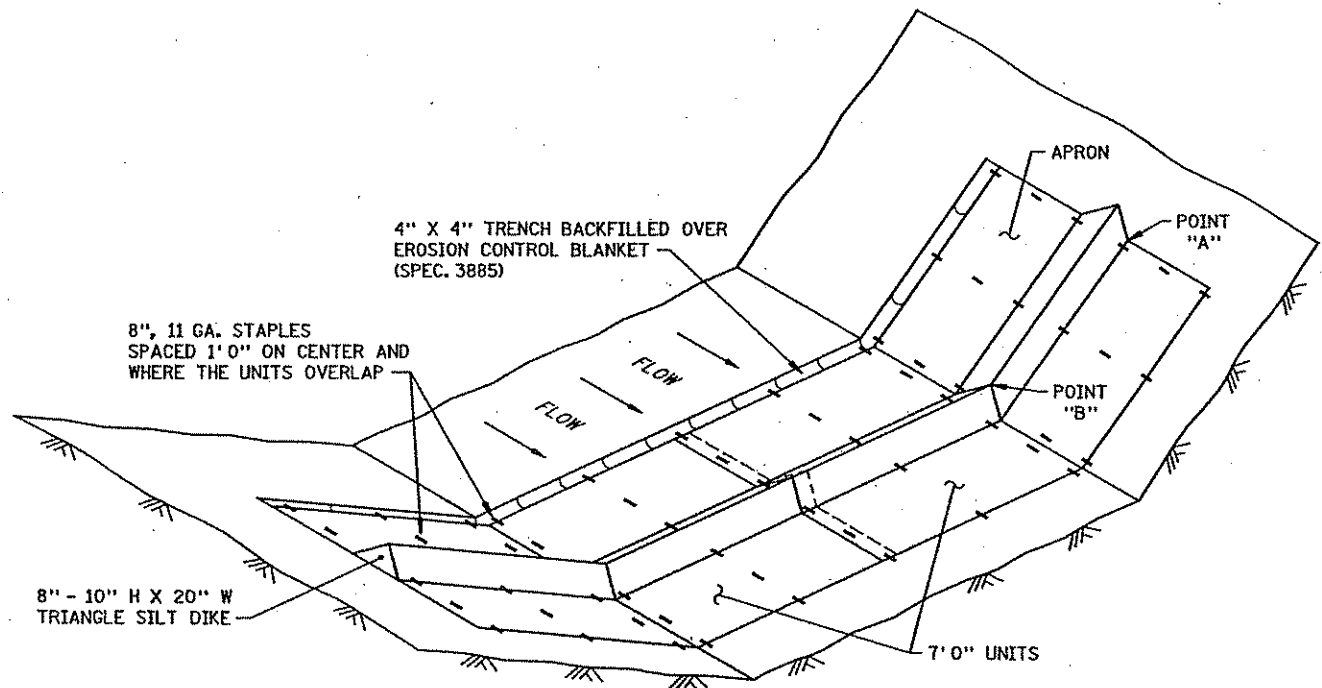
TEMPORARY EROSION CONTROL

PLOT NAME: \$\$\$@LOT\$NAME\$\$\$ FILE NAME: \$\$\$@PATH\$FILENAME\$\$\$ PLOT DATE: \$\$\$@DATE\$\$\$
 PLOT NAME: \$\$\$@LOT\$NAME\$\$\$ FILE NAME: \$\$\$@PATH\$FILENAME\$\$\$ PLOT DATE: \$\$\$@DATE\$\$\$



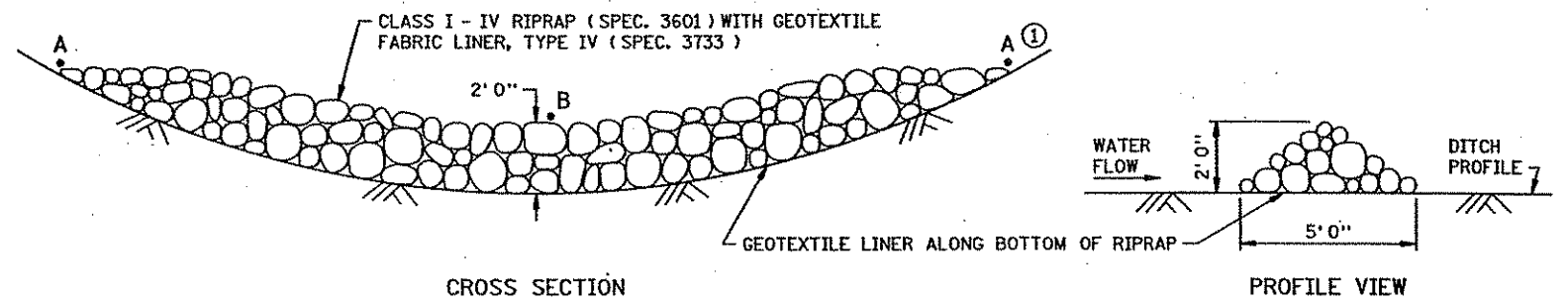
POINT "A" MUST BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

BIOROLL BLANKET SYSTEM
(TYPE 3 SPEC. 3889)

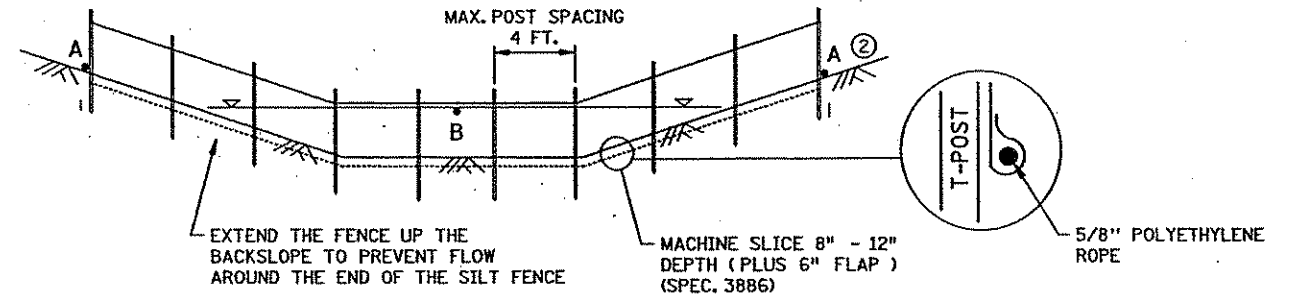


POINT "A" MUST BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

GEOTEXTILE TRIANGULAR DIKE
(TYPE 6 SPEC. 3889)



ROCK CHECK
(TYPE 7 SPEC. 3889)



DESIGN GUIDELINES	
STORM FREQUENCY	2 YR.- 24 HR.
MAX. DITCH GRADE	5%
MAX. DRAINAGE AREA	1 ACRE

NOTE:
WHEN SEDIMENT BUILD UP REACHES 1.5 FT., THE SILT SHOULD BE REMOVED OR A SECOND SILT FENCE BUILT UPSTREAM FROM THE EXISTING ONE AT A SUITABLE DISTANCE.

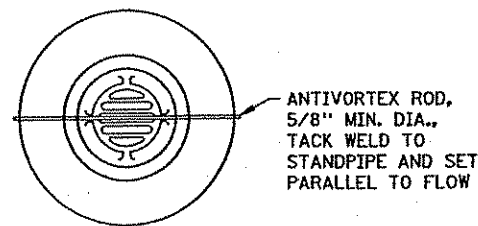
MACHINE SLICED
(TYPE 1 SPEC. 3889)

- NOTES:**
 SEE SPECS. 2573, 3885, 3886 & 3889.
 SPACING OF DITCH CHECKS IS DEPENDENT ON DRAINAGE AREA AND GRADES. SEE DISTRICT HYDRAULICS ENGINEER FOR RECOMMENDATIONS.
 ① POINT A MUST BE 2'6" MIN. HIGHER THAN POINT B.
 ② POINT A MUST BE 2'0" MIN. HIGHER THAN POINT B.

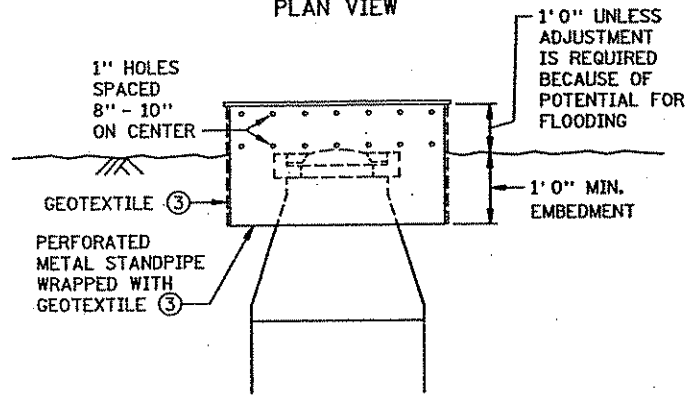
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\$\$\$@PATH@FILENAME@\$\$\$

I PLOT NAME: \$\$\$@IPLLOT@NAME@\$\$\$ PATH & FILE NAME: FILE NAME \$\$\$@5405401.SPN



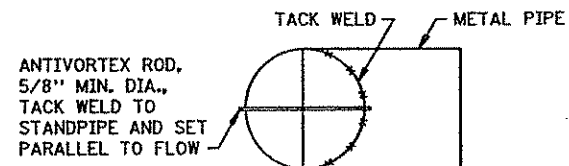
PLAN VIEW



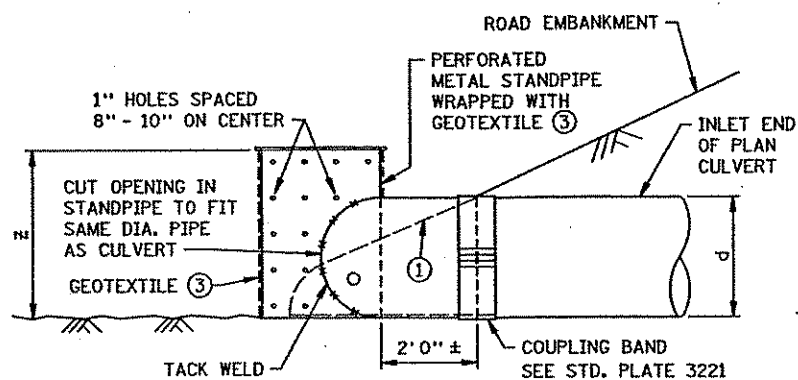
ELEVATION

RISER STANDPIPE TO PROTECT DROP INLET (TYPE A SPEC. 3891)

DESIGN GUIDELINES: STORM FREQUENCY: 10 YEAR - 24 HOUR.



PLAN VIEW



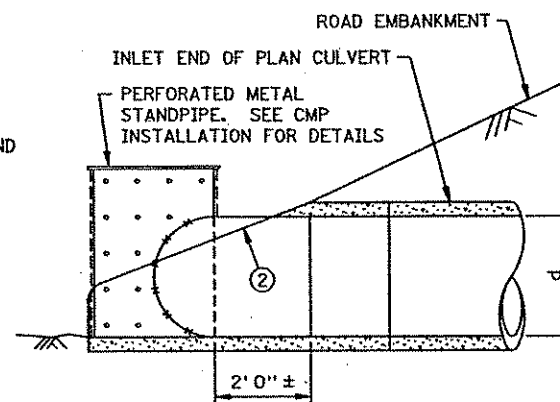
ELEVATION OF CMP INSTALLATION

RISER STANDPIPE

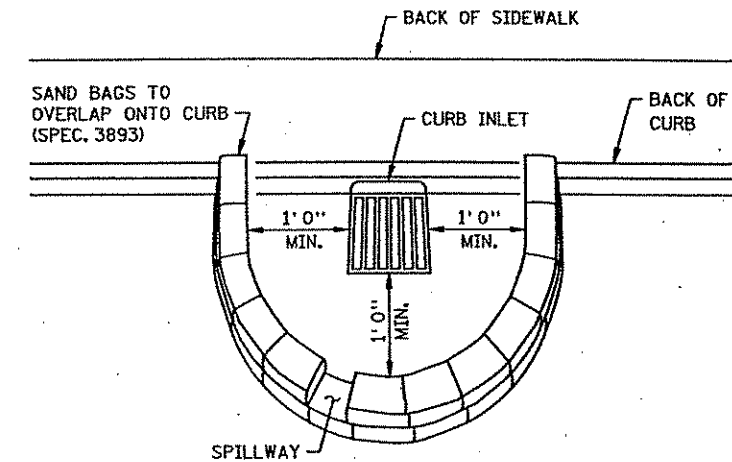
FOR SEDIMENT CONTROL ON CULVERT INLET (TYPE D SPEC. 3891)

d = DIA. OF STANDPIPE EQUAL TO DIA. OF PLAN CULVERT
z = LENGTH OF PERFORATED STANDPIPE (d + 12")

DESIGN GUIDELINES: CULVERT SIZE: 12" - 36" STORM FREQUENCY: 10 YR. - 24 HR.

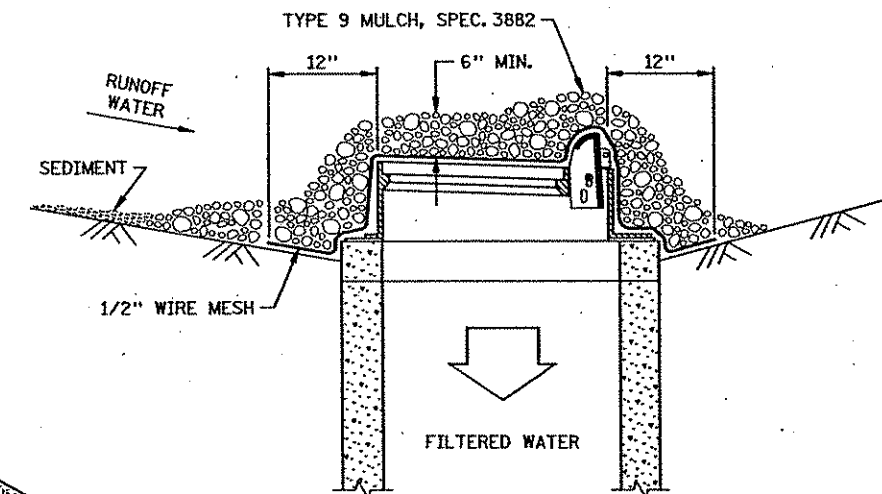


ELEVATION OF RCP INSTALLATION



CURB INLET SAND BAG BARRIER

THIS INLET PROTECTION IS USED DURING ROUGH GRADING ONLY. USE BEFORE ROAD IS OPEN TO TRAFFIC OR IS PAVED. (TYPE B OR C SPEC. 3891)

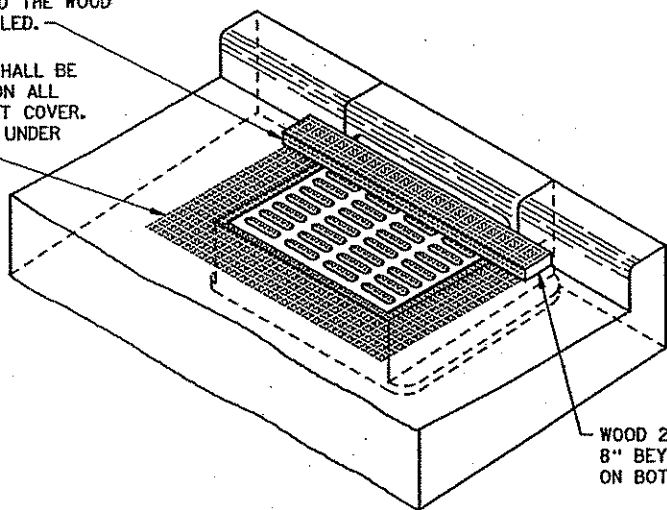


AGGREGATE FILTER AT CURB INLET

(TYPE B OR C SPEC. 3891)

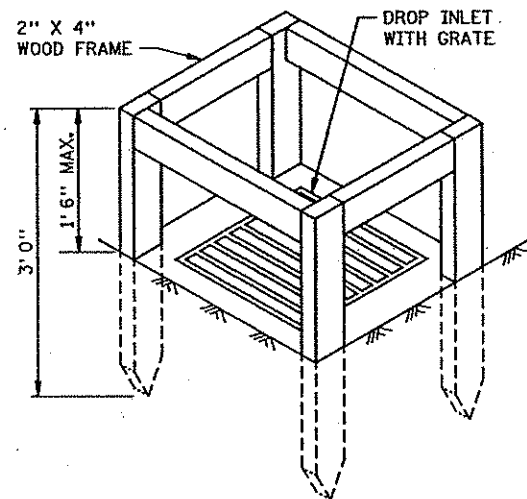
AN ADDITIONAL 18" OF GEOTEXTILE IS WRAPPED AROUND THE WOOD 2" X 4" AND STAPLED.

GEOTEXTILE SIZE SHALL BE 8" MIN. GREATER ON ALL SIDES OF THE INLET COVER. PLACE GEOTEXTILE UNDER INLET COVER. ③



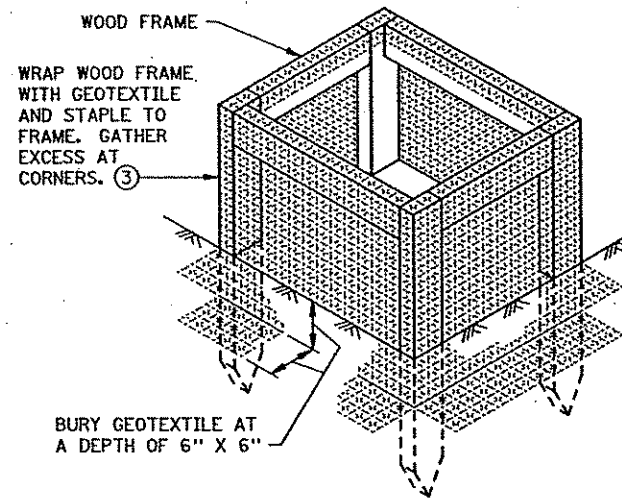
SILT FENCE BOX TO PROTECT DROP INLETS

(TYPE A SPEC. 3891)



SILT FENCE BOX TO PROTECT DROP INLETS

USE WHERE INLET DRAINS AN AREA WITH SLOPES AT 1:3 OR LESS (TYPE A SPEC. 3891)



NOTES:

- SEE SPECS. 2573, 3891 & 3893.
- MANUFACTURED ALTERNATIVES LISTED ON Mn/DOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED.
- ① FOR CMP, REMOVE TEMPORARY STANDPIPE AND INSTALL CULVERT APRON AFTER VEGETATION IS ESTABLISHED.
- ② FOR RCP, INSTALL CULVERT APRON AND SLIDE TEMPORARY STANDPIPE INTO RCP. AFTER VEGETATION IS ESTABLISHED REMOVE TEMPORARY STANDPIPE.
- ③ ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONO/MONO, MEETING SPEC. 3886 FOR MACHINE SLICED.

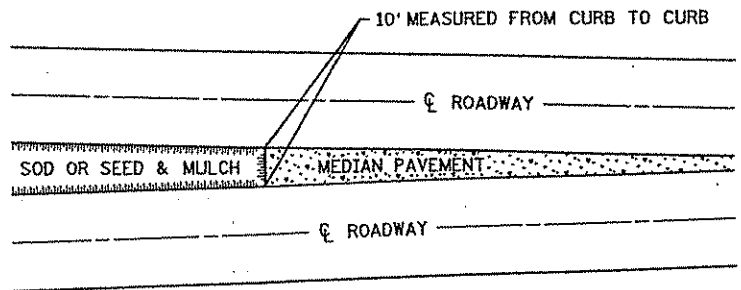
STANDARD SHEET NO. 5-297.405 (4 OF 4)	TITLE:
STANDARD APPROVED: JULY 30, 2001	

TEMPORARY EROSION CONTROL
TEMPORARY INLET PROTECTION

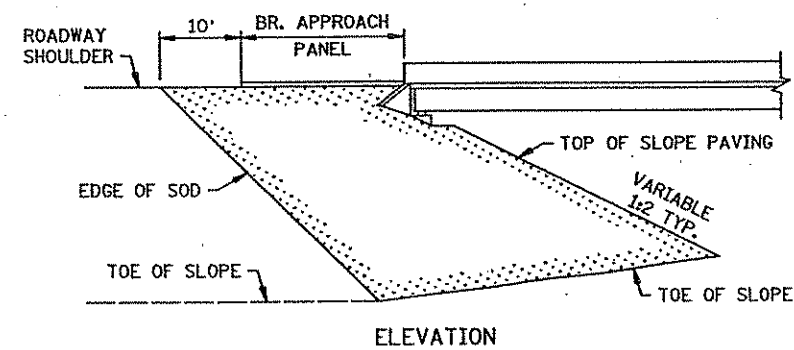
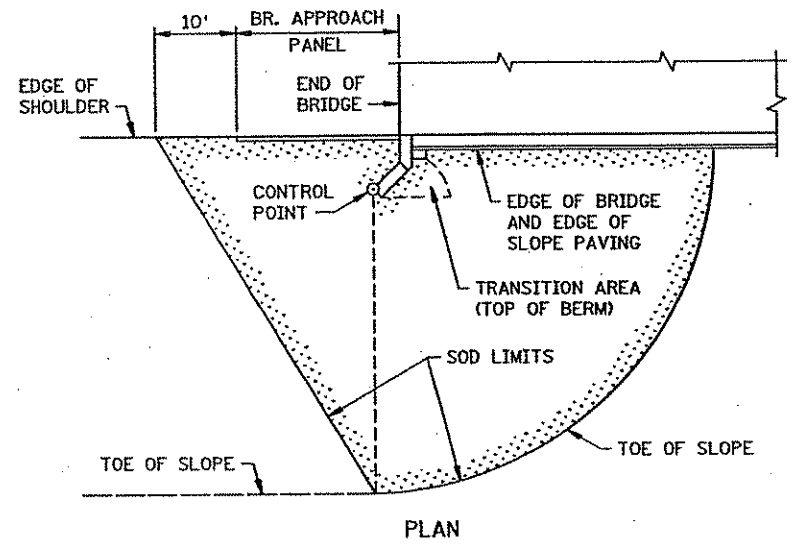
PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

\$\$\$@PATH@FILENAME@\$\$\$

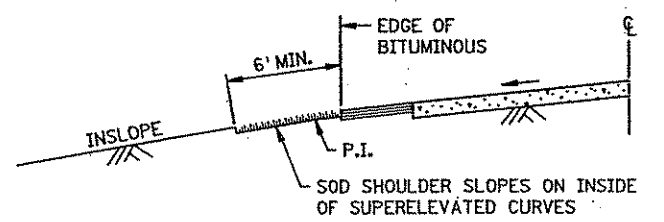
IPLOT NAME: \$\$\$@PLOT#NAME\$\$\$
PATH & FILE NAME:
FILE NAME S406A85.SPN



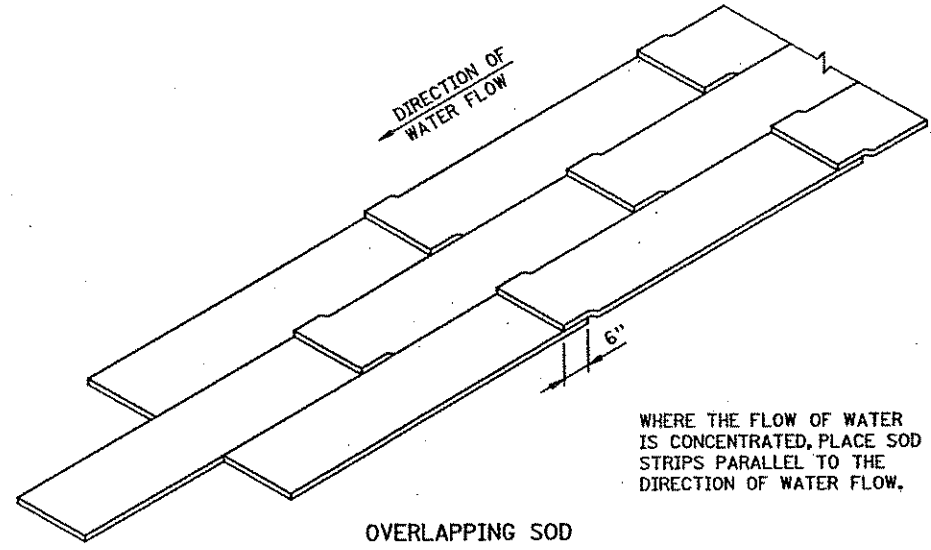
SODDING LIMITS AT GORE AREA



SODDING LIMITS AT BRIDGE APPROACH FILLS

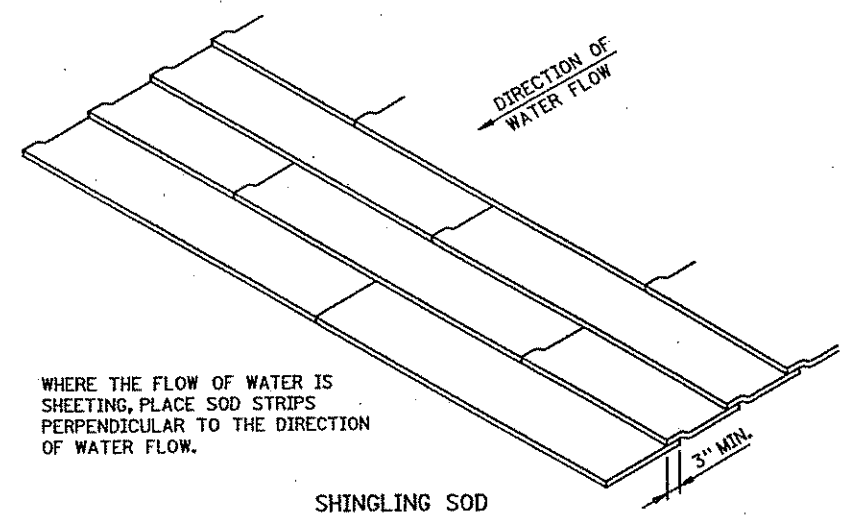


SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

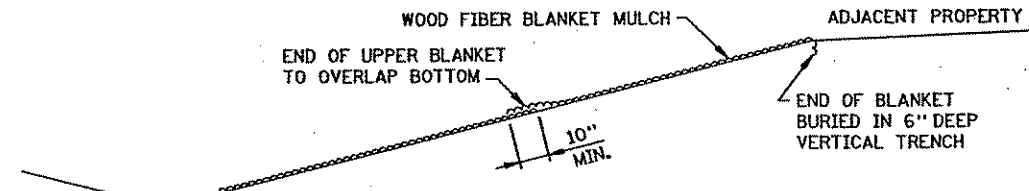
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.



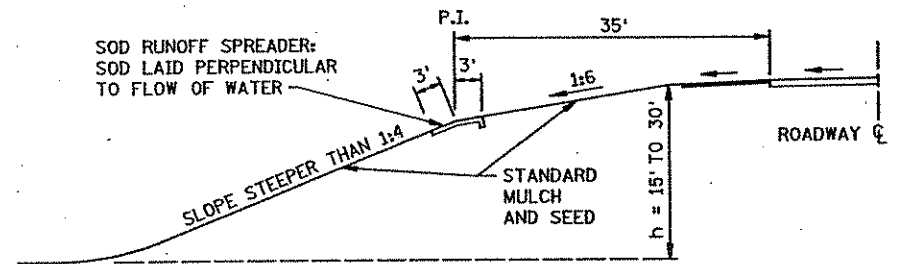
SHINGLING SOD

WHERE THE FLOW OF WATER IS SHEETING, PLACE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

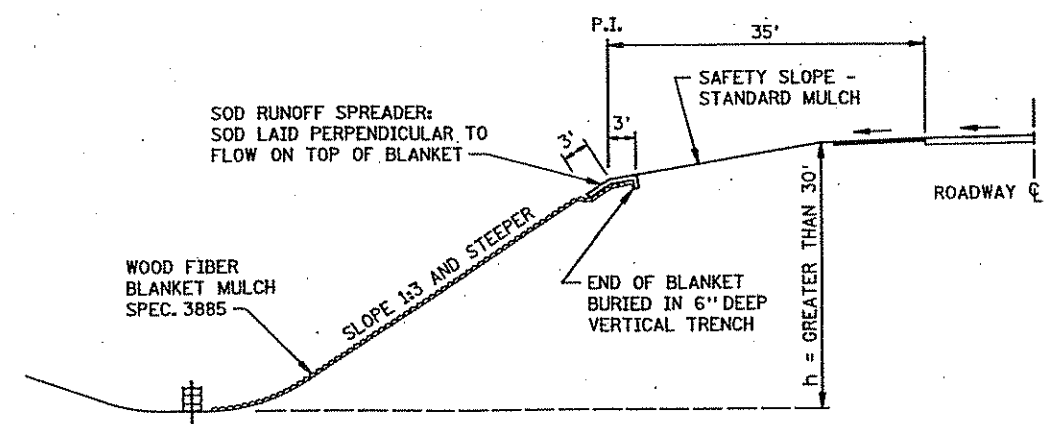
SPECIAL SOD PLACEMENT TECHNIQUES



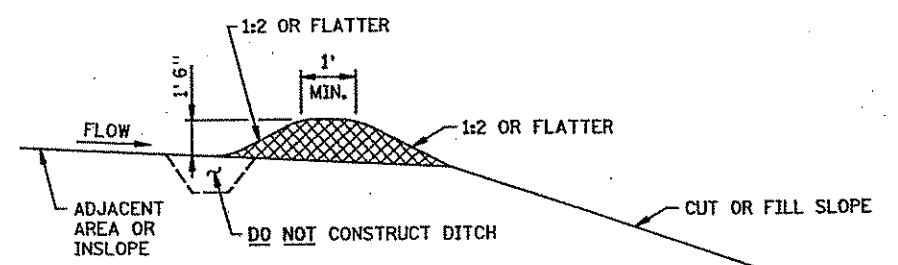
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)

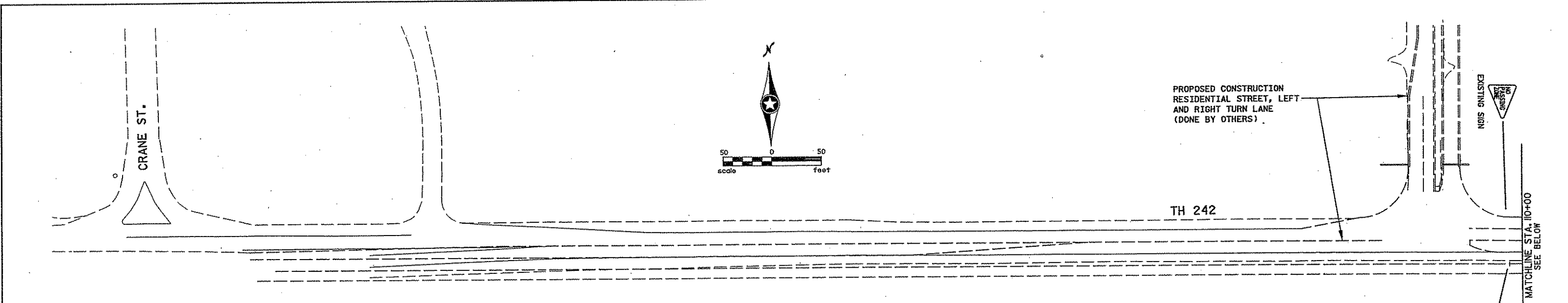


PERMANENT SLOPE PROTECTION DIKE

STANDARD SHEET NO. 5-297.406	TITLE:
STANDARD APPROVED: JANUARY 31, 1985	

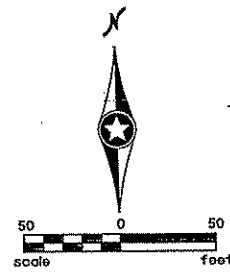
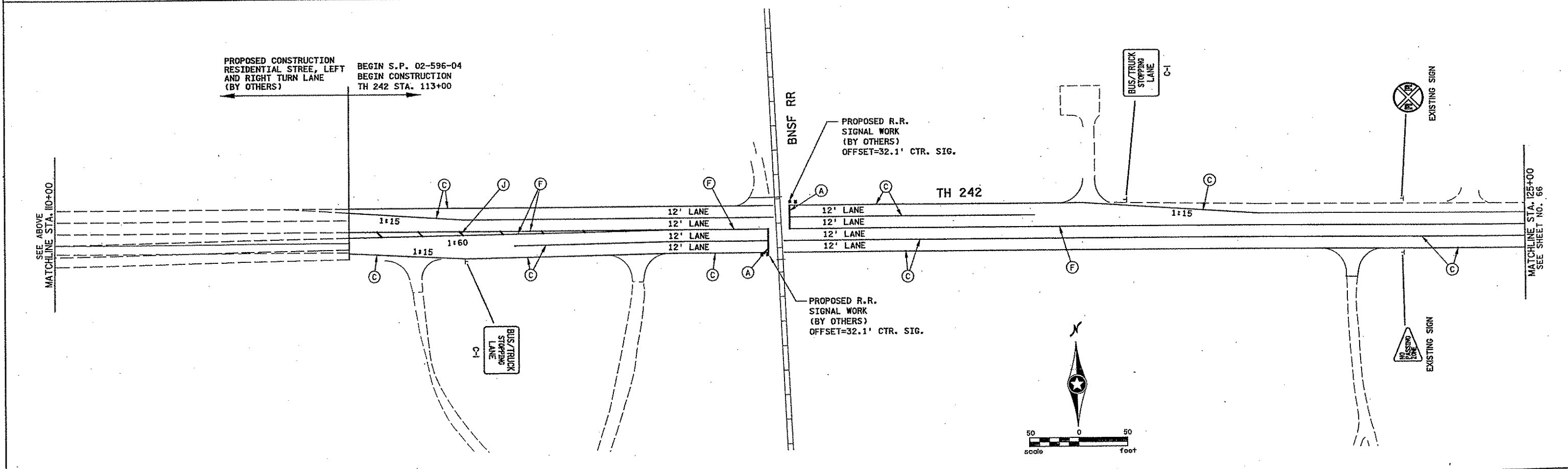
PERMANENT EROSION CONTROL
ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS

REVISION DATE
10-26-2000



- NOTES:
- (A) 24" STOP LINE WHITE-EPOXY
 - (C) 4" SOLID LINE WHITE-EPOXY
 - (F) 4" DOUBLE LINE YELLOW-EPOXY
 - (U) 24" SOLID LINE YELLOW-EPOXY 30' SPACING O.C. @ 45 DEGREES

- GENERAL NOTES:
1. ALL CONFLICTING SIGNING IDENTIFIED BY THE ENGINEER SHALL BE SALVAGED AND DELIVERED TO ANOKA COUNTY, SEE SPECIAL PROVISIONS, OR INSTALLED IN APPROXIMATE SAME LOCATION AS DIRECTED BY THE ENGINEER.
 2. MATCH EXISTING PAVEMENT MARKINGS AT PROJECT LIMITS, AS DIRECTED BY ENGINEER.
 3. ALL CONFLICTING PAVEMENT MARKINGS IDENTIFIED BY THE ENGINEER SHALL BE REMOVED. THE METHOD OF REMOVAL SHALL BE APPROVED BY THE ENGINEER.
 4. ALL EXISTING STREET NAME SIGNS SHALL BE SALVAGED AND INSTALLED IN NEW LOCATIONS, AS DIRECTED BY ENGINEER.



P:\AG11\110474\102\plans\ 81a
 SRF'S PLOTTER CALS 07/17/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.SIA DATE: Sep, 19, 2001

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 7-12-02 License: 26391

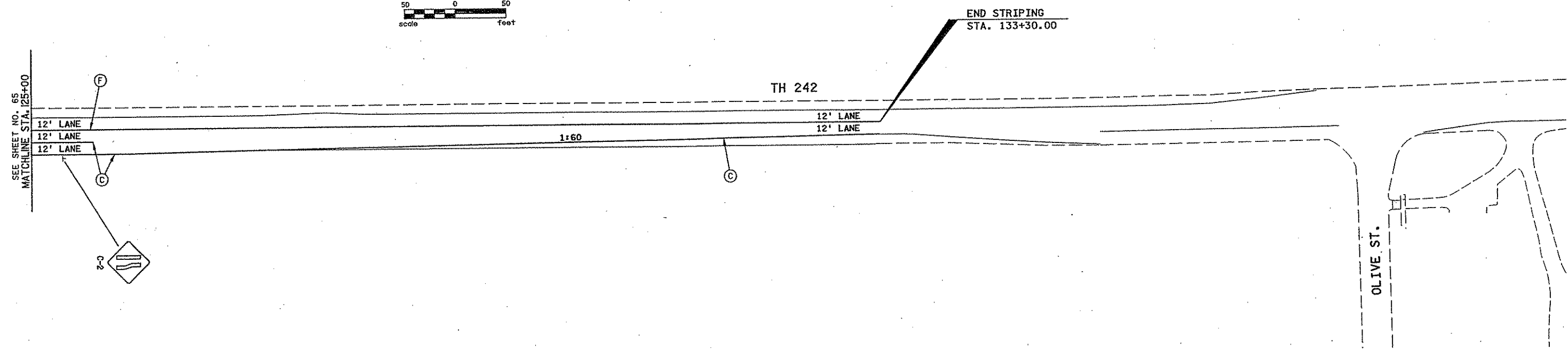
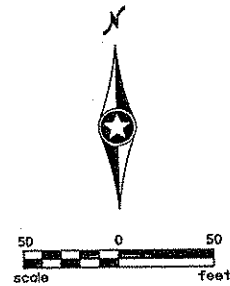
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 001402



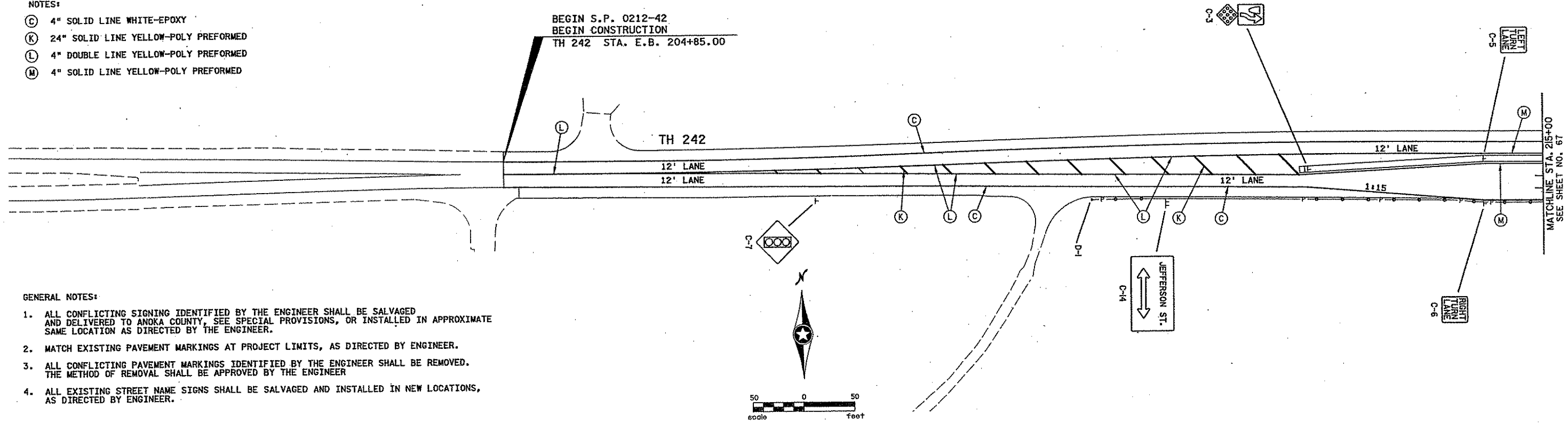
ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 TH 242
 STA. 113+00 TO STA. 125+00

SHEET 65 OF 139

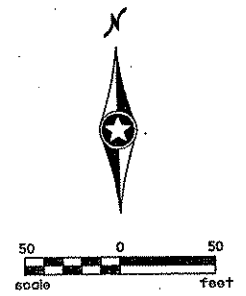


- NOTES:
- (C) 4" SOLID LINE WHITE-EPOXY
 - (K) 24" SOLID LINE YELLOW-POLY PREFORMED
 - (L) 4" DOUBLE LINE YELLOW-POLY PREFORMED
 - (M) 4" SOLID LINE YELLOW-POLY PREFORMED

BEGIN S.P. 0212-42
 BEGIN CONSTRUCTION
 TH 242 STA. E.B. 204+85.00



- GENERAL NOTES:
1. ALL CONFLICTING SIGNING IDENTIFIED BY THE ENGINEER SHALL BE SALVAGED AND DELIVERED TO ANOKA COUNTY, SEE SPECIAL PROVISIONS, OR INSTALLED IN APPROXIMATE SAME LOCATION AS DIRECTED BY THE ENGINEER.
 2. MATCH EXISTING PAVEMENT MARKINGS AT PROJECT LIMITS, AS DIRECTED BY ENGINEER.
 3. ALL CONFLICTING PAVEMENT MARKINGS IDENTIFIED BY THE ENGINEER SHALL BE REMOVED. THE METHOD OF REMOVAL SHALL BE APPROVED BY THE ENGINEER.
 4. ALL EXISTING STREET NAME SIGNS SHALL BE SALVAGED AND INSTALLED IN NEW LOCATIONS, AS DIRECTED BY ENGINEER.



PLOTTER: \$55000
 DATE: 07/11/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.SIB DATE: Sep. 19, 2001

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 7-12-02 License # 26391

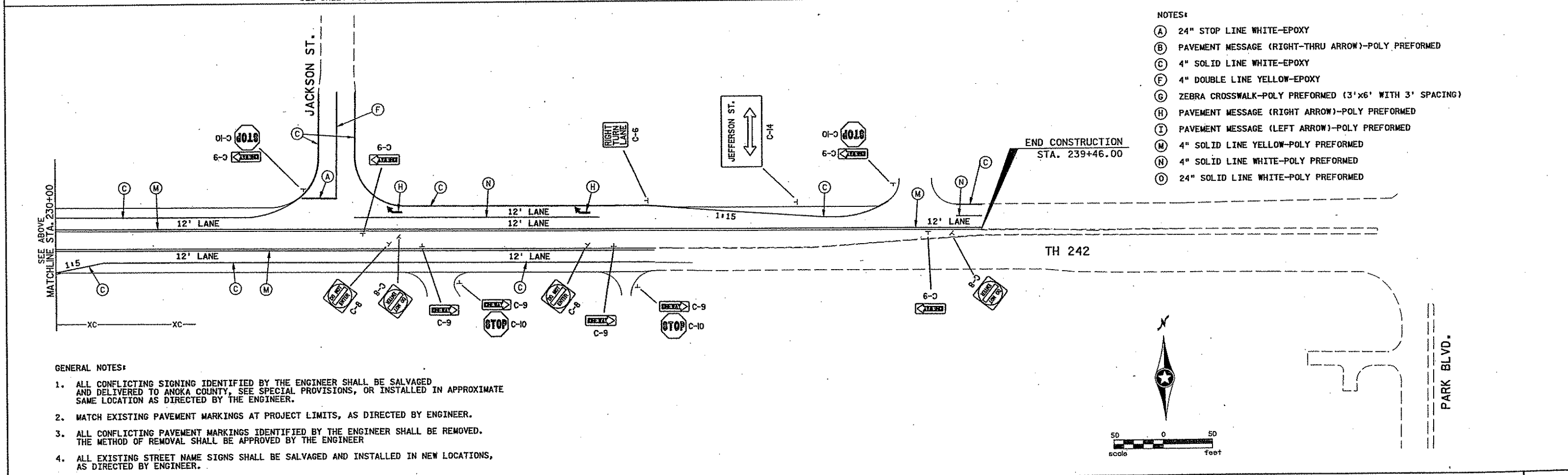
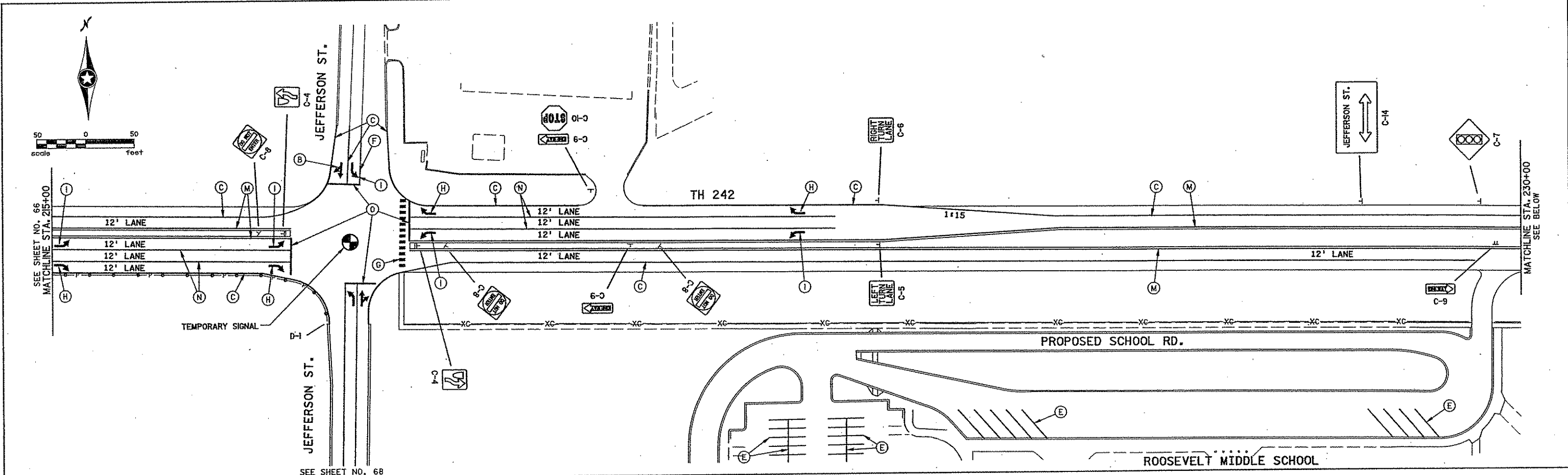
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102



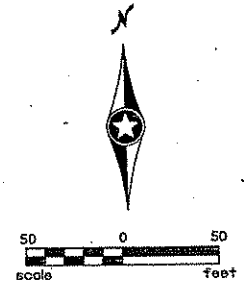
ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 TH 242
 STA. 125+00 TO STA. 215+00

SHEET 66 OF 139



- NOTES:
- (A) 24" STOP LINE WHITE-EPOXY
 - (B) PAVEMENT MESSAGE (RIGHT-THRU ARROW)-POLY PREFORMED
 - (C) 4" SOLID LINE WHITE-EPOXY
 - (F) 4" DOUBLE LINE YELLOW-EPOXY
 - (G) ZEBRA CROSSWALK-POLY PREFORMED (3'x6' WITH 3' SPACING)
 - (H) PAVEMENT MESSAGE (RIGHT ARROW)-POLY PREFORMED
 - (I) PAVEMENT MESSAGE (LEFT ARROW)-POLY PREFORMED
 - (M) 4" SOLID LINE YELLOW-POLY PREFORMED
 - (N) 4" SOLID LINE WHITE-POLY PREFORMED
 - (O) 24" SOLID LINE WHITE-POLY PREFORMED

- GENERAL NOTES:
1. ALL CONFLICTING SIGNING IDENTIFIED BY THE ENGINEER SHALL BE SALVAGED AND DELIVERED TO ANOKA COUNTY, SEE SPECIAL PROVISIONS, OR INSTALLED IN APPROXIMATE SAME LOCATION AS DIRECTED BY THE ENGINEER.
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 4. ALL EXISTING STREET NAME SIGNS SHALL BE SALVAGED AND INSTALLED IN NEW LOCATIONS, AS DIRECTED BY ENGINEER.



.sld
 11/04/2001 10:25:10 AM
 \$PLOTTER\$
 \$SCALE\$
 07/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.SID DATE: Sep. 20, 2001

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

Print Name: NATHAN A. WILL

Nathan A. Will

Date: 7-12-02 License # 26391

STATE AID PROJECT NO.

S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 001402



ANOKA COUNTY

SIGNING AND STRIPING PLAN

TH 242

STA 215+00 TO STA. 242+00

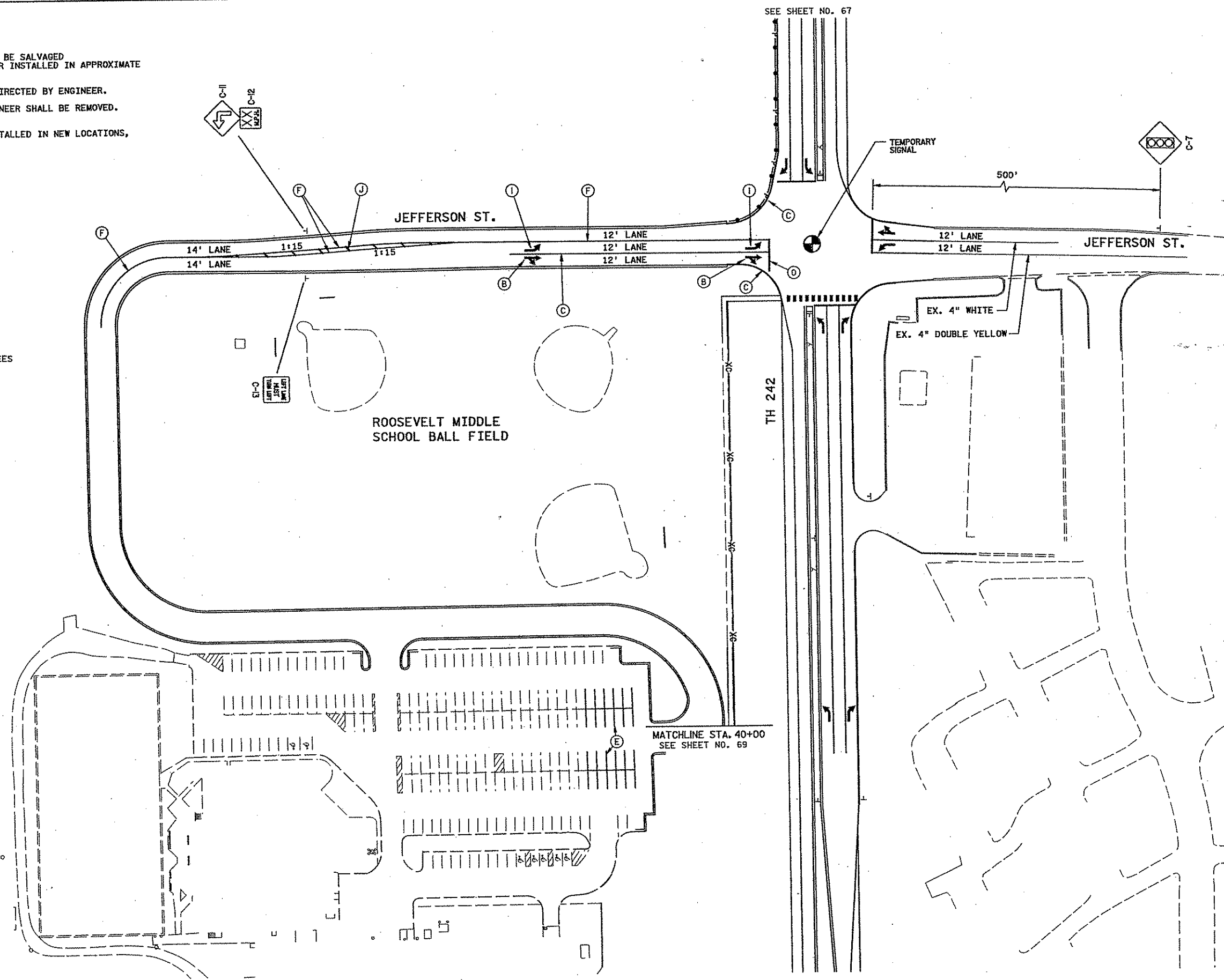
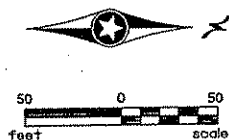
SHEET 67 OF 139

GENERAL NOTES:

1. ALL CONFLICTING SIGNING IDENTIFIED BY THE ENGINEER SHALL BE SALVAGED AND DELIVERED TO ANOKA COUNTY, SEE SPECIAL PROVISIONS, OR INSTALLED IN APPROXIMATE SAME LOCATION AS DIRECTED BY THE ENGINEER.
2. MATCH EXISTING PAVEMENT MARKINGS AT PROJECT LIMITS, AS DIRECTED BY ENGINEER.
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4. ALL EXISTING STREET NAME SIGNS SHALL BE SALVAGED AND INSTALLED IN NEW LOCATIONS, AS DIRECTED BY ENGINEER.

NOTES:

- (B) PAVEMENT MESSAGE (RIGHT-THRU ARROW)-POLY PREFORMED
- (C) 4" SOLID LINE WHITE-EPOXY
- (E) 4" SOLID LINE YELLOW-PAINT
- (F) 4" DOUBLE LINE YELLOW-EPOXY
- (I) PAVEMENT MESSAGE (LEFT ARROW)-POLY PREFORMED
- (J) 24" SOLID LINE YELLOW-EPOXY 30' SPACING O.C. @ 45 DEGREES
- (D) 24" SOLID LINE WHITE-POLY PREFORMED



P:\311\11047\1102\plans\ 316
 SRF
 PLOTTERS
 SCALES
 07/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.SIE DATE: Apr. 05, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
 Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 TH 242
 STA.20+00 TO STA. 40+00

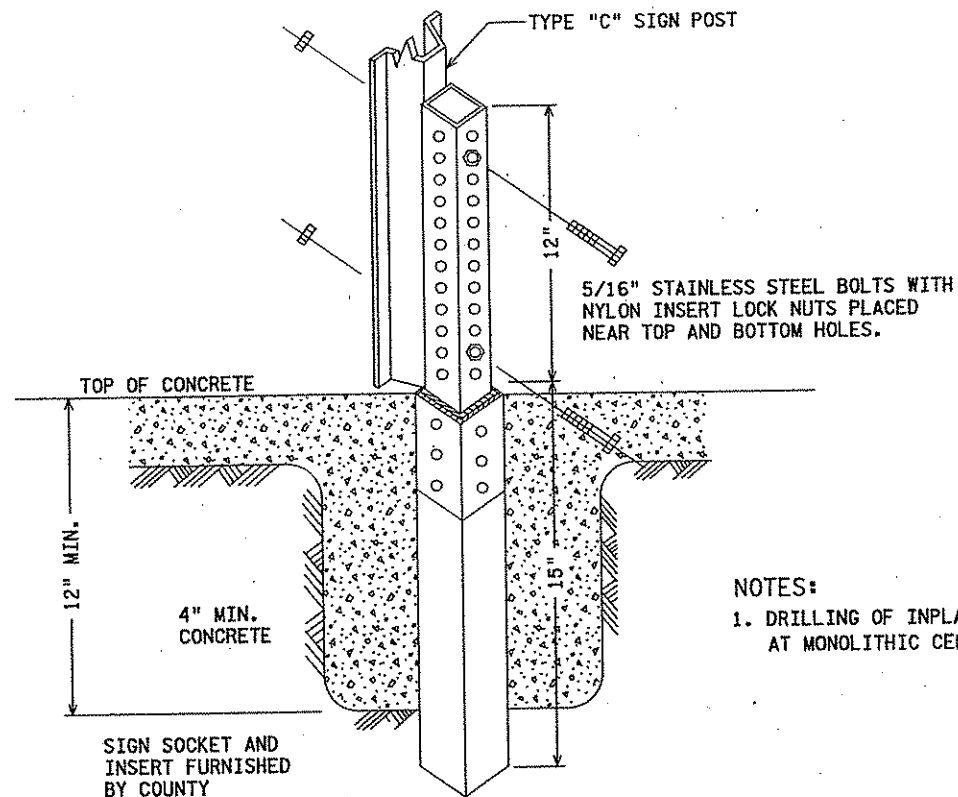
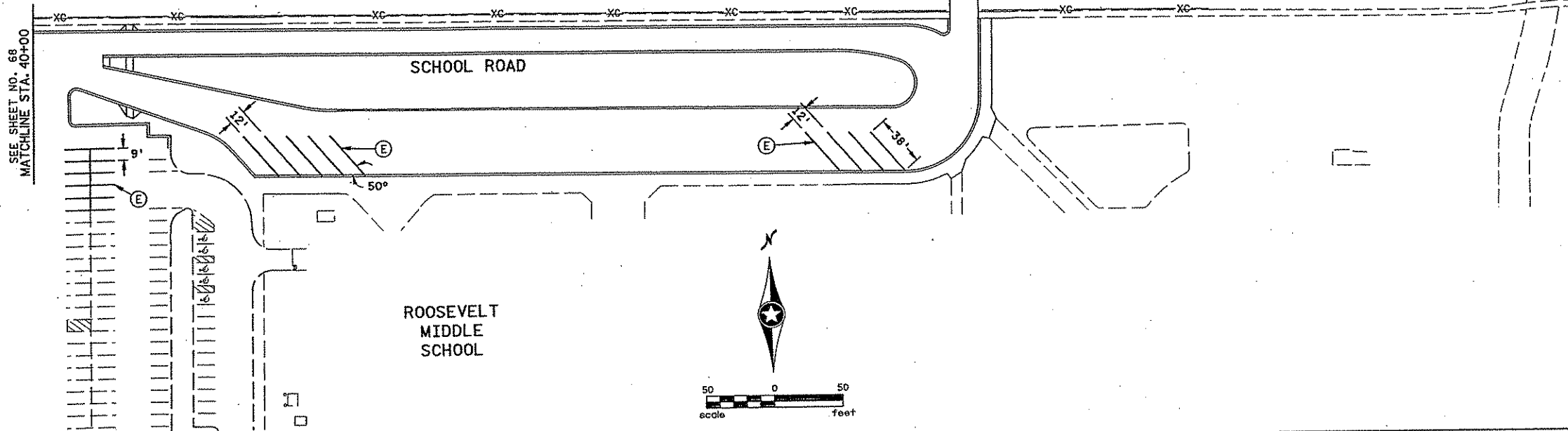
SHEET 68 OF 139

GENERAL NOTES:

1. ALL CONFLICTING SIGNING IDENTIFIED BY THE ENGINEER SHALL BE SALVAGED AND DELIVERED TO ANOKA COUNTY, SEE SPECIAL PROVISIONS, OR INSTALLED IN APPROXIMATE SAME LOCATION AS DIRECTED BY THE ENGINEER.
2. MATCH EXISTING PAVEMENT MARKINGS AT PROJECT LIMITS, AS DIRECTED BY ENGINEER.
3. ALL CONFLICTING PAVEMENT MARKINGS IDENTIFIED BY THE ENGINEER SHALL BE REMOVED. THE METHOD OF REMOVAL SHALL BE APPROVED BY THE ENGINEER.
4. ALL EXISTING STREET NAME SIGNS SHALL BE SALVAGED AND INSTALLED IN NEW LOCATIONS, AS DIRECTED BY ENGINEER.

NOTES:

(E) 4" SOLID LINE YELLOW-PAINT



NOTES:

1. DRILLING OF INPLACE CONCRETE PAVEMENT MAY BE REQUIRED AT MONOLITHIC CENTER ISLANDS. AS DIRECTED BY THE ENGINEER.

TYPICAL SIGN SOCKET DETAIL FOR SIGNS MOUNTED IN CONCRETE ISLANDS (NO SCALE)

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

Print Name: NATHAN A. WILL

Date: 7-12-02 License # 26391

STATE AID PROJECT NO.

S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY DATE

D. FITCHORN 8-02
DESIGNED BY N. WILL 4-02
CHECKED BY N. WILL 5-02
COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY

SIGNING AND STRIPING PLAN
TH 242
STA. 40+00 TO STA. 46+66

SHEET
69
OF
139

(J) SIGN PANELS TYPE C										
	QUANTITY	POSTS			MOUNTING HEIGHT (FT)	PANEL			CODE NO.	PANEL LEGEND
		NO. & TYPE	KNEE BRACES QUANTITY	LENGTH		SIZE (IN)	AREA (SF)	TOTAL AREA (SF)		
C-10	5	2 - U	1	13	7	30 X 30	6.25	31.25	R1 - 1	STOP
C-1	2	2 - U	1	13	7	36 X 30	7.50	15.00	R4 - X4	STOPPING LANE
C-6	3	2 - U	1	13	7	30 X 30	6.25	18.75	R3 - X1	RIGHT TURN LANE
C-5	2	2 - U	1	13	7	30 X 30	6.25	12.50	R3 - X2	LEFT TURN LANE
C-3	1	2 - U	-	13	7	24 X 30	5.00	5.00	R4 - 7	KEEP RIGHT
					4	18 X 18	2.25	0.00	X4-2	HAZARD MARKER
C-8	7	2 - U	1	13	7	30 X 30	6.25	43.75	R5-1	DO NOT ENTER
C-13	1	2 - U	1	13	7	30 X 30	6.25	6.25	R3 - 7L	LEFT LANE MUST TURN LEFT
C-9	11	2 - U		12	7	36 X 12	3.00	33.00	R6-1R	ONE WAY
C-11	1	2 - U	1	13	7	30 X 30	6.25	6.25	W1 - 1L	CURVE ARROW
C-12	1				4	24 X 24	4.00	4.00	W13 - 1	SPEED LIMIT
C-7	3	2 - U	1	14	7	36 X 36	9.00	27.00	W3 - 3	SIGNAL
C-4	2	2 - U		13	7	24 X 30	5.00	10.00	R4 - 7	KEEP RIGHT
C-2	1	2 - U	1	14	7	36 X 36	9.00	9.00	W4 - 2R	LANE REDUCTION TRANSITION
PROJECT TOTAL:								221.75		

(N) DELINATORS & MARKERS			
	PANEL LEGEND	QUANTITY	CODE NO.
D - 1	SNOW PLOW MARKER	2	X4 - 5
D - 2	GUIDE POSTS TYPE B	8	
PROJECT TOTALS:		10	

typo:sign.xls
 NOTES:
 POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICES.
 SEE SHEETS 72 - 74 FOR STRUCTURAL DETAILS.
 SEE STANDARD SIGNS MANUAL FOR PUNCHING CODE AND DETAILED DRAWINGS OF TYPE "C" SIGN PANELS. SEE SHEET 74.
 MOUNTING HEIGHT IS MINIMUM, SEE SHEET 72 FOR TYPICAL MOUNTING.
 (A) MOUNT ON RIGHT POST.

(K) PAVEMENT MARKINGS																		
ALIGNMENT	EPOXY								POLY PREFORMED									
	PAVEMENT MESSAGE			STOP LINE	SOLID LINE			CROSS WALK MARKING (SF)	DOUBLE SOLID LINE	PAVEMENT MESSAGE			STOP LINE	CROSS WALK MARKING (SF)	SOLID LINE			DOUBLE SOLID LINE
	LEFT ARROW (EACH)	RIGHT ARROW (EACH)	RT-THRU ARROW (EACH)	24 INCH WHITE (LF)	4 INCH WHITE (LF)	24 INCH YELLOW (LF)	4 INCH YELLOW (LF)		LEFT ARROW (EACH)	RIGHT ARROW (EACH)	RT-THRU ARROW (EACH)	24 INCH WHITE (LF)	4 INCH WHITE (LF)		4 INCH YELLOW (LF)	24 INCH YELLOW (LF)	4 INCH YELLOW (LF)	
E.B. T.H. 242 (STA 113+00 TO 117+40)				28	685	60		725										
E.B. T.H. 242 (STA 117+40 TO 122+30)					976			480										
E.B. T.H. 242 (STA 122+30 TO 133+30)					1435			1107										
W.B. T.H. 242 (STA 113+00 TO 117+40)					875													
W.B. T.H. 242 (STA 117+40 TO 122+30)				28	730													
W.B. T.H. 242 (STA 122+30 TO 133+30)																		
E.B. T.H. 242 (STA 204+84 TO 209+50)					467			515										
E.B. T.H. 242 (STA 209+50 TO 217+43)	2			35	1740			1100	2	2		38		530	485			
E.B. T.H. 242 (STA 217+43 TO 225+30)	3	1	1	40	1925	105	90	1080					72		665			
E.B. T.H. 242 (STA 225+30 TO 232+18)					645			100							685			
E.B. T.H. 242 (STA 232+18 TO 236+13)					395										395			
E.B. T.H. 242 (STA 236+13 TO 239+46)																		
W.B. T.H. 242 (STA 204+84 TO 209+50)					480											47	755	
W.B. T.H. 242 (STA 209+50 TO 217+43)				90	1260		144								485	176	805	
W.B. T.H. 242 (STA 217+43 TO 225+30)					1715			60	3	2	1	76	144	880	665			
W.B. T.H. 242 (STA 225+30 TO 232+18)					930										690			
W.B. T.H. 242 (STA 232+18 TO 236+13)				38	520			110		2				250	395			
W.B. T.H. 242 (STA 236+13 TO 239+46)					280									30	340			
JEFFERSON STREET								900	2		2	32						
SCHOOL ROAD (STA 30+00 TO 38+38)																		
SCHOOL ROAD (STA 38+38 TO 44+00)					890													
SCHOOL ROAD (STA 44+00 TO T.H. 242 230+06)																		
PROJECT TOTALS:	5	1	1	259	15948	195	234	6177	7	6	3	146	216	1690	4805	223	1560	

2.stb
 #REF#
 #PLOTTER#
 #SCALE#
 06/11/2002

NO	DATE	BY	CKD	APPR	REVISION

NAME: 4102.STB DATE: May. 06, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 6-12-02 License: 26391

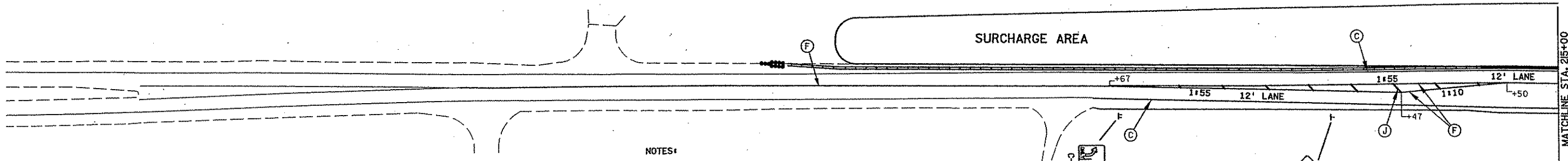
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102



ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 TH 242

SHEET
 70
 OF
 139

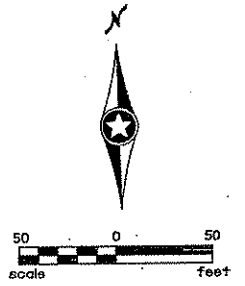
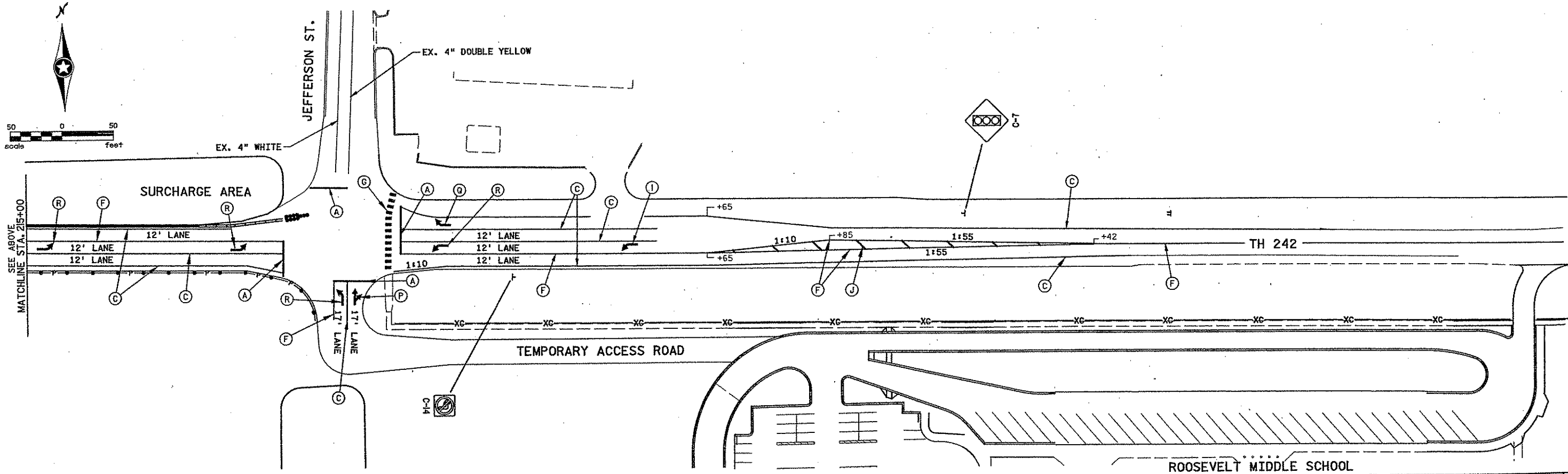


LEGEND

- IMPACT ATTENUATOR BARRELS (55 MPH DESIGN)
- ⚡ TYPE A LOW INTENSITY WARNING FLASHER
- ➔ TRAFFIC LOCATION AND DIRECTION
- REFLECTORIZED PLASTIC DRUMS, 50' SPACING
- ⊥ POST MOUNTED SIGN
- ▬ TYPE III BARRICADE, REFLECTORIZED BOTH SIDES
- ▬ CONCRETE MEDIAN BARRIER

- NOTES:**
- (A) 24" STOP LINE WHITE-EPOXY
 - (C) 4" SOLID LINE WHITE-EPOXY
 - (F) 4" DOUBLE LINE YELLOW-EPOXY
 - (G) ZEBRA CROSSWALK-POLY PREFORMED (3'x6' WITH 3' SPACING)
 - (J) 24" SOLID LINE YELLOW-EPOXY 30' SPACING O.C. @ 45 DEGREES
 - (P) PAVEMENT MESSAGE (RIGHT-THRU ARROW)-EPOXY
 - (R) PAVEMENT MESSAGE (RIGHT ARROW)-EPOXY
 - (L) PAVEMENT MESSAGE (LEFT ARROW)-EPOXY

GENERAL NOTES:
 ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED.
 SEE TEMPORARY PAVEMENT MARKING TABULATION, SHEET NO.69.



NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.SIG DATE: Mar. 28, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: **NATHAN A. WILL**
Nathan A. Will
 Date: 7-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: **D. FITCHORN** DATE: 8-02
 DESIGNED BY: **N. WILL** DATE: 4-02
 CHECKED BY: **N. WILL** DATE: 5-02
 COMM. NO. 001402

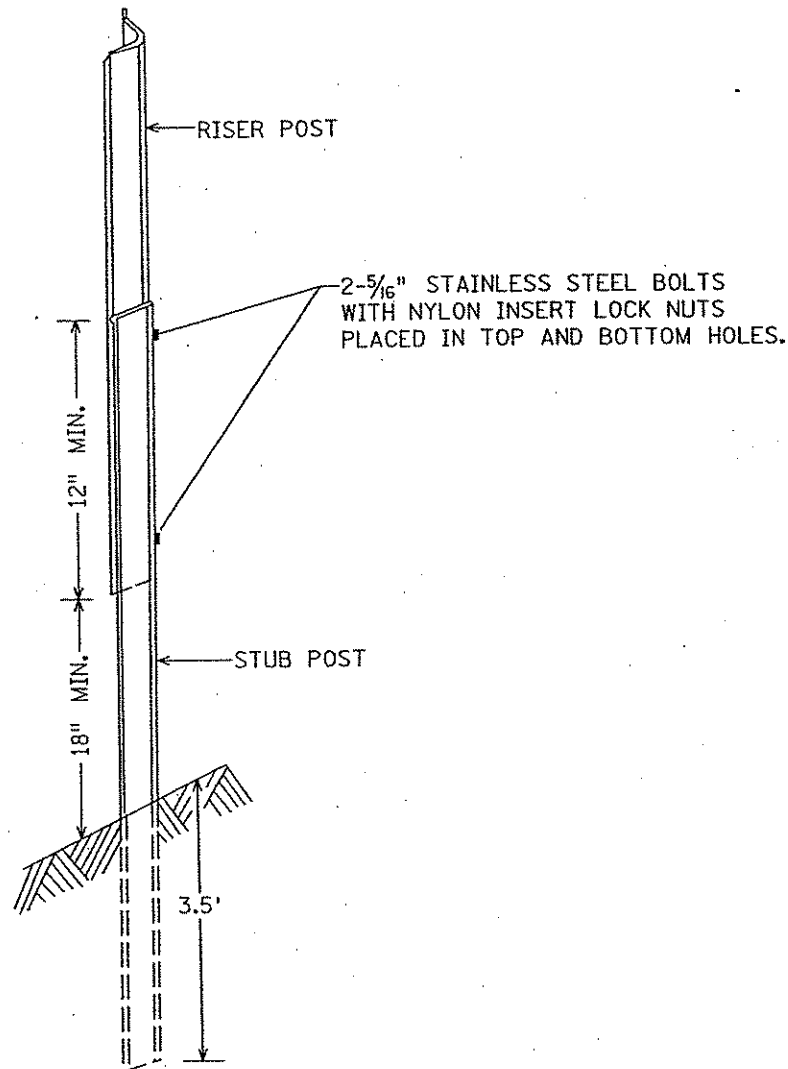


ANOKA COUNTY
 TEMPORARY SIGNING AND STRIPING PLAN
 TH 242
 STA 210+00 TO STA. 226+00

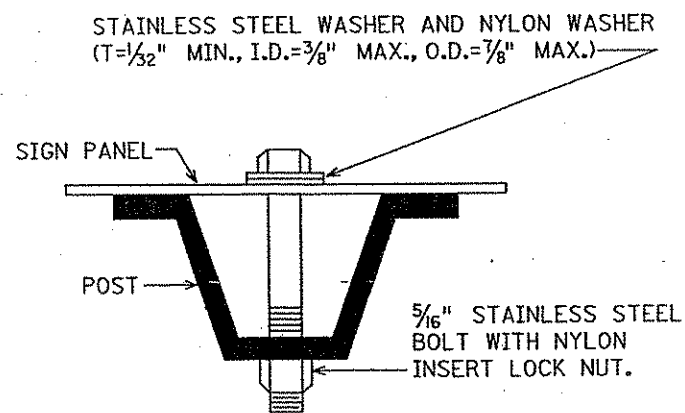
SHEET
 71
 OF
 139

REAGV111047V-1102\plans\A4 -1g
 PROJECT # 4102
 SS/SALES #
 07/11/2002

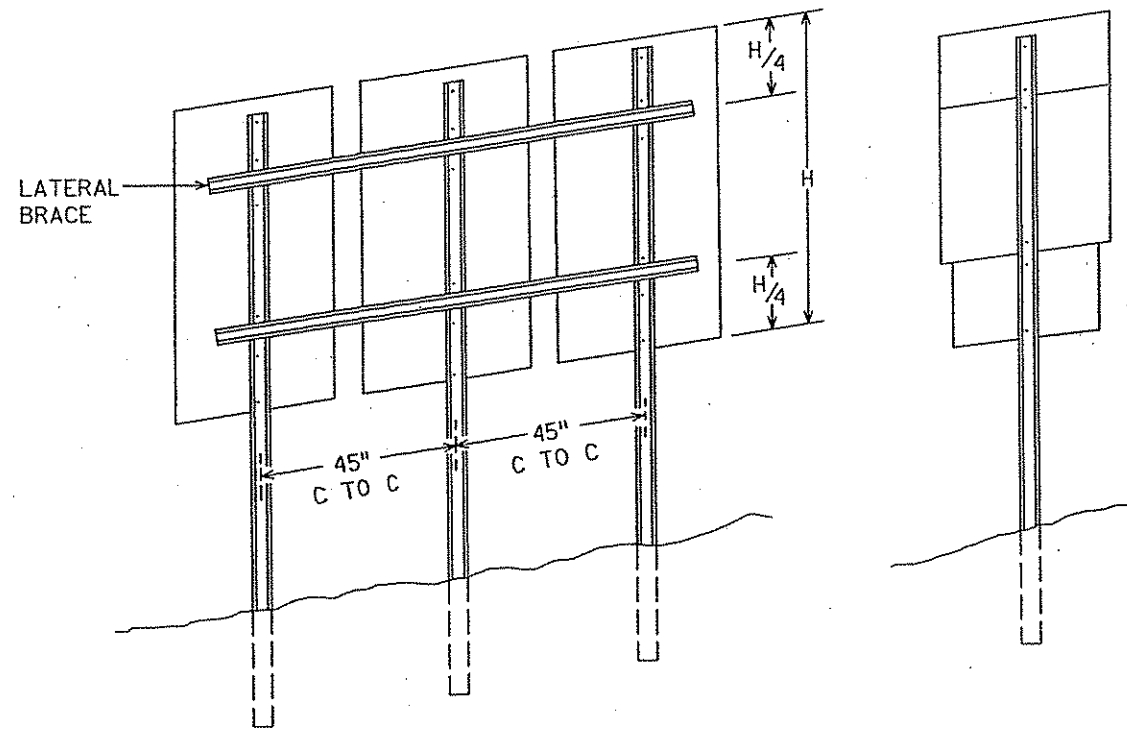
TYPE "C" & "D" POST



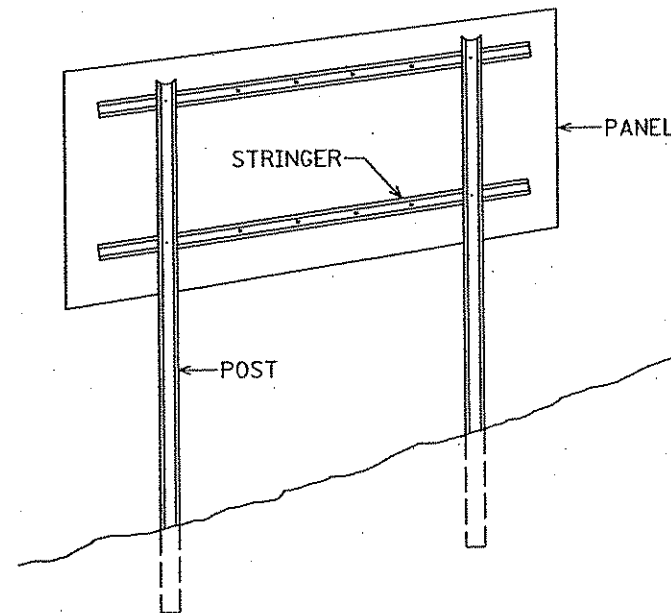
"U POST" SPLICE



"U POST" MOUNTING
TYPE "C" SIGNS



TYPICAL TYPE "C" INSTALLATIONS

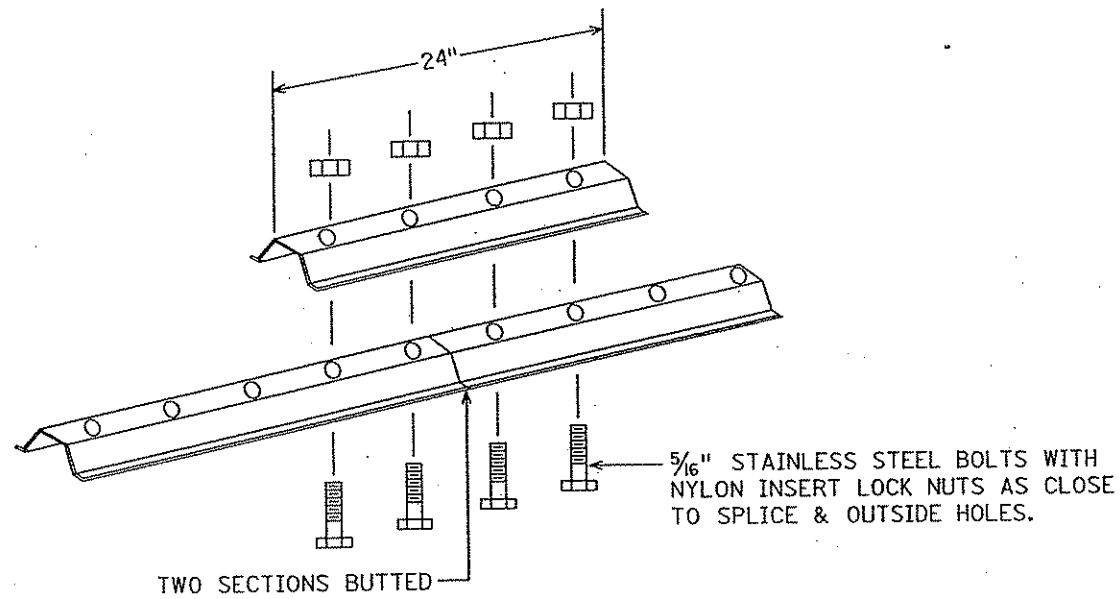


TYPICAL TYPE "D" INSTALLATION

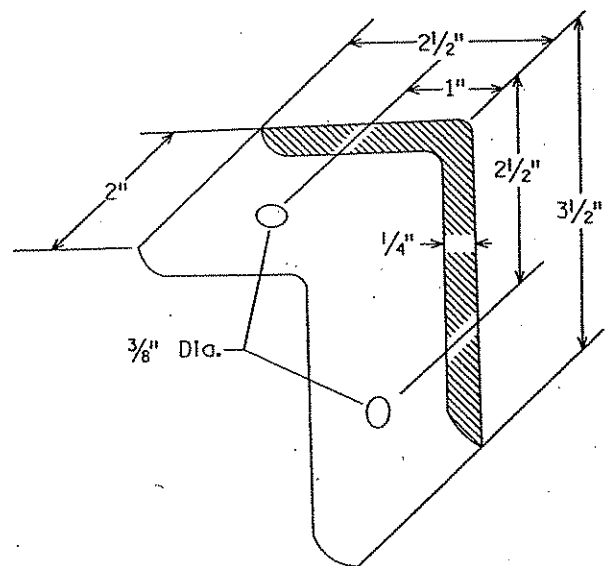
NOTES:

1. USE 3# STUB POSTS, RISER POSTS, STRINGERS, KNEE BRACES, LATERAL BRACES AND KNEE BRACE STUB POSTS. ALL SHALL CONFORM TO MN/DOT 3401.
2. FOR TYPE "D" SIGN POSTS LENGTHS AND SPACINGS, SEE SIGN DATA SHEET.
3. TYPE "D" SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH TYPE "D" STRINGER AND PANEL-JOINT DETAIL (SEE STANDARD SIGNS MANUAL).
4. MOUNTING (PUNCHING CODE) FOR TYPE "C" SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
5. ALL RISER (VERTICAL) "U POSTS" SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
6. USE STAINLESS STEEL 5/16" BOLTS, WASHERS, AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
7. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
8. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 3 1/2'.
9. A-FRAME BRACKET SHALL BE STEEL CONFORMING TO MN/DOT 3306 AND GALVANIZED IN ACCORDANCE WITH MN/DOT 3394.
10. COLLARS SHALL BE USED TO SHIM OVERLAYS AND DEMOUNTABLE LEGEND AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED. MN/DOT 3352.2A7.
11. 2 AND 3 POST TYPE "C" SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
12. WHERE 2 OR MORE SINGLE POST SIGNS (TYPE "C") ARE MOUNTED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 POST SECTIONS, BOLTED AT EACH POST AND LOCATED APPROXIMATELY AT THE QUARTER POINTS AS SHOWN IN SKETCH.

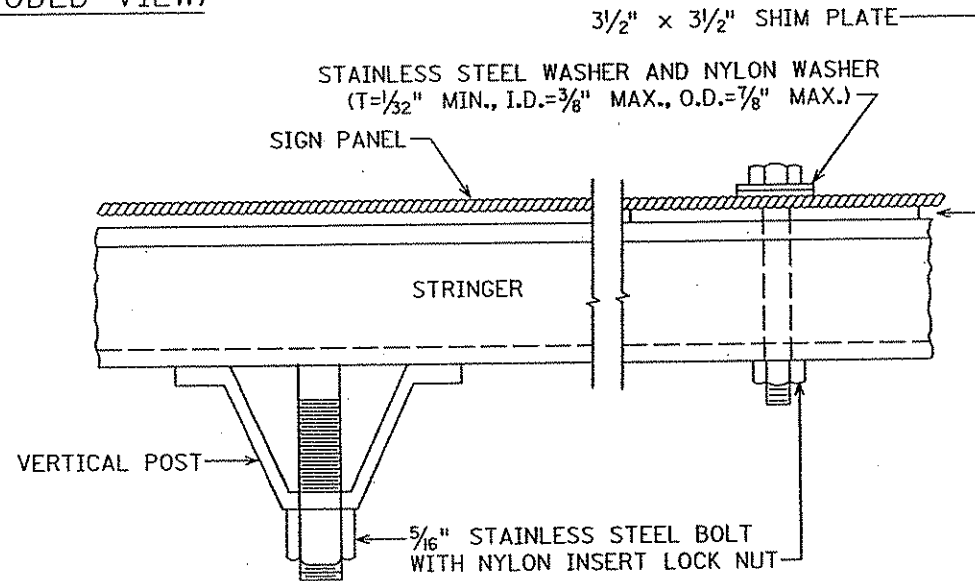
TYPE C & D SIGN
STRUCTURAL DETAILS



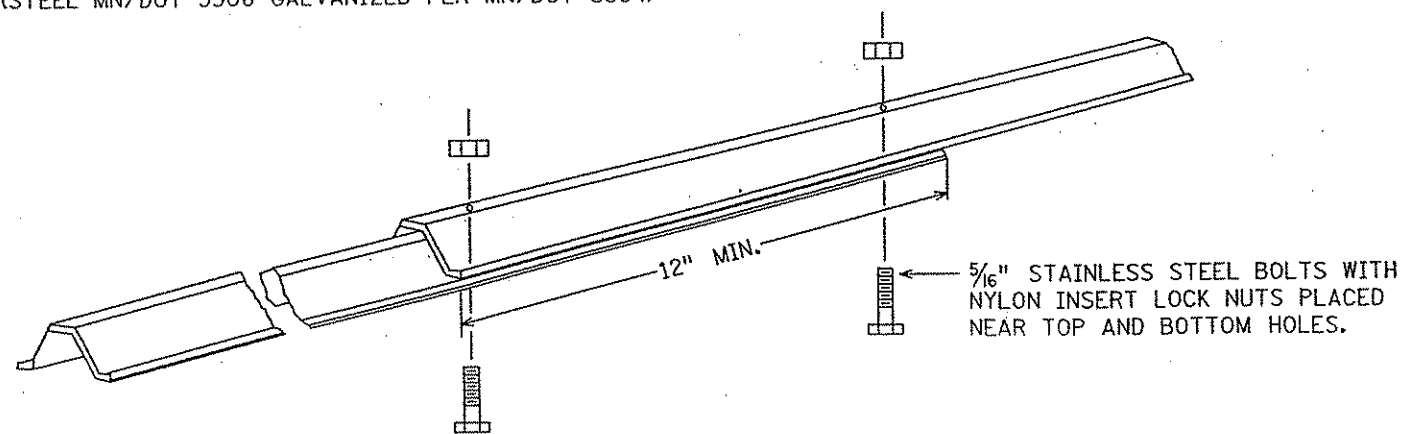
LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)



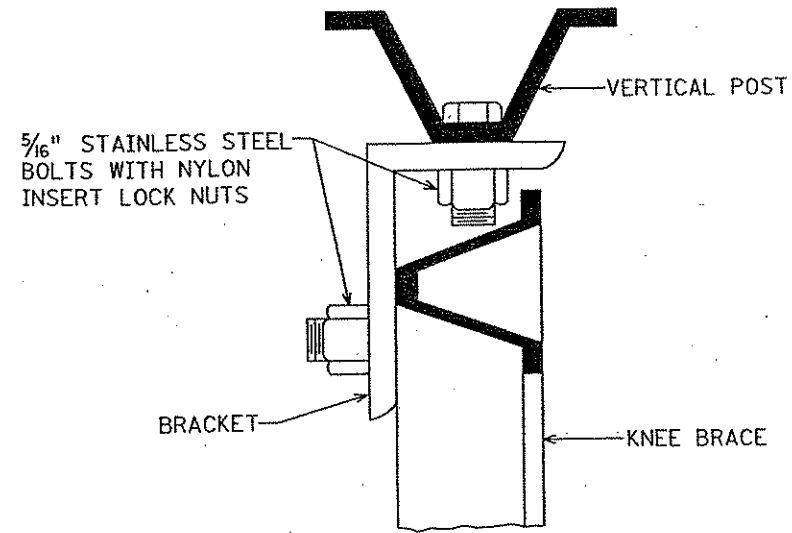
A-FRAME BRACKET



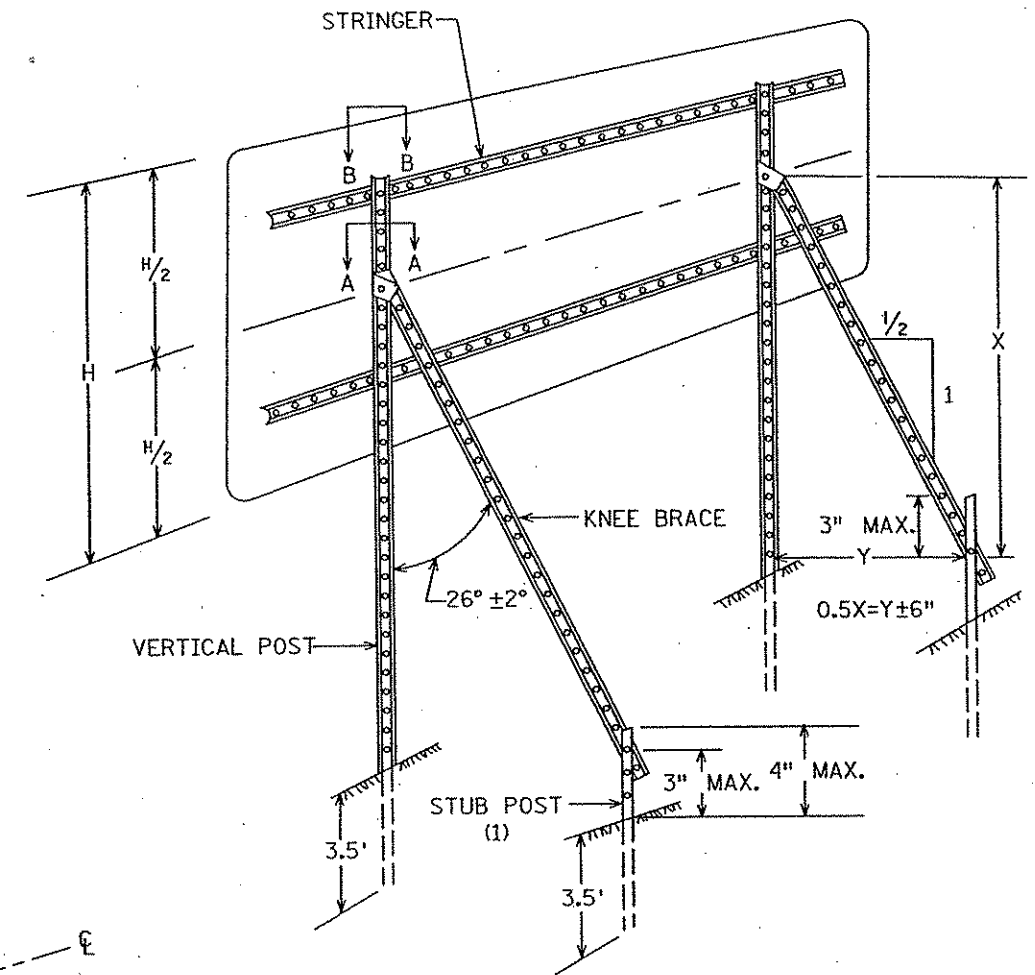
SECTION B-B



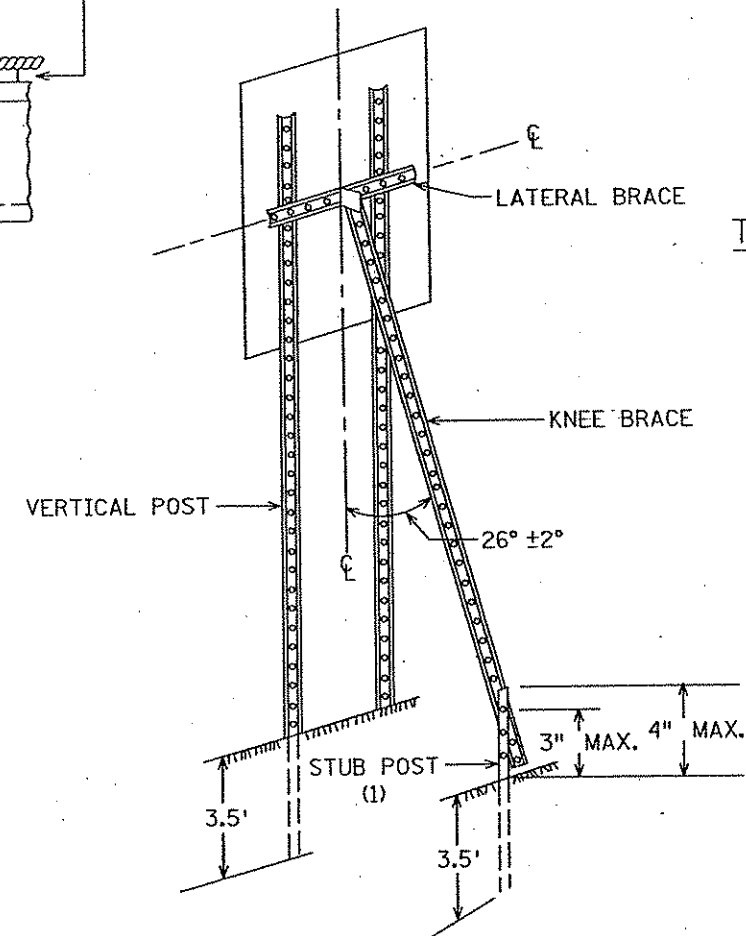
KNEE BRACE SPLICE



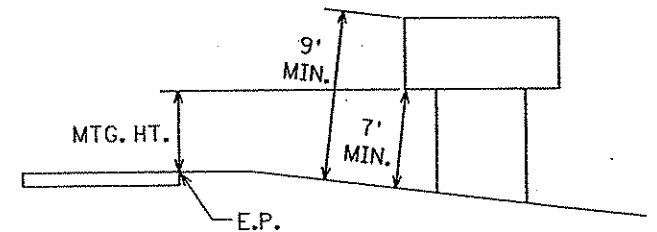
SECTION A-A



TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS



TYPICAL "A-FRAME" INSTALLATION
TYPE "C" SIGNS

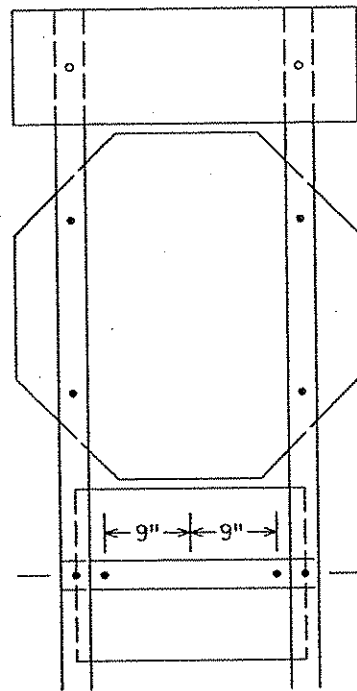


TYPICAL MOUNTING

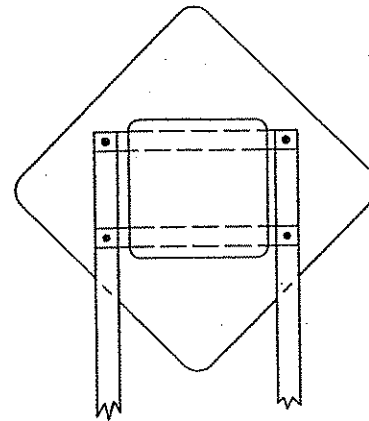
(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST.

TYPE C & D SIGN
STRUCTURAL DETAILS

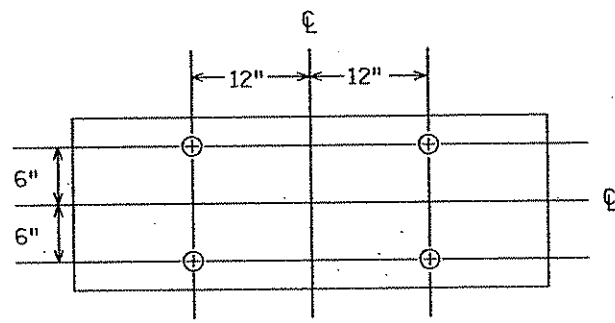
Sheet 2 of 3



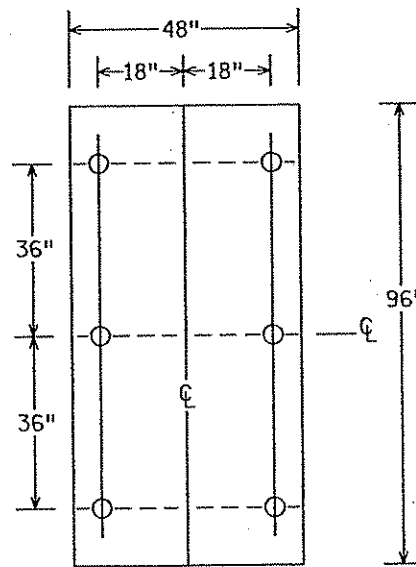
R6-1, R1-1 & (R6-3 OR R6-3a)
MOUNTING



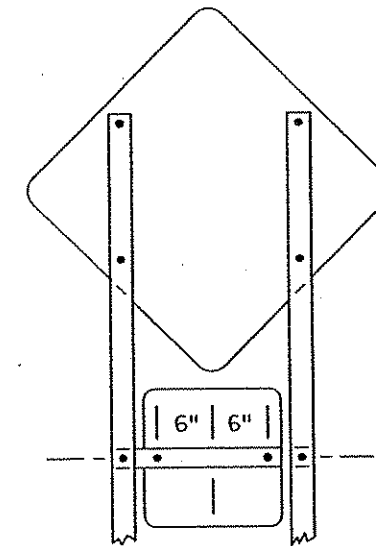
BACK TO BACK MOUNTING
OF R4-7 AND W9-2



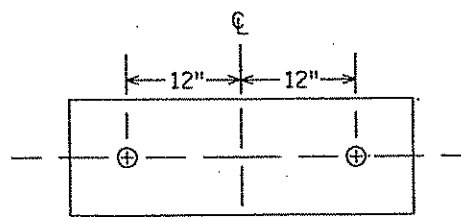
PUNCHING FOR R6-1(48" x 18")



PUNCHING FOR R2-4a
SPEED LIMIT



(W1-1, W1-2, W1-3, W1-4 OR W1-5) & W13-1
MOUNTING

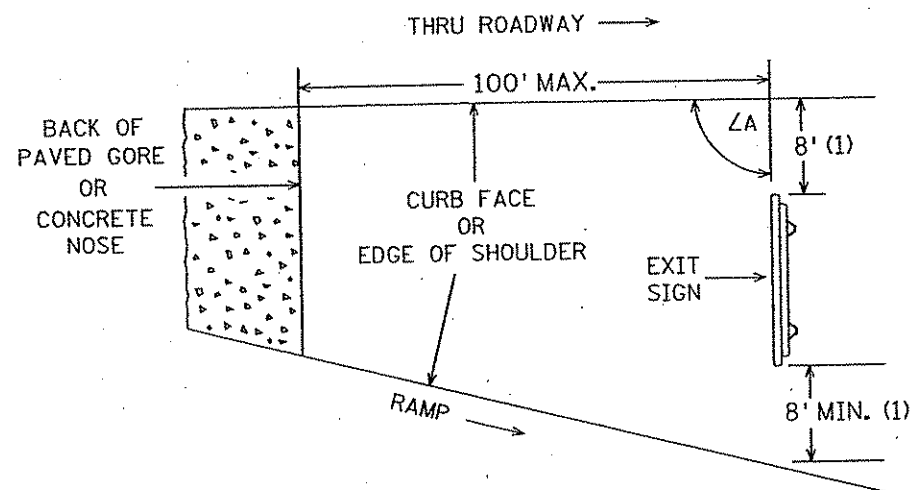


PUNCHING FOR R6-1(36" x 12")

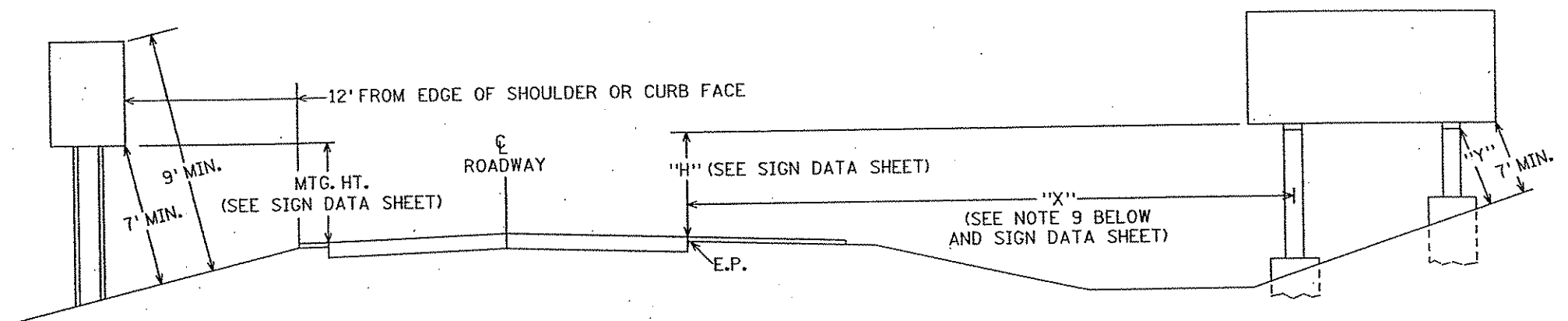
TYPE C & D SIGN
STRUCTURAL DETAILS

Sheet 3 of 3

GORE PLACEMENT

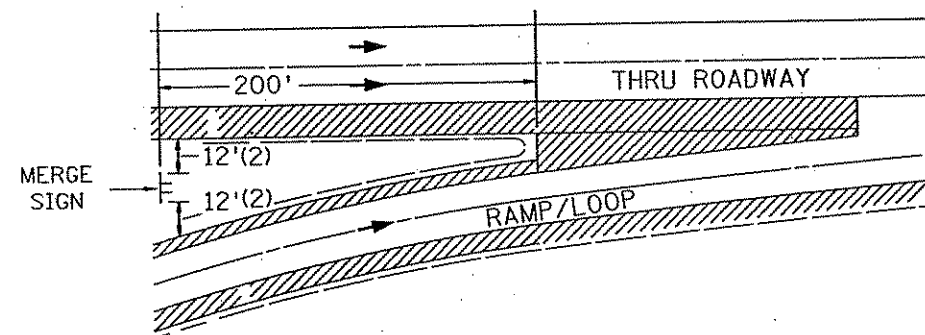


ROADSIDE PLACEMENT



MAJOR GUIDE SIGN - TYPE "A"

ROUTE MARKER, REGULATORY & WARNING SIGNS - TYPE "C"
MINOR GUIDE SIGNS - TYPE "D"



SPECIFIC NOTES:

(1) EXIT SIGNS

IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, CONTACT THE OTE SIGNING UNIT.

IF THE GORE NEEDS TO BE DELINEATED, INSTALL A HAZARD MARKER PLATE X4-2 JUST BEYOND THE PAVED GORE. IN ADDITION, INSTALL RAMP DELINEATORS ON SEPARATE POSTS TO MAINTAIN THEIR PROPER LOCATIONS AND SPACINGS.

(2) MERGE SIGNS

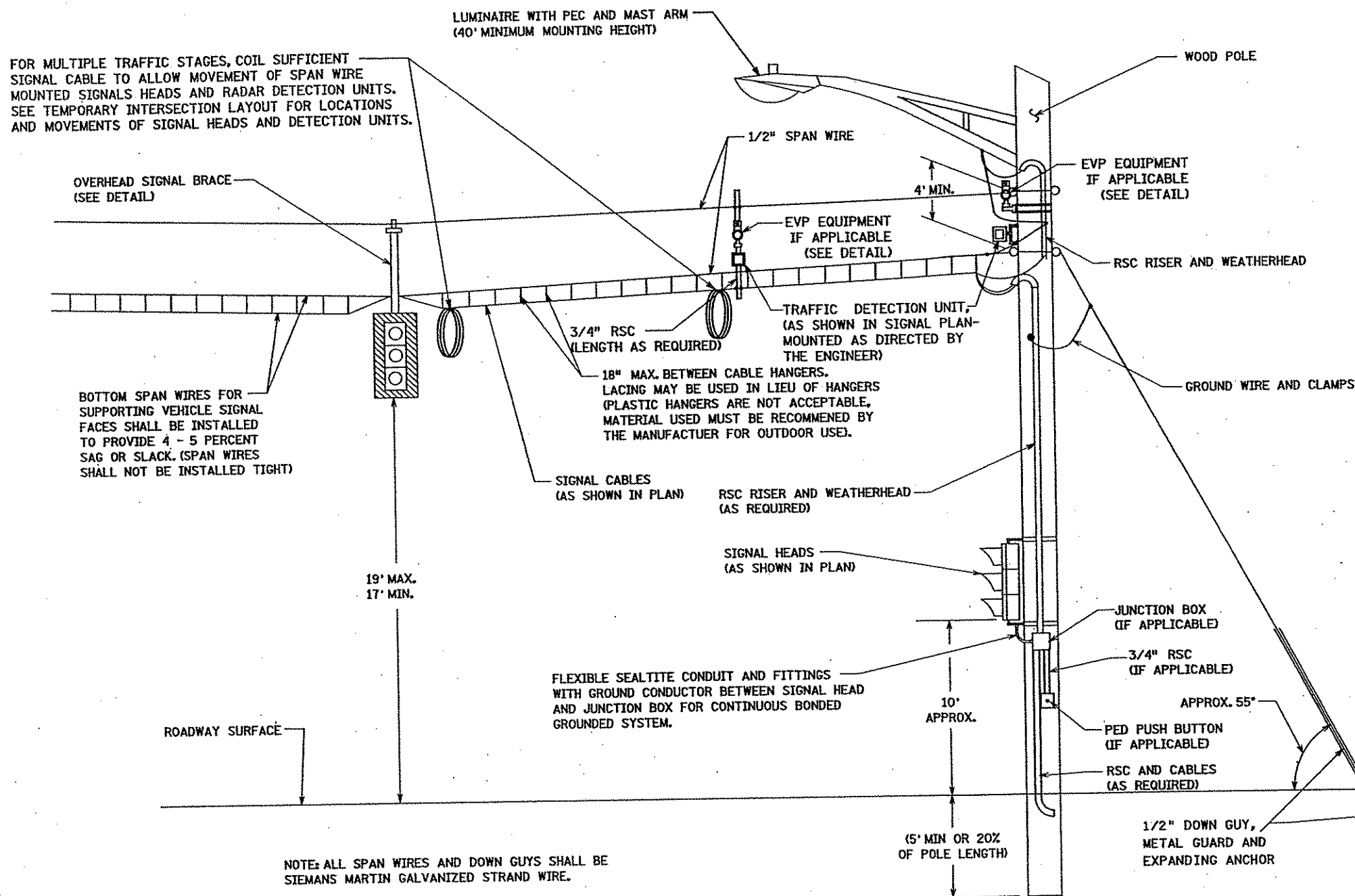
IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE, UNLESS THE SIGN IS TO BE MOUNTED ON A LIGHT POLE STANDARD (MINIMUM 2 FOOT OFFSET) LOCATED WITHIN 200 FEET OF THE PAVED GORE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, CONTACT THE OTE SIGNING UNIT.

NOTES:

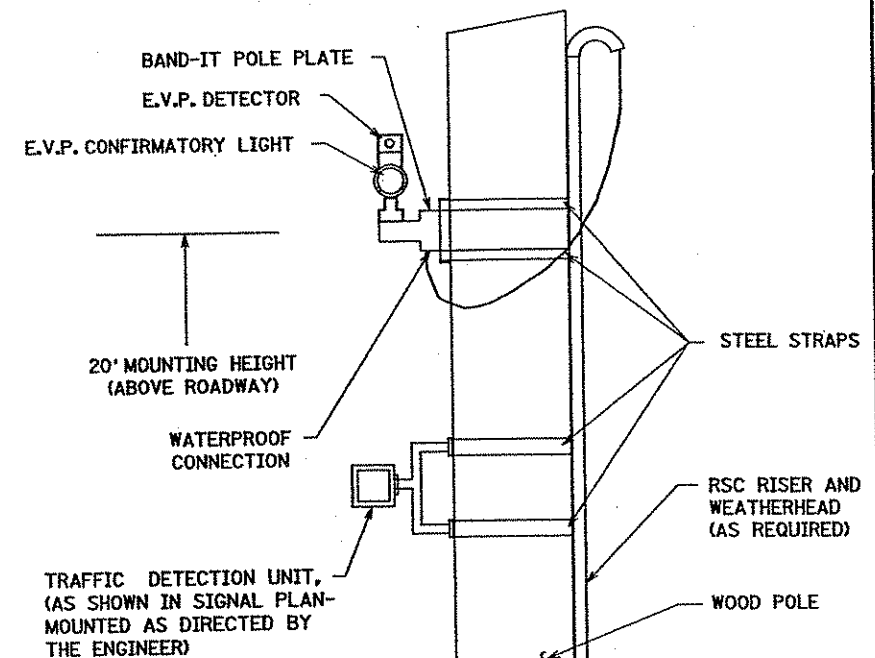
- IF A SECONDARY SIGN IS MOUNTED BELOW A MAJOR SIGN, THE MAJOR SIGN SHALL BE AT LEAST 8' ABOVE THE PAVEMENT EDGE AND THE SECONDARY SIGN AT LEAST 5'.
- ALL ROUTE MARKERS, WARNING AND REGULATORY SIGNS SHALL BE AT LEAST 6' ABOVE PAVEMENT EDGE EXCEPT WHERE HEAVY PEDESTRIAN TRAFFIC IS ENCOUNTERED THEY SHALL BE 7'.
- SIGN FACES SHALL BE VERTICAL.
- OVERHEAD SIGNS SHALL BE POSITIONED AT RIGHT ANGLES TO THE THRU ROADWAY UNLESS OTHERWISE NOTED.
- TO AVOID SPECULAR GLARE, $\angle A$ SHALL BE APPROXIMATELY 93° FOR SIGNS LOCATED LESS THAN 30' FROM THE EDGE OF PAVEMENT AND APPROXIMATELY 92° FOR SIGNS LOCATED 30' OR MORE FROM EDGE OF PAVEMENT. THIS APPLIES TO SIGNS TYPE "A", "C", & "D" AND INCLUDES SIGNS IN THE GORE.
- "Y" IS THE PERPENDICULAR DISTANCE FROM THE GROUND LINE TO THE FRICTION FUSE ON THE POST. THIS DISTANCE SHALL BE AT LEAST 7'.
- WHERE "X" IS LESS THAN 30', "H" SHALL BE $7' \pm 6"$. WHERE "X" IS 30' OR GREATER, MINIMUM AND PREFERRED "H" IS 5'.
- LATERAL CLEARANCES GIVEN APPLY TO RIGHT AND OR LEFT SIDE INSTALLATION.
- WHEN A TYPE A SIGN IS INSTALLED DIRECTLY BEHIND TRAFFIC BARRIER, THE LEFT EDGE OF THE SIGN PANEL SHALL BE LOCATED A MINIMUM OF 4 FEET BEHIND THE FACE OF THE TRAFFIC BARRIER.

SIGN PLACEMENT

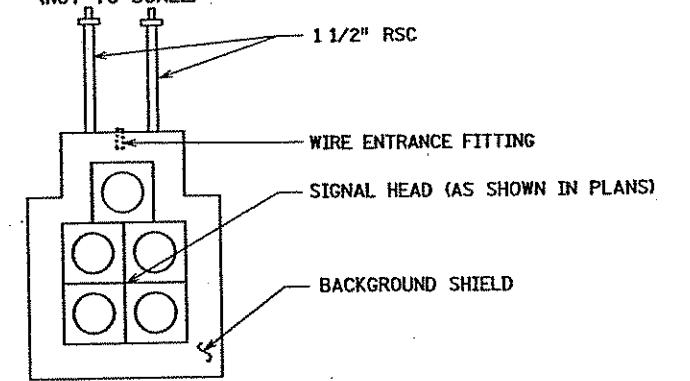
TYPICAL WOOD POLE AND SPAN WIRE MOUNTED TRAFFIC SIGNALS
(NOT TO SCALE)



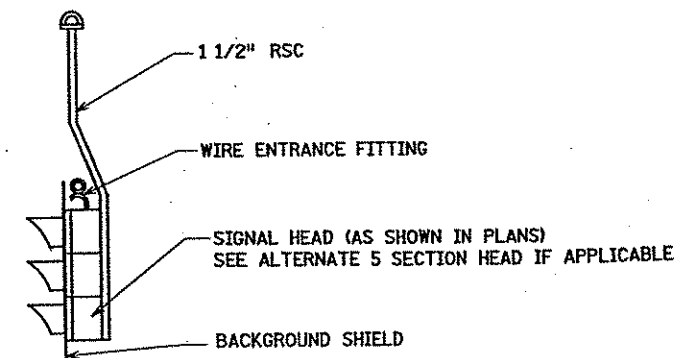
E.V.P. OR TRAFFIC DETECTOR WOOD POLE MOUNT
(NOT TO SCALE)



ALTERNATE 5 SECTION HEAD OVERHEAD SIGNAL BRACE DETAIL
(NOT TO SCALE)



OVERHEAD SIGNAL BRACE DETAIL
(NOT TO SCALE)



NOTE: ALL SPAN WIRES AND DOWN GUYS SHALL BE SIEMANS MARTIN GALVANIZED STRAND WIRE.

NO	DATE	BY	CHKD	APPR	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Electrical Engineer under the laws of the State of Minnesota.
Print Name: **BRIAN D. HOLT**
Brian D. Holt
Date: **6-13-02** License # 21428

I hereby certify that this plan, specification, or report 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.
Print Name: **JONATHAN J. KRIEG**
Jonathan J. Krieg
Date: **6-13-02** License # 40780

STATE AID PROJECT NO.
S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY: **D. RASMUSSEN** DATE: **03-02**
DESIGNED BY: **J. KRIEG** DATE: **03-02**
CHECKED BY: **J. KRIEG** DATE: **03-02**
COMM. NO. 0014102



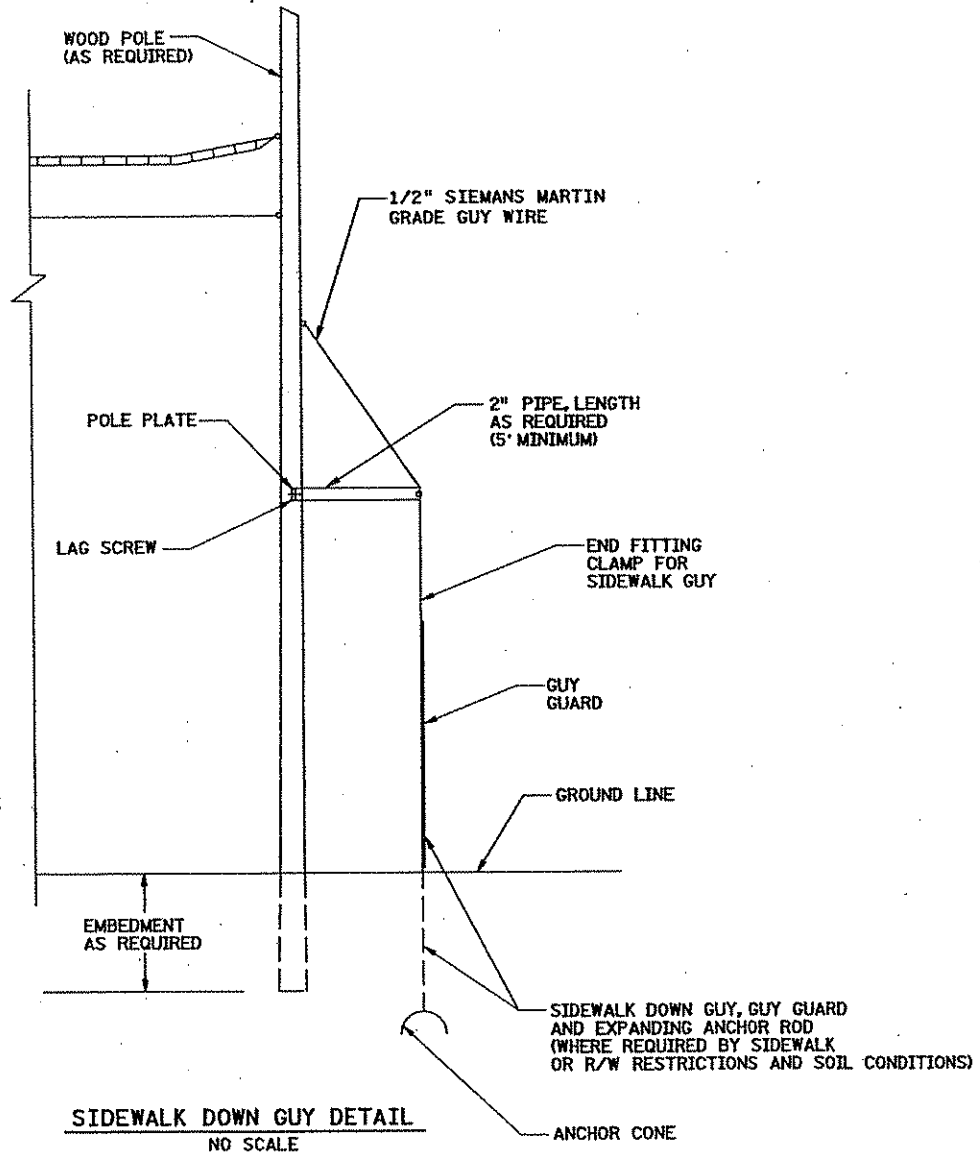
ANOKA COUNTY
SPAN WIRE DETAILS
T.H. 242 AT JEFFERSON STREET

SHEET
76
OF
139

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 \$SCALE\$
 06/11/2002

SIGNAL PLAN LAYOUT LEGEND

- ⊥ GROUND ROD
- ← DOWN GUY & ANCHOR
- ◻ MICROWAVE DETECTOR
- ⊙ BARREL MOUNTED PEDESTAL POLE
- ▣ PAD MOUNTED TRANSFORMER
- ⊠ SIGNAL ASSEMBLY PEDESTAL MOUNT
- HANDHOLE
- INPLACE HANDHOLE
- ⊙ SOURCE OF POWER
- ⊠ CONTROLLER & CABINET SERVICE PANEL
- ⊠ INPLACE CONTROLLER & CABINET INPLACE SERVICE PANEL
- CONDUIT
- INPLACE CONDUIT
- △ LUMINAIRE NO.
- ⊜ SIGNAL BASE NO.
- ⊜-2 SIGNAL FACE NO./FLASHER FACE NO.
- ← MAST ARM SIGNAL POLE WITH OPTIONAL LUMINAIRE SHAFT EXTENSION AS NOTED
- WOOD POLE
- INPLACE WOOD POLE
- ⊙ INPLACE BARREL MOUNTED PEDESTAL POLE
- ←+ SIGNAL HEAD
- ←+ INPLACE SIGNAL HEAD
- * LUMINAIRE AND ARM
- * INPLACE LUMINAIRE AND ARM
- ←// EVP DETECTOR W/LIGHT
- ←// EVP LIGHT ONLY
- ←// EVP DETECTOR ONLY
- SPLICE
- ⊙ EQ.G CONNECTION



ABBREVIATIONS

BL	BLUE	NEU	NEUTRAL
BL/BLK	BLUE WITH BLACK TRACER	NMC	NONMETALLIC CONDUIT
BLK	BLACK	O	ORANGE
BLK/WH	BLACK WITH WHITE TRACER	O/BLK	ORANGE WITH BLACK TRACER
CH. SW.	CHECK SWITCH	P1-1 (e.g.)	PEDESTRIAN INDICATION (PHASE 1, NO. 1)
CLR	CLEAR	PB	PUSH BUTTON
D2-1 (e.g.)	DETECTOR (PHASE 2, NO. 1)	PB2-1 (e.g.)	PUSH BUTTON (PHASE 2, NO. 1)
DWK	DON'T WALK	PEC	PHOTOELECTRIC CELL
EQ.G	EQUIPMENT GROUND	PED	PEDESTRIAN
EVP	EMERGENCY VEHICLE PREEMPTION	R	RED
F&I	FURNISH AND INSTALL	REL	RELOCATE
FL	FLASH/FLASHING	R&S	REMOVE AND SALVAGE
G	GREEN	R/BLK	RED WITH BLACK TRACER
G/BLK	GREEN WITH BLACK TRACER	RLTA	RED LEFT TURN ARROW
GLTA	GREEN LEFT TURN ARROW	RSC	RIGID STEEL CONDUIT
GRN	GREEN	SOP	SOURCE OF POWER
GR. RD.	GROUND ROD	SPR	SPARE
GRTA	GREEN RIGHT TURN ARROW	ST LHT	STREET LIGHT
GTHA	GREEN THRU ARROW	STA	STATION
HH	HANDHOLE	SW	SWITCH
HPS	HIGH PRESSURE SODIUM	SWD	SWITCHED
IMC	INTERMEDIATE METAL CONDUIT	TDW	TELEPHONE DROP WIRE
INS. GR.	INSULATED GROUND	WH	WHITE
INP.	INPLACE	WH/BLK	WHITE WITH BLACK TRACER
JB	JUNCTION BOX	WLK	WALK
LED	LIGHT EMITTING DIODE	YEL	YELLOW
LHT	LIGHT	YLTA	YELLOW LEFT TURN ARROW
LUM.	LUMINAIRE	YRTA	YELLOW RIGHT TURN ARROW

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Brian D. Holt
 Date: 6-13-02 License # 21428

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Jonathan J. Krieg
 Date: 6-13-02 License # 40780

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY D. RASMUSSEN DATE 03-02
 DESIGNED BY J. KRIEG DATE 03-02
 CHECKED BY J. KRIEG DATE 03-02
 COMM. NO. 001402



ANOKA COUNTY
 SPAN WIRE DETAILS
 T.H. 242 AT JEFFERSON STREET

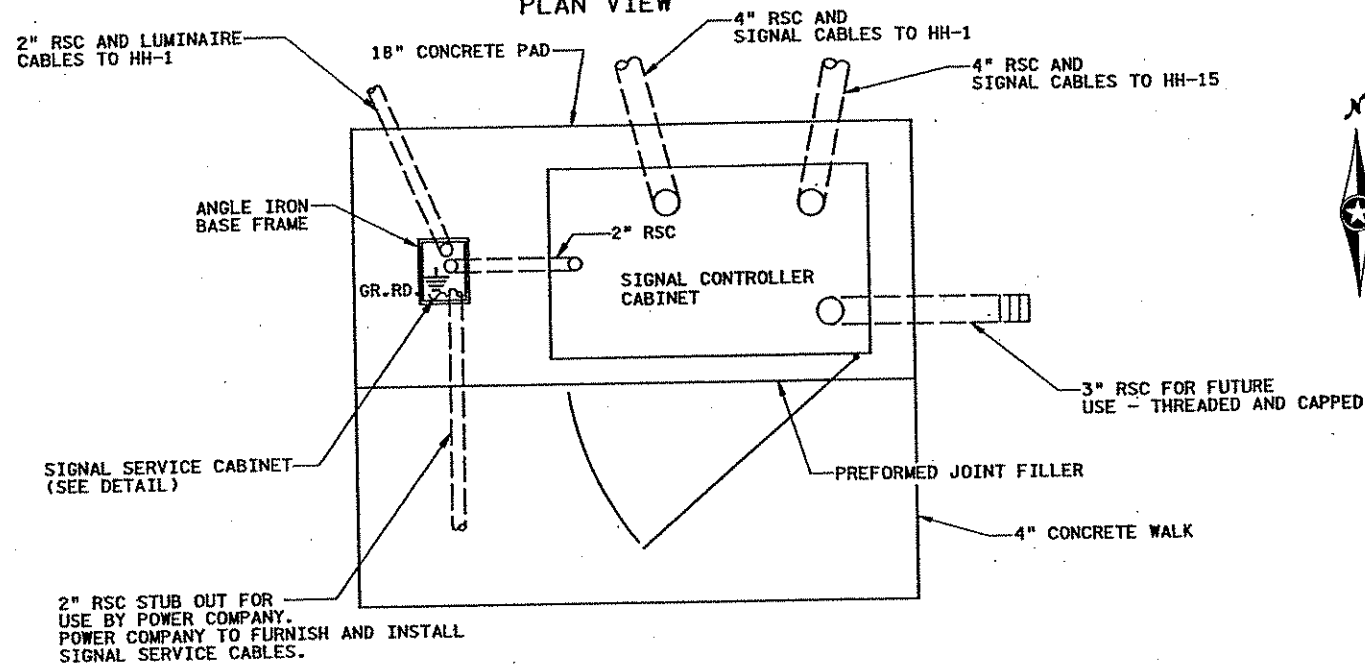
SHEET 77 OF 139

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 06/11/2002

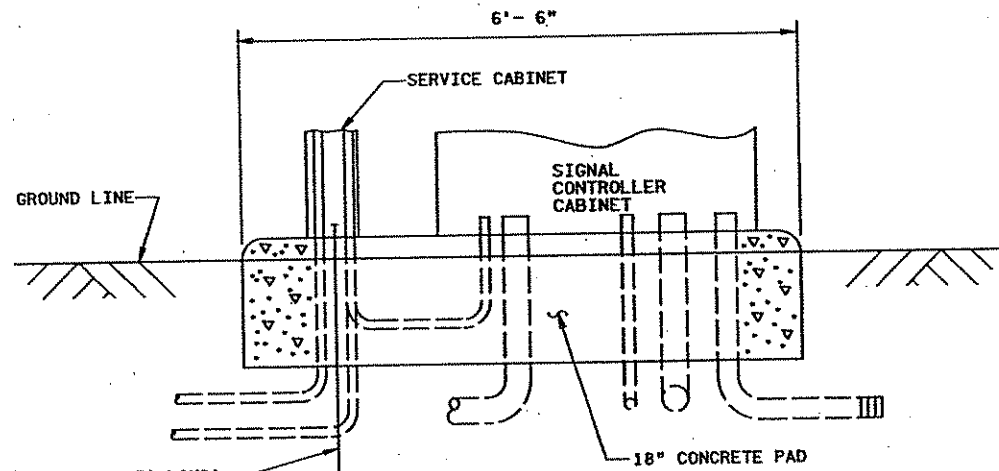
PAD WITH CONTROLLER CABINET AND SERVICE CABINET

SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)

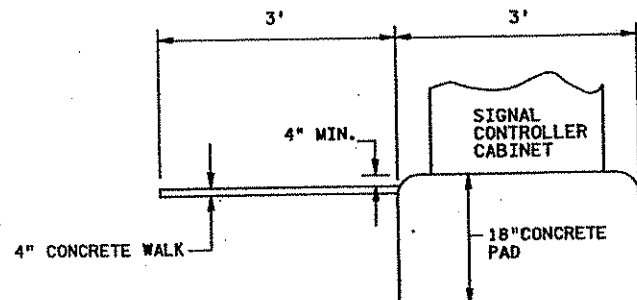
PLAN VIEW



FRONT VIEW



SIDE VIEW



**T.H. 242 & JEFFERSON STREET
(TEMPORARY SIGNAL SYSTEM)**

NOTES:

1. THE ANCHOR RODS, NUTS AND WASHERS FOR THE CONTROLLER CABINET SHALL BE FURNISHED BY MNDOT.
2. THE UPPER PART OF THE EQUIPMENT PAD SHALL BE BEVELLED OR CHAMFERRED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER.
3. THE TOP OF THE CONDUITS SHALL BE THREADED AND CAPPED AFTER INSTALLATION (UNTIL CABLES ARE INSTALLED).
4. CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE CONCRETE AND SHALL BE LOCATED INSIDE THE CABINET WHERE DIRECTED BY THE ENGINEER, BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).
5. CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR THE EQUIPMENT PAD AND SIDEWALK.
6. CONDUITS WITH BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
7. THE EXACT LOCATION OF CONDUITS WITHIN THE PAD SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

I hereby certify that the Electrical Portion of this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Electrical Engineer under the laws of the State of Minnesota.
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Jonathan J. Krieg
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S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY D. RASMUSSEN DATE 03-02
DESIGNED BY J. KRIEG
CHECKED BY J. KRIEG
COMM. NO. 0014102

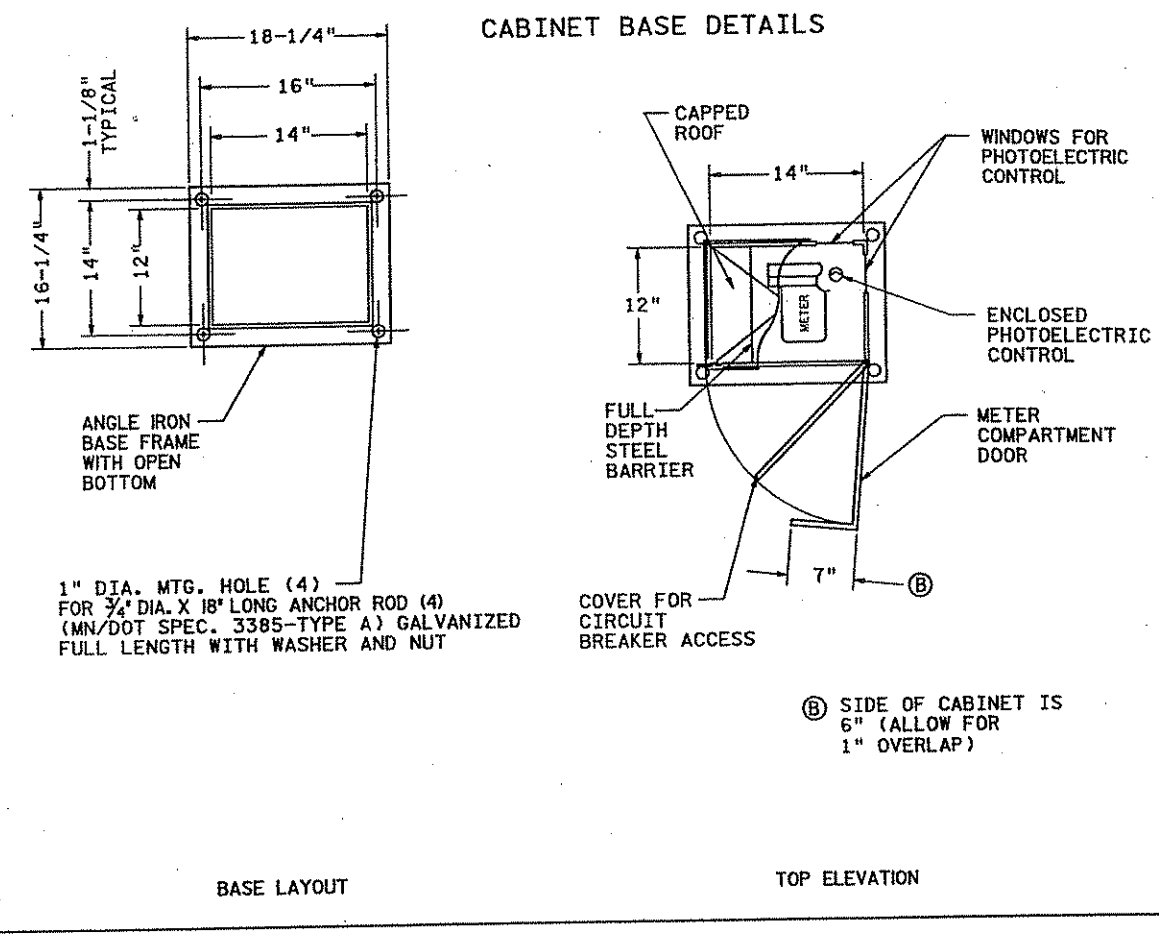
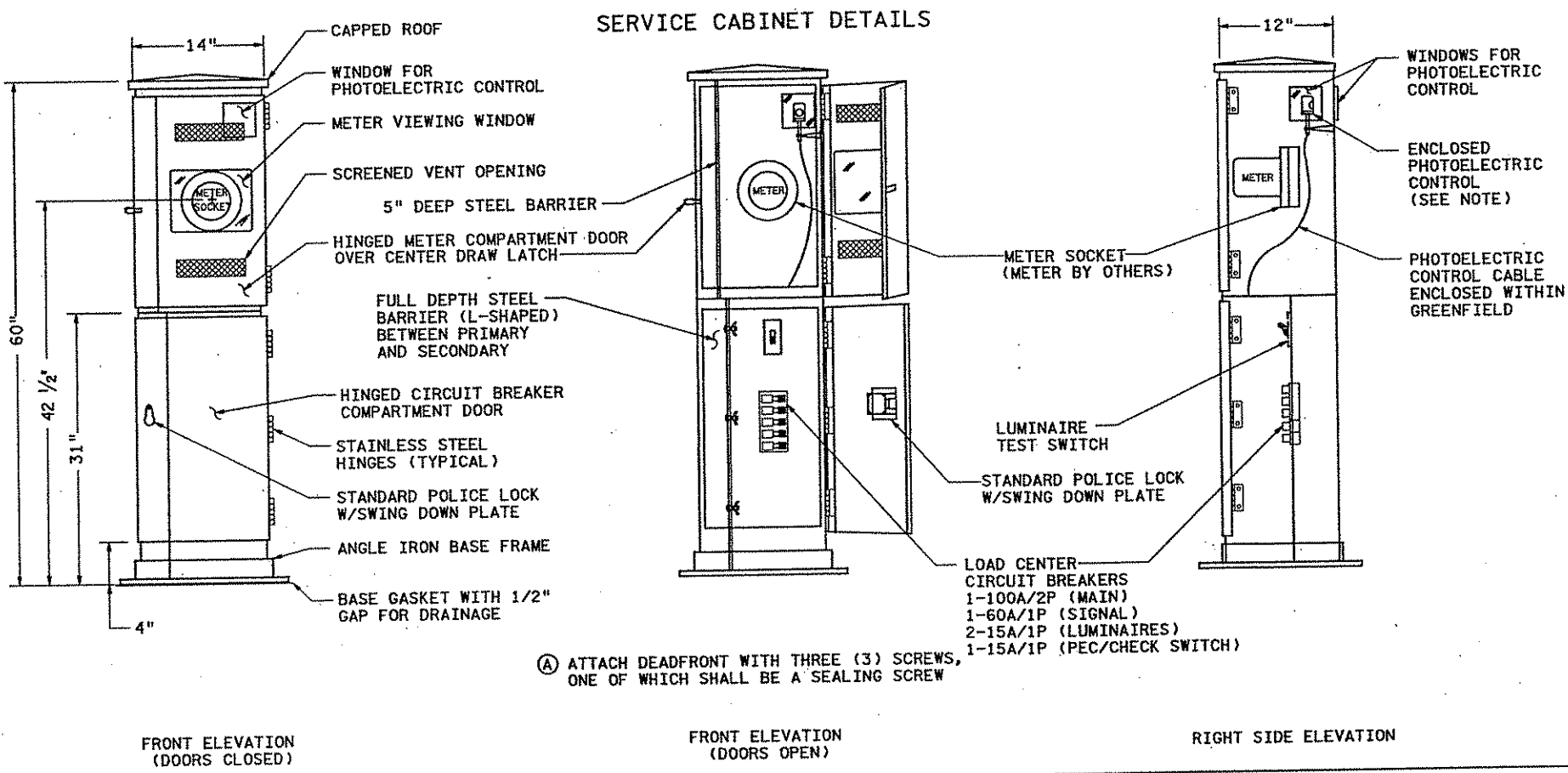


ANOKA COUNTY
EQUIPMENT PAD DETAILS
T.H. 242 AT JEFFERSON STREET

SHEET
78
OF
139

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 PLOTTER:
 SCALE:
 06/11/2002

NO. DATE BY CKD APPR REVISION
NAME: 4102.DSB DATE: Aug. 03, 2001



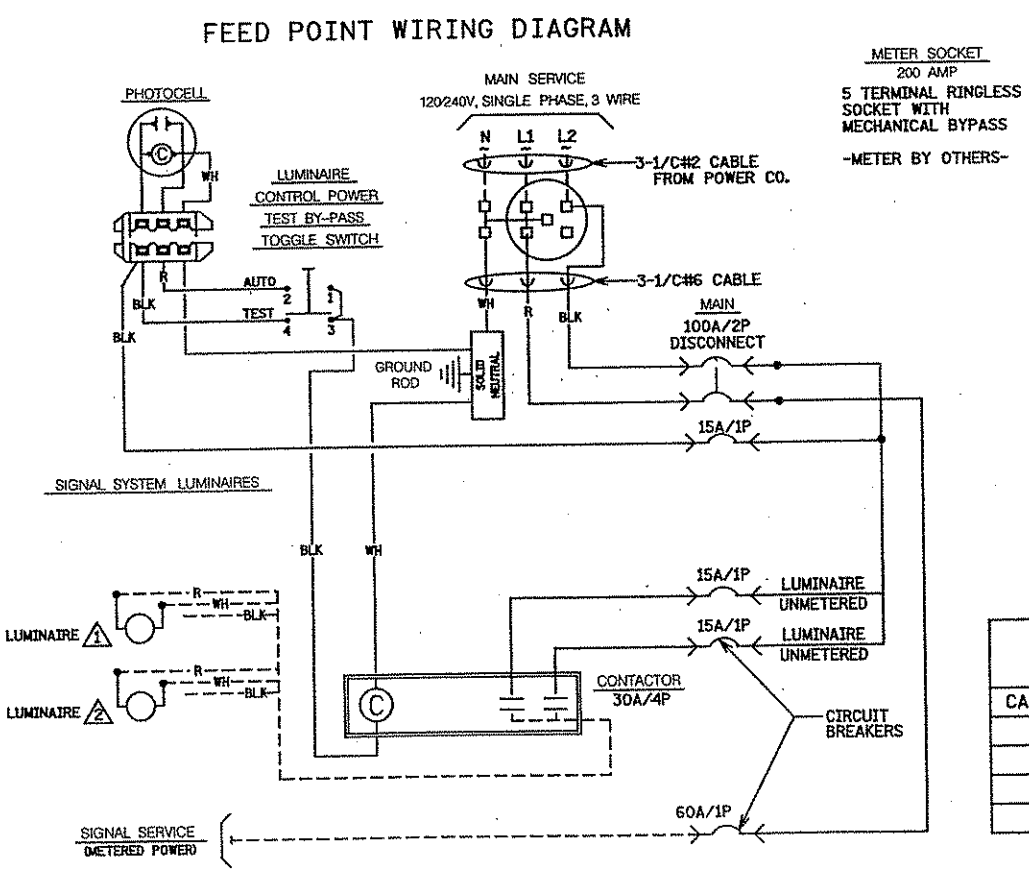
FRONT ELEVATION (DOORS CLOSED)

FRONT ELEVATION (DOORS OPEN)

RIGHT SIDE ELEVATION

BASE LAYOUT

TOP ELEVATION



FIELD WIRING DIAGRAM CABLE NUMBERS

CABLE NO.	CABLE	USE
1	3-1/C#2	INPUT POWER
2	3-1/C#6	SIGNAL SERVICE
3	3/C#12	LUMINAIRE - 1
4	3/C#12	LUMINAIRE - 2

CONSTRUCTION NOTES

1. THE SERVICE CABINET SHALL BE FABRICATED FROM FORMED AND WELDED .125" ANNOXIDIZED ALUMINUM.
2. ALL HINGES, HINGE PINS, AND LOCKS SHALL BE OF NON-CORRODING MATERIALS.
3. THE SERVICE CABINET DOORS SHALL BE ATTACHED TO THE ENCLOSURE WITH LIFT-OFF PHENOLIC HINGES. THE METER COMPARTMENT DOOR SHALL BE SECURED WITH AN OVER-CENTER DRAW LATCH AND DUAL LOCKING FIXTURE WITH LOCK. THE CIRCUIT BREAKER COMPARTMENT DOOR SHALL BE SECURED WITH A STANDARD POLICE LOCK EQUIPPED WITH A STANDARD POLICE LOCK W/SWING DOWN PLATE.
4. BOTH DOOR OPENINGS SHALL BE SEALED WITH NEOPRENE GASKETS TO FORM A COMPLETE SEAL WITH THE ENCLOSURE.
5. THE VIEWING AND PHOTOELECTRIC CONTROL WINDOWS SHALL BE CLEAR LEXAN MATERIAL, SEVEN INCH X SEVEN INCH MINIMUM FOR VIEWING WINDOW AND FOUR INCH X FOUR INCH FOR PHOTOELECTRIC CONTROL CELL WINDOW.
6. THE SERVICE CABINET SHALL BE PROTECTED INSIDE AND OUTSIDE WITH A RUST INHIBITING RED IRON OXIDE ENAMEL PRIMER AND FINISHED WITH AN OVEN BAKED ENAMEL (SILVER).
7. THE CIRCUIT BREAKERS SHALL BE 120/240 VOLT AC, 60 HZ, AND SHALL BE CLEARLY MARKED WITH THE "ON" AND "OFF" POSITIONS AND IDENTIFIED WITH THE LOAD WHICH IT IS CARRYING (E.G. "SIGNALS OR "LIGHTING"). ALL CIRCUIT BREAKERS SHALL BE CLEARLY MARKED IN A MANNER THAT WILL NOT DETERIORATE WITH MOISTURE OR AGE.
8. SHORT CIRCUIT RATING - 10,000 AIC SYMMETRICAL.
9. PROVIDE CLEARANCE TO INSTALL OR REMOVE THE PHOTOELECTRIC CONTROL CELL.
10. THE PHOTOELECTRIC CONTROL LENS SHALL BE ORIENTED TO ELIMINATE INTERFERENCE BY MANMADE LIGHT SOURCES. THE PHOTOELECTRIC CONTROL LENS SHALL NORMALLY FACE NORTH AND EAST.
11. ALL CONDUIT ENTERING THE FOUNDATION SHALL BE SEALED WITH AN APPROVED DUCT SEALER.
12. THE SERVICE CABINET SHALL BE U.L. LISTED AND APPROVED FOR USE AS THE OUTDOOR WEATHER PROOF SERVICE ENTRANCE EQUIPMENT.
13. THE SERVICE CABINET SHALL BE WELDED TO THE BASE IN ACCORDANCE WITH U.L. STANDARDS.
14. SEE THE INTERSECTION LAYOUT FOR THE REQUIRED NUMBER OF LUMINAIRES AT EACH INTERSECTION.
15. ALL WIRES SHALL BE #12 UNLESS NOTED OTHERWISE.

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 SRF
 JCK
 08/13/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.DSA DATE: Aug. 03, 2001

I hereby certify that the Electrical Portion of this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Electrical Engineer under the laws of the State of Minnesota.

Print Name: Brian D. Holt
Brian D. Holt
 Date: 6-13-02 License # 21428

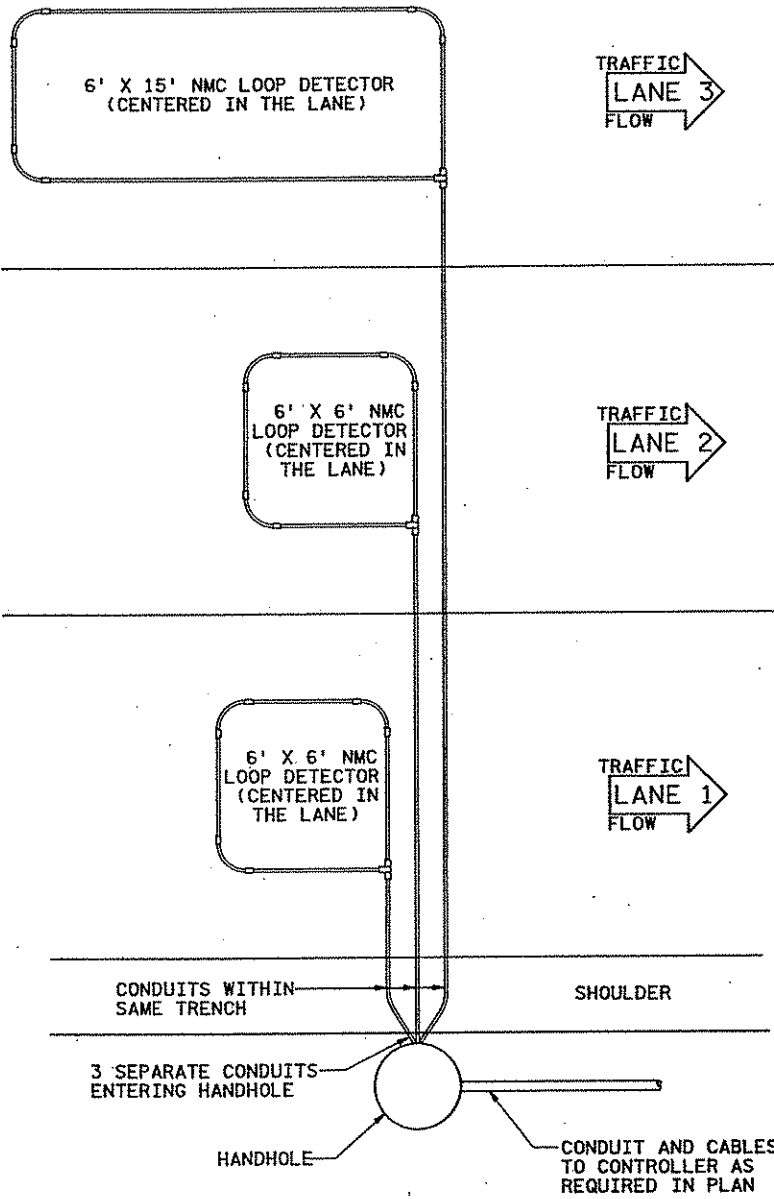
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Print Name: JONATHAN J. KRIEG
Jonathan J. Krieg
 Date: 6-13-02 License # 40780

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. RASMUSSEN DATE: 03-02
 DESIGNED BY: J. KRIEG
 CHECKED BY: J. KRIEG DATE: 03-02
 COMM. NO. 0014102

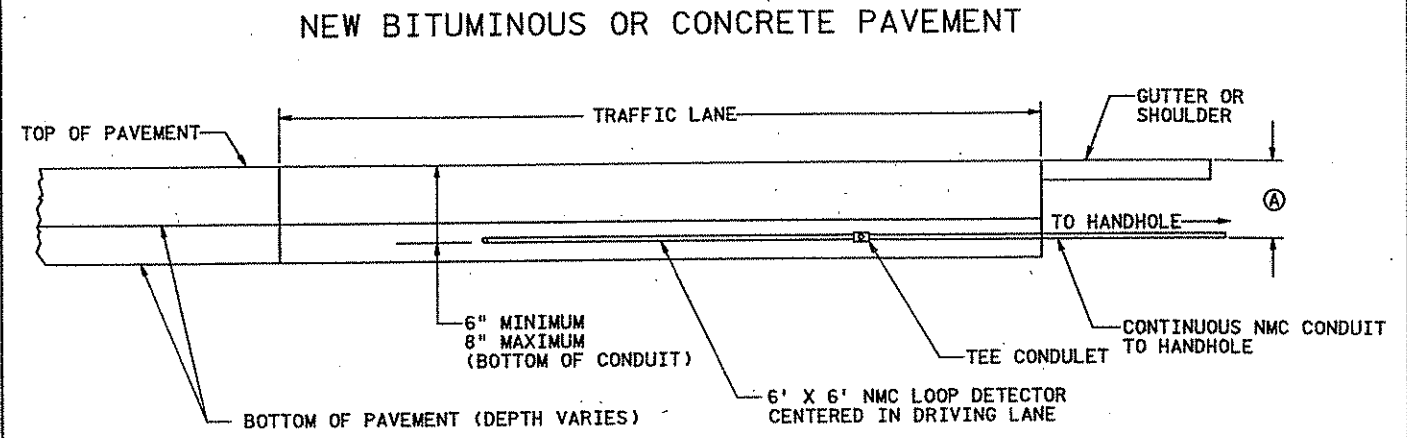
TYPICAL NMC LOOP DETECTOR LAYOUT



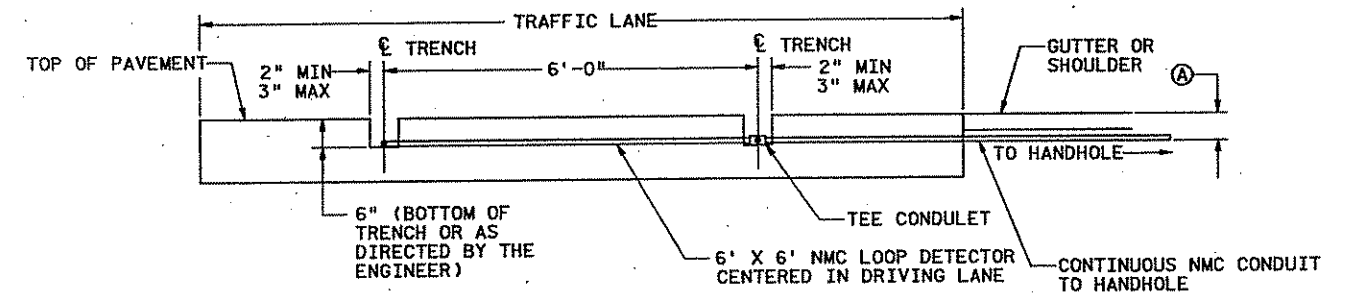
GENERAL NOTES:

1. SEE SPECIAL PROVISIONS FOR REQUIRED LOOP DETECTOR CONDUCTORS, SPLICE KITS, TESTS AND ACCEPTANCE PARAMETERS.
2. THE 3/4" NON-METALLIC CONDUIT (NMC) AND FITTINGS SHALL BE SCHEDULE 40 HEAVY WALL RIGID POLYVINYL CHLORIDE (PVC). SEE SPEC. 3803.
3. THREE CORNERS OF EACH LOOP DETECTOR SHALL BE A 90° FACTORY ELBOW (6" RADIUS). THE FOURTH SHALL BE A NMC TEE CONDULET.
4. APPROVED PVC PRIMER AND CEMENT SHALL BE USED FOR THE PVC JOINTS.
5. ALL SLACK MUST BE REMOVED FROM LOOP DETECTOR CONDUCTORS WITHIN THE NMC
6. THE LOOP DETECTOR CONDUCTORS (1/C#14) SHALL BE TWISTED THREE TURNS PER FOOT FROM THE NMC TEE CONDULET TO THE HANDHOLE.
7. ATTACH A FERROUS METAL ITEM TO THE INTERIOR OF THE TEE CONDULET COVER.
8. EACH LOOP DETECTOR CONDUIT TO THE HANDHOLE SHALL BE SLOPED TOWARDS THE HANDHOLE.
9. LOOP DETECTOR CONDUITS TO THE HANDHOLE MAY BE PLACED WITHIN THE SAME TRENCH.
10. THE LOOP DETECTOR CONDUCTORS SHALL END IN THE HANDHOLE.
11. NO SPLICES ALLOWED IN CONDUIT OR TEE CONDULET.
12. THE LOOP DETECTOR ROADWAY CONDUCTORS AND THE LOOP DETECTOR LEAD-IN CABLE CONDUCTORS SHALL BE PROPERLY PREPARED AND CLEANED BEFORE SPLICING.
13. SPLICE KITS SHALL BE INSTALLED IN HANDHOLES IN SUCH A MANNER AS TO ENSURE THAT EACH SPLICE KIT IS SUSPENDED AND/OR SECURED NEAR THE TOP OF THE HANDHOLE TO THE SATISFACTION OF THE ENGINEER. (PLACING SPLICE KITS ON THE TOP OF THE ELECTRICAL CABLES AND CONDUCTORS IS NOT ACCEPTABLE).
14. TYPICAL LOOP DETECTOR SIZES SHALL BE 6' X 6', 6' X 10', 6' X 15' AND 6' X 20'. REFER TO THE INTERSECTION LAYOUT FOR SPECIFIC LOOP DETECTORS TO BE PLACED.
15. ALL LOOP DETECTORS SHALL HAVE FOUR (4) TURNS OF WIRE.

TYPICAL NMC LOOP DETECTOR INSTALLATION



INPLACE BITUMINOUS PAVEMENT

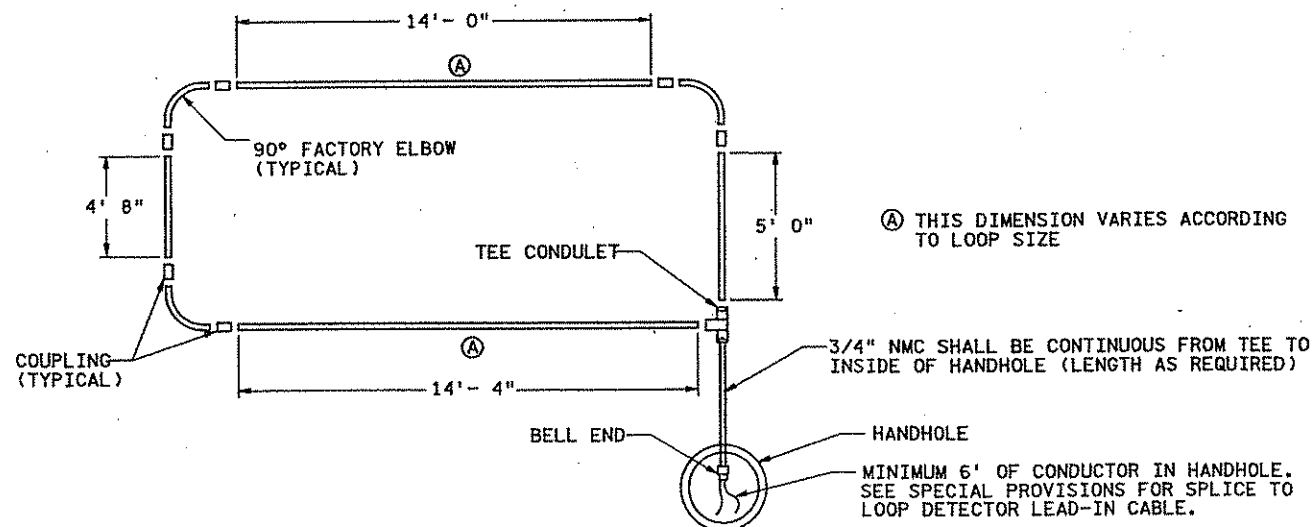


Ⓐ VARIABLE DEPTH-MAINTAIN DRAINAGE TO HANDHOLE

NOTES:

1. USE THE LOOP DETECTOR TO BE INSTALLED FOR THE PURPOSE OF MARKING THE PAVEMENT LOCATION FOR THE MILLING OPERATION.
2. TO ACHIEVE FULL TRENCH DEPTH FOR CONDUIT PLACEMENT, MILL BEYOND THE DESIRED PAVEMENT MARKING.
3. PROVIDE A MINIMUM 2" VERTICAL EDGE, MEASURED FROM THE TOP OF PAVEMENT, ON ALL MILLED TRENCH CUTS.
4. AN AIR COMPRESSOR UNIT (50 HP) IS REQUIRED FOR REMOVING ALL LOOSE MATERIAL FROM TRENCH PRIOR TO TACK COAT APPLICATION.
5. APPLY A TACK COAT AT A UNIFORM RATE TO THE BOTTOM AND EDGES OF THE MILLED AREA USE AN EMULSIFIED ASPHALT PER SPEC. 2357.2A
6. USE MIXTURE TYPE MEDIUM VOLUME (TYPE MWWE45035B) TO BACKFILL THE TRENCH. OTHER WEARING COURSE MIXTURE TYPES ARE ALLOWED WHEN APPROVED BY THE ENGINEER.
7. THE USE OF PETROLEUM DISTILLATES AS AN ANTI-ADHESIVE AGENT IS NOT ALLOWED. REFER TO MN/DOT TECH. MEMO NO. 94-16-MRE-05 DATED 3/10/94 FOR ADDITIONAL INFORMATION.
8. COMPACTION SHALL BE OBTAINED BY THE ORDINARY COMPACTION METHOD. BACKFILL THE TRENCH WITH A MINIMUM OF TWO LIFTS AND COMPACT EACH LIFT. BEFORE COMPACTION THE FIRST LIFT ENSURE THAT THERE IS ADEQUATE MIXTURE ON EACH SIDE AND ABOVE THE CONDUIT SO THAT THE CONDUIT IS NOT DAMAGED DURING COMPACTION OPERATIONS.
9. THE COMPACTION MIXTURE IN THE TRENCH SHOULD BE LEFT 1/4" TO 1/2" ABOVE THE ADJACENT PAVEMENT SURFACE TO PROVIDE FOR ADDITIONAL COMPACTION BY TRAFFIC.
10. APPLY A BITUMINOUS FOG SEAL ON THE NEWLY COMPACTION MIXTURE TO PROVIDE AN ADDITIONAL SURFACE SEAL (EMULSIFIED ASPHALT 2355.2A). DRY SAND SHALL BE SPREAD ON THE FOG SEAL TO PREVENT MATERIAL PICKUP AND TRACKING.

TYPICAL NMC LOOP DETECTOR DETAIL- (6' X 15' LOOP)



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Jonathan J. Krieg
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 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY DATE
 D. RASMUSSEN 03-02
 DESIGNED BY
 J. KRIEG 03-02
 CHECKED BY
 J. KRIEG 03-02
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 001402

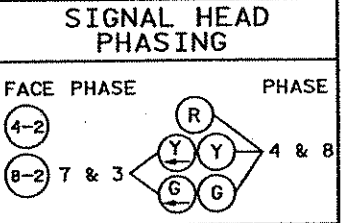
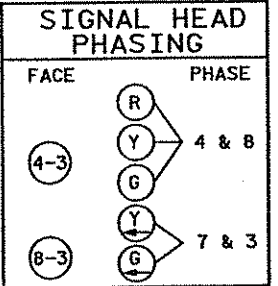


ANOKA COUNTY
 PREFORMED NMC CONDUIT LOOP DETECTOR DETAILS
 T.H. 242 AT JEFFERSON STREET

SHEET
 80
 OF
 139

LED SIGNAL INDICATIONS						
SIGNAL FACE	R	Y	G	RLTA	YLTA	GLTA
1-1,1-2				←	←	←
2-1,2-2	●	●	●			
4-1	●	●	●			
4-2,4-3	●	●	●	←	←	←
5-1,5-2				←	←	←
6-1,6-2	●	●	●			
8-1	●	●	●			
8-2,8-3	●	●	●	←	←	←

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12"
-EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD



MATCH LINE "B"
SEE SHEET 83

WP3 EB 217+74, 64'LT
50' MINIMUM WOOD POLE, CLASS 2
2-DOWN GUYS, GUARDS AND ANCHORS
15' LUM. ARM (30' MOUNTING HEIGHT)
TYPE 10B
TYPE 10A
LUMINAIRE - 250 WATT H.P.S.
1 - PED. PUSHBUTTON AND SIGN - FACING WP4
1 - R9-3a SIGN - FACING WP2
ONE-WAY EVP DETECTOR (Ø4+Ø7)
1" RSC RISER AND WEATHERHEAD ABOVE SPAN WIRE
FOR LUMINAIRE, 1-3/C#12(LUM.)
1 - METAL JUNCTION BOX WITH TERMINAL BLOCK
3/4" RSC BELOW JUNCTION BOX TO PED PUSHBUTTON
2" RSC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
2 - 12/C #12 AND 1 - 3/C #12
EXTEND 3" RSC INTO HH-9 WITH:
4 - 2/C #14

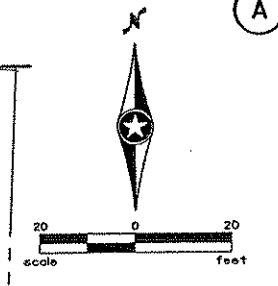
(B) SOURCE OF POWER
GROUND MOUNTED TRANSFORMER
(BY CONNEXUS ENERGY)
APPROX. LOCATION.
CONTRACTOR TO COORDINATE WITH
POWER COMPANY

7/16" SPAN WIRE WITH:
2-12/C#12
1-3/C#12
1-3/C#20
1-3/C#12 (LUM.)
4-2/C#14

7/16" SPAN WIRE WITH:
2-12/C#12
1-5/C#12
1-3/C#12
1-3/C#20
1-3/C#12 (LUM.)
4-2/C#14

7/16" SPAN WIRE WITH:
2-12/C#12
1-5/C#12
2-3/C#12
1-3/C#12 (LUM.)
4-2/C#14
1-3/C#20

JEFFERSON ST.
(40 M.P.H.)

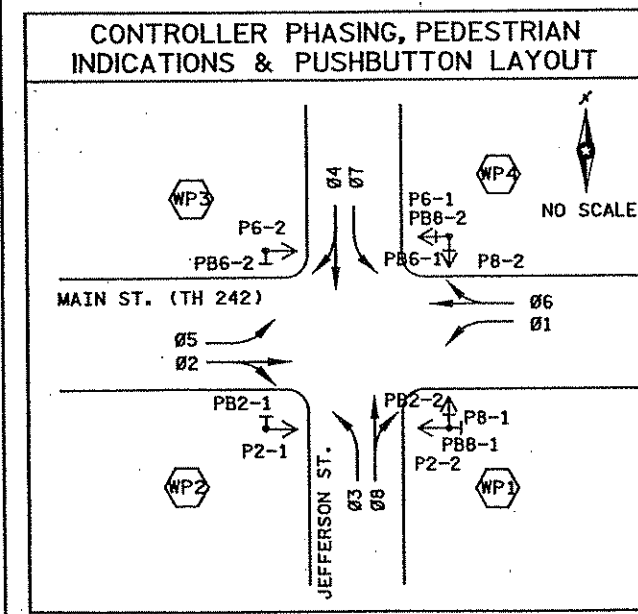
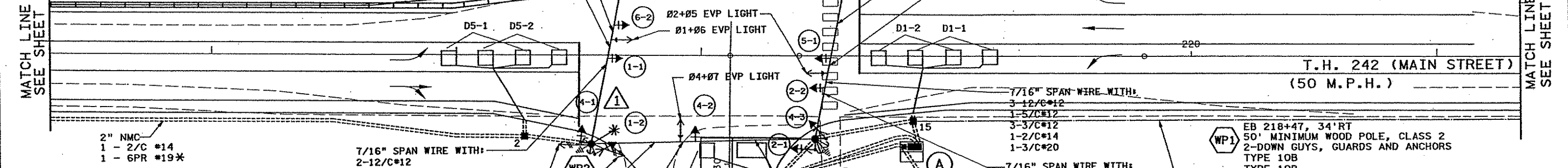


(A) EB 218+88, 35'RT
EQUIPMENT PAD - SEE DETAIL
CONTROLLER, MASTER CONTROLLER & CABINET
EXTEND 4" RSC INTO HH-14 WITH:
5 - 12/C #12, 2 - 5/C #12,
4 - 3/C #12, 3 - 2/C #14,
1 - 3/C #20 AND 1 - 6PR #19*
EXTEND 4" RSC INTO HH-1 WITH:
5 - 12/C #12, 2 - 5/C #12,
4 - 3/C #12, 10-2/C #14,
3 - 3/C #20 AND 1 - 6PR #19*
3" RSC STUBBED OUT (THREADED
AND CAPPED BOTH ENDS)
2" RSC TO SERVICE CABINET
2 - 1/C #6
1 - 1/C #6 INS. GRD.
SERVICE CABINET TO HH-1:
2" RSC
2 - 3/C #12 (LUM.)
EXTEND 2" RSC FROM SERVICE CABINET
SOUTH 20 FEET. MARK END OF CONDUIT
WITH STAKE. CONNEXUS ENERGY WILL
TAP INTO CONDUIT AND CONNECT TO
SERVICE CABINET. POWER COMPANY TO
SUPPLY:
3 - 1/C #2

NMC LOOP DETECTORS		
DESIGNATION	NO. & SIZE/FT.	LOCATION
D1-1	2-6'X6'	20' AND 50'
D1-2	2-6'X6'	5' AND 35'
D2-1	1-6'X6'	400'
D3-1	2-6'X6'	5' AND 35'
D3-2	1-6'X6'	20'
D4-1	1-6'X6'	250'
D4-2	2-6'X15'	5' AND 20'
D5-1	2-6'X6'	20' AND 50'
D5-2	2-6'X6'	5' AND 35'
D6-1	1-6'X6'	400'
D7-1	2-6'X6'	20' AND 50'
D7-2	2-6'X6'	5' AND 35'
D8-1	2-6'X12'	5' AND 20'

-LOCATION: DISTANCE FROM CROSSWALK/STOP
LINE IN FEET

WP4 EB 218+64, 57'LT
50' MINIMUM WOOD POLE, CLASS 2
2 - DOWN GUYS, GUARDS AND ANCHORS
2 - TYPE 10B
ONE-WAY EVP DETECTOR (Ø1+Ø6)
2 - PED. PUSHBUTTONS AND SIGNS
1 - METAL JUNCTION BOX WITH TERMINAL BLOCK
3/4" RSC BELOW JUNCTION BOX TO PED PUSHBUTTONS
2" RSC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
2 - 12/C #6 AND 1-3/C #12
EXTEND 3" RSC TO HH-11 WITH: 1 - 2/C #14



7/16" SPAN WIRE WITH:
2-12/C#12
2-5/C#12
2-3/C#12
1-3/C#12 (LUM.)
4-2/C#14
1-3/C#20

7/16" SPAN WIRE WITH:
4-12/C#12
2-5/C#12
3-3/C#12
2-3/C#12 (LUM.)
7-2/C#14
3-3/C#20
1-6PR#19*

7/16" SPAN WIRE WITH:
4-12/C#12
2-5/C#12
4-3/C#12
2-3/C#12 (LUM.)
7-2/C#14
3-3/C#20
1-6PR#19*

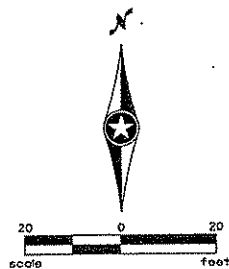
WP2 EB 217+55, 37'RT
50' MINIMUM WOOD POLE, CLASS 2
1-DOWN GUY, GUARD AND ANCHOR
15' LUM. ARM (30' MOUNTING HEIGHT)
TYPE 10B
TYPE 10A
LUMINAIRE - 250 WATT H.P.S.
1 - PED. PUSHBUTTON AND SIGN - FACING WP1
1 - R9-3a SIGN - FACING WP3
ONE-WAY EVP DETECTOR (Ø3+Ø8)
ONE-WAY EVP DETECTOR (Ø2+Ø5)
1" RSC RISER AND WEATHERHEAD ABOVE SPAN WIRE
FOR LUMINAIRE, 1-3/C#12(LUM.)
1 - METAL JUNCTION BOX WITH TERMINAL BLOCK
3/4" RSC BELOW JUNCTION BOX TO PED PUSHBUTTON
2" RSC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
SIGNAL SYSTEM ID#: 22545
T.E.#: 2871
MASTER ID#: 22566
MASTER T.E.#: 2925
METER ADDRESS: 650 NE MAIN ST.
BLAINE, MN 55434

SIGNAL OPERATION NOTES

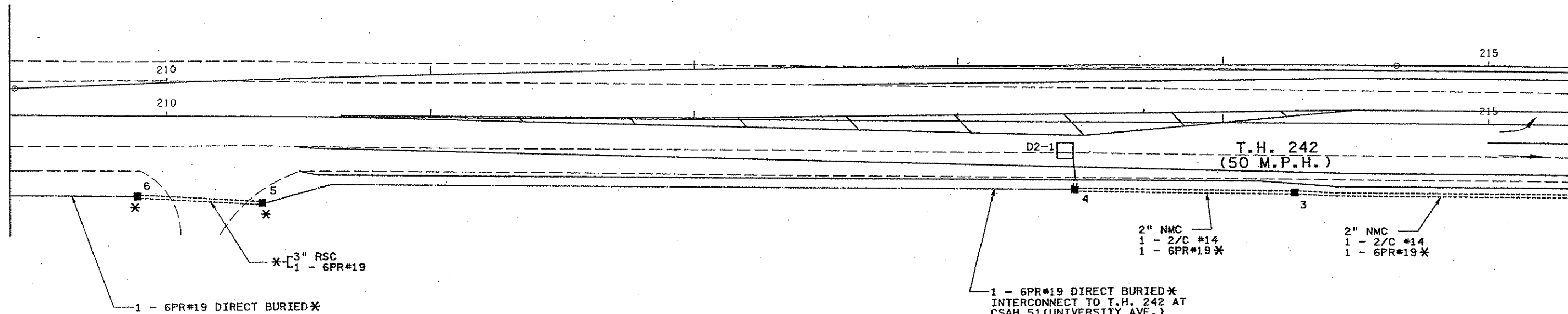
- NORMAL OPERATION IS 8 PHASE
- FLASH MODE SHALL BE ALL RED
- Ø1 & Ø5 SHALL BE PROTECTED
- Ø3 & Ø7 SHALL BE PROTECTED/PERMISSIVE
- Ø2 & Ø6 SHALL BE ON VEHICLE RECALL

NOTES:

- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS, LED VEHICLE INDICATIONS AND PEDESTRIAN INDICATIONS.
- EXACT LOCATION OF HANDHOLES, POLES, LOOP DETECTORS AND CABINET SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER AND REVIEWED BY MN/DOT TRAFFIC OFFICE PERSONNEL.
- THE CONTRACTOR AND A POWER COMPANY REPRESENTATIVE SHALL FIELD VERIFY THE LOCATION OF THE SOURCE OF POWER.
- ALL EVP DETECTORS SHALL BE INSTALLED AND AIMED BY THE ENGINEER AND REVIEWED BY MN/DOT TRAFFIC OFFICE PERSONNEL.
- SEE SHEET 76 FOR SPAN WIRE MOUNTING DETAILS.
- ALL ITEMS DENOTED WITH * SHALL BE PART OF THE INTERCONNECT SYSTEM PAY ITEM.
- SIGNAL HEADS 4-2 AND 8-2 SHALL BE A DOGHOUSE (PENTAGON) ARRANGEMENT.
- FURNISH AND INSTALL TWO 24"x30" R10-12 SIGNS, ONE TO BE LOCATED ON THE SPAN WIRE ADJACENT TO SIGNAL INDICATION 8-2, THE OTHER TO BE LOCATED ON THE SPAN WIRE ADJACENT TO SIGNAL INDICATION 4-2.



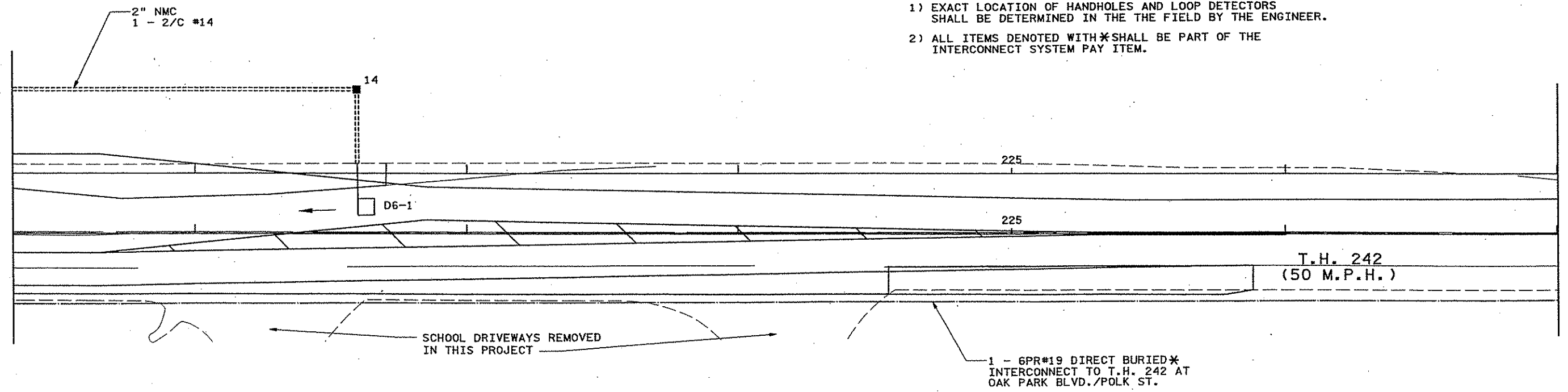
MATCH LINE "G"
SEE SHEET 86



MATCH LINE "A"
SEE SHEET 81

NOTE:
 1) EXACT LOCATION OF HANDHOLES AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 2) ALL ITEMS DENOTED WITH * SHALL BE PART OF THE INTERCONNECT SYSTEM PAY ITEM.

MATCH LINE "C"
SEE SHEET 81



MATCH LINE "D"
SEE SHEET 85

RECEIVED 11/04/21 10:23 AM
 402.MLC
 SCALE: AS SHOWN
 DATE: 06/13/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 402.MLC DATE: Mar. 18, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: JONATHAN J. KRIEG
Jonathan J. Krieg
 Date: 6-13-02 License # 40180

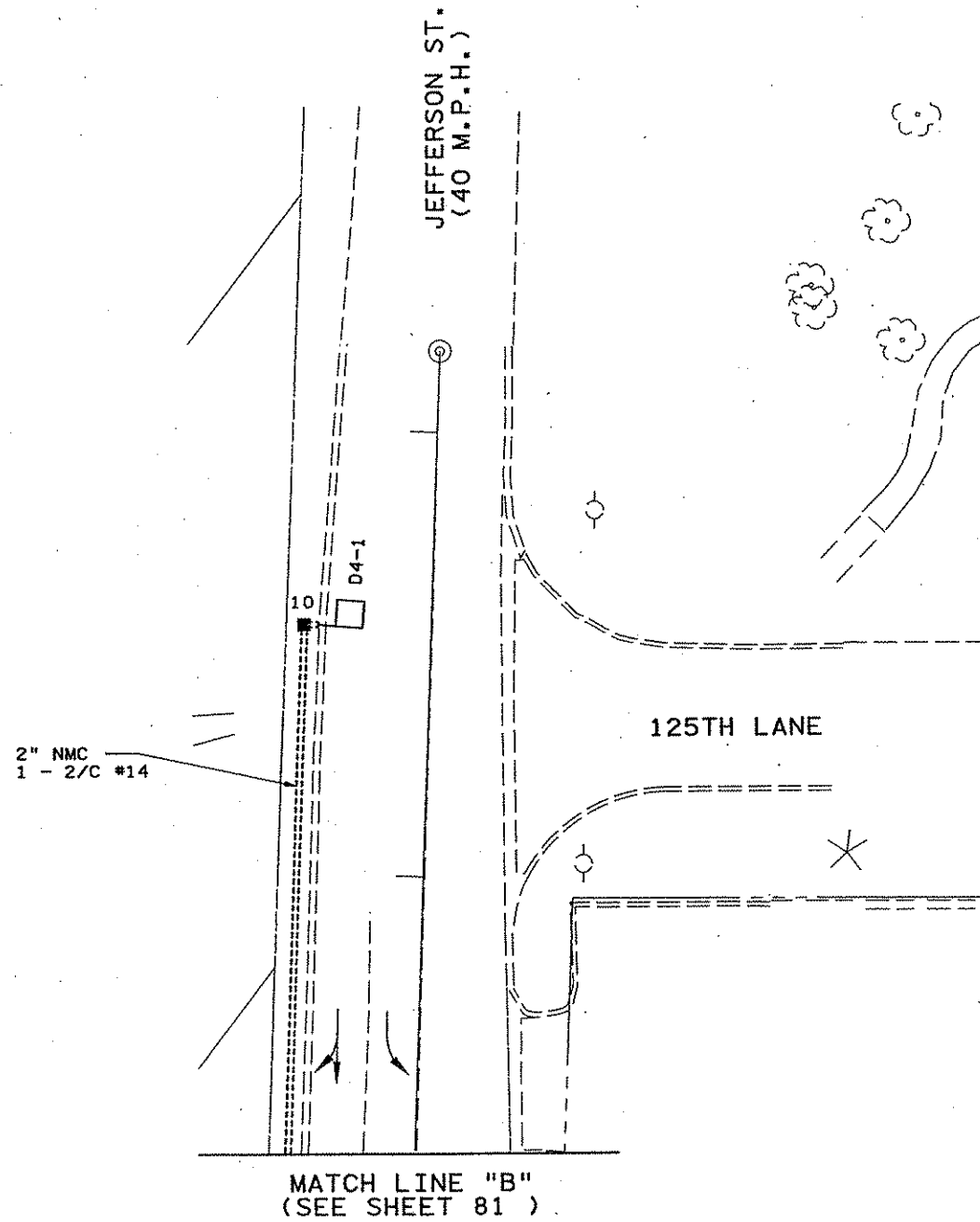
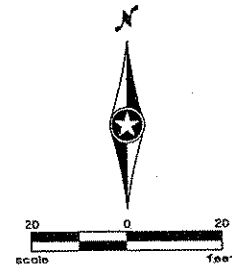
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. RASMUSSEN DATE: 03-02
 DESIGNED BY: J. KRIEG DATE: 03-02
 CHECKED BY: J. KRIEG DATE: 03-02
 COMM. NO.: 001402



ANOKA COUNTY
 MATCH LINE LAYOUT
 T.H. 242 AT JEFFERSON STREET

SHEET
 82
 OF
 139



H:\S\11\047\4102\plans...2.mxd
 #PREFS
 #PLOTTERS
 #SCALES
 06/13/2002

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: JONATHAN J. KRIEG
Jonathan J. Krieg
 Date: 6-13-02 License # 40780

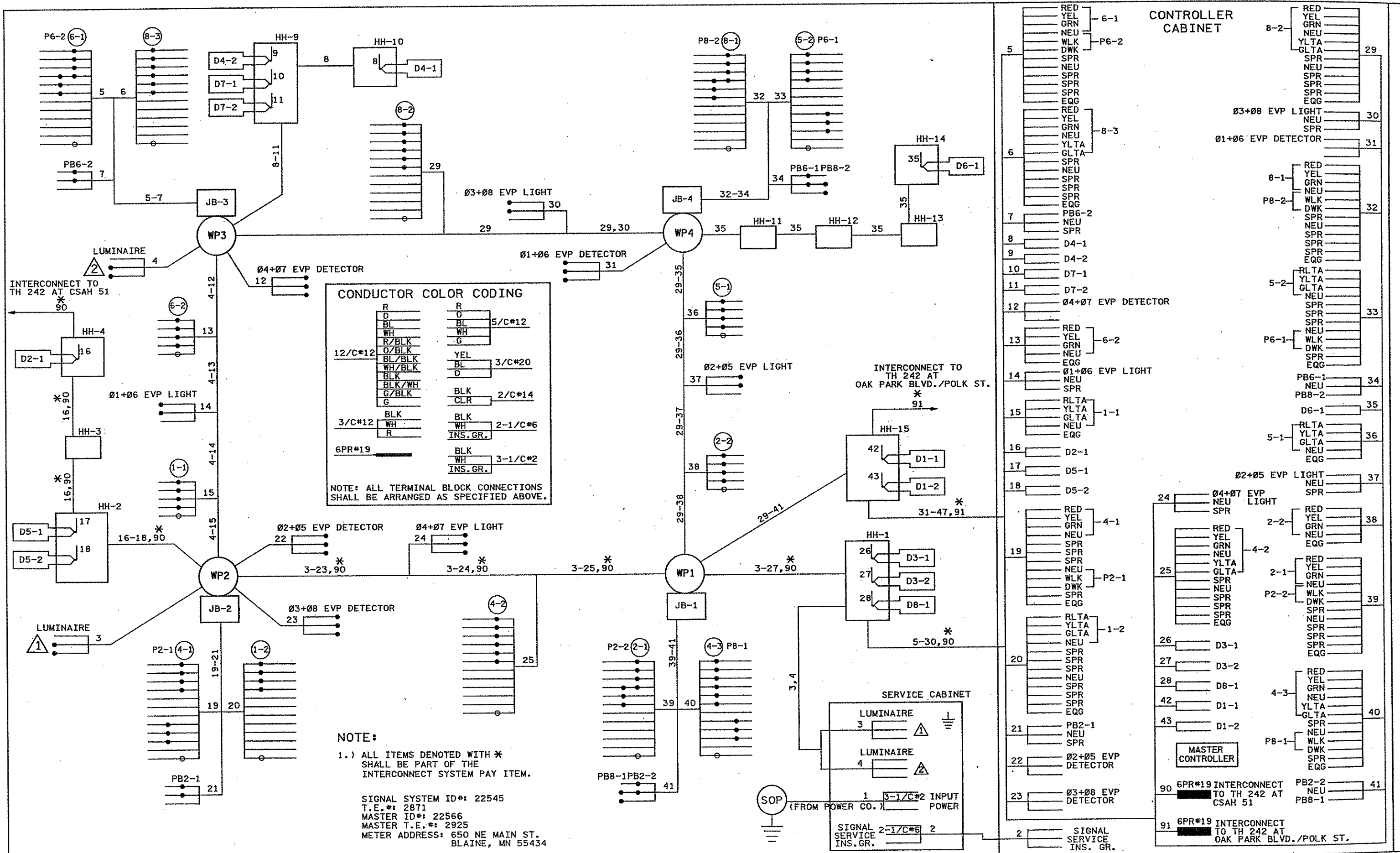
STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: D. RASMUSSEN DATE: 03-02
 DESIGNED BY: J. KRIEG DATE: 03-02
 CHECKED BY: J. KRIEG DATE: 03-02
 COMM. NO.: 001902



ANOKA COUNTY
 MATCH LINE LAYOUT
 T.H. 242 AT JEFFERSON STREET

SHEET
 83
 OF
 139



2.twg
 SRF CONSULTING GROUP, INC.
 PLOTTER
 SCALES
 06/13/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.TWA DATE: Mar. 22, 2002 TIME: 08:25:51

I hereby certify that the Electrical Portion of this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Electrical Engineer under the laws of the State of Minnesota.

Print Name: **Brian D. Holt**
Brian D. Holt
 Date: 6-13-02 License #: 21428

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

Print Name: **JONATHAN J. KRIEG**
Jonathan J. Krieg
 Date: 6-13-02 License #: 40780

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY: **D. RASMUSSEN** DATE: 3-02
 DESIGNED BY: **J. KRIEG** DATE: 3-02
 CHECKED BY: **J. KRIEG** DATE: 3-02
 COMM. NO.: 0014102



ANOKA COUNTY
 TEMPORARY FIELD WIRING DIAGRAM
 T.H. 242 AT JEFFERSON STREET

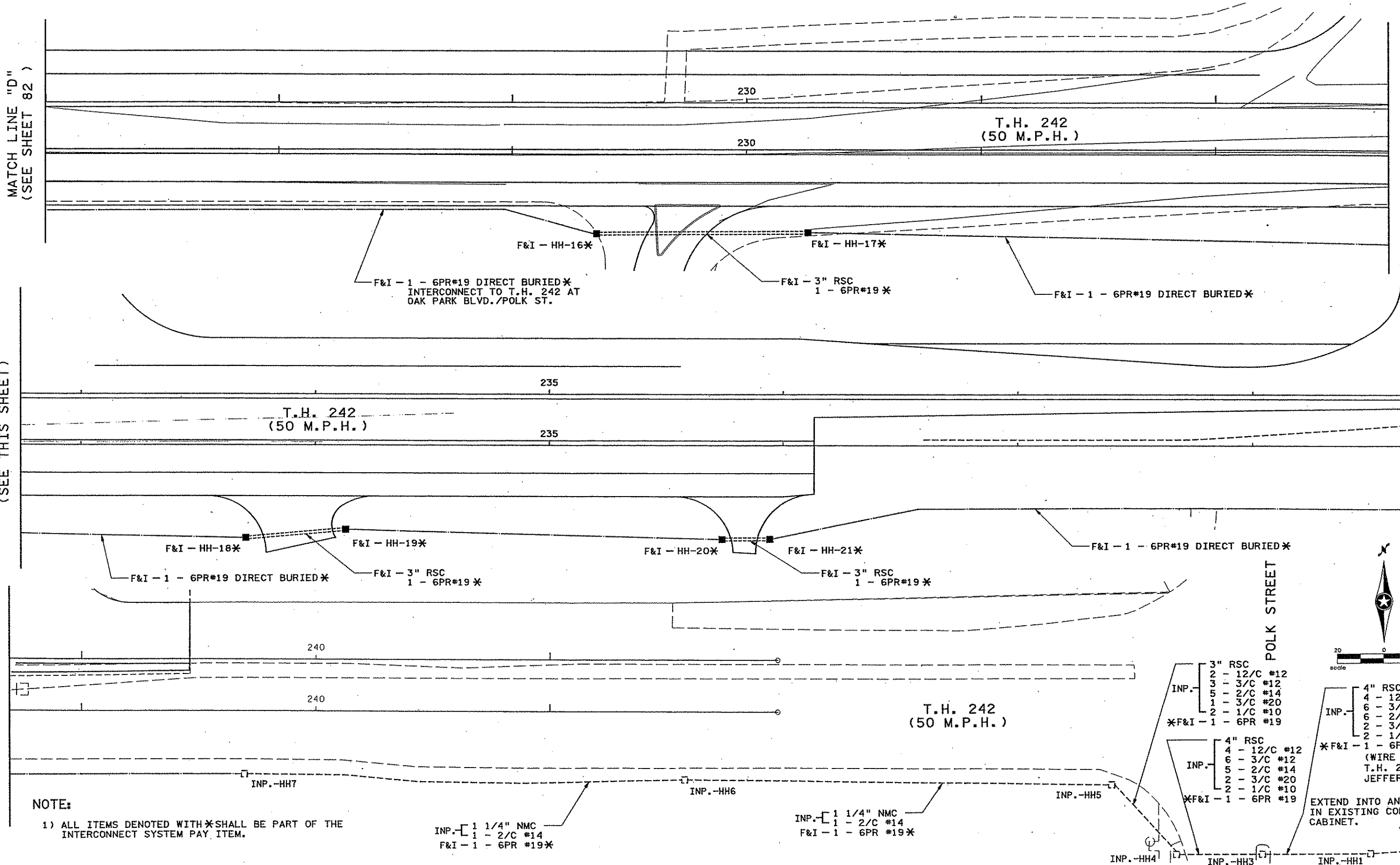
MATCH LINE "D"
(SEE SHEET 82)

MATCH LINE "E"
(SEE THIS SHEET)

MATCH LINE "E"
(SEE THIS SHEET)

MATCH LINE "F"
(SEE THIS SHEET)

MATCH LINE "F"
(SEE THIS SHEET)



NOTE:
 1) ALL ITEMS DENOTED WITH * SHALL BE PART OF THE INTERCONNECT SYSTEM PAY ITEM.

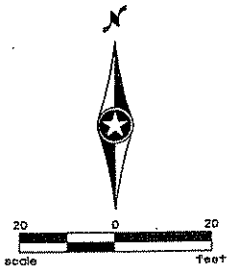
INP.- [1 1/4" NMC
 1 - 2/C #14
 F&I - 1 - 6PR #19*

INP.- [1 1/4" NMC
 1 - 2/C #14
 F&I - 1 - 6PR #19*

INP.- [3" RSC
 2 - 12/C #12
 3 - 3/C #12
 5 - 2/C #14
 1 - 3/C #20
 2 - 1/C #10
 *F&I - 1 - 6PR #19

INP.- [4" RSC
 4 - 12/C #12
 6 - 3/C #12
 6 - 2/C #14
 2 - 3/C #20
 2 - 1/C #10
 *F&I - 1 - 6PR #19
 (WIRE #91 FROM T.H. 242 AND JEFFERSON ST.)

EXTEND INTO AND CONNECT IN EXISTING CONTROLLER CABINET.



P:\REV\11\04\14\4102.dwg 02.100
 J. KRUEGER
 06/13/2002

NO	DATE	BY	CRD	APPR	REVISION

I hereby certify that this plan, specification, or report 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.
 Print Name: JONATHAN J. KRIEG
Jonathan J. Krieg
 Date 6-13-02 License # 46780

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

DRAWN BY D. RASMUSSEN DATE 03-02
 DESIGNED BY J. KRIEG DATE 03-02
 CHECKED BY J. KRIEG DATE 03-02
 COMM. NO. 001402



ANOKA COUNTY
 INTERCONNECT LAYOUT
 T.H. 242 AT JEFFERSON STREET
 (JEFFERSON ST. TO POLK ST.)

SHEET
 85
 OF
 139

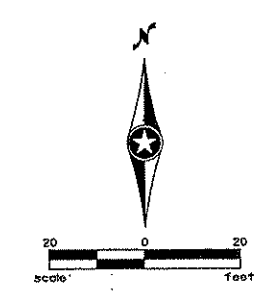
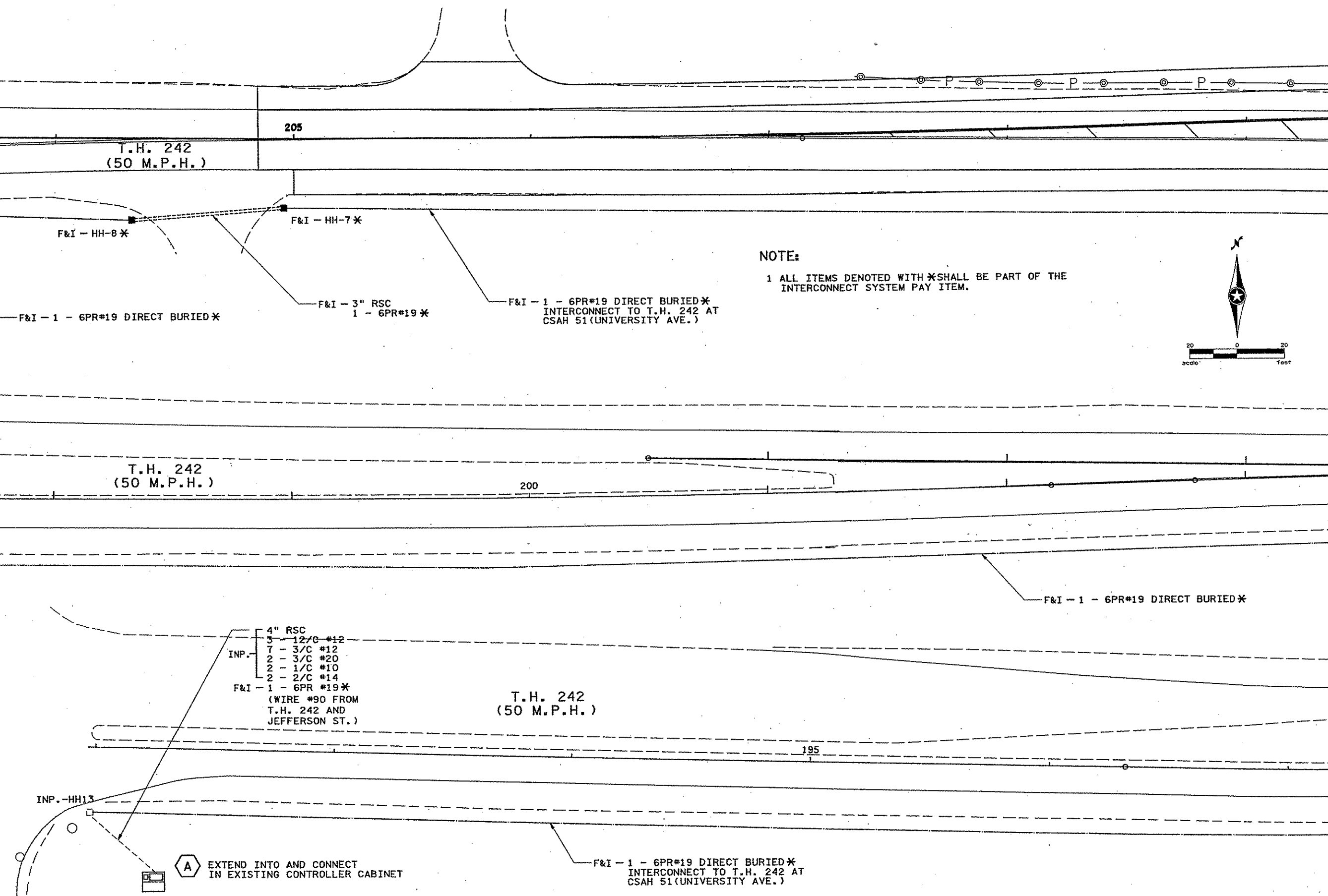
MATCH LINE "H"
SEE THIS SHEET

MATCH LINE "G"
SEE SHEET 82

MATCH LINE "I"
SEE THIS SHEET

MATCH LINE "H"
SEE THIS SHEET

MATCH LINE "I"
SEE THIS SHEET



P:\ACIV\110474\1102\PLA 2-ICC
 SRF &
 SCOUTERS
 06/13/2002

NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.ICC DATE: Sept. 27, 2001

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

Print Name: JONATHAN J. KRIEG

Jonathan J. Krieg

Date: 6-13-02 License # 40780

STATE AID
PROJECT NO.

S.P. 106-010-18
S.P. 106-121-04
S.P. 0212-42
S.P. 02-596-04

DRAWN BY DATE
D.RASMUSSEN 03-02

DESIGNED BY
J. KRIEG 03-02

CHECKED BY
J. KRIEG 03-02

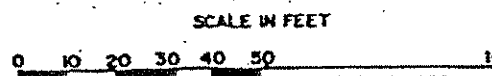
COMM. NO.
001402

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
INTERCONNECT LAYOUT
T.H. 242 AT JEFFERSON STREET
(JEFFERSON ST. TO UNIVERSITY AVE.)

SHEET
86
OF
139

DETECTOR CHART				DISTANCE FROM STOP BAR
DESIGNATION	PHASE	SIZE IN FT	FUNCTION	
D2-1	2	1-6 X 6	(1)	380'
* D6-1	6	1-6 X 6	(1)	380'
D4-1	4	2-6 X 6	(2)	180'
* D4-2	4	2-6 X 6	(1)	5' & 20'
D4-3	4	2-6 X 6	(1)	5' & 35'
D8-1	8	2-6 X 6	(2)	180'
D8-2	8	4-6 X 6	(1)	5' & 20'
D8-3	8	2-6 X 6	(1)	5' & 35'
D4-1	1	2-6 X 6	(1)	5' & 35'
D5-1	5	2-6 X 6	(1)	5' & 35'



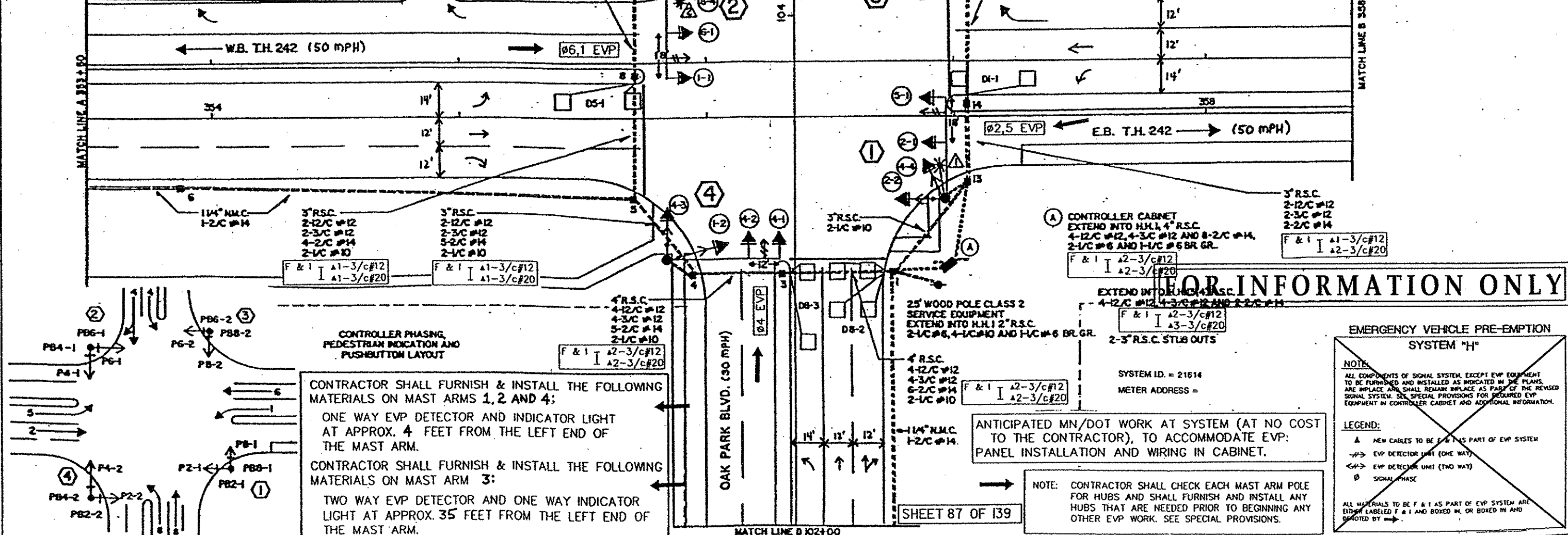
SIGNAL FACES						
SIGNAL FACE	SIGNAL INDICATIONS ARE 12"					
	LED R	Y	G	LED R	Y	G
1-1, 1-2				←	←	←
2-1, 2-2	•	•	•			
4-1, 4-2, 4-3	•	•	•			
5-1, 5-2				←	←	←
6-1, 6-2	•	•	•			
8-1, 8-2, 8-3	•	•	•			
4-4, 8-4	•	•	•			

CONTRACTOR SHALL FURNISH AND INSTALL NEW LED RED SIGNAL INDICATIONS IN EACH INPLACE SIGNAL FACE WITH EVP SYSTEM INSTALLATION. SEE SPECIAL PROVISIONS.

CONTRACTOR SHALL SALVAGE ALL INPLACE PEDESTRIAN SIGNAL INDICATIONS (WITH ATTACHED POLE MOUNTED BRACKETING) AND INPLACE PED INSTRUCTION SIGNS, AND SHALL FURNISH AND INSTALL NEW ONE SECTION HAND/WALKING PERSON INDICATIONS, RHD-46 PED INSTRUCTION SIGNS, AND POLE MOUNTED BRACKETING AT EACH LOCATION. HAND INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS AND DETAILS.

CONTRACTOR SHALL FURNISH & INSTALL THE FOLLOWING MATERIALS ON MAST ARM 3:

ONE WAY EVP DETECTOR (SEE SPECIAL PROVISIONS), AT APPROX. 4 FEET FROM THE LEFT END OF THE MAST ARM.



NOTES: 1. EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
 2. PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
 3. SEE SPECIAL PROVISIONS FOR STATE FURNISHED EQUIPMENT.
 4. ALL HANDHOLES SHALL BE PVC HANDHOLES WITH CONCRETE COVERS.

CONTRACTOR PHASING, PEDESTRIAN INDICATION AND PUSHBUTTON LAYOUT

CONTRACTOR SHALL FURNISH & INSTALL THE FOLLOWING MATERIALS ON MAST ARMS 1, 2 AND 4:

ONE WAY EVP DETECTOR AND INDICATOR LIGHT AT APPROX. 4 FEET FROM THE LEFT END OF THE MAST ARM.

CONTRACTOR SHALL FURNISH & INSTALL THE FOLLOWING MATERIALS ON MAST ARM 3:

TWO WAY EVP DETECTOR AND ONE WAY INDICATOR LIGHT AT APPROX. 35 FEET FROM THE LEFT END OF THE MAST ARM.

FOR INFORMATION ONLY

CONTROLLER CABINET
 EXTEND INTO H.H. 1, 4' R.S.C.
 4-12/C #12, 4-3/C #12 AND 8-2/C #14,
 2-1/C #6 AND 1-1/C #6 BR GR.
 F & I 1-2-3/C #12
 1-2-3/C #20

SYSTEM ID. = 21614
 METER ADDRESS =

ANTICIPATED MN/DOT WORK AT SYSTEM (AT NO COST TO THE CONTRACTOR), TO ACCOMMODATE EVP: PANEL INSTALLATION AND WIRING IN CABINET.

NOTE: CONTRACTOR SHALL CHECK EACH MAST ARM POLE FOR HUBS AND SHALL FURNISH AND INSTALL ANY HUBS THAT ARE NEEDED PRIOR TO BEGINNING ANY OTHER EVP WORK. SEE SPECIAL PROVISIONS.

EMERGENCY VEHICLE PRE-EMPTION SYSTEM "H"

NOTE: ALL COMPONENTS OF SIGNAL SYSTEM, EXCEPT EVP EQUIPMENT TO BE FURNISHED AND INSTALLED AS INDICATED IN THE PLANS, ARE INPLACE AND SHALL REMAIN INPLACE AS PART OF THE REVISED SIGNAL SYSTEM. SEE SPECIAL PROVISIONS FOR REQUIRED EVP EQUIPMENT IN CONTROLLER CABINET AND ADDITIONAL INFORMATION.

LEGEND:
 A NEW CABLES TO BE F & I AS PART OF EVP SYSTEM
 → EVP DETECTOR UNIT (ONE WAY)
 ← EVP DETECTOR UNIT (TWO WAY)
 Ø SIGNAL PHASE

ALL MATERIALS TO BE F & I AS PART OF EVP SYSTEM ARE EITHER LABELED F & I AND BOXED IN, OR BOXED IN AND IDENTIFIED BY →

PLANS 11/04/98 4102XP1
 PLOTTER #5
 SCALE #5
 06/11/2002

NO.	BY	DATE	REVISIONS

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.

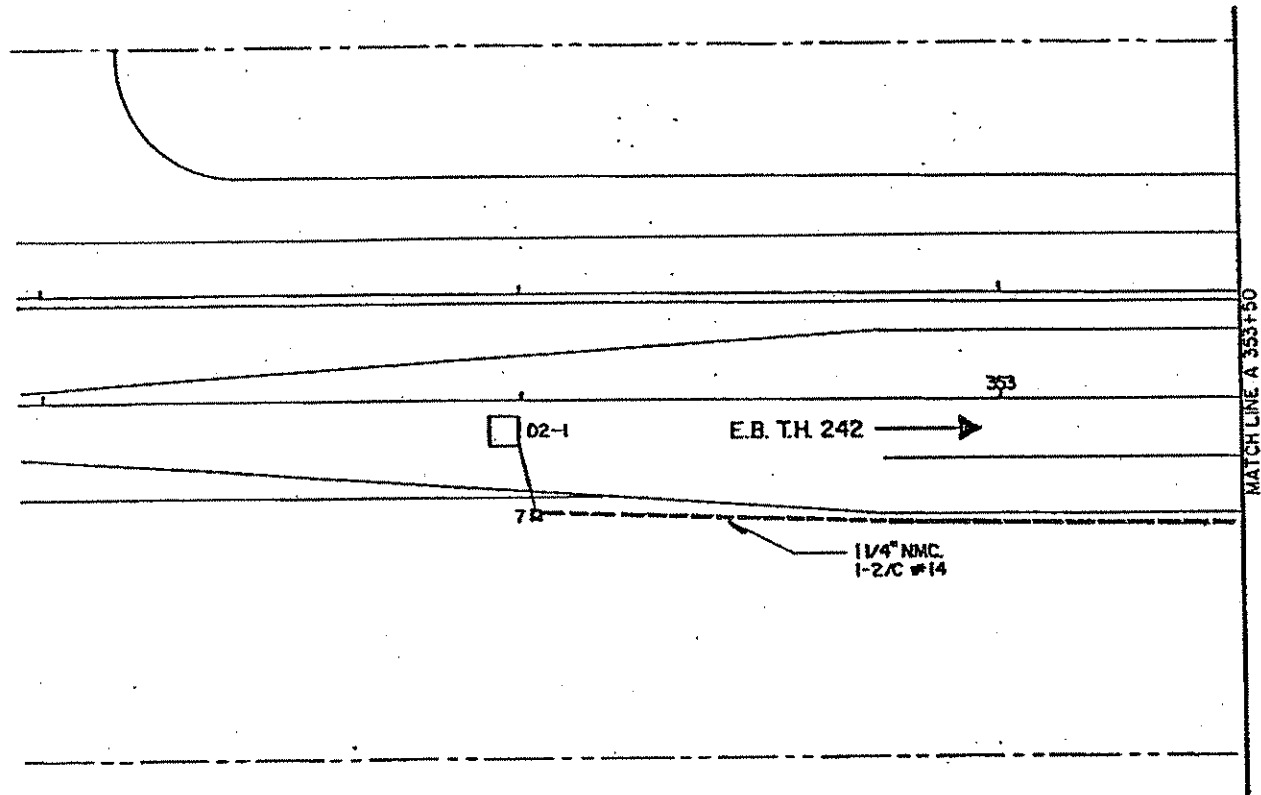
[Signature]
 2/16/98 Reg. No. 22457



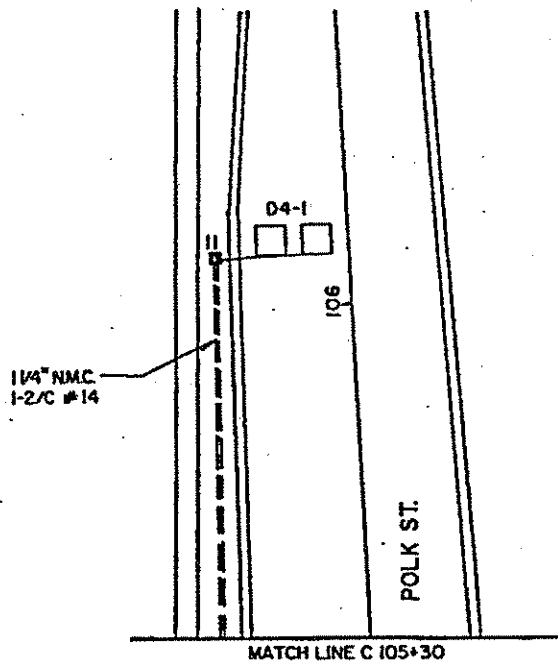
BLAINE, MINNESOTA
 ANOKA COUNTY
 STATE PROJECT NO. 8825-34
 S.A.P. 106 010 17, 106 030 04
 BLAINE CITY PROJECT NO. 98-10

EVP SYSTEM "H"
 INTERSECTION LAYOUT
 T.H.242 AT OAK PARK BLVD/POLK STREET NE

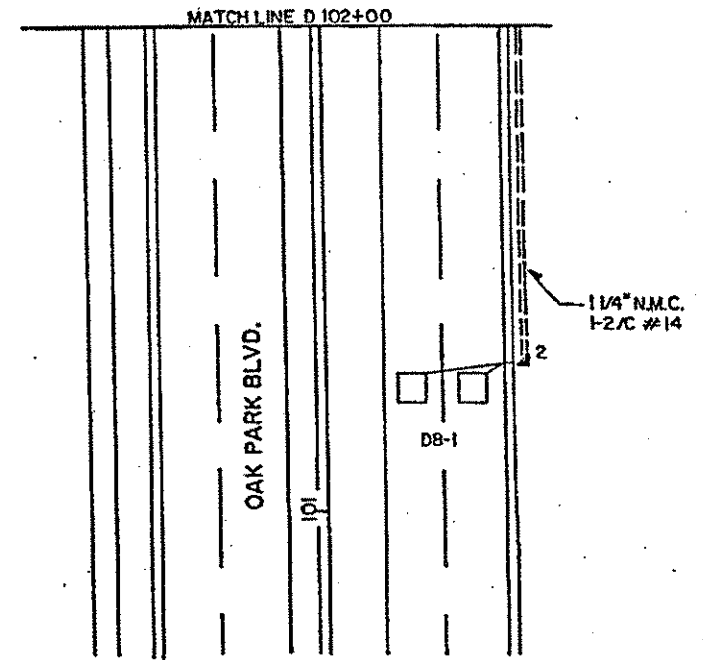
FILE NO. 10-
 BLAIN0802
 DATE 6/19/98
 62



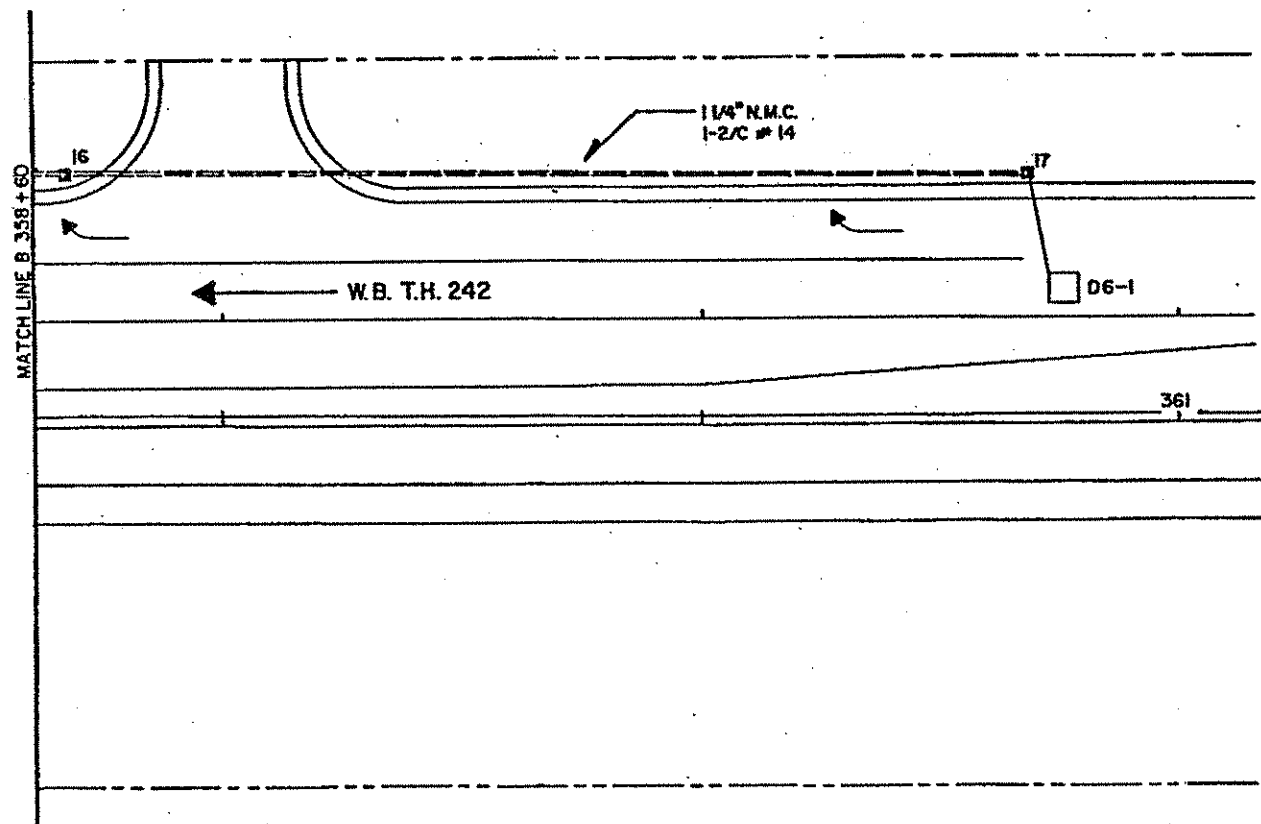
MATCH LINE A 353+50



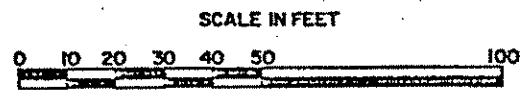
MATCH LINE C 105+30



MATCH LINE D 102+00



MATCH LINE B 358+60



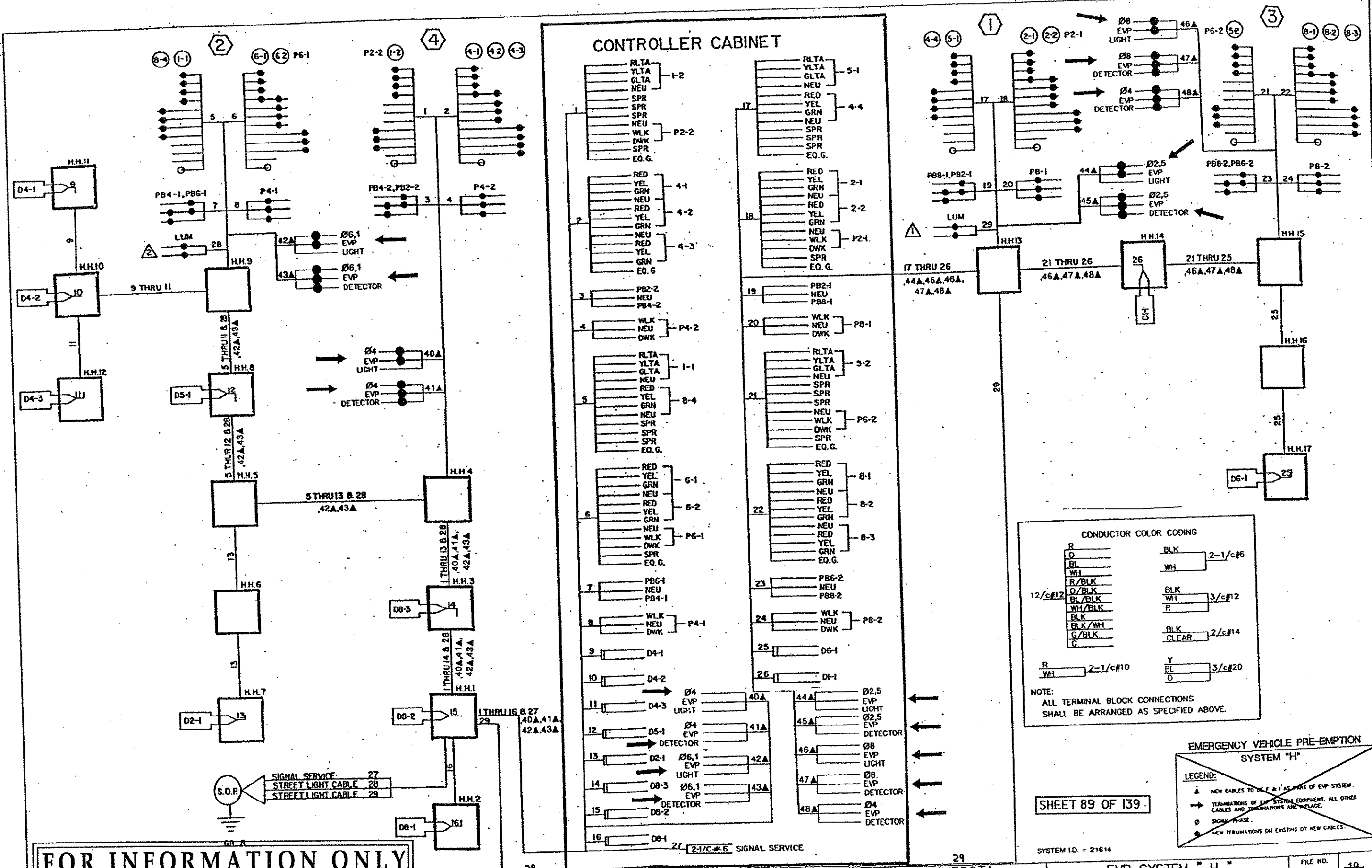
MATCH LINE DETAILS
 T.H. 242
 AT OAK PARK BLVD. & POLK ST.
 BLAINE

FOR INFORMATION ONLY

SHEET 88 OF 139

11/11/2002 11:04:14 AM 1026101814.dwg
 P:\PROJECTS\0212-33\1026101814.dwg
 SCALE: 1/4"=1'-0"
 DATE: 11/11/2002

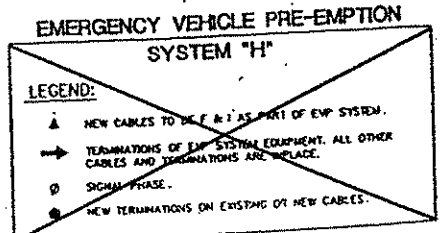
BASE INFORMATION ONLY



CONDUCTOR COLOR CODING

R	BLK	2-1/c#6
O	WH	
BL		
WH		
R/BLK	BLK	3/c#12
O/BLK	WH	
BL/BLK	R	
WH/BLK		
BLK	BLK	2/c#14
BLK/WH	CLEAR	
G/BLK		
G		
R	Y	2-1/c#10
WH	BL	3/c#20
	O	

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



SHEET 89 OF 139

SYSTEM I.D. = 21614

FOR INFORMATION ONLY

10/11/04 11/04/11 02/10/08 04/10/02
 S.P.R.F.
 S.C.O.T.T.E.R.
 08/11/2002

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer and the loss of the state of Minnesota.

[Signature]
 Reg. No. 22457



BLAINE, MINNESOTA
 ANOKA COUNTY
 STATE PROJECT NO. 8825-34
 S.A.P. 106 010-17, 106-030-04
 BLAINE CITY PROJECT NO. 98-10

EVP SYSTEM "H"
 FIELD WIRING DIAGRAM
 T.H.242 AT OAK PARK BLVD/POLK STREET NE

FILE NO.
 BLAIN0802
 DATE
 6/19/98

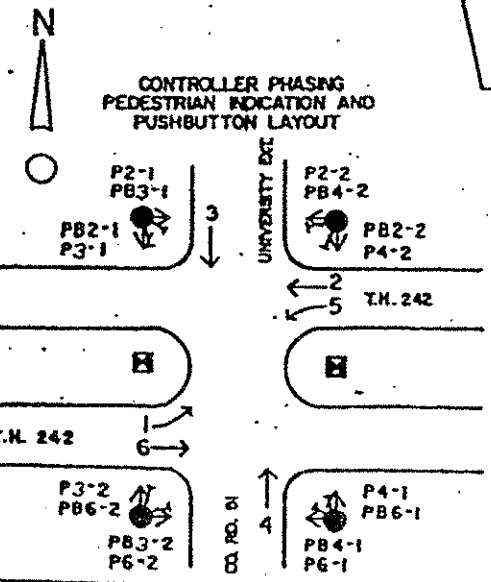
SIGNAL FACES						
SIGNAL FACE	SIGNAL INDICATIONS ARE 12"					
	LED R	Y	G	LED R	Y	G
1-1, 1-2				←	←	
2-1, 2-2	•	•	•			
3-1, 4-1	•	•	•			
3-2, 4-2	•	•	•	←	←	
3-3, 4-3	•	•	•	←	←	
5-1, 5-2				←	←	
6-1, 6-2	•	•	•			

CONTRACTOR SHALL FURNISH AND INSTALL NEW LED RED SIGNAL INDICATIONS IN EACH INPLACE SIGNAL FACE WITH EVP SYSTEM INSTALLATION. SEE SPECIAL PROVISIONS.

CONTRACTOR SHALL SALVAGE ALL INPLACE PEDESTRIAN SIGNAL INDICATIONS (WITH ATTACHED POLE MOUNTED BRACKETING) AND INPLACE PED INSTRUCTION SIGNS, AND SHALL FURNISH AND INSTALL NEW ONE SECTION HAND/WALKING PERSON INDICATIONS, R10-40 PED INSTRUCTION SIGNS, AND POLE MOUNTED BRACKETING AT EACH LOCATION. HAND INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS AND DETAILS.

CONTRACTOR SHALL FURNISH & INSTALL THE FOLLOWING MATERIALS ON MAST ARMS 1, 2, 3 AND 4:
ONE WAY EVP DETECTOR AND INDICATOR LIGHT AT APPROX. 4 FEET FROM THE LEFT END OF THE MAST ARM.

ANTICIPATED MN/DOT WORK AT SYSTEM (AT NO COST TO THE CONTRACTOR), TO ACCOMMODATE EVP: REPLACEMENT OF CONTROLLER CABINET.



SIGNAL SYSTEM OPERATION:
- FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE.
- PHASE 1 & 6 SHALL BE PROTECTED LEFT TURN.

F & I ONE WAY EVP DETECTOR AND INDICATOR LIGHT (ø2.5) - OVERHEAD
3/4" R.S.C. EXTENSION FOR EVP DETECTOR (OVER SIGN) (ø2.5)
A1-3/c#12
A1-3/c#20

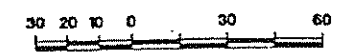
② TYPE A-30 ONE WAY SIGNAL (OVERHEAD)
TYPE 20C-POLE MOUNTED AT 270°
2-PEDESTRIAN PUSHBUTTONS
EXTEND INTO H.H.B.; 3" R.S.C.
1-1/2" C #12, 3-3/4" C #12 AND 2-1/4" C #10
SWING-AWAY HINGES (2)

⑤ ONE WAY SIGNAL (TYPE IA) EXTEND INTO H.H.B.; 3" R.S.C.
1-1/2" C #12

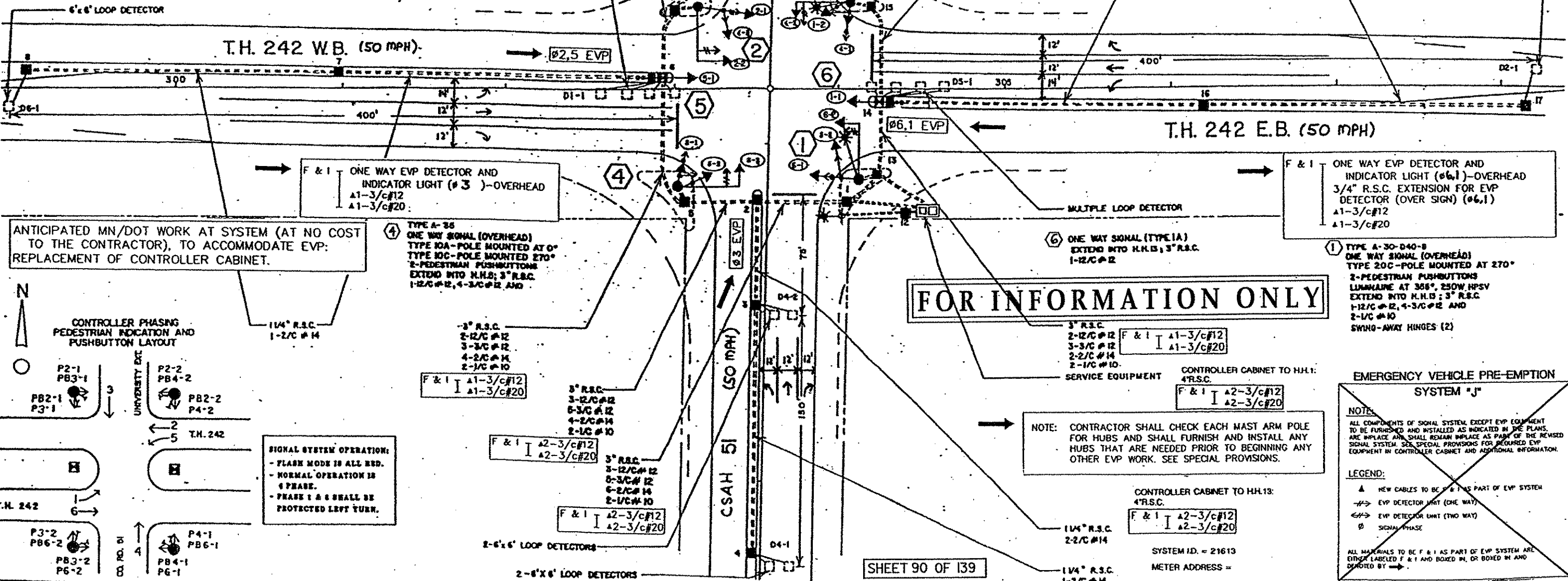
F & I ONE WAY EVP DETECTOR AND INDICATOR LIGHT (ø4) - OVERHEAD
A1-3/c#12
A1-3/c#20

③ TYPE A-30-D40-9 ONE WAY SIGNAL (OVERHEAD)
TYPE 10A-POLE MOUNTED AT 0°
TYPE 10C-POLE MOUNTED AT 270°
LUMINAIRE AT 355°-250 W HPS
2-PEDESTRIAN PUSHBUTTONS
EXTEND INTO H.H.B.; 3" R.S.C.
1-1/2" C #12, 3-3/4" C #12 AND 2-1/4" C #10

F & I A1-3/c#12
A1-3/c#20



THESE HANDHOLES SHALL HAVE TYPE LD COVERS: 2, 3, 4, 6, 7, 8, 14, 16, AND 17



FOR INFORMATION ONLY

NOTE: CONTRACTOR SHALL CHECK EACH MAST ARM POLE FOR HUBS AND SHALL FURNISH AND INSTALL ANY HUBS THAT ARE NEEDED PRIOR TO BEGINNING ANY OTHER EVP WORK. SEE SPECIAL PROVISIONS.

EMERGENCY VEHICLE PRE-EMPTION SYSTEM "J"

NOTE: ALL COMPONENTS OF SIGNAL SYSTEM, EXCEPT EVP EQUIPMENT TO BE FURNISHED AND INSTALLED AS INDICATED IN THE PLANS, ARE INPLACE AND SHALL REMAIN INPLACE AS PART OF THE REVISED SIGNAL SYSTEM. SEE SPECIAL PROVISIONS FOR REQUIRED EVP EQUIPMENT IN CONTROLLER CABINET AND ADDITIONAL INFORMATION.

LEGEND:
▲ NEW CABLES TO BE F & I AS PART OF EVP SYSTEM
→ EVP DETECTOR UNIT (ONE WAY)
↔ EVP DETECTOR UNIT (TWO WAY)
⊙ SIGNAL PHASE

ALL MATERIALS TO BE F & I AS PART OF EVP SYSTEM ARE EITHER LABELED F & I AND BOXED IN, OR BOXED IN AND SHOWN BY →.

CONTROLLER CABINET TO H.H.13: 4" R.S.C.

F & I A2-3/c#12
A2-3/c#20

SYSTEM ID. = 21613
METER ADDRESS =

SHEET 90 OF 139

12.100
 PLOTTER
 SCALES
 8/17/98

NO.	BY	DATE	PROVISIONS	ITEM	DESIGN	CHECKED

I hereby certify that this plan was prepared by me under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.
Date: 7/16/98 Reg. No. 22457

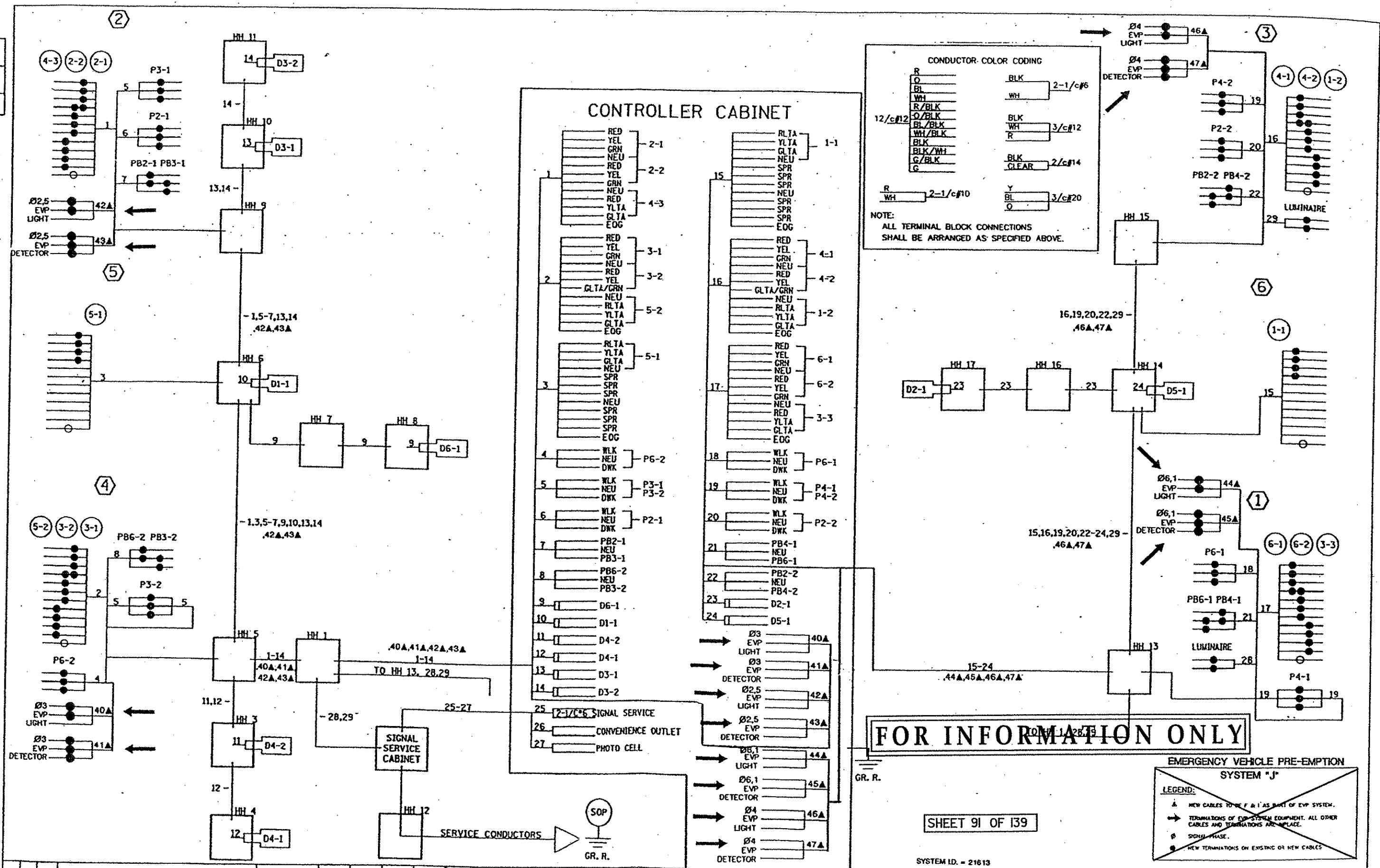


BLAINE/COON RAPIDS, MINNESOTA
ANOKA COUNTY
STATE PROJECT NO. 8826-34
S.A.P. 106 010 17 106 020-13
S.A.P. 114 010 09 114 020-16
BLAINE, MN 55425

EVP SYSTEM "J"
INTERSECTION LAYOUT
T.H. 242 AT CSAH 51 (UNIVERSITY AVENUE)

FILE NO. 20-
BLAIN0802
DATE 6/19/98
62

FALSE WORK AREA



FOR INFORMATION ONLY

EMERGENCY VEHICLE PRE-EMPTION SYSTEM "J"

LEGEND:

- ▲ NEW CABLES TO BE F & I AS PART OF EVP SYSTEM.
- TERMINALS OF EXISTING EQUIPMENT. ALL OTHER CABLES AND TERMINATIONS ARE IN PLACE.
- SIGNAL PHASE.
- NEW TERMINATIONS ON EXISTING OR NEW CABLES.

SYSTEM ID. = 21613

SHEET 91 OF 139

PLN 011104T4102, P108V4102, 100
 PLOTTER
 SCALE
 06/11/2002

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 in the state of Minnesota.

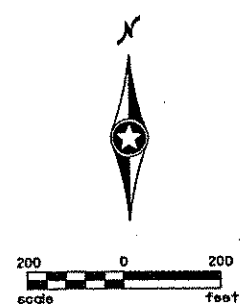
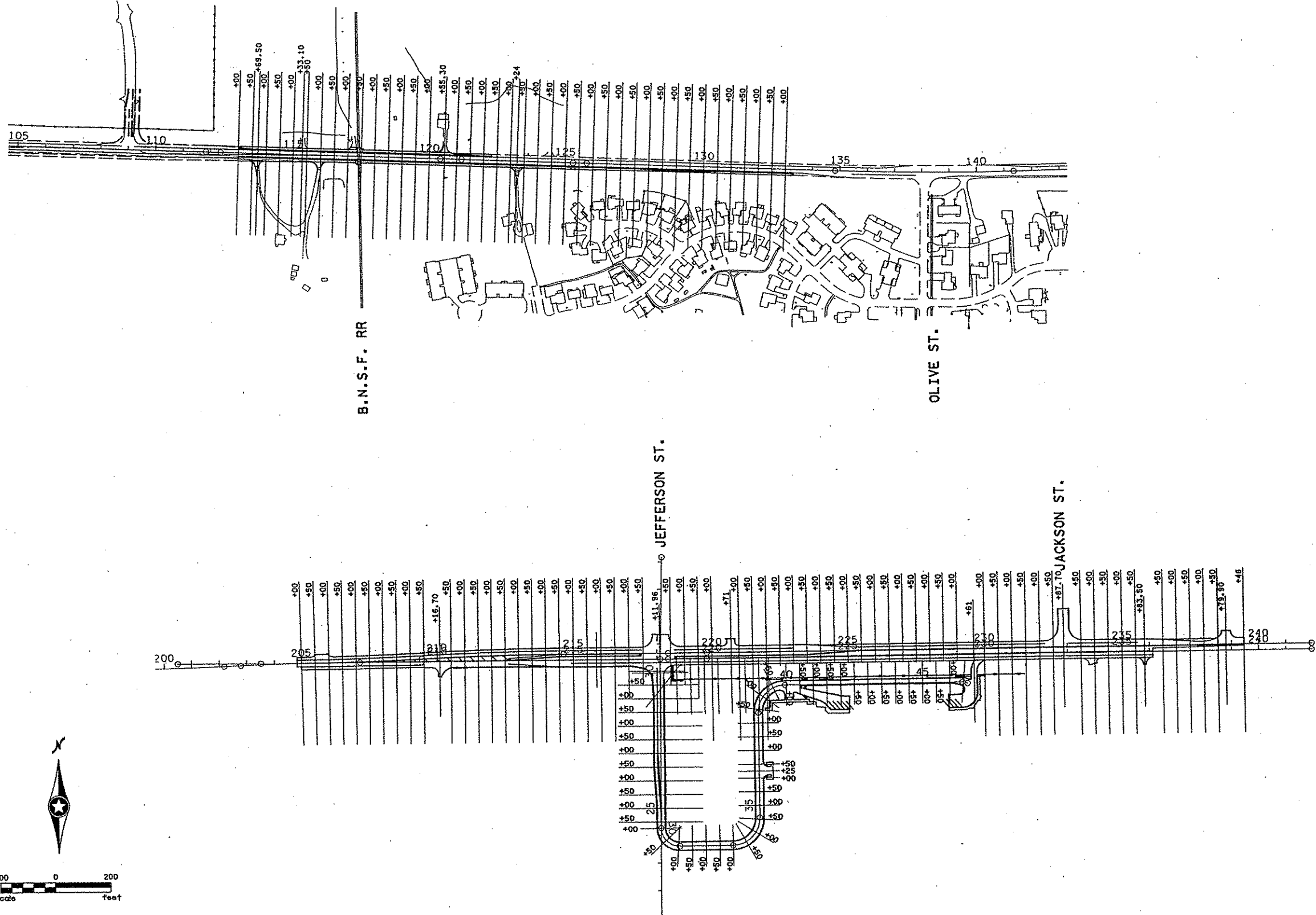
[Signature]
 Date: 7/16/98
 Ref. No. 22457



BLAINE/COON RAPIDS, MINNESOTA
 ANOKA COUNTY
 STATE PROJECT NO. 8825-34
 S.A.P. 106-010-17, 106-020-13
 S.A.P. 134-010-00, 134-020-16
 BLAINE-C.R. 08-10, COON RAPIDS-C.R. 08-50

EVP SYSTEM "J"
 FIELD WIRING DIAGRAM
 T.H.242 AT CSAH 51 (UNIVERSITY AVENUE)

FILE NO. 21
 BLAIN0802
 DATE 6/19/98
 -62-



NO	DATE	BY	CHKD	APPR	REVISION

NAME: 4102.CLA DATE: Apr. 09, 2002

I hereby certify that this plan, specification, or report 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.
 Print Name: NATHAN A. WILL
Nathan A. Will
 Date: 6-12-02 License # 26391

STATE AID PROJECT NO.
 S.P. 106-010-18
 S.P. 106-121-04
 S.P. 0212-42
 S.P. 02-596-04

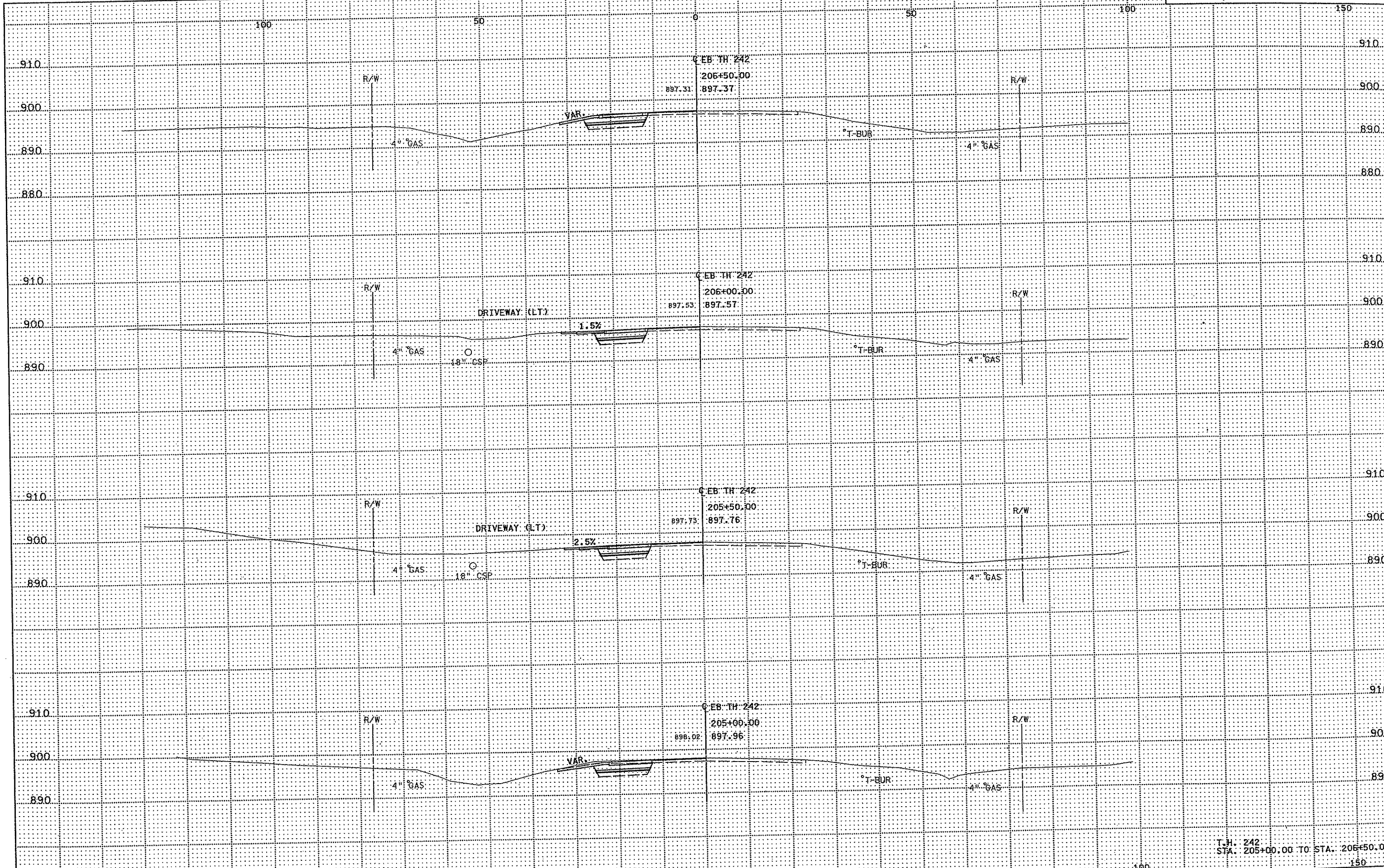
DRAWN BY: D. FITCHORN DATE: 8-02
 DESIGNED BY: N. WILL DATE: 4-02
 CHECKED BY: N. WILL DATE: 5-02
 COMM. NO. 0014102

SRF CONSULTING GROUP, INC.

ANOKA COUNTY
 CROSS SECTION LAYOUT
 TH 242

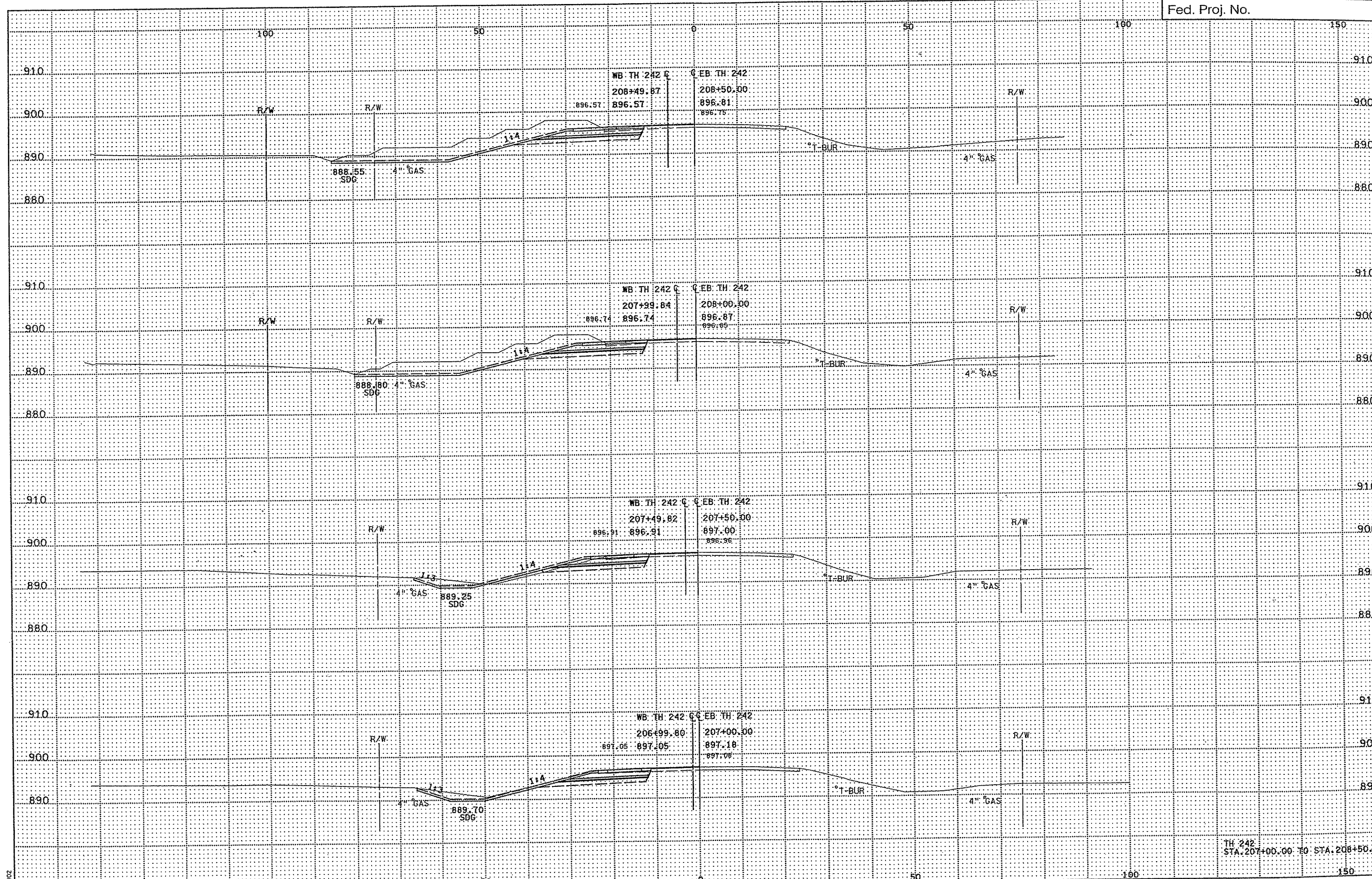
SHEET 92 OF 139

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 PLOTTER
 SCALES
 06/11/2002



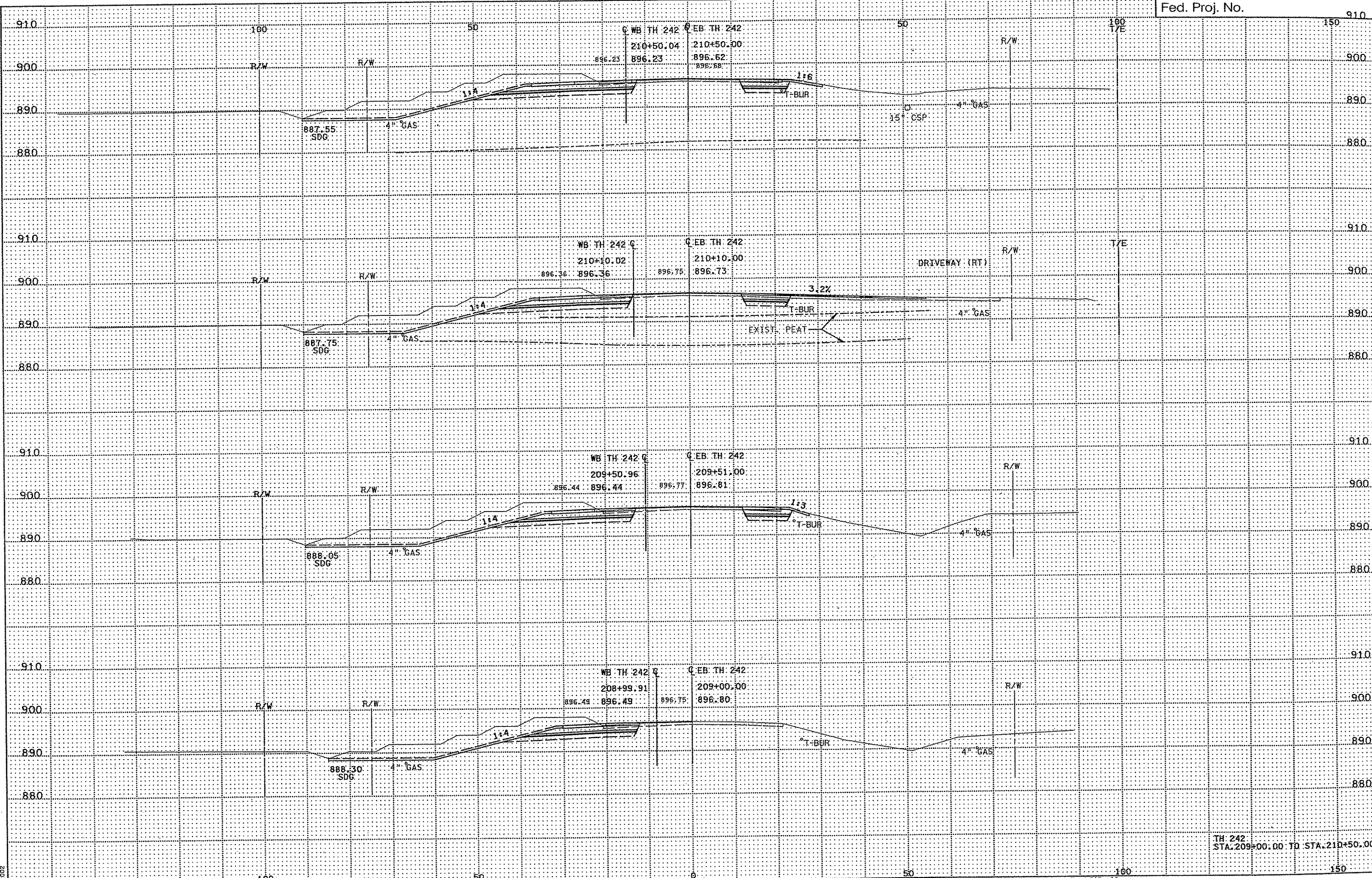
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 07/11/2002



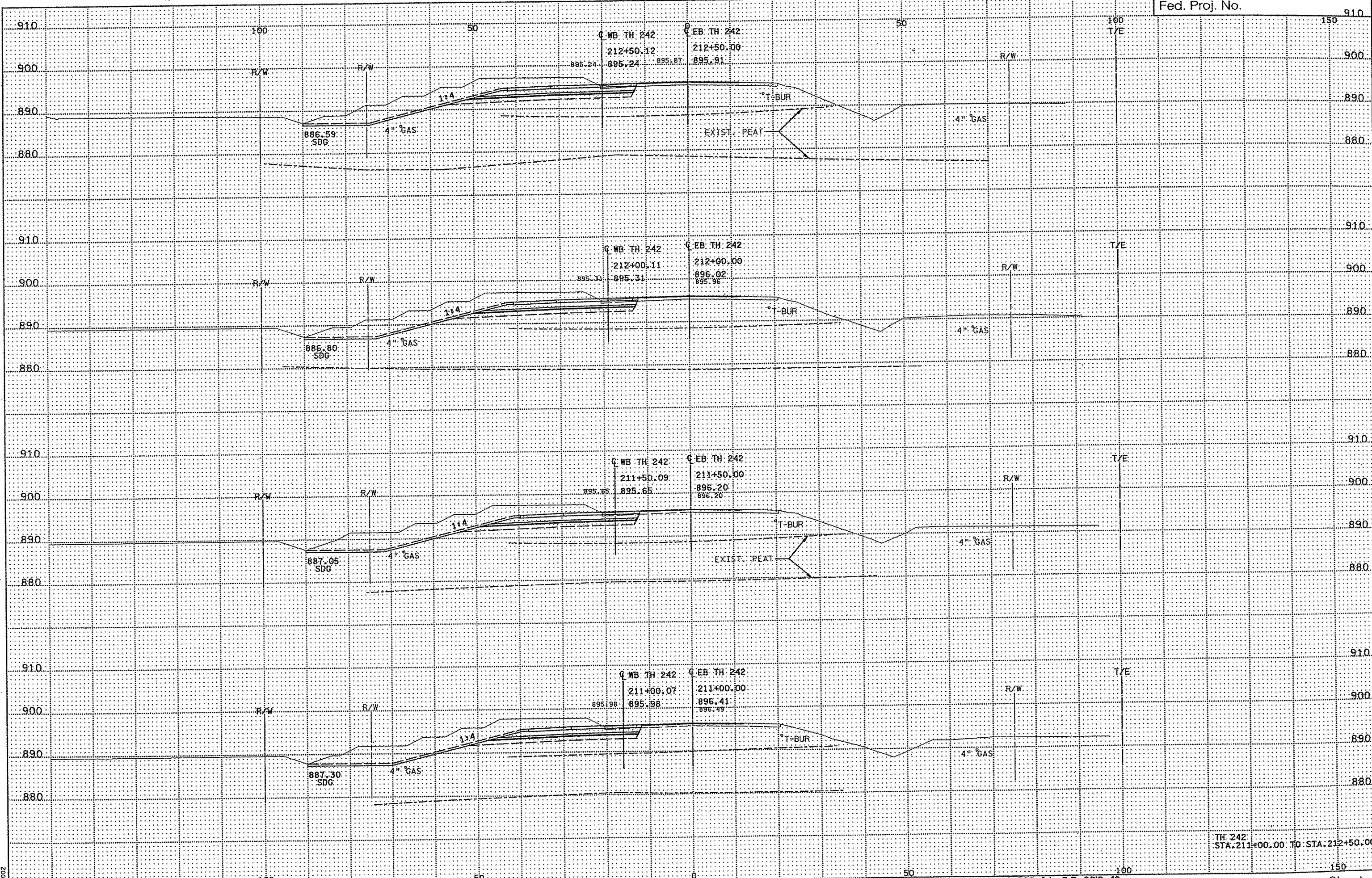
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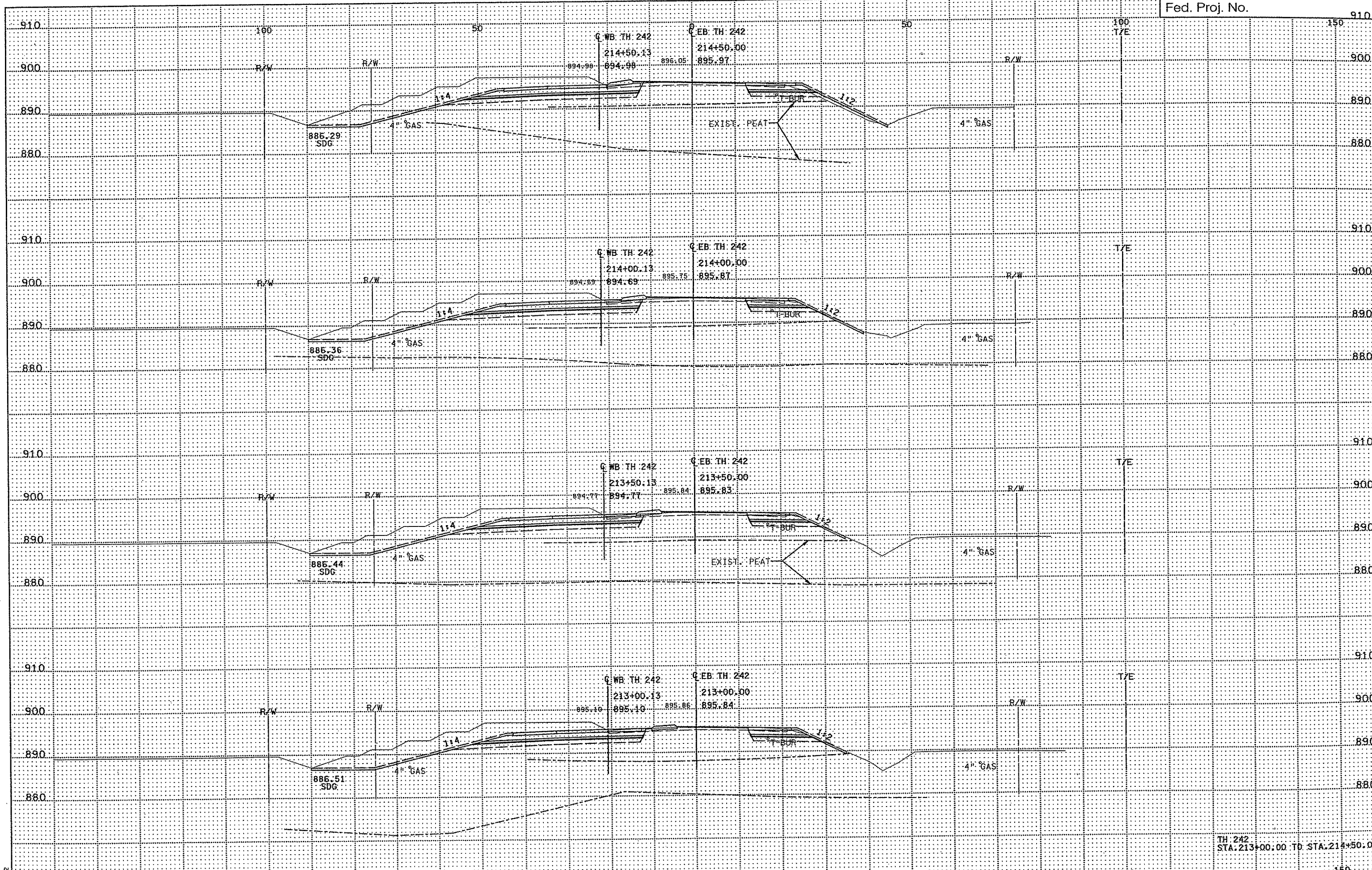
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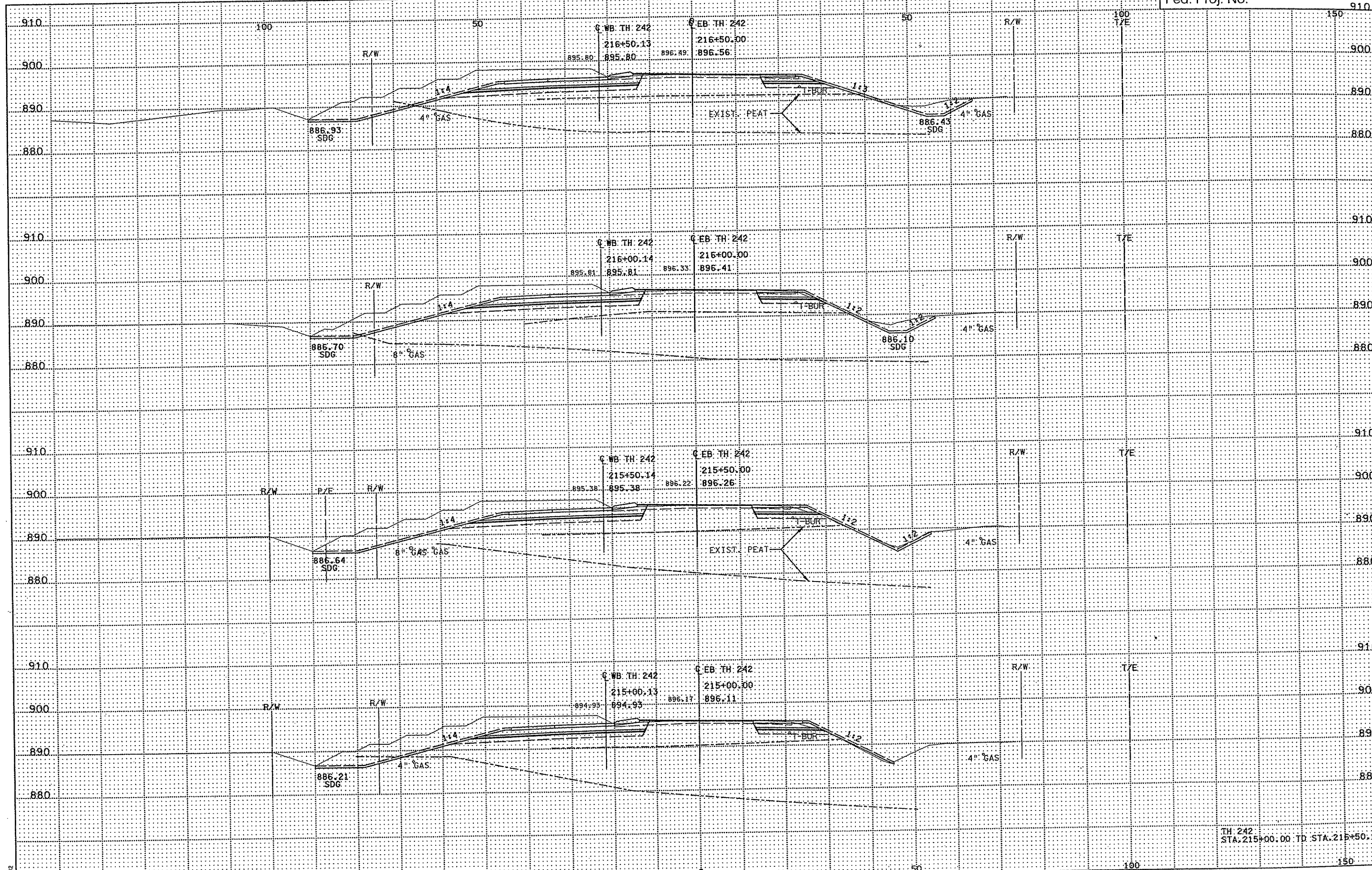
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 07/17/2002

TH 242
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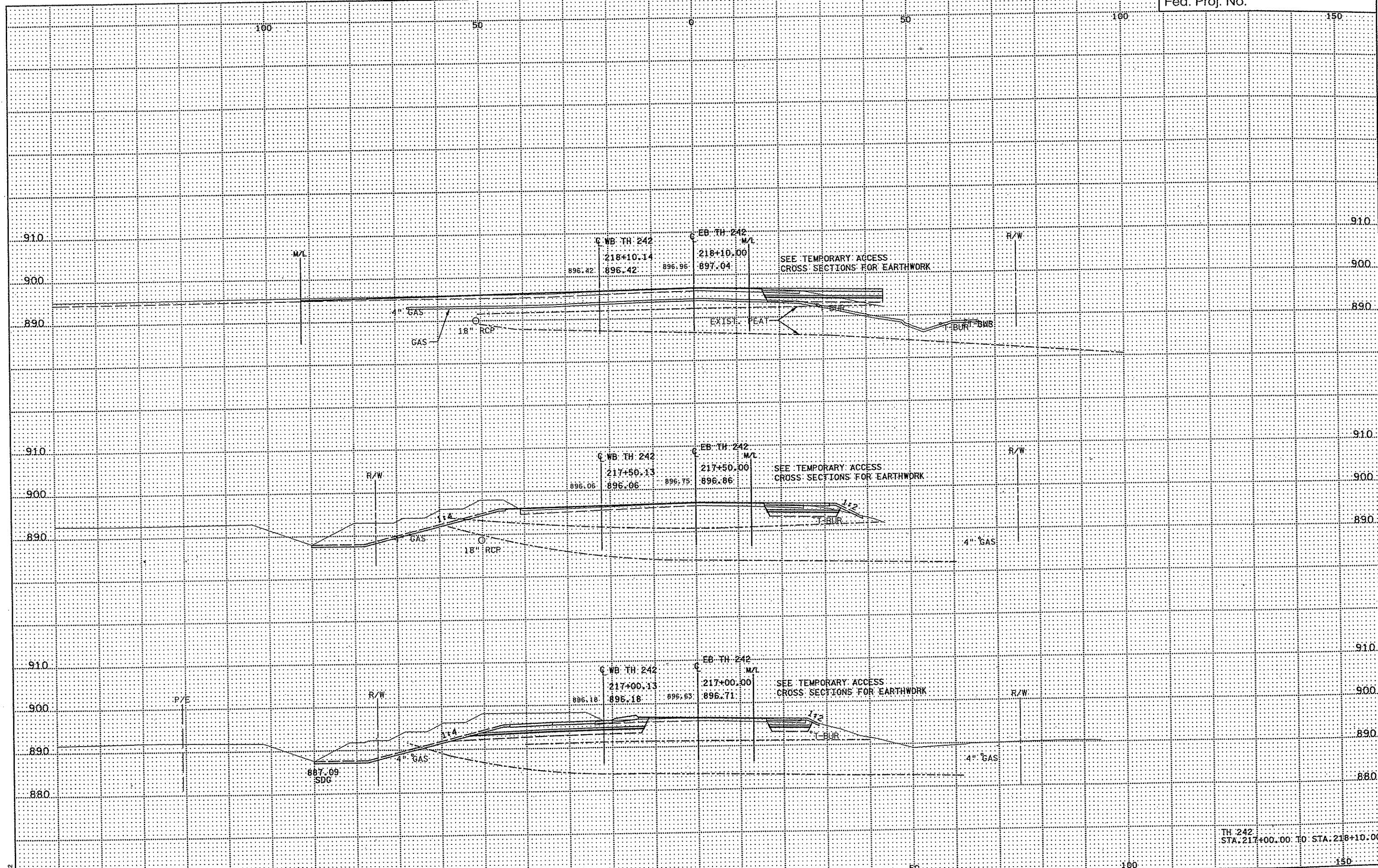
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07/17/2002



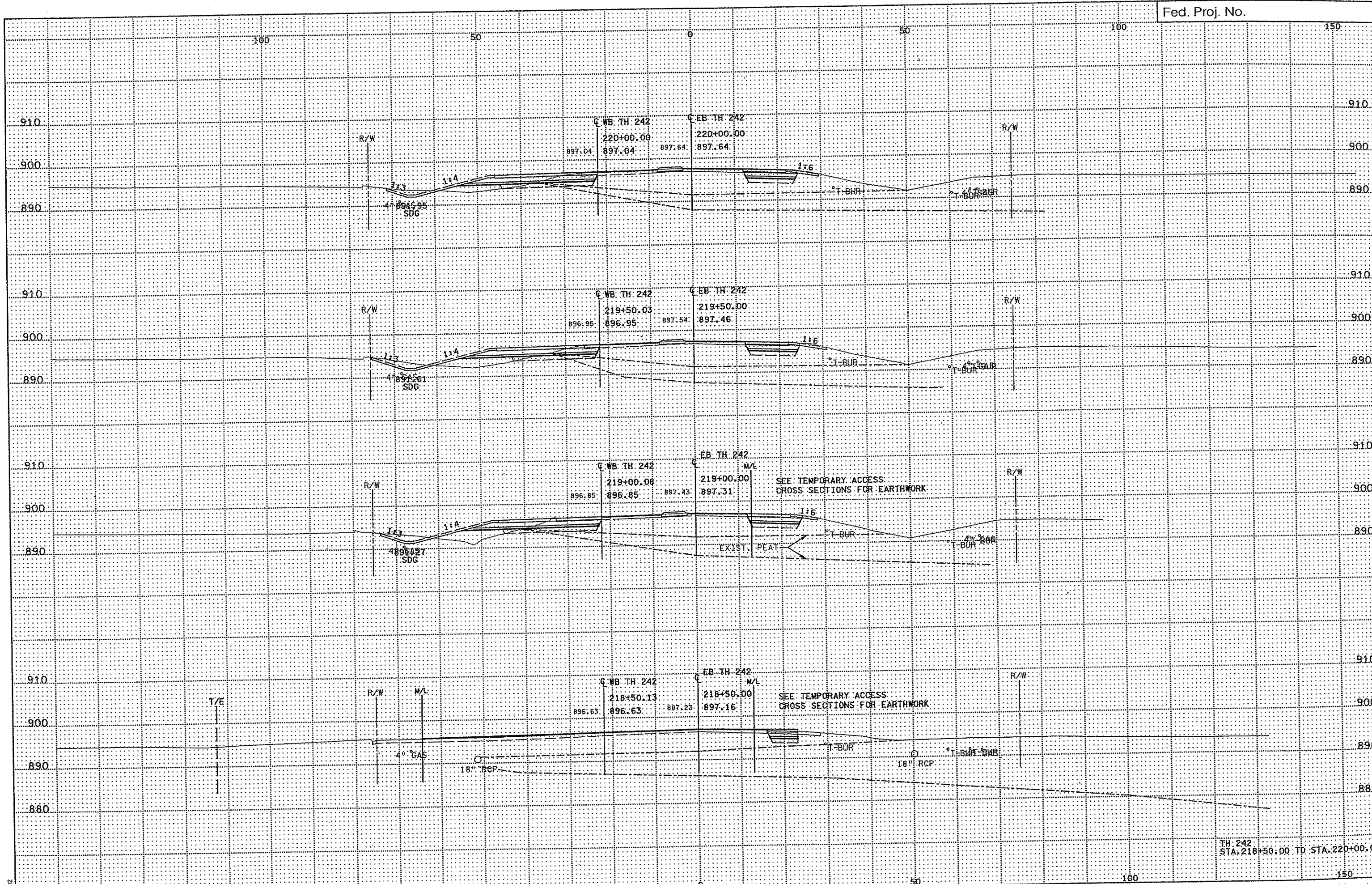
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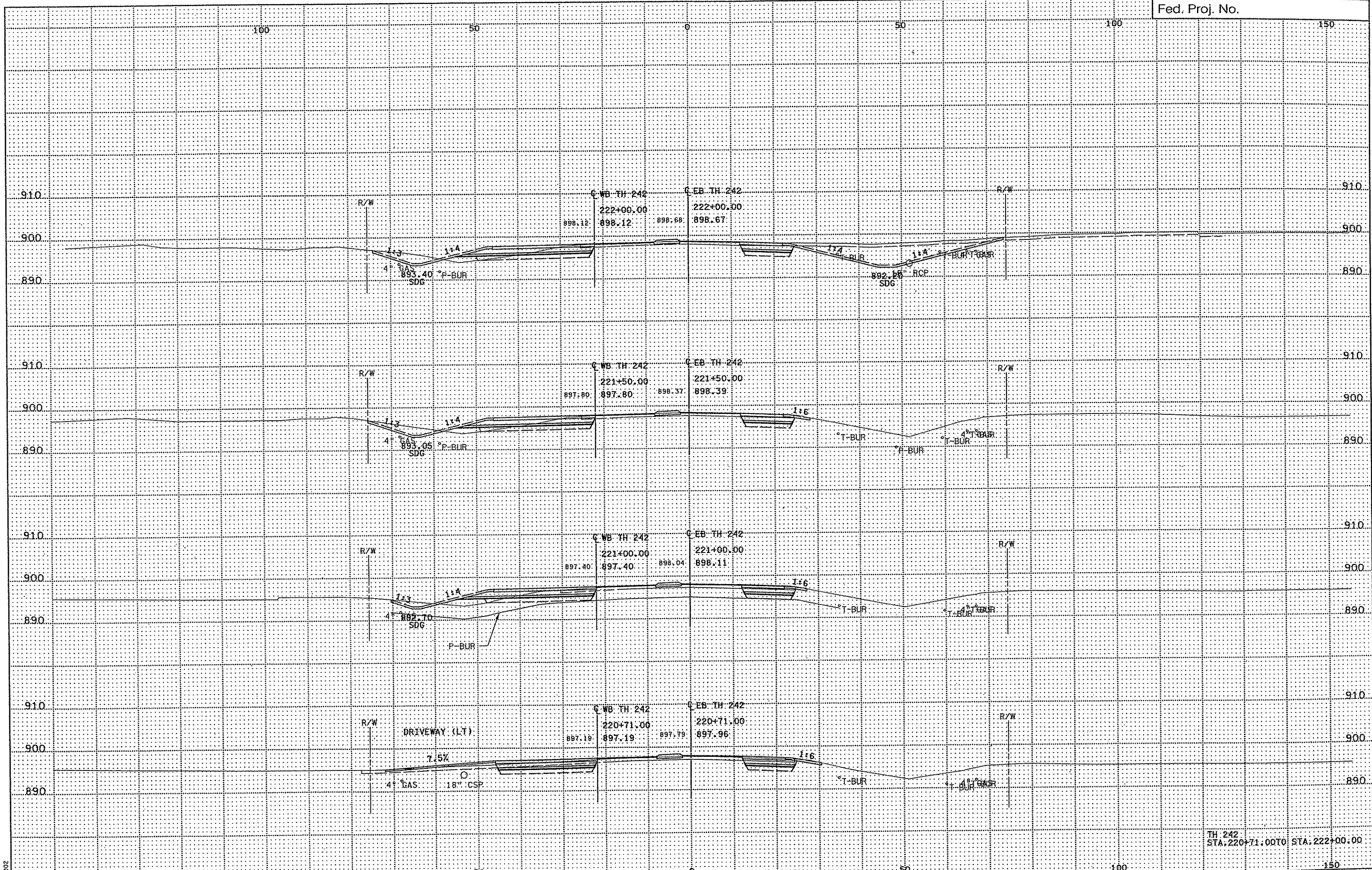
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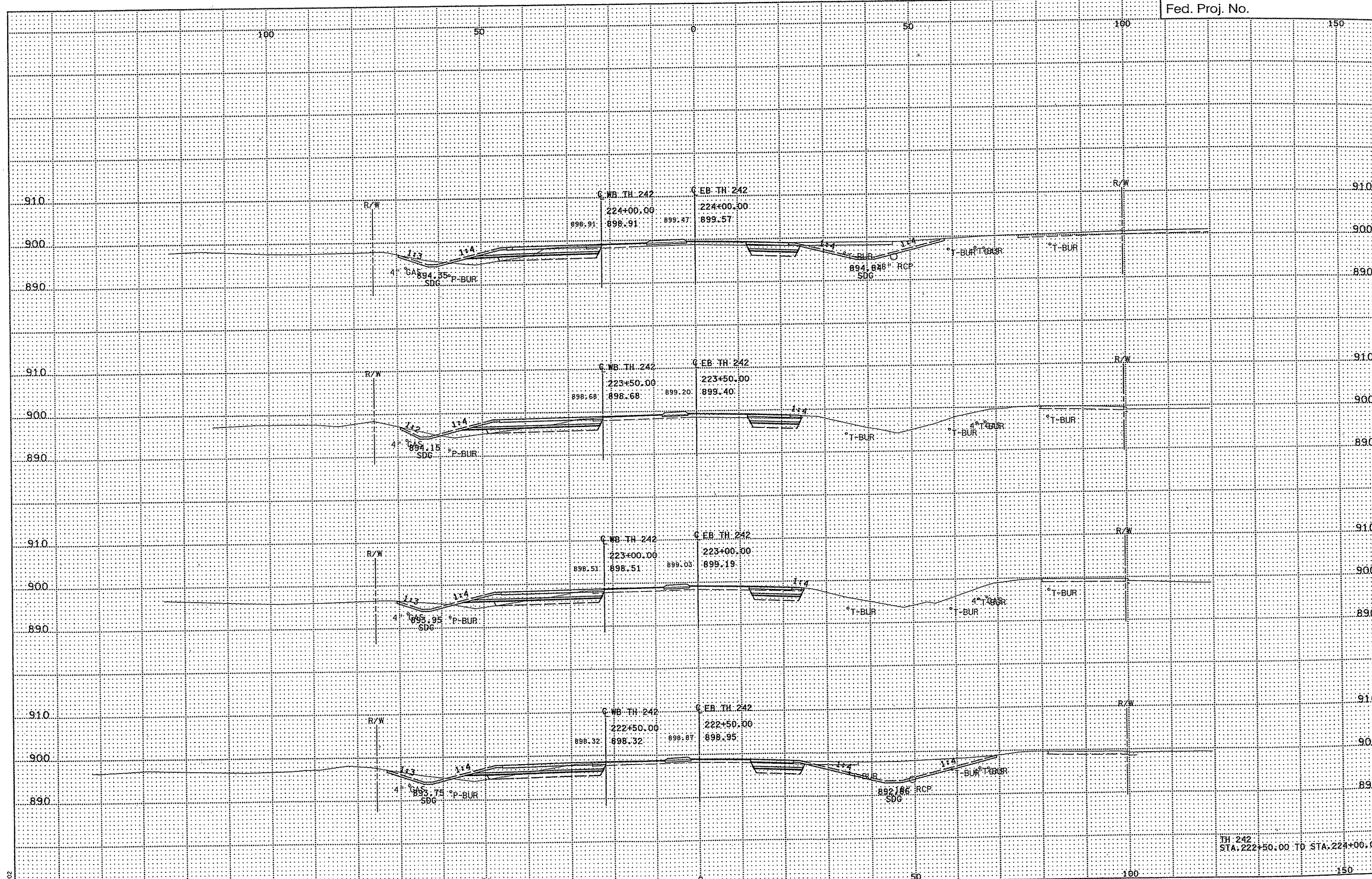
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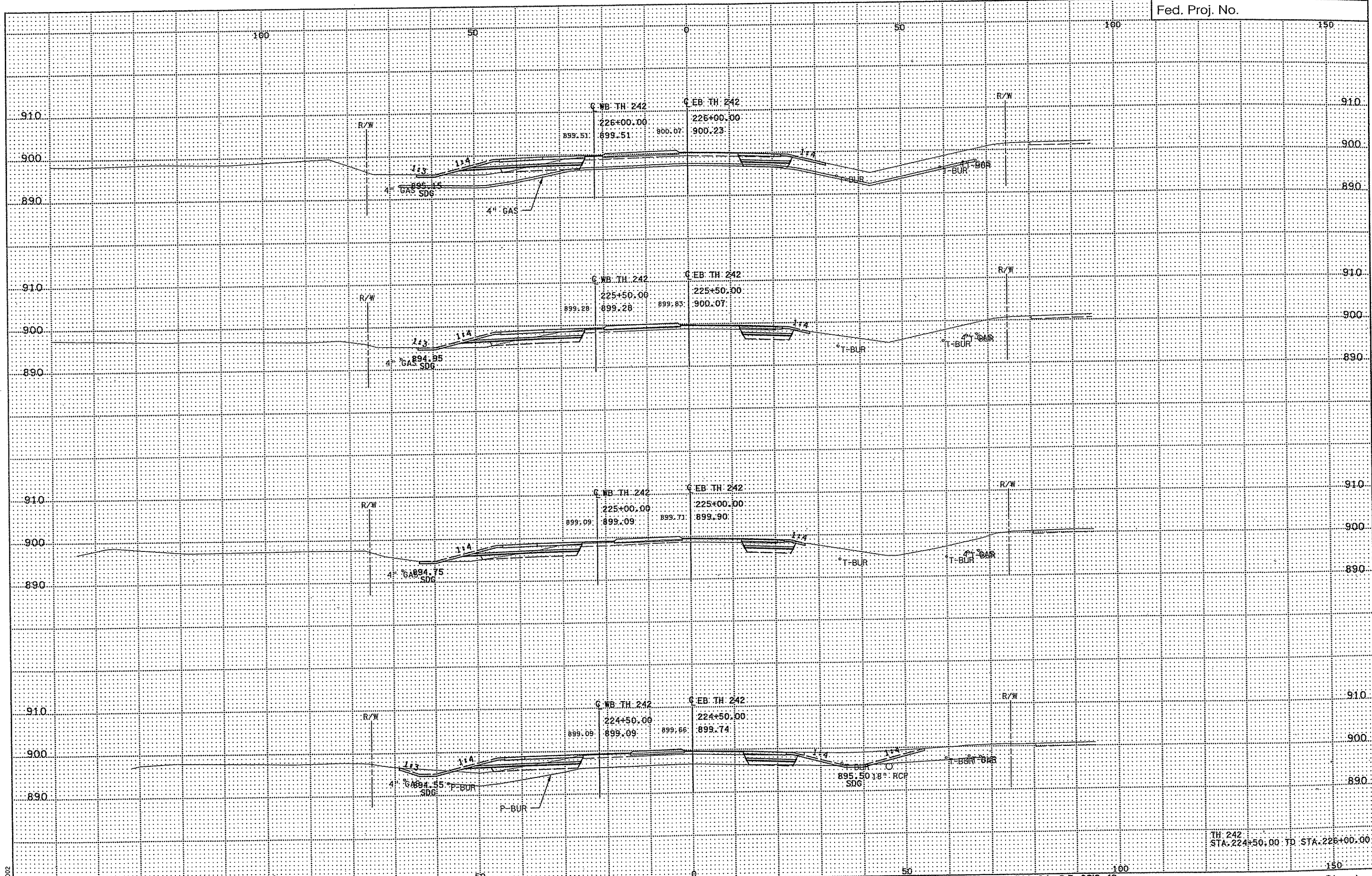
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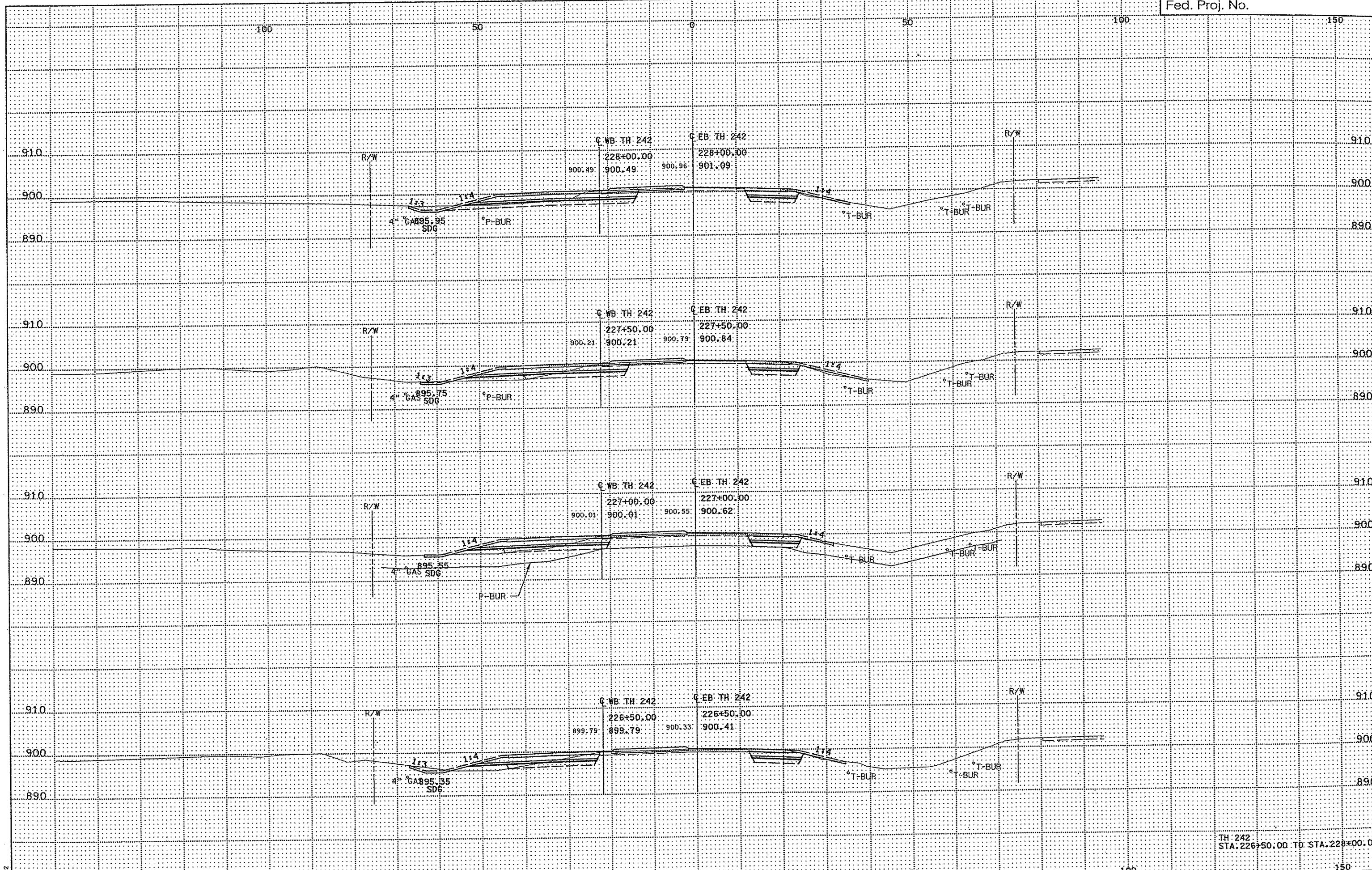
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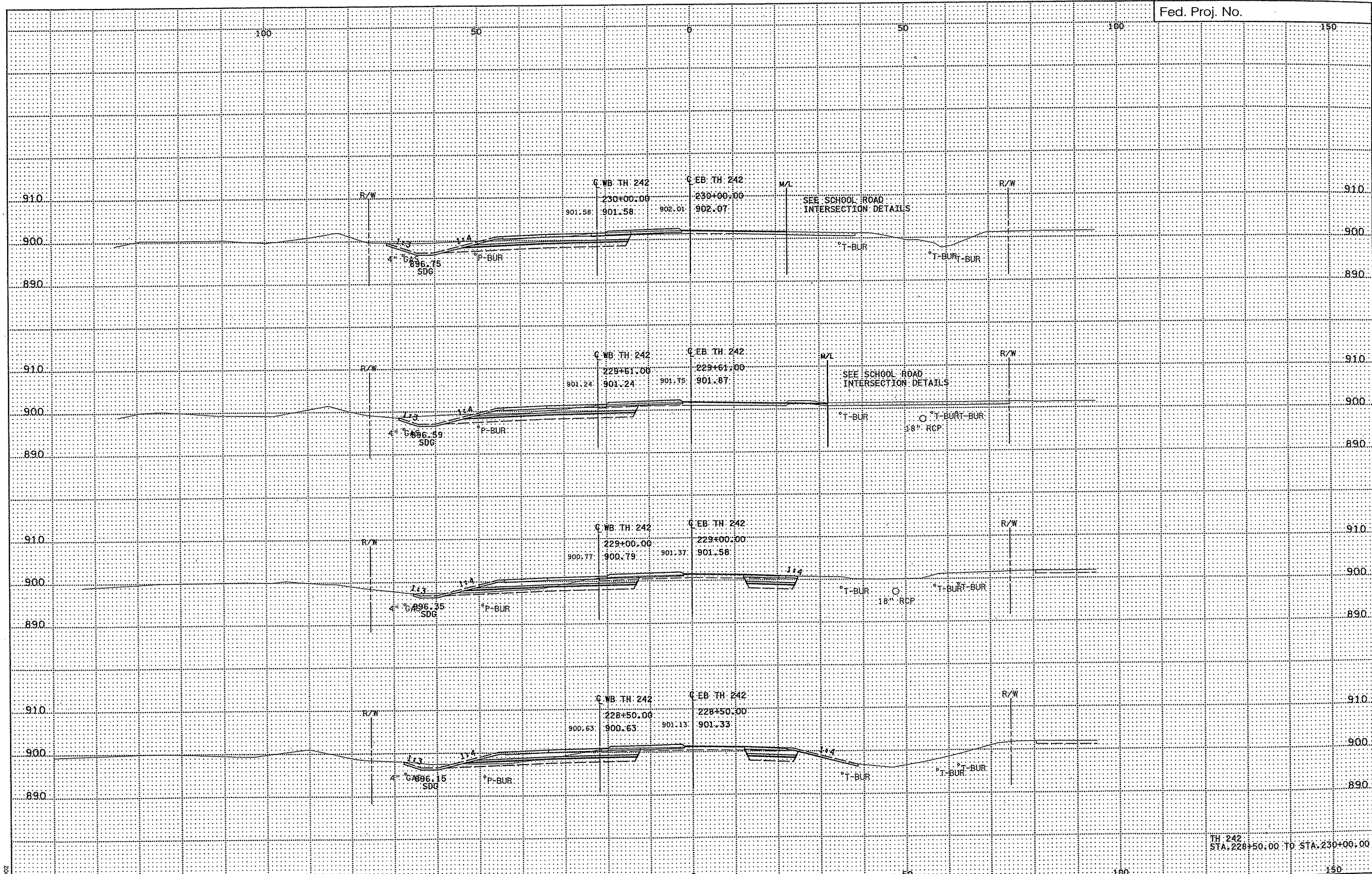
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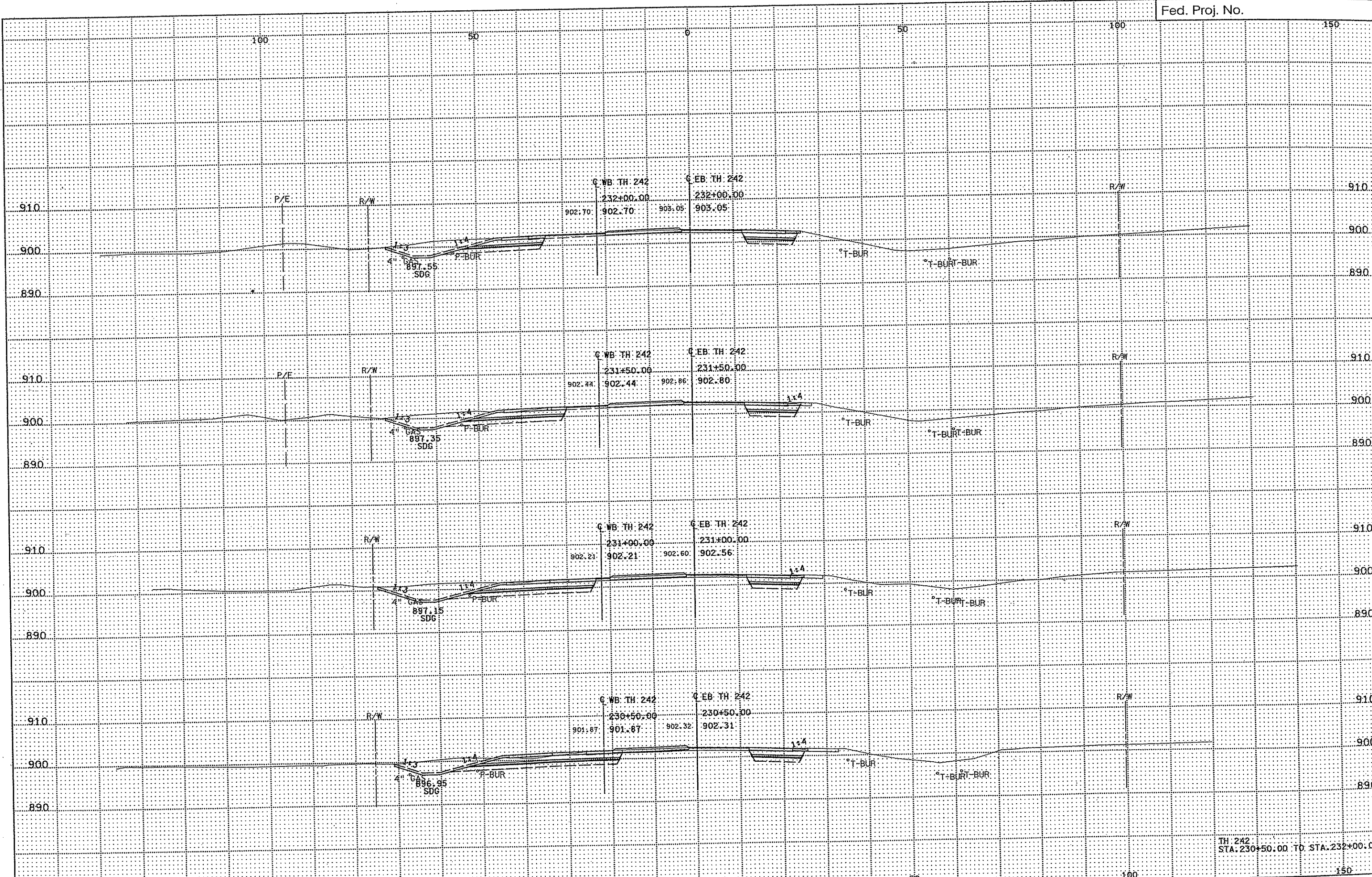
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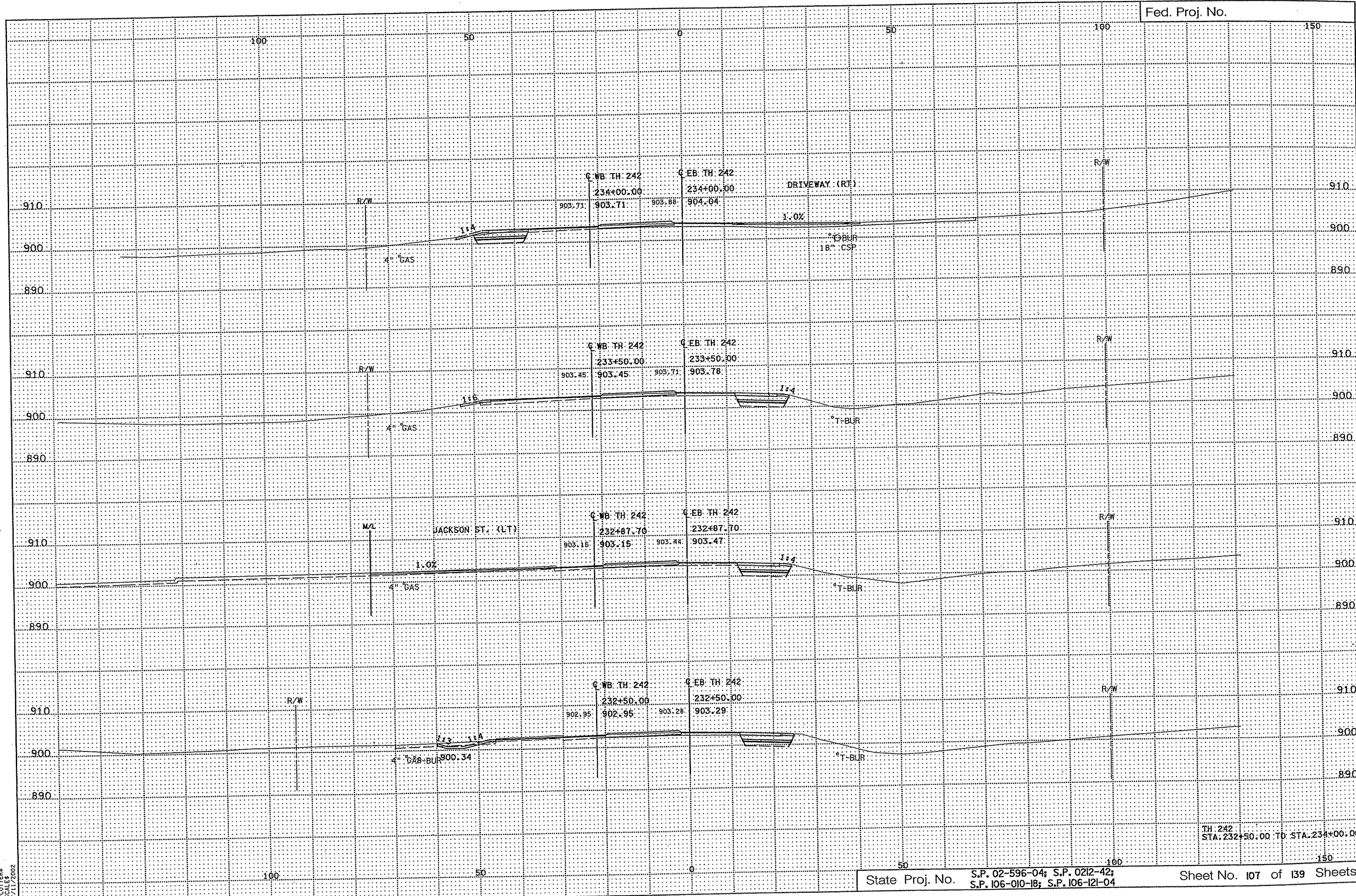
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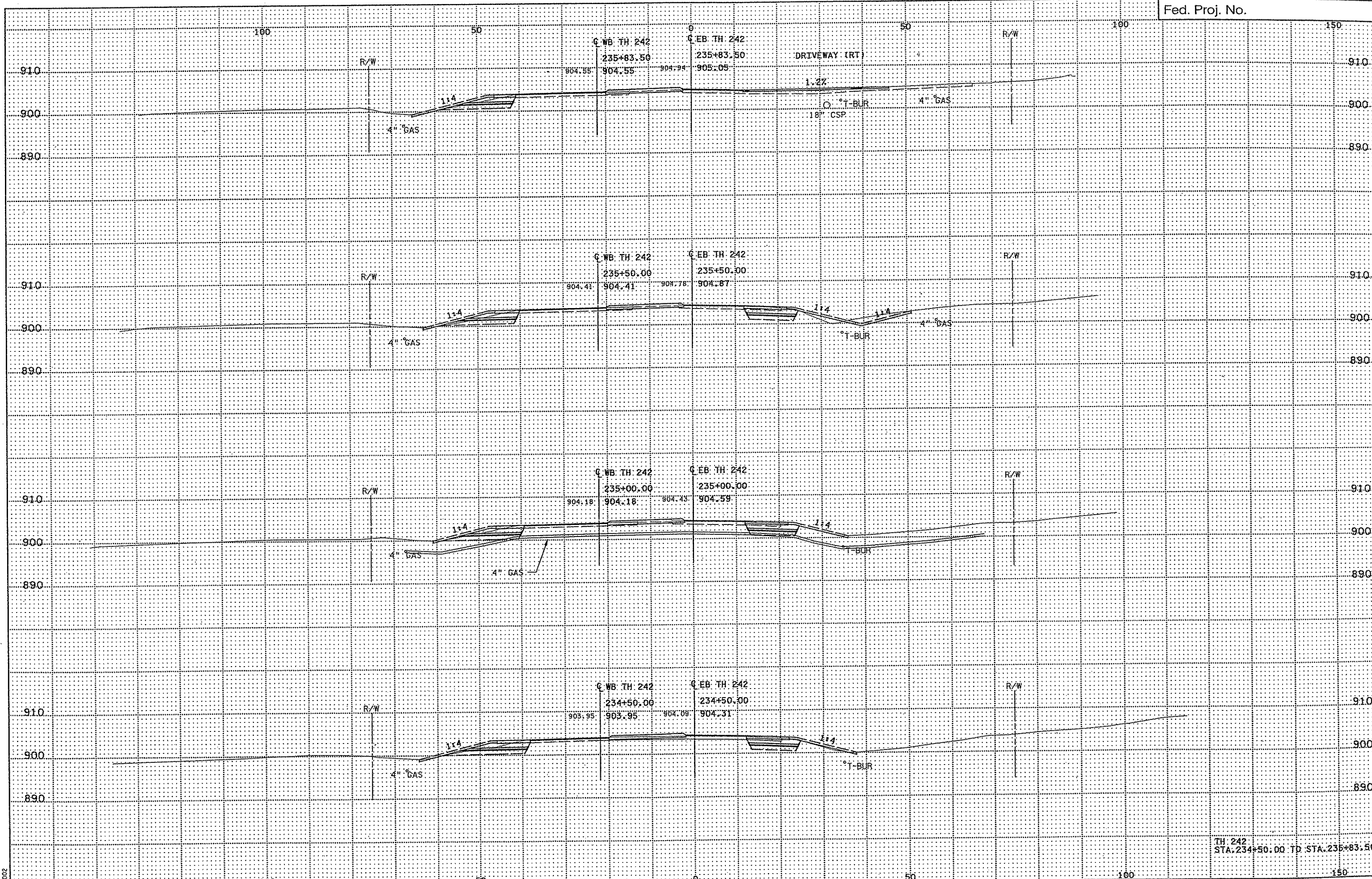
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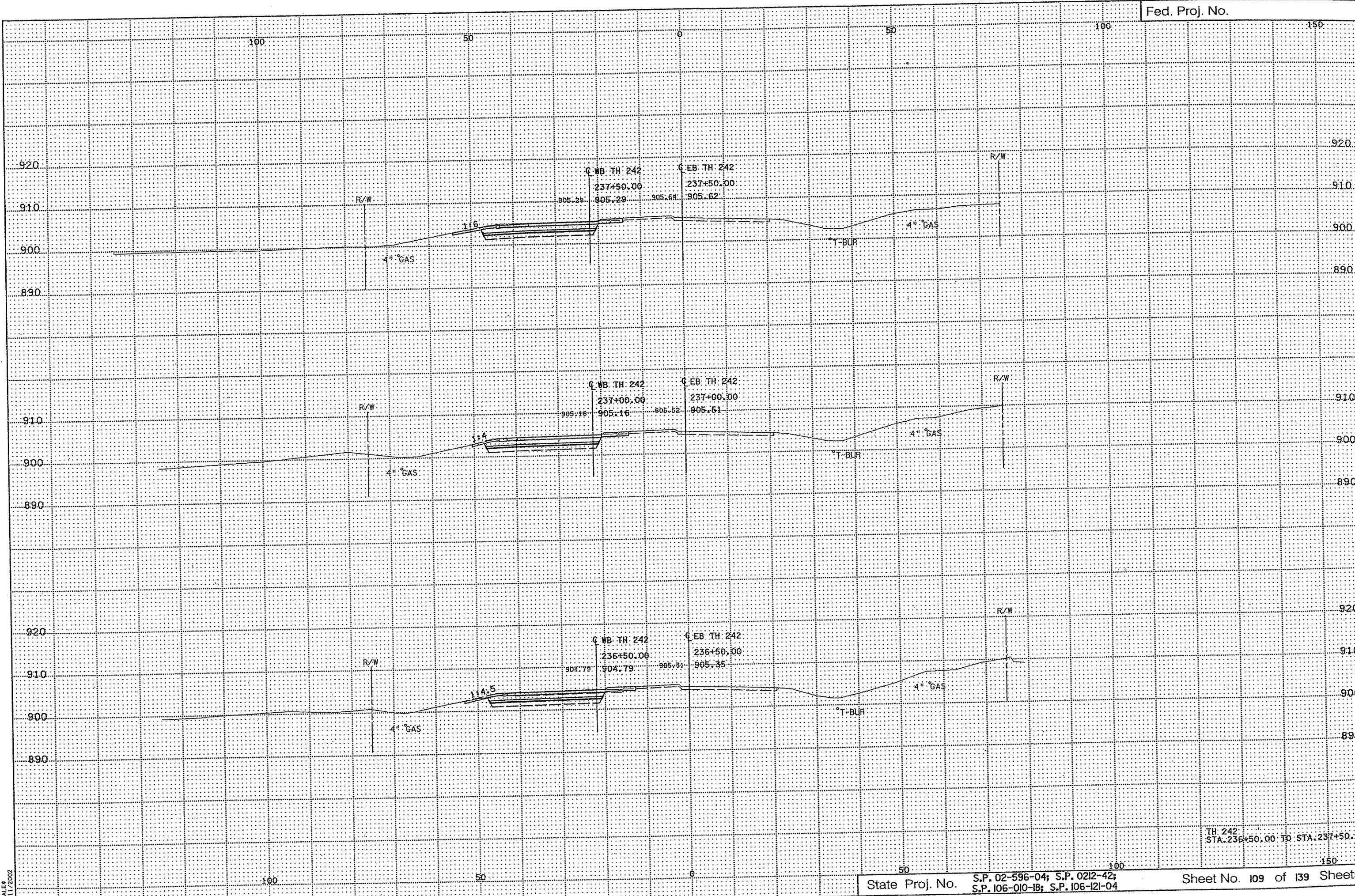
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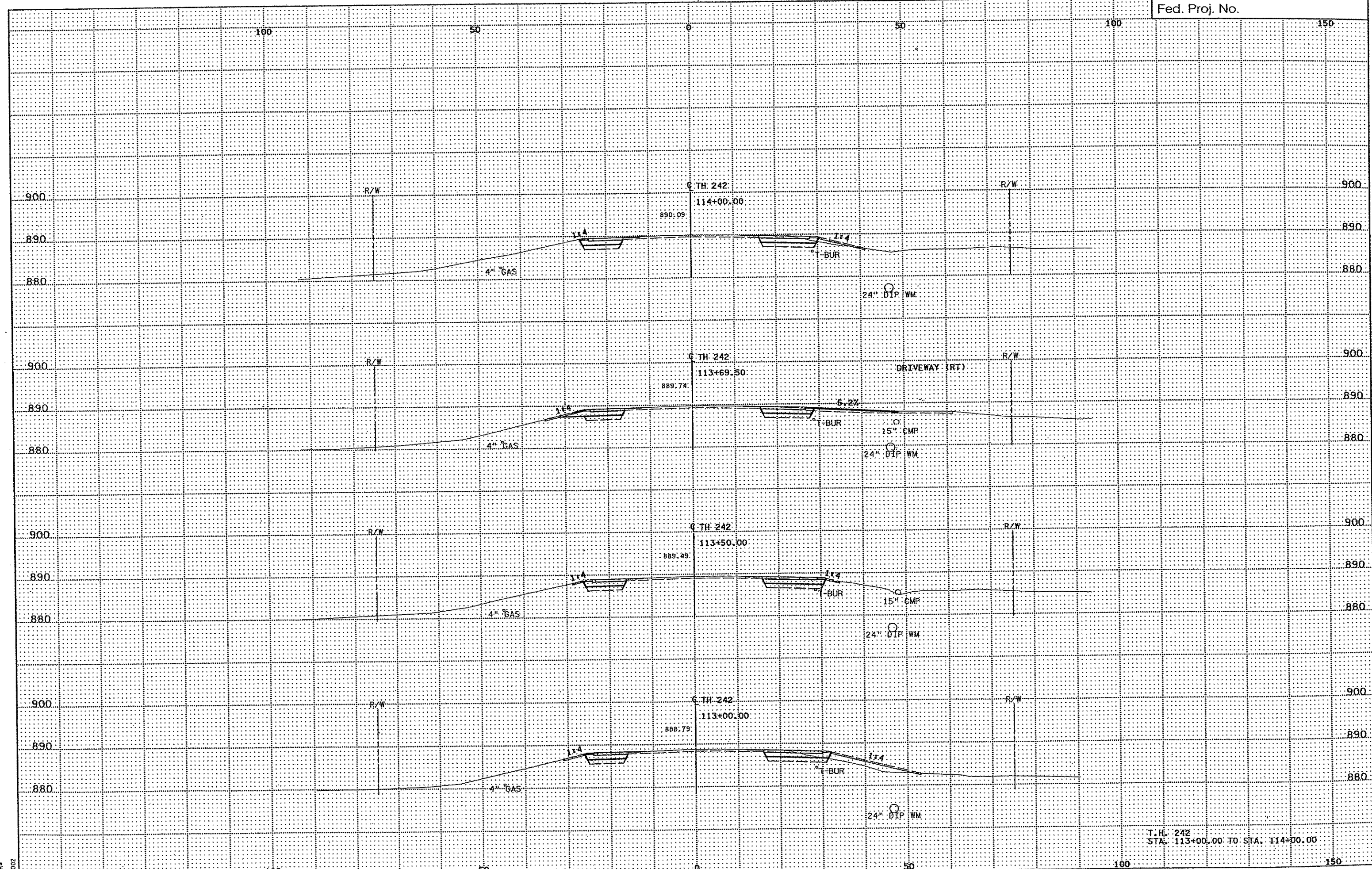
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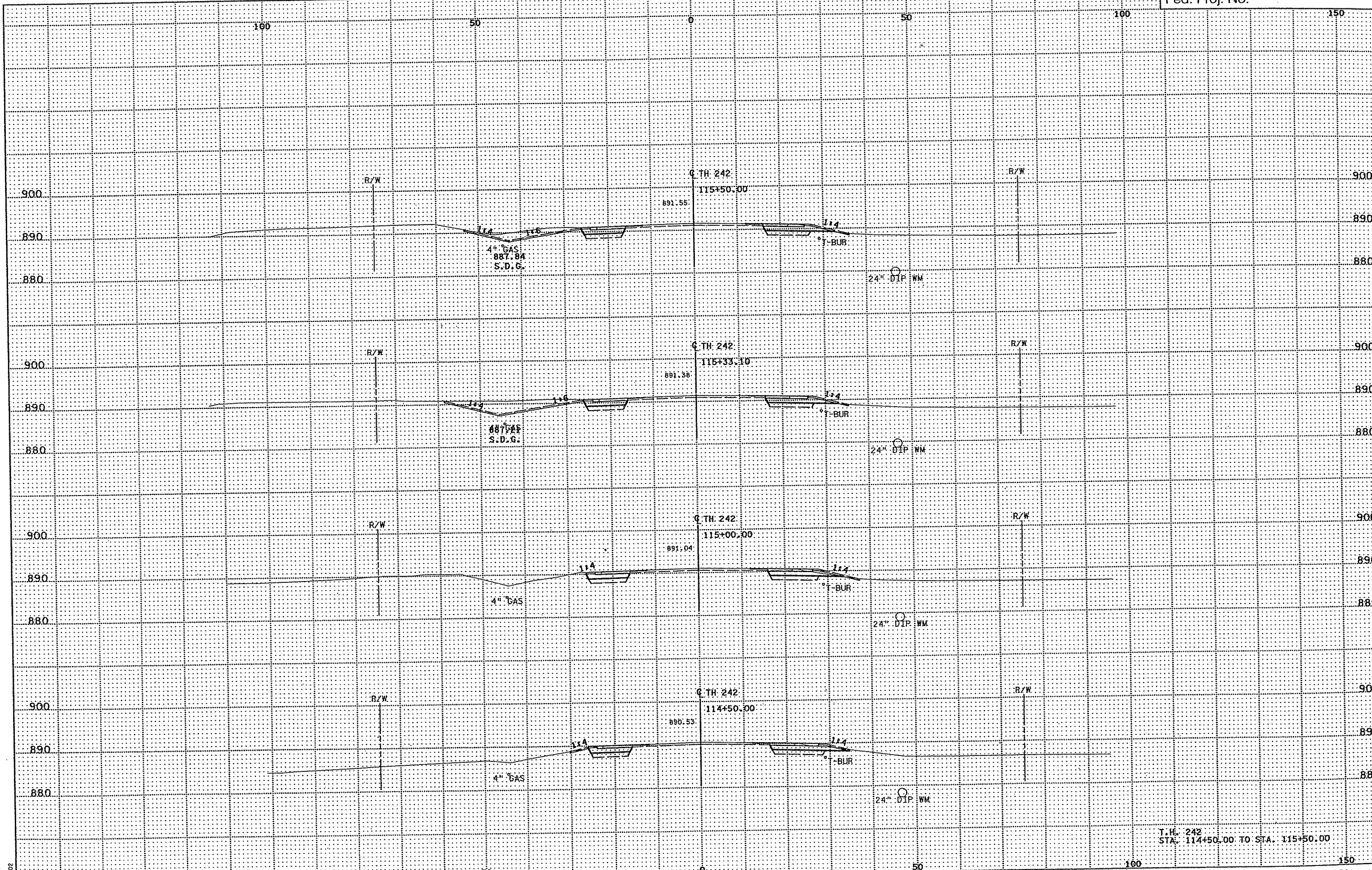
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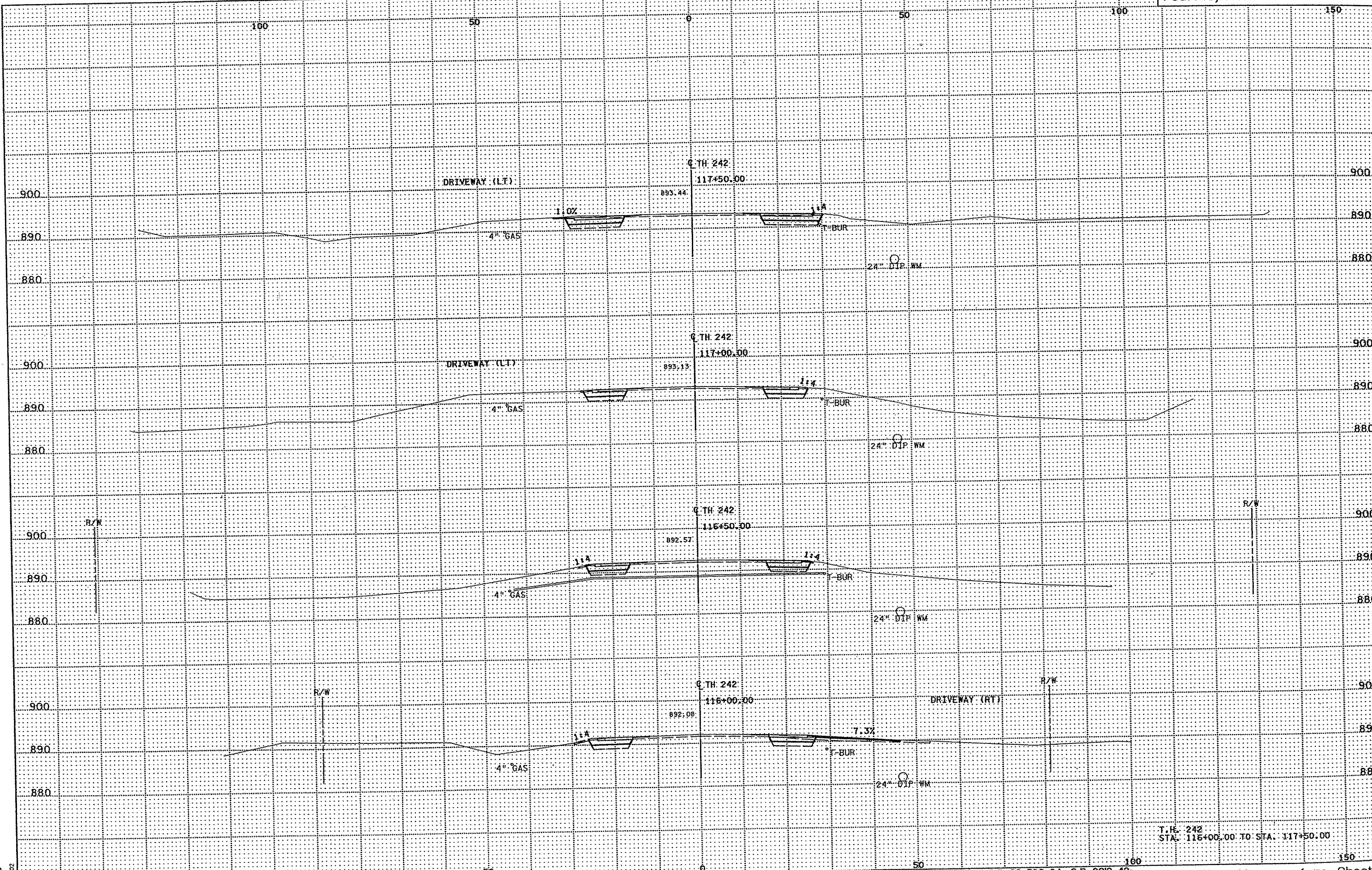
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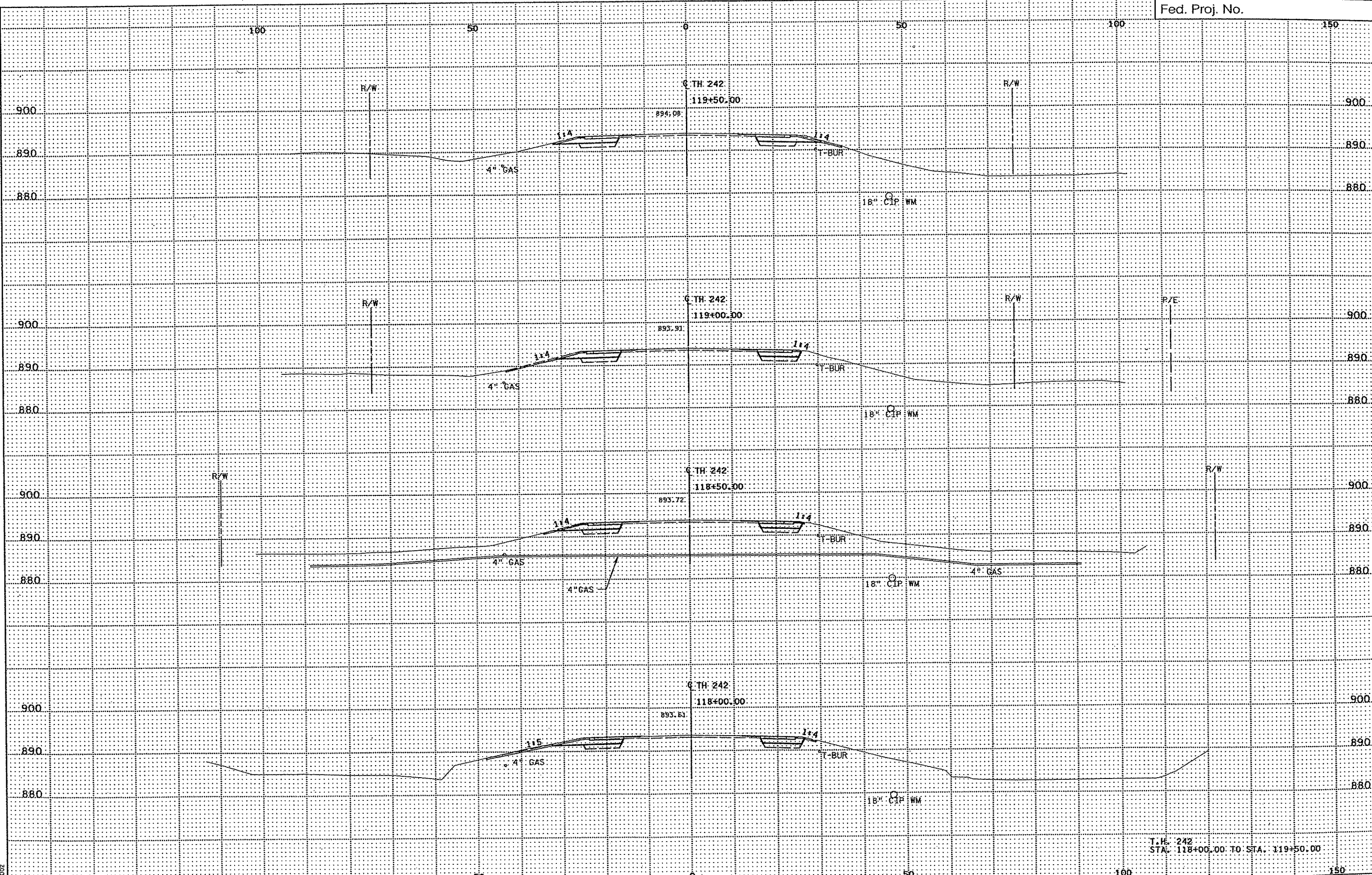
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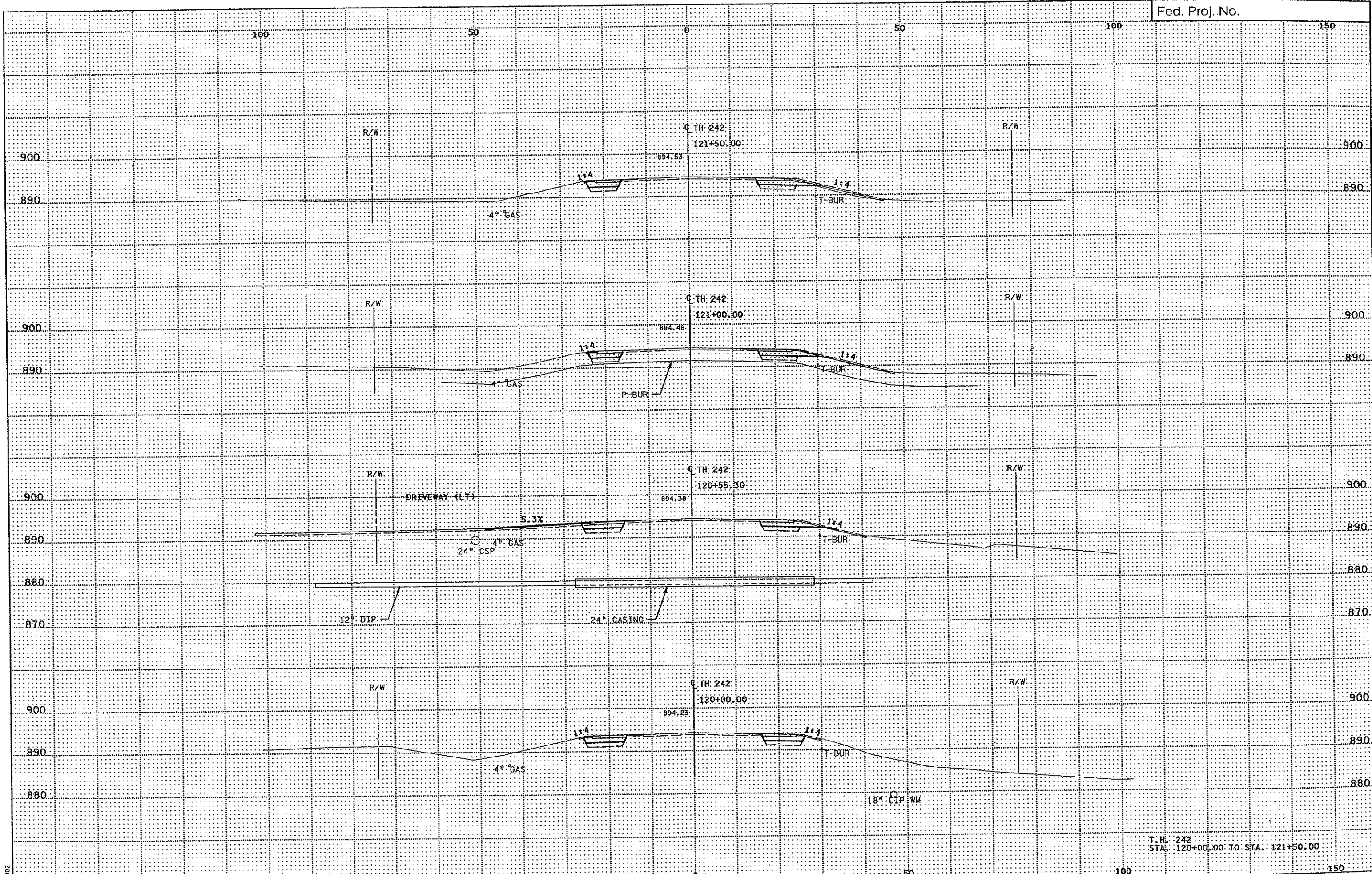
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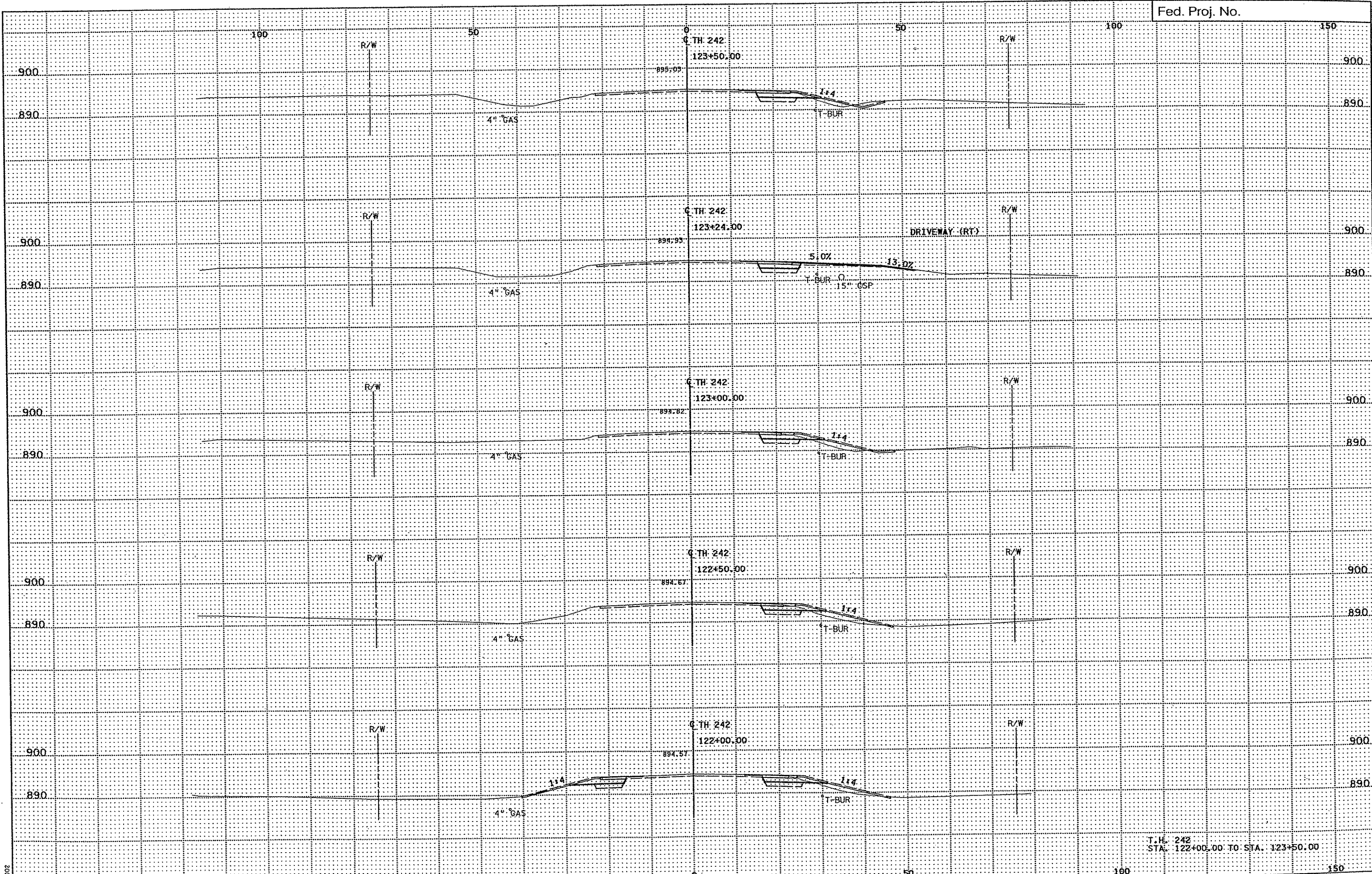
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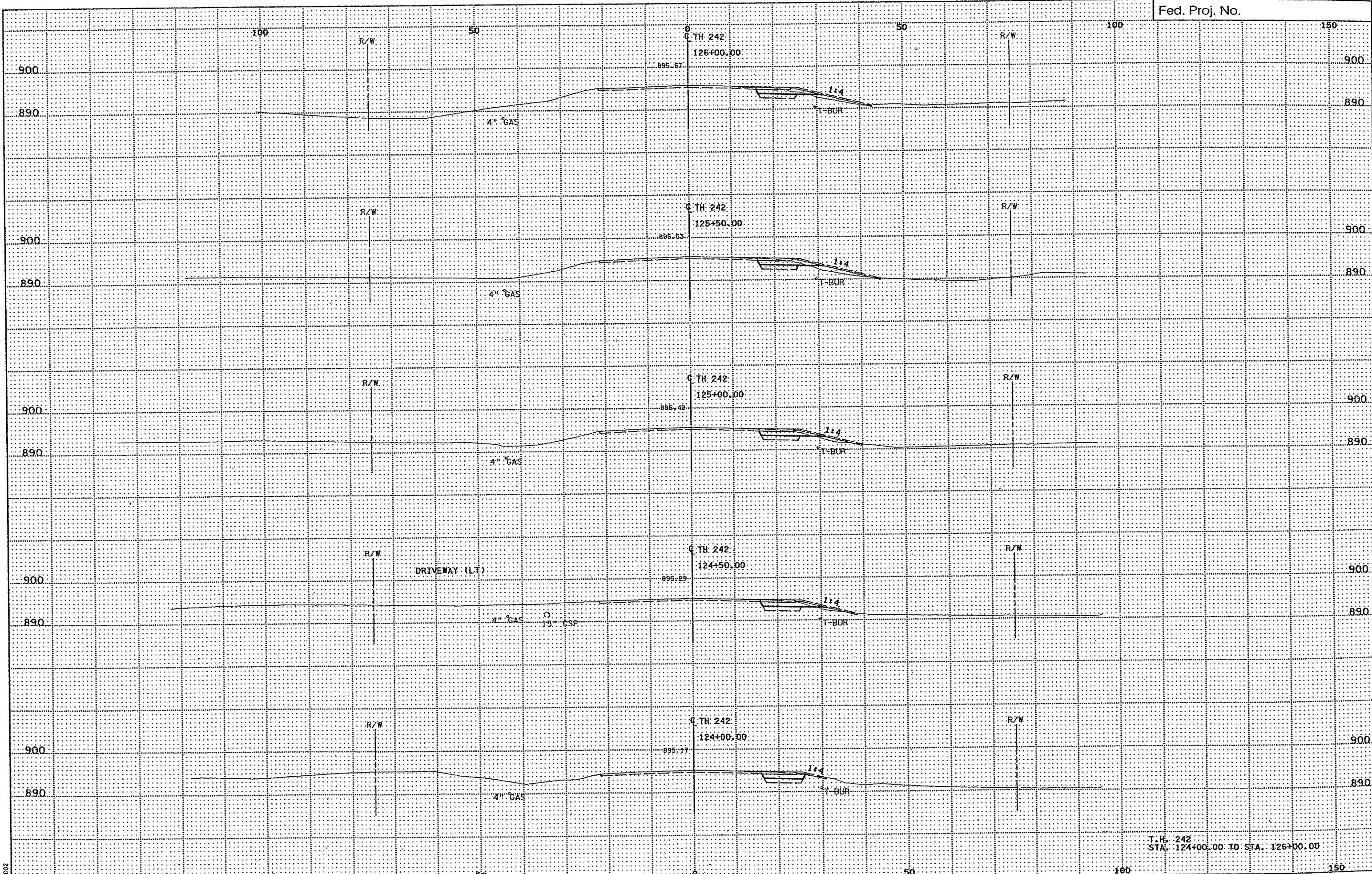
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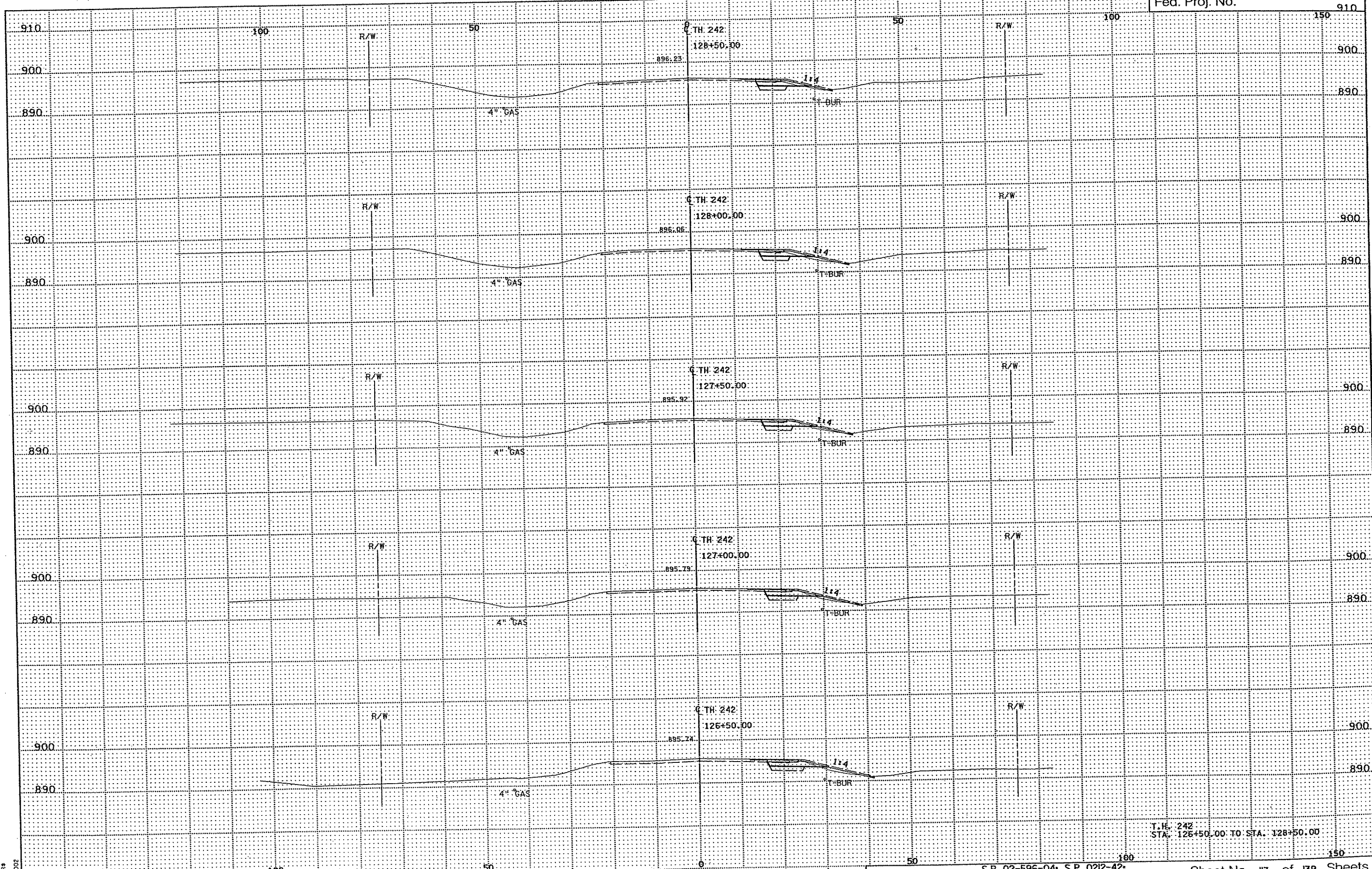
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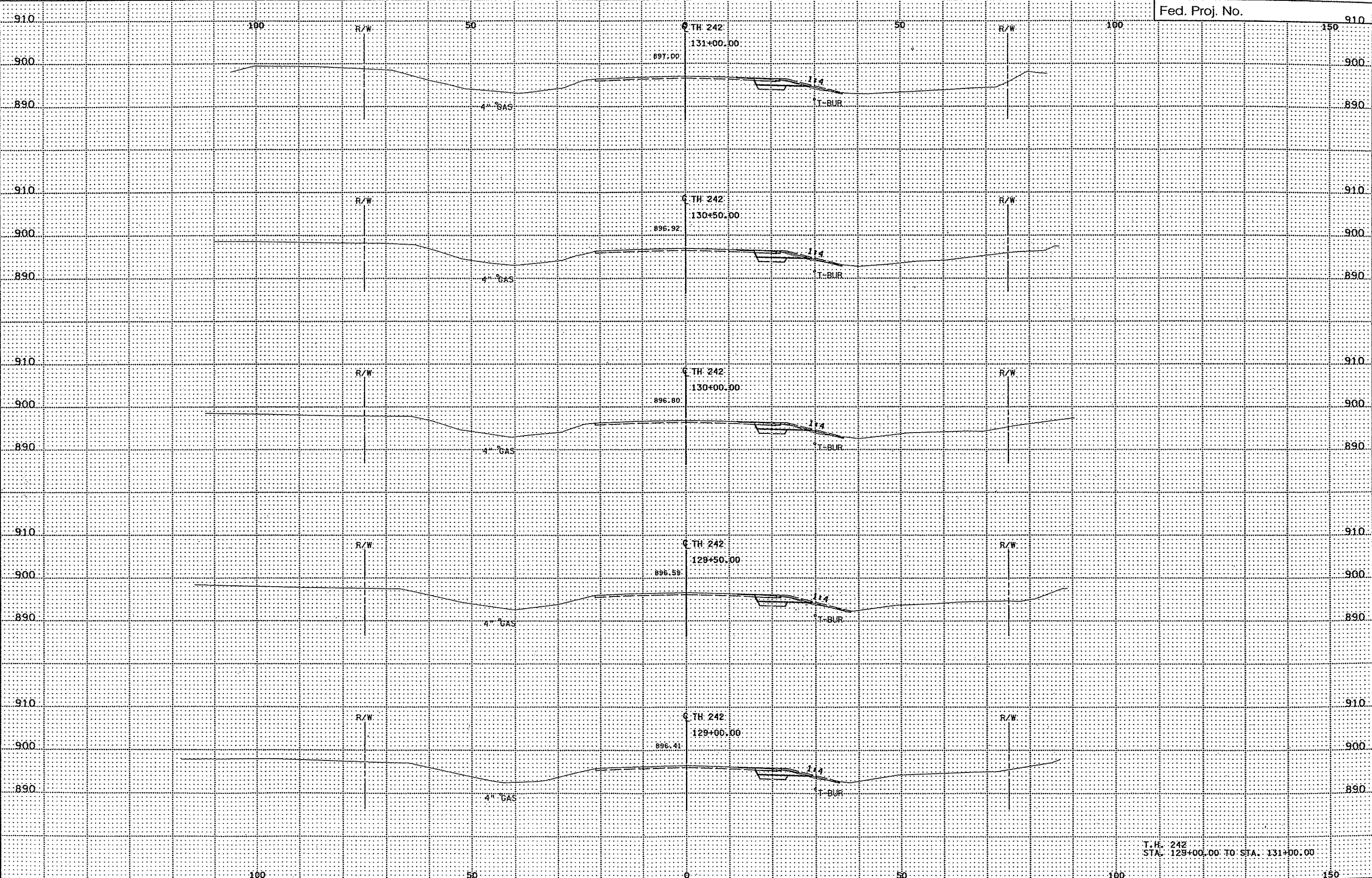
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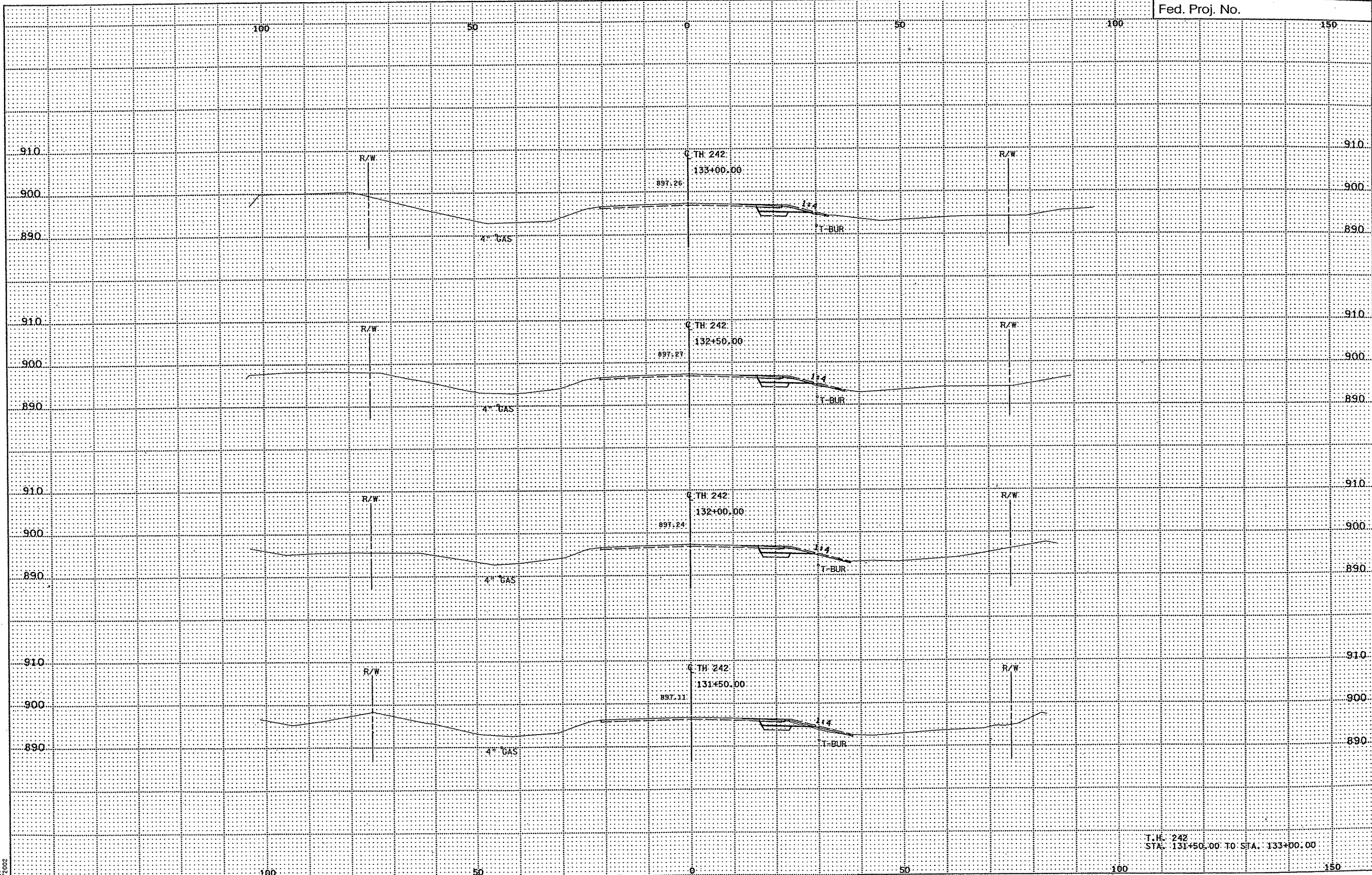
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T.H. 242
STA. 129+00.00 TO STA. 131+00.00

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T.H. 242
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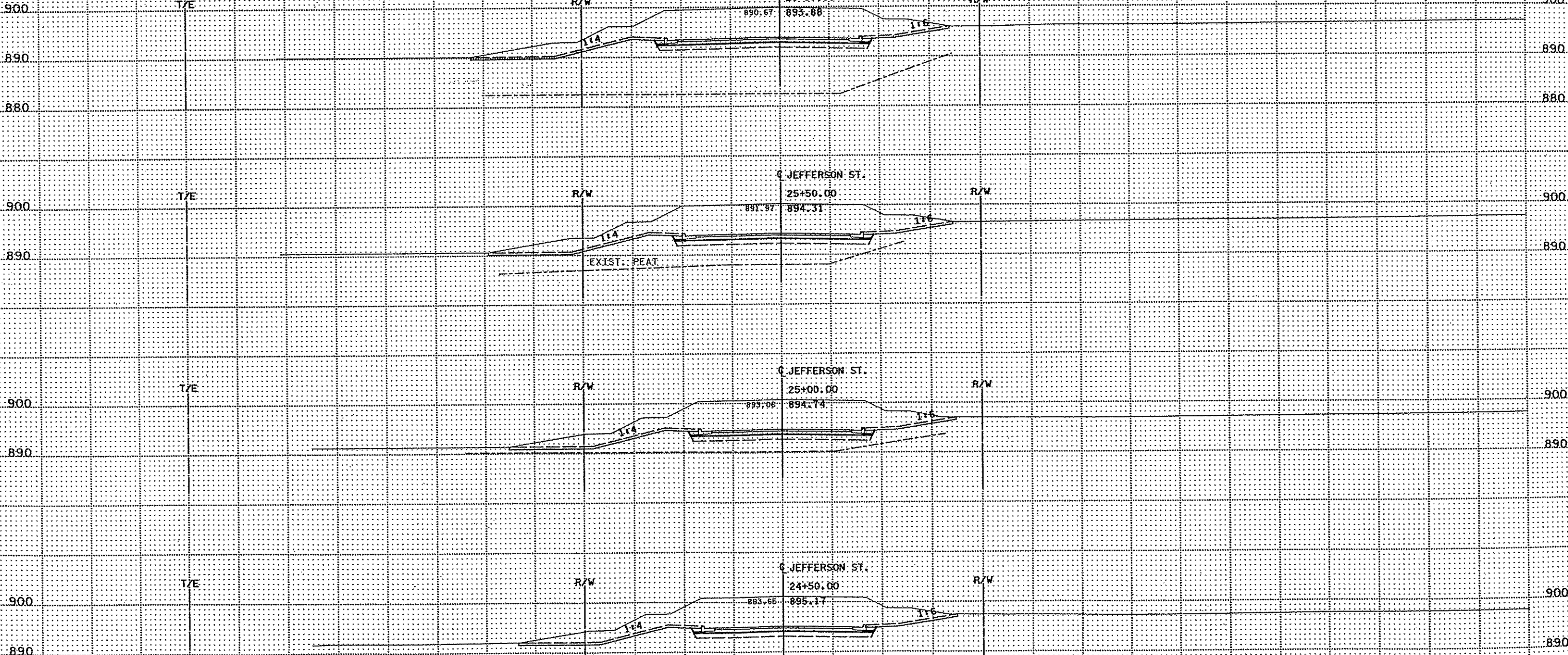
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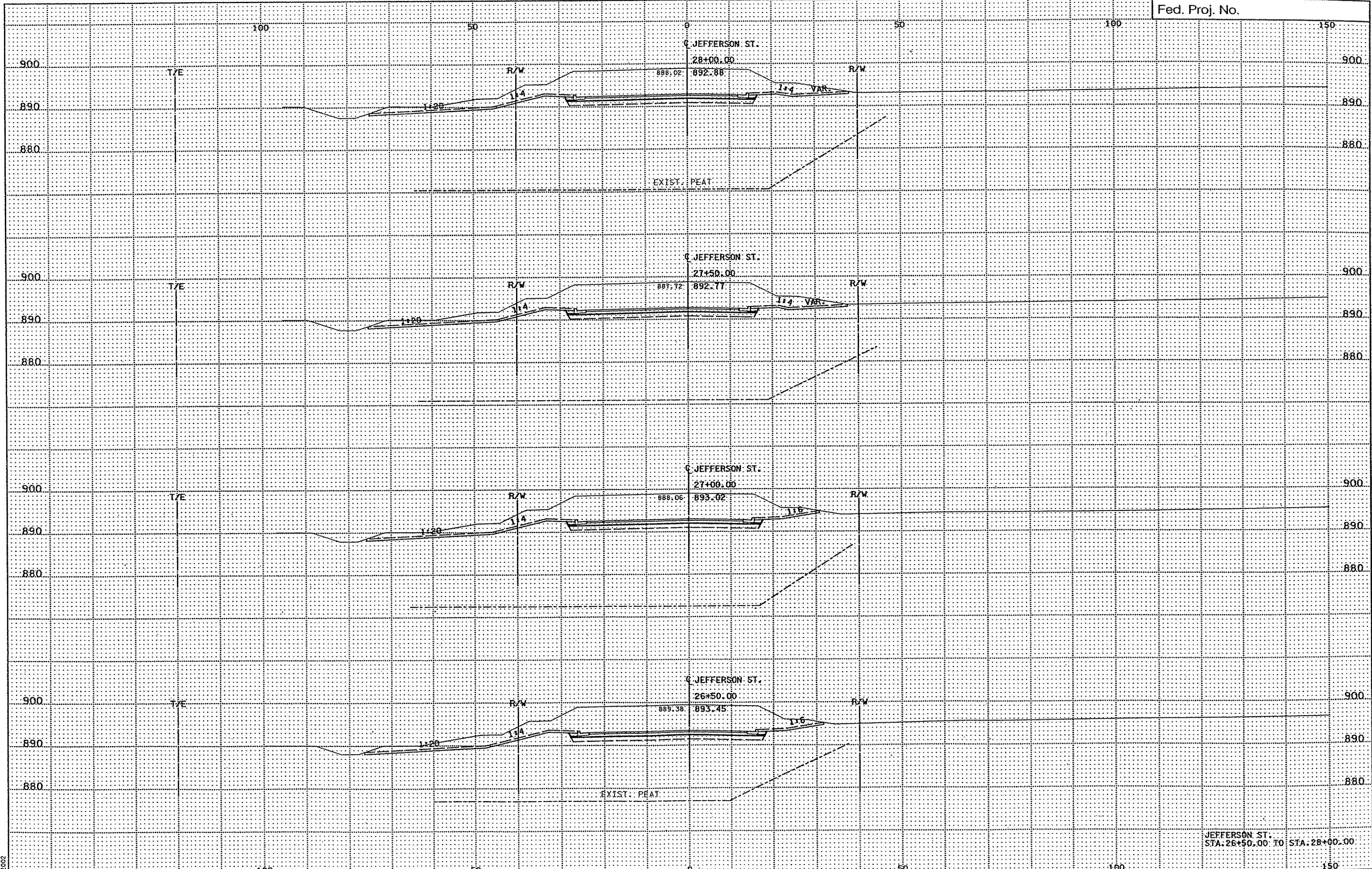
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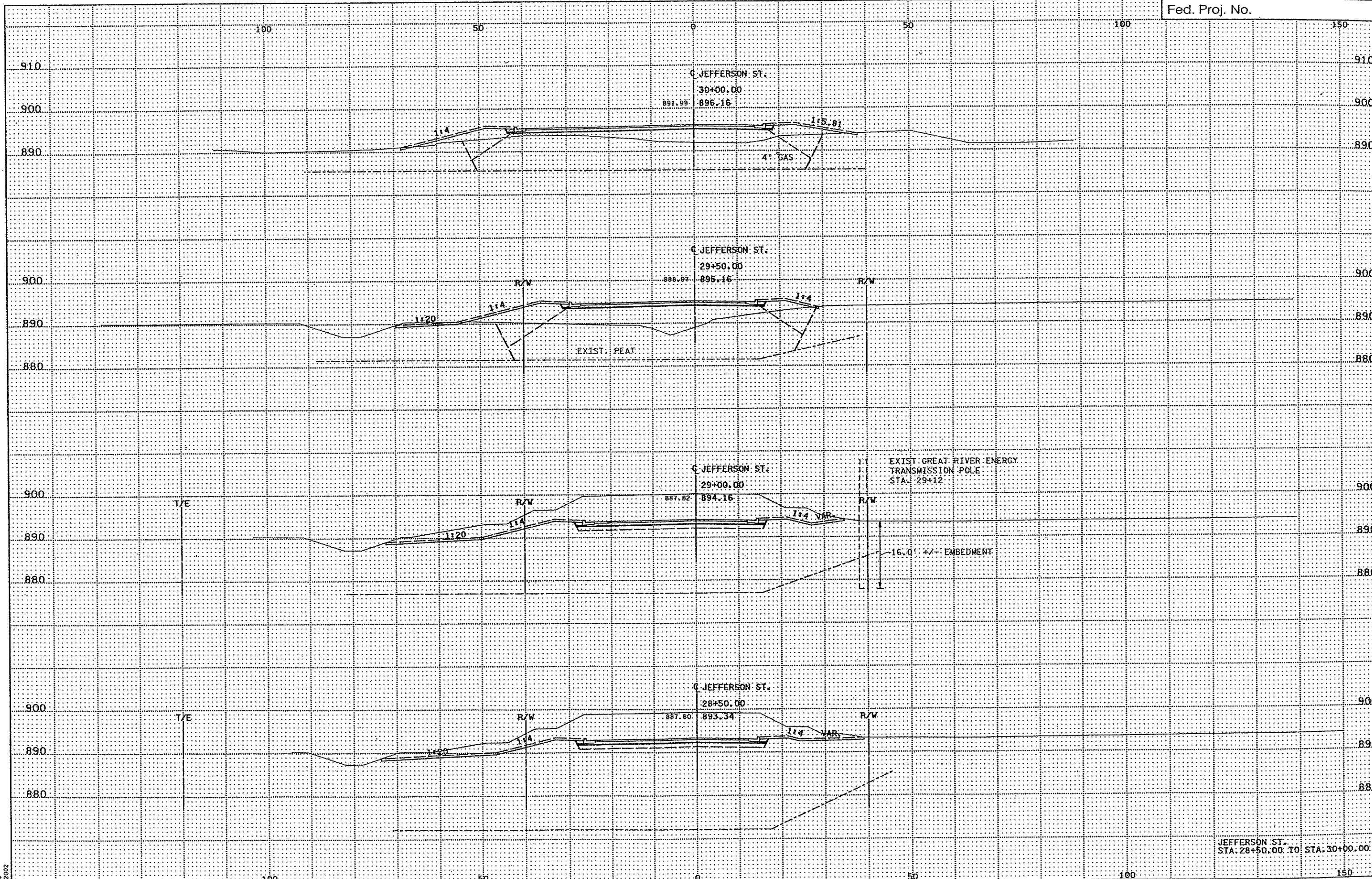
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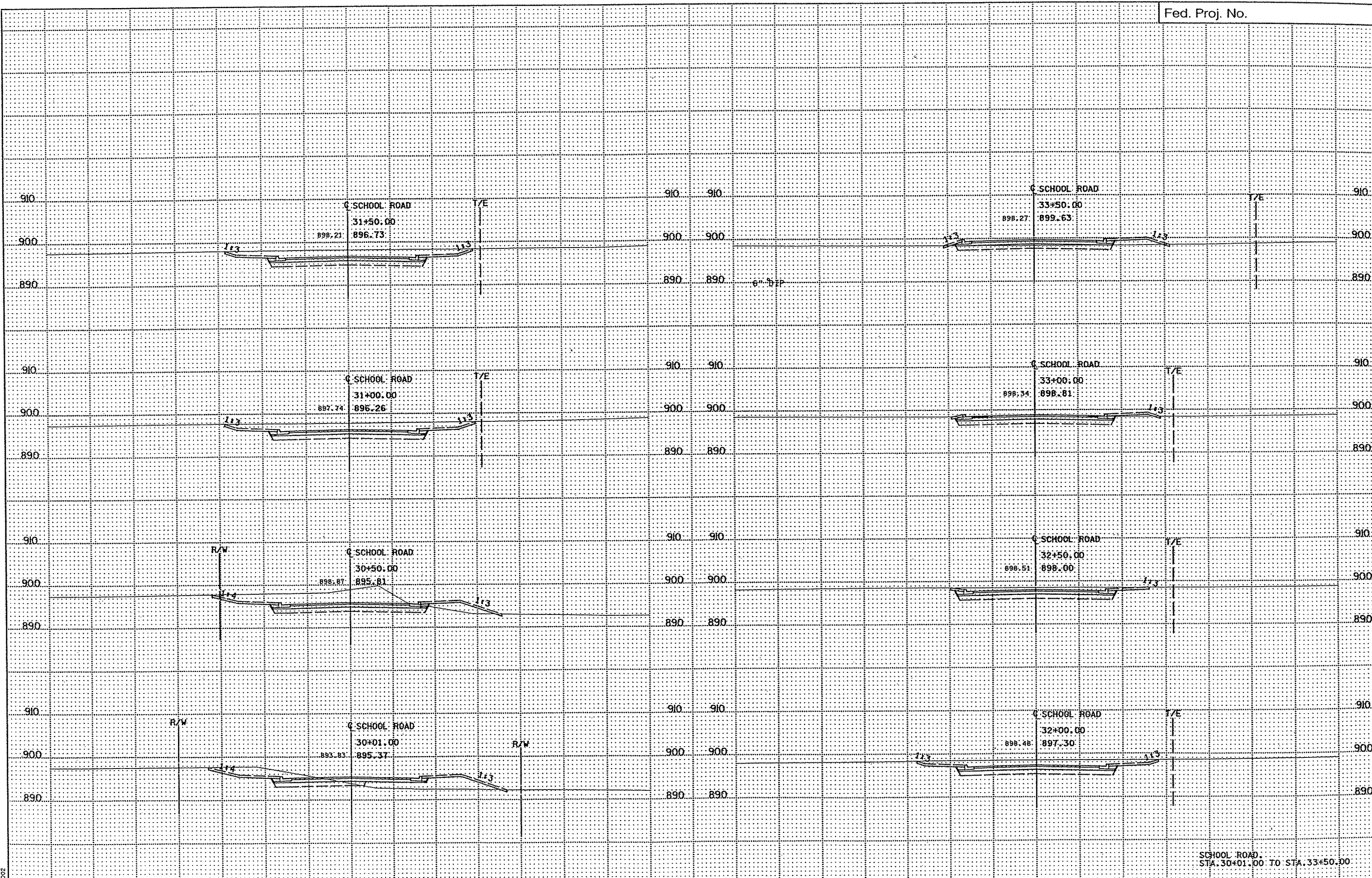


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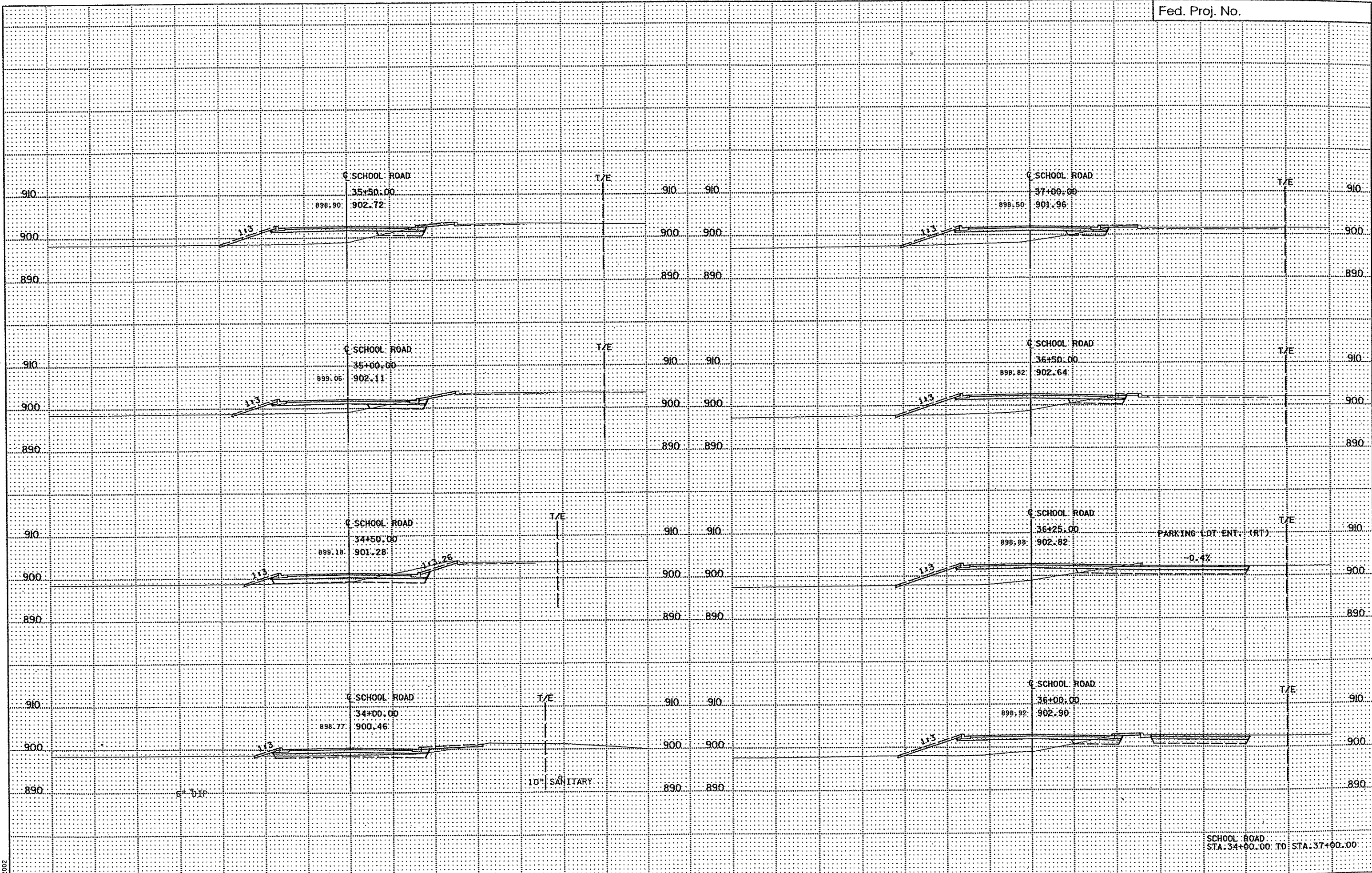


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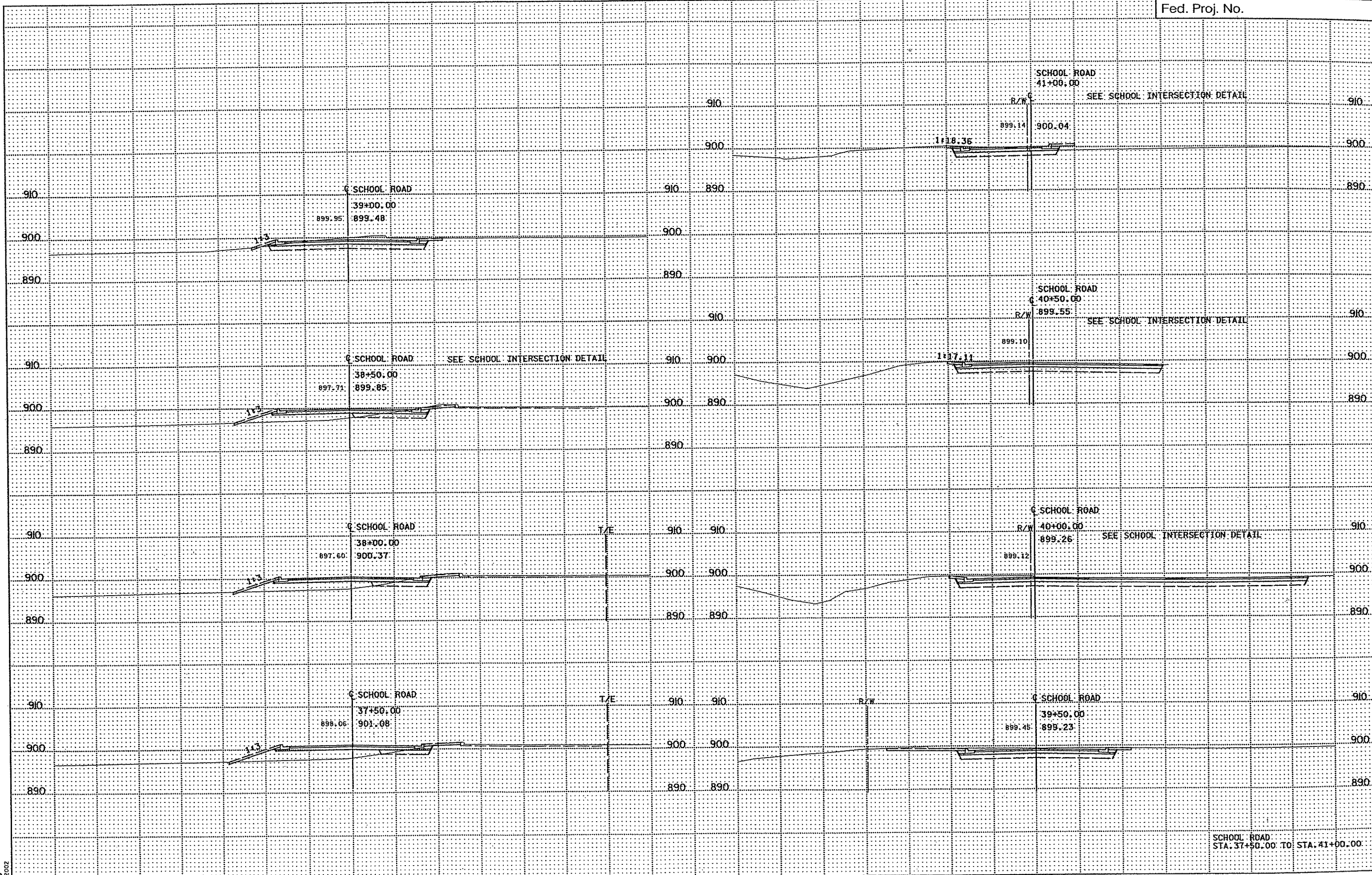


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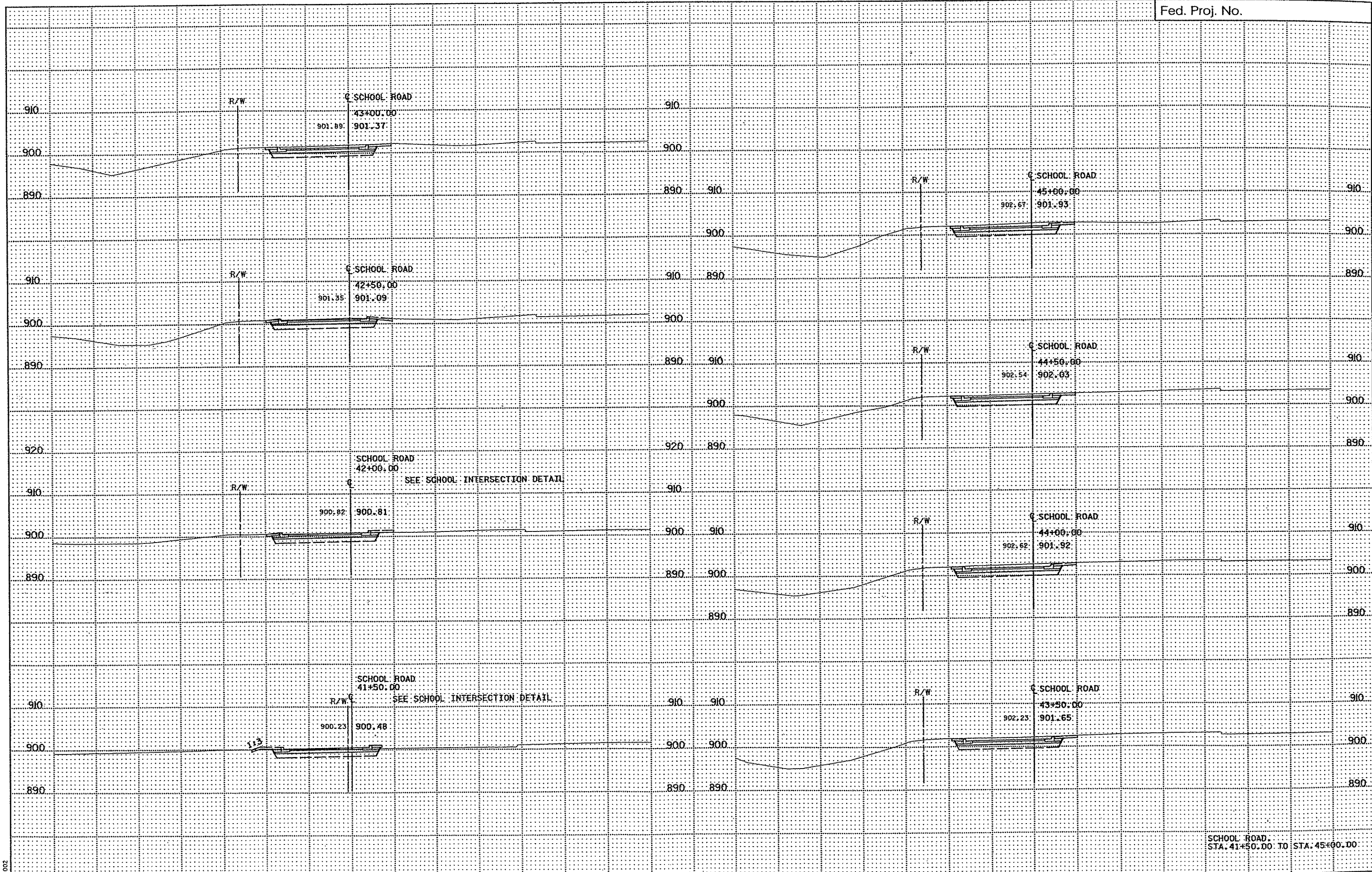


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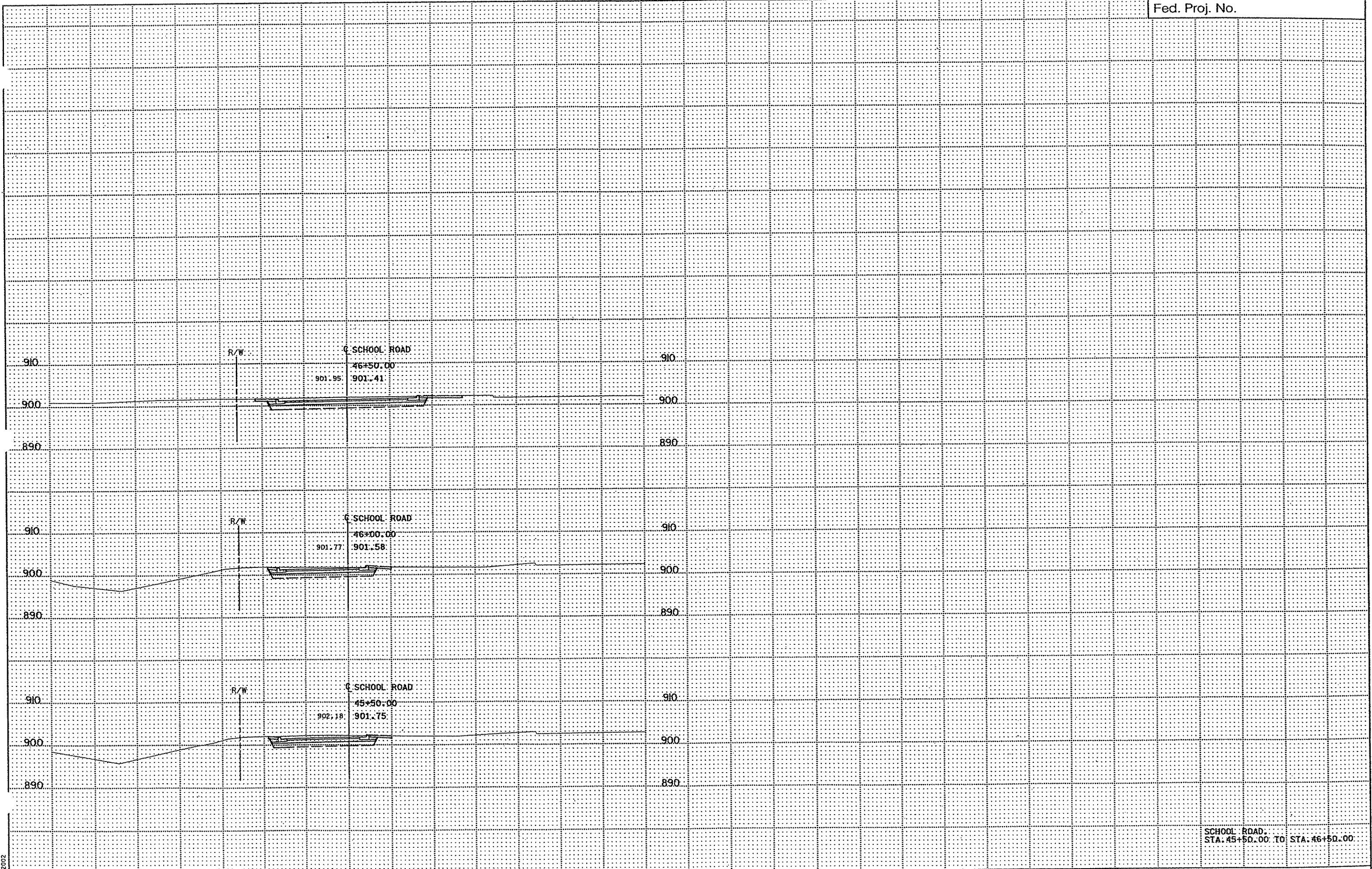


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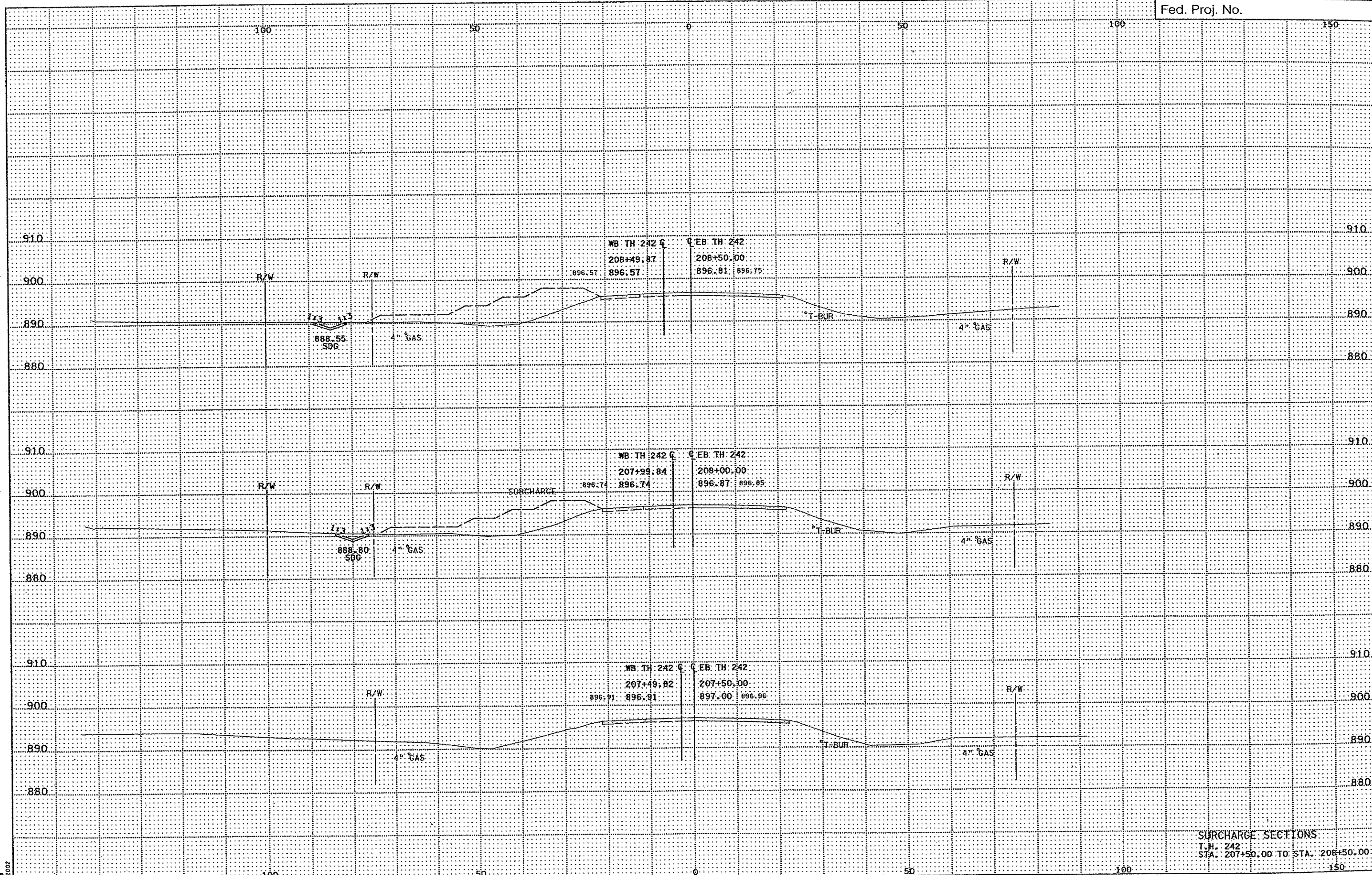


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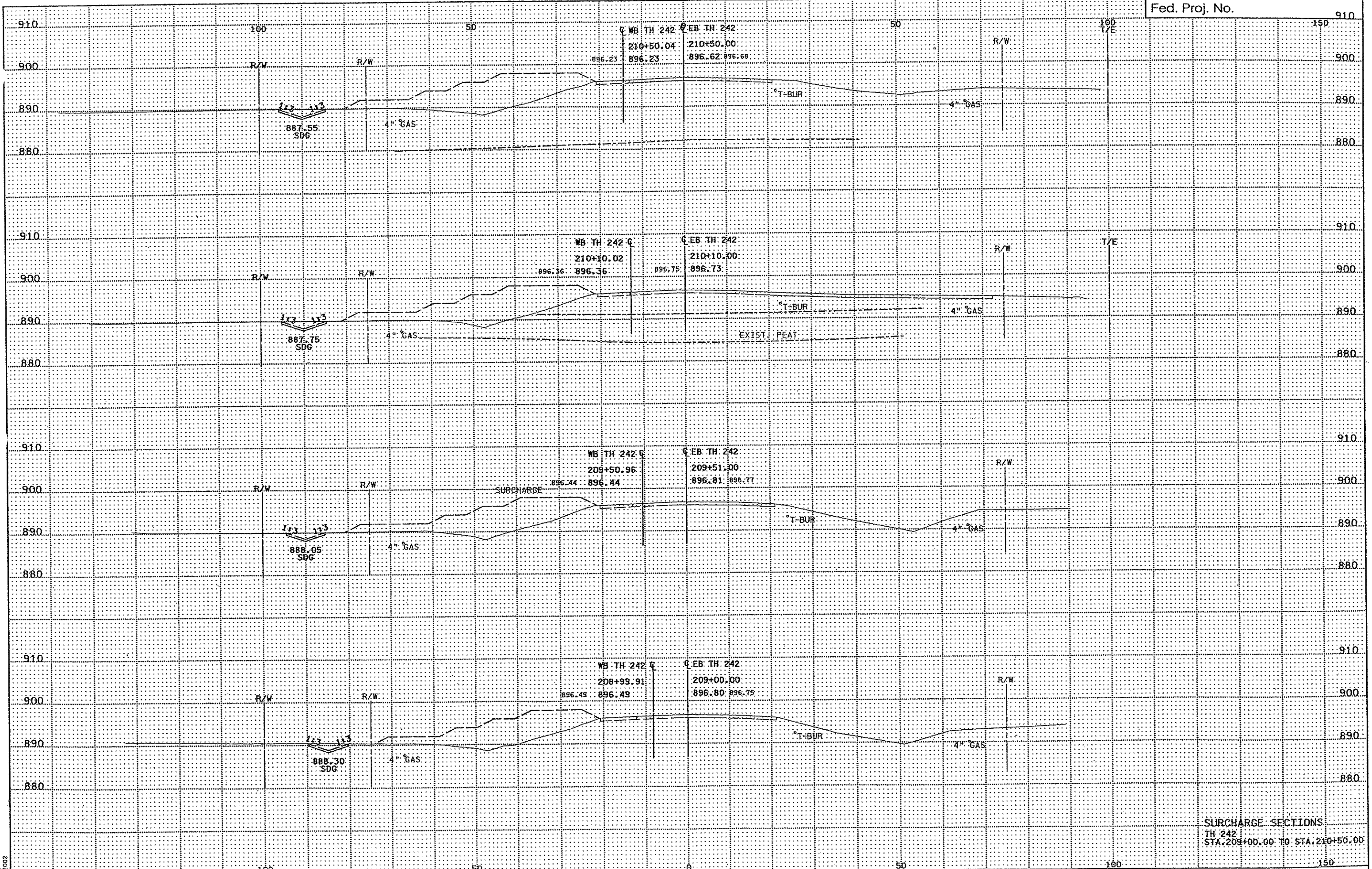
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SCALE
06/11/2002



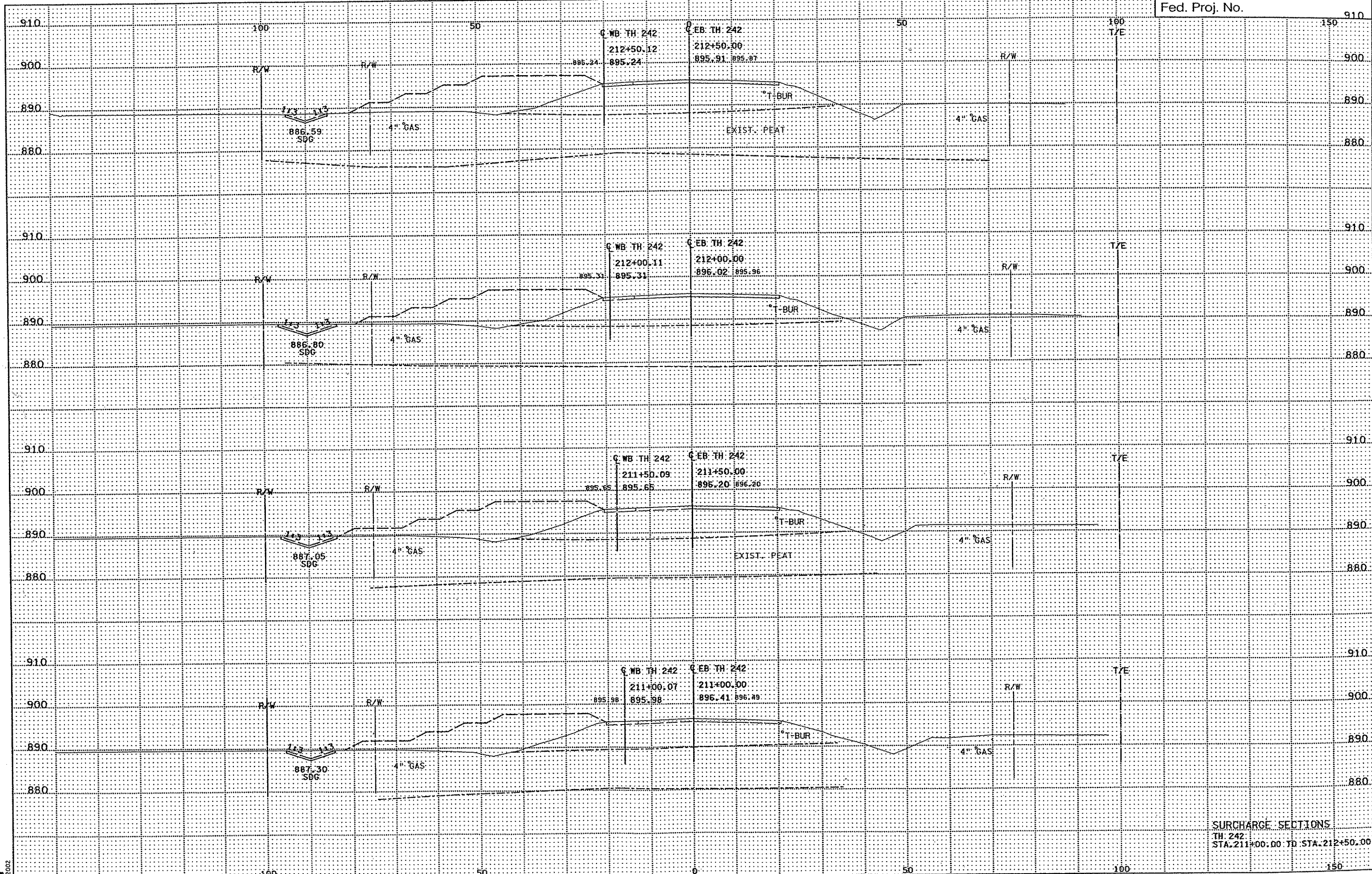
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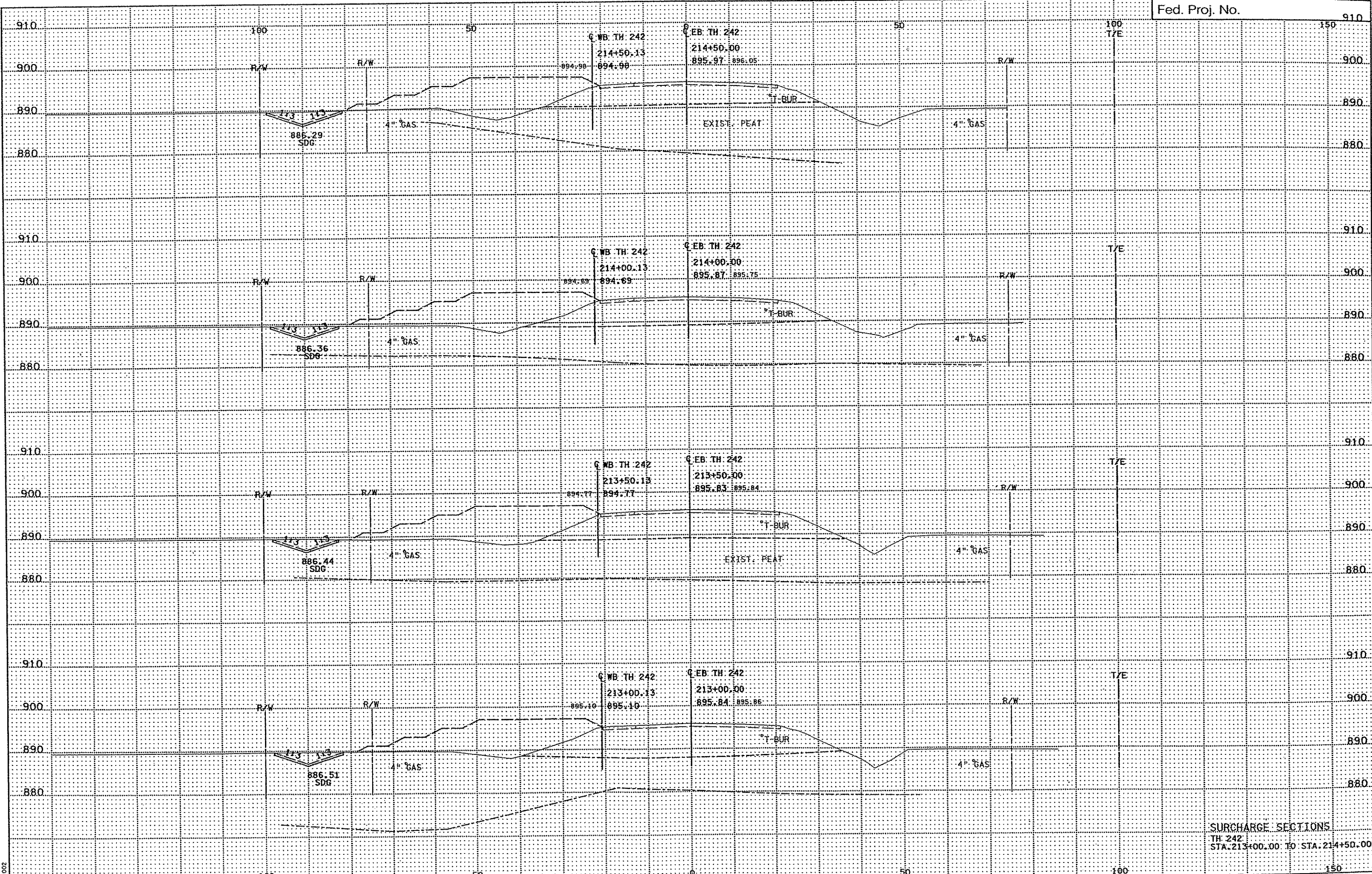
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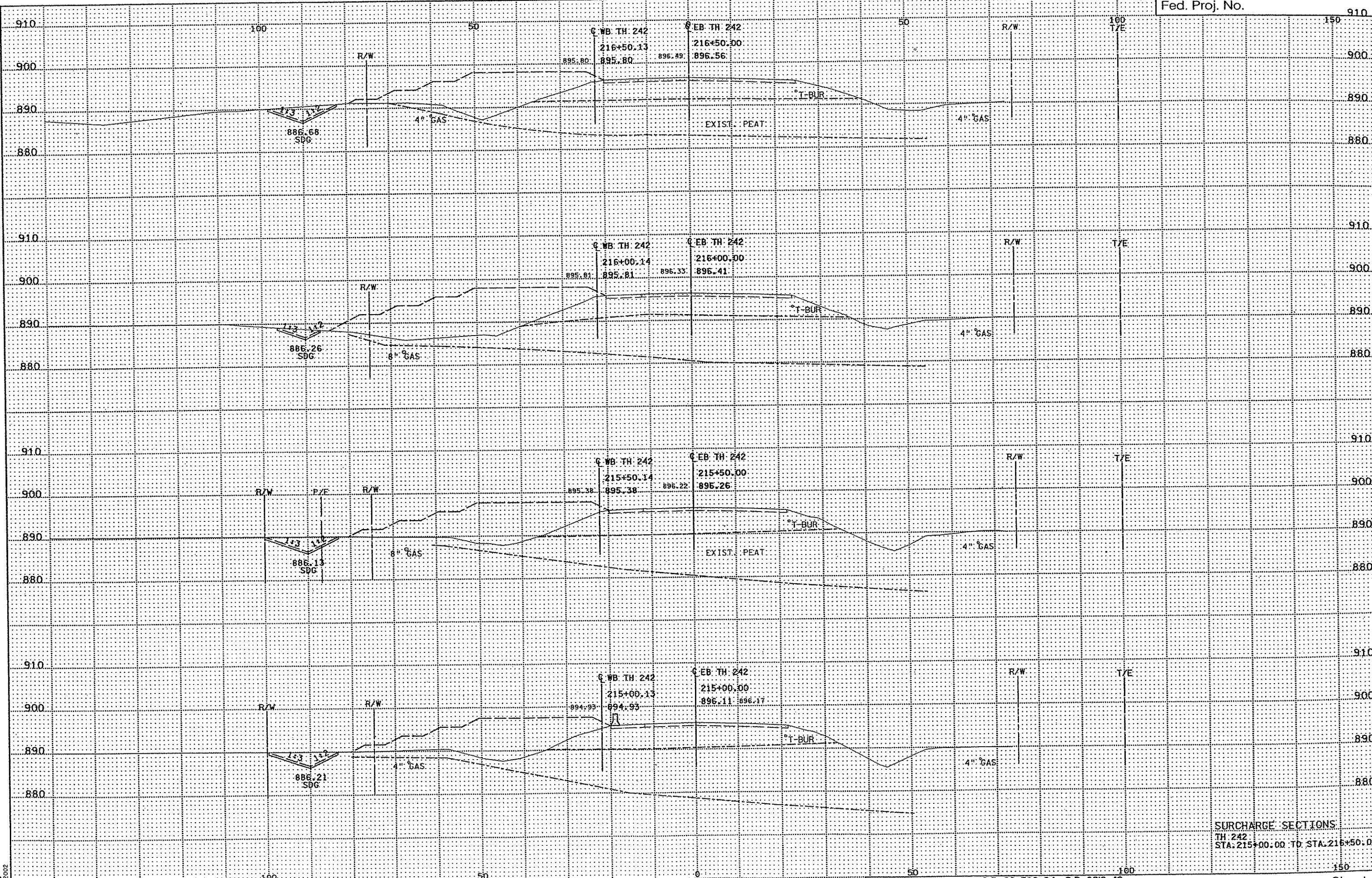
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 06/11/2002

SURCHARGE SECTIONS
 TH 242
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SURCHARGE SECTIONS
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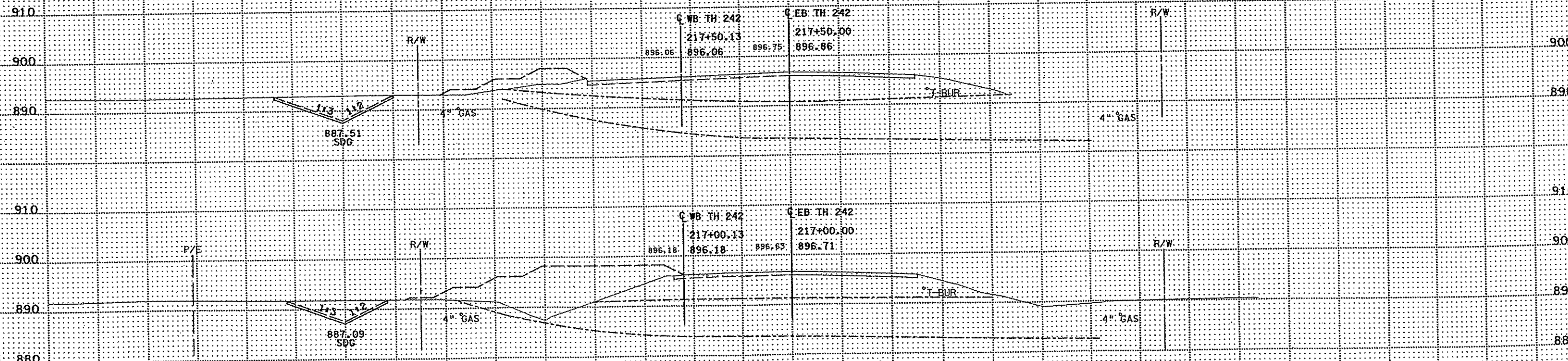
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SURCHARGE SECTIONS
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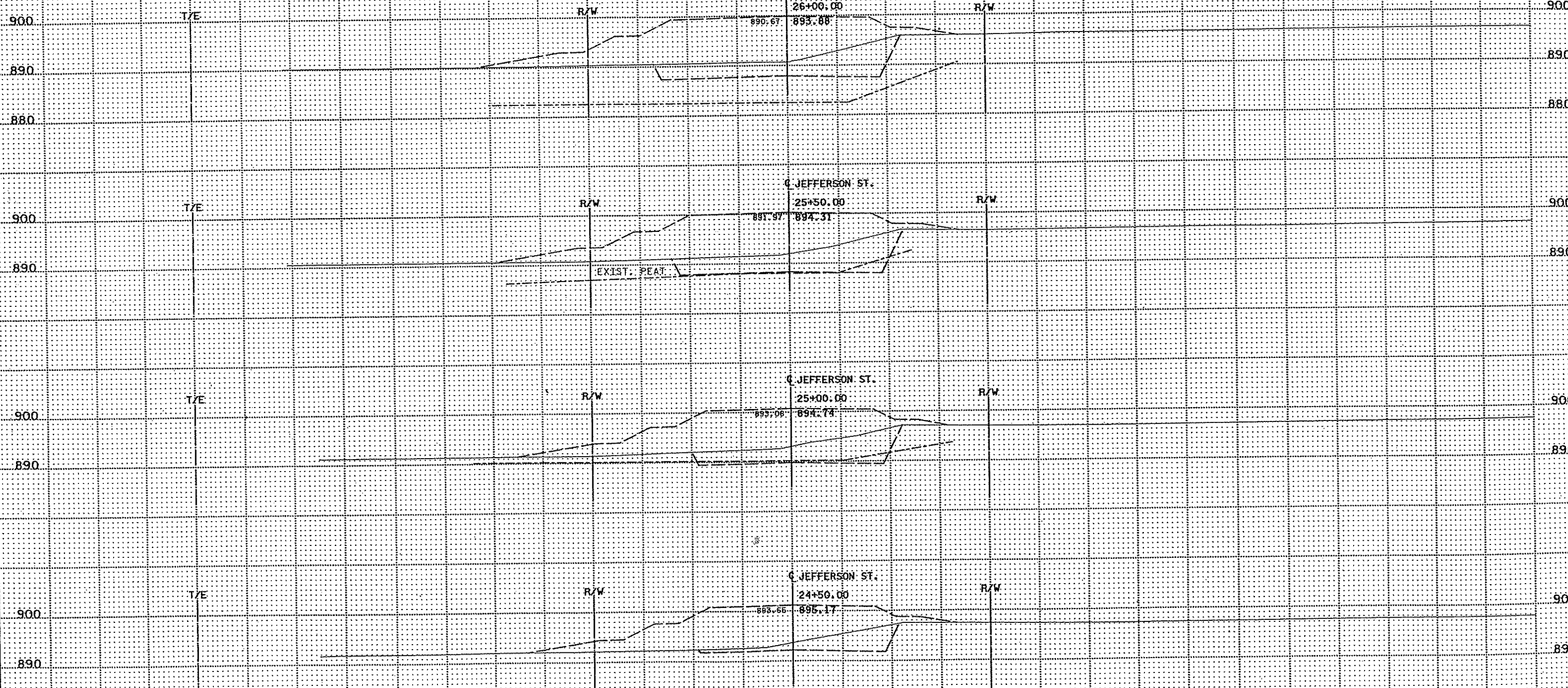
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SURCHARGE SECTIONS
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 STA. 24+50.00 TO STA. 26+00.00

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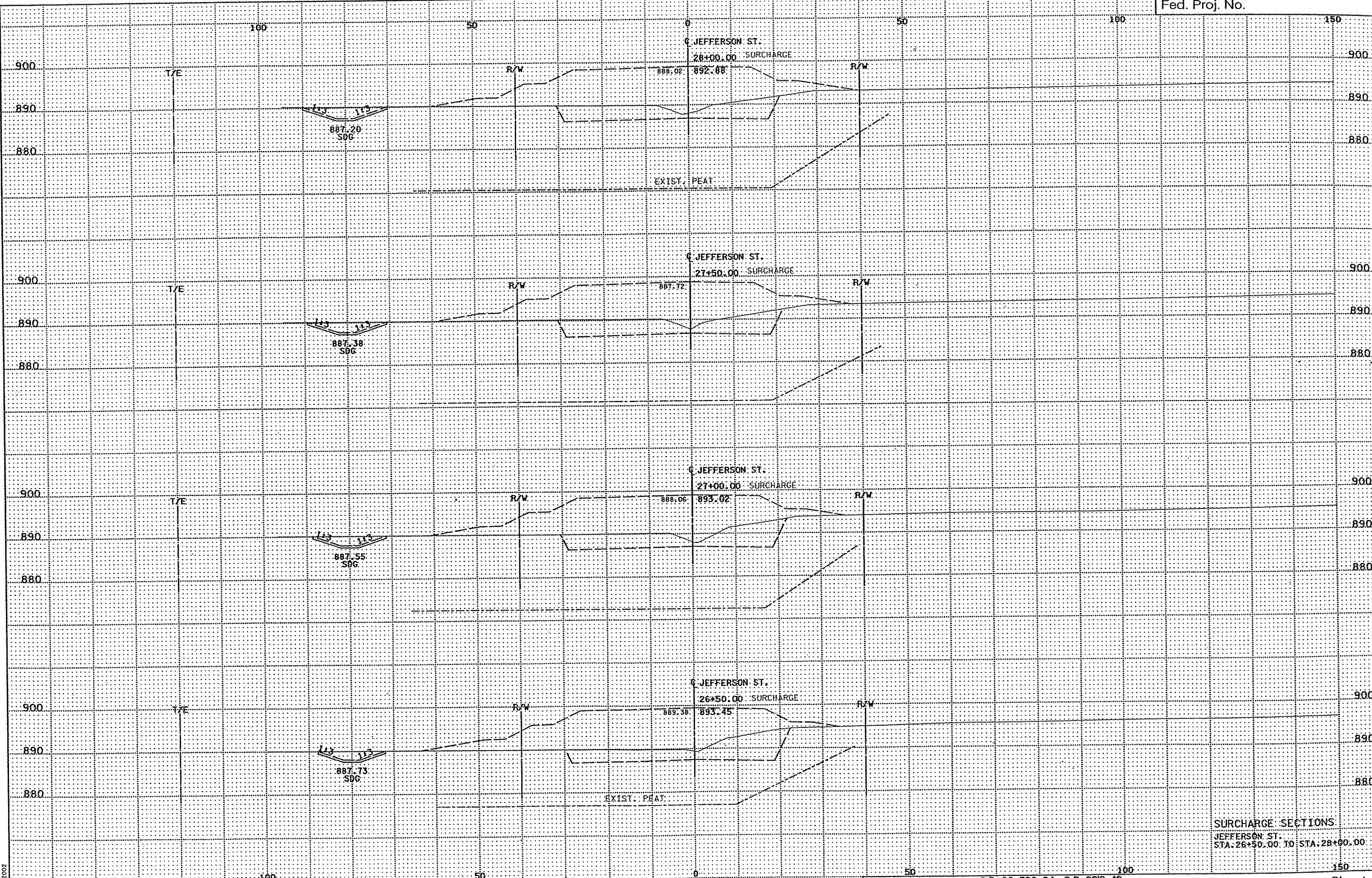
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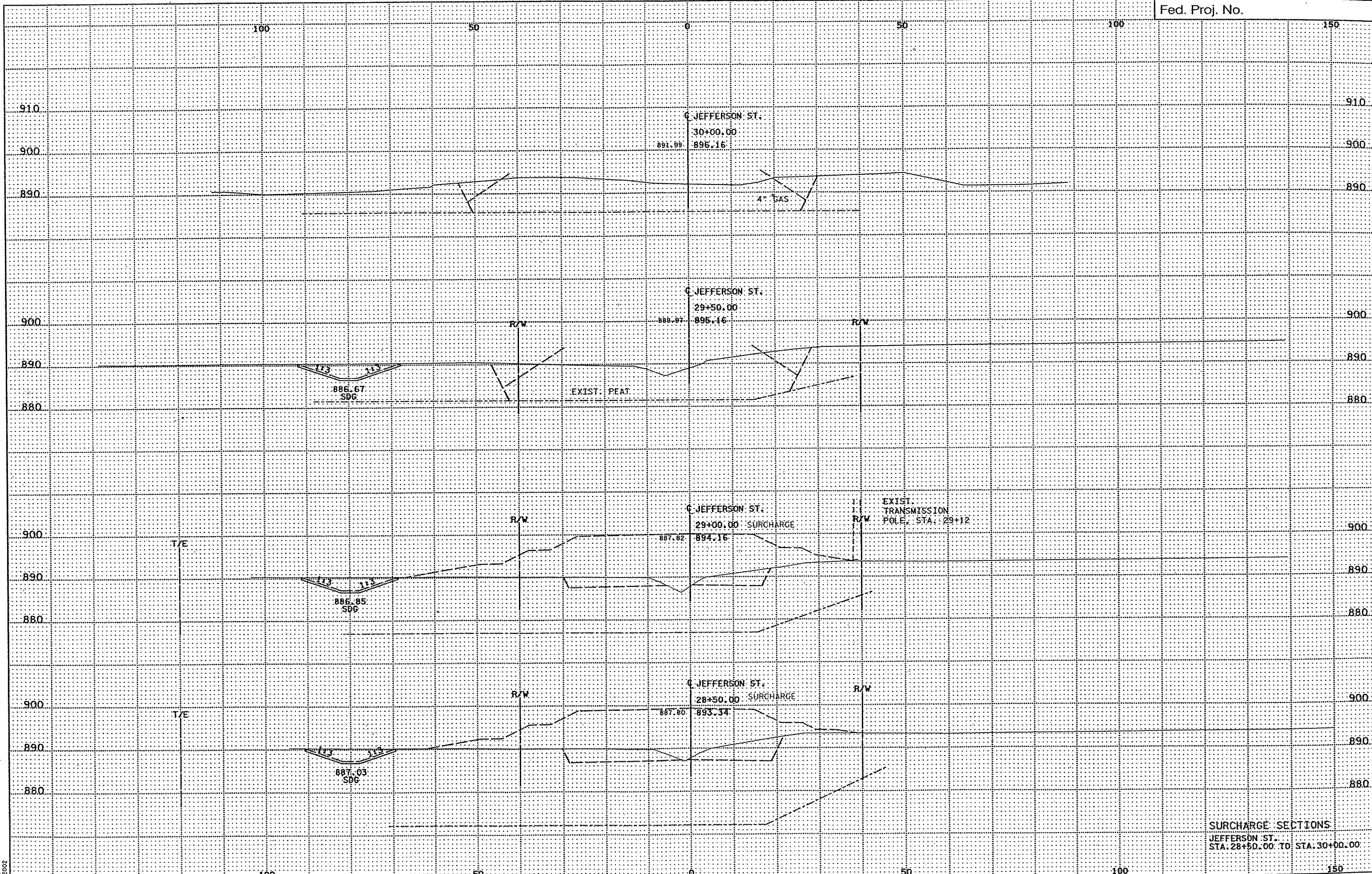
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 SCALE
 08/11/2002



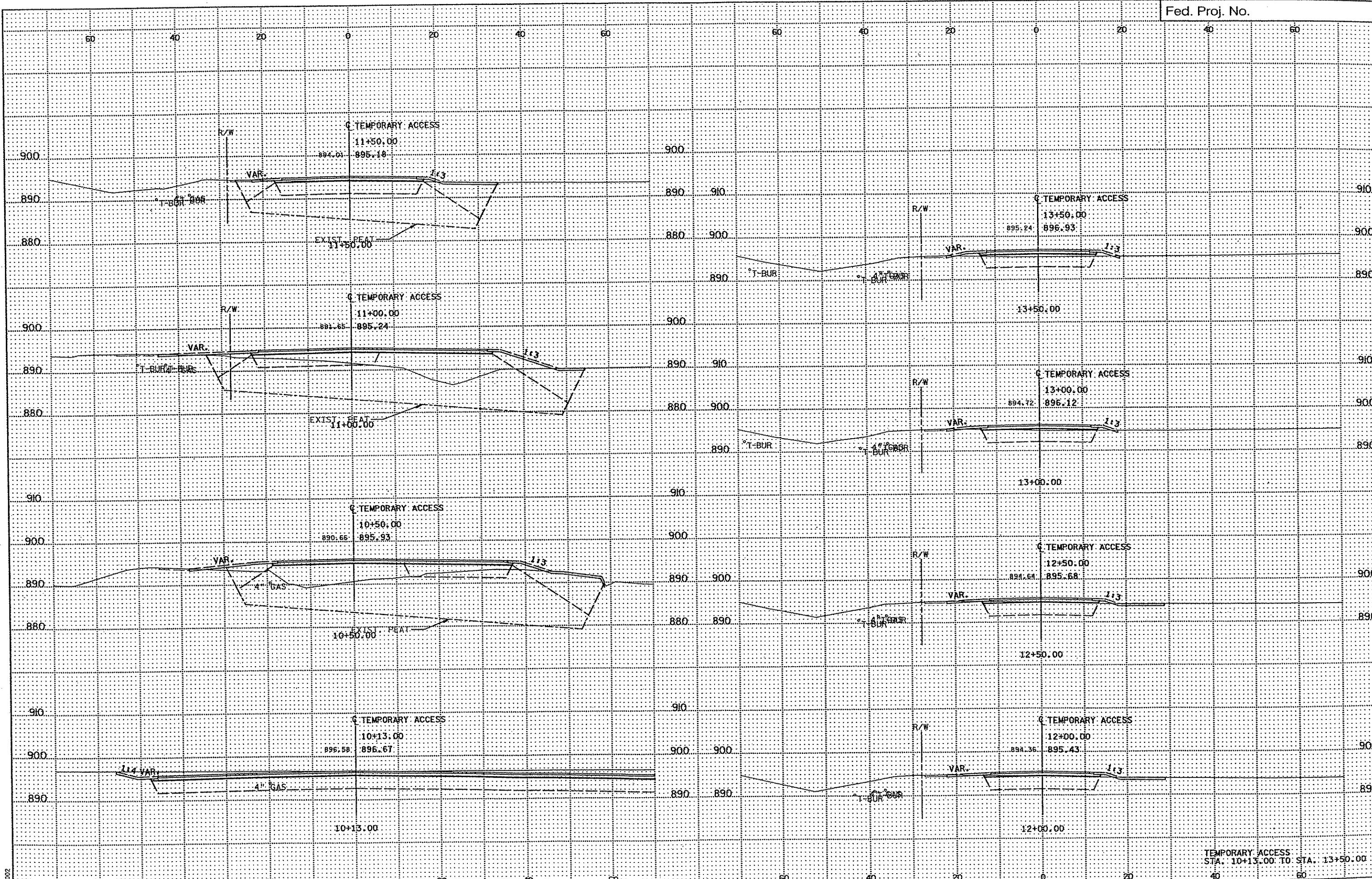
SURCHARGE SECTIONS
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 #SCALE*
 05/11/2002



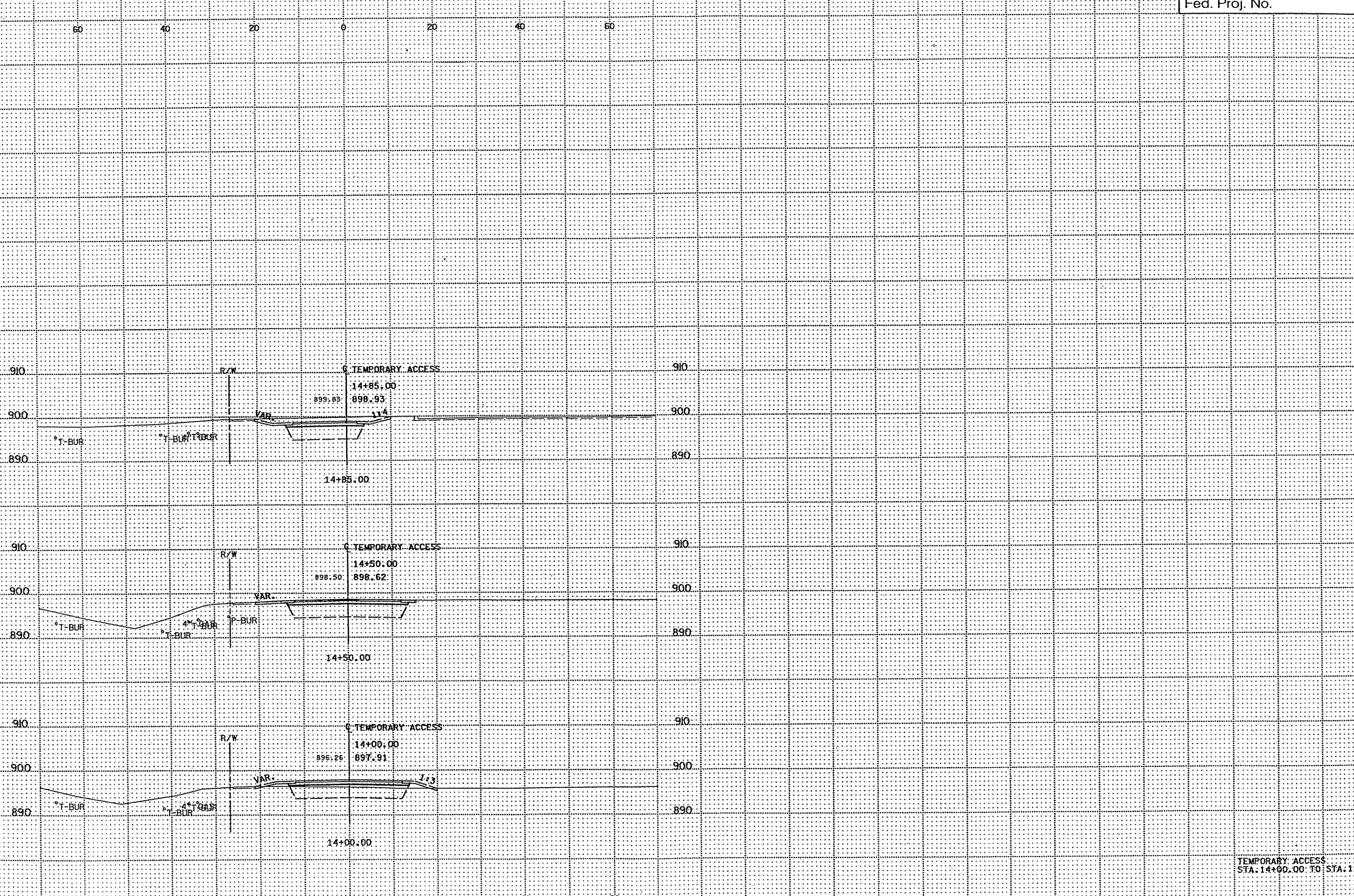
SURCHARGE SECTIONS
JEFFERSON ST.
STA. 28+50.00 TO STA. 30+00.00

PLASIV1104TV102.Dwg 2.xvt
PLOTTER#
SCALE#
06/11/2002



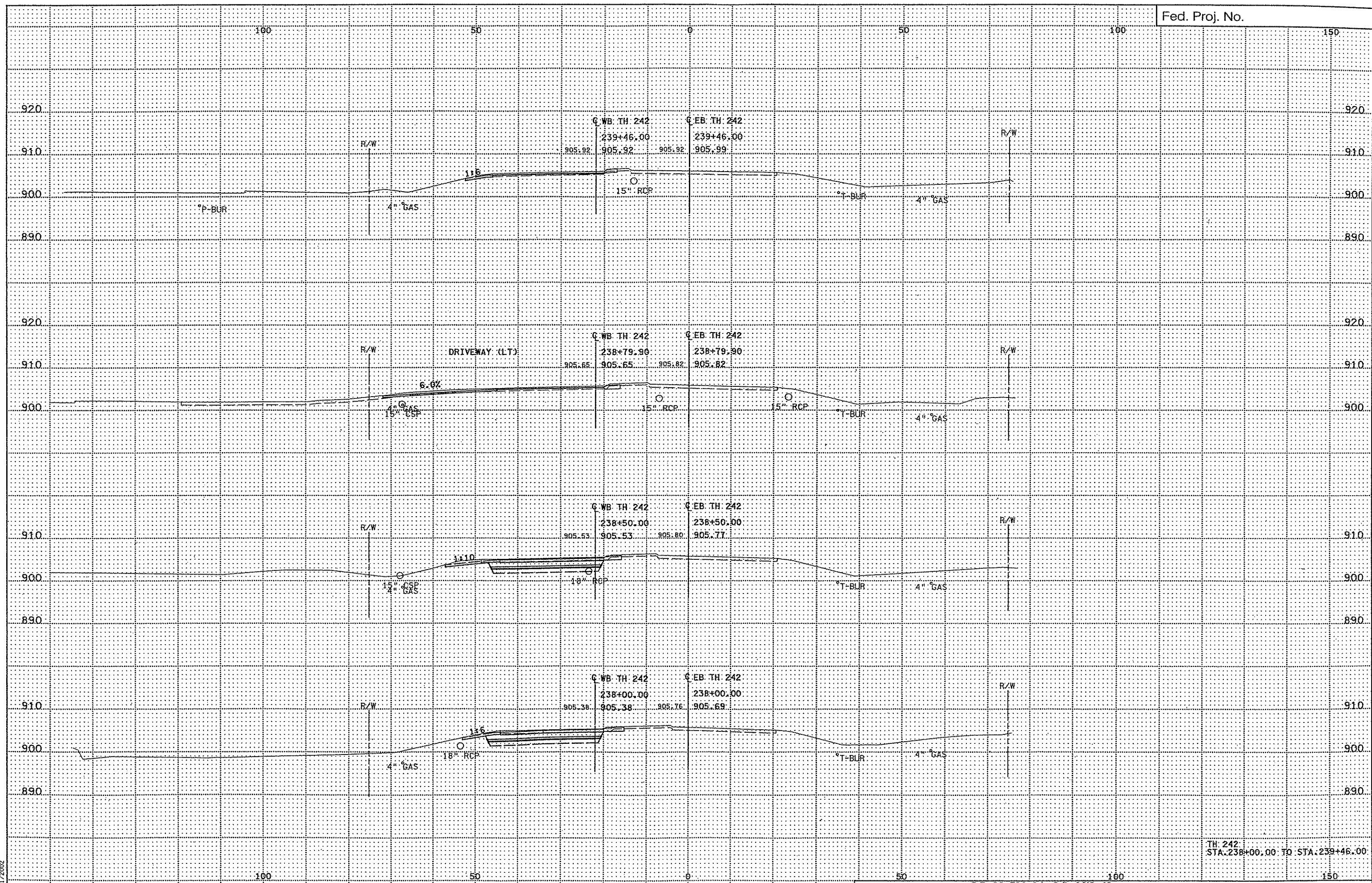
TEMPORARY ACCESS
 STA. 10+13.00 TO STA. 13+50.00

h:\civ\11\04\TY1102\Draws..._02.dwg
 06/11/2002



PLT:G:\11\047\102\Draw. 2.kxb
#PREF#
#PLOTTER#
#SCALE#
05/11/2002

TEMPORARY ACCESS
STA. 14+00.00 TO STA. 14+85.00



D:\G11\11041\11041.dwg 12.4x2
 \$PREF\$
 \$PLOTTER\$
 \$SCALE\$
 07/11/2002

TH 242
 STA. 238+00.00 TO STA. 239+46.00