

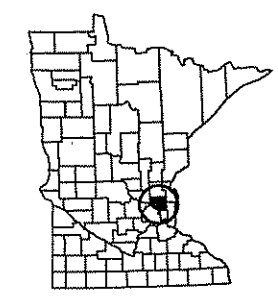
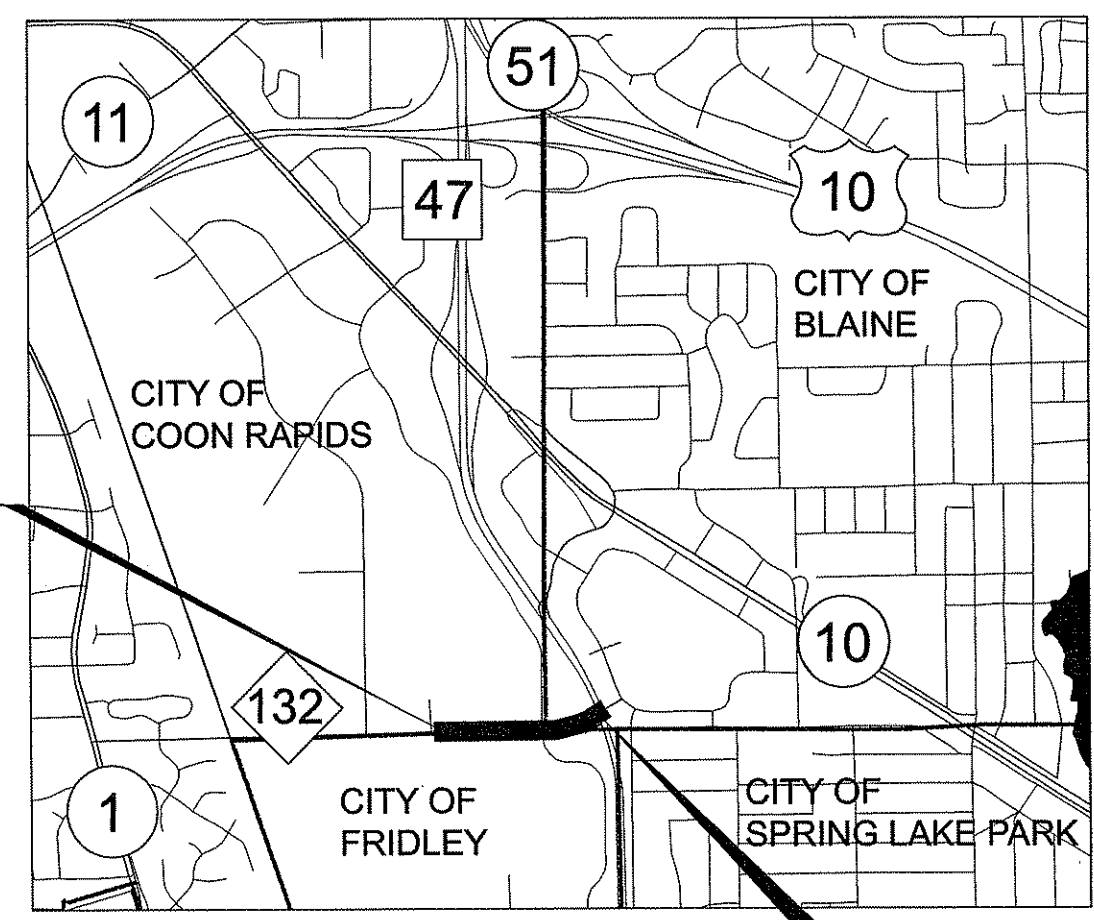
MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, AGG.BASE, BITUMINOUS SURFACING, DRAINAGE, CURB & GUTTER AND SIGNAL SYSTEM

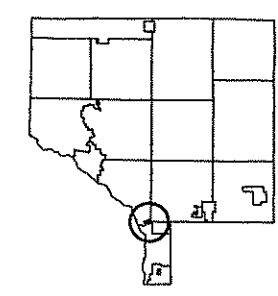
LOCATED ON C.R. 132 BETWEEN T.H. 47 AND EVERGREEN BLVD. NW

STATE PROJ. NO. 02-596-07
C.R. 132

GROSS LENGTH	2559.45 FEET	0.485 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	2559.45 FEET	0.485 MILES



PROJECT LOCATION
CITIES OF BLAINE,
COON RAPIDS, & FRIDLEY
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 36 & 3
TOWNSHIP 31 NORTH & 30 NORTH
RANGE 24 WEST



PLAN SYMBOLS

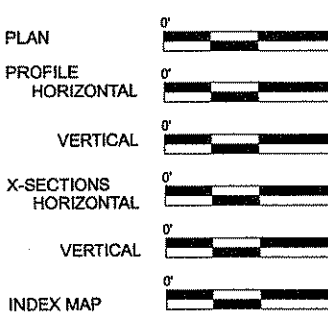
- COUNTY LINE _____
- TOWNSHIP OR RANGE LINE _____
- SECTION LINE _____
- QUARTER LINE _____
- SIXTEENTH LINE _____
- RIGHT OF WAY LINE _____
- SLOPE EASEMENT _____
- EXISTING RIGHT OF WAY _____
- PROPERTY LINE _____
- CORPORATE OR CITY LIMITS _____
- RETAINING WALL _____
- RAILROAD _____
- RAILROAD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

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

UTILITY SYMBOLS

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

SCALES



DESIGN DESIGNATION (WEST OF SPRINGBROOK DR.)		FUNCTIONAL CLASSIFICATION	
ESAL 20	816,000	MAJOR COLLECTOR	
R VALUE	50	NO. OF TRAFFIC LANES	4
ADT (2007)	7600	NO. OF PARKING LANES	0
PROJ. ADT (2027)	11400	DESIGN SPEED	50/35 MPH
PROJ. HCADT (2027)	445	C.R. 132	
SOIL FACTOR	NA	STOPPING SIGHT DISTANCE BASED ON:	
10	TON DESIGN	HEIGHT OF EYE	3.5'
		HEIGHT OF OBJECT	2.0'
		DESIGN SPEED NOT ACHIEVED AT:	
		STA.	TO STA.
			MPH

DESIGN DESIGNATION (EAST OF SPRINGBROOK DR.)		FUNCTIONAL CLASSIFICATION	
ESAL 20	1,900,000	MAJOR COLLECTOR	
R VALUE	50	NO. OF TRAFFIC LANES	2
ADT (2007)	17700	NO. OF PARKING LANES	0
PROJ. ADT (2027)	26550	DESIGN SPEED	35 MPH
PROJ. HCADT (2027)	1035	C.R. 132	
SOIL FACTOR	NA	STOPPING SIGHT DISTANCE BASED ON:	
10	TON DESIGN	HEIGHT OF EYE	3.5'
		HEIGHT OF OBJECT	2.0'
		DESIGN SPEED NOT ACHIEVED AT:	
		STA.	TO STA.
			MPH

GOVERNING SPECIFICATIONS
THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3 - 4	STATEMENT OF ESTIMATED QUANTITIES
5	SOILS AND CONSTRUCTION NOTES
6	STANDARD PLATES & BASIS OF QUANTITIES
7 - 10	TAB SHEETS
11 - 14	TYPICAL SECTIONS
15	MISCELLANEOUS DETAILS
16 - 24	CONSTRUCTION STAGING PLAN
25 - 27	ALIGNMENT TABULATION AND PLAN
28 - 29	INPLACE TOPOGRAPHY AND REMOVAL PLAN
30 - 31	CONSTRUCTION PLANS
32	WB PROFILE
33 - 38	DRAINAGE PLAN & TABULATIONS
39 - 42	INTERSECTION DETAILS
43	SUPERELEVATION PLAN
44	UTILITY PLAN
45 - 46	SWPPP NARRATIVE
47 - 55	EROSION CONTROL PLAN AND DETAILS
56 - 57	TURF ESTABLISHMENT PLAN
58 - 64	SIGNING & STRIPING PLAN AND DETAILS
65 - 73	TRAFFIC CONTROL PLAN
74 - 86	TRAFFIC SIGNAL PLANS
87 - 101	CROSS SECTIONS

THIS PLAN CONTAINS 101 SHEETS

Approved 4/7/2010 *[Signature]*
ANOKA COUNTY ENGINEER

Approved 4/13/2010 *[Signature]*
CITY OF BLAINE

Approved 4-13, 2010 *[Signature]*
CITY OF COON RAPIDS

Approved 4/13/2010 *[Signature]*
CITY OF FRIDLEY

REVIEWED FOR COMPLIANCE WITH STATE AND FEDERAL AID RULES/POLICY 4/14/2010 *[Signature]*
DISTRICT STATE AID ENGINEER

Approved for State AND/OR FEDERAL AID FUNDING 4/14/2010 *[Signature]*
STATE AID ENGINEER

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-596-07\Plan\0259607_TSH.dgn
2/28/2010 2:51:58 PM

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: CURT A. KOBLARCSEK
SIGNATURE: *[Signature]*
DATE: 3-29-10 LICENSE NO. 24758

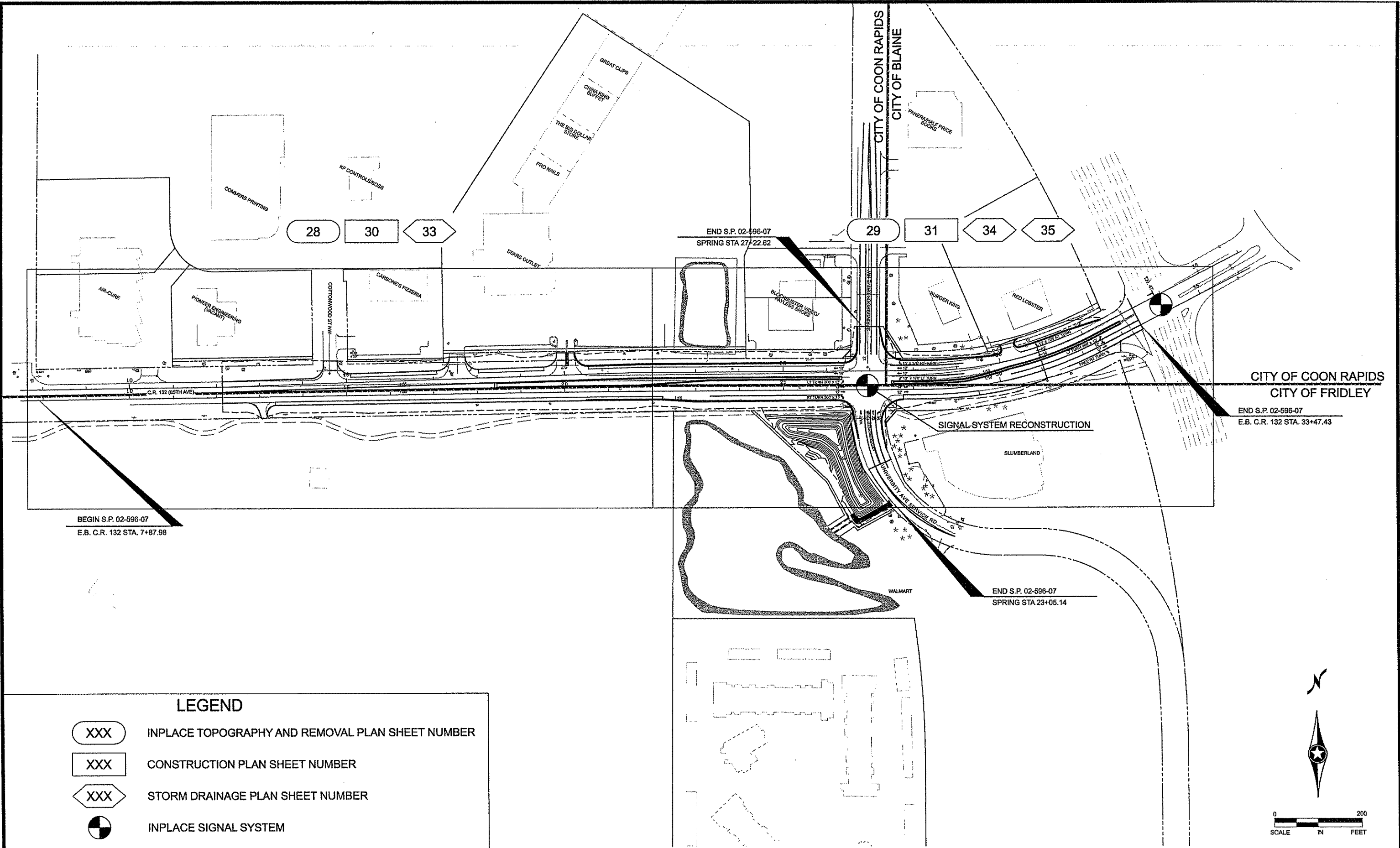
DRAWN BY: NJD DATE: 03-17-09
DESIGN BY: DFP DATE: 11-17-09
CHECKED BY: JEO DATE: 11-18-09

**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 02-596-07
STATE PROJECT NO. 106-080-002
STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

TITLE SHEET

Sheet 1 of 101 Sheets



CITY OF COON RAPIDS
CITY OF FRIDLEY

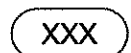
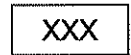


END S.P. 02-596-07
E.B. C.R. 132 STA. 33+47.43

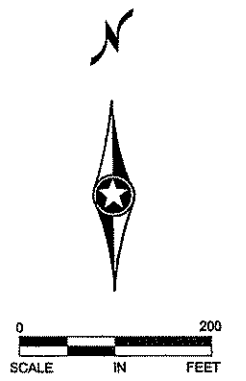
SIGNAL SYSTEM RECONSTRUCTION

END S.P. 02-596-07
SPRING STA 23+05.14

BEGIN S.P. 02-596-07
E.B. C.R. 132 STA. 7+87.98

LEGEND

-  INPLACE TOPOGRAPHY AND REMOVAL PLAN SHEET NUMBER
-  CONSTRUCTION PLAN SHEET NUMBER
-  STORM DRAINAGE PLAN SHEET NUMBER
-  INPLACE SIGNAL SYSTEM



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_GL1.dgn 4/27/2010 12:57:14 PM

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: CURT A. KOBILARCSIK
 SIGNATURE: *Curt Kobilarcsik*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-17-09

ANOKA COUNTY
HIGHWAY DEPT.




STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

GENERAL LAYOUT
 Sheet 2 of 101 Sheets

TAB / NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	PARTICIPATING- FEDERAL FUNDS					NON-PARTICIPATING-LOCAL FUNDS			
					ANOKA COUNTY 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF FRIDLEY 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF BLAINE 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS 02-596-07 ROADWAY QUANTITIES ESTIMATED	DRAINAGE QUANTITIES ESTIMATED	ANOKA COUNTY 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF FRIDLEY 127-341-006 ROADWAY QUANTITIES ESTIMATED	CITY OF BLAINE 106-080-002 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS 114-130-005 ROADWAY QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1	0.850	.074	0.014	0.062					
	2031.501	FIELD OFFICE TYPE D	EACH	1	0.850	.074	0.014	0.062					
A	2101.501	CLEARING	ACRE	0.50	0.5								
A	2021.501	CLEARING	TREE	21	21								
A	2031.501	GRUBBING	ACRE	0.50	0.5								
A	2101.501	GRUBBING	TREE	21	21								
R	2102.501	PAVEMENT MARKING REMOVAL-PERMANENT	SQ FT	1567	1331.5	115.9	21.9	97.1					
R	2102.502	PAVEMENT MARKING REMOVAL-TEMPORARY	LIN FT	7672	6521.2	567.7	107.4	475.7					
R	2102.502	PAVEMENT MARKING REMOVAL-PERMANENT	LIN FT	7492	6368.2	554.4	104.9	464.5					
C	2104.501	REMOVE PIPE CULVERTS	LIN FT	353	353								
C	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	423	423.0								
B	2104.501	REMOVE CURB AND GUTTER	LIN FT	1783	1686					97			
B	2104.501	REMOVE BITUMINOUS CURB	LIN FT	386	386								
B	2104.503	REMOVE CONCRETE MEDIAN	SQ FT	1551	1551								
B	2104.503	REMOVE BITUMINOUS MEDIAN	SQ FT	1936	1936								
B	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	15899	15899								
C	2104.509	REMOVE PIPE APRON	EACH	4	4								
C	2104.509	REMOVE DRAINAGE STRUCTURE	EACH	3	3								
[1]	2104.509	REMOVE BITUMINOUS FLUME	EACH	2	2								
[3]	2104.509	REMOVE SIGNAL SYSTEM	EACH	1	0.250	0.375	0.0625	0.3125					
B	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	12	12								
B	2104.513	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	3318	3221					97			
B	2104.521	SALVAGE CHAIN LINK FENCE	LIN FT	191	191								
	2104.601	HAUL SALVAGED MATERIAL	LUMP SUM	1	0.250	0.375	0.0625	0.3125					
	2104.607	REMOVE TEMPORARY WIDENING (LV)	CU YD	744	744								
	2105.501	COMMON EXCAVATION (P)	CU YD	8534	8459					75			
	2105.505	MUCK EXCAVATION	CU YD	17099	17099								
	2105.507	SUBGRADE EXCAVATION (P)	CU YD	5702	5617					85			
	2105.522	SELECT GRANULAR BORROW (LV)	CU YD	13560	13466					94			
	2105.601	DEWATERING	LUMP SUM	1	1								
	2123.509	DOZER	HOUR	10	10								
	2130.501	WATER	M GALLONS	122	122								
G	2211.503	AGGREGATE BASE (CV) CLASS 5 (P)	CU YD	3285	3285								
G	2221.503	AGGREGATE SHOULDERING (CV), CLASS 7	CU YD	93	93								
B	2232.501	MILL BITUMINOUS SURFACE (2.0")	SQ YD	2314	2314								
D	2350.503	TYPE LV4 WEARING COURSE MIXTURE (B) 3" THICK	SQ YD	522	522								
D	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1891	1885					6			
D	2360.501	TYPE SP 12.5 WEARING COURSE MIX (3,E)	TON	4085	4073					12			
D	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (3,B)	TON	1890	1884					6			
D	2360.505	TYPE SP 12.5 BITUMINOUS MIXTURE FOR TEMPORARY WIDENING	TON	266	266								
H	2501.511	15" RC PIPE CULVERT	LIN FT	38	38								
H	2501.511	36" RC PIPE CULVERT	LIN FT	194	194								
H	2501.515	15" RC PIPE APRON	EACH	2					2				
P	2501.515	18" RC PIPE APRON	EACH	1					1				
P	2501.515	21" RC PIPE APRON	EACH	1					1				
H	2501.567	36" RC SAFETY APRON & GRATE DES 3128	EACH	6					6				
P	2501.569	15" RC SAFETY APRON	EACH	2					2				
P	2503.541	15" RC PIPE SEWER DES 3006	LIN FT	775					775				
P	2503.541	18" RC PIPE SEWER DES 3006	LIN FT	587					587				
P	2503.541	21" RC PIPE SEWER DES 3006	LIN FT	45					45				
N	2504.602	ADJUST HYDRANT AND GATE VALVE	EACH	2	2								
N	2504.602	ADJUST GATE VALVE & BOX	EACH	5	5								
[6]	2504.604	2" POLYSTYRENE INSULATION	SQ YD	9	9								
P	2506.501	CONST. DRAINAGE STRUCTURE DESIGN F	LIN FT	15.9					15.9				
P	2506.501	CONST. DRAINAGE STRUCTURE DESIGN G	LIN FT	32.8					32.8				
P	2506.501	CONST. DRAINAGE STRUCTURE DESIGN H	LIN FT	16.3					16.3				
P	2506.501	CONST. DRAINAGE STRUCTURE DES 48-4020	LIN FT	31.0					31.0				
P	2506.501	CONST. DRAINAGE STRUCTURE DES 54-4020	LIN FT	7.4					7.4				
P	2506.516	CASTING ASSEMBLY	EACH	23					23				
J	2506.522	ADJUST FRAME & RING CASTING	EACH	5	5								
P	2511.501	RANDOM RIPRAP CLASS II	CU YD	13.0	13.0								
E	2521.501	4" CONCRETE WALK	SQ FT	10043	10043								
E	2531.501	CONCRETE CURB & GUTTER DESIGN B418 (MOD)	LIN FT	2698	2673			25					

GENERAL NOTES:
[1] SEE REMOVAL PLAN SHEET 29
[2] SEE CONSTRUCTION STAGING PLAN SHEETS 16 - 23
[3] SEE TRAFFIC SIGNAL PLAN SHEETS 86-87
[4] SEE PERMANENT SIGNING TAB SHEET 59 (STREET SIGNS PAID FOR AS ITEM 2564.537)
[5] SEE PLAN PROFILE SHEETS 30-31 FOR LOCATIONS
[6] SEE DRAINAGE PLAN SHEETS 33-34 FOR LOCATIONS

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: CURT A. KOBILARCSIK SIGNATURE: <i>Curt A. Kobilarsik</i> DATE: 4-28-10 LICENSE NO. 24756				DRAWN BY: <u>NJD</u> DATE: 11-17-09 DESIGN BY: <u>DFP</u> DATE: 11-17-09 CHECKED BY: <u>JEO</u> DATE: 11-18-09	 ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006	STATEMENT OF ESTIMATED QUANTITIES Sheet <u>3</u> of <u>101</u> Sheets
---	--	--	--	--	---	--	---

NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_SEQ1.dgn 4/27/2010 12:57:17 PM

TAB / NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	PARTICIPATING- FEDERAL FUNDS					NON-PARTICIPATING-LOCAL FUNDS			
					ANOKA COUNTY 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF FRIDLEY 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF BLAINE 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS 02-596-07 ROADWAY QUANTITIES ESTIMATED	DRAINAGE QUANTITIES ESTIMATED	ANOKA COUNTY 02-596-07 ROADWAY QUANTITIES ESTIMATED	CITY OF FRIDLEY 127-341-006 ROADWAY QUANTITIES ESTIMATED	CITY OF BLAINE 106-080-002 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS 114-130-005 ROADWAY QUANTITIES ESTIMATED
E	2531.501	CONCRETE CURB & GUTTER DESIGN B424	LIN FT	1951	975	327	283	366					
E	2531.501	CONCRETE CURB & GUTTER DESIGN B618 (MOD)	LIN FT	185	41	41					103		
[5]	2531.618	TRUNCATED DOMES	SF	48	48								
E	2531.618	CONC ENTRANCE NOSE DES 7113	EACH	4	4								
[5]	2557.603	INSTALL SALVAGED FENCE	LIN FT	180	180								
R, [2]	2563.601	TRAFFIC CONTROL (STAGE 1)	LUMP SUM	1	0.850	.074	0.014	0.062					
R, [2]	2563.601	TRAFFIC CONTROL (STAGE 2)	LUMP SUM	1	0.850	.074	0.014	0.062					
R, [2]	2563.601	TRAFFIC CONTROL (STAGE 3)	LUMP SUM	1	0.850	.074	0.014	0.062					
R, [2]	2563.601	TRAFFIC CONTROL (STAGE 4)	LUMP SUM	1	0.850	.074	0.014	0.062					
R	2563.602	RAISED PAVEMENT MARKER TEMPORARY	EACH	626.0	532.1	46.3	8.8	38.8					
	2563.610	POLICE OFFICER	HOURL	200	170.0	14.8	2.8	12.4					
[4]	2564.531	SIGN PANELS TYPE C	SQ FT	293	293								
[4]	2564.537	INSTALL SIGN TYPE SPECIAL	EACH	2	2								
[4]	2564.552	HAZARD MARKER X4-2	EACH	5	5								
[3]	2565.511	TRAFFIC CONTROL SIGNAL SYSTEM	SYSTEM	1	0.250	0.375	0.0625	0.3125					
[3]	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1		.500	0.125	0.375					
	2565.602	SIGNAL SERVICE CABINET	EACH	1	0.250	0.375	0.0625	0.3125					
[3]	2565.602	NMC LOOP DETECTOR 6' X 6'	EACH	1	0.250	0.375	0.0625	0.3125					
[3]	2565.602	NMC LOOP DETECTOR 2-6' X 6'	EACH	3	0.250	0.375	0.0625	0.3125					
I	2573.502	SILT FENCE, TYPE MACHINE SLICED	LIN FT	2636	2574						62		
I	2573.505	FLOTATION SILT CURTAIN TYPE STILL WATER	LIN FT	101	101								
I	2573.512	TEMPORARY DITCH CHECK TYPE 2	LIN FT	240	240								
I	2573.530	STORM DRAIN INLET PROTECTION	EACH	29	29								
	2573.542	FLOCCULANT SOCK	EACH	1	1								
I	2575.501	SEEDING	ACRE	2.4	2.4								
I	2575.502	SEED MIXTURE 250	POUND	123.2	123.2								
I	2575.502	SEED MIXTURE 310	POUND	12.4	12.4								
I	2575.502	SEED MIXTURE 325	POUND	38.5	38.5								
P	2575.505	SODDING TYPE EROSION	SQ YD	13	13								
I	2575.505	SODDING TYPE SALT RESISTANT	SQ YD	1230	1230								
I	2575.511	MULCH MATERIAL TYPE 3	TON	3.5	3.5								
I	2575.519	DISK ANCHORING	ACRE	1.8	1.8								
I, H	2575.523	EROSION CONTROL BLANKETS CATEGORY 3	SQ YD	8136	8136								
I	2575.532	FERTILIZER TYPE 2	POUND	948	948								
R	2581.501	REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	9104	7738.4	673.7	127.5	564.4					
Q	2582.501	PAVEMENT MESSAGE (LT ARROW) PREFORMED THERMOPLASTIC	EACH	8	8								
Q	2582.501	PAVEMENT MESSAGE (RT ARROW) PREFORMED THERMOPLASTIC	EACH	5	5								
Q	2582.501	PAVEMENT MESSAGE (THRU ARROW) PREFORMED THERMOPLASTIC	EACH	2	2								
Q	2582.501	PAVEMENT MESSAGE (RT-THRU ARROW) PREFORMED THERMOPLASTIC	EACH	2	2								
Q	2582.501	PAVEMENT MESSAGE (LT-THRU ARROW) PREFORMED THERMOPLASTIC	EACH	2	2								
R	2582.502	4" SOLID LINE WHITE-PAINT	LIN FT	14425	12261.3	1067.5	202.0	894.4					
R	2582.502	4" BROKEN LINE WHITE-PAINT	LIN FT	1282	1089.7	94.9	17.9	79.5					
R	2582.502	4" SOLID YELLOW-PAINT	LIN FT	6744	5732.4	499.1	94.4	418.1					
R	2582.502	4" DOUBLE SOLID LINE YELLOW-PAINT	LIN FT	5293	4499.1	391.7	74.1	328.2					
Q	2582.502	24" STOP LINE WHITE - PREFORMED THERMOPLASTIC	LIN FT	176	176								
Q	2582.502	4" SOLID LINE WHITE-EPOXY	LIN FT	8081	8081								
Q	2582.502	4" BROKEN LINE WHITE-EPOXY	LIN FT	3673	3673								
Q	2582.502	4" SOLID LINE YELLOW-EPOXY	LIN FT	2708	2708								
Q	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY	LIN FT	3003	3003								
Q	2582.502	24" SOLID LINE YELLOW-EPOXY	LIN FT	387	387								

GENERAL NOTES:

- [1] SEE REMOVAL PLAN SHEET 29
- [2] SEE CONSTRUCTION STAGING PLAN SHEETS 16 - 23
- [3] SEE TRAFFIC SIGNAL PLAN SHEETS 86-87
- [4] SEE PERMANENT SIGNING TAB SHEET 59 (STREET SIGNS PAID FOR AS ITEM 2564.537)
- [5] SEE PLAN PROFILE SHEETS 30-31 FOR LOCATIONS
- [6] SEE DRAINAGE PLAN SHEETS 33-34 FOR LOCATIONS

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_SEQ1.dgn 4/27/2010 12:57:18 PM

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: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 4.28.10 LICENSE NO. 24758

DRAWN BY: NJD DATE: 11-17-09

DESIGN BY: DFF DATE: 11-17-09

CHECKED BY: JEO DATE: 11-18-09



ANOKA COUNTY
HIGHWAY DEPT.


STATE PROJECT NO. 02-596-07
STATE PROJECT NO. 106-080-002
STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

STATEMENT OF ESTIMATED QUANTITIES

Sheet 4 of 101 Sheets

SOILS AND CONSTRUCTION NOTES

1. TOP OF THE GRADING SUBGRADE (GRADING GRADE) IS DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE LAYER.
2. BOTTOM OF SUBBASE GRADE SHALL BE DEFINED AS THE BOTTOM OF THE 1' SUBGRADE EXCAVATION.
3. GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B1 OR AS DIRECTED BY ENGINEER.
4. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B2 OR AS DIRECTED BY ENGINEER.
5. COMMON MATERIAL SHALL BE DEFINED AS ALL GRADING MATERIALS THAT ARE APPROPRIATE FOR REUSE ON THE PROJECT BUT THAT MAY NOT MEET THE REQUIREMENTS OF GRANULAR OR SELECT GRANULAR MATERIALS. COMMON MATERIAL MAY CONSIST OF TOPSOIL AND ORGANIC SOILS, UNLESS THE ENGINEER DETERMINES THESE SOILS ARE NOT REUSABLE, IN WHICH CASE THE CONTRACTOR SHALL REMOVE THEM FROM THE PROJECT LIMITS. COMMON MATERIAL SHALL NOT CONSIST OF DEBRIS.
6. TOPSOIL MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3877.2A OR AS DIRECTED BY ENGINEER.
7. UNSUITABLE SOILS ARE DEFINED AS SOILS WHICH DO NOT MEET OR ARE NOT MANUFACTURED TO MEET ANY OF THE ABOVE DEFINED CATEGORIES, AND ARE THEREFORE NOT REUSABLE AS STRUCTURAL BACKFILL OR EMBANKMENT WITHIN THE ROADWAY CORE.
8. AGGREGATE BASE MATERIAL FOR THIS PROJECT SHALL BE CLASS 5 GRADATION IN ACCORDANCE WITH MNDOT 2221 AND 3138.2A1
9. AGGREGATE SHOULDERING MATERIAL FOR THIS PROJECT SHALL BE CLASS 7 GRADATION IN ACCORDANCE WITH MNDOT 2221 AND 3138.2A2
10. UNLESS OTHERWISE SPECIFICALLY ALLOWED OR REQUIRED BY THE CONTRACT, BITUMINOUS AND CONCRETE ITEMS 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 THE RIGHT-OF-WAY IN ACCORDANCE WITH SPEC. 2104.3C3.
11. OBTAIN COMPACTION ON THE GRADING PORTIONS OF PERMANENT CONSTRUCTION, INCLUDING GRANULAR, IN ACCORDANCE WITH THE "SPECIFIED DENSITY METHOD" REQUIREMENTS, MN/DOT SPECIFICATION 2105.3F1.
12. COMPACTION OF THE AGGREGATE BASE LAYER USING RECYCLED MATERIAL SHALL BE OBTAINED IN ACCORDANCE WITH THE "PENETRATION INDEX METHOD". THE TEST SHALL BE PERFORMED IN ACCORDANCE WITH SECTION C4 AND C4A OF THE TECH MEMO NO. 99-08-MRR-04. THIS WOULD INCLUDE ANY AREAS WHERE CRUSHED CONCRETE OR SALVAGED ASPHALT MAY BE USED FOR AGGREGATE BASE.
13. OBTAIN COMPACTION ON GRADING PORTIONS OF TEMPORARY CONSTRUCTION IN ACCORDANCE WITH THE "QUALITY COMPACTION METHOD" REQUIREMENTS. TEMPORARY GRADING AND AGGREGATE BASE PORTIONS PLACED BY THE "QUALITY COMPACTION METHOD" SHOULD BE REMOVED AFTER CONSTRUCTION IS COMPLETE.
14. UNLESS OTHERWISE REQUIRED, IN ALL TREATMENTS, THE CONTRACTOR SHOULD STRIVE TO SUBSTANTIALLY MATCH THE SOILS INPLACE IN THE UPPER 5.0 FEET OF THE ROADWAY.
15. UNLESS OTHERWISE REQUIRED, ADD 1:20 TAPERS TO THE FULL DEPTH STATION LIMITS OF ALL SUBGRADE EXCAVATIONS. PROVIDE 1:20 TRANSITION TAPERS BETWEEN CHANGES IN SUBGRADE EXCAVATION DEPTHS LONGITUDINALLY. THE 1:20 TAPER SHALL BE CONSTRUCTED SO THAT THE GRANULAR BACKFILL MATERIAL OVERLAYS THE ADJACENT PLASTIC SOIL BACKFILL.
16. WHERE CONNECTING NEW SURFACING ADJACENT TO ANY INPLACE PAVEMENTS TO BE WIDENED, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT 1:2 SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
17. WHERE CONNECTING TO THE INPLACE ROADWAYS AT THE TERMINI OF PROPOSED NEW CONSTRUCTION, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:20 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
18. WHERE MATCHING INTO INPLACE CROSSROADS, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:4 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
19. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON THE EXISTING PAVEMENT. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.03 TO 0.05 GALLONS/SQ. YD. BETWEEN BITUMINOUS LAYERS AND 0.07 TO 0.10 GALLONS/SQ. YD. ON CONCRETE OR MILLED BITUMINOUS SURFACES PRIOR TO BEING OVERLAID. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY) OR MC AND RC LIQUID ASPHALTS. THE ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPECIFICATION 2357.
20. THE BITUMINOUS MIXTURE SHALL MEET THE MOST CURRENT REQUIREMENTS OF MNDOT SPECIFICATION 2360. COMPACTION OF ALL BITUMINOUS MIXTURES SHALL BE BY THE "MAXIMUM DENSITY METHOD".
21. STRIP ALL TOPSOIL WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS TOPSOIL OR REGULAR EMBANKMENT.
22. QUANTITIES SHOWN ON THE EARTHWORK TABULATION REPRESENT ALL EARTHWORK QUANTITIES BELOW THE PROPOSED GRADING GRADE OF ALL PERMANENT ROADWAYS. QUANTITIES REQUIRED ABOVE THE GRADING GRADE OR FOR TEMPORARY CONSTRUCTION ARE PROVIDED IN DETAIL ON THE AGGREGATE AND BITUMINOUS SUMMARY TABS.
23. FOR ALL ROADWAYS, UNLESS OTHERWISE REQUIRED, PROVIDE FOR A 12" SUBCUT BELOW THE TOP OF THE GRADING GRADE TO ASSURE UNIFORMITY AND COMPACTION. THE BOTTOM OF THE SUBCUT SHALL BE SHAPED AND COMPACTED BY THE QUALITY COMPACTION METHOD WITH A MINIMUM OF 4 PASSES OF AN APPROVED ROLLER. REPLACEMENT FILL SHALL BE GRANULAR MATERIAL.
24. EXISTING UNPAVED AREAS SHALL BE CORRECTED, CORRECTION SHALL INCLUDE SUBCUTTING OF VEGETATION, SOILS CONTAINING SOD/ROOTS AND SIGNIFICANTLY ORGANIC SOILS WHEN CONSTRUCTING AN EMBANKMENT. ON GRADING SLOPES STEEPER THAN 1:4, CONSTRUCT STEPS IN SLOPE PER MN/DOT SPECIFICATION 2105.3B WHEN CONSTRUCTING AN EMBANKMENT.
25. AS A PRECAUTIONARY MEASURE FROM A SOILS STANDPOINT, TRAFFIC LANES TO BE USED DURING CONSTRUCTION MUST BE DELINEATED TO KEEP VEHICLES A SAFE DISTANCE AWAY FROM THE ADJACENT EXCAVATION. THE DELINEATION SHOULD COINCIDE WITH POINTS ESTABLISHED BY PROJECTING 1:2 OR GREATER (FLATTER) SLOPE BETWEEN THE EDGE OF THE TRAFFIC SURFACE AND THE BOTTOM OF THE EXCAVATION.
26. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE AND THE EXISTING GROUND LINE AS DEPICTED ON THE CROSS SECTIONS. THE CONSTRUCTION LIMITS DO NOT INCLUDE AREAS REQUIRED FOR SLOPE ROUNDING.
27. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER & INCIDENTAL TO CONTRACT.
28. ALL EXCESS SOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH MN/DOT SPECIFICATIONS.
29. PIPE SEWERS CONNECTING MANHOLES AND CATCH BASINS SHALL BE IN ACCORDANCE WITH SPECIFICATION 2503. BEDDING AND BACKFILL SHALL CONSIST OF UNIFORM SUITABLE GRADING MATERIAL MATCHING ADJACENT SOILS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
30. DISPOSITION OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SPECIFICATION 2105.3D.
31. 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.
32. INPLACE BITUMINOUS PAVEMENT RANGES FROM 4" TO 8" THICK. FOR INFORMATION ONLY. CONTRACTOR RESPONSIBLE TO VERIFY.

	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: CURT A. KOBILARCSIK SIGNATURE: <i>[Signature]</i> DATE: 4-28-10 LICENSE NO. 24756	DRAWN BY: NJD DATE: 11-17-09 DESIGN BY: DFF DATE: 11-17-09 CHECKED BY: JEO DATE: 11-18-09	 ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006	SOILS AND CONSTRUCTION NOTES Sheet 5 of 101 Sheets												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> NAME: p:\02-596-07\plan\0259607_SCN1.dgn 4/27/2010 12:57:20 PM	NO	DATE	BY	CHKD	APPR	REVISION											
NO	DATE	BY	CHKD	APPR	REVISION												

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

STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE (5 SHEETS)
3006G	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
3007D	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3022C	PRECAST CONCRETE SAFETY APRON (3 SHEETS)
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133C	RIPRAP AT RCP OUTLETS
3145F	CONCRETE PIPE TIES
4005L	MANHOLE OR CATCH BASIN TYPE A & B CONE SECTIONS PRECAST - DESIGN F
4006L	MANHOLE OR CATCH BASIN PRECAST - DESIGNS G AND H
4010H	CONCRETE SHORT CONE & ADJUSTING RING (SECTIONAL CONCRETE)
4011E	PRECAST CONCRETE BASE
4018A	MANHOLE OR CATCH BASIN (REDUCER CONE SECTION PRECAST) - DESIGN D
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS) (2 SHEETS)
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4125D	CATCH BASIN FRAME CASTING (FOR SQUARE GRATE) - CASTING NO. 806
4134A	CURB BOX CASTING FOR CATCH BASIN (FOR DESIGN B CURBS)- CASTING NO. 825
4143E	STOOL GRATE & CONCRETE FRAME (MEDIAN DRAINS) - CASTING NO. 731
4154B	CATCH BASIN GRATE CASTING - CASTING NO. 816
4180J	MANHOLE OR CATCH BASIN STEP
7035M	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036F	PEDESTRIAN CURB RAMP (2 SHEETS)
7100H	CONCRETE CURB AND GUTTER (DESIGN B and DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES
8110E	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8114A	P.V.C. HANDHOLE/PULLBOX (NO VEHICLE LOAD) (2 SHEETS)
8118D	SERVICE EQUIPMENT & POLE TRAFFIC CONTROL SIGNALS
8119C	GROUND MOUNTED CABINET FOUNDATION
8121F	TRANSFORMER BASE AND POLE BASE PLATE (PA85M, PA90 AND PA100) (2 SHEETS)
8123F	POLE AND MAST ARM - LUMINAIRES AND TRAFFIC LIGHTS ASSEMBLY (2 SHEETS)
8126I	POLE FOUNDATION (PA90 AND PA100)
9102D	TURF ESTABLISHMENT AREAS (AT PIPE CULVERT ENDS)

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BASIS OF QUANTITIES		
SPEC NO	DESCRIPTION	RATE
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GALLONS / SQ YD / LIFT
2360.501	TYPE SP12.5 WEARING COURSE MIXTURE	115 LBS / SQ YD / IN
2360.502	TYPE SP12.5 NON-WEARING COURSE MIXTURE	115 LBS / SQ YD / IN
2575.502	SEED MIXTURE 250	70 POUNDS / ACRE
2575.502	SEED MIXTURE 310	82 POUNDS / ACRE
2575.502	SEED MIXTURE 325	84 POUNDS / ACRE
2575.511	MULCH MATERIAL TYPE 3	2 TONS / ACRE
2575.532	FERTILIZER TYPE 2	400 POUNDS / ACRE

NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_TAB.dgn 4/27/2010 12:57:22 PM

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PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09

DESIGN BY: DFF DATE: 11-17-09

CHECKED BY: JEO DATE: 11-18-09



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
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STANDARD PLATES &
INDEX OF TABULATIONS

Sheet 6 of 101 Sheets


CLEARING & GRUBBING SPEC (2101)							A
ALIGNMENT	STATION	OFFSET		CLEARING	GRUBBING	NOTES	
		LEFT	RIGHT	(TREE)	(TREE)		
CR 132 WB	12+26.27	42.4		1	1		
CR 132 WB	12+63.32	38.4		1	1		
CR 132 WB	12+98.76	49.7		1	1		
CR 132 WB	17+97.25	55.8		1	1		
CR 132 WB	18+53.34	59.2		1	1		
CR 132 WB	21+38.94	44.3		1	1		
CR 132 WB	22+13.86	43.9		1	1		
CR 132 WB	24+72.75	38.0		1	1		
CR 132 WB	25+56.85	23.6		1	1		
CR 132 WB	25+61.30	23.0		1	1		
CR 132 WB	25+63.04	38.5		1	1		
CR 132 WB	25+97.33	38.5		1	1		
CR 132 WB	29+90.87	29.1		1	1		
CR 132 WB	30+76.82	33.8		1	1		
CR 132 WB	32+19.25	31.5		1	1		
SPRING	23+06.93	35.0		1	1		
SPRING	23+15.43	47.0		1	1		
SPRING	23+44.48	46.0		1	1		
SPRING	23+63.60	52.0		1	1		
SPRING	23+66.14	73.0		1	1		
SPRING	24+04.74	48.0		1	1		
SPRING	23+23.12	117.0				0.5 0.5	
PROJECT TOTAL				21	21	0.5 0.5	

CLEARING & GRUBBING GENERAL NOTES:
 TREES WITHIN THE CONSTRUCTION LIMITS WILL BE DESIGNATED FOR REMOVAL BY THE ENGINEER.
 REMOVAL OF MISCELLANEOUS SHRUBS AND LANDSCAPING SHALL BE CONSIDERED INCIDENTAL

REMOVE EXISTING STORM SEWER								C
ALIGNMENT	STATION TO STATION	OFFSET		REMOVE (SPEC 2104)				NOTES
		LEFT	RIGHT	DRAINAGE STRUCTURE (EACH)	PIPE APRON (EACH)	SEWER PIPE STORM (LIN FT)	PIPE CULVERTS (LIN FT)	
CR 132 WB	14+32.58 - 14+97.02	29					64	
CR 132 WB	17+21.53 - 17+88.87	33			2		67	
CR 132 WB	19+69.28 - 20+32.09	23					63	
CR 132 EB	26+32.32 - 27+49.60		32		2		120	
CR 132 WB	26+44.25 - 30+72.13	15		3		423		
PROJECT TOTAL				3	4	423	353	

REMOVALS, SAWING AND MILLING													B
ALIGNMENT	STATION TO STATION	OFFSET		REMOVE (SPEC. 2104)					SALVAGE (SPEC. 2104)	SAWING (SPEC. 2104)		MILLING (SPEC. 2232)	NOTES
		LEFT	RIGHT	BIT. PAVEMENT (SQ YD)	CONC. MEDIAN (SQ FT)	BIT. MEDIAN (SQ FT)	CONC. CURB & GUTTER (LIN FT)	BIT. CURB (LIN FT)	CHAIN LINK FENCE (LIN FT)	BIT. PAVEMENT (LIN FT)	CONC. PAVEMENT (LIN FT)	BIT. SURFACE (2") (SQ YD)	
CR 132 EB	12+13.27 - 26+45.50	13.5									1432		[4]
CR 132 EB	12+13.27 - 31+04.49	57	25	11722									[2]
CR 132 EB	12+83.57 - 13+27.07		48.5	75							14		[3]
CR 132 WB	14+19.09 - 14+49.40	51.5					20						
CR 132 WB	14+22.87 - 14+49.09	32.1						40					
CR 132 WB	14+26.71 - 15+13.43	51.5		179									[3]
CR 132 WB	14+49.07 - 14+80.09	51.5								31			
CR 132 WB	14+79.72 - 14+80.09	50.8					20						
CR 132 WB	17+10.41 - 18+06.24	50.5		253									[3]
CR 132 WB	17+26.89 - 17+37.57	38						30					
CR 132 WB	17+37.57 - 17+38.79	50.2					12						
CR 132 WB	17+38.14 - 17+73.79	50.5								35			
CR 132 WB	17+73.28 - 17+73.51	49.4					10						
CR 132 WB	17+73.51 - 17+80.47	39.3						23					
CR 132 WB	19+84.32 - 20+25.43	51.7								41			
CR 132 WB	19+61.77 - 20+52.04	51.7		275									[3]
CR 132 WB	19+83.66 - 19+84.82	51.7					20						
CR 132 WB	20+03.47 - 20+09.42	51.7								6			
CR 132 WB	20+04.97 - 20+07.92	50.9				84							[1]
CR 132 WB	20+05.06 - 20+05.70	50.9					28						
CR 132 WB	20+09.01 - 20+09.57	50.9					28						
CR 132 WB	20+24.91 - 20+25.51	50.4					15						
CR 132 EB	24+60.78 - 26+47.49		65						191				
CR 132 WB	27+21.45 - 30+10.06	30.2						293					
CR 132 EB	27+51.02 - 33+07.56	25.1											
CR 132 WB	27+51.85 - 32+87.56		14.14										
CR 132 EB	27+52.00 - 30+38.02	29											
CR 132 WB	30+06.96 - 30+52.22	42.9								46			
CR 132 WB	30+09.46 - 30+56.77	46		87									[3]
CR 132 WB	30+10.06 - 30+06.96	39.2											
CR 132 EB	30+38.02 - 33+07.36	29				1015				6			[1]
CR 132 WB	30+41.33 - 30+52.11	43.7											
CR 132 WB	30+91.44 - 30+91.44		11.5							23			
CR 132 WB	30+91.44 - 32+59.24	10								166			
CR 132 WB	30+91.44 - 33+07.44		11.5							198			
CR 132 EB	31+04.49 - 31+04.49	22.5	20							44			
CR 132 EB	31+04.49 - 33+07.56	22.5								200			
CR 132 EB	31+04.49 - 33+45.78	53	20								1763		
CR 132 EB	33+07.44 - 33+07.56	31.5								9			
SPRING	24+03.73 - 25+03.96	26.3	26.4									551	
SPRING	24+35.00 - 25+27.74	3	3			452							
SPRING	24+35.00 - 25+55.03	27.5	28							97			
SPRING	24+35.20 - 24+35.20	3	3							10			
SPRING	24+35.20 - 25+03.96	3								70			
SPRING	24+35.20 - 25+03.96		3							68			
SPRING	24+37.60 - 25+30.63	3								95			
SPRING	24+37.60 - 25+30.63		3							94			
SPRING	25+03.00 - 25+92.49		0								89		[4]
SPRING	25+03.77 - 25+35.15	31.8								34			
SPRING	25+03.96 - 25+03.96	31								23			
SPRING	25+03.96 - 25+03.96		28							24			
SPRING	25+03.96 - 25+65.47	56.9	61.2	577									[3]
SPRING	25+04.99 - 25+31.11		29							25			
SPRING	25+92.49 - 27+22.84		0								131		[4]
SPRING	26+18.77 - 27+23.05	47.8	46.3	424									[3]
SPRING	26+45.28 - 27+23.05	26.3								78			
SPRING	26+52.00 - 27+23.05		26.4							71			
SPRING	27+23.05 - 27+23.05	26.3	26.4								53		
PROJECT TOTAL				13592	1551	1936	1783	386	191	2853	12	2314	

REMOVALS NOTES:
 [1] CONCRETE APPROACH NOSE REMOVAL INCIDENTAL
 [2] QUANTITY FOR MAINLINE PAVEMENT REMOVAL
 [3] QUANTITY FOR SIDESTREET / DRIVEWAY REMOVAL
 [4] QUANTITY FOR STAGING

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NO. DATE BY CKD APPR REVISION NAME: p:102-596-07\plan\0259607_TAB.dgn 4/27/2010 12:57:23 PM								

BITUMINOUS SUMMARY							D
ALIGNMENT	STATION TO STATION	BITUMINOUS					NOTE:
		2360 TYPE SP 12.5 WEAR (3,E)	2360 TYPE SP 12.5 NON WEAR (3,B)	TYPE LV4 WEAR [13]	TYPE SP 12.5 FOR TEMP WIDENING	2357 BIT. TACK COAT	
		TON	TON	SQ YD	TON	GALLON	
CR 132 EB	7+50.00 - 26+69.47				266	115	[1]
CR 132 EB	12+13.27 - 32+88.16	3482	1741			1520	[2]
CR 132 EB	12+69.84 - 13+36.30			81		9	[3]
CR 132 WB	14+23.96 - 15+10.08	38	19			17	[4]
CR 132 WB	17+08.12 - 18+03.79			162		17	[5]
CR 132 WB	19+54.17 - 20+54.16			151		16	[6]
CR 132 WB	26+40.34 - 27+80.01	134	67			59	[7]
CR 132 EB	26+34.45 - 27+74.24	113	57			50	[7]
CR 132 WB	29+97.98 - 30+52.22			76		8	[8]
CR 132 EB	31+04.49 - 33+38.83			52		6	[9]
CR 132 EB	31+04.49 - 33+45.78	203				45	[10]
CR 132 EB	27+51.32 - 33+45.86	40				9	[11]
SPRING	24+03.73 - 25+03.96	63				14	[12]
SPRING	24+35.00 - 25+55.03	12	6			6	[7]
PROJECT TOTAL		4085	1890	522	266	1891	

BITUMINOUS SUMMARY NOTES:
 [1] 2 INCH PAVEMENT DEPTH
 [2] QUANTITY FOR MAINLINE CONSTRUCTION
 [3] QUANTITY FOR SPRINGBROOK PARK MAINTENANCE ACCESS
 [4] QUANTITY FOR COTTONWOOD STREET
 [5] QUANTITY FOR WEST MALL ENTRANCE
 [6] QUANTITY FOR EAST MALL ENTRANCE
 [7] QUANTITY FOR SPRINGBROOK DRIVE AND UNIVERSITY AVE SERVICE ROAD
 [8] QUANTITY FOR RED LOBSTER ENTRANCE
 [9] QUANTITY FOR MEDIAN AREA NEAR TH 47
 [10] OVERLAY QUANTITY FOR EAST MILL & OVERLAY
 [11] QUANTITY FOR STAGE 1 PATCHING
 [12] OVERLAY QUANTITY FOR SPRINGBROOK MILL & OVERLAY
 [13] BITUMINOUS DRIVEWAY PAVEMENT - 6" DEPTH (2" BITUMINOUS MIX, 4" AGGREGATE BASE CLASS 5 PAID UNDER ITEM 2211.503 AGGREGATE BASE (CV) CLASS 5.

AGGREGATE					G
ALIGNMENT	STATION TO STATION	LOCATION	AGGREGATE		
			BASE CLASS 5	SHOULDER CLASS 7	
			CU YD	CU YD	
CR 132 EB	12+13.19 - 18+91.84	MAINLINE	971	64	
CR 132 EB	18+91.84 - 22+98.66	MAINLINE	625	13	
CR 132 EB	22+98.66 - 26+97.83	MAINLINE	671		
CR 132 EB	26+97.83 - 33+08.42	MAINLINE	763	16	
CR 132 EB	14+18.40 - 15+09.57	COTTONWOOD ST.	35		
SPRING	25+03.79 - 25+56.87	TH 47 SERVICE	107		
SPRING	26+41.61 - 27+23.46	SPRINGBROOK	113		
CR 132 EB	7+87.98 - 26+69.47	TEMP. WIDENING	252		
TOTAL			3285	93	

CONCRETE										E
STATION		ALIGNMENT	OFFSET TO	CONCRETE CURB & GUTTER DESIGN B424	CONCRETE CURB & GUTTER DESIGN B418 (MOD)	CONCRETE CURB & GUTTER DESIGN B618 (MOD)	4" CONCRETE WALK	CONC ENTRANCE NOSE DES 7113		
BEGIN	END			LIN FT	LIN FT	LIN FT	SQ FT	EACH (1)		
18+45.45	26+29.17	CR 132 WB	14.0 - 14.0		783		7056	2		
18+45.75	26+28.64	CR 132 EB	-16.0 - -25.0		783					
20+05.62	20+06.20	CR 132 WB	-25.6 - -51.0		25		74	1		
20+08.56	20+09.07	CR 132 WB	-25.6 - -50.9		25					
20+25.43	26+70.91	CR 132 WB	-50.4 - -101.9	732						
20+50.21	26+67.64	CR 132 EB	20.0 - 76.8	653						
27+23.75	30+06.96	CR 132 WB	-101.2 - -39.2	344.0						
27+26.28	27+33.13	CR 132 EB	75.0 - 21.5			82				
27+55.82	33+31.83	CR 132 EB	-14.0 - -25.0		542.0		2913	1		
27+56.35	33+11.95	CR 132 WB	25.0 - 14.0		540.0					
30+42.88	32+50.07	CR 132 WB	-33.9 - -12.3	222.0						
26+67.84	27+26.43	CR 132 EB	75.0 - 133.1			103				
PROJECT TOTAL				1951	2698	185	10043	4		

CONCRETE NOTES:
 (1) BASED UPON 42 SQ FT AREA EACH
 (2) INCLUDES QUANTITY FOR PEDESTRIAN CURB RAMPS

TEMPORARY PAVEMENT				F
STA. TO STA.	LOCATION	SAWCUT	REMOVE PAVEMENT	REMOVE TEMP. WIDENING
		LIN FT	SQ YD	CU YD
CR 132 WB 7+87.98 - 26+69.47	LT	325	2133	583
CR 132 EB 10+28.32 - 12+87.92	RT	140	173	161
		465	2307	744

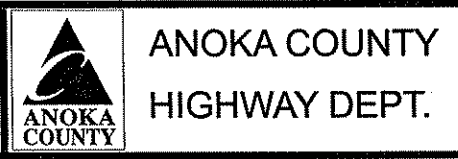
CULVERT TABULATION								H
				15" RC PIPE CULVERT	15" RC SAFETY APRON	36" RC PIPE CULVERT	36" RC SAFETY APRON & GRATE	EROSION CONTROL BLANKETS CAT 3
FROM	TO	FROM	TO	LIN FT	EACH	LIN FT	EACH	SQ YD
12+86.40	13+24.83	33 RT	32 RT	LEB	38	2		16
14+33.81	14+95.95	36 LT	38 LT	LWB		62	2	
17+22.65	17+90.17	36 LT	34 LT	LWB		68	2	
19+72.48	20+36.17	35 LT	37 LT	LWB		64	2	
PROJECT TOTAL				38	2	194	6	16

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_TAB.dgn 4/27/2010 12:57:24 PM

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: CURT A. KOBIARCSIK
 SIGNATURE: *Curt A. Kobiarcsik*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

TAB SHEETS
 Sheet 8 of 101 Sheets

TURF ESTABLISHMENT AND EROSION CONTROL													I
LOCATION	SILT FENCE TYPE MACHINE SLICED	FLOTATION SILT CURTAIN TYPE STILL WATER	SEEDING	SEED MIXTURE 250	SEED MIXTURE 310	SEED MIXTURE 325	MULCH MATERIAL TYPE 3	DISK ANCHORING	FERTILIZER TYPE 2	STORM DRAIN INLET PROTECTION	EROSION CONTROL BLANKETS CAT. 3 [1]	TEMP. DITCH CHECK TYPE 2	SODDING TYPE SALT RESISTANT
STATION TO STATION	LIN FT	LIN FT	ACRE	POUND	POUND	POUND	TON	ACRE	POUND	EACH	SQ YD	LIN FT	SQ YD
7+87.98 - 14+47.88			0.4	28.0			0.8	0.4	160		1946	48	
14+81.10 - 17+39.76			0.14	9.8			0.28	0.14	56	1	693	48	
17+74.00 - 19+81.71			0.13	9.1			0.26	0.13	52	1	623	32	
20+25.43 - 26+70.97			0.40	28.0			0.80	0.40	160	7	1932	96	
27+32.23 - 30+06.96	290									5		16	332
30+56.02 - 33+49.47										3			397
LWB SUB-TOTAL	290	0	1.07	74.9	0.0	0.0	2.14	1.07	428	17	5,194	240	729
10+28.67 - 13+03.53	279		0.12	8.4			0.24	0.12	48				
13+16.94 - 26+50.00	1135		0.57	39.9			1.14	0.57	228	8			
27+67.01 - 31+56.73	456									3			501
LEB SUB-TOTAL	1,870	0	0.69	48.3	0.0	0.0	1.38	0.69	276	11	0	0	501
24+50.00 - 25+55.25	476	101	0.61		12.4	38.5			244	1	2926		
LT LNB SUB-TOTAL	476	101	0.61	0	12.4	38.5	0.0	0.0	244	1	2926	0	0
PROJECT TOTAL	2,636	101	2.4	123.2	12.4	38.5	3.5	1.8	948	29	8,120	240	1,230

SANITARY SEWER				J
STATION	OFFSET FROM CR 132 EB	REMARKS	INVERT ELEV	ADJUST FRAME RING & CASTING (SPEC. 2506) (EACH)
10+62.65	52 LT	MANHOLE	858.66	
14+62.06	52 LT	MANHOLE	860.29	1
17+37.85	52 LT	MANHOLE	861.55	1
20+86.75	50 LT	MANHOLE	862.82	1
23+84.54	50 LT	MANHOLE	863.97	1
26+94.28	51 LT	MANHOLE	865.17	1
PROJECT TOTAL				5

GAS - CENTERPOINT ENERGY						K
STATION BEGIN	STATION END	OFFSET	ALIGNMENT	REMARKS	SIZE & ITEM	NOTES
10+00	15+00	33 LT	CR 132 EB	LEAVE AS-IS	6" ST	
15+00	20+94	35 LT	CR 132 EB	LEAVE AS-IS	6" ST	
15+07	15+07	35 LT	CR 132 EB	LEAVE AS-IS / CROSSING	2" TR	COTTONWOOD ST
17+19	17+19	36 LT	CR 132 EB	LEAVE AS-IS / CROSSING	3" TR	SPRINGBROOK MALL
20+94	32+50	40 LT	CR 132 EB	RELOCATE	6" ST	
26+11	26+66	64 LT	CR 132 EB	LEAVE AS-IS	3" TR	
26+66	27+26	102 LT	CR 132 EB	LEAVE AS-IS	3" TR	
27+50	27+50	41 LT	CR 132 EB	LEAVE AS-IS / CROSSING	3" TR	SPRINGBROOK DRIVE
29+72	29+72	46 LT	CR 132 EB	LEAVE AS-IS / CROSSING	2" TR	RED LOBSTER
24+14	26+20	34 LT	SPRING	LEAVE AS-IS	2" TR	
26+40	30+50	30 RT	SPRING	LEAVE AS-IS	3" TR	

TELEPHONE - QWEST						L
STATION BEGIN	STATION END	OFFSET	ALIGNMENT	INPLACE ITEM	REMARKS	NOTES
10+07	32+79	22 RT	CR 132 EB	BURIED PHONE	RELOCATED	BY OTHERS
10+07	32+79	45 RT TO 33 RT	CR 132 EB	BURIED FIBER	AS-IS	
10+99	10+99	45 RT TO 68 LT	CR 132 EB	BURIED PHONE	AS-IS	CROSSING
17+30	17+30	23 RT TO 68 LT	CR 132 EB	BURIED PHONE	AS-IS	CROSSING
24+16	27+23	68 LT	CR 132 EB	BURIED PHONE	AS-IS	BLOCKBUSTER
26+47	31+25	27 RT	SPRING	BURIED PHONE	AS-IS	SPRINGBROOK

UTILITY OWNERS		M
CITY OF COON RAPIDS 11155 ROBINSON DR NW COON RAPIDS, MN 55433 CONTACT DOUG VIERZBA CITY ENGINEER TEL: 763-767-6465	XCEL ENERGY 8701 MONTICELLO LANE MAPLE GROVE, MN 55369 CONTACT ROBERT M. TORRES DESIGNER TEL 763-493-1671	
QWEST 425 MONROE ANOKA, MN 55303 CONTACT THOMAS BURNEY TEL. 763-712-5006	CENTERPOINT ENERGY 700 WEST LINDEN AVE P.O. BOX 1165 MINNAPOLIS, MN 55440-1165 CONTACT STEVE GUHANICK TEL 612-321-5421	

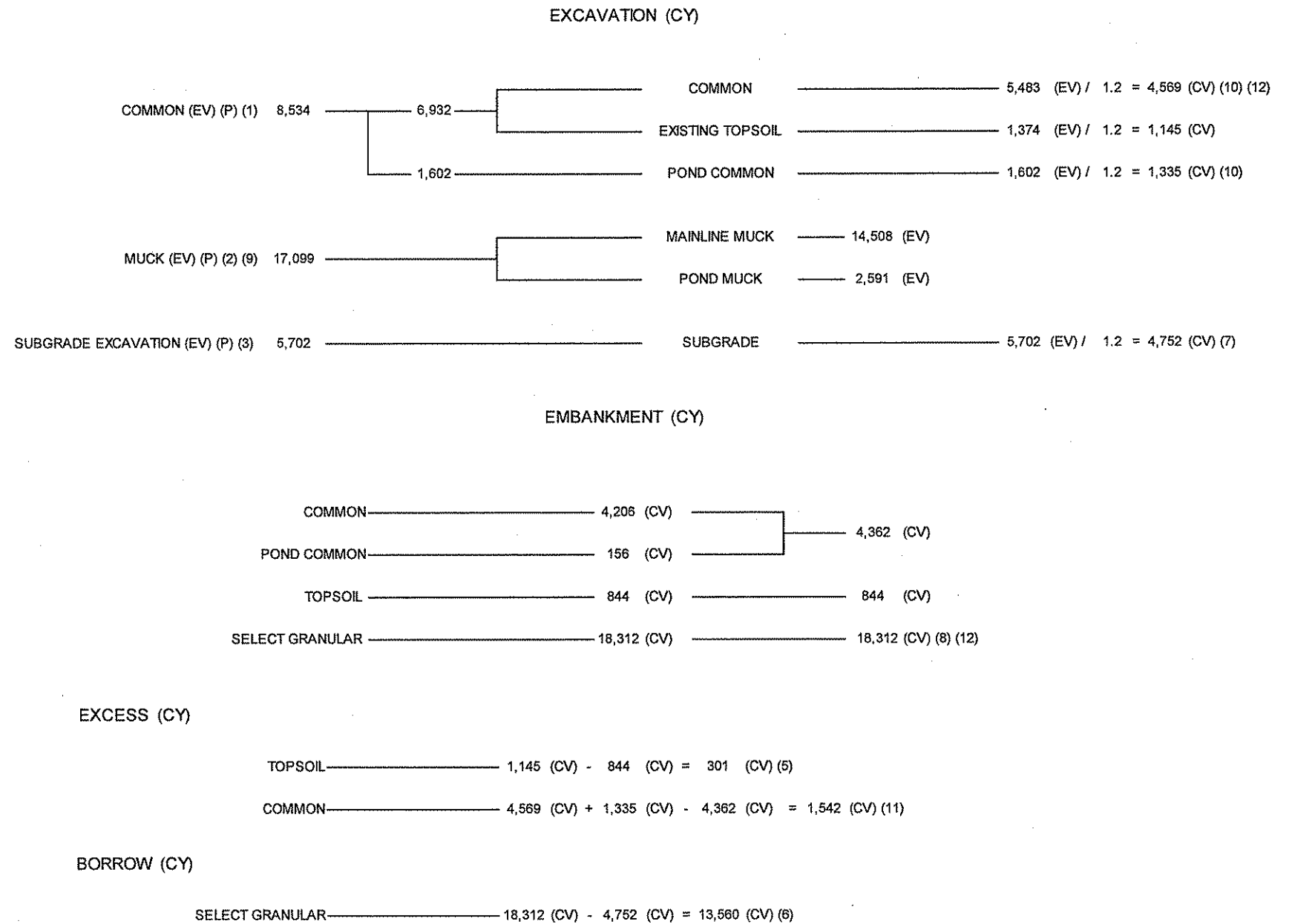
WATERMAIN						N
ALIGNMENT	STATION	OFFSET LWB	OWNER	ADJUST (SPEC. 2504)		NOTES
				HYDRANT & G.V. (EACH)	G.V & BOX (EACH)	
CR 132 WB	14+51.13	32 LT	COON RAPIDS		1	
CR 132 WB	14+89.58	44 LT	COON RAPIDS	1		
CR 132 WB	17+33.34	30 LT	COON RAPIDS		1	
CR 132 WB	17+42.83	9 LT	COON RAPIDS		1	
CR 132 WB	26+59.47	35 LT	COON RAPIDS		1	
CR 132 WB	26+62.90	33 LT	COON RAPIDS	1		
CR 132 WB	26+87.98	26 LT	COON RAPIDS		1	
PROJECT TOTAL				2	5	

OVERHEAD POWER - XCEL ENERGY				O
STATION	OFFSET	INPLACE ITEM	REMARKS	NOTES
13+58.56	41 RT	CR 132 EB	POWER POLE	AS IS
15+36.73	40 RT	CR 132 EB	POWER POLE	AS IS
17+14.41	40 RT	CR 132 EB	POWER POLE	AS IS
18+98.13	40 RT	CR 132 EB	POWER POLE	AS IS
20+75.40	40 RT	CR 132 EB	POWER POLE	AS IS
22+50.97	40 RT	CR 132 EB	POWER POLE	AS IS
23+86.80	40 RT	CR 132 EB	POWER POLE	AS IS
25+68.97	39 RT	CR 132 EB	POWER POLE	RELOCATE (XCEL)
27+32.27	37 RT	CR 132 EB	POWER POLE	RELOCATE (XCEL)
29+01.97	27 RT	CR 132 EB	POWER POLE	AS IS
30+33.63	30 RT	CR 132 EB	POWER POLE	AS IS
32+79.26	46 RT	CR 132 EB	POWER POLE	AS IS

STATION EB C.R. 132	EXCAVATION TOTALS			EMBANKMENT VOLUMES		
	COMMON (C.Y.)	SUBGRADE (C.Y.)	MUCK (C.Y.)	TOPSOIL (C.Y.)	SEL. GRAN. (C.Y.)	COMMON (C.Y.)
12+13.27	0	0	0	0	0	0
12+50.00	118	74	0	24	74	12
13+00.00	194	103	0	28	103	18
13+50.00	200	109	0	31	111	41
14+00.00	180	115	0	37	119	56
14+62.55	234	149	0	31	153	48
15+00.00	136	94	0	14	97	29
15+50.00	177	126	198	28	315	67
16+00.00	184	124	407	26	513	85
16+50.00	185	124	403	25	521	83
17+00.00	187	127	373	24	491	75
17+54.89	204	149	607	20	598	196
18+00.00	167	128	765	17	663	253
18+50.00	192	137	1104	29	957	321
19+00.00	180	128	1017	27	945	259
19+50.00	148	119	789	24	829	153
19+94.37	93	110	659	16	671	152
20+15.87	45	43	303	5	287	75
20+50.00	90	60	459	13	469	103
21+00.00	137	105	674	28	742	169
21+50.00	141	98	785	29	829	213
22+00.00	148	99	763	28	816	202
22+50.00	156	107	624	27	692	167
23+00.00	166	120	610	26	679	174
23+50.00	139	132	705	26	753	200
24+00.00	127	133	676	25	722	192
24+50.00	179	130	523	25	603	157
25+00.00	201	131	479	24	564	149
25+50.00	160	132	555	23	616	171
26+00.00	130	133	665	22	679	205
26+50.00	128	149	365	15	443	118
26+96.05	239	262	0	4	265	4
27+50.00	312	310	0	6	311	4
28+00.00	180	169	0	10	171	5
28+50.00	163	169	0	9	172	1
29+00.00	136	170	0	7	172	1
29+50.00	120	168	0	6	171	2
30+00.00	110	163	0	7	166	4
30+34.05	83	110	0	4	111	4
31+04.49	159	146	0	15	148	5
31+20.00	26	14	0	4	14	0
31+40.00	33	18	0	5	19	1
31+60.00	31	18	0	5	19	1
31+80.00	30	18	0	5	19	1
32+00.00	29	18	0	5	19	1
32+20.00	24	17	0	4	19	1
32+40.00	16	16	0	3	19	3
32+60.00	12	15	0	2	17	5
32+80.00	11	13	0	3	15	7
33+00.00	11	12	0	3	12	6
33+20.00	8	9	0	2	9	2
SUBTOTAL A	6459	5323	14508	826	17932	4201

STATION NB SPRINGBROOK	EXCAVATION TOTALS			EMBANKMENT VOLUMES		
	COMMON (C.Y.)	SUBGRADE (C.Y.)	MUCK (C.Y.)	TOPSOIL (C.Y.)	SEL. GRAN. (C.Y.)	COMMON (C.Y.)
24+50.00						
25+04.07	60	73	0	3	78	1
25+28.05	62	66	0	2	69	2
25+48.00	57	65	0	2	69	2
26+52.83						
26+70.82	112	54	0	3	55	0
27+23.05	182	121	0	8	125	0
SUBTOTAL B	473	379	0	18	380	5
PROJECT TOTAL	6932	5702	14508	844	18312	4206

EARTHWORK BALANCE



- (1) TOTAL COMMON EXCAVATION FOR PROJECT (INCLUDING TOPSOIL)
- (2) TOTAL MUCK EXCAVATION FOR PROJECT
- (3) TOTAL SUBGRADE EXCAVATION FOR PROJECT
- (4) TOTAL SUITABLE GRADING EXCESS FOR PROJECT
- (5) TOTAL TOPSOIL EXCESS FOR PROJECT
- (6) TOTAL SELECT GRANULAR BORROW FOR PROJECT
- (7) ALL SUBGRADE EXCAVATION ASSUMED TO MEET REQUIREMENTS FOR SELECT GRANULAR BORROW
- (8) COMBINED SELECT GRANULAR QUANTITY FOR BOTH 1.0' SUBCUT AND MUCK BACKFILL
- (9) ALL MUCK MATERIAL TO BE DISPOSED OF OFF SITE BY CONTRACTOR
- (10) IT IS ASSUMED THAT NO COMMON EXCAVATION WILL MEET REQUIREMENTS FOR GRANULAR BORROW
- (11) TOTAL COMMON EXCESS FOR THIS PROJECT
- (12) QUANTITY FOR TEMPORARY WIDENING INCLUDED IN TOTAL

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_EW_P1.dgn 4/27/2010 12:57:27 PM

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: CURT A. KOBILARCSIK

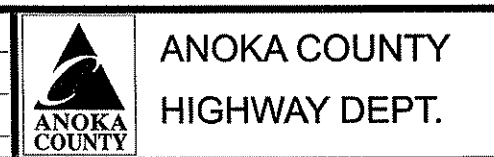
SIGNATURE: *Curt A. Kobilarsik*

DATE: 4-28-10 LICENSE NO. 24758

DRAWN BY: NJD DATE 11-17-09

DESIGN BY: DFF DATE 11-17-09

CHECKED BY: JEO DATE 11-18-09



STATE PROJECT NO. 02-596-07

STATE PROJECT NO. 106-080-002

STATE PROJECT NO. 114-130-005

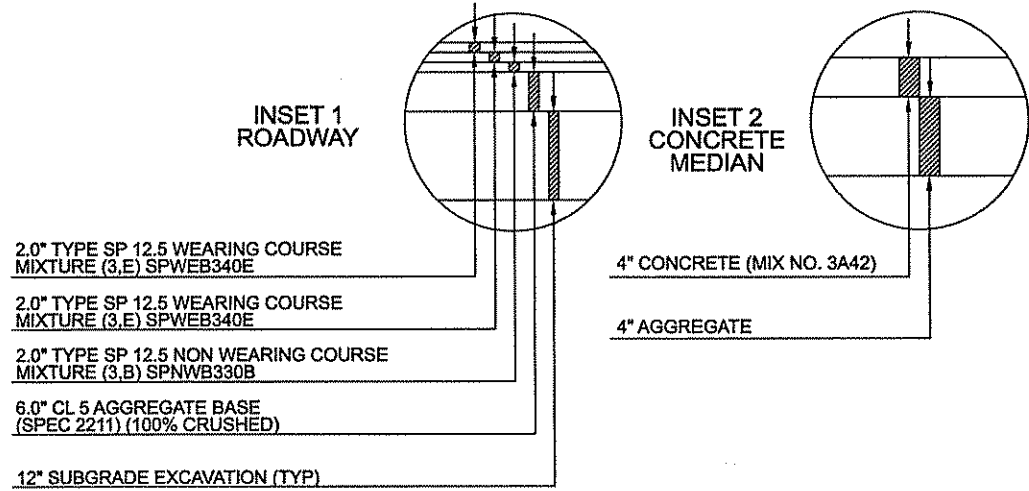
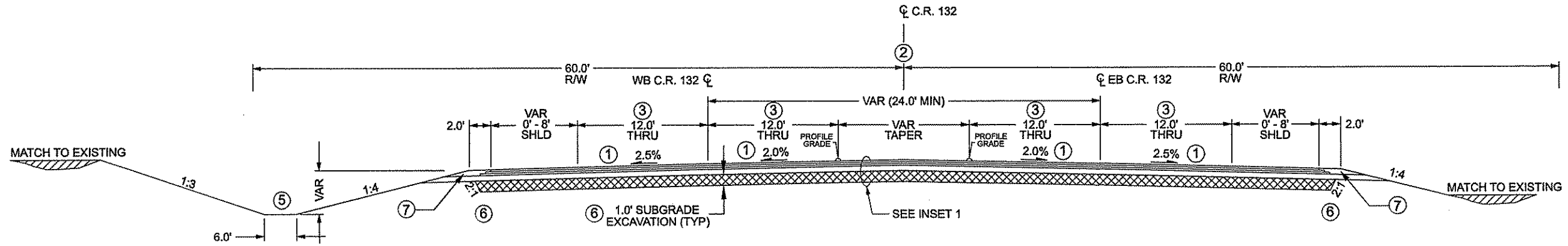
STATE PROJECT NO. 127-341-006

EARTHWORK SUMMARY

Sheet 10 of 101 Sheets

CR 132 (85 TH AVE NW) WEST TAPER

STA 12+13.27 - STA. 18+39.56



TYPICAL SECTION NOTES

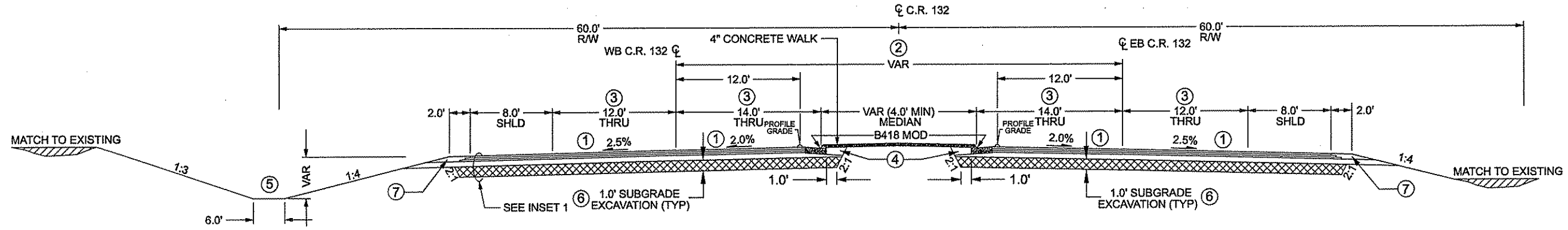
NOTES APPLY TO ALL TYPICALS AS DENOTED

- ① GRADING GRADE CROSS SLOPES WILL BE THE SAME AS FINISHED GRADE UNLESS OTHERWISE SPECIFIED
- ② ALL SECTIONS SHOWN ARE FOR NORMAL CROWN AND CROSS SLOPE. FOR SUPERELEVATIONS AND TRANSITIONS SEE SUPERELEVATION PLAN SHEET 43.
- ③ SEE CONSTRUCTION PLAN SHEETS 30 - 31 AND STRIPING PLAN SHEET 58 FOR LANE WIDTHS AND LOCATIONS
- ④ BACKFILL WITH SELECT GRANULAR MATERIAL
- ⑤ 4" TOPSOIL & SOD (OR SEED) ON ALL DISTURBED AREAS UNLESS OTHERWISE NOTED. SEE TURF ESTABLISHMENT PLAN SHEETS 56 - 57 FOR ADDITIONAL INFORMATION
- ⑥ MN/DOT SPEC 2112 MODIFIED TO A DEPTH OF 1 FOOT, PAID FOR AS "SUBGRADE EXCAVATION" (CUT SECTION ONLY). SEE PROFILE SHEETS 30 - 32 AND CROSS SECTION SHEETS 87 - 99 FOR LOCATIONS AND DEPTH OF SUBGRADE EXCAVATION REQUIRED.
- ⑦ CLASS 7 AGGREGATE SHOULDERING (MNDOT SPEC 2221)

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: CURT A. KOBILARCSIK SIGNATURE: <i>[Signature]</i> DATE: 4-28-10 LICENSE NO. 24758					DRAWN BY: NJD DATE: 09-24-09 DESIGN BY: DFF DATE: 09-24-09 CHECKED BY: JEO DATE: 09-24-09	<p>ANOKA COUNTY HIGHWAY DEPT.</p>	STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006	<p>TYPICAL SECTIONS</p> <p>Sheet 11 of 101 Sheets</p>
NO. DATE BY CKD APPR REVISION NAME: p102-596-07\plan10259607_TS.dgn 4/27/2010 12:57:30 PM								

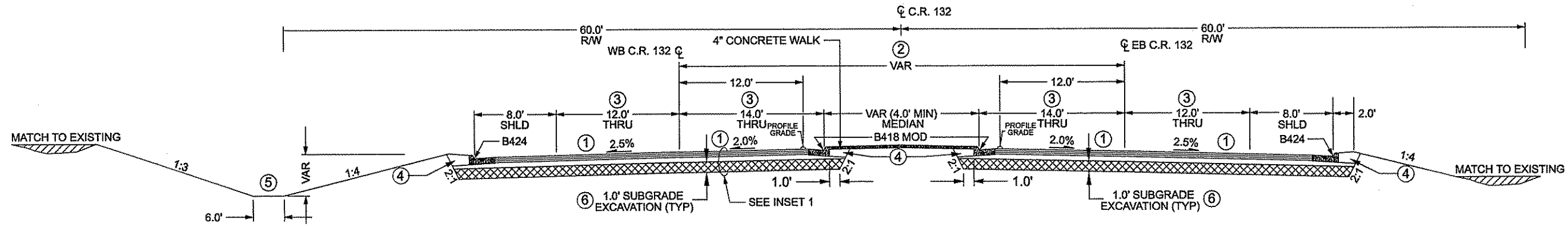
CR 132 (85 TH AVE NW)

STA 18+39.56 - STA. 20+24.30



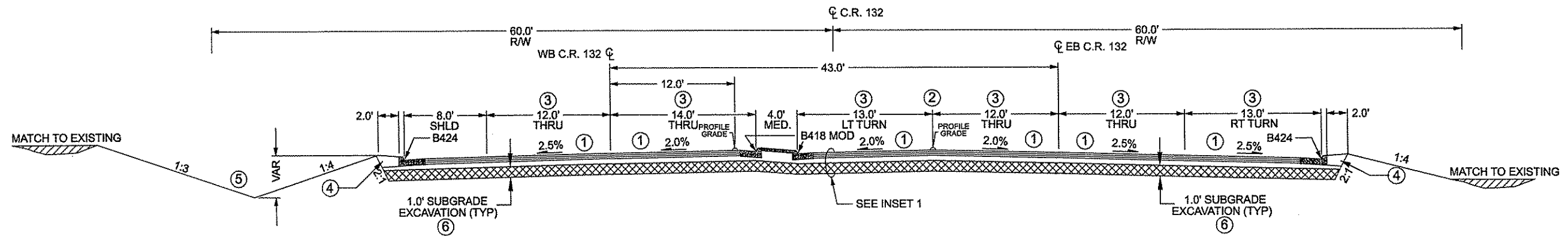
CR 132 (85 TH AVE NW)

STA 20+24.30 - STA. 23+33.13



CR 132 (85 TH AVE NW) TURN LANES

STA 23+33.13 - STA. 27+00.00



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PRINT NAME: CURT A. KOBIARCSIK
 SIGNATURE: *Curt Kobilarcsik*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



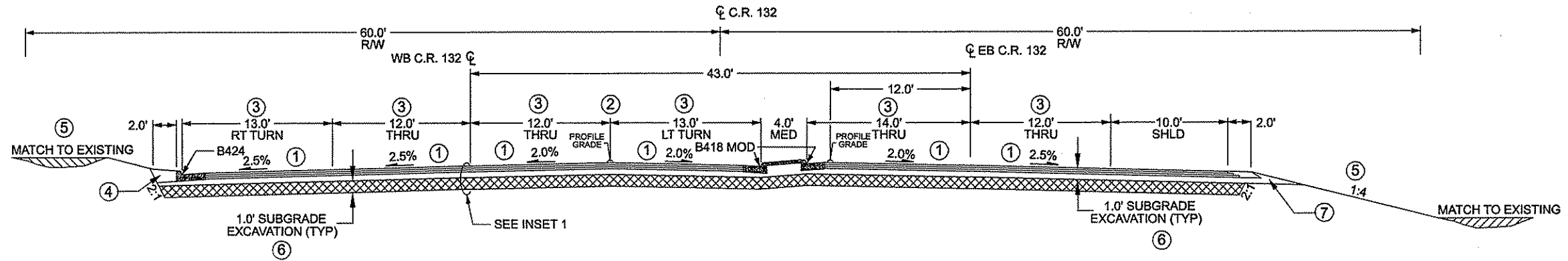
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

TYPICAL SECTIONS

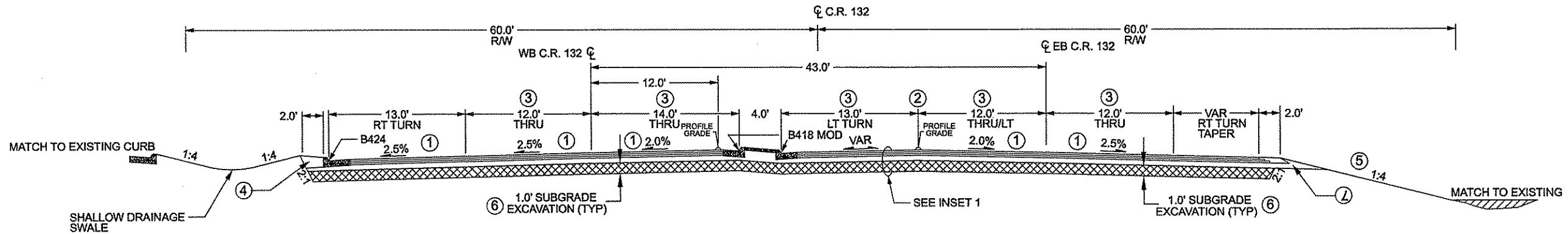
CR 132 (85 TH AVE NW) TURN LANES

STA 27+00.00 - STA. 30+28.42



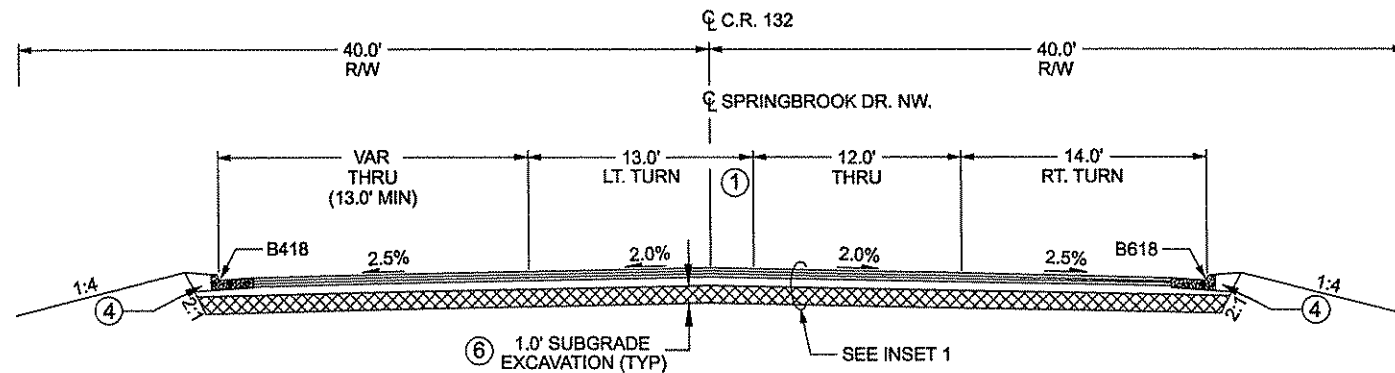
CR 132 (85 TH AVE NW) TURN LANES

STA 30+28.42 - STA. 31+04.49



SPRINGBROOK DR

NB STA 25+03.96 - STA. 25+96.74



NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:102-596-07\plan10259607_TS.dgn 4/27/2010 12:57:33 PM

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: CURT A. KOBILARCSIK
 SIGNATURE: *Curt A. Kobilarsik*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



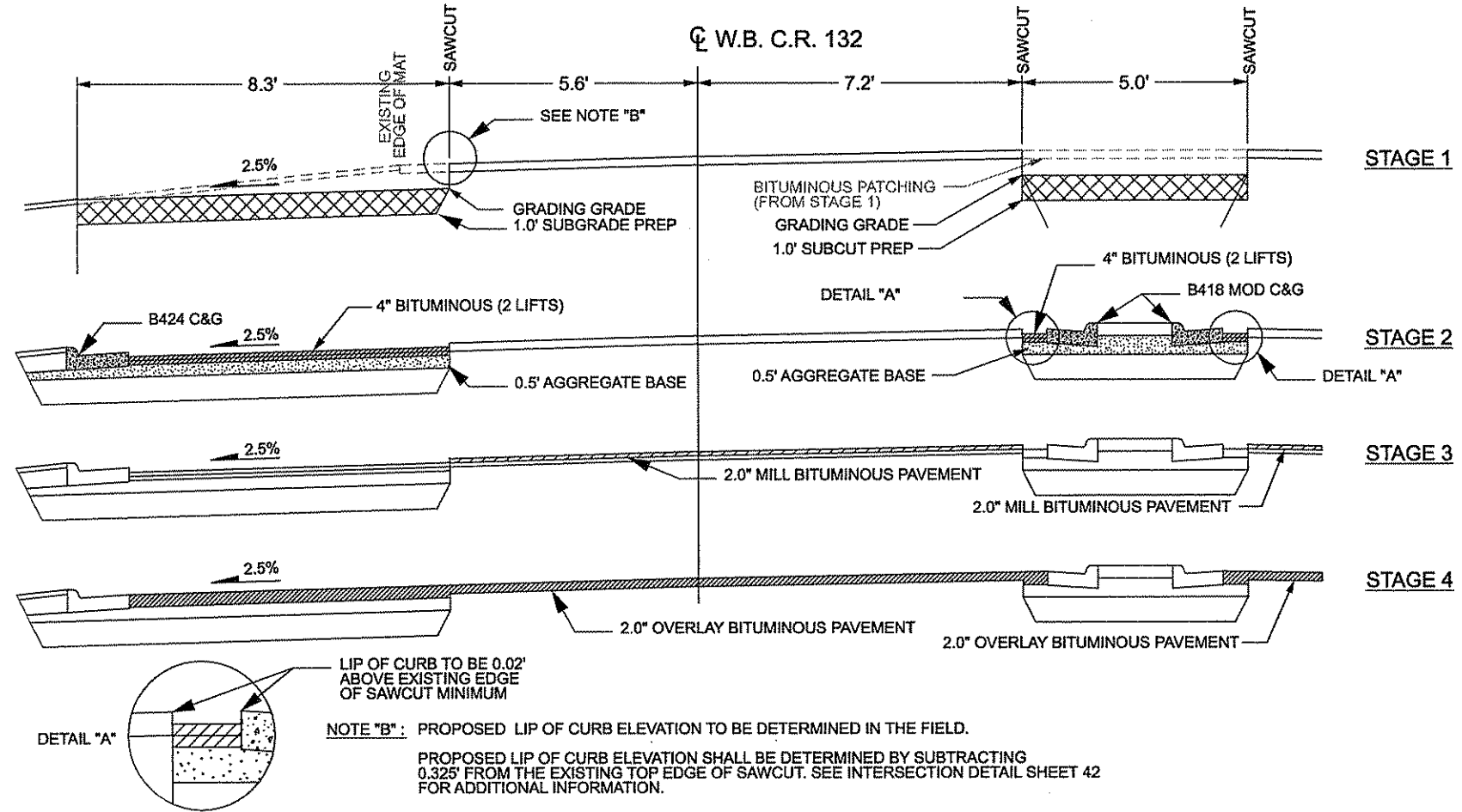
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

TYPICAL SECTIONS

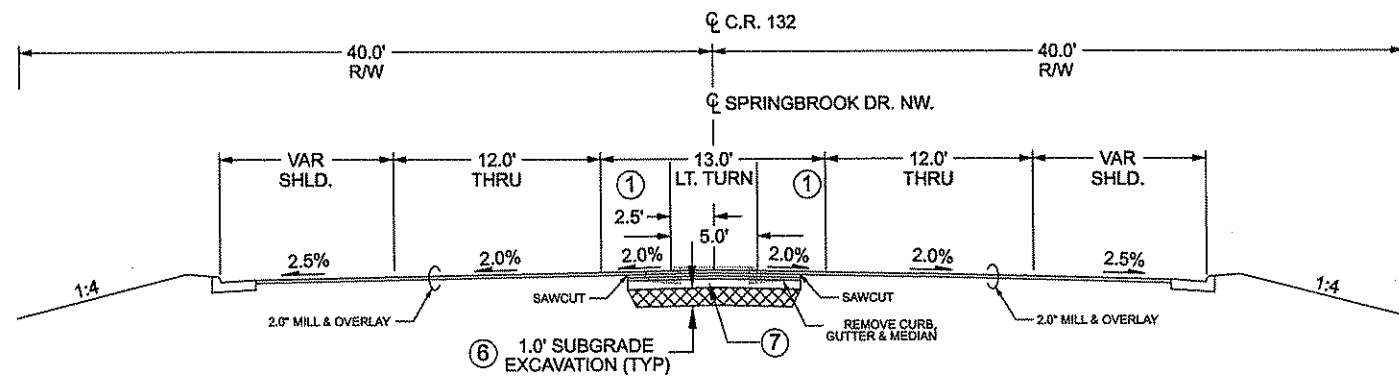
CR 132 (85 TH AVE NW) MILL & OVERLAY

STA 31+04.49 - STA. 33+47.43
(RIGHT TURN LANE AT RED LOBSTER)



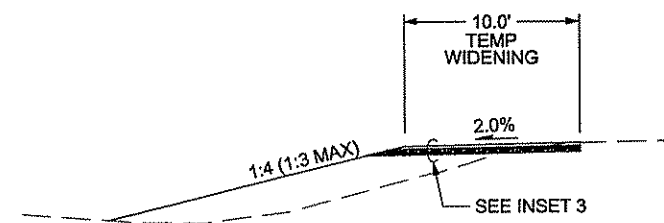
SPRINGBROOK DR MEDIAN REMOVAL

NB STA 24+35.20 - STA. 25+27.61

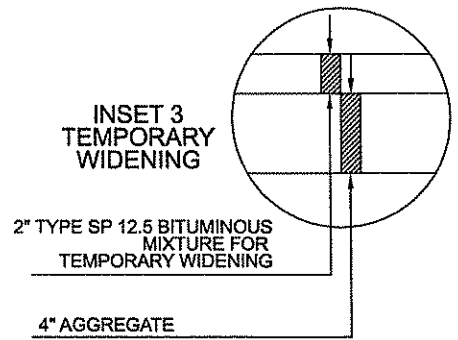
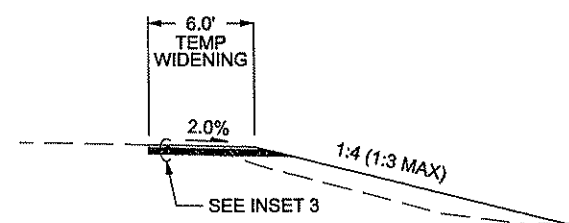


STAGE 2 TEMPORARY WIDENING

WB STA 7+87.98 - STA. 26+69.47



EB STA 10+28.32 - STA. 12+87.92



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259807_TS.dgn
 4/27/2010
 12:57:34 PM

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: CURT A. KOBIARCSIK
 SIGNATURE: *Curt A. Kobiarcsik*
 DATE: 4-28-10 LICENSE NO. 24758

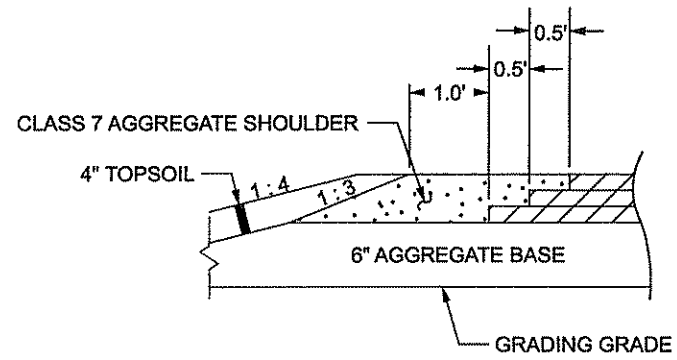
DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



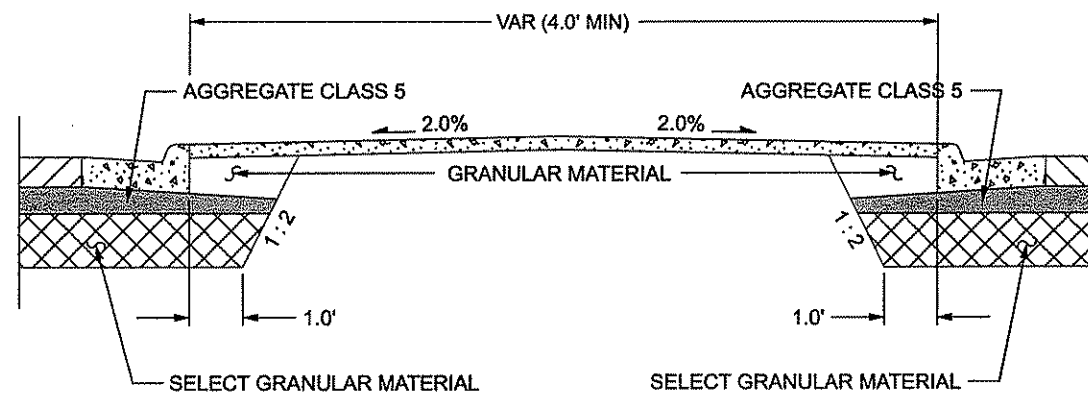
STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

TYPICAL SECTIONS
 MILL & OVERLAY
 Sheet 14 of 101 Sheets

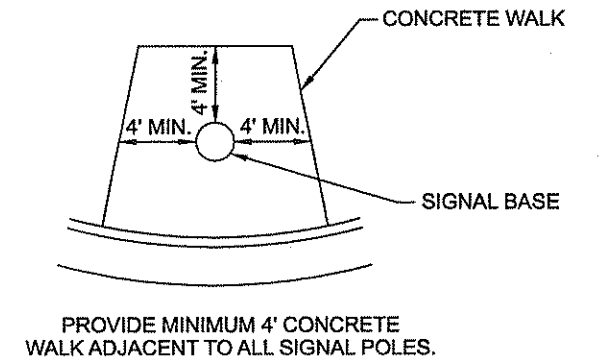
AGGREGATE SHOULDER DETAIL



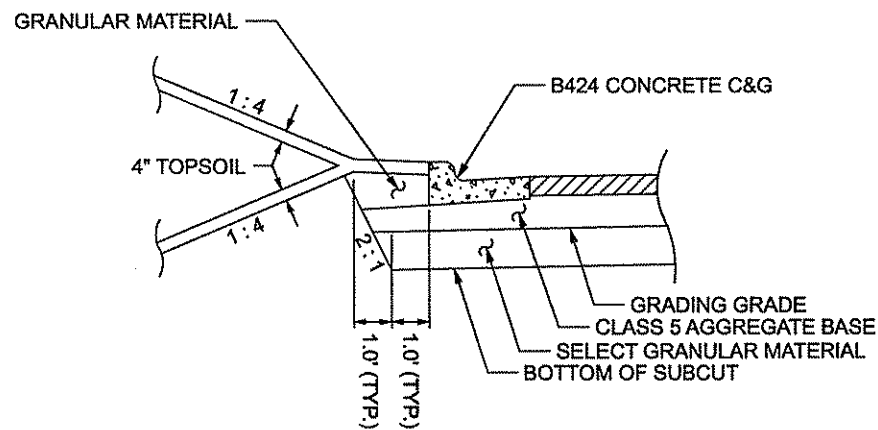
MEDIAN DETAIL



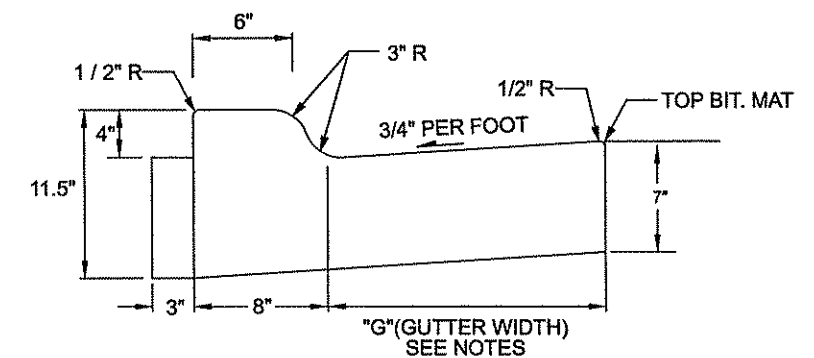
CONCRETE WALK AT SIGNAL BASES



B4 CURB & GUTTER AT GRASS BOULEVARD - CR 132

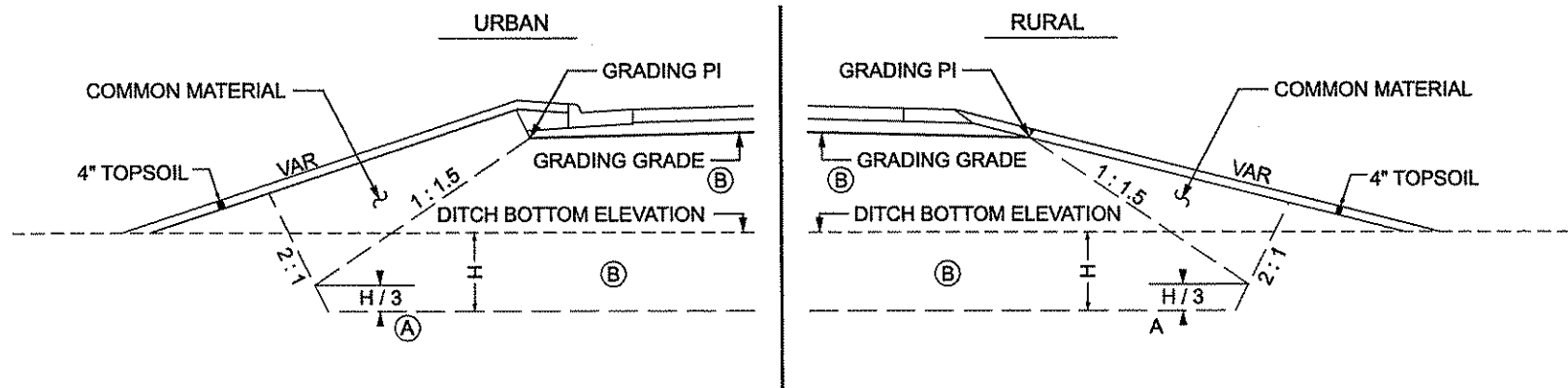


B4 MODIFIED CURB & GUTTER



- "G"=12" FOR B412 MODIFIED CONCRETE CURB & GUTTER.
- "G"=18" FOR B418 MODIFIED CONCRETE CURB & GUTTER.
- "G"=24" FOR B424 MODIFIED CONCRETE CURB & GUTTER.

MUCK EXCAVATION



- (A) SEE PROFILES AND CROSS SECTIONS FOR MUCK EXCAVATION DEPTH
- (B) BACKFILL WITH SELECT GRANULAR MATERIAL

NO	DATE	BY	CHKD	APPR	REVISION
NAME: p:\02-596-07\plan\0259607_DT.dgn					

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: CURT A. KOBILARCSIK
 SIGNATURE: *[Signature]*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 7-31-08
 DESIGN BY: DFF DATE: 7-31-08
 CHECKED BY: JEO DATE: 7-31-08















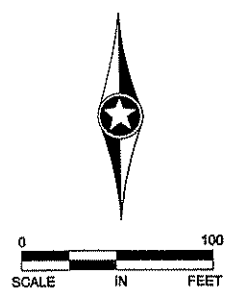
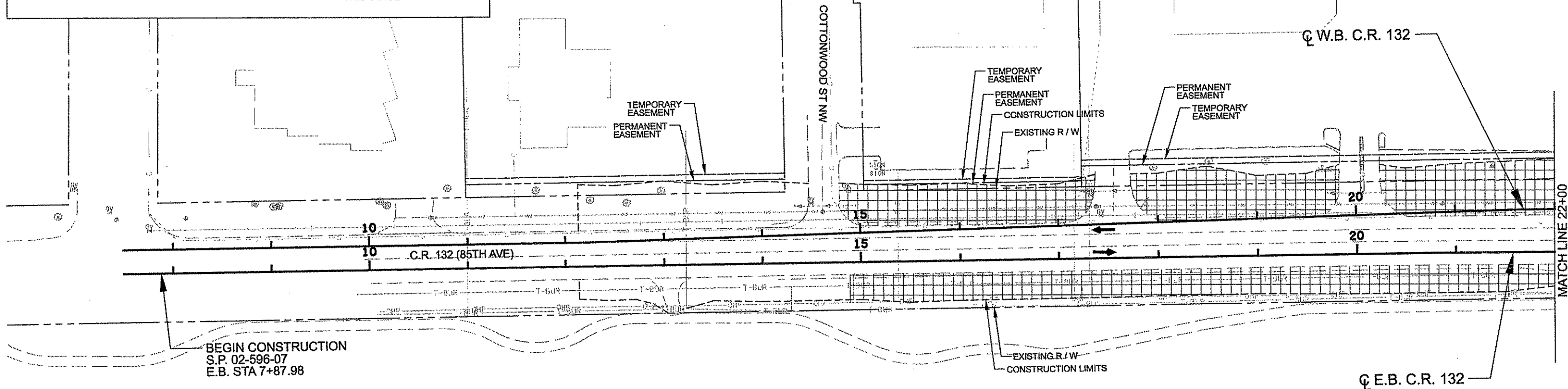
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

MISCELLANEOUS DETAILS

LEGEND

-  WORK AREA
-  MUCK REMOVAL
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE
-  ACCESS CLOSED DURING THIS STAGE



STAGE 1 CONSTRUCTION NOTES:

SIGNAL AT TH 47 AND CR 132 SHALL REMAIN OPERATIONAL AT ALL TIMES

REMOVE AND PATCH CENTER MEDIAN BETWEEN SPRINGBROOK DRIVE AND T.H. 47 (SEE INSET A) CARE SHALL BE TAKEN TO AVOID HANDHOLE FOR EXISTING SIGNAL

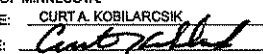

REMOVE AND PATCH CENTER MEDIAN ON UNIVERSITY AVE SERVICE DRIVE

POND GRADING TO BE COMPLETED DURING THIS STAGE













STAGE 1 TRAFFIC NOTES:

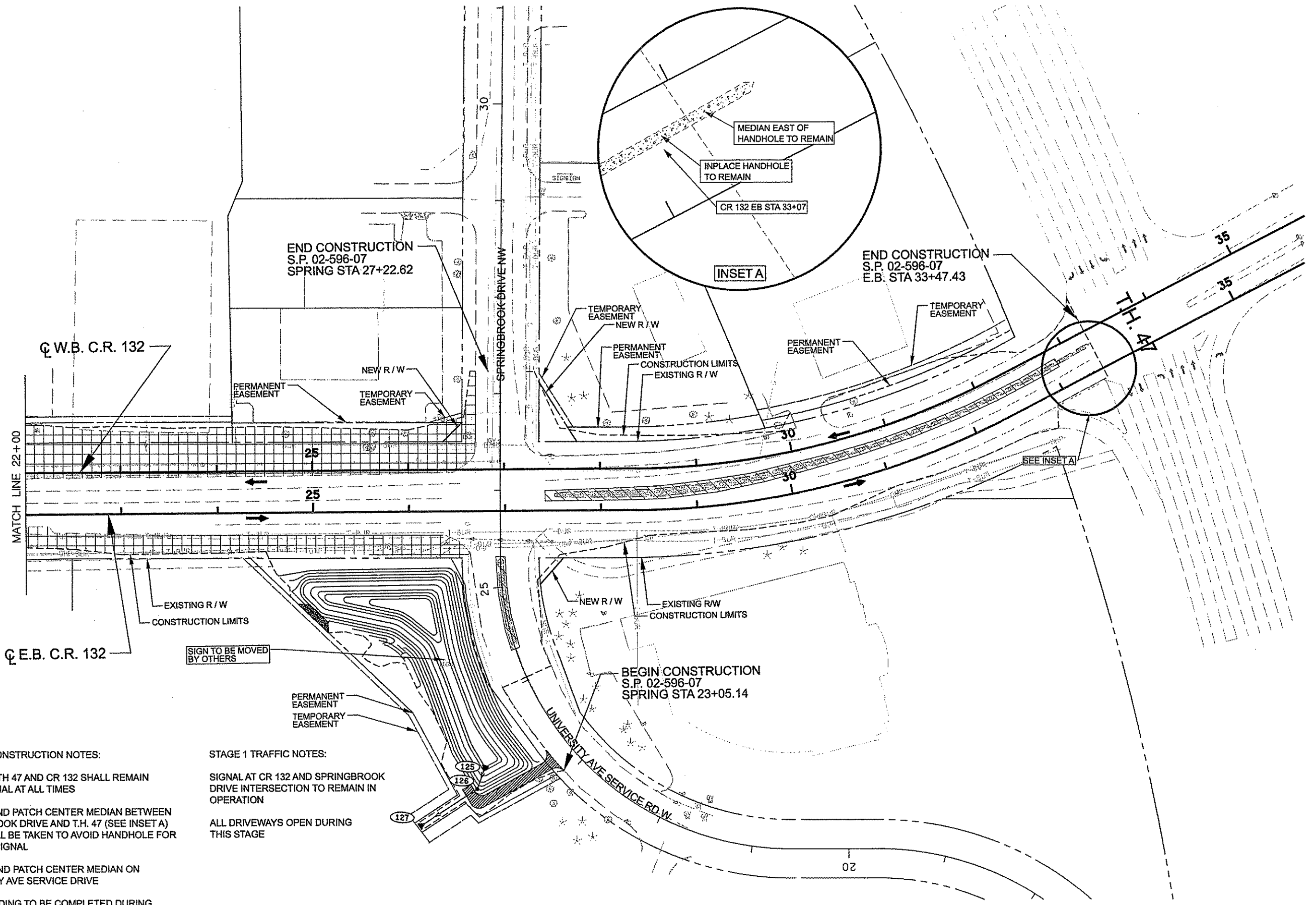
SIGNAL AT CR 132 AND SPRINGBROOK DRIVE INTERSECTION TO REMAIN IN OPERATION

ALL DRIVEWAYS OPEN DURING THIS STAGE

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>NAME: p:\02-596-07\plan\0259607_STG1_1.dgn</p>	NO	DATE	BY	CHKD	APPR	REVISION							<p>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.</p> <p>PRINT NAME: CURT A. KOBIARCSIK</p> <p>SIGNATURE: </p> <p>DATE: 4-28-10 LICENSE NO. 24756</p>	<p>DRAWN BY: DFF DATE: 11-12-09</p> <p>DESIGN BY: DFF DATE: 11-12-09</p> <p>CHECKED BY: JEO DATE: 11-18-09</p>	 <p>ANOKA COUNTY HIGHWAY DEPT.</p>	<p>STATE PROJECT NO. 02-596-07</p> <p>STATE PROJECT NO. 106-080-002</p> <p>STATE PROJECT NO. 114-130-005</p> <p>STATE PROJECT NO. 127-341-006</p>	<p>STAGING PLAN STAGE 1</p> <p>Sheet 16 of 101 Sheets</p>
NO	DATE	BY	CHKD	APPR	REVISION												

LEGEND

-  WORK AREA
-  MUCK REMOVAL
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE
-  ACCESS CLOSED DURING THIS STAGE



STAGE 1 CONSTRUCTION NOTES:

SIGNAL AT TH 47 AND CR 132 SHALL REMAIN OPERATIONAL AT ALL TIMES

REMOVE AND PATCH CENTER MEDIAN BETWEEN SPRINGBROOK DRIVE AND T.H. 47 (SEE INSET A) CARE SHALL BE TAKEN TO AVOID HANDHOLE FOR EXISTING SIGNAL

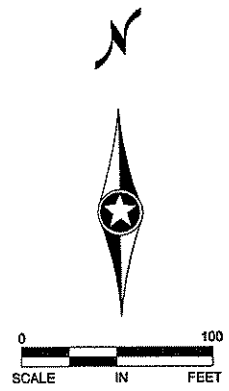
REMOVE AND PATCH CENTER MEDIAN ON UNIVERSITY AVE SERVICE DRIVE


POND GRADING TO BE COMPLETED DURING THIS STAGE












STAGE 1 TRAFFIC NOTES:

SIGNAL AT CR 132 AND SPRINGBROOK DRIVE INTERSECTION TO REMAIN IN OPERATION

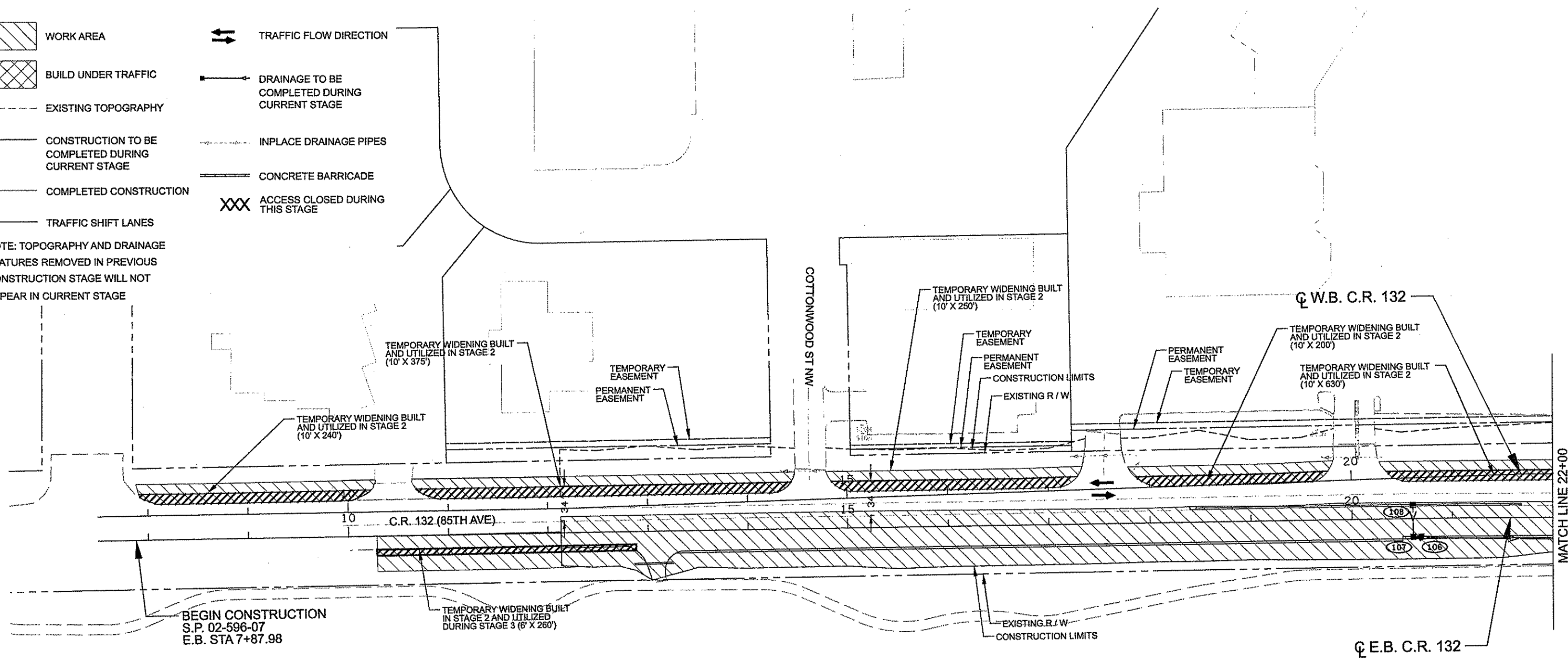
ALL DRIVEWAYS OPEN DURING THIS STAGE



<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>NAME: p:\02-596-07\plan\0259607_STG1_2.dgn</p>	NO	DATE	BY	CHKD	APPR	REVISION							<p>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.</p> <p>PRINT NAME: CURT A. KOBILARCSIK</p> <p>SIGNATURE: <i>Curt A. Kobilarsik</i></p> <p>DATE: 4-28-10 LICENSE NO. 24796</p>	<p>DRAWN BY: DFF DATE: 11-12-09</p> <p>DESIGN BY: DFF DATE: 11-12-09</p> <p>CHECKED BY: JEO DATE: 11-18-09</p>	 <p>ANOKA COUNTY HIGHWAY DEPT.</p>	<p>STATE PROJECT NO. 02-596-07</p> <p>STATE PROJECT NO. 106-080-002</p> <p>STATE PROJECT NO. 114-130-005</p> <p>STATE PROJECT NO. 127-341-006</p>	<p>STAGING PLAN STAGE 1</p> <p>Sheet 17 of 101 Sheets</p>
NO	DATE	BY	CHKD	APPR	REVISION												

-  WORK AREA
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE
-  ACCESS CLOSED DURING THIS STAGE

NOTE: TOPOGRAPHY AND DRAINAGE FEATURES REMOVED IN PREVIOUS CONSTRUCTION STAGE WILL NOT APPEAR IN CURRENT STAGE



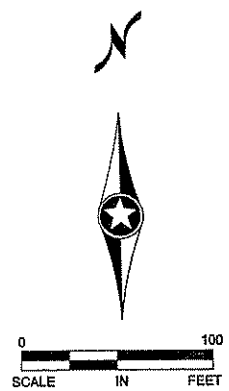
BEGIN CONSTRUCTION
S.P. 02-596-07
E.B. STA 7+87.98

STAGE 2 CONSTRUCTION NOTES:

- SOUTH SIDE OF C.R. 132 TO BE CONSTRUCTED DURING THIS STAGE
- STRUCTURES 103, 104, 108, 109, 113, 114, 116, 117, & 118 TO BE CONSTRUCTED DURING NIGHT CLOSURE STRUCTURES TO BE PLATED, COVERED, AND TEMP PAVED
- TEMPORARY WIDENING ON SOUTH SIDE OF ROAD AT WEST END OF PROJECT
- TEMPORARY WIDENING ON NORTH SIDE OF ROAD WEST OF SPRINGBROOK DRIVE
- REMOVE SIGNAL AT CR 132 AND SPRINGBROOK DRIVE INTERSECTION
- BEGIN TRAFFIC SIGNAL CONSTRUCTION

STAGE 2 TRAFFIC NOTES:

- NORTH SIDE OF C.R. 132 TO BE USED FOR TRAFFIC DURING THIS STAGE
- SOUTH LEG OF INTERSECTION TO BE CONSTRUCTED UNDER TRAFFIC (SEE SHEET 24 FOR DETAIL)
- DRIVEWAYS ON NORTH TO REMAIN OPEN DURING STAGE 2
- FOUR WAY STOP CONDITION AT SPRINGBROOK DRIVE INTERSECTION

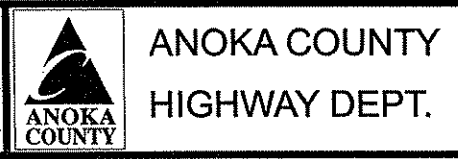


NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_STG2_1.dgn 4/27/2010 12:57:55 PM

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: CURT A. KOBILARCSIK
 SIGNATURE: *Curt A. Kobilarsik*
 DATE: 4-28-10 LICENSE NO. 24768












DRAWN BY: DFF DATE: 11-10-09
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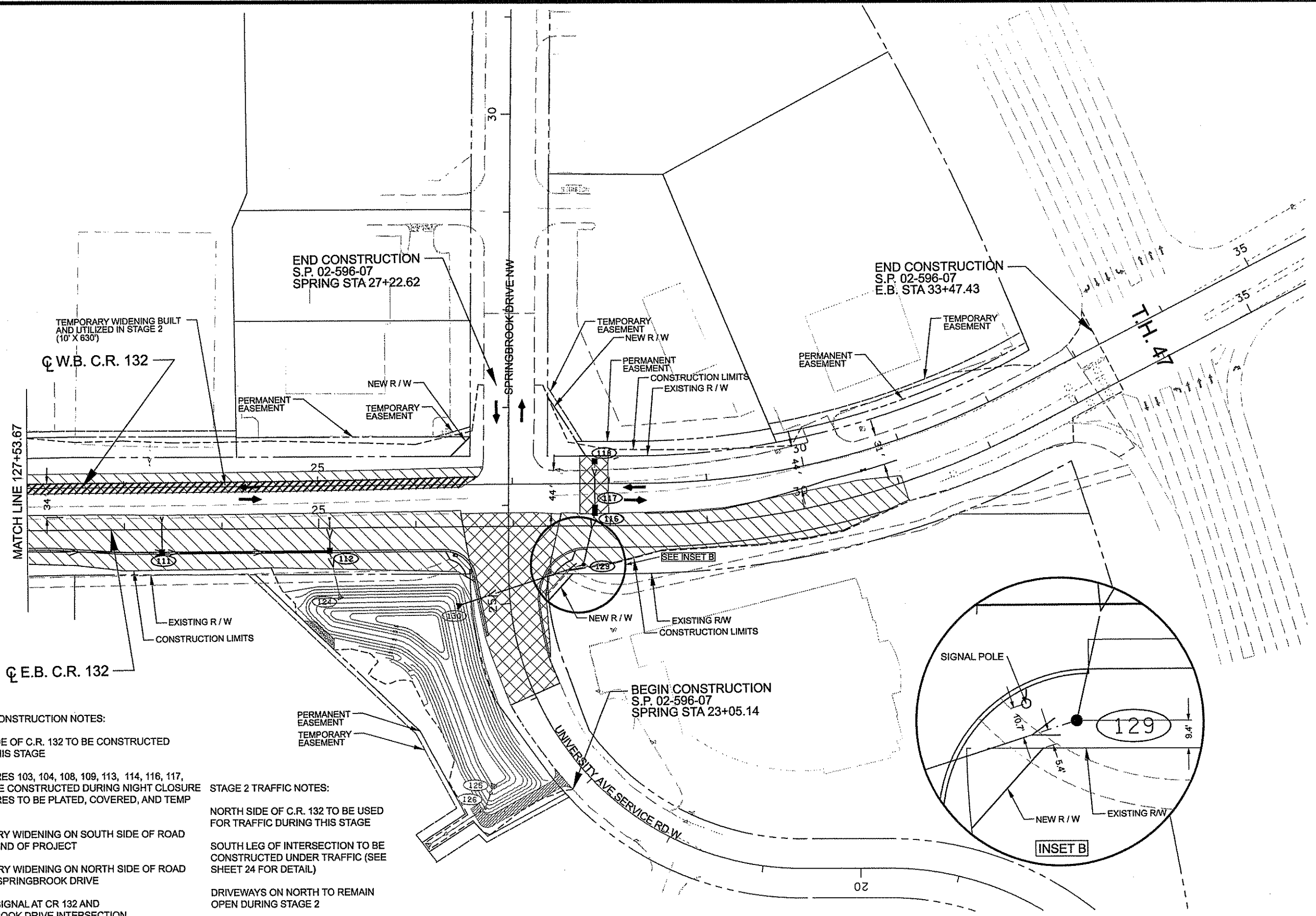
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STATE PROJECT NO.	106-080-002
STATE PROJECT NO.	114-130-005
STATE PROJECT NO.	127-341-006

STAGING PLAN
STAGE 2
Sheet 18 of 101 Sheets

LEGEND

-  WORK AREA
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE
-  ACCESS CLOSED DURING THIS STAGE

NOTE: TOPOGRAPHY AND DRAINAGE FEATURES REMOVED IN PREVIOUS CONSTRUCTION STAGE WILL NOT APPEAR IN CURRENT STAGE



STAGE 2 CONSTRUCTION NOTES:

SOUTH SIDE OF C.R. 132 TO BE CONSTRUCTED DURING THIS STAGE

STRUCTURES 103, 104, 108, 109, 113, 114, 116, 117, & 118 TO BE CONSTRUCTED DURING NIGHT CLOSURE. STRUCTURES TO BE PLATED, COVERED, AND TEMP PAVED

TEMPORARY WIDENING ON SOUTH SIDE OF ROAD AT WEST END OF PROJECT

TEMPORARY WIDENING ON NORTH SIDE OF ROAD WEST OF SPRINGBROOK DRIVE

REMOVE SIGNAL AT CR 132 AND SPRINGBROOK DRIVE INTERSECTION

BEGIN TRAFFIC SIGNAL CONSTRUCTION

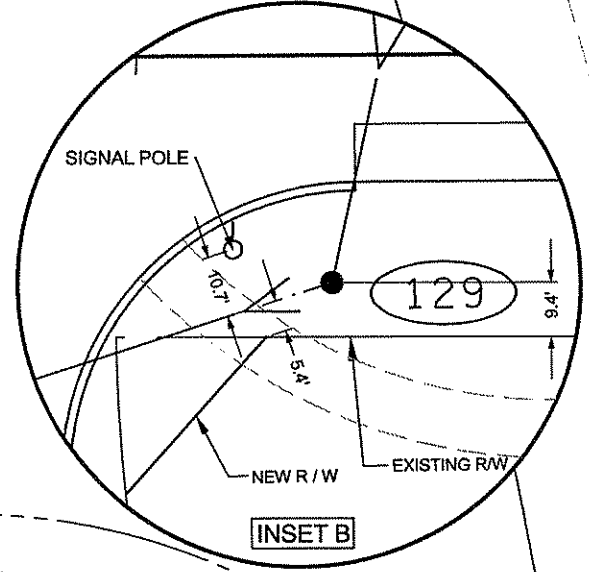
STAGE 2 TRAFFIC NOTES:


NORTH SIDE OF C.R. 132 TO BE USED FOR TRAFFIC DURING THIS STAGE

SOUTH LEG OF INTERSECTION TO BE CONSTRUCTED UNDER TRAFFIC (SEE SHEET 24 FOR DETAIL)












DRIVEWAYS ON NORTH TO REMAIN OPEN DURING STAGE 2

FOUR WAY STOP CONDITION AT SPRINGBROOK DRIVE INTERSECTION

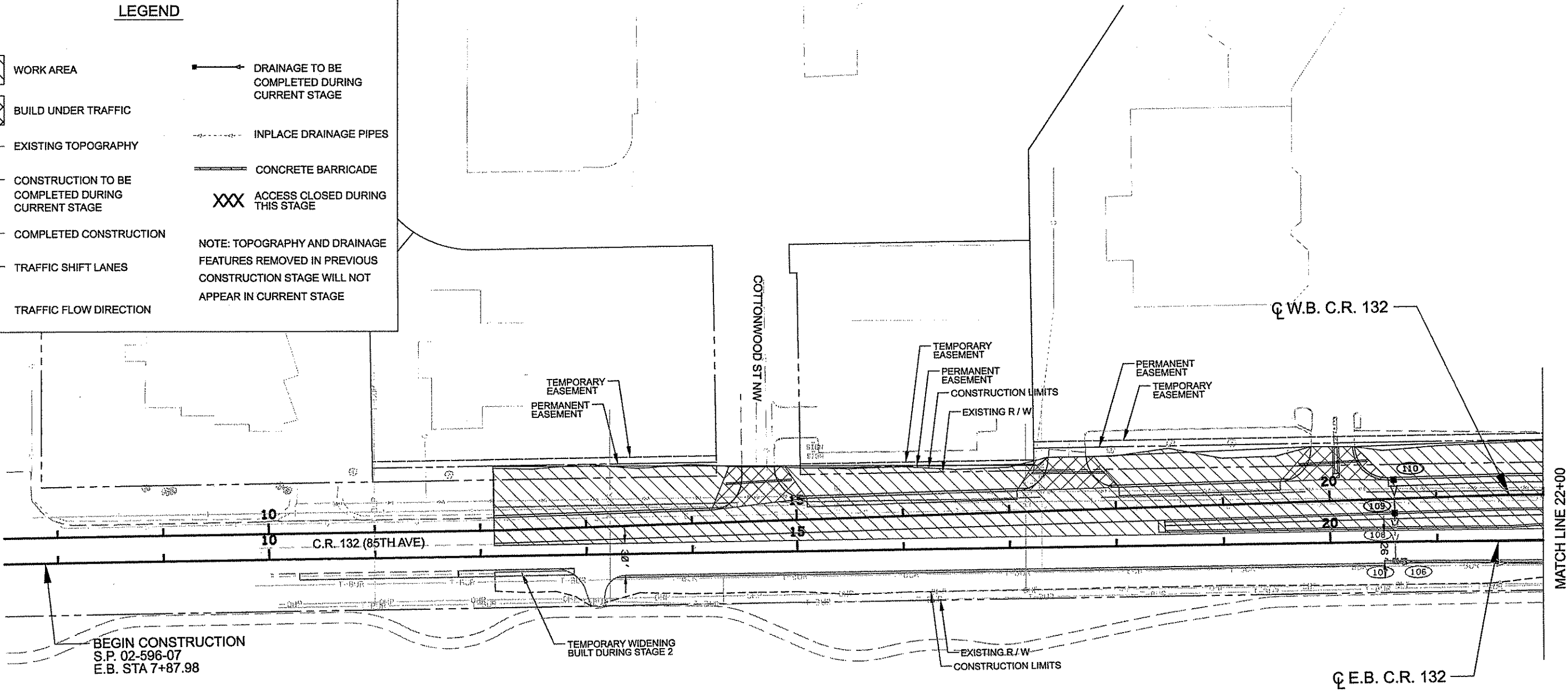


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CURT A. KOBIARCSIK SIGNATURE: <i>Curt A. Kobiarcsik</i> DATE: 4-28-10 LICENSE NO. 24758					DRAWN BY: DFF DATE: 11-10-09 DESIGN BY: DFF DATE: 11-10-09 CHECKED BY: JEO DATE: 11-18-09	 ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006	STAGING PLAN STAGE 2 Sheet 19 of 101 Sheets
NO. DATE BY CKD APPR REVISION NAME: p:\02-596-07\plan\0259607_STG2_2.dgn 4/27/2010 12:58:02 PM								

LEGEND

-  WORK AREA
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE
-  ACCESS CLOSED DURING THIS STAGE

NOTE: TOPOGRAPHY AND DRAINAGE FEATURES REMOVED IN PREVIOUS CONSTRUCTION STAGE WILL NOT APPEAR IN CURRENT STAGE




BEGIN CONSTRUCTION
S.P. 02-596-07
E.B. STA 7+87.98

MATCH LINE 22+00














STAGE 3 CONSTRUCTION NOTES:
NORTH SIDE OF C.R. 132 TO BE COMPLETED DURING THIS STAGE
AVOID IMPACTING SPRINGBROOK MALL ENTRANCE SIGN

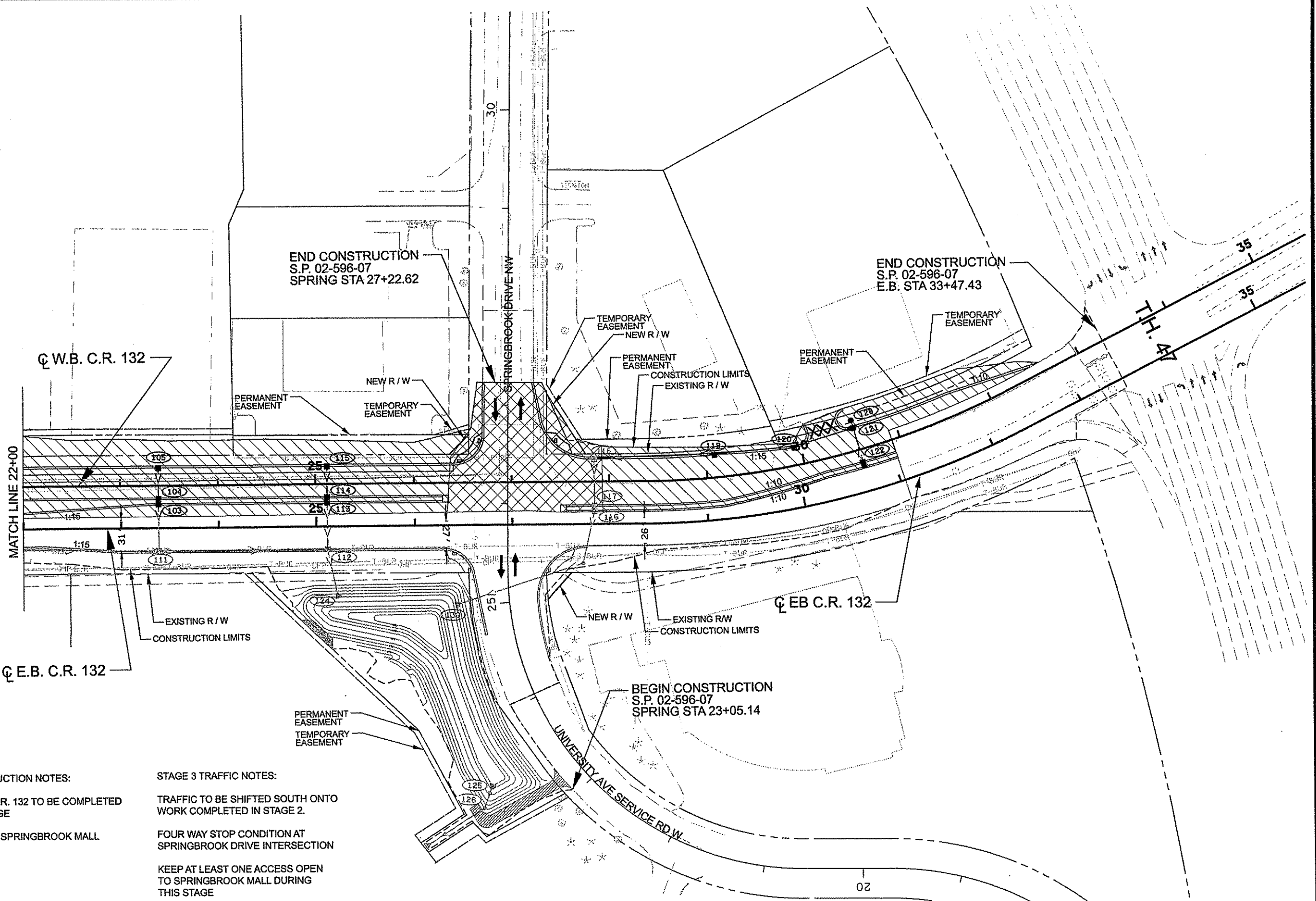
STAGE 3 TRAFFIC NOTES:
TRAFFIC TO BE SHIFTED SOUTH ONTO WORK COMPLETED IN STAGE 2.
FOUR WAY STOP CONDITION AT SPRINGBROOK DRIVE INTERSECTION
KEEP AT LEAST ONE ACCESS OPEN TO SPRINGBROOK MALL DURING THIS STAGE
RED LOBSTER ACCESS FROM CR 132 TO BE CLOSED DURING THIS STAGE

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>NAME: p:\02-596-07\plan\0259507_STG3_1.dgn</p>	NO	DATE	BY	CHKD	APPR	REVISION							<p>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.</p> <p>PRINT NAME: CURT A. KOBILARCSIK SIGNATURE: <i>Curt Kobilarsik</i> DATE: 4-28-10 LICENSE NO. 24796</p>	<p>DRAWN BY: DFF DATE: 11-13-09 DESIGN BY: DFF DATE: 11-13-09 CHECKED BY: JEO DATE: 11-18-09</p>	 ANOKA COUNTY HIGHWAY DEPT.	<p>STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006</p>	<p>STAGING PLAN STAGE 3</p> <p>Sheet 20 of 101 Sheets</p>
NO	DATE	BY	CHKD	APPR	REVISION												

LEGEND

-  WORK AREA
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE
-  ACCESS CLOSED DURING THIS STAGE

NOTE TOPOGRAPHY AND DRAINAGE FEATURES REMOVED IN PREVIOUS CONSTRUCTION STAGE WILL NOT APPEAR IN CURRENT STAGE



STAGE 3 CONSTRUCTION NOTES:

NORTH SIDE OF C.R. 132 TO BE COMPLETED DURING THIS STAGE

AVOID IMPACTING SPRINGBROOK MALL ENTRANCE SIGN

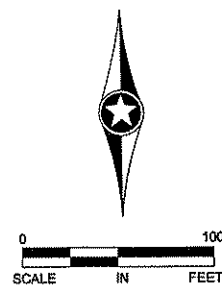
STAGE 3 TRAFFIC NOTES:


TRAFFIC TO BE SHIFTED SOUTH ONTO WORK COMPLETED IN STAGE 2.

FOUR WAY STOP CONDITION AT SPRINGBROOK DRIVE INTERSECTION












KEEP AT LEAST ONE ACCESS OPEN TO SPRINGBROOK MALL DURING THIS STAGE

RED LOBSTER ACCESS FROM CR 132 TO BE CLOSED DURING THIS STAGE

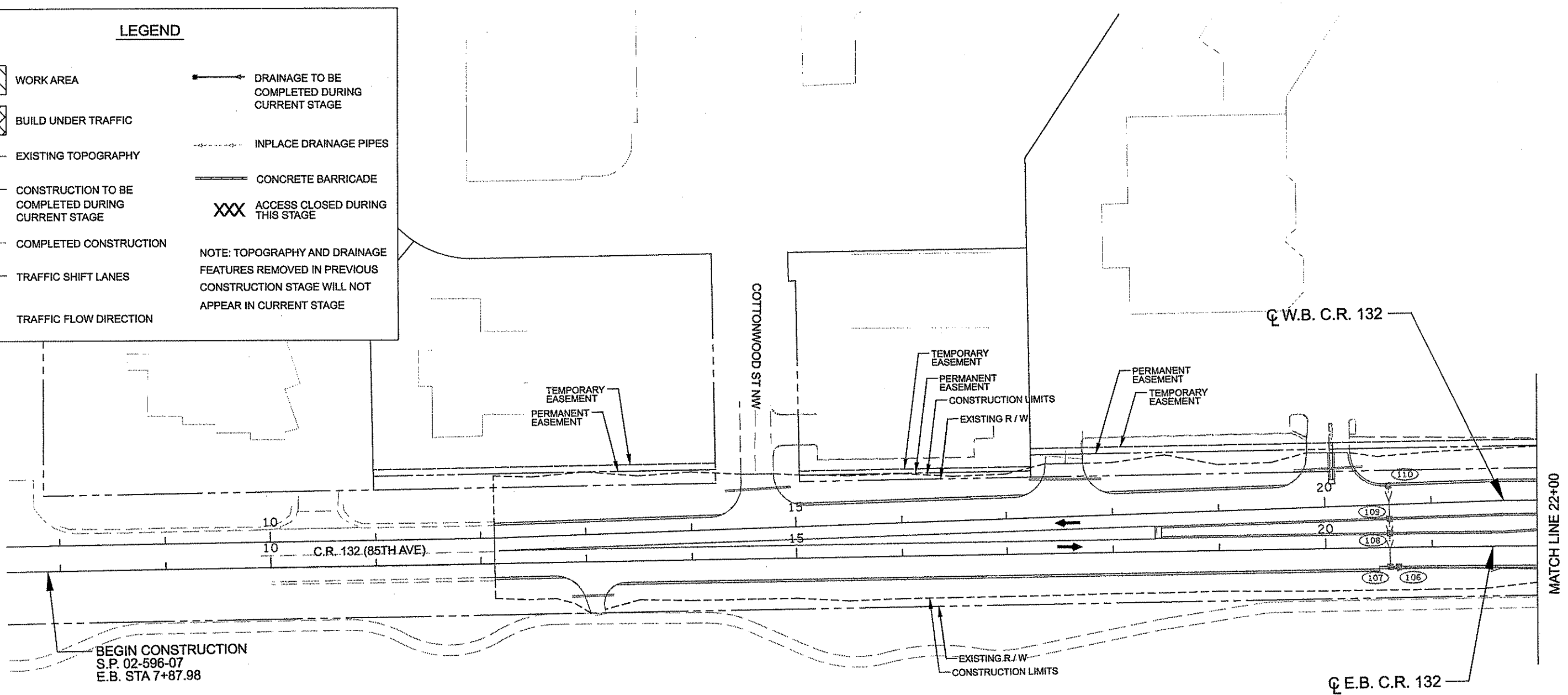


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NO	DATE	BY	CHKD	APPR	REVISION												

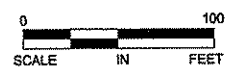
LEGEND

-  WORK AREA
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE
-  ACCESS CLOSED DURING THIS STAGE

NOTE: TOPOGRAPHY AND DRAINAGE FEATURES REMOVED IN PREVIOUS CONSTRUCTION STAGE WILL NOT APPEAR IN CURRENT STAGE



BEGIN CONSTRUCTION
S.P. 02-596-07
E.B. STA 7+87.98



STAGE 4 CONSTRUCTION NOTES:

MEDIAN BETWEEN SPRINGBROOK DRIVE AND T.H. 47 TO BE COMPLETED DURING THIS STAGE

MILL AND OVERLAY BETWEEN SPRINGBROOK DRIVE AND T.H. 47 TO BE COMPLETED DURING THIS STAGE

STAGE 4 TRAFFIC NOTES:

LANE CLOSURES FOR CONSTRUCTION DURING THIS STAGE OF CONSTRUCTION

SPRINGBROOK DRIVE TRAFFIC SIGNAL TO BE OPERATIONAL DURING THIS STAGE OF CONSTRUCTION

TRAFFIC CONTROL DURING MILL AND OVERLAY OPERATION TO BE DETERMINED IN THE FIELD AND SHALL CONFORM TO THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL, JANUARY 2007.

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: CURT A. KOBILARCSIK

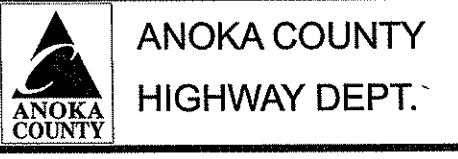
SIGNATURE: *Curt A. Kobilarsik*

DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: DFF DATE: 11-16-09

DESIGN BY: DFF DATE: 11-16-09

CHECKED BY: JEO DATE: 11-18-09



STATE PROJECT NO. 02-596-07

STATE PROJECT NO. 106-080-002



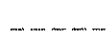
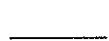

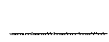




STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

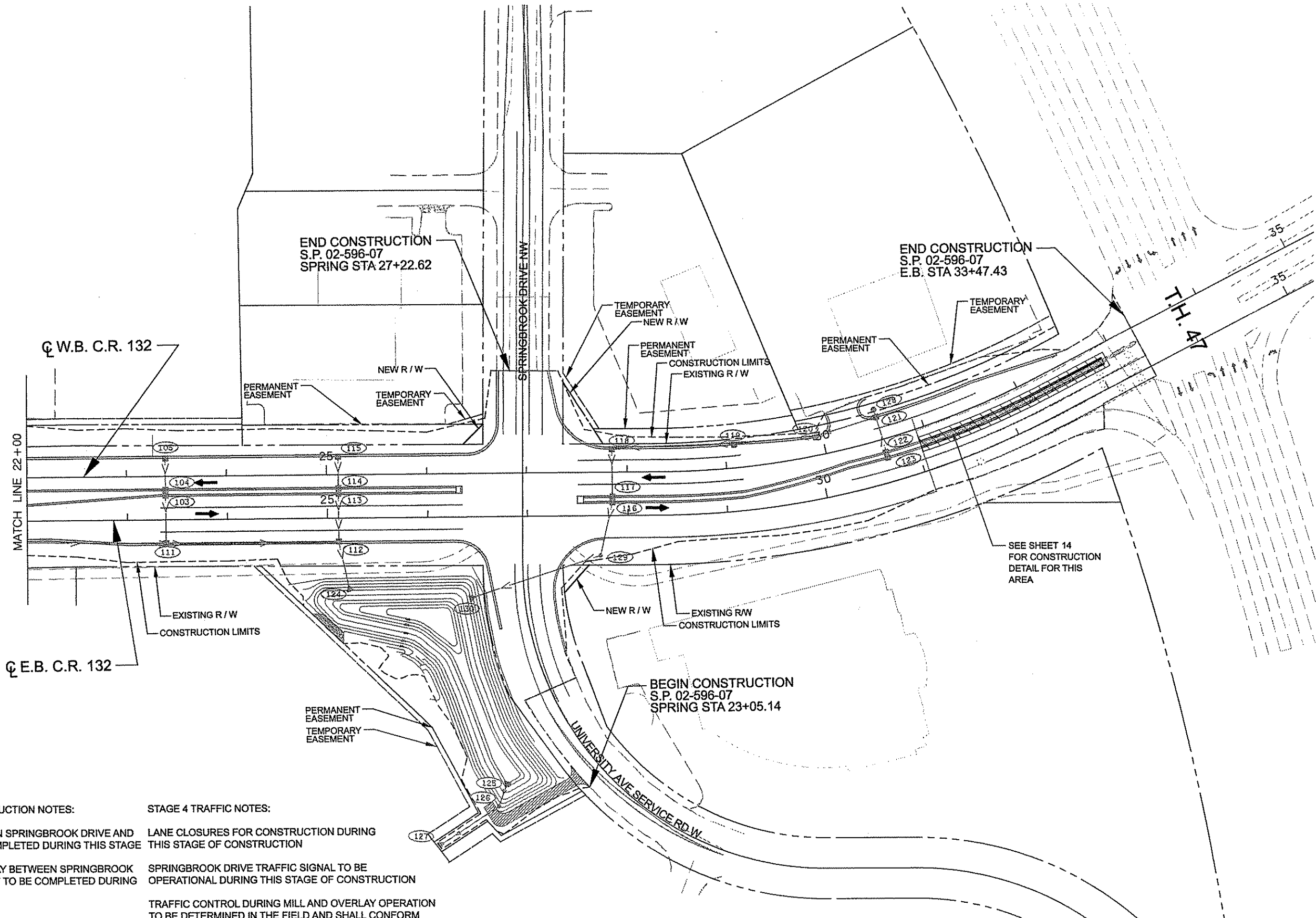
STAGING PLAN
STAGE 4

Sheet 22 of 101 Sheets

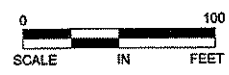
LEGEND

-  WORK AREA
-  BUILD UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES
-  CONCRETE BARRICADE

NOTE TOPOGRAPHY AND DRAINAGE FEATURES REMOVED IN PREVIOUS CONSTRUCTION STAGE WILL NOT APPEAR IN CURRENT STAGE



SEE SHEET 14 FOR CONSTRUCTION DETAIL FOR THIS AREA



STAGE 4 CONSTRUCTION NOTES:

MEDIAN BETWEEN SPRINGBROOK DRIVE AND T.H. 47 TO BE COMPLETED DURING THIS STAGE


MILL AND OVERLAY BETWEEN SPRINGBROOK DRIVE AND T.H. 47 TO BE COMPLETED DURING THIS STAGE

STAGE 4 TRAFFIC NOTES:

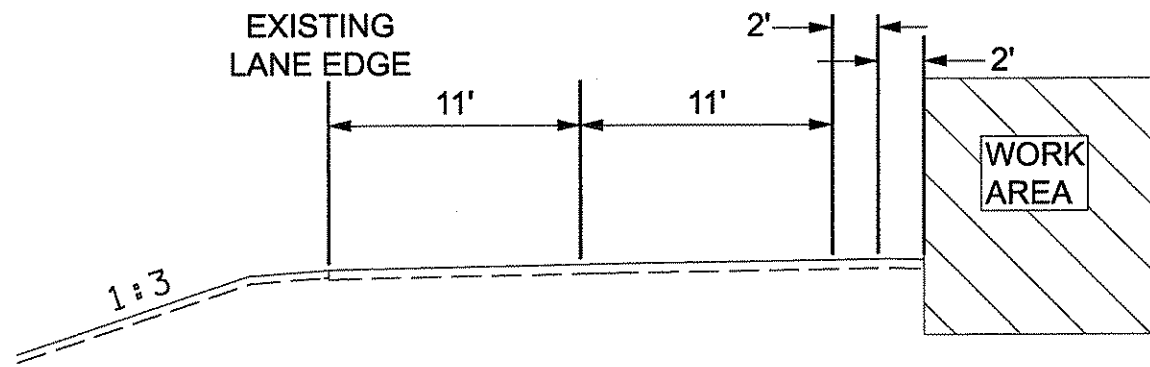
LANE CLOSURES FOR CONSTRUCTION DURING THIS STAGE OF CONSTRUCTION

SPRINGBROOK DRIVE TRAFFIC SIGNAL TO BE OPERATIONAL DURING THIS STAGE OF CONSTRUCTION

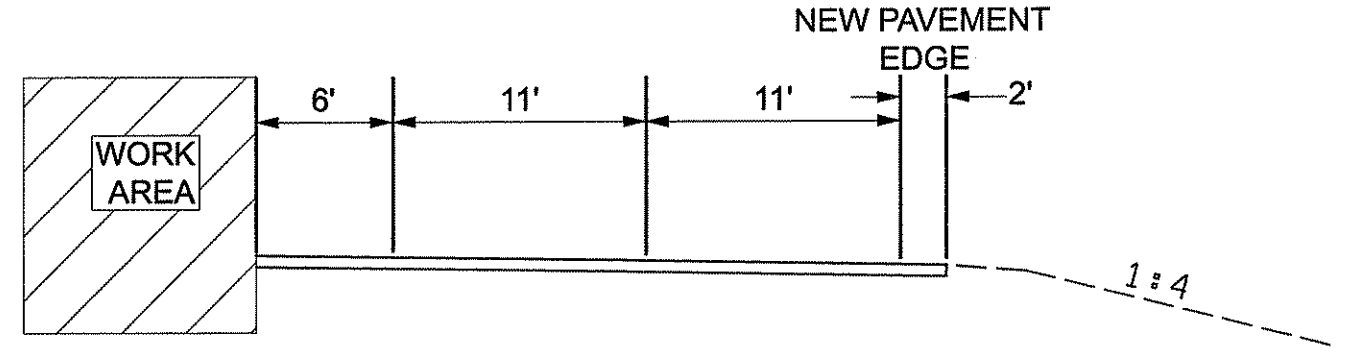
TRAFFIC CONTROL DURING MILL AND OVERLAY OPERATION TO BE DETERMINED IN THE FIELD AND SHALL CONFORM TO THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL, JANUARY 2007.

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NO	DATE	BY	CKD	APPR	REVISION												

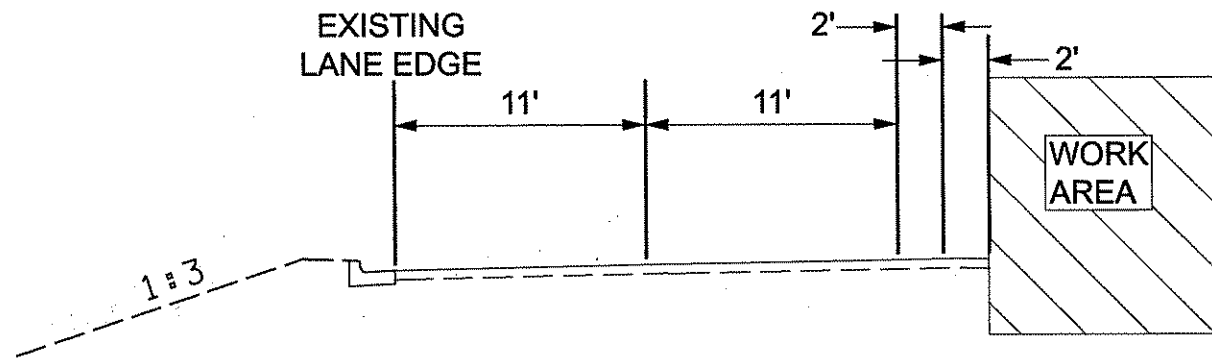
TYPICAL STAGE 3 CROSS SECTION



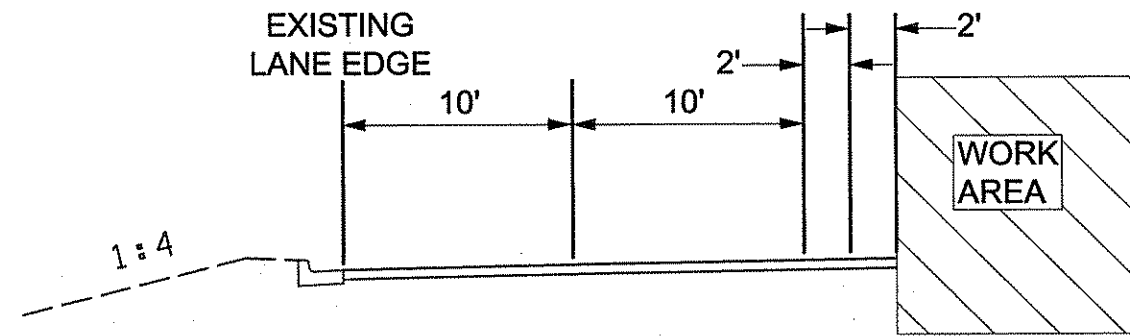
TYPICAL STAGE 2 CROSS SECTION



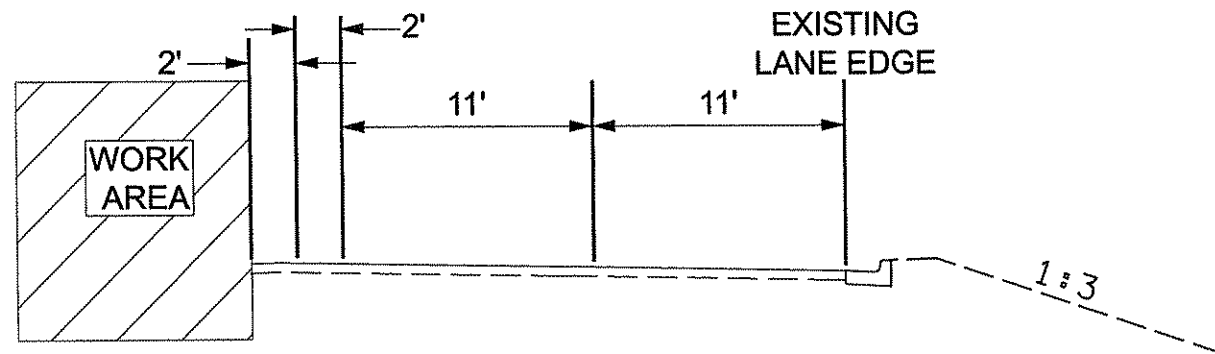
TYPICAL STAGE 2 CROSS SECTION FOR SPRINGBROOK DRIVE SOUTH LEG WEST SIDE



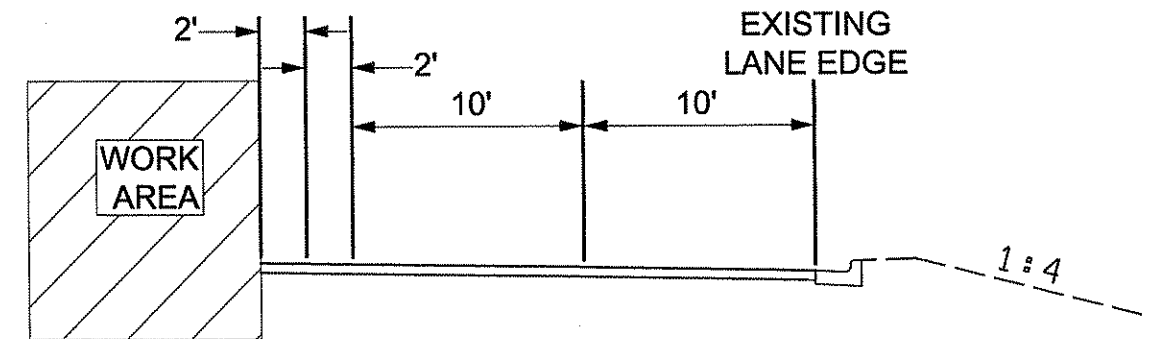
TYPICAL STAGE 3 CROSS SECTION FOR SPRINGBROOK DRIVE NORTH LEG WEST SIDE



TYPICAL STAGE 2 CROSS SECTION FOR SPRINGBROOK DRIVE SOUTH LEG EAST SIDE



TYPICAL STAGE 3 CROSS SECTION FOR SPRINGBROOK DRIVE NORTH LEG EAST SIDE



NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\Plan\0259607_STG_DT.dgn 4/27/2010 12:58:30 PM

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: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 4-28-10 LICENSE NO. 24759

DRAWN BY DFF DATE 11-17-09

DESIGN BY DFF DATE 11-17-09

CHECKED BY JEO DATE 11-18-09



ANOKA COUNTY
HIGHWAY DEPT.

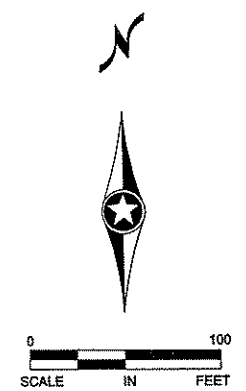
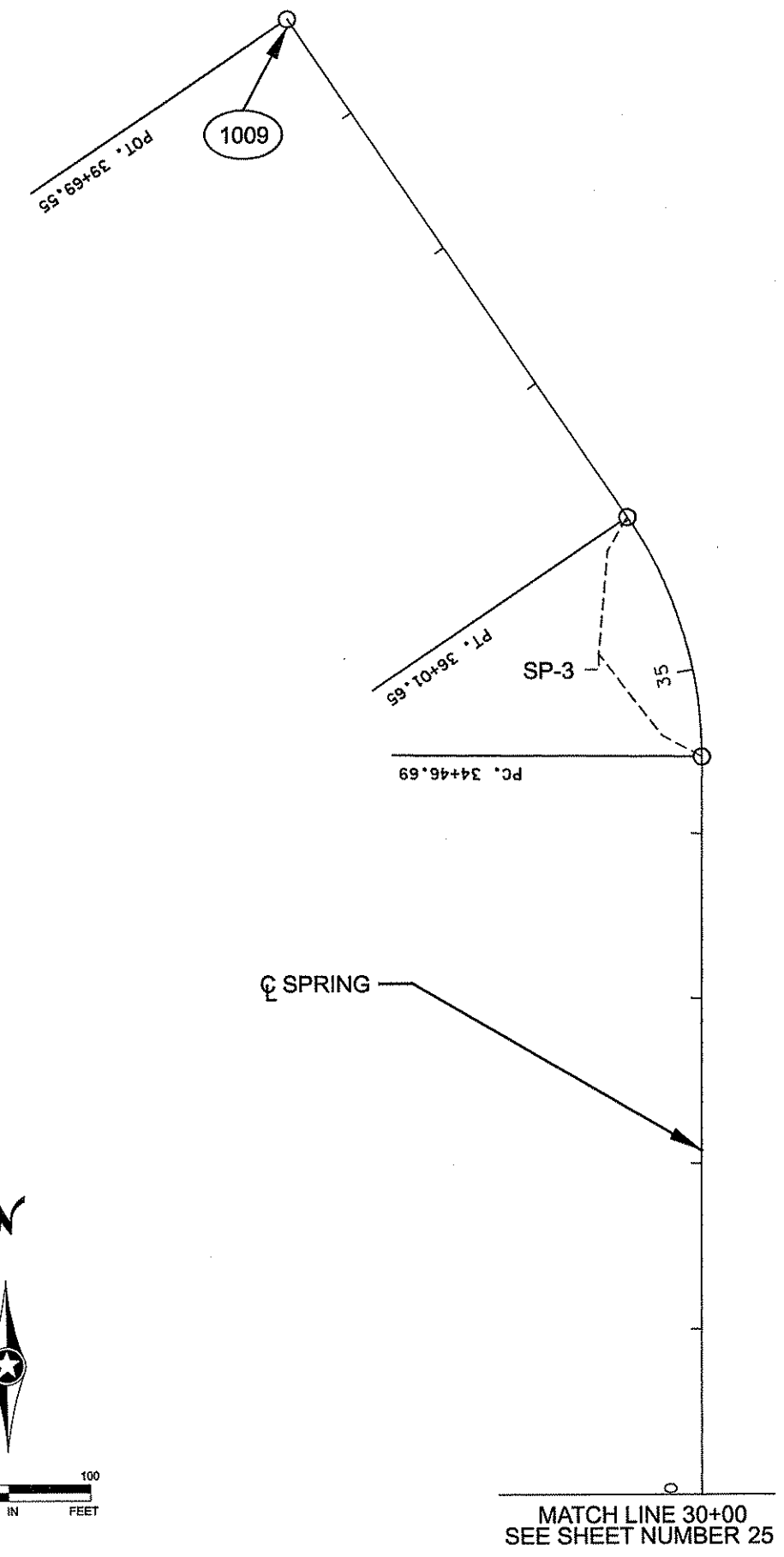
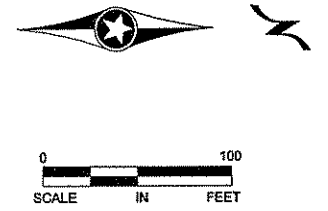
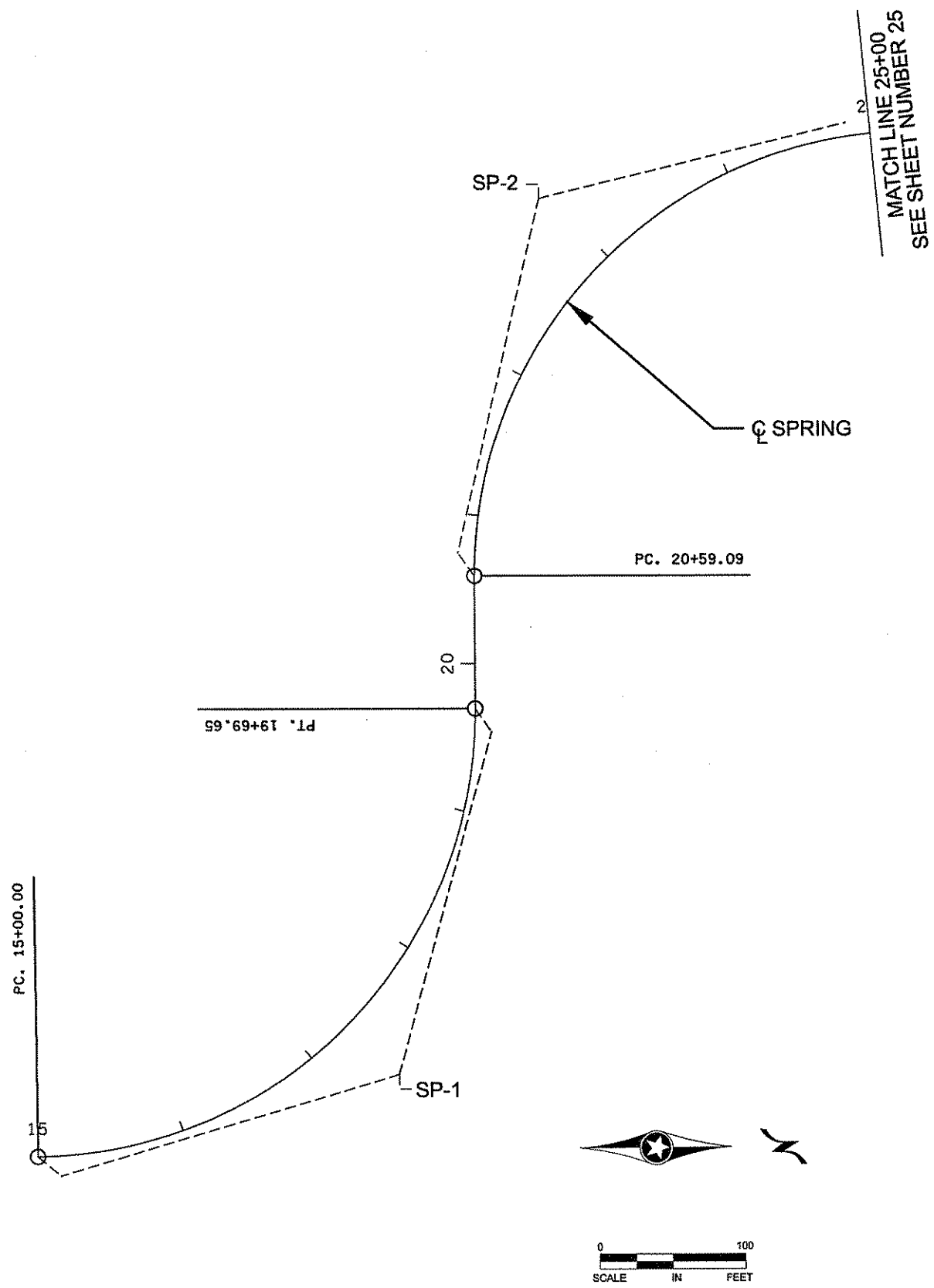
STATE PROJECT NO. 02-596-07

STATE PROJECT NO. 106-080-002

STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

STAGING DETAILS



NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 03-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09

ANOKA COUNTY
HIGHWAY DEPT.



STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

ALIGNMENT PLAN

Sheet 26 of 101 Sheets

ALIGNMENT TABULATION											
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y		
☉ C.R. 132 EB <32E_5>											
1000	POT	☉ C.R. 132 EB	7+50.000						497,947.6102	132,516.5215	
1001	POT		20+94.266						499,291.7508	132,534.8513	
	PC		28+36.151						500,033.6245	132,538.9377	N 89° 41' 03.87" E
EB-1	PI		30+41.726	27° 11' 31.90" LT	6° 44' 26.45"	850.000'	205.575'	403.404'	500,239.1968	132,540.0701	PI
	CC								500,028.9426	133,388.9248	
	PT		32+39.555						500,421.5314	132,635.0190	N 62° 29' 31.96" E
1002	POT	☉ C.R. 132 EB	36+28.329						500,766.3538	132,814.5817	

ALIGNMENT TABULATION											
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y		
☉ C.R. 132 WB <32W_5>											
1003	POT	☉ C.R. 132 WB	7+50.000						497,947.2830	132,540.5193	
1004	POT		12+18.354						498,415.5939	132,546.9056	
1005	POT		21+68.667						499,365.3890	132,578.2576	
	PC		28+36.676						500,033.3877	132,581.9371	N 89° 41' 03.87" E
WB-1	PI		30+31.851	27° 11' 31.90" LT	7° 05' 59.46"	807.000'	195.176'	382.997'	500,228.5604	132,583.0121	PI
	CC								500,028.9426	133,388.9248	
	PT		32+19.673						500,401.6711	132,673.1578	N 62° 29' 31.96" E
1006	POT	☉ C.R. 132 WB	36+08.447						500,746.4935	132,852.7205	

ALIGNMENT TABULATION											
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y		
☉ SPRING <N_SPRING>											
	PC	☉ SPRINGBROOK	15+00.000						500,582.1019	131,891.7314	N 0° 18' 56.13" W
SP-1	PI		17+98.418	89° 41' 49.68" LT	19° 05' 54.94"	300.000'	298.418'	469.653'	500,580.4582	132,190.1453	PI
	CC								500,282.1065	131,890.0790	
	PT		19+69.653						500,282.0398	132,190.0790	S 89° 59' 14.19" W
	PC		20+59.093						500,192.6003	132,190.0591	S 89° 59' 14.19" W
SP-2	PI		23+59.664	90° 06' 32.50" RT	19° 05' 54.94"	300.000'	300.571'	471.810'	499,892.0289	132,189.9924	PI
	CC								500,192.5337	132,490.0591	
	PT		25+30.902						499,892.5341	132,490.5634	N 0° 05' 46.69" E
1008	POT		26+00.001						499,892.6502	132,559.6615	
	PC		34+46.693						499,898.2690	133,406.3352	N 0° 22' 48.81" E
SP-3	PI		35+26.610	34° 33' 04.00" LT	22° 17' 48.05"	256.970'	79.917'	154.961'	499,898.7993	133,486.2505	PI
	CC								499,641.3047	133,408.0405	
	PT		36+01.654						499,853.9129	133,552.3711	N 34° 10' 15.19" W
1009	POT	☉ SPRINGBROOK	39+69.545						499,647.2819	133,856.7519	

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_AL_P1.dgn 4/27/2010 12:58:34 PM

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PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE: *Curt A. Kobilarsik*
 DATE: 4-28-10 LICENSE NO. 24768

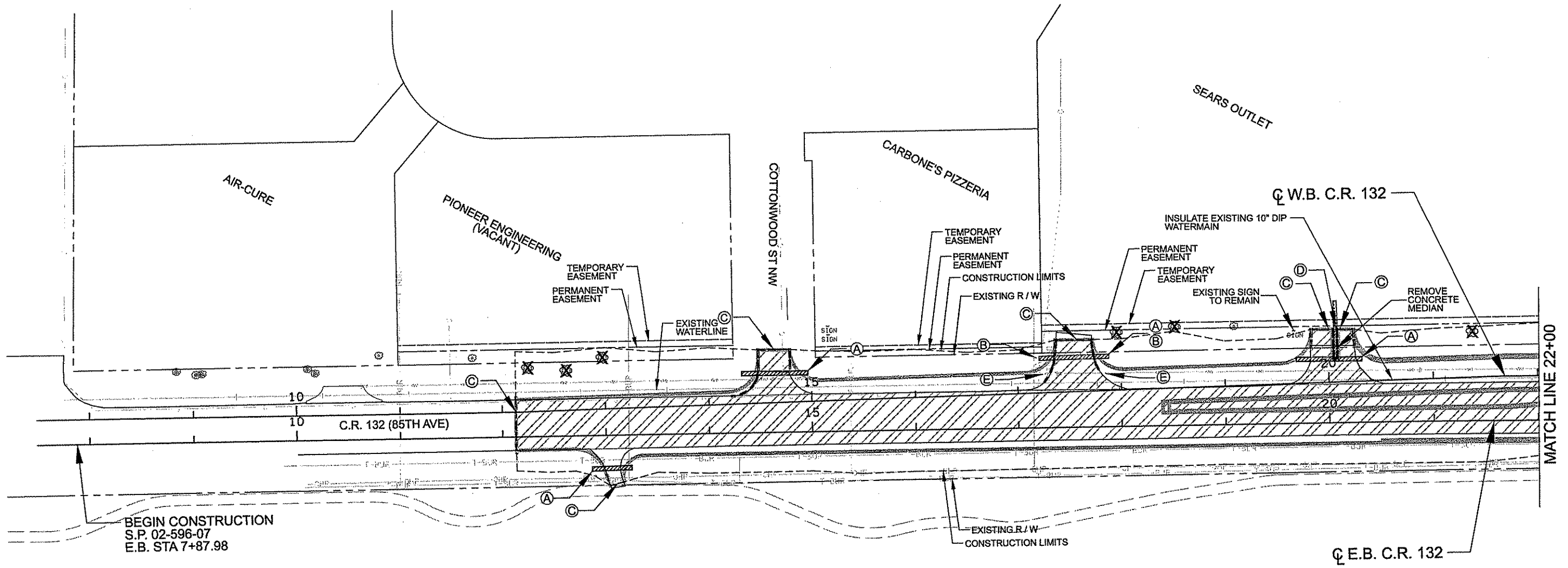
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 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

ALIGNMENT PLAN
 Sheet 27 of 101 Sheets



BEGIN CONSTRUCTION
S.P. 02-596-07
E.B. STA 7+87.98

REMOVAL NOTES

REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

- REMOVAL LEGEND**
- REMOVE BITUMINOUS PAVEMENT
 - MILL BITUMINOUS SURFACE (2.0")
 - REMOVE CONCRETE SIDEWALK OR MEDIAN
 - REMOVE BITUMINOUS WALK OR BITUMINOUS MEDIAN
 - CLEAR & GRUB (ACRE)
 - TREE REMOVAL
 - REMOVE CURB AND GUTTER
 - REMOVE BITUMINOUS CURB
 - CONSTRUCTION LIMITS
 - PROPOSED CURB AND/OR EDGE OF PAVEMENT (FOR REFERENCE ONLY)
 - REMOVE SEWER PIPE (STORM)
 - SOIL BORINGS

THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING AS DIRECTED AND MARKED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL OTHERWISE PROTECT ALL EXISTING TREES NOT SPECIFICALLY MARKED FOR REMOVAL.

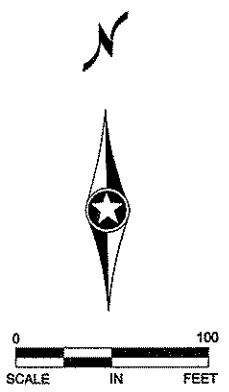
ALL MANHOLES AND CATCH BASINS WILL BE PAID FOR AS "REMOVE DRAINAGE STRUCTURE ITEM 2104.509 CALLED OUT IN REMOVAL PLANS AS MH AND CB. FOR INFORMATION PURPOSES ONLY.

ALL PRIVATE UTILITIES TO BE RELOCATED BY OTHERS AS REQUIRED. SEE IN PLACE UTILITY TABULATION FOR MORE INFORMATION.

ALL ROADWAY SIGNS WITHIN THE CONSTRUCTION LIMITS AND CONFLICTING SIGNS SHALL BE SALVAGED BY THE CONTRACTOR.














CONTRACTOR SHALL MAINTAIN DRAINAGE PATTERNS AS REQUIRED BY THE ENGINEER, REMOVAL OF PIPE CULVERTS AND STRUCTURES SHALL NOT CAUSE FLOODING ON THE PROJECT. TIMING OF THE REMOVALS IS CRITICAL, AS IS THE PLACEMENT OF NEW PIPE CULVERTS.

- NOTES:**
- (A) REMOVE PIPE CULVERT
 - (B) REMOVE PIPE APRON
 - (C) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
 - (D) SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
 - (E) REMOVE BITUMINOUS FLUME
 - (F) REMOVE DRAINAGE STRUCTURE
 - (G) REMOVE SEWER PIPE (STORM)



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: CURT A. KOBIARCSIK SIGNATURE: <i>[Signature]</i> DATE: 4-28-10 LICENSE NO. 24756					DRAWN BY: NJD DATE: 11-17-09 DESIGN BY: DFF DATE: 11-17-09 CHECKED BY: JEO DATE: 11-18-09		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006		REMOVAL PLAN STA 7+87.98 TO 22+00.00 SHEET 28 OF 101 SHEETS	
NO	DATE	BY	CKD	APPR	REVISION							
					4/27/2010							

REMOVAL LEGEND

-  REMOVE BITUMINOUS PAVEMENT
-  MILL BITUMINOUS SURFACE (2.0")
-  REMOVE CONCRETE SIDEWALK OR MEDIAN
-  REMOVE BITUMINOUS WALK OR BITUMINOUS MEDIAN
-  SALVAGE CONCRETE PAVERS
-  CLEAR & GRUB (ACRE)
-  TREE REMOVAL
-  REMOVE CURB AND GUTTER
-  REMOVE BITUMINOUS CURB
-  CONSTRUCTION LIMITS
-  PROPOSED CURB AND/OR EDGE OF PAVEMENT (FOR REFERENCE ONLY)
-  REMOVE SEWER PIPE (STORM)
-  SOIL BORINGS

REMOVAL NOTES

REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

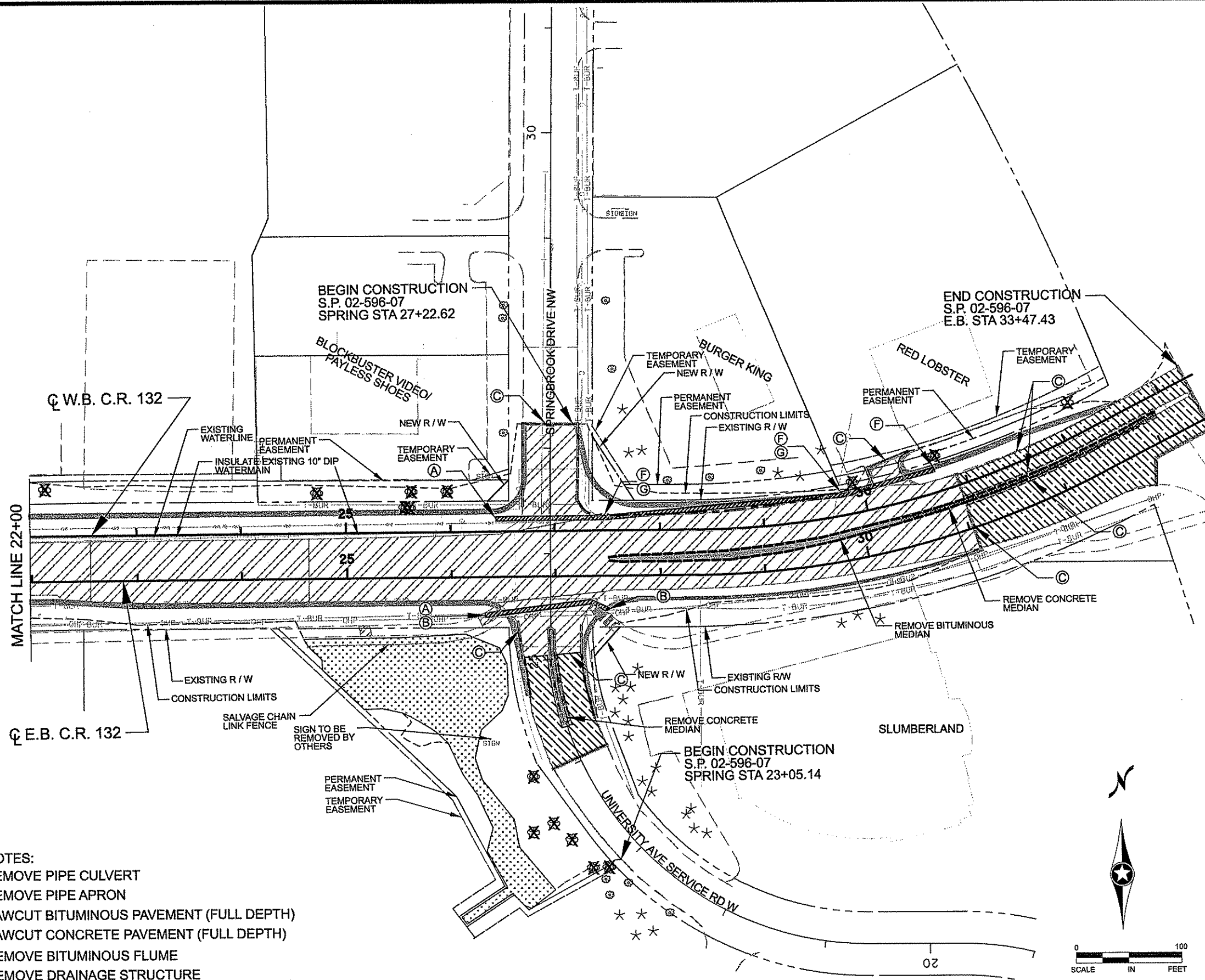
THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING AS DIRECTED AND MARKED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL OTHERWISE PROTECT ALL EXISTING TREES NOT SPECIFICALLY MARKED FOR REMOVAL.

ALL MANHOLES AND CATCH BASINS WILL BE PAID FOR AS "REMOVE DRAINAGE STRUCTURE ITEM 2104.509 CALLED OUT IN REMOVAL PLANS AS MH AND CB. FOR INFORMATION PURPOSES ONLY.

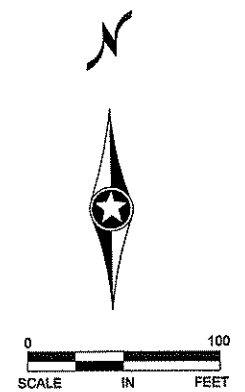
ALL PRIVATE UTILITIES TO BE RELOCATED BY OTHERS AS REQUIRED. SEE IN PLACE UTILITY TABULATION FOR MORE INFORMATION.


ALL ROADWAY SIGNS WITHIN THE CONSTRUCTION LIMITS AND CONFLICTING SIGNS SHALL BE SALVAGED BY THE CONTRACTOR.

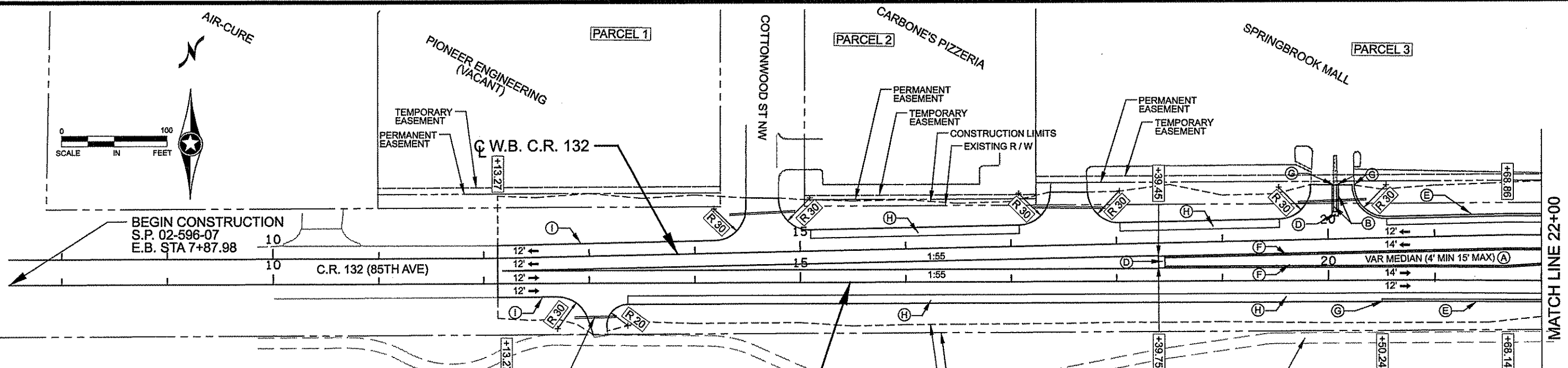
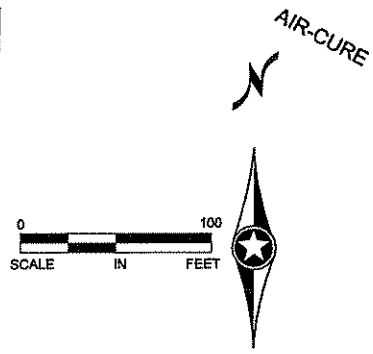
CONTRACTOR SHALL MAINTAIN DRAINAGE PATTERNS AS REQUIRED BY THE ENGINEER, REMOVAL OF PIPE CULVERTS AND STRUCTURES SHALL NOT CAUSE FLOODING ON THE PROJECT. TIMING OF THE REMOVALS IS CRITICAL, AS IS THE PLACEMENT OF NEW PIPE CULVERTS.



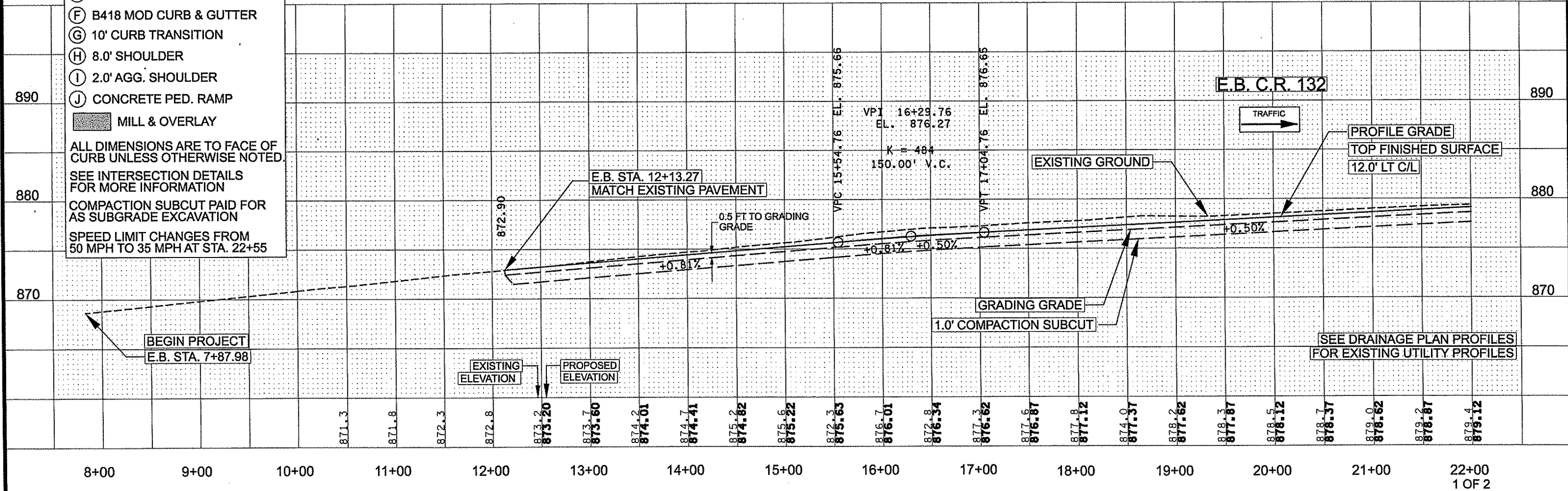
- NOTES:**
- (A) REMOVE PIPE CULVERT
 - (B) REMOVE PIPE APRON
 - (C) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
 - (D) SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
 - (E) REMOVE BITUMINOUS FLUME
 - (F) REMOVE DRAINAGE STRUCTURE
 - (G) REMOVE SEWER PIPE (STORM)



<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>NAME: p:\02-596-07\plan\0259607_RM2.DGN 4/27/2010 12:58:45 PM</p>	NO	DATE	BY	CHKD	APPR	REVISION							<p>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.</p> <p>PRINT NAME: CURT A. KOBLARCSIK SIGNATURE: <i>Curt A. Koblarczik</i> DATE: 4-28-10 LICENSE NO. 24756</p>	<p>DRAWN BY: NJD DATE: 11-17-09 DESIGN BY: DFF DATE: 11-17-09 CHECKED BY: JEO DATE: 11-18-09</p>	 <p>ANOKA COUNTY HIGHWAY DEPT.</p>	<p>STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006</p>	<p>REMOVAL PLAN</p> <p>STA 22+00.00 TO 33+47.43</p> <p>SHEET 29 OF 101 SHEETS</p>
NO	DATE	BY	CHKD	APPR	REVISION												



- CONSTRUCTION NOTES:**
- (A) CONCRETE WALK
 - (B) B624 CURB & GUTTER
 - (C) B618 MOD CURB & GUTTER
 - (D) CONCRETE APPROACH NOSE STD. PLATE 7113
 - (E) B424 CURB & GUTTER
 - (F) B418 MOD CURB & GUTTER
 - (G) 10' CURB TRANSITION
 - (H) 8.0' SHOULDER
 - (I) 2.0' AGG. SHOULDER
 - (J) CONCRETE PED. RAMP
 - MILL & OVERLAY
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
SEE INTERSECTION DETAILS FOR MORE INFORMATION
COMPACTION SUBCUT PAID FOR AS SUBGRADE EXCAVATION
SPEED LIMIT CHANGES FROM 50 MPH TO 35 MPH AT STA. 22+55



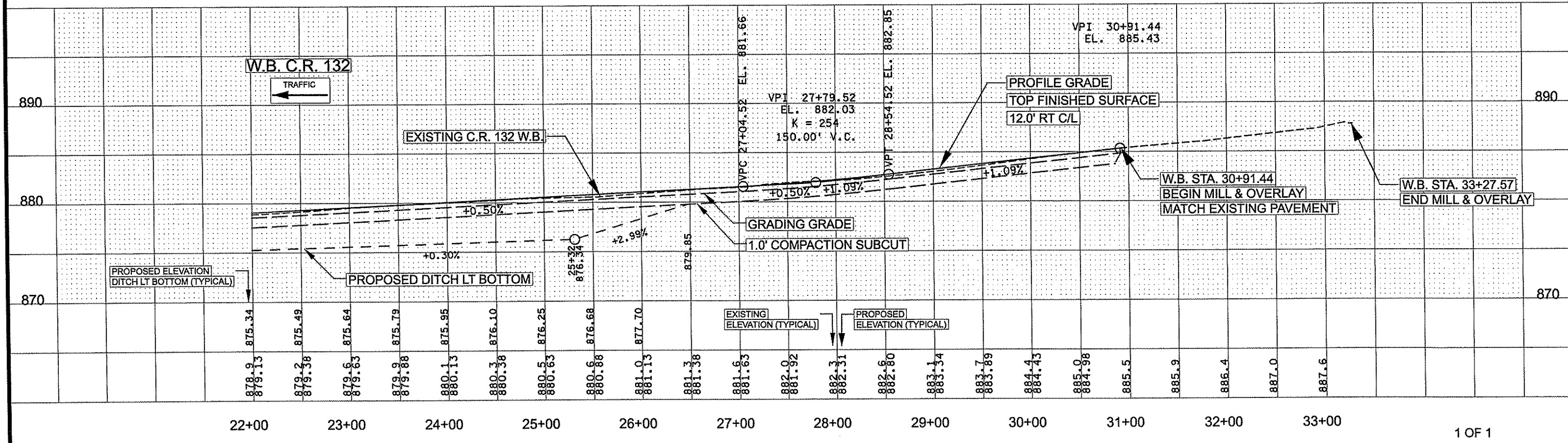
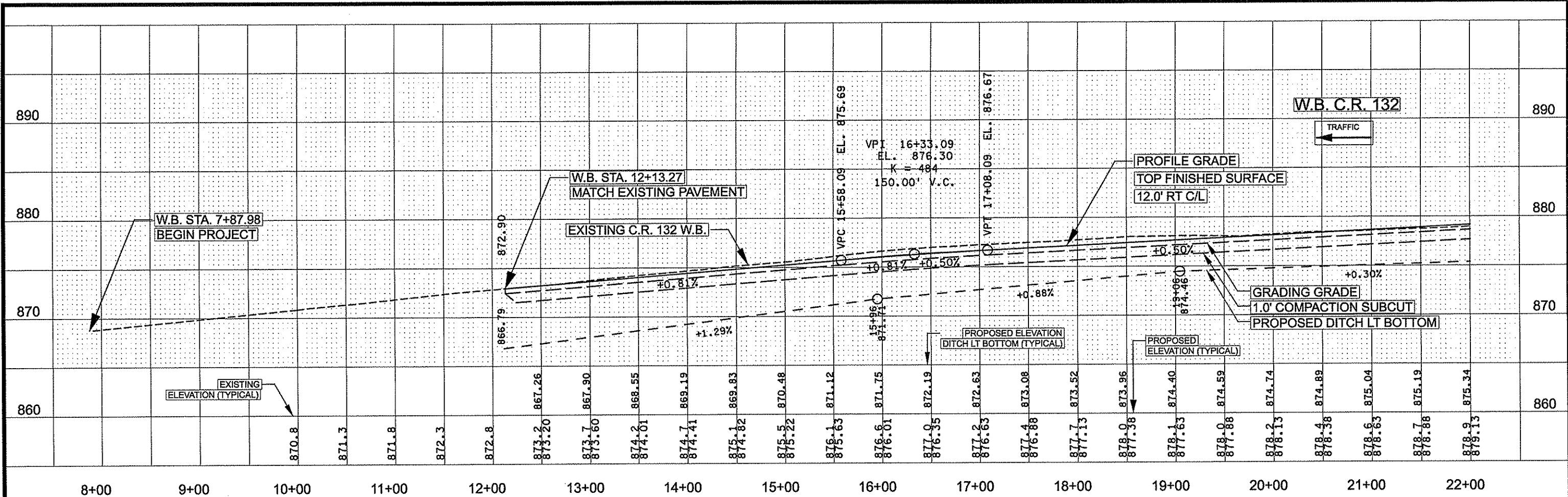
NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\02-596-07\Plan\0259607_PP1.dgn					

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: CURT A. KOBILARCSIK	SIGNATURE: <i>Curt Kobilarcsik</i>
DATE: 4-28-10	LICENSE NO. 24756

DRAWN BY: NJD	DATE: 11-17-09
DESIGN BY: DFF	DATE: 11-17-09
CHECKED BY: JEO	DATE: 11-18-09

ANOKA COUNTY	STATE PROJECT NO. 02-596-07
HIGHWAY DEPT.	STATE PROJECT NO. 106-080-002
	STATE PROJECT NO. 114-130-005
	STATE PROJECT NO. 127-341-006

PLAN AND PROFILE	
STA 7+87.98	TO 22+00.00
Sheet 30	of 101 Sheets



NO	DATE	BY	CHKD	APPR	REVISION
NAME: p102-596-07\plan\0259607_PR_SB.dgn					

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.

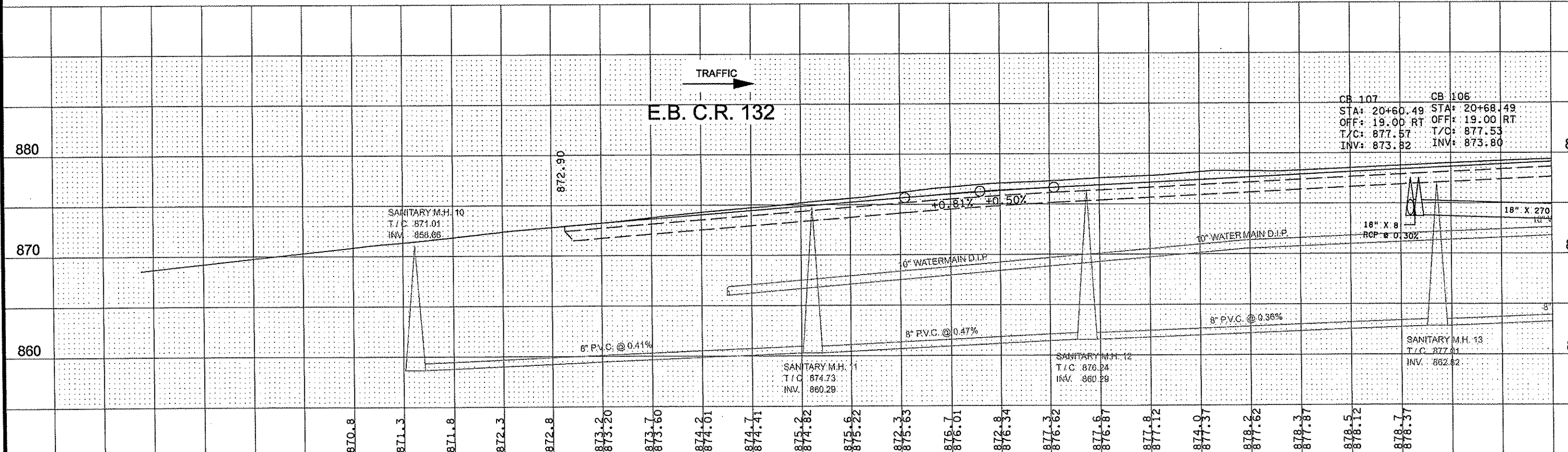
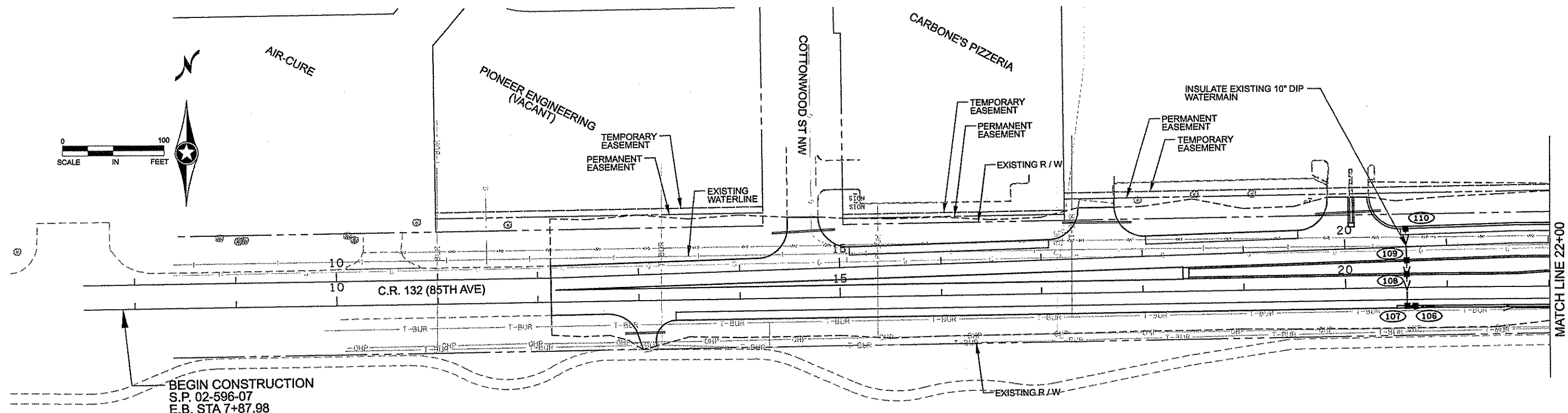
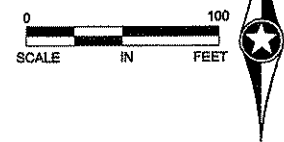
PRINT NAME: CURT A. KOBIARCZIK
 SIGNATURE: *Curt Kobiarcik*
 DATE: 4-28-10 LICENSE NO. 24798

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DJF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

WEST BOUND PROFILE
 STA 7+87.98 TO 33+27.57
 Sheet 32 of 101 Sheets



870.8	871.3	871.8	872.3	872.8	873.20	873.7	874.20	874.7	874.41	875.2	874.82	875.6	875.22	876.3	875.63	876.7	876.01	876.8	876.34	877.3	876.62	877.6	876.87	877.8	877.12	878.0	877.37	878.2	877.62	878.3	877.87	878.5	878.12	878.7	878.37
8+00	9+00	10+00	11+00	12+00	13+00	14+00	15+00	16+00	17+00	18+00	19+00	20+00	21+00	22+00																					

NO	DATE	BY	CHKD	APPR	REVISION	

NAME: p:02-596-07\plan\0259607_DR1.dgn
4/27/2010 12:59:06 PM

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: CURT A. KOBILARCSIK
SIGNATURE: *Curt A. Kobilarsik*
DATE: 4-28-10 LICENSE NO. 24756

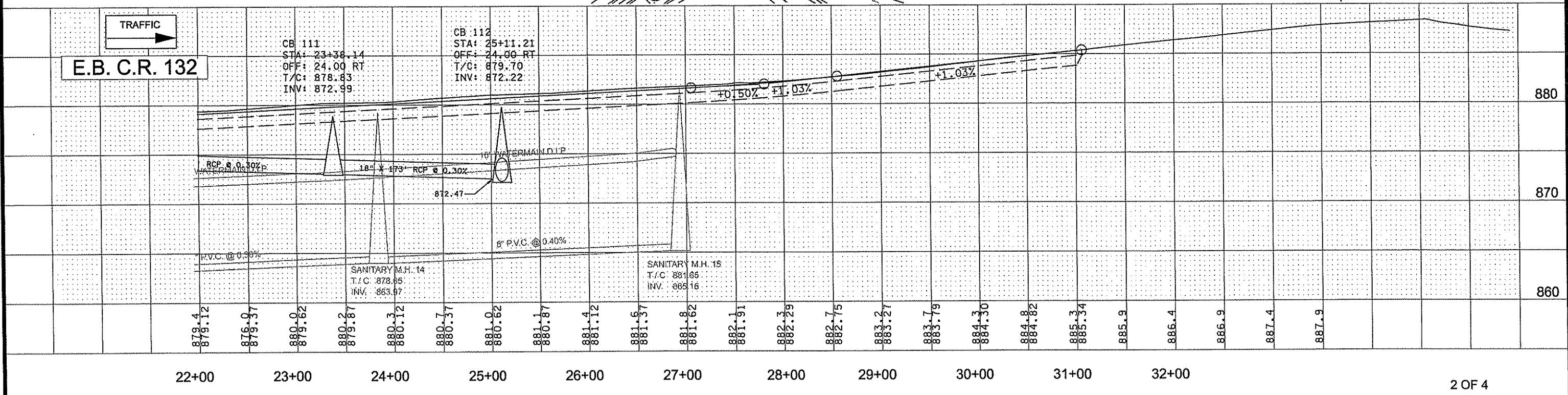
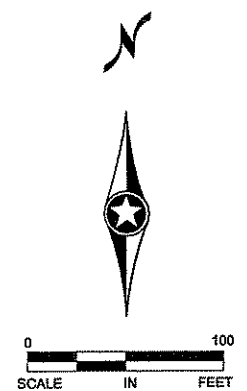
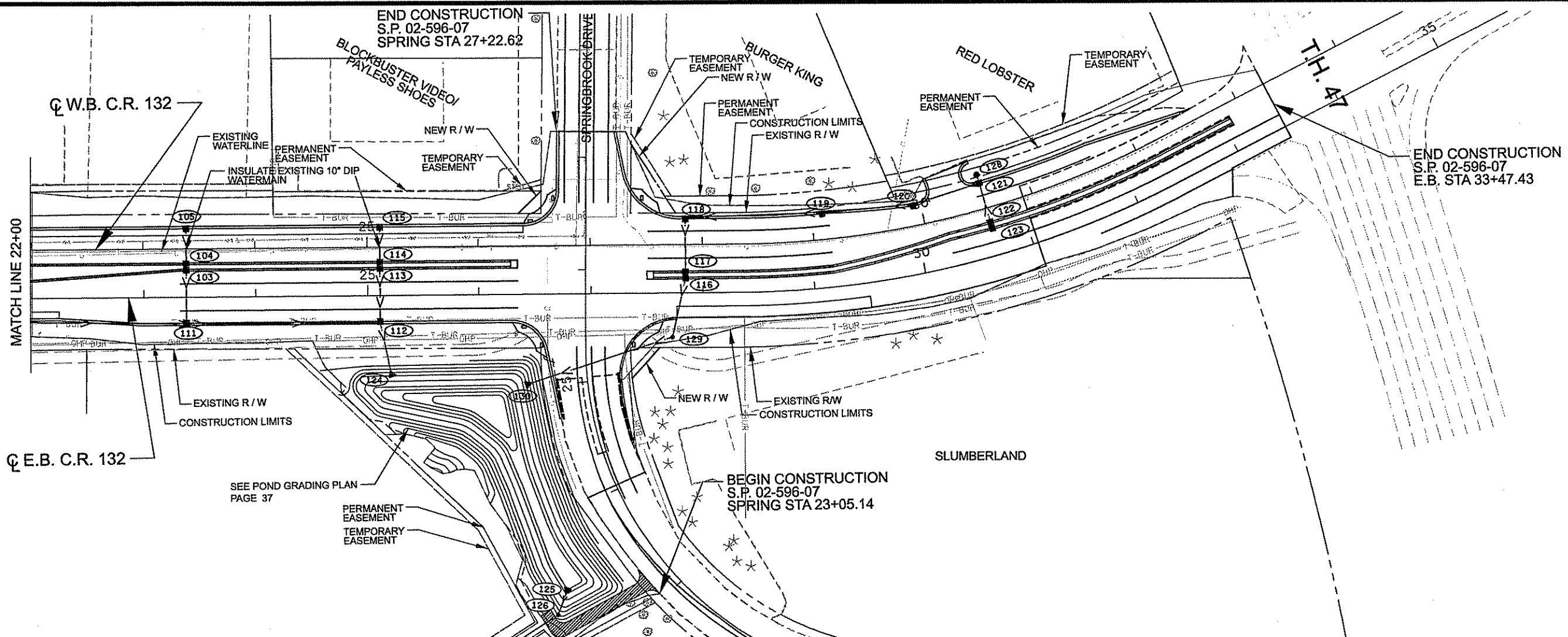
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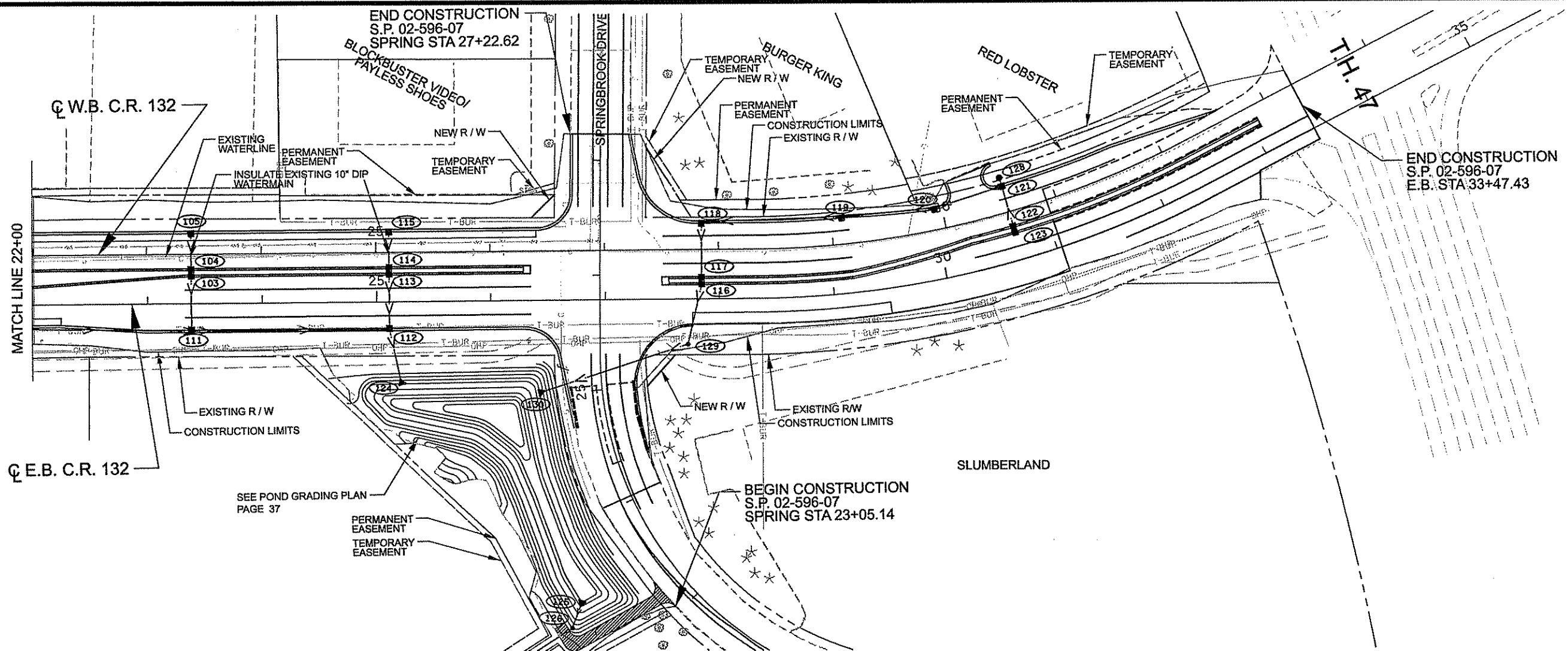
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
STATE PROJECT NO. 106-080-002
STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

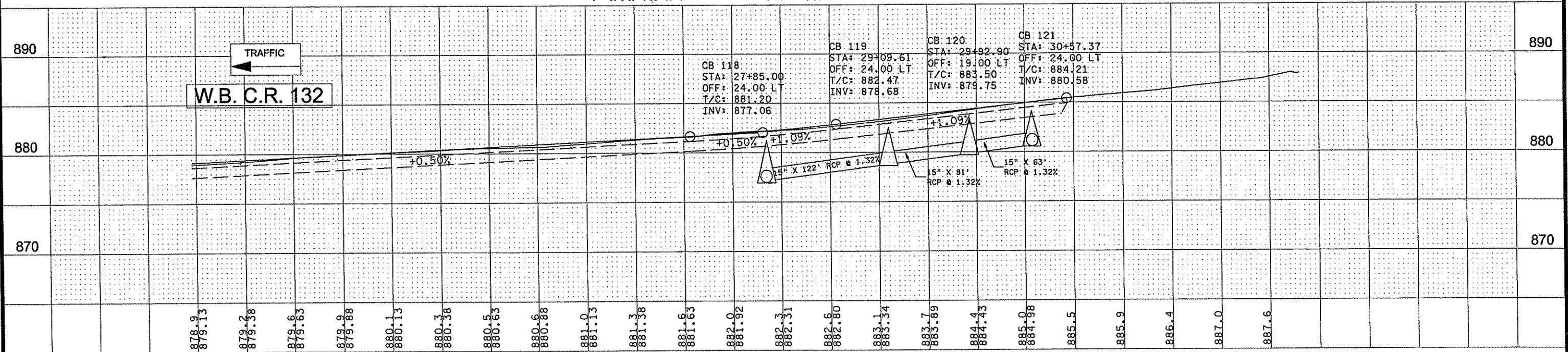
DRAINAGE PLAN
STA 7+87.98 TO 22+00.00
Sheet 33 of 101 Sheets



NO. DATE BY CKD APPR REVISION NAME: p102-596-07\plan10259607_DR2.dgn 4/27/2010 12:59:12 PM		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: CURT A. KOBILARCSIK SIGNATURE: <i>Curt Kobilarcsik</i> DATE: 4-28-10 LICENSE NO. 24756		DRAWN BY: NJD DATE: 11-17-09 DESIGN BY: DFF DATE: 11-17-09 CHECKED BY: JEO DATE: 11-18-09		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006		DRAINAGE PLAN STA 22+00.00 TO 33+47.43 Sheet 34 of 101 Sheets	
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SEE POND GRADING PLAN
PAGE 37

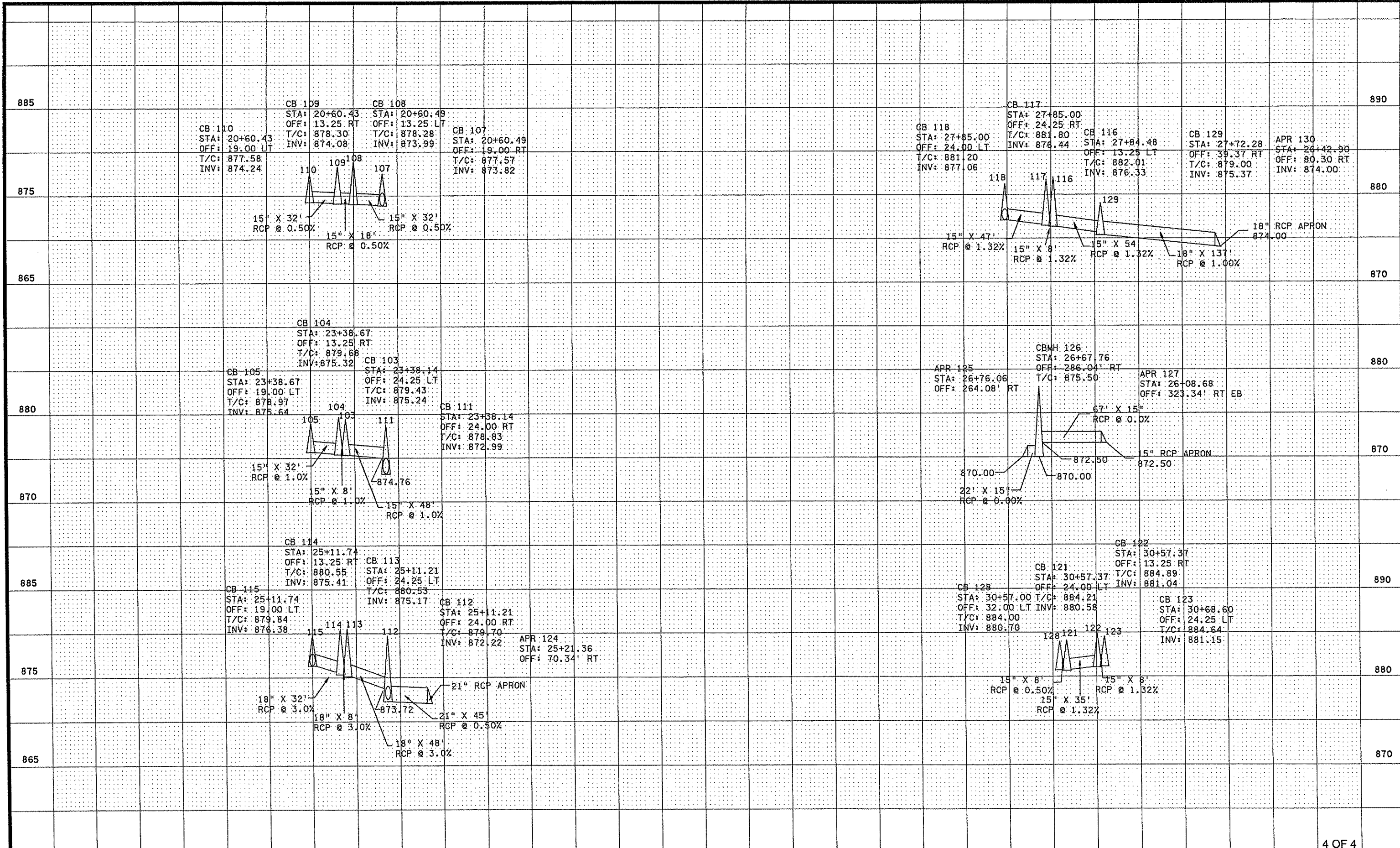


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	22+00	23+00	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00																													

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NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_DR3.dgn 4/27/2010 12:59:18 PM



NO	DATE	BY	CKD	APPR	REVISION
NAME: p102-596-07\plan10259607_DR4.dgn					12:59:23 PM

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: CURT A. KOBIARCSIK
 SIGNATURE: *Curt A. Kobiarcsik*
 DATE: 4-28-10 LICENSE NO. 24758

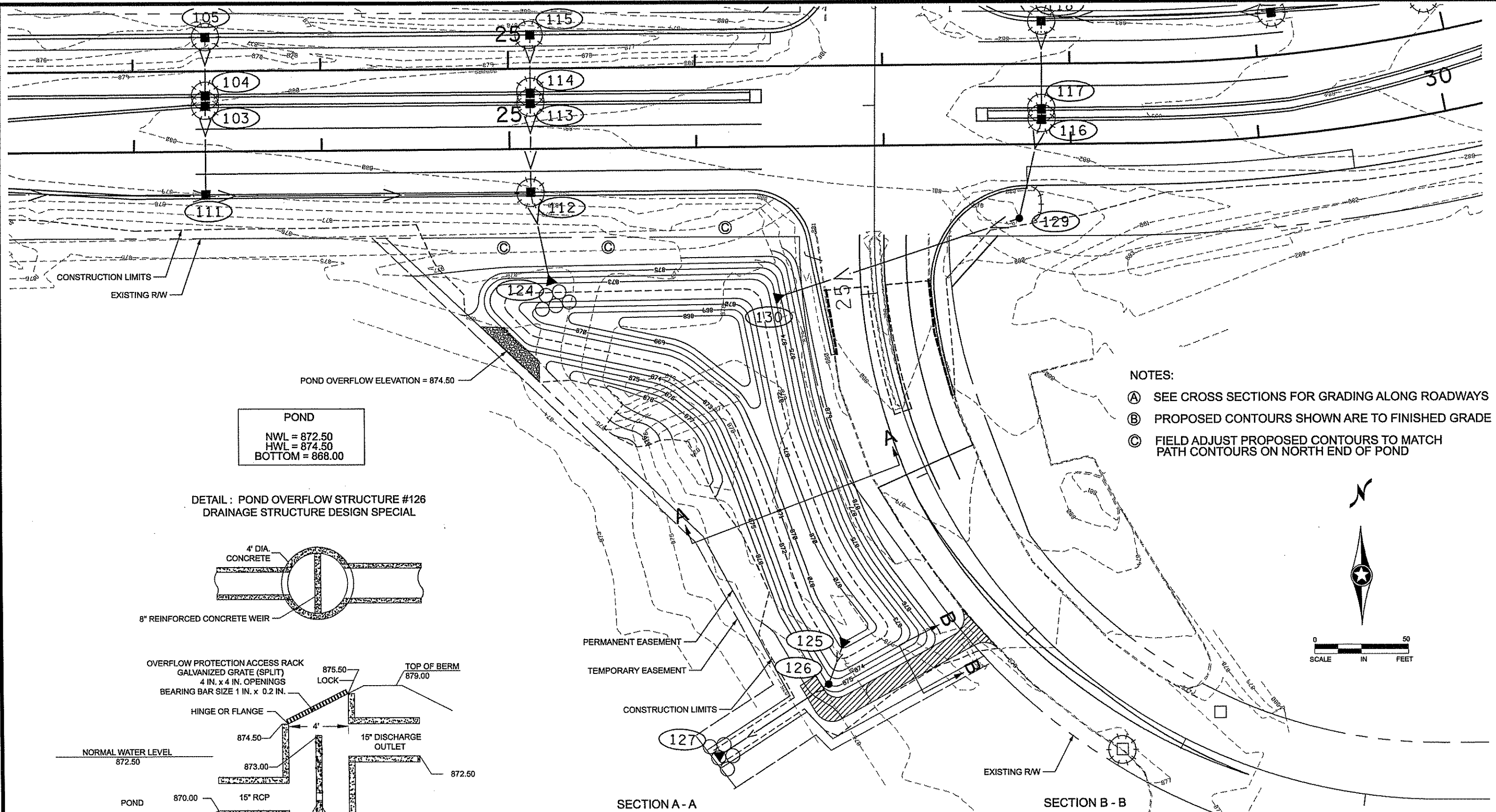
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 CHECKED BY: JEO DATE: 11-18-09



ANOKA COUNTY
HIGHWAY DEPT.

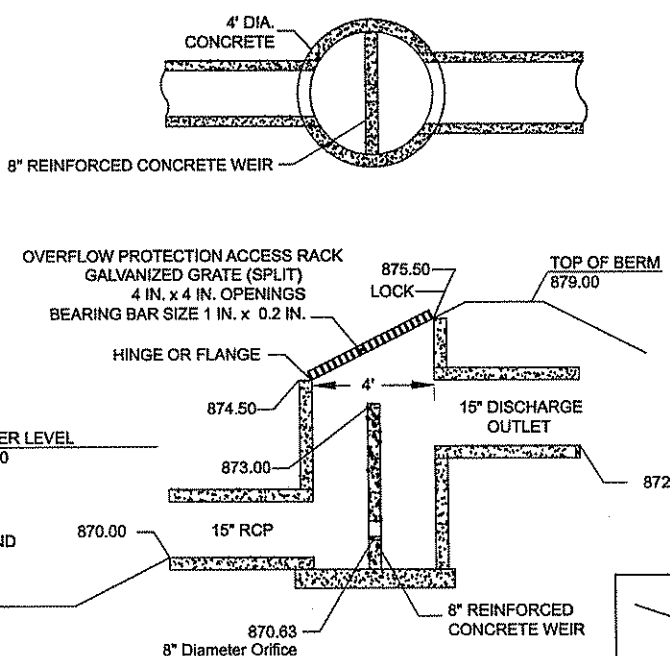
STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

DRAINAGE PROFILES
 Sheet 36 of 101 Sheets



POND
 NWL = 872.50
 HWL = 874.50
 BOTTOM = 868.00

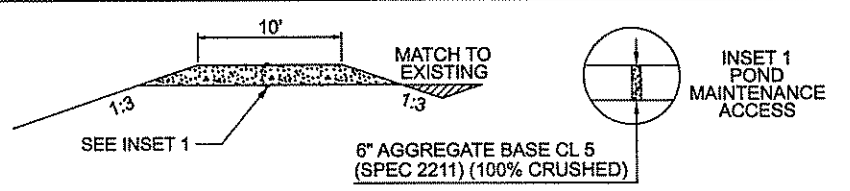
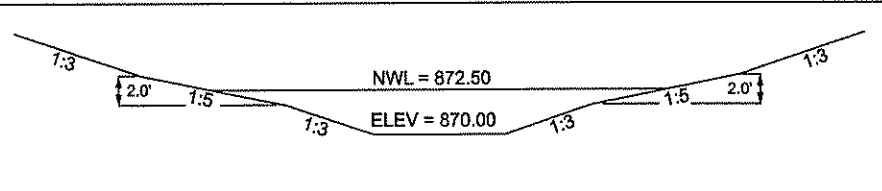
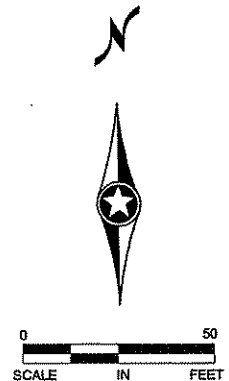
**DETAIL: POND OVERFLOW STRUCTURE #126
 DRAINAGE STRUCTURE DESIGN SPECIAL**



PERMANENT EASEMENT
 TEMPORARY EASEMENT
 CONSTRUCTION LIMITS

SECTION A - A

SECTION B - B



1 OF 1

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_POND.dgn
 12:59:29 PM 4/27/2010

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: CURT A. KOBIARCZAK
 SIGNATURE: *Curt A. Kobiarcsik*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-008

POND GRADING PLAN
 Sheet 37 of 101 Sheets

DRAINAGE TABULATION

P

STRUCTURE NO.		CENTER OF CASTING LOCATION			DRAINAGE STRUCTURES										SODDING						RIPRAP		NOTES			
FLOWS FROM	FLOWS TO	ALIGN.	STATION	OFFSET	TYPE	DESIGN	PAY HEIGHT					CASTING ASSEMBLY TYPE	STEPS REQ'D	TOP OF CASTING ELEV.	OUTLET ELEV.	DOWN-STREAM INLET ELEV.	SLOPE %	15"	15"	18"	18"	21"		21"	SODDING TYPE EROSION SQ YD	RIPRAP CLASS II CU YD
							H	G	F	48-4020	54-4020							RCP CL II LIN FT	RCP APRON EACH	RCP CL II LIN FT	RCP APRON EACH	RCP CL III LIN FT		RCP APRON EACH		
							LIN FT	LIN FT	LIN FT	LIN FT	LIN FT															
103	111	CR 132 EB	23+38.14	24.25 LT	CB	G		4.1				R-3448-C		879.43	875.24	874.76	1.00	48.3								
104	103	CR 132 WB	23+38.67	13.25 RT	CB	G		4.2				R-3448-C		879.68	875.32	875.24	1.00	8.0								
105	104	CR 132 WB	23+38.67	19.00 LT	CB	H	3.2					R-3250-EVSP		878.97	875.64	875.32	1.00	32.3								
106	111	CR 132 EB	20+68.49	19.00 RT	CB	48-4020				3.6		R-3250-EVSP		877.53	873.80	872.99	0.30			269.5						
107	106	CR 132 EB	20+60.49	19.00 RT	CB	48-4020				3.6		R-3250-EVSP		877.57	873.82	873.80	0.30			8.0						1
108	107	CR 132 EB	20+60.49	13.25 LT	CB	G		4.2				R-3448-C		878.28	873.99	873.83	0.50	32.3								
109	108	CR 132 WB	20+60.43	13.25 RT	CB	G		4.1				R-3448-C		878.30	874.08	873.99	0.50	18.0								
110	109	CR 132 WB	20+60.43	19.00 LT	CB	H	3.2					R-3250-EVSP		877.58	874.24	874.08	0.50	32.3								
111	112	CR 132 EB	23+38.14	24.00 RT	CB	F			5.7			R-3250-EVSP	YES	878.83	872.99	872.47	0.30			172.6						
112	124	CR 132 EB	25+11.21	24.00 RT	CB	54-4020				7.4		R-3250-EVSP	YES	879.70	872.22	872.00	0.50				44.9					
113	112	CR 132 EB	25+11.21	24.25 LT	CB	F			5.2			R-3448-C	YES	880.53	875.17	873.72	3.00	48.3								
114	113	CR 132 WB	25+11.74	13.25 RT	CB	F			5.0			R-3448-C	YES	880.55	875.41	875.17	3.00	8.0								
115	114	CR 132 WB	25+11.74	19.00 LT	CB	H	3.3					R-3250-EVSP		879.84	876.38	875.41	3.00	32.3								
116	129	CR 132 EB	27+84.48	13.25 LT	CB	48-4020				5.6		R-3448-C	YES	882.01	876.33	875.62	1.32	54.0								
117	116	CR 132 WB	27+85.00	24.25 RT	CB	G		5.2				R-3448-C	YES	881.80	876.44	876.33	1.32	8.0								
118	117	CR 132 WB	27+85.00	24.00 LT	CB	48-4020				4.0		R-3250-EVSP		881.20	877.06	876.44	1.32	47.3								
119	118	CR 132 WB	29+09.61	24.00 LT	CB	G		3.7				R-3250-EVSP		882.47	878.68	877.06	1.32	122.4								
120	119	CR 132 WB	29+92.90	19.00 LT	CB	G		3.6				R-3250-EVSP		883.50	879.75	878.68	1.32	81.2								
121	120	CR 132 WB	30+57.37	24.00 LT	CB	48-4020				3.5		R-3250-EVSP		884.21	880.58	879.75	1.32	62.9								
122	121	CR 132 WB	30+57.37	13.25 RT	CB	G		3.7				R-3448-C		884.89	881.04	880.58	1.32	35.0								
123	122	CR 132 EB	30+68.60	24.25 LT	CB	H	3.4					R-3448-C		884.64	881.15	881.04	1.32	8.0								
124	POND	CR 132 EB	25+21.36	70.43 RT	APR										872.00	872.00						1	8	6		
125	126	CR 132 EB	26+76.06	264.08 RT	APR										870.00	870.00	0.00	21.6	1							
126	127	CR 132 EB	26+67.76	286.04 RT	SPECIAL	48-4020				7.2			YES	875.50	872.50	872.50	0.00	67.0								
127	WETLAND	CR 132 EB	26+08.68	323.34 RT	APR										872.50	872.50			1				5	3		
128	121	CR 132 WB	30+57.00	32.00 LT	CB	H	3.2					M-8		884.00	880.70	880.66	0.50	8.0								
129	130	CR 132 EB	27+72.28	39.37 RT	CB	48-4020				3.5		M-8		879.00	875.37	874.00	1.00			137.0						
130		CR 132 EB	26+42.90	80.30 RT	APR																					4

PROJECT TOTAL	16.3	32.8	15.9	31.0	7.4	23												775	2	587	1	45	1	13	13
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CASTING ASSEMBLIES SUMMARY

ASSEMBLY	RING OR FRAME	COVER OR	CURB BOX	STANDARD PLATE	QUANTITY	REMARKS
M-8	700-7	721		4101 4140	2	Catch Basin

NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-596-07\plan\0259607_DRT.dgn					

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.

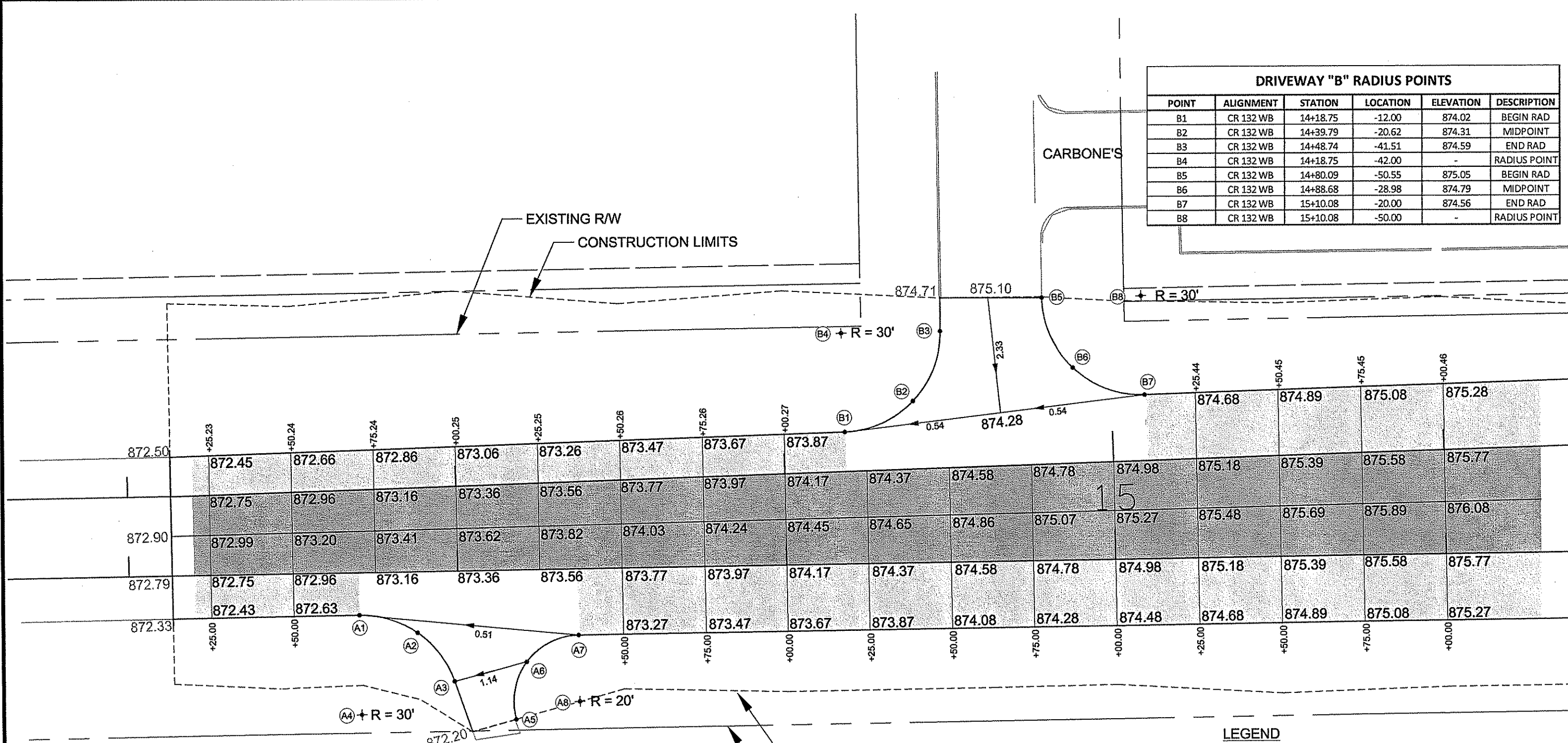
PRINT NAME: CURT A. KOBIARCSIK
 SIGNATURE: *Curt A. Kobiarcsik*
 DATE: 9-28-10 LICENSE NO. 24758

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DJF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

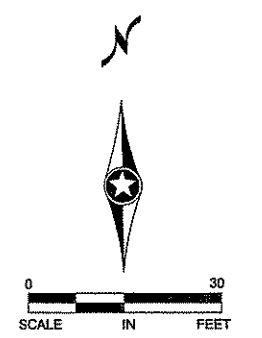
DRIVEWAY "B" RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
B1	CR 132 WB	14+18.75	-12.00	874.02	BEGIN RAD
B2	CR 132 WB	14+39.79	-20.62	874.31	MIDPOINT
B3	CR 132 WB	14+48.74	-41.51	874.59	END RAD
B4	CR 132 WB	14+18.75	-42.00	-	RADIUS POINT
B5	CR 132 WB	14+80.09	-50.55	875.05	BEGIN RAD
B6	CR 132 WB	14+88.68	-28.98	874.79	MIDPOINT
B7	CR 132 WB	15+10.08	-20.00	874.56	END RAD
B8	CR 132 WB	15+10.08	-50.00	-	RADIUS POINT



DRIVEWAY "A" RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
A1	CR 132 EB	12+69.84	12.79	872.80	BEGIN RAD
A2	CR 132 EB	12+87.43	18.40	872.59	MIDPOINT
A3	CR 132 EB	12+98.40	33.24	872.38	END RAD
A4	CR 132 EB	12+69.96	42.79	-	RADIUS POINT
A5	CR 132 EB	13+16.94	45.03	872.13	BEGIN RAD
A6	CR 132 EB	13+20.47	27.77	872.64	MIDPOINT
A7	CR 132 EB	13+36.30	20.00	873.14	END RAD
A8	CR 132 EB	13+36.30	40.00	-	RADIUS POINT

LEGEND

- 999.99 EXISTING SPOT ELEVATION
- 999.99 PROPOSED SPOT ELEVATION
- 2.00 PROPOSED LANE SLOPE (%)
- SAW CUT
- ELEVATIONS ARE TOP OF FINISHED PAVEMENT
- CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED
- 2.00% CROSS SLOPE
- 2.50% CROSS SLOPE



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_IN_P1.dgn

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: CURT A. KOBILARCSIK

SIGNATURE: *Curt Kobilarsik*

DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09

DESIGN BY: DFF DATE: 11-17-09

CHECKED BY: JEO DATE: 11-18-09



STATE PROJECT NO. 02-596-07

STATE PROJECT NO. 106-080-002

STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

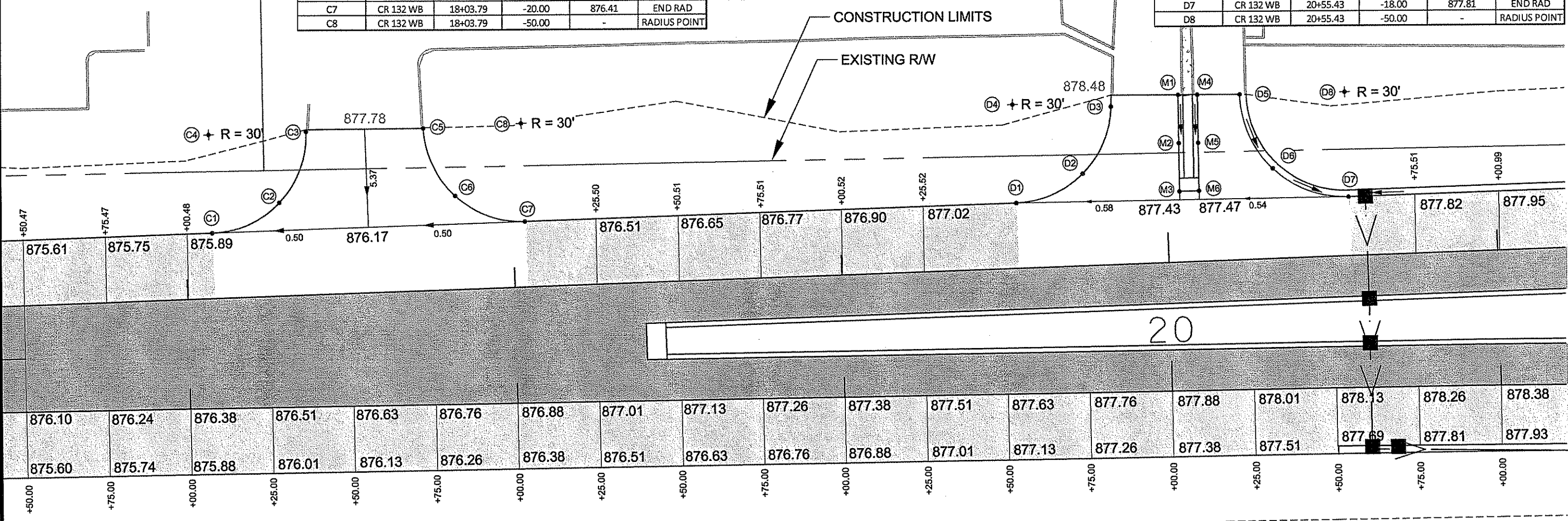
INTERSECTION DETAILS

Sheet 39 of 101 Sheets

DRIVEWAY "C" RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
C1	CR 132 WB	17+08.12	-20.00	875.93	BEGIN RAD
C2	CR 132 WB	17+29.06	-28.52	876.50	MIDPOINT
C3	CR 132 WB	17+38.14	-50.45	877.37	END RAD
C4	CR 132 WB	17+08.12	-50.00	-	RADIUS POINT
C5	CR 132 WB	17+73.79	-49.56	877.71	BEGIN RAD
C6	CR 132 WB	17+82.73	-28.63	877.06	MIDPOINT
C7	CR 132 WB	18+03.79	-20.00	876.41	END RAD
C8	CR 132 WB	18+03.79	-50.00	-	RADIUS POINT

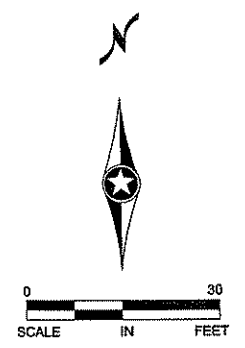
MEDIAN "M" POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
M1	CR 132 WB	20+04.70	-51.02	878.70	BEGIN MEDIAN
M2	CR 132 WB	20+04.37	-36.31	878.11	MIDPOINT
M3	CR 132 WB	20+04.03	-21.61	877.53	MEDIAN NOSE
M4	CR 132 WB	20+10.57	-50.86	878.69	BEGIN MEDIAN
M5	CR 132 WB	20+10.28	-36.21	878.13	MIDPOINT
M6	CR 132 WB	20+09.98	-21.56	877.57	MEDIAN NOSE

DRIVEWAY "D" RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
D1	CR 132 WB	19+54.17	-20.00	877.16	BEGIN RAD
D2	CR 132 WB	19+74.75	-28.52	877.78	MIDPOINT
D3	CR 132 WB	19+84.12	-48.25	878.39	END RAD
D4	CR 132 WB	19+54.17	-50.00	-	RADIUS POINT
D5	CR 132 WB	20+23.43	-50.42	878.61	BEGIN RAD
D6	CR 132 WB	20+32.65	-27.52	878.21	MIDPOINT
D7	CR 132 WB	20+55.43	-18.00	877.81	END RAD
D8	CR 132 WB	20+55.43	-50.00	-	RADIUS POINT



LEGEND

- 999.99 EXISTING SPOT ELEVATION
- 999.99 PROPOSED SPOT ELEVATION
- 2.00 PROPOSED LANE SLOPE (%)
- SAW CUT
- ELEVATIONS ARE TOP OF FINISHED PAVEMENT
- CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED
- 2.00% CROSS SLOPE
- 2.50% CROSS SLOPE

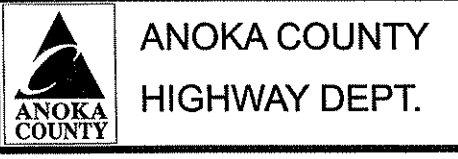


NO	DATE	BY	CHKD	APPR	REVISION

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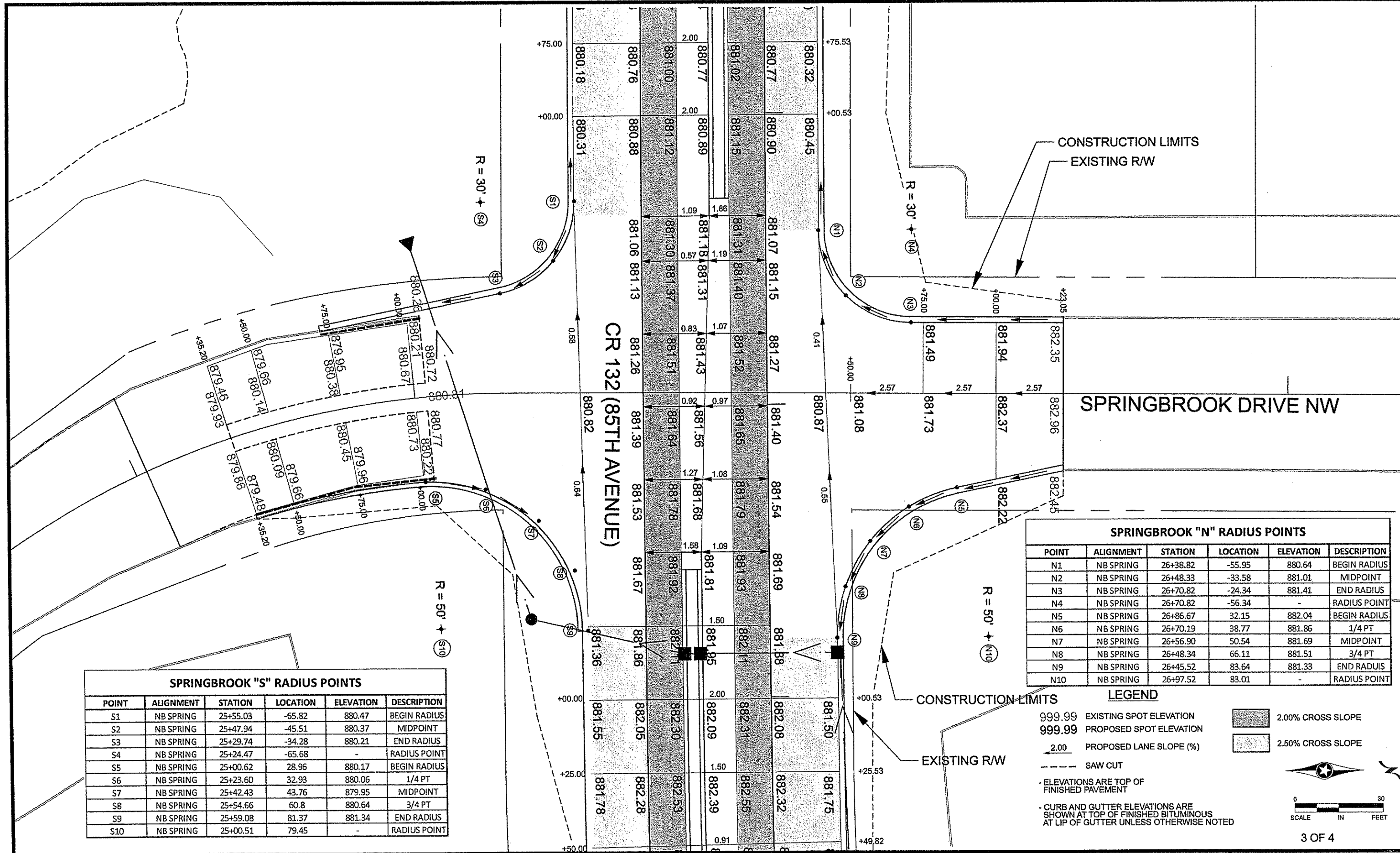
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE: *[Signature]*
 DATE: 4.28.10 LICENSE NO. 24758

DRAWN BY: NJD DATE: 11-17-09
 DESIGN BY: DFF DATE: 11-17-09
 CHECKED BY: JEO DATE: 11-18-09



STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

INTERSECTION DETAILS
 Sheet 40 of 101 Sheets



SPRINGBROOK "S" RADIUS POINTS

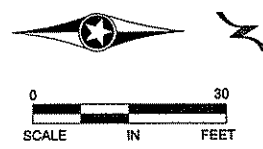
POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
S1	NB SPRING	25+55.03	-65.82	880.47	BEGIN RADIUS
S2	NB SPRING	25+47.94	-45.51	880.37	MIDPOINT
S3	NB SPRING	25+29.74	-34.28	880.21	END RADIUS
S4	NB SPRING	25+24.47	-65.68	-	RADIUS POINT
S5	NB SPRING	25+00.62	28.96	880.17	BEGIN RADIUS
S6	NB SPRING	25+23.60	32.93	880.06	1/4 PT
S7	NB SPRING	25+42.43	43.76	879.95	MIDPOINT
S8	NB SPRING	25+54.66	60.8	880.64	3/4 PT
S9	NB SPRING	25+59.08	81.37	881.34	END RADIUS
S10	NB SPRING	25+00.51	79.45	-	RADIUS POINT

SPRINGBROOK "N" RADIUS POINTS

POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
N1	NB SPRING	26+38.82	-55.95	880.64	BEGIN RADIUS
N2	NB SPRING	26+48.33	-33.58	881.01	MIDPOINT
N3	NB SPRING	26+70.82	-24.34	881.41	END RADIUS
N4	NB SPRING	26+70.82	-56.34	-	RADIUS POINT
N5	NB SPRING	26+86.67	32.15	882.04	BEGIN RADIUS
N6	NB SPRING	26+70.19	38.77	881.86	1/4 PT
N7	NB SPRING	26+56.90	50.54	881.69	MIDPOINT
N8	NB SPRING	26+48.34	66.11	881.51	3/4 PT
N9	NB SPRING	26+45.52	83.64	881.33	END RADIUS
N10	NB SPRING	26+97.52	83.01	-	RADIUS POINT

LEGEND

- 999.99 EXISTING SPOT ELEVATION
- 999.99 PROPOSED SPOT ELEVATION
- 2.00 PROPOSED LANE SLOPE (%)
- SAW CUT
- ELEVATIONS ARE TOP OF FINISHED PAVEMENT
- CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED
- 2.00% CROSS SLOPE
- 2.50% CROSS SLOPE



NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_IN_P3.dgn
4/27/2010 12:58:48 PM

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: CURT A. KOBILARCSIK
SIGNATURE: *Curt A. Kobilarsik*
DATE: 4-28-10 LICENSE NO. 24758

DRAWN BY: NJD DATE: 11-17-09
DESIGN BY: DFF DATE: 11-17-09
CHECKED BY: JEO DATE: 11-18-09

ANOKA COUNTY
HIGHWAY DEPT.

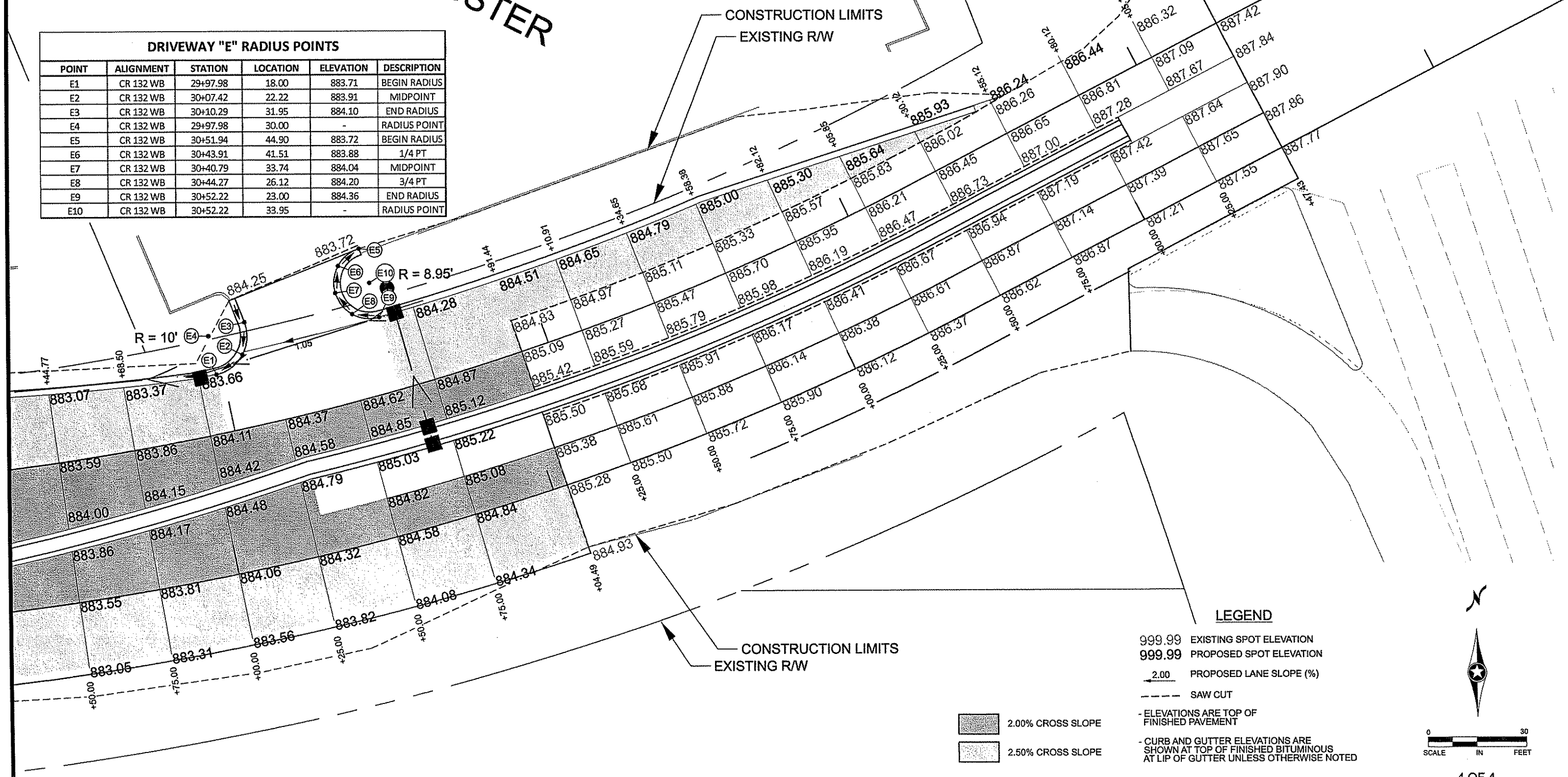
STATE PROJECT NO. 02-596-07
STATE PROJECT NO. 106-080-002
STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

INTERSECTION DETAILS
Sheet 41 of 101 Sheets

RED LOBSTER

END CONSTRUCTION
S.P. 02-596-07
E.B. STA 33+47.43

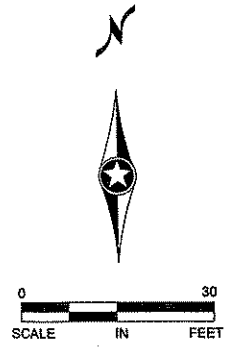
DRIVEWAY "E" RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
E1	CR 132 WB	29+97.98	18.00	883.71	BEGIN RADIUS
E2	CR 132 WB	30+07.42	22.22	883.91	MIDPOINT
E3	CR 132 WB	30+10.29	31.95	884.10	END RADIUS
E4	CR 132 WB	29+97.98	30.00	-	RADIUS POINT
E5	CR 132 WB	30+51.94	44.90	883.72	BEGIN RADIUS
E6	CR 132 WB	30+43.91	41.51	883.88	1/4 PT
E7	CR 132 WB	30+40.79	33.74	884.04	MIDPOINT
E8	CR 132 WB	30+44.27	26.12	884.20	3/4 PT
E9	CR 132 WB	30+52.22	23.00	884.36	END RADIUS
E10	CR 132 WB	30+52.22	33.95	-	RADIUS POINT



LEGEND

- 999.99 EXISTING SPOT ELEVATION
- 999.99 PROPOSED SPOT ELEVATION
- 2.00 PROPOSED LANE SLOPE (%)
- SAW CUT
- ELEVATIONS ARE TOP OF FINISHED PAVEMENT
- CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED

- 2.00% CROSS SLOPE
- 2.50% CROSS SLOPE



NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_IN_P4.dgn
4/27/2010 12:59:54 PM

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: CURT A. KOBIARCSIK
SIGNATURE: *Curt A. Kobiarcsik*
DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 11-17-09
DESIGN BY: OFF DATE: 11-17-09
CHECKED BY: JEO DATE: 11-18-09

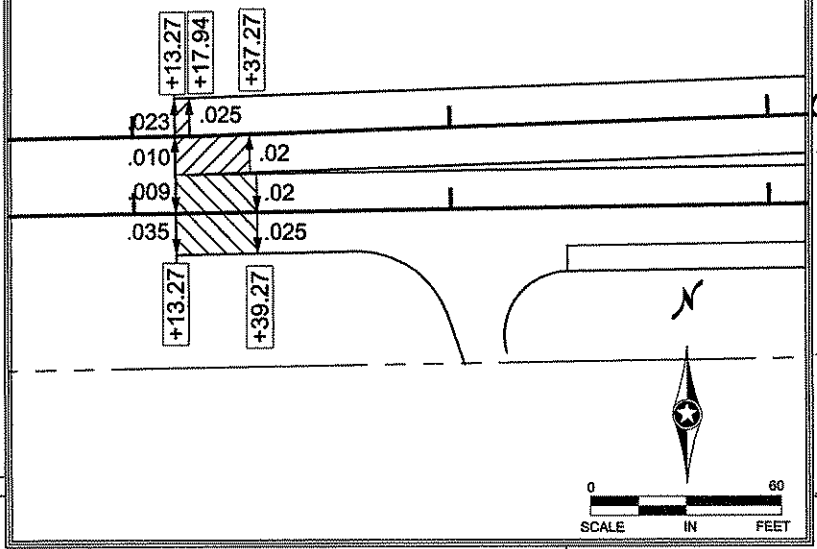
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
STATE PROJECT NO. 106-080-002
STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

INTERSECTION DETAILS

Sheet 42 of 101 Sheets

WEST PROJECT LIMITS



CKBUSTER VIDEO/
YLESS SHOES

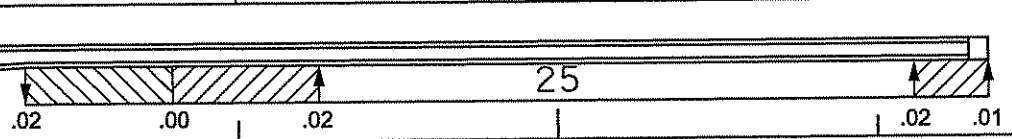
SPRINGBROOK DRIVE NW

BURGER KING

RED LOBSTER

☉ W.B. C.R. 132

SEE SHEET 41 FOR
FOR INTERSECTION DETAIL



☉ E.B. C.R. 132

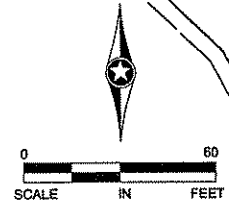
SLUMBERLAND

UNIVERSITY AVE SERVICE RD W

- NOTES:**
1. ALL CROSS SLOPES ARE IN FEET PER FOOT
 2. STATIONING FOR EAST BOUND CR 132 BASED ON EAST BOUND ALIGNMENT
 3. STATIONING FOR WEST BOUND CR 132 BASED ON WEST BOUND ALIGNMENT
 4. SEE INTERSECTION DETAIL PLANS FOR MORE INFORMATION.

LEGEND:

SUPERELEVATION TRANSITION



NO	DATE	BY	CHKD	APPR	REVISION	
NAME: p:\02-596-07\plan\0259607_SE1.dgn					4/27/2010	1:00:00 PM

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PRINT NAME: CURT A. KOBILARCSIK
SIGNATURE: *Curt A. Kobilarsik*
DATE: 4-28-10 LICENSE NO. 24756

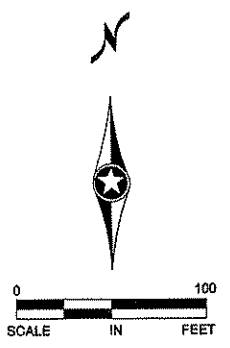
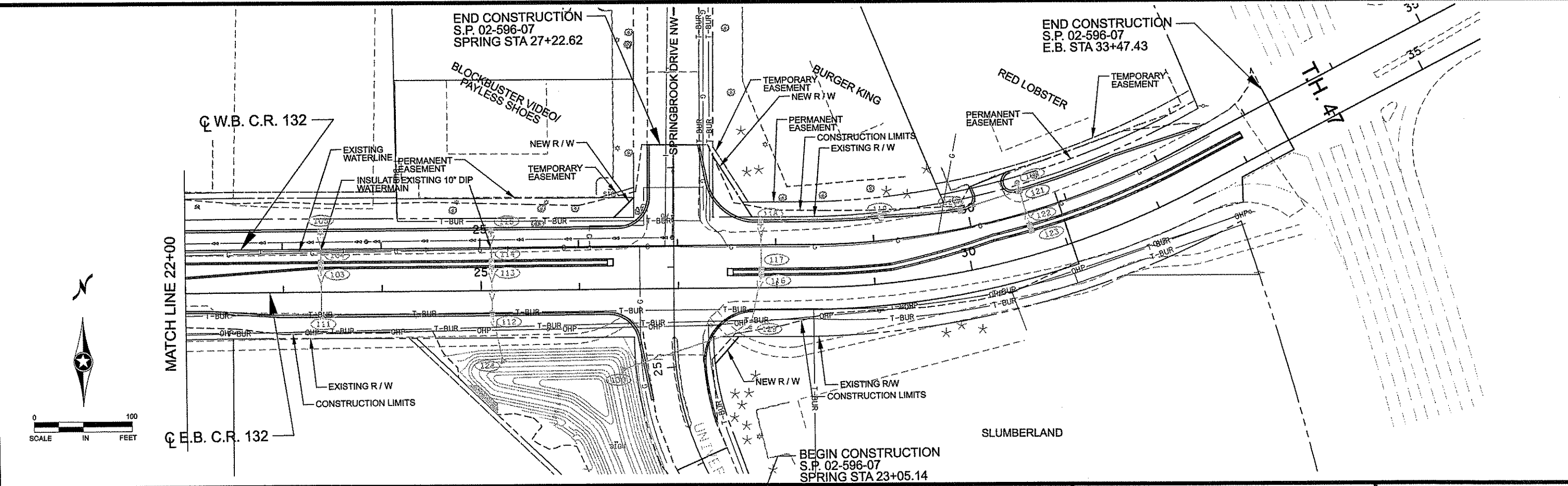
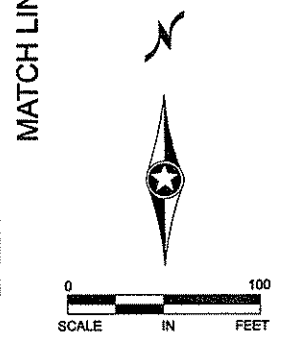
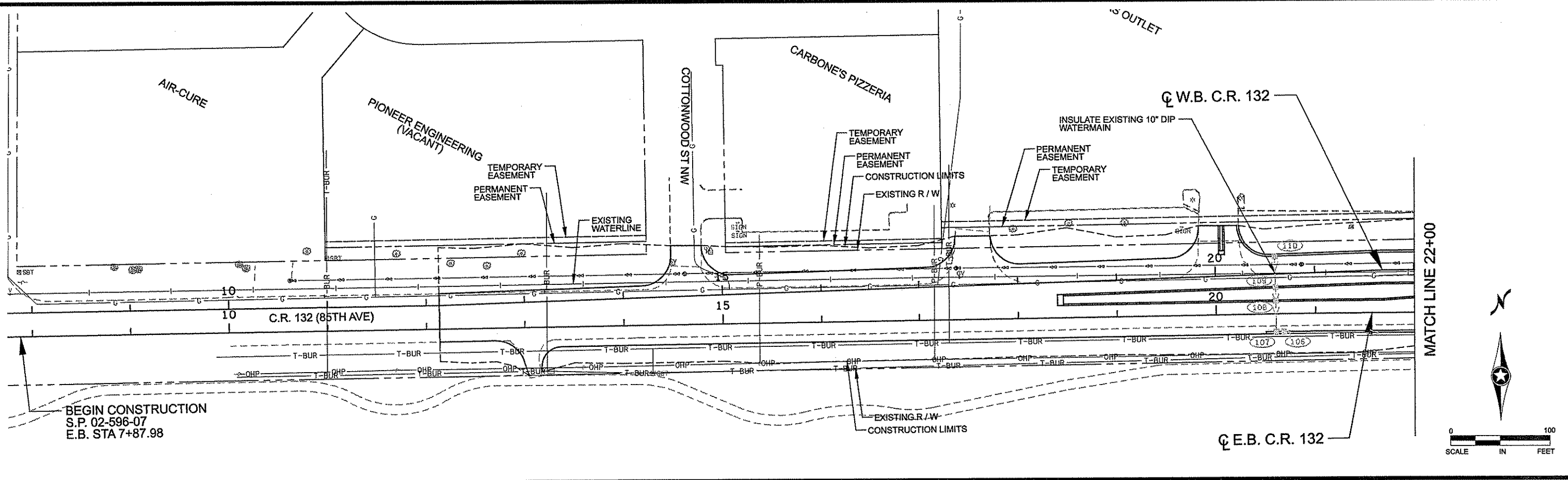
DRAWN BY: NJD DATE: 11-17-09
DESIGN BY: DFF DATE: 11-17-09
CHECKED BY: JEO DATE: 11-18-09

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
STATE PROJECT NO. 106-080-002
STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

SUPERELEVATION PLAN

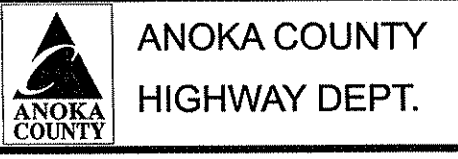
Sheet 43 of 101 Sheets



NO	DATE	BY	CHKD	APPR	REVISION
NAME: p:\02-596-07\plan\0259607_UT_P1.dgn					

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.
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STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

UTILITY PLAN
 Sheet 44 of 101 Sheets

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Project Description

SP 02-596-07 consists of grading, bituminous surfacing, and storm sewer modifications. This project is located in the cities of Blaine, Coon Rapids, and Fridley in Anoka County. Construction activities include excavation and grading for a northward expansion of CR 132. The main receiving water from this project will be the Mississippi River.

Site Maps

In addition to what is located within this plan, existing and proposed site maps have been created and kept on file with the Anoka County Highway Department. The site maps are roll maps that show project limits, alignment, soil types, existing and proposed contours, drainage areas, storm sewer locations, flow arrows, and impervious surface. If applicable, impaired waters and wetlands are also shown.

Environmentally Sensitive Areas

There are no impacted wetlands within the project limits. Additionally, there are no Impaired or Special Waters within this project's limits.

Outstanding Resource Value Waters

There are no outstanding resource value waters within the project limits.

Calcareous Fens

There are no calcareous fens within the project limits.

TMDL Implementation Plans Containing Storm Water Requirements

No TMDL Implementation Plans currently exist for the receiving waters on this project.

Land Feature Changes

Total Project Area Disturbed:	6.85 acres
Total Existing Impervious Surface:	3.32 acres
Total Existing Pervious Surface:	3.53 acres
Total Proposed Impervious Surface:	4.28 acres
Total Proposed Pervious Surface:	2.57 acres

Timing of BMP Installation

The erosion prevention and sediment control BMP's shall be installed as necessary to minimize erosion from disturbed surfaces and capture sediment on site, and shall meet the NPDES Permit Part IV Construction Activity Requirements. All silt fence used for containment shall be installed prior to grading operations.

Drainage Calculations

Computations are kept on file with the Anoka County Highway Department. Changes in the field should be discussed with the Project Manager and noted in the Contractor's log.

Project Contacts

The Project Engineer and the Contractor are responsible for implementation of the SWPPP and the installation, inspection, and maintenance of the erosion prevention and sediment control BMPs before and during construction. Anoka County and the Cities of Blaine and Coon Rapids are responsible for long term operation and maintenance of the permanent storm water management system.

Anoka County Project Manager:
Douglas W Fischer, PE
Anoka County Engineer
1440 Bunker Lake Boulevard NW
Andover, MN 55304
(763) 862-4200

MPCA 24 HOUR EMERGENCY NOTIFICATION:

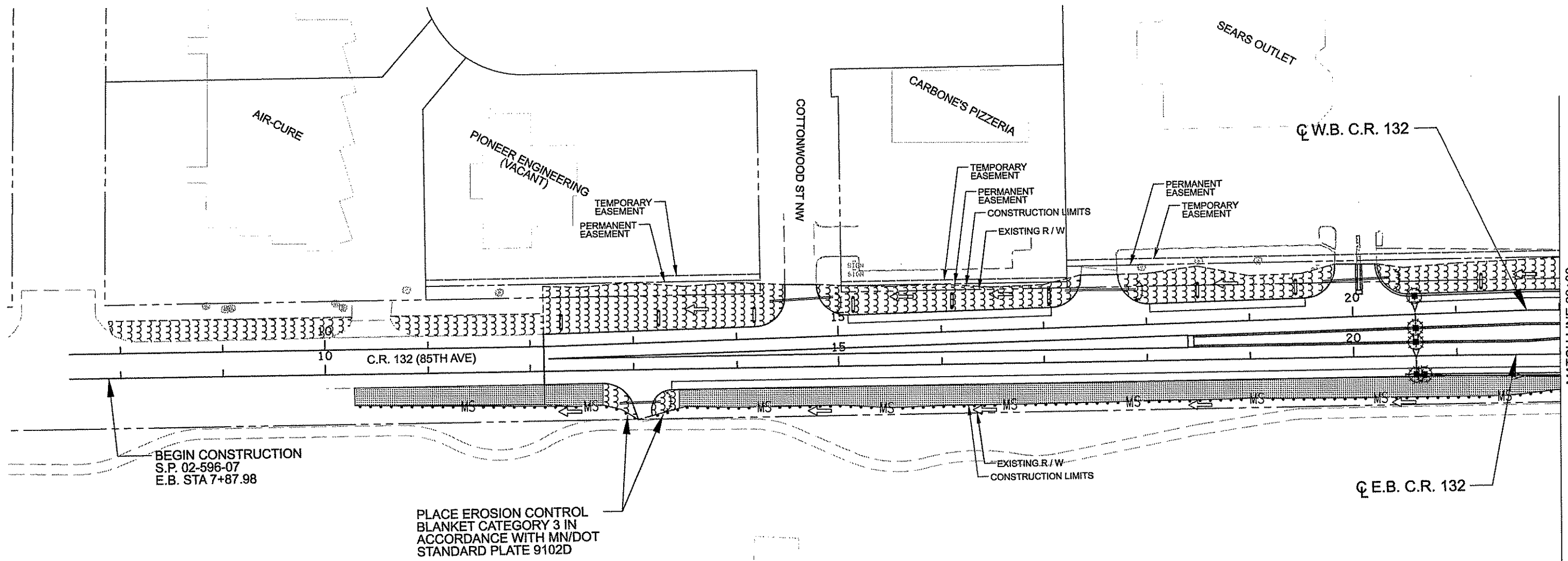
651-649-5451
800-422-0798

Construction Notes

Construction shall be governed by MN/DOT Spec Book and the special provisions. The contractor shall keep the inspection and maintenance log.

Description	Plan Sheet Title	Location
Temporary Erosion Control	Erosion Control Plan	Sheet No. 47 - 48
Permanent Erosion Control	Erosion Control Plan & Turf Establishment Plan	Sheet No. 47 - 48
		& 56 - 57
Direction of Flow	Erosion Control Plan	Sheet No. 47 - 48
Final Stabilization	Turf Establishment Plan	Sheet No. 56 - 57
Drainage Structures	Drainage Plan	Sheet No. 33 - 37
Drainage Tabulation	Drainage Tabulation	Sheet No. 38
Drainage Profile Sheets	Drainage Plan	Sheet No. 33 - 37
Erosion Control Details	Erosion Control Plan	Sheet No. 47 - 48
Turf Establishment / Erosion	Erosion Control Plan & Turf Establishment Plan	Sheet No. 47 - 48
		& 56 - 57

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO	DATE	BY	CHKD	APPR	REVISION							<p style="font-size: 8px;">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.</p> <p>PRINT NAME: CURT A. KOBILARCSIK SIGNATURE: <i>[Signature]</i> DATE: 4-28-10 LICENSE NO. 24756</p>	<p>DRAWN BY: NJD DATE: 11-17-09 DESIGN BY: DFF DATE: 11-17-09 CHECKED BY: JEO DATE: 11-18-09</p>	<p>ANOKA COUNTY HIGHWAY DEPT.</p>	<p>STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006</p>	<p style="text-align: center;">SWPPP NARRATIVE</p> <hr/> <p style="text-align: center;">Sheet 45 of 101 Sheets</p>
NO	DATE	BY	CHKD	APPR	REVISION												



BEGIN CONSTRUCTION
S.P. 02-596-07
E.B. STA 7+87.98

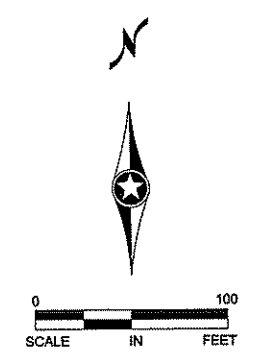
PLACE EROSION CONTROL
BLANKET CATEGORY 3 IN
ACCORDANCE WITH MN/DOT
STANDARD PLATE 9102D

LEGEND

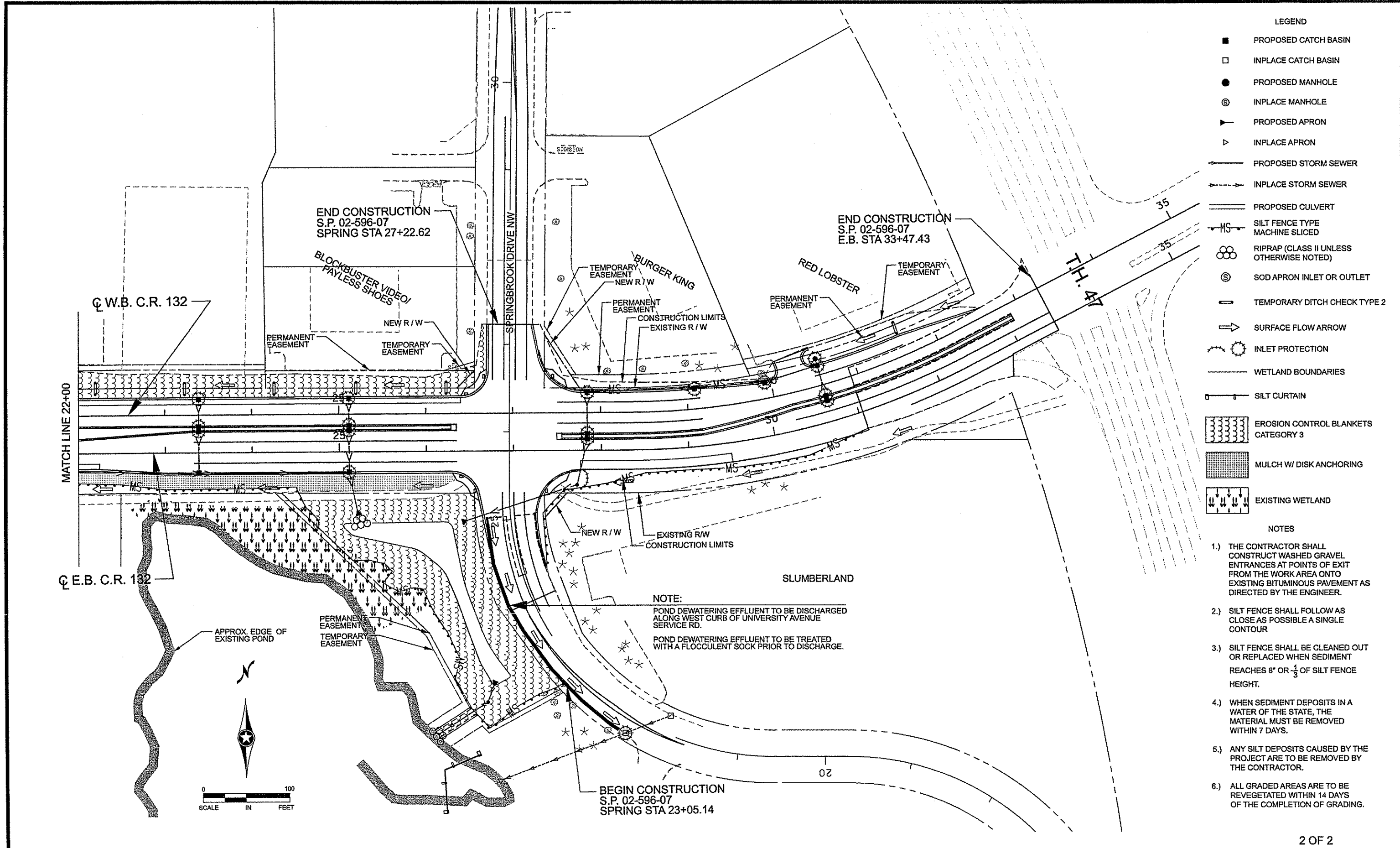
- | | | | |
|------|---|---|--|
| ■ | PROPOSED CATCH BASIN | ⊙ | SOD APRON INLET OR OUTLET |
| □ | INPLACE CATCH BASIN | ⇨ | TEMPORARY DITCH CHECK TYPE 2 |
| ● | PROPOSED MANHOLE | ⇨ | SURFACE FLOW ARROW |
| ⊙ | INPLACE MANHOLE | ⊙ | INLET PROTECTION |
| ▶ | PROPOSED APRON | — | WETLAND BOUNDARIES |
| ▷ | INPLACE APRON | — | SILT CURTAIN |
| — | PROPOSED STORM SEWER | ⊞ | EROSION CONTROL BLANKETS
CATEGORY 3 |
| — | INPLACE STORM SEWER | ⊞ | MULCH W/ DISK ANCHORING |
| — | PROPOSED CULVERT | ⊞ | EXISTING WETLAND |
| —MS— | SILT FENCE TYPE
MACHINE SLICED | | |
| ⊞ | RIPRAP (CLASS II UNLESS
OTHERWISE NOTED) | | |

NOTES

- 1.) THE CONTRACTOR SHALL CONSTRUCT WASHED GRAVEL ENTRANCES AT POINTS OF EXIT FROM THE WORK AREA ONTO EXISTING BITUMINOUS PAVEMENT AS DIRECTED BY THE ENGINEER.
- 2.) SILT FENCE SHALL FOLLOW AS CLOSE AS POSSIBLE A SINGLE CONTOUR
- 3.) SILT FENCE SHALL BE CLEANED OUT OR REPLACED WHEN SEDIMENT REACHES 8" OR 1/3 OF SILT FENCE HEIGHT.
- 4.) WHEN SEDIMENT DEPOSITS IN A WATER OF THE STATE, THE MATERIAL MUST BE REMOVED WITHIN 7 DAYS.
- 5.) ANY SILT DEPOSITS CAUSED BY THE PROJECT ARE TO BE REMOVED BY THE CONTRACTOR.
- 6.) ALL GRADED AREAS ARE TO BE REVEGETATED WITHIN 14 DAYS OF THE COMPLETION OF GRADING.



<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>NAME: p:\02-596-07\plan\0259607_EC_P1.dgn</p>	NO	DATE	BY	CHKD	APPR	REVISION							<p>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.</p> <p>PRINT NAME: CURT A. KOBIARCSIK SIGNATURE: <i>Curt A. Kobiarcsik</i> DATE: 4-28-10 LICENSE NO. 24758</p>	<p>DRAWN BY: NJD DATE: 11-17-09 DESIGN BY: DFF DATE: 11-17-09 CHECKED BY: JEO DATE: 11-18-09</p>	 ANOKA COUNTY HIGHWAY DEPT.	<p>STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006</p>	<p>EROSION CONTROL PLAN</p> <p>Sheet 47 of 101 Sheets</p>
NO	DATE	BY	CHKD	APPR	REVISION												



- LEGEND**
- PROPOSED CATCH BASIN
 - INPLACE CATCH BASIN
 - PROPOSED MANHOLE
 - ⊙ INPLACE MANHOLE
 - ▶ PROPOSED APRON
 - ▽ INPLACE APRON
 - PROPOSED STORM SEWER
 - INPLACE STORM SEWER
 - PROPOSED CULVERT
 - MS SILT FENCE TYPE MACHINE SLICED
 - ⊗ RIPRAP (CLASS II UNLESS OTHERWISE NOTED)
 - ⊙ SOD APRON INLET OR OUTLET
 - TEMPORARY DITCH CHECK TYPE 2
 - SURFACE FLOW ARROW
 - ⊗ INLET PROTECTION
 - WETLAND BOUNDARIES
 - SILT CURTAIN
 - ⊗ EROSION CONTROL BLANKETS CATEGORY 3
 - ⊗ MULCH W/ DISK ANCHORING
 - ⊗ EXISTING WETLAND

- NOTES**
- 1.) THE CONTRACTOR SHALL CONSTRUCT WASHED GRAVEL ENTRANCES AT POINTS OF EXIT FROM THE WORK AREA ONTO EXISTING BITUMINOUS PAVEMENT AS DIRECTED BY THE ENGINEER.
 - 2.) SILT FENCE SHALL FOLLOW AS CLOSE AS POSSIBLE A SINGLE CONTOUR
 - 3.) SILT FENCE SHALL BE CLEANED OUT OR REPLACED WHEN SEDIMENT REACHES 8" OR 1/3 OF SILT FENCE HEIGHT.
 - 4.) WHEN SEDIMENT DEPOSITS IN A WATER OF THE STATE, THE MATERIAL MUST BE REMOVED WITHIN 7 DAYS.
 - 5.) ANY SILT DEPOSITS CAUSED BY THE PROJECT ARE TO BE REMOVED BY THE CONTRACTOR.
 - 6.) ALL GRADED AREAS ARE TO BE REVEGETATED WITHIN 14 DAYS OF THE COMPLETION OF GRADING.

NOTE:
 POND DEWATERING EFFLUENT TO BE DISCHARGED ALONG WEST CURB OF UNIVERSITY AVENUE SERVICE RD.
 POND DEWATERING EFFLUENT TO BE TREATED WITH A FLOCCULENT SOCK PRIOR TO DISCHARGE.

NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-596-07\plant\0259607_EC_P2.dgn					

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: CURT A. KOBIARCSIK
 SIGNATURE: *Curt A. Kobiarcsik*
 DATE: 4-28-10 LICENSE NO. 24756

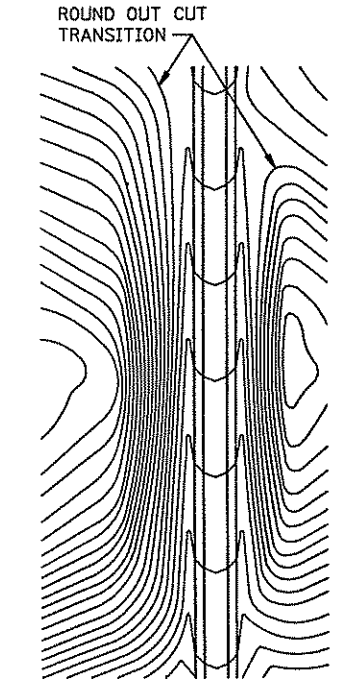
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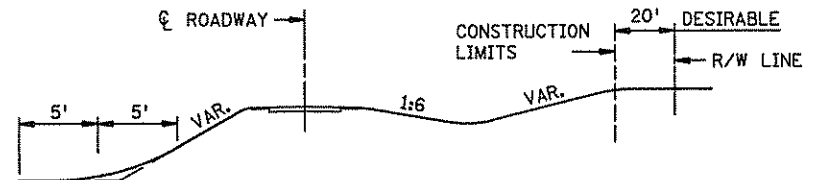
STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

EROSION CONTROL PLAN
 Sheet 48 of 101 Sheets

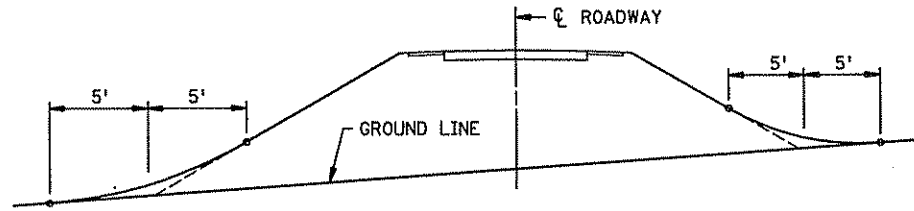
PLOTTED/REVISED: 4/27/2010



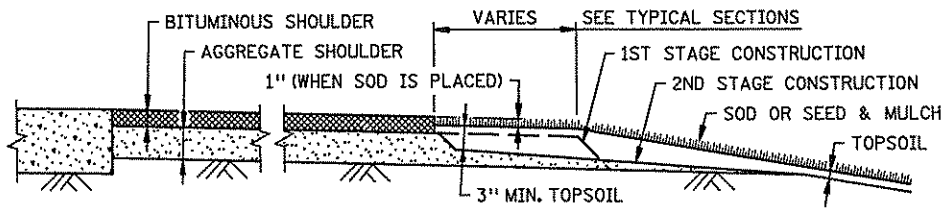
CONTOURING ROAD CUTS



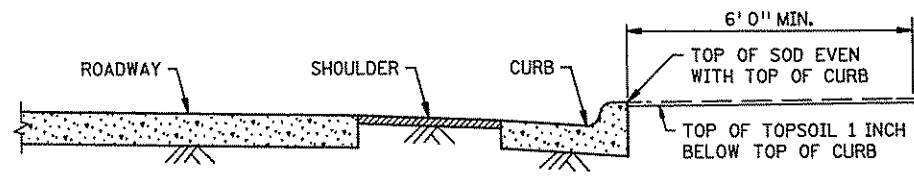
ROUNDING SHOULDERS AND BACKSLOPES



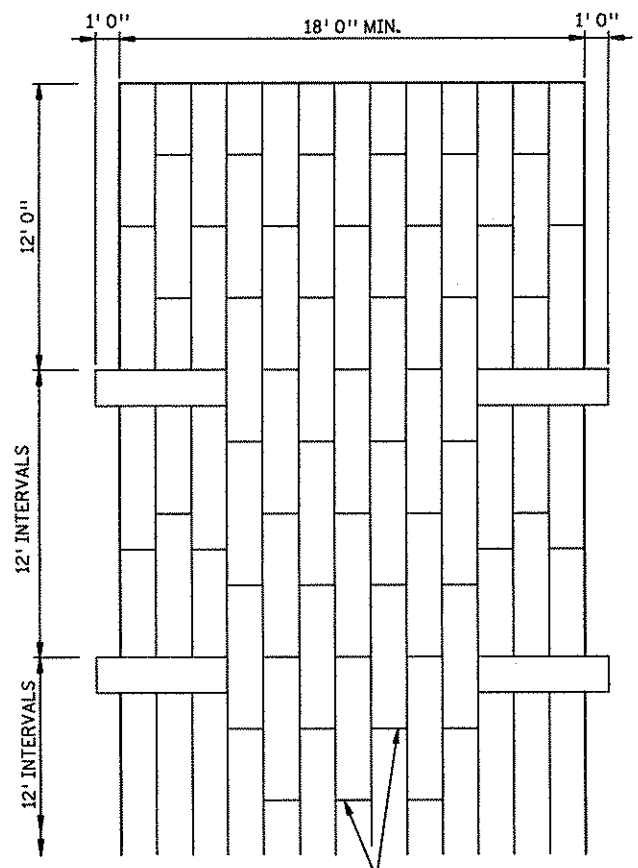
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



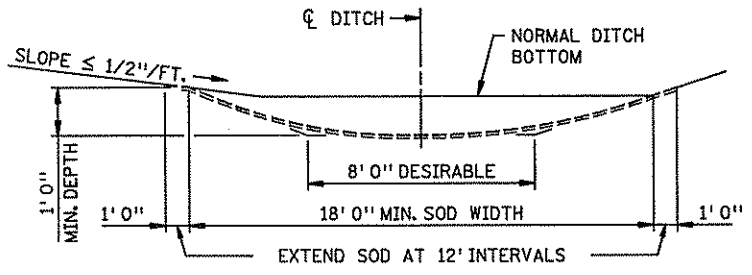
SHAPING AND TOPSOILING INSLOPES



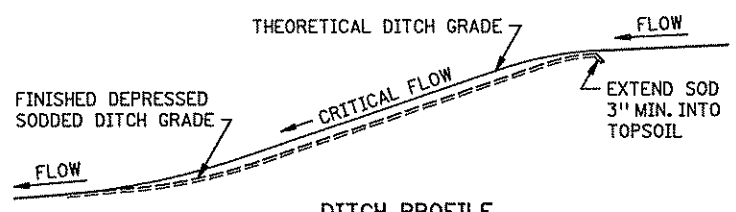
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



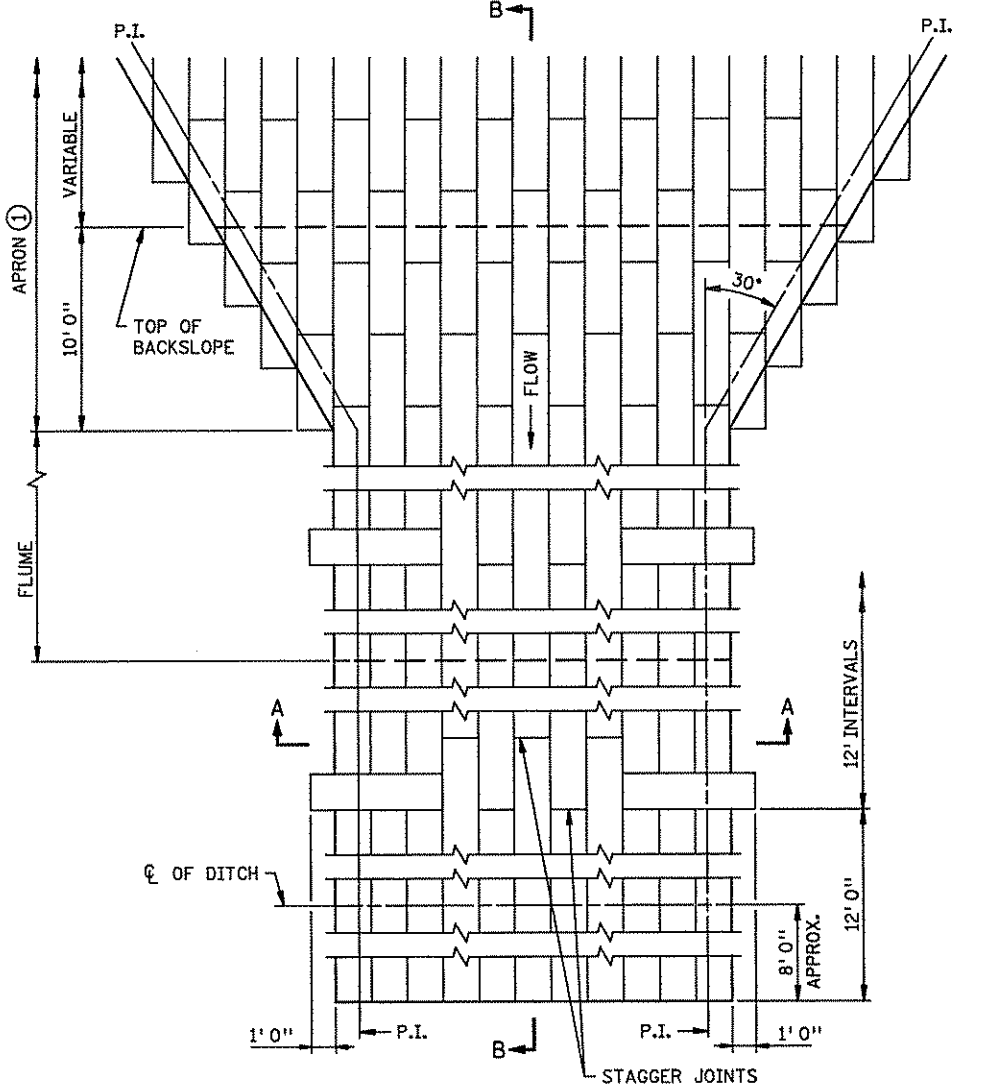
PLAN VIEW



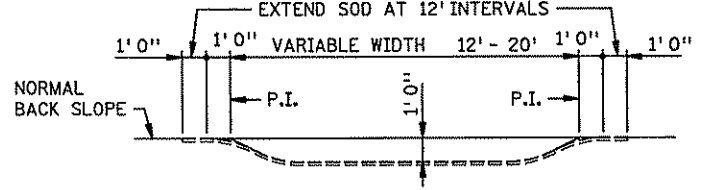
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



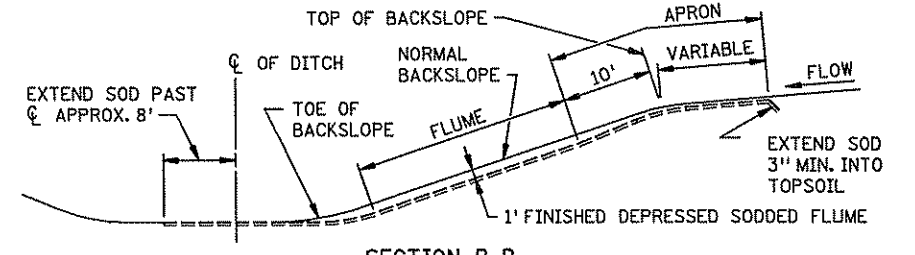
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



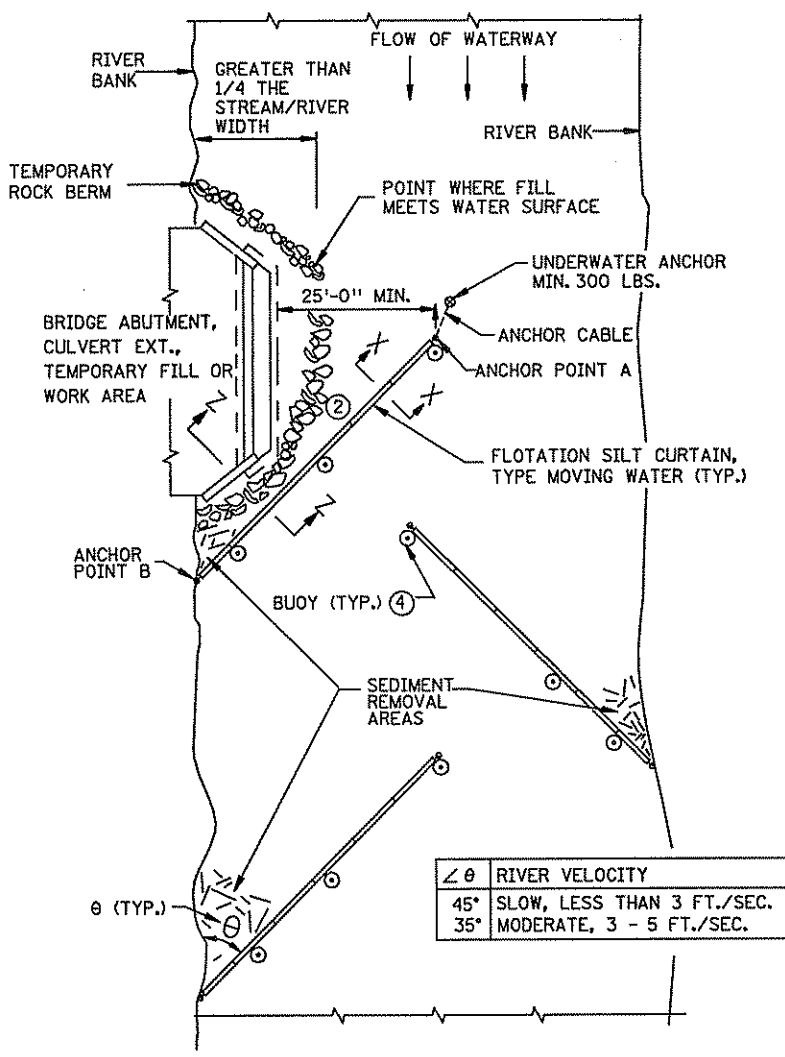
SECTION B-B
SODDED FLUME DETAILS

NOTES:
SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

S.P. 02-596-07	STANDARD SHEET NO. 5-297.404	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
S.P. 106-080-002	STANDARD APPROVED: NOVEMBER 20, 2002	
S.P. 114-130-005		SHEET NO. 49 OF 101 SHEETS
S.P. 127-341-006		

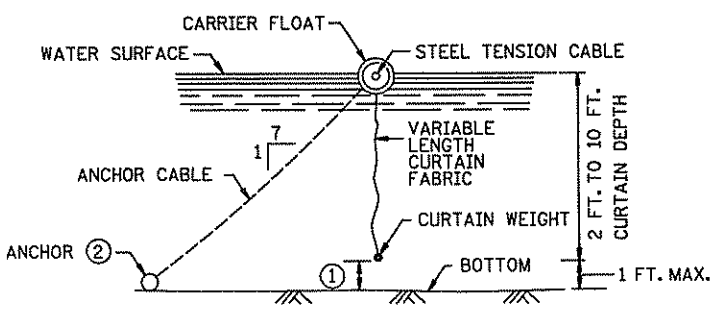
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4/27/2010

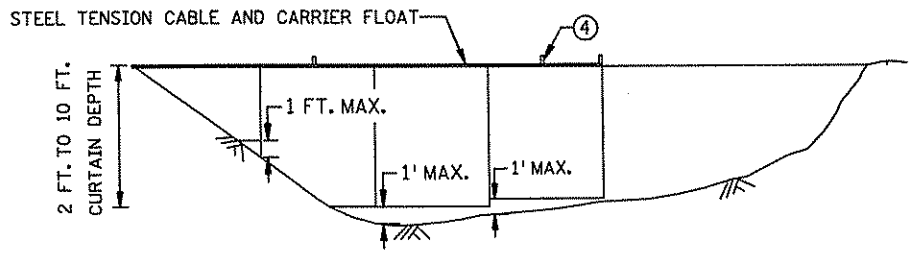


∠ θ	RIVER VELOCITY
45°	SLOW, LESS THAN 3 FT./SEC.
35°	MODERATE, 3 - 5 FT./SEC.

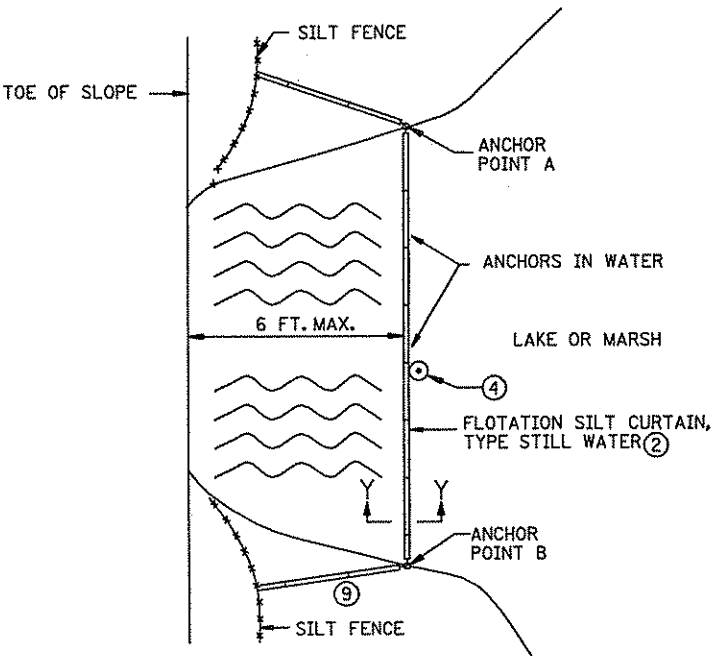
PLAN VIEW (TYPE: MOVING WATER)



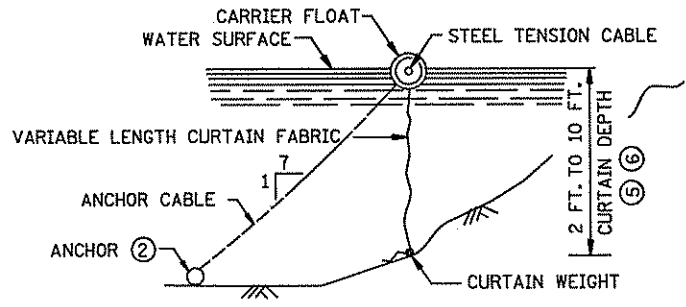
SECTION X-X



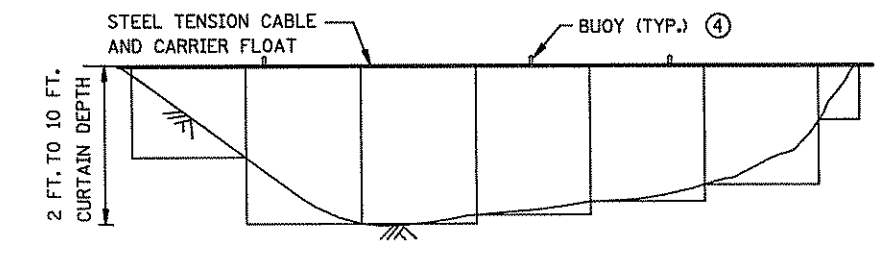
FLOTATION SILT CURTAIN - TYPE: MOVING WATER (5)
USE FOR SMALLER RIVERS WITH SLOW AND MODERATE VELOCITIES



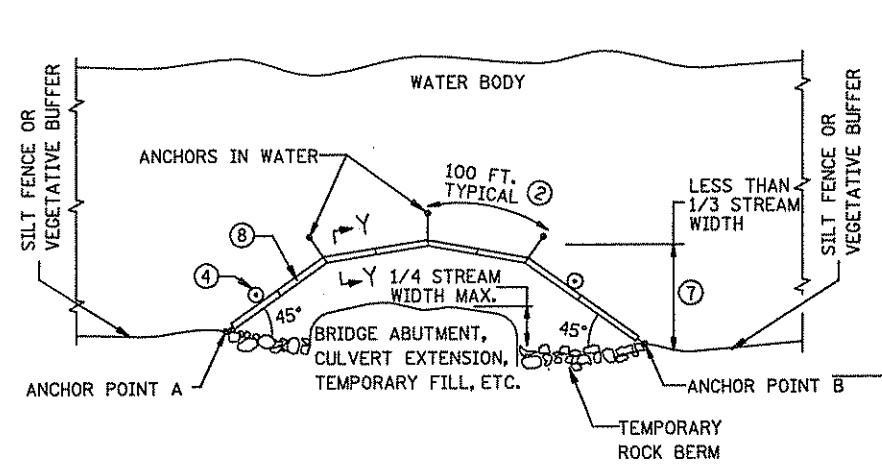
PLAN VIEW (TYPE: STILL WATER)



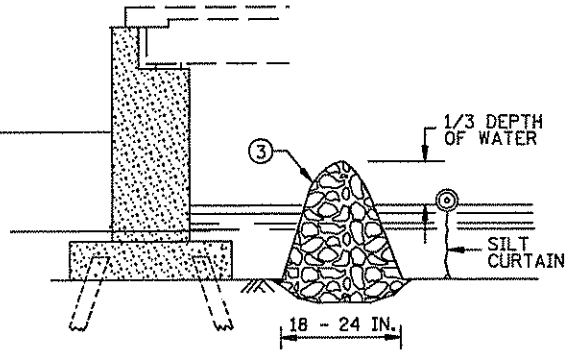
SECTION Y-Y



FLOTATION SILT CURTAIN - TYPE: WORK AREA AND STILL WATER (5)
FOR CONTAINING OVERFLOWS FROM WEIRS, STANDPIPES, SETTLING PONDS



PLAN VIEW (TYPE: WORK AREA)



SECTION Z-Z TEMPORARY ROCK BERM FOR SEDIMENT CONTROL

DESIGN GUIDELINES:
MOVING WATER
WHEN TEMPORARY FILL ENCLOSES MORE THAN 1/4 BUT LESS THAN 1/3 WIDTH OF THE STREAM.
MINIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER DEPTH: 11 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC. (1) (6)

DESIGN GUIDELINES:
WORK AREA
WHEN TEMPORARY FILL ENCLOSES LESS THAN 1/4 OF THE WIDTH OF STREAM.
MINIMUM WATER DEPTH: 10 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.

DESIGN GUIDELINES:
STILL WATER
MINIMUM WATER DEPTH: 0 FT.
MAXIMUM WATER DEPTH: 10 FT. (6)

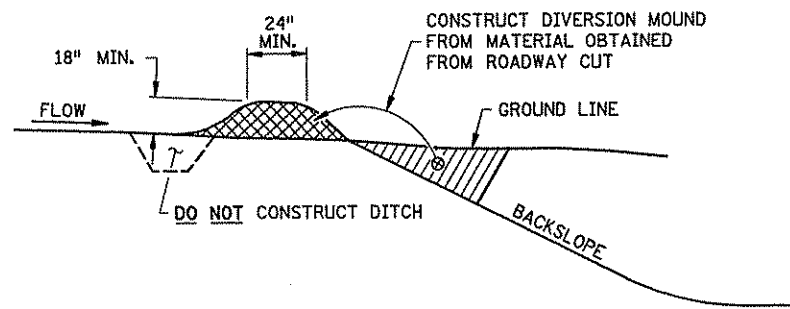
NOTES:

- SEE SPECS. 2573 & 3887.
- (1) CURTAIN EXTENDS TO 1 FT. MAXIMUM FROM BOTTOM OF WATER BODY.
- (2) FOR ANCHOR AND WEIGHT REQUIREMENTS, SEE SPEC. 2573.
- (3) IN AREAS WHERE THE PLAN CALLS FOR RIPRAP AT THE BRIDGE, A TEMPORARY ROCK BERM WILL BE USED TO PROVIDE ADDITIONAL PROTECTION. THE TEMPORARY ROCK BERM IS INCIDENTAL FOR WHICH NO DIRECT PAYMENT WILL BE MADE.
- (4) ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.
- (5) WATER DEPTH CAN BE 0 TO 10 FEET, 0 TO 11 FEET FOR TYPE MOVING WATER.
- (6) SILT CURTAIN HEIGHT INCLUDES MAXIMUM WAVE HEIGHT FOR WATER BODY.
- (7) KEEP AS CLOSE TO WORK AREA AS POSSIBLE.
- (8) SILT CURTAIN, ROCK BERM OR SHEET PILE AS REQUIRED TO CONTROL THE INFILTRATION OF SILT.
- (9) IF 6 INCHES OR LESS OF WATER, USE BALE BARRIERS, SEE SHEET 2.

FILE NAME:
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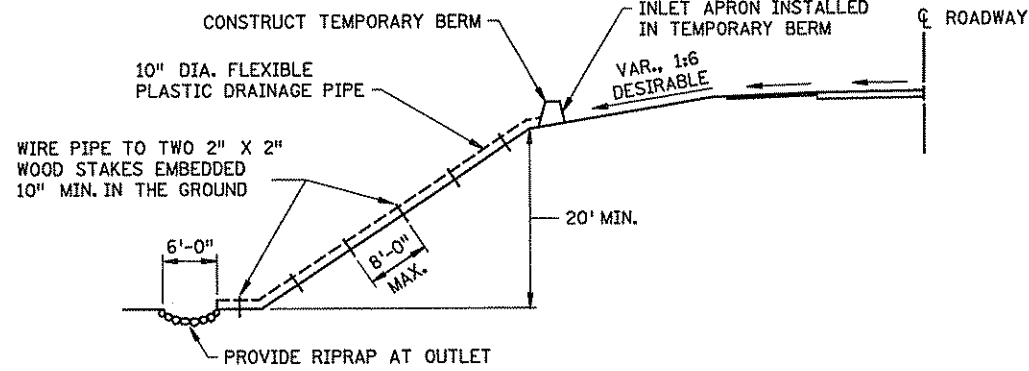
STANDARD SHEET NO. 5-297.405 (1 OF 4)	TITLE: TEMPORARY SEDIMENT CONTROL SILT CURTAIN
STANDARD APPROVED: SEPTEMBER 27, 2006	
STATE PROJ. NO. 02-596-07	SHEET NO. 50 OF 101 SHEETS

PLOTTED/REVISED: 4/27/2010



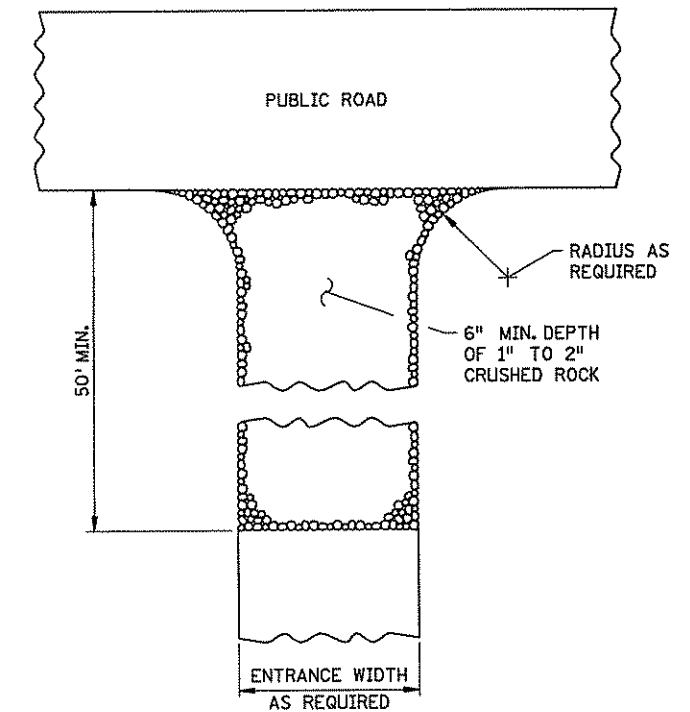
DIVERSION MOUND

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

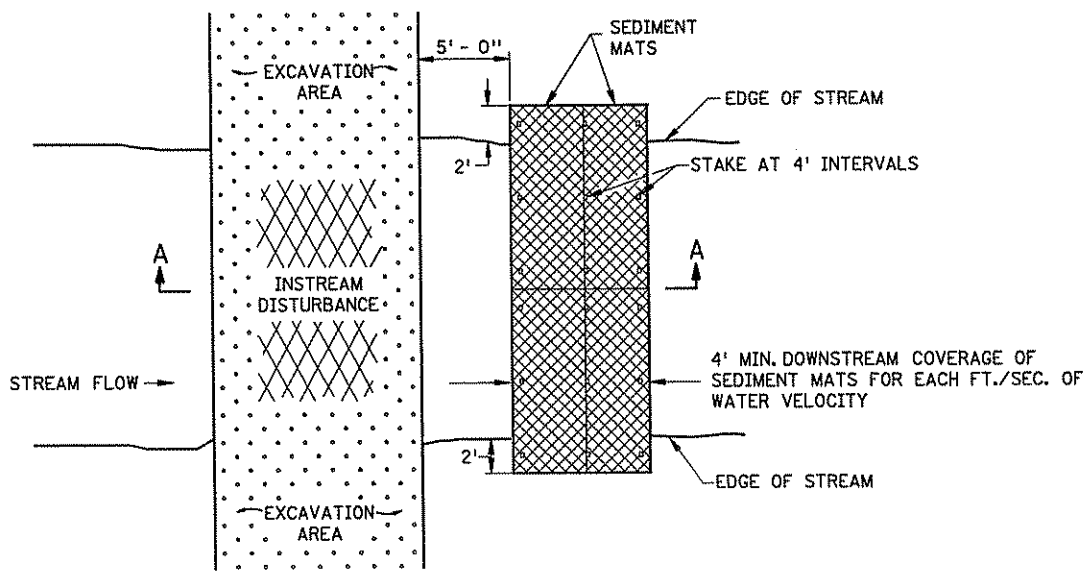


TEMPORARY DOWN DRAIN ON FILL SLOPE

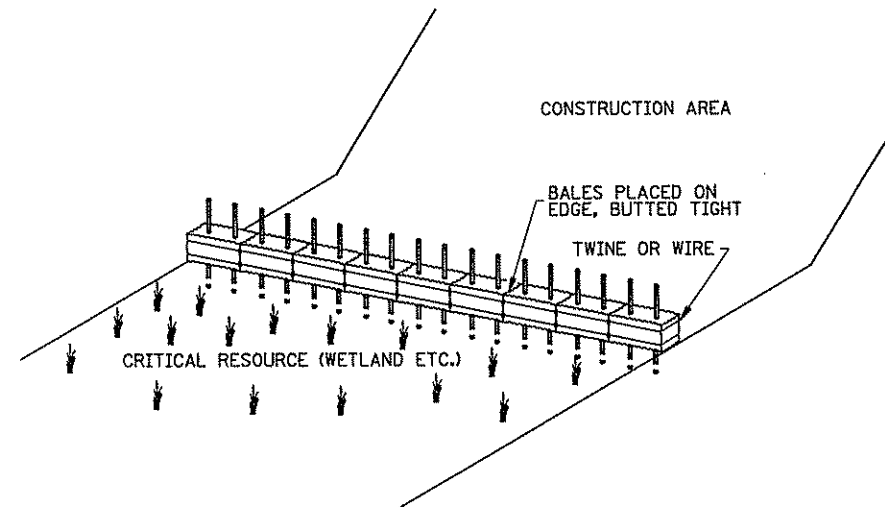
DESIGN GUIDELINES:
 STORM FREQUENCY: 2 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 3 ACRES



ROCK CONSTRUCTION ENTRANCE ①

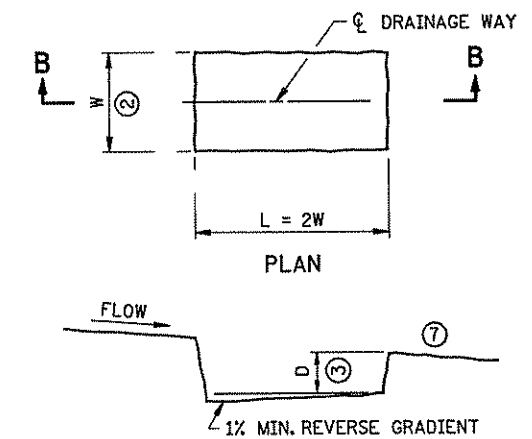


PLAN VIEW

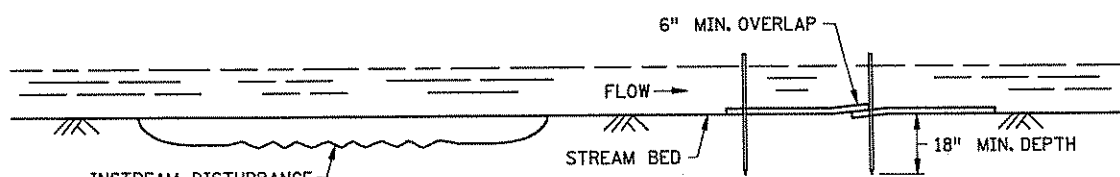


BALE BARRIERS

TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS



SEDIMENT TRAP DETAIL

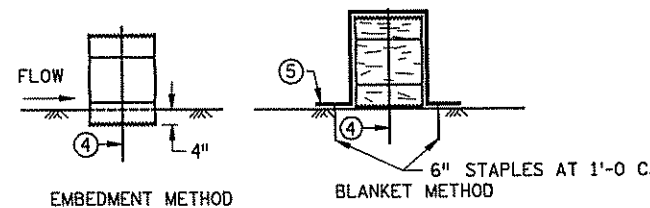


SECTION A-A

SEDIMENT MAT ⑥

TYPICAL STREAM BED INSTALLATION

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



BALE BARRIER DETAIL

APPROX. BALE SIZE: 14" X 18" X 36" LONG

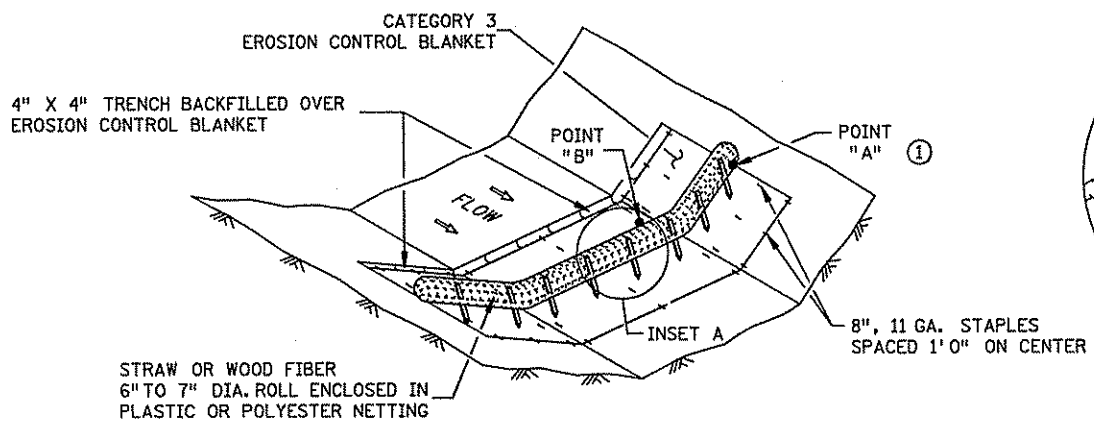
NOTES:

- SEE SPECS. 2573, 3892, & 3894.
- ① ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE TRUCKS ENTER MAIN ROAD. KEEPING MUD OFF THE ROAD WILL PREVENT AUTO DAMAGE AND KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS. GEOTEXTILE MAY BE PLACED UNDER THE ROCK TO KEEP ROCKS SEPARATE FROM SOIL.
- ② W = 10 FT. MIN., 20 FT. MAX.
- ③ D = 2 FT.
- ④ TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE EMBEDDED 10 INCHES MINIMUM IN THE GROUND.
- ⑤ PLACE A CATEGORY 3 EROSION CONTROL BLANKET, 6 FT. WIDE MINIMUM, OVER THE BALE INSTEAD OF TRENCHING.
- ⑥ THIS DETAIL MAY NOT BE ACCEPTABLE FOR WORK ON PUBLIC WATERS, SEE GENERAL PUBLIC WATERS PERMIT (GP) 2004-0001.
- ⑦ LOCATION OF DOWNSTREAM TEMPORARY SEDIMENT CONTROL DEVICE.

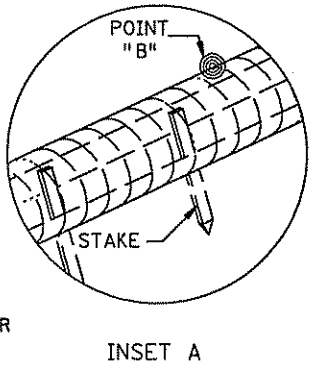
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S.P. 02-596-07	STANDARD SHEET NO.	TITLE
S.P. 106-080-002	5-297.405 (2 of 4)	TEMPORARY SEDIMENT CONTROL
S.P. 114-130-005	STANDARD APPROVED	MISCELLANEOUS DETAILS
S.P. 127-341-006	SEPTEMBER 27, 2006	SHEET NO. 51 OF 101 SHEETS

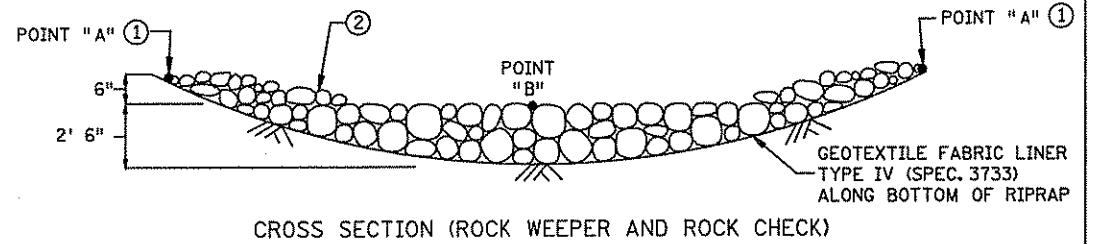
PLOTTED/REVISED
4/27/2010



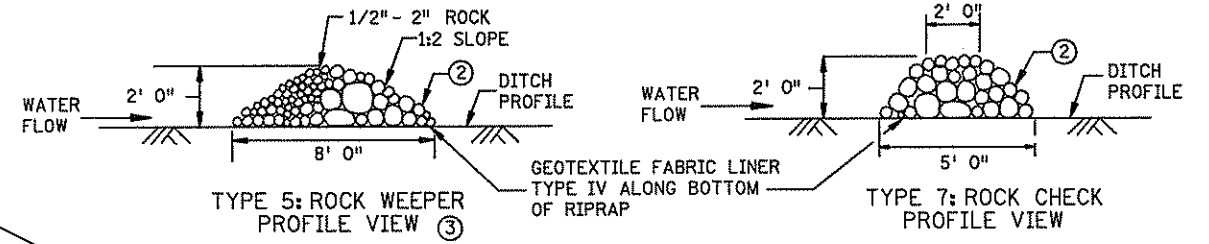
TYPE 3: BIOROLL BLANKET SYSTEM DITCH CHECK



INSET A



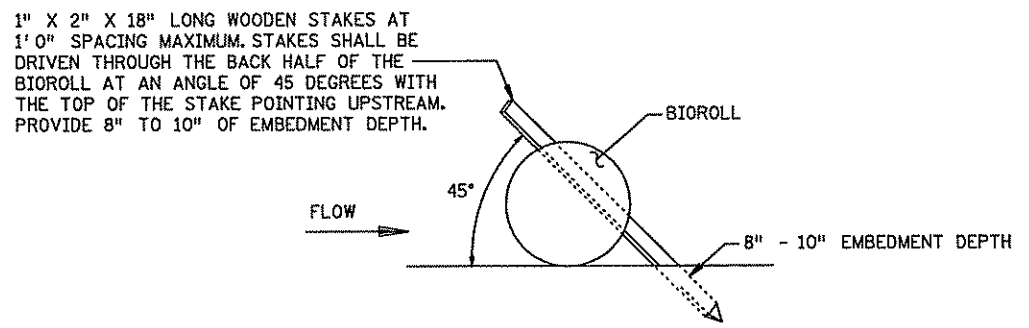
CROSS SECTION (ROCK WEEPER AND ROCK CHECK)



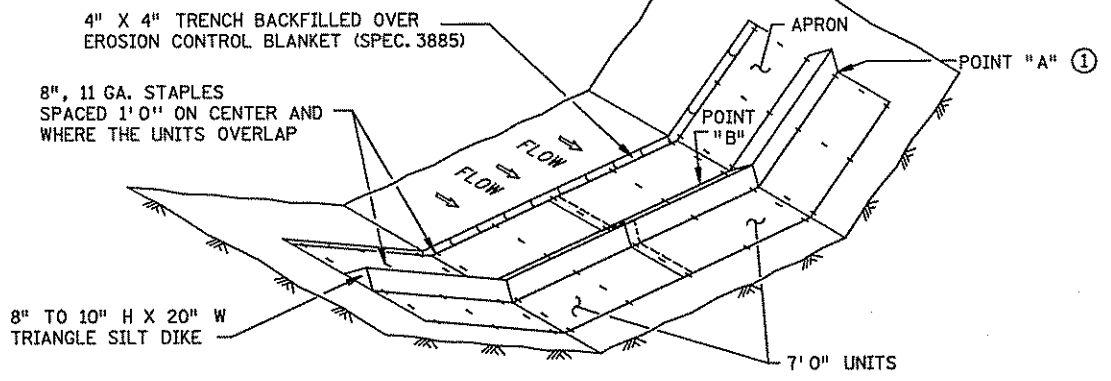
TYPE 5: ROCK WEEPER PROFILE VIEW

TYPE 7: ROCK CHECK PROFILE VIEW

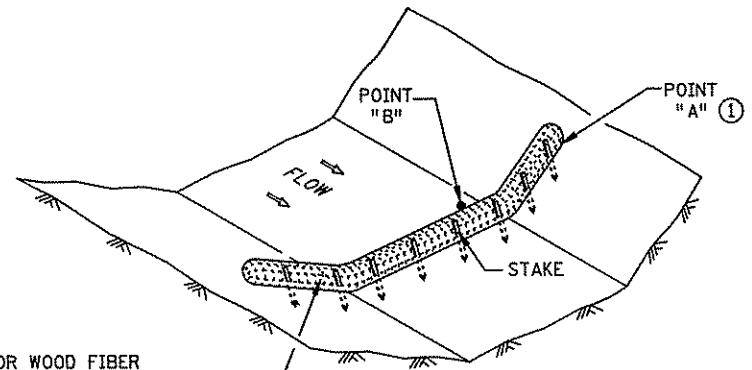
TYPE 5: ROCK WEEPER AND TYPE 7: ROCK CHECK DITCH CHECKS
USE ON ROUGH GRADED AREAS



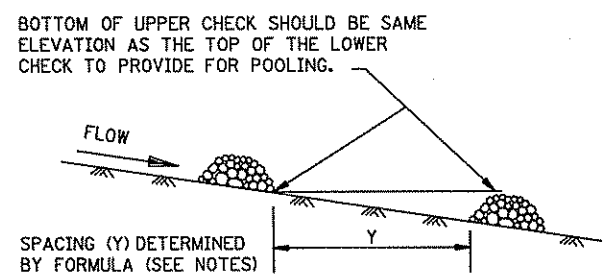
BIOROLL STAKING DETAIL



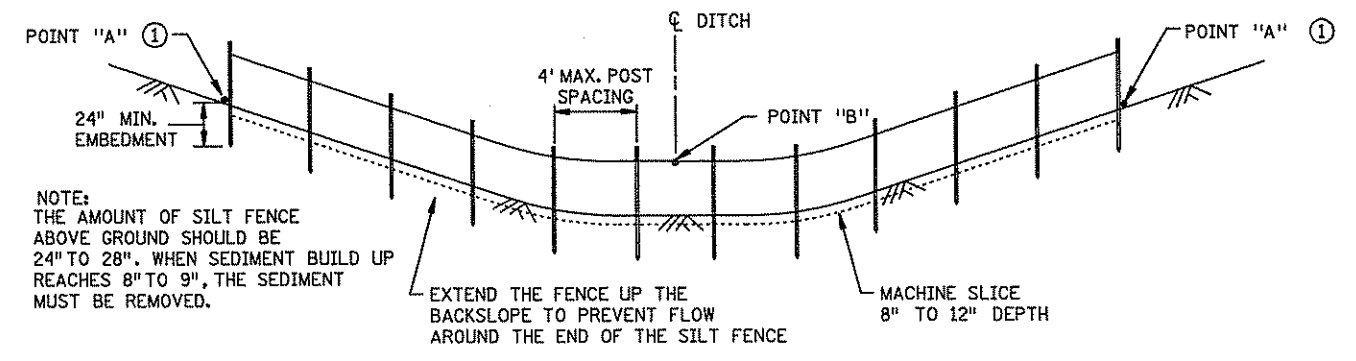
TYPE 6: GEOTEXTILE TRIANGULAR DIKE DITCH CHECK



TYPE 2: BIOROLL DITCH CHECK
USE ON ROUGH GRADED AREAS



DITCH CHECK SPACING



TYPE 1: SLICED IN SILT FENCE DITCH CHECK

- NOTES:
- SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.
 - APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:

$$\text{APPROXIMATE SPACING OF DITCH CHECKS (FT.)} = Y = \frac{\text{DITCH CHECK HEIGHT (FT)}}{\% \text{ CHANNEL SLOPE}} \times 100$$
 - ① POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
 - ② CLASS I - IV RIPRAP (SPEC. 3601) WITH GEOTEXTILE FABRIC LINER, TYPE IV (SPEC. 3733).
 - ③ THE ROCK WEEPER FILTERS SEDIMENT OUT OF THE WATER BETTER THAN THE OTHER DITCH CHECKS. THE ROCK WEEPER COULD BE USED AS A PERMANENT WATER FILTERING FEATURE.
 - ④ PERMANENT ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE WILL NEED TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.

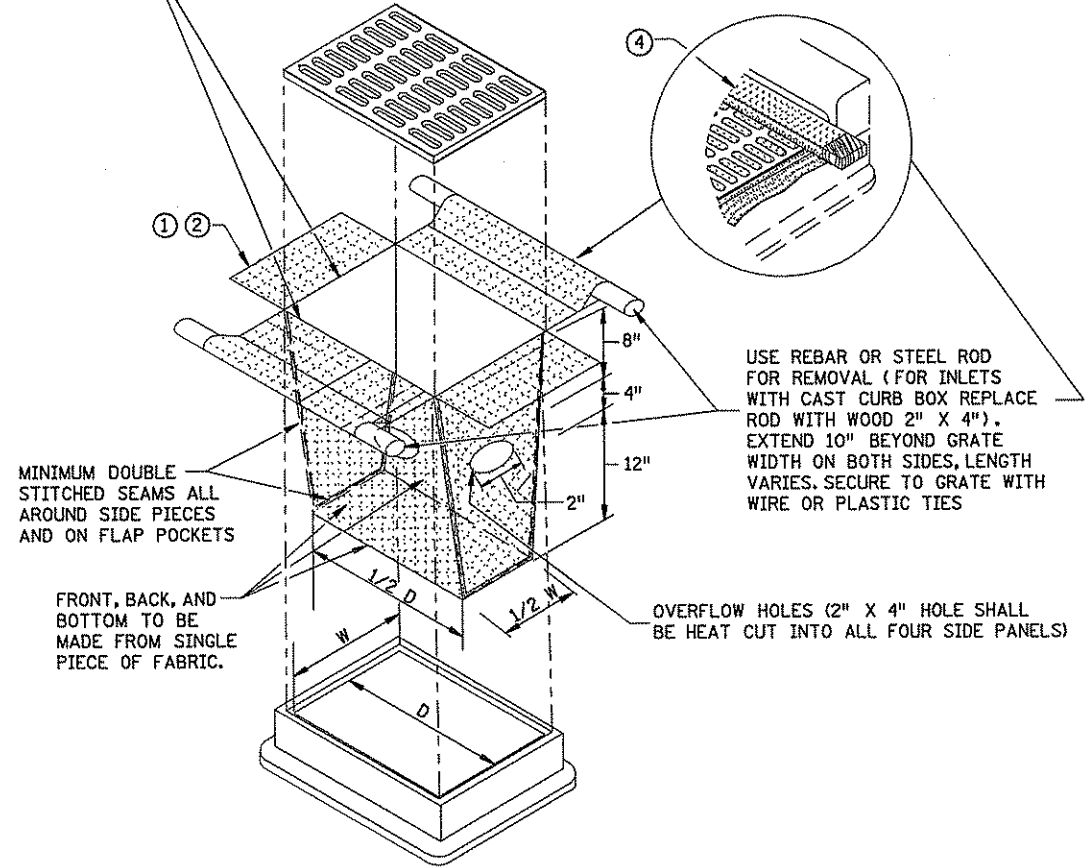
GENERAL DESIGN GUIDELINES						
DITCH CHECK TYPE	SILT FENCE	BIOROLL	BIOROLL BLANKET	TRIANGULAR DIKE	ROCK WEEPER	ROCK CHECK
STORM FREQUENCY:	2 YR. - 24 HR.	2 YR. - 24 HR.	2 YR. - 24 HR.	2 YR. - 24 HR.	5 YR. - 24 HR.	5 YR. - 24 HR.
MAX. FLOW VELOCITY:	< 1 FT./SECOND	1.5 FT./SECOND	4.5 FT./SECOND	1.5 FT./SECOND	12 FT./SECOND	12 FT./SECOND
MAX. DITCH GRADE:	0% - 0.5%	1.5% - 3%	1.5% - 3%	1.5% - 2.0%	3% - 5%	3% - 5%
MAX. DRAINAGE AREA:	1 ACRE	2 ACRE	2 ACRE	4 ACRE	4+ ACRE	4+ ACRE

FILE NAME:
PA-102-596-07 plan 405_3.spr.dgn

PLOTTED/REVISED: 4/27/2010

FILE NAME: P:\02-596-07\Plan\5-297.405.4.spr.dgn

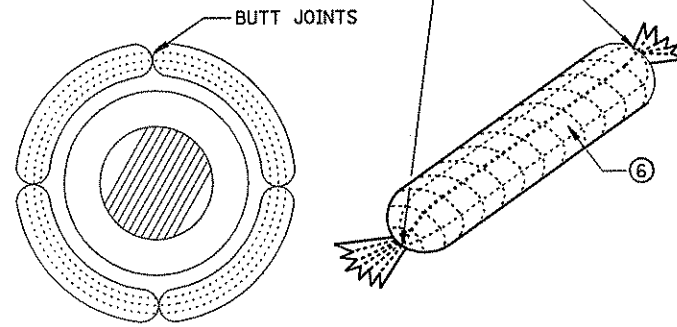
INLET SPECIFICATIONS AS PER THE PLAN
DIMENSION LENGTH AND WIDTH TO MATCH
FLAP POCKET



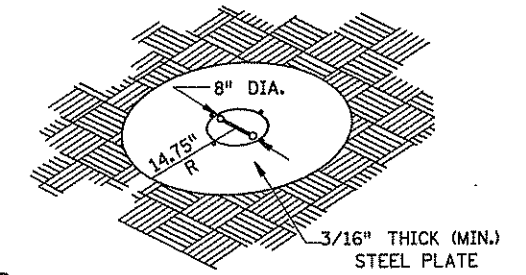
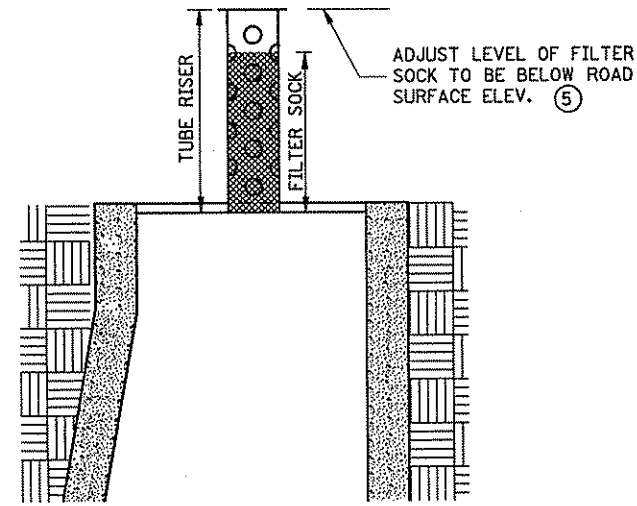
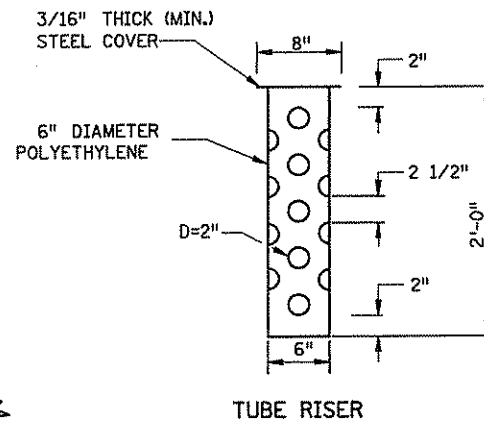
FILTER BAG INSERT ③

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)

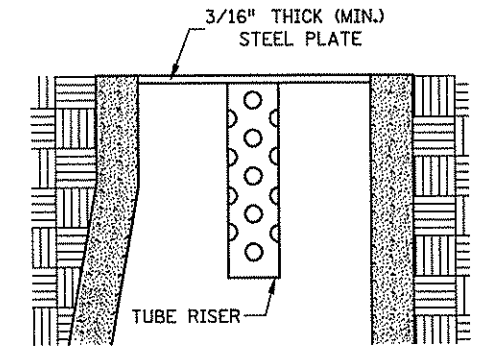
ENDS SECURELY CLOSED TO PREVENT LOSS OF OPEN GRADED AGGREGATE FILL. SECURED WITH 50 PSI. ZIP TIE.



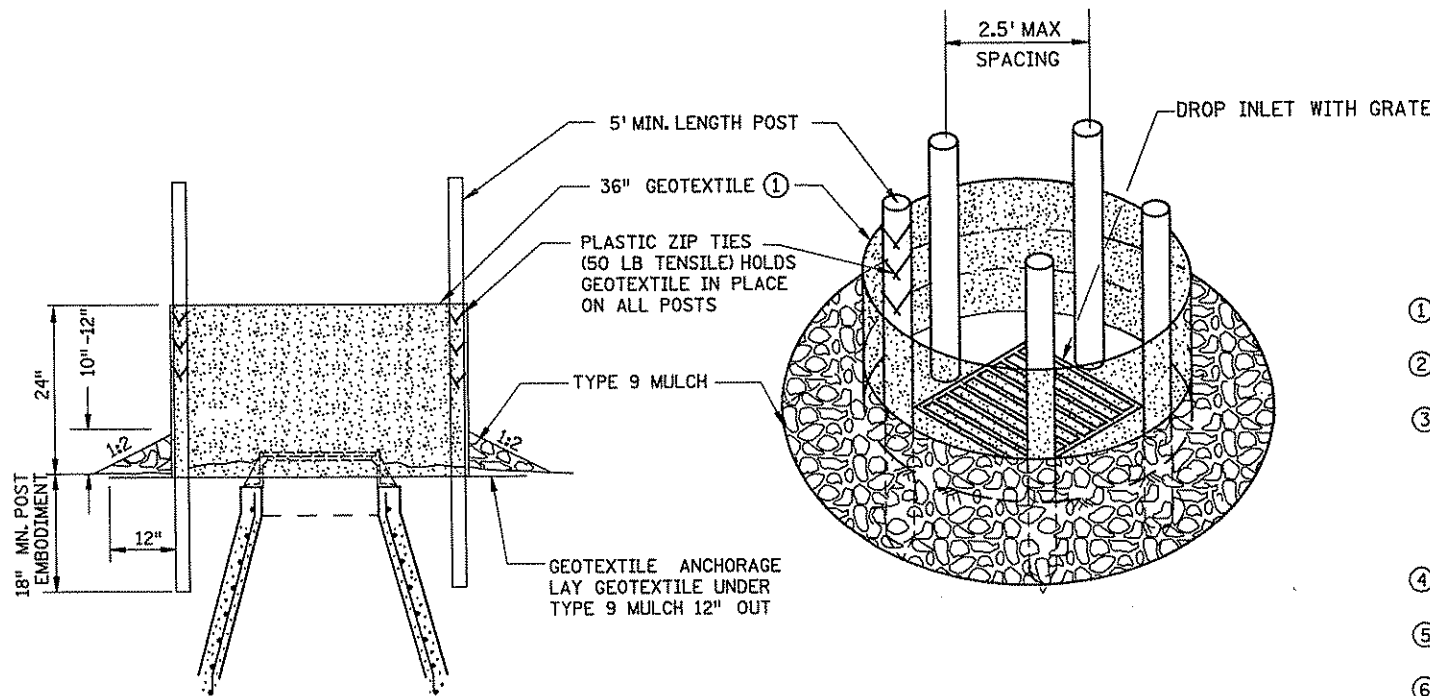
ROCK LOG/COMPOST LOG



PERSPECTIVE VIEW

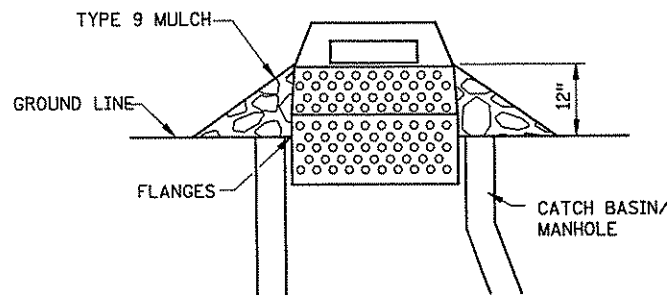


POP-UP HEAD



SILT FENCE RING AND ROCK FILTER BERM

USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 OR LESS



SEDIMENT CONTROL INLET HAT

NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.

NOTES:

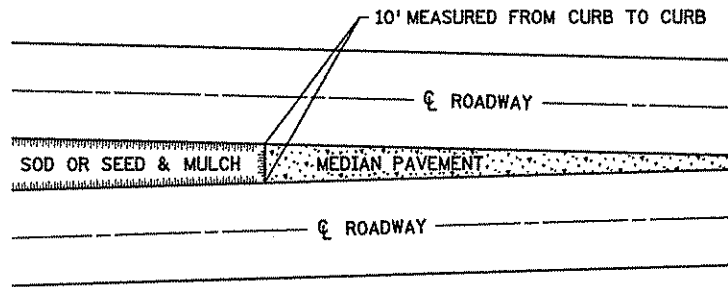
SEE SPECS. 2573, 3137, 3886 & 3891.

MANUFACTURED ALTERNATIVES LISTED ON Mn/DOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED.

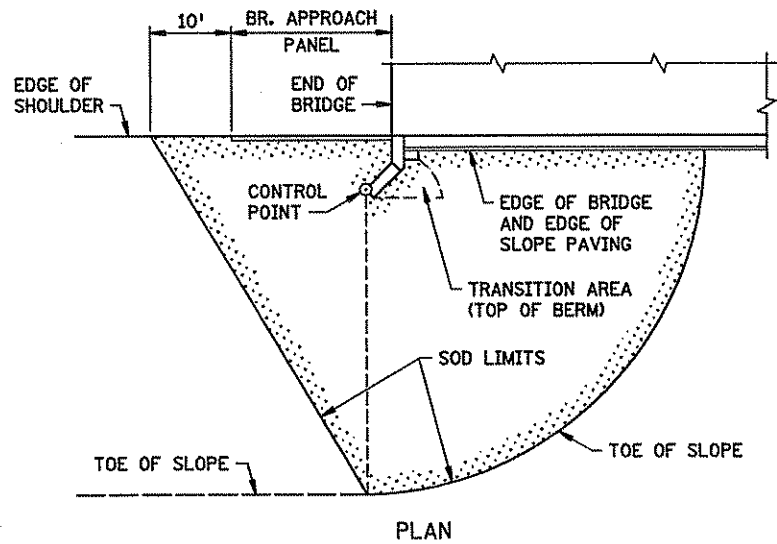
- ① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
- ② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ③ INSTALLATION NOTES:
DO NOT INSTALL FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
- ④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.
- ⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
- ⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1; CA-3 GRADATION.

S.P. 02-596-07	STANDARD SHEET NO.	TITLE:
S.P. 106-080-002	297.405 (4 OF 4)	TEMPORARY SEDIMENT CONTROL STORM DRAIN INLET PROTECTION
S.P. 114-130-005	STANDARD APPROVED:	
S.P. 127-341-006	SEPTEMBER 27, 2006	

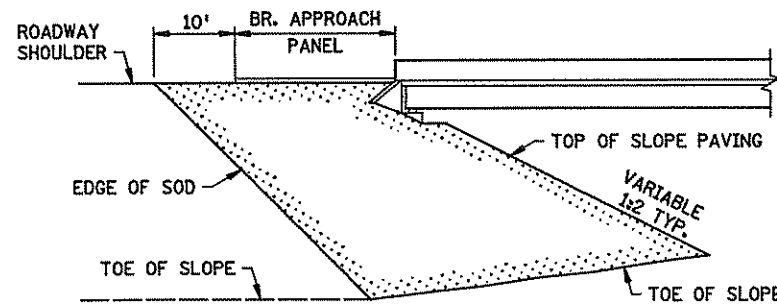
PLOTTED/REVISED: 4/27/2010



SODDING LIMITS AT GORE AREA

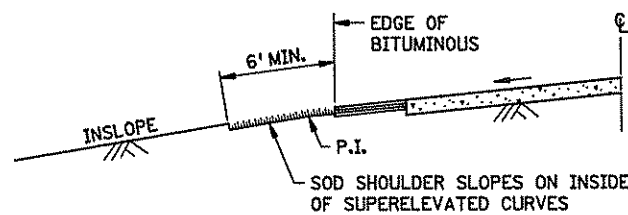


PLAN

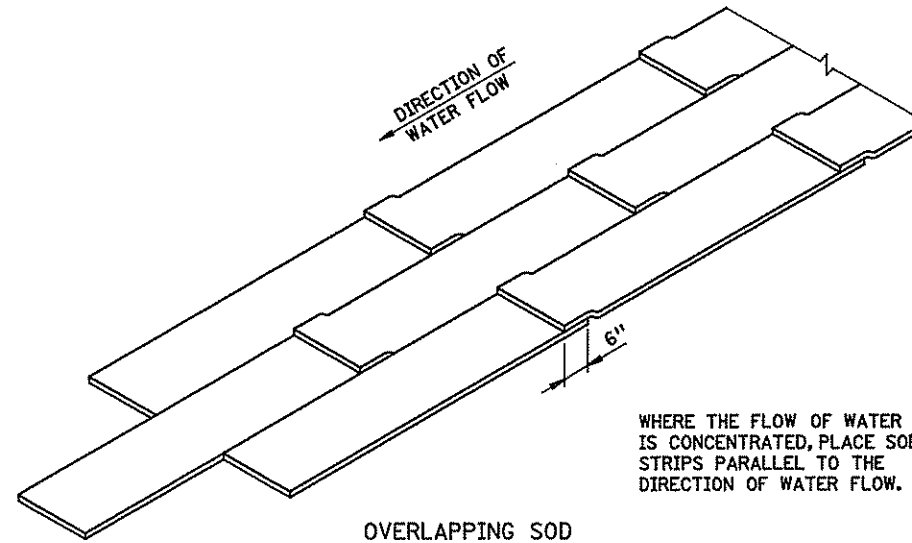


ELEVATION

SODDING LIMITS AT BRIDGE APPROACH FILLS

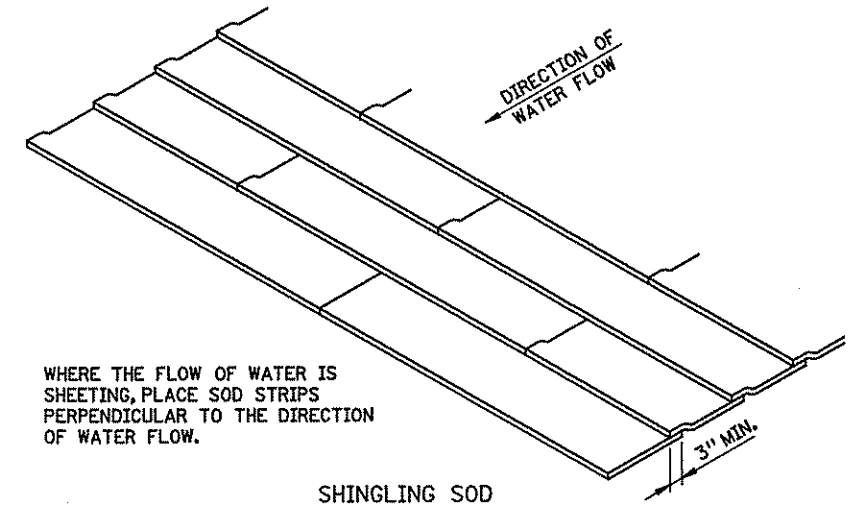


SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

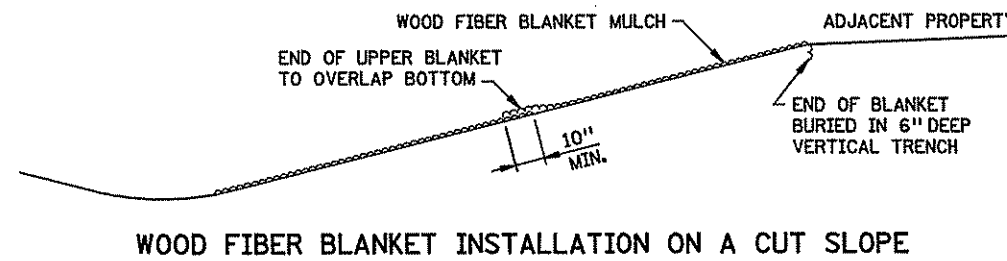
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.



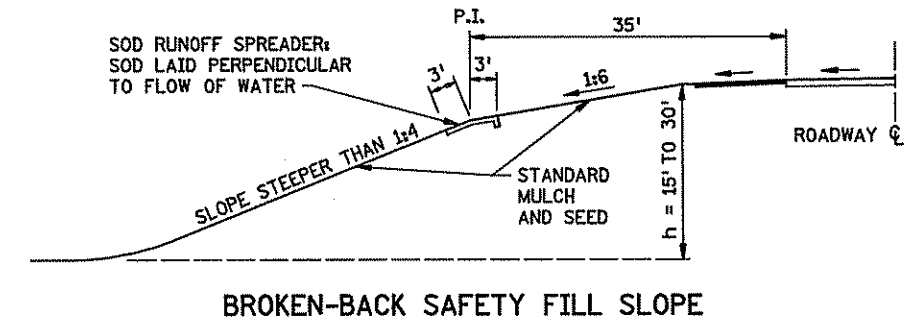
SHINGLING SOD

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

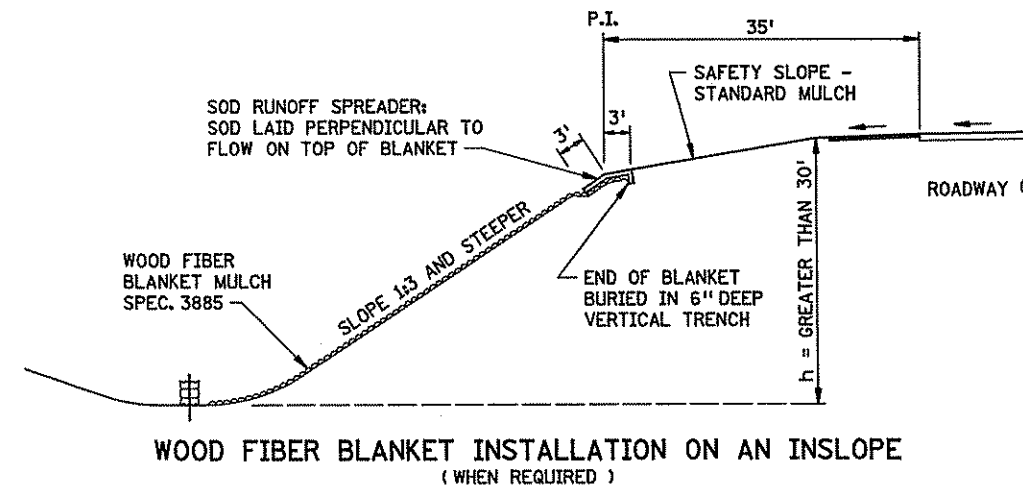
SPECIAL SOD PLACEMENT TECHNIQUES



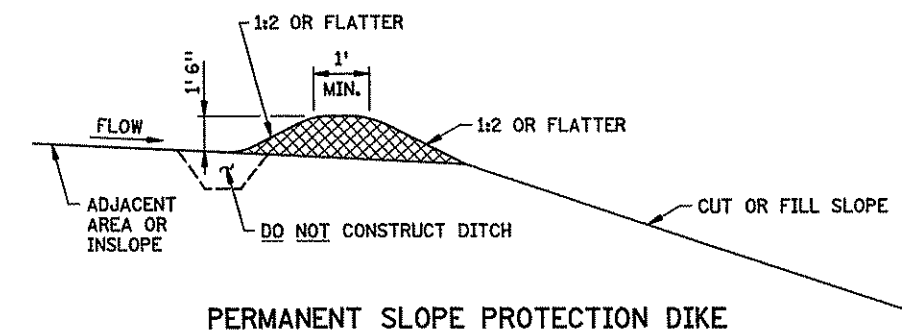
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)

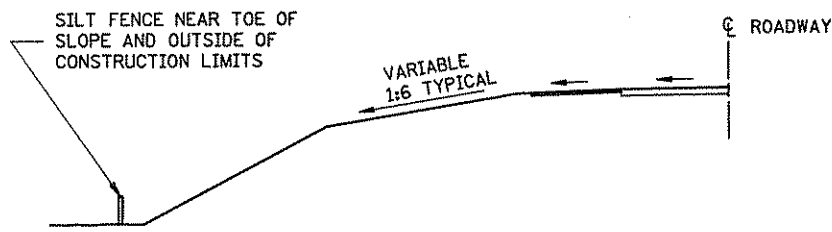


PERMANENT SLOPE PROTECTION DIKE

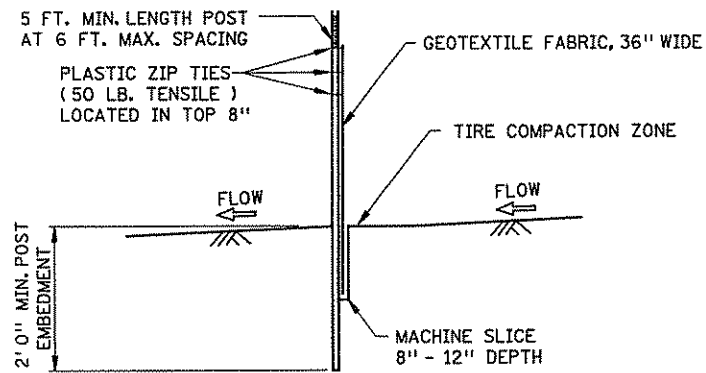
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S.P. 02-596-07	STANDARD SHEET NO. 5-297.406	TITLE:
S.P. 106-080-002	STANDARD APPROVED: JANUARY 31, 1985	PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS
S.P. 114-130-005	REVISION DATE 10-26-2000	
S.P. 127-341-006		
		SHEET NO. 54 OF 101 SHEETS

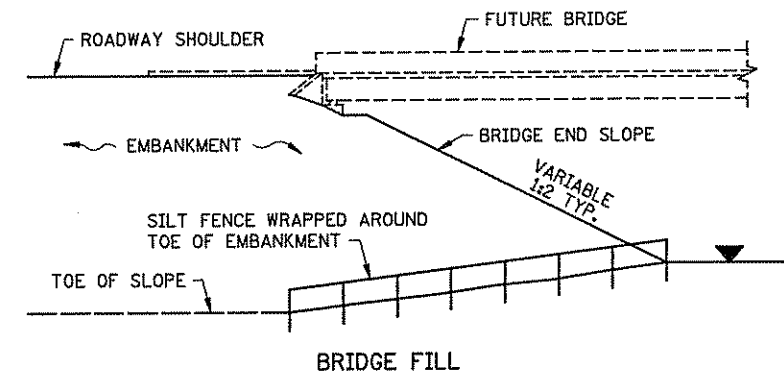
PLOTTED/REVISED: 4/27/2010



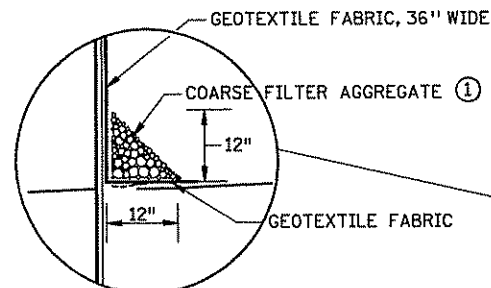
LOCATION OF SILT FENCE AT TOE OF ROADWAY EMBANKMENT



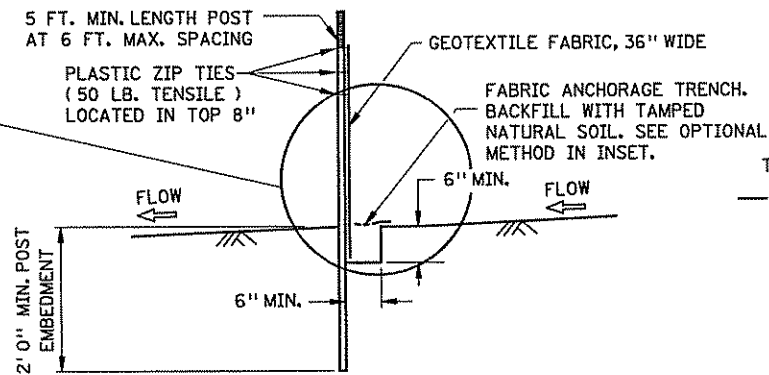
SILT FENCE, MACHINE SLICED
DESIGN GUIDELINES:
TO PROTECT AREAS FROM SHEET FLOW.
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



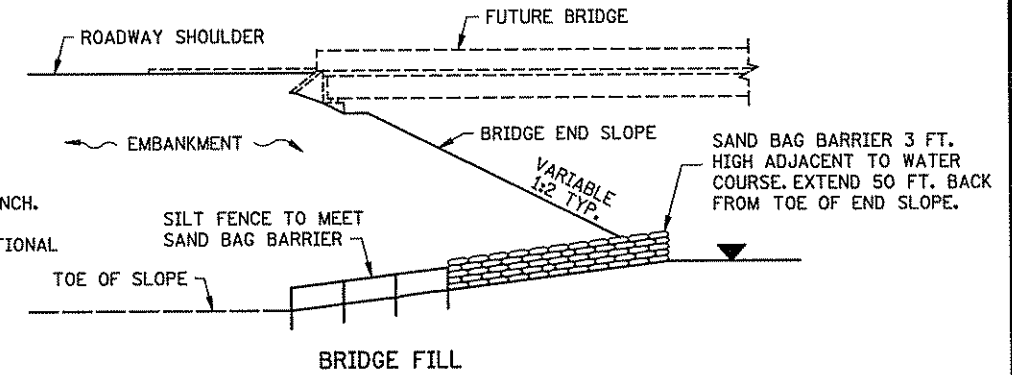
DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: STAGNANT
CONTRIBUTING SLOPE AREA: 1/2 ACRE



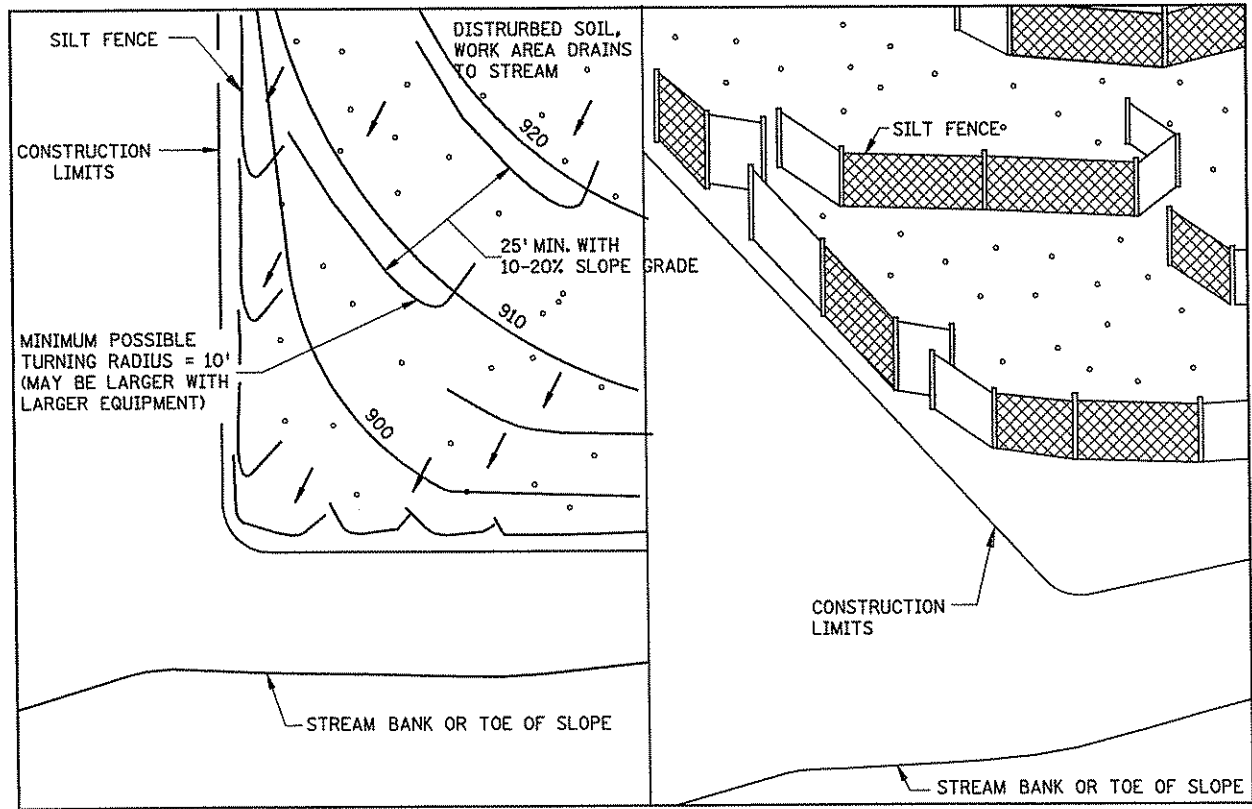
OPTIONAL METHOD FOR SILT FENCE, HEAVY DUTY



SILT FENCE, HEAVY DUTY (HAND INSTALLED)
DESIGN GUIDELINES:
TO PROTECT AREAS FROM SHEET FLOW.
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



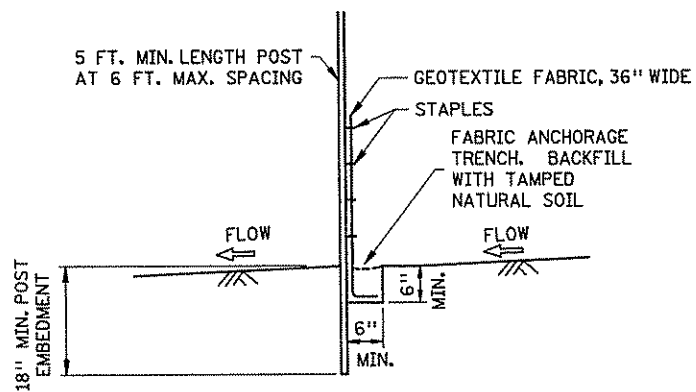
DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC.
CONTRIBUTING SLOPE AREA: 1 ACRE



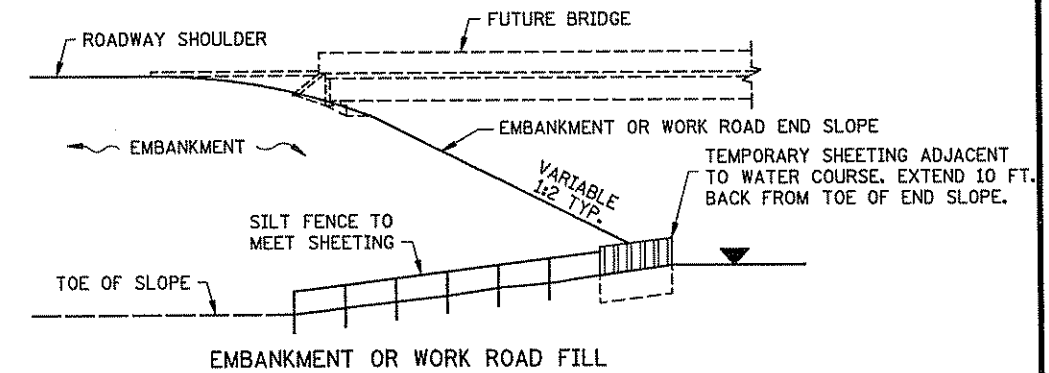
PLAN VIEW

SIDE VIEW

SILT FENCE, J-HOOK INSTALLATION



SILT FENCE, PREASSEMBLED
DESIGN GUIDELINES:
TO PROTECT AREAS FROM SHEET FLOW.
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



SILT FENCE AT BRIDGE EMBANKMENT ADJACENT TO WATER

DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC.
CONTRIBUTING SLOPE AREA: 3 ACRES

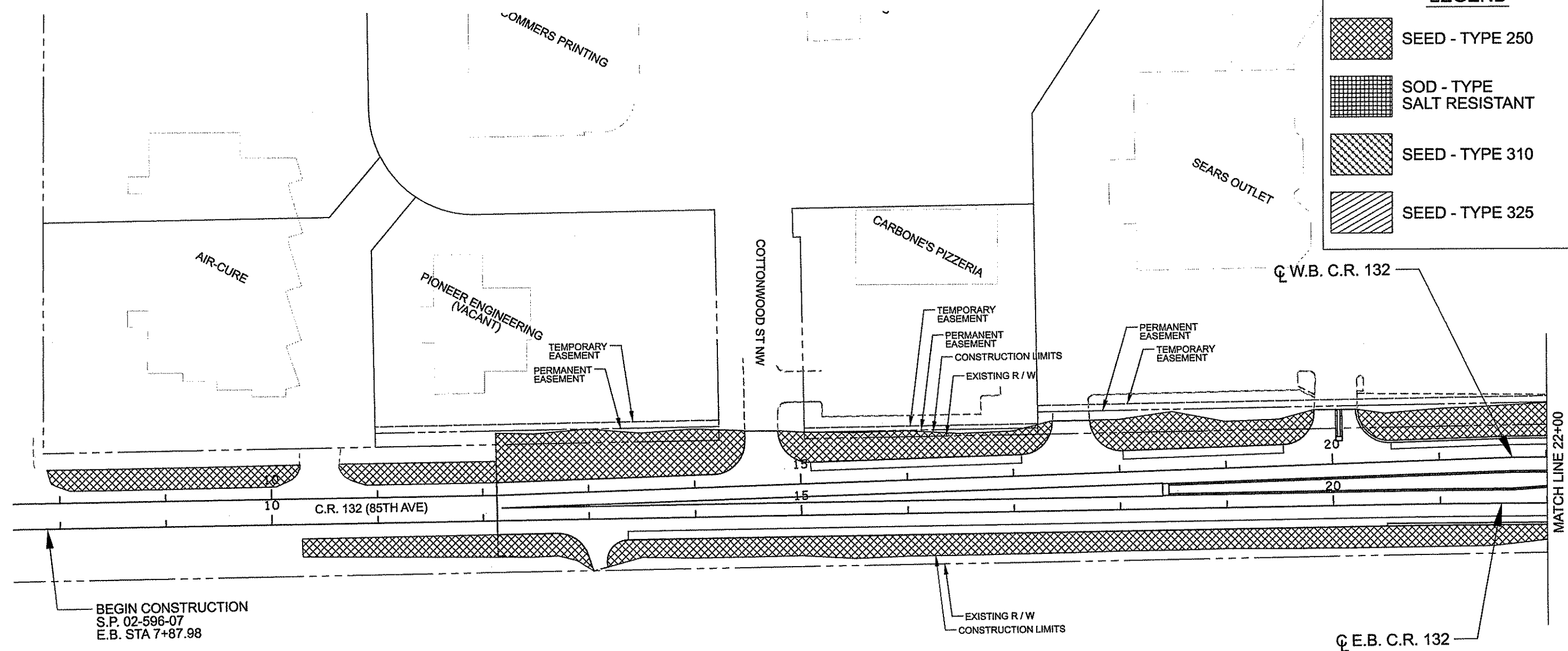
NOTES:

- SEE SPECS. 2573, 3149 & 3886.
- ① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.

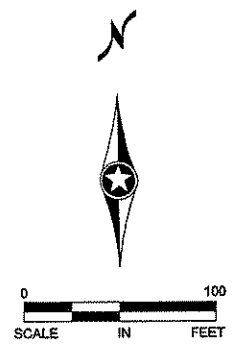
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S.P. 02-596-07	STANDARD SHEET NO.	TITLE:
S.P. 106-080-002	5-297.408 (1 OF 2)	TEMPORARY SEDIMENT CONTROL
S.P. 114-130-005	STANDARD APPROVED:	SILT FENCE
S.P. 127-341-006	SEPTEMBER 27, 2006	SHEET NO. 55 OF 101 SHEETS

LEGEND	
	SEED - TYPE 250
	SOD - TYPE SALT RESISTANT
	SEED - TYPE 310
	SEED - TYPE 325



BEGIN CONSTRUCTION
S.P. 02-596-07
E.B. STA 7+87.98

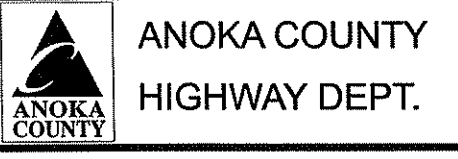


NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_TE_P1.dgn
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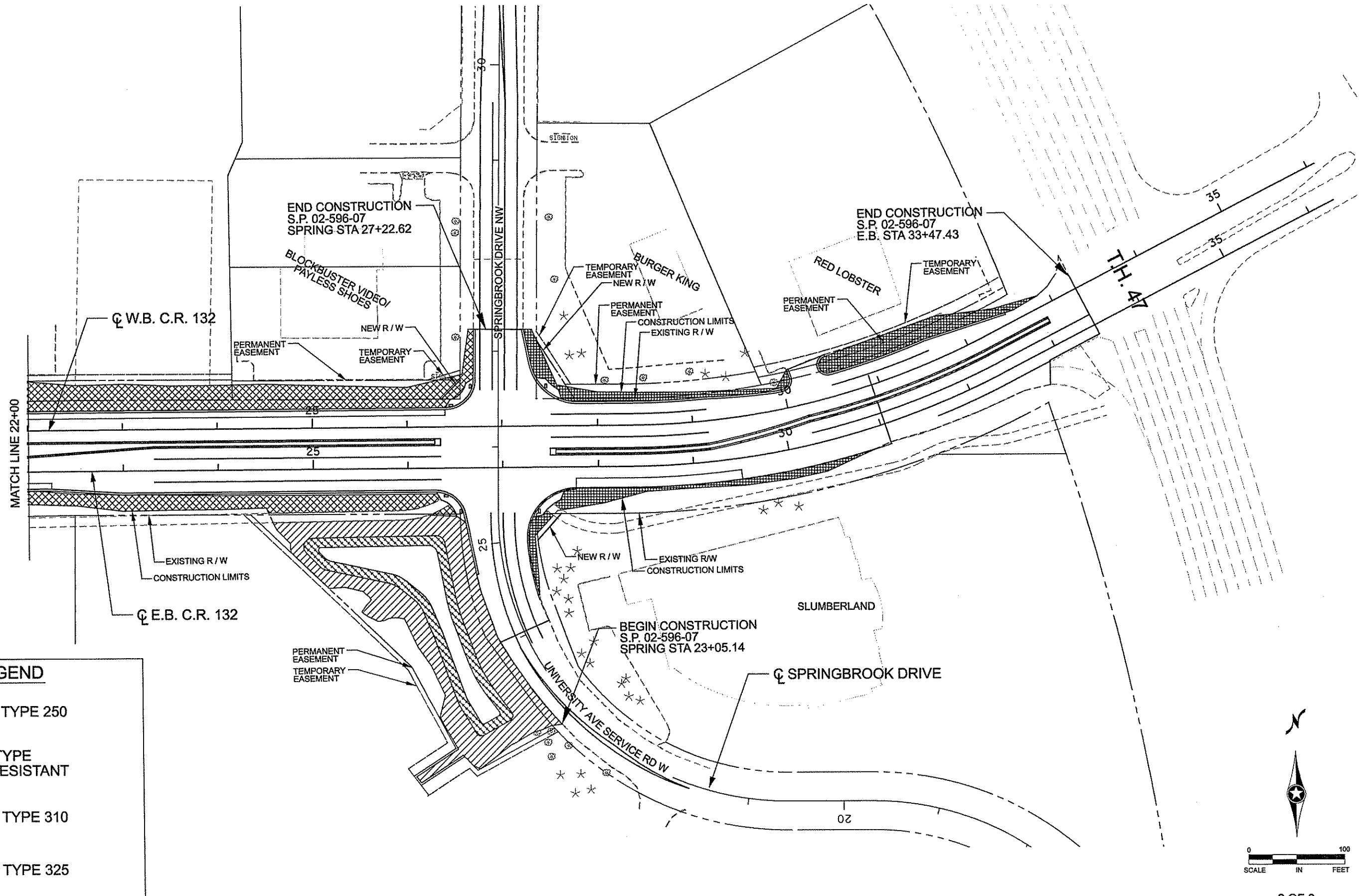
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: CURT A. KOBILARCSIK
SIGNATURE: *[Signature]*
DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY NJD DATE 11-17-09
DESIGN BY DFF DATE 11-17-09
CHECKED BY JEO DATE 11-18-09



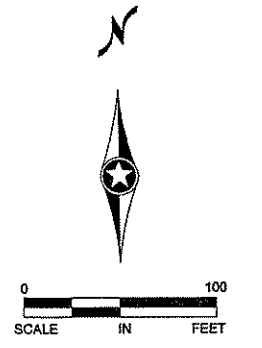
STATE PROJECT NO. 02-596-07
STATE PROJECT NO. 106-080-002
STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

TURF ESTABLISHMENT PLAN
Sheet 56 of 101 Sheets



LEGEND

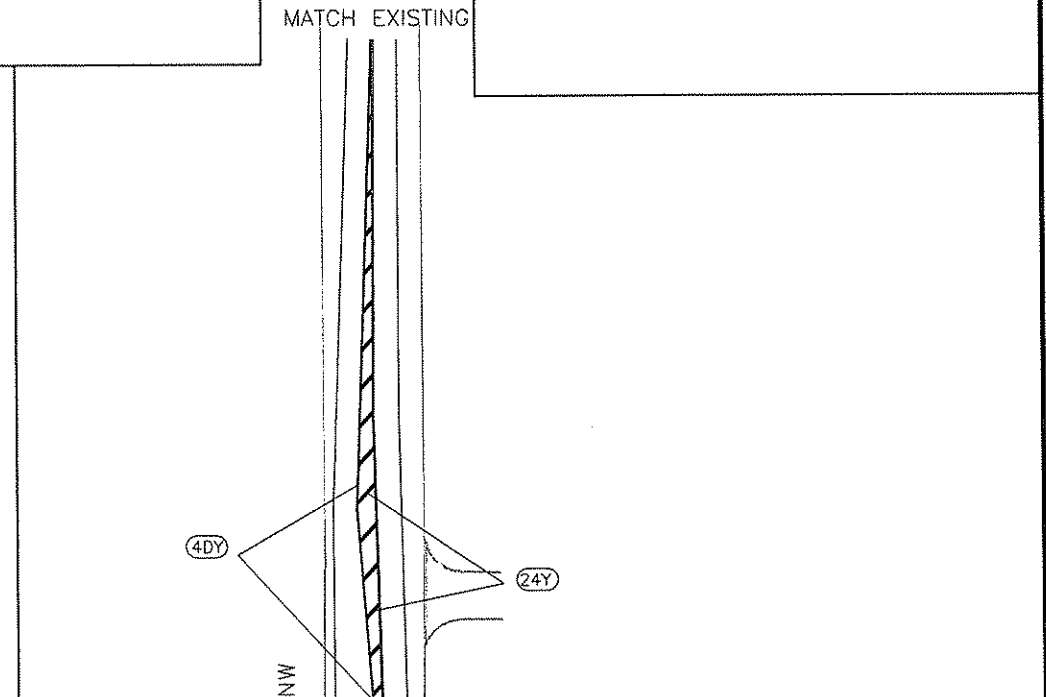
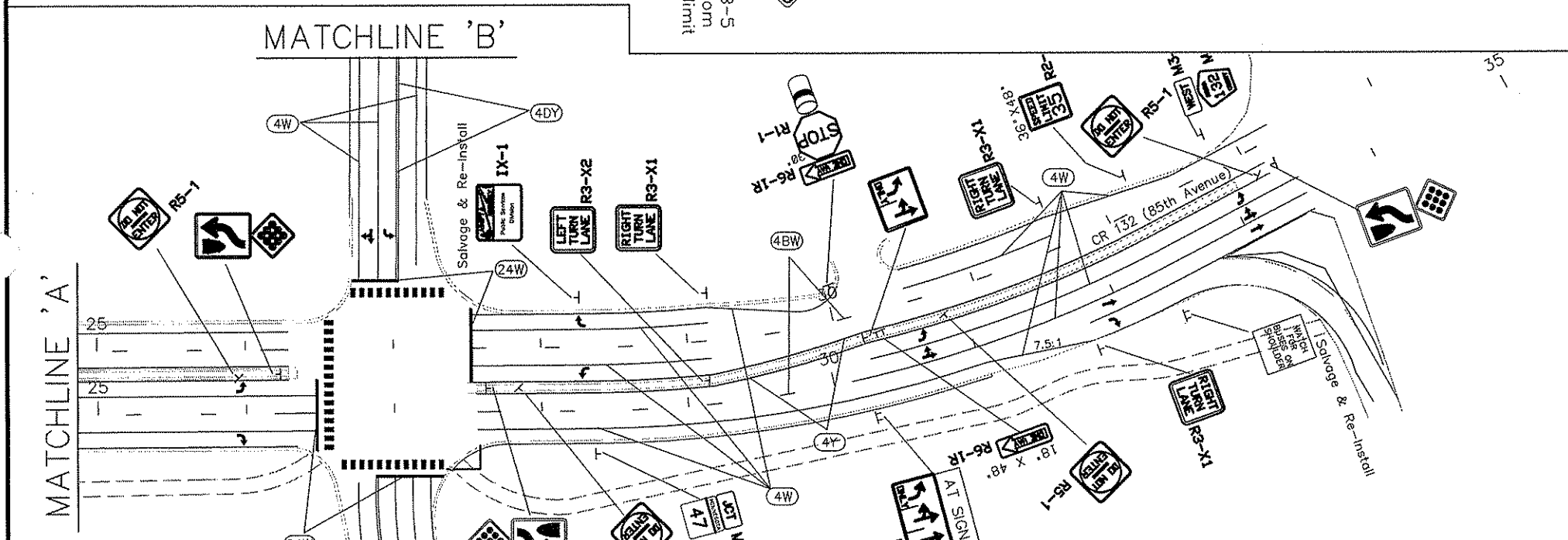
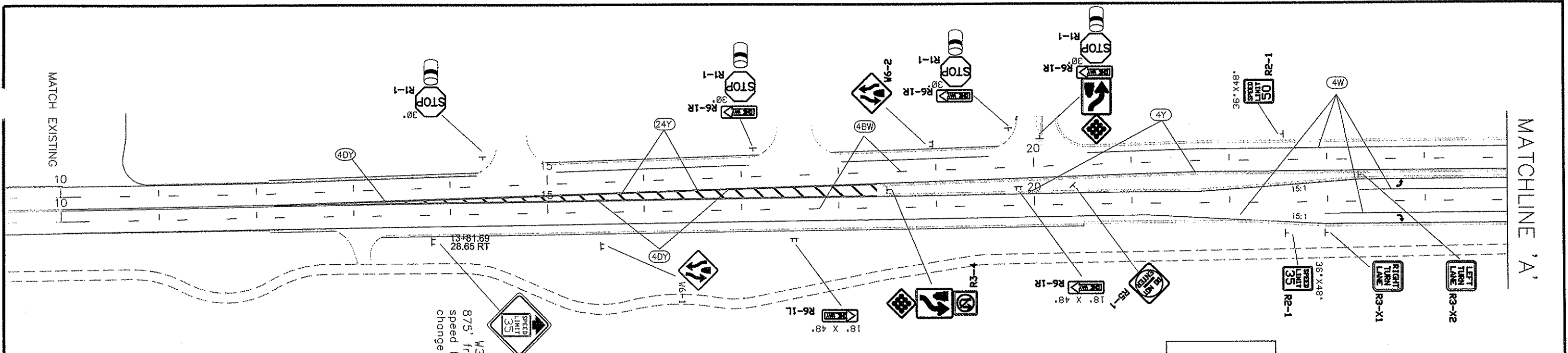
	SEED - TYPE 250
	SOD - TYPE SALT RESISTANT
	SEED - TYPE 310
	SEED - TYPE 325



2 OF 2

<table border="1"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					NO	DATE	BY	CHKD	APPR	REVISION							I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CURT A. KOBILARCSIK SIGNATURE: <i>Curt Kobilarsik</i> DATE: 4-28-10 LICENSE NO. 24756		DRAWN BY: NJD DATE: 11-17-09 DESIGN BY: DFF DATE: 11-17-09 CHECKED BY: JEO DATE: 11-18-09		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006		TURF ESTABLISHMENT PLAN Sheet 57 of 101 Sheets	
NO	DATE	BY	CHKD	APPR	REVISION																					

NAME: p:\02-596-07\plan\0259607_TE_P2.dgn 4/27/2010 1:00:46 PM



- PAVEMENT MESSAGE RIGHT
- PAVEMENT MESSAGE THROUGH/RIGHT
- PAVEMENT MESSAGE THROUGH
- PAVEMENT MESSAGE THROUGH/LEFT
- PAVEMENT MESSAGE LEFT
- (4W) 4" SOLID LINE WHITE
- (4BW) 4" BROKEN LINE WHITE (10' STRIPE, 40' GAP)
- (4Y) 4" SOLID LINE YELLOW
- (4DY) 4" DOUBLE SOLID LINE YELLOW
- (24W) 24" STOP LINE WHITE
- (24Y) 24" LINE YELLOW

- Notes:
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
 2. LOCATIONS OF ALL PERMANENT STRIPING AND PAVEMENT MESSAGES ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 3. ALL MAINLINE PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
 4. SEE PERMANENT SIGN TABULATIONS FOR ADDITIONAL INFORMATION
 5. ALL SEGMENT STRIPE LINES SHALL BE EPOXY. PERMANENT MESSAGES AND ARROWS SHALL BE PERFORMED THERMOPLASTIC
 6. ALL SIGNS SHALL BE FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: CURT A. KOBIARCSIK

SIGNATURE: *Curt Kobilarcsik*

DATE: 4-28-10 REG. NO. 24756

DRAWN BY: MTH DATE: 03/11/10

DESIGN BY: MTH DATE: 03/11/10

CHECKED BY: JR DATE: 03/11/10



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07

STATE PROJECT NO. 106-080-002

STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

02-596-07
SIGNING AND STRIPING
PLAN

Sheet 58 of 101 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY	PANEL AREA SQ FT	TOTAL AREA SQ FT	MOUNTING FEET PER INSTALLATION	MOUNTING HEIGHT	NOTES
R1-1	30' x 30'	STOP	5	6.25	31.25	1	7.0'	
R2-1	24' x 36'	SPEED LIMIT 35	0	6.00	0	1	7.0'	
	36' x 48'		2	12.00	24.0	2	7.0'	
R2-1	36' x 48'	SPEED LIMIT 50	1	12.00	12.0	2	7.0'	
R3-X1	24' x 36'	RIGHT TURN LANE	4	6.00	24.0	1	7.0'	
R3-X2	24' x 36'	LEFT TURN LANE	2	6.00	12.0	1	7.0'	
R3-4	24' x 24'		1	4.00	4.00		7.0'	1
R3-30ACA	54' x 30'		1	11.25	11.25	2	7.0'	
R3-30AD	30' x 30'		1	6.25	6.25	1	7.0'	
R3-30AE	30' x 30'		1	6.25	6.25	1	7.0'	
R3-30AECA	66' x 30'	AT SIGNAL	1	18.33	18.3	2	7.0'	
R4-7	24' x 30'		5	5.00	25.0	1	7.0'	
R5-1	30' x 30'	DO NOT ENTER	5	6.25	31.25	1	7.0'	
R6-1R	12' x 36'	ONE WAY	4	3.00	12.0		7.0'	2
	18' x 48'		2	6.00	12.0	2	7.0'	
R6-1L	18' x 48'	ONE WAY	1	6.00	6.0	2	7.0'	

M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY	PANEL AREA SQ FT	TOTAL AREA SQ FT	MOUNTING FEET PER INSTALLATION	MOUNTING HEIGHT	NOTES
W3-5	48' x 48'		1	16.00	16.0	2	7.0'	
W6-1	36' x 36'		1	9.00	9.0	2	7.0'	
W6-2	36' x 36'		1	9.00	9.0	2	7.0'	
V14-X9	30' x 36'	WATCH FOR BUSES ON SHOULDER	1	5.00	5.0	1	7.0'	
M1-5A	24' x 24'	47	1	4.00	4.00	1	7.0'	
M1-6A	24' x 24'	132	1	4.00	4.00	1	7.0'	
M2-1A	21' x 15'	JCT	1	2.19	2.19			3
M3-4A	24' x 12'	WEST	1	2.00	2.00			4
X4-2	18' x 18'		5	2.25	11.25			5
X4-13	4" diameter x 15'		5	1.31	6.56			6

GENERAL NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.

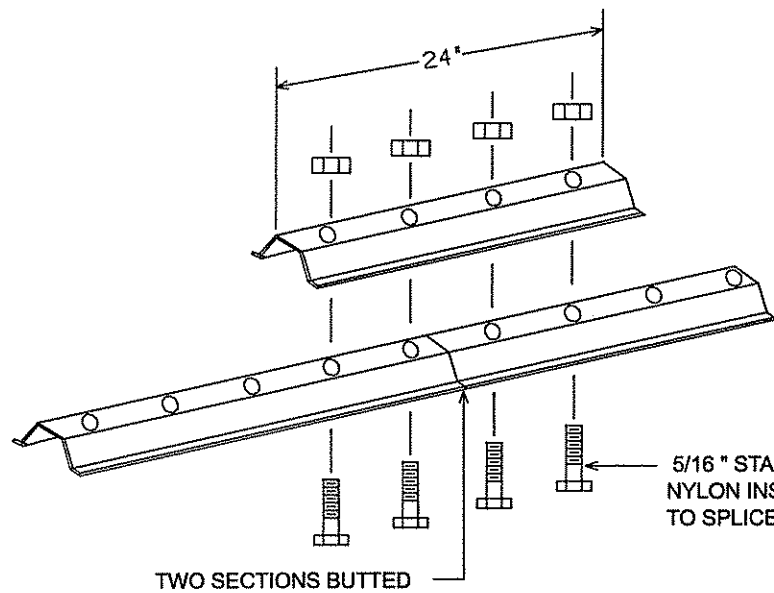
SIGNING NOTES:

- MOUNT ON BACKSIDE OF R4-7
- MOUNT DIRECTLY ABOVE R1-1
- MOUNT DIRECTLY ABOVE M1-5A
- MOUNT DIRECTLY ABOVE M1-6A
- MOUNT DIRECTLY BELOW R4-7
- MOUNT DIRECTLY BELOW R1-1

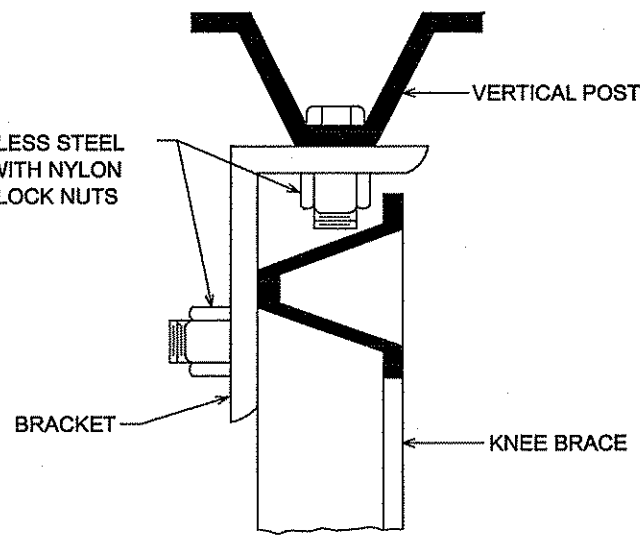
PERMANENT PAVEMENT MARKINGS											Q	
STATION TO STATION	ALIGNMENT	PAVEMENT MESSAGE					SOLID LINE				BROKEN LINE	DOUBLE SOLID LINE
		LEFT ARROW	RIGHT ARROW	LEFT-THRU ARROW	RIGHT-THRU ARROW	THRU ARROW	4" WHITE (LF)	24" WHITE (LF)	4" YELLOW (LF)	24" YELLOW (LF)	4" WHITE (LF)	4" YELLOW (LF)
		(EACH)	(EACH)	(EACH)	(EACH)	(EACH)						
12+13.27 TO 26+47.60	CR 132 EB	2	2				2295	49	783	194	300	844
12+18.35 TO 26+29.17	CR 132 WB						1347		790		300	578
27+56.22 TO 33+47.43	CR 132 EB	2	1	2		2	1126		567		50	
27+51.73 TO 33+11.95	CR 132 WB	1	1				875	50	568		120	
20+71.66 TO 25+36.31	SPRING	1	1			1	1163	47		64		659
26+67.50 TO 33+82.93	SPRING	2			2		1484	30		129		1067
PROJECT TOTAL		8	5	2	2	3	8292	176	2708	387	770	3148

STRIPING KEY:

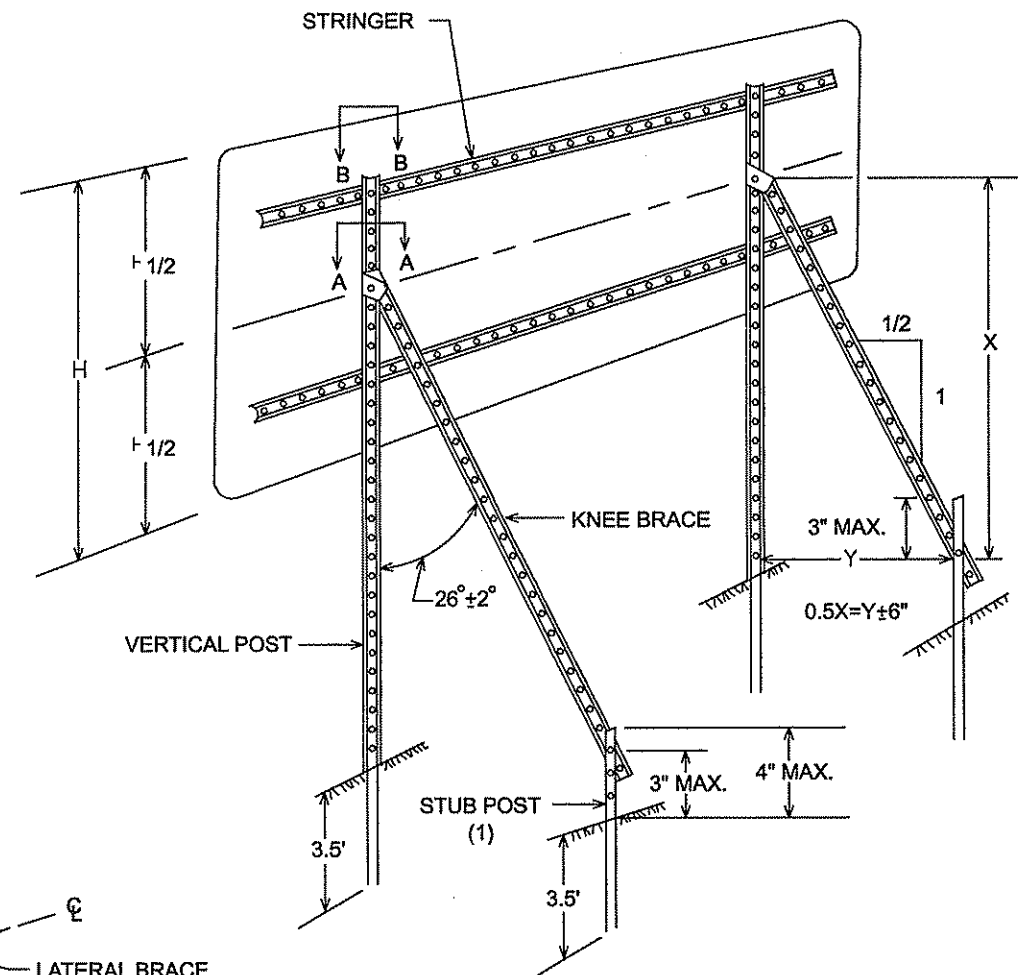
- 4W 4" SOLID LINE WHITE
- 4BW 4" BROKEN LINE WHITE (10' STRIPE, 40' GAP)
- 4Y 4" SOLID LINE YELLOW
- 4DY 4" DOUBLE SOLID LINE YELLOW
- 24W 24" STOP LINE WHITE
- 24Y 24" LINE YELLOW
- PAVEMENT MESSAGE RIGHT
- PAVEMENT MESSAGE THROUGH/RIGHT
- PAVEMENT MESSAGE THROUGH
- PAVEMENT MESSAGE THROUGH/LEFT
- PAVEMENT MESSAGE LEFT



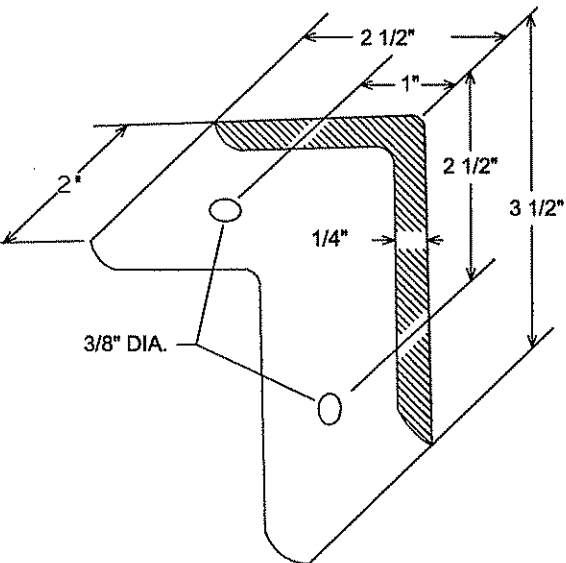
**LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)**



SECTION A-A

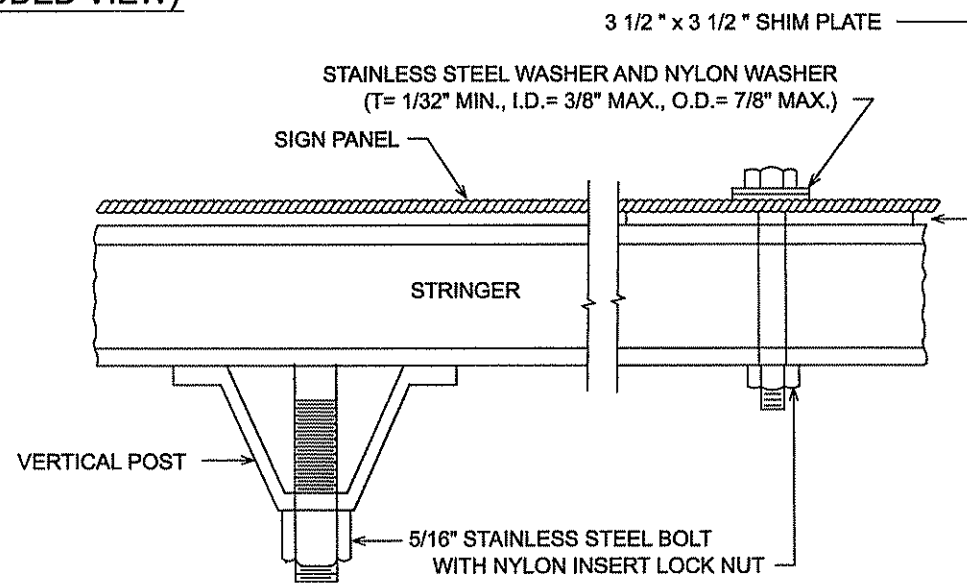


**TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS**

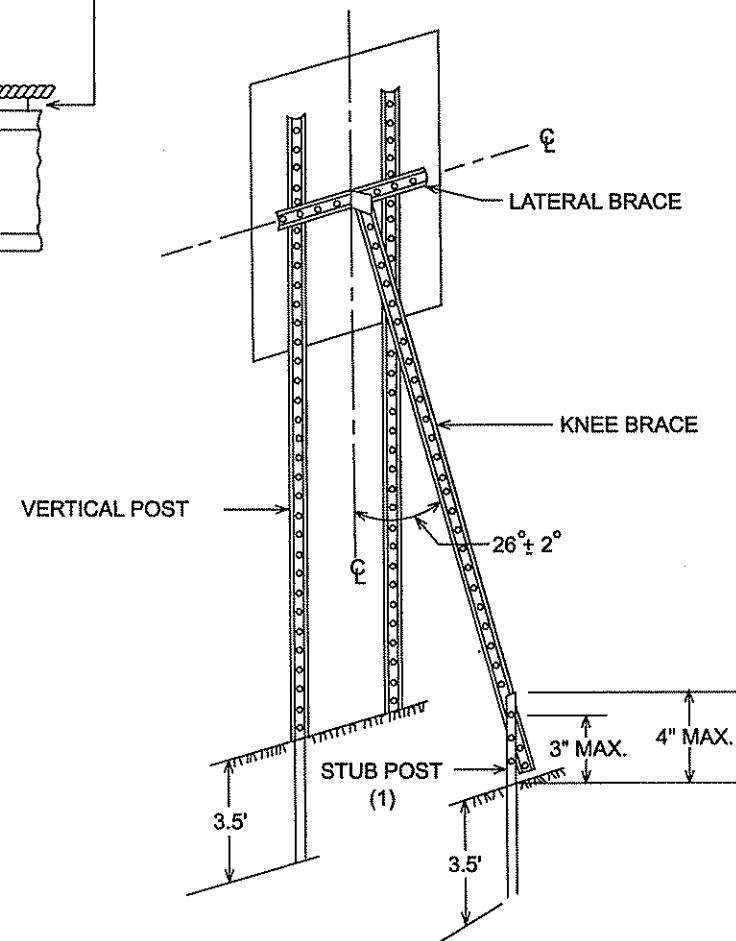


A-FRAME BRACKET

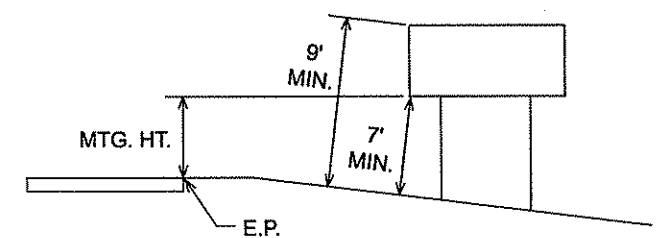
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



SECTION B-B



**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**

NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-596-07\plan\0259607_SSTD1.dgn					

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: CURT A. KOBILARCSIK
 SIGNATURE: *Curt A. Kobilarsik*
 DATE: 4-28-10 LICENSE NO. 24756

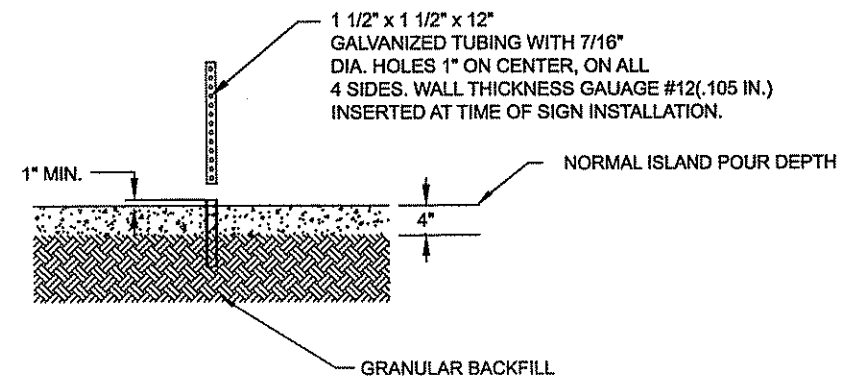
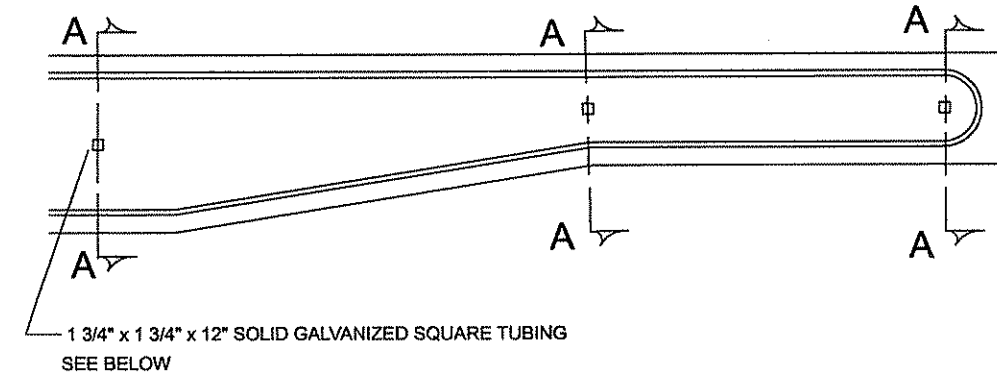
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 DESIGN BY: DFF DATE: 8-13-08
 CHECKED BY: JEO DATE: 8-13-08



**ANOKA COUNTY
HIGHWAY DEPT.**

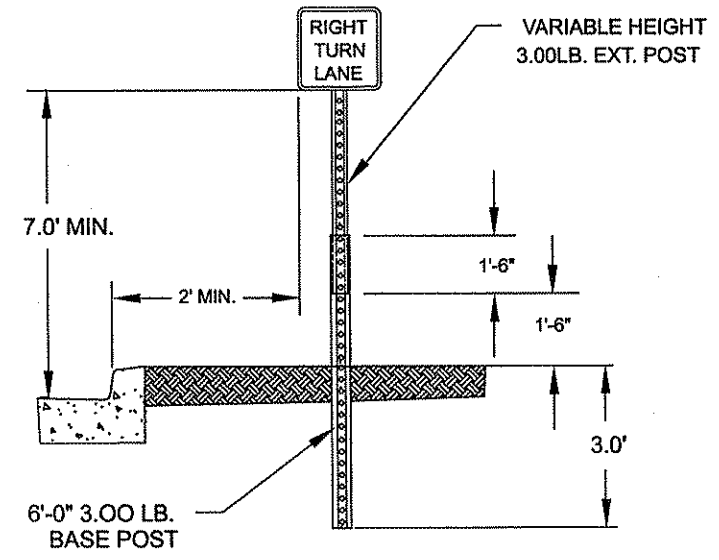
STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

SIGNING & STRIPING DETAILS

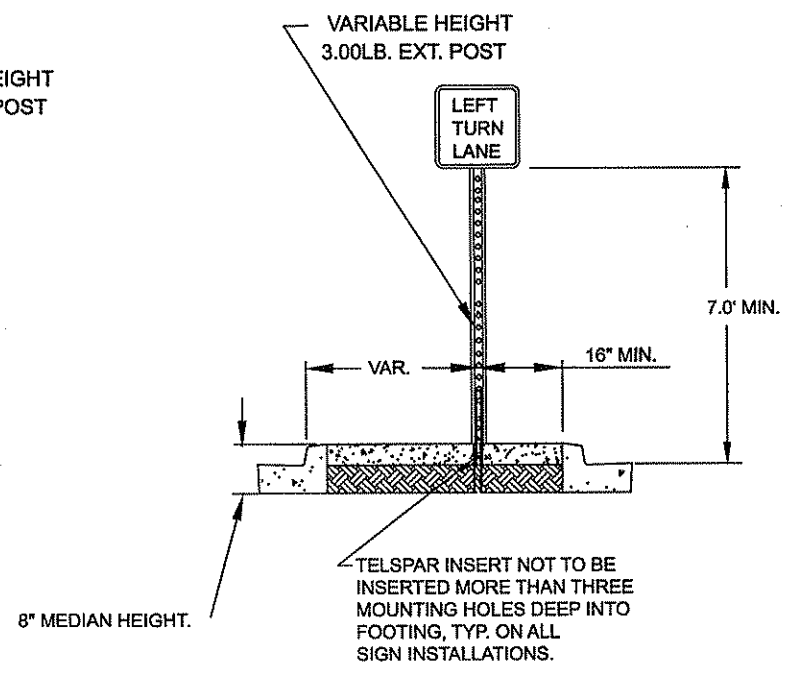


SECTION A - A

GROUND POST MOUNT SIGN INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN INSTALLATION TYPICAL



NO	DATE	BY	CHKD	APPR	REVISION

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PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE: *Curt A. Kobilarscik*
 DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY: NJD DATE: 8-13-08
 DESIGN BY: DFF DATE: 8-13-08
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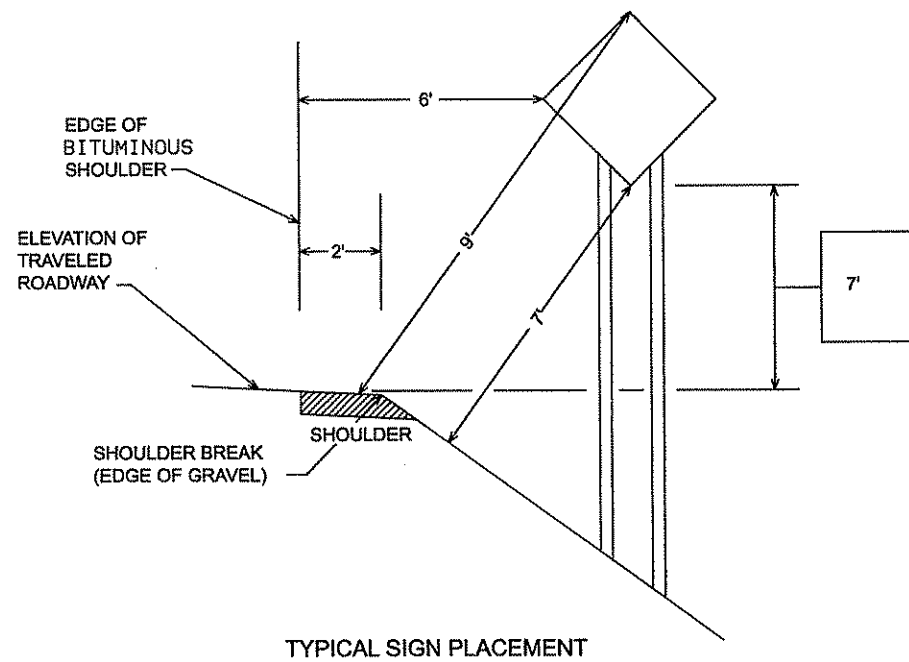


STATE PROJECT NO. 02-596-07
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 STATE PROJECT NO. 114-130-005
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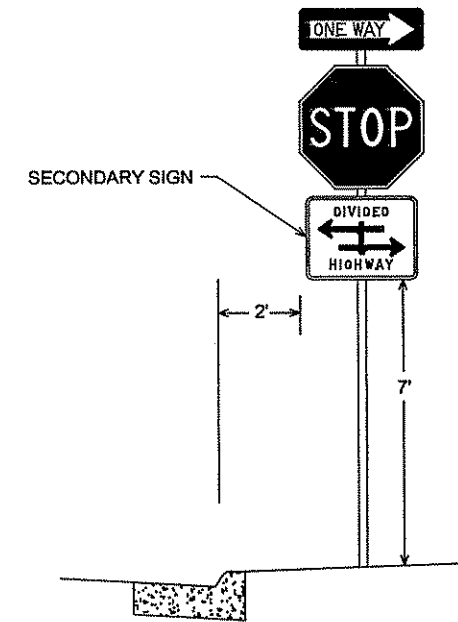
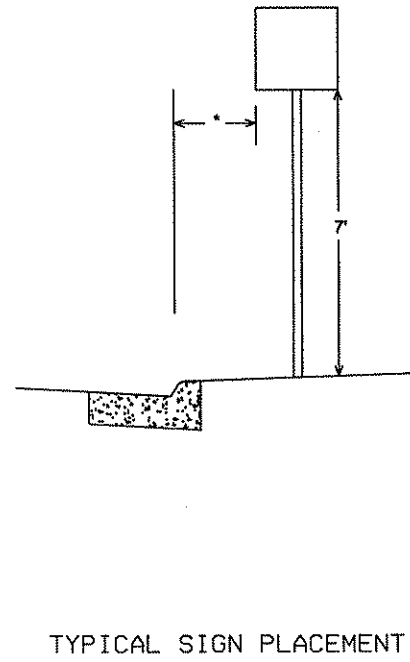
Sheet 61 of 101 Sheets

RURAL



URBAN

- 2' - NARROW BOULEVARD (< 8' WIDE)
- 6' - WIDE BOULEVARD



- NOTE:
- ALL DIMENSIONS ARE MINIMUMS
 - MAINTAIN 2' CLEAR FROM SIGNS TO BITUMINOUS TRAIL

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_SSTD1.dgn 4/27/2010 1:00:52 PM

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PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 4-28-10 LICENSE NO. 24758

DRAWN BY NJD DATE 8-13-08

DESIGN BY DFF DATE 8-13-08

CHECKED BY JEO DATE 8-13-08



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07

STATE PROJECT NO. 106-080-002

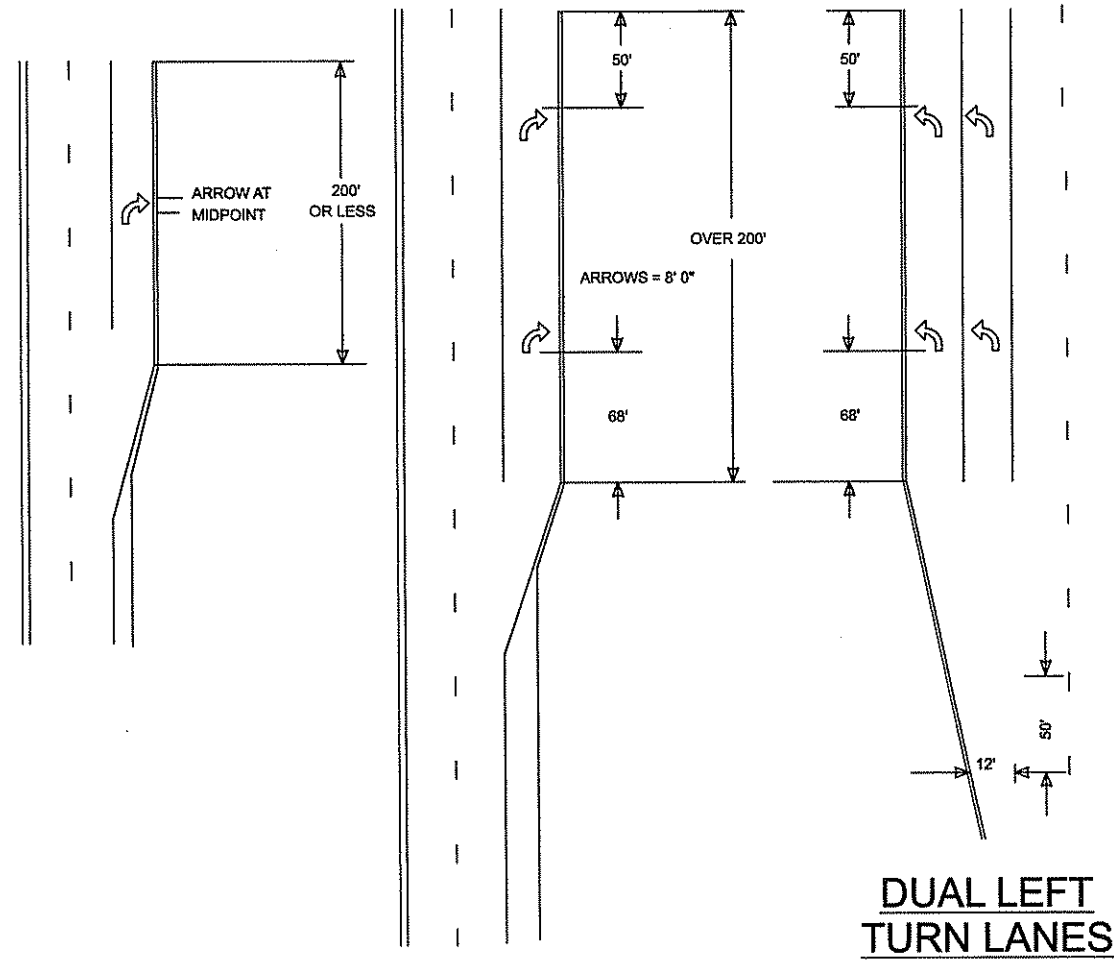
STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

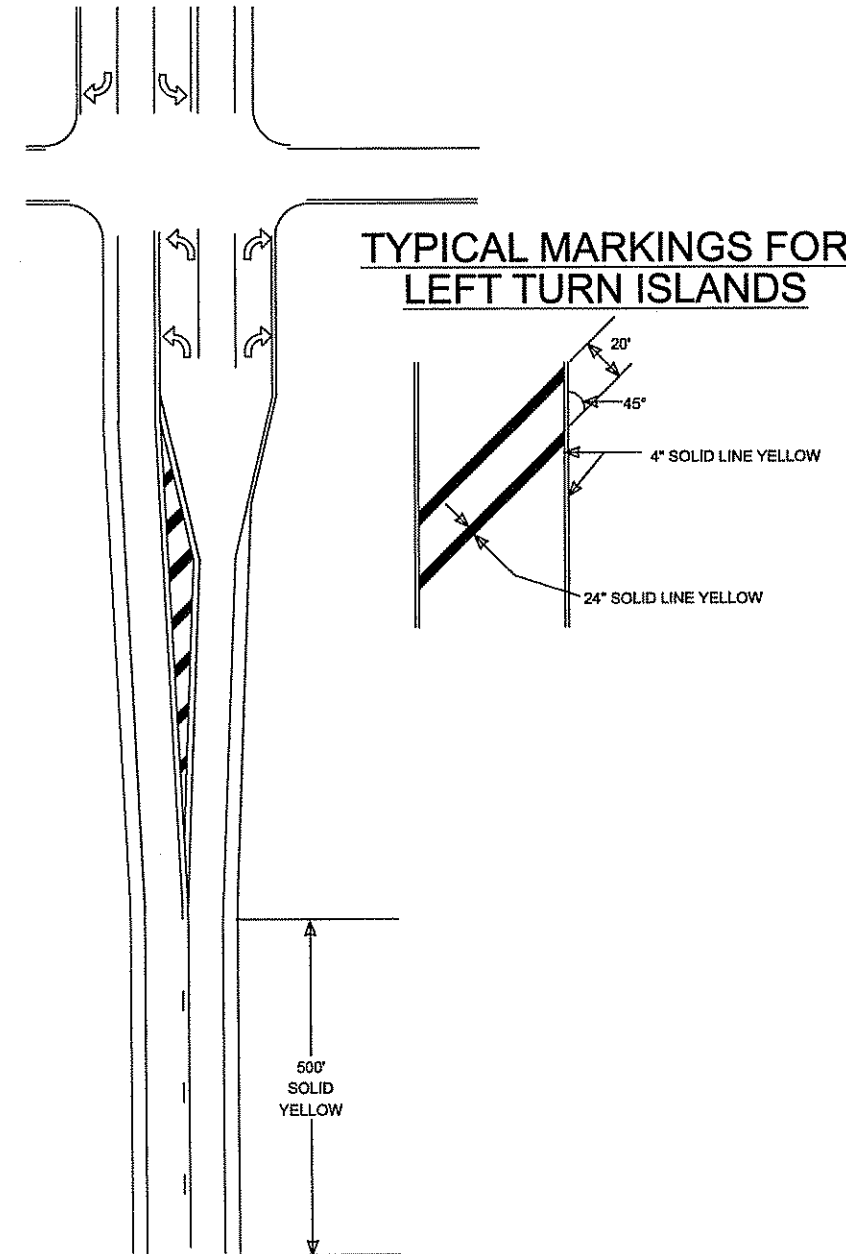
SIGNING & STRIPING DETAILS

Sheet 62 of 101 Sheets

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-596-07\plan\0259607_SSTD1.dgn
4/27/2010 1:00:52 PM

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SIGNATURE: *Curt Kobilarsik*
DATE: 4-28-10 LICENSE NO. 24756

DRAWN BY NJD DATE 8-13-08
DESIGN BY DFF DATE 8-13-08
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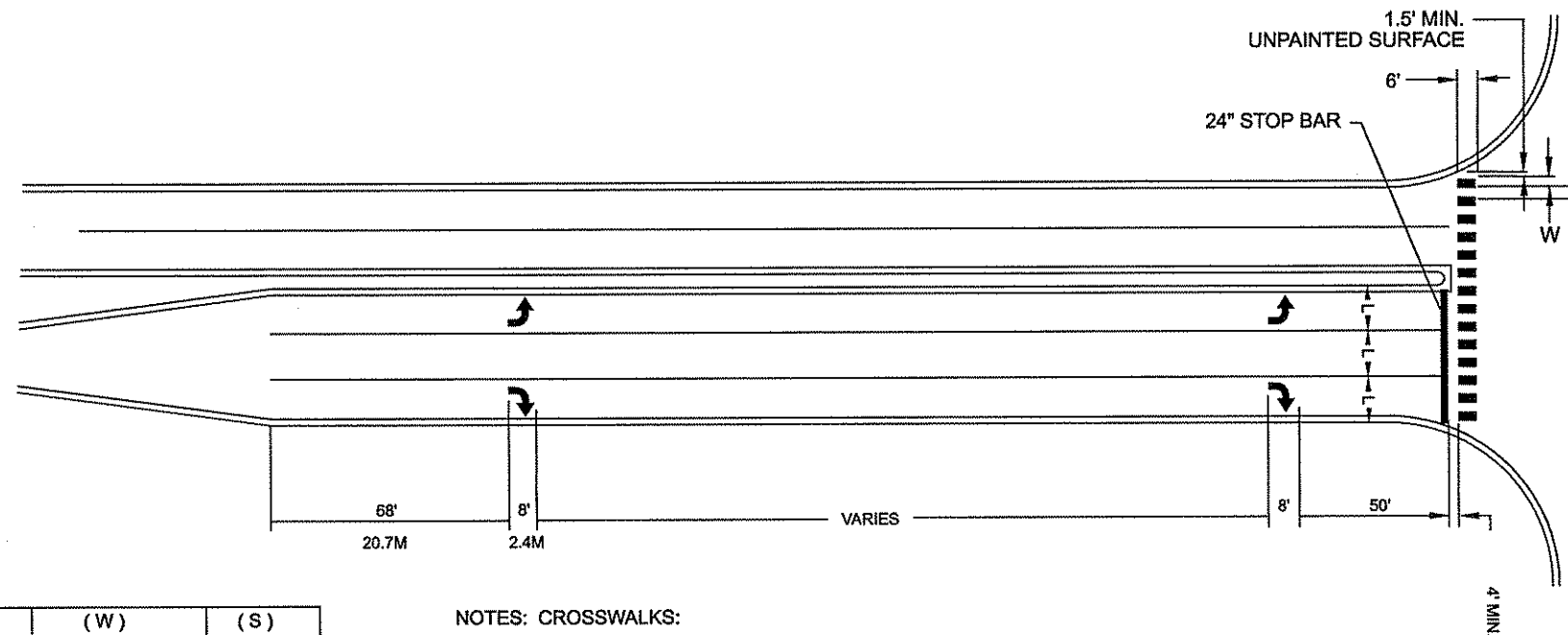
**ANOKA COUNTY
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STATE PROJECT NO. 127-341-006

SIGNING & STRIPING DETAILS

Sheet 63 of 101 Sheets

MARKINGS FOR PEDESTRIAN CROSSWALKS



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

NOTES: CROSSWALKS:

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

NOTES & GUIDELINES

GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. THE CONTRACTOR WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.

EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.

A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

EPOXY:

THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENTS AND/OR LAITANCE. ON LOW SPEED (SPEED LIMIT 35 OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS, SANDBLAST CLEANING SHALL BE USED FOR ALL EPOXY PAVEMENT MARKINGS.

THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOXY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEADS SHALL BE APPLIED AT A POUND PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES F° OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

PAINT:

AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICATION IN A MANNER AND TO THE EXTENT REQUIRED BY THE ENGINEER.

GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.

EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR TEMPERATURE IS 50°F OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OF DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p102-596-07\plan0259607_SSTD1.dgn 4/27/2010 1:00:53 PM

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PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE: *Curt A. Kobilarsik*
 DATE: 4-28-10 LICENSE NO. 24756

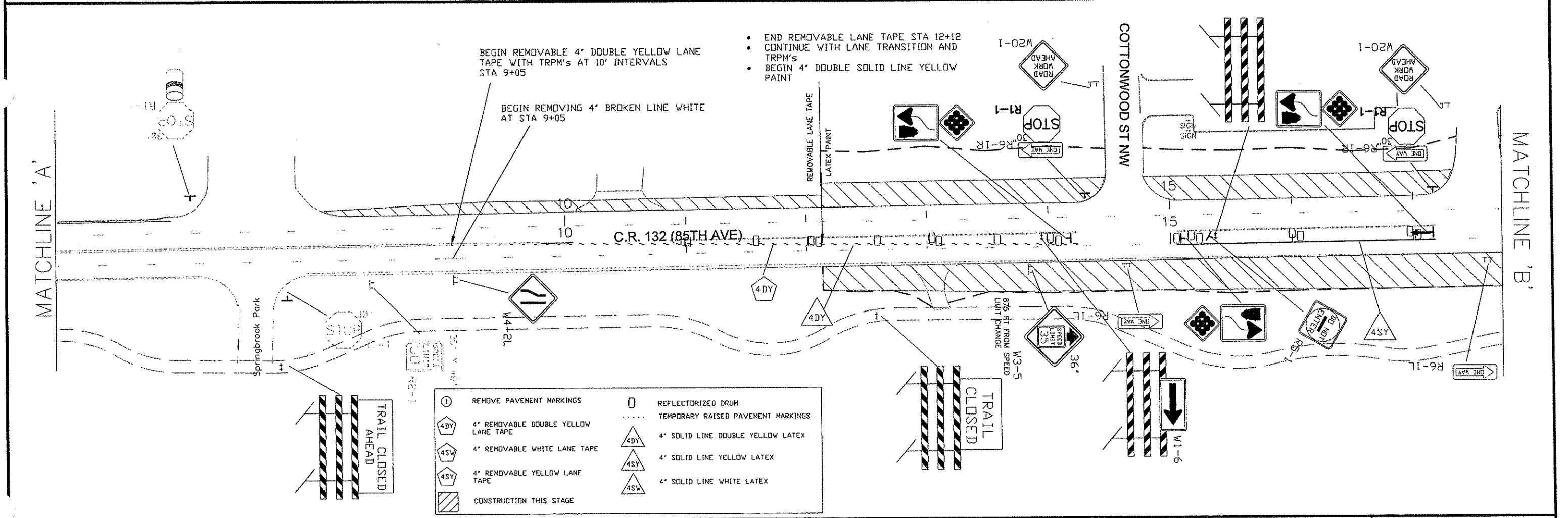
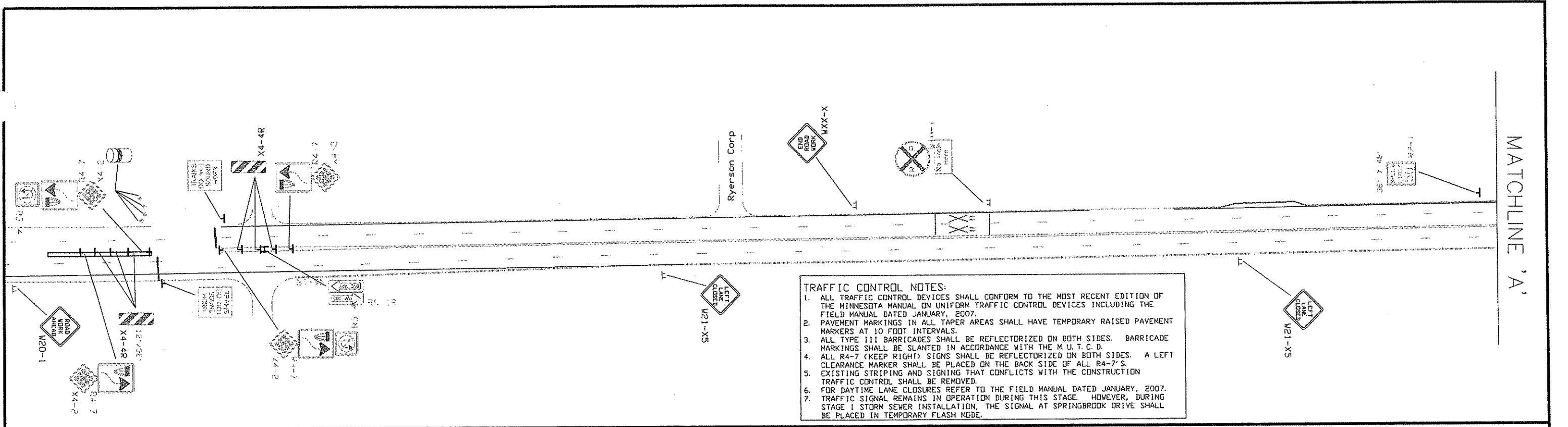
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 DESIGN BY: DFF DATE: 8-13-08
 CHECKED BY: JEO DATE: 8-13-08



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

SIGNING & STRIPING DETAILS
 Sheet 64 of 101 Sheets



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CURT A KOBIARCSIK SIGNATURE: <i>Curt A Kobiarsik</i> DATE: 4-28-10 REG. NO. 24756					DRAWN BY: MTH DATE 03/01/10 DESIGN BY: MTH DATE 03/01/10 CHECKED BY: JR DATE 03/01/10		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. 02-596-07 STATE PROJECT NO. 106-080-002 STATE PROJECT NO. 114-130-005 STATE PROJECT NO. 127-341-006		STAGE 1 TRAFFIC CONTROL Sheet 65 of 101 Sheets	
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MATCHLINE 'B'

MATCHLINE 'C'

SPRINGBROOK DRIVE NW

END REMOVING 4" BROKEN LINE WHITE STA 26+35

REMOVE 4" BROKEN LINE WHITE FROM STA 27+50 TO 30+00

Place W20-1 750 feet from signal

Place W20-1 750 feet from signal

T.H. 47

⓪	REMOVE PAVEMENT MARKINGS	↩	REMOVE LEFT TURN ARROW PAVEMENT MARKING
4SY	4" REMOVABLE DOUBLE YELLOW LANE TAPE	⓪	REMOVE "THRU" PORTION OF PAVEMENT MARKING
4SW	4" REMOVABLE WHITE LANE TAPE	⓪	REFLECTORIZED DRUM
4SY	4" REMOVABLE YELLOW LANE TAPE	⓪	TEMPORARY RAISED PAVEMENT MARKINGS
⓪	CONSTRUCTION THIS STAGE	△	4" SOLID LINE YELLOW LATEX
⓪	CONSTRUCTION UNDER TRAFFIC	△	4" SOLID LINE WHITE LATEX

- TRAFFIC CONTROL NOTES:**
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
 2. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
 3. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.
 4. ALL R4-7 (KEEP RIGHT) SIGNS SHALL BE REFLECTORIZED ON BOTH SIDES. A LEFT CLEARANCE MARKER SHALL BE PLACED ON THE BACK SIDE OF ALL R4-7'S.
 5. EXISTING STRIPING AND SIGNING THAT CONFLICTS WITH THE CONSTRUCTION TRAFFIC CONTROL SHALL BE REMOVED.
 6. FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.
 7. TRAFFIC SIGNAL REMAINS IN OPERATION DURING THIS STAGE. HOWEVER, DURING STAGE 1 STORM SEWER INSTALLATION, THE SIGNAL AT SPRINGBROOK DRIVE SHALL BE PLACED IN TEMPORARY FLASH MODE.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-07\02-596-07\02-596-07_STG 1.dwg

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PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 4-28-10 REG. NO. 24756

DRAWN BY: MTH DATE: 03/01/10

DESIGN BY: MTH DATE: 03/01/10

CHECKED BY: JR DATE: 03/01/10



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07

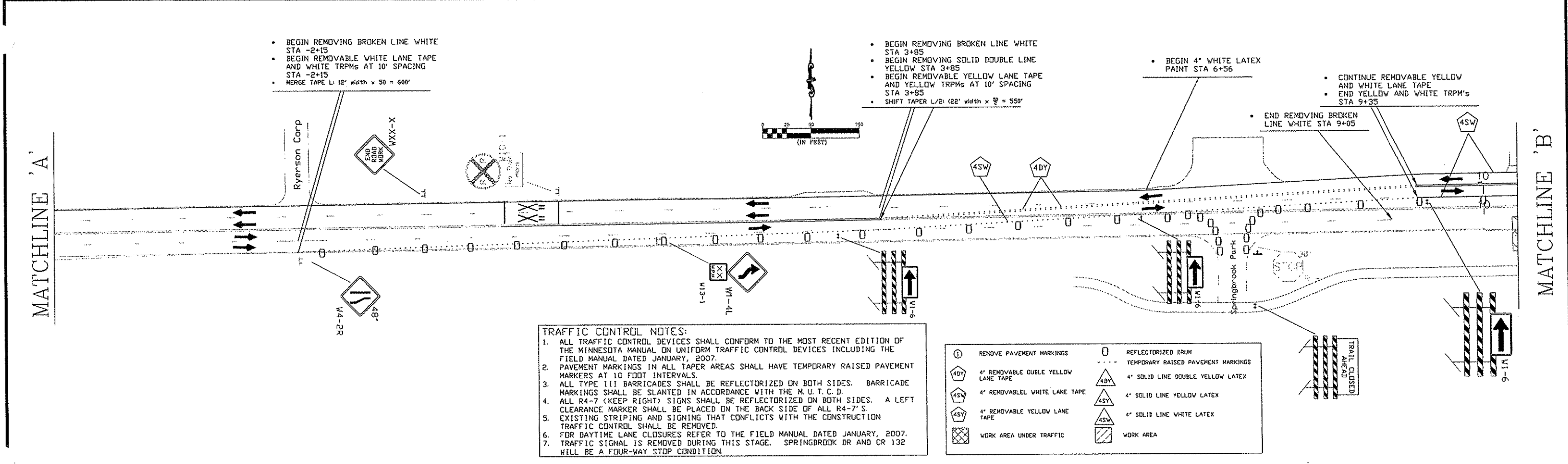
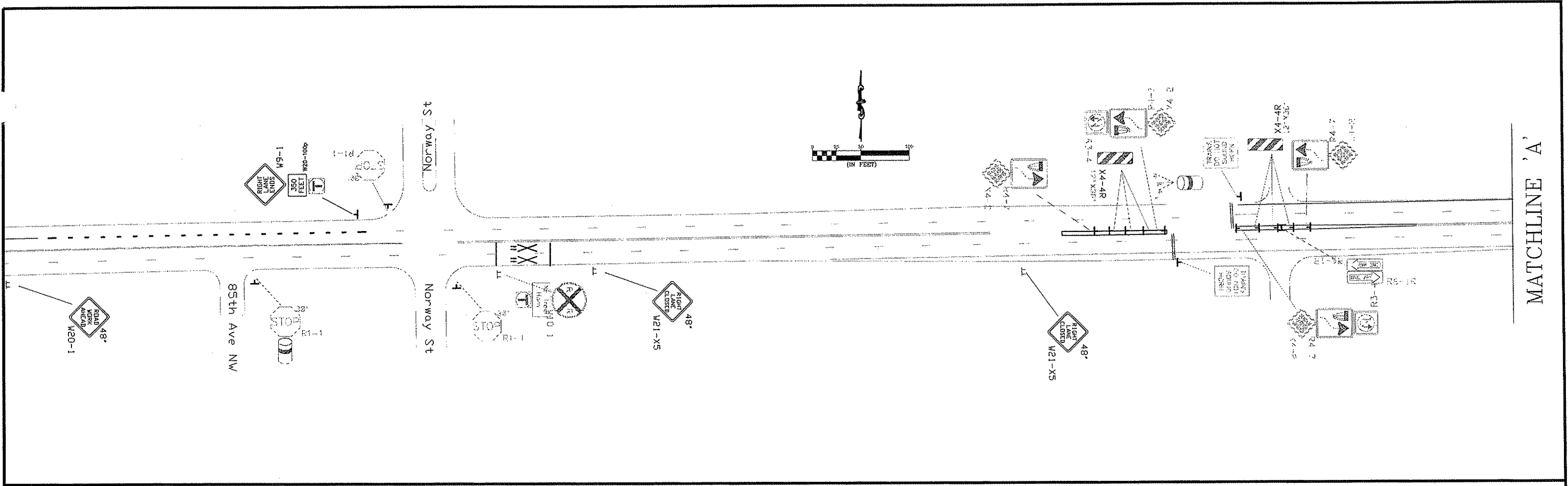
STATE PROJECT NO. 106-080-002

STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

STAGE 1
TRAFFIC CONTROL

Sheet 66 of 101 Sheets



- BEGIN REMOVING BROKEN LINE WHITE STA -2+15
- BEGIN REMOVABLE WHITE LANE TAPE AND WHITE TRPMs AT 10' SPACING STA -2+15
- MERGE TAPE L: 12' width x 50' = 600'

- BEGIN REMOVING BROKEN LINE WHITE STA 3+85
- BEGIN REMOVING SOLID DOUBLE LINE YELLOW STA 3+85
- BEGIN REMOVABLE YELLOW LANE TAPE AND YELLOW TRPMs AT 10' SPACING STA 3+85
- SHIFT TAPER L/2: (22' width x 50' = 550'

- BEGIN 4" WHITE LATEX PAINT STA 6+56

- CONTINUE REMOVABLE YELLOW AND WHITE LANE TAPE
- END YELLOW AND WHITE TRPMs STA 9+35

- END REMOVING BROKEN LINE WHITE STA 9+05

TRAFFIC CONTROL NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
2. PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
3. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M. U. T. C. D.
4. ALL R4-7 (KEEP RIGHT) SIGNS SHALL BE REFLECTORIZED ON BOTH SIDES. A LEFT CLEARANCE MARKER SHALL BE PLACED ON THE BACK SIDE OF ALL R4-7'S.
5. EXISTING STRIPING AND SIGNING THAT CONFLICTS WITH THE CONSTRUCTION TRAFFIC CONTROL SHALL BE REMOVED.
6. FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.
7. TRAFFIC SIGNAL IS REMOVED DURING THIS STAGE. SPRINGBROOK DR AND CR 132 WILL BE A FOUR-WAY STOP CONDITION.

(1)	REMOVE PAVEMENT MARKINGS	(2)	REFLECTORIZED DRUM
(4DY)	4" REMOVABLE DOUBLE YELLOW LANE TAPE	(4DY)	4" SOLID LINE DOUBLE YELLOW LATEX
(4SW)	4" REMOVABLE WHITE LANE TAPE	(4SY)	4" SOLID LINE YELLOW LATEX
(4SY)	4" REMOVABLE YELLOW LANE TAPE	(4SW)	4" SOLID LINE WHITE LATEX
(W)	WORK AREA UNDER TRAFFIC	(W)	WORK AREA

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-07\Bose\PROPOSED\0259607_STG 2.dwg

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ANOKA COUNTY
HIGHWAY DEPT.

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STATE PROJECT NO. 114-130-005

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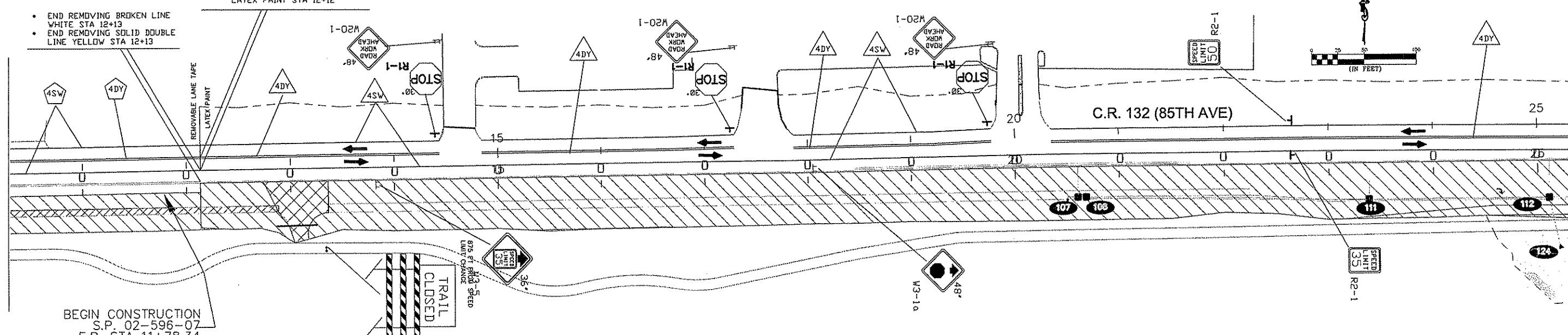
STAGE 2
TRAFFIC CONTROL

Sheet 67 of 101 Sheets

MATCHLINE 'B'

MATCHLINE 'C'

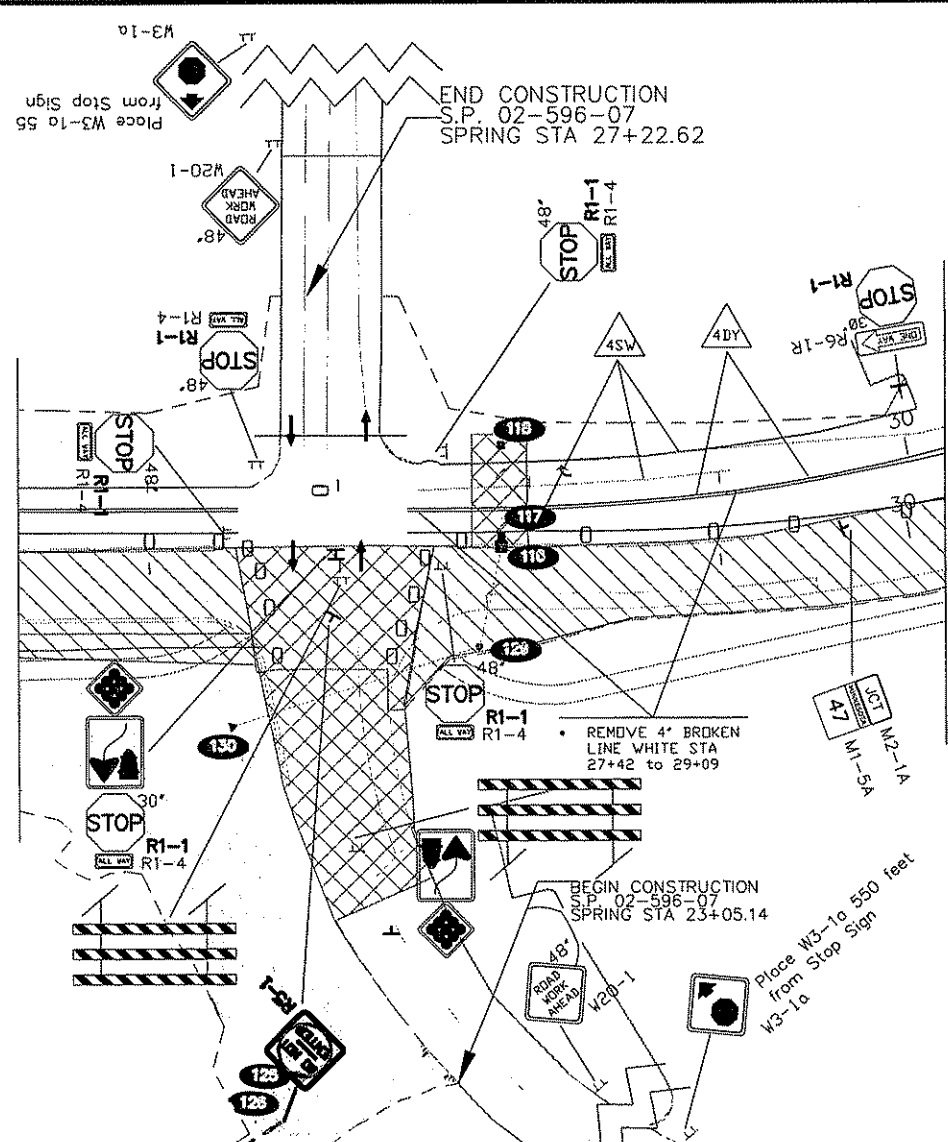
- END REMOVING BROKEN LINE WHITE STA 12+13
- END REMOVING SOLID DOUBLE LINE YELLOW STA 12+13
- END REMOVABLE YELLOW AND WHITE LANE TAPE STA 12+12
- BEGIN YELLOW AND WHITE LATEX PAINT STA 12+12



BEGIN CONSTRUCTION
S.P. 02-596-07
E.B. STA 11+78.34

MATCHLINE 'C'

MATCHLINE 'D'

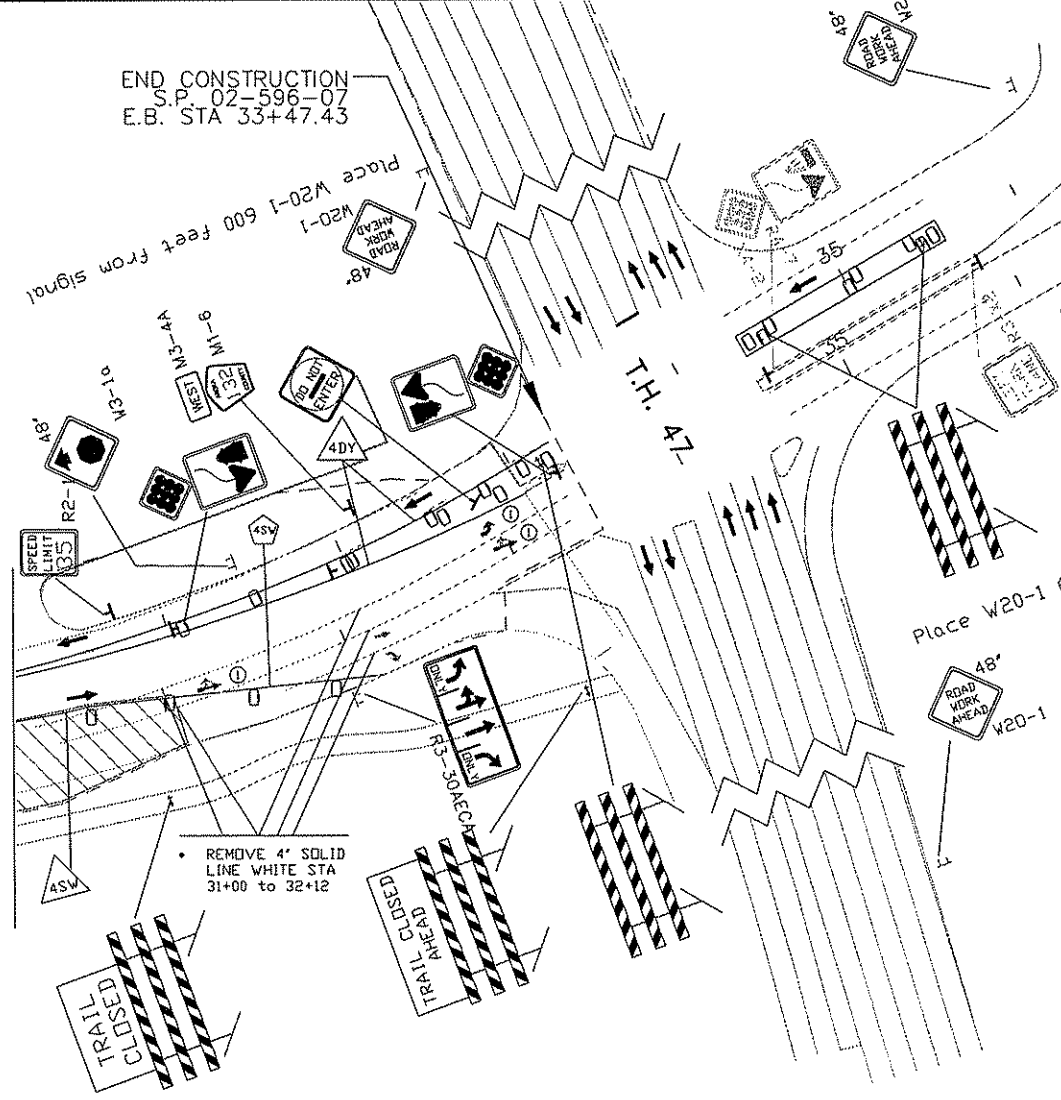


END CONSTRUCTION
S.P. 02-596-07
SPRING STA 27+22.62

REMOVE 4" BROKEN LINE WHITE STA 27+42 TO 29+09

BEGIN CONSTRUCTION
S.P. 02-596-07
SPRING STA 23+05.14

MATCHLINE 'D'



END CONSTRUCTION
S.P. 02-596-07
E.B. STA 33+47.43

REMOVE 4" SOLID LINE WHITE STA 31+00 TO 32+12

- TRAFFIC CONTROL NOTES:**
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 6. FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.
 7. TRAFFIC SIGNAL IS REMOVED DURING THIS STAGE. SPRINGBROOK DR AND CR 132 WILL BE A FOUR-WAY STOP CONDITION.

(O)	REMOVE PAVEMENT MARKINGS	(D)	REFLECTORIZED DRUM
(DY)	4" REMOVABLE DOUBLE YELLOW LANE TAPE	(- - -)	TEMPORARY RAISED PAVEMENT MARKINGS
(SW)	4" REMOVABLE WHITE LANE TAPE	(DY)	4" SOLID LINE DOUBLE YELLOW LATEX
(SY)	4" REMOVABLE YELLOW LANE TAPE	(SY)	4" SOLID LINE YELLOW LATEX
(SY)	4" REMOVABLE YELLOW LANE TAPE	(SW)	4" SOLID LINE WHITE LATEX
(X)	WORK AREA UNDER TRAFFIC	(/)	WORK AREA

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-07\Bose\PROPOSED\0259607_STG 2.dwg

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SIGNATURE: *Curt A. Kobilarsik*

DATE: 4-28-10 REG. NO. 24756

DRAWN BY: MTH DATE 05/12/10

DESIGN BY: MTH DATE 03/01/10

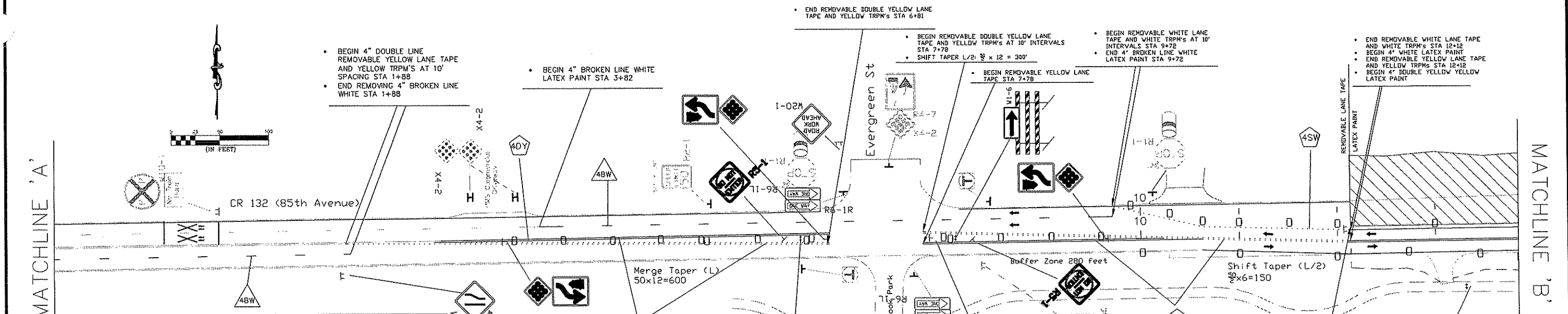
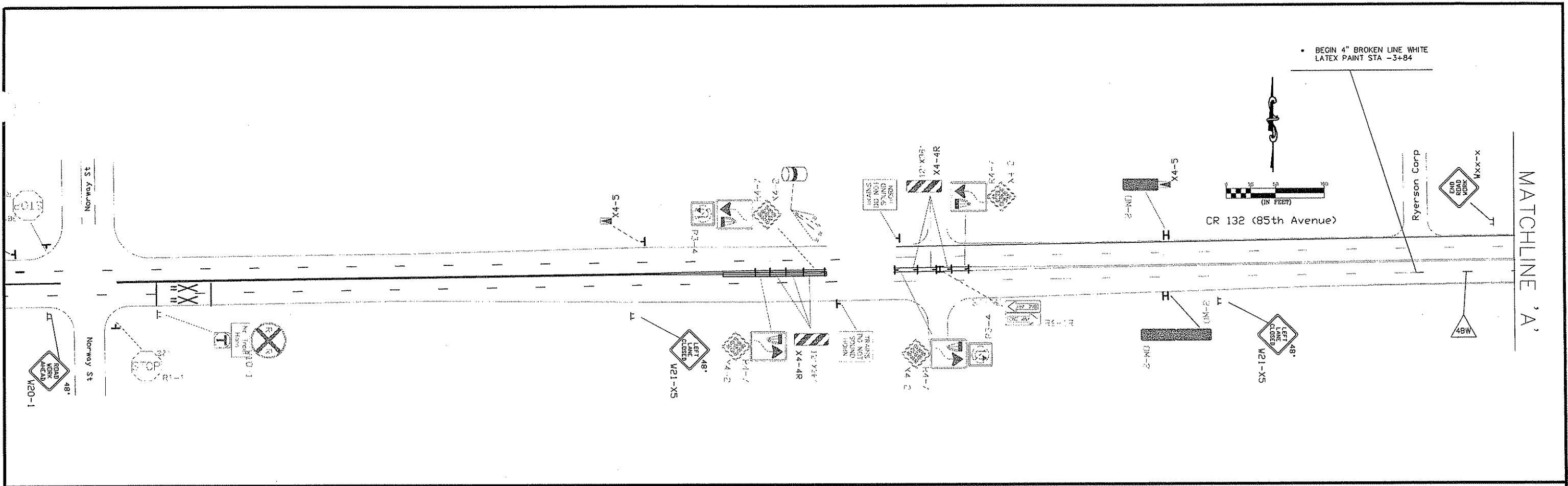
CHECKED BY: JR DATE 03/01/10



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
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STATE PROJECT NO. 114-130-005
STATE PROJECT NO. 127-341-006

STAGE 2
TRAFFIC CONTROL
Sheet 68 of 101 Sheets



TRAFFIC CONTROL NOTES:

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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M. U. T. C. D.
- ALL R4-7 (KEEP RIGHT) SIGNS SHALL BE REFLECTORIZED ON BOTH SIDES. A LEFT CLEARANCE MARKER SHALL BE PLACED ON THE BACK SIDE OF ALL R4-7'S.
- EXISTING STRIPING AND SIGNING THAT CONFLICTS WITH THE CONSTRUCTION TRAFFIC CONTROL SHALL BE REMOVED.
- FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.
- SPRINGBROOK DR AND CR 132 WILL REMAIN A FOUR-WAY STOP CONDITION.
- SPRINGBROOK MALL ENTRANCE AND RED LOBSTER ENTRANCE TO REMAIN CLOSED DURING STAGE 3 CONSTRUCTION.

(1)	REMOVE PAVEMENT MARKINGS	(1)	REFLECTORIZED DRUM
(4DY)	4" REMOVABLE DOUBLE YELLOW LANE TAPE	(4DY)	4" SOLID LINE DOUBLE YELLOW LATEX
(4SW)	4" REMOVABLE WHITE LANE TAPE	(4SY)	4" SOLID LINE YELLOW LATEX
(4SY)	4" REMOVABLE YELLOW LANE TAPE	(4SW)	4" SOLID LINE WHITE LATEX
(X)	WORK AREA UNDER TRAFFIC	(X)	WORK AREA
(TRAIL CLOSED AHEAD)		(TRAIL CLOSED AHEAD)	

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-07\Bose\PROPOSED\0259607_STG 3.dwg

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

PRINT NAME: CURT A KOBLARCSIK

SIGNATURE: *Curt Koblarcsik*

DATE: 4-28-10 REG. NO. 24756

DRAWN BY: MTH DATE 03/05/10

DESIGN BY: MTH DATE 03/05/10

CHECKED BY: JR DATE 03/05/10

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07

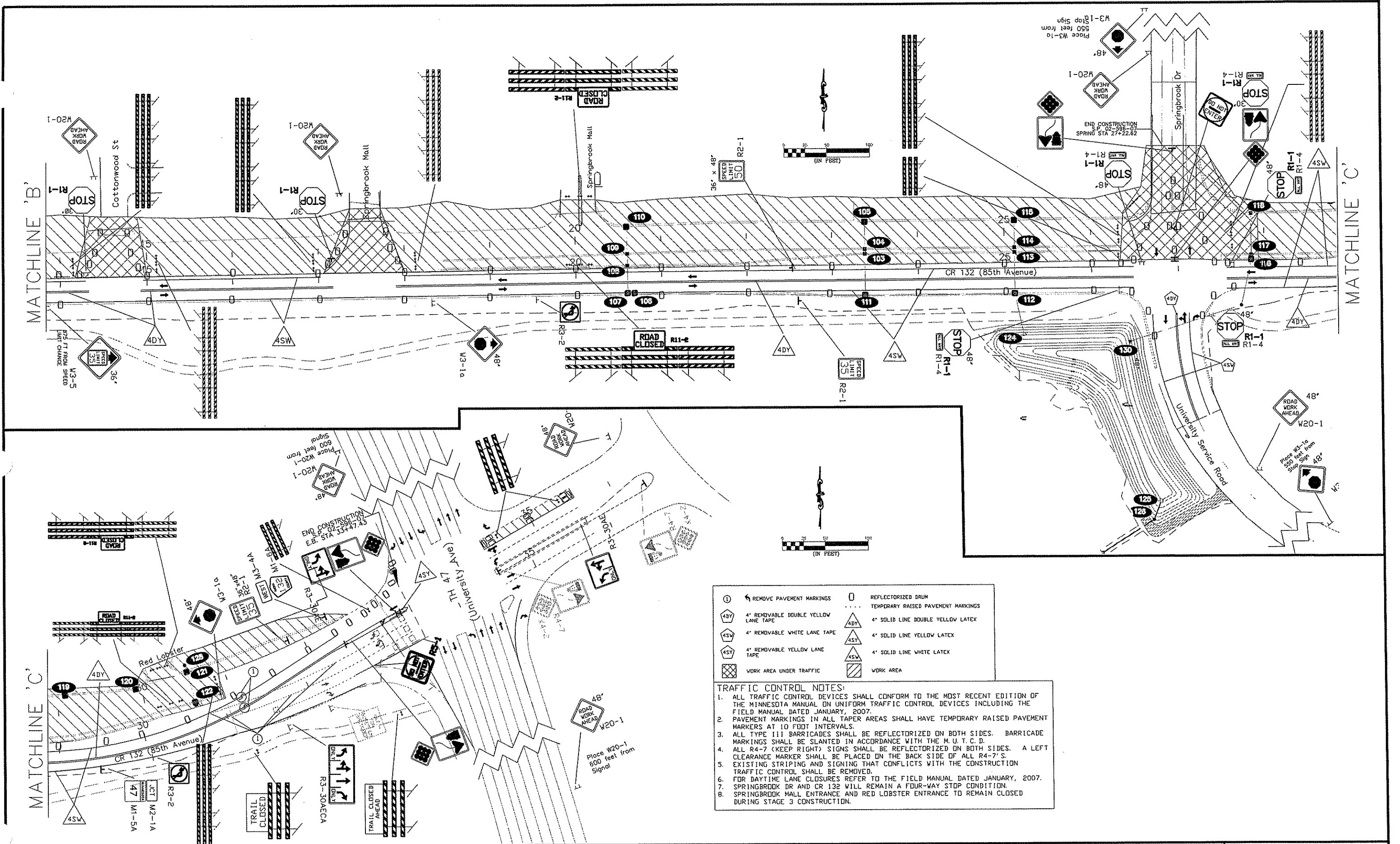
STATE PROJECT NO. 106-080-002

STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

STAGE 3 TRAFFIC CONTROL

Sheet 69 of 101 Sheets



① REMOVE PAVEMENT MARKINGS	◻ REFLECTORIZED DRUM
4DY 4' REMOVABLE DOUBLE YELLOW LANE TAPE	◻ TEMPORARY RAISED PAVEMENT MARKINGS
4SW 4' REMOVABLE WHITE LANE TAPE	◻ 4' SOLID LINE DOUBLE YELLOW LATEX
4SY 4' REMOVABLE YELLOW LANE TAPE	◻ 4' SOLID LINE YELLOW LATEX
⊗ WORK AREA UNDER TRAFFIC	◻ 4' SOLID LINE WHITE LATEX
	◻ WORK AREA

TRAFFIC CONTROL NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
- PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FOOT INTERVALS.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.
- ALL R4-7 (KEEP RIGHT) SIGNS SHALL BE REFLECTORIZED ON BOTH SIDES. A LEFT CLEARANCE MARKER SHALL BE PLACED ON THE BACK SIDE OF ALL R4-7'S.
- EXISTING STRIPING AND SIGNING THAT CONFLICTS WITH THE CONSTRUCTION TRAFFIC CONTROL SHALL BE REMOVED.
- FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.
- SPRINGBROOK DR AND CR 132 WILL REMAIN A FOUR-WAY STOP CONDITION.
- SPRINGBROOK MALL ENTRANCE AND RED LOBSTER ENTRANCE TO REMAIN CLOSED DURING STAGE 3 CONSTRUCTION.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-07\Bose\PROPOSED\0259607_STG 3.dwg

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

PRINT NAME: CURT A KOBIARCSIK

SIGNATURE: *Curt Kobiarcsik*

DATE: 4-28-10 REG. NO. 24756

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

STAGE 3
TRAFFIC CONTROL

Sheet 70 of 101 Sheets

CR 132 (85th Avenue)

C.R. 132 (85TH AVE)

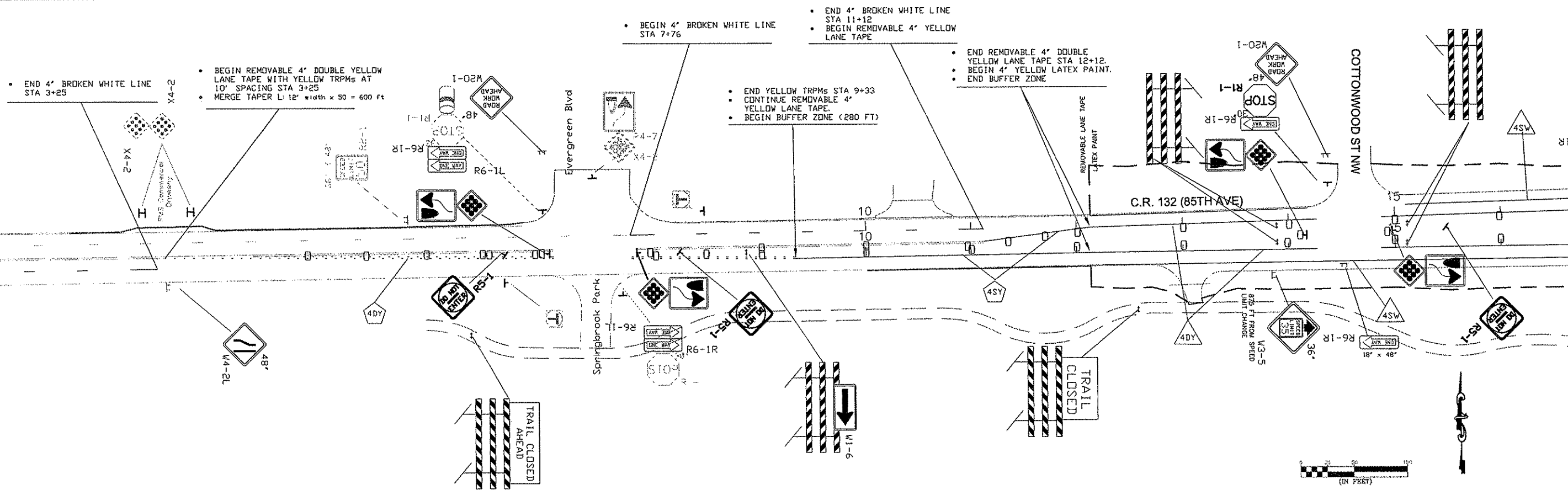
TRAFFIC CONTROL NOTES:

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5. EXISTING STRIPING AND SIGNING THAT CONFLICTS WITH THE CONSTRUCTION TRAFFIC CONTROL SHALL BE REMOVED.
6. FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.
7. SPRINGBROOK DR AND CR 132 WILL REMAIN A FOUR-WAY STOP CONDITION.

①	REMOVE PAVEMENT MARKINGS	△4DY	4' SOLID LINE DOUBLE YELLOW LATEX
Ⓚ	REFLECTORIZED DRUM	△4SY	4' SOLID LINE YELLOW LATEX
---	TEMPORARY RAISED PAVEMENT MARKINGS	△4SW	4' SOLID LINE WHITE LATEX
△4DY	4' REMOVABLE DOUBLE YELLOW LANE TAPE	△4SW	4' SOLID LINE WHITE LATEX
△4SW	4' REMOVABLE WHITE LANE TAPE	△4BW	4' BROKEN LINE WHITE LATEX
△4SY	4' REMOVABLE YELLOW LANE TAPE		

MATCHLINE 'A'

MATCHLINE 'B'



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-07\02-596-07\PROPOSED\0259607_STG 4.dwg

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

PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt Kobilarsik*

DATE: 4.28.10 REG. NO. 24756

DRAWN BY: MTH DATE 03/09/10

DESIGN BY: MTH DATE 03/09/10

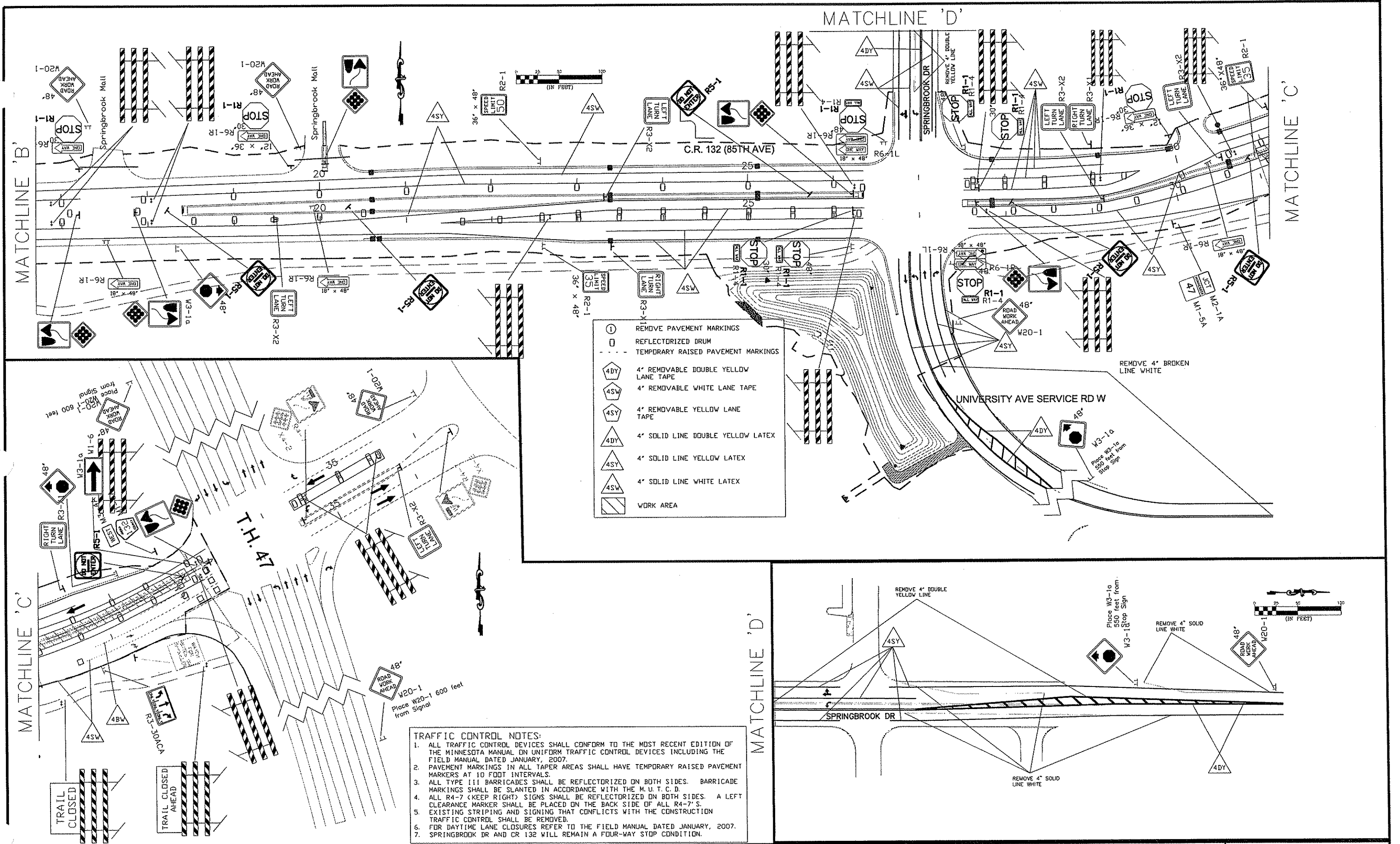
CHECKED BY: JR DATE 03/09/10

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.	02-596-07
STATE PROJECT NO.	106-080-002
STATE PROJECT NO.	114-130-005
STATE PROJECT NO.	127-341-006

STAGE 4
TRAFFIC CONTROL

Sheet 71 of 101 Sheets



- REMOVE PAVEMENT MARKINGS
- REFLECTORIZED DRUM
- TEMPDRARY RAISED PAVEMENT MARKINGS
- 4DY 4" REMOVABLE DOUBLE YELLOW LANE TAPE
- 4SW 4" REMOVABLE WHITE LANE TAPE
- 4SY 4" REMOVABLE YELLOW LANE TAPE
- 4DY 4" SOLID LINE DOUBLE YELLOW LATEX
- 4SY 4" SOLID LINE YELLOW LATEX
- 4SW 4" SOLID LINE WHITE LATEX
- ▨ WORK AREA

TRAFFIC CONTROL NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED JANUARY, 2007.
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- EXISTING STRIPING AND SIGNING THAT CONFLICTS WITH THE CONSTRUCTION TRAFFIC CONTROL SHALL BE REMOVED.
- FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.
- SPRINGBROOK DR AND CR 132 WILL REMAIN A FOUR-WAY STOP CONDITION.

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.

PRINT NAME: CURT A. KOBIARCSIK
 SIGNATURE: *Curt Kobiarcsik*
 DATE: 4.28.10 REG. NO. 24756

DRAWN BY: MTH DATE 03/09/10
 DESIGN BY: MTH DATE 03/09/10
 CHECKED BY: JR DATE 03/09/10



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

STAGE 4
 TRAFFIC CONTROL
 Sheet 72 of 101 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-07\0259607_STG 4.dwg

M. U. T. C. D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3	QTY. STG. 4
R1-1	48" x 48"		0	4	4	4
R1-1	30" x 30"		4	5	3	6
R1-2	6" x 18"		0	5	5	6
R1-6R	18" x 48"		1	0	0	6
R1-6R	12" x 36"		6	1	0	6
R1-6L	18" x 48"		3	0	0	2
R1-6L	12" x 36"		2	0	0	2
R2-1	36" x 48"		2	2	2	2
R2-1	36" x 48"		1	1	1	1
R3-X1	30" x 30"		2	0	0	3
R3-X2	30" x 30"		1	0	0	4
R3-2	24" x 24"		0	0	2	0
R4-7	24" x 30"		11	4	8	10
X4-11	18" x 18"		11	4	8	10
R5-1	24" x 24"		8	2	4	9
R3-30AE	30" x 30"		0	0	2	0
R3-30ACA	54" x 30"		1	0	0	1
R3-30AEC	48" x 48"		0	1	1	0
X4-4L	12" x 36"		11	4	8	10

M. U. T. C. D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3	QTY. STG. 4
W1-4L	48" x 48"		0	1	0	0
W13-1	30" x 30"		0	1	0	0
W3-1a	48" x 48"		0	4	4	4
W3-5	36" x 36"		1	1	1	1
W4-2R	48" x 48"		0	1	0	0
W4-2L	48" x 48"		1	0	1	1
W20-1	48" x 48"		9	9	9	10
W21-X5	48" x 48"		0	2	0	0
W21-X5	48" x 48"		2	0	2	2
R11-2	48" x 30"		2	2	2	2
R11-2	48" x 30"		4	4	2	2
R11-2	48" x 30"		0	0	4	0

M. U. T. C. D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3	QTY. STG. 4
W1-6	48" x 24"		1	0	1	2
W1-6	48" x 24"		0	3	0	0
W1-6	48" x 24"		0	0	20	0
W1-6	48" x 24"		10	5	13	18
Wxx-x	48" x 48"		1	1	1	1
REFLECTORIZED REBOUNDABLE DRUM			71	82	100	109
REFLECTORIZED WEIGHTED CHANNELIZER			0	0	0	0
M1-5A	24" x 24"		1	1	1	1
M1-6A	24" x 24"		1	1	1	1
M2-1A	21" x 15"		1	1	1	1
M3-4A	24" x 12"		1	1	1	1

TRAFFIC CONTROL NOTES:

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- PAVEMENT MARKINGS IN ALL TAPER AREAS SHALL HAVE TEMPORARY RAISED PAVEMENT MARKERS AT 10 FT INTERVALS.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.
- ALL R4-7 (KEEP RIGHT) SIGNS SHALL BE REFLECTORIZED ON BOTH SIDES. A LEFT CLEARANCE MARKER SHALL BE PLACED ON THE BACK SIDE OF ALL R4-7'S.
- EXISTING STRIPING AND SIGNING THAT CONFLICTS WITH THE CONSTRUCTION TRAFFIC CONTROL SHALL BE REMOVED.
- FOR DAYTIME LANE CLOSURES REFER TO THE FIELD MANUAL DATED JANUARY, 2007.

TEMPORARY PAVEMENT MARKING NOTES:

- STAGE 1: REMOVE STOP BARS AND CROSSWALKS
 - STAGE 2: SHIFT TRAFFIC CONTROL AS NEEDED TO CONSTRUCT UNIVERSITY AVE SERVICE ROAD
 - STAGE 3: SHIFT TRAFFIC CONTROL AS NEEDED TO CONSTRUCT SPRINGBROOK DR. ADD 4" WHITE SKIP TO PREVIOUSLY REMOVED SKIP AS SHOWN ON PLAN.
 - STAGE 4: REMOVE CONFLICTING PERMANENT MARKINGS ON SPRINGBROOK DR AND UNIVERSITY AVE SERVICE RD.
1. "TEMPORARY LANE MARKING WHITE" AND "TEMPORARY LANE MARKING YELLOW" SHALL BE PAID FOR UNDER ITEM 2581 REMOVABLE PREFORMED PLASTIC MARKING.

TRAFFIC CONTROL DEVICE & SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	REFLECTORIZED REBOUNDABLE DRUM
	REFLECTORIZED WEIGHTED CHANNELIZER
	SOLID LINE PAVEMENT MARKING WITH TRPM'S SPACED AT 10' INTERVALS (TEMPORARY RAISED PAVEMENT MARKERS)

TEMPORARY PAVEMENT MARKINGS (SPEC. 2582)

STAGE	WHITE TRPM EACH	YELLOW TRPM EACH	4" SOLID LINE YELLOW LATEX LIN FT	4" SOLID LINE WHITE LATEX LIN FT	4" SKIP LINE WHITE LATEX LIN FT	4" SOLID LINE DOUBLE YELLOW LATEX LIN FT	REMOVE PAVEMENT MARKING PERMANENT LIN FT	REMOVE PAVEMENT MARKING TEMPORARY LIN FT	REMOVE PAVEMENT MARKING PERMANENT SQ FT	TEMPORARY LANE MARKING WHITE [1] LIN FT	TEMPORARY LANE MARKING YELLOW [1] LIN FT	NOTES
CONSTRUCTION STAGE 1	0	80	2143	0	0	211	2000		1089	0	386	
CONSTRUCTION STAGE 2	116	112	658	3036	0	1361	3612	386	454	2146	1660	
CONSTRUCTION STAGE 3	25	187	200	3711	405	1789	350	3806	23.5	250	3230	
CONSTRUCTION STAGE 4	0	106	3743	7678	877	1932	1530	3480		0	1432	
TOTALS	141	485	6744	14425	1282	5293	7492	7672	1566.5	2396	6708	

NO	DATE	BY	CHKD	APPR	REVISION

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PRINT NAME: CURT A KOBILARCSIK

SIGNATURE:

DATE: 4-28-10 REG. NO. 24756

DRAWN BY: MTH DATE 03/11/10

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07

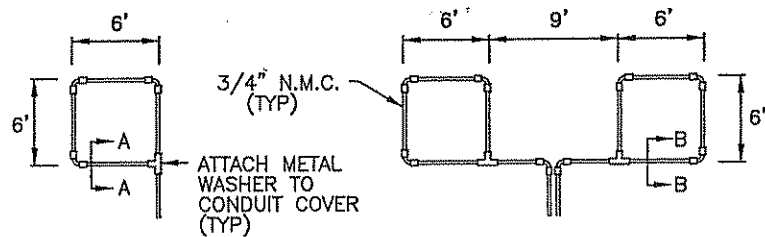
STATE PROJECT NO. 106-080-002

STATE PROJECT NO. 114-130-005

STATE PROJECT NO. 127-341-006

STAGING
TEMPORARY SIGNING AND
TEMPORARY PAVEMENT
MARKINGS

Sheet 73 of 101 Sheets

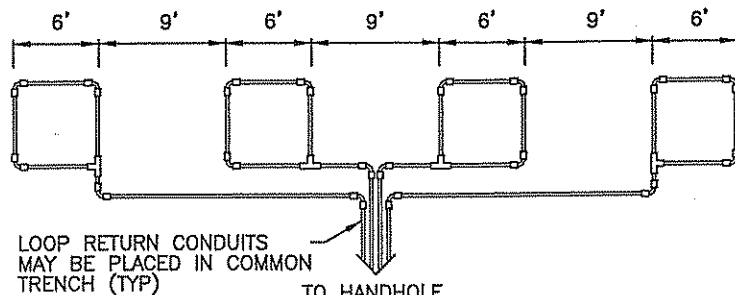


**LOOP DETECTOR
DETAIL 'A'**
(LOOP PHASING FOR
SINGLE CONNECTION)

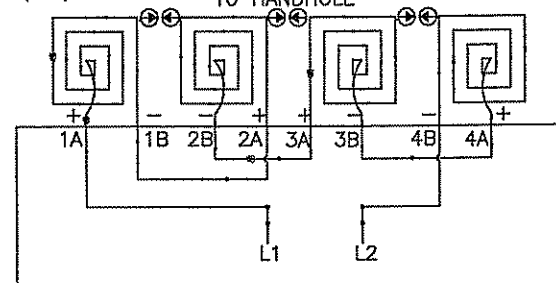
LOOP CONNECTIONS SHALL BE
LABELED AND SPLICED IN THE
HANDHOLE AS FOLLOWS:

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

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



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

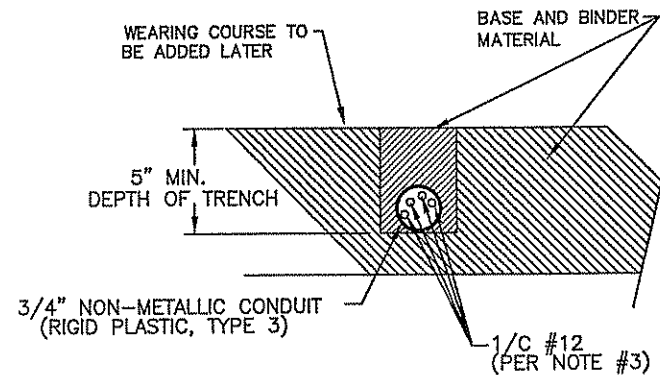


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED
IN THE HANDHOLE AS FOLLOWS:

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

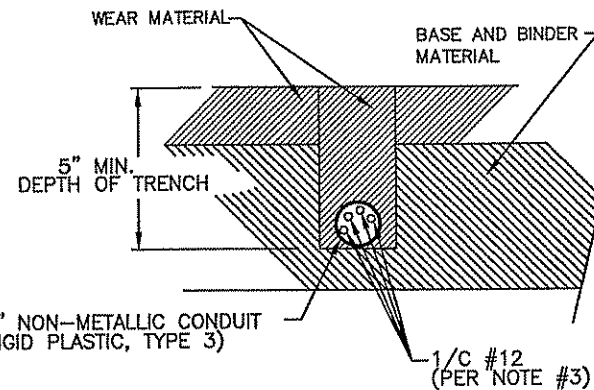
SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE.
ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE
(1A, 1B, ECT)

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



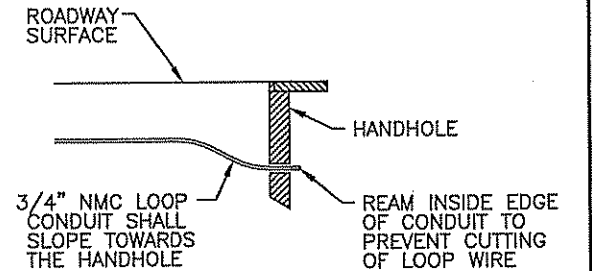
SECTION A-A

DETAIL FOR LOOP INSTALLATION
IN NEW ROADWAY



SECTION B-B

DETAIL FOR LOOP INSTALLATION
IN EXISTING ROADWAY



DRAINAGE DETAIL

LOOP DETECTOR WIRING

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' x 6' THRU 6' x 14' SHALL HAVE (4) TURNS.
- 7) LOOPS 6' x 15' AND LARGER SHALL HAVE (2) TURNS.

LEGEND OF SYMBOLS

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

ABBREVIATIONS

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

CONDUCTOR COLOR CODE

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

TRAFFIC SIGNAL TABULATION

ITEM NO	ITEM	UNIT	TOTAL ESTIMATED QUANTITY
2104	REMOVE SIGNAL SYSTEM	EACH	1
2104	HAUL SALVAGED MATERIAL	LUMP SUM	1
2565	TRAFFIC CONTROL SIGNAL SYSTEM	SIG. SYS.	1
2565	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1
2565	SIGNAL SERVICE CABINET	EACH	1
2565	NMC LOOP DETECTOR 6' x 6'	EACH	1
2565	NMC LOOP DETECTOR 2-6' x 6'	EACH	3

TRAFFIC SIGNAL STANDARD PLATES

THESE TRAFFIC SIGNAL STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

PLATE NO.	DESCRIPTION
* 8000 I	STANDARD BARRICADES
* 8110 E	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
* 8111 E	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
* 8112 F	PEDESTAL FOUNDATION
* 8114 A	PVC HANDHOLE/PULLBOX
* 8118 D	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 N	PAB5 POLE FOUNDATION
* 8121 F	TRANSFORMER BASE AND POLE BASE PLATE
* 8122 E	PEDESTAL AND PEDESTAL BASE
* 8123 F	POLE AND MAST ARM
* 8126 I	PA90 AND PA100 POLE FOUNDATION
* 8132 A	PREFORMED RIGID PVC CONDUIT LOOP DETECTOR

* - APPLIES TO THIS PROJECT

S.P. 02-596-07

S:\VEVA\ANOKA\CORRIDOR\451-132 SIGNAL DETAIL.DWG 04/15/2010

DRAWN BY:	JMG	1	JMG	4/15/10
DESIGNER:	JMG			
CHECKED BY:	JMG			
DESIGN TEAM		NO.	BY	DATE

REVISED LOOP DETECTOR DETAILS PER STATE COMMENTS

REVISIONS

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.

John M. Gray
Name: John M. Gray, PE
Date: March 29, 2010
Lic. No. 22457

SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

**ANOKA COUNTY,
MINNESOTA**
BLAINE, COON RAPIDS, FRIDLEY

**TRAFFIC SIGNAL SYSTEM
DETAILS & STANDARD PLATES**
COUNTY ROAD 132 (85TH AVENUE-NW)
AT SPRINGBROOK DRIVE

FILE NO.
105979
SIGNAL SHEET
1 OF 13

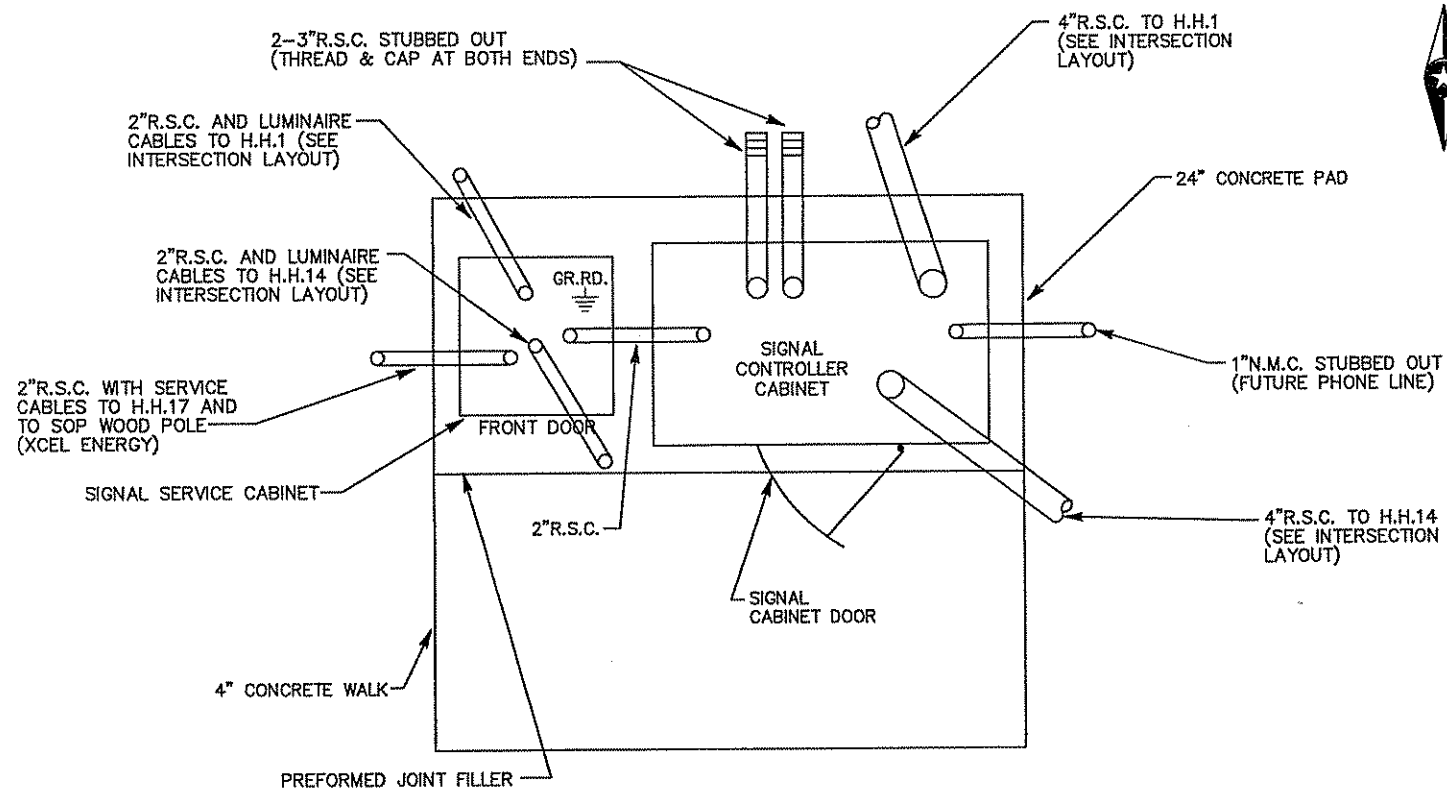
74
101

TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET

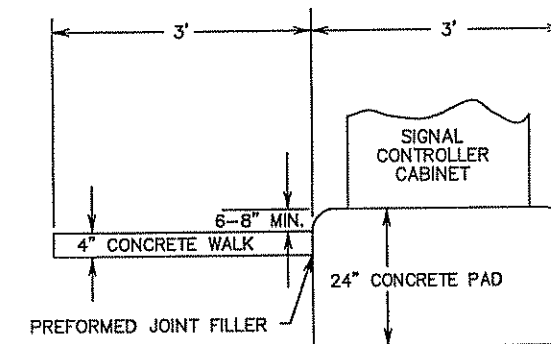
SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)

PLAN VIEW

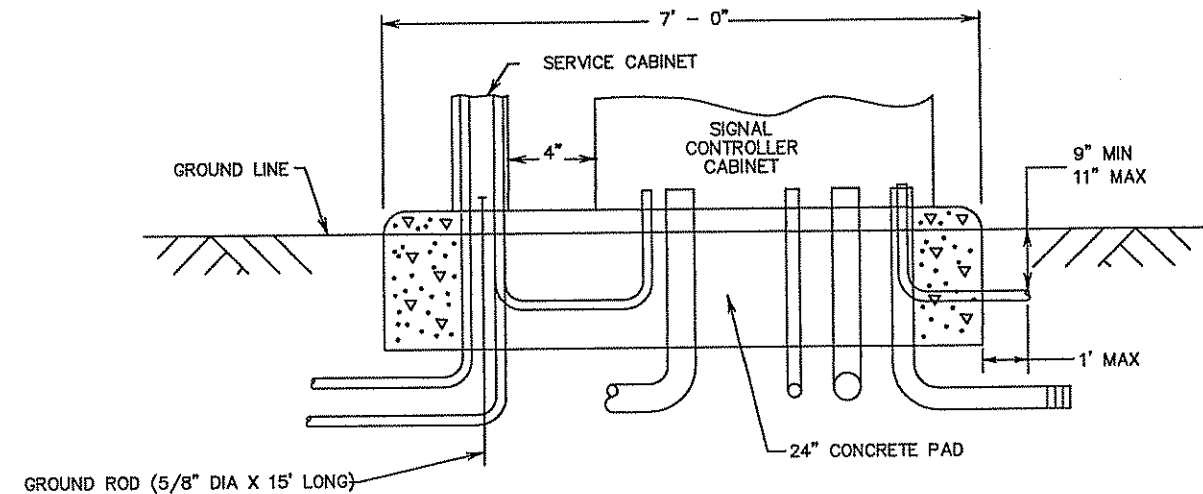
COUNTY ROAD 132 (85TH AVE NW) AT SPRINGBROOK DRIVE



SIDE VIEW



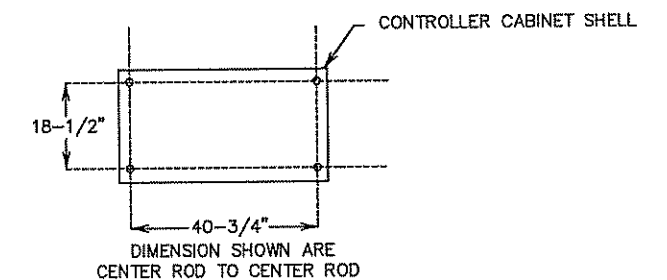
FRONT VIEW



NOTES:

1. THE ANCHOR RODS, NUTS AND WASHERS FOR THE COUNTY FURNISHED CONTROLLER AND CABINET SHALL BE FURNISHED BY THE COUNTY AND INSTALLED BY THE CONTRACTOR.
2. THE UPPER PART OF THE EQUIPMENT PAD SHALL BE BEVELLED OR CHAMFERED 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.
8. ANCHOR RODS SHALL PROJECT A MINIMUM OF 3" ABOVE THE CONCRETE BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).
9. CONTRACTOR SHALL PROVIDE MINIMUM 4-INCH CLEARANCE BETWEEN CONTROLLER AND SERVICE CABINETS ON THE EQUIPMENT PAD FOUNDATION AS SHOWN.

CONTROLLER CABINET TYPE "P" & "R" BOLT PATTERN



S:\AEVA\ANOKA\COMMON\SIG\132\SIGNAL\VE\SIGNAL.DWG 03/29/2010

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

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 LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
John M. Gray
Name: John M. Gray, PE
Date: March 29, 2010 Lic. No. 22457



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ST. PAUL, MN 55110

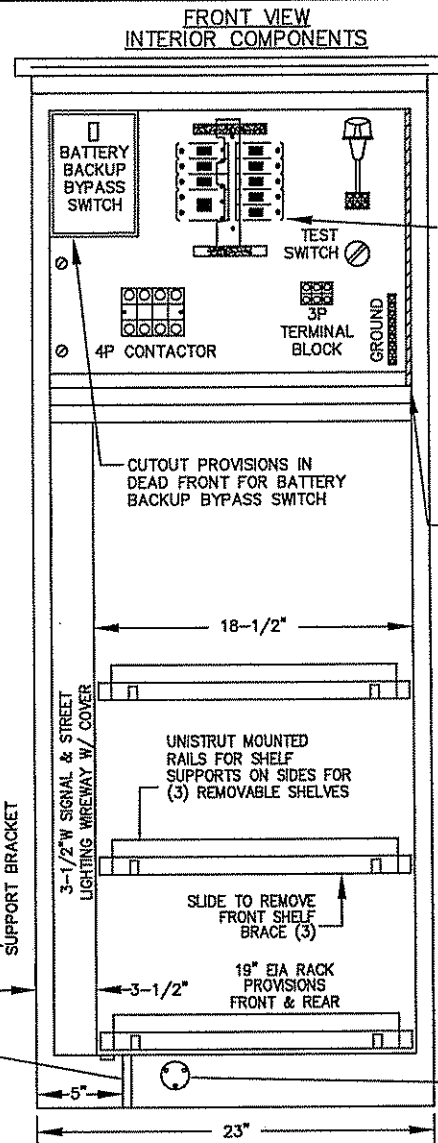
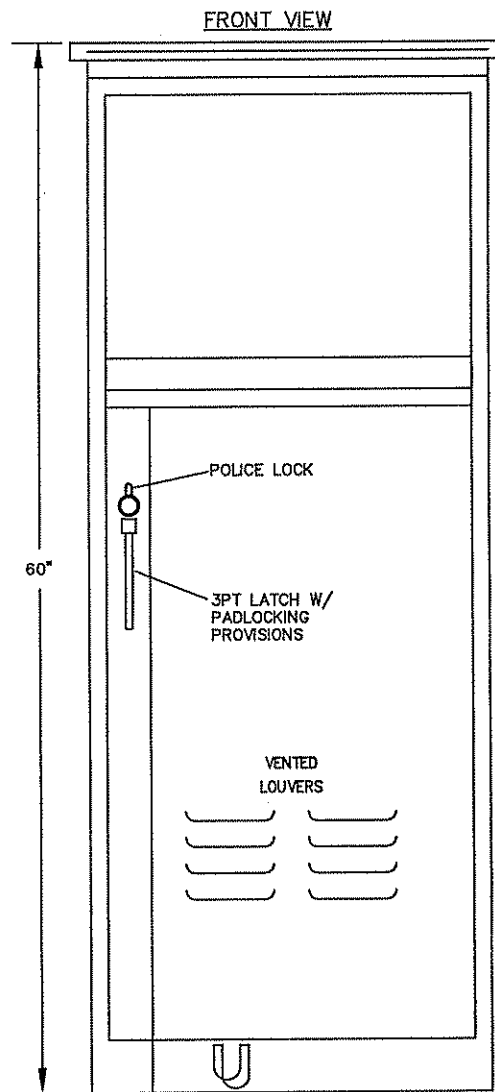
**ANOKA COUNTY,
MINNESOTA**
ELAINE, COON RAPIDS, FRIDLEY

**TRAFFIC SIGNAL SYSTEM
EQUIPMENT PAD DETAILS**
COUNTY ROAD 132 (85TH AVENUE NW)
AT SPRINGBROOK DRIVE

FILE NO.
105979
SIGNAL SHEET
2 OF 13

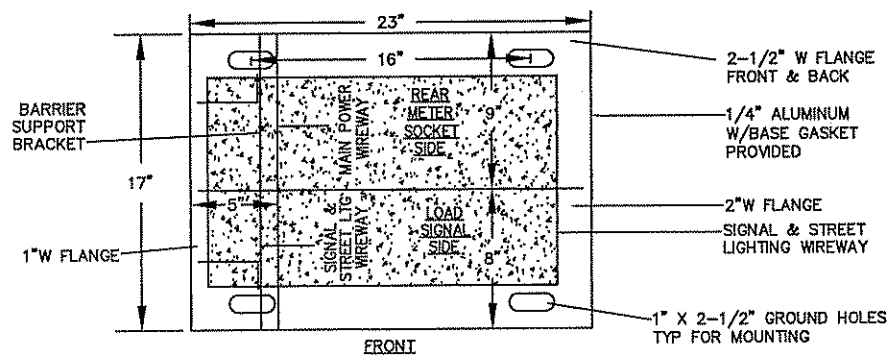
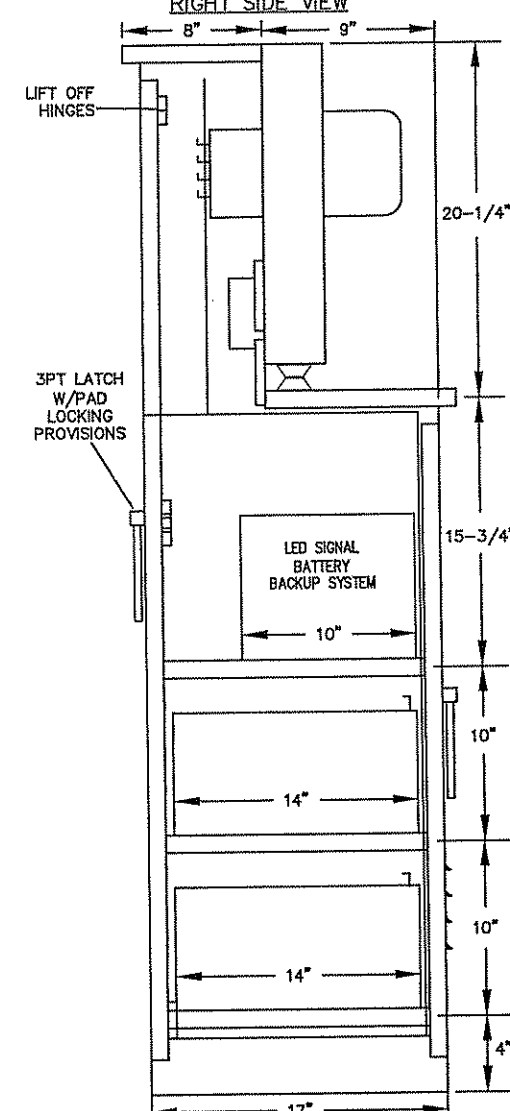
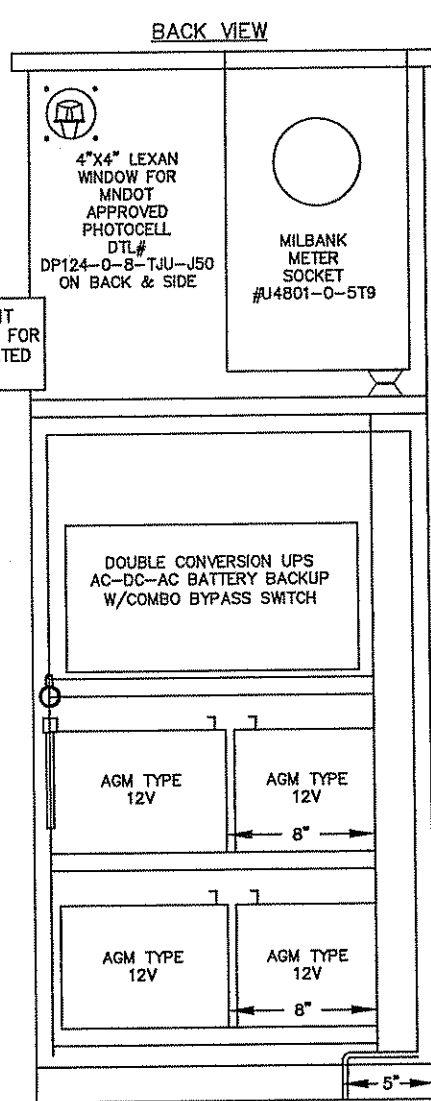
75
101

S.P. 02-596-07



LOAD CENTER
CIRCUIT
BREAKERS
ITE "Q" TYPE
1-100A/2P
SERVICE
DISCONNECT
1-30A/1P
EMERGENCY
POWER
1-15/1P
PHOTOCELL
4-15A/1P
LUMINAIRE
1-30A/1P
SIGNAL SVC
1 SPARE

ALSO INCLUDE CIRCUIT
BREAKER, 4-20A/1P FOR
INTERNALLY ILLUMINATED
SIGN CIRCUITS.

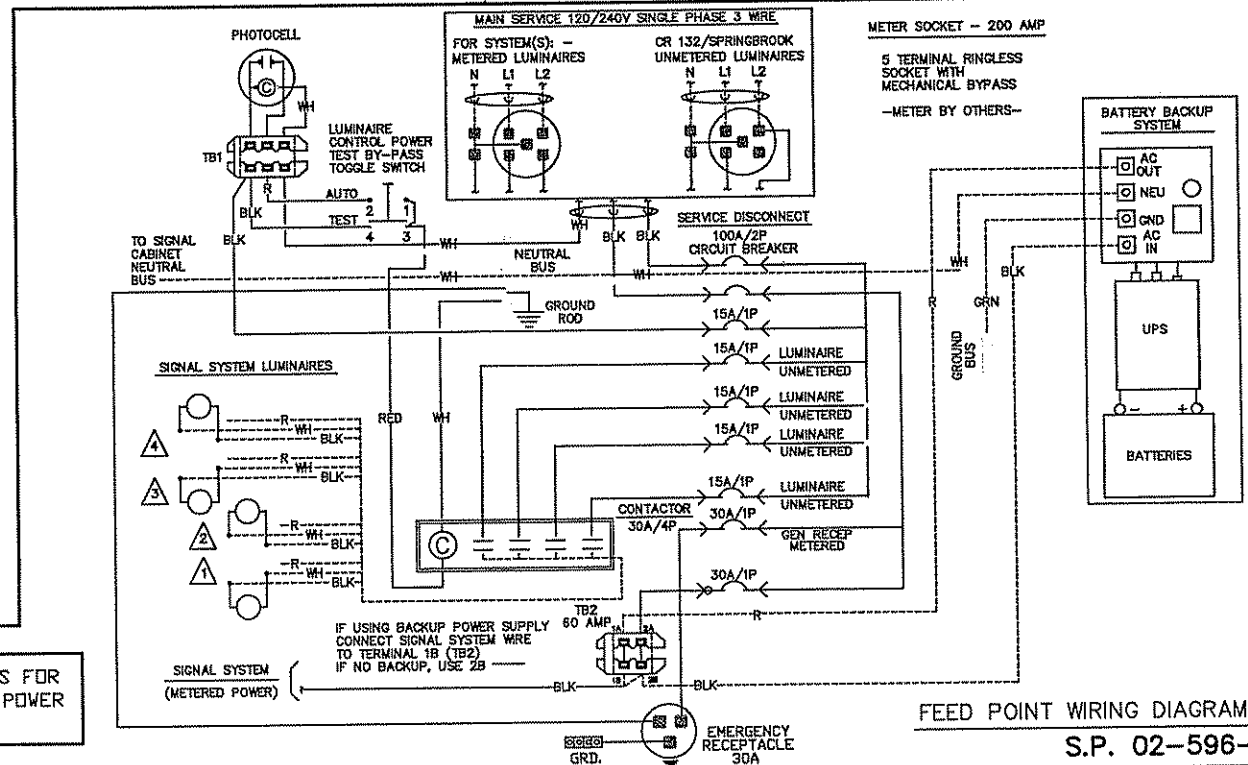


CABINET CONSTRUCTION

- NEMA 3R
- 1/8" ALUMINUM 5052+H32
- ANODIZED 30 MINUTE CLEAR
- NEOPRENE GASKETED DOORS
- NON-CORRODING HARDWARE
- ETL LISTED IN ACCORDANCE W/UL508A

SEE SPECIAL PROVISIONS AND STATEMENT OF ESTIMATED QUANTITIES REGARDING SEPARATE PAY ITEM FOR FURNISHING & INSTALLING NEW BATTERY BACK-UP SIGNAL SERVICE CABINET.

NOTE: INCLUDE FOUR (4) CIRCUIT BREAKERS FOR UNMETERED INTERNALLY ILLUMINATED SIGN POWER (120VAC, 15A/1P).



DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	NO. BY DATE

REVISIONS	NO.	BY	DATE

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Date: March 29, 2010
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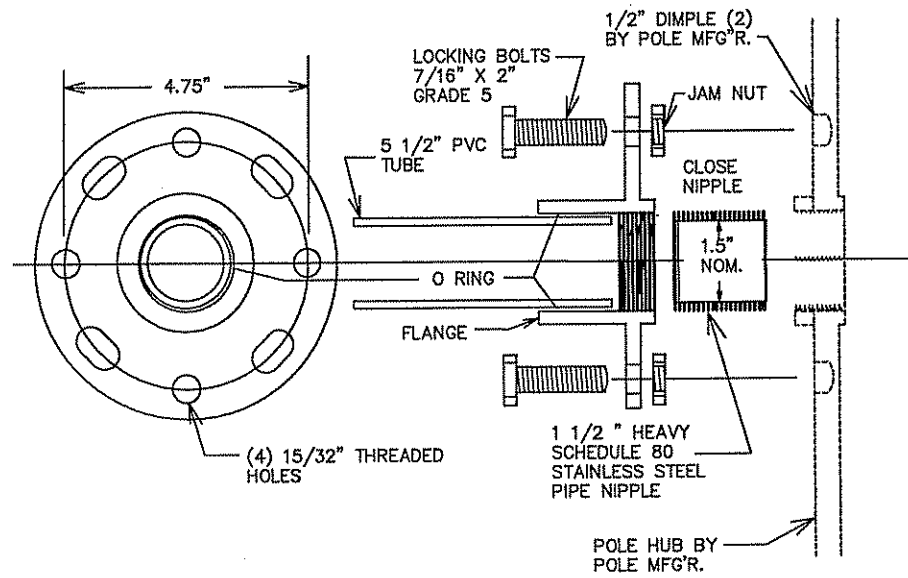
**ANOKA COUNTY,
MINNESOTA**
BLAINE, COON RAPIDS, FRIDLEY

**TRAFFIC SIGNAL SYSTEM
BATTERY BACK-UP SERVICE CABINET DETAILS**
COUNTY ROAD 132 (85TH AVENUE NW)
AT SPRINGBROOK DRIVE

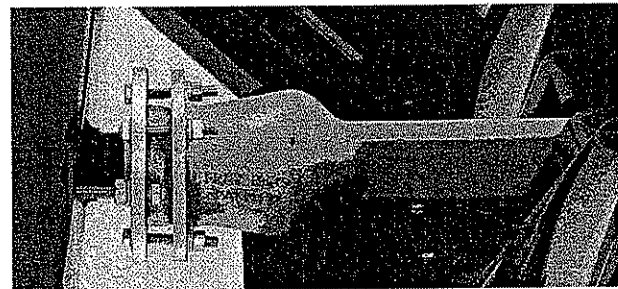
FILE NO.
105979
SIGNAL SHEET
3 OF 13

76
101

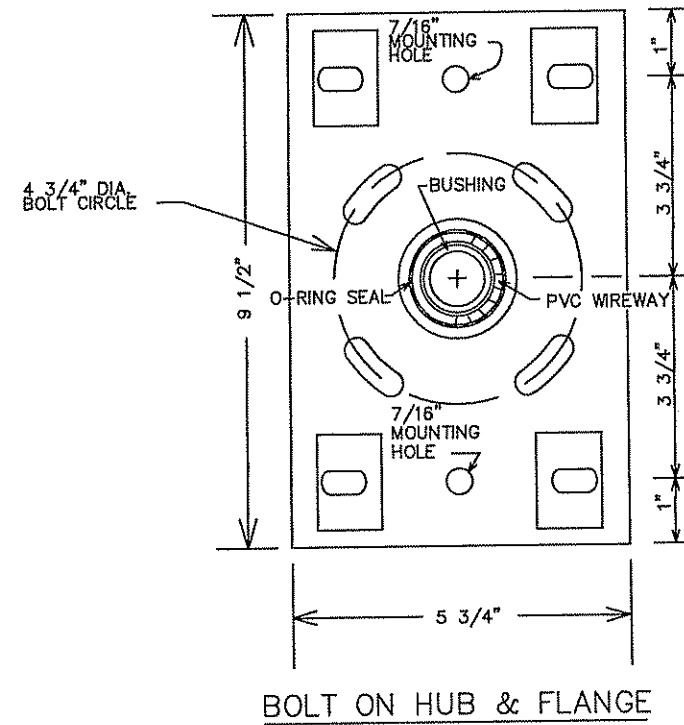
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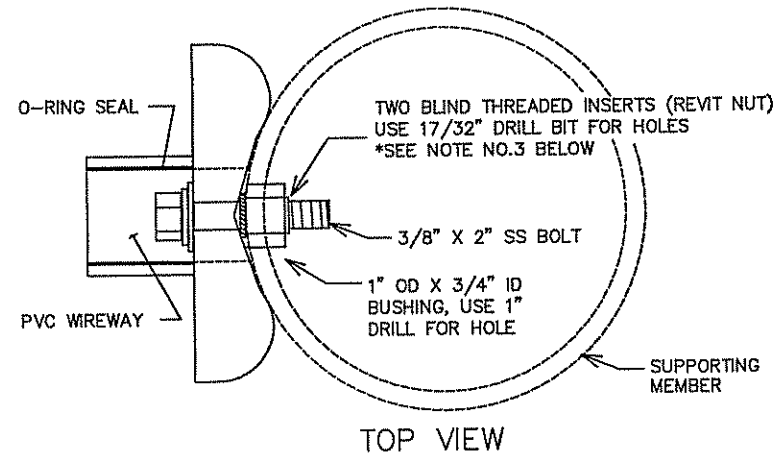
THREADED HUB AND FLANGE POLE ADAPTOR



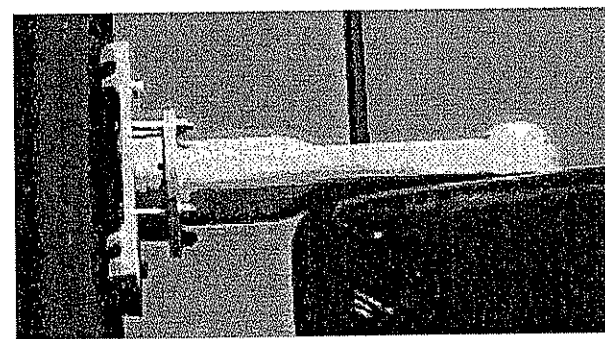
- NOTE:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
 2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 & 5 SECTION POLY HEADS.
 3. SEE STANDARD PLATE NUMBER 8123 FOR ADDITIONAL SIGNAL POLE DETAILS.



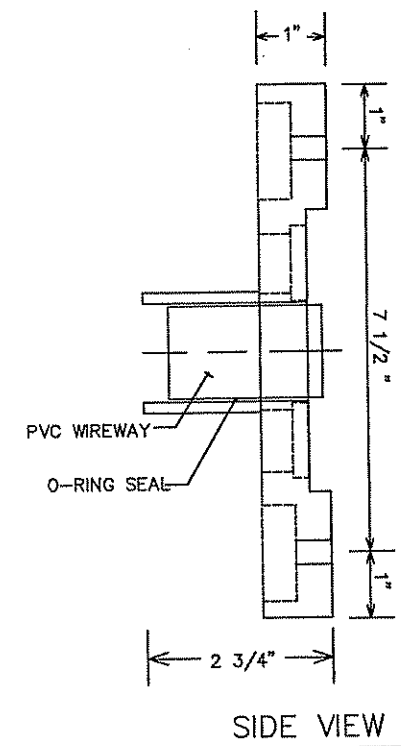
BOLT ON HUB & FLANGE



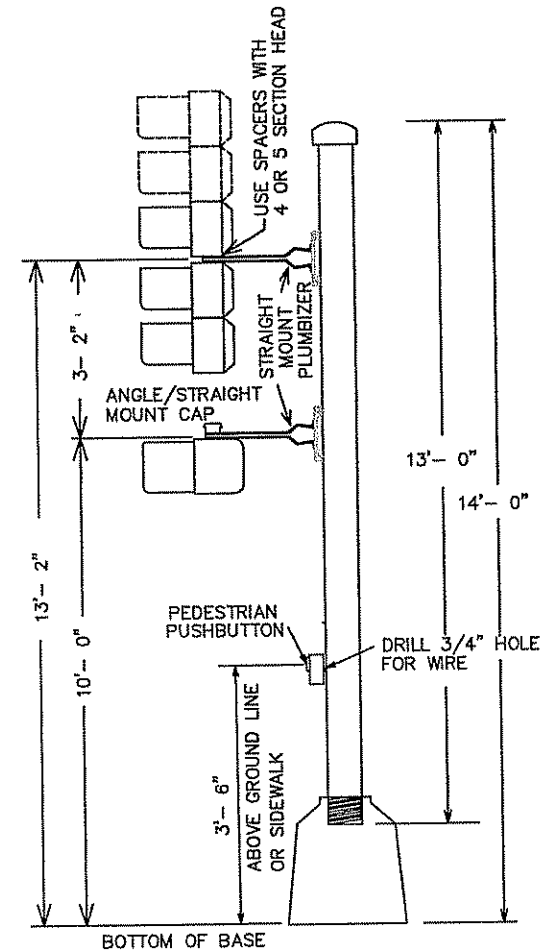
TOP VIEW



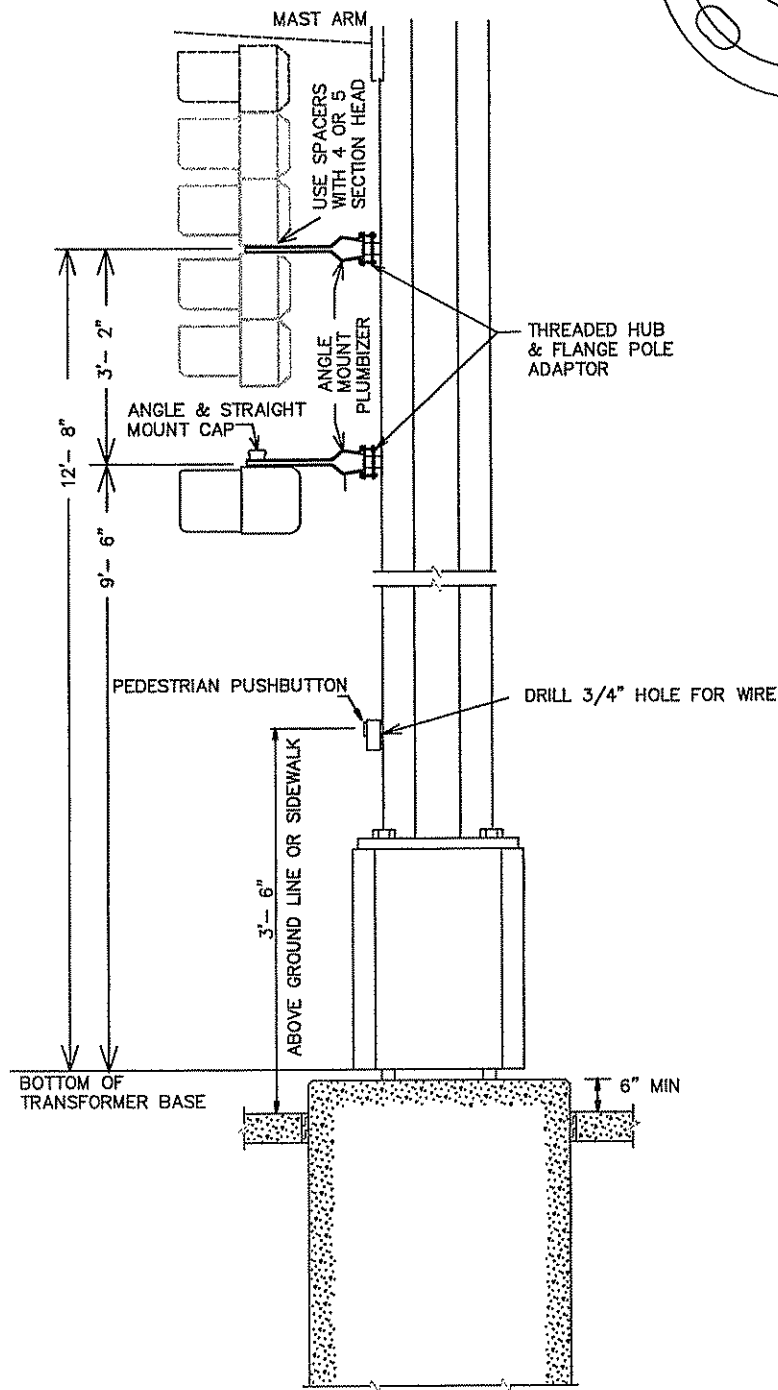
- NOTE:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
 2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 & 5 SECTION POLY HEADS.
 3. BLIND THREADED INSERTS (RIVET NUT) MUST BE INSTALLED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
 4. SEE STANDARD PLATE NUMBER 8122 FOR ADDITIONAL PEDESTAL POLE DETAILS.



SIDE VIEW



TYPICAL PEDESTAL MOUNTING
NOT TO SCALE



TYPICAL SIGNAL POLE MOUNTING
NOT TO SCALE

DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	NO. BY DATE

REVISIONS

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John M. Gray
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ANOKA COUNTY, MINNESOTA
BLAINE, COON RAPIDS, FRIDLEY

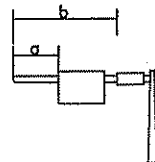
**TRAFFIC SIGNAL SYSTEM
POLE MOUNT DETAILS**
COUNTY ROAD 132 (85TH AVENUE NW)
AT SPRINGBROOK DRIVE

FILE NO.
105979
SIGNAL SHEET
4 OF 13

77
101

S.P. 02-596-07

MAST ARM MOUNTED SIGNS					
INTERNALLY ILLUMINATED SIGNS (INPLACE)-SALVAGE AND INSTALL					
SIGN PANEL	APPROX. SIZE (in.)	NO. REQ.	POLE NO.	a	b
D-1	96x18	1	1	-	30'
D-2	96x18	1	2	-	30'
D-3	96x18	1	3	-	30'
D-4	96x18	1	4	-	30'
TOTAL QUANTITIES		4			



CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW MAST ARM MOUNTED BRACKETING FOR ALL INPLACE INTERNALLY ILLUMINATED SIGNS TO BE SALVAGED AND REINSTALLED AS PART OF THIS PROJECT (INCIDENTAL).

SIGNS FOR TRAFFIC SIGNAL SYSTEM									
SIGN PANELS - TYPE C (FURNISH AND INSTALL)									
SIGN PANEL	SIZE (in.)	NO. REQ.	NO. POSTS/STIFFENERS PER SIGN	BAND SPACING (**)	SQ. FT. PER SIGN	TOTAL AREA (SQ.FT.)	POLE NO.	a	b
R6-1L	36x12	2	①	-	3.00	6.00	2,4	-	-
R6-1R	36x12	2	①	-	3.00	6.00	2,4	-	-
R9-3a	18x18	2	①	-	2.25	4.50	3,4	-	-
R10-12	36x48	4	2	-	12.00	48.00	1,2,3,4	1'	-
TOTAL QUANTITIES		10				64.50			

(**) = SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE SPECIAL PROVISIONS AND STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE: 7/06/2007) FOR BRACKET SPACING REQUIREMENTS.

GENERAL SIGNING NOTES:

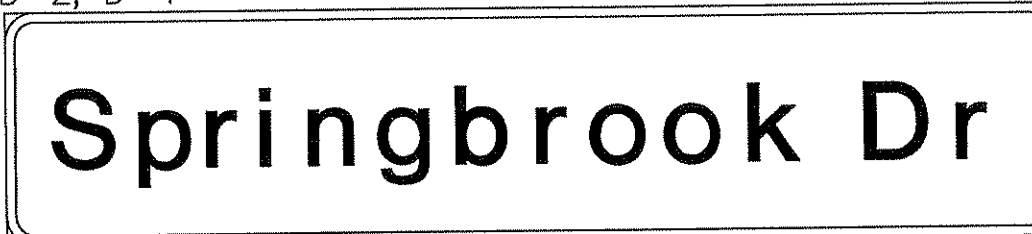
- FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS, SEE STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE: 7/06/07), AND SPECIAL PROVISIONS.
- SEE STANDARD SIGNS MANUAL FOR DETAILED DRAWINGS OF TYPE C SIGN PANELS.
- FURNISHING AND INSTALLING NEW TYPE C SIGNS, AND SALVAGING AND INSTALLING IN-PLACE INTERNALLY ILLUMINATED SIGNS SHALL BE INCLUDED AS PART OF THE PAY ITEM NO. 2565 (TRAFFIC CONTROL SIGNAL SYSTEM). SEE SPECIAL PROVISIONS.
- ALL NEW TYPE C SIGN PANELS SHALL BE FABRICATED USING HP SHEETING. SEE SPECIAL PROVISIONS.
- ① = INSTALL SIGN PANEL ON TRAFFIC SIGNAL MAST ARM POLE.
- SEE DETAIL IN SPECIAL PROVISIONS FOR FURTHER INFORMATION REGARDING INSTALLATION OF INTERNALLY ILLUMINATED SIGNS.

D-1, D-3



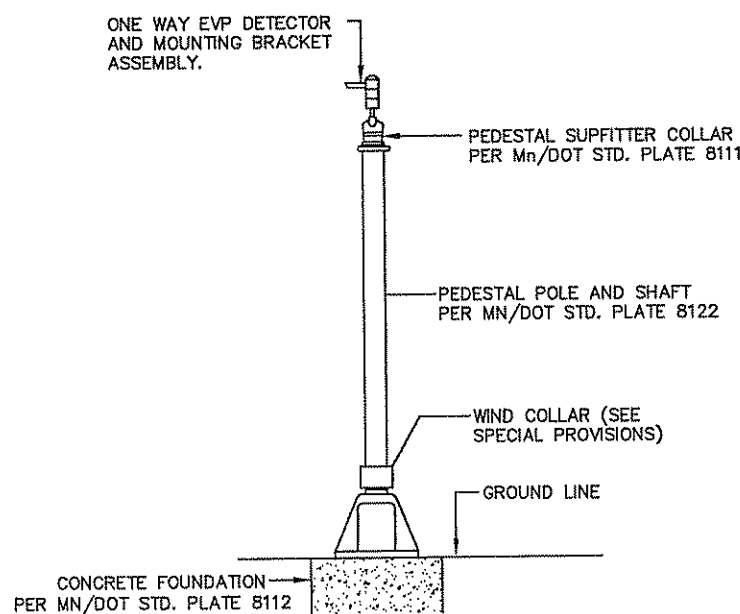
INTERNALLY ILLUMINATED SIGN PANEL-INPLACE (SALVAGE & INSTALL)
APPROXIMATE SIZE 96" X 18"

D-2, D-4

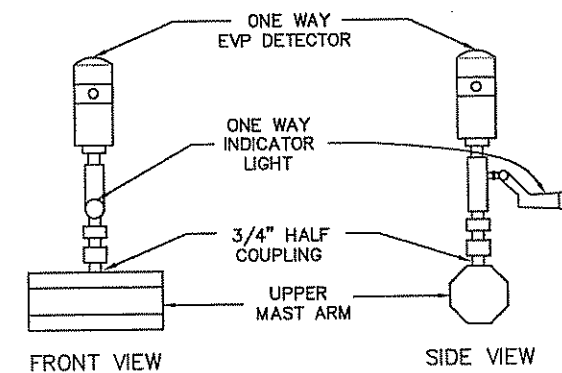


INTERNALLY ILLUMINATED SIGN PANEL-INPLACE (SALVAGE & INSTALL)
APPROXIMATE SIZE 96" X 18"

PEDESTAL POLE MOUNTED
EVP DETECTOR DETAIL



EVP DETECTOR AND LIGHT
MOUNTING DETAIL ON MAST ARM



S.P. 02-596-07

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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Date: March 28, 2010 Name: John M. Gray, PE Lic. No. 22457

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ANOKA COUNTY,
MINNESOTA
BLAINE, COON RAPIDS, FRIDLEY

TRAFFIC SIGNAL SYSTEM
SIGNAL SIGNING AND EVP DETAILS
COUNTY ROAD 132 (85TH AVENUE NW)
AT SPRINGBROOK DRIVE

FILE NO. 105979
SIGNAL SHEET 5 OF 13
78
101

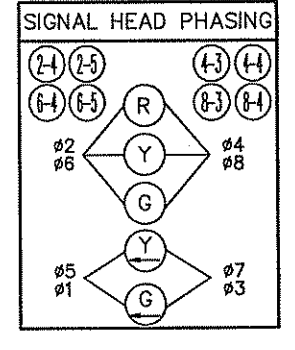
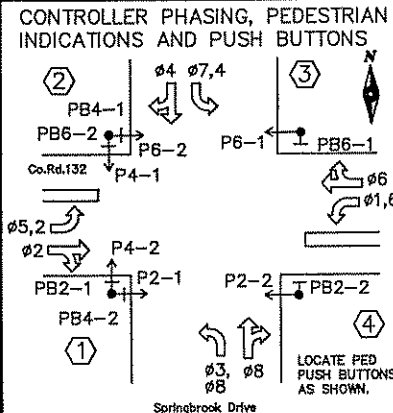
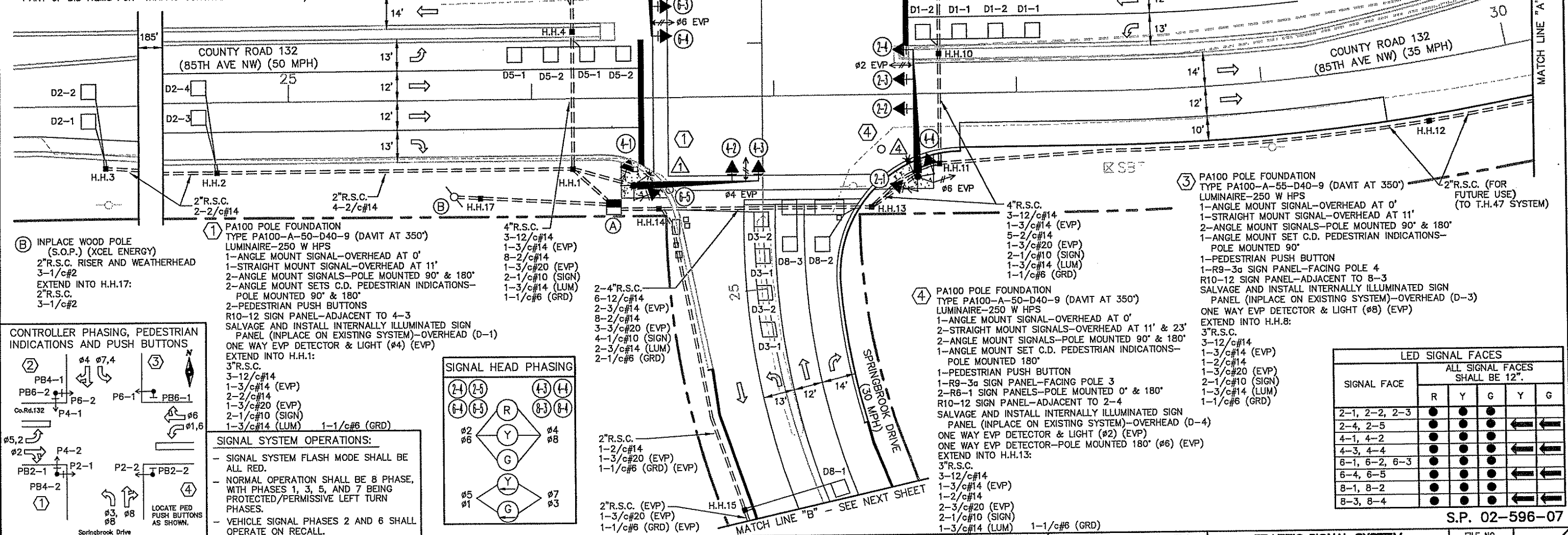
S:\AE\ANOKA\COMMON\SIGNALS\1-132_SIGNAL_DETAILS\ALDING 03/29/2010

- NOTES:**
- 1) LOCATION OF FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
 - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS.
 - 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
 - 6) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION "FILLED" COUNTDOWN TIMER "HAND/WALKING PERSON" INDICATION.
 - 7) ALL VEHICLE SIGNAL INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
 - 8) SEE DETAILS, SPECIAL PROVISIONS, AND STATEMENT OF ESTIMATED QUANTITIES REGARDING BATTERY BACK-UP SIGNAL SERVICE CABINET TO BE FURNISHED AND INSTALLED BY CONTRACTOR (SEPARATE FROM ITEM NO. 2565 FOR THIS SIGNAL SYSTEM).
 - 9) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6 FEET FROM THE END OF EACH MAST ARM (FOR EVP).
 - 10) ALL VEHICLE AND PEDESTRIAN SIGNAL HOUSINGS, BACKGROUND SHIELDS, AND VISORS SHALL BE FABRICATED USING BLACK POLYCARBONATE MATERIALS. SEE SPECIAL PROVISIONS.
 - 11) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
 - 12) (EVP) DENOTES ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR UNDER ITEM NO. 2565 (EMERGENCY VEHICLE PREEMPTION SYSTEM). SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
 - 13) SEE DETAILS AND SPECIAL PROVISIONS REGARDING TYPE C SIGNS TO BE F & I BY CONTRACTOR (INCLUDED AS PART OF BID ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
 - 14) CONTRACTOR SHALL COIL AND STORE 25 FEET OF SPARE 1-2/c#14 CABLE IN HANDHOLES 1 & 5 (FOR FUTURE APS SYSTEM INSTALLATION BY OTHERS) (INCLUDED AS PART OF BID ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
 - 15) SEE SPECIAL PROVISIONS AND DETAILS REGARDING INTERNALLY ILLUMINATED SIGNS TO BE SALVAGED FROM EXISTING SYSTEM AND INSTALLED ON NEW SYSTEM BY CONTRACTOR (INCLUDED AS PART OF BID ITEMS FOR "TRAFFIC CONTROL SIGNAL SYSTEM").

N.M.C. LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D1-1	2-6x6	20' & 50'	1
D1-2	2-6x6	5' & 35'	1
D2-1	6x6	400'	1
D2-2	6x6	400'	1
D2-3	6x6	180'	1
D2-4	6x6	180'	1
D3-1	2-6x6	20' & 50'	1
D3-2	2-6x6	5' & 35'	1
D4-1	6x12	120'	3,8
D4-2	2-6x12	0' & 15'	7
D5-1	2-6x6	20' & 50'	1
D5-2	2-6x6	5' & 35'	1
D6-1	6x6	180'	1
D6-2	6x6	180'	1
D7-1	2-6x6	20' & 50'	1
D7-2	2-6x6	5' & 35'	1
D8-1	6x6	120'	3,8
D8-2	6x12&6x6	0' & 15'	7
D8-3	2-6x6	0' & 15'	1

- LOOP DETECTORS FUNCTIONS:**
- 1) CALL AND EXTEND
 - 3) EXTEND ONLY
 - 7) DELAYED CALL, IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)

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



- SIGNAL SYSTEM OPERATIONS:**
- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
 - NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5, AND 7 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.
 - VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.



- EQUIPMENT PAD FOUNDATION**
INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)
BATTERY BACK-UP SIGNAL SERVICE CABINET BETWEEN CONTROLLER CABINET AND SERVICE CABINET:
METERED SIGNAL SERVICE
2" R.S.C.
3-1/c#6
CONTROLLER CABINET TO H.H.1:
4" R.S.C.
6-12/c#14
2-3/c#14 (EVP)
14-2/c#14
2-3/c#20 (EVP)
CONTROLLER CABINET TO H.H.14:
4" R.S.C.
6-12/c#14
2-3/c#14 (EVP)
11-2/c#14
4-3/c#20 (EVP)
STUB OUT 2-3" R.S.C. FROM CONTROLLER CABINET TO NORTH (THREAD & CAP BOTH ENDS-FOR FUTURE USE)
STUB OUT 1" N.M.C. FROM CONTROLLER CABINET (FOR FUTURE PHONE LINE BY OTHERS)

- SERVICE CABINET TO H.H.1:
2" R.S.C.
2-1/c#6 (GRD)
UNMETERED STREET LIGHT SERVICE
2-3/c#14 (LUM)
UNMETERED INT. ILL. SIGN SERVICE
4-1/c#10 (SIGN)
SERVICE CABINET TO H.H.14:
2" R.S.C.
3-1/c#6 (GRD)
UNMETERED STREET LIGHT SERVICE
2-3/c#14 (LUM)
UNMETERED INT. ILL. SIGN SERVICE
4-1/c#10 (SIGN)
SERVICE CABINET TO H.H.17:
2" R.S.C.
3-1/c#2 (FOR POWER BY XCEL ENERGY)

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE	REVISIONS

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.

John M. Gray
Name: John M. Gray, PE
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Date: March 29, 2010

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3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
BLAINE, COON RAPIDS, FRIEDLEY

TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
COUNTY ROAD 132 (85TH AVENUE NW) AT SPRINGBROOK DRIVE

FILE NO. 105979
SIGNAL SHEET 6 OF 13
79
101

S:\AE\ANOKA\COMMON\SIGNS\1-132_SIGNAL\SRBASEL.DWG 03/23/2010

NOTES (TH 47 AT COUNTY ROAD 132 SYSTEM):

- 1) LOCATION OF NEW LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) ALL HANDHOLES, CONDUIT, CABLES AND CONDUCTORS AT THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AS SHOWN.
- 3) CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING INPLACE HANDHOLES 3, 6, AND 7 TO FINISHED SURROUNDING GRADE UPON COMPLETION OF ALL ROAD AND MEDIAN WORK (INCIDENTAL).
- 4) CONTRACTOR SHALL MAINTAIN OPERATION OF INPLACE SIGNAL SYSTEM AT ALL TIMES, UNLESS OTHERWISE APPROVED BY ENGINEER AND BY MN/DOT DISTRICT TRAFFIC OFFICE PERSONNEL.
- 5) CONTRACTOR SHALL FURNISH AND INSTALL NEW LOOP DETECTOR SPLICE KITS FOR EACH LOOP DETECTOR SHOWN ON THIS PLAN SHEET. SEE SPECIAL PROVISIONS.
- 6) SEE SPECIAL PROVISIONS AND MN/DOT STANDARD PLATE NO. 8132A REGARDING PVC LOOP DETECTOR INSTALLATION WORK TO BE COMPLETED BY THE CONTRACTOR AT THIS SIGNAL SYSTEM.
- 7) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
- 8) LOOP DETECTOR INSTALLATION WORK AT THIS SIGNAL SYSTEM WILL BE MEASURED AND PAID FOR SEPARATELY. SEE SPECIAL PROVISIONS AND STATEMENT OF ESTIMATED QUANTITIES.
- 9) NEW CONDUIT TO BE FURNISHED AND INSTALLED BY CONTRACTOR INTO IN-PLACE HANDHOLE 3 SHALL HAVE END CAPPED AFTER INSTALLATION (FOR FUTURE USE BY OTHERS).

TH 47 AT COUNTY ROAD 132

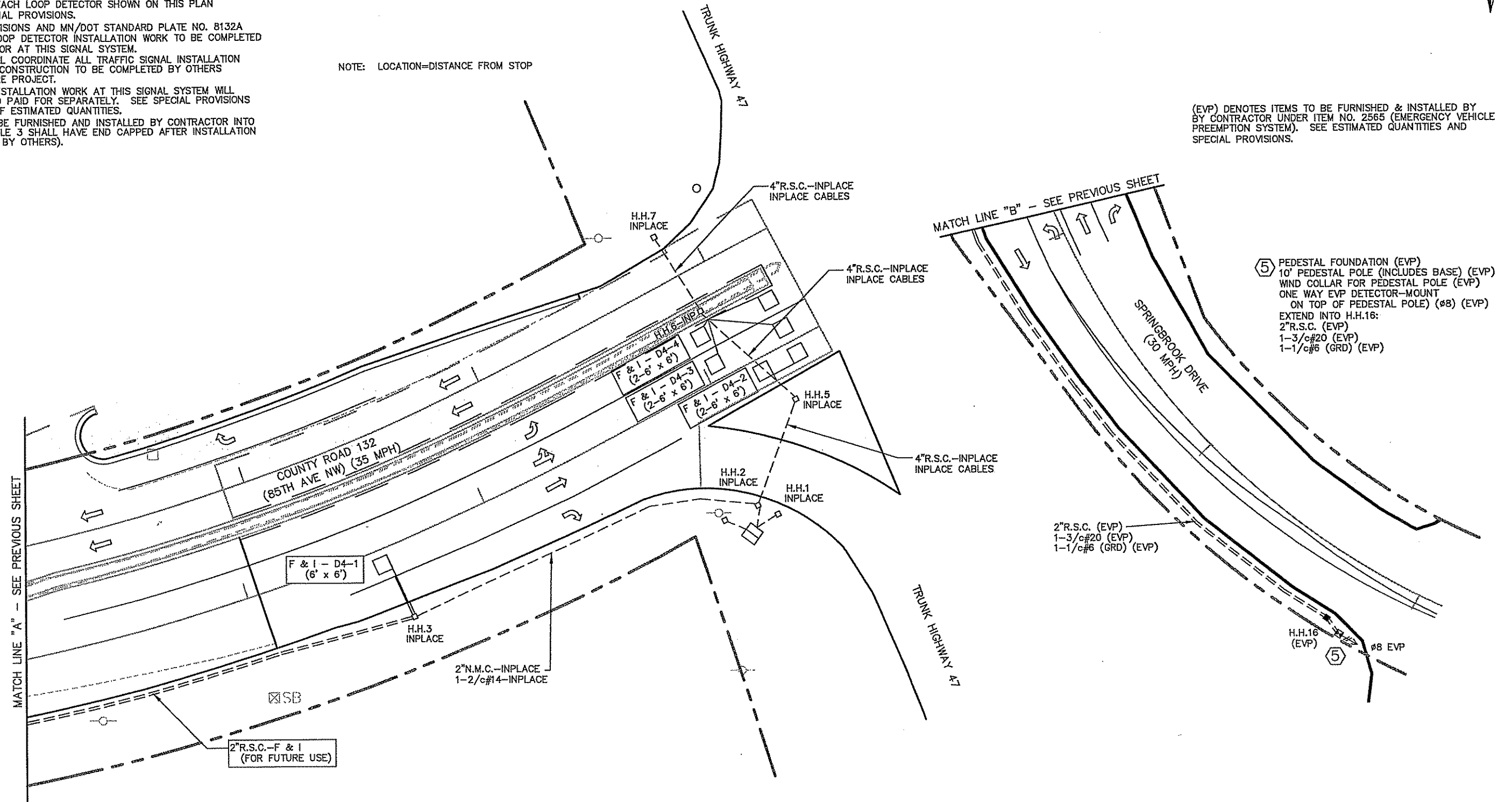
F & I PVC LOOP DETECTORS		
NUMBER	SIZE (FT.)	LOCATION
D4-1	6x6	180'
D4-2	2-6x6	5' & 20'
D4-3	2-6x6	5' & 35'
D4-4	2-6x6	5' & 35'

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

NOTE: LOCATION=DISTANCE FROM STOP



(EVP) DENOTES ITEMS TO BE FURNISHED & INSTALLED BY BY CONTRACTOR UNDER ITEM NO. 2565 (EMERGENCY VEHICLE PREEMPTION SYSTEM). SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.



- 5 PEDESTAL FOUNDATION (EVP)
- 10' PEDESTAL POLE (INCLUDES BASE) (EVP)
- WIND COLLAR FOR PEDESTAL POLE (EVP)
- ONE WAY EVP DETECTOR-MOUNT ON TOP OF PEDESTAL POLE) (#8) (EVP)
- EXTEND INTO H.H.16:
- 2"R.S.C. (EVP)
- 1-3/c#20 (EVP)
- 1-1/c#6 (GRD) (EVP)

S:\NEW\ANOKA\CORRIG\151-132_SIGNAL_SYSTEMS.DWG 04/15/2010

DRAWN BY: JMG	1	JMG	4/15/10	REVISED RIGHT TURN TAPER NEAR TH 47 TO MATCH OVERALL PLANS
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	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 LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

JMG
 Name: John M. Grey, PE
 Lc. No. 22457
 Date: March 29, 2010

PHONE: (651) 480-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
 BLAINE, COON RAPIDS, FRIDLEY

TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
 COUNTY ROAD 132 (85TH AVENUE NW)
 (SPRINGBROOK DRIVE TO TH 47)

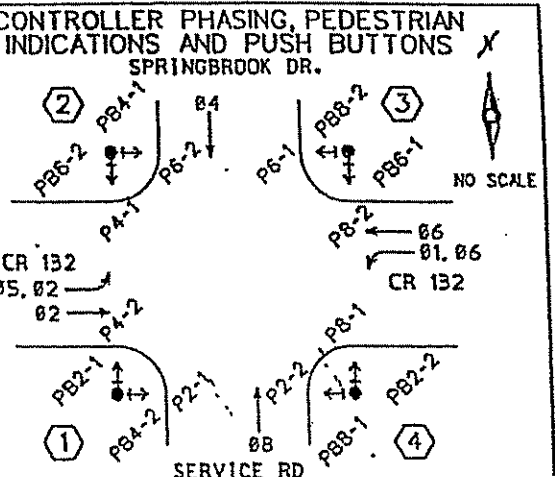
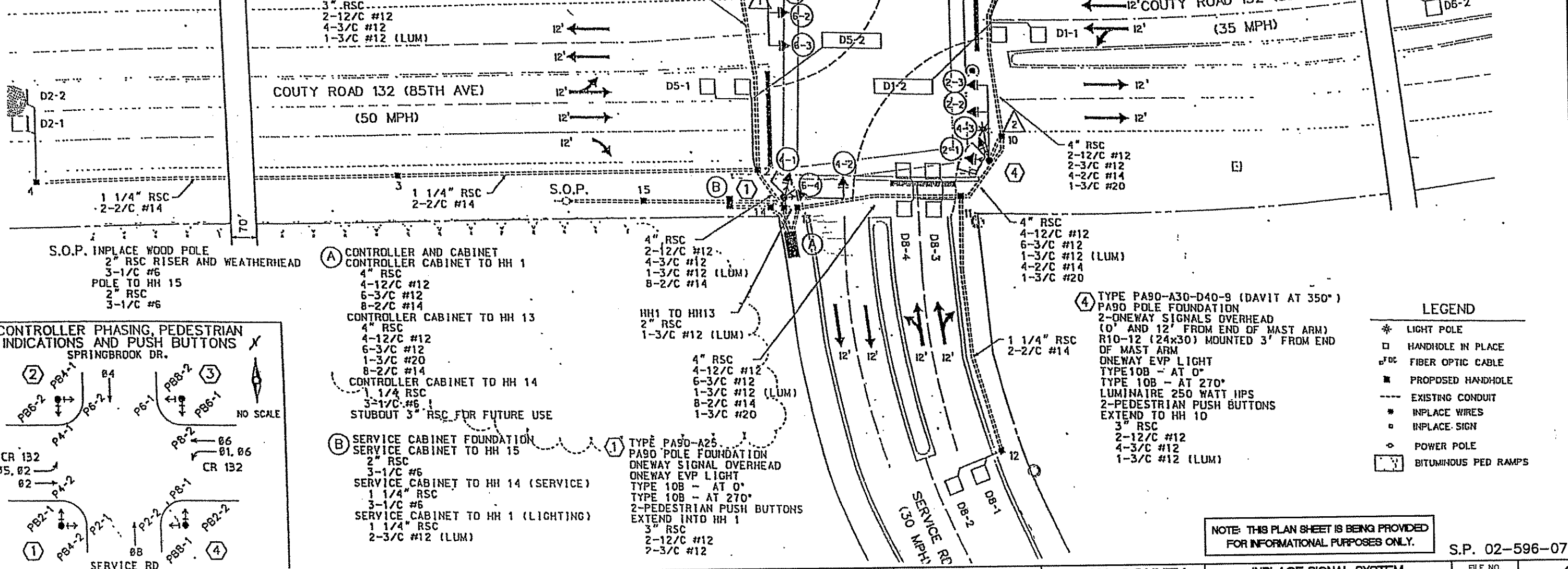
FILE NO. 105979	80
SIGNAL SHEET 7 OF 13	
101	

S.P. 02-596-07

LOOP DETECTORS			
NUMBER	SIZE	FUNCTION	LOCATION
D1-1	6' X 6'	10	5'
D1-2	6' X 24'	3	AS SHOWN
D2-1	6' X 6'	1	370'
D2-2	6' X 6'	1	370'
D4-1	6' X 6'	3/8	120'
D4-2	6' X 6'	3/8	120'
D4-3	6' X 6'	7	5'
D4-4	6' X 6'	1	5'
D5-1	6' X 6'	10	5'
D5-2	6' X 24'	3	AS SHOWN
D6-1	6' X 6'	1	260'
D6-2	6' X 6'	1	260'
DB-1	6' X 6'	3/8	120'
DB-2	6' X 6'	3/8	120'
DB-3	6' X 6'	7	5'
DB-4	6' X 6'	1	5'

- NOTES:
- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - EACH LUMINAIRE SHALL HAVE A PEC AND CHECK SWITCH.
 - SEE SHEET NO. 5 AND SPECIAL PROVISIONS FOR SERVICE CABINET DETAILS.
 - DIRECTIONAL SIGNS (TYPE D) TO BE FURNISHED AND INSTALLED ON MAST ARMS AT POLES 1, 2, 3 AND 4 AND SHALL BE CONSIDERED INCIDENTAL.
 - SEE SPECIAL PROVISIONS FOR HANDHOLE TYPE.
 - SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR LOCATION OF UTILITIES.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
 - ALL SIGNAL FACES SHALL BE 12 INCH 3 SECTION R-Y-G, EXCEPT FACES (2-3) (2-4) (6-3) (6-4) WHICH SHALL BE 12 INCH 5 SECTION R-Y-G-YLTA-GLTA.
 - ALL VEHICLE SIGNAL INDICATIONS SHALL USE GLASS LENSES.
 - BIT. PED RAMPS SHALL BE CONSTRUCTED IN ALL QUADRANTS AS SHOWN ON PLAN AND SHALL BE CONSIDERED INCIDENTAL TO SIGNAL SYSTEM CONSTRUCTION.
 - EVP TO BE FURNISHED BY THE CITY OF FRIDLEY AND INSTALLED BY THE CONTRACTOR (SEE SPECIAL PROVISIONS).

- LOCATION-DISTANCE FROM STOP LINE TO DETECTOR
- FUNCTIONS:
- CALL AND EXTEND
 - CALL ONLY
 - EXTEND ONLY
 - CALL ONLY DENIS
 - DLY CALL ONLY
 - DLY CALL ONLY DENSITY
 - DLY CALL IMMED EXTEND
 - CARRY OVER
 - ADVISORY
 - CALL ONLY DURING B4 AND B8 GREEN



- (A) CONTROLLER AND CABINET
CONTROLLER CABINET TO HH 1
4" RSC
4-12/C #12
6-3/C #12
8-2/C #14
CONTROLLER CABINET TO HH 13
4" RSC
4-12/C #12
6-3/C #12
1-3/C #20
8-2/C #14
CONTROLLER CABINET TO HH 14
1 1/4" RSC
3-1/C #6
STUBOUT 3" RSC FOR FUTURE USE
- (B) SERVICE CABINET FOUNDATION
SERVICE CABINET TO HH 15
2" RSC
3-1/C #6
SERVICE CABINET TO HH 14 (SERVICE)
1 1/4" RSC
3-1/C #6
SERVICE CABINET TO HH 1 (LIGHTING)
1 1/4" RSC
2-3/C #12 (LUM)

- (1) TYPE PA90-A25
PA90 POLE FOUNDATION
ONEWAY SIGNAL OVERHEAD
ONEWAY EVP LIGHT
TYPE 10B - AT 0°
TYPE 10B - AT 270°
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO HH 1
3" RSC
2-12/C #12
2-3/C #12

- (4) TYPE PA90-A30-D40-9 (DAVIT AT 350°)
PA90 POLE FOUNDATION
2-ONEWAY SIGNALS OVERHEAD
(0° AND 12° FROM END OF MAST ARM)
R10-12 (24x30) MOUNTED 3' FROM END OF MAST ARM
ONEWAY EVP LIGHT
TYPE 10B - AT 0°
TYPE 10B - AT 270°
LUMINAIRE 250 WATT HPS
2-PEDESTRIAN PUSH BUTTONS
EXTEND TO HH 10
3" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM)

LEGEND

* LIGHT POLE
□ HANDHOLE IN PLACE
FOC FIBER OPTIC CABLE
■ PROPOSED HANDHOLE
--- EXISTING CONDUIT
* INPLACE WIRES
□ INPLACE SIGN
○ POWER POLE
BIT BITUMINOUS PED RAMPS

NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

S.P. 02-596-07

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE	REVISIONS

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Name: John M. Gray, PE
Lic. No. 22457
Date: March 29, 2010

SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY,
MINNESOTA
BLAINE, COON RAPIDS, FRIDLEY

INPLACE SIGNAL SYSTEM
"FOR INFORMATION ONLY"
COUNTY ROAD 132 (85TH AVENUE NW)
AT SPRINGBROOK DRIVE

FILE NO. 105979
SIGNAL SHEET 9 OF 13
82
101

① INPLACE:
 P100 POLE FOUNDATION
 TYPE P100-A45-D40-9 (DAVIT AT 350°)
 LUM-200W HPS WITH PEC
 3 - ONEWAY SIGNALS (OVERHEAD)
 MID MAST ARM MOUNT 12' & 24' FROM END
 2 - TYPE IOB AT 0° & 270°
 2 - PED PB & SIGNS (RIO-48)
 ONE WAY EVP DETECTOR AND LIGHT (01 & 06)
 EXTEND INTO HH 4
 3" RSC
 2 - 12/C #12
 3 - 3/C #12
 1 - 3/C #12 (LUM)
 1 - 3/C #20

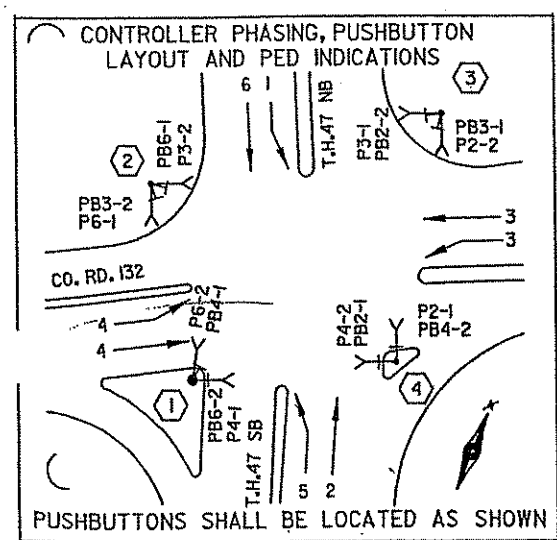
③ PA100 POLE FOUNDATION
 TYPE PA100-A50-D40-9 (DAVIT AT 350°)
 LUM-200W HPS WITH PEC
 3-ONEWAY SIGNALS (OVERHEAD)
 MID MAST ARM MOUNT 13' & 25' FROM END
 2 - TYPE IOB AT 0° & 270°
 2- PED. PB & SIGN (RIO-48)
 ONE WAY EVP DETECTOR AND LIGHT (02 & 05)
 EXTEND INTO HH 12
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

② INPLACE:
 A100 POLE FOUNDATION
 TYPE A100-A50
 2 - ONEWAY SIGNALS (OVERHEAD)
 MID MAST ARM MOUNT 18' FROM END
 2 - TYPE IOB AT 0° AND 270°
 2 - PED PB & SIGNS (RIO-48)
 ONE WAY EVP DETECTOR AND LIGHT (03)
 EXTEND INTO HH 7:
 3" RSC
 2 - 12/C #12
 2 - 3/C #12
 1 - 3/C #20

INPLACE 4" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #12 (LUM)
 6-2/C #14
 1-3/C #20
 1-6PR #19

④ INPLACE:
 P100 POLE FOUNDATION
 TYPE P100-A40
 2 - ONEWAY SIGNALS (OVERHEAD)
 MID MAST ARM MOUNT 18' FROM END
 2 - TYPE IOB AT 0° & 270°
 2 - PED. PB & SIGNS (RIO-48)
 ONE WAY EVP DETECTOR AND LIGHT (04)
 EXTEND INTO HH 17:
 3" RSC
 2-12/C #12
 3-3/C #12
 2-2/C #14
 1-3/C #20

⑤ EQUIPMENT PAD (INPLACE)
 CONTROLLER AND CABINET (INPLACE)
 SERVICE EQUIPMENT (INPLACE)
 ⑥ SOP-INPLACE WOOD POLE
 INPLACE: EXTEND INTO HH20
 2" RSC
 3-1/C #2
 2" RSC RISER AND WEATHERHEAD
 3-1/C #12
 METER TO HH 20
 INPLACE 2" RSC
 2-3/C #12
 3-1/C #2
 LOAD CENTER TO HH 1
 INPLACE 1 1/4" RSC
 2-3/C #12 (LUM)
 LOAD CENTER TO CABINET
 INPLACE 1 1/4" RSC
 2-1/C #6
 1-1/C #6 BR GR
 3" RSC STUB OUT
 THREAD AND CAP BOTH ENDS



SIGNAL FACE CHART

ALL INDICATIONS SHALL BE 12"

INPLACE	SIGNAL FACE	R	Y	G	Y	G
*	2-1,2-2,2-3	o	o	o	o	o
*	6-1,6-2,6-3	o	o	o	o	o
*	1-1,1-2	←	←	←		
*	5-1,5-2	←	←	←		
*	4-1,4-2	o	o	o		
*	4-3,4-4	o	←	←		
*	3-1,3-2	o	o	o		
*	3-3,3-4	o	←	←		

LOOP DETECTOR CHART

TYPE OF INSTALLATION	DESIGNATION	PHASE	SIZE (FT.)	FUNCTION	LOCATION**
*	DI-1, DI-2	1	6x6	1	5 & 35
*	D5-1, D5-2	5	6x6	1	5 & 35
NMC	D2-1	2	6x6	1	430
NMC	D2-2, D2-3	2	6x6	1	430
*	D6-1, D6-2	6	6x6	1	430
NMC	D3-1	3	1-6x6, 1-6x12	7	5 & 20
NMC	D3-2	3	6x6	1	10
NMC	D3-3, D3-4	3	6x6	1	40
NMC	D3-5	3	2 - 6x6	1	10
*	D4-1	4	1 - 6x6	3	180
*	D4-2	4	2 - 6x6	1	5 & 20
*	D4-3	4	2 - 6x6	1	5 & 35
*	D4-4	4	2 - 6x6	1	5 & 35

* - INPLACE
 FUNCTION 1: CALL AND EXTEND
 FUNCTION 3: EXTEND ONLY
 FUNCTION 7: DELAY CALL, IMMEDIATE EXTEND
 ** LOCATION = DISTANCE FROM X-WALK

SIGNAL SYSTEM OPERATION

- FLASH MODE IS ALL RED
- NORMAL OPERATION IS 6 PHASE
- PHASES 1&5 SHALL BE PROTECTED LEFT TURNS
- PHASES 2&6 SHALL BE ON PEDESTRIAN RECALL

NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

S.P. 02-596-07

S:\AE\ANOKA\COMMON\GENERAL\1-132_SIGNAL\NETSIGNAL.DWG 03/29/2010

DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG

REVISIONS

NO.	BY	DATE

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.

John M. Gray
 Name: John M. Gray, PE
 Lic. No. 22457
 Date: March 29, 2010

SEH
 PHONE: (651) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
 BLAINE, COON RAPIDS, FRIDLEY

INPLACE SIGNAL SYSTEM
 'FOR INFORMATION ONLY'
 COUNTY ROAD 132 (85TH AVENUE NW)
 AT TRUNK HIGHWAY 47

FILE NO. 105979
 SIGNAL SHEET 11 OF 13
84
101

NOTE: THIS PLAN SHEET HAS
BEEN LEFT BLANK INTENTIONALLY.


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03/29/2010

S.P. 02-596-07

DRAWN BY: JMG				
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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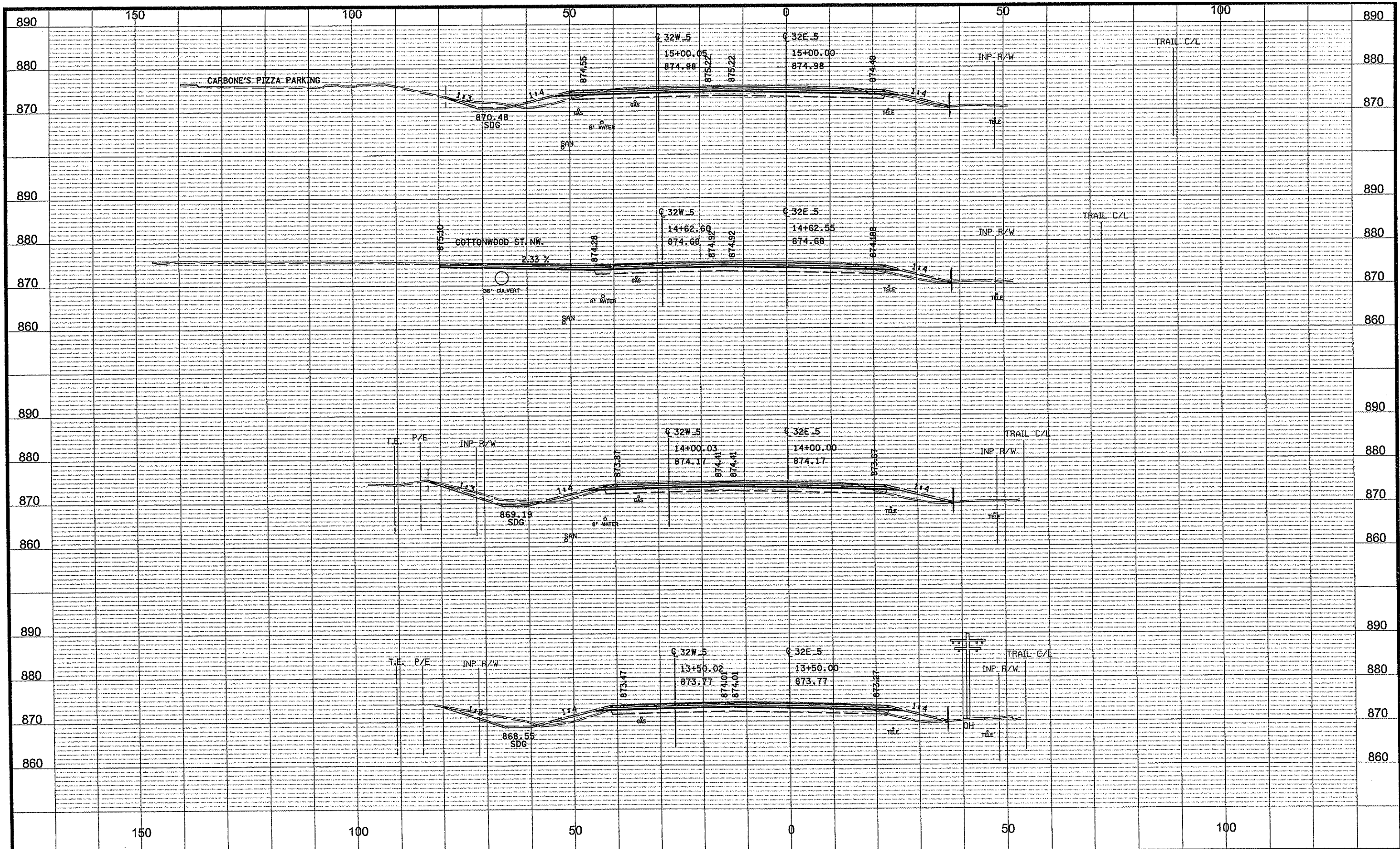
JMG
Date: March 29, 2010 Name: John M. Gray, PE Lic. No. 22457

 SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

**ANOKA COUNTY,
MINNESOTA**
BLAINE, COON RAPIDS, FRIDLEY

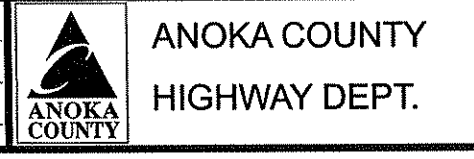
TRAFFIC SIGNAL SYSTEM
COUNTY ROAD 132 (85TH AVENUE NW)
AT SPRINGBROOK DRIVE

FILE NO. 105979	86
SIGNAL SHEET 13 OF 13	101



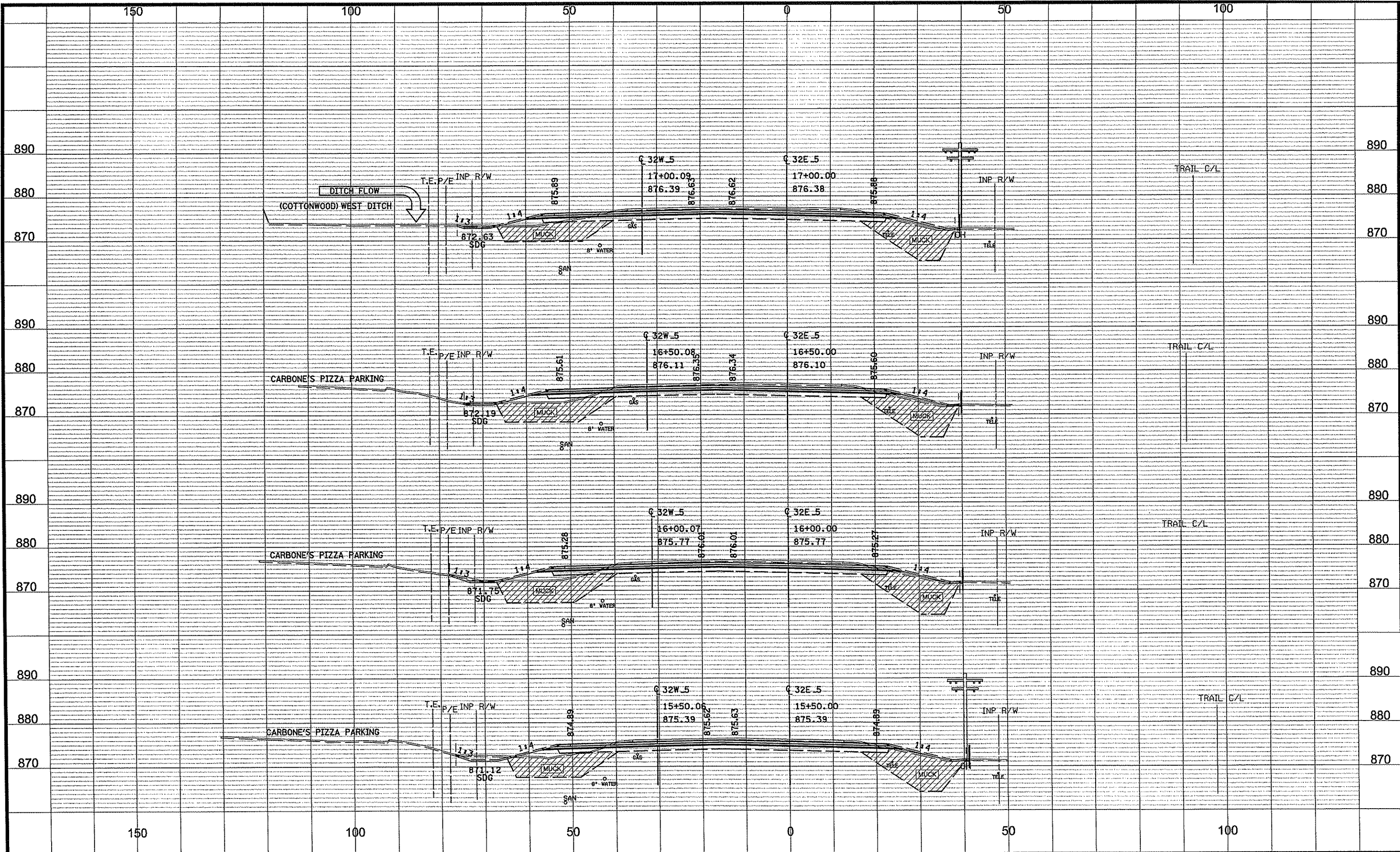
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DRAWN BY NJD DATE 11-17-09
 DESIGN BY DFP DATE 11-17-09
 CHECKED BY JEO DATE 11-18-09



STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 13+50.00 TO 15+00.00
 Sheet 88 of 101 Sheets



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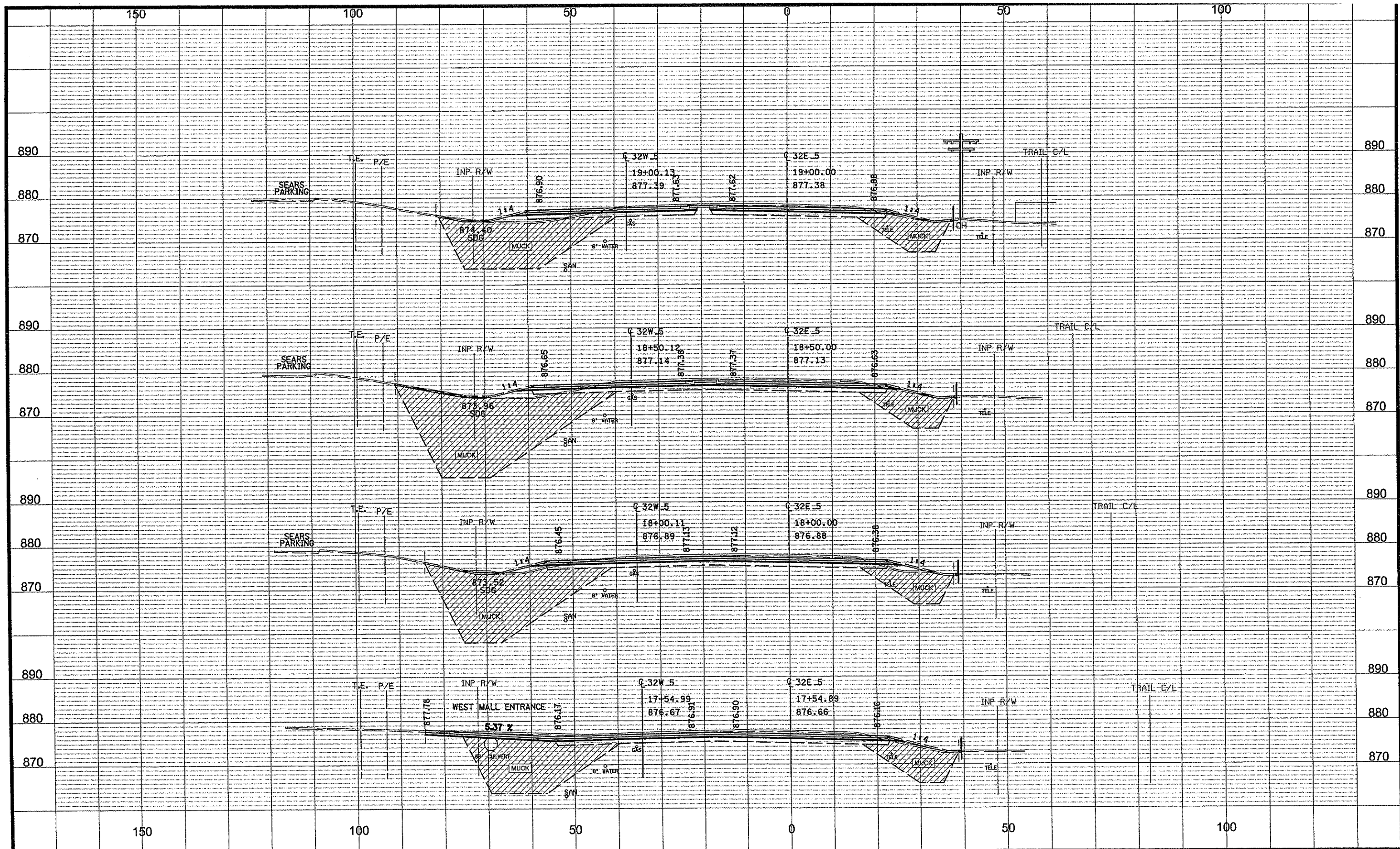
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 15+50.00 TO 17+00.00
 Sheet 89 of 101 Sheets



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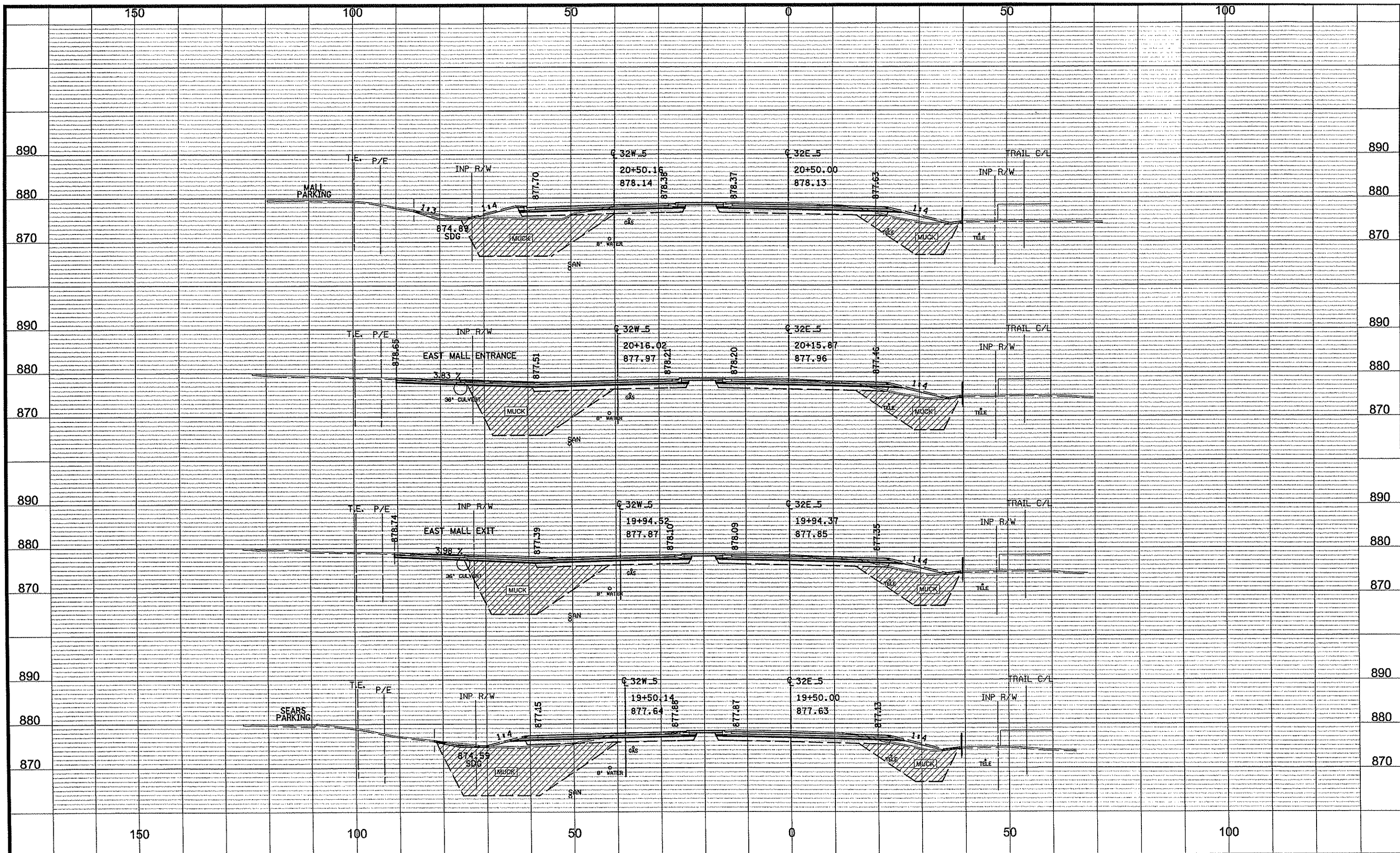
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
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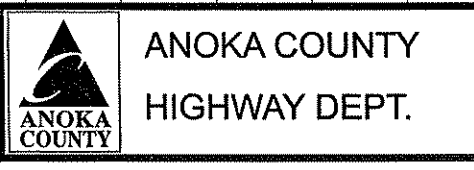
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 Sheet 90 of 101 Sheets



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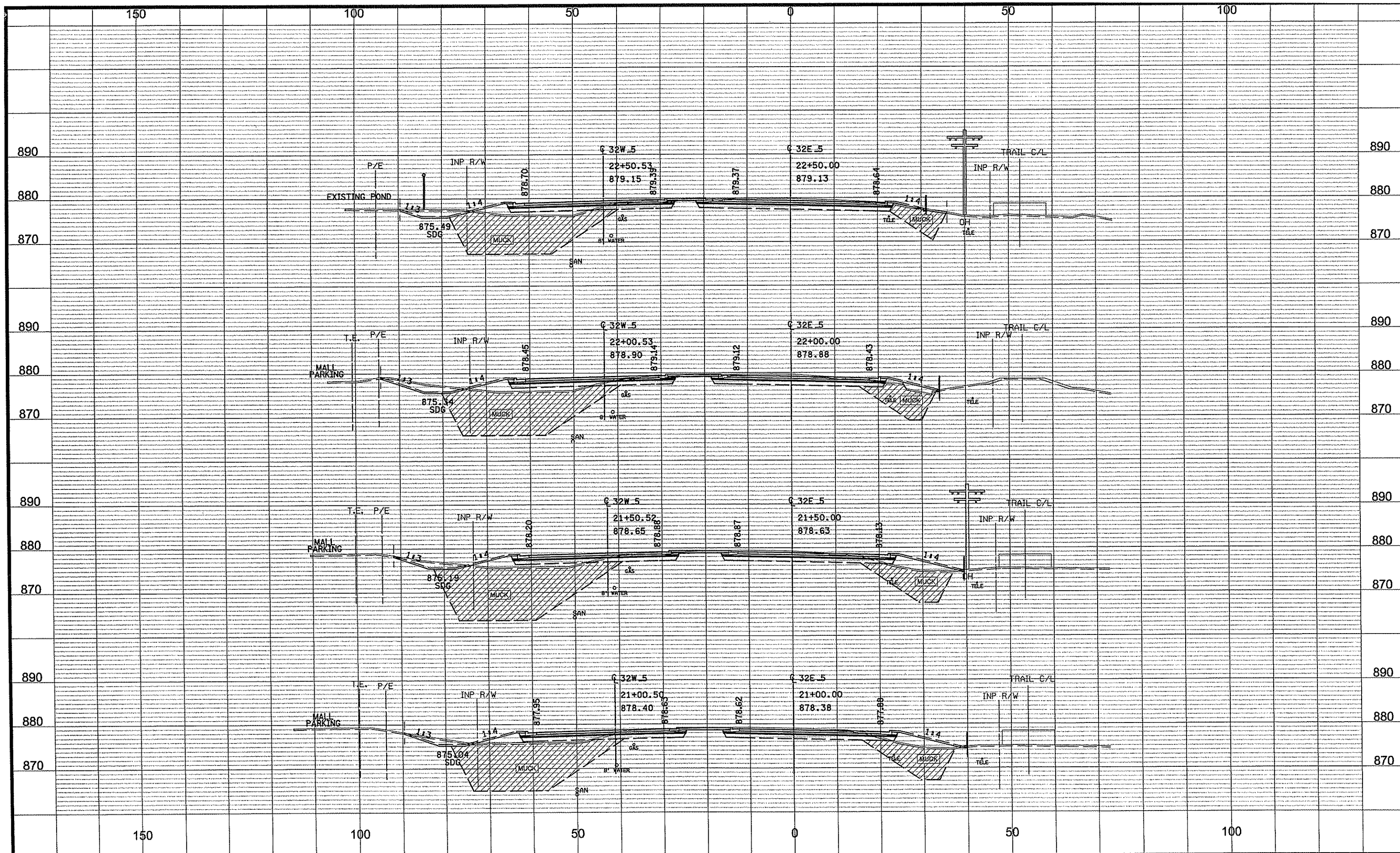
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STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 19+50.00 TO 20+50.00
 Sheet 91 of 101 Sheets



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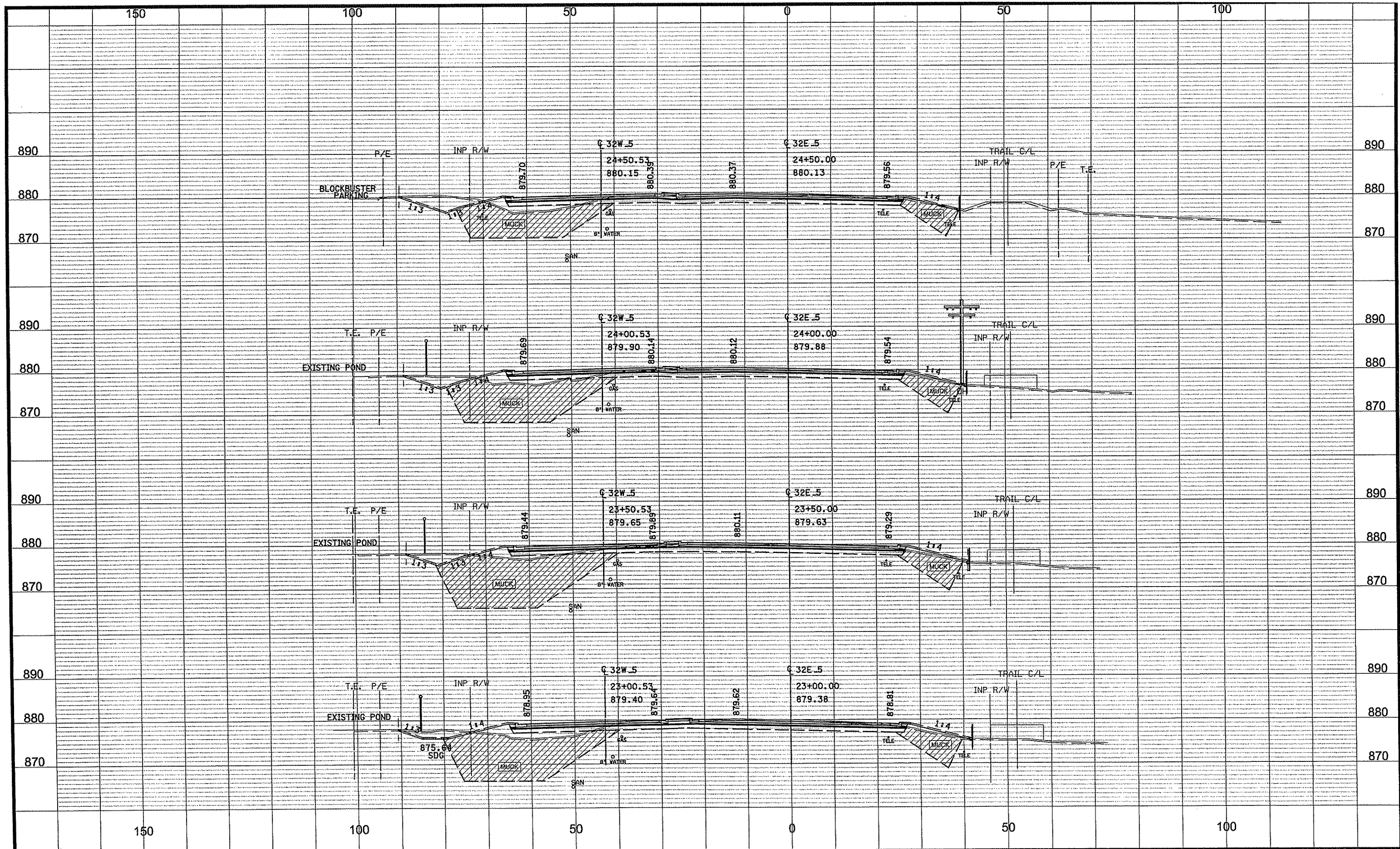
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
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 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

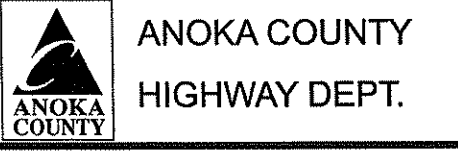
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 Sheet 92 of 101 Sheets



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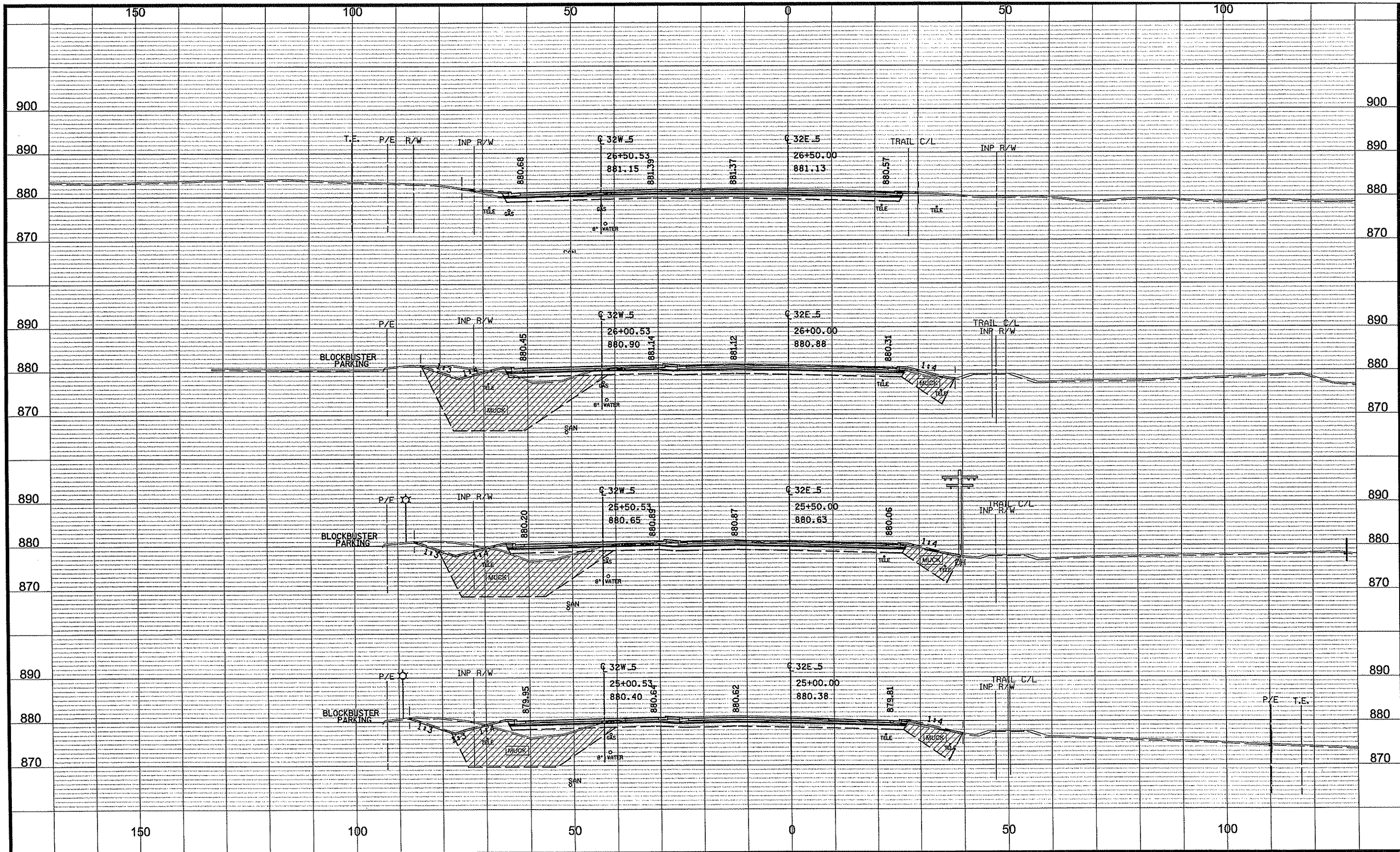
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 CHECKED BY JEO DATE 11-18-09



STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 23+00.00 TO 24+50.00
 Sheet 93 of 101 Sheets



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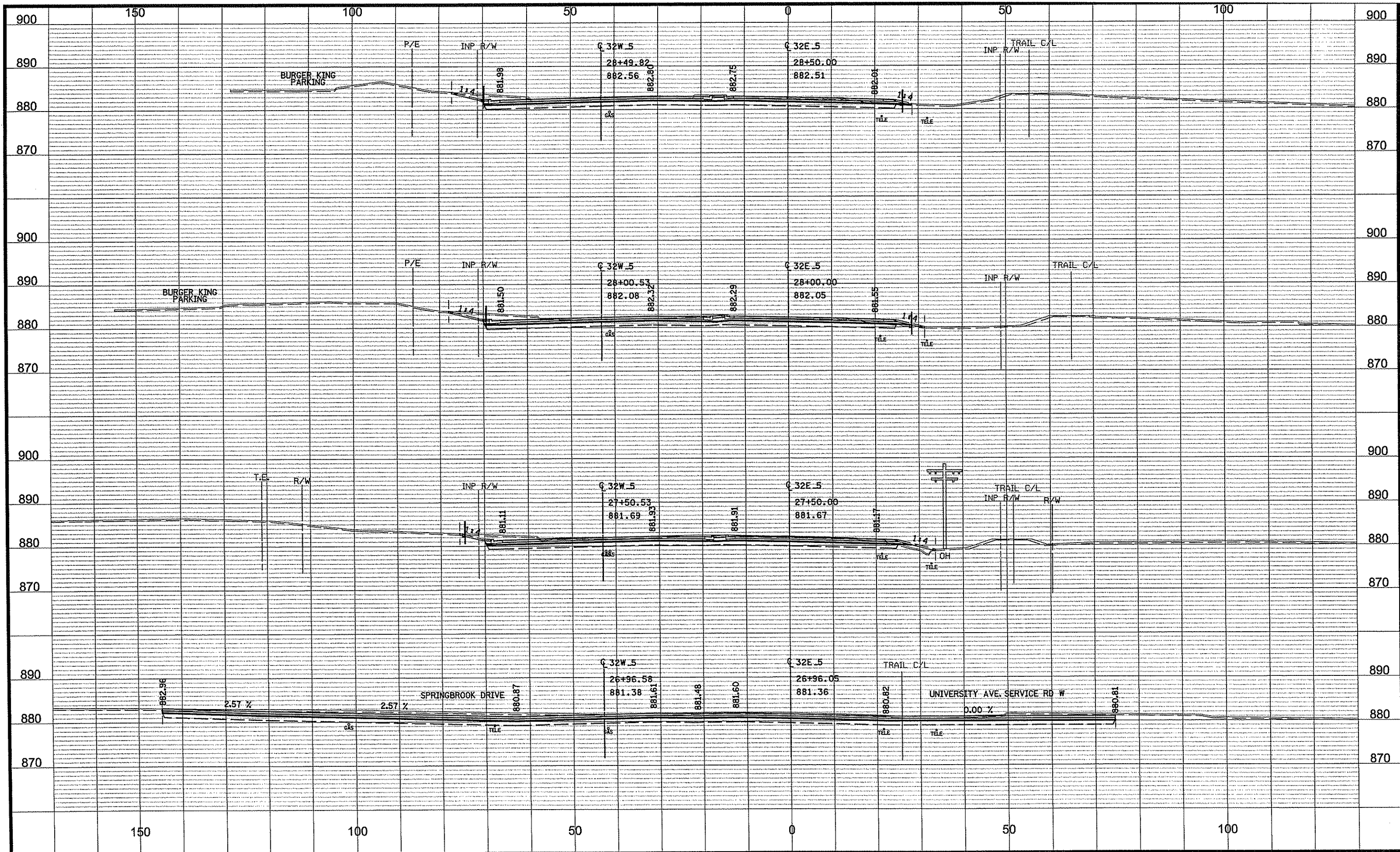
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 25+00.00 TO 26+50.00
 Sheet 94 of 101 Sheets



NO	DATE	BY	CHKD	APPR	REVISION
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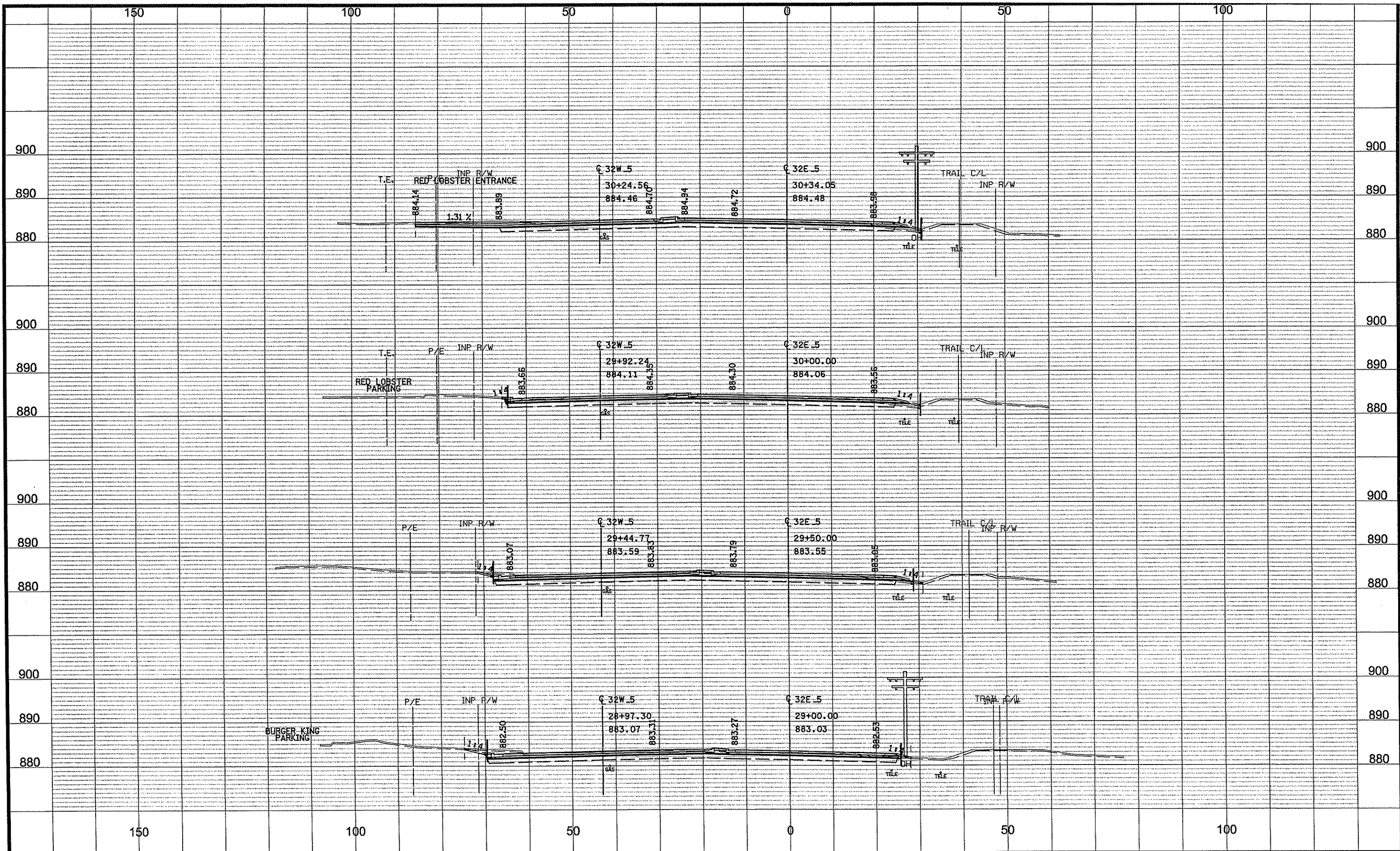
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 26+96.05 TO 28+50.00
 Sheet 95 of 101 Sheets



NO	DATE	BY	CKD	APPR	REVISION

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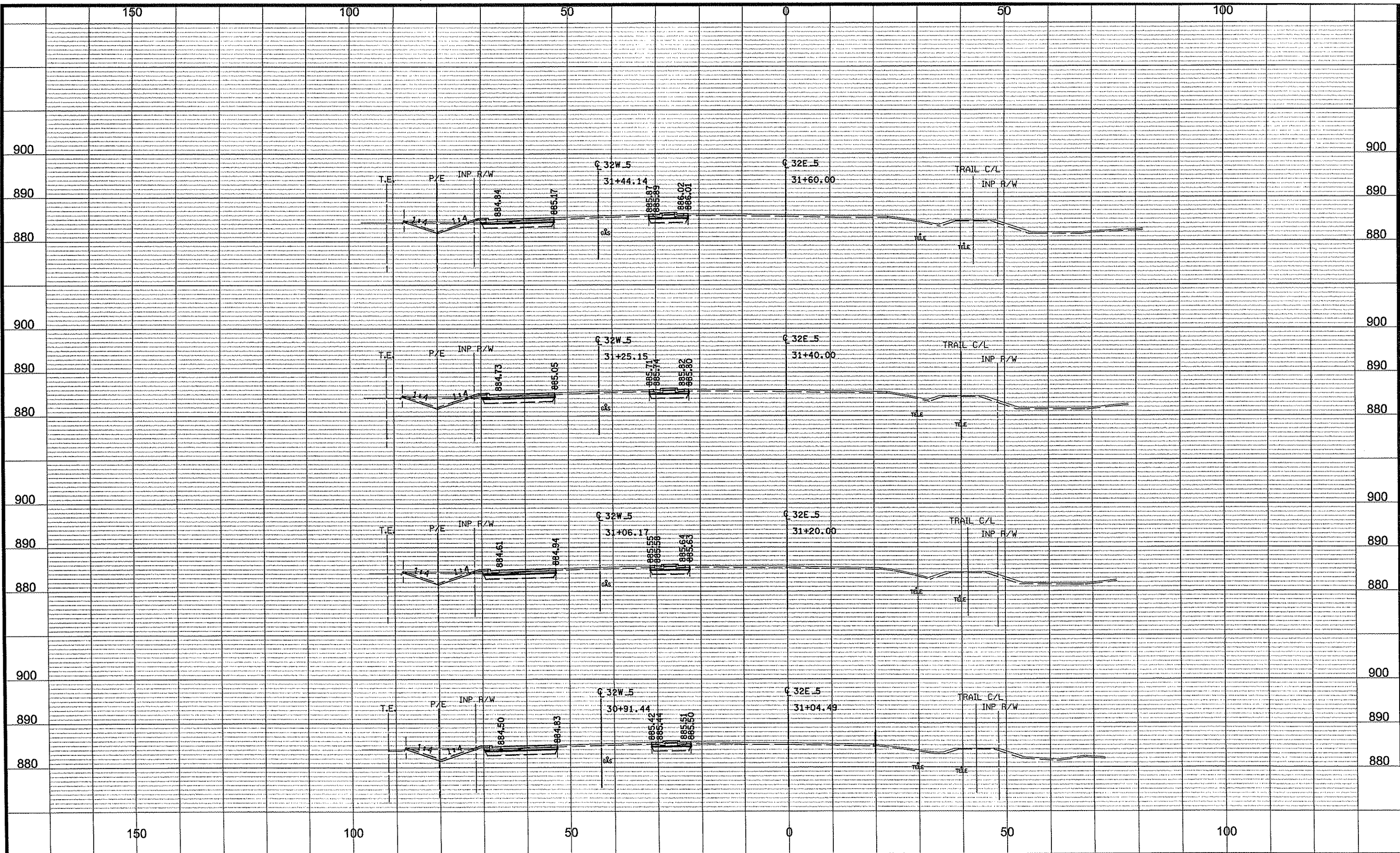
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 DESIGN BY DFF DATE 11-17-09
 CHECKED BY JEO DATE 11-18-09



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 29+00+00 TO 30+34.05
 Sheet 96 of 101 Sheets



NO	DATE	BY	CKD	APPR	REVISION
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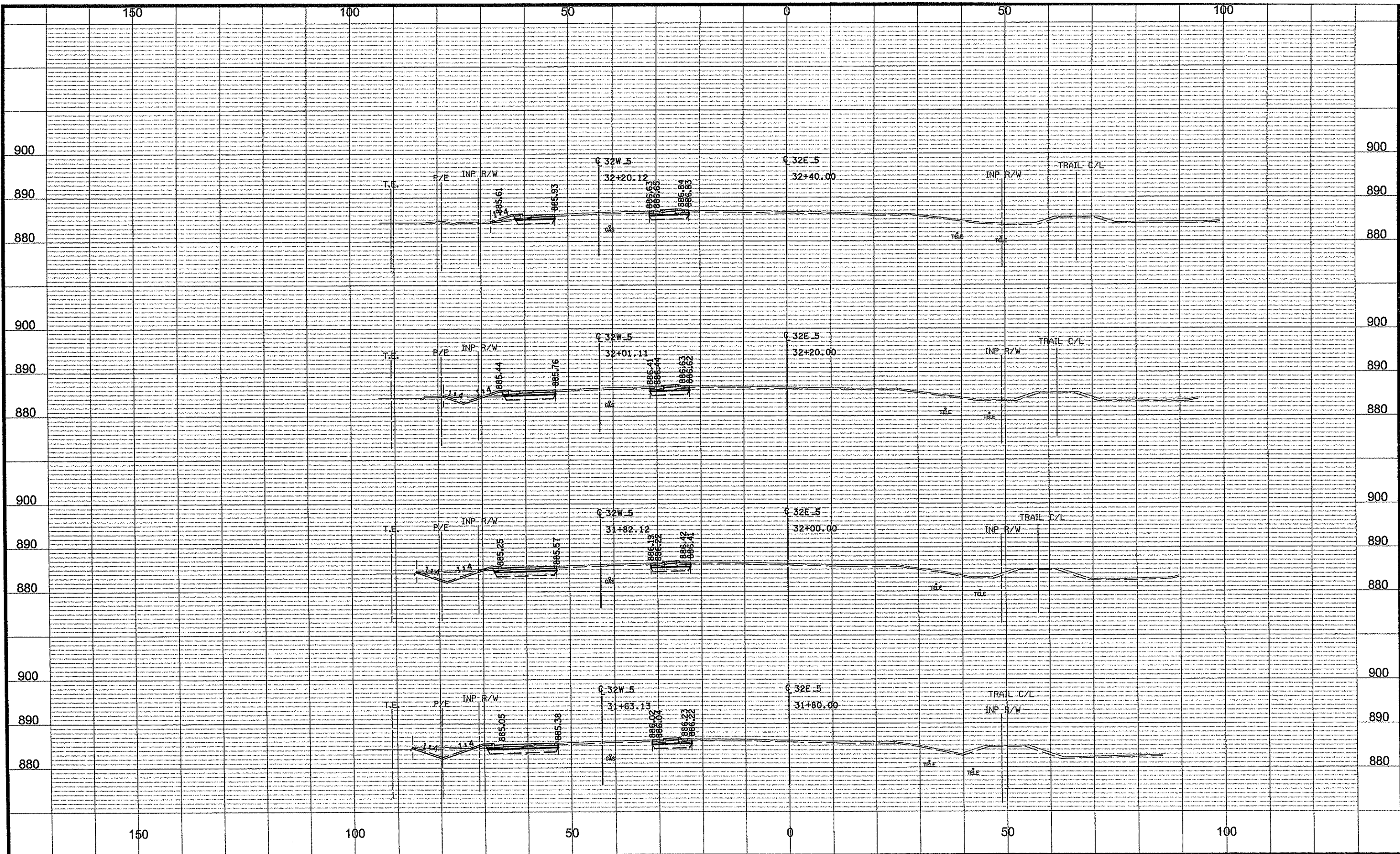
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 31+04.49 TO 31+60.00
 Sheet 97 of 101 Sheets



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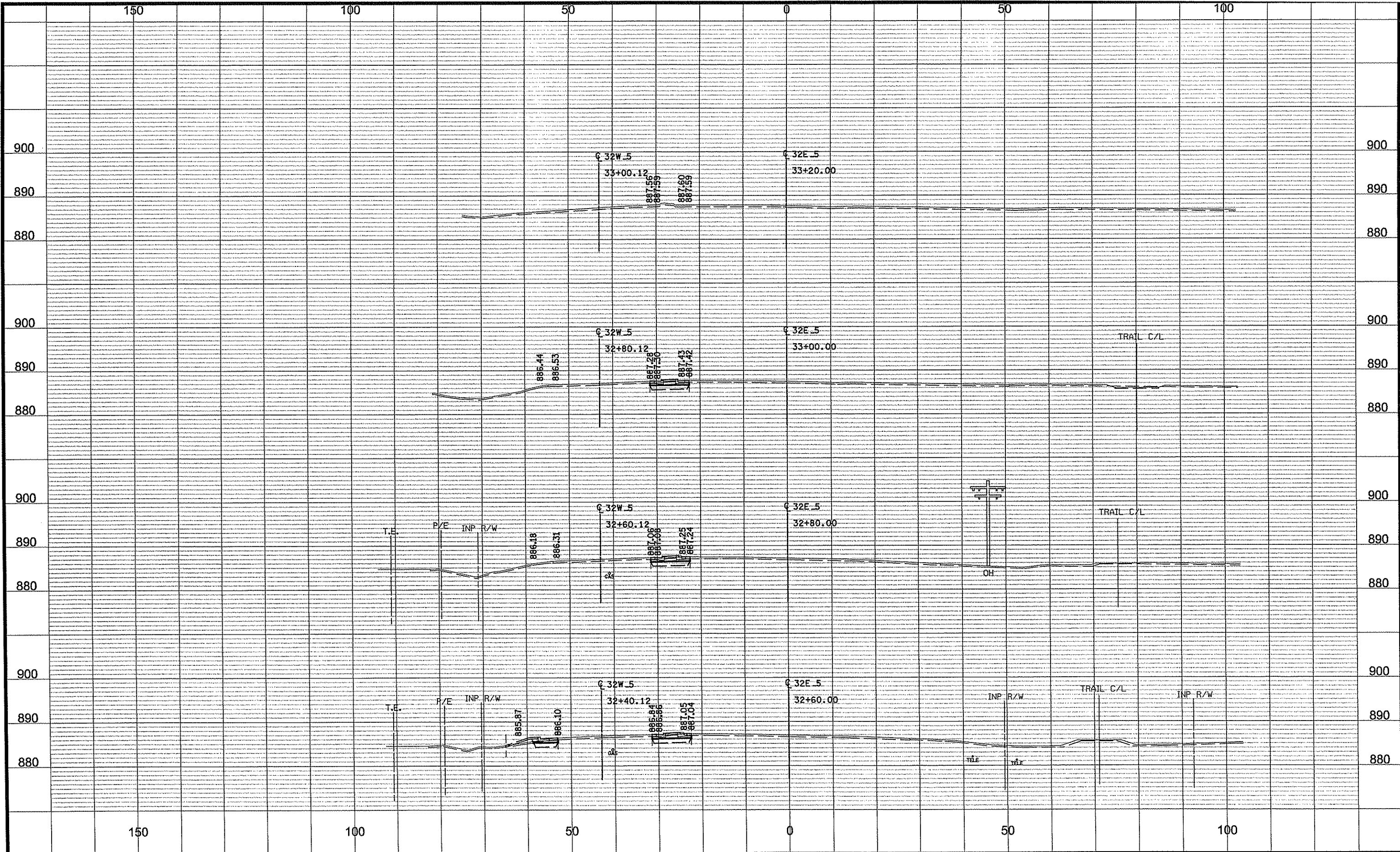
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 31+80.00 TO 32+40.00
 Sheet 98 of 101 Sheets



NO	DATE	BY	CHKD	APPR	REVISION
					4/27/2010

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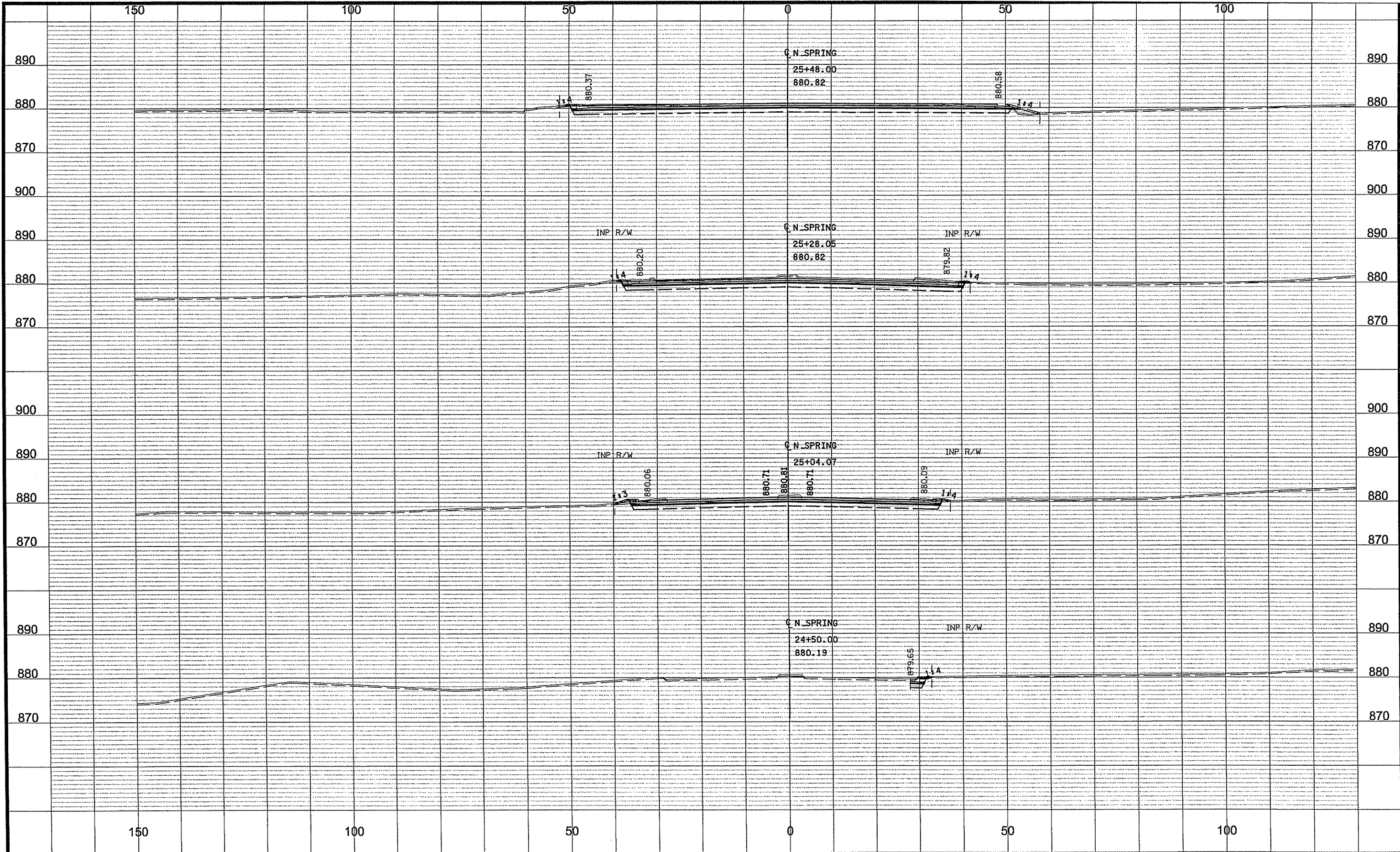
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 CHECKED BY JEO DATE 11-18-09



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
 STA 32+60.00 TO 33+20.00
 Sheet 99 of 101 Sheets



NO	DATE	BY	CKD	APPR	REVISION
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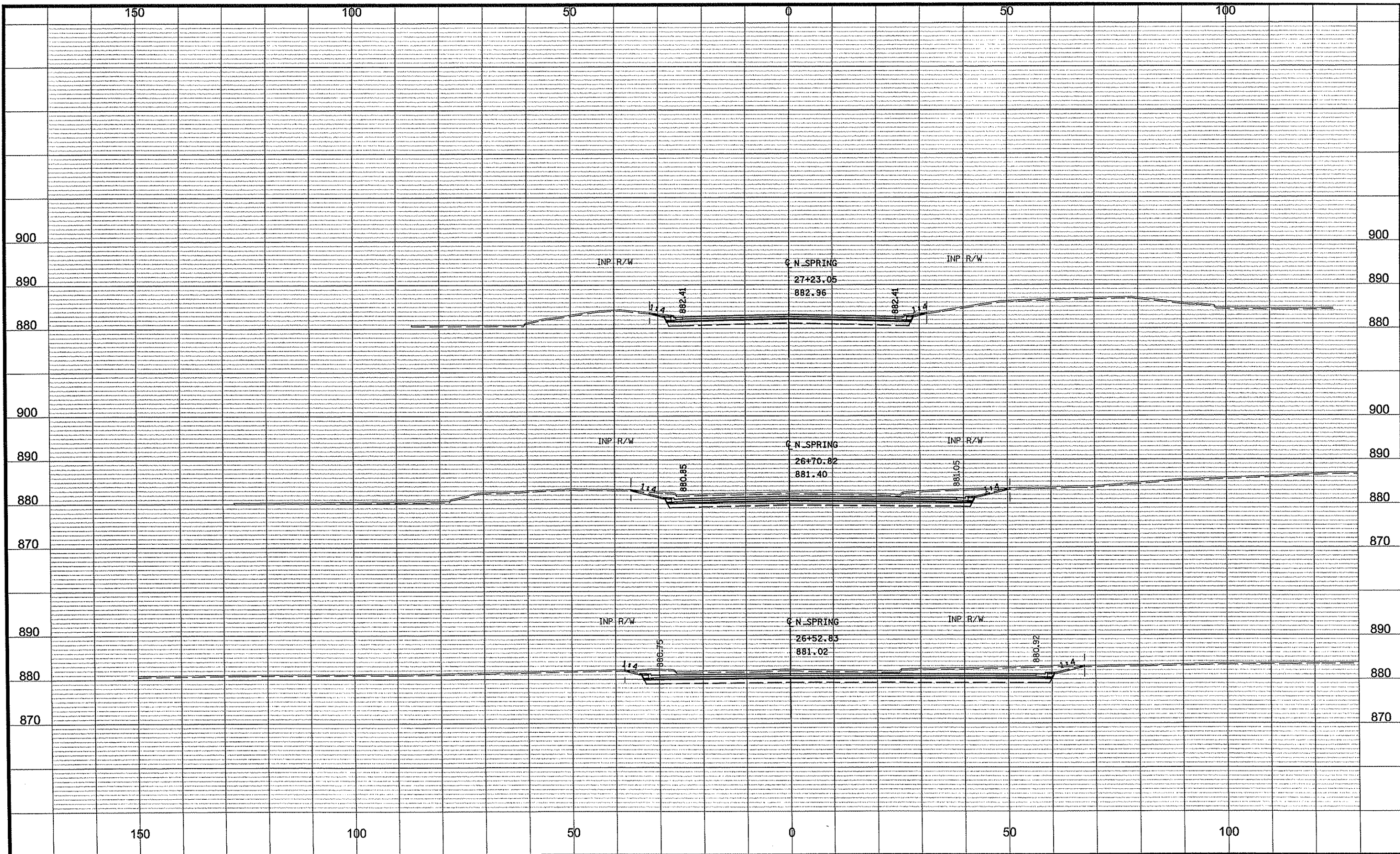
DRAWN BY: NJD DATE: 11147999
 DESIGN BY: DFF DATE: 11147999
 CHECKED BY: JEO DATE: 11148999



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
SPRINGBROOK DRIVE
 STA 25+04.07 TO 26+52.83
 Sheet 100 of 101 Sheets



NO	DATE	BY	CKD	APPR	REVISION
					4/27/2010

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DRAWN BY NJD DATE 11-17-09
 DESIGN BY DFF DATE 11-17-09
 CHECKED BY JEO DATE 11-18-09



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 02-596-07
 STATE PROJECT NO. 106-080-002
 STATE PROJECT NO. 114-130-005
 STATE PROJECT NO. 127-341-006

CROSS SECTIONS
SPRINGBROOK DRIVE
 STA 26+70.82 TO 27+23.05
 Sheet 101 of 101 Sheets

