

MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR SIGNAL REVISIONS AND ADA IMPROVEMENTS

LOCATED ON VARIOUS TRUNK HIGHWAYS WITHIN THE METRO AREA

FED. PROJ. NO. STPX 8811 (231)

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES AND INTERSECTION INDEX
3	STANDARD PLATES, NOTES, AND GUIDELINES
4-5	TABULATIONS
6-8	TYPICAL SECTIONS AND DETAILS
9-18	MISCELLANEOUS DETAILS
19	STANDARD PLAN SHEET
20-27	INTERSECTION A PLANS
28-36	INTERSECTION B PLANS
37-45	INTERSECTION C PLANS
46-56	INTERSECTION D PLANS
57-65	INTERSECTION E PLANS
66-76	INTERSECTION F PLANS
77-85	INTERSECTION G PLANS
86-93	INTERSECTION H PLANS
94-102	INTERSECTION I PLANS
103-111	INTERSECTION J PLANS
112-122	INTERSECTION K PLANS
TC1-TC16	TRAFFIC CONTROL PLAN

THIS PLAN CONTAINS 138 SHEETS

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: MICHAEL GERBENSKY LICENSE # 19863

DATE: 4/21/2011 SIGNATURE: *Michael P. Gerbensky*

DESIGN SQUAD: B. JOHNSON, G. SIMKUNAS, S. KURALLE, M. SANDBERG, B. MEHSIKOMER

RECOMMENDED FOR APPROVAL *by Allen L. Ellis* 4/22/2011
DISTRICT TRANSPORTATION ENGINEER

RECOMMENDED FOR APPROVAL _____ 20__

RECOMMENDED FOR APPROVAL _____ 20__

RECOMMENDED FOR APPROVAL *Kevin May* 4/21/2011
DISTRICT TRAFFIC ENGINEER

RECOMMENDED FOR APPROVAL *Valerie K. Johnson* 5/2/11
STATE PRE-LETTING ENGINEER

OFFICE OF LAND MANAGEMENT APPROVAL *M. Sandberg* 5/3/11
DIRECTOR OF LAND MANAGEMENT

APPROVED *5/4* 2011 *Don Chyle*
STATE DESIGN ENGINEER

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, WERE 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: _____ LICENSE # _____

DATE: _____ SIGNATURE: _____

INTERSECTION H
TH 169 AT MILLER RD
REF PT 145+00.715

INTERSECTION G
TH 169 AT 114TH AVE
REF PT 143+00.300

INTERSECTION I
TH 10 AT UNIVERSITY AVE
REF PT 232+00.662

INTERSECTION J
TH 10 AT UNIVERSITY AVE
REF PT 232+00.662

INTERSECTION C
TH 51 AT LYDIA AVE
REF PT 009+00.097

INTERSECTION B
TH 51 AT CO RD C2
REF PT 008+00.854

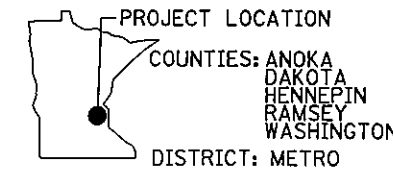
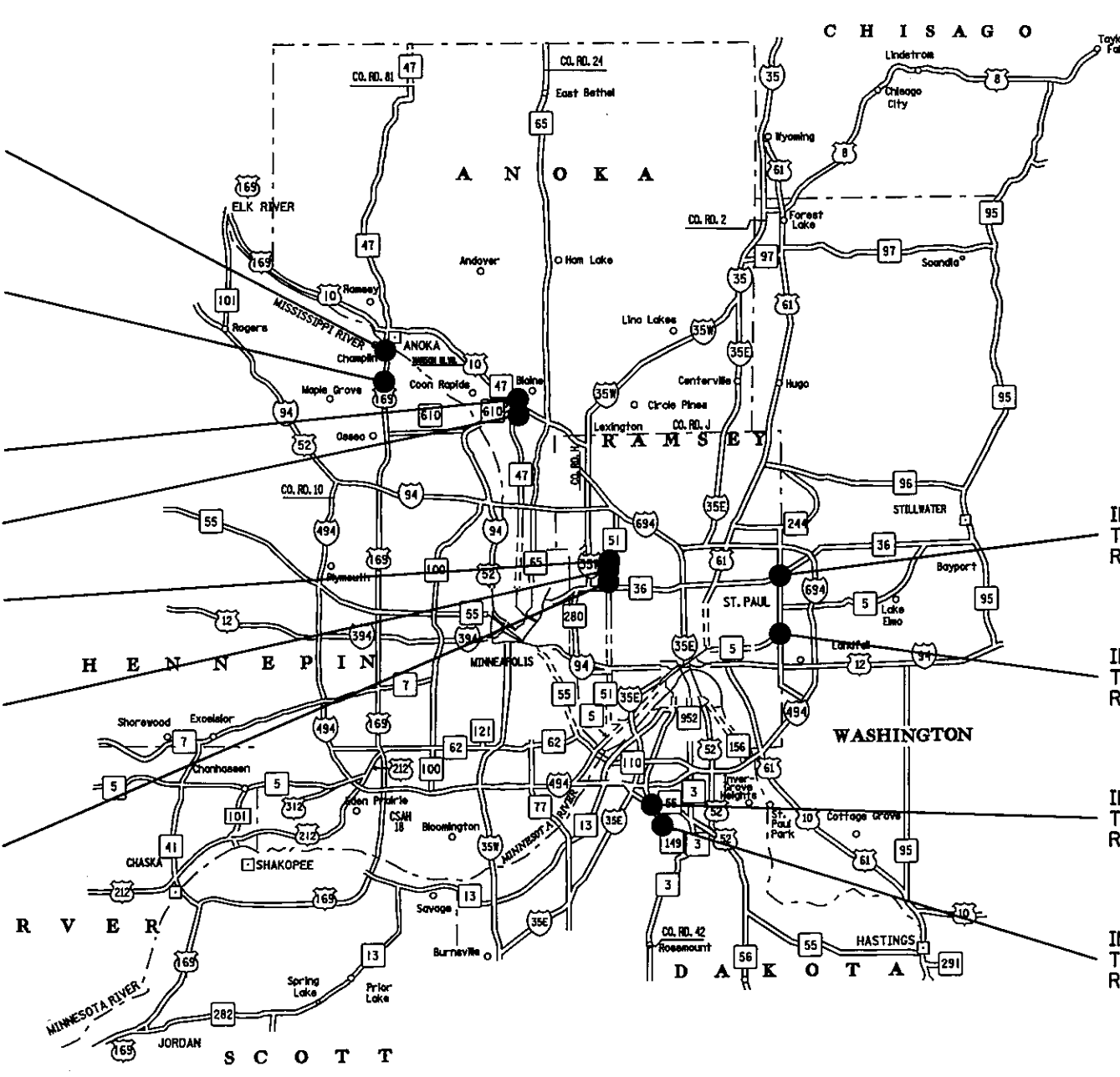
INTERSECTION A
TH 51 AT CO RD C
REF PT 008+00.382

INTERSECTION F
TH 36 AT TH 120
REF PT 010+00.463

INTERSECTION E
TH 5 AT TH 120
REF PT 186+00.658

INTERSECTION D
TH 55 AT TH 149
REF PT 202+00.705

INTERSECTION K
TH 149 AT YANKEE DOODLE RD
REF PT 001+00.962



FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO. 8825-393 CHARGE IDENTIFIER

STATE PROJ. NO. 8825-393

SHEET NO. 1 OF 122 SHEETS

PLOTTED/REVISED: 4/21/2011

DISTRICT #: METRO
I/PLOT NAME: TITLE SHEET
PATH & FILENAME: IP_PWP-d1363620V8825393_1sh.dgn

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

STATEMENT OF ESTIMATED QUANTITIES

TABULATION	SHEET NUMBER	ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
		2011.601	CONSTRUCTION SURVEYING	LUMP SUM	1
		2021.501	MOBILIZATION	LUMP SUM	1
C	4	2102.501	PAVEMENT MARKING REMOVAL-PERMANENT (1)	SQ FT	9226
C	4	2104.501	REMOVE CURB AND GUTTER	LIN FT	1996
C	4	2104.503	REMOVE BITUMINOUS WALK	SQ FT	2588
C	4	2104.503	REMOVE CONCRETE WALK (2)	SQ FT	12080
C	4	2104.503	REMOVE CONCRETE PAVEMENT	SQ FT	72
C	4	2104.503	REMOVE BITUMINOUS PAVEMENT (3)	SQ FT	1275
C	4	2104.509	REMOVE MARKER	EACH	13
C	4	2104.509	REMOVE SIGN TYPE C	EACH	13
C	4	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	611
C	4	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	1256
C	4	2104.618	SALVAGE BRICK PAVERS (4)	SQ FT	770
D	5	2231.501	BITUMINOUS PATCHING MIXTURE (5)	TON	161
C	4	2232.501	MILL BITUMINOUS SURFACE (2.0")	SQ YD	448
D	5	2301.608	DRILL AND GROUT REINFORCEMENT BARS (EPOXY COATED)	POUND	9
D	5	2504.602	ADJUST VALVE BOX	EACH	1
D	5	2506.522	ADJUST FRAME & RING CASTING	EACH	2
D	5	2521.501	6" CONCRETE WALK	SQ FT	14854
D	5	2521.618	SIDEWALK (9)	SQ FT	72
D	5	2531.603	CONCRETE CURB & GUTTER (6)	LIN FT	2197
D	5	2531.618	TRUNCATED DOMES (7)	SQ FT	1468
D	5	2545.602	ADJUST HANDHOLE	EACH	14
TC	TC2	2563.601	TRAFFIC CONTROL	LUMP SUM	1
A	4	2564.531	SIGN PANELS TYPE C	SQ FT	102
B	4	2564.552	HAZARD MARKER X4-2	EACH	16
		20-27	REVISE SIGNAL SYSTEM A	SYSTEM	1
		28-36	REVISE SIGNAL SYSTEM B	SYSTEM	1
		37-45	REVISE SIGNAL SYSTEM C	SYSTEM	1
		46-56	REVISE SIGNAL SYSTEM D	SYSTEM	1
		57-65	REVISE SIGNAL SYSTEM E	SYSTEM	1
		66-76	REVISE SIGNAL SYSTEM F	SYSTEM	1
		77-85	REVISE SIGNAL SYSTEM G	SYSTEM	1
		86-93	REVISE SIGNAL SYSTEM H	SYSTEM	1
		94-102	REVISE SIGNAL SYSTEM I	SYSTEM	1
		103-111	REVISE SIGNAL SYSTEM J	SYSTEM	1
		112-122	REVISE SIGNAL SYSTEM K	SYSTEM	1
D	5	2573.530	STORM DRAIN INLET PROTECTION	EACH	3
		2575.555	TURF ESTABLISHMENT (8)	LUMP SUM	1

STATEMENT OF ESTIMATED QUANTITIES

TABULATION	SHEET NUMBER	ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
TC	TC2	2581.501	REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	815
D	5	2582.502	24" STOP LINE WHITE-POLY PREFORM (GROUND IN)	LIN FT	136
D	5	2582.502	4" SOLID LINE WHITE-EPOXY	LIN FT	504
D	5	2582.502	4" SOLID LINE YELLOW-EPOXY	LIN FT	496
D	5	2582.503	CROSSWALK MARKING-POLY PREFORM (GROUND IN)	SQ FT	8226
D	5	2582.503	CROSSWALK MARKING-EPOXY	SQ FT	594

TABULATION INDEX

TAB	SHEET	DESCRIPTION
A	4	SIGN PANELS TYPE C
B	4	DELINEATORS & MARKERS
C	4	MISCELLANEOUS SALVAGE AND REMOVALS
D	5	MISCELLANEOUS CONSTRUCTION
TC	TC2	TRAFFIC CONTROL

INTERSECTION INDEX

LETTER	SHEET	SIG SYS ID	TE#	LOCATION
A	20	20741	5367	TH 51 AT CSAH 23 (CO RD C), ROSEVILLE
B	28	20743	5368	TH 51 AT CO RD C2, ROSEVILLE
C	37	20744	5369	TH 51 AT LYDIA AVE, ROSEVILLE
D	46	20928	5370	TH 55 AT TH 149, SOUTH JUNCTION, EAGAN
E	57	21437	5371	TH 5 AT TH 120, MAPLEWOOD & OAKDALE
F	66	20641	5372	TH 36 AT TH 120, NORTH ST PAUL & OAKDALE
G	77	21520	5373	TH 169 AT 114TH AVE/ELM CREEK PKWY, CHAMPLIN
H	86	21523	5377	TH 169 AT DAYTON RD/MILLER RD, CHAMPLIN
I	94	22126	5374	TH 10 AT CSAH 51 (UNIVERSITY AVE), NORTH RAMPS, BLAINE
J	103	22124	5375	TH 10 AT CSAH 51 (UNIVERSITY AVE), SOUTH RAMPS, BLAINE
K	112	21946	5376	TH 149 AT CSAH 28 (YANKEE DOODLE RD), EAGAN

- (1) FOR PAVEMENT MARKING REMOVAL TYPE AND LOCATION, SEE REMOVAL AND PAVEMENT MARKING PLAN SHEETS.
- (2) INCLUDES ALL INPLACE TRUNCATED DOMES.
- (3) CONSISTS OF BITUMINOUS PAVEMENT VARYING FROM 6" TO 10" THICK.
- (4) CONTRACTOR SHALL RE-INSTALL SALVAGED PAVERS AS NECESSARY TO FIT THE NEW CONCRETE WALK (INCIDENTAL). UNUSED PAVERS SHALL BE STOCKPILED WITHIN THE PROJECT LIMITS OF INTERSECTION H AND THE CITY OF CHAMPLIN SHALL BE NOTIFIED FOR PICK-UP (INCIDENTAL).
- (5) SHALL MEET THE REQUIREMENTS OF MN/DOT 2360 TYPE SP 9.5 WEARING COURSE (SPWEA340E).
- (6) INCLUDES ALL CURB AND GUTTER WORK IN THIS PROJECT. SEE INTERSECTION PLAN SHEETS, DETAILS, AND SPECIAL PROVISIONS.
- (7) CONSISTS OF 1124 SQ. FT. OF RECTANGULAR 2' WIDTH, 24 SQ. FT. OF 10' RADIUS, AND 320 SQ. FT. OF 35' RADIUS.
- (8) ALL DISTURBED AREAS SHALL BE TREATED WITH THE FOLLOWING TO RESTORE TURF:
 - SEEDING
 - SEED MIXTURE 250 AT A RATE OF 70 POUNDS/ACRE
 - FERTILIZER TYPE 3 ANALYSIS 22-5-10 80% W.I.N. AT A RATE OF 350 POUNDS/ACRE
 - TYPE 8 BONDED FIBER MATRIX HYDRAULIC SOIL STABILIZER AT A RATE OF 3500 POUNDS/ACRE
- (9) CONSISTS OF 6' X 12' X 9" CONCRETE SIDEWALK AT NORTH MEDIAN OF INTERSECTION G.

STATEMENT OF ESTIMATED QUANTITIES

PLOTTED/REVISED: 4/29/2011

DISTRICT #: METRO
 I/PLOT NAME: est quant
 FILENAME: IP_FWP-d1363620V8825393.tbl.dgn

PAVEMENT MARKING NOTES AND 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.

FOR 15 MIL APPLICATIONS, GLASS BEADS SHALL BE APPLIED AT A RATE OF AT LEAST 25 LB/GAL. THE "NO-TRACKING" CONDITION SHALL BE DETERMINED ON AN APPLICATION OF SPECIFIED THICKNESS TO THE PAVEMENT AND COVERED WITH GLASS BEADS AT THE RATE OF AT LEAST 25 LB/GAL.

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

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

POLY PREFORM GROOVED APPLICATION:

CONCRETE PAVEMENT SURFACES AND BITUMINOUS PAVEMENT SURFACES SHALL BE GROOVED (1/4" MAXIMUM DEPTH) FOR THE INSTALLATION OF DURABLE REFLECTORIZED PAVEMENT MARKINGS. SEE SPECIAL PROVISIONS.

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT	
STANDARD PLATES	
PLATE NO.	DESCRIPTION
7020J	CONCRETE CURB (DESIGN B, DESIGN V, DESIGN S, DESIGN DR AND DESIGN BR) (2 SHEETS)
7036G	PEDESTRIAN CURB RAMP (FOR THE HANDICAPPED) (2 SHEETS)
7038A	DETECTABLE WARNING SURFACE (TRUNCATED DOMES)
7100H	CONCRETE CURB & GUTTER (DESIGN B AND DESIGN V)
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES
8110E	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8111E	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED) (3 SHEETS)
8112F	PEDESTAL FOUNDATION (TRAFFIC CONTROL SIGNALS)
8114A	P.V.C. HANDHOLE/PULLBOX (2 SHEETS)
8130E	SAW CUT LOOP DETECTORS (LOOP/HANDHOLE INSTALLATION) (3 SHEETS)
8132A	PREFORMED RIGID PVC CONDUIT LOOP DETECTOR (3 SHEETS)

SOILS AND CONSTRUCTION NOTES AND GUIDELINES

1. TOP OF "GRADING GRADE" IS HEREBY DEFINED AS THE TOP OF THE GRANULAR MATERIAL OR THE BOTTOM OF THE AGGREGATE BASE.
2. UNSUITABLE MATERIALS ARE TOPSOILS, OTHER ORGANIC SOILS, SILT SOILS, CLAY LOAM AND DEBRIS.
3. SUITABLE MATERIALS SHALL BE ALL OTHER MINERAL SOILS ENCOUNTERED ON THE PROJECT OR FROM BORROW, NOT PREVIOUSLY DEFINED AS BEING UNSUITABLE.
4. COMPACTION OF AGGREGATE BASE SHALL BE IN ACCORDANCE WITH THE QUALITY COMPACTION METHOD.
5. BITUMINOUS PATCHING MIXTURE SHALL MEET THE REQUIREMENTS OF MN/DOT 2360 TYPE SP 9.5 WEARING COURSE (SPWEA340E).
6. BITUMINOUS PATCHING MIXTURE SHALL BE PLACED AND COMPACTED IN 3" MAXIMUM LIFTS.
7. BITUMINOUS PATCHING MIXTURE SHALL MATCH THE EXISTING ADJACENT BITUMINOUS PAVEMENT THICKNESS. EXISTING BITUMINOUS PAVEMENT VARIES FROM 6" TO 10" THICK.
8. STRIP ALL TOPSOIL AND INPLACE SLOPE DRESSING IN AREAS TO BE DISTURBED BY CONSTRUCTION AND, IF PRACTICAL, STOCKPILE FOR REUSE AS SLOPE DRESSING. SLOPE DRESSING ON THIS PROJECT IS DEFINED AS THE INPLACE TOPSOIL OR OTHER SOIL PLACED DURING PRIOR CONSTRUCTION TO PROVIDE A MEDIUM FOR ESTABLISHING TURF.
9. 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 OF THE RIGHT OF WAY IN ACCORDANCE WITH MN/DOT SPECIFICATION 2104.
10. AFTER MILLING THE PAVEMENT TO THE REQUIRED DEPTH AND PRIOR TO OVERLAYING, AIR BLAST ANY DETERIORATED CRACKS AND JOINTS TO REMOVE LOOSE OR DETERIORATED BITUMINOUS SURFACING. THE AIR BLASTING SHALL BE DONE WITH HIGH-PRESSURE (100+ PSI) EQUIPMENT.
11. THE CONTRACTOR IS HEREBY REMINDED OF THEIR RESPONSIBILITY UNDER STATE LAW TO CONTACT ALL UTILITIES THAT MAY HAVE FACILITIES IN THE AREA. CONTACT MUST BE MADE THROUGH GOPHER STATE ONE-CALL.
12. 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.
13. CONTRACTOR SHALL PROVIDE TACK COAT BETWEEN ALL BITUMINOUS LAYERS AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING PAVEMENT IN ACCORDANCE WITH SPECIFICATION 2357 (INCIDENTAL).

STANDARD PLATES, NOTES AND GUIDELINES

DRAWN BY: MAS

CHECKED BY: BTJ

CERTIFIED BY

Michael P. Selinsky
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 19863 DATE 4-29-11

STATE PROJ. NO. 8825-393

SHEET NO. 3 OF 122 SHEETS

PLOTTED/REVISED: 4/29/2011

DISTRICT #: METRO
PLOT NAME: std plates
FILENAME: IP_PWP-df363620N8825393.tbl.dgn

PLOTTED/REVISED: 4/29/2011

A		SIGN PANELS TYPE C									
SIGN NO	QTY	POSTS			MTG HT (1)	PANEL			CODE NO	PANEL LEGEND	
		NO & TYPE	KNEE BRACES QTY	LEN FEET		SIZE INCH	AREA SQ FT	TOTAL AREA SQ FT			
C-2	4	1-ST		11	7	36 x 36	9.00	36.00	R5-1	DO NOT ENTER (2)	
C-3	8	1-ST		11	7	30 x 36	7.50	60.00	R4-7	KEEP RIGHT (2)	
C-4	1	1-ST		11	7	30 x 30	6.25	6.25	R5-1	DO NOT ENTER (2)	
TOTAL								102.25			

SPECIFIC NOTES:

- (1) MOUNTING HEIGHT IS MINIMUM. SEE SHEET NO. 16 FOR TYPICAL MOUNTING.
- (2) MOUNT IN CONCRETE, SEE SHEET NO. 18.

GENERAL NOTES:

- 1. POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICE.
- 2. SEE SHEETS 13 TO 15 FOR STRUCTURAL DETAILS.
- 3. SEE STANDARD SIGNS MANUAL FOR PUNCHING CODE AND DETAILED DRAWINGS OF TYPE C SIGN PANELS.

B		DELINEATORS & MARKERS	
CODE NO	QTY	LOCATION	
HAZARD MARKER X4-2	8	ISLAND	
HAZARD MARKER X4-2	8	BELOW KEEP RIGHT	

(1)(2)

SPECIFIC NOTES:

- (1) PLACE ON 3LB/FT POST (MNDOT 3401).
- (2) MOUNT IN CONCRETE. SEE SHEET 18.

GENERAL NOTES:

- 1. FOR DELINEATOR AND MARKER PLACEMENT, SEE SHEET NO. 17.
- 2. SEE STANDARD SIGNS MANUAL FOR HAZARD MARKER (BLACK BACKGROUND).

MISCELLANEOUS SALVAGE AND REMOVALS													C
INTERSECTION	PAVEMENT MARKING REMOVAL - PERMANENT	REMOVE CURB AND GUTTER (1)	REMOVE BITUMINOUS WALK (1)	REMOVE CONCRETE WALK (1)(2)	REMOVE CONCRETE PAVEMENT (1)(3)	REMOVE BITUMINOUS PAVEMENT (1)(4)	REMOVE MARKER	REMOVE SIGN TYPE C	SAWING CONCRETE PAVEMENT (FULL DEPTH)	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	SALVAGE BRICK PAVERS (5)	MILL BITUMINOUS SURFACE (2.0")	NOTES
	SQ FT	LIN FT	SQ FT	SQ FT	SQ FT	SQ FT	EACH	EACH	LIN FT	LIN FT	SQ FT	SQ YD	
A	684	204	615	1413					62	22		46	
B	1188	160		905		187			53	57		36	
C	198	152		721		378			35	95		20	
D	810	254	85	825			2		114	17		62	
E	594	323		1285			2	1		323		72	
F	630	154		2179		78	3	3	30			32	
G	1018	94	1190	364	72	127		1	40	203		33	
H	1044	220		1870		178	6	4	133	99	770	52	
I	648	178	159	985		176		2	101	121		24	
J	1134	202	226	961		151		2	43	111		39	
K	1278	55	313	572						208		32	
TOTALS:	9226	1996	2588	12080	72	1275	13	13	611	1256	770	448	

- (1) SAWCUT OR REMOVE TO NEAREST JOINT.
- (2) INCLUDES REMOVAL OF TRUNCATED DOMES.
- (3) CONSISTS OF REINFORCED CONCRETE PAVEMENT 9" THICK.
- (4) CONSISTS OF BITUMINOUS PAVEMENT 6" TO 10" THICK.
- (5) CONTRACTOR SHALL RE-INSTALL SALVAGED PAVERS AS NECESSARY TO FIT THE NEW CONCRETE WALK TO THE SATISFACTION OF THE ENGINEER (INCIDENTAL). UNUSED PAVERS SHALL BE STOCKPILED WITHIN THE PROJECT LIMITS OF INTERSECTION H AND THE CITY OF CHAMPLIN SHALL BE NOTIFIED FOR PICK-UP (INCIDENTAL).

TABULATIONS

DRAWN BY: MAS

CHECKED BY: BTJ

CERTIFIED BY

Michael P. Libonati
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 19863 DATE 4-29-11

STATE PROJ. NO. 8825-393

SHEET NO. 4 OF 122 SHEETS

DISTRICT #: METRO
PLOT NAME: tabs
FILENAME: IP_PWP-dl363620V8825393.tbl.dgn

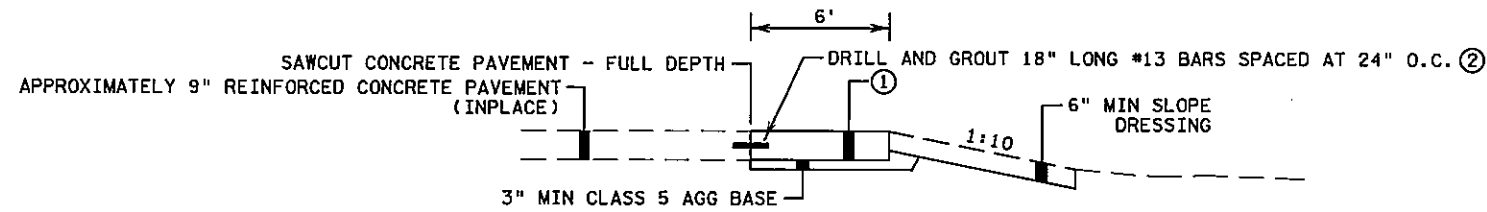
PLOTTED/REVISED: 4/29/2011

MISCELLANEOUS CONSTRUCTION																	D
INTERSECTION	BITUMINOUS PATCHING MIXTURE	DRILL AND GROUT REINFORCEMENT BARS (EPOXY COATED) (1)	ADJUST VALVE BOX	ADJUST FRAME & RING CASTING (3)	6" CONCRETE WALK	SIDEWALK	CONCRETE CURB & GUTTER (2)	TRUNCATED DOMES			ADJUST HANDHOLE	STORM DRAIN INLET PROTECTION	24" STOP LINE WHITE - POLY PREFORM (GROUND IN)	4" SOLID LINE WHITE - EPOXY	4" SOLID LINE YELLOW - EPOXY	CROSSWALK MARKING - POLY PREFORM (GROUND IN)	CROSSWALK MARKING - EPOXY
								RECTANGULAR 2' X 2'	10' RADIUS	35' RADIUS							
	TON	POUND	EACH	EACH	SQ FT	SQ FT	LIN FT	SQ FT	SQ FT	SQ FT	EACH	EACH	LIN FT	LIN FT	LIN FT	SQ FT	SQ FT
A	5			1	1838		204	96		32	1	2				612	
B	4				1536		160	156								1062	
C	13				1170		131	124		24						486	
D	7				746		254	100		48	3			111	96	810	
E	8		1		1476		323	60	24	56	2			99	72		594
F	14				2394		137	132			1			12	80	576	
G	22	9			893	72	170	48		44	1		136	40		756	
H	40			1	2039		343	192			5	1		213	165	990	
I	23				821		104	72							43	612	
J	21				877		159	72		80	1			29	40	1044	
K	4				1064		212	72		36						1278	
TOTALS:	161	9	1	2	14854	72	2197	1124	24	320	14	3	136	504	496	8226	594

- (1) FOR 12' X 6' X 9" SIDEWALK AT NORTH MEDIAN. FURNISH AND INSTALL 18" LONG #13 BARS SPACED AT 24" O.C.
- (2) INCLUDES ALL CURB AND CURB & GUTTER WORK IN THIS PROJECT. SEE INTERSECTION PLAN SHEETS, DETAILS, AND SPECIAL PROVISIONS.
- (3) AT INTERSECTION H, INCLUDES REMOVAL OF THE CURB BOX AT CATCH BASIN.

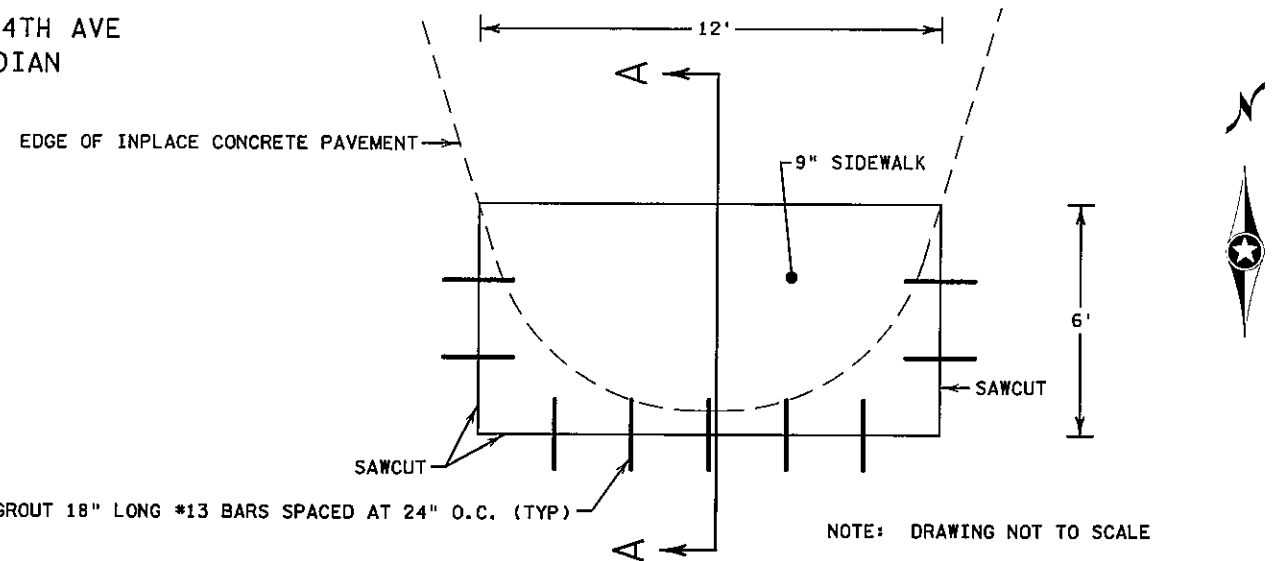
DISTRICT #: METRO
 PLOT NAME: Tabs_2
 FILENAME: IP_PWP-d136362048825393.tbl.dgn

TH 169 AT 114TH AVE
NORTH MEDIAN



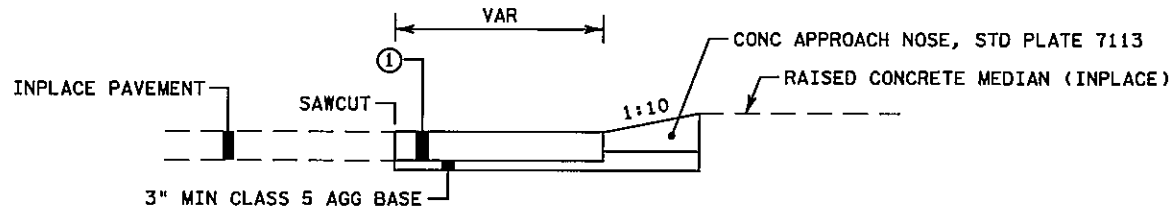
SECTION A-A

- ① REMOVE INPLACE CONCRETE PAVEMENT, CONSTRUCT 9" SIDEWALK.
- ② BARS SHALL BE EPOXY-COATED IN ACCORDANCE WITH WPEC 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53.



- ② DRILL AND GROUT 18" LONG #13 BARS SPACED AT 24" O.C. (TYP)
- NOTE: DRAWING NOT TO SCALE

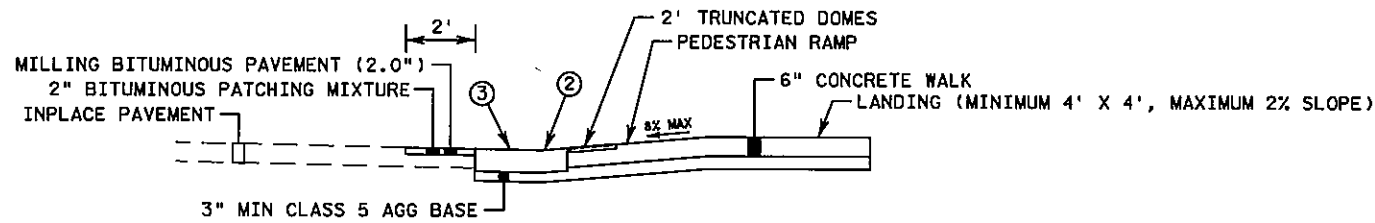
URBAN MEDIAN NOSE (TYPICAL SECTION 1)



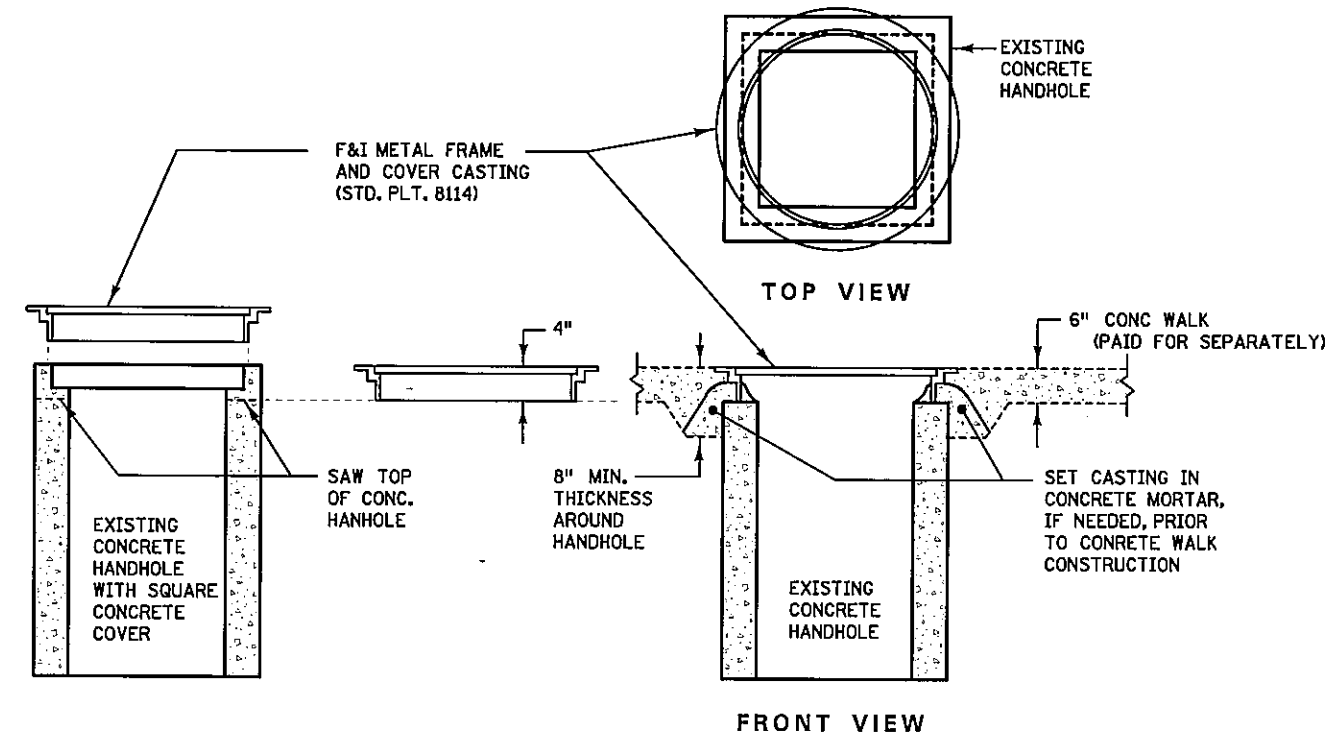
ADJUST HANDHOLE

NOTE:
F&I ROUND METAL FRAME AND COVER (STD. PLT. 8114) ON EXISTING SQUARE CONCRETE HANDHOLE. WORK REQUIRES CUTTING TO TOP OF THE CONCRETE HANDHOLE SO THAT THE TOP OF THE METAL COVER FITS THE ELEVATION ON THE PROPOSED CONCRETE WALK. THIS WORK AND F&I ROUND METAL FRAME AND COVER (STD. PLT. 8114) IS INCLUDED IN THE PAY ITEM 2545 "ADJUST HANDHOLE."

INTERSECTION CORNER RADIUS (TYPICAL SECTION 2)



- ① VARIABLE DEPTH BITUMINOUS PATCHING MIXTURE. MATCH THICKNESS OF ADJACENT INPLACE PAVEMENT.
- ② 11% MAXIMUM ROLLOVER.
- ③ PAID FOR AS CONCRETE CURB & GUTTER.



TYPICAL SECTIONS AND DETAILS

DRAWN BY: MAS

CHECKED BY: BTJ

CERTIFIED BY

Michael P. Lubinsky
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 19863 DATE 4-29-11

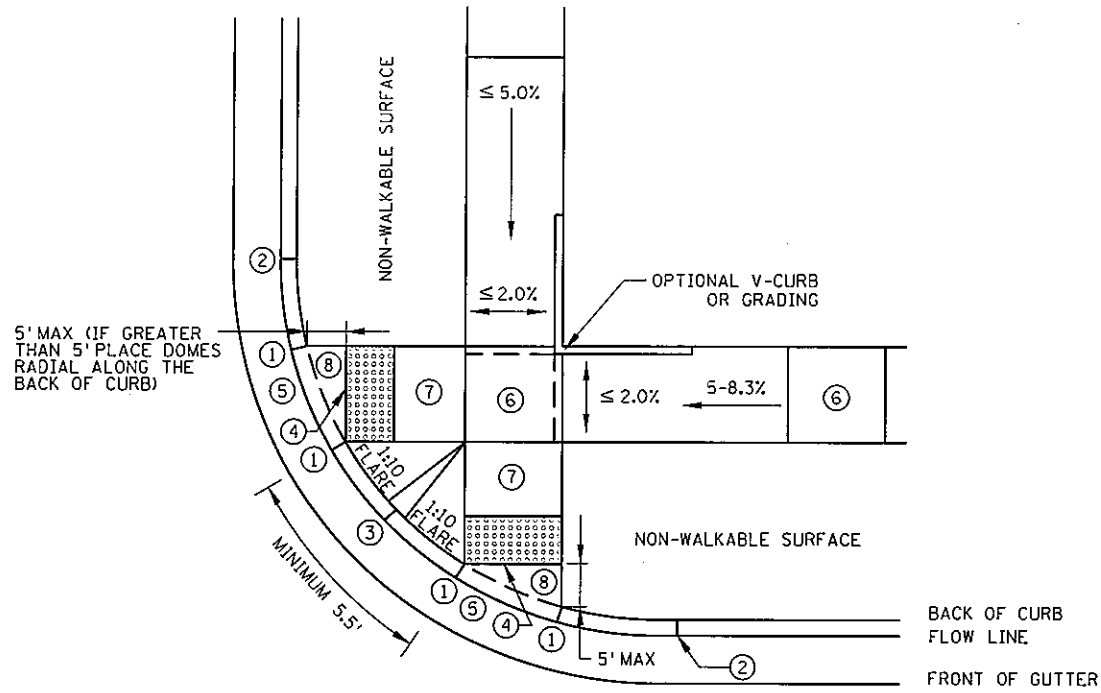
STATE PROJ. NO. 8825-393

SHEET NO. 6 OF 122 SHEETS

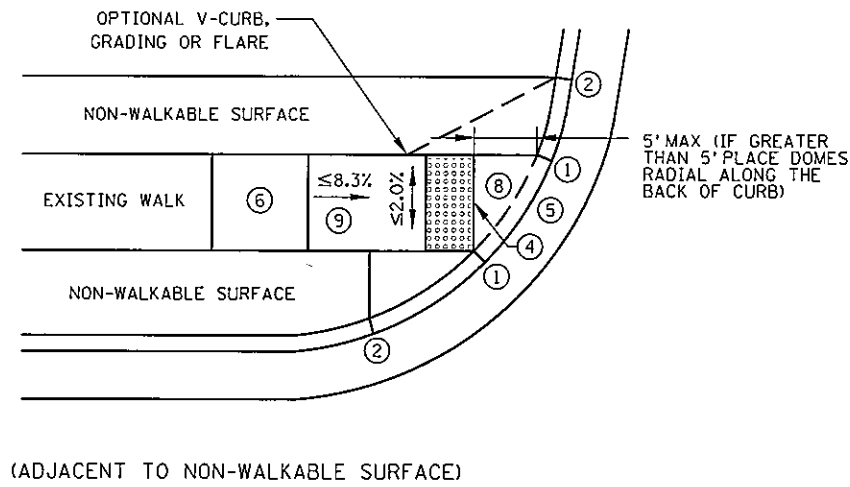
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DISTRICT #: METRO
PLOT NAME: Typicals.J
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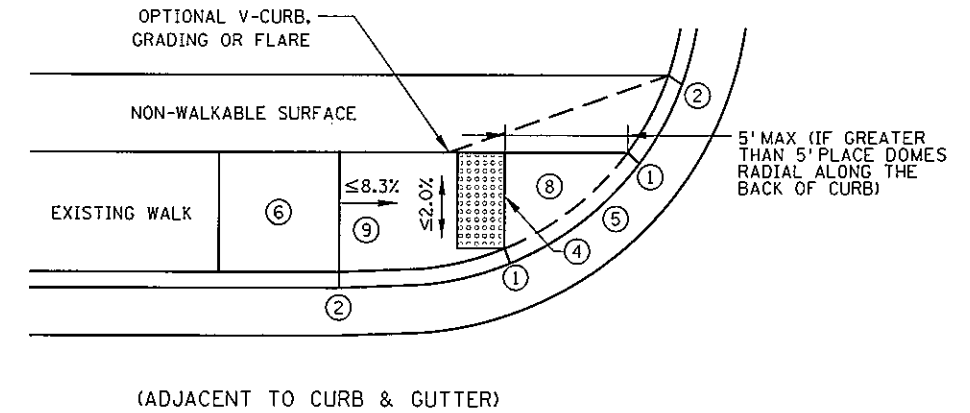
PLOTTED/REVISED: 4/29/2011



(ADJACENT TO NON-WALKABLE SURFACE)

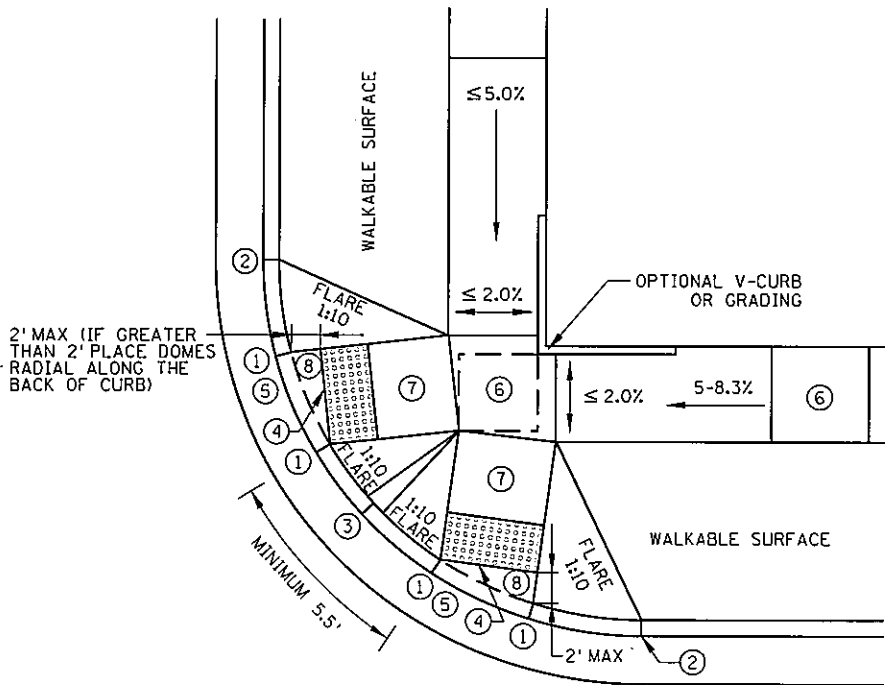


(ADJACENT TO NON-WALKABLE SURFACE)



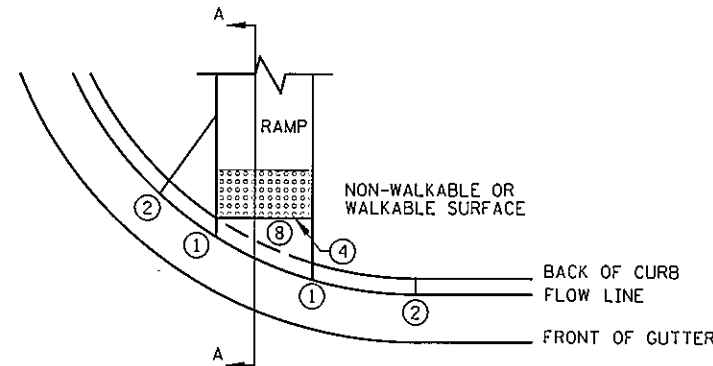
(ADJACENT TO CURB & GUTTER)

ONE WAY DIRECTIONAL RAMPS



(ADJACENT TO WALKABLE SURFACE)

TWO WAY DIRECTIONAL RAMPS



SECTION A-A

WINONA CURB

NOTES:

SEE STANDARD PLATE 7038 FOR DETAILS ON DETECTABLE WARNING.
LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AND AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5%.

ALLOWABLE RUNNING (LONGITUDINAL) SLOPES:
THE MAX. ALLOWABLE RUNNING SLOPE FOR A PEDESTRIAN ACCESS ROUTE IS 8.3% FOR 30' WITH A 4' LANDING (2% MAX SLOPE) AT THE TOP OR LESS THAN A 5% RUNNING SLOPE WITH NO LANDING.

ALL LANDINGS SHALL BE CONNECTED WITH A MIN. 4' WIDE PEDESTRIAN ACCESS ROUTE WITH MAX. 2% CROSS SLOPE THAT IS WITHIN ALLOWABLE RUNNING SLOPES.

JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

USE 6" CONCRETE WALK UP TO EXISTING SIDEWALK GRADES FOR ALL RAMP AND LANDING AREAS.

CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.

- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 3" MINIMUM CURB HEIGHT.
- ④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB. JOINT SHALL BE FREE OF DEBRIS.
- ⑤ SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 8.
- ⑥ 4' BY 4' MIN. LANDING WITH MAX. 2% SLOPE IN ALL DIRECTIONS.
- ⑦ RUNNING SLOPE LESS THAN OR EQUAL TO 8.3% & CROSS SLOPE LESS THAN OR EQUAL TO 2%.
- ⑧ MAX. 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHOULD BE CONSTRUCTED WITH CURB AND GUTTER (SEE WINONA CURB DETAIL ON THIS SHEET).
- ⑨ IF RAMP SLOPE IS LESS THAN 5% NO LANDING IS REQUIRED.

TYPICAL DETAILS

DRAWN BY: MAS

CHECKED BY: BTJ

CERTIFIED BY

Michael P. Lubinsky
LICENSED PROFESSIONAL ENGINEER

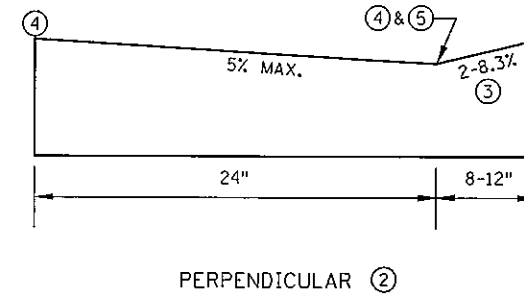
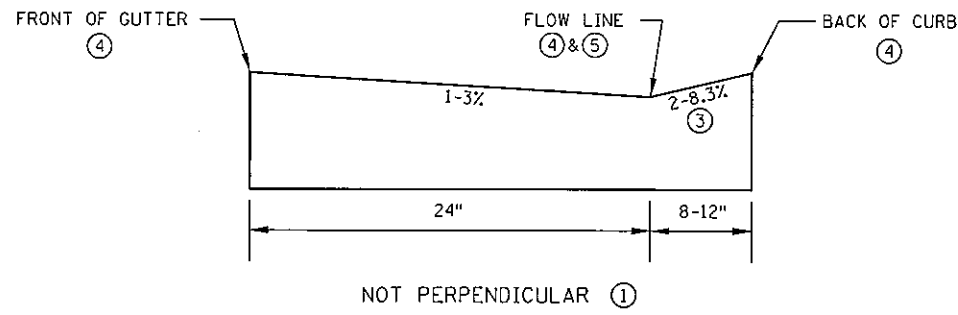
LIC. NO. 19863 DATE 4-29-11

STATE PROJ. NO. 8825-393

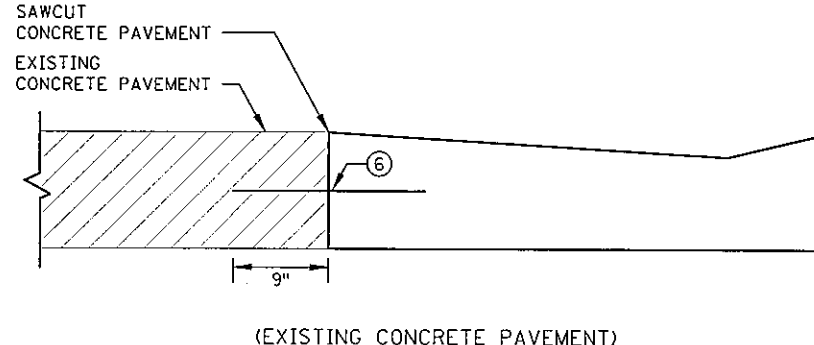
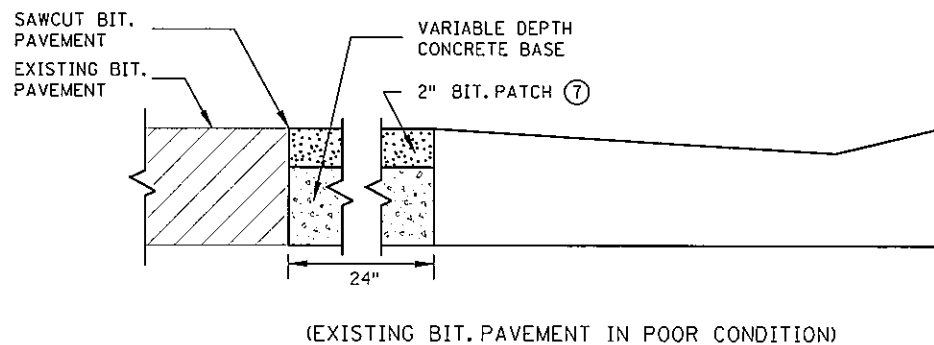
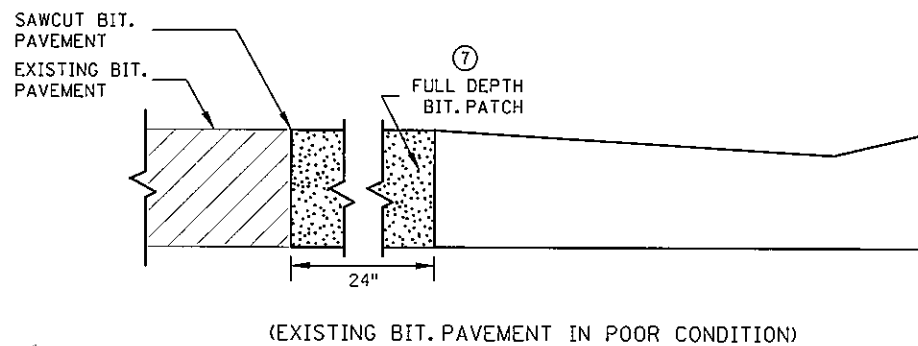
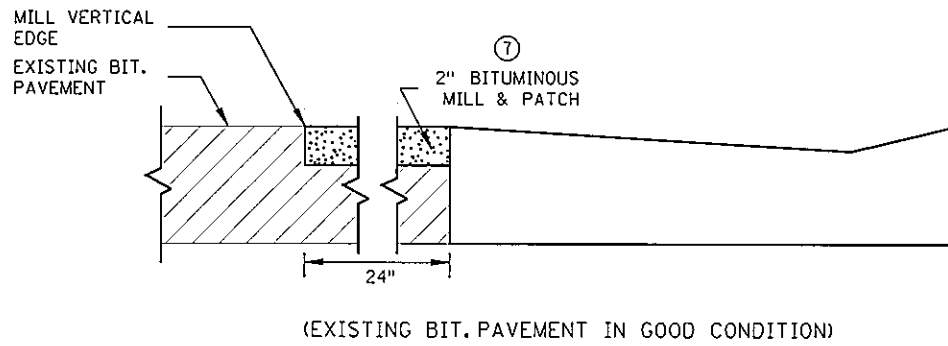
SHEET NO. 7 OF 122 SHEETS

DISTRICT #: METRO
PLOT NAME: Typicals-2
FILENAME: IP_PWP-d1363620V8825393_jbi.dgn

PLOTTED/REVISED: 4/20/2011



PEDESTRIAN ACCESS ROUTE
CURB & GUTTER DETAIL



- NOTES:
- ADEQUATE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM. NO PONDING SHALL BE PRESENT IN THE PAR.
- ① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS NOT PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS, DEPRESSED CORNERS, & ONE WAY AND TWO WAY DIRECTIONALS.
 - ② FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, PARALLEL AND DIAGONAL RAMP.
 - ③ CURB SLOPE SHALL MATCH THE SLOPE OF THE CONCRETE WALK BEHIND THE CURB.
 - ④ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".
 - ⑤ MINIMUM 1/4" DEEP FLOWLINE MUST BE MAINTAINED. THE EXISTING FLOWLINE LOCATION SHALL NOT CHANGE.
 - ⑥ DRILL AND GROUT NO. 13 EPOXY COATED 18" LONG BARS AT 2' CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT.
 - ⑦ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.

BACKFILL OPTIONS FOR PAVEMENT
IN FRONT OF CURB & GUTTER

TYPICAL DETAILS

DRAWN BY: MAS

CHECKED BY: BTJ

CERTIFIED BY

Michael P. Sulimsky
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 19863 DATE 4-21-11

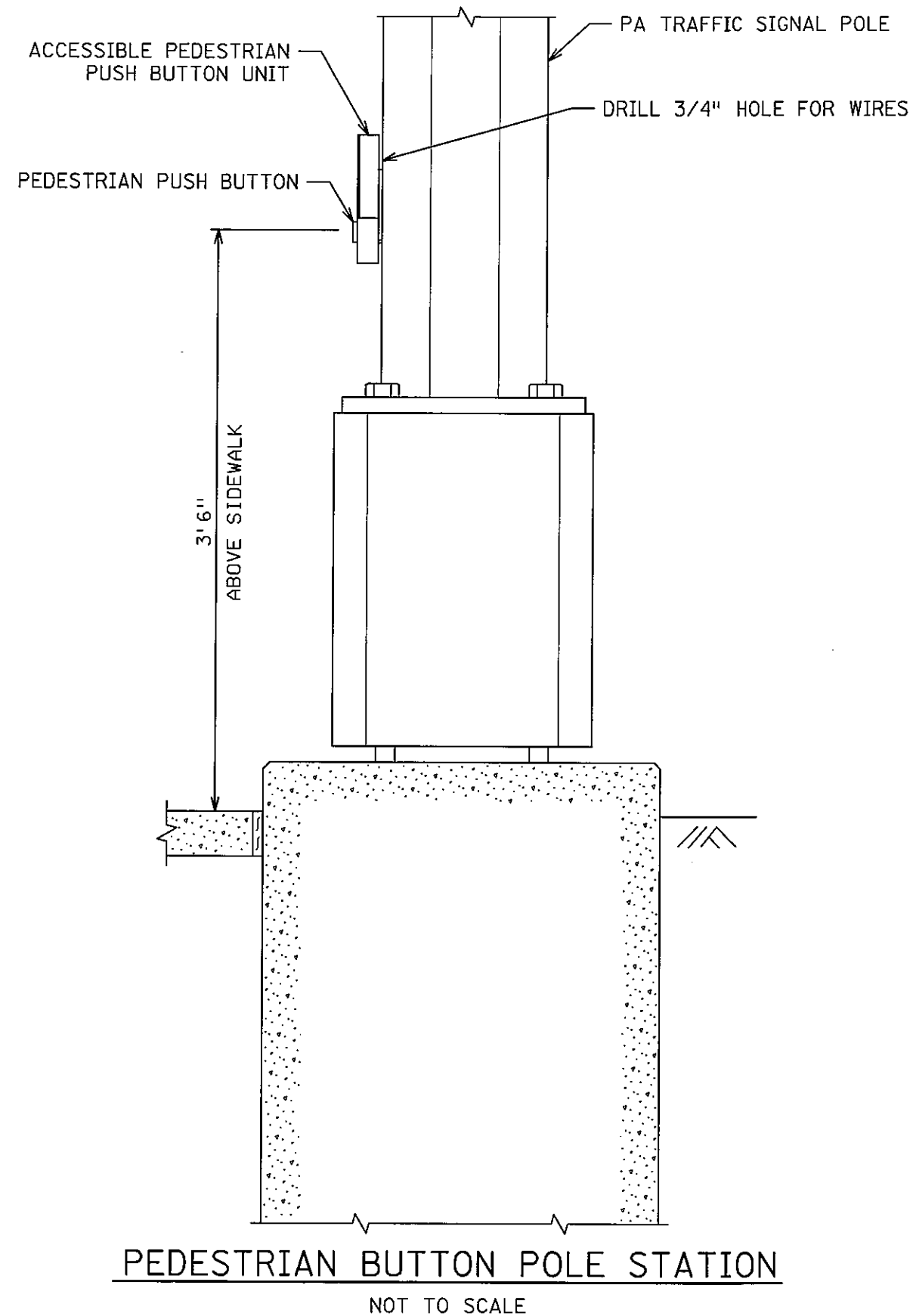
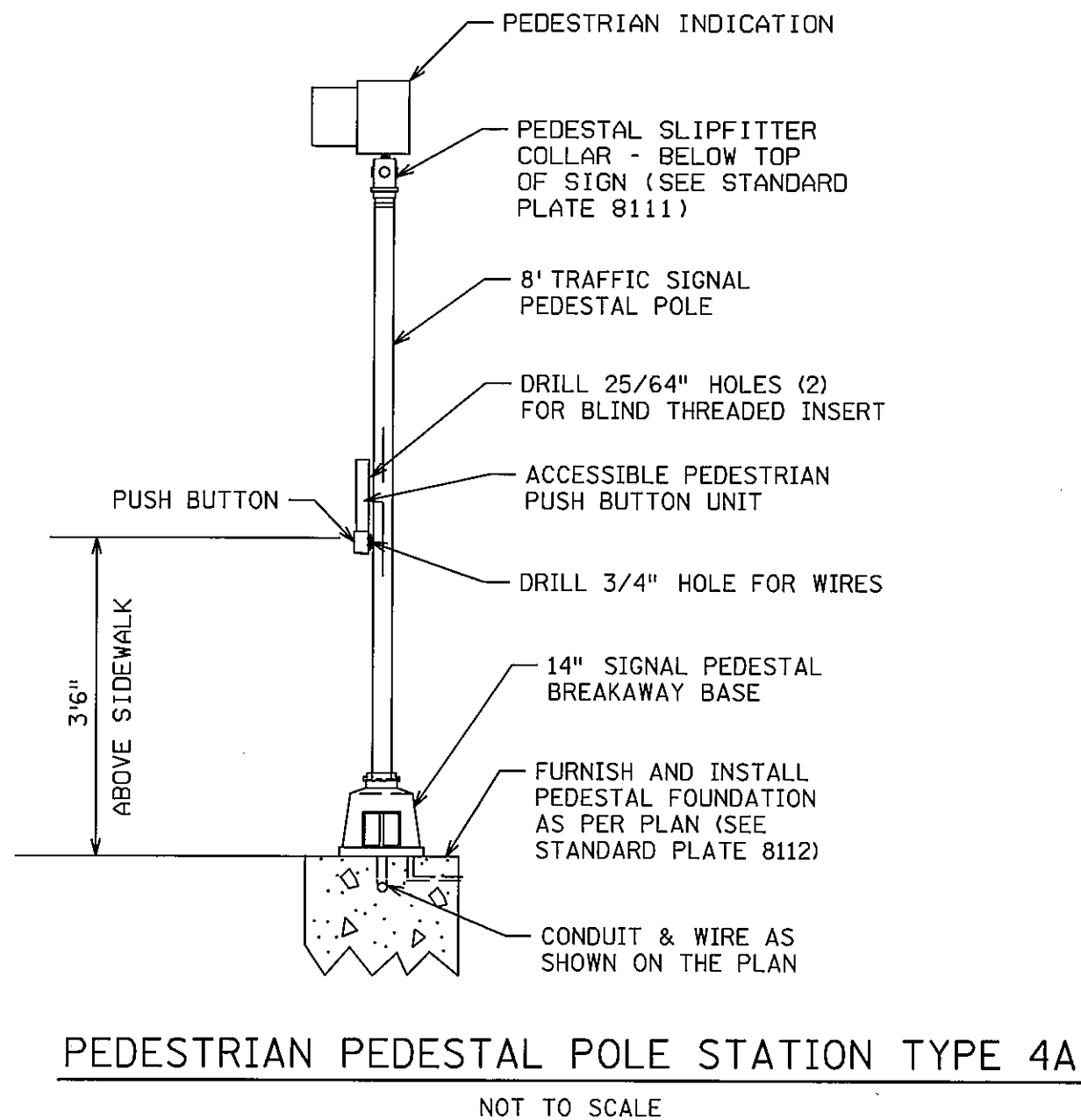
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SHEET NO. 8 OF 122 SHEETS

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PLOTTED/REVISED: 4/20/2011

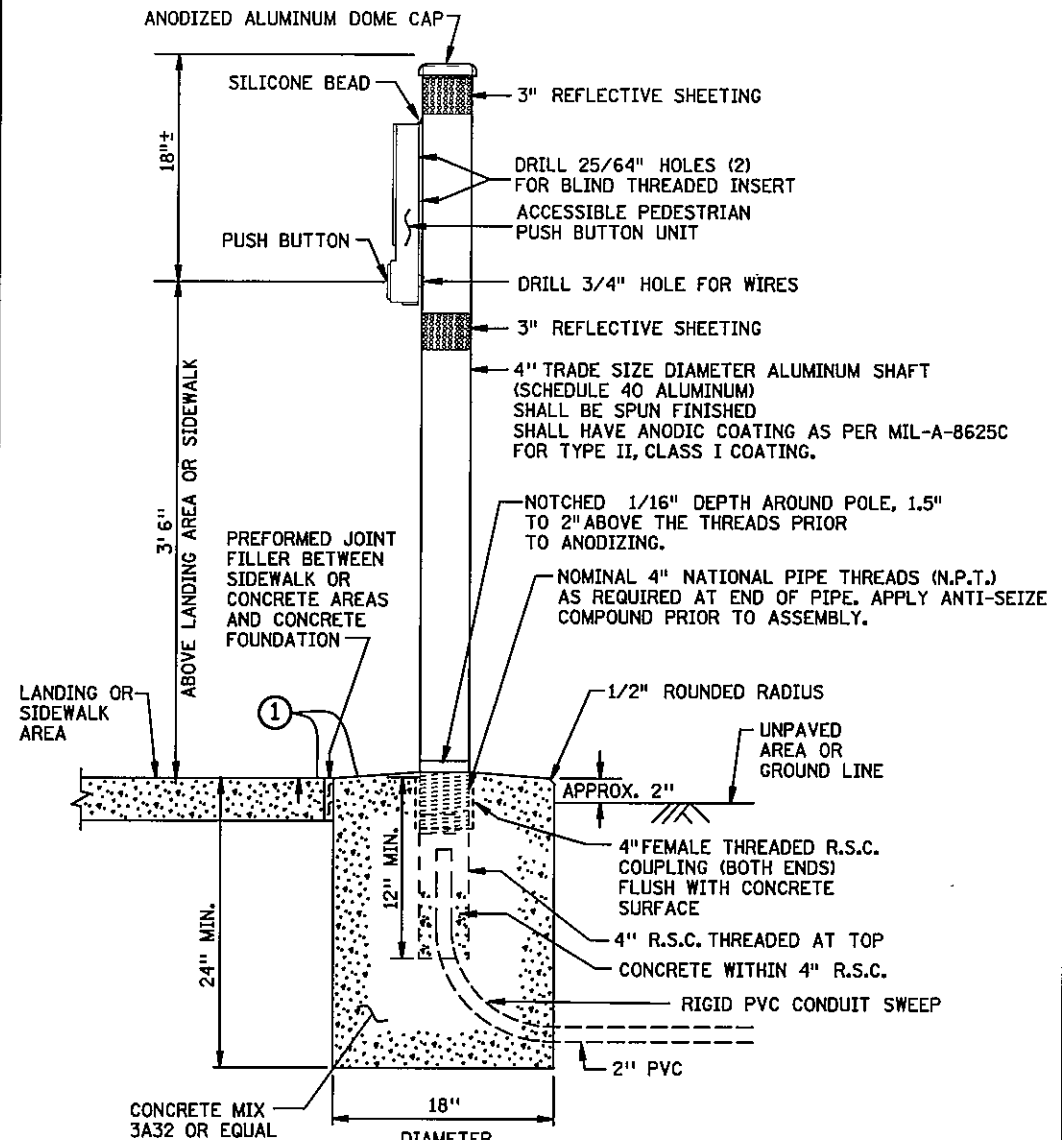
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BY	DATE	REVISIONS	SYSTEM ID:	T.E.	S.A.P. NO.
			METER ADDRESS:		CERTIFIED BY: <i>Michael P. Selinsky</i> LIC. NO. 19863 DATE: 4-21-11
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393 SHEET NO. 9 OF 122 SHEETS

PEDESTRIAN BUTTON DETAIL

PEDESTRIAN PUSH BUTTON STATION

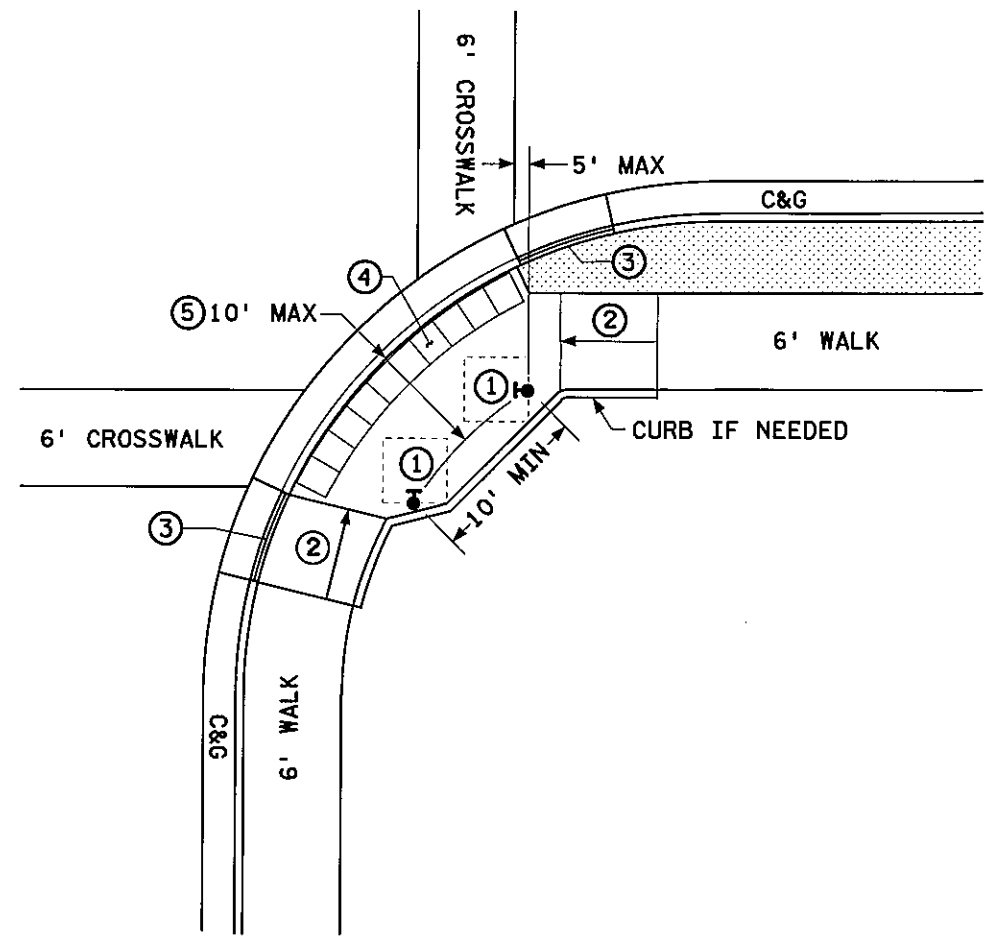
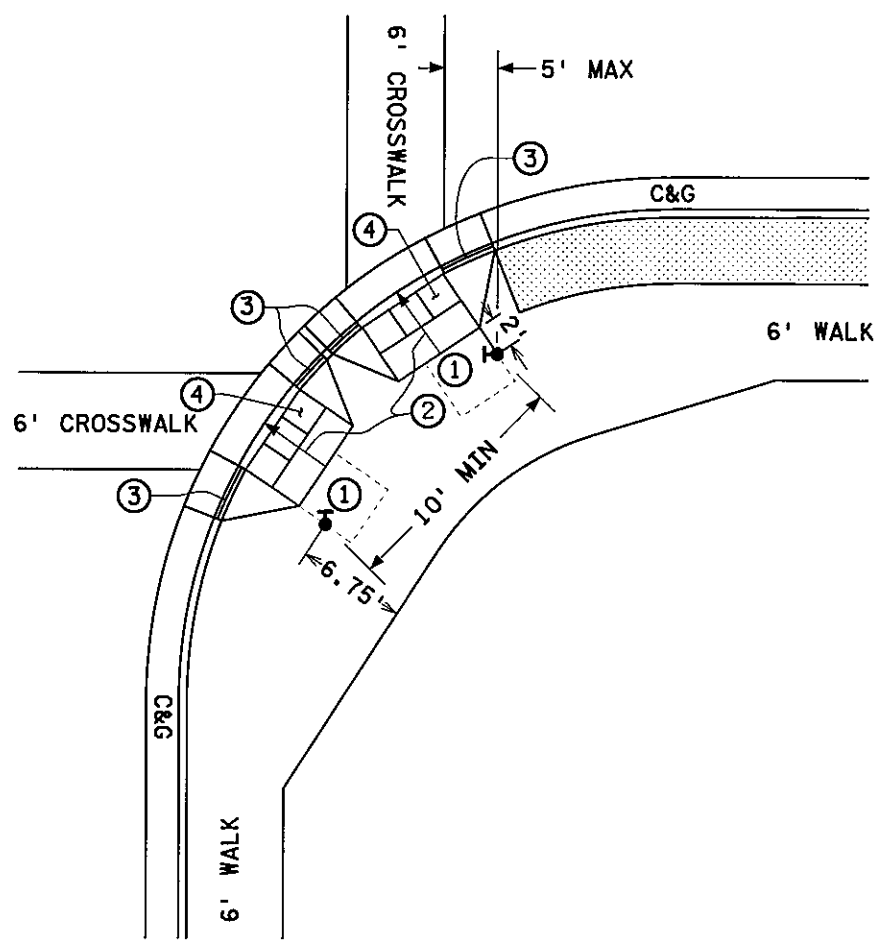


- NOTES:**
- PLACEMENT AND ORIENTATION OF THE PUSH BUTTON STATION IS CRITICAL. MOUNT THE BUTTON SO THAT THE FACE IS PARALLEL WITH THE ASSOCIATED CROSSWALK. SCREW IN POST TO A TIGHTENED POSITION BEFORE MOUNTING ACCESSIBLE PEDESTRIAN PUSH BUTTON UNIT TO THE POST.
 - BLIND THREADED INSERTS (RIVET NUT) MUST BE INSERTED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
 - BLIND THREADED INSERTS SHALL BE ZINC PLATED STEEL WITH 1/4 - 20 UNC THREADS. INSERT SHALL BE SUITABLE FOR USE ON A MOUNTING SURFACE WALL THICKNESS OF .337". APPROVED BLIND THREADED INSERTS CAN BE FOUND ON THE MN/DOT QUALIFIED PRODUCTS LIST.
 - MOUNTING BOLTS SHALL BE 1/4 - 20 STAINLESS STEEL. APPLY BRUSH ON ANTI SEIZE COMPOUND TO BOLTS PRIOR TO ASSEMBLY.
 - APPLY A BEAD OF 100% SILICONE SEALANT ALONG THE TOP OF THE PUSH BUTTON UNIT WHERE IT COMES IN CONTACT WITH THE 4" POST.
 - THE REFLECTIVE SHEETING SHALL BE WHITE AT INTERSECTION CORNERS AND SHALL BE YELLOW WHEN USED IN CENTER MEDIANS. SEE MN/DOT SIGNING QUALIFIED PRODUCTS LIST (QPL) FOR APPROVED SIGN SHEETING.
 - ANTI-SEIZE COMPOUND MUST BE USED ON THE MOUNTING BOLTS WHEN THE PEDESTRIAN SIGN IS MOUNTED.

① THE CONCRETE FOUNDATION SHALL BE CAST INPLACE AND CONSTRUCTED FLUSH WITH THE SURROUNDING SIDEWALK.

GUIDELINES FOR LOCATING APS PUSH BUTTONS:

- THIS IS A GENERAL DETAIL INTENDED TO SHOW THE REQUIREMENTS OF APS PUSH BUTTON LOCATION. FOR PROJECT SPECIFIC DETAILS REGARDING PEDESTRIAN RAMP LAYOUT, SEE THE PEDESTRIAN CURB RAMP AND SIDEWALK DETAILS.
- BUTTONS SHALL BE WITHIN 5' OF THE OUTSIDE EDGE OF THE CROSSWALK.
- THE FACE OF THE BUTTON SHALL BE PARALLEL WITH THE CROSSWALK.
- A MIN. 4'X4' LANDING AREA SHALL BE PROVIDED ADJACENT TO EACH BUTTON.
- BUTTONS SHALL BE WITHIN 10' OF THE BACK OF CURB OR EDGE OF ROADWAY.
- BUTTONS SHALL BE AT LEAST 10' APART.



- ① 4'X4' MINIMUM LANDING AREA ADJACENT TO PUSH BUTTON. (2% SLOPE MAX.)
- ② RAMP - SLOPE (5% PREFERRED 8% MAX).
- ③ CURB TAPER SECTION AT 1:10 (10%) (HEIGHT OF CURB IS TAPERED TO 0").
- ④ DETECTABLE WARNING SURFACE (TRUNCATED DOMES) - RADIUS SECTIONS WHERE SPECIFIED.
- ⑤ DISTANCE FROM THE BACK OF CURB TO PUSH BUTTON STATION.

TYPICAL APS PEDESTRIAN PUSH BUTTON LOCATION

DISTRICT #: METRO
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 PATH & FILENAME: IP_PWP-df1363620V-PedestrianPushButtonStationDetail12042010.dgn
 PLOTTED/REVISED: 4/28/2011

BY	DATE	REVISIONS	SYSTEM ID:	T.E.	S.A.P. NO.
			METER ADDRESS:		CERTIFIED BY: <i>Michael P. Selinsky</i> LIC. NO. 19863 DATE: 4-21-11
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393 SHEET NO. 10 OF 122 SHEETS

ACCESSIBLE PEDESTRIAN SIGNAL (APS)
 PEDESTRIAN PUSH BUTTON STATION
 TYPICAL APS PUSH BUTTON LOCATION DETAIL

PLOTTED/REVISED: 4/20/2011

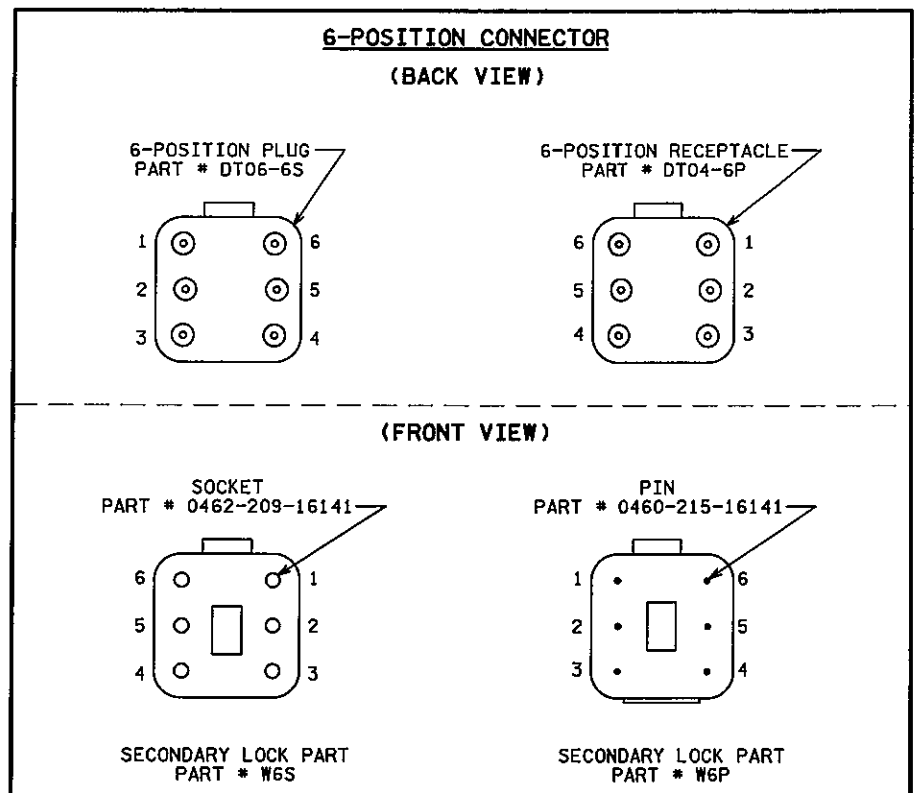
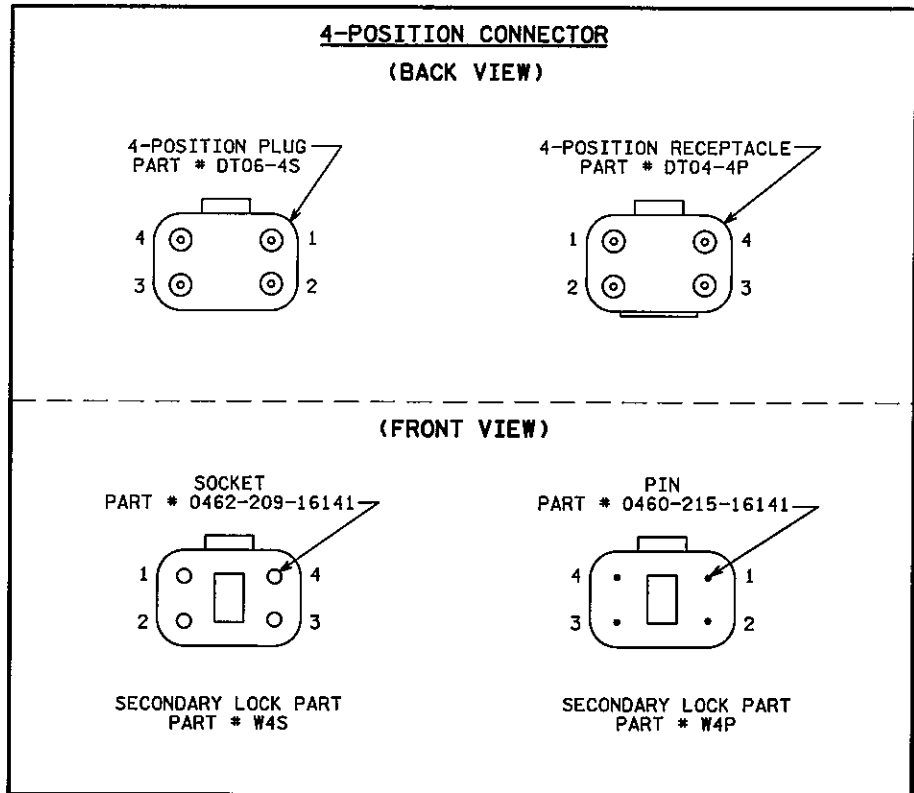
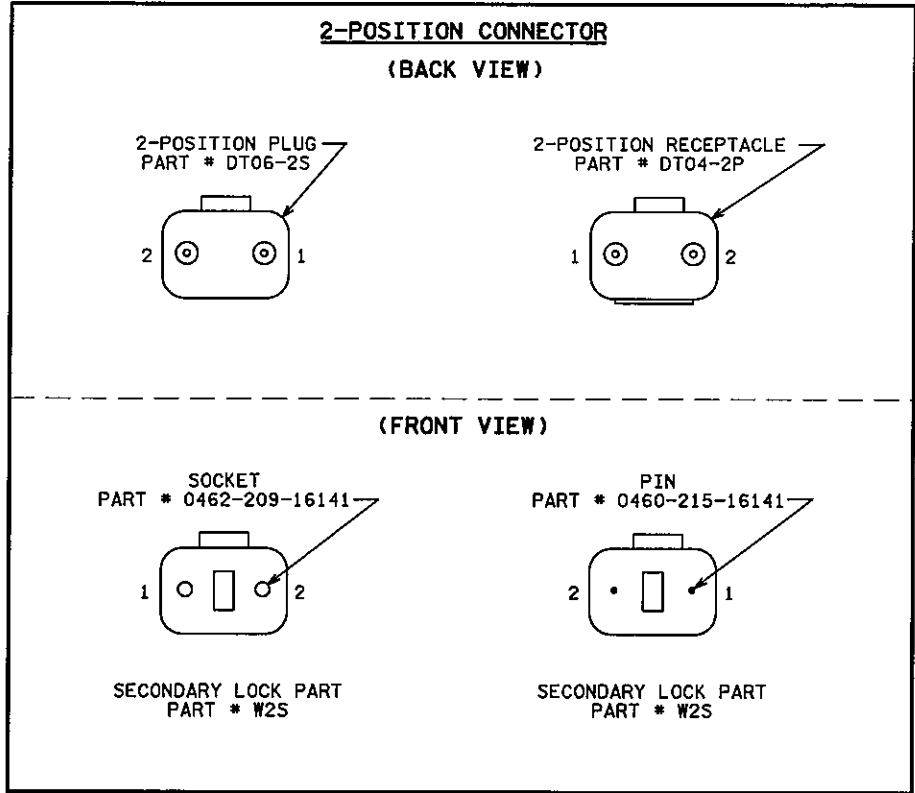


TABLE 1 2 Position DT Connector (As Needed)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
BLK	1	BLK	PB (If Required)
WH or CL	2	WH or CL	NEU

TABLE 2a 4 Position DT Connector (3 Section Head/DWK/WLK)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R or R/BLK or BLK	1	R	RED or DWK
O or O/BLK or BLK/WH or BLK	2	BLK/R	YEL or WLK
BL or BL/BLK or BLK/R or BLK	3	BLK	GRN or SPR
WH or WH/BLK or WH/R	4	WH	NEU

TABLE 3 6 Position DT Connector (4 and 5 Section Heads)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R	1	R	RED
O	2	O	YEL
BL	3	BL	GRN
WH	4	WH	NEU
O/BLK or BLK/R (6/C)	5	BLK/R	YLA or FYLA
BL/BLK or BLK (6/C)	6	BLK	GLA

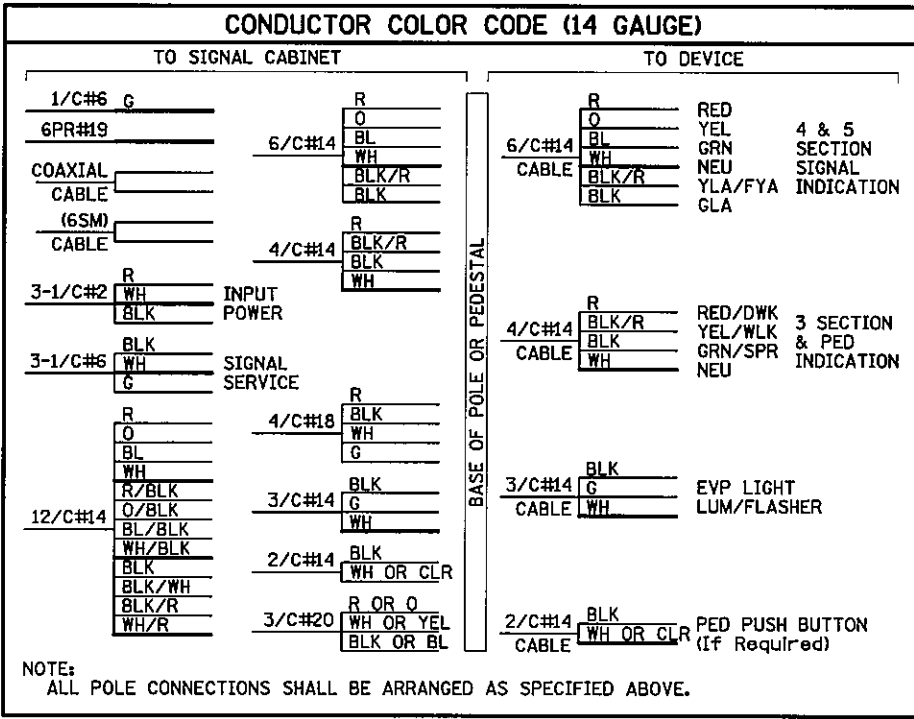


TABLE 2b 4 Position DT Connector (Used with 3 Conductor Cable Only) (EVP LHT/LUM/Flasher)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
BLK	1	BLK	EVP LHT or LUM or RED or YEL
(Not Used)	2	(Not Used)	(Not Used) (See Note #8)
G	3	G	EQ.G
WH	4	WH	NEU

- NOTES:**
- DT04-P RECEPTACLE SHALL BE TERMINATED TO THE WIRING HARNESS RUNNING FROM THE BASE/JUNCTION BOX OF THE POLE TO SIGNAL INDICATIONS.
 - DT06-S PLUG SHALL BE TERMINATED TO THE CABLES RUNNING FROM THE TRAFFIC SIGNAL CABINET TO THE BASE/JUNCTION BOX OF THE POLE.
 - THERE SHALL BE A MINIMUM OF 24 INCHES OF SLACK ON EACH CABLE IN EVERY POLE BASE /JUNCTION BOX.
 - STRIP A MAXIMUM OF 6 INCHES OF THE OUTER JACKET OF EACH SIGNAL CABLE.
 - STRIP .250 INCHES OF INSULATION FROM EACH INDIVIDUAL CONDUCTOR.
 - CRIMP PINS OR SOCKETS USING RATCHETING TYPE CRIMPING TOOL HDT-48-00. NO OTHER CRIMPING TOOL WILL BE ALLOWED.
 - WIRES MUST BE TERMINATED AS DETAILED IN TABLES 1 THRU 3 DEPENDING ON WIRE COUNT.
 - ANY UNUSED PIN MUST HAVE A SEALING PLUG PLACED IN BOTH THE PLUG & RECEPTACLE (PART # 114017).
 - LABEL EACH HALF OF THE CONNECTOR (PLUG AND RECEPTACLE) WITH THE DEVICE DESIGNATION (AS INDICATED IN THE WIRING DIAGRAM) USING A PERMANENT BLACK MARKER.

Wire Color Code Key

R	Red
O	Orange
BL	Blue
WH	White
BLK	Black
BRN	Brown
CL	Clear
G	Green
R/BLK	Red with Black Stripe
O/BLK	Orange with Black Stripe
BL/BLK	Blue with Black Stripe
WH/BLK	White with Black Stripe
WH/R	White with Red Stripe
BLK/WH	Black with White Stripe
BLK/R	Black with Red Stripe

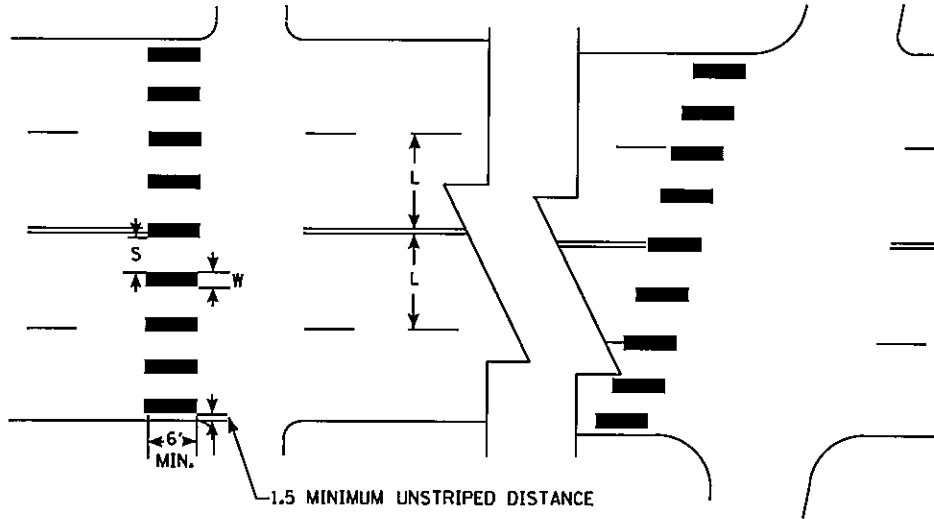
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BY	DATE	REVISIONS	SYSTEM ID:	T.E.	S.A.P. NO.
			METER ADDRESS:		CERTIFIED BY: <i>Michael P. Libinsky</i> LIC. NO. 19863 DATE: 4-21-11
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393 SHEET NO. 11 OF 122 SHEETS

TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL

MARKINGS FOR PEDESTRIAN CROSSWALKS

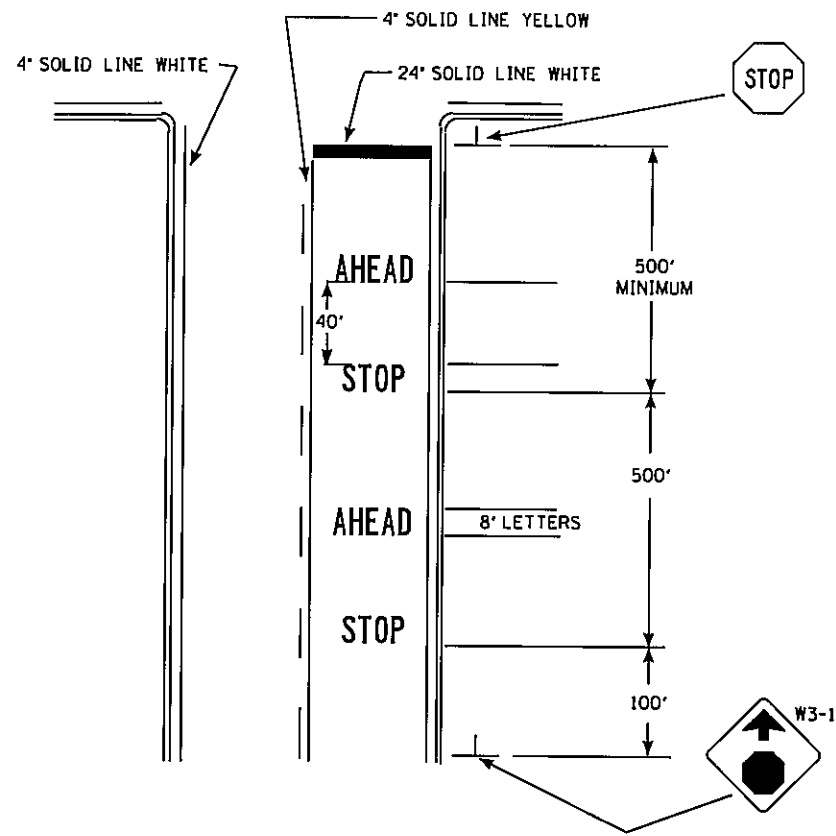
(L) WIDTH OF INSIDE LANE	(W) WIDTH OF PAINTED AREA	(S) WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'



NOTES:

1. PAINTED AREAS TO BE CENTERED ON CENTERLINE AND LANE LINES.
2. A MINIMUM OF 1.5 FT. CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
3. ON TWO LANE TWO WAY STREETS, USE SPACING SHOWN FOR AN 11 FT. INSIDE LANE.
4. FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
5. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES AS SHOWN.

PLACEMENT FOR "STOP AHEAD" MARKINGS AND STOP LINES



NOTES:

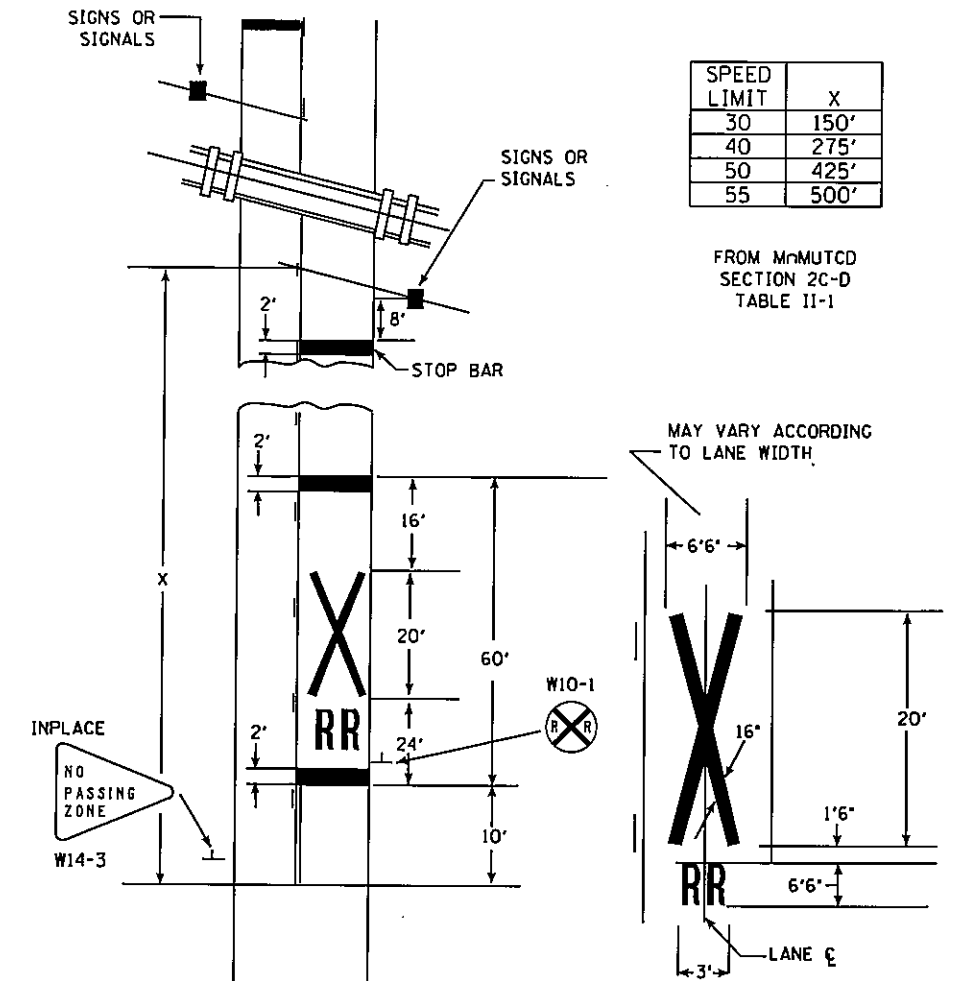
1. DOUBLE PAVEMENT MESSAGE AS SHOWN SHOULD BE INSTALLED WHENEVER THE STOP AHEAD SIGN IS PLACED A MINIMUM OF 1100' IN ADVANCE OF THE STOP SIGN
2. IF THE DISTANCE BETWEEN THE BEGINNING OF THE SOLID LINE YELLOW IS LESS THAN THE DISTANCES IN THE CHART BELOW FROM THE END OF A PRECEDING SOLID LINE YELLOW IN THE SAME LANE, THE SOLID LINE SHALL BE EXTENDED BETWEEN THEM.

35 MPH SPEED LIMIT OR LESS	500'
40-50 MPH SPEED LIMIT	650'
55 MPH SPEED LIMIT	800'
3. WHERE STOP LINES ARE USED WITHOUT A MARKED CROSSWALK, THE STOP LINE SHOULD BE PLACED AT THE DESIRED STOPPING POINT, AND IN NO CASE NO MORE THAN 30 FEET OR LESS THAN 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTING CURB LINE OR THE NEAR EDGE OF THE SHOULDER. WHERE STOP LINES AND CROSSWALK MARKINGS ARE USED TOGETHER, THE STOP LINE SHOULD BE PLACED 4 FEET IN ADVANCE OF AND PARALLEL TO THE NEAREST CROSSWALK LINE.

IF A STOP LINE IS USED IN CONJUNCTION WITH A STOP SIGN, IT SHOULD ORDINARILY BE PLACED IN LINE WITH THE STOP SIGN. HOWEVER, IF THE SIGN CANNOT BE LOCATED EXACTLY WHERE VEHICLES ARE EXPECTED TO STOP, THE STOP LINE SHOULD BE PLACED AT THE STOPPING POINT.

METRO DISTRICT NOTE: STOP BARS AND CROSSWALK PAVEMENT MARKINGS WILL NOT BE INSTALLED AT THE SAME LOCATION UNLESS OTHERWISE DETAILED IN THE PLAN.

MARKINGS FOR RAILROAD CROSSINGS



NOTES:

1. THE DISTANCE FROM THE RAILROAD CROSSING MARKING TO THE NEAREST TRACK WILL VARY ACCORDING TO THE APPROACH SPEED AND SIGHT DISTANCE OF THE VEHICULAR TRAFFIC APPROACHING, BUT SHOULD NOT BE LESS THAN 50 FEET.
2. ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
3. THE STOP LINE MAY BE PARALLEL TO AND 15 FEET FROM THE TRACKS WHERE THERE ARE RAILROAD CROSSBUCK SIGNS.

PLOTTED/REVISED: 4/20/2011

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 IPLOT NAME: T8825393_ttypicals_ps38
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DRAWN BY: JAW

CHECKED BY: BTJ

CERTIFIED BY

Michael P. Gelinsky
 LICENSED PROFESSIONAL ENGINEER

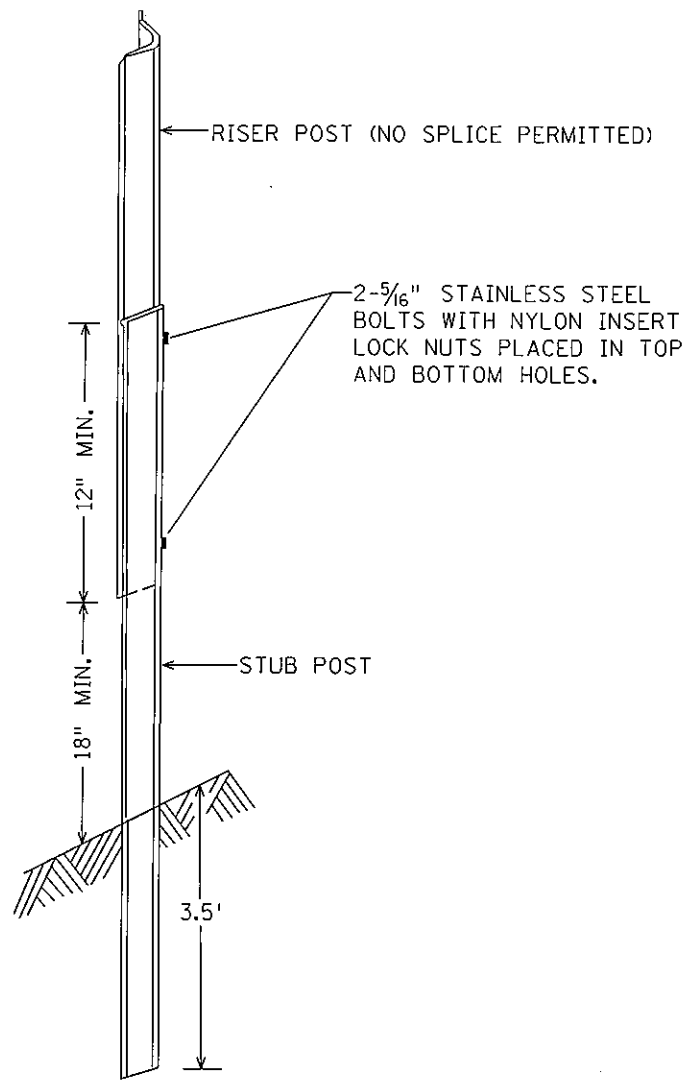
LIC. NO. 19863 DATE 4-21-11

PAVEMENT MARKING TYPICALS

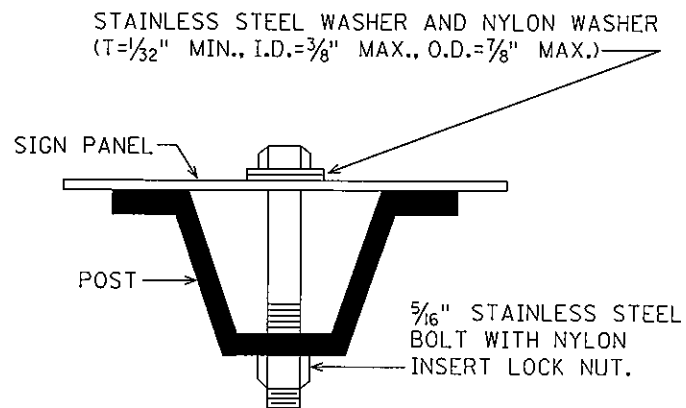
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SHEET NO. 12 OF 122 SHEETS

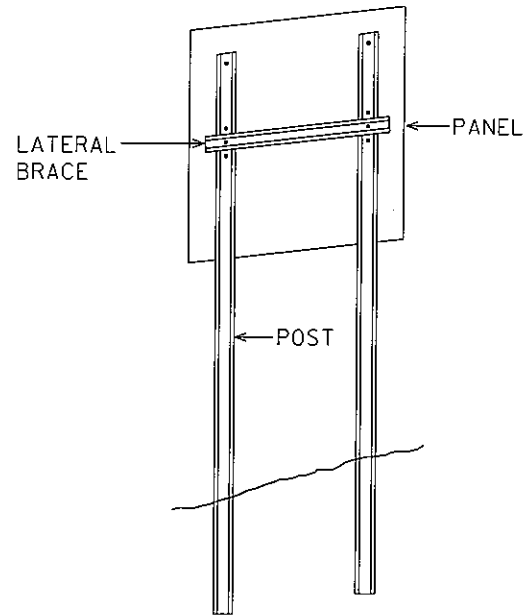
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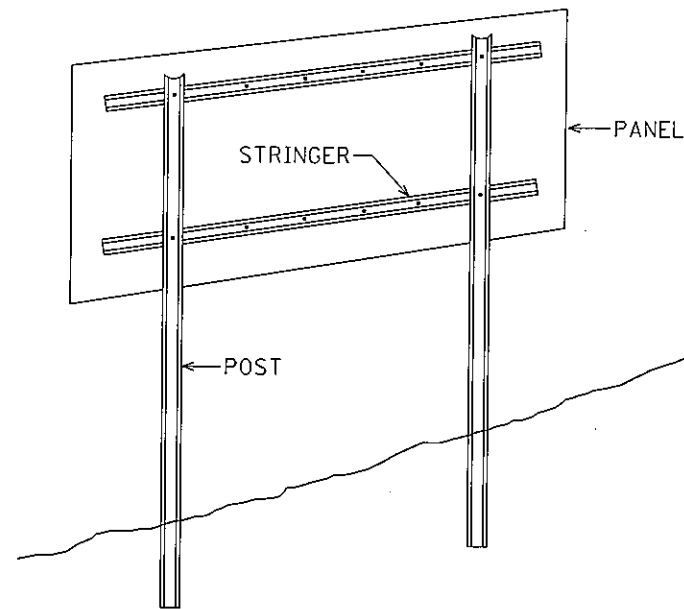
U POST SPLICE



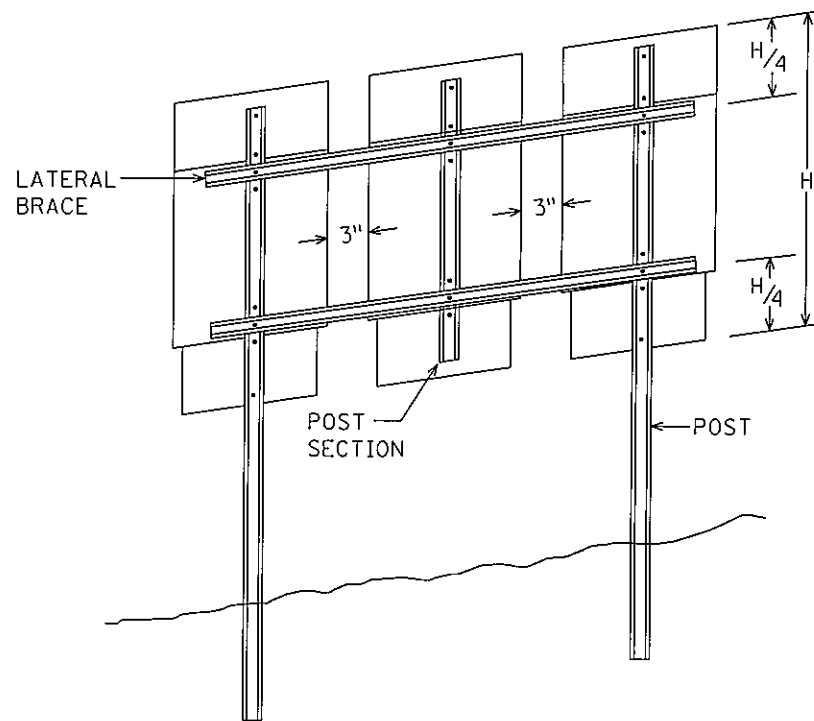
U POST MOUNTING
TYPE C SIGNS



TYPICAL TYPE C INSTALLATION



TYPICAL TYPE D INSTALLATION



MODIFIED TYPE C INSTALLATION

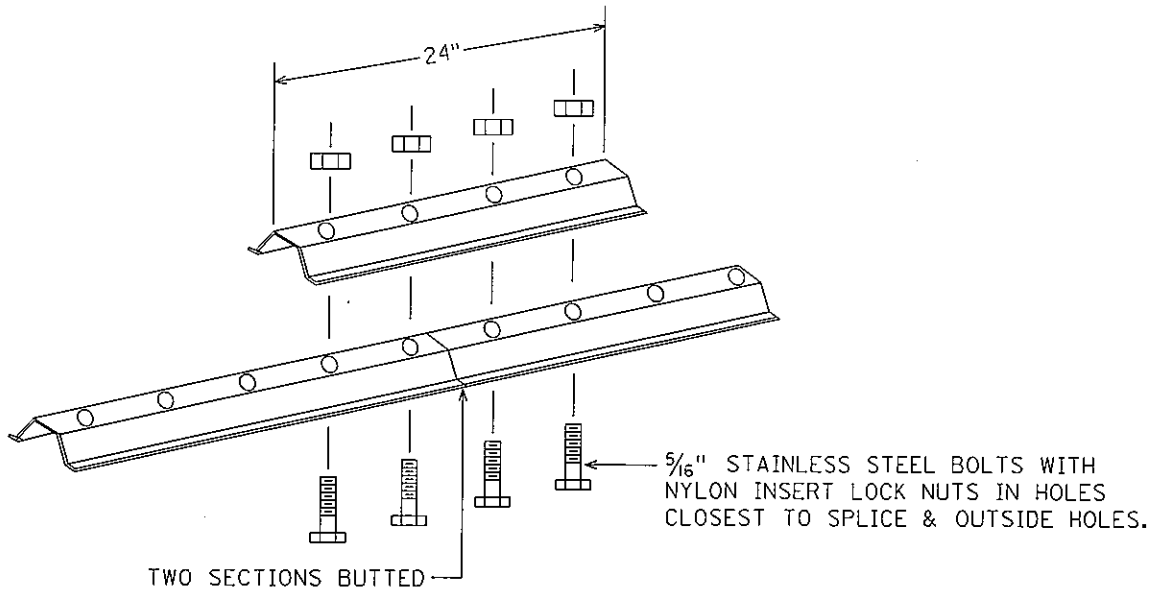
NOTES:

1. USE 3 LB/FT STUB POSTS, RISER POSTS, STRINGERS, KNEE BRACES, LATERAL BRACES AND KNEE BRACE STUB POSTS. ALL SHALL CONFORM TO MN/DOT 3401.
2. FOR TYPE D SIGN POSTS LENGTHS AND SPACINGS, SEE SIGN DATA SHEET.
3. TYPE D SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH THE TYPE D STRINGER AND PANEL-JOINT DETAIL (SEE STANDARD SIGNS MANUAL).
4. MOUNTING (PUNCH CODE) FOR TYPE C SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
5. ALL RISER (VERTICAL) U POSTS SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
6. USE STAINLESS STEEL 5/16" BOLTS, WASHERS AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
7. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
8. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 3 1/2'.
9. A-FRAME BRACKET SHALL BE STEEL CONFORMING TO MN/DOT 3306 AND GALVANIZED IN ACCORDANCE WITH MN/DOT 3394.
10. COLLARS SHALL BE USED TO SHIM OVERLAYS AND DEMOUNTABLE LEGEND AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED. MN/DOT 3352.2A5.
11. 2 POST TYPE C SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
12. WHERE 2 SINGLE POST TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND LOCATED APPROXIMATELY AT THE QUARTER POINTS.
13. WHERE 3 OR MORE TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND POST SECTION AND LOCATED APPROXIMATELY AT THE QUARTER POINTS AS SHOWN IN MODIFIED TYPE C INSTALLATION.

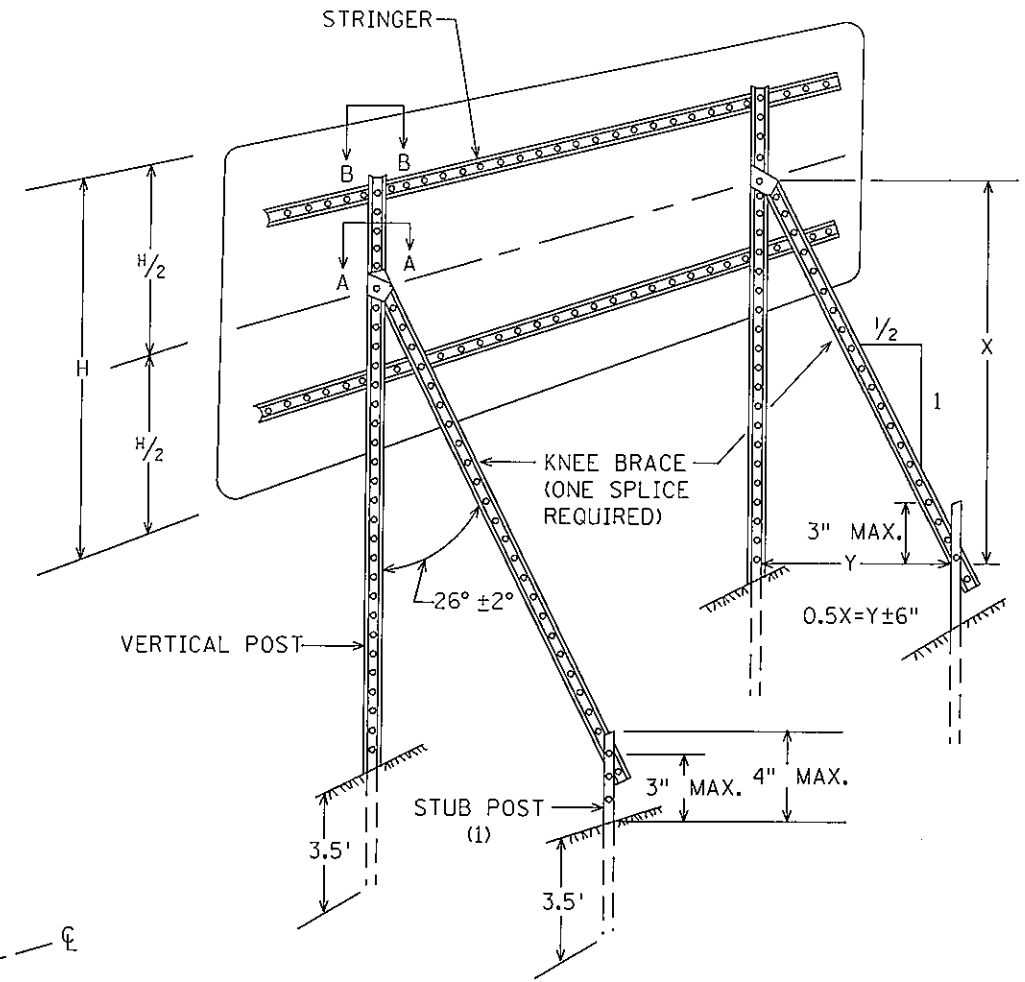
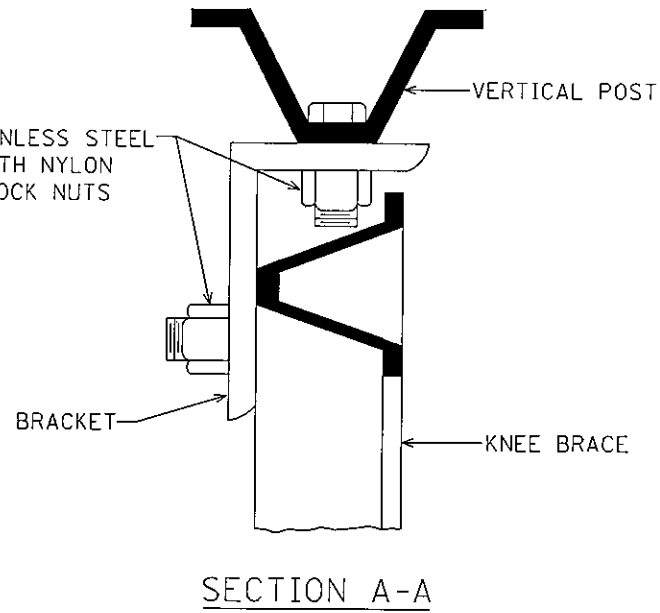
TYPE C & D SIGN
STRUCTURAL DETAILS

PLOTTED/REVISED: 4/20/2011

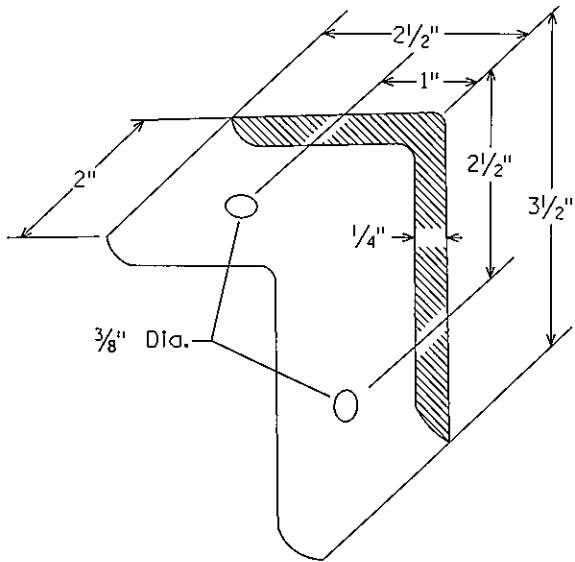
DISTRICT #: METRO
PLOT NAME: T8825393_typicals_ps40
PATH & FILENAME: IP_PWP-dl405738T8825393_typicals_ps.dgn



LATERAL BRACE OR STRINGER SPLICE DETAIL (EXPLODED VIEW)

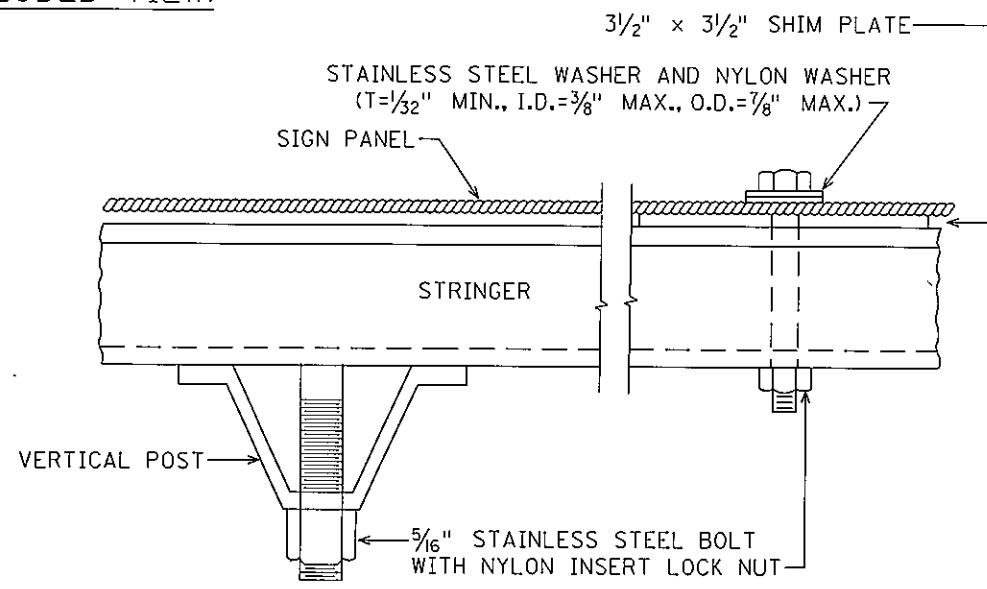


TYPICAL "A-FRAME" INSTALLATION TYPE "D" SIGNS

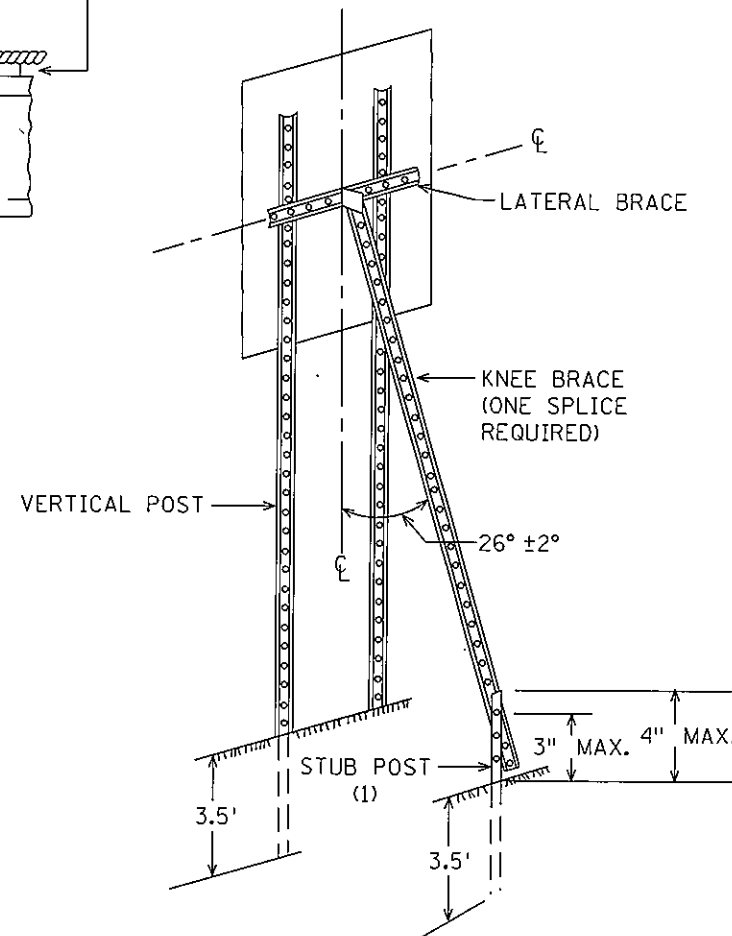


A-FRAME BRACKET

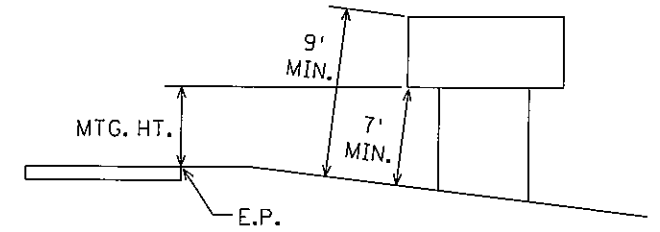
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



SECTION B-B



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



TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY RELATIVE TO VERTICAL POST. ATTACH STUB POST AND KNEE BRACE BACK TO BACK.

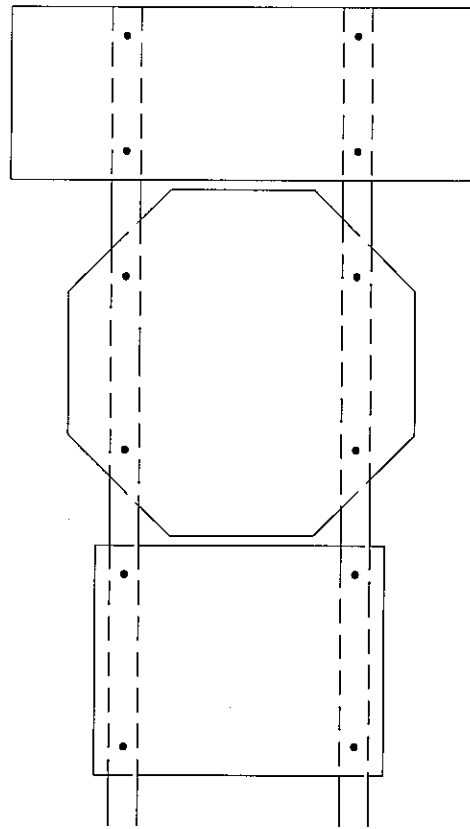
TYPE C & D SIGN STRUCTURAL DETAILS

Sheet 2 of 3

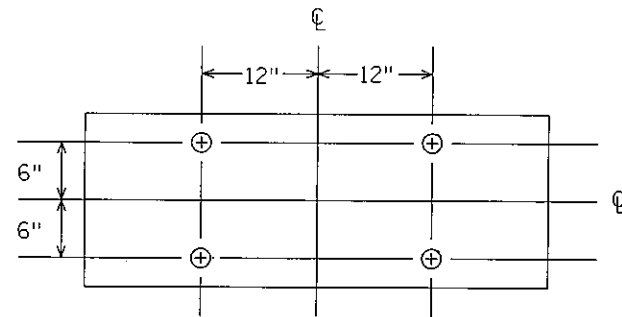
REVISED: 1-7-08

STATE PROJ. NO. 8825-393

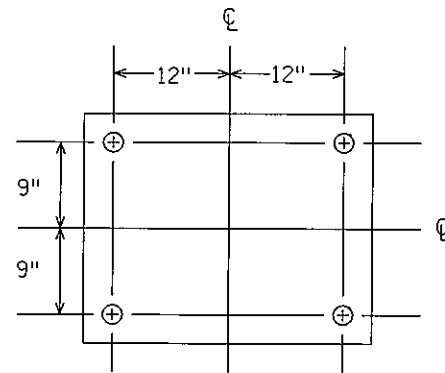
SHEET NO. 14 OF 122 SHEETS



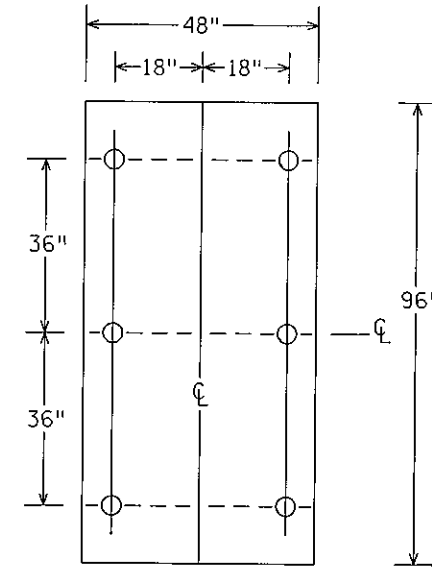
R6-1, R1-1 & (R6-3 OR R6-3a)
MOUNTING



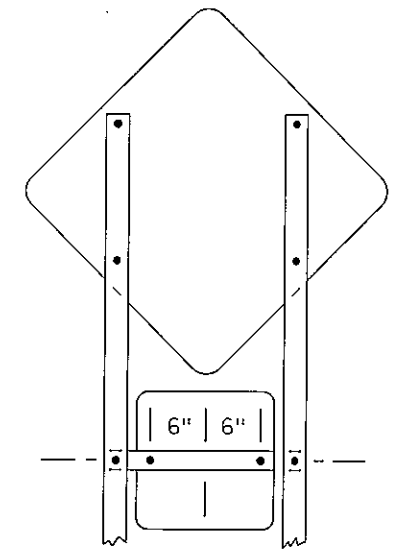
PUNCHING FOR R6-1(48" x 18")



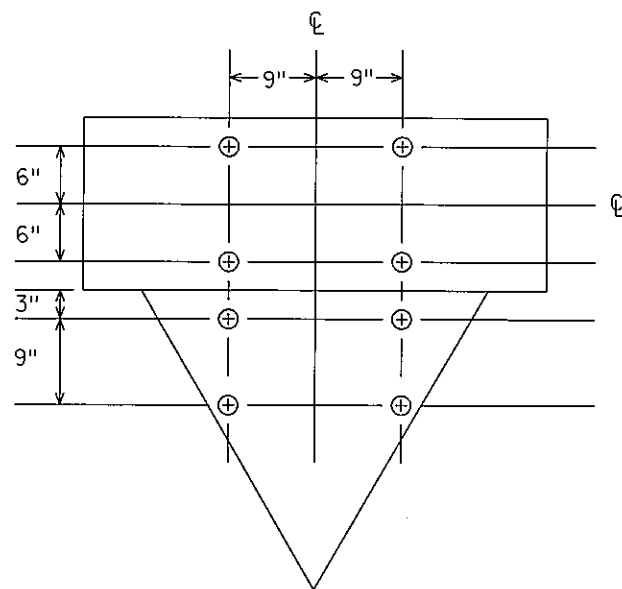
PUNCHING FOR R6-3 OR R6-3a(30" x 24")



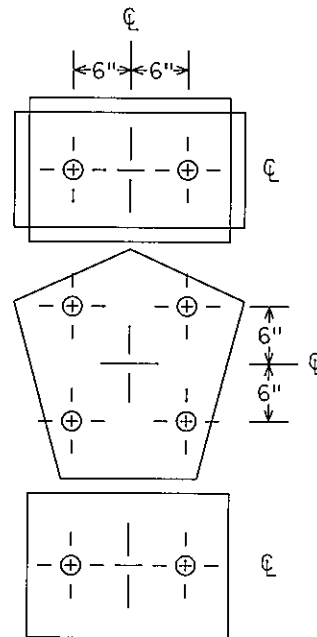
PUNCHING FOR R2-4b
SPEED LIMIT



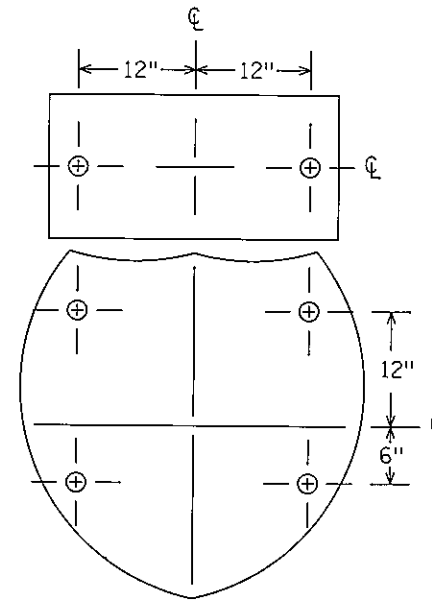
(W1-1, W1-2, W1-3, W1-4 OR W1-5) & W13-1
MOUNTING



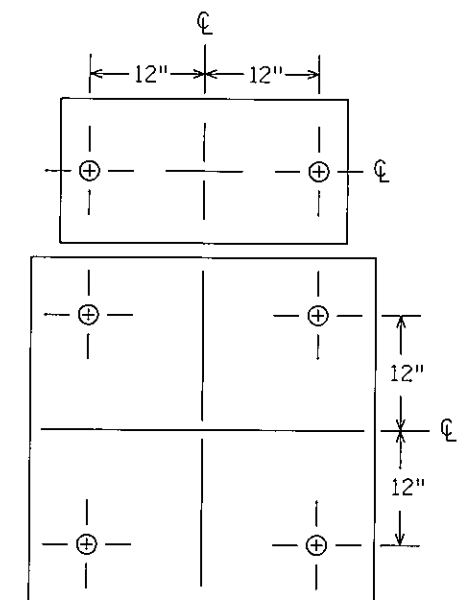
PUNCHING FOR R6-1(48" x 18")
& R1-2(36" x 36" x 36")



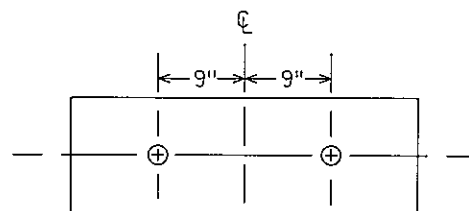
M2-1A [21" x 15"] OR
(M3-1A, M3-2A, M3-3A OR M3-4A) [24" x 12"] AND
M1-6 [24" x 24"] AND
(M5-1A, M5-2A, M6-1A, M6-2A, M6-3A M6-4A, M6-5A OR M6-6A) [21" x 15"]
PUNCHING



(M3-1A, M3-2A, M3-3A OR M3-4A) [30" x 15"] AND
M1-1 [45" x 36" OR 36" x 36"]
PUNCHING



(M3-1, M3-1A, M3-2, M3-2A, M3-3, M3-3A M3-4 OR
M3-4A) [30" x 15"] AND (M1-4 OR M1-5A) [36" x 36"]
PUNCHING

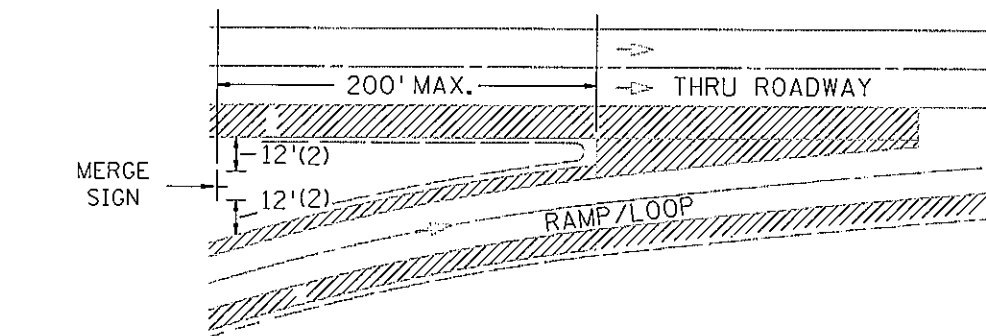
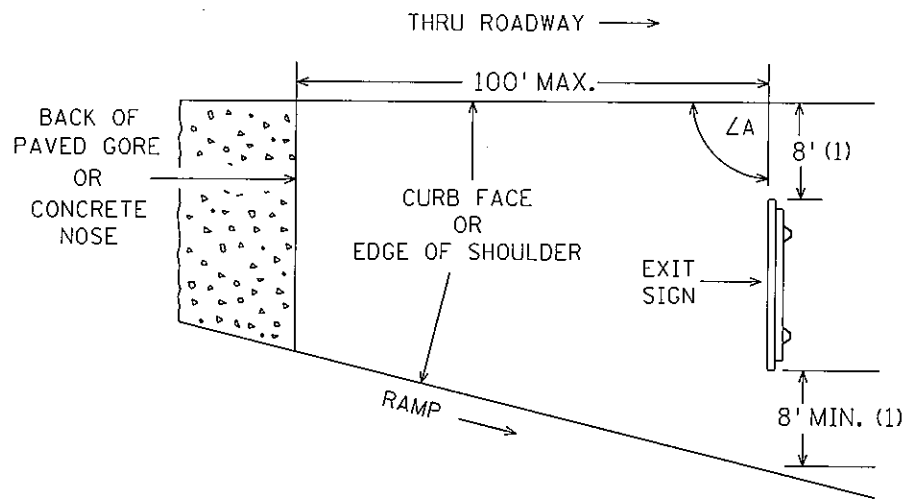


PUNCHING FOR R6-1(36" x 12")

TYPE C & D SIGN
STRUCTURAL DETAILS

Sheet 3 of 3

GORE PLACEMENT



SPECIFIC NOTES:

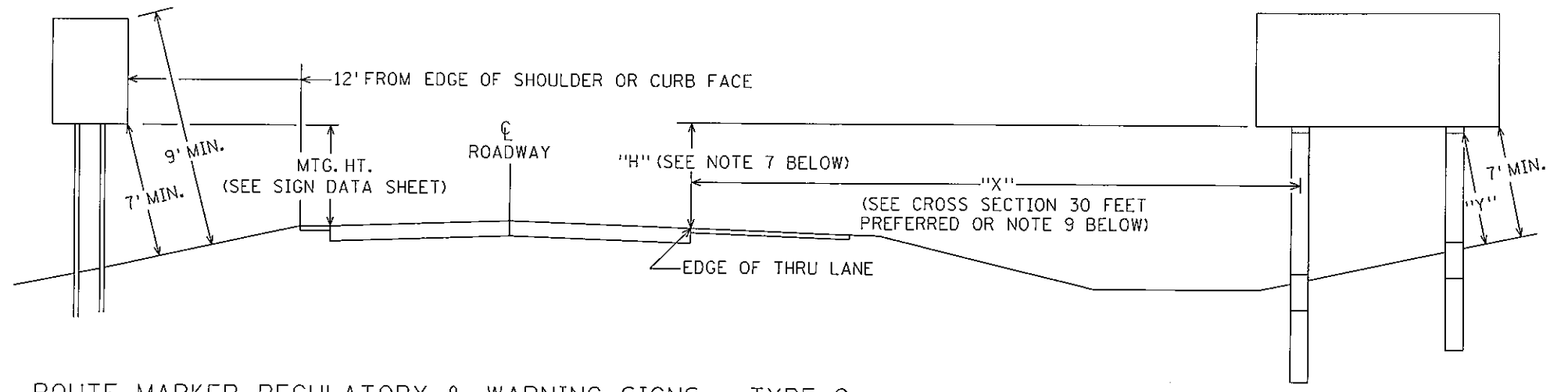
(1) EXIT SIGNS

IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, CONTACT THE PROJECT ENGINEER WHO WILL CONSULT WITH THE STATE SIGNING ENGINEER.

(2) MERGE SIGNS

IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, CONTACT THE PROJECT ENGINEER WHO WILL CONSULT WITH THE STATE SIGNING ENGINEER.

ROADSIDE PLACEMENT



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

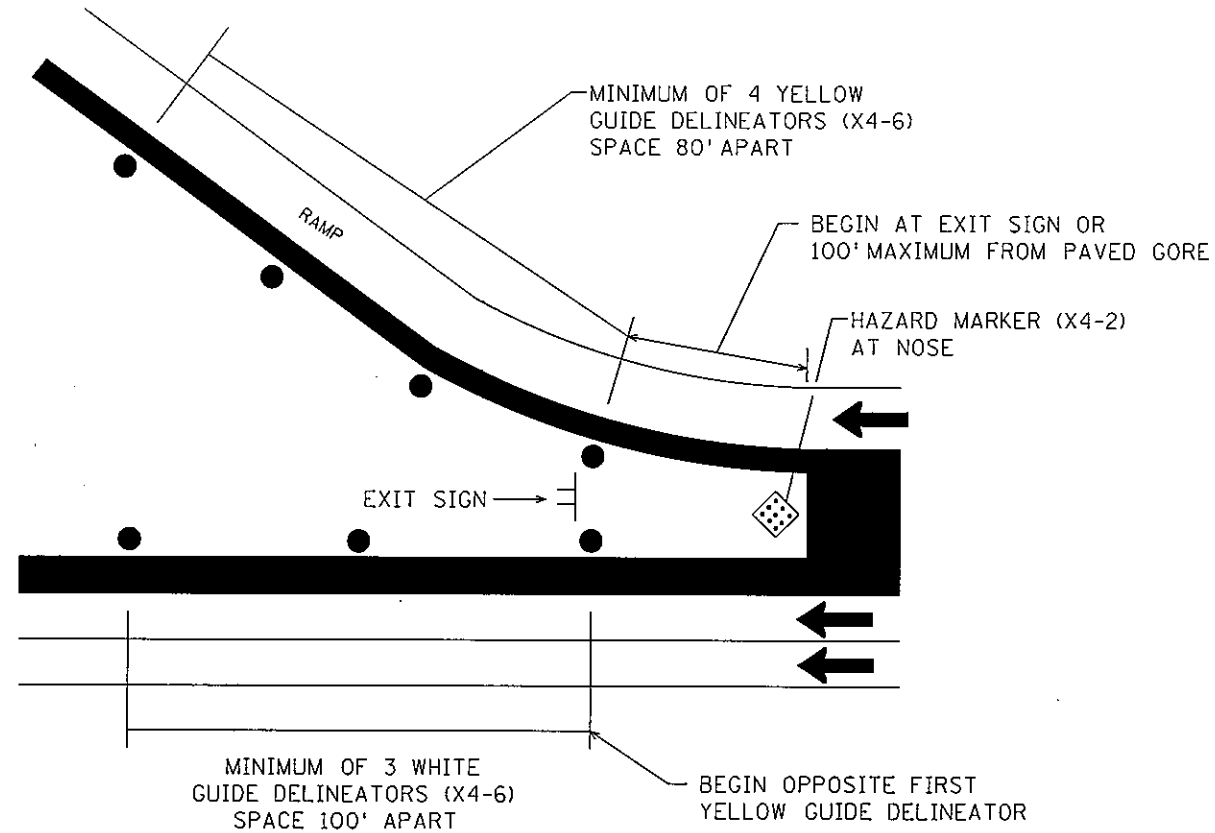
MAJOR GUIDE SIGN - TYPE A

NOTES:

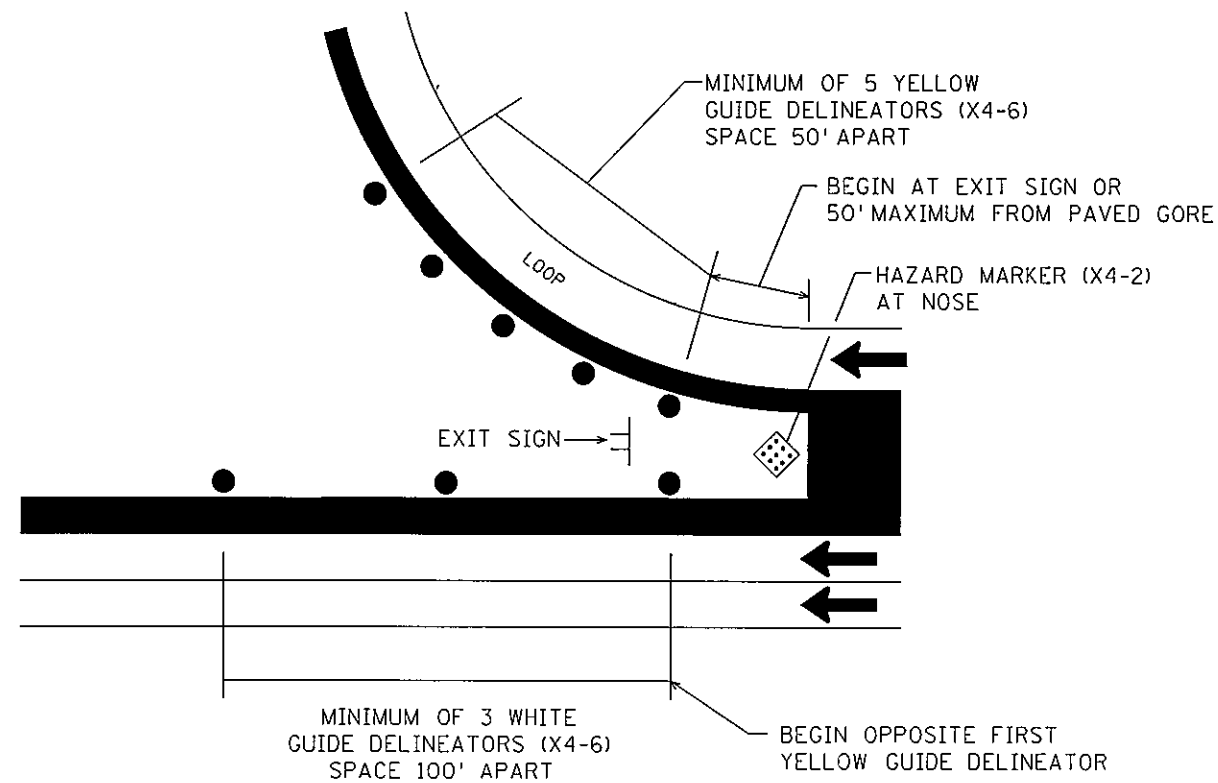
1. IF A SECONDARY SIGN IS MOUNTED BELOW A MAJOR SIGN, THE MAJOR SIGN SHALL BE AT LEAST 8' ABOVE THE THRU LANE EDGE AND THE SECONDARY SIGN AT LEAST 5'.
2. ALL ROUTE MARKERS, WARNING AND REGULATORY SIGNS SHALL BE AT LEAST 7' ABOVE THRU LANE EDGE.
3. SIGN FACES SHALL BE VERTICAL.
4. OVERHEAD SIGNS SHALL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

SIGN PLACEMENT

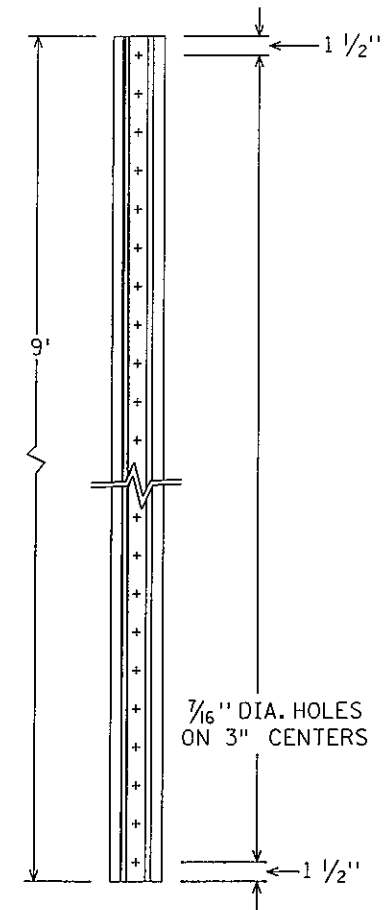
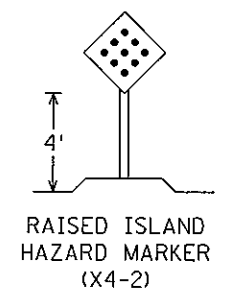
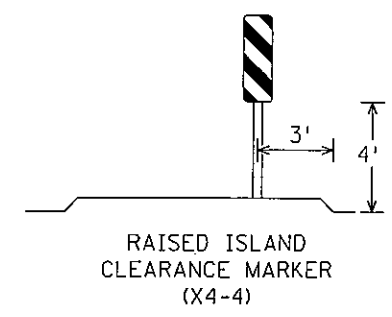
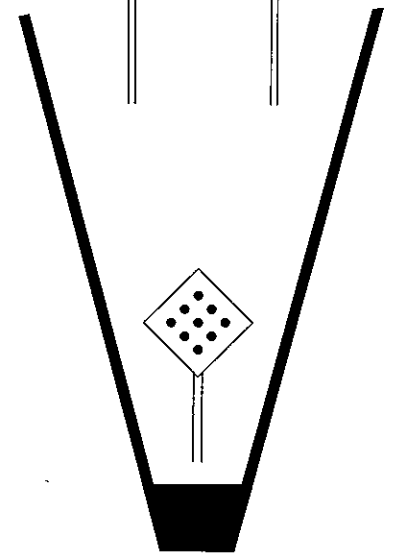
PLOTTED/REVISED: 4/20/2011



PLAN A RAMP DELINEATION

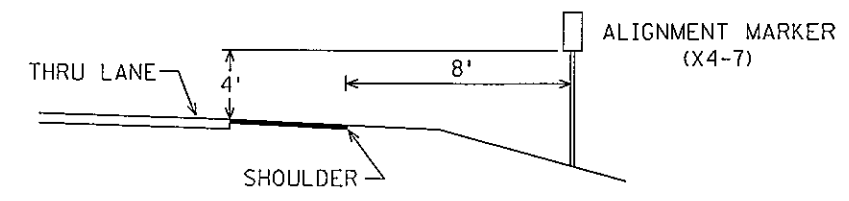
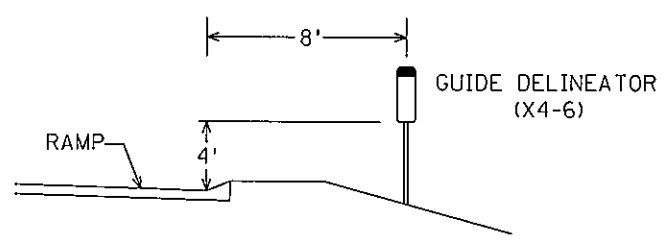
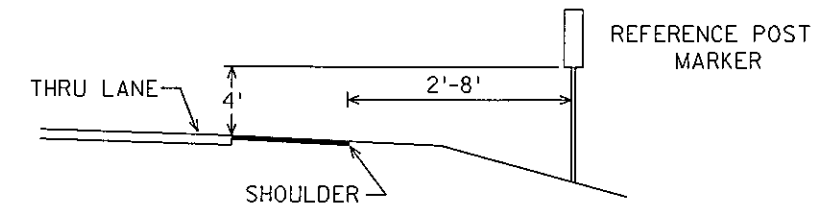
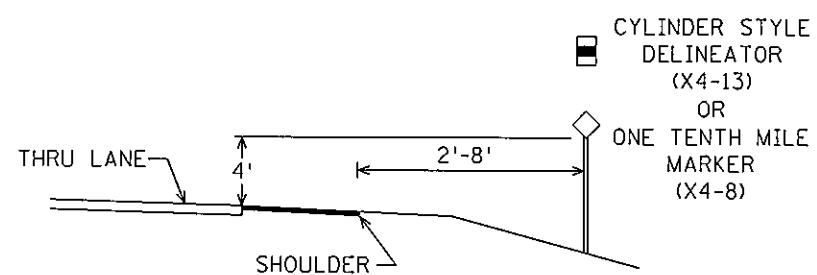


PLAN B LOOP DELINEATION



MN/DOT 3401 NORMAL WEIGHT= 2 LB./FT.

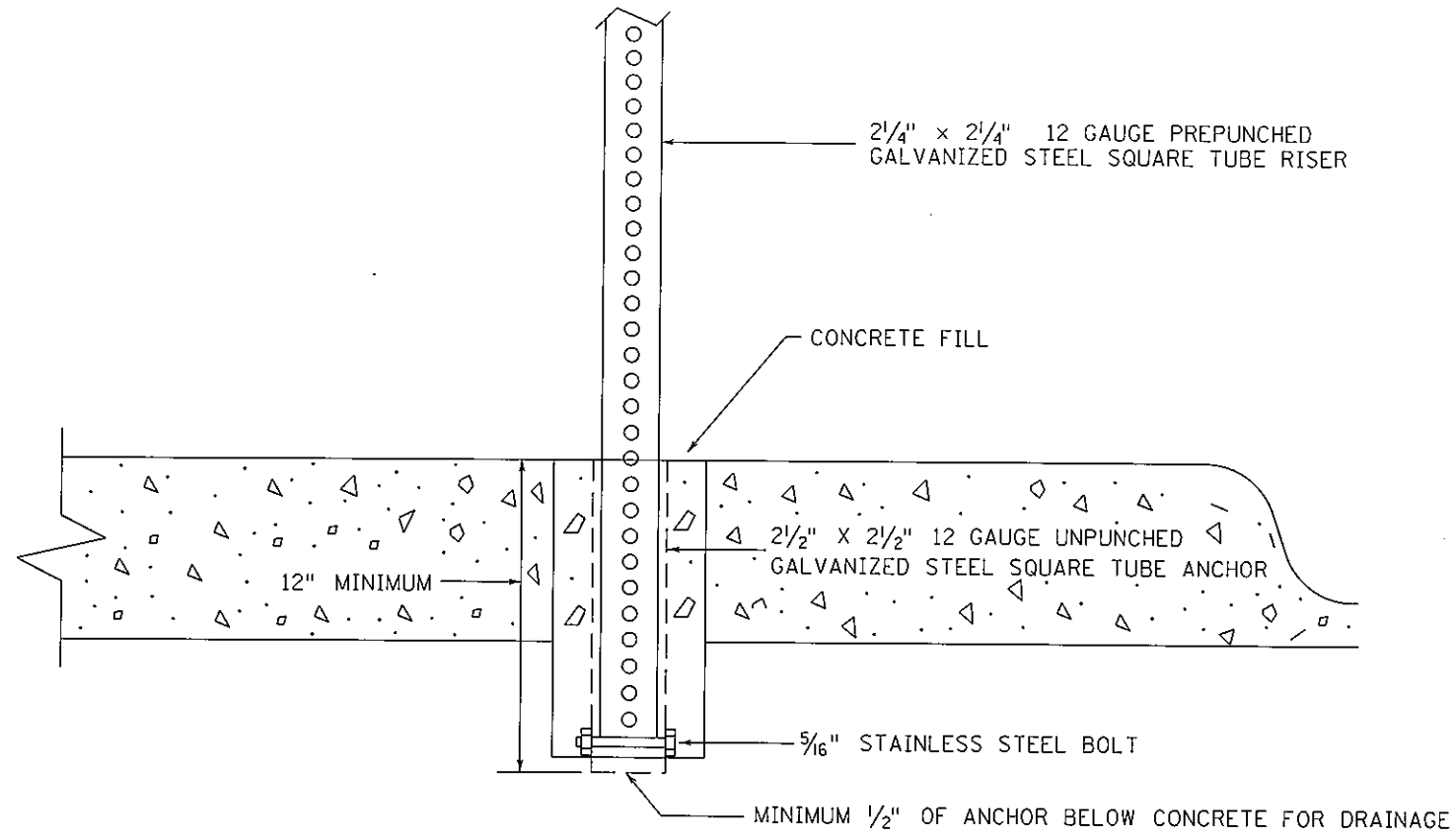
DELINEATOR POST



TYPICAL PLACEMENT

DELINEATORS AND MARKERS

DISTRICT #: METRO
PLOT NAME: T8825393_typicals_ps43
PATH & FILENAME: IP_PWP-d1405736T8825393_typicals_ps.dgn



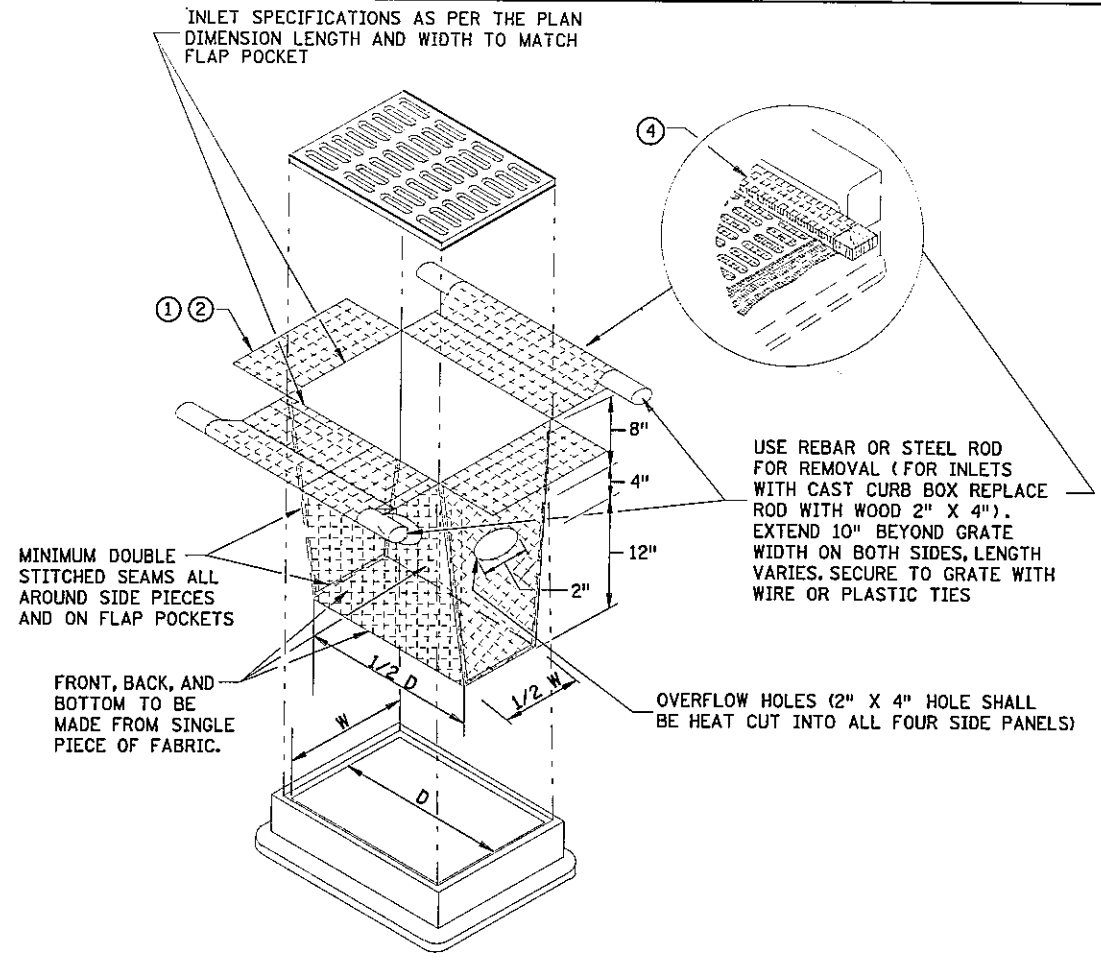
NOTES;

1. DRILL AN 8" DIAMETER HOLE THE FULL DEPTH OF THE ANCHOR.
2. DRILL 3/8" HOLES ON OPPOSITE SIDES OF THE UNPUNCHED GALVANIZED STEEL SQUARE TUBE ANCHOR APPROX. 1" FROM THE BOTTOM OF THE ANCHOR. INSERT A 5/16" STAINLESS STEEL BOLT THROUGH THE HOLES AND SECURE WITH A STAINLESS STEEL LOCK NUT WITH NYLON INSERT. THE PREPUNCHED GALVANIZED STEEL SQUARE TUBE RISER (TO BE INSERTED INSIDE THE UNPUNCHED GALVANIZED SQUARE TUBE ANCHOR) WILL REST ON BOLT.
3. INSERT THE ANCHOR IN THE HOLE.
4. AFTER INSTALLATION OF THE UNPUNCHED GALVANIZED STEEL SQUARE TUBE ANCHOR, FILL THE HOLE WITH A CONCRETE MIX APPROVED BY THE ENGINEER AND LEVEL OFF THE TOP OF CONCRETE.

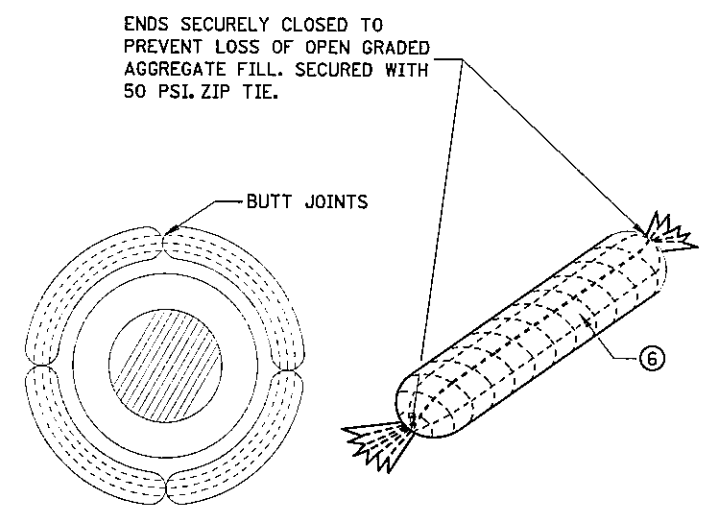
TYPE C SIGNS, DELINEATORS &
MARKERS IN CONCRETE

PLOTTED/REVISED: 4/20/2011

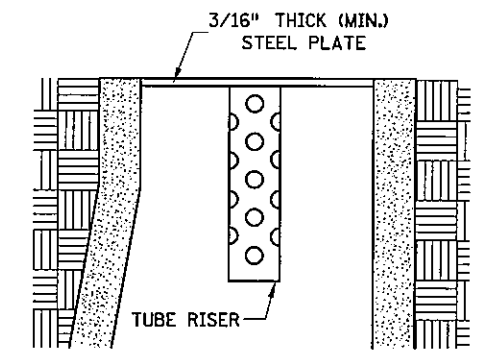
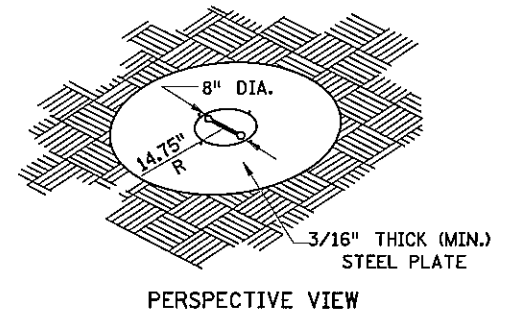
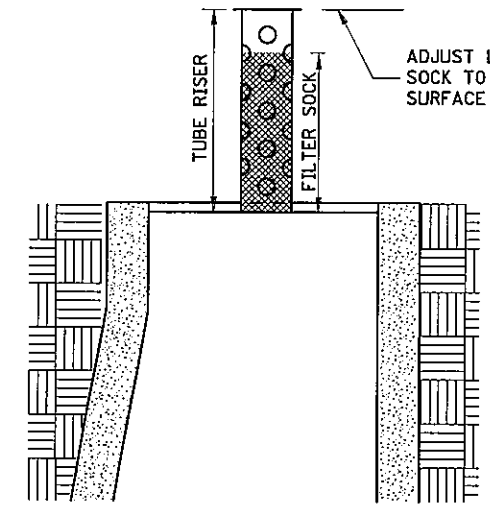
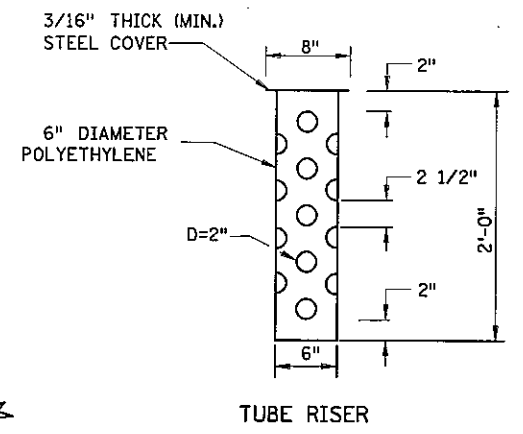
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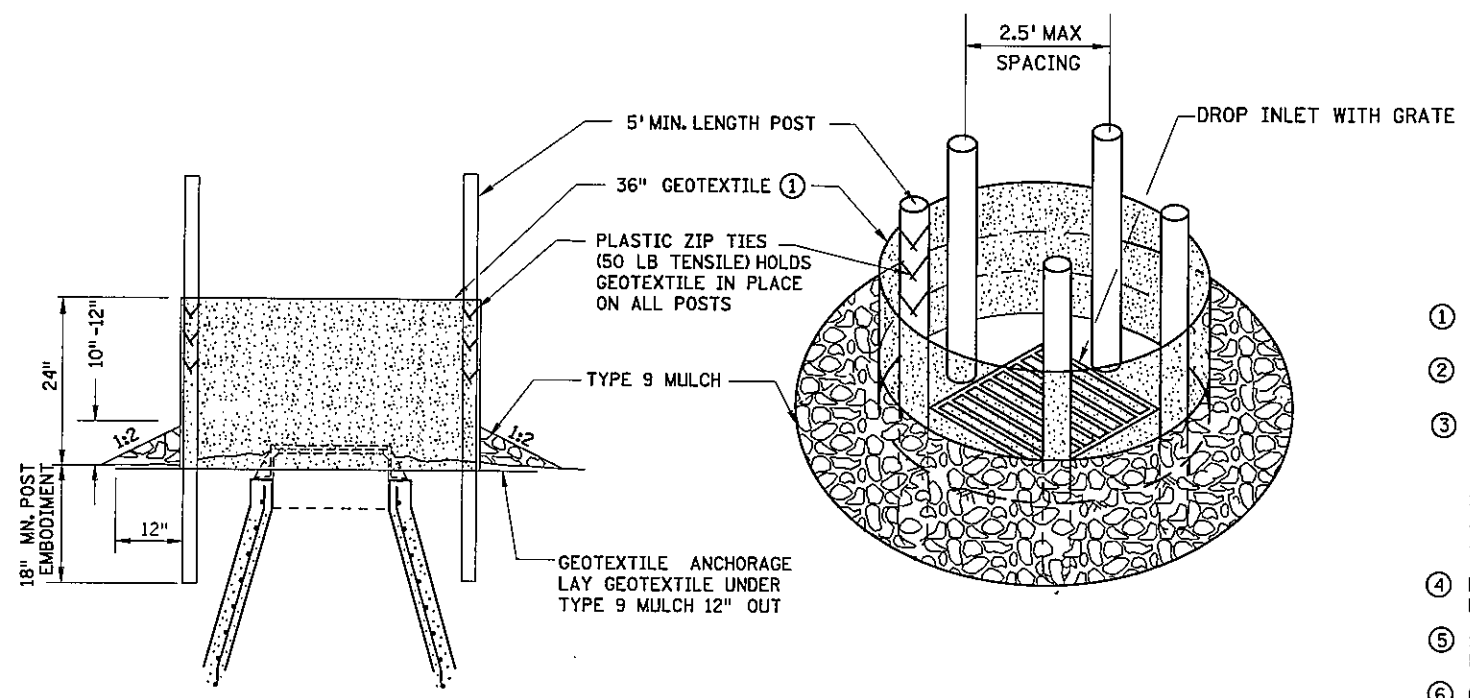
FILTER BAG INSERT ③
 (CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)



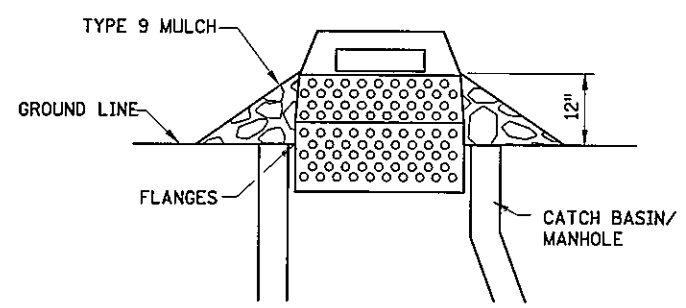
ROCK LOG/COMPOST LOG



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

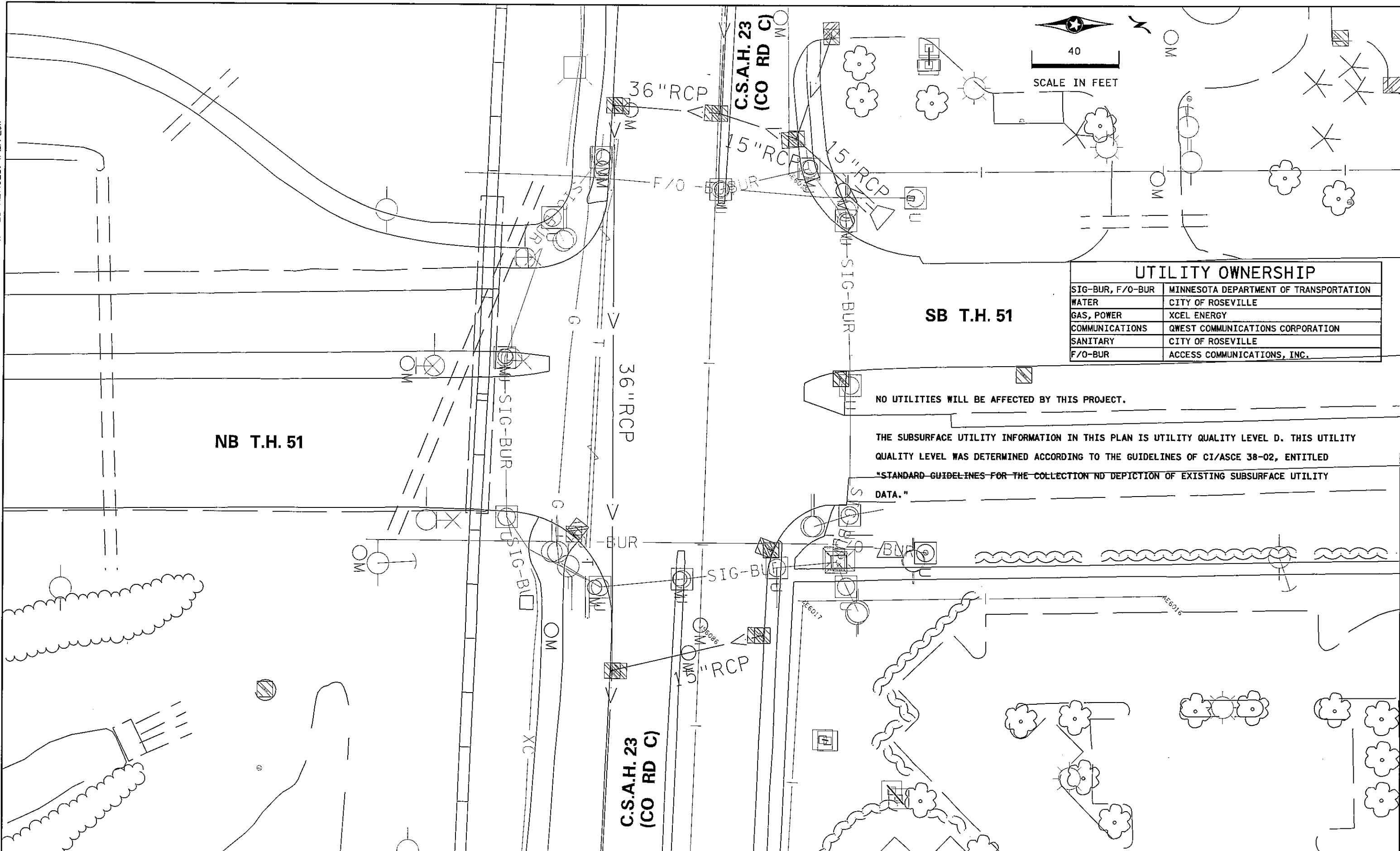
NOTE:
 THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.

- 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.

STANDARD SHEET NO. 297.405 (4 OF 4)	TITLE: TEMPORARY SEDIMENT CONTROL STORM DRAIN INLET PROTECTION
STANDARD APPROVED: SEPTEMBER 27, 2006	
STATE PROJ. NO. 8825-393	SHEET NO. 19 OF 122 SHEETS

PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
I/PLOT NAME: topog and utilities A
PATH & FILENAME: IP_PWP-d135079NPT2074IU_sgl.dgn



UTILITY OWNERSHIP	
SIG-BUR, F/O-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
WATER	CITY OF ROSEVILLE
GAS, POWER	XCEL ENERGY
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION
SANITARY	CITY OF ROSEVILLE
F/O-BUR	ACCESS COMMUNICATIONS, INC.

NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

BY	DATE	REVISIONS

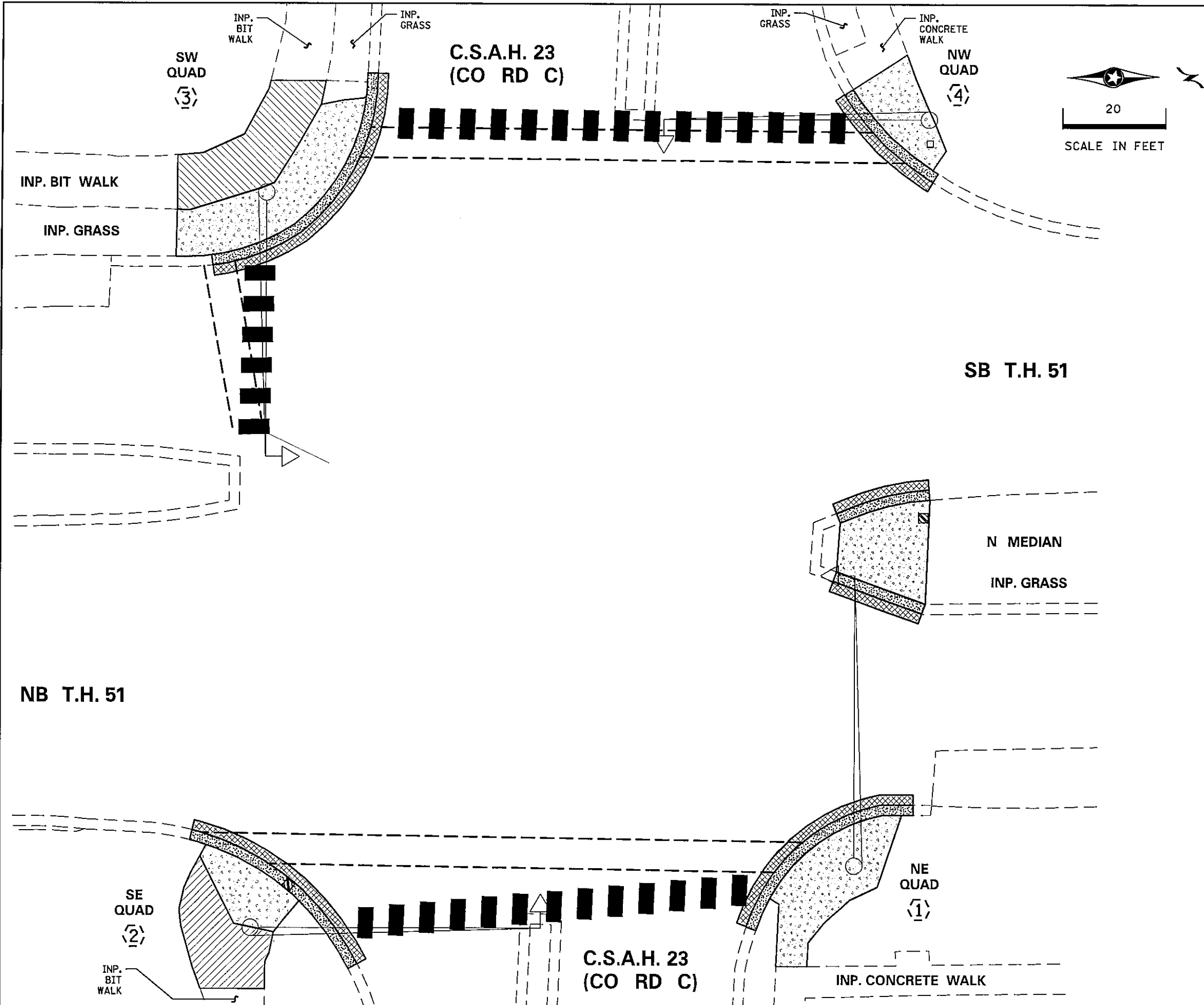
SYSTEM ID: 20741 T.E. 5367
 METER ADDRESS: 2642 SNELLING AVE N
 MASTER ID: T.E.

**INPLACE TOPOGRAPHY AND UTILITY PLAN
 REVISE SIGNAL SYSTEM A
 T.H. 51 AT C.S.A.H. 23 (COUNTY ROAD C)
 IN ROSEVILLE, RAMSEY COUNTY**

S.A.P. NO. DRAWN BY: BTJ CKD BY: BTJ DATE: 4-21-11
 CERTIFIED BY: *Michael P. Lubinsky* LIC. NO. 19863 DATE: 4-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 20 OF 122 SHEETS

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 IPLOT NAME: removals & pave mark A
 PATH & FILENAME: IP_FWP-d135079NPT.2074IR_sgl.dgn



LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK
	MILL BITUMINOUS SURFACE (2.0'')
	REMOVE BITUMINOUS PAVEMENT
	INPLACE SIGNAL BASE NO.
	INPLACE HANDHOLE
	INPLACE CATCH BASIN
	REMOVE CROSSWALK
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING

BY	DATE	REVISIONS

SYSTEM ID: 20741 T.E. 5367
 METER ADDRESS: 2642 SNELLING AVE N
 MASTER ID: T.E.

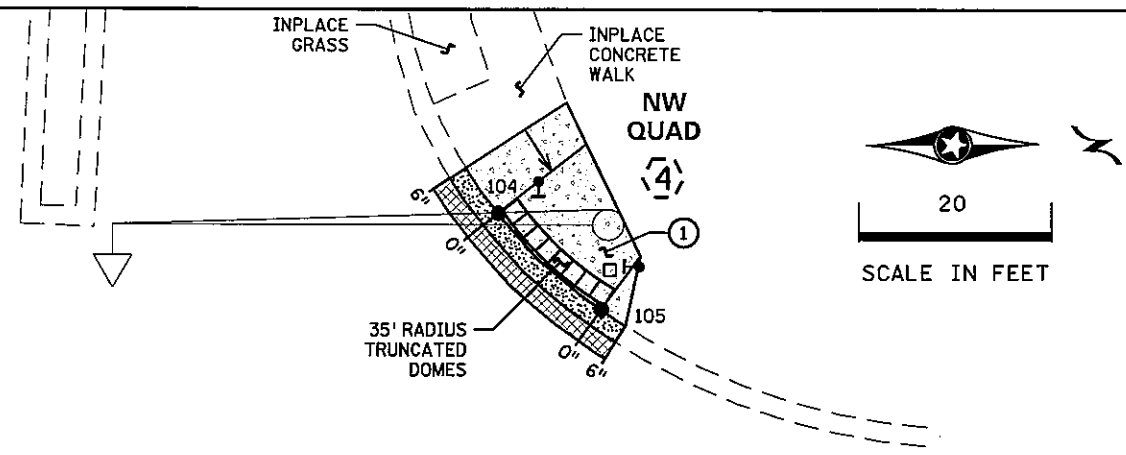
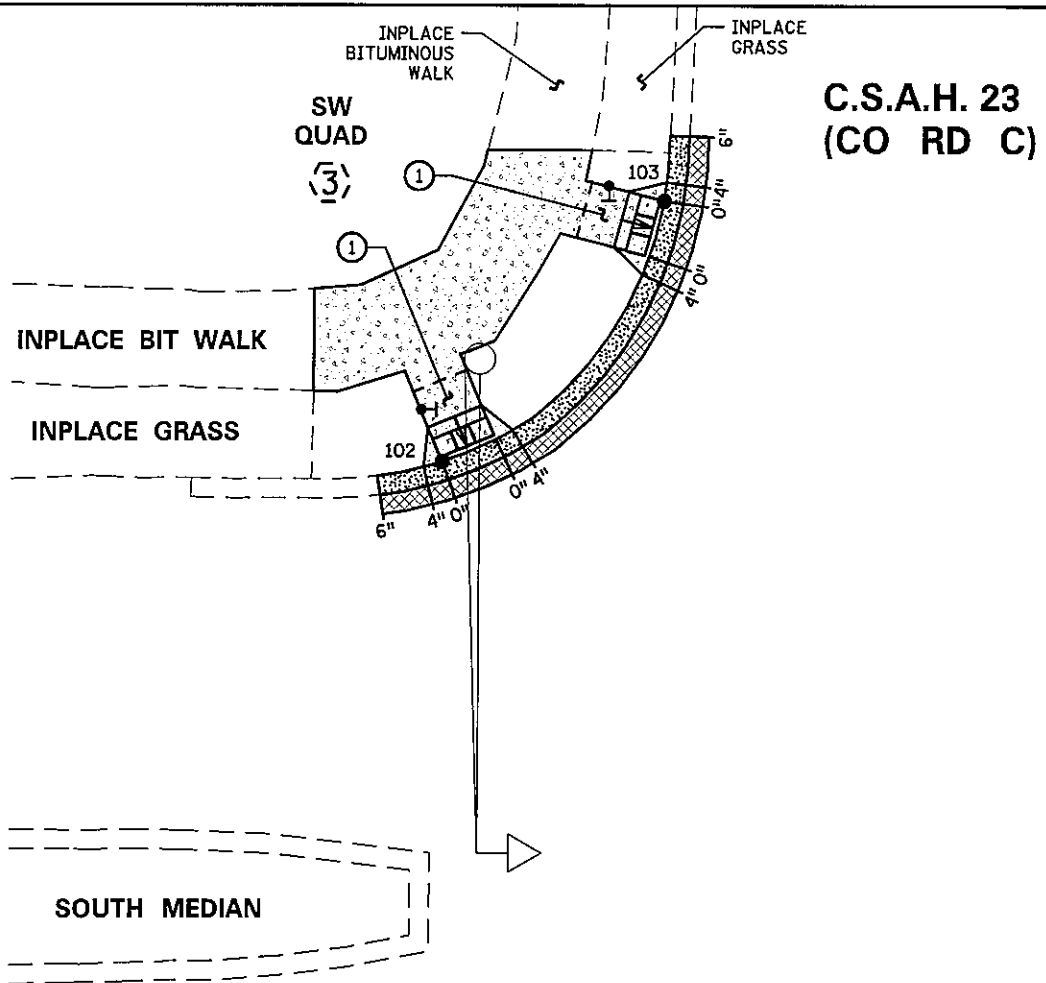
REMOVAL AND PAVEMENT MARKING PLAN
 REVISE SIGNAL SYSTEM A
 T.H. 51 AT C.S.A.H. 23 (COUNTY ROAD C)
 IN ROSEVILLE, RAMSEY COUNTY

S.A.P. NO. _____
 CERTIFIED BY *Michael P. Lubinsky*
LICENSED PROFESSIONAL ENGINEER

DRAWN BY: GDS CKD BY: BTJ DATE: 4-21-11
 LIC. NO. 19863 DATE: 4-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 21 OF 122 SHEETS

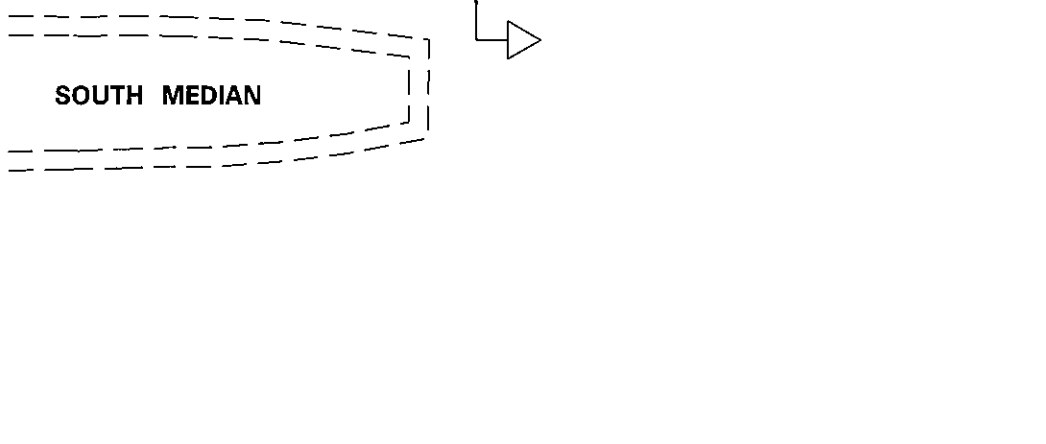
PLOTTED/REVISED/28/2011

DISTRICT #METRO
PLOT NAME:ped ramp detail A
PATH & FILENAME: P:\PWP:d1350791\PT20741D_sgl.dgn



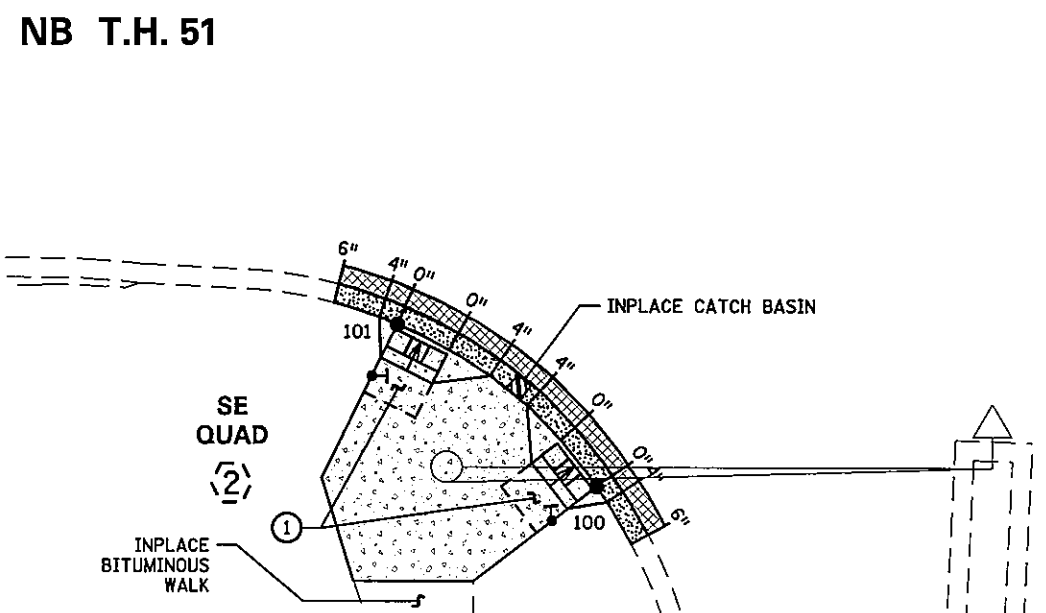
LEGEND

- INPLACE SIGNAL POLE
- CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
- PEDESTRIAN PUSH BUTTON STATION
- INPLACE SIGNAL BASE NO.
- INPLACE HANDHOLE
- EDGE OF INPLACE SURFACING
- CURB HEIGHT AT INDICATED LOCATION
- INTERSECTION POINT OF CROSSWALK EDGE AND PEDESTRIAN RAMP EDGE AT FACE OF CURB
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- 6" CONCRETE WALK
- 2" BITUMINOUS OVERLAY, 2' WIDE
- INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT



DETAIL POINTS		
POINT NO.	X	Y
100	556040.1979	183853.0938
101	556023.4670	183832.4388
102	555906.2086	183834.4886
103	555878.4248	183859.2749
104	555879.2914	183957.7692
105	555889.3385	183968.5529
106	555955.5501	183963.4644
107	555972.5890	183962.5061
108	556016.3855	183959.6613
109	556032.2455	183938.9910

- GENERAL NOTES:**
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.
- ① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.



**C.S.A.H. 23
(CO RD C)**

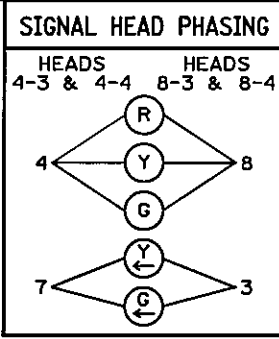
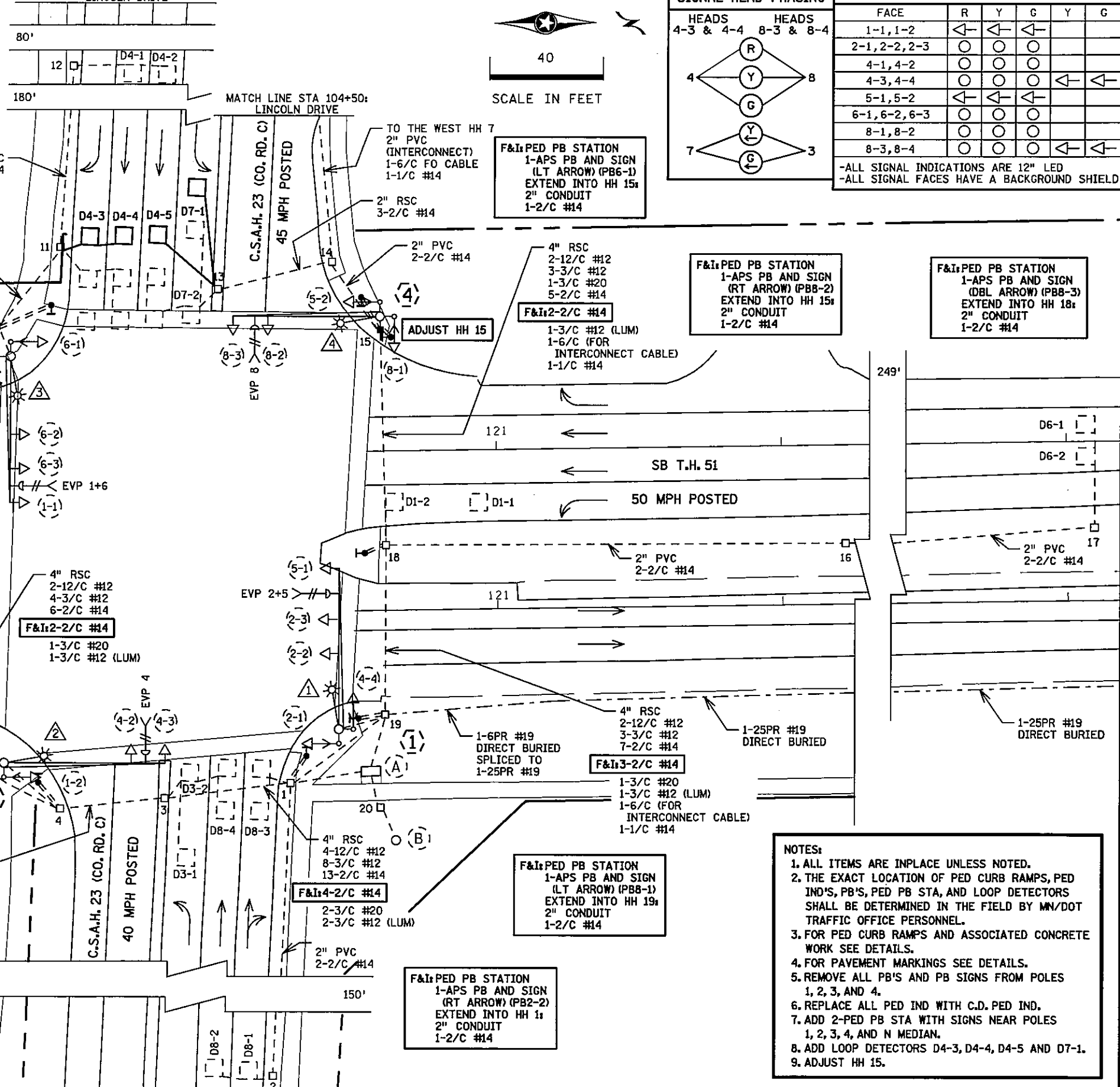
BY	DATE	REVISIONS	SYSTEM ID: 20741	T.E. 5367	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 2642 SNELLING AVE N		CERTIFIED BY: <i>Michael P. Dubinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 22 OF 122 SHEETS	
PEDESTRIAN CURB RAMP DETAILS REVISE SIGNAL SYSTEM A T.H. 51 AT C.S.A.H. 23 (COUNTY ROAD C) IN ROSEVILLE, RAMSEY COUNTY								

LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION	STATUS	TYPE
D1-1, D1-2	6x6	37 & 8	INPLACE	PVC
D2-1, D2-2	6x6	500	INPLACE	PVC
D3-1, D3-2	6x6	32 & 2	INPLACE	PVC
D4-1, D4-2	6x6	250	INPLACE	PVC
D4-3, D4-4, D4-5	2-6x6	-6 & 9	INPLACE	PVC
D4-3, D4-4, D4-5	6x6	24	F&I	SAW
D5-1, D5-2	2-6x6	3 & 18	INPLACE	PVC
D5-3, D5-4	6x6	15	INPLACE	PVC
D6-1, D6-2	6x6	500	INPLACE	PVC
D7-1, 7-2	2-6x6	-4 & 26	INPLACE	PVC
D7-1	6x6	35	F&I	SAW
D8-1, D8-2	6x6	250	INPLACE	PVC
D8-3, D8-4	6x6	.2 & 17	INPLACE	PVC

-ALL LOOP DETECTORS ARE PVC UNLESS NOTED OTHERWISE
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

MATCH LINE STA 101+95:
LINCOLN DRIVE



SIGNAL FACE CHART

FACE	R	Y	G	Y	G
1-1, 1-2	←	←	←		
2-1, 2-2, 2-3	○	○	○		
4-1, 4-2	○	○	○		
4-3, 4-4	○	○	○	←	←
5-1, 5-2	←	←	←		
6-1, 6-2, 6-3	○	○	○		
8-1, 8-2	○	○	○		
8-3, 8-4	○	○	○	←	←

-ALL SIGNAL INDICATIONS ARE 12" LED
 -ALL SIGNAL FACES HAVE A BACKGROUND SHIELD

F&I PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB4-1)
 EXTEND INTO HH 10:
 2" CONDUIT
 1-2/C #14

F&I PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB6-2)
 EXTEND INTO HH 10:
 2" CONDUIT
 1-2/C #14

F&I PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB6-1)
 EXTEND INTO HH 15:
 2" CONDUIT
 1-2/C #14

F&I PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB8-2)
 EXTEND INTO HH 15:
 2" CONDUIT
 1-2/C #14

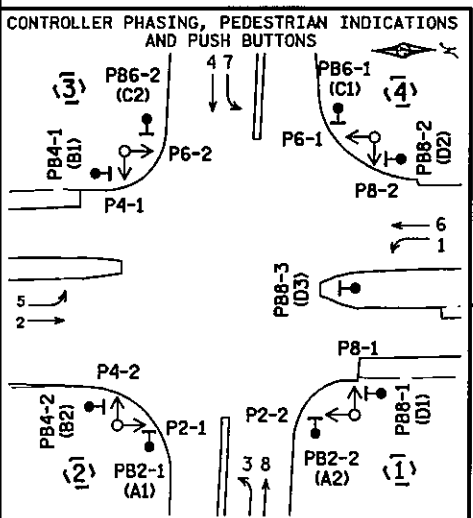
F&I PED PB STATION
 1-APS PB AND SIGN (DBL ARROW) (PB8-3)
 EXTEND INTO HH 18:
 2" CONDUIT
 1-2/C #14

F&I PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB4-2)
 EXTEND INTO HH 5:
 2" CONDUIT
 1-2/C #14

F&I PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB2-1)
 EXTEND INTO HH 4:
 2" CONDUIT
 1-2/C #14

F&I PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB8-1)
 EXTEND INTO HH 19:
 2" CONDUIT
 1-2/C #14

F&I PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB2-2)
 EXTEND INTO HH 1:
 2" CONDUIT
 1-2/C #14



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 3 AND 7 BEING A PROTECTED/PERMISSIVE LEFT TURN PHASES, WITH PHASE(S) 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 3, AND 4.
 6. REPLACE ALL PED IND WITH C.D. PED IND.
 7. ADD 2-PED PB STA WITH SIGNS NEAR POLES 1, 2, 3, 4, AND N MEDIAN.
 8. ADD LOOP DETECTORS D4-3, D4-4, D4-5 AND D7-1.
 9. ADJUST HH 15.

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 I/PLOT NAME: layout 4
 PATH & FILENAME: IP_PWP-d135079NPT20741_sgl.dgn

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 IPLOT NAME: notes A
 PATH & FILENAME: IP_PWP-d135079NPT20741...sgl.dgn

(3) PA100 POLE FOUNDATION
 TYPE PA100-A-50-D30-9 (DAVIT AT 350 DEG)
 3-ONE WAY SIGNALS OVERHEAD AT 0', 12' AND 25'
 2-TYPE 10B POLE MOUNTED AT 90 & 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 1+6)
 LUMINAIRE - 250 W HPS

REMOVE: 2-PED PB AND SIGNS

TYPE D SIGN
 EXTEND INTO HH 10
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

(2) PA100 POLE FOUNDATION
 TYPE PA100-A-55-D30-9 (DAVIT AT 350 DEG)
 2-ONE WAY SIGNALS OVERHEAD AT 0' AND 12'
 2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 4)
 LUMINAIRE - 250 W HPS

REMOVE: 2-PED PB AND SIGNS

1-R10-12 SIGN ADJACENT TO HEAD 4-3
 TYPE D SIGN
 EXTEND INTO HH 4
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

(4) PA100 POLE FOUNDATION
 TYPE PA100-A-50-D30-9 (DAVIT AT 350 DEG)
 2-ONE WAY SIGNALS OVERHEAD AT 0' AND 12'
 2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)
 LUMINAIRE - 250 W HPS

REMOVE: 2-PED PB AND SIGNS

1-R10-12 SIGN ADJACENT TO HEAD 8-3
 TYPE D SIGN
 EXTEND INTO HH 14
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

(1) PA100 POLE FOUNDATION
 TYPE PA100-A-55-D30-9 (DAVIT AT 350 DEG)
 3-ONE WAY SIGNALS OVERHEAD AT 0', 18' AND 30'
 2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 2+5)
 LUMINAIRE - 250 W HPS

REMOVE: 2-PED PB AND SIGNS

TYPE D SIGN
 EXTEND INTO HH 19
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

(A) EQUIPMENT PAD
 SERVICE CABINET
 MASTER CONTROLLER,
 CONTROLLER & CABINET
 4" RSC TO HH 19 4" RSC TO HH 1
 4-12/C #12 4-12/C #12
 9-3/C #12 8-3/C #12
 2-3/C #20 2-3/C #20
 7-2/C #14 16-2/C #14

F&I: 4-2/C #14

F&I: 5-2/C #14

1-6PR #19
 (INTERCONNECT)
 1-6/C FO CABLE
 1-1/C #14
 3" RSC STUBBED OUT (THREADED
 & CAPPED BOTH ENDS)
 2" RSC TO CONTROLLER
 2-1/C #6
 1-1/C # 6 INS. GR.
 SERVICE CABINET TO HH 1
 2" RSC
 4-3/C #12
 SERVICE CABINET TO HH 20
 3-1/C #2
 HH 1 TO HH 19
 2" PVC
 2-3/C #12 (LUM)

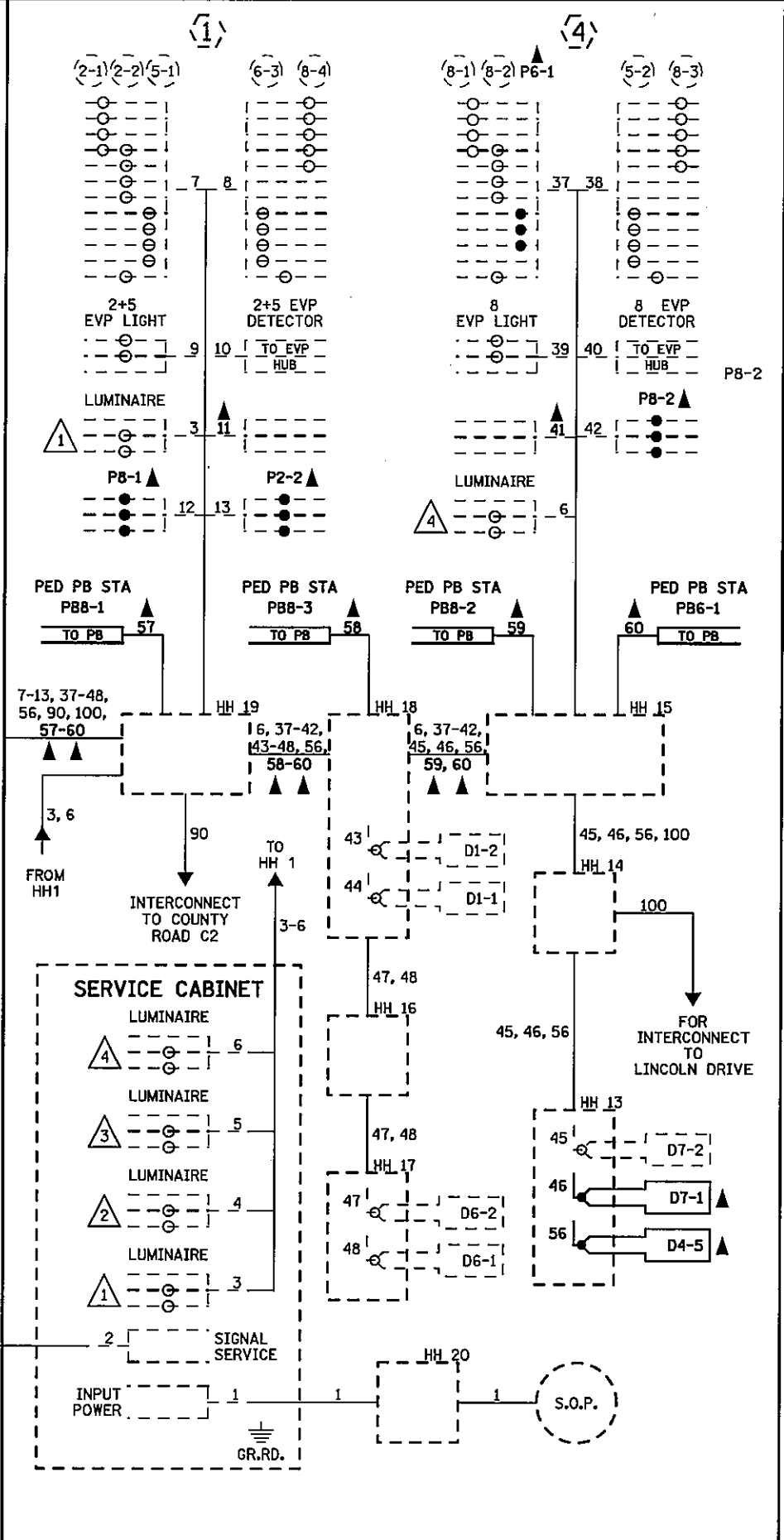
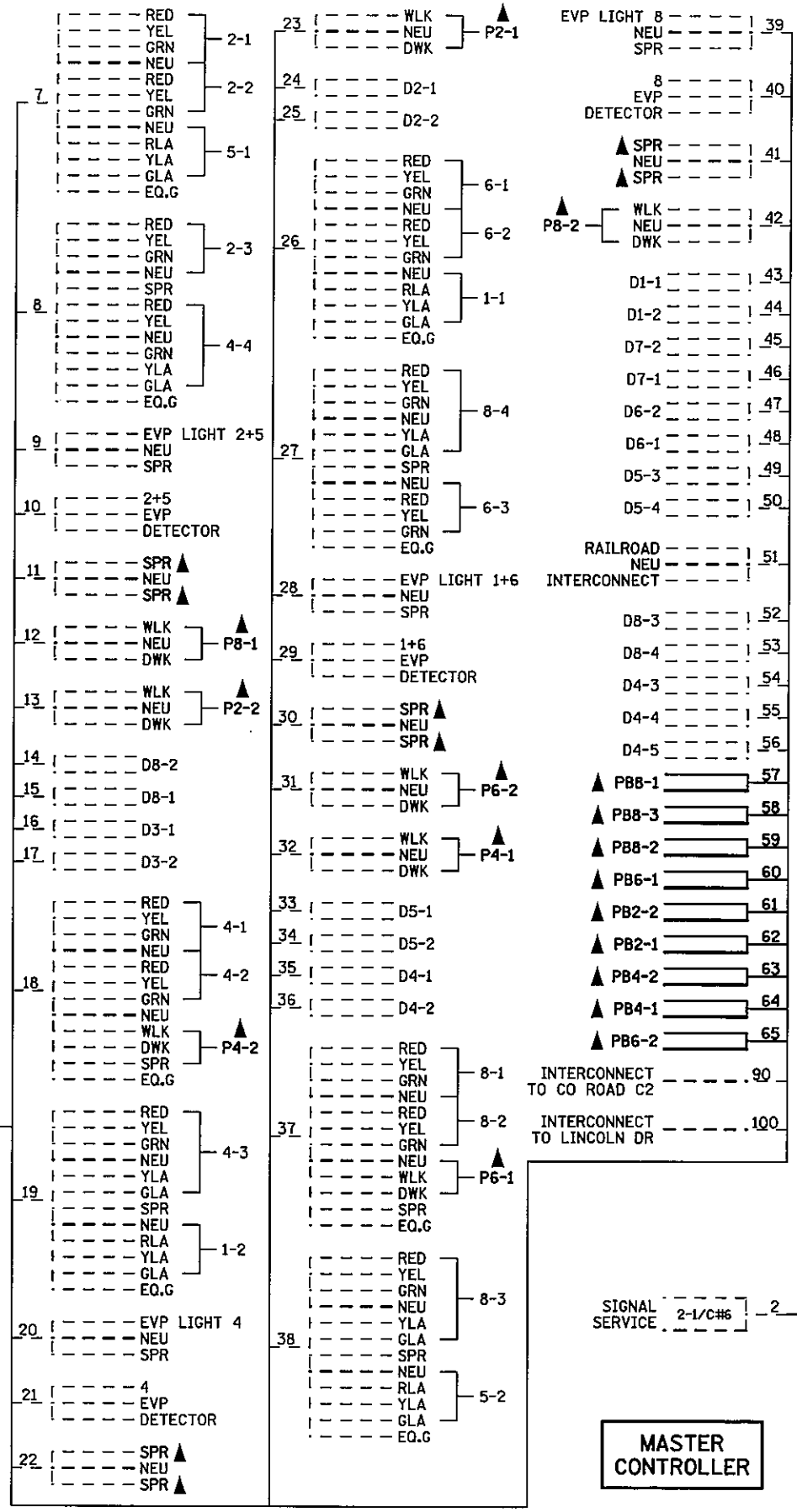
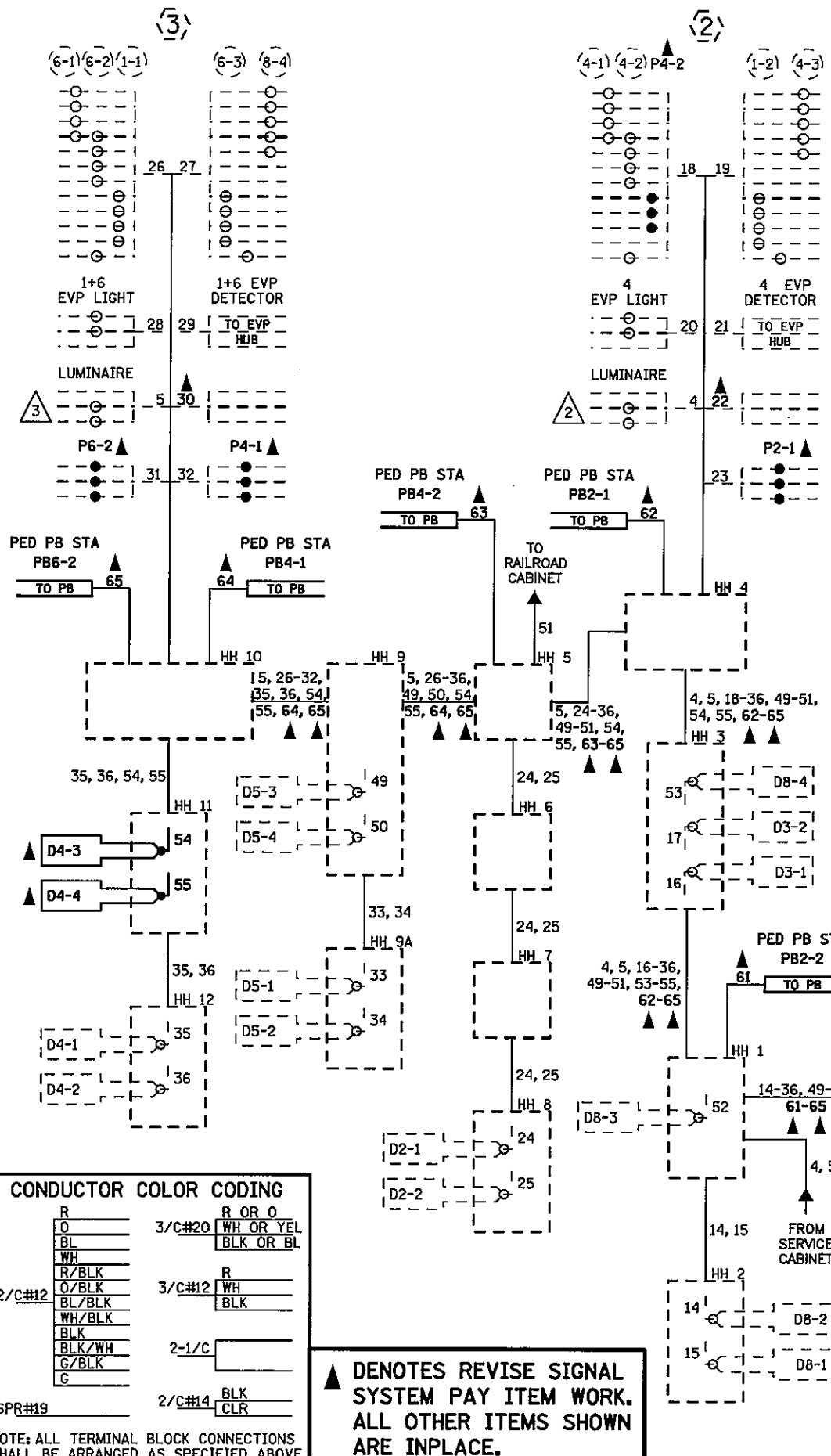
(B) S.O.P. - WOOD POLE (BY XCEL)
 2" RSC RISER, WEATHERHEAD
 & CONDUIT TO HH 20
 3-1/C #2

BY	DATE	REVISIONS	SYSTEM ID: 20741	T.E. 5367	INTERSECTION LAYOUT NOTES	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 2642 SNELLING AVE N		REVISE SIGNAL SYSTEM A	CERTIFIED BY: <i>Michael P. Subashy</i>			LIC. NO. 19863
			MASTER ID:	T.E.	T.H. 51 AT C.S.A.H. 23 (COUNTY ROAD C)	STATE PROJ. NO. 8825-393			DATE: 4-21-11
					IN ROSEVILLE, RAMSEY COUNTY				SHEET NO. 24 OF 122 SHEETS

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: wiring A
PATH & FILENAME: IP_PWP-wj35079NPT20741_sgl.dgn

CONTROLLER CABINET



BY	DATE	REVISIONS	SYSTEM ID: 20741	T.E. 5367	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 2642 SNELLING AVE N		CERTIFIED BY: <i>Michael P. Gubinsky</i>		LIC. NO. 19863	DATE: 4-21-11
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 25 OF 122 SHEETS	

FIELD WIRING DIAGRAM
REVISE SIGNAL SYSTEM A
T.H. 51 AT C.S.A.H. 23 (COUNTY ROAD C)
IN ROSEVILLE, RAMSEY COUNTY

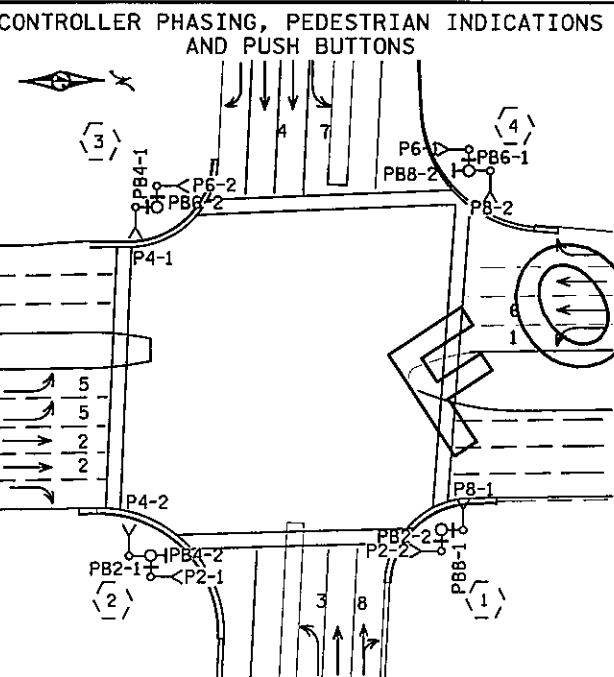
PLOTTED/REVISED: 4/20/2011

(1) NB STA 220+41.34 RT
 PA 100 POLE FOUNDATION
 TYPE PA100-A-55-D30-9 (DAVIT AT 350')
 3-ONE WAY SIGNALS OVERHEAD (0', 18' & 30')
 FROM THE END OF THE MAST ARM)
 2-TYPE 10B POLE MOUNTED AT 90' & 180'
 1-EVP DETECTOR & CONFIRMATORY LIGHT
 MOUNTED 6' FROM THE END OF MAST ARM
 LUMINAIRE - 250 W HPS
 2-PED PB & SIGN
 TYPE D SIGN - SEE SIGNING SHEET
 EXTEND INTO HH 19
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

(2) NB STA 219+19.43 RT
 PA 100 POLE FOUNDATION
 TYPE PA100-A-55-D30-9 (DAVIT AT 350')
 2-ONE WAY SIGNALS OVERHEAD (0' & 12')
 FROM THE END OF THE MAST ARM)
 2-TYPE 10B POLE MOUNTED AT 90' AND 180'
 1-EVP DETECTOR & CONFIRMATORY LIGHT
 MOUNTED 6' FROM THE END OF THE MAST ARM
 LUMINAIRE - 250 W HPS
 2-PED PB & SIGN
 1-R10-12 SIGN ADJACENT TO HEAD 4-3
 TYPE D SIGN - SEE SIGNING SHEET
 EXTEND INTO HH 4
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

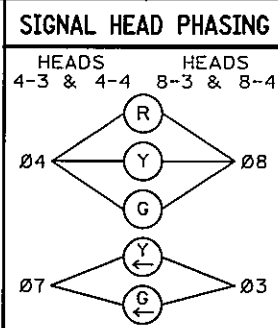
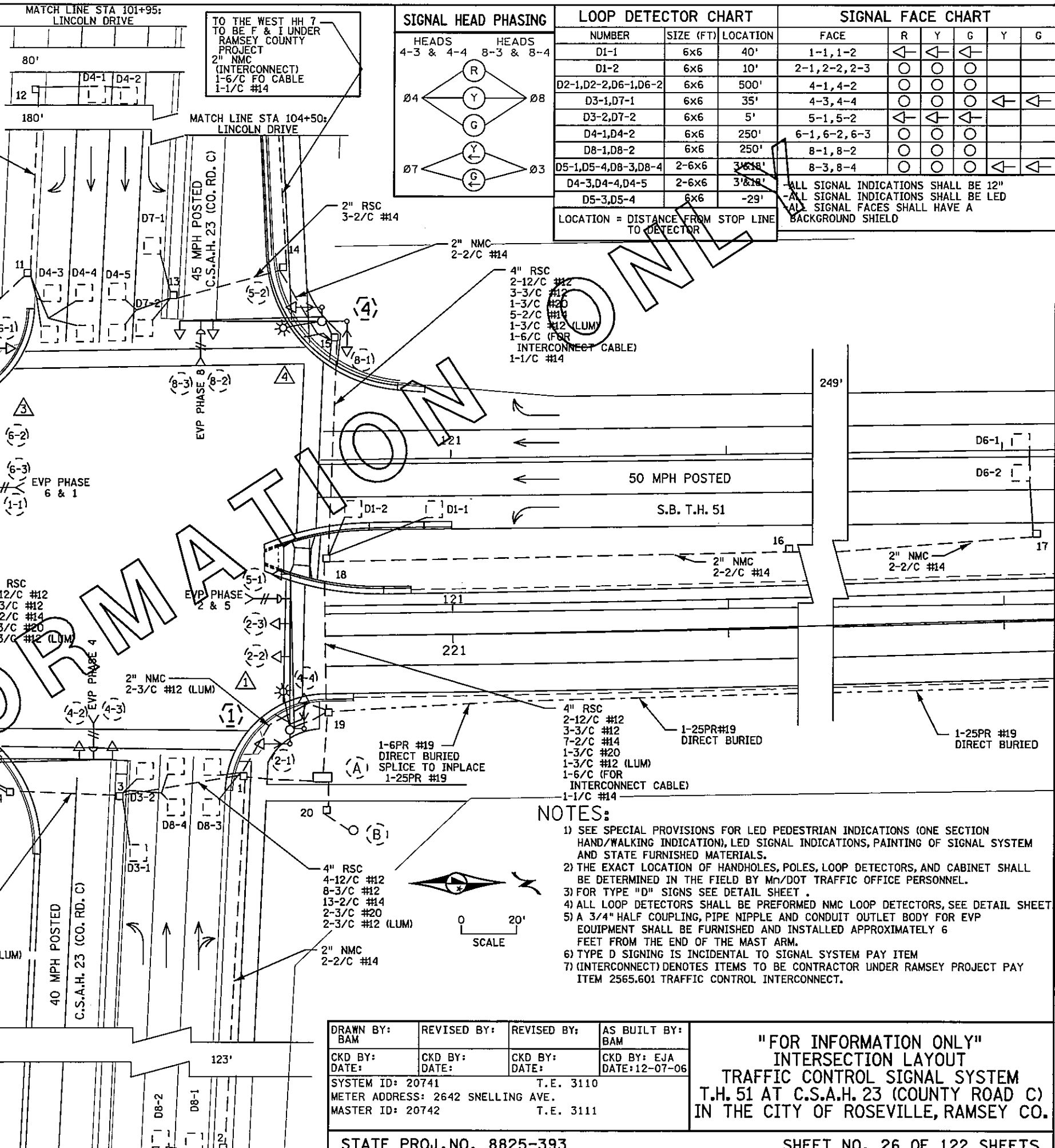
(3) SB STA 119+24.37 LT
 PA 100 POLE FOUNDATION
 TYPE PA100-A-55-D30-9 (DAVIT AT 350')
 3-ONE WAY SIGNALS OVERHEAD (0', 12' & 25')
 FROM THE END OF THE MAST ARM)
 2-TYPE 10B POLE MOUNTED AT 90' & 180'
 1-EVP DETECTOR & CONFIRMATORY LIGHT
 MOUNTED 6' FROM THE END OF MAST ARM
 LUMINAIRE - 250 W HPS
 2-PED PB & SIGN
 TYPE D SIGN - SEE SIGNING SHEET
 EXTEND INTO HH 10
 3" RSC
 2-12/C #12
 4-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

(4) SB STA 120+54.51 LT
 PA 100 POLE FOUNDATION
 TYPE PA100-A-50-D30-9 (DAVIT AT 350')
 2-ONE WAY SIGNALS OVERHEAD (0' & 12')
 FROM THE END OF THE MAST ARM)
 2-TYPE 10B POLE MOUNTED AT 90' AND 180'
 1-EVP DETECTOR & CONFIRMATORY LIGHT
 MOUNTED 12' FROM THE END OF THE MAST ARM
 LUMINAIRE - 250 W HPS
 2-PED PB & SIGN
 1-R10-12 SIGN ADJACENT TO HEAD 8-3
 TYPE D SIGN - SEE SIGNING SHEET
 EXTEND INTO HH 14
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)



EQUIPMENT PAD (SEE SHEET NO. 160)
 SERVICE CABINET (SEE SHEET NO. 158)
 MASTER CONTROLLER
 CONTROLLER & CABINET
 4" RSC TO HH 1
 4-12/C #12
 8-3/C #12
 13-2/C #14
 2-3/C #20
 16-2/C #14
 4" RSC TO HH 19
 4-12/C #12 (INTERCONNECT)
 9-3/C #12 1-6/C FO CABLE
 2-3/C #20 1-1/C #14
 7-2/C #14
 1-6PR #19
 3" RSC STUBBED OUT (THREADED & CAPPED BOTH ENDS)
 2" RSC TO CONTROLLER
 2-1/C #6
 1-1/C # 6 INS. GR.
 SERVICE CABINET TO HH 1
 2" RSC
 4-3/C #12
 SERVICE CABINET TO HH 20
 3-1/C #2

(A) INPLACE S.O.P. - WOOD POLE (BY XCEL)
 2" RSC RISER, WEATHERHEAD & CONDUIT TO HH 20
 3-1/C #2



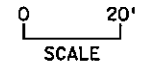
LOOP DETECTOR CHART			SIGNAL FACE CHART					
NUMBER	SIZE (FT)	LOCATION	FACE	R	Y	G	Y	G
D1-1	6x6	40'	1-1,1-2	←	←	←		
D1-2	6x6	10'	2-1,2-2,2-3	○	○	○		
D2-1,D2-2,D6-1,D6-2	6x6	500'	4-1,4-2	○	○	○		
D3-1,D7-1	6x6	35'	4-3,4-4	○	○	○	←	←
D3-2,D7-2	6x6	5'	5-1,5-2	←	←	←		
D4-1,D4-2	6x6	250'	6-1,6-2,6-3	○	○	○		
D8-1,D8-2	6x6	250'	8-1,8-2	○	○	○		
D5-1,D5-4,D8-3,D8-4	2-6x6	3'x18'	8-3,8-4	○	○	○	←	←
D4-3,D4-4,D4-5	2-6x6	3'x18'						
D5-3,D5-4	6x6	-29'						

LOCATION = DISTANCE FROM STOP LINE TO DETECTOR

ALL SIGNAL INDICATIONS SHALL BE 12"
 ALL SIGNAL INDICATIONS SHALL BE LED
 ALL SIGNAL FACES SHALL HAVE A
 BACKGROUND SHIELD

NOTES:

- 1) SEE SPECIAL PROVISIONS FOR LED PEDESTRIAN INDICATIONS (ONE SECTION HAND/WALKING INDICATION), LED SIGNAL INDICATIONS, PAINTING OF SIGNAL SYSTEM AND STATE FURNISHED MATERIALS.
- 2) THE EXACT LOCATION OF HANDHOLES, POLES, LOOP DETECTORS, AND CABINET SHALL BE DETERMINED IN THE FIELD BY Mn/DOT TRAFFIC OFFICE PERSONNEL.
- 3) FOR TYPE "D" SIGNS SEE DETAIL SHEET.
- 4) ALL LOOP DETECTORS SHALL BE PREFORMED NMC LOOP DETECTORS, SEE DETAIL SHEET
- 5) A 3/4" HALF COUPLING, PIPE NIPPLE AND CONDUIT OUTLET BODY FOR EVP EQUIPMENT SHALL BE FURNISHED AND INSTALLED APPROXIMATELY 6 FEET FROM THE END OF THE MAST ARM.
- 6) TYPE D SIGNING IS INCIDENTAL TO SIGNAL SYSTEM PAY ITEM
- 7) (INTERCONNECT) DENOTES ITEMS TO BE CONTRACTOR UNDER RAMSEY PROJECT PAY ITEM 2565.601 TRAFFIC CONTROL INTERCONNECT.



DRAWN BY: BAM	REVISED BY:	REVISED BY:	AS BUILT BY: BAM
CKD BY: DATE:	CKD BY: DATE:	CKD BY: DATE:	CKD BY: EJA DATE: 12-07-06
SYSTEM ID: 20741		T.E. 3110	
METER ADDRESS: 2642 SNELLING AVE.			
MASTER ID: 20742		T.E. 3111	

"FOR INFORMATION ONLY"
 INTERSECTION LAYOUT
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 51 AT C.S.A.H. 23 (COUNTY ROAD C)
 IN THE CITY OF ROSEVILLE, RAMSEY CO.

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
IPLLOT NAME: Info only wiring A
PATH & FILENAME: IP_PWPd\35079VPT2074\INFO\sql.dgn

CONTROLLER CABINET

MASTER CONTROLLER

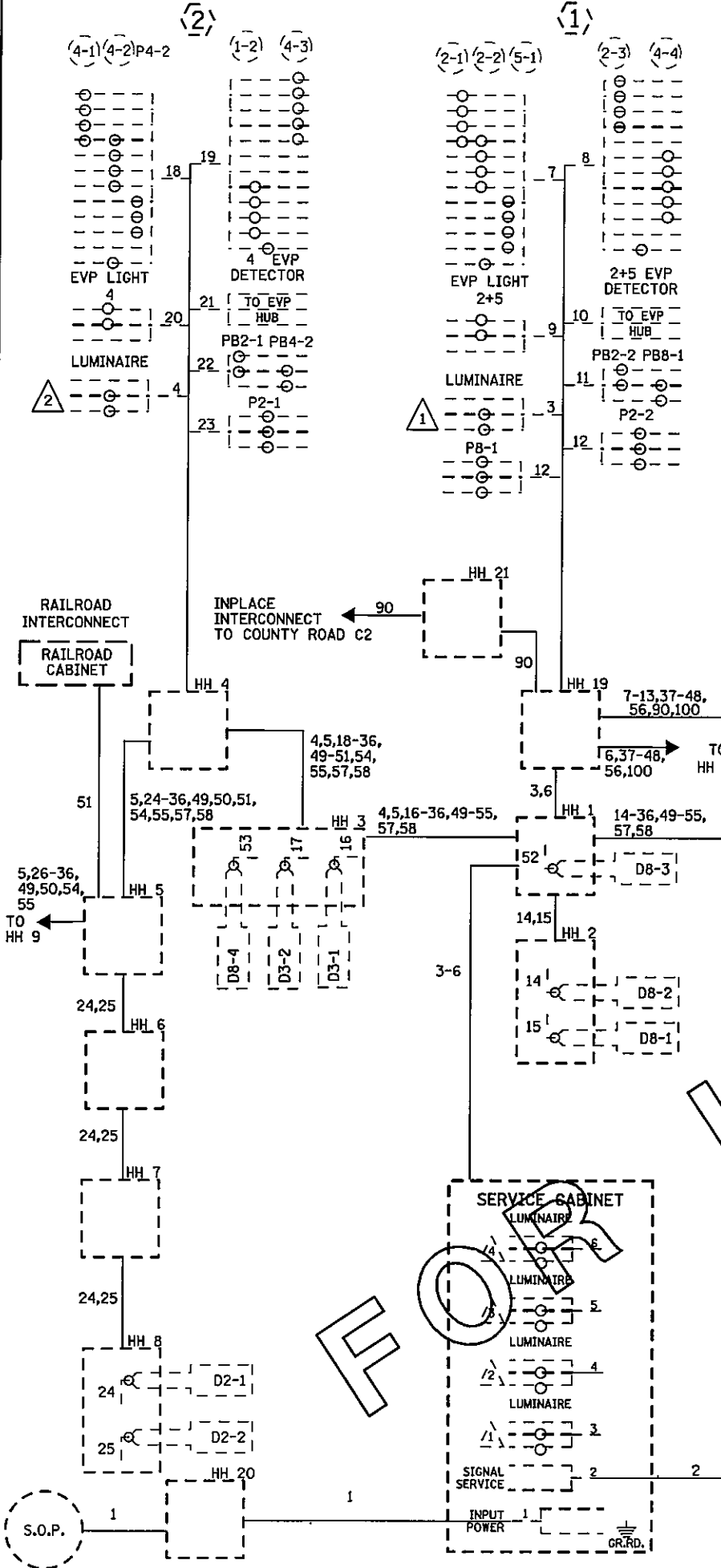
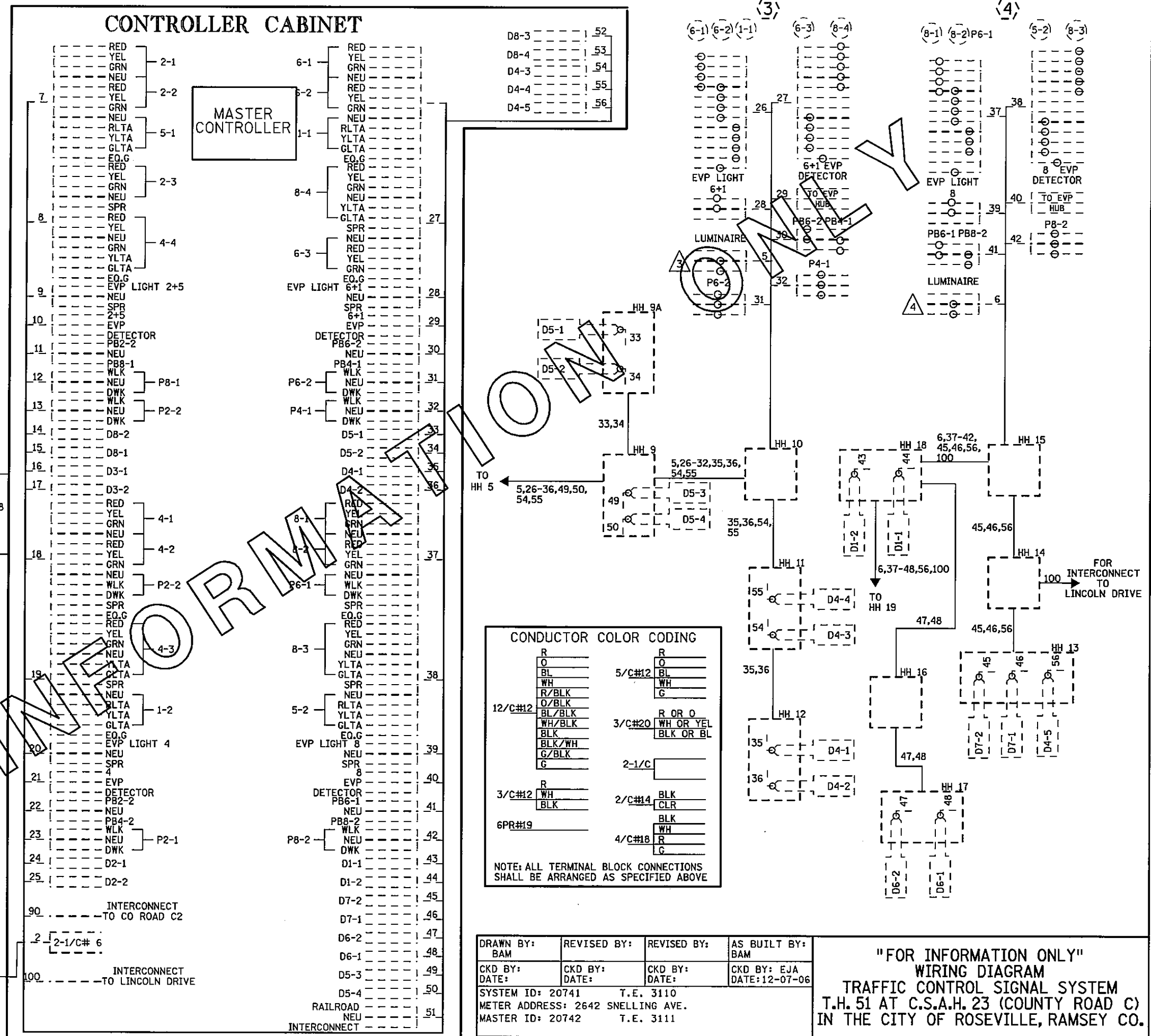
CONDUCTOR COLOR CODING

R	R
O	O
BL	5/C#12 BL
WH	WH
R/BLK	G
12/C#12 O/BLK	R OR O
BL/BLK	3/C#20 WH OR YEL
WH/BLK	BLK OR BL
BLK	
BLK/WH	2-1/C
G/BLK	
G	
3/C#12 WH	2/C#14 BLK
BLK	CLR
6PR#19	BLK
	WH
	R
	G

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

DRAWN BY: BAM	REVISED BY:	REVISED BY:	AS BUILT BY: BAM
CKD BY: DATE:	CKD BY: DATE:	CKD BY: DATE:	CKD BY: EJA DATE: 12-07-06
SYSTEM ID: 20741 T.E. 3110		METER ADDRESS: 2642 SNELLING AVE.	
MASTER ID: 20742 T.E. 3111			

"FOR INFORMATION ONLY"
WIRING DIAGRAM
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 51 AT C.S.A.H. 23 (COUNTY ROAD C)
IN THE CITY OF ROSEVILLE, RAMSEY CO.



FOR INFORMATION ONLY

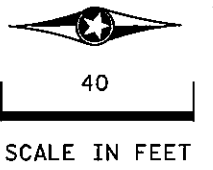
FOR INFORMATION ONLY

FOR INFORMATION ONLY

FOR INFORMATION ONLY

PLOTTED/REVISED: 4/27/2011

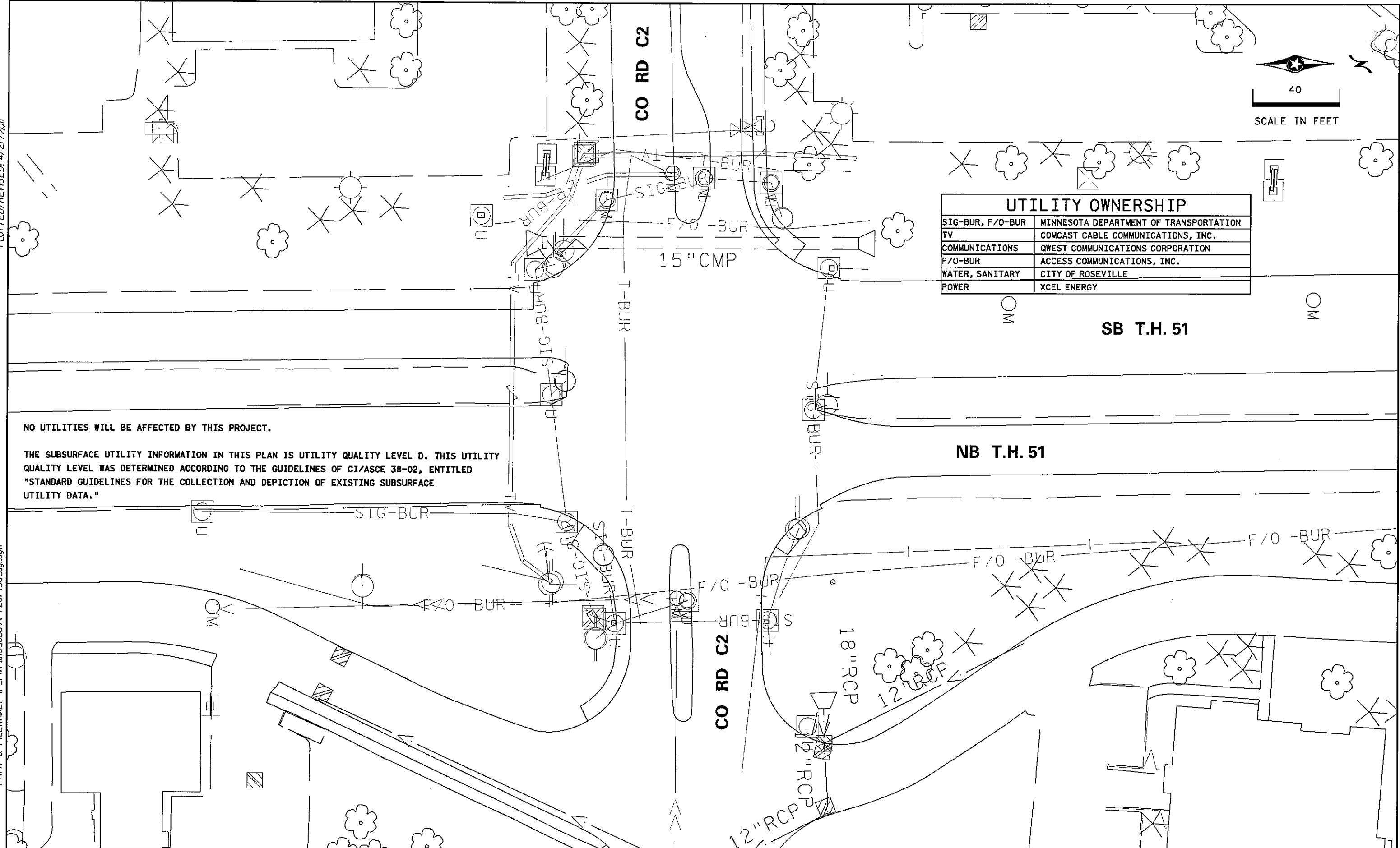
DISTRICT #: METRO
PLOT NAME: topog & utilities B
PATH & FILENAME: IP_PWP-dl35056APT20743U_sgl.dgn



UTILITY OWNERSHIP	
SIG-BUR, F/O-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
TV	COMCAST CABLE COMMUNICATIONS, INC.
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION
F/O-BUR	ACCESS COMMUNICATIONS, INC.
WATER, SANITARY	CITY OF ROSEVILLE
POWER	XCEL ENERGY

NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

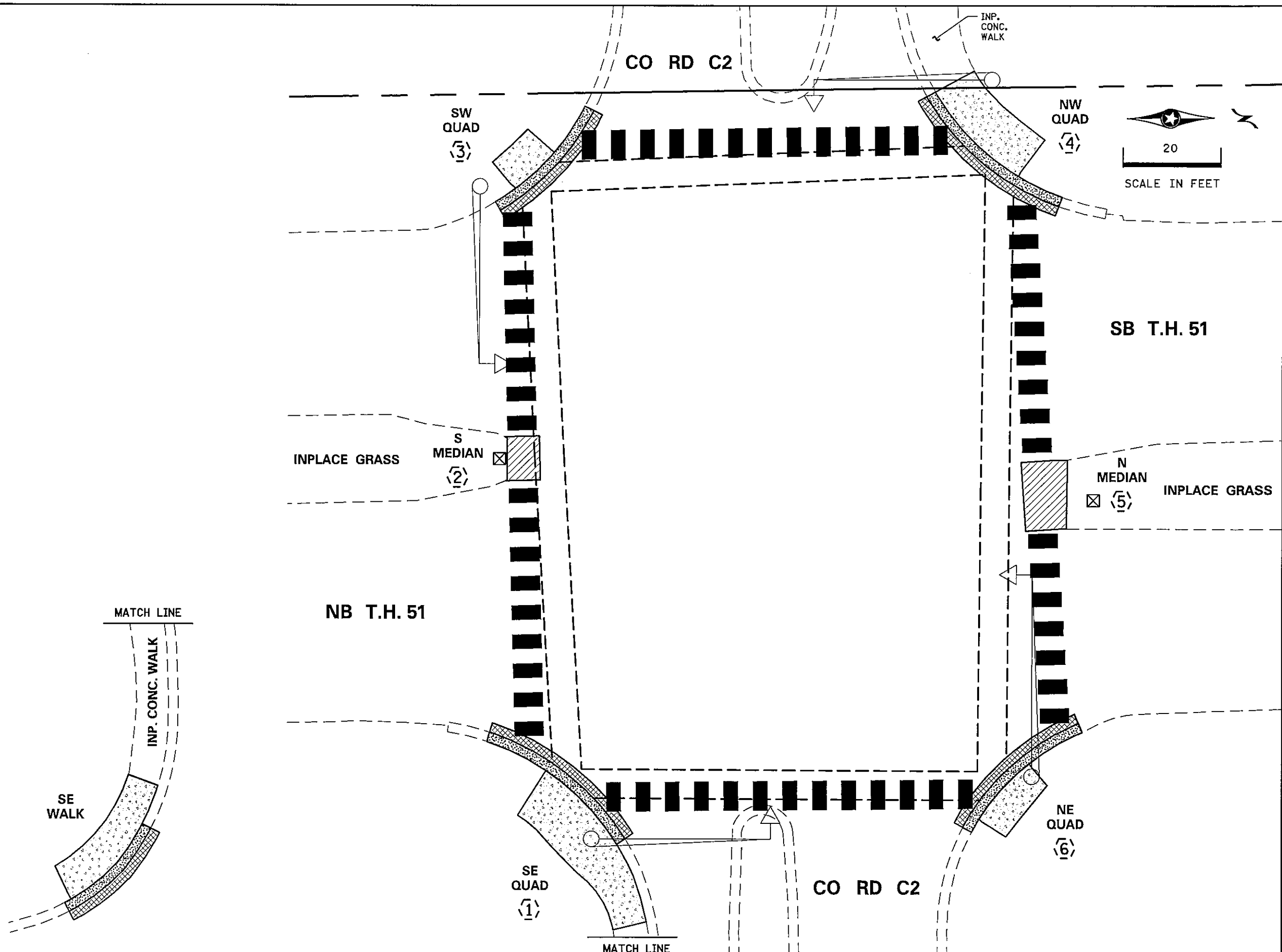


BY	DATE	REVISIONS	SYSTEM ID: 20743	T.E. 5368	INPLACE TOPOGRAPHY AND UTILITY PLAN REVISE SIGNAL SYSTEM B T.H. 51 AT COUNTY ROAD C2 IN ROSEVILLE, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY:GDS	CKD BY:BTJ	DATE:4-21-11
			METER ADDRESS: 1584 CO RD C2 W			CERTIFIED BY: <i>Michael P. Gubinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.		STATE PROJ.NO. 8825-393	SHEET NO. 28 OF 122 SHEETS		

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 IPLOT NAME: removals & pave mark B
 PATH & FILENAME: IP_PWP-d1350564PT20743R_sgl.dgn

LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK
	MILL BITUMINOUS SURFACE (2.0")
	REMOVE BITUMINOUS PAVEMENT
	INPLACE SIGNAL PEDESTAL
	INPLACE SIGNAL BASE NO.
	REMOVE CROSSWALK
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING



BY	DATE	REVISIONS	SYSTEM ID: 20743	T.E. 5368	REMOVAL AND PAVEMENT MARKING PLAN	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 1584 CO RD C2 W		REVISE SIGNAL SYSTEM B	CERTIFIED BY: <i>Michael P. Lubinsky</i>			LIC. NO. 19863
			MASTER ID:	T.E.	T.H. 51 AT COUNTY ROAD C2	LICENSED PROFESSIONAL ENGINEER			DATE: 4-21-11
					IN ROSEVILLE, RAMSEY COUNTY	STATE PROJ. NO. 8825-393			SHEET NO. 29 OF 122 SHEETS

PLOTTED/REVISED: 4/28/2011

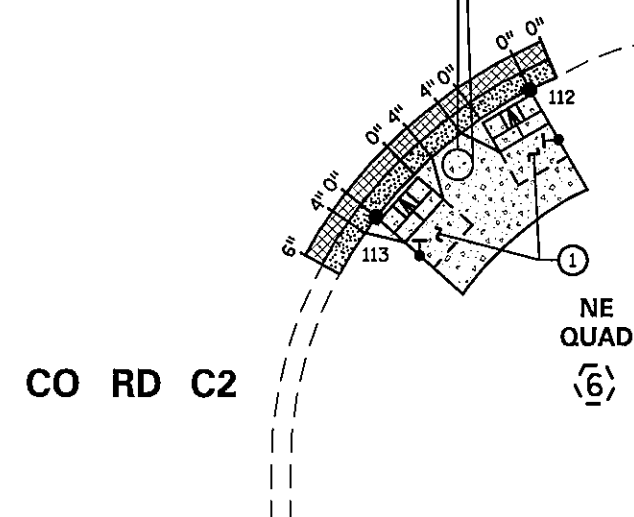
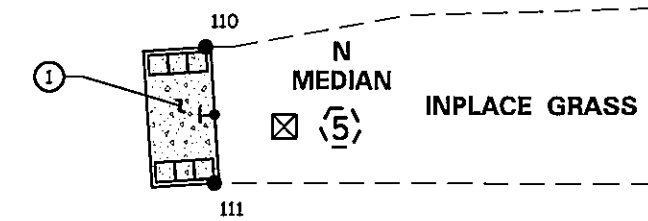
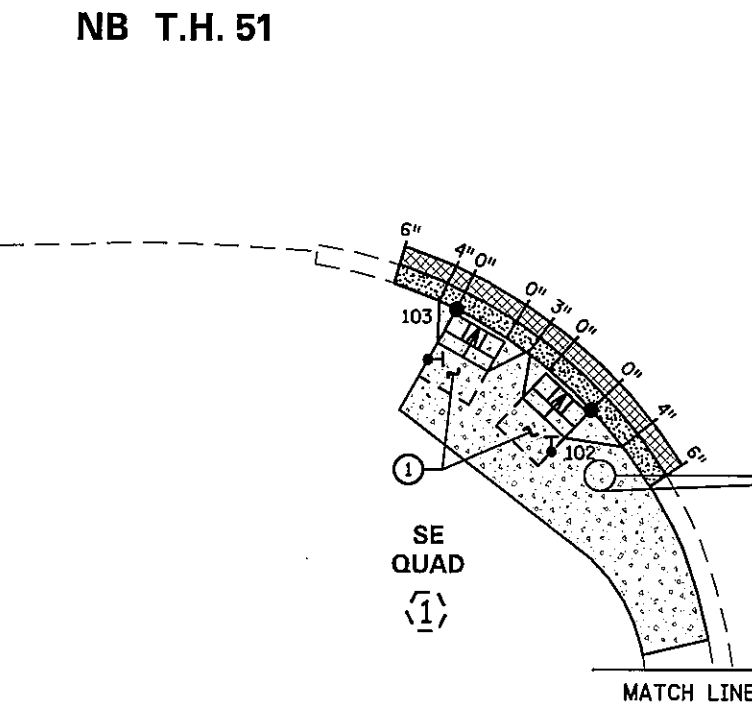
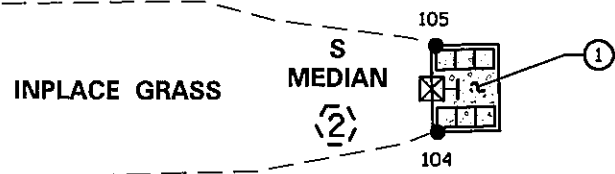
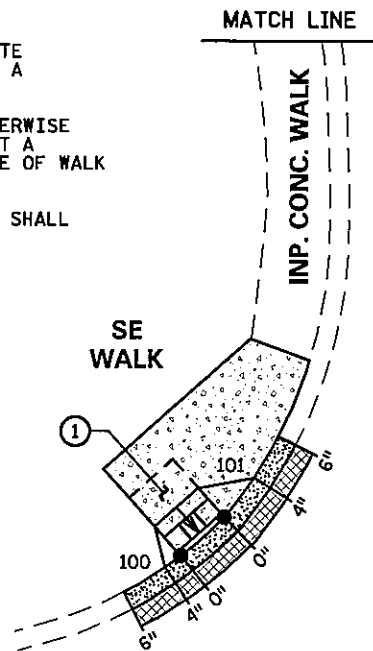
DISTRICT #: METRO
 I/PLOT NAME: ped ramp detail B
 PATH & FILENAME: IP_PWP-d\350564\PT20743D_spl.dgn

LEGEND	
	INPLACE SIGNAL POLE
	CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
	PEDESTRIAN PUSH BUTTON STATION
	INPLACE SIGNAL BASE NO.
	INPLACE SIGNAL PEDESTAL POLE
	EDGE OF INPLACE SURFACING
	X" CURB HEIGHT AT INDICATED LOCATION
	INTERSECTION POINT OF CROSSWALK EDGE AND PEDESTRIAN RAMP EDGE AT FACE OF CURB
	TRUNCATED DOMES (SEE STANDARD PLATE 7038)
	CONSTRUCT CONCRETE CURB & GUTTER
	6" CONCRETE WALK
	2" BITUMINOUS OVERLAY, 2' WIDE
	INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT

DETAIL POINTS		
POINT NO.	X	Y
100	556067.9106	186373.7930
101	556063.9194	186378.2730
102	555987.3742	186375.4952
103	555976.9660	186361.4794
104	555920.5656	186359.3100
105	555911.5503	186359.0742
106	555861.6673	186358.6566
107	555849.4321	186371.1055
108	555848.4949	186452.2368
109	555859.2686	186465.9698
110	555916.2765	186470.6450
111	555930.3865	186471.5934
112	555973.5471	186473.9606
113	555986.7955	186457.9452

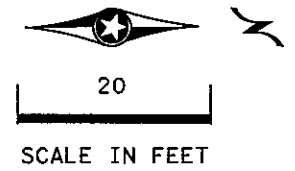
- GENERAL NOTES:
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.

① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.



CO RD C2

NW QUAD



SB T.H. 51

BY	DATE	REVISIONS

SYSTEM ID: 20743 T.E. 5368
 METER ADDRESS: 1584 CO RD C2 W
 MASTER ID: T.E.

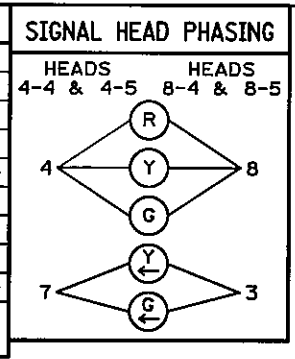
PEDESTRIAN CURB RAMP DETAILS
 REVISE SIGNAL SYSTEM B
 T.H. 51 AT COUNTY ROAD C2
 IN ROSEVILLE, RAMSEY COUNTY

S.A.P. NO. _____
 CERTIFIED BY: *Michael P. Dubinsky* LIC. NO. 19863 DATE: 4-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 30 OF 122 SHEETS

PLOTTED/REVISED: 4/20/2011

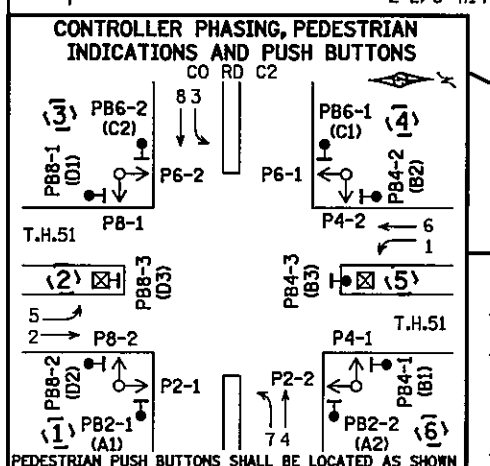
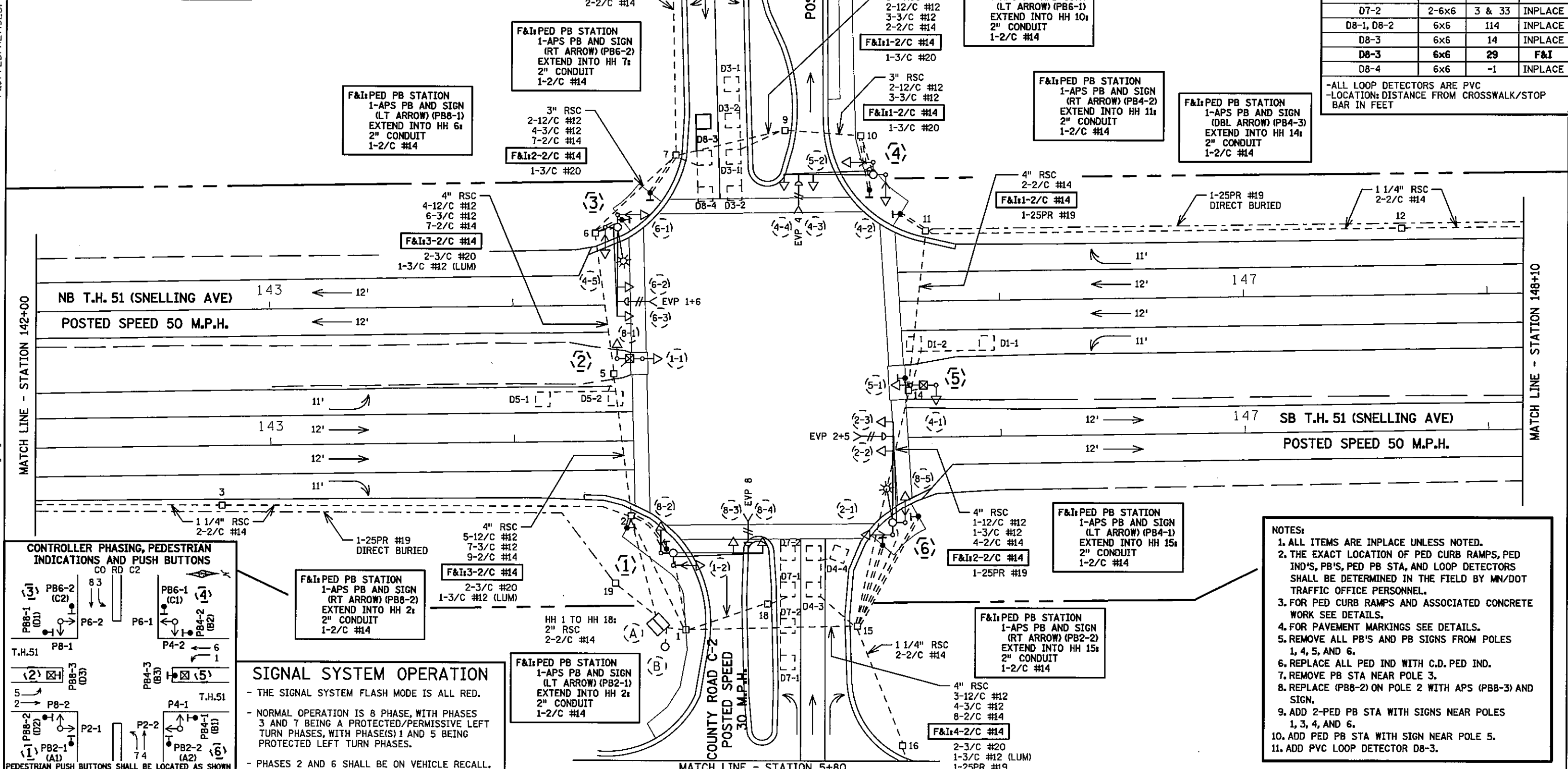
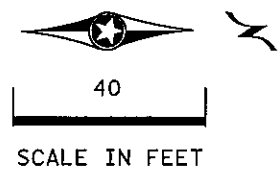
DISTRICT #: METRO
PLOT NAME: layout B
PATH & FILENAME: IP_PWP-dj350564PT20743_sgl.dgn

SIGNAL FACE CHART					
FACE	R	Y	G	Y	G
1-1, 1-2	◀	◀	◀		
2-1, 2-2, 2-3	○	○	○		
4-1, 4-2, 4-3	○	○	○		
4-4, 4-5	○	○	○	◀	◀
5-1, 5-2	◀	◀	◀		
6-1, 6-2, 6-3	○	○	○		
8-1, 8-2, 8-3	○	○	○		
8-4, 8-5	○	○	○	◀	◀



LOOP DETECTOR CHART				
NUMBER	SIZE (FT)	LOCATION	STATUS	
D1-1, D1-2	6x6	2 & 32	INPLACE	
D2-1, D2-2	6x6	367	INPLACE	
D3-1	2-6x6	14 & 44	INPLACE	
D3-2	2-6x6	-1 & 29	INPLACE	
D4-1, D4-2	6x6	163	INPLACE	
D4-3, D4-4	2-6x6	3 & 18	INPLACE	
D4-4	6x6	3	INPLACE	
D5-1, D5-2	6x6	34 & 4	INPLACE	
D6-1, 6-2	6x6	394	INPLACE	
D7-1	2-6x6	18 & 48	INPLACE	
D7-2	2-6x6	3 & 33	INPLACE	
D8-1, D8-2	6x6	114	INPLACE	
D8-3	6x6	14	INPLACE	
D8-3	6x6	29	F&I	
D8-4	6x6	-1	INPLACE	

-ALL LOOP DETECTORS ARE PVC
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 3 AND 7 BEING A PROTECTED/PERMISSIVE LEFT TURN PHASES, WITH PHASE(S) 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

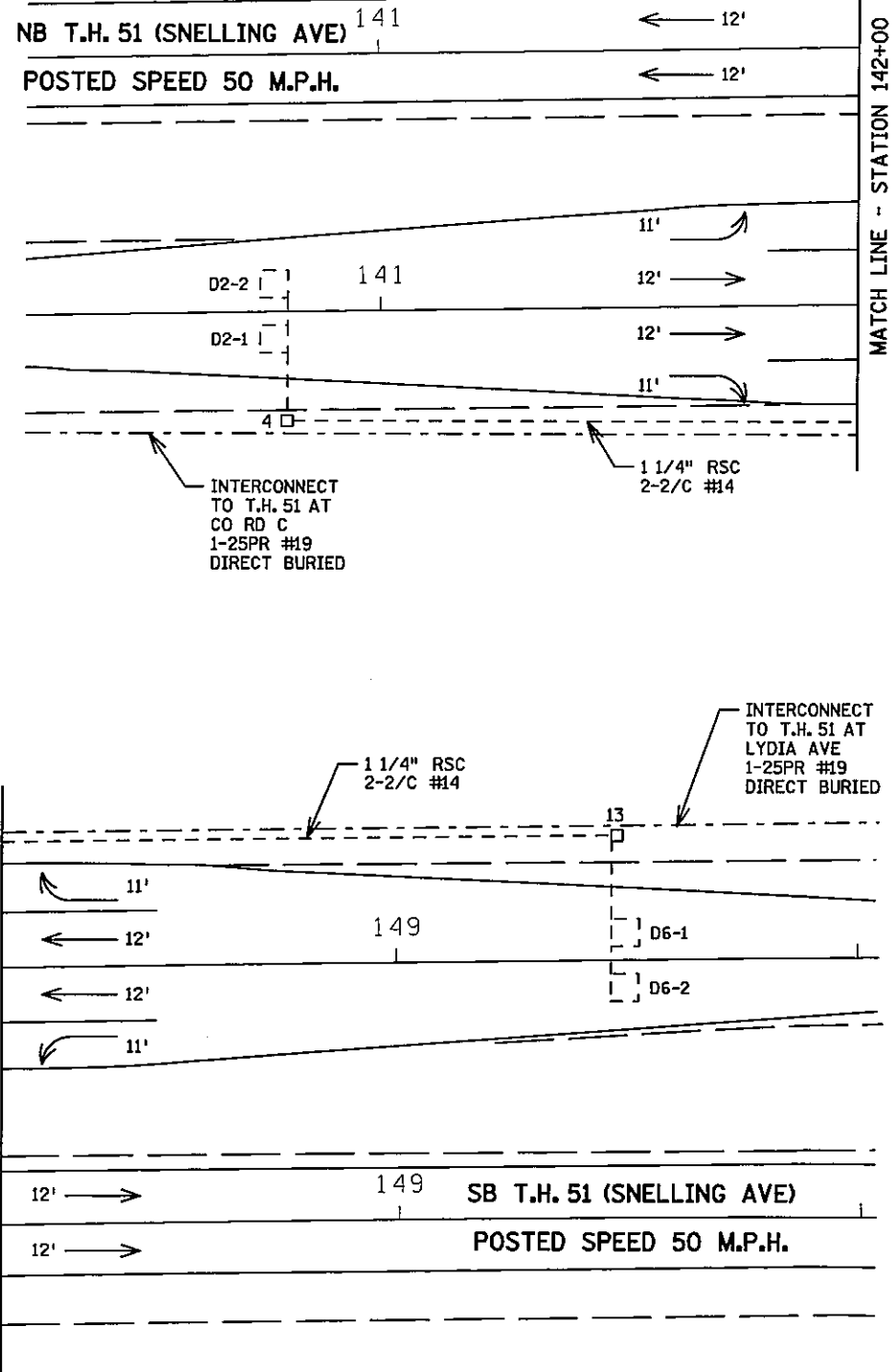
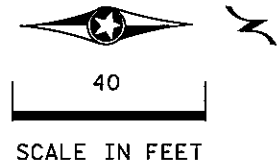
- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 4, 5, AND 6.
 6. REPLACE ALL PED IND WITH C.D. PED IND.
 7. REMOVE PB STA NEAR POLE 3.
 8. REPLACE (PB8-2) ON POLE 2 WITH APS (PB8-3) AND SIGN.
 9. ADD 2-PED PB STA WITH SIGNS NEAR POLES 1, 3, 4, AND 6.
 10. ADD PED PB STA WITH SIGN NEAR POLE 5.
 11. ADD PVC LOOP DETECTOR D8-3.

BY	DATE	REVISIONS	SYSTEM ID: 20743	T.E. 5368	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 1584 CO RD C2 W		CERTIFIED BY: <i>Michael P. Sulway</i>			LIC. NO. 19863 DATE: 4-21-11
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393			SHEET NO. 31 OF 122 SHEETS

INTERSECTION LAYOUT
REVISE SIGNAL SYSTEM B
T.H. 51 AT COUNTY ROAD C2
IN ROSEVILLE, RAMSEY COUNTY

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 I/PLOT NAME: match line & notes B
 PATH & FILENAME: IP_PWP-df1350564VPT20743_sgl.dgn



(7) REMOVE: PEDESTAL FOUNDATION
 5' PEDESTAL POLE AND BASE
 2-PED PB AND SIGNS
 EXTEND INTO HH 7:
 2" RSC
 1-3/C #12

(3) PA90 POLE FOUNDATION
 TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG)
 2-ONE WAY SIGNALS OVERHEAD AT 0' AND 12'
 2-TYPE 10B POLE MOUNTED AT 90 & 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 1+6)
 LUMINAIRE - 250 W HPS WITH PEC
 AND CHECK SWITCH
 TYPE D SIGN
 EXTEND INTO HH 6:
 3" RSC
 2-12/C #12
 2-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

(2) PEDESTAL FOUNDATION
 PEDESTAL POLE AND BASE
 TYPE 2A

REMOVE: PED PB & SIGN
 F&I: 1-APS PB AND SIGN
 (DBL ARROW) (PB8-3)

EXTEND INTO HH 5:
 3" RSC
 1-12/C #12
 1-3/C #12

(1) PA90 POLE FOUNDATION
 TYPE PA90-A-35
 2-ONE WAY SIGNALS OVERHEAD AT 0' AND 11'
 2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)

REMOVE: 2-PED PB AND SIGNS

1-R10-12 SIGN (36" x 48") ADJACENT TO HEAD 8-4
 TYPE D SIGN (96" x 18")
 EXTEND INTO HH 1:
 3" IMC
 2-12/C #12
 3-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

(4) PA90 POLE FOUNDATION
 TYPE PA90-A-35
 2-ONE WAY SIGNALS OVERHEAD AT 0' AND 11'
 2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 4)

REMOVE: 2-PED PB AND SIGNS

1-R10-12 SIGN (36" x 48") ADJACENT TO HEAD 4-4
 TYPE D SIGN (96" x 18")
 EXTEND INTO HH 10:
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20

(5) PEDESTAL FOUNDATION
 PEDESTAL POLE AND BASE
 TYPE 2A

REMOVE: PED PB AND SIGN

EXTEND INTO HH 14:
 3" RSC
 1-12/C #12
 1-3/C #12

(6) PA90 POLE FOUNDATION
 TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG)
 2-ONE WAY SIGNALS OVERHEAD AT 0' AND 11'
 2-TYPE 10B POLE MOUNTED AT 90 & 180 DEG

REMOVE: 2-PED IND
 F&I: 2-C. D. PED IND

1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 2+5)
 LUMINAIRE - 250 W HPS WITH PEC AND CHECK SWITCH

REMOVE: 2-PED PB AND SIGNS

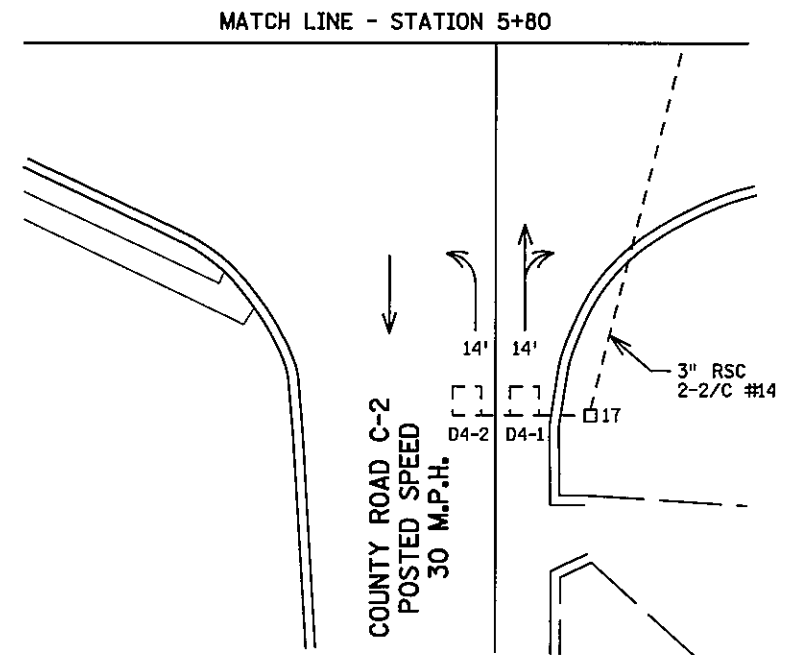
TYPE D SIGN
 EXTEND INTO HH 15:
 3" IMC
 2-12/C #12
 3-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

(A) EQUIPMENT PAD
 SERVICE CABINET
 CONTROLLER & CABINET
 4" IMC TO HH 1: 4" IMC TO HH 2:
 5-12/C #12 5-12/C #12
 7-3/C #12 7-3/C #12
 2-3/C #20 2-3/C #20
 8-2/C #14 13-2/C #14

F&I: 4-2/C #14 F&I: 5-2/C #14

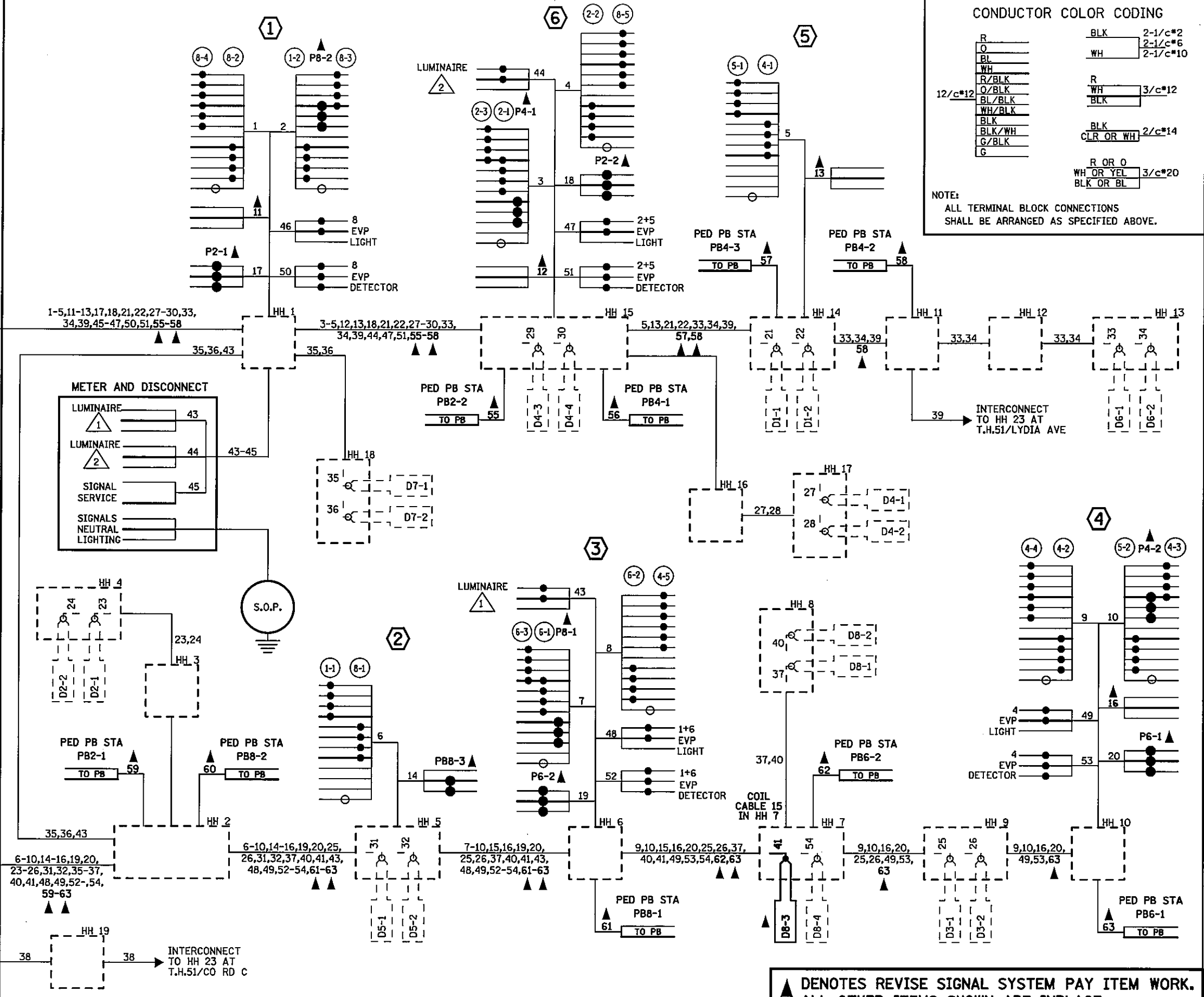
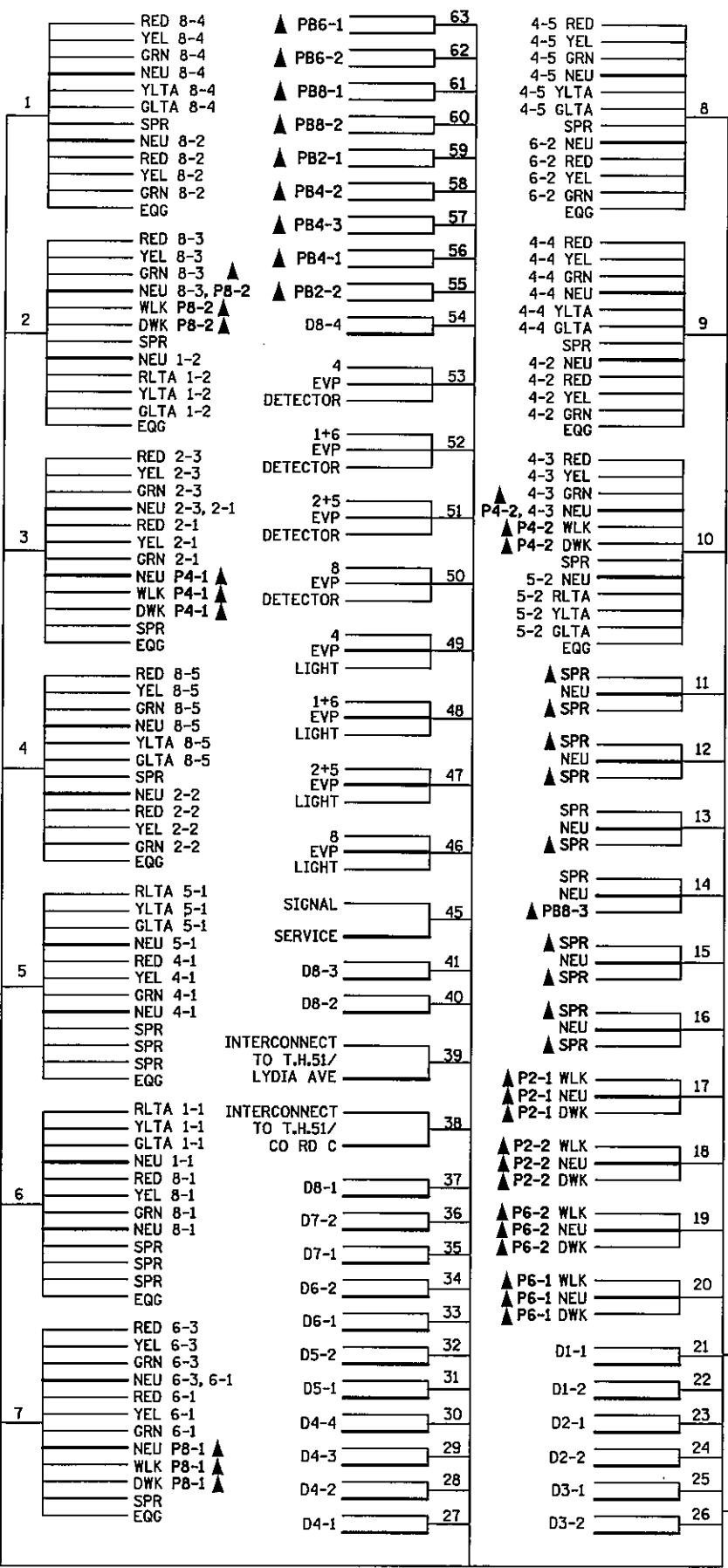
2-1/C #6
 1-1/C #6 BR. GR.
 1-25PR #19
 4" IMC TO HH 19:
 1-25PR #19
 HH 1 TO HH 2:
 2" IMC
 1-3/C #12 (LUM)
 2-2/C #14

(B) S.O.P. - WOOD POLE (BY XCEL)
 SERVICE EQUIPMENT
 EXTEND INTO HH 1:
 2" IMC
 2-1/C #6
 1-1/C #6 BR. GR.
 2-3/C #12 (LUM)



BY	DATE	REVISIONS	SYSTEM ID: 20743	T.E. 5368	MATCH LINE LAYOUTS AND NOTES	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 1584 CO RD C2 W		REVISE SIGNAL SYSTEM B	CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.	T.H. 51 AT COUNTY ROAD C2	STATE PROJ. NO. 8825-393	SHEET NO. 32 OF 122 SHEETS		
			IN ROSEVILLE, RAMSEY COUNTY						

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	BLK	2-1/c*2
O	WH	2-1/c*6
BL		2-1/c*10
WH	R	3/c*12
R/BLK	WH	3/c*12
O/BLK	BLK	
BL/BLK	BLK	2/c*14
WH/BLK	CLR OR WH	
BLK	BLK	2/c*14
BLK/WH	R OR O	3/c*20
G/BLK	WH OR YEL	3/c*20
G	BLK OR BL	

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

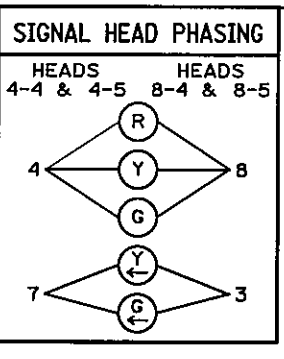
▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: wiring B
PATH & FILENAME: IP_PWP-d\350564\PT20743_sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 20743	T.E. 5368	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 1584 CO RD C2 W		CERTIFIED BY: <i>Michael P. Lubinsky</i>			LIC. NO. 19863
			MASTER ID:	T.E.				DATE: 4-21-11
FIELD WIRING DIAGRAM REVISE SIGNAL SYSTEM B T.H. 51 AT COUNTY ROAD C2 IN ROSEVILLE, RAMSEY COUNTY					STATE PROJ. NO. 8825-393			
					SHEET NO. 33 OF 122 SHEETS			

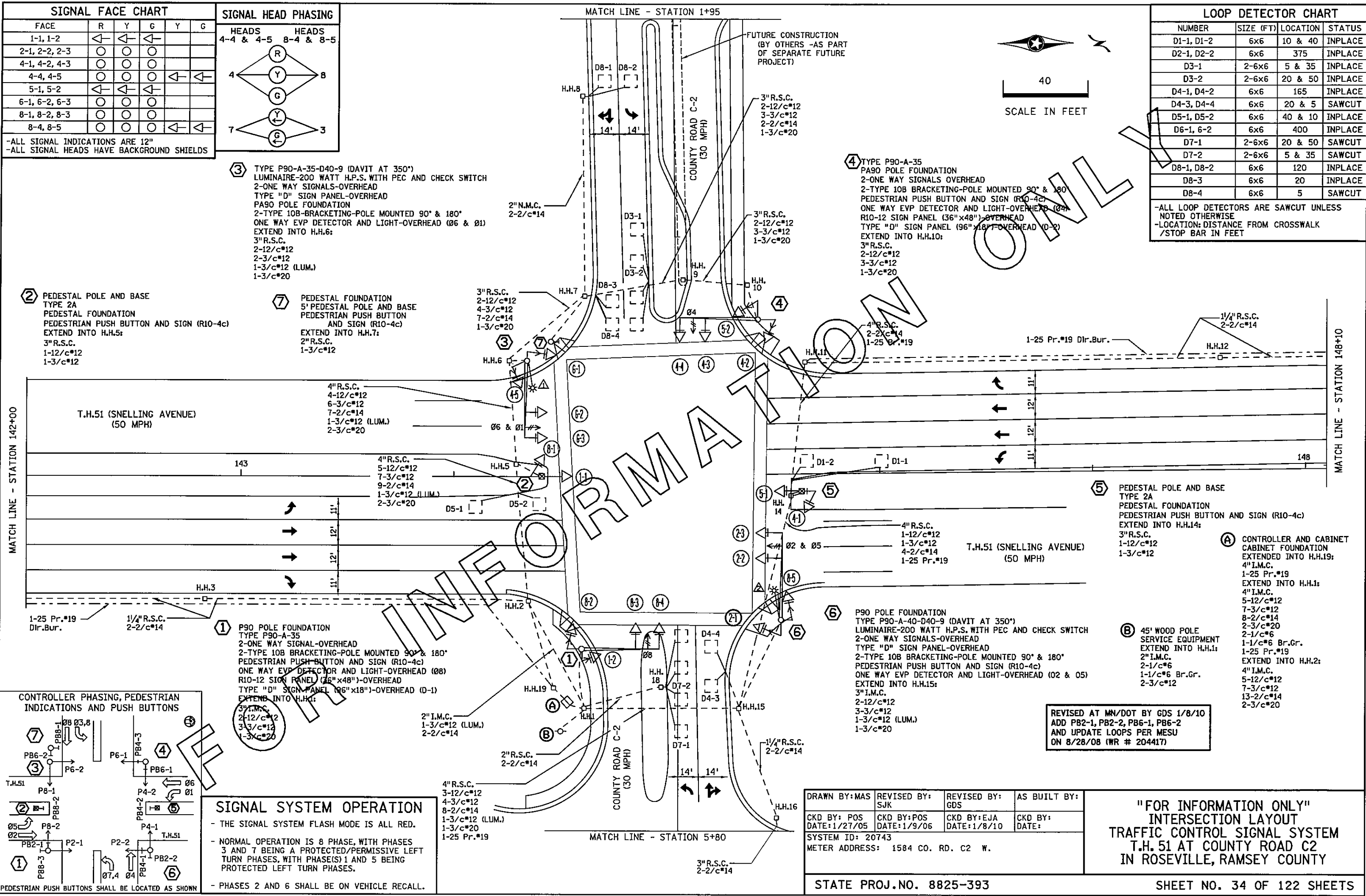
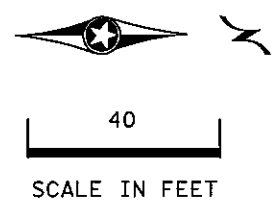
SIGNAL FACE CHART					
FACE	R	Y	G	Y	G
1-1, 1-2	←	←	←		
2-1, 2-2, 2-3	○	○	○		
4-1, 4-2, 4-3	○	○	○		
4-4, 4-5	○	○	○	←	←
5-1, 5-2	←	←	←		
6-1, 6-2, 6-3	○	○	○		
8-1, 8-2, 8-3	○	○	○		
8-4, 8-5	○	○	○	←	←



-ALL SIGNAL INDICATIONS ARE 12"
-ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS

LOOP DETECTOR CHART				
NUMBER	SIZE (FT)	LOCATION	STATUS	
D1-1, D1-2	6x6	10 & 40	INPLACE	
D2-1, D2-2	6x6	375	INPLACE	
D3-1	2-6x6	5 & 35	INPLACE	
D3-2	2-6x6	20 & 50	INPLACE	
D4-1, D4-2	6x6	165	INPLACE	
D4-3, D4-4	6x6	20 & 5	SAWCUT	
D5-1, D5-2	6x6	40 & 10	INPLACE	
D6-1, 6-2	6x6	400	INPLACE	
D7-1	2-6x6	20 & 50	SAWCUT	
D7-2	2-6x6	5 & 35	SAWCUT	
D8-1, D8-2	6x6	120	INPLACE	
D8-3	6x6	20	INPLACE	
D8-4	6x6	5	SAWCUT	

-ALL LOOP DETECTORS ARE SAWCUT UNLESS NOTED OTHERWISE
-LOCATION: DISTANCE FROM CROSSWALK /STOP BAR IN FEET



③ TYPE P90-A-35-D40-9 (DAVIT AT 350")
LUMINAIRE-200 WATT H.P.S. WITH PEC AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD
TYPE "D" SIGN PANEL-OVERHEAD
PA90 POLE FOUNDATION
2-TYPE 10B-BRACKETING-POLE MOUNTED 90° & 180°
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø6 & Ø1)
EXTEND INTO H.H.6:
3" R.S.C.
2-12/c*12
2-3/c*12
1-3/c*12 (LUM.)
1-3/c*20

② PEDESTAL POLE AND BASE
TYPE 2A
PEDESTAL FOUNDATION
PEDESTRIAN PUSH BUTTON AND SIGN (R10-4c)
EXTEND INTO H.H.5:
3" R.S.C.
1-12/c*12
1-3/c*12

⑦ PEDESTAL FOUNDATION
5' PEDESTAL POLE AND BASE
PEDESTRIAN PUSH BUTTON
AND SIGN (R10-4c)
EXTEND INTO H.H.7:
2" R.S.C.
1-3/c*12

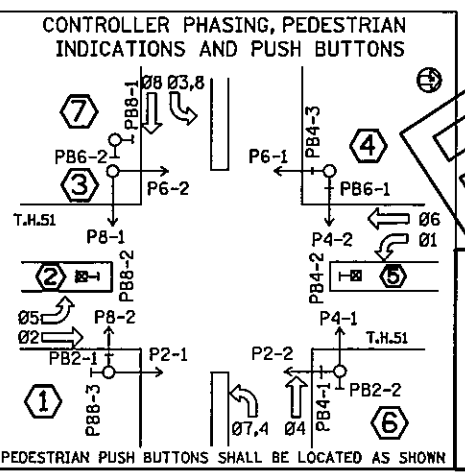
④ TYPE P90-A-35
PA90 POLE FOUNDATION
2-ONE WAY SIGNALS OVERHEAD
2-TYPE 10B BRACKETING-POLE MOUNTED 90° & 180°
PEDESTRIAN PUSH BUTTON AND SIGN (R10-4c)
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø4)
R10-12 SIGN PANEL (36"x48")-OVERHEAD
TYPE "D" SIGN PANEL (96"x18")-OVERHEAD (D-2)
EXTEND INTO H.H.10:
3" R.S.C.
2-12/c*12
3-3/c*12
1-3/c*20

⑤ PEDESTAL POLE AND BASE
TYPE 2A
PEDESTAL FOUNDATION
PEDESTRIAN PUSH BUTTON AND SIGN (R10-4c)
EXTEND INTO H.H.14:
3" R.S.C.
1-12/c*12
1-3/c*12

⑥ P90 POLE FOUNDATION
TYPE P90-A-40-D40-9 (DAVIT AT 350")
LUMINAIRE-200 WATT H.P.S. WITH PEC AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD
TYPE "D" SIGN PANEL-OVERHEAD
2-TYPE 10B BRACKETING-POLE MOUNTED 90° & 180°
PEDESTRIAN PUSH BUTTON AND SIGN (R10-4c)
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø2 & Ø5)
EXTEND INTO H.H.15:
3" I.M.C.
2-12/c*12
3-3/c*12
1-3/c*12 (LUM.)
1-3/c*20

① P90 POLE FOUNDATION
TYPE P90-A-35
2-ONE WAY SIGNAL-OVERHEAD
2-TYPE 10B BRACKETING-POLE MOUNTED 90° & 180°
PEDESTRIAN PUSH BUTTON AND SIGN (R10-4c)
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø8)
R10-12 SIGN PANEL (36"x48")-OVERHEAD
TYPE "D" SIGN PANEL (96"x18")-OVERHEAD (D-1)
EXTEND INTO H.H.3:
3" I.M.C.
2-12/c*12
3-3/c*12
1-3/c*20

⑧ 45' WOOD POLE
SERVICE EQUIPMENT
EXTEND INTO H.H.1:
2" I.M.C.
2-1/c*6
1-1/c*6 Br.Gr.
5-12/c*12
7-3/c*12
13-2/c*14
2-3/c*20



SIGNAL SYSTEM OPERATION
- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 3 AND 7 BEING A PROTECTED/PERMISSIVE LEFT TURN PHASES, WITH PHASE(S) 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

DRAWN BY: MAS	REVISED BY: SJK	REVISED BY: GDS	AS BUILT BY:
CKD BY: POS	CKD BY: POS	CKD BY: EJA	CKD BY:
DATE: 1/27/05	DATE: 1/9/06	DATE: 1/8/10	DATE:
SYSTEM ID: 20743			
METER ADDRESS: 1584 CO. RD. C2 W.			

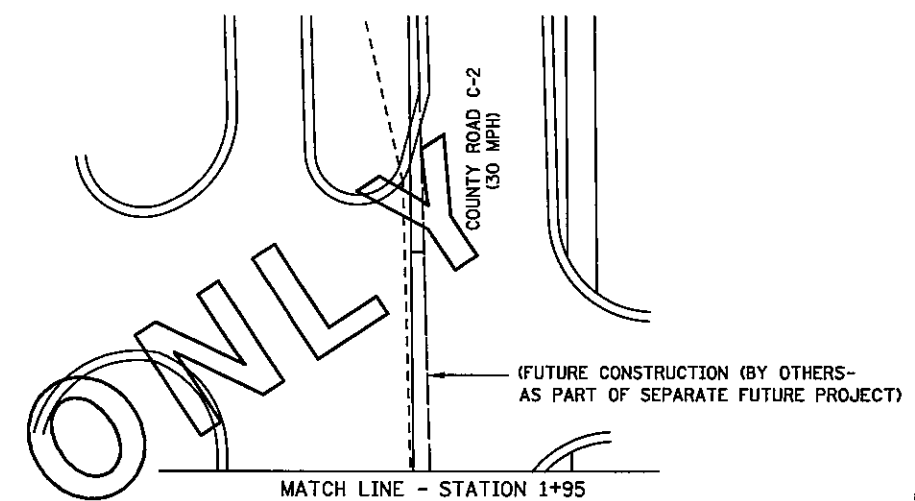
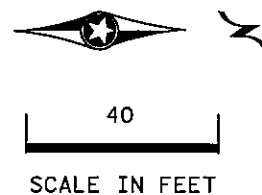
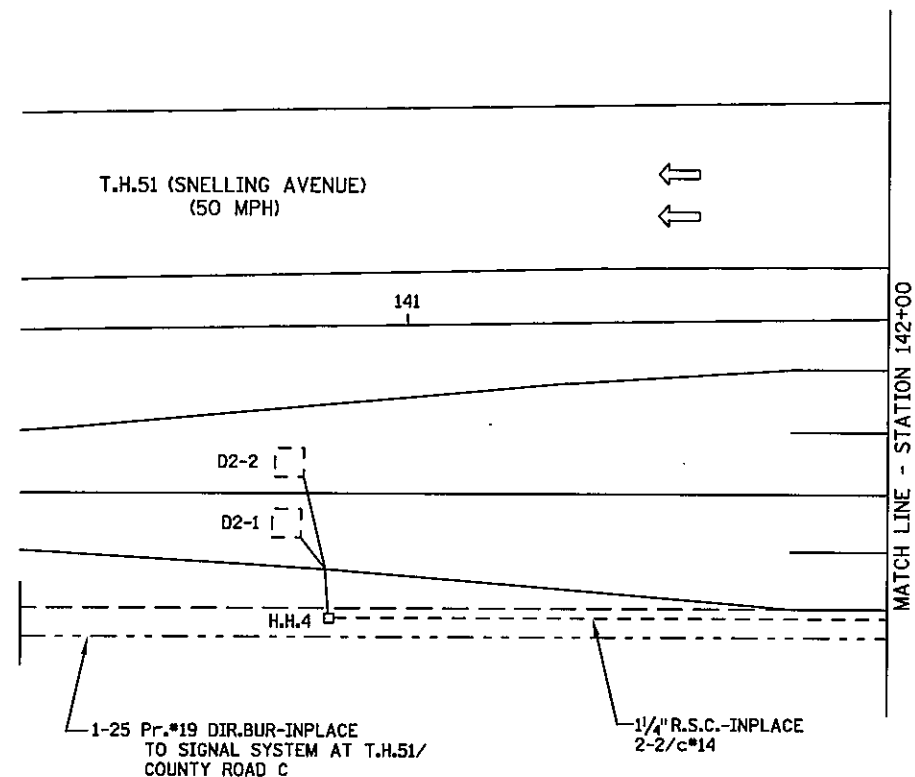
"FOR INFORMATION ONLY"
INTERSECTION LAYOUT
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 51 AT COUNTY ROAD C2
IN ROSEVILLE, RAMSEY COUNTY

STATE PROJ. NO. 8825-393 SHEET NO. 34 OF 122 SHEETS

DISTRICT #: METRO
 I/PLOT NAME: Info only layout B
 PATH & FILENAME: IP_PWP-dj350564PT20743\INFO_sgl.dgn
 PLOTTED/REVISED: 4/20/2011

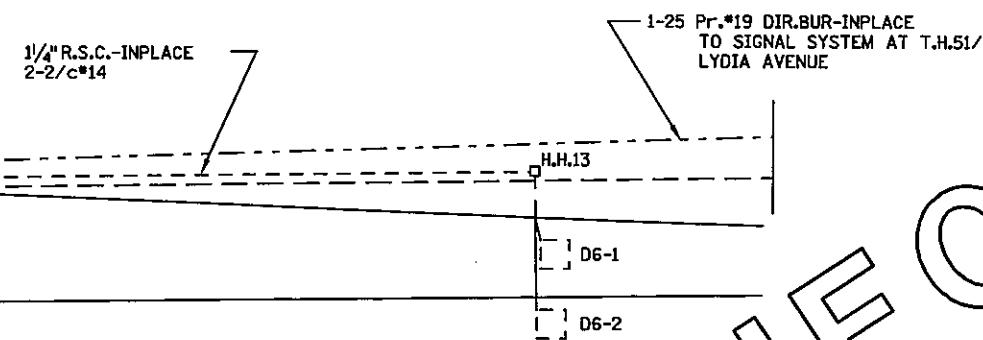
PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
 I/PLOT NAME: Info only match lines B
 PATH & FILENAME: IP_PWP-dj350564PT20743(Info)_sg.dgn



- (A) CONTROLLER AND CABINET**
 CABINET FOUNDATION
 EXTENDED INTO H.H.19:
 4" I.M.C.
 1-25 Pr.#19
 EXTEND INTO H.H.1:
 4" I.M.C.
 5-12/c*12
 7-3/c*12
 8-2/c*14
 2-3/c*20
 2-1/c*6
 1-1/c*6 Br.Gr.
 1-25 Pr.#19
 EXTEND INTO H.H.2:
 4" I.M.C.
 5-12/c*12
 7-3/c*12
 13-2/c*14
 2-3/c*20

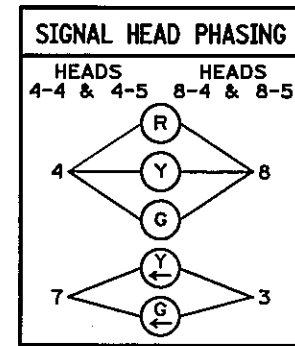
- (B) 45' WOOD POLE**
 SERVICE EQUIPMENT
 EXTEND INTO H.H.1:
 2" I.M.C.
 2-1/c*6
 1-1/c*6 Br.Gr.
 2-3/c*12



FOR INFORMATION ONLY

SIGNAL FACE CHART						
FACE	R	Y	G	Y	G	
1-1, 1-2	◀	◀	◀			
2-1, 2-2, 2-3	○	○	○			
4-1, 4-2, 4-3	○	○	○			
4-4, 4-5	○	○	○	◀	◀	
5-1, 5-2	◀	◀	◀			
6-1, 6-2, 6-3	○	○	○			
8-1, 8-2, 8-3	○	○	○			
8-4, 8-5	○	○	○	◀	◀	

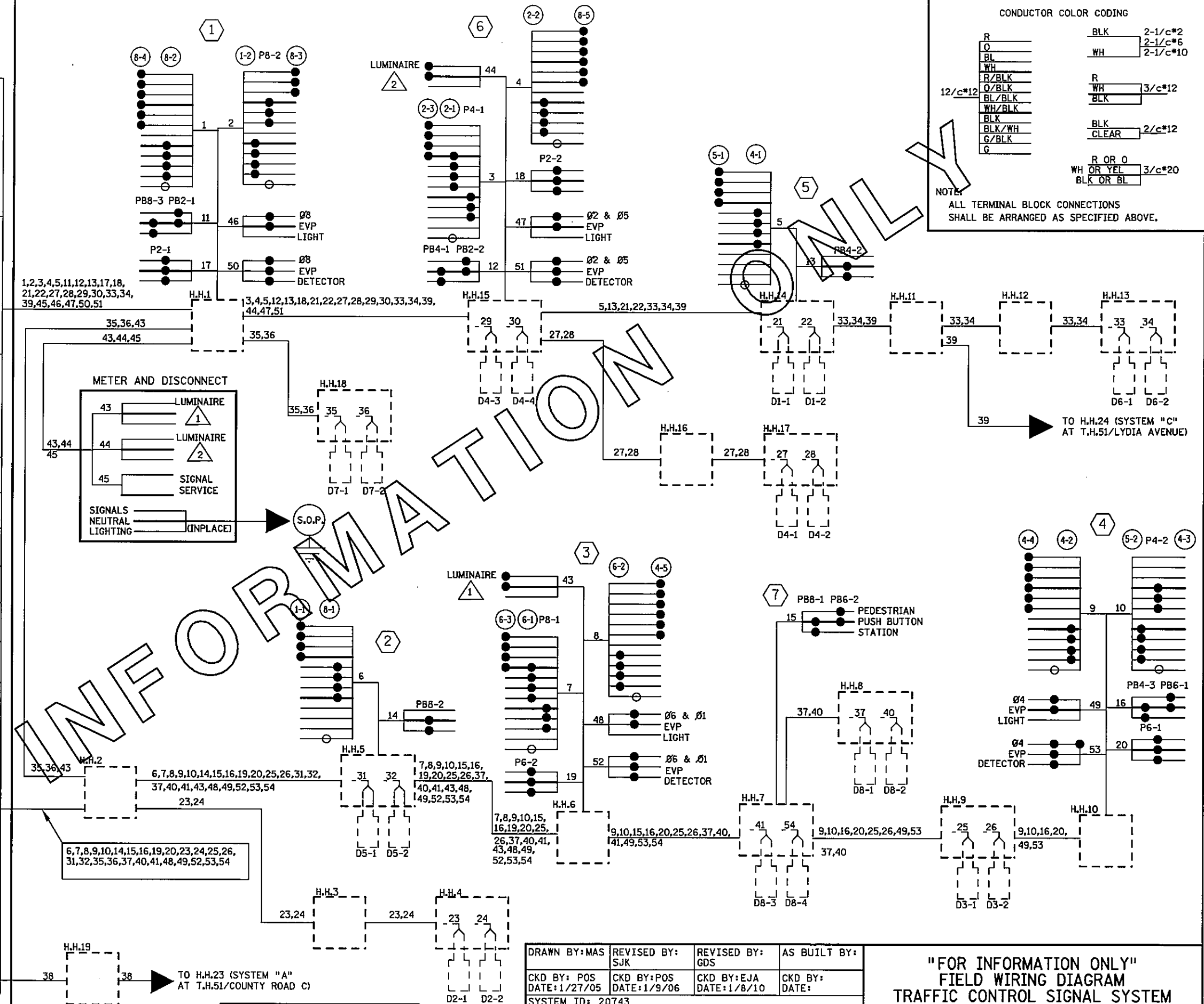
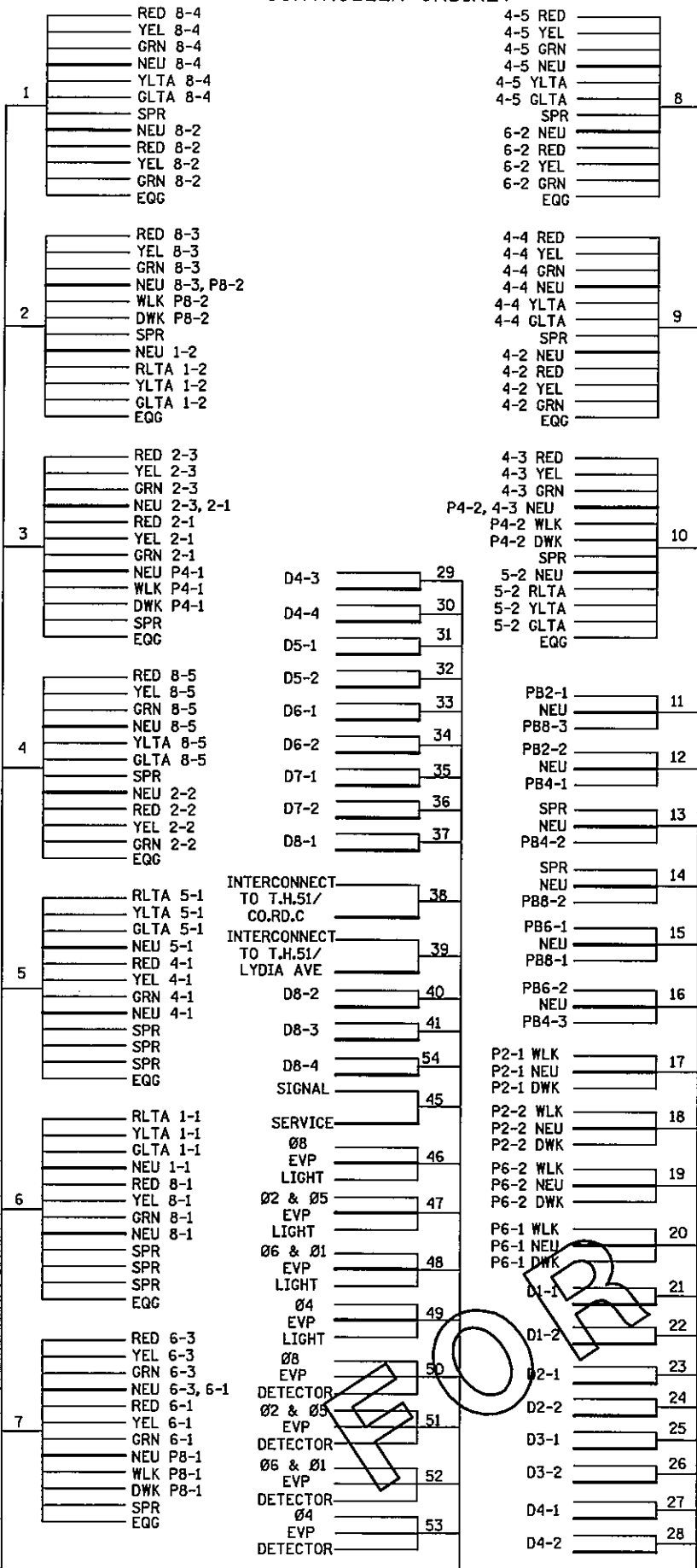
-ALL SIGNAL INDICATIONS ARE 12"
 -ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS



REVISED AT MN/DOT BY GDS 1/8/10
 ADD PB2-1, PB2-2, PB6-1, PB6-2
 AND UPDATE LOOPS PER MESU
 ON 8/28/08 (WR # 204417)

BY	DATE	REVISIONS	SYSTEM ID: 20743	T.E.	"FOR INFORMATION ONLY" MATCH LINES LAYOUT T.H. 51 AT COUNTY ROAD C2 IN ROSEVILLE, RAMSEY COUNTY	STATE PROJ. NO. 8825-393	SHEET NO. 35 OF 122 SHEETS
1	JMG	Record Drawing	METER ADDRESS: 1584 CO RD C2 W				
			MASTER ID:	T.E.			

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	BLK	2-1/c*2
O	WH	2-1/c*6
BL	WH	2-1/c*10
WH	R	3/c*12
R/BLK	WH	3/c*12
O/BLK	BLK	3/c*12
BL/BLK	BLK	3/c*12
WH/BLK	BLK	3/c*12
BLK	BLK	2/c*12
BLK/WH	CLEAR	2/c*12
G/BLK	R OR O	3/c*20
G	WH OR YEL	3/c*20
	BLK OR BL	3/c*20

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

DRAWN BY: MAS	REVISED BY: SJK	REVISED BY: GDS	AS BUILT BY:
CKD BY: POS	CKD BY: POS	CKD BY: EJA	CKD BY:
DATE: 1/27/05	DATE: 1/9/06	DATE: 1/8/10	DATE:
SYSTEM ID: 20743			
METER ADDRESS: 1584 CO. RD. C2 W.			

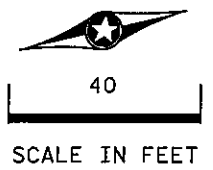
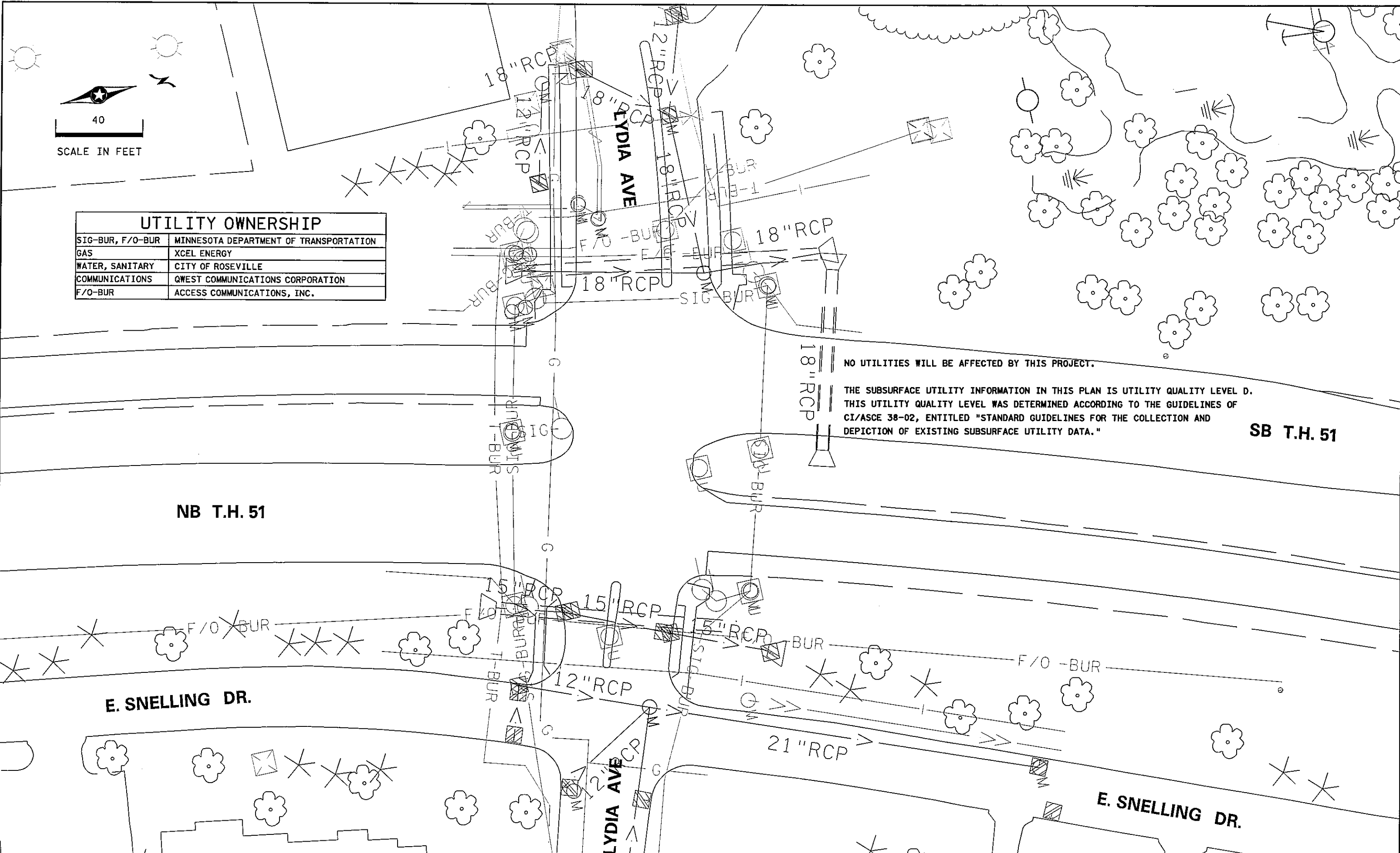
"FOR INFORMATION ONLY"
 FIELD WIRING DIAGRAM
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 51 AT COUNTY ROAD C2
 IN ROSEVILLE, RAMSEY COUNTY

REVISED AT MN/DOT BY GDS 1/8/10
 ADD PB2-1, PB2-2, PB6-1, PB6-2
 AND UPDATE LOOPS PER MESU
 ON 8/28/08 (WR # 204417)

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 IPLOT NAME: Info only wiring B
 PATH & FILENAME: IP_PWP-dj350564PT20743\INFO_sgl.dgn

PLOTTED/REVISED: 4/27/2011



UTILITY OWNERSHIP	
SIG-BUR, F/O-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
GAS	XCEL ENERGY
WATER, SANITARY	CITY OF ROSEVILLE
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION
F/O-BUR	ACCESS COMMUNICATIONS, INC.

NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

SB T.H. 51

NB T.H. 51

E. SNELLING DR.

LYDIA AVE

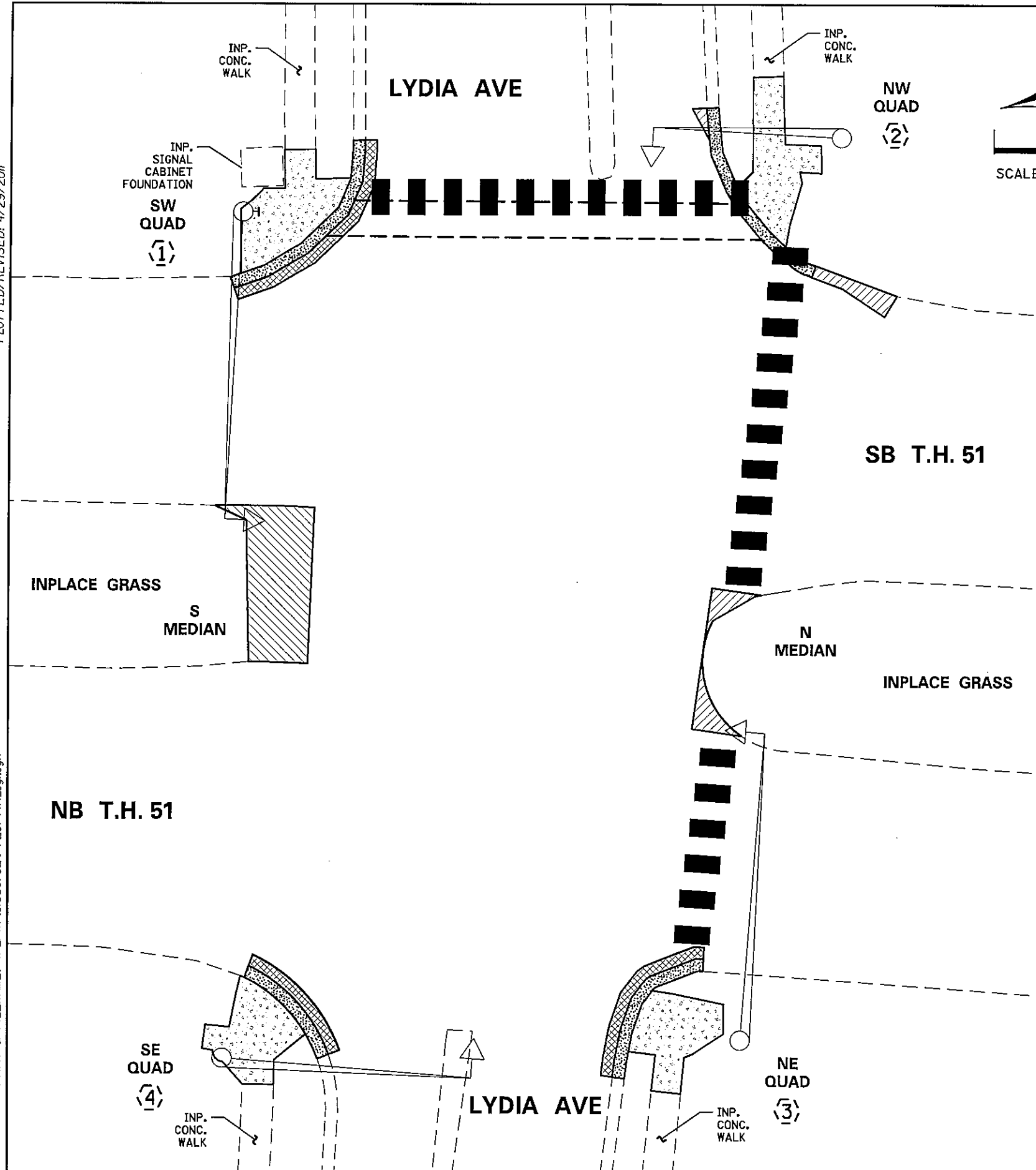
E. SNELLING DR.

DISTRICT #: METRO
I/PLOT NAME: topog & utilities C
PATH & FILENAME: IP_PWP-d1350782PT20744U_sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 20744	T.E. 5369	INPLACE TOPOGRAPHY AND UTILITIES PLAN	S.A.P. NO.	DRAWN BY:GDS	CKD BY:BTJ	DATE:4-21-11
			METER ADDRESS: 2995 SNELLING AVE N		REVISE SIGNAL SYSTEM C	CERTIFIED BY: <i>Michael P. Libunsky</i>			LIC. NO. 19863
			MASTER ID:	T.E.	T.H. 51 AT LYDIA AVE.	LICENSED PROFESSIONAL ENGINEER			DATE: 4-21-11
					IN ROSEVILLE, RAMSEY COUNTY	STATE PROJ.NO. 8825-393			SHEET NO. 37 OF 122 SHEETS

PLOTTED/REVISED: 4/29/2011

DISTRICT #: METRO
 I/PLOT NAME: removals & pave mark C
 PATH & FILENAME: IP_PWP-dj1350782\PT20744R_sgl.dgn



BY	DATE	REVISIONS

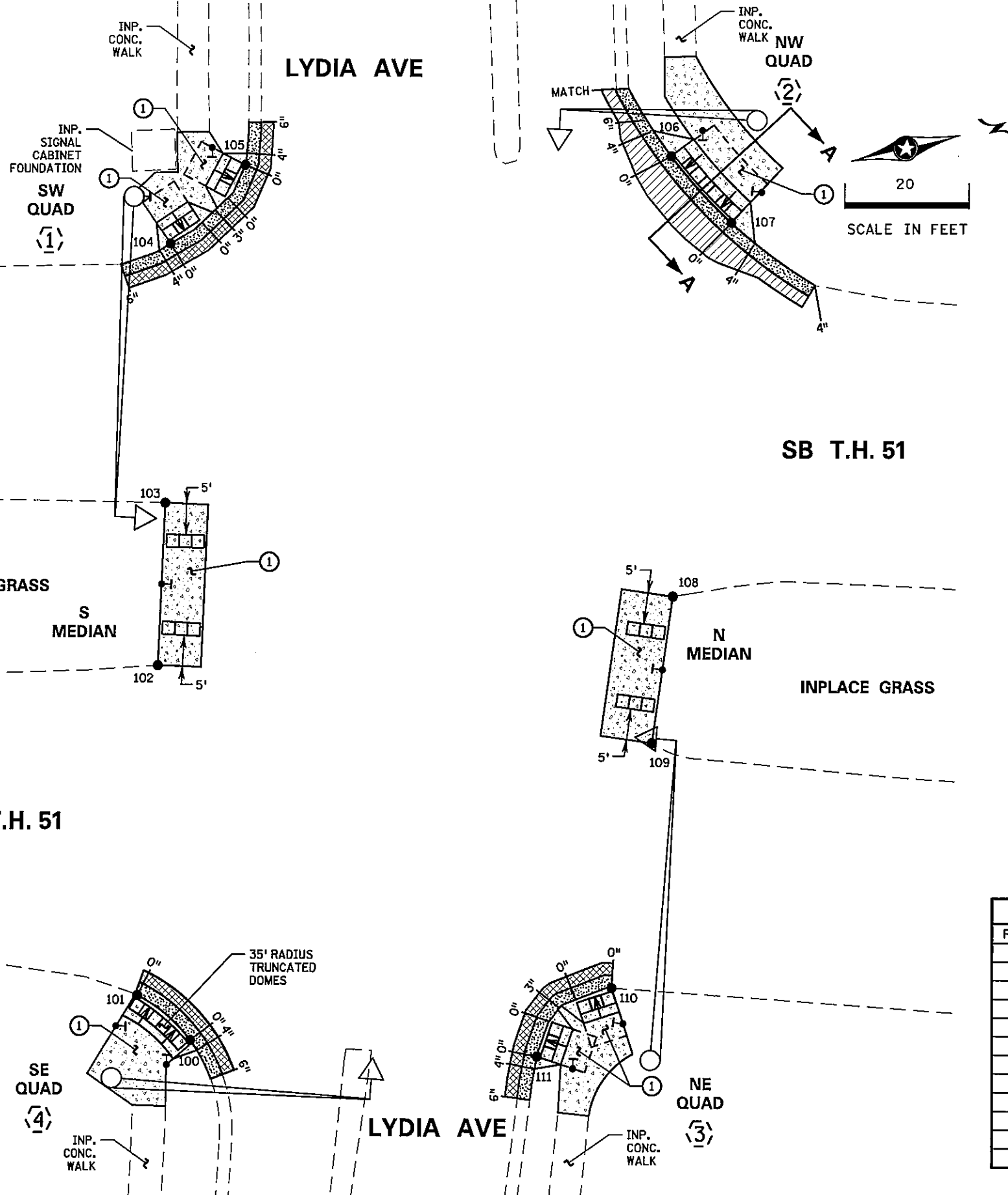
SYSTEM ID: 20744 T.E. 5369
 METER ADDRESS: 2995 SNELLING AVE N
 MASTER ID: T.E.

REMOVAL AND PAVEMENT MARKING PLAN
REVISE SIGNAL SYSTEM C
T.H. 51 AT LYDIA AVE.
IN ROSEVILLE, RAMSEY COUNTY

S.A.P. NO. _____
 DRAWN BY: GDS CKD BY: BTJ DATE: 4-21-11
 CERTIFIED BY: *Michael P. Lubinsky* LIC. NO. 19863 DATE: 4-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 38 OF 122 SHEETS

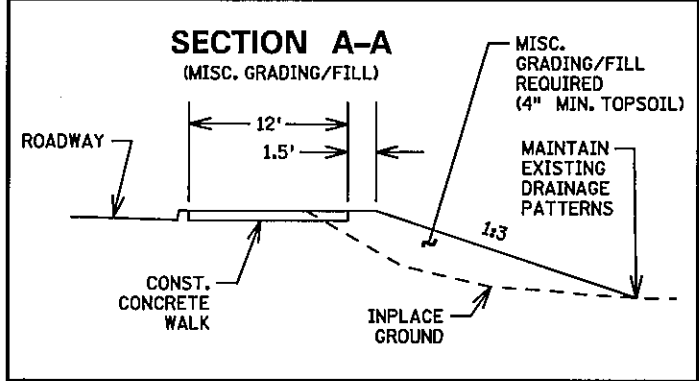
PLOTTED/REVISED: 4/28/2011

DISTRICT #: METRO
 IPLOT NAME: ped ramp detail C
 PATH & FILENAME: IP_PWP-d1350782VPT20744D_sgl.dgn



LEGEND

- INPLACE SIGNAL POLE
- CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
- PEDESTRIAN PUSH BUTTON STATION
- INPLACE SIGNAL BASE NO.
- EDGE OF INPLACE SURFACING
- CURB HEIGHT AT INDICATED LOCATION
- INTERSECTION POINT OF CROSSWALK EDGE AND PEDESTRIAN RAMP EDGE AT FACE OF CURB
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- 6" CONCRETE WALK
- 2" BITUMINOUS OVERLAY, 2' WIDE
- BITUMINOUS PAVEMENT
- INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT



- GENERAL NOTES:**
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.
- ① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.

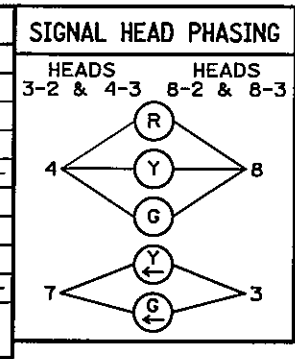
DETAIL POINTS		
POINT NO.	X	Y
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101	556067.8697	187637.3989
102	556007.9130	187645.5356
103	555982.7614	187652.3840
104	555942.1614	187662.2669
105	555932.4180	187676.6938
106	555946.1018	187743.8100
107	555958.6877	187750.8697
108	556015.3548	187728.5720
109	556037.5556	187720.1076
110	556074.6278	187705.1141
111	556082.7114	187691.0695

BY	DATE	REVISIONS	SYSTEM ID: 20744	T.E. 5369	S.A.P. NO.
			METER ADDRESS: 2995 SNELLING AVE N		CERTIFIED BY: <i>Michael P. Lubinsky</i>
			MASTER ID:	T.E.	LIC. NO. 19863
PEDESTRIAN CURB RAMP DETAILS REVISE SIGNAL SYSTEM C T.H. 51 AT LYDIA AVE. IN ROSEVILLE, RAMSEY COUNTY					DATE: 4-21-11
					STATE PROJ. NO. 8825-393
					SHEET NO. 39 OF 122 SHEETS

PLOTTED/REVISED: 4/29/2011

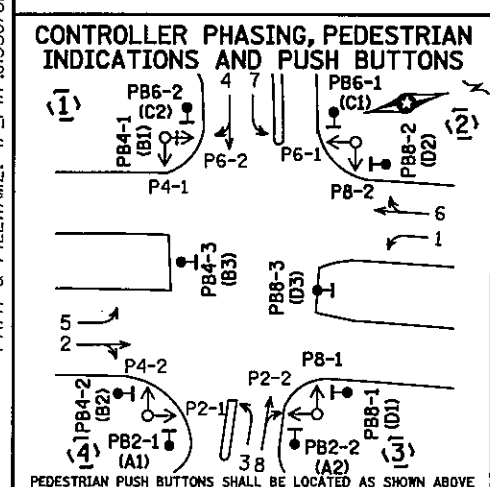
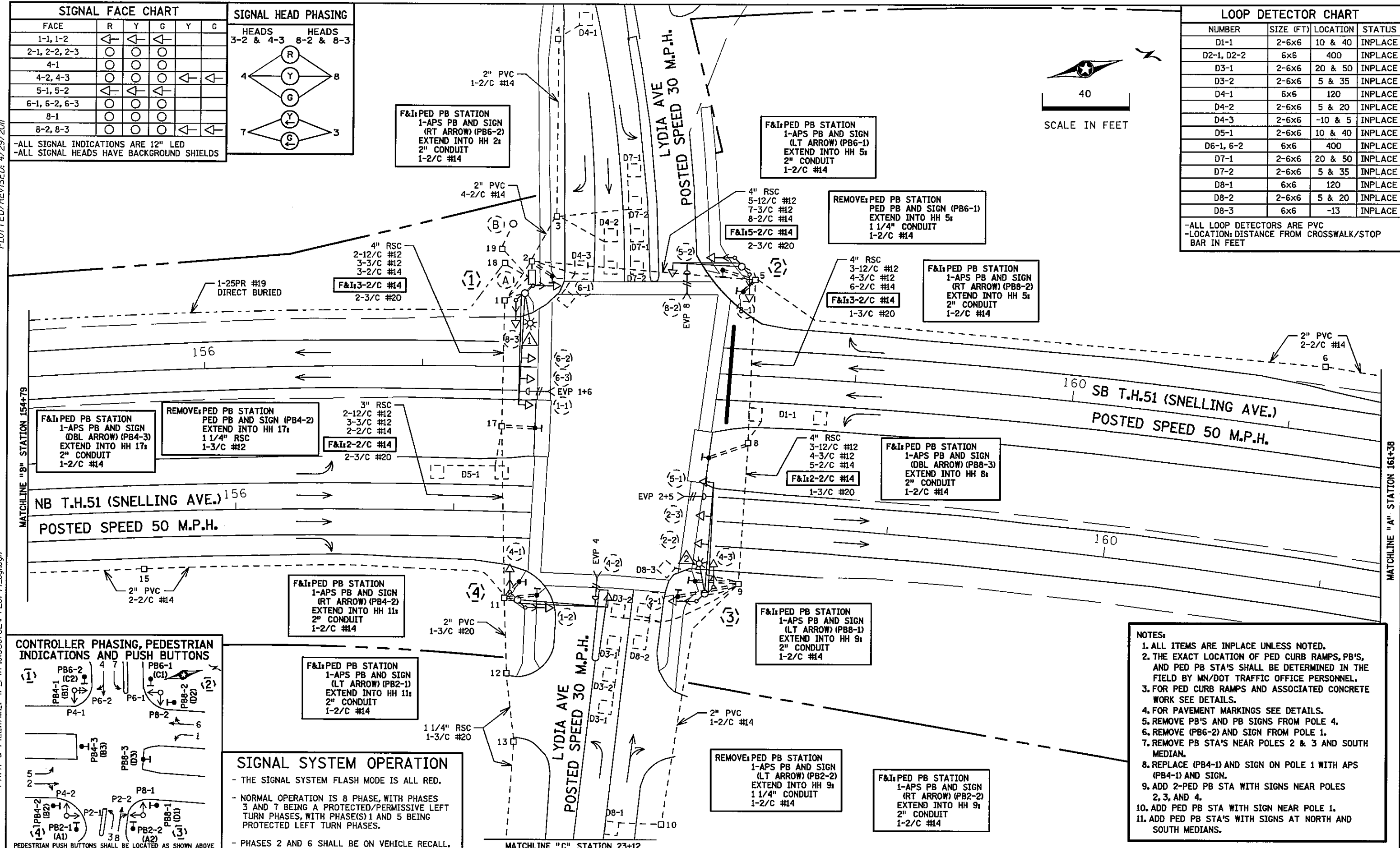
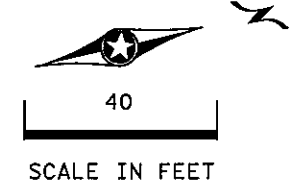
DISTRICT #: METRO
I/PLOT NAME: layout C
PATH & FILENAME: IP_PWP-d1350782VPT20744_sgl.dgn

SIGNAL FACE CHART					
FACE	R	Y	G	Y	G
1-1, 1-2	◀	◀	◀		
2-1, 2-2, 2-3	○	○	○		
4-1	○	○	○		
4-2, 4-3	○	○	○	◀	◀
5-1, 5-2	◀	◀	◀		
6-1, 6-2, 6-3	○	○	○		
8-1	○	○	○		
8-2, 8-3	○	○	○	◀	◀



LOOP DETECTOR CHART				
NUMBER	SIZE (FT)	LOCATION	STATUS	
D1-1	2-6x6	10 & 40	INPLACE	
D2-1, D2-2	6x6	400	INPLACE	
D3-1	2-6x6	20 & 50	INPLACE	
D3-2	2-6x6	5 & 35	INPLACE	
D4-1	6x6	120	INPLACE	
D4-2	2-6x6	5 & 20	INPLACE	
D4-3	2-6x6	-10 & 5	INPLACE	
D5-1	2-6x6	10 & 40	INPLACE	
D6-1, 6-2	6x6	400	INPLACE	
D7-1	2-6x6	20 & 50	INPLACE	
D7-2	2-6x6	5 & 35	INPLACE	
D8-1	6x6	120	INPLACE	
D8-2	2-6x6	5 & 20	INPLACE	
D8-3	6x6	-13	INPLACE	

-ALL LOOP DETECTORS ARE PVC
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

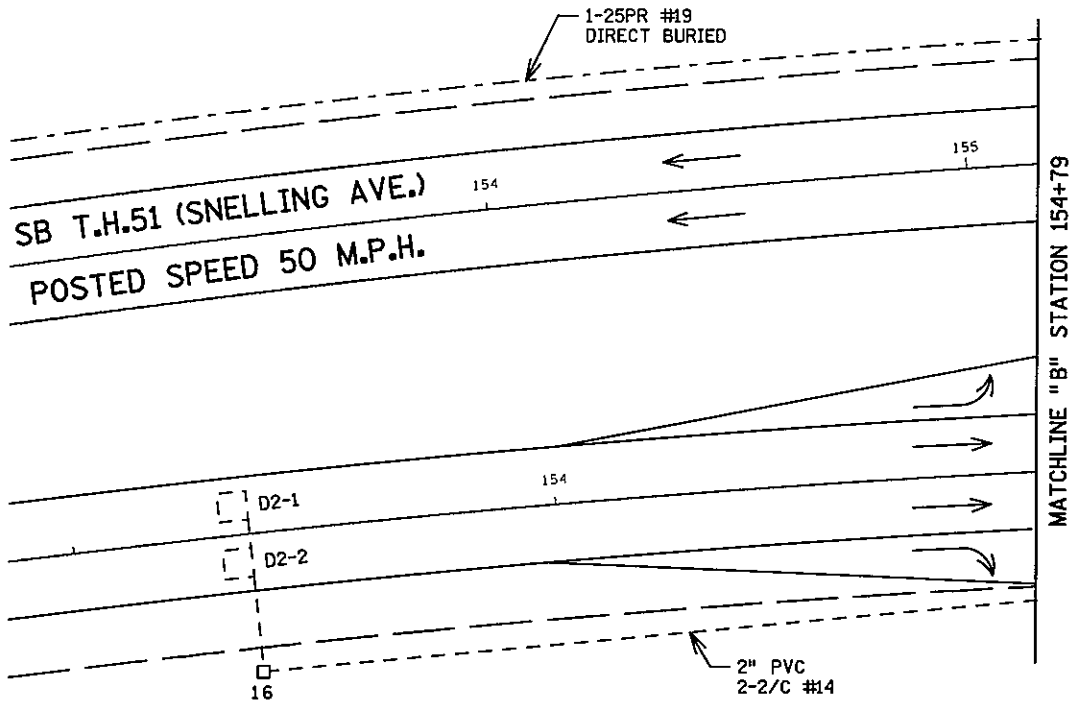


SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 3 AND 7 BEING A PROTECTED/PERMISSIVE LEFT TURN PHASES, WITH PHASES(1) AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMP, PB'S, AND PED PB STA'S SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMP AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE PB'S AND PB SIGNS FROM POLE 4.
 6. REMOVE (PB6-2) AND SIGN FROM POLE 1.
 7. REMOVE PB STA'S NEAR POLES 2 & 3 AND SOUTH MEDIAN.
 8. REPLACE (PB4-1) AND SIGN ON POLE 1 WITH APS (PB4-1) AND SIGN.
 9. ADD 2-PED PB STA WITH SIGNS NEAR POLES 2, 3, AND 4.
 10. ADD PED PB STA WITH SIGN NEAR POLE 1.
 11. ADD PED PB STA'S WITH SIGNS AT NORTH AND SOUTH MEDIANS.

PLOTTED/REVISED: 4/20/2011



- (1) PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
3-ONE-WAY SIGNALS OVERHEAD (0', 12' AND 22' FROM THE END OF THE MAST ARM)
2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225 DEG
2-POLE MOUNTED C. D. PED IND AT 45 AND 225 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)
LUMINAIRE-250W HPS

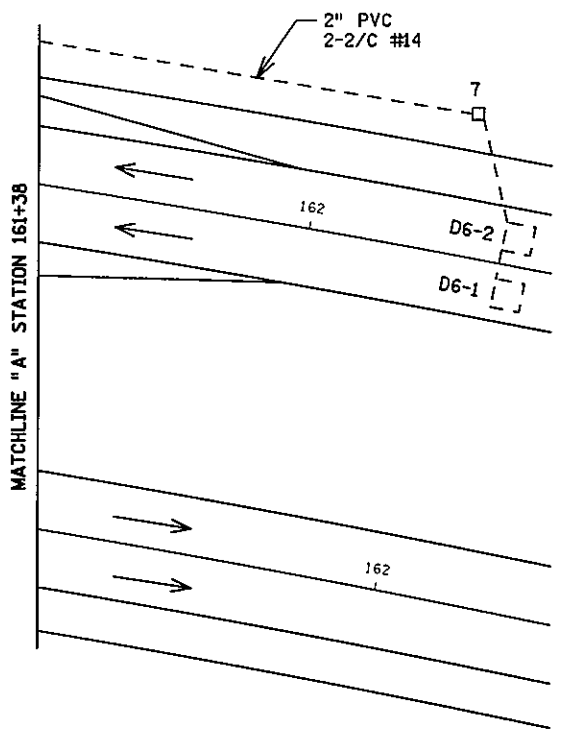
**REMOVE: 2-PED PB AND SIGNS
F&I: 1-APS PB AND SIGN (LT ARROW) (PB4-1)**

- 2-R6-1R SIGNS (ONE WAY)
- 1-TYPE D SIGN
- EXTEND INTO HH 1:
- 3" RSC
- 3-12/C #12
- 5-3/C #12
- 1-3/C #20

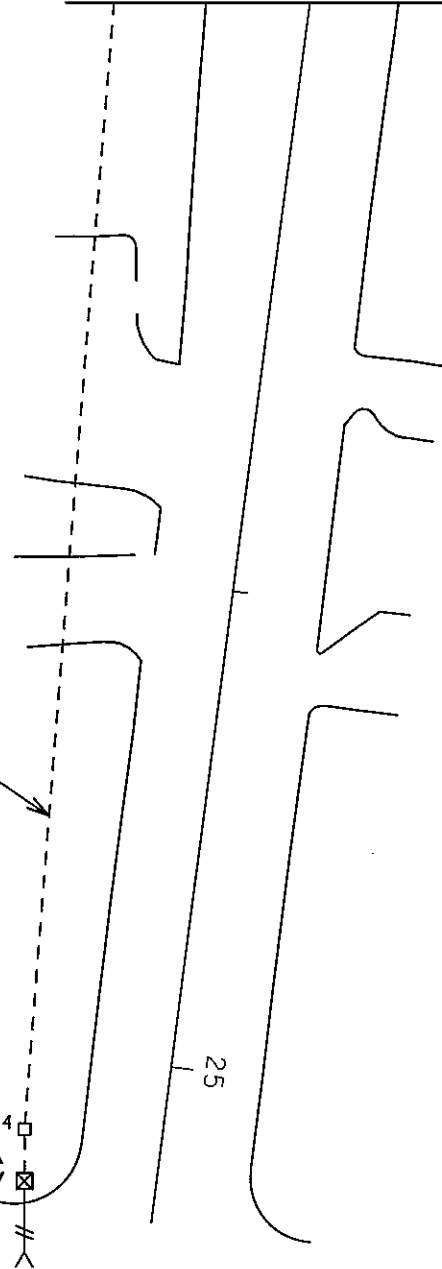
- (2) PA90 POLE FOUNDATION
TYPE PA90-A-30
1-ONE-WAY SIGNAL OVERHEAD (0' FROM THE END OF THE MAST ARM)
2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225 DEG
1-POLE MOUNTED C. D. PED IND AT 225 DEG

F&I: 1-POLE MOUNTED C. D. PED IND AT 225 DEG

- 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 8)
- 1-R10-12 SIGN ADJACENT TO HEAD 8-2
- 1-R9-3a SIGN (NO PED) FACING POLE 3
- 1-TYPE D SIGN
- EXTEND INTO HH 5:
- 3" RSC
- 2-12/C #12
- 3-3/C #12
- 1-3/C #20



MATCHLINE "C" STATION 23+12



1 1/4" RSC
1-3/C #30

25

- (5) PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
1-ONE WAY EVP DETECTOR (PHASE 8)
EXTEND INTO HH 14:
1 1/4" RSC
1-3/C #30

- (4) PA100 POLE FOUNDATION
TYPE PA100-A-40
1-ONE-WAY SIGNAL OVERHEAD (0' FROM THE END OF THE MAST ARM)
2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225 DEG
2-POLE MOUNTED C. D. PED IND AT 45 AND 225 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4)

REMOVE: 2-PED PB AND SIGNS

- 1-R10-12 SIGN ADJACENT TO HEAD 4-2
- 1-TYPE D SIGN
- EXTEND INTO HH 11:
- 3" RSC
- 2-12/C #12
- 3-3/C #12
- 1-3/C #20

- (A) EQUIPMENT PAD
SERVICE CABINET
CONTROLLER AND CABINET
4" RSC TO HH 1: 4" RSC TO HH 2:
5-12/C #12 5-12/C #12
7-3/C #12 6-3/C #12
3-3/C #20 2-3/C #20
3-2/C #14 13-2/C #14

F&I: 3-2/C #14 F&I: 6-2/C #14

- 3" RSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)
- 2" RSC TO SERVICE CABINET:
- 2-1/C #6
- 1-1/C #6 INS. GR.
- SERVICE CABINET TO HH 1:
- 2" RSC
- 2-3/C #12
- SERVICE CABINET TO HH 19:
- 2" RSC
- 3-1/C #2
- CONTROLLER CABINET TO HH 18:
- 2" RSC
- 1-25PR #19
- HH 1 TO HH 2:
- 2" RSC
- 1-3/C #12

- (B) SOP-WOOD POLE
2" RISER, WEATHERHEAD, AND CONDUIT TO HH 19
3-1/C #2

- (3) PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
3-ONE-WAY SIGNALS OVERHEAD (0', 12' AND 22' FROM THE END OF THE MAST ARM)
2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225 DEG
1-POLE MOUNTED C. D. PED IND AT 225 DEG

F&I: 1-POLE MOUNTED C. D. PED IND AT 45 DEG

- 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5)
- LUMINAIRE-250W HPS
- 1-R9-3a SIGN (NO PED) FACING POLE 2
- 2-R6-1R SIGNS (ONE WAY)
- 1-TYPE D SIGN
- EXTEND INTO HH 9:
- 3" RSC
- 3-12/C #12
- 4-3/C #12
- 1-3/C #20

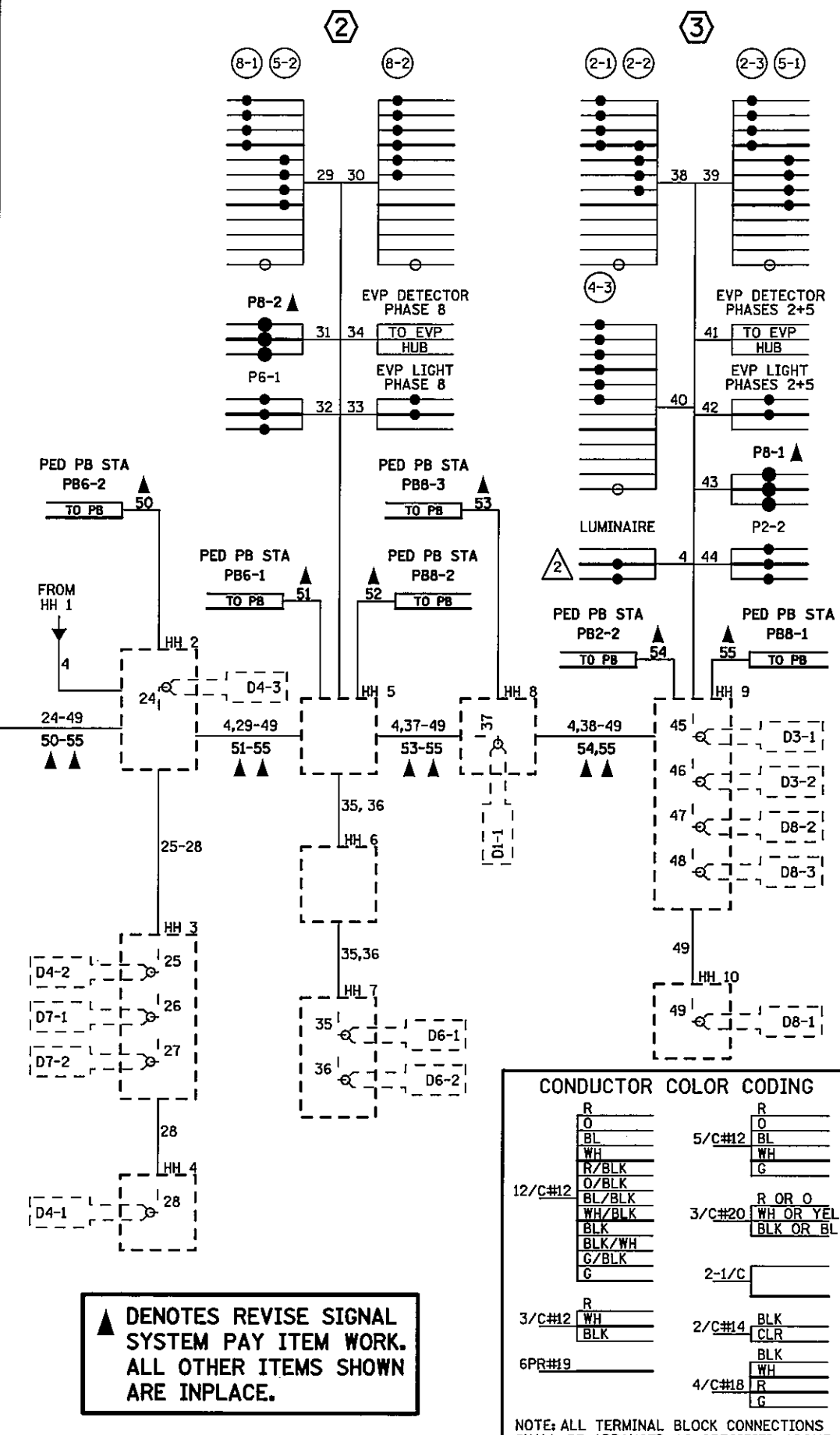
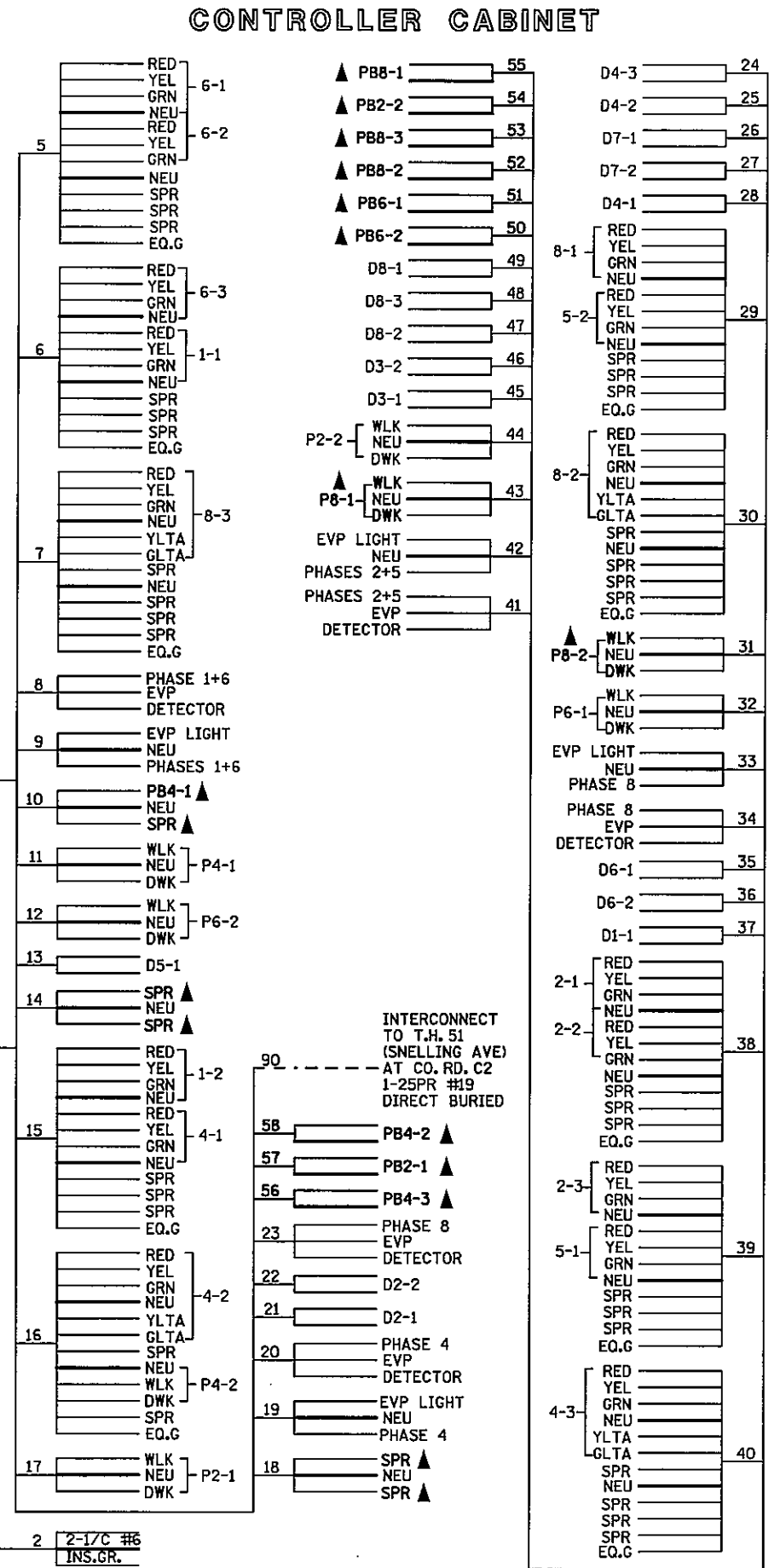
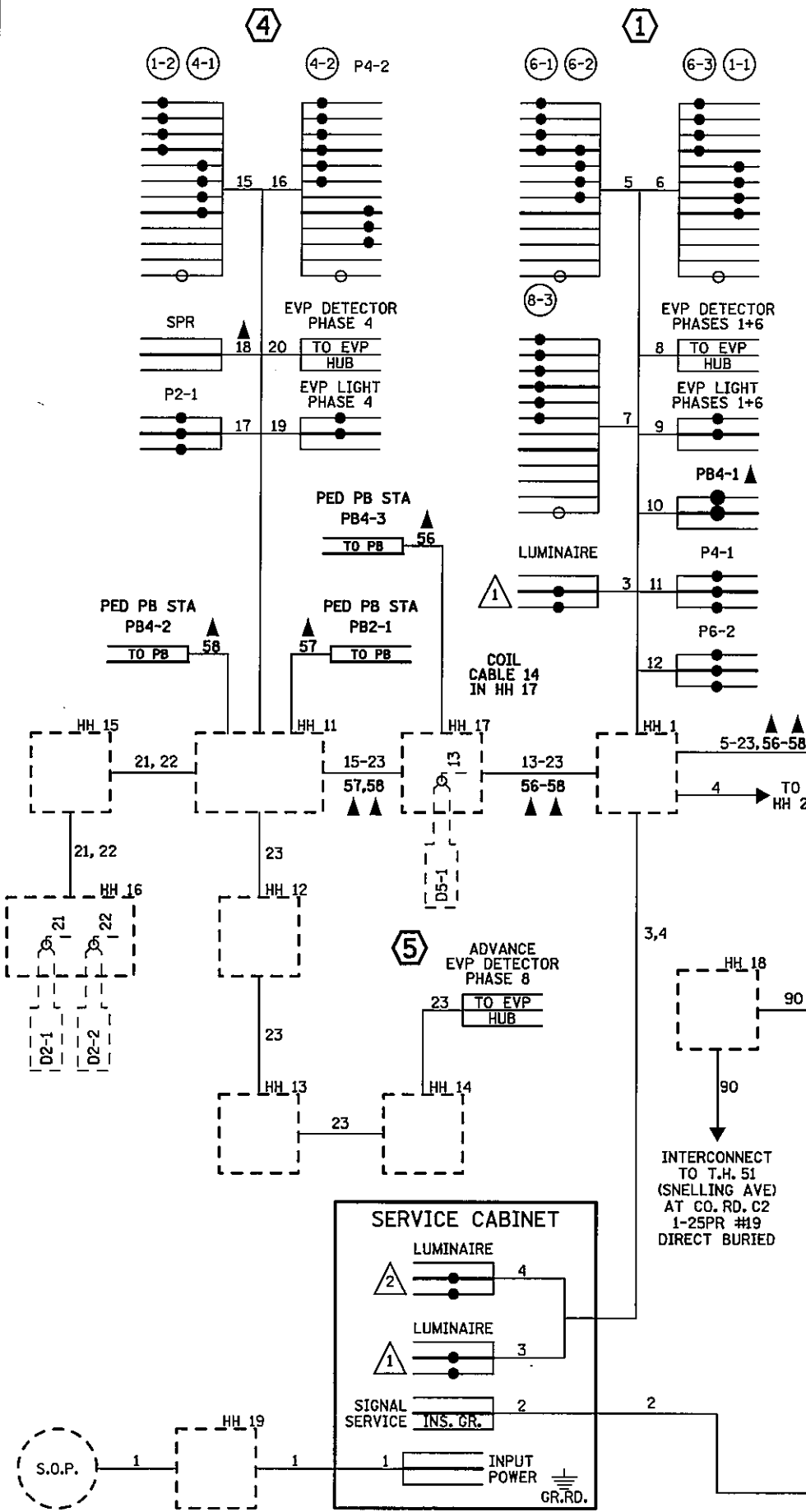
DISTRICT #: METRO
PLOT NAME: match line & notes C
PATH & FILENAME: IP_PWP.d\350782\PT20744_sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 20744	T.E. 5369	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 2995 SNELLING AVE N		CERTIFIED BY: <i>Michael P. Libusky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 41 OF 122 SHEETS	
MATCH LINE LAYOUTS AND NOTES REVISE SIGNAL SYSTEM C T.H. 51 AT LYDIA AVE. IN ROSEVILLE, RAMSEY COUNTY								

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 PLOT NAME: wiring C
 PATH & FILENAME: IP_PWP-d\350782\PT20744_sgl.dgn

CONTROLLER CABINET



▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

CONDUCTOR COLOR CODING	
R	R
O	5/C#12 BL
BL	WH
WH	G
R/BLK	R OR O
O/BLK	WH OR YEL
BL/BLK	BLK OR BL
WH/BLK	
BLK/WH	
G/BLK	
G	
	2-1/C
R	
3/C#12 WH	2/C#14 BLK
BLK	CLR
	BLK
6PR#19	WH
	R
	G

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

PLOTTED/REVISED: 4/20/2011

- (A) EQUIPMENT PAD
 SERVICE CABINET
 CONTROLLER AND CABINET
 4" RSC TO HH 1: 4" RSC TO HH 2:
 5-12/C #12 5-12/C #12
 8-3/C #12 7-3/C #12
 3-3/C #20 2-3/C #20
 3-2/C #14 15-2/C #14
 3" TSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)
 2" RSC TO SERVICE CABINET:
 2-1/C #6
 1-1/C #6 INS. GR.
 SERVICE CABINET TO HH 1:
 2" RSC
 2-3/C #12
 SERVICE CABINET TO HH 19:
 2" RSC
 3-1/C #2
 CONTROLLER CABINET TO HH 18:
 2" RSC
 1-25PR, #19
 HH 1 TO HH 2:
 2" RSC
 1-3/C #12

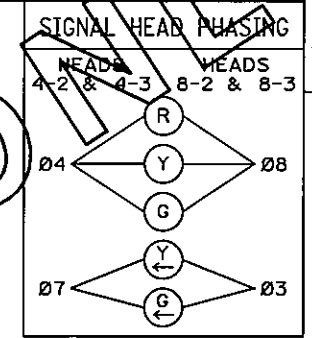
- (1) PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 3-ONE-WAY SIGNALS OVERHEAD (0', 12' AND
 22' FROM THE END OF THE MAST ARM)
 2-POLE MOUNTED ONE-WAY SIGNALS AT
 45 AND 225 DEG
 2-POLE MOUNTED C. D. PED IND
 AT 45 AND 225 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 1+6)
 LUMINAIRE-250W HPS
 2-PED PBS & SIGNS
 2-R6-1R SIGNS (ONE WAY)
 1-TYPE D SIGN
 EXTEND INTO HH 1:
 3" RSC
 3-12/C #12
 5-3/C #12
 1-3/C #20

- (2) PA90 POLE FOUNDATION
 TYPE PA90-A-30
 1-ONE-WAY SIGNAL OVERHEAD
 (0' FROM THE END OF THE MAST ARM)
 2-POLE MOUNTED ONE-WAY SIGNALS AT
 45 AND 225 DEG
 1-POLE MOUNTED C. D. PED IND AT 45 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)
 1-R10-12 SIGN ADJACENT TO HEAD 8-2
 1-R9-3a SIGN (NO PED) FACING POLE 3
 1-TYPE D SIGN
 EXTEND INTO HH 5:
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20

- (B) SOP-WOOD POLE
 2" RISER, WEATHERHEAD, AND
 CONDUIT TO HH 19
 3-1/C #2

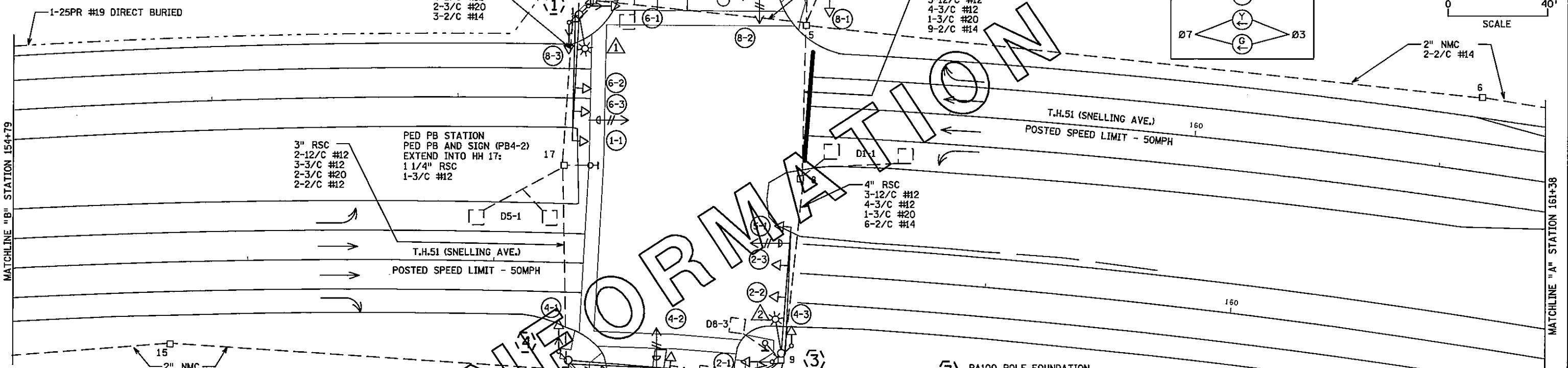
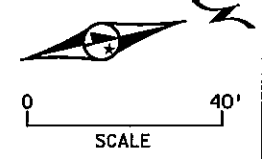
SIGNAL FACES					
FACE	R	Y	G	Y	G
1-1,1-2	←	←	←		
2-1,2-2,2-3	○	○	○		
4-1	○	○	○		
4-2,4-3	○	○	○	←	←
5-1,5-2	←	←	←		
6-1,6-2,6-3	○	○	○		
8-1	○	○	○		
8-2,8-3	○	○	○	←	←

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1,D5-1	6X6	40
D1-2,D5-2	6X6	10
D2-1,D2-2,D6-1,D6-2	6X6	400
D3-1,D7-1	2-6X6	20 & 50
D3-2,D7-2	2-6X6	5 & 35
D4-1,D8-1	6X6	120
D4-2,D8-2	2-6X6	5 & 20
D4-3	2-6X6	-5 & 5
D8-3	6X6	-5

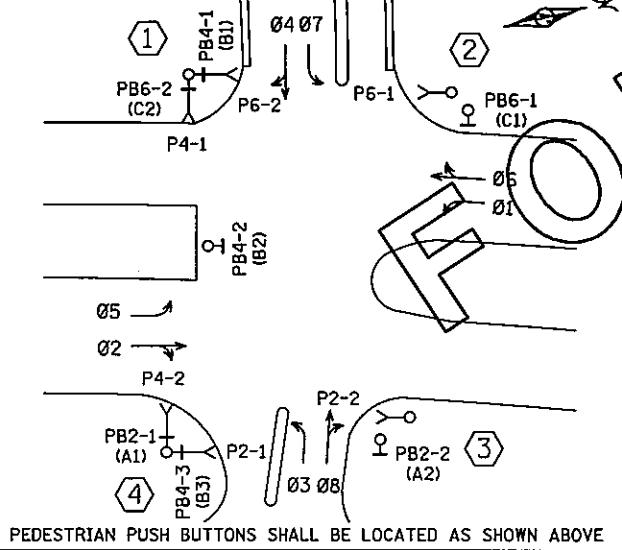


-ALL SIGNAL INDICATIONS SHALL BE 12"
 -ALL SIGNAL INDICATIONS SHALL BE LED
 -ALL SIGNAL FACES SHALL HAVE A BACKGROUND
 SHIELD

-ALL LOOPS DETECTORS SHALL BE NMC UNLESS
 NOTED OTHERWISE.
 -LOCATION: DISTANCE FROM CROSSWALK/STOP
 BAR IN FEET.



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



- (4) PA100 POLE FOUNDATION
 TYPE PA100-A-40
 1-ONE-WAY SIGNAL OVERHEAD
 (0' FROM THE END OF THE MAST ARM)
 2-POLE MOUNTED ONE-WAY SIGNALS AT
 45 AND 225 DEG
 2-POLE MOUNTED C. D. PED IND
 AT 45 AND 225 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 4)
 2-PED PBS & SIGNS
 1-R10-12 SIGN ADJACENT TO HEAD 4-2
 1-TYPE D SIGN
 EXTEND INTO HH 11:
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20

- PEDESTRIAN STATION
 1-APS PB AND SIGN
 (LT ARROW) (PB2-2)
 EXTEND INTO HH 9:
 1 1/4" CONDUIT
 1-2/C #14

- (3) PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 3-ONE-WAY SIGNALS OVERHEAD (0', 12' AND
 22' FROM THE END OF THE MAST ARM)
 2-POLE MOUNTED ONE-WAY SIGNALS AT
 45 AND 225 DEG
 1-POLE MOUNTED C. D. PED IND AT 225 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 2+5)
 LUMINAIRE-250W HPS
 1-R9-3a SIGN (NO PED)
 FACING POLE 2
 2-R6-1R SIGNS (ONE WAY)
 1-TYPE D SIGN
 EXTEND INTO HH 9:
 3" RSC
 3-12/C #12
 4-3/C #12
 1-3/C #20

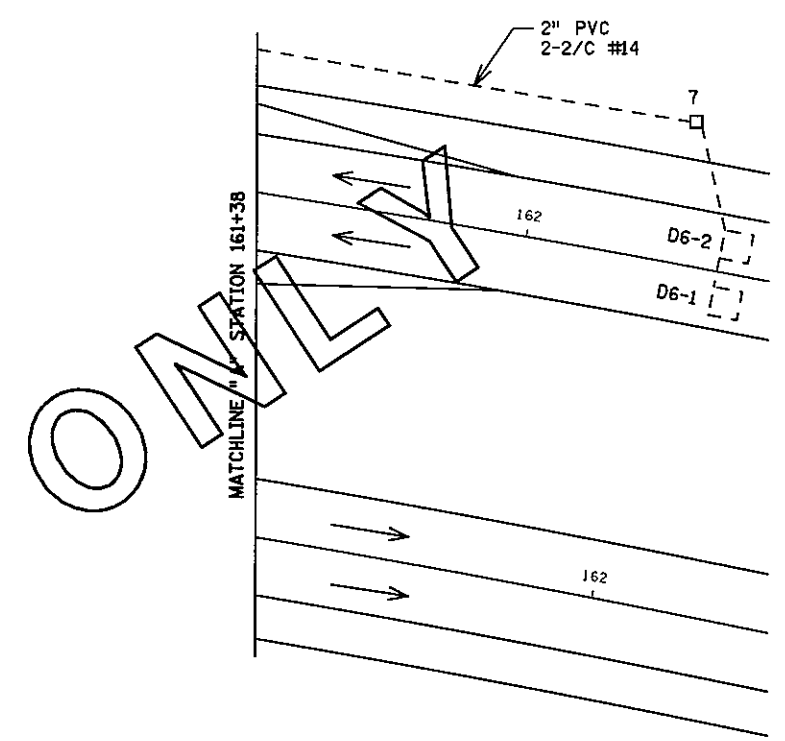
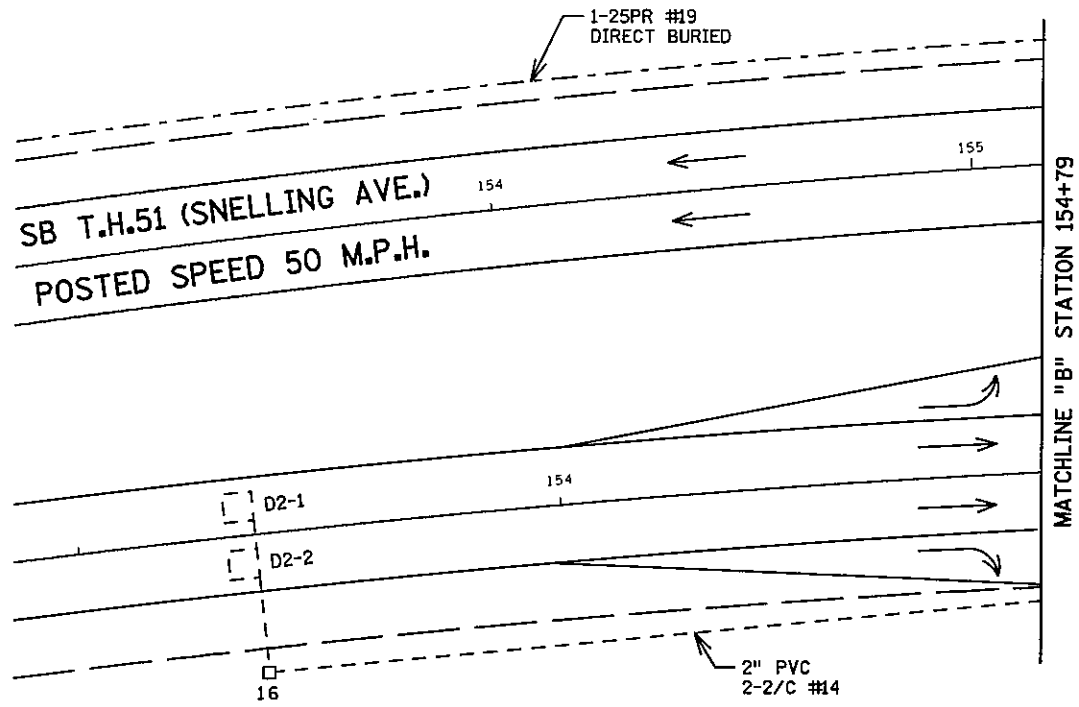
DRAWN BY: MAS	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY: EJA	CKD BY:	CKD BY:	CKD BY:
DATE: 9/22/09	DATE:	DATE:	DATE:
SYSTEM ID: 20744		T.E. 4965	
METER ADDRESS: 2995 SNELLING AVENUE NORTH			
MASTER ID: 20742			

"FOR INFORMATION ONLY"
INTERSECTION LAYOUT
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 51 AT LYDIA AVE.
IN ROSEVILLE, RAMSEY COUNTY

DISTRICT #: METRO
 I/PLOT NAME: Info only layout C
 PATH & FILENAME: IP_FWP-d\350782\PT20744\INFO_sgl.dgn

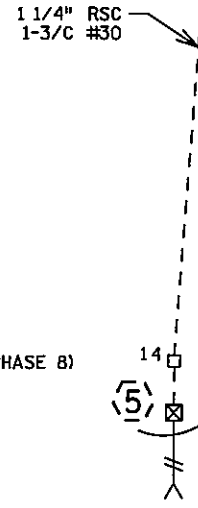
PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: Info only match lines C
PATH & FILENAME: IP_PWP-dl350782PT20744(Info)_sgl.dgn



FOR INFORMATION ONLY

(5) PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
1-ONE WAY EVP DETECTOR (PHASE B)
EXTEND INTO HH 14:
1 1/4" RSC
1-3/4" #30

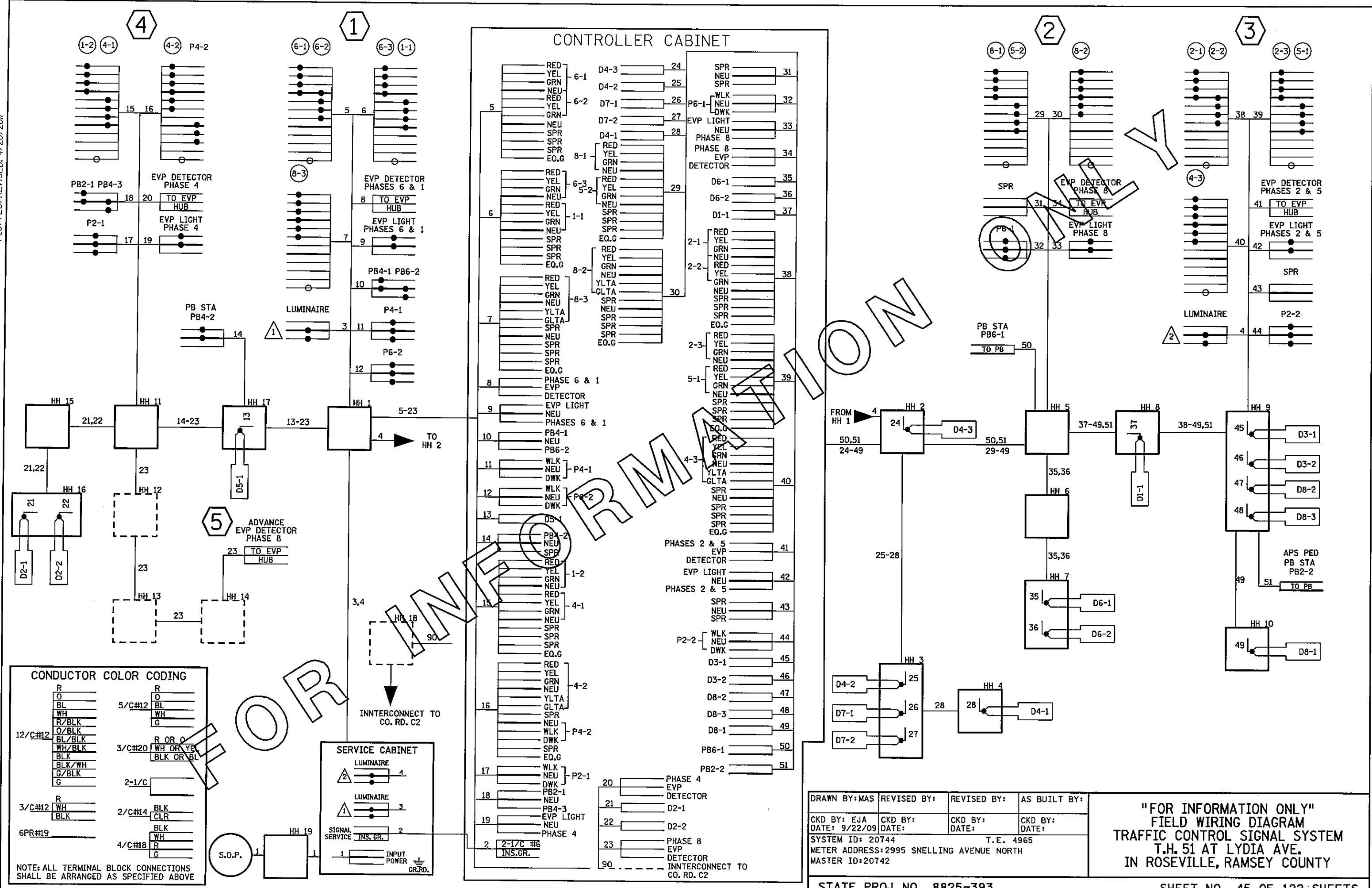


DRAWN BY: MAS	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY: LDB	CKD BY:	CKD BY:	CKD BY:
DATE:	DATE:	DATE:	DATE:
SYSTEM ID: 20744		T.E. 3666	
METER ADDRESS: 2995 SNELLING AVENUE NORTH			
MASTER ID: 20742			

"FOR INFORMATION ONLY"
MATCH LINE LAYOUTS
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 51 AT LYDIA AVE.
IN ROSEVILLE, RAMSEY COUNTY

PLOTTED/REVISED: 4/20/2011

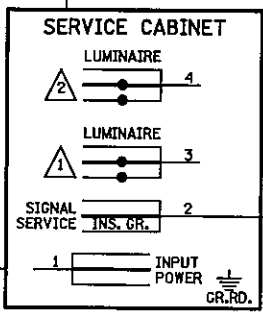
DISTRICT #: METRO
IPLOT NAME: Info only wiring C
PATH & FILENAME: IP_PWP-d1350782-PT20744(Info)_s.dgn



CONDUCTOR COLOR CODING

R	R
O	O
BL	BL
WH	WH
R/BLK	5/C#12 BL
O/BLK	5/C#12 WH
BL/BLK	5/C#12 G
WH/BLK	R OR O
BLK	3/C#20 WH OR YEL
BLK/WH	3/C#20 BLK OR BL
G/BLK	2-1/C
G	2-1/C
R	2/C#14 BLK
WH	2/C#14 CLR
BLK	2/C#14 BLK
	4/C#18 WH
	4/C#18 R
	4/C#18 G

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



DRAWN BY: MAS	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY: EJA	CKD BY:	CKD BY:	CKD BY:
DATE: 9/22/09	DATE:	DATE:	DATE:
SYSTEM ID: 20744		T.E. 4965	
METER ADDRESS: 2995 SNELLING AVENUE NORTH			
MASTER ID: 20742			

STATE PROJ. NO. 8825-393

"FOR INFORMATION ONLY"
FIELD WIRING DIAGRAM
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 51 AT LYDIA AVE.
IN ROSEVILLE, RAMSEY COUNTY

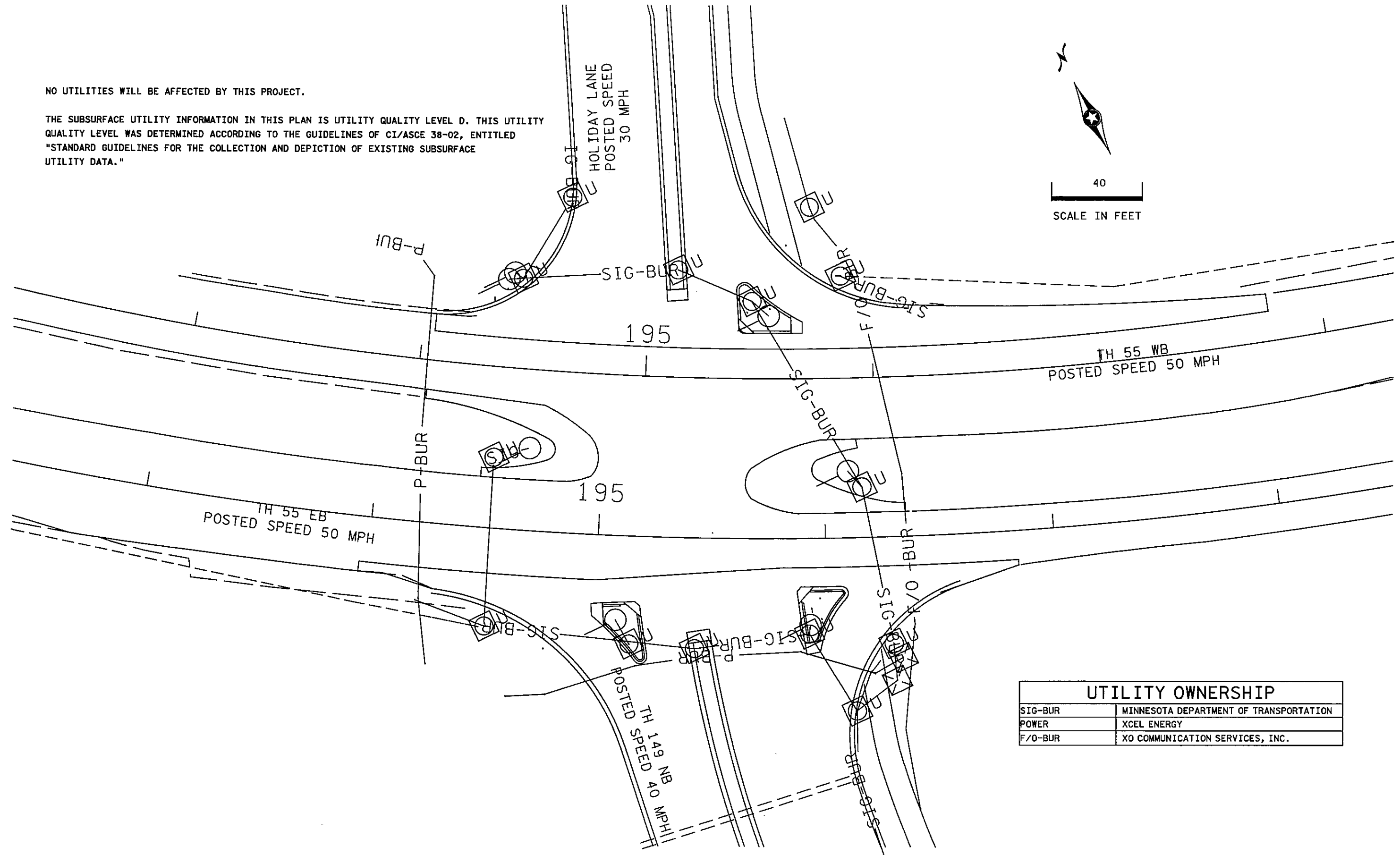
SHEET NO. 45 OF 122 SHEETS

PLOTTED/REVISED: 2/7/2011

DISTRICT #: METRO
PLOT NAME: UTILITIES
PATH & FILENAME: P:\PWP:d1382529\T20928U_sgl.dgn

NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

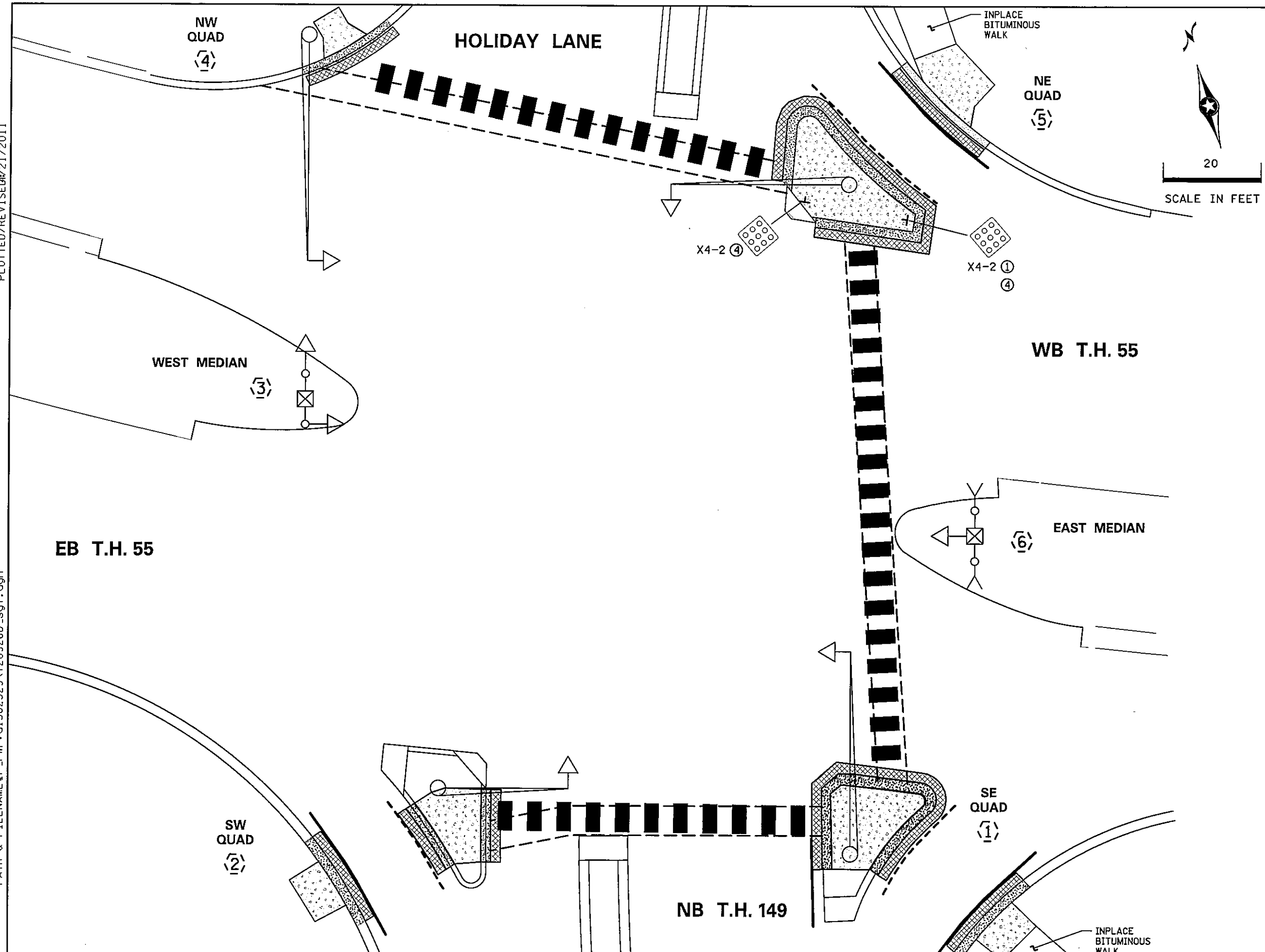
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



UTILITY OWNERSHIP	
SIG-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
POWER	XCEL ENERGY
F/O-BUR	XO COMMUNICATION SERVICES, INC.

BY	DATE	REVISIONS	SYSTEM ID: 20928	T.E. 5370	INPLACE TOPOGRAPHY AND UTILITIES PLAN REVISE SIGNAL SYSTEM D TRAFFIC CONTROL SIGNAL SYSTEM T.H. 55 AT TH 149 DODD RD S. JCT IN EGAN, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11	
			METER ADDRESS: 2879 HIGHWAY 55			CERTIFIED BY: <i>Michael P. Sulmasy</i>	LIC. NO. 19863	DATE: 04-21-11		
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 46 OF 122 SHEETS			

DISTRICT #METRO
 IPLOT NAME:REMOVALS
 PATH & FILENAME:P_PWP:d1382529\T20928D_sgl.dgn
 PLOTTED/REVISED:21/2011



LEGEND

- INPLACE SIGNAL POLE
- REMOVE CONC. CURB & GUTTER
- REMOVE CONCRETE WALK
- MILL BITUMINOUS SURFACE (2.0")
- REMOVE BITUMINOUS SURFACING
- INPLACE SIGNAL BASE NO.
- INPLACE HANDHOLE
- INPLACE CATCH BASIN
- REMOVE CROSSWALK
- INPLACE EDGE OF PAVEMENT
- F&I CROSSWALK MARKING
- F&I 4" SOLID LINE WHITE
- F&I 4" SOLID LINE YELLOW



- ① F & I
- ④ REMOVE

BY	DATE	REVISIONS	SYSTEM ID: 20928	T.E. 5370	REMOVAL, SIGNING AND PAVEMENT MARKING PLAN REVISE SIGNAL SYSTEM D T.H. 55 AT TH 149 DODD RD S. JCT IN EAGAN, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 2879 HIGHWAY 55			CERTIFIED BY: <i>Michael P. Libunsky</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863		DATE: 04-21-11
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 47 OF 122 SHEETS		

PLOTTED/REVISED/28/2011

DISTRICT #METRO
PLOT NAME:20 SCALE CURB RAMP DETAIL
PATH & FILENAME: P:\PWP:d1382529\T20928D.sgl.dgn

HOLIDAY LANE

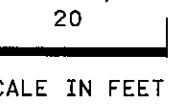
WB T.H. 55

EB T.H. 55

NB T.H. 149

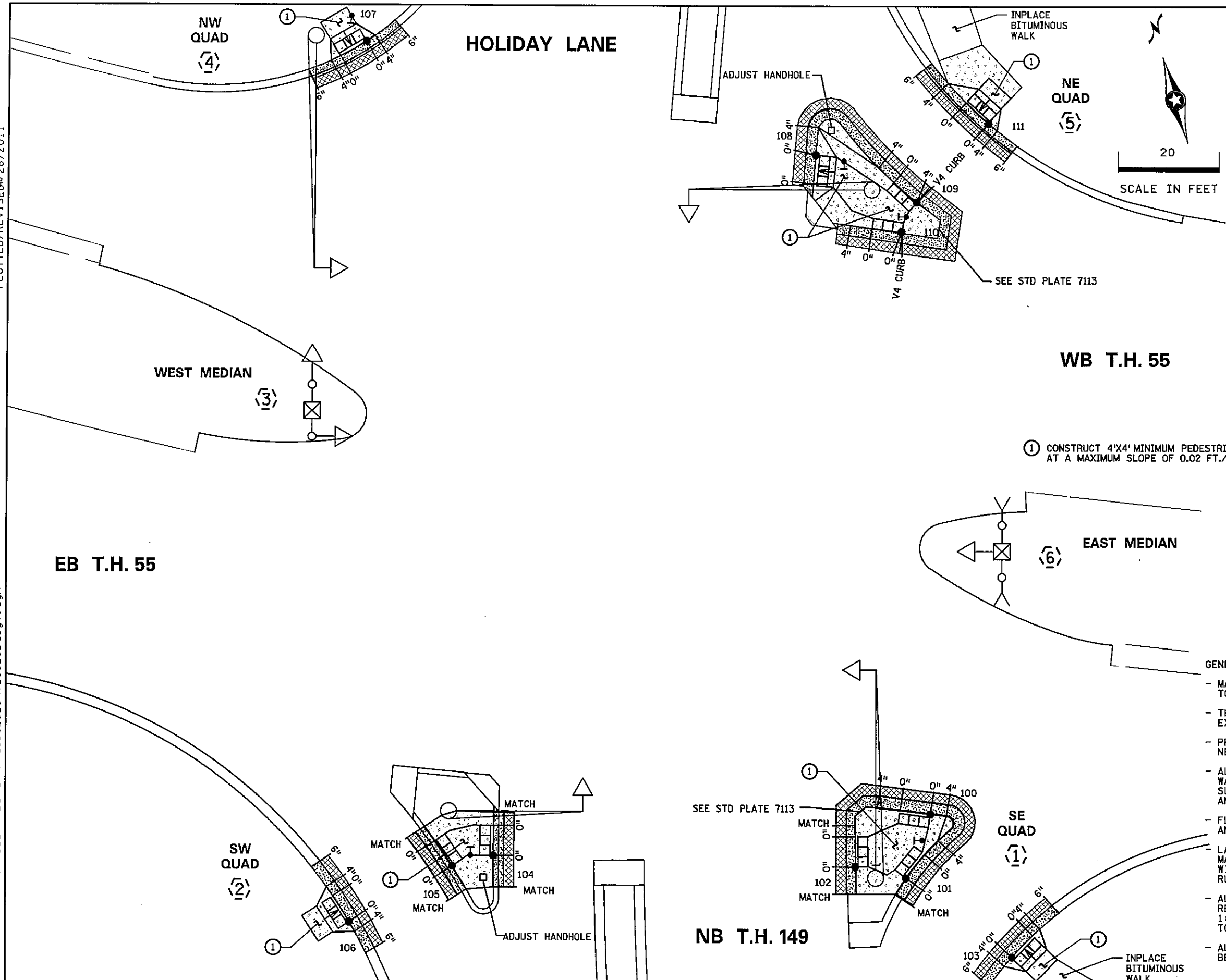
LEGEND

- INPLACE SIGNAL POLE
- CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
- PEDESTRIAN PUSH BUTTON STATION
- INPLACE SIGNAL BASE NO.
- INPLACE HANDHOLE
- EDGE OF INPLACE SURFACING
- X" CURB HEIGHT AT INDICATED LOCATION
- INTERSECTION POINT OF CROSSWALK EDGE AND PEDESTRIAN RAMP EDGE AT FACE OF CURB
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- 6" CONCRETE WALK
- 2" BITUMINOUS OVERLAY, 2' WIDE
- INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT



DETAIL POINTS		
POINT NO.	X	Y
100	550075.2231	236353.1881
101	550066.6278	236342.6098
102	550057.8570	236347.9406
103	550081.6318	236321.0279
104	549990.1487	236372.7221
105	549981.8033	236373.2852
106	549958.7149	236369.2216
107	550017.0370	236525.4577
108	550095.1374	236485.5363
109	550111.2483	236470.2027
110	550106.5955	236465.3790
111	550129.7188	236480.7078

- GENERAL NOTES:
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.



BY	DATE	REVISIONS	SYSTEM ID: 20928	T.E. 5370	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 2879 HIGHWAY 55		CERTIFIED BY: <i>Michael P. Lubusky</i>			DATE: 04-21-11
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 48 OF 122 SHEETS	
PEDESTRIAN CURB RAMP DETAILS REVISE SIGNAL SYSTEM D T.H. 55 AT TH 149 DODD RD S. JCT IN EAGAN, DAKOTA COUNTY								

LOOP DETECTOR CHART

DESIGNATION	SIZE (FEET)	LOCATION	STATUS
D1-1	6X6	40'	INPLACE
D1-2	6X6	10'	INPLACE
D2-1, D2-2	6X6	380'	INPLACE
D3-1, D3-2	6X6	250'	INPLACE
D3-3, D3-4	6X6	40'	INPLACE
D3-5, D3-6	6X6	10'	INPLACE
D4-1	6X6	120'	INPLACE
D4-2	2-6X6	-10, 5'	INPLACE
D4-3	2-6X6	5', 20'	INPLACE
D5-1	6X6	40'	INPLACE
D5-2	6X6	10'	INPLACE
D6-1, D6-2	6X6	395'	INPLACE
D7-1	6X6	40'	INPLACE
D7-2	6X6	10'	INPLACE
D8-1	6X6	250'	INPLACE
D8-2	2-6X6	5', 20'	F&I

-ALL LOOPS DETECTORS SHALL BE 6'X6' UNLESS OTHERWISE SPECIFIED.
 -LOCATION: DISTANCE FROM CROSSWALK/STOP LINE IN FEET.

REMOVE: PEDESTRIAN PUSH BUTTON STATION
 1-PEDESTRIAN PUSH BUTTON
 EXTEND INTO HH 11:
 2" CONDUIT
 PULL BACK TO HH 11: 1-3/C#12
F&I: PED PB STA
 1-APS PB AND SIGN
 (RT ARROW) (PB8-2)
 EXTEND INTO HH 11:
 2" CONDUIT
REINSTALL: 1-3-C#12

F&I: PED PB STA
 1-APS PB AND SIGN
 (LT ARROW) (PB6-1)
 EXTEND INTO HH 15:
 2" CONDUIT
REINSTALL: 1-3-C#12

F&I: PED PB STA
 1-APS PB AND SIGN
 (RT ARROW) (PB8-2)
 EXTEND INTO HH 15:
 2" CONDUIT
REINSTALL: 1-2-C#14

LED SIGNAL FACE CHART

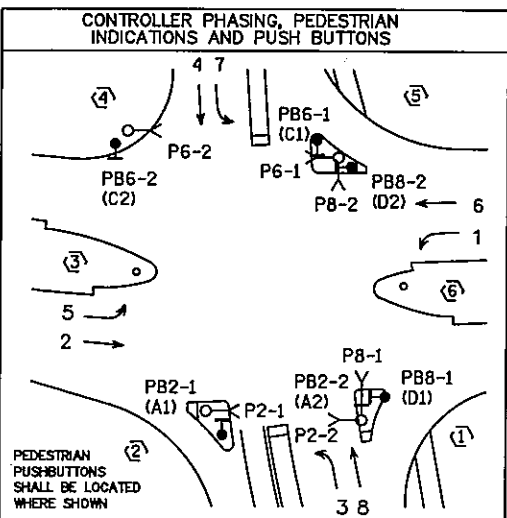
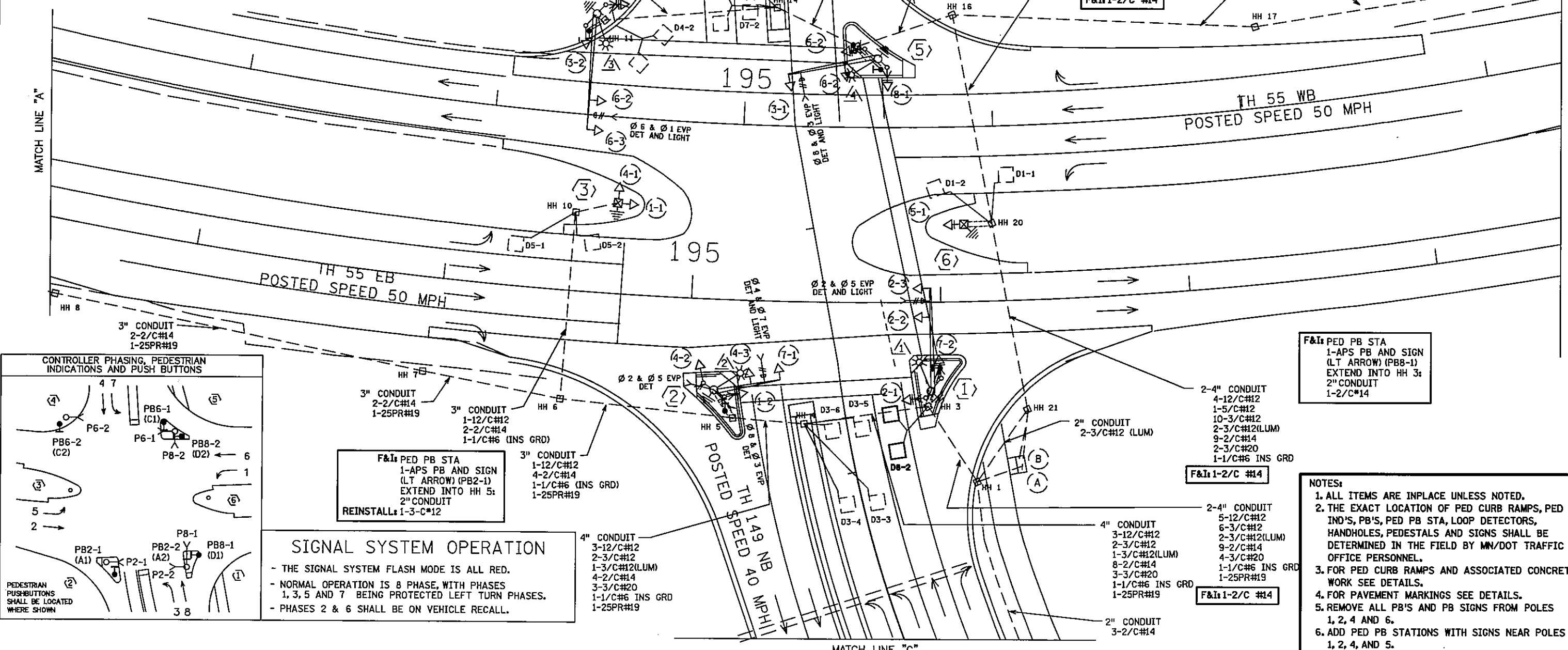
FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	○	○	○			
3-1, 3-2				←	←	←
4-1, 4-2, 4-3	○	○	○			
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	○	○	○			
7-1, 7-2				←	←	←
8-1, 8-2	○	○	○			

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12".
 -ALL VEHICLE SIGNAL INDICATIONS SHALL BE LED'S.
 -EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.



PLOTTED/REVISED 04/20/2011

DISTRICT #: METRO
 I: PLOT NAME: LAYOUT
 PATH & FILENAME: P:\PWP: d1382529\T20928 -sgl.dgn



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5 AND 7 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 & 6 SHALL BE ON VEHICLE RECALL.

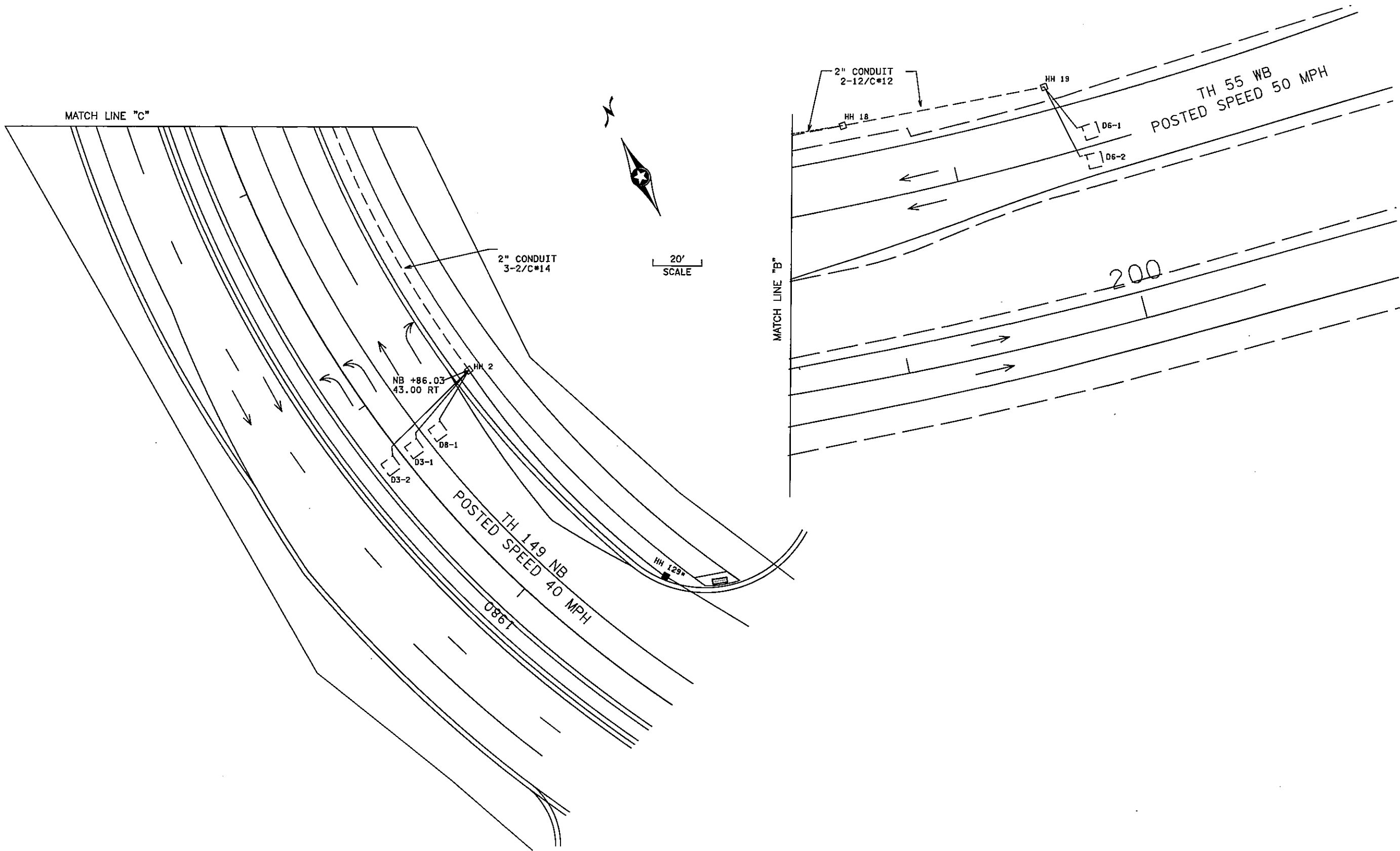
NOTES:

1. ALL ITEMS ARE INPLACE UNLESS NOTED.
2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, LOOP DETECTORS, HANDHOLES, PEDESTALS AND SIGNS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
4. FOR PAVEMENT MARKINGS SEE DETAILS.
5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 4 AND 6.
6. ADD PED PB STATIONS WITH SIGNS NEAR POLES 1, 2, 4, AND 5.

BY	DATE	REVISIONS	SYSTEM ID: 20928	T.E. 5370	INTERSECTION LAYOUT REVISE SIGNAL SYSTEM D TRAFFIC CONTROL SIGNAL SYSTEM T.H. 55 AT TH 149 DODD RD S. JCT IN EAGAN, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 2879 HIGHWAY 55			CERTIFIED BY: <i>Michael P. Lubinsky</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 04-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 49 OF 122 SHEETS		

PLOTTED/REVISED: 04/20/2011

DISTRICT #: METRO
 IPLOT NAME: MATCH LINES
 PATH & FILENAME: P:\PWP:dl382529\T20928 .sgl.dgn



BY	DATE	REVISIONS

SYSTEM ID: 20928 T.E. 5370
 METER ADDRESS: 2879 HIGHWAY 55
 MASTER ID: T.E.

MATCH LINES
 REVISE SIGNAL SYSTEM D
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 55 AT TH 149 DODD RD S. JCT
 IN EAGAN, DAKOTA COUNTY

S.A.P. NO. _____
 DRAWN BY: SJK CKD BY: BTJ DATE: 04-21-11
 CERTIFIED BY: *Michael P. Lubinsky* LIC. NO. 19863 DATE: 04-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 50 OF 122 SHEETS

PLOTTED/REVISED: 04/20/2011

DISTRICT # METRO
 I/PLOT NAME # POLE NOTES
 PATH & FILENAME # PWP: d:\382529\T20928_sgl.dgn

① PA100 POLE FOUNDATION
 TYPE PA100-40-A-D40-9 (DAVIT AT 350)
 2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 11 FT
 2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225
 2-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATIONS
 WITH COUNTDOWN TIMERS AT 45 AND 225

REMOVE: 2-PED PB AND SIGN
 F&I: 1-APS PB AND SIGN (RT ARROW) (PB2-2)

LUMINAIRE-250 HPS
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 EXTEND INTO HH 3
 3" CONDUIT
 2-12/C*12
 4-3/C*12
 1-3/C*12(LUM)
 1-3/C*20
 2-1/C*6 INS GRD

② IPA90 POLE FOUNDATION
 TYPE PA90-25-D40-9 (DAVIT AT 350)
 2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 11 FT
 ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225
 1-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATION
 WITH COUNTDOWN TIMER AT 45

REMOVE: 1-PED PB AND SIGN R10-4b

LUMINAIRE-250 HPS
 1-R9-3a SIGNS (FACING POLE 3)
 TYPE D SIGN (D-11)
 1-SIGN R10-4b
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 EXTEND INTO HH 5
 3" CONDUIT
 2-12/C*12
 1-3/C*12

PULL BACK TO HH 5: 1-3/C*12

1-3/C*12(LUM)
 3-3/C*20
 2-1/C*6 INS GRD

③ PEDESTAL FOUNDATION
 13' SIGNAL PEDESTAL POLE
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 2-POLE MOUNTED ONE WAY SIGNALS
 AT 0 (FACING EAST) AND 270 (FACING NORTH)
 2-R9-3a SIGNS (FACING POLES 2&4)
 EXTEND INTO HH 10
 3" CONDUIT
 1-12/C*12
 1-1/C*6 INS GRD

④ PA100 POLE FOUNDATION
 TYPE PA100-A-45-D40-9 (DAVIT AT 350")
 2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 11 FT
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225
 1-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATION
 WITH COUNTDOWN TIMER AT 225"

LUMINAIRE-250 HPS
 1- SIGN R9-3a FACING POLE 3
 TYPE SIGNS (D-12 & D-13)
 1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
 EXTEND INTO HH 11
 3" CONDUIT
 2-12/C*12
 2-3/C*12
 1-3/C*12(LUM)
 1-3/C*20
 1-1/C*6 INS GRD

⑤ PA100 POLE FOUNDATION
 TYPE PA100-A-35-D40-9 (DAVIT AT 350)
 2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 23 FT
 ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-POLE MOUNTED ONE-WAY SIGNALS AT 45 AND 225
 2-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATIONS
 WITH COUNTDOWN TIMERS AT 45 AND 225

REMOVE: 2-PED PB & SIGNS R10-4b(L)

LUMINAIRE-250 HPS
 TYPE D SIGNS (D-14)
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 EXTEND INTO HH 15
 3" CONDUIT
 2-12/C*12
 3-3/C*12

PULL BACK TO HH 15: 1-3/C*12

1-3/C*12(LUM)
 1-3/C*20
 2-1/C*6 INS GRD

⑥ PEDESTAL FOUNDATION
 13' SIGNAL PEDESTAL POLE AND BASE
 1-POLE MOUNTED ONE WAY SIGNAL AT 0° (FACING WEST)

REMOVE: 2-ONE WAY PEDESTAL MOUNTED PEDESTRIAN INDICATIONS
 AT 90° AND 270° WITH COUNTDOWN TIMERS
 1-PEDESTRIAN PB AND SIGN R10-4b

1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 EXTEND INTO HH 20
 3" CONDUIT
 1-5/C*12
 3-3/C*12
 2-1/C*6 INS GRD

Ⓐ Ⓑ EQUIPMENT PAD
 POWER COMPANY TRANSFORMER
 CONTROLLER AND CABINET
 SIGNAL SERVICE CABINET
 EXTEND TO HH 1
 2-4" CONDUIT
 5-12/C*12
 6-3/C*12
 12-2/C*14

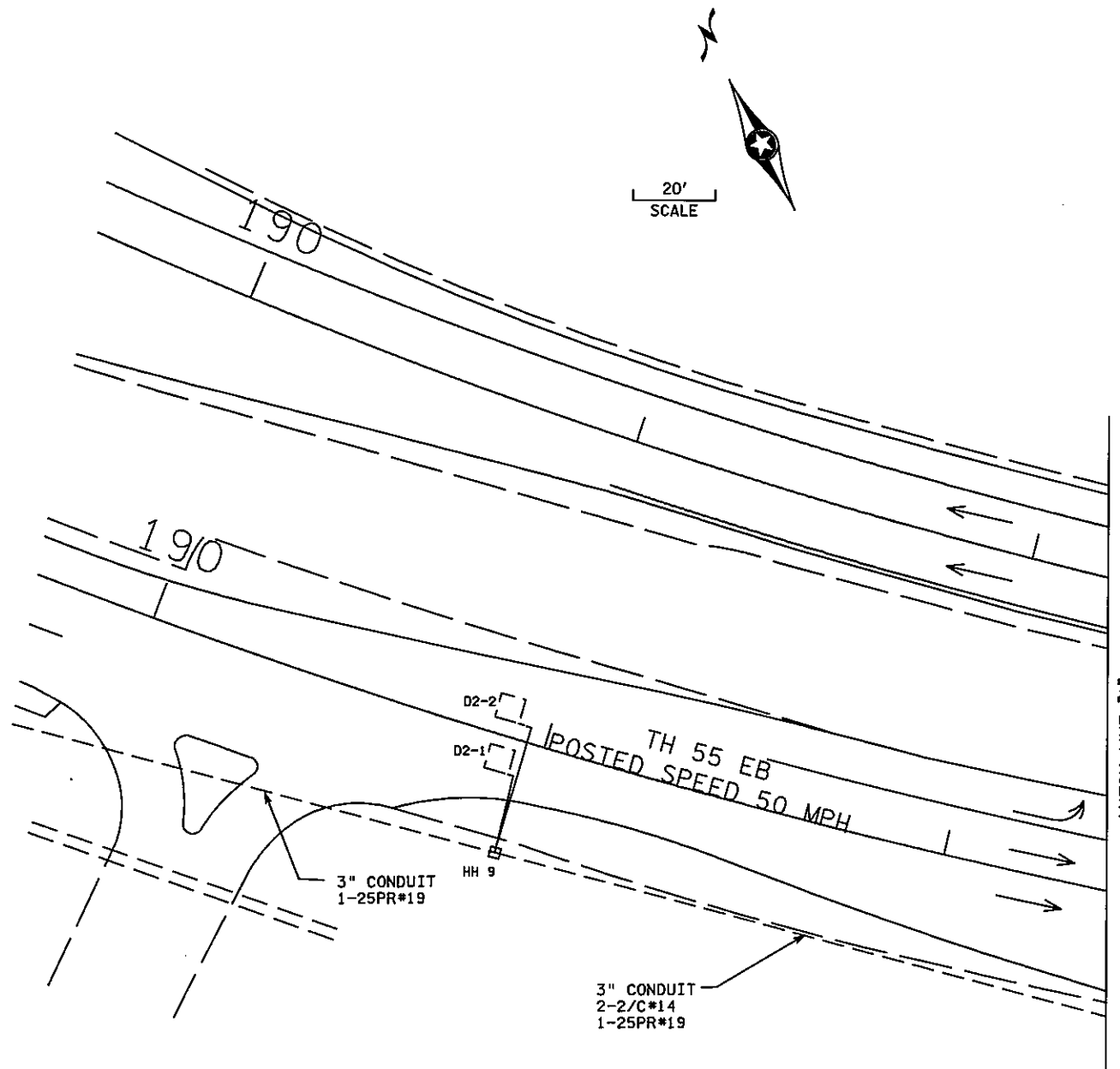
F&I: 1-2/C*14

4-3/C*20
 1-1/C*6 INS GRD
 1-25PR*19*
 EXTEND TO HH 21
 2-4" CONDUIT
 4-12/C*12
 1-5/C*12
 10-3/C*12
 9-2/C*14

F&I: 1-2/C*14

2-3/C*20
 1-1/C*6 INS GRD

CONTROLLER TO SERVICE CABINET
 2 " CONDUIT
 2-1/C*6
 1-1/C*6 INS GRD
 2-1/C*12(CONVENIENCE OUTLET)
 SERVICE CABINET TO HH 21
 2 " CONDUIT
 4-3/C*12 (LUM)



BY	DATE	REVISIONS

SYSTEM ID: 20928 T.E. 5370
 METER ADDRESS: 2879 HIGHWAY 55
 MASTER ID: T.E.

POLE NOTES
 REVISE SIGNAL SYSTEM D
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 55 AT TH 149 DODD RD S. JCT
 IN EAGAN, DAKOTA COUNTY

S.A.P. NO. _____
 CERTIFIED BY: *Michael P. Lubinsky* LIC. NO. 19863 DATE: 04-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 51 OF 122 SHEETS

DRAWN BY: SJK CKD BY: BTJ DATE: 04-21-11

LOOP DETECTOR CHART

DESIGNATION	SIZE (FEET)	LOCATION
D1-1	6X6	40'
D1-2	6X6	10'
D2-1, D2-2	6X6	380'
D3-1, D3-2	6X6	250'
D3-3, D3-4	6X6	40'
D3-5, D3-6	6X6	10'
D4-1	6X6	120'
D4-2	2-6X6	-10, 5'
D4-3	2-6X6	5', 20'
D5-1	6X6	40'
D5-2	6X6	10'
D6-1, D6-2	6X6	395'
D7-1	6X6	40'
D7-2	6X6	10'
D8-1	6X6	250'
D8-2	2-6X6	5', 20'

-ALL LOOPS DETECTORS SHALL BE 6'X6' UNLESS OTHERWISE SPECIFIED.
 -LOCATION: DISTANCE FROM CROSSWALK/STOP LINE IN FEET.

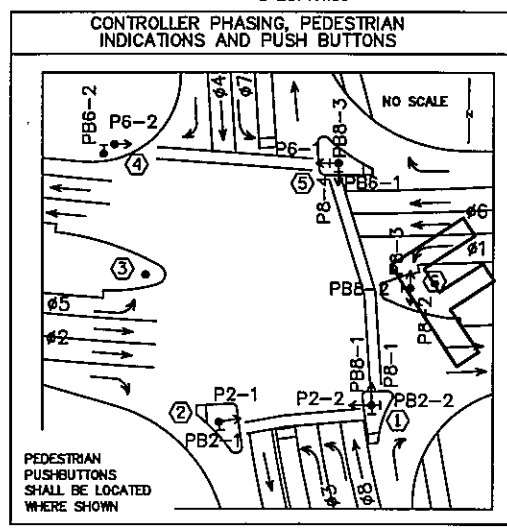
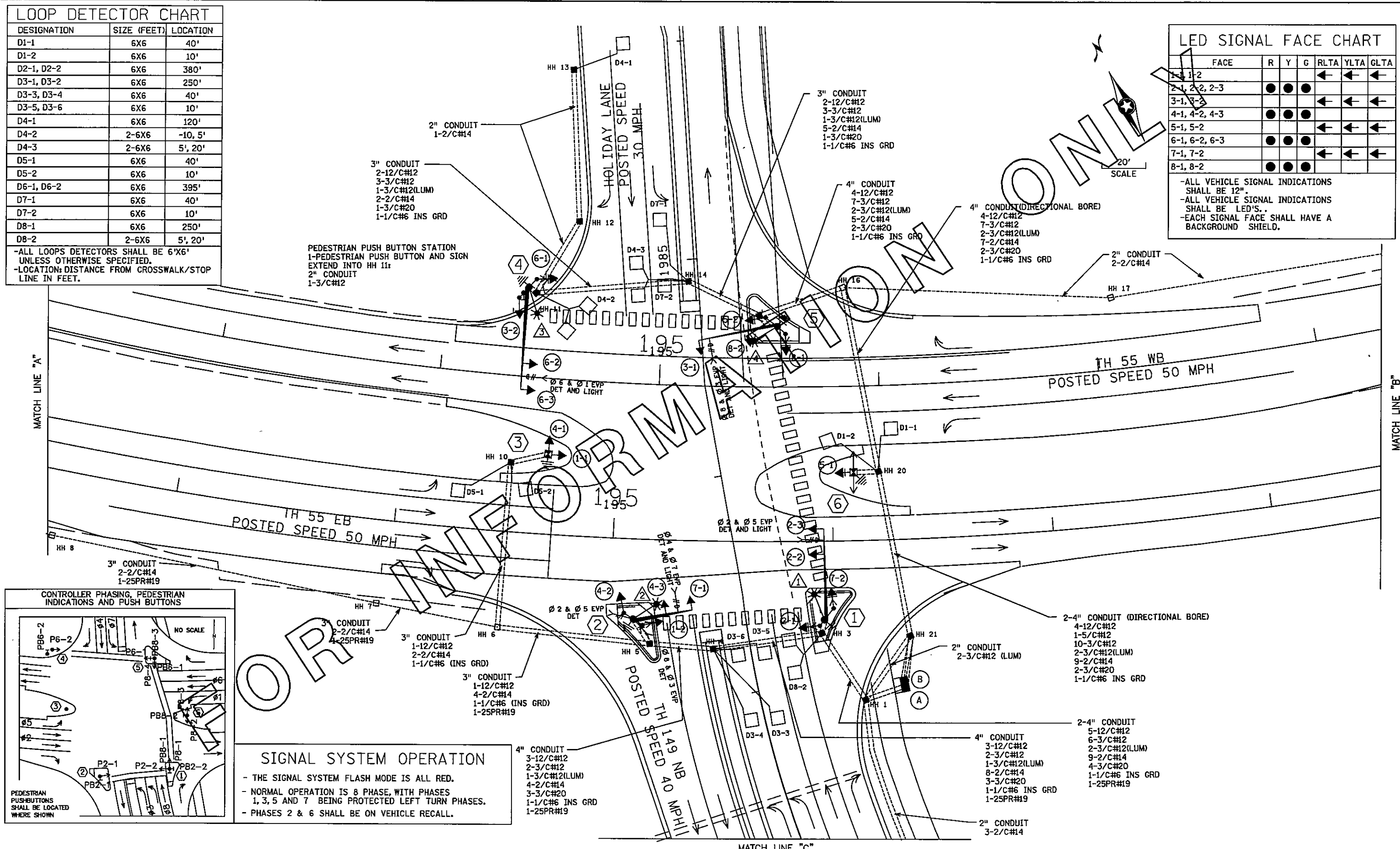
LED SIGNAL FACE CHART

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	●	●	●			
3-1, 3-2				←	←	←
4-1, 4-2, 4-3	●	●	●			
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	●	●	●			
7-1, 7-2				←	←	←
8-1, 8-2	●	●	●			

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12".
 -ALL VEHICLE SIGNAL INDICATIONS SHALL BE LED'S.
 -EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.

PLOTTED/REVISED/27/2011

DISTRICT #METRO
 IPLOT NAME:INFO ONLY LAYOUT
 PATH & FILENAME:P:\PWP:d1382529\T20928_sgl.dgn



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5 AND 7 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 & 6 SHALL BE ON VEHICLE RECALL.

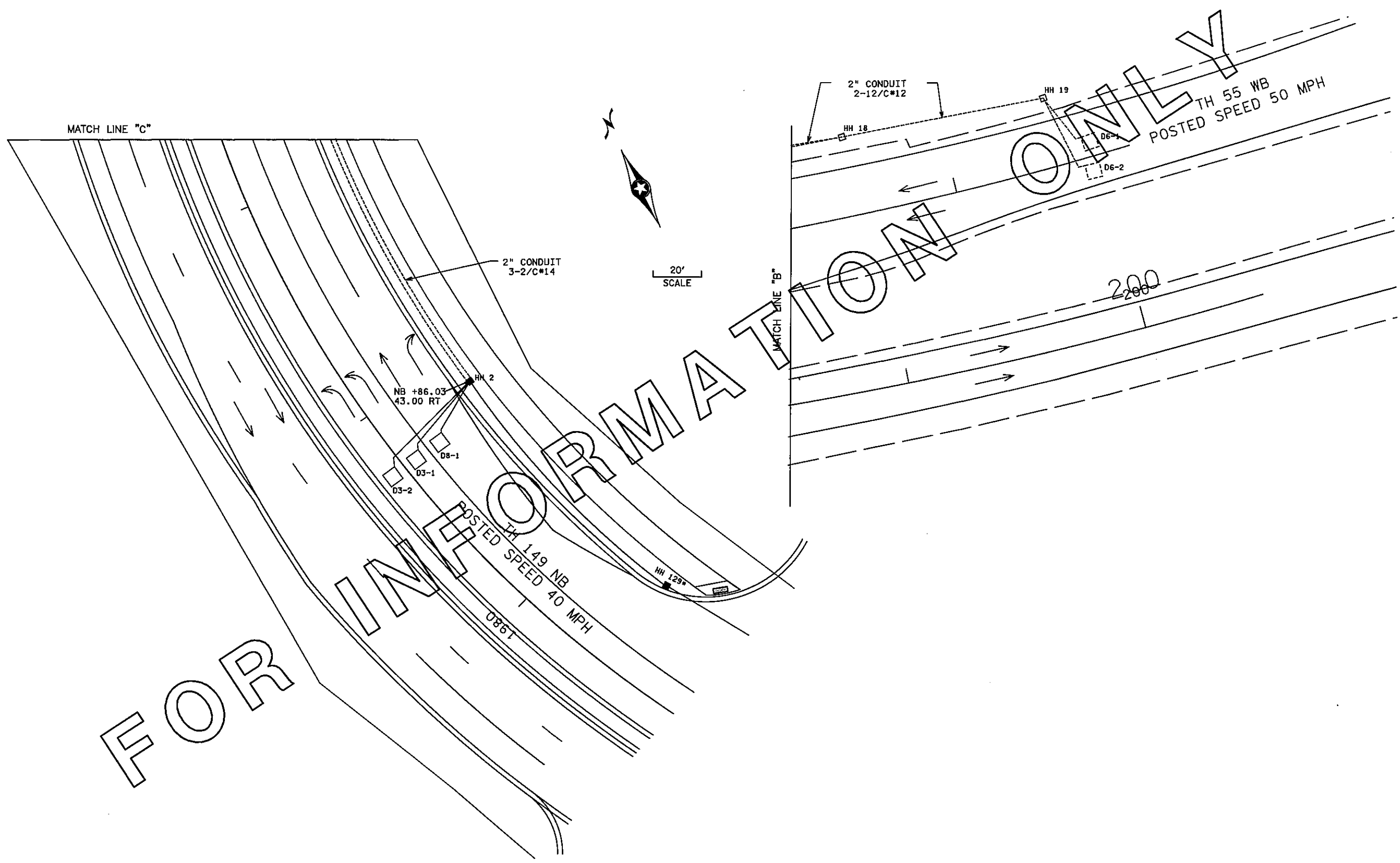
BY	DATE	REVISIONS

SYSTEM ID: 20928 T.E. 5370
 METER ADDRESS: 2879 HIGHWAY 55
 MASTER ID: T.E.

"FOR INFORMATION ONLY"
 INTERSECTION LAYOUT
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 55 AT TH 149 DODD RD S. JCT
 IN EGAN, DAKOTA COUNTY

PLOTTED/REVISED: 27/2011

DISTRICT #: METRO
PLOT NAME: INFO ONLY MATCH LINES
PATH & FILENAME: P:\PWP:dl382529\T20928 -sgl.dgn



FOR INFORMATION ONLY

BY	DATE	REVISIONS

SYSTEM ID: 20928 T.E. 5370
 METER ADDRESS: 2879 HIGHWAY 55
 MASTER ID: T.E.

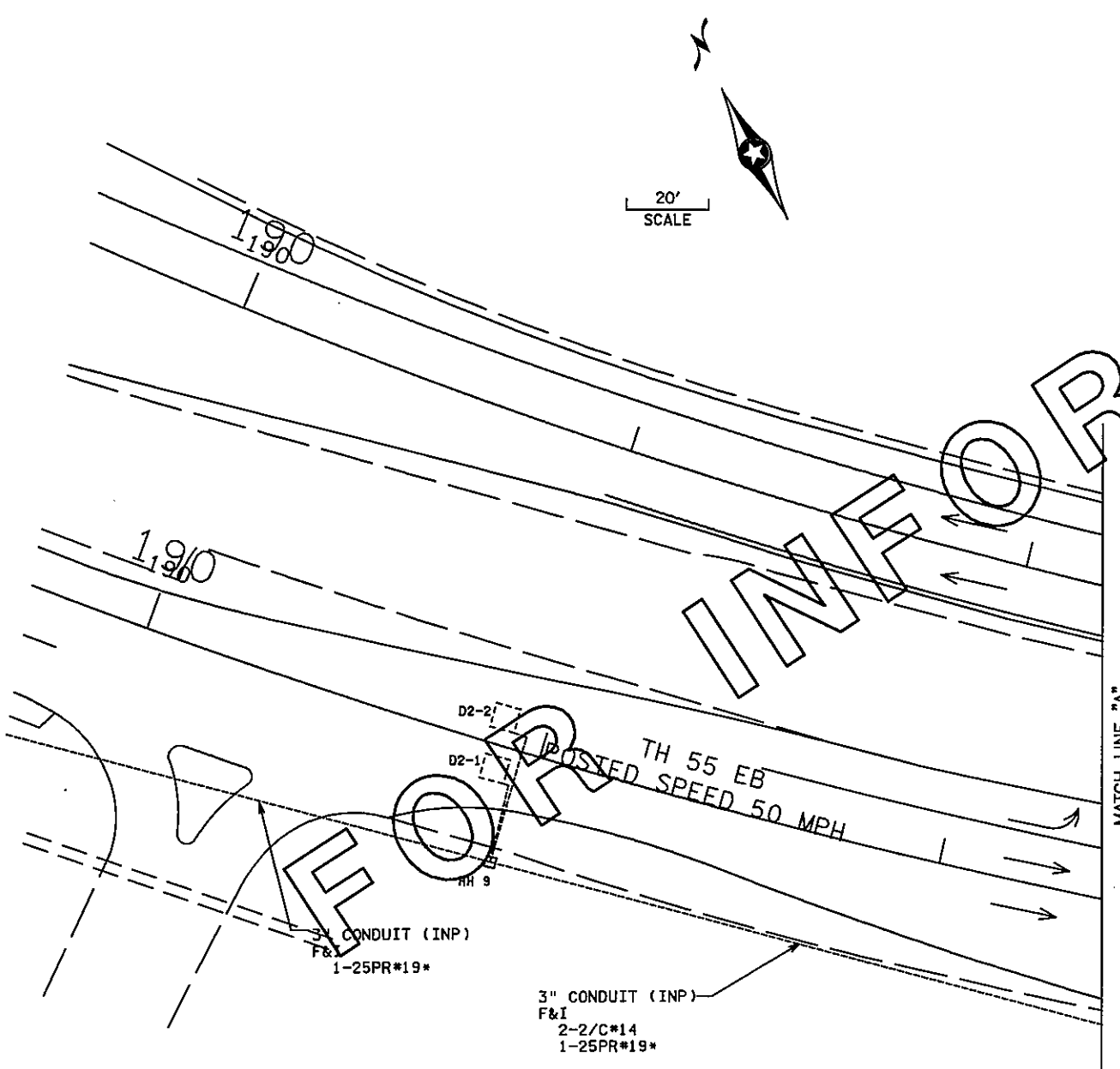
"FOR INFORMATION ONLY"
 MATCH LINES
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 55 AT TH 149 DODD RD S, JCT
 IN EAGAN, DAKOTA COUNTY

STATE PROJ. NO. 8825-393

SHEET NO. 54 OF 122 SHEETS

PLOTTED/REVISED/27/2011

DISTRICT #METRO
I PLOT NAME:INFO ONLY POLE NOTES
PATH & FILENAME:IP_PWP:d1382529\T20928_sgl.dgn



① STA 1983+27.8 TH149 (N.B.), 35.3' RT
F&I
PA100 POLE FOUNDATION
TYPE PA100-40-A-D40-9 (DAVIT AT 350")
2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 11 FT
2-POLE MOUNTED ONE-WAY SIGNALS AT 45° AND 225°
2-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATIONS
WITH COUNTDOWN TIMERS AT 45° AND 225°
LUMINAIRE-250 HPS
1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
EXTEND INTO HH 3
3" CONDUIT
2-12/C*12
4-3/C*12
1-3/C*12(LUM)
1-3/C*20
2-1/C*6 INS GRD
INSTALL SALVAGED
FROM EXISTING "SYSTEM D" POLE 1
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
1-PED PB & SIGNS R10-4b(R) TOWARDS POLE 6
1-PED PB & SIGNS R10-4b(L) TOWARDS POLE 2
TYPE SIGNS (D-9 & D-10)

② STA 1983+40.0 TH149 (N.B.), 50.9' LT
F&I
PA90 POLE FOUNDATION
TYPE PA90-25-D40-9 (DAVIT AT 350")
2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 11 FT
2-POLE MOUNTED ONE-WAY SIGNALS AT 45° AND 225°
1-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATION
WITH COUNTDOWN TIMER AT 45°
LUMINAIRE-250 HPS
1-SIGN R10-4b
1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
EXTEND INTO HH 5
3" CONDUIT
2-12/C*12
2-3/C*12
1-3/C*12(LUM)
1-3/C*20
2-1/C*6 INS GRD
INSTALL SALVAGED
FROM EXISTING "SYSTEM D" POLE 2
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
1-PED PB AND SIGN R10-4b(L) TOWARDS POLE 1
1-R9-3a SIGNS (FACING POLE 3)
TYPE D SIGN (D-11)

③ STA 1984+23.71 TH149 (N.B.), 75.72 LT'
F&I
PEDESTAL FOUNDATION
13' SIGNAL PEDESTAL POLE
1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
2-POLE MOUNTED ONE WAY SIGNALS
AT 0° (FACING EAST) AND 270° (FACING NORTH)
EXTEND INTO HH 10
3" CONDUIT
1-12/C*12
1-1/C*6 INS GRD
INSTALL SALVAGED
FROM EXISTING "SYSTEM D" POLE 6
2-R9-3a SIGNS (FACING POLES 2&4)

④ STA 1984+91.8 TH149 (N.B.), 77.0' LT
F&I
PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9 (DAVIT AT 350")
2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 11 FT
2-POLE MOUNTED ONE-WAY SIGNALS AT 45° AND 225°
1-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATION
WITH COUNTDOWN TIMER AT 225°
LUMINAIRE-250 HPS
1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
EXTEND INTO HH 11
3" CONDUIT
2-12/C*12
4-3/C*12
1-3/C*12(LUM)
1-3/C*20
1-1/C*6 INS GRD
INSTALL SALVAGED
FROM EXISTING "SYSTEM D" POLE 3
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
1- SIGN R9-3a FACING POLE 3
TYPE SIGNS (D-12 & D-13)

⑤ STA 1984+66.7 TH149 (N.B.), 34.9' RT
F&I
PA100 POLE FOUNDATION
TYPE PA100-A-35-D40-9 (DAVIT AT 350")
2-ONE-WAY SIGNALS OVERHEAD AT 0 FT AND 23 FT
2-POLE MOUNTED ONE-WAY SIGNALS AT 45° AND 225°
2-POLE MOUNTED ONE-WAY PEDESTRIAN INDICATIONS
WITH COUNTDOWN TIMERS AT 45° AND 225°
LUMINAIRE-250 HPS
1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
EXTEND INTO HH 15
3" CONDUIT
2-12/C*12
4-3/C*12
1-3/C*12(LUM)
1-3/C*20
2-1/C*6 INS GRD
INSTALL SALVAGED
FROM EXISTING "SYSTEM D" POLE 4
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
1-PED PB & SIGNS R10-4b(R) TOWARDS POLE 4
1-PED PB & SIGNS R10-4b(L) TOWARDS POLE 5
TYP D SIGNS (D-14)

⑥ STA 1983+90.81 TH149 (N.B.), 59.43' RT
F&I
PEDESTAL FOUNDATION
13' SIGNAL PEDESTAL POLE AND BASE
1-POLE MOUNTED ONE WAY SIGNAL AT 0° (FACING WEST)
2-ONE WAY PEDESTAL MOUNTED PEDESTRIAN INDICATIONS
AT 90° AND 270° WITH COUNTDOWN TIMERS
1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
EXTEND INTO HH 20
3" CONDUIT
1-5/C*12
3-3/C*12
2-1/C*6 INS GRD
INSTALL SALVAGED
FROM EXISTING "SYSTEM D" POLE 5
1-PEDESTRIAN PB AND SIGN R10-4b

(A) (B) F&I
EQUIPMENT PAD
INSTALL SALVAGED
POWER COMPANY TRANSFORMER
(MOVED BY OTHERS) INSTALLED ON NEW PAD
CONTROLLER AND CABINET
SIGNAL SERVICE CABINET
EXTEND TO HH 1
2-4" CONDUIT
5-12/C*12
6-3/C*12
12-2/C*14
4-3/C*20
1-1/C*6 INS GRD
1-25PR*19*
EXTEND TO HH 21
2-4" CONDUIT
4-12/C*12
1-5/C*12
10-3/C*12
9-2/C*14
2-3/C*20
1-1/C*6 INS GRD

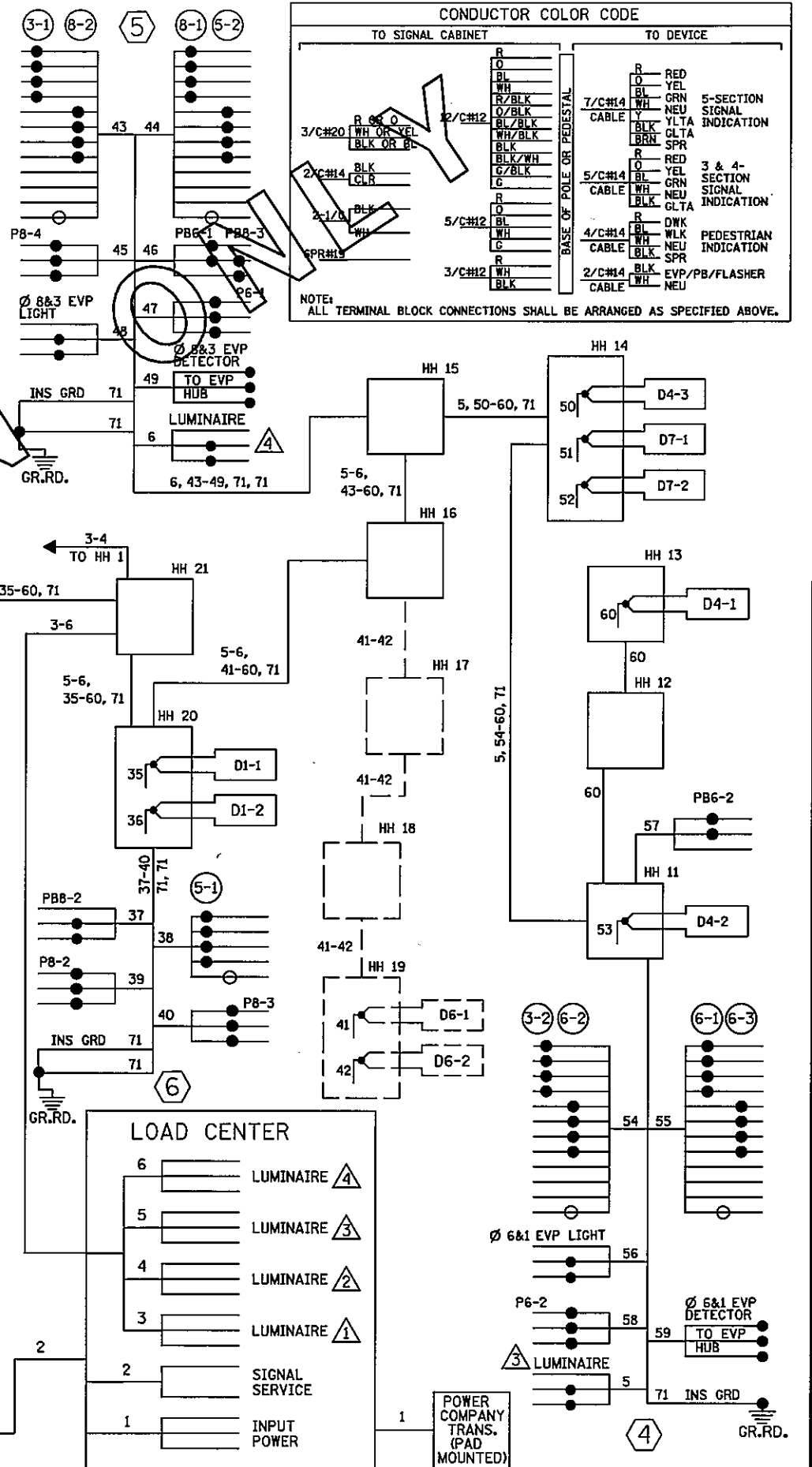
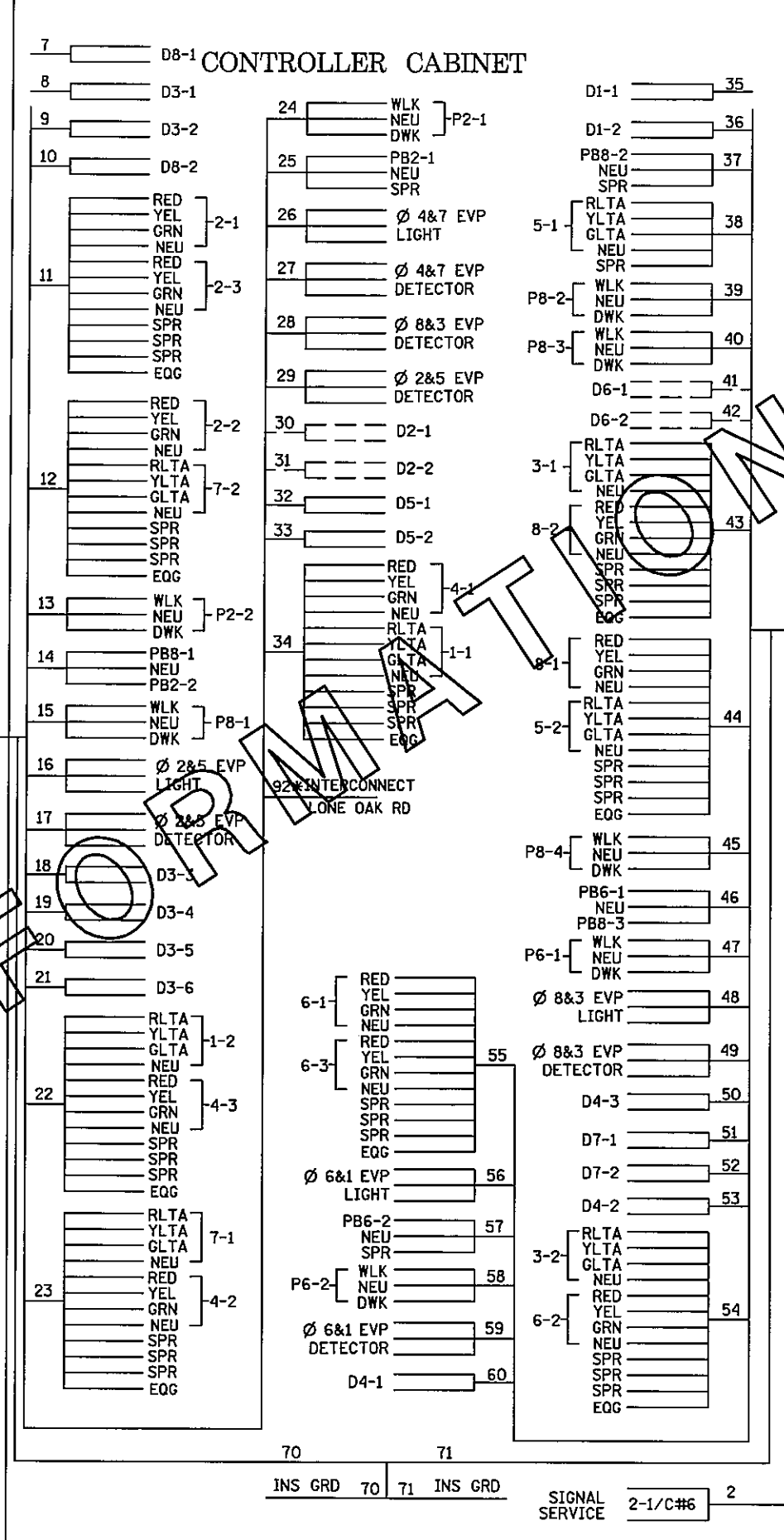
CONTROLLER TO SERVICE CABINET
2 " CONDUIT
2-1/C*6
1-1/C*6 INS GRD
2-1/C*12(CONVENIENCE OUTLET)
SERVICE CABINET TO HH 21
2 " CONDUIT
4-3/C*12 (LUM)

BY	DATE	REVISIONS

SYSTEM ID: 20928 T.E. 5370
METER ADDRESS: 2879 HIGHWAY 55
MASTER ID: T.E.

"FOR INFORMATION ONLY"
POLE NOTES
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 55 AT TH 149 DODD RD S. JCT
IN EAGAN, DAKOTA COUNTY

DISTRICT #: METRO
 IPLOT NAME: INFO ONLY WIRING DIAGRAM
 PATH & FILENAME: P:\PWP: d1382529\T20928 - sgl.dgn
 PLOTTED/REVISED: 04/27/2011



CONDUCTOR COLOR CODE	
TO SIGNAL CABINET	TO DEVICE
R	R RED
O	O YEL
BL	BL GRN
WH	WH NEU
R/BLK	R/BLK YLTA
O/BLK	O/BLK GLTA
WH/BLK	WH/BLK BLK
BLK/BLK	BLK/BLK BLK
BLK/WH	BLK/WH BLK
G/BLK	G/BLK BLK
C	C
R	R
O	O
BL	BL
WH	WH
R/BLK	R/BLK
O/BLK	O/BLK
WH/BLK	WH/BLK
BLK/BLK	BLK/BLK
BLK/WH	BLK/WH
G/BLK	G/BLK
C	C
R	R
O	O
BL	BL
WH	WH
R/BLK	R/BLK
O/BLK	O/BLK
WH/BLK	WH/BLK
BLK/BLK	BLK/BLK
BLK/WH	BLK/WH
G/BLK	G/BLK
C	C

5-SECTION SIGNAL INDICATION
 3 & 4-SECTION SIGNAL INDICATION
 PEDESTRIAN CABLE INDICATION
 EVP/PB/FLASHER CABLE

BASE OF POLE OR PEDESTAL
 7/C#14
 5/C#14
 4/C#14
 2/C#14

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

BY	DATE	REVISIONS

SYSTEM ID: 20928 T.E. 5370
 METER ADDRESS: 2879 HIGHWAY 55
 MASTER ID: T.E.

"FOR INFORMATION ONLY"
 FIELD WIRING DIAGRAM
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 55 AT TH 149 DODD RD S. JCT
 IN EAGAN, DAKOTA COUNTY

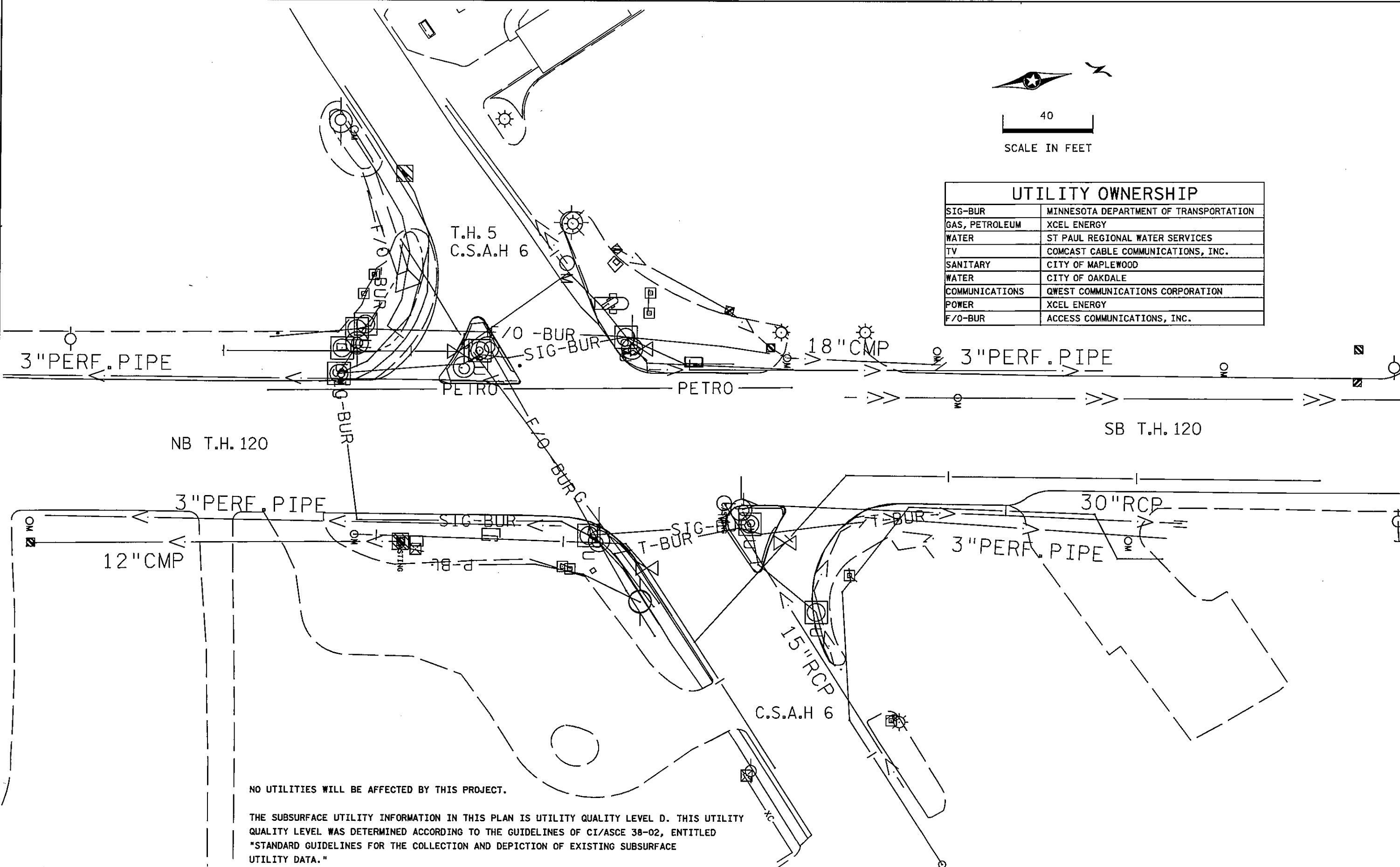
PLOTTED/REVISED/27/2011

DISTRICT #METRO
 IPLOT NAME: UTILITIES LAYOUT
 PATH & FILENAME: P:\PWP:dl1382530\T21437U.sgl.dgn



40
 SCALE IN FEET

UTILITY OWNERSHIP	
SIG-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
GAS, PETROLEUM	XCEL ENERGY
WATER	ST PAUL REGIONAL WATER SERVICES
TV	COMCAST CABLE COMMUNICATIONS, INC.
SANITARY	CITY OF MAPLEWOOD
WATER	CITY OF OAKDALE
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION
POWER	XCEL ENERGY
F/O-BUR	ACCESS COMMUNICATIONS, INC.



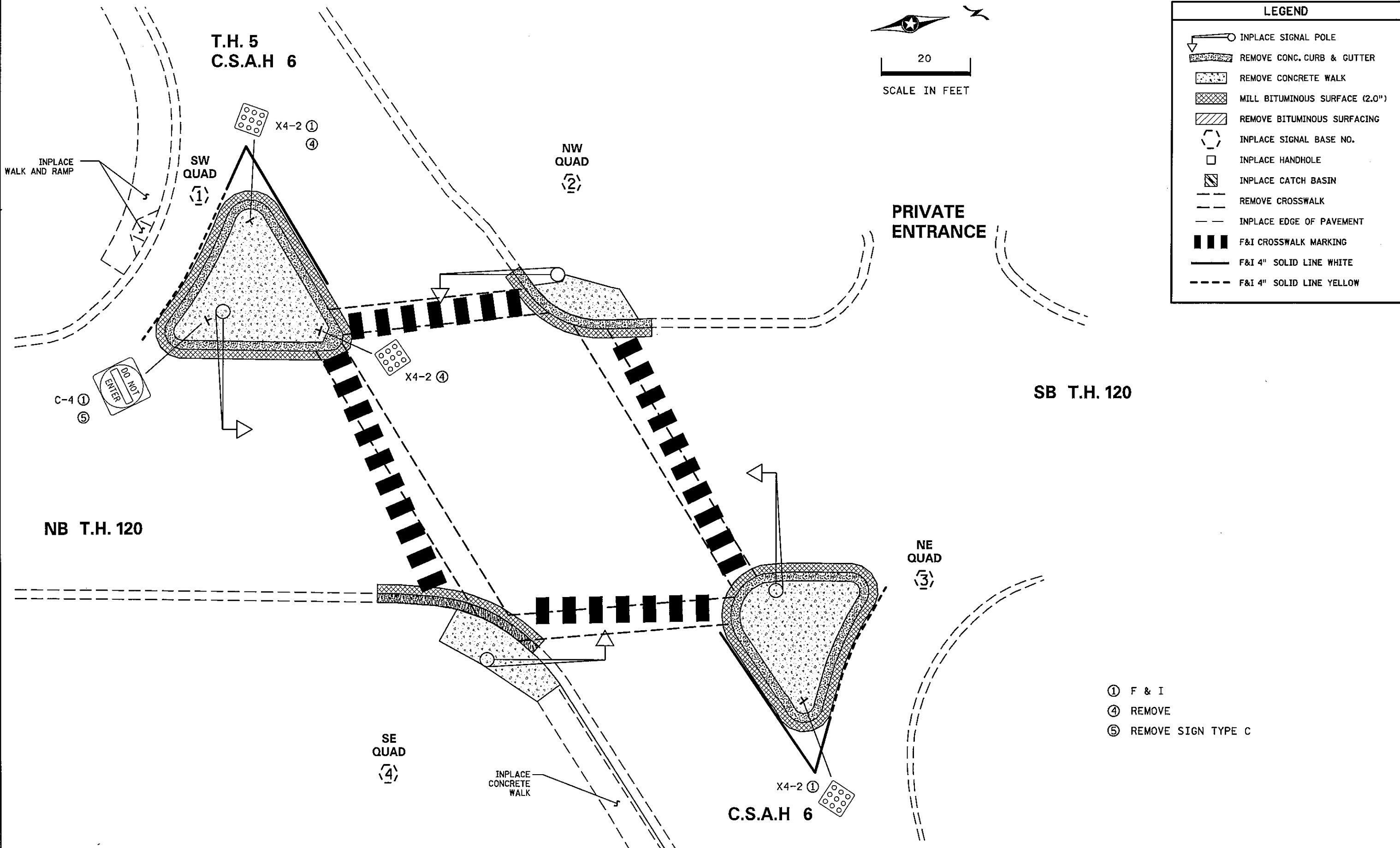
NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	INPLACE TOPOGRAPHY AND UTILITIES PLAN REVISE SIGNAL SYSTEM E T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6 (STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 1125 CENTURY AVE N			CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863	DATE: 04-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 57 OF 122 SHEETS		

PLOTTED/REVISED: 04/26/2011

DISTRICT #METRO
 IPLOT NAME: REMOVALS AND PAVEMENT MARKINGS
 PATH & FILENAME: P:\PWP\dl382530\T21437D_sgl.dgn



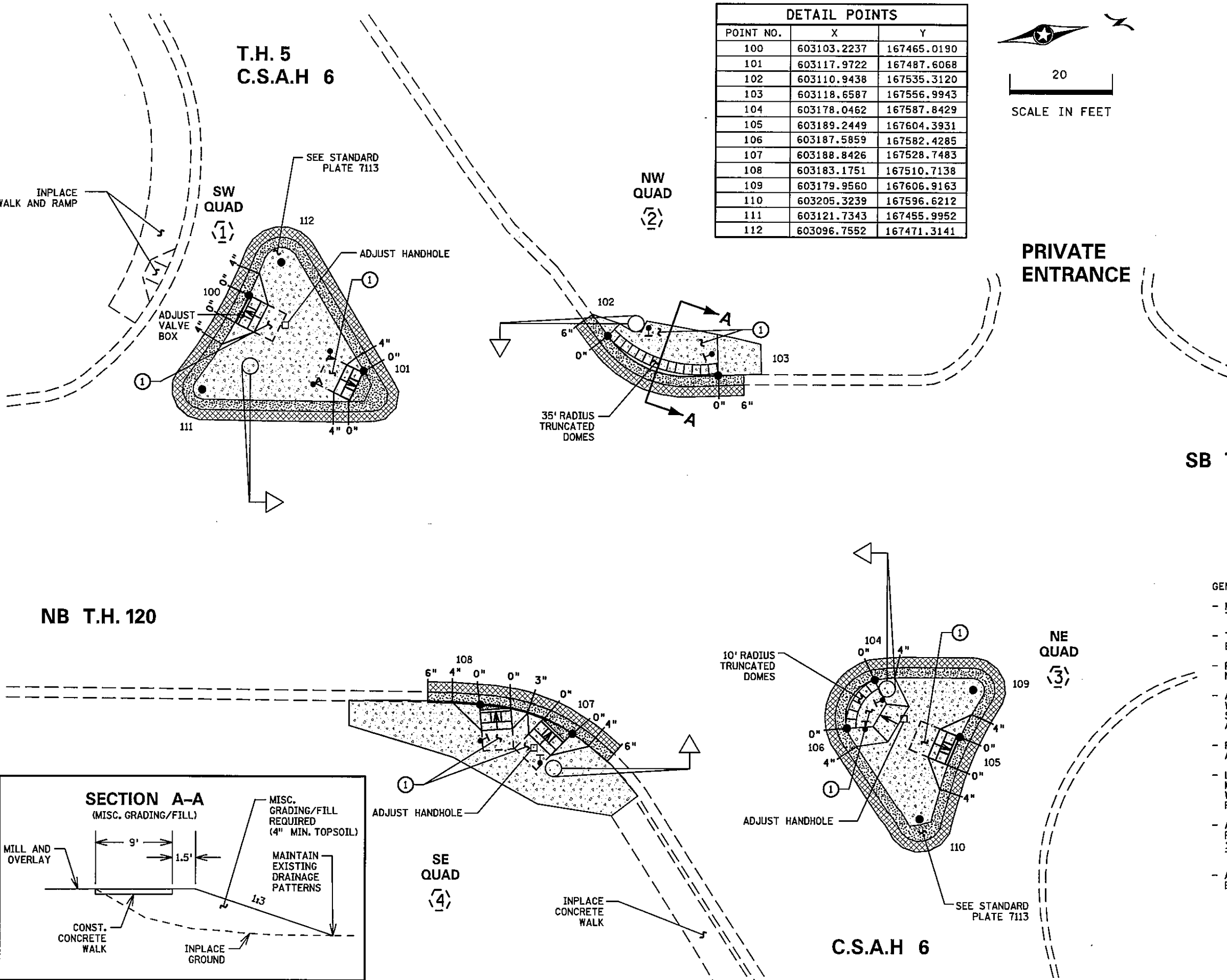
LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK
	MILL BITUMINOUS SURFACE (2.0")
	REMOVE BITUMINOUS SURFACING
	INPLACE SIGNAL BASE NO.
	INPLACE HANDHOLE
	INPLACE CATCH BASIN
	REMOVE CROSSWALK
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING
	F&I 4" SOLID LINE WHITE
	F&I 4" SOLID LINE YELLOW

- ① F & I
- ④ REMOVE
- ⑤ REMOVE SIGN TYPE C

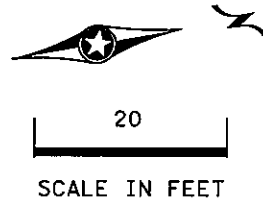
BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	REMOVAL, SIGNING AND PAVEMENT MARKING PLAN REVISE SIGNAL SYSTEM E	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 1125 CENTURY AVE N		T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6	CERTIFIED BY: <i>Michael P. Gubinsky</i>	LIC. NO. 19863	DATE: 04-21-11	
			MASTER ID:	T.E.	(STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY	STATE PROJ. NO. 8825-393	SHEET NO. 58 OF 122 SHEETS		

PLOTTED/REVISED/28/2011

DISTRICT #METRO
IPLOT NAME:20 socle ramp detail
PATH & FILENAME:IP.PWP:dl382530\T21437D_sgl.dgn



DETAIL POINTS		
POINT NO.	X	Y
100	603103.2237	167465.0190
101	603117.9722	167487.6068
102	603110.9438	167535.3120
103	603118.6587	167556.9943
104	603178.0462	167587.8429
105	603189.2449	167604.3931
106	603187.5859	167582.4285
107	603188.8426	167528.7483
108	603183.1751	167510.7138
109	603179.9560	167606.9163
110	603205.3239	167596.6212
111	603121.7343	167455.9952
112	603096.7552	167471.3141

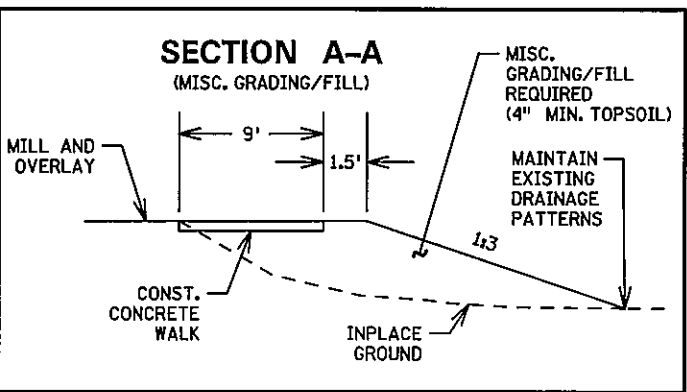


LEGEND	
	INPLACE SIGNAL POLE
	CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
	PEDESTRIAN PUSH BUTTON STATION
	INPLACE SIGNAL BASE NO.
	INPLACE HANDHOLE
	EDGE OF INPLACE SURFACING
	X" CURB HEIGHT AT INDICATED LOCATION
	INTERSECTION POINT OF CROSSWALK EDGE AND PEDESTRIAN RAMP EDGE AT FACE OF CURB
	TRUNCATED DOMES (SEE STANDARD PLATE 7036)
	CONSTRUCT CONCRETE CURB & GUTTER
	6" CONCRETE WALK
	2" BITUMINOUS OVERLAY, 2' WIDE
	INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT

SB T.H. 120

NB T.H. 120

- GENERAL NOTES:
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.



① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.

BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	PEDESTRIAN CURB RAMP DETAILS REVISE SIGNAL SYSTEM E T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6 (STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 1125 CENTURY AVE N			CERTIFIED BY: <i>Michael P. Selinsky</i>	LIC. NO. 19863		DATE: 04-21-11
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393		SHEET NO. 59 OF 122 SHEETS	

PLOTTED/REVISED: 04/20/2011

DISTRICT #: METRO
PLOT NAME: LAYOUT
PATH & FILENAME: P:\PWP\01382530\T21437.sgl.dgn

MATCHLINE "B"



LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION	TYPE	STATUS
D1-1	2-6x6	5', 20'	PVC	INPLACE
D2-1, D2-2	6x6	250'	PVC	INPLACE
D4-1	6x6	200'	PVC	INPLACE
D4-2, D4-3	2-6x6	5', 20'	PVC	F&I
D5-1	3-6x6	5', 20', 35'	PVC	INPLACE
D6-1, D6-2	6x6	250'	SAWCUT	INPLACE
D8-1	2-6x6	200'	SAWCUT	INPLACE
D8-2, D8-3	2-6x6	5', 20'	PVC	F&I

LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET.

SIGNAL HEAD PHASING

HEADS		SIGNAL FACES					
2-1 & 2-3	6-1 & 6-3	FACE	R	Y	G	Y	G
Ø2	Ø6	2-1, 2-3	○	○	○	←	←
		2-2	○	○	○		
		4-1, 4-2, 4-3	○	○	○		
		8-1, 8-2, 8-3	○	○	○		
Ø5	Ø1	6-1, 6-3	○	○	○	←	←
		6-2	○	○	○		

-ALL SIGNAL INDICATIONS SHALL BE 12"
-ALL SIGNAL INDICATIONS SHALL BE LED
-ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD EXCEPT FACES 4-3 AND 4-6

F&I PED PB STA
1-APS PB AND SIGN (RT ARROW) (PB6-2)
EXTEND INTO HH 6:
2" CONDUIT
1-2/C*14

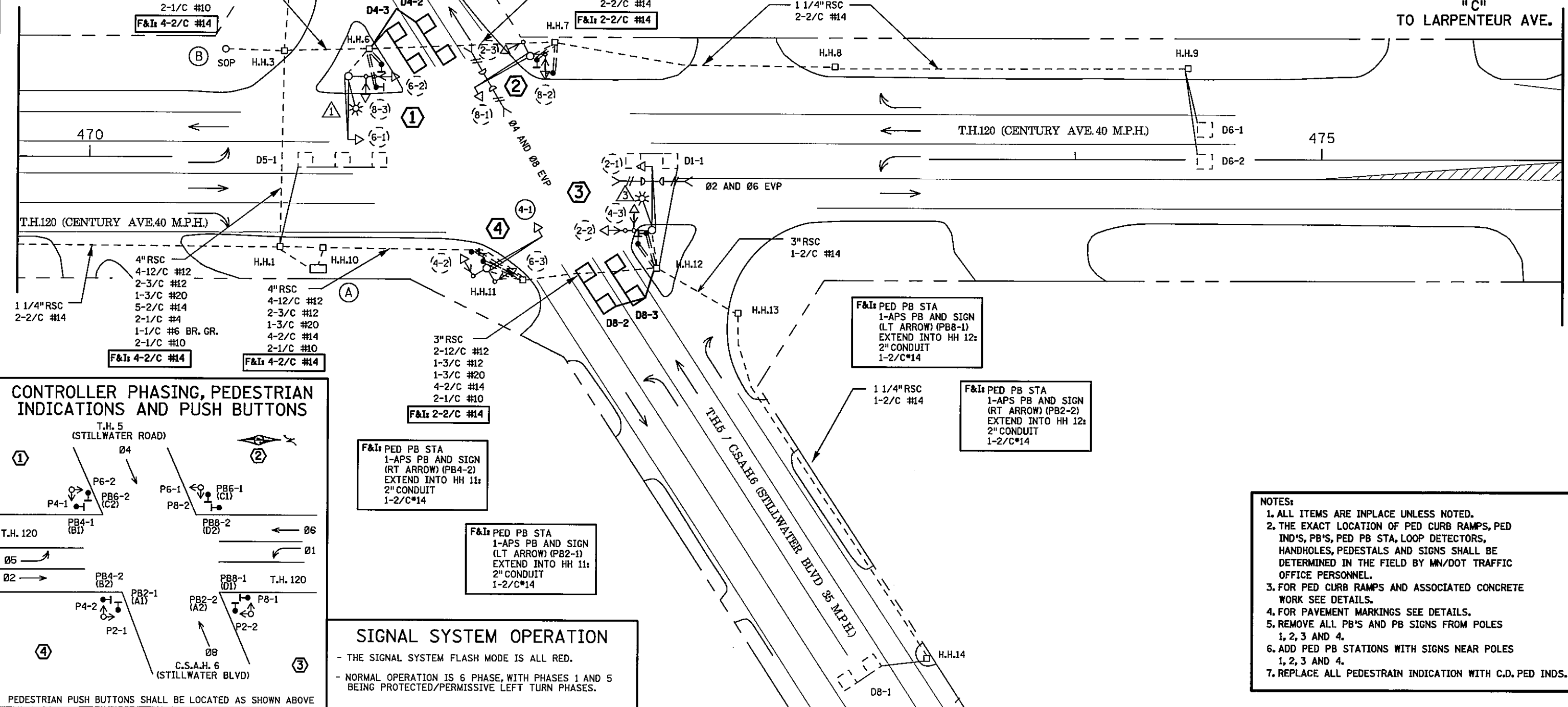
F&I PED PB STA
1-APS PB AND SIGN (LT ARROW) (PB6-1)
EXTEND INTO HH 7:
2" CONDUIT
1-2/C*14

F&I PED PB STA
1-APS PB AND SIGN (LT ARROW) (PB4-1)
EXTEND INTO HH 6:
2" CONDUIT
1-2/C*14

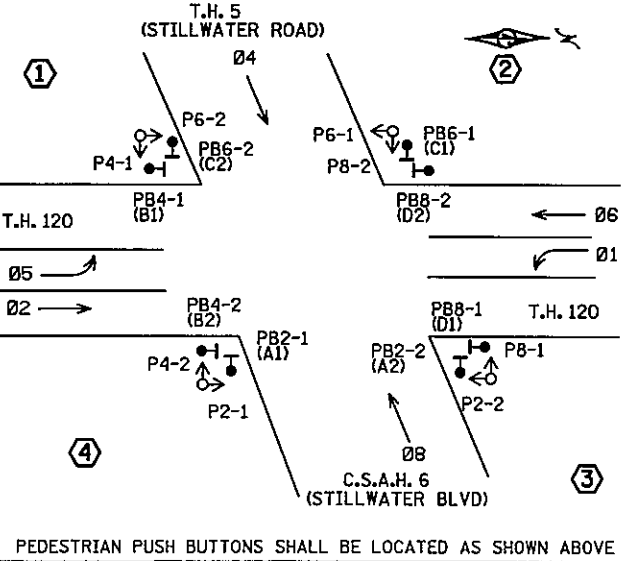
F&I PED PB STA
1-APS PB AND SIGN (RT ARROW) (PB8-2)
EXTEND INTO HH 7:
2" CONDUIT
1-2/C*14

MATCHLINE "A" TO HARVESTER AVE.

MATCHLINE "C" TO LARPENTEUR AVE.



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.

- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, LOOP DETECTORS, HANDHOLES, PEDESTALS AND SIGNS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 3 AND 4.
 6. ADD PED PB STATIONS WITH SIGNS NEAR POLES 1, 2, 3 AND 4.
 7. REPLACE ALL PEDESTRIAN INDICATION WITH C.D. PED IND'S.

BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	INTERSECTION LAYOUT REVISE SIGNAL SYSTEM E T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6 (STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 1125 CENTURY AVE N			CERTIFIED BY: <i>Michael P. Subrany</i>	LIC. NO. 19863		DATE: 04-21-11
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393			SHEET NO. 60 OF 122 SHEETS

PLOTTED/REVISED: 20/2011

DISTRICT # METRO
IPLOT NAME: MATCH LINES POLE NOTES
PATH & FILENAME: P:\PWP\1382530\T21437.sgl.dgn

① TYPE P90-A-25-D40-9 (DAVIT AT 350)
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 20C-POLE MOUNTED 270
LUMINAIRE-200 WATT H.P.S. (P.E.C.)
R10-12 SIGN (36"x48")

REMOVE: 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
2-PED IND
F&I: 2-C.D. PED IND

EXTEND INTO H.H.6:
3" RSC
2-12/C #12
1-3/C #12
2-1/C #10

② TYPE P90-A-25
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TWO WAY EVP DETECTOR AND LIGHTS
TYPE 10B-POLE MOUNTED 90
TYPE 10B-POLE MOUNTED 180

REMOVE: 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
2-PED IND
F&I: 2-C.D. PED IND

EXTEND INTO H.H.7:
3" RSC
2-12/C #12
1-3/C #12
1-3/C #20

③ TYPE P90-A-25-D40-9 (DAVIT AT 350)
P90 POLE FOUNDATION
TWO WAY EVP DETECTOR AND LIGHTS
ONE WAY SIGNAL-OVERHEAD
TYPE 20C-POLE MOUNTED 270
LUMINAIRE - 200 WATT H.P.S. (P.E.C.)
R10-12 SIGN (36"x48")

REMOVE: 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
2-PED IND
F&I: 2-C.D. PED IND

EXTEND INTO H.H.12:
3" RSC
2-12/C #12
1-3/C #12
1-3/C #20
2-1/C #10

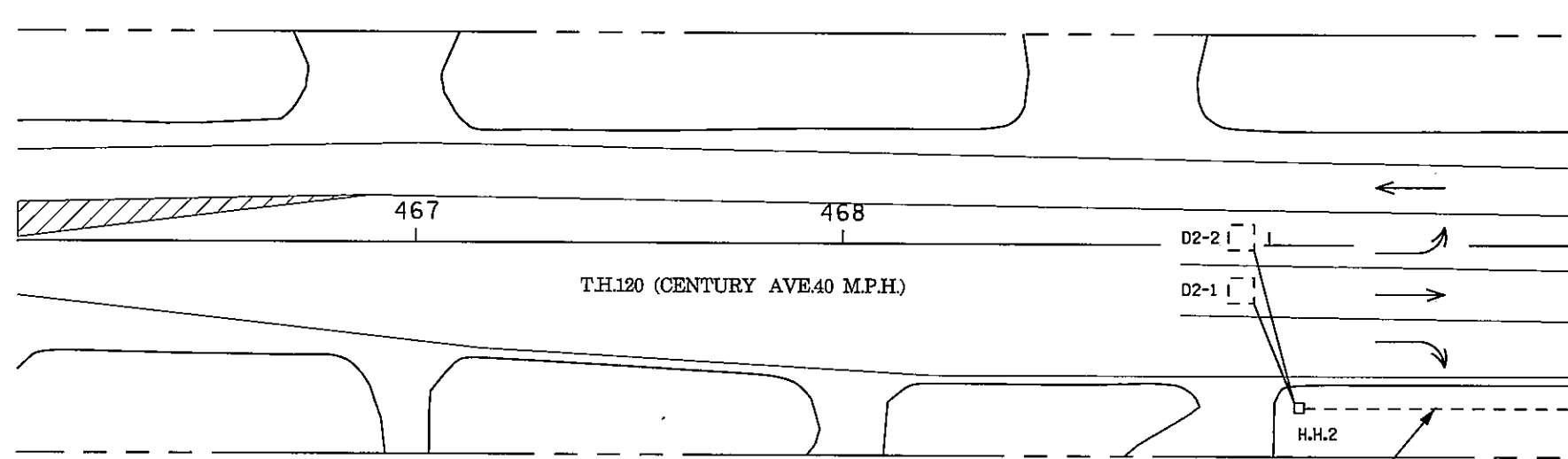
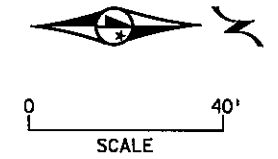
④ TYPE P90-A-25
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 10B-POLE MOUNTED 90
TYPE 10B-POLE MOUNTED 180

REMOVE: 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
2-PED IND
F&I: 2-C.D. PED IND

EXTEND INTO H.H.11:
3" RSC
2-12/C #12
1-3/C #12

Ⓐ EQUIPMENT PAD
1" RSC STUB OUT - CAP BOTH ENDS
EXTEND INTO H.H.1
4" RSC
4-12/C #12 F&I: 4-2/C #14
2-3/C #12
1-3/C #20
8-2/C #14
2" IMC
2-1/C #4
1-1/C #6 BR. GR.
EXTEND INTO H.H.10:
4" RSC
4-12/C #12 F&I: 4-2/C #14
2-3/C #12
1-3/C #20
4-2/C #14
BETWEEN H.H.1 AND H.H.10
2" IMC.
2-1/C #10

Ⓑ WOOD POLE
1 1/4" RSC RISER AND WEATHERHEAD
3-1/C #4
SERVICE EQUIPMENT
1 1/4" RSC RISER, EXTEND INTO H.H.3
2-1/C #4
1-1/C #6 BR. GR.
4-1/C #10



MATCHLINE
"A"
TO STILLWATER BLVD.

1 1/4" RSC
1-2/C #14

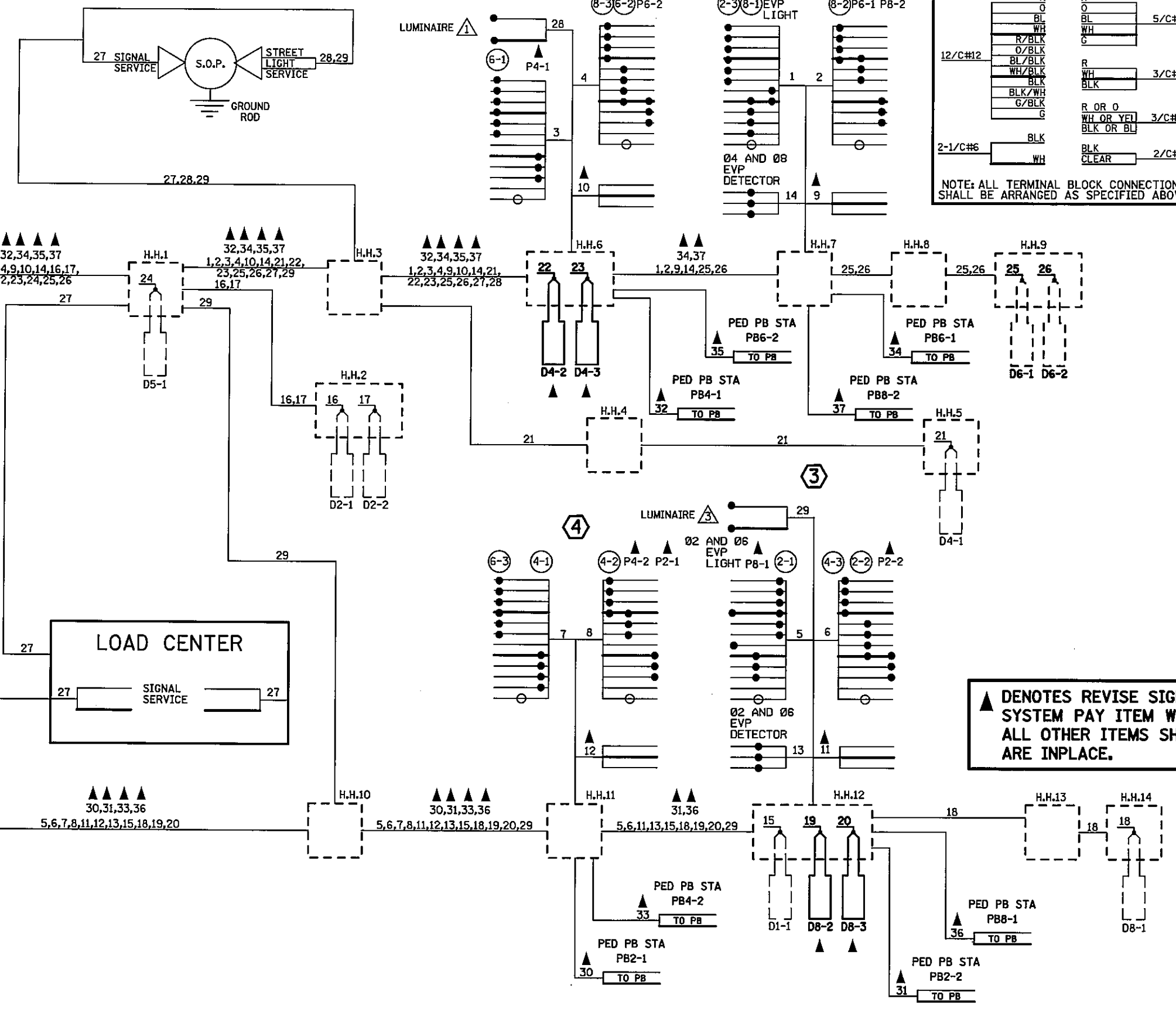
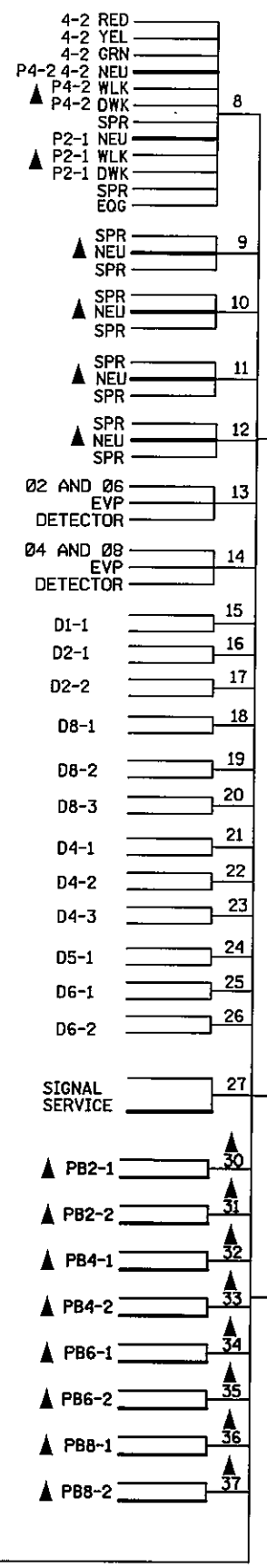
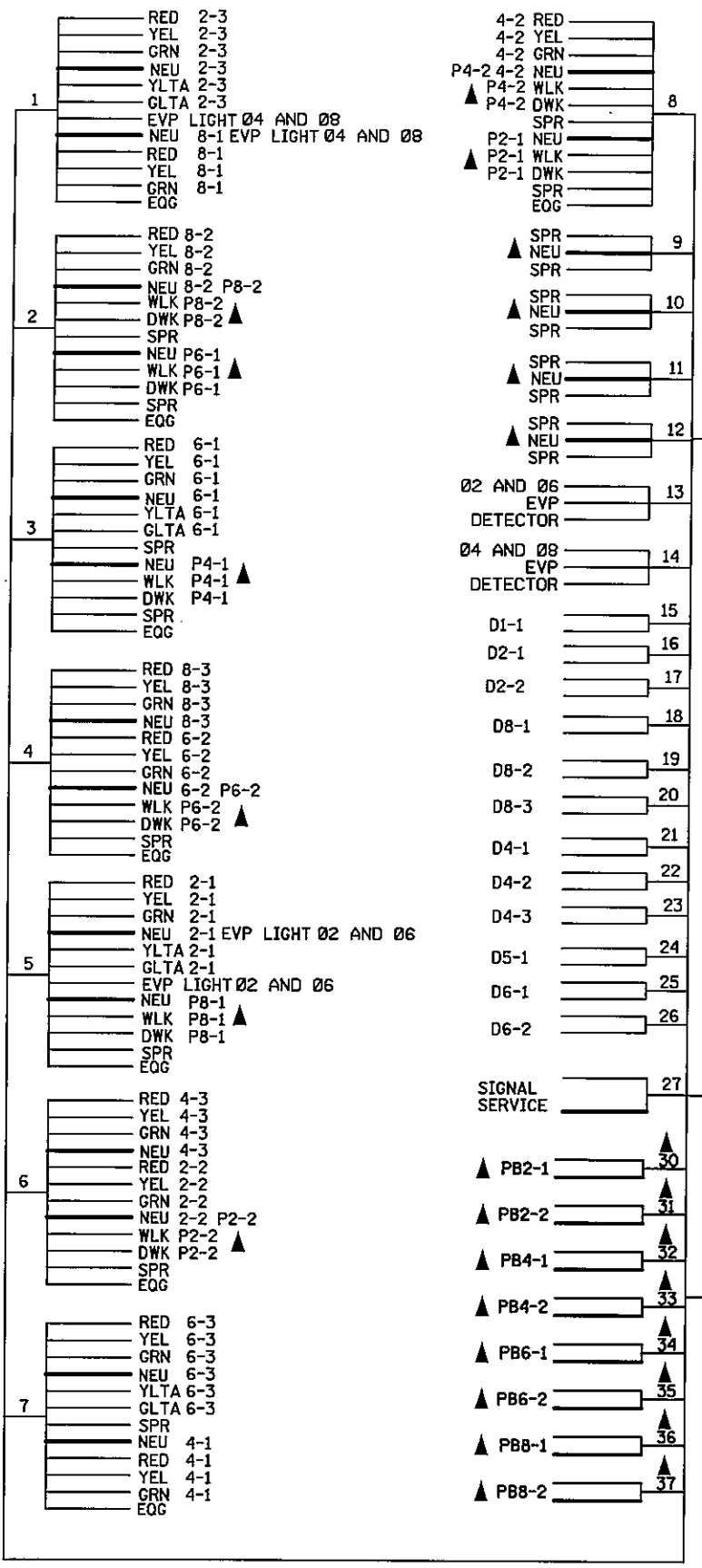
MATCHLINE
"B"
TO T.H. 120

1 1/4" RSC
2-2/C #14

BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 1125 CENTURY AVE N		CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863	DATE: 04-21-11	
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 61 OF 122 SHEETS	

MATCH LINES AND NOTES
REVISE SIGNAL SYSTEM E
T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6
(STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY

CONTROLLER CABINET



R	R		
O	BL	5/C#12	
BL	WH		
WH	G		
12/C#12	R/BLK		
	O/BLK		
	BL/BLK		
	WH/BLK		
	BLK	3/C#12	
	BLK/WH		
	G/BLK		
	G	R OR O	3/C#20
		WH OR YEL	
		BLK OR BL	
2-1/C#6	BLK	BLK	2/C#14
	WH	CLEAR	

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

▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

DISTRICT #METRO
 IPLOT NAME: WIRING DIAGRAM
 PATH & FILENAME: P:\PWP\01382530\T21437.sgl.dgn
 PLOTTED/REVISED: 04/20/2011

BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	FIELD WIRING DIAGRAM	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 1125 CENTURY AVE N		REVISE SIGNAL SYSTEM E	CERTIFIED BY: <i>Michael P. Sulbush</i>			
			MASTER ID:	T.E.	T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6	LIC. NO. 19863			DATE: 04-21-11
					(STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY	STATE PROJ. NO. 8825-393			SHEET NO. 62 OF 122 SHEETS

PLOTTED/REVISED: 04/27/2011

DISTRICT # METRO
IPLOT NAME: INFO LAYOUT
PATH & FILENAME: P:\PWP\1382530\T21437.sgl.dgn

MATCHLINE "B"

MATCHLINE "A" TO HARVESTER AVE.

MATCHLINE "C" TO LARPELVEUR AVE.

LOOP DETECTOR CHART

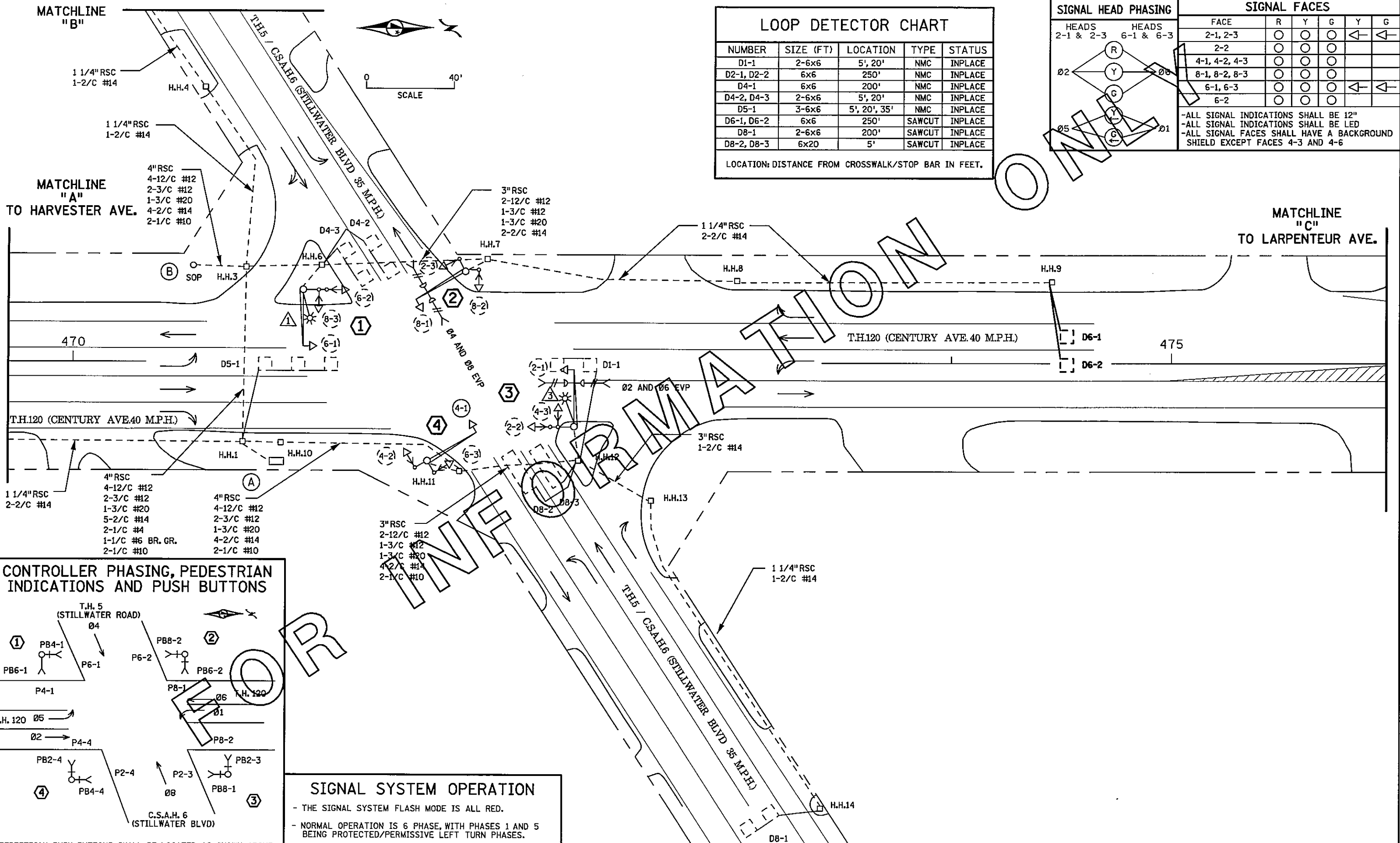
NUMBER	SIZE (FT)	LOCATION	TYPE	STATUS
D1-1	2-6x6	5', 20'	NMC	INPLACE
D2-1, D2-2	6x6	250'	NMC	INPLACE
D4-1	6x6	200'	NMC	INPLACE
D4-2, D4-3	2-6x6	5', 20'	NMC	INPLACE
D5-1	3-6x6	5', 20', 35'	NMC	INPLACE
D6-1, D6-2	6x6	250'	SAWCUT	INPLACE
D8-1	2-6x6	200'	SAWCUT	INPLACE
D8-2, D8-3	6x20	5'	SAWCUT	INPLACE

LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET.

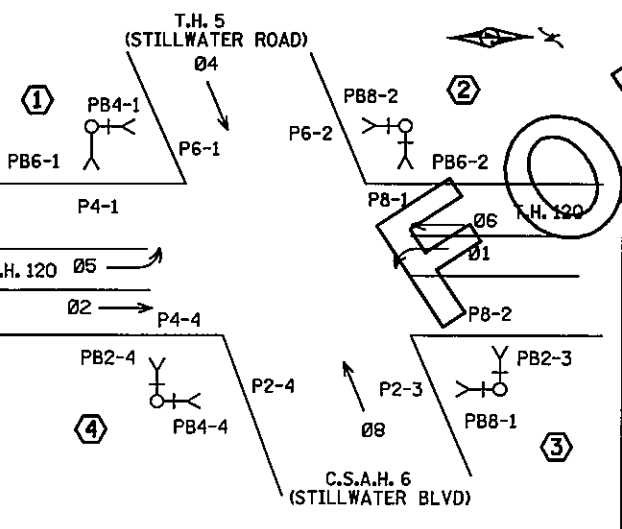
SIGNAL HEAD PHASING

HEADS		SIGNAL FACES					
2-1 & 2-3	6-1 & 6-3	FACE	R	Y	G	Y	G
02	06	2-1, 2-3	○	○	○	←	←
		2-2	○	○	○		
		4-1, 4-2, 4-3	○	○	○		
		8-1, 8-2, 8-3	○	○	○		
		6-1, 6-3	○	○	○	←	←
		6-2	○	○	○		

- ALL SIGNAL INDICATIONS SHALL BE 12"
- ALL SIGNAL INDICATIONS SHALL BE LED
- ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD EXCEPT FACES 4-3 AND 4-6



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.

BY	DATE	REVISIONS

SYSTEM ID: 21437 T.E. 5371
 METER ADDRESS: 1125 CENTURY AVE N
 MASTER ID: T.E.

"FOR INFORMATION ONLY"
 INTERSECTION LAYOUT
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6
 (STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY

PLOTTED/REVISED/27/2011

- ① TYPE P90-A-25-D40-9 (DAVIT AT 350)
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 20C-POLE MOUNTED 270
LUMINAIRE-200 WATT H.P.S. (P.E.C.)
R10-12 SIGN (36"x48")
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.6:
3"RSC
2-12/C #12
1-3/C #12
2-1/C #10

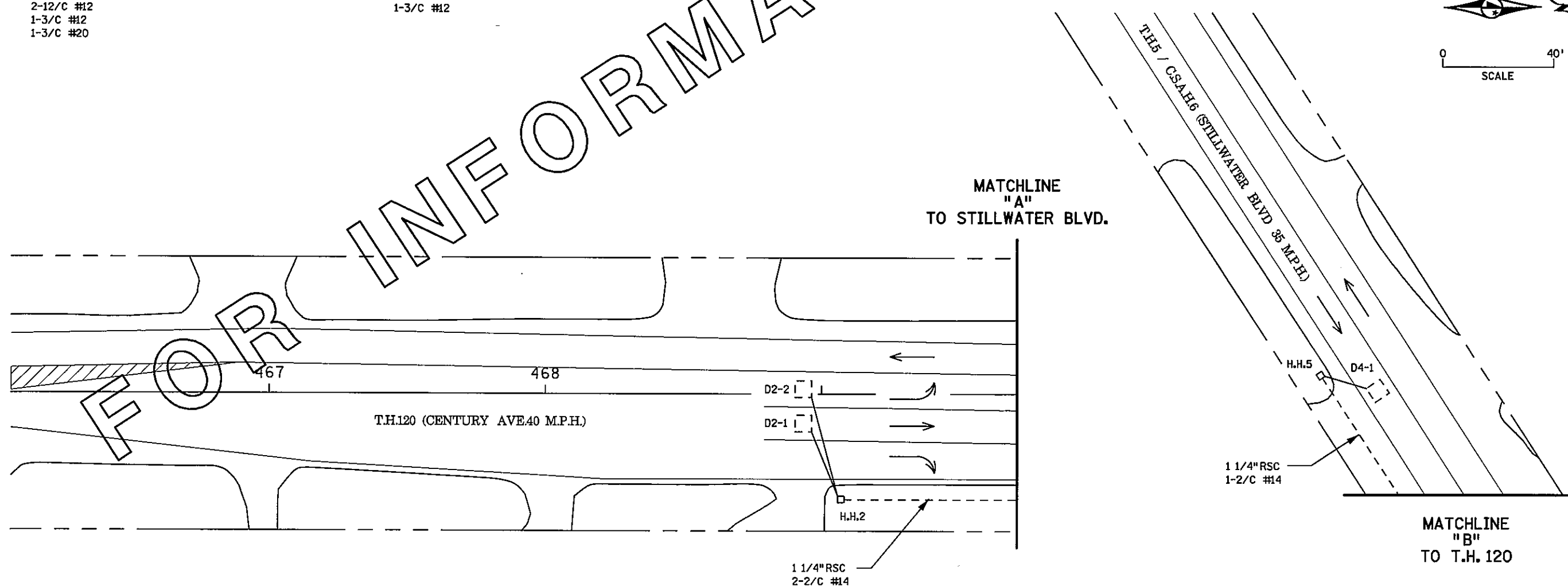
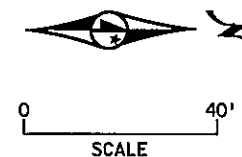
- ③ TYPE P90-A-25-D40-9 (DAVIT AT 350)
P90 POLE FOUNDATION
TWO WAY EVP DETECTOR AND LIGHTS
ONE WAY SIGNAL-OVERHEAD
TYPE 20C POLE-MOUNTED 270
LUMINAIRE - 200 WATT H.P.S. (P.E.C.)
R10-12 SIGN (36"x48")
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.12:
3"RSC
2-12/C #12
1-3/C #12
1-3/C #20
2-1/C #10

- Ⓐ EQUIPMENT PAD
1"RSC STUB OUT - CAP BOTH ENDS
EXTEND INTO H.H.1
4"RSC
4-12/C #12
2-3/C #12
1-3/C #20
8-2/C #14
2"IMC
2-1/C #4
1-1/C #6 BR. GR.
EXTEND INTO H.H.10:
4"RSC
4-12/C #12
2-3/C #12
1-3/C #20
4-2/C #14
BETWEEN H.H.1 AND H.H.10
2"IMC.
2-1/C #10

- Ⓑ WOOD POLE
1 1/4"RSC RISER AND WEATHERHEAD
3-1/C #4
SERVICE EQUIPMENT
1 1/4"RSC RISER EXTEND INTO H.H.3
2-1/C #4
1-1/C #6 BR.GR.
4-1/C #10

- ② TYPE P90-A-25
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TWO WAY EVP DETECTOR AND LIGHTS
TYPE 10B-POLE MOUNTED 90
TYPE 10B-POLE MOUNTED 180
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.7:
3"RSC
2-12/C #12
1-3/C #12
1-3/C #20

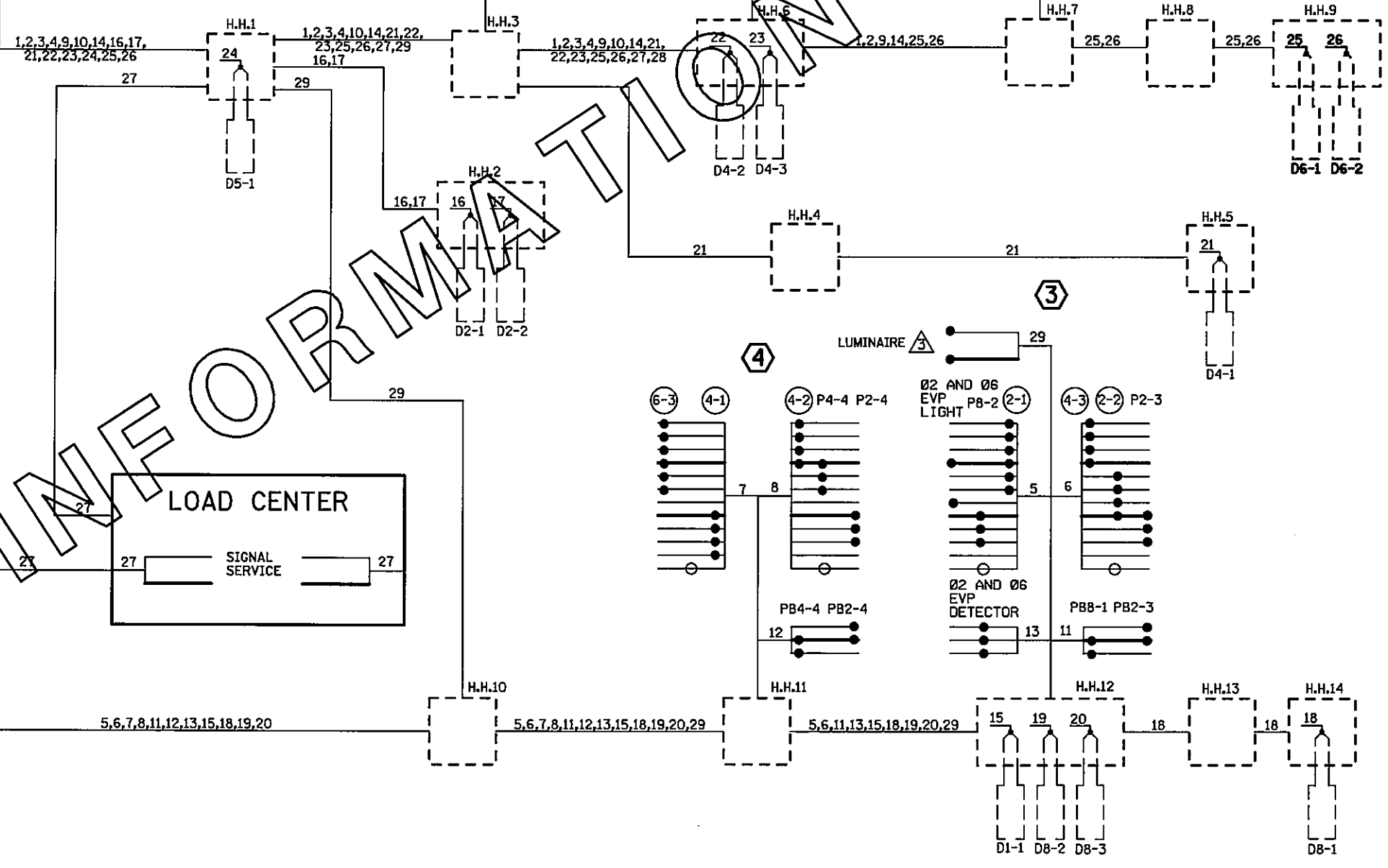
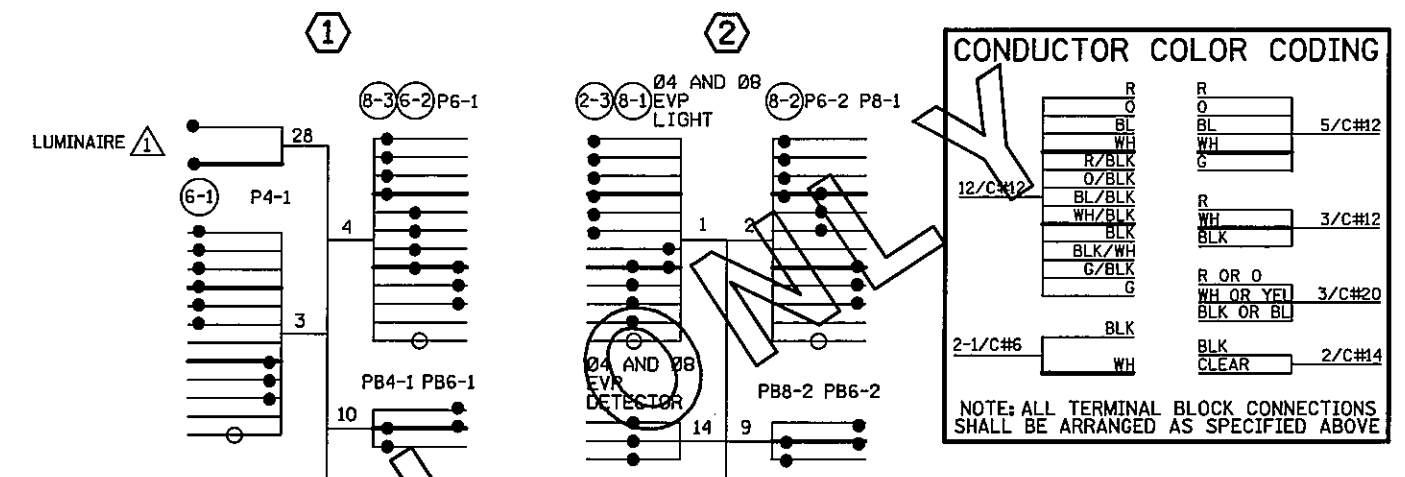
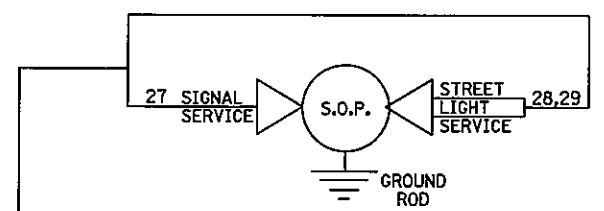
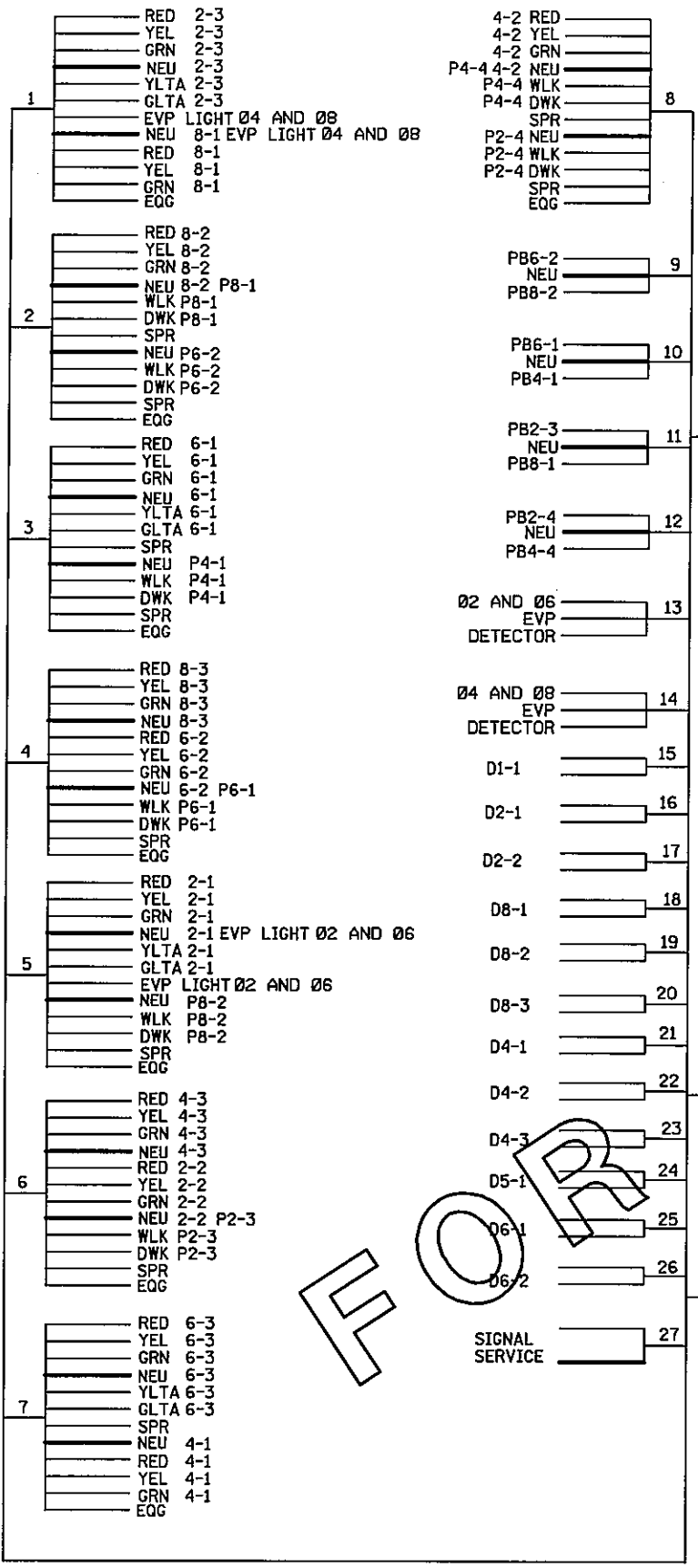
- ④ TYPE P90-A-25
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE10B-POLE MOUNTED 90
TYPE10B-POLE MOUNTED 180
2-PEDESTRIAN PUSH BUTTONS AND SIGNS
EXTEND INTO H.H.11:
3"RSC
2-12/C #12
1-3/C #12



DISTRICT #METRO
IPLOT NAME:INFO MATCH LINE AND NOTES
PATH & FILENAME:P:\PWP\1382530\T21437.sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	"FOR INFORMATION ONLY" MATCH LINES AND NOTES TRAFFIC CONTROL SIGNAL SYSTEM T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6 (STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY	STATE PROJ. NO. 8825-393	SHEET NO. 64 OF 122 SHEETS
			METER ADDRESS: 1125 CENTURY AVE N				
			MASTER ID:	T.E.			

CONTROLLER CABINET



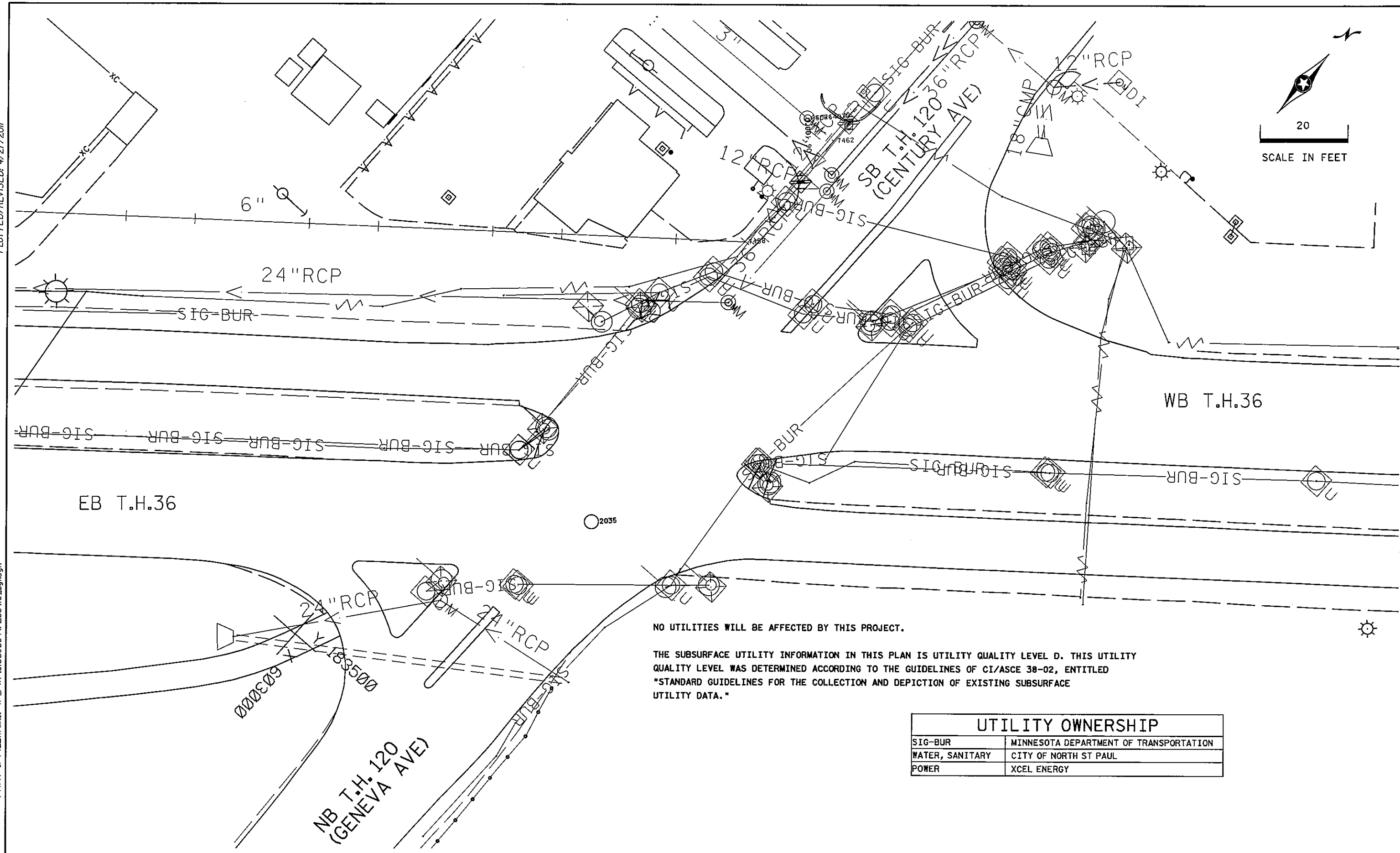
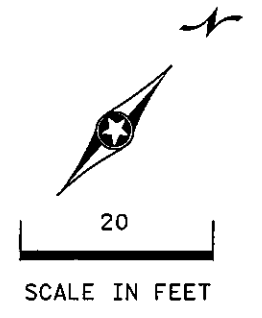
PLOTTED/REVISED 04/27/2011

DISTRICT #: METRO
 IPLOT NAME: INFO WIRING DIAGRAM
 PATH & FILENAME: P:\PWP\01382530\T21437.sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 21437	T.E. 5371	"FOR INFORMATION ONLY" FIELD WIRING DIAGRAM TRAFFIC CONTROL SIGNAL SYSTEM T.H. 5 AT T.H. 120 SOUTH JCT. C.S.A.H. 6 (STILLWATER BLVD.) IN MAPLEWOOD, RAMSEY COUNTY	STATE PROJ. NO. 8825-393	SHEET NO. 65 OF 122 SHEETS
			METER ADDRESS: 1125 CENTURY AVE N				
			MASTER ID:	T.E.			

PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
 IPLOT NAME: utilities layout
 PATH & FILENAME: IP_FWP-dl359504T2064IU_sgl.dgn



NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

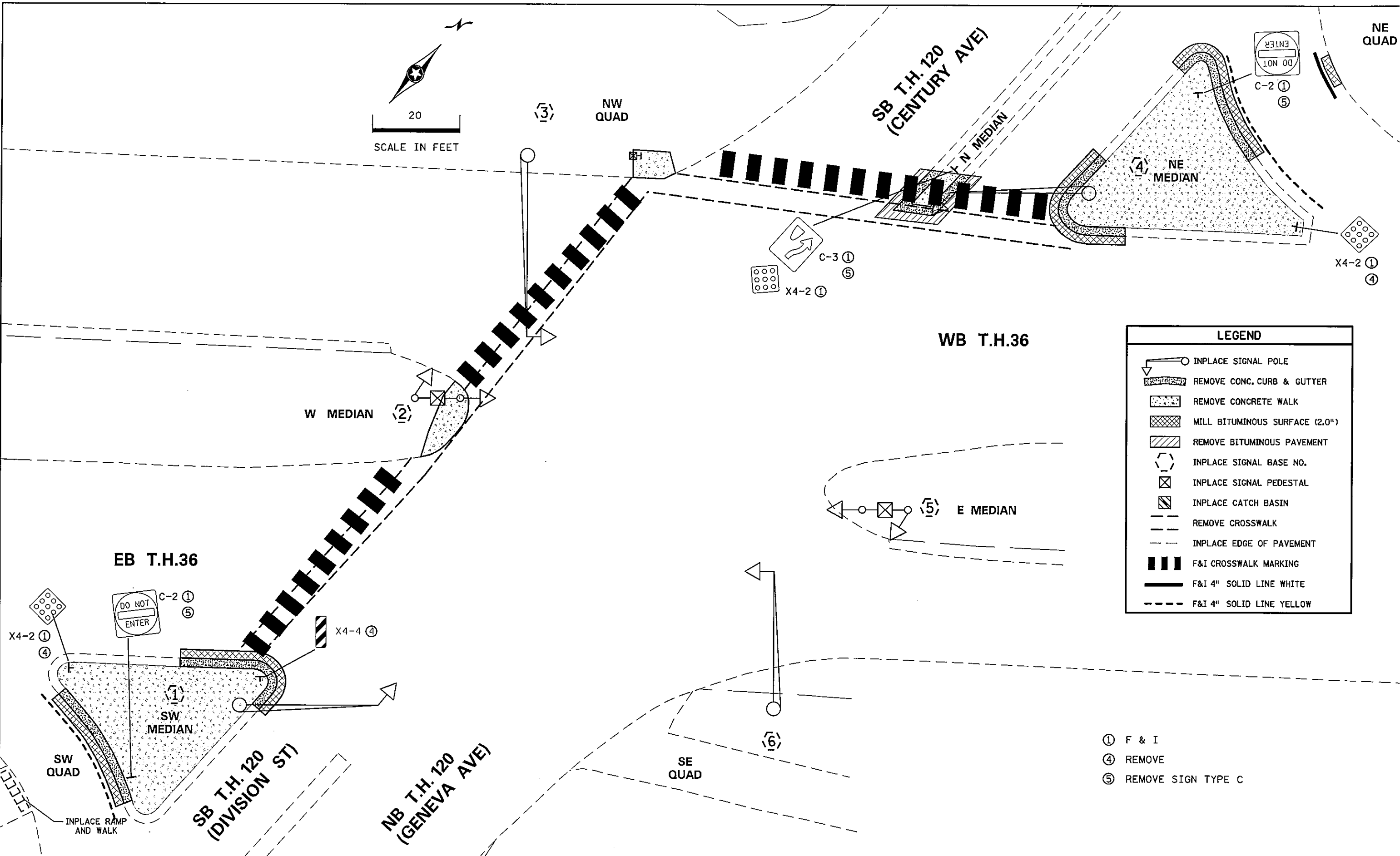
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

UTILITY OWNERSHIP	
SIG-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
WATER, SANITARY	CITY OF NORTH ST PAUL
POWER	XCEL ENERGY

BY	DATE	REVISIONS	SYSTEM ID: 20641	T.E. 5372	INPLACE TOPOGRAPHY AND UTILITIES PLAN REVISE SIGNAL SYSTEM F T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST. IN NORTH ST. PAUL, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY: BAM	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 5800 CENTURY AVE.			CERTIFIED BY: <i>Michael P. Selinsky</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 66 OF 122 SHEETS		

PLOTTED/REVISED: 4/19/2011

DISTRICT #: METRO
 IPLOT NAME: Ped Removal
 PATH & FILENAME: IP_PWF-d1359504\20641R_spl.dgn



LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK
	MILL BITUMINOUS SURFACE (2.0")
	REMOVE BITUMINOUS PAVEMENT
	INPLACE SIGNAL BASE NO.
	INPLACE SIGNAL PEDESTAL
	INPLACE CATCH BASIN
	REMOVE CROSSWALK
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING
	F&I 4" SOLID LINE WHITE
	F&I 4" SOLID LINE YELLOW

- ① F & I
- ④ REMOVE
- ⑤ REMOVE SIGN TYPE C

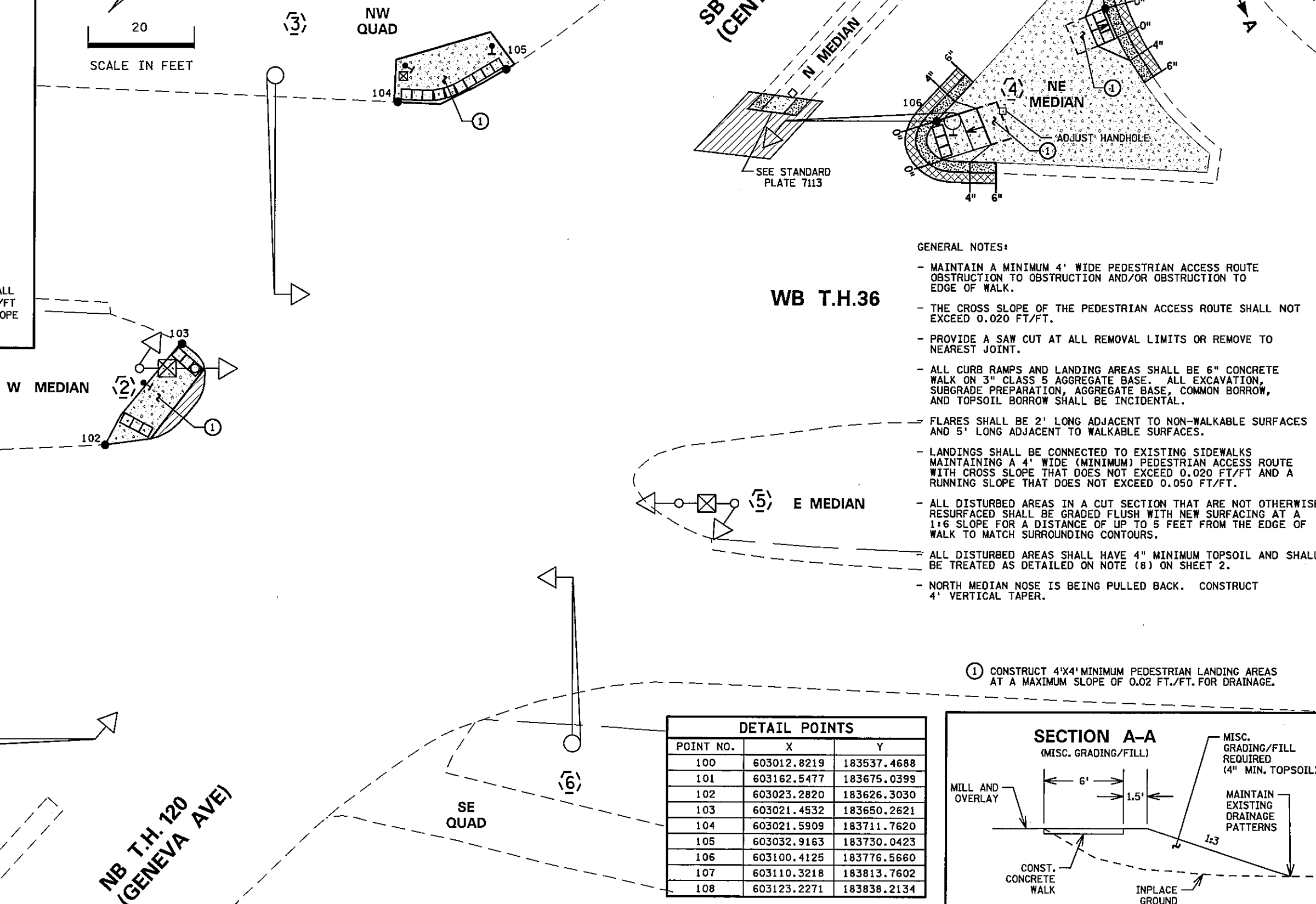
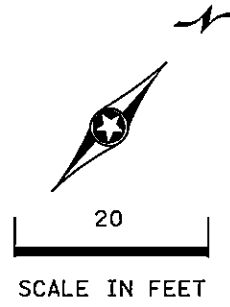
BY	DATE	REVISIONS	SYSTEM ID: 20641	T.E. 5372	REMOVAL, SIGNING AND PAVEMENT MARKING PLAN	S.A.P. NO.	DRAWN BY: BAM	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 5800 CENTURY AVE.		REVISE SIGNAL SYSTEM F	CERTIFIED BY: <i>Michael P. Selinsky</i>			
			MASTER ID:	T.E.	T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST.	LIC. NO. 19863			DATE: 4-21-11
					IN NORTH ST. PAUL, RAMSEY COUNTY	STATE PROJ. NO. 8825-393			SHEET NO. 67 OF 122 SHEETS

PLOTTED/REVISED: 4/28/2011

DISTRICT #: METRO
 IPLOT NAME: Ped detail
 PATH & FILENAME: IP_PWP-d1359504PT2064ID_sgl.dgn

LEGEND

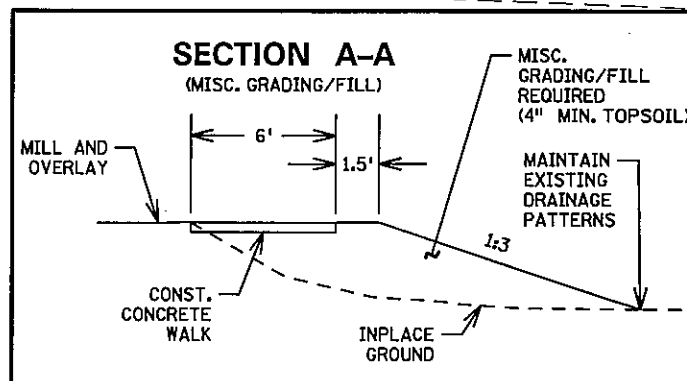
- INPLACE SIGNAL POLE
- CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
- PEDESTRIAN PUSH BUTTON STATION
- INPLACE SIGNAL BASE NO.
- INPLACE SIGNAL PEDESTAL POLE
- EDGE OF INPLACE SURFACING
- X" CURB HEIGHT AT INDICATED LOCATION
- XXX INTERSECTION POINT OF PEDESTRIAN RAMP EDGE AT FACE OF CURB
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- 6" CONCRETE WALK
- 2" BITUMINOUS OVERLAY, 2' WIDE
- BITUMINOUS PAVEMENT
- INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT



- #### GENERAL NOTES:
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.
 - NORTH MEDIAN NOSE IS BEING PULLED BACK. CONSTRUCT 4' VERTICAL TAPER.

① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.

DETAIL POINTS		
POINT NO.	X	Y
100	603012.8219	183537.4688
101	603162.5477	183675.0399
102	603023.2820	183626.3030
103	603021.4532	183650.2621
104	603021.5909	183711.7620
105	603032.9163	183730.0423
106	603100.4125	183776.5660
107	603110.3218	183813.7602
108	603123.2271	183838.2134



BY	DATE	REVISIONS

SYSTEM ID: 20641 T.E. 5372
 METER ADDRESS: 5800 CENTURY AVE.
 MASTER ID: T.E.

PEDESTRIAN CURB RAMP DETAILS
 REVISE SIGNAL SYSTEM F
 T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST.
 IN NORTH ST. PAUL, RAMSEY COUNTY

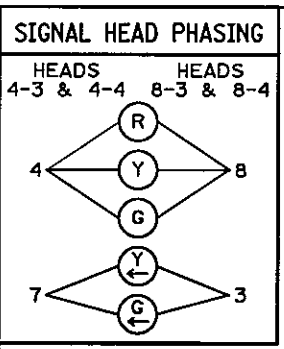
S.A.P. NO. DRAWN BY: BAM CKD BY: BTJ DATE: 4-21-11

CERTIFIED BY: *Michael P. Selinsky* LIC. NO. 19863 DATE: 4-21-11
LICENSED PROFESSIONAL ENGINEER

STATE PROJ. NO. 8825-393 SHEET NO. 68 OF 122 SHEETS

LOOP DETECTOR CHART			
NUMBER	SIZE (FT)	LOCATION	STATUS
D1-1, D5-1	2-6x6	5 & 20	INPLACE
D5-1	2-6x6	5 & 20	F & I
D2-1	2-6x6	400	INPLACE
D2-2	6x6	400	INPLACE
D3-1, D7-1	2-6x6	10 & 40	INPLACE
D4-1	3-6x60	180	INPLACE
D4-2, D8-2	2-6x6	10 & 40	INPLACE
D4-3, D8-3	6x6	0	INPLACE
D8-3	6x6	5	F & I
D6-1, D6-2	6x6	400	INPLACE
D8-1	6x6, 6x15	180	INPLACE

SIGNAL FACE CHART						
FACE	R	Y	G	Y	G	
1-1	←	←	←			
2-1, 2-2, 2-3	○	○	○			
4-1, 4-4	○	○	○	←	←	
4-2, 4-3, 4-5	○	○	○			
5-1	←	←	←			
6-1, 6-2, 6-3	○	○	○			
8-4	○	○	○	←	←	
8-2, 8-3, 8-5	○	○	○			



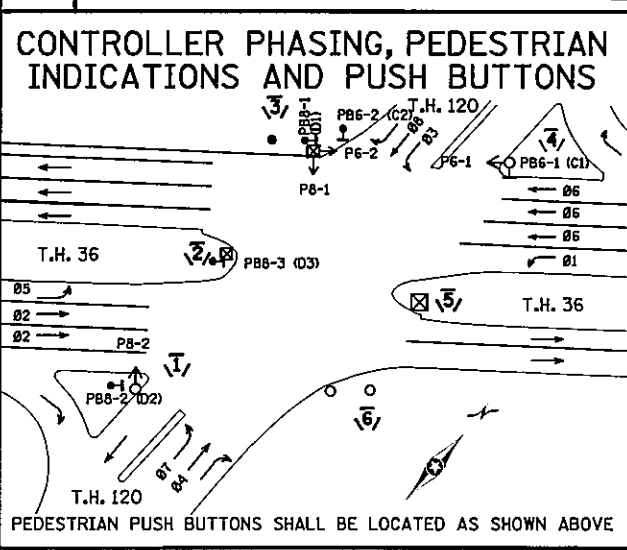
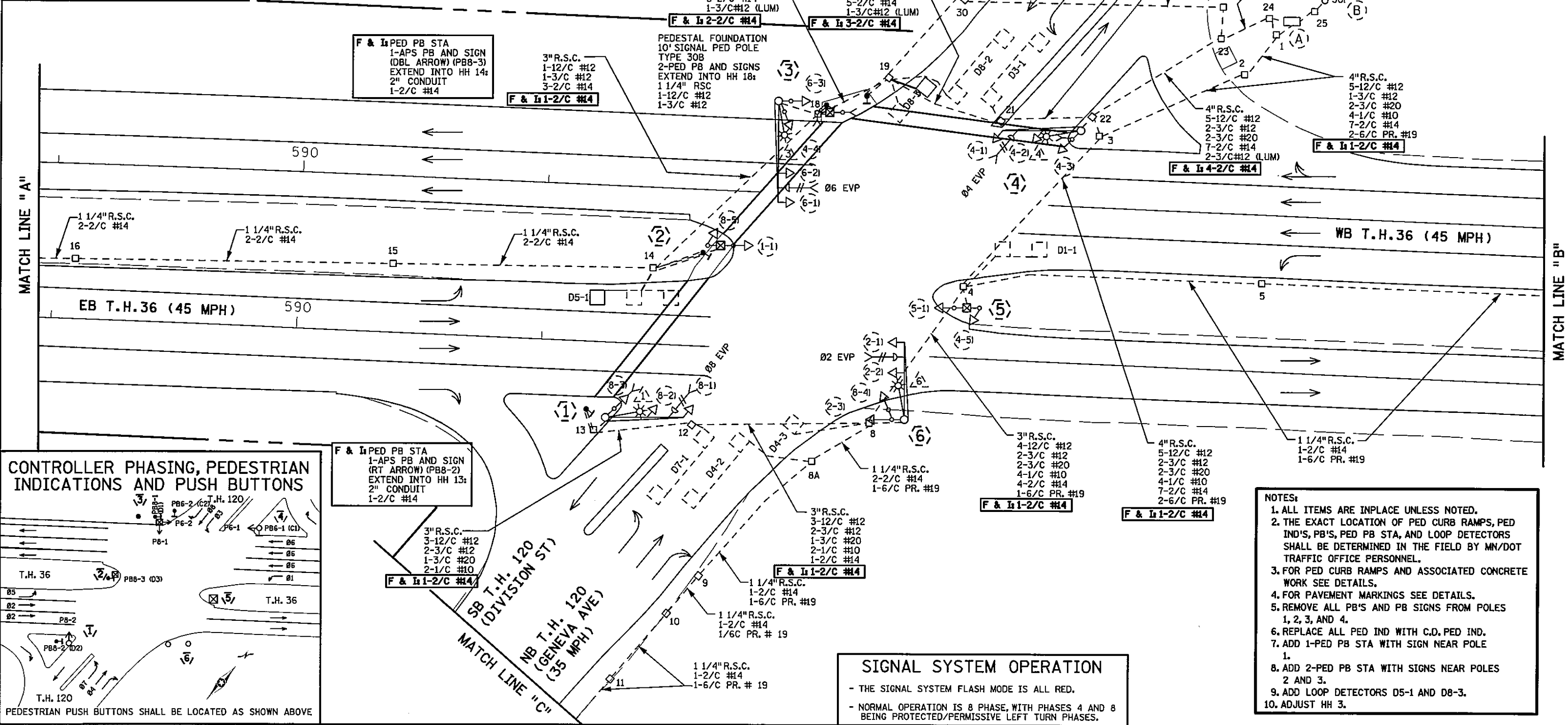
F & I PED PB STA
 1-APS PB AND SIGN (LT ARROW) (PB8-1)
 EXTEND INTO HH 18:
 2" CONDUIT
 1-2/C #14

F & I PED PB STA
 1-APS PB AND SIGN (RT ARROW) (PB6-2)
 EXTEND INTO HH 19:
 2" CONDUIT
 1-2/C #14

F & I PED PB STA
 1-APS PB AND SIGN (DBL ARROW) (PB8-3)
 EXTEND INTO HH 14:
 2" CONDUIT
 1-2/C #14

PEDESTAL FOUNDATION
 10' SIGNAL PED POLE
 TYPE 30B
 2-PED PB AND SIGNS
 EXTEND INTO HH 18:
 1 1/4" RSC
 1-12/C #12
 1-3/C #12

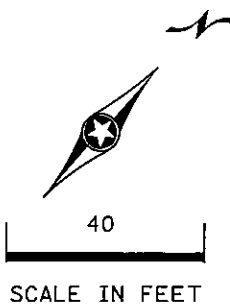
-ALL LOOP DETECTORS ARE PVC
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 4 AND 8 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.

- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 3, AND 4.
 6. REPLACE ALL PED IND WITH C.D. PED IND.
 7. ADD 1-PED PB STA WITH SIGN NEAR POLE 1.
 8. ADD 2-PED PB STA WITH SIGNS NEAR POLES 2 AND 3.
 9. ADD LOOP DETECTORS D5-1 AND D8-3.
 10. ADJUST HH 3.



PLOTTED/REVISED: 4/19/2011

DISTRICT #: METRO
 IPLOT NAME: Layout
 PATH & FILENAME: IP_FWP-d1359504\20641A_SGL.DGN

BY	DATE	REVISIONS

SYSTEM ID: 20641 T.E. 5372
 METER ADDRESS: 5800 CENTURY AVE.
 MASTER ID: T.E.

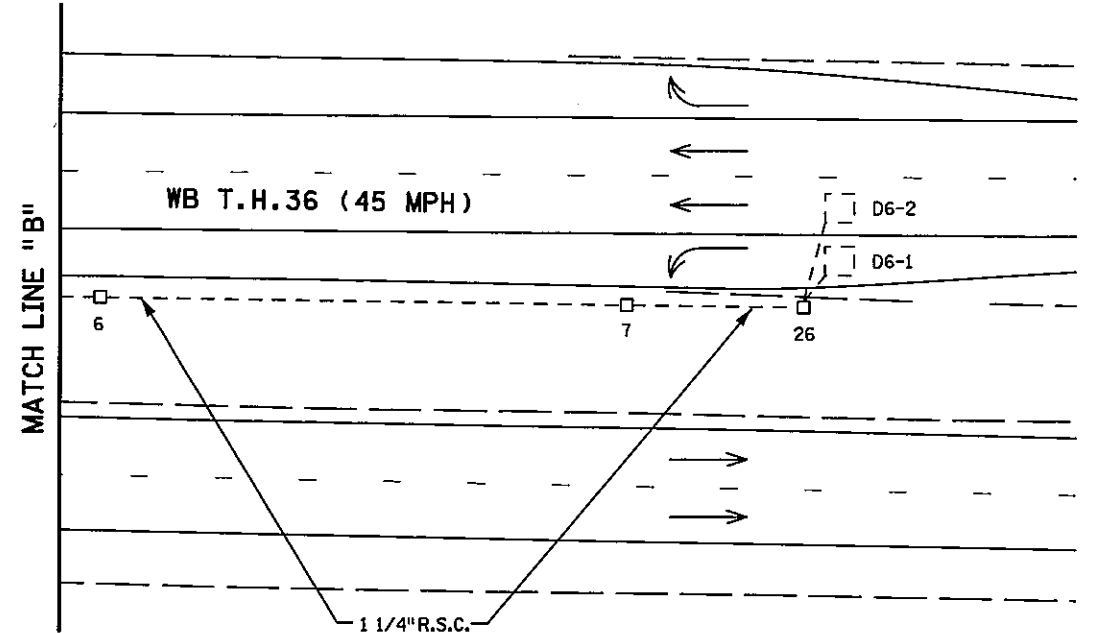
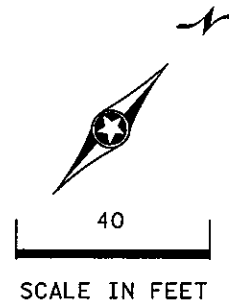
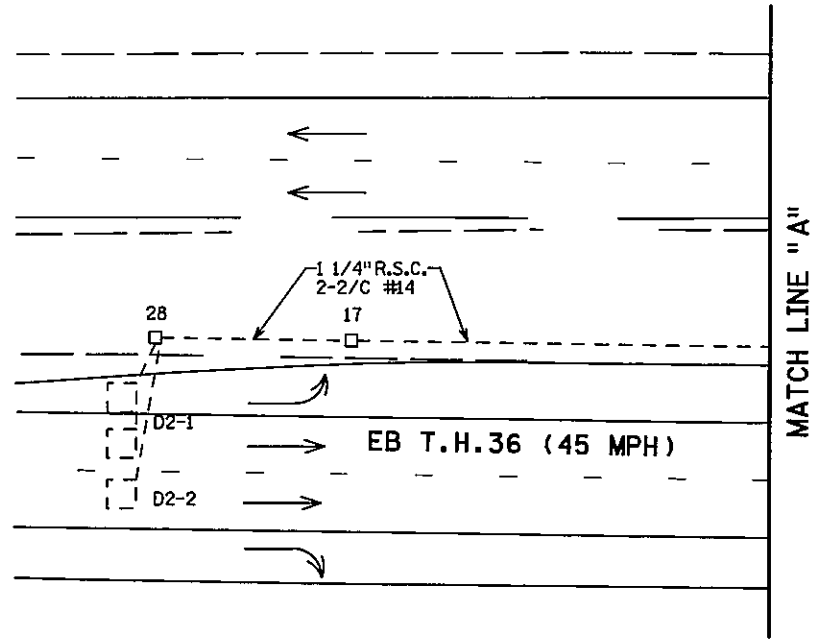
INTERSECTION LAYOUT
 REVISE SIGNAL SYSTEM F
 T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST.
 IN NORTH ST. PAUL, RAMSEY COUNTY

S.A.P. NO.
 CERTIFIED BY *Michael P. Salway*
 LICENSED PROFESSIONAL ENGINEER

DRAWN BY: BAM CKD BY: BTJ DATE: 4-21-11
 LIC. NO. 19863 DATE: 4-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 69 OF 122 SHEETS

PLOTTED/REVISED: 4/19/2011

DISTRICT *: METRO
 IPLOT NAME: MLNotes
 PATH & FILENAME: IP_PWP-dj359504-20641A_SGL.DGN



(3) PA100 POLE FOUNDATION
 TYPE PA100-A-40-D40-9
 ONE WAY EVP DETECTORS AND LIGHT
 2 ONE WAY SIGNALS-OVERHEAD
 LUMINAIRE-250 WATT H.P.S.
 2-TYPE 10B POLE MOUNTED AT 0 AND 270 DEG

REMOVE: 2-PED IND
F & I: 2-C.O. PED IND

TYPE D SIGN
 EXTEND INTO HH 18:
 3" R.S.C.
 2-12/C #12
 1-3/C #12
 1-3/C #20

(2) TYPE 2A
 PEDESTAL POLE AND BASE
 PEDESTAL FOUNDATION

REMOVE: 1-PED PB (PB8-2) AND SIGN

EXTEND INTO HH 14:
 3" R.S.C.
 1-12/C #12
 1-3/C #12

(1) TYPE A100-A-35-D40-9
 A100 POLE FOUNDATION
 ONE WAY EVP DETECTOR AND LIGHT
 ONE WAY SIGNALS-OVERHEAD (8-2)
 ONE WAY SIGNALS-OVERHEAD (8-1)
 LUMINAIRE-250 WATT H.P.S.
 TYPE 10B POLE MOUNTED 315 DEG

REMOVE: 1-PED IND
F & I: 1-C.D. PED IND
REMOVE: 1-PED PB (PB8-1) AND SIGN

1-TYPE R9-3a SIGN FACING POLE 6
 EXTEND INTO HH 13:
 3" R.S.C.
 3-12/C #12
 1-3/C #12
 1-3/C #20
 2-1/C #10

(4) TYPE A100-A-35-D40-9
 A100 POLE FOUNDATION
 ONE WAY EVP DETECTOR AND LIGHT
 ONE WAY SIGNALS-OVERHEAD (4-2)
 ONE WAY SIGNALS-OVERHEAD (4-1)
 LUMINAIRE-250 WATT H.P.S.
 TYPE 10B POLE MOUNTED 315 DEG

REMOVE: 1-PED IND
F & I: 1-C.D. PED IND
REMOVE: 1-PED PB (PB6-4) AND SIGN
F & I: 1-APS PB AND SIGN (LT ARROW) (PB6-1)

1-TYPE R9-3a SIGN FACING POLE 5
 EXTEND INTO HH 22:
 3" R.S.C.
 5-12/C #12
 4-3/C #12
 1-3/C #20
 1-3/C #14 (LUM)

(5) TYPE 2A
 PEDESTAL POLE AND BASE
 PEDESTAL FOUNDATION
 2-R9-3a SIGNS (FACING POLES 4 & 6)
 EXTEND INTO HH 14:
 3" R.S.C.
 1-12/C #12
 2-3/C #12

(6) TYPE A100-A-35-D40-9
 A100 POLE FOUNDATION
 ONE WAY EVP DETECTOR AND LIGHT
 2 ONE WAY SIGNALS-OVERHEAD
 LUMINAIRE-250 WATT H.P.S.
 TYPE 20A POLE MOUNTED
 2-TYPE R9-3a SIGNS FACING POLES 1 AND 5
 EXTEND INTO HH 8:
 3" R.S.C.
 5-12/C #12
 1-3/C #20
 2-1/C #10

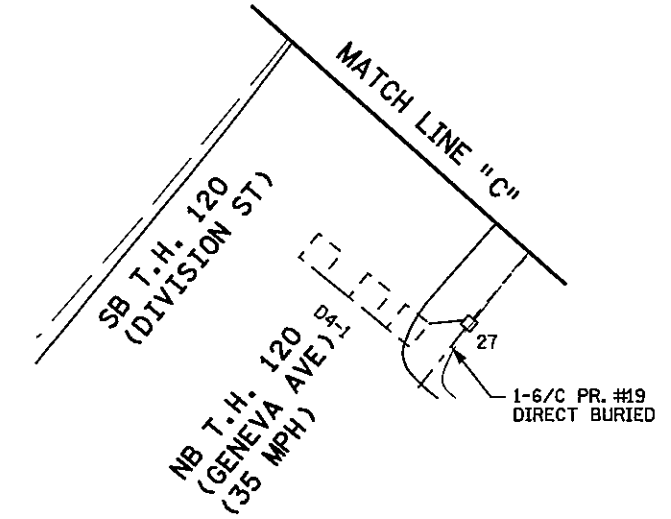
(A) EQUIPMENT PAD
 SIGNAL SERVICE CABINET
 EXTEND INTO HH 1:
 3" R.S.C.
 4-1/C #10
 2-3/C #12
 FROM HH 1 TO HH 24
 2" RSC
 2-3/C #12
 BETWEEN METER AND HH 25
 2" R.S.C.
 3-1/C #6
 CONTROLLER AND CABINET
 EXTEND INTO HH 1:
 4" R.S.C.
 5-12/C #12
 1-3/C #12
 2-3/C #20
 7-2/C #14
 2-6 PR. #19

F & I: 1-2/C #14

EXTEND INTO HH 24:
 6-12/C #12
 2-3/C #12
 2-3/C #20
 7-2/C #14

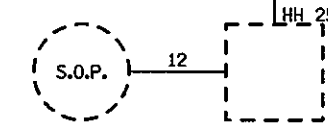
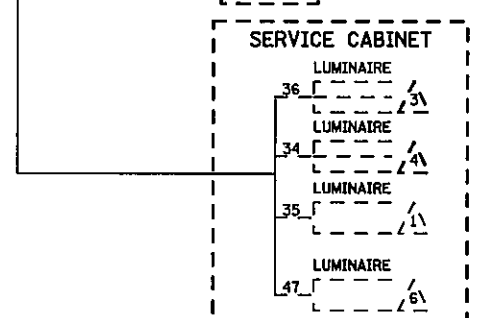
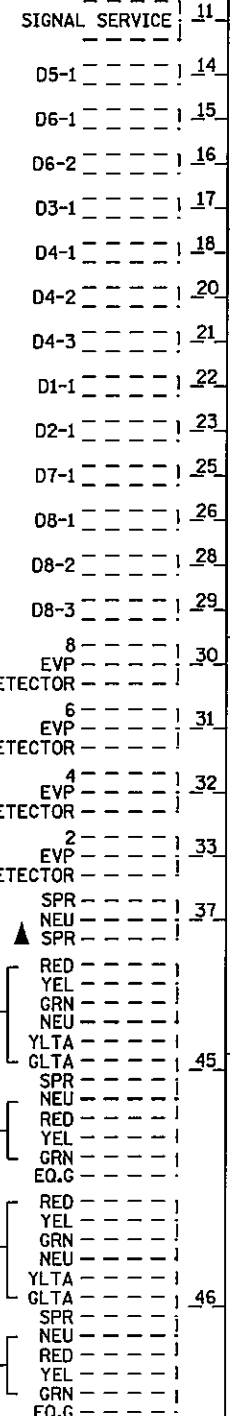
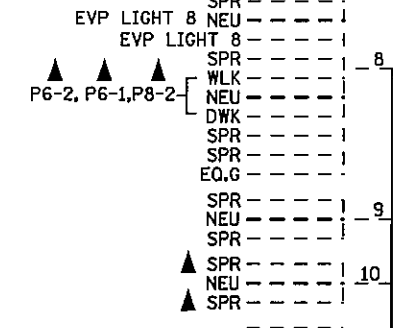
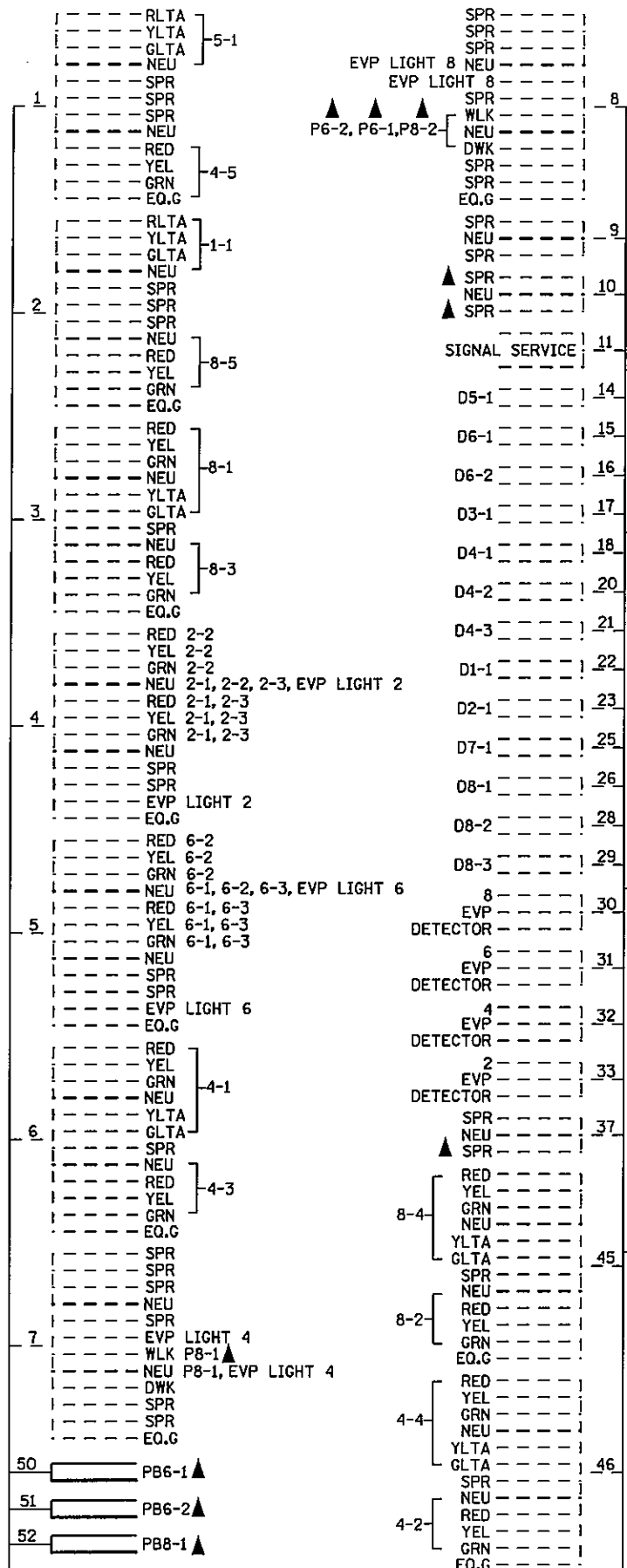
F & I: 4-2/C #14

(B) 35' WOOD POLE
 2" RSC RISER AND WEATHERHEAD
 EXTEND INTO HH 25:
 2" R.S.C. RISER
 3-1/C #6



BY	DATE	REVISIONS	SYSTEM ID: 20641	T.E. 5372	MATCH LINES LAYOUT / NOTES	S.A.P. NO.	DRAWN BY: BAM	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 5800 CENTURY AVE.		REVISE SIGNAL SYSTEM F	CERTIFIED BY: <i>Michael P. Subashy</i>			LIC. NO. 19863
			MASTER ID:	T.E.	T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST.				DATE: 4-21-11
					IN NORTH ST. PAUL, RAMSEY COUNTY	STATE PROJ. NO. 8825-393			SHEET NO. 70 OF 122 SHEETS

CONTROLLER CABINET



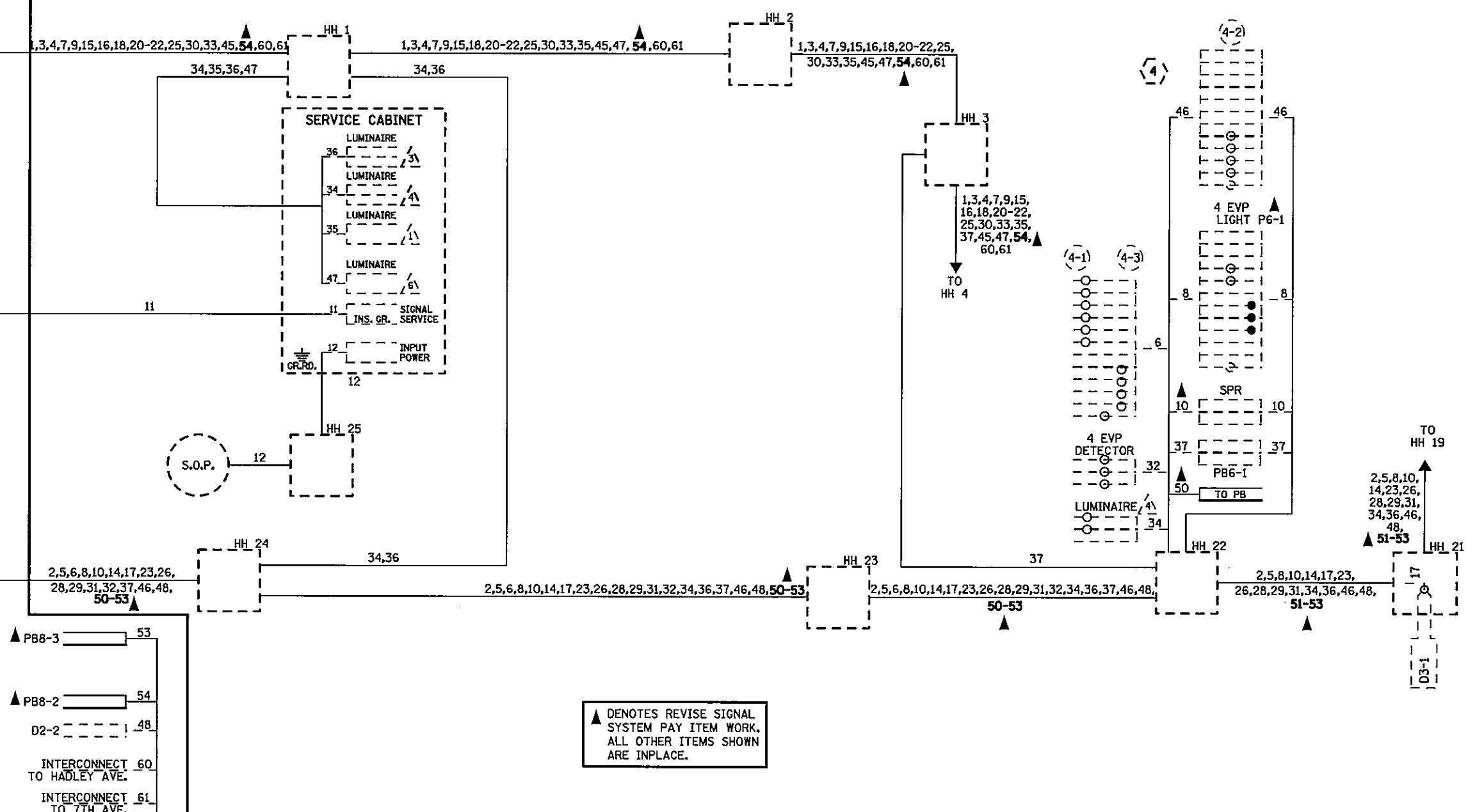
▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

CONDUCTOR COLOR CODE

TO SIGNAL CABINET	BASE OF POLE OR PEDESTAL	TO DEVICE
3/C#20 WH OR YEL BLK OR BL	R O BL WH R/BLK O/BLK BL/BLK WH/BLK BLK BLK/WH G/BLK G	R O BL WH Y BLK BRN
2/C#14 BLK CLR	R O BL WH G	R O BL WH Y BLK BRN
2-1/C BLK WH	R O BL WH G	R O BL WH Y BLK BRN
6PR#19	R O BL WH G	R O BL WH Y BLK BRN
	3/C#12 R WH BLK	R O BL WH Y BLK BRN

5-SECTION SIGNAL INDICATION
3 & 4-SECTION SIGNAL INDICATION
PEDESTRIAN INDICATION
EVP/PB/FLASHER NEU

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



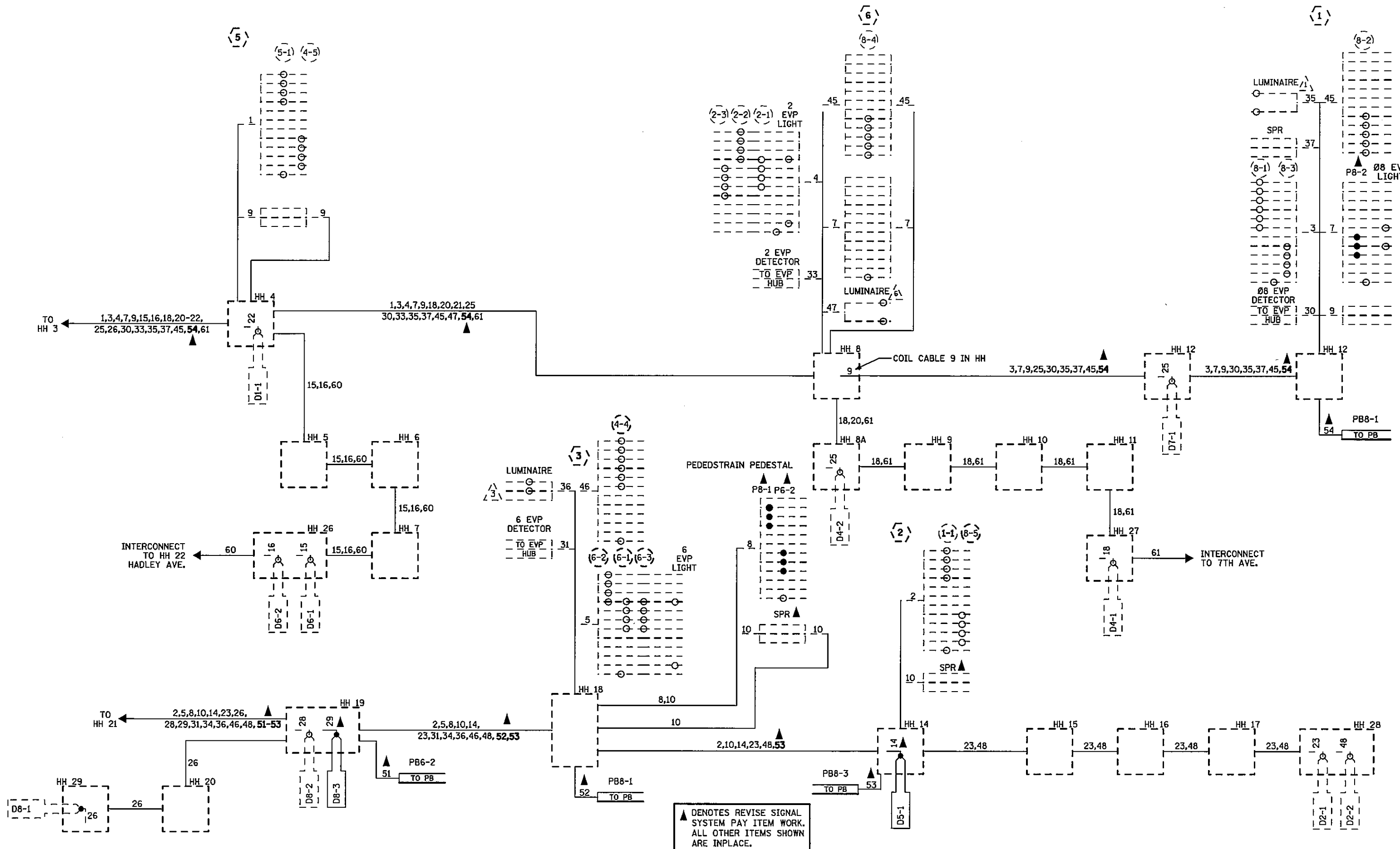
PLOTTED/REVISED: 4/19/2011

DISTRICT #: METRO
IFLOT NAME: Wire 1 of 2
PATH & FILENAME: IP_PWP-d135950420641A_SGLDGN

BY	DATE	REVISIONS	SYSTEM ID: 20641	T.E. 5372	FIELD WIRING DIAGRAM (1 OF 2)	S.A.P. NO.	DRAWN BY: BAM	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 5800 CENTURY AVE.		REVISE SIGNAL SYSTEM F	CERTIFIED BY: <i>Michael P. Subersky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.	T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST. IN NORTH ST. PAUL, RAMSEY COUNTY	STATE PROJ. NO. 8825-393	SHEET NO. 71	OF 122 SHEETS	

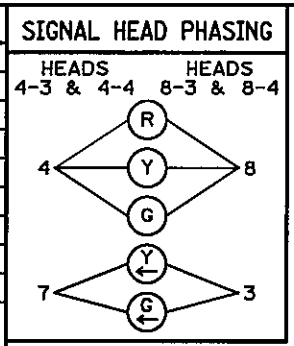
PLOTTED/REVISED: 4/19/2011

DISTRICT #: METRO
 IPLOT NAME: Wire 2 of 2
 PATH & FILENAME: IP_PWP-dj35950A20641A_SGLDGN

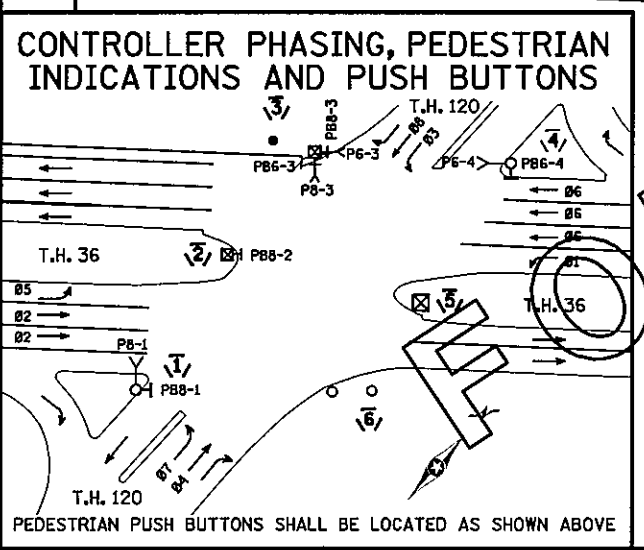
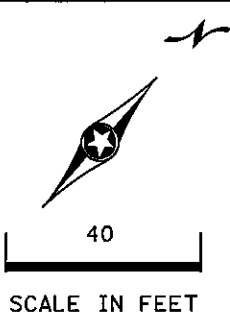
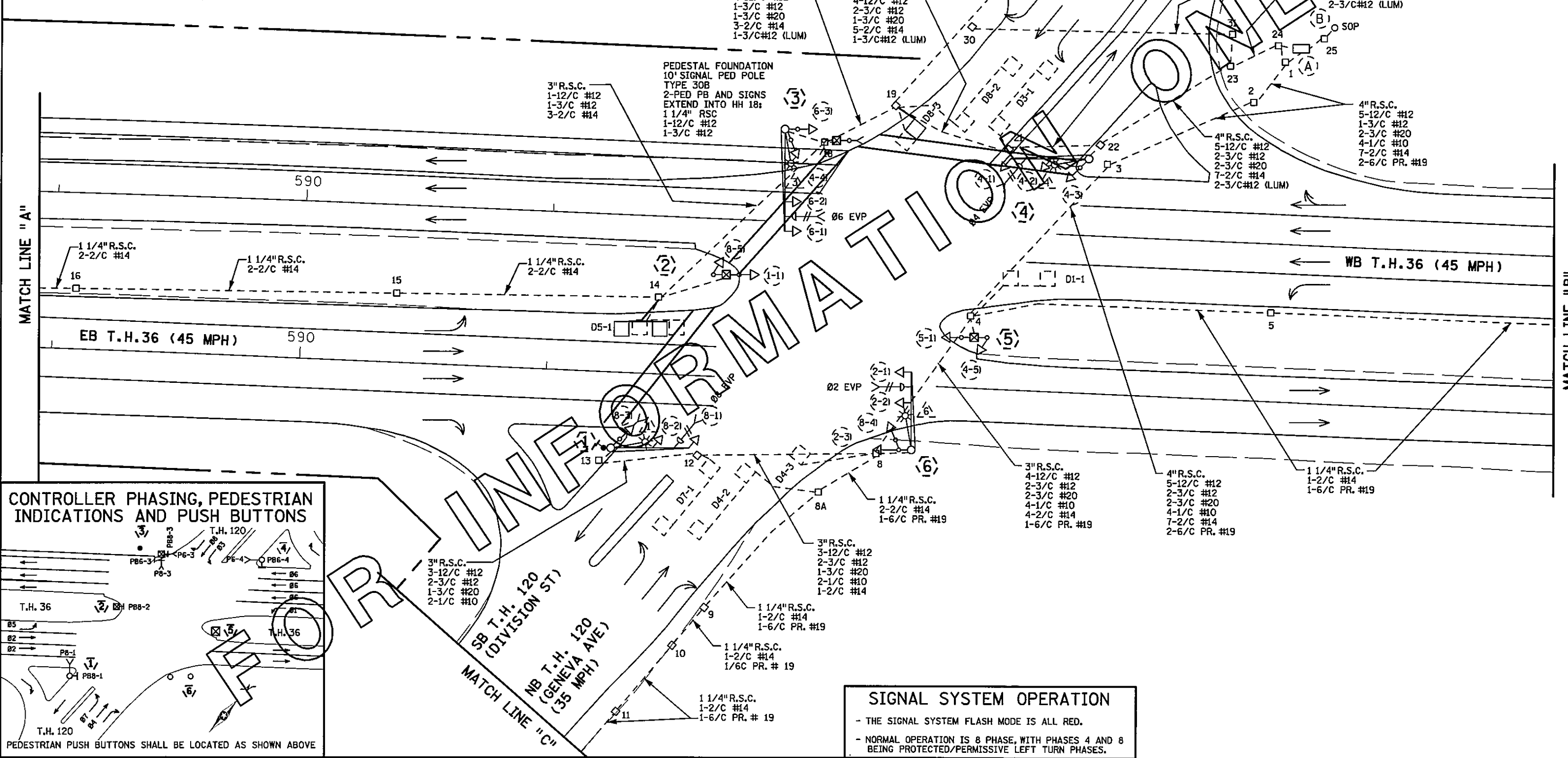


BY	DATE	REVISIONS	SYSTEM ID: 20641	T.E. 5372	FIELD WIRING DIAGRAM (2 OF 2) REVISE SIGNAL SYSTEM F T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST. IN NORTH ST. PAUL, RAMSEY COUNTY	S.A.P. NO.	DRAWN BY: BAM	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 5800 CENTURY AVE.			CERTIFIED BY: <i>Michael P. Subinsky</i>	LIC. NO. 19863		DATE: 4-21-11
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393		SHEET NO. 72 OF 122 SHEETS	

LOOP DETECTOR CHART			SIGNAL FACE CHART					SIGNAL HEAD PHASING		
NUMBER	SIZE (FT)	LOCATION	FACE	R	Y	G	Y	G	HEADS	HEADS
D1-1, D5-1	2-6x6	5 & 20	1-1	←	←	←			4-3 & 4-4	8-3 & 8-4
D2-1	2-6x6	400	2-1, 2-2, 2-3	○	○	○				
D2-2	6x6	400	4-1, 4-4	○	○	○	←	←		
D3-1, D7-1	2-6x6	10 & 40	4-2, 4-3, 4-5	○	○	○				
D4-1	3-6x60	180	5-1	←	←	←				
D4-2, D8-2	2-6x6	10 & 40	6-1, 6-2, 6-3	○	○	○				
D4-3, D8-3	6x6	0	8-4	○	○	○	←	←		
D6-1, D6-2	6x6	400	8-2, 8-3, 8-5	○	○	○				
D8-1	6x6, 6x15	180								



-ALL LOOP DETECTORS ARE PVC
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET
 -ALL SIGNAL INDICATIONS ARE 12" LED
 -ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS



SIGNAL SYSTEM OPERATION
 - THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
 - NORMAL OPERATION IS 8 PHASE, WITH PHASES 4 AND 8 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.

BY	DATE	REVISIONS

SYSTEM ID: 20641 T.E.
 METER ADDRESS: 5800 CENTURY AVE.
 MASTER ID: T.E.

"FOR INFORMATION ONLY"
 INTERSECTION LAYOUT
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST.
 IN NORTH ST. PAUL, RAMSEY COUNTY

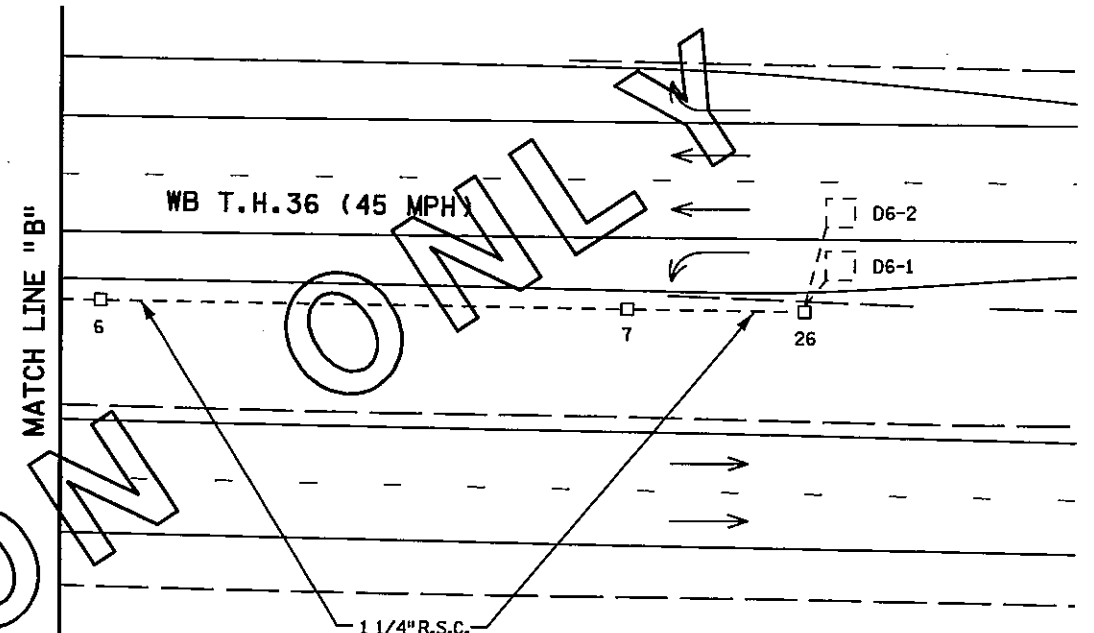
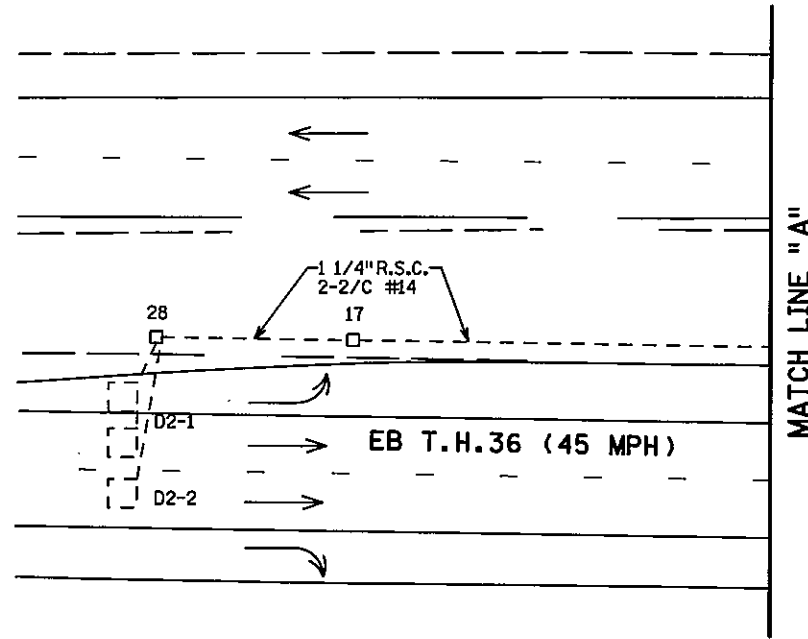
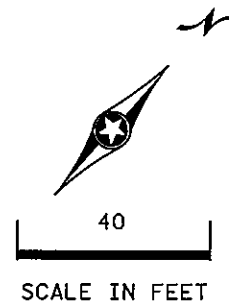
STATE PROJ. NO. 8825-393 SHEET NO. 73 OF 122 SHEETS

PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
 IPLOT NAME: FIO Layout
 PATH & FILENAME: IP_FWP-01359504-copy1_PT20641_sgl.dgn

PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
PLOT NAME: FIO ML Notes
PATH & FILENAME: IP_PWP-df1359504copy1_PT2064f_sgl.dgn



- ③ PA100 POLE FOUNDATION
TYPE PA100-A-40-D40-9
ONE WAY EVP DETECTORS AND LIGHT
2 ONE WAY SIGNALS-OVERHEAD
LUMINAIRE-250 WATT H.P.S.
2-TYPE 10B POLE MOUNTED AT 0 AND 270 DEG
TYPE D SIGN
EXTEND INTO HH 18:
3" R.S.C.
3-12/C #12
2-3/C #12
1-3/C #20

- ② TYPE 2A
PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
1-PED PB (PB8-2) AND SIGN
EXTEND INTO HH 14:
3" R.S.C.
1-12/C #12
1-3/C #12

- ① TYPE A100-A-35-D40-9
A100 POLE FOUNDATION
ONE WAY EVP DETECTOR AND LIGHT
ONE WAY SIGNALS-OVERHEAD (8-2)
ONE WAY SIGNALS-OVERHEAD (8-1)
LUMINAIRE-250 WATT H.P.S.
TYPE 10B POLE MOUNTED 315 DEG
1-PED PB (PB8-1) AND SIGN
1-TYPE R9-3a SIGN FACING POLE 6
EXTEND INTO HH 13:
3" R.S.C.
3-12/C #12
1-3/C #12
1-3/C #10
2-1/C #10

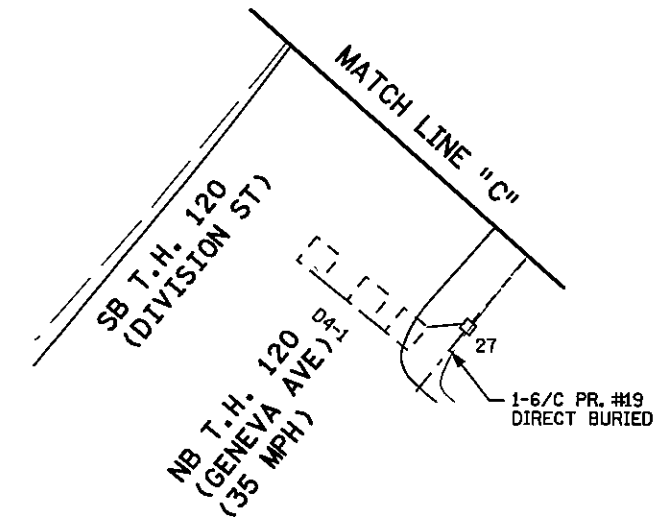
- ④ TYPE A100-A-35-D40-9
A100 POLE FOUNDATION
ONE WAY EVP DETECTOR AND LIGHT
ONE WAY SIGNALS-OVERHEAD (4-2)
ONE WAY SIGNALS-OVERHEAD (4-1)
LUMINAIRE-250 WATT H.P.S.
TYPE 10B POLE MOUNTED 315 DEG
1-PED PB (PB6-4) AND SIGN
1-TYPE R9-3a SIGN FACING POLE 5
EXTEND INTO HH 22:
3" R.S.C.
5-12/C #12
4-3/C #12
1-3/C #20
1-3/C #14 (LUM)

- ⑤ TYPE 2A
PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
2-R9-3a SIGNS FACING POLES 4 & 6)
EXTEND INTO HH 14:
3" R.S.C.
1-12/C #12
2-3/C #12

- ⑥ TYPE A100-A-35-D40-9
A100 POLE FOUNDATION
ONE WAY EVP DETECTOR AND LIGHT
2 ONE WAY SIGNALS-OVERHEAD
LUMINAIRE-250 WATT H.P.S.
TYPE 20A POLE MOUNTED
2-TYPE R9-3a SIGNS FACING POLES 1 AND 5
EXTEND INTO HH 8:
3" R.S.C.
5-12/C #12
1-3/C #20
2-1/C #10

- (A) EQUIPMENT PAD
SIGNAL SERVICE CABINET
EXTEND INTO HH 1:
5" R.S.C.
1-1/C #10
2-3/C #12
FROM HH 1 TO HH 24
2" RSC
2-3/C #12
BETWEEN METER AND HH 25
2" R.S.C.
3-1/C #6
CONTROLLER AND CABINET
EXTEND INTO HH 1:
4" R.S.C.
5-12/C #12
1-3/C #12
2-3/C #20
7-2/C #14
2-6 PR. #19
EXTEND INTO HH 24:
6-12/C #12
2-3/C #12
2-3/C #20
7-2/C #14

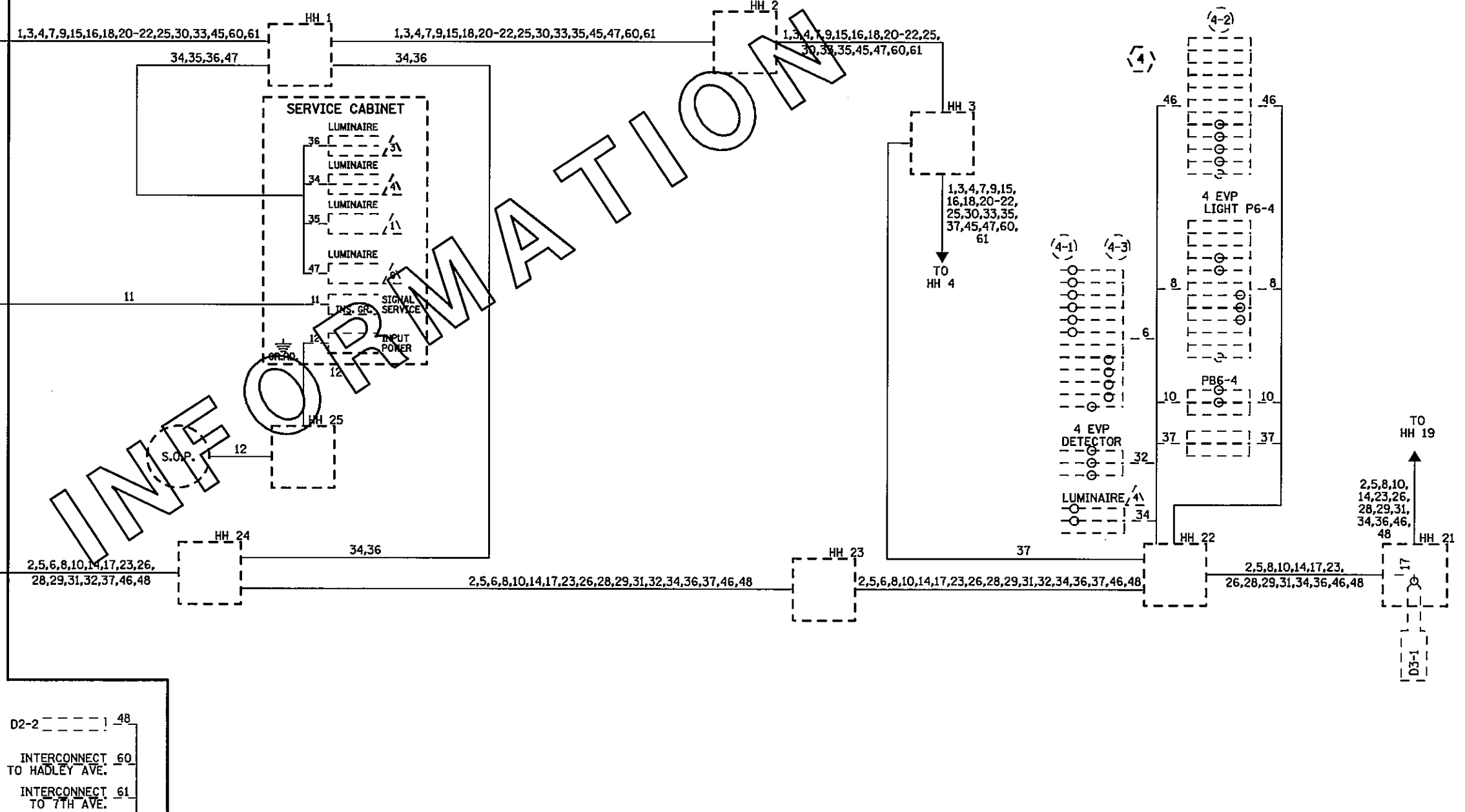
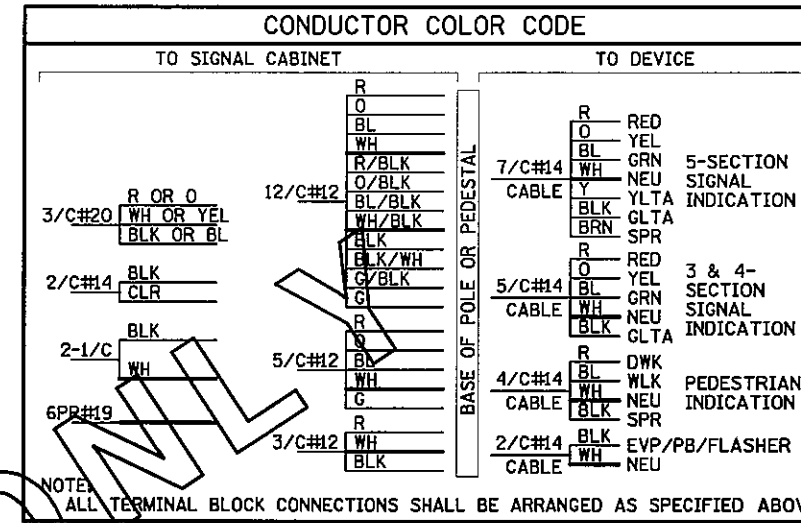
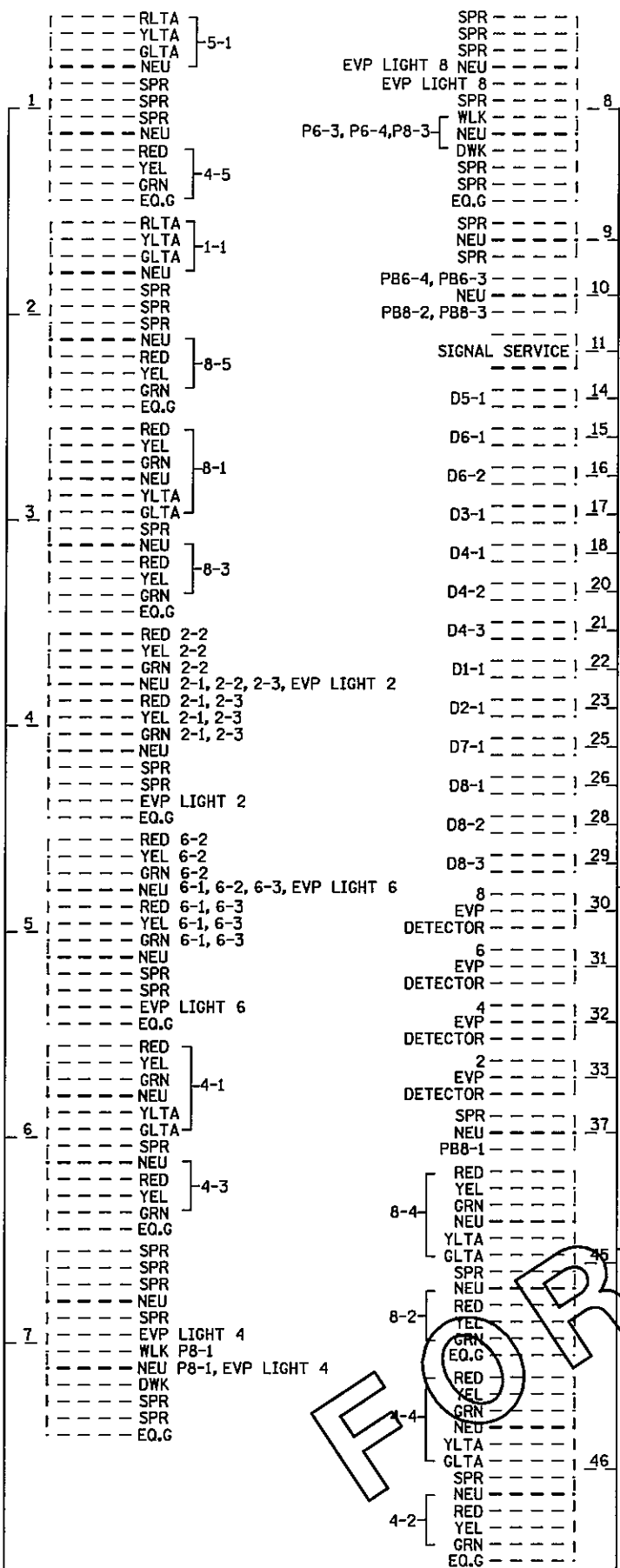
- (B) 35' WOOD POLE
2" RSC RISER AND WEATHERHEAD
EXTEND INTO HH 25:
2" R.S.C. RISER
3-1/C #6



BY	DATE	REVISIONS	SYSTEM ID: 20641	T.E.
			METER ADDRESS: 5800 CENTURY AVE.	
			MASTER ID:	T.E.

"FOR INFORMATION ONLY"
MATCH LINES LAYOUT / NOTES
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST.
IN NORTH ST. PAUL, RAMSEY COUNTY

CONTROLLER CABINET



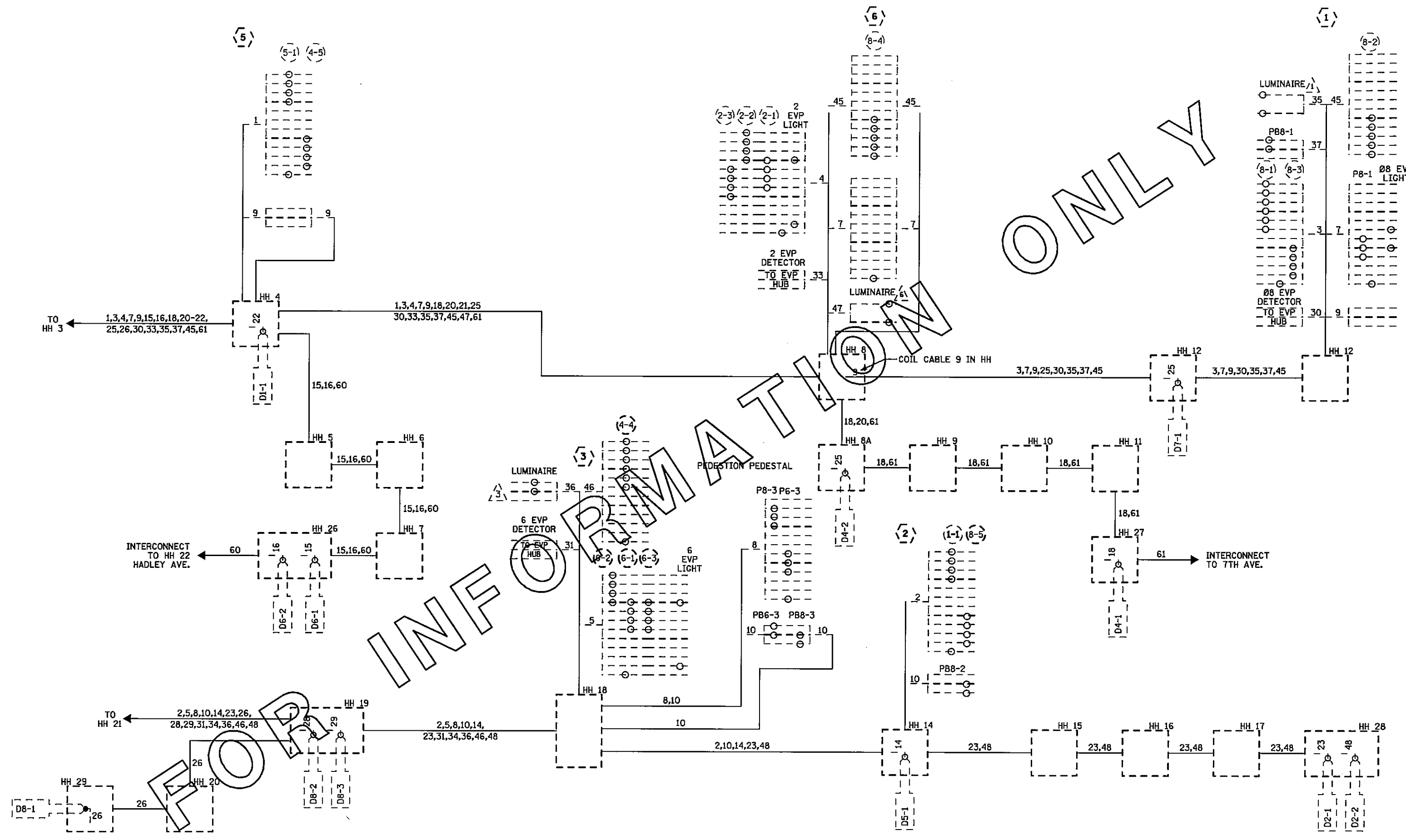
DISTRICT #: METRO
 PLOT NAME: FIO Wire 1 of 2
 PATH & FILENAME: IP_FWP-dl359504-copy1_PT20641_sgl.dgn
 PLOTTED/REVISED: 4/27/2011

FOR INFORMATION ONLY

PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
PLOT NAME: FIO Wire 2 of 2
PATH & FILENAME: IP_PWP-d1359504\copy1_PT20641.sgl.dgn

ONLY

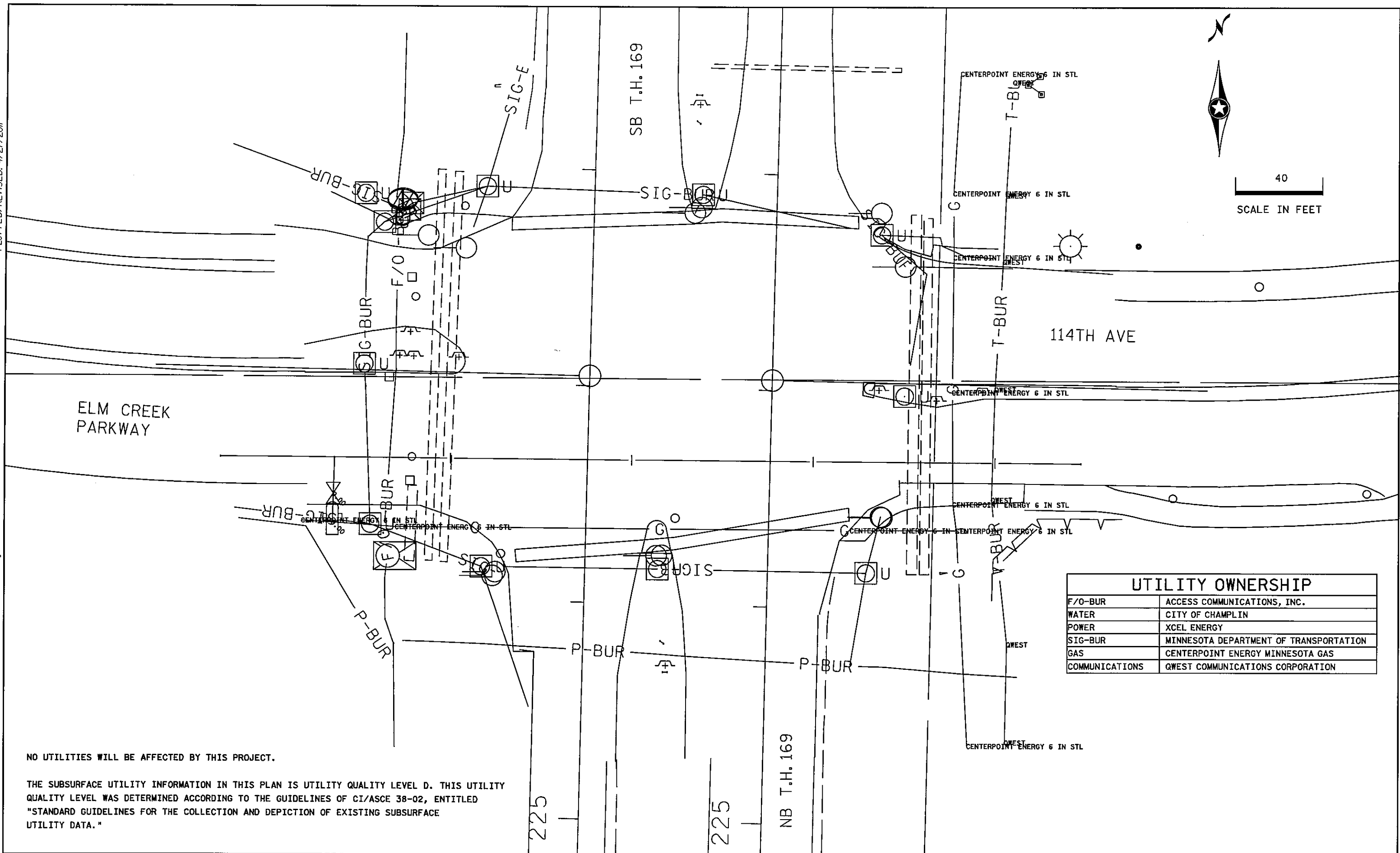
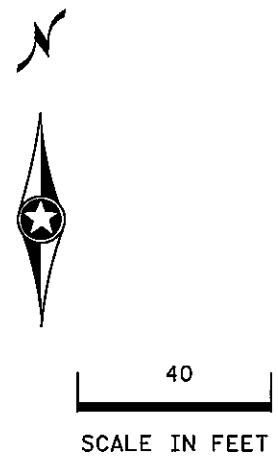


BY	DATE	REVISIONS

SYSTEM ID: 20641 T.E.
 METER ADDRESS: 5800 CENTURY AVE.
 MASTER ID: T.E.

"FOR INFORMATION ONLY"
 FIELD WIRING DIAGRAM (2 OF 2)
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 36 AT T.H. 120 (CENTURY AVE.) DIVISION ST.
 IN NORTH ST. PAUL, RAMSEY COUNTY

PLOTTED/REVISED: 4/27/2011



UTILITY OWNERSHIP	
F/O-BUR	ACCESS COMMUNICATIONS, INC.
WATER	CITY OF CHAMPLIN
POWER	XCEL ENERGY
SIG-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
GAS	CENTERPOINT ENERGY MINNESOTA GAS
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION

NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

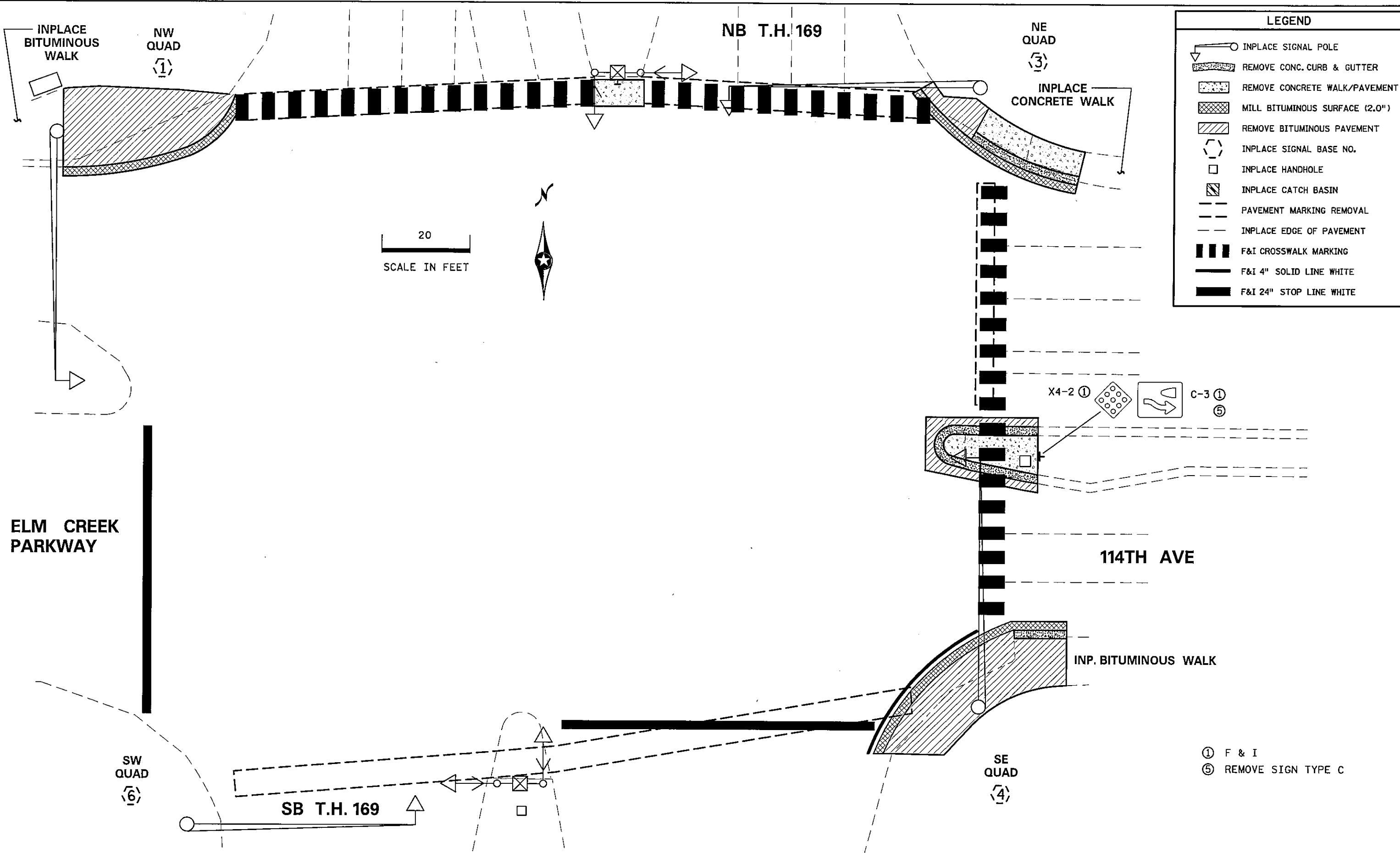
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

DISTRICT #: METRO
PLOT NAME: UTILITIES_SGL
PATH & FILENAME: IP_PWP-d138252UTILITIES_SGL.dgn

BY	DATE	REVISIONS	SYSTEM ID: 21520 T.E. 5373	INPLACE TOPOGRAPHY AND UTILITY PLAN REVISE SIGNAL SYSTEM G T.H. 169 AT ELM CREEK PKWY & 114TH AVE IN CHAMPLIN, HENNEPIN COUNTY	S.A.P. NO.	DRAWN BY: BTJ	CKD BY: MAS	DATE: 4-21-11
			METER ADDRESS: 11401 T.H. 169		CERTIFIED BY: <i>Michael P. Delaney</i>	LIC. NO. 19683	DATE: 4-21-11	
			MASTER ID: T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 77 OF 122 SHEETS		

PLOTTED/REVISED: 20/2011

DISTRICT #METRO
 IPLOT NAME: ADAREMOVALS
 PATH & FILENAME: P_PWP: d1382521\T21520ADAREMOVALS.dgn



LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK/PAVEMENT
	MILL BITUMINOUS SURFACE (2.0'')
	REMOVE BITUMINOUS PAVEMENT
	INPLACE SIGNAL BASE NO.
	INPLACE HANDHOLE
	INPLACE CATCH BASIN
	PAVEMENT MARKING REMOVAL
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING
	F&I 4" SOLID LINE WHITE
	F&I 24" STOP LINE WHITE

20
 SCALE IN FEET



ELM CREEK PARKWAY

114TH AVE

SW QUAD (6)

SB T.H. 169

SE QUAD (4)

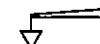
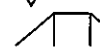
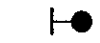


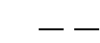
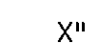


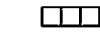



① F & I
 ⑤ REMOVE SIGN TYPE C

BY	DATE	REVISIONS	SYSTEM ID: 21520 T.E. 5373	REMOVAL, SIGNING & PAVEMENT MARKING PLAN	S.A.P. NO.	DRAWN BY: MAS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 11401 T.H. 169	REVISE SIGNAL SYSTEM G	CERTIFIED BY: <i>Michael P. Selinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID: T.E.	T.H. 169 AT ELM CREEK PKWY & 114TH AVE	STATE PROJ. NO. 8825-393	SHEET NO. 78 OF 122 SHEETS		
				IN CHAMPLIN, HENNEPIN COUNTY				

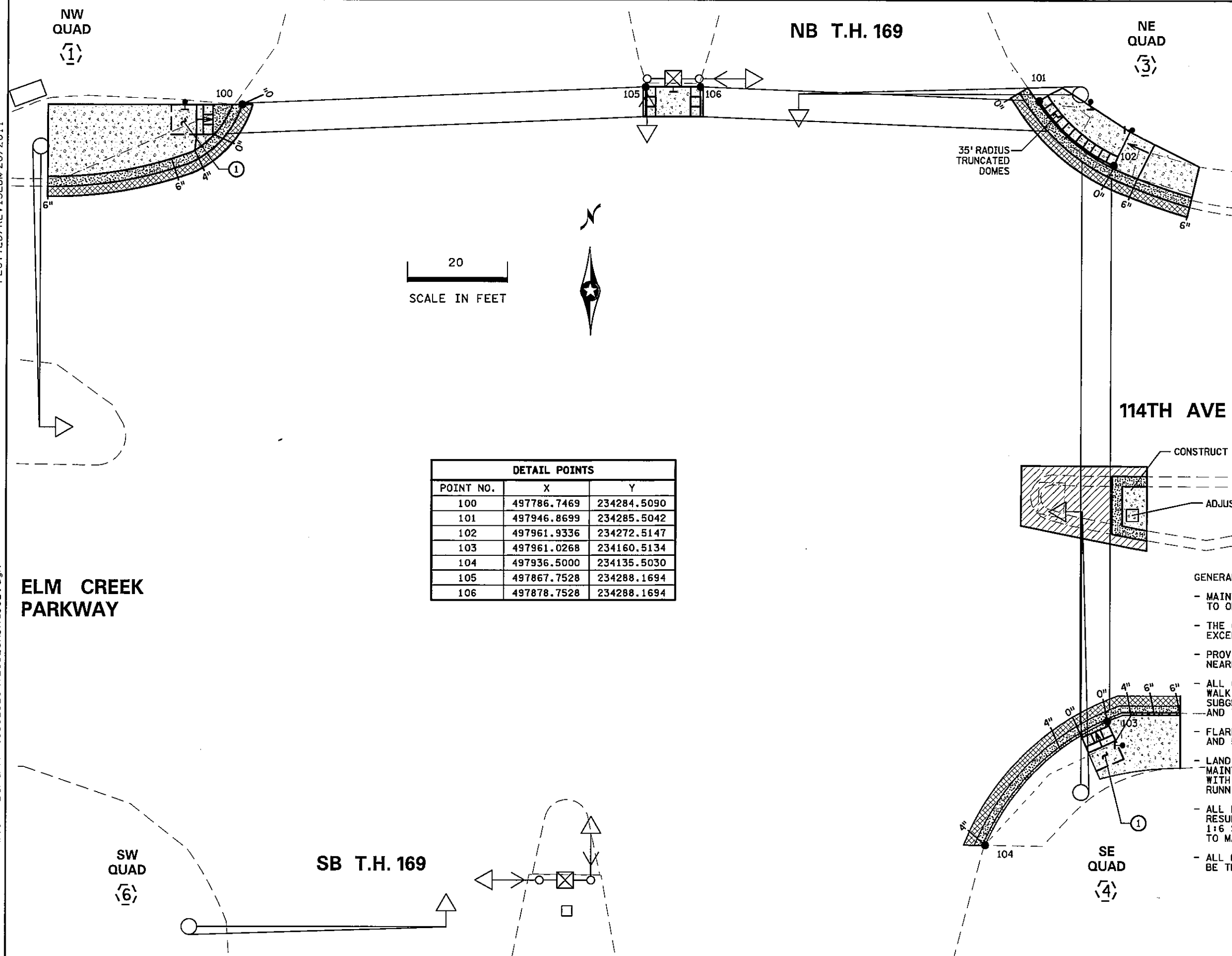
PLOTTED/REVISED#28/2011

DISTRICT #METRO
 IPILOT NAME: ADA RAMPS
 PATH & FILENAME: P:\PWP:d\1382521\T21520ADA_SGL.dgn

LEGEND

-  INPLACE SIGNAL POLE
-  CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
-  PEDESTRIAN PUSH BUTTON STATION
-  INPLACE SIGNAL BASE NO.
-  INPLACE HANDHOLE
-  EDGE OF INPLACE SURFACING
-  X" CURB HEIGHT AT INDICATED LOCATION
-  INTERSECTION POINT OF PEDESTRIAN RAMP EDGE AT FACE OF CURB
-  TRUNCATED DOMES (SEE STANDARD PLATE 7038)
-  CONSTRUCT CONCRETE CURB & GUTTER
-  6" CONCRETE WALK
-  2" BITUMINOUS OVERLAY, 2' WIDE
-  SEE TYPICAL SECTION 1

INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT



DETAIL POINTS		
POINT NO.	X	Y
100	497786.7469	234284.5090
101	497946.8699	234285.5042
102	497961.9336	234272.5147
103	497961.0268	234160.5134
104	497936.5000	234135.5030
105	497867.7528	234288.1694
106	497878.7528	234288.1694

ELM CREEK PARKWAY

114TH AVE

CONSTRUCT APPROACH NOSE, SEE STANDARD PLATE 7113.

ADJUST HANDHOLE

GENERAL NOTES:

- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
- THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
- PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
- ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
- FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
- LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
- ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
- ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.

① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.

BY	DATE	REVISIONS	SYSTEM ID: 21520 T.E. 5373	PEDESTRIAN CURB RAMP DETAILS REVISE SIGNAL SYSTEM G T.H. 169 AT ELM CREEK PKWY & 114TH AVE IN CHAMPLIN, HENNEPIN COUNTY	S.A.P. NO.	DRAWN BY: MAS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 11401 T.H. 169		CERTIFIED BY: <i>Michael P. Selinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID: T.E.		STATE PROJ. NO. 8825-393		SHEET NO. 79 OF 122 SHEETS	

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: INTERSECTION
PATH & FILENAME: IP_PWP-df382521\21520_SGL.dgn

- (A) EQUIPMENT PAD**
 CONTROLLER & CABINET
 4" RSC TO HH-1 4" RSC TO HH-13
 6-12/C*12 5-12/C*12
 6-3/C*12 7-3/C*12
 10-2/C*14 11-2/C*14
 2-3/C*20 2-3/C*20
 1-6PR#19 2-6PR#19

- (B) S.O.P.-WOOD POLE**
 2" RSC TO INP.-HH-1
 3-1/C*0
 2" RSC RISER & WEATHERHEAD
 3-1/C*0

- (C) SIGNAL SERVICE CABINET**
 2" RSC TO CONTROLLER CABINET
 2-1/C*6
 1-1/C*6 BARE GRD.
 2" RSC TO HH-1
 4-3/C*12
 2" TO S.O.P.
 3-1/C*0
 3" STUB OUT THREAD & CAP BOTH ENDS
 2-3" RSC (INTERCONNECT)
 1-1/4" RSC (FUTURE PHONE)

- (D) F&I: 1-2/C*14**
 4" RSC
 3-12/C*12
 5-3/C*12
 1-3/C*12 (LUM.)
 4-2/C*14
 1-3/C*20

T.H. 169
(45 M.P.H.)

MATCHLINE "E"

MATCHLINE "C"

MATCHLINE "D"



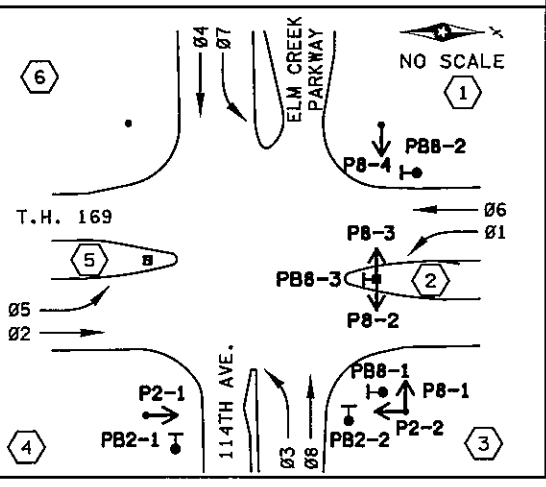
LOOP DETECTORS			
DESIGNATION	NO. & SIZE/FT.	LOCATION	STATUS
D1-1,D1-2	2-6'X6'	10' AND 40'	INPLACE
D2-1,D2-2	1-6'X6'	475'	INPLACE
D3-1	2-6'X6'	10' AND 40'	INPLACE
D4-1,D4-2	1-6'X6'	120'	INPLACE
D4-3,D4-4	2-6'X6'	0' AND 14'	INPLACE
D4-5	1-6'X15'	0'	INPLACE
D5-1,D5-2	2-6'X6'	10' AND 40'	INPLACE
D6-1,D6-2	1-6'X6'	475'	INPLACE
D7-1,D7-2	2-6'X6'	10' AND 40'	INPLACE
D8-1,D8-2	1-6'X6'	120'	INPLACE
D8-3,D8-4	2-6'X6'	0' AND 14'	INPLACE
D8-3,D8-4	1-6'X6'	29'	F & I
D8-5	1-6'X15'	0'	INPLACE
D8-5	1-6'X6'	24'	F & I

-LOCATION: DISTANCE FROM CROSSWALK/STOP LINE IN FEET
 -ALL LOOP DETECTORS SHALL BE IN NMC CONDUIT, EXCEPT LOOPS IN EXISTING CONCRETE PAVEMENT WHICH SHALL BE SAWCUT.

LED SIGNAL INDICATIONS			
SIGNAL FACE	R	Y	G
1-1,1-2	←	←	←
2-1,2-2,2-3	●	●	●
3-1,3-2	←	←	←
4-1,4-2,4-3,4-4	●	●	●
5-1,5-2	←	←	←
6-1,6-2,6-3,6-4	●	●	●
7-1,7-2	←	←	←
8-1,8-2,8-3,8-4	●	●	●

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

CONTROLLER PHASING, PEDESTRIAN INDICATIONS & PUSHBUTTON LAYOUT



F&I: PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB2-1)
 EXTEND INTO HH 7: 2" CONDUIT
 1-2/C #14

- SIGNAL OPERATION NOTES**
- FLASH MODE SHALL BE ALL RED
 - Ø2 & Ø6 SHALL BE ON VEHICLE RECALL
 - Ø1 & Ø5 SHALL BE PROTECTED LEFT TURNS
 - Ø3 & Ø7 SHALL BE PROTECTED LEFT TURNS

F&I: PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB8-2)
 EXTEND INTO HH 1: 2" CONDUIT
 1-2/C #14

F&I: PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB8-1)
 EXTEND INTO HH 3: 2" CONDUIT
 1-2/C #14

F&I: PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB2-2)
 EXTEND INTO HH 3: 2" CONDUIT
 1-2/C #14

F&I: PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB2-2)
 EXTEND INTO HH 3: 2" CONDUIT
 1-2/C #14

- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 3, 4, 5 AND 6.
 6. ALL NEW PED IND SHALL BE C.D. PED IND.
 7. ADD PED PB STA WITH SIGNS NEAR POLES 1, 3 AND 4.
 8. ADD LOOP DETECTORS D8-3, D8-4 AND D8-5.
 9. ADJUST HH 6.

BY	DATE	REVISIONS	SYSTEM ID: 21520	T.E. 5373	S.A.P. NO.	DRAWN BY: MAS	CKD BY: BTJ	DATE: 4-21-11
		REVISED AT MN/DOT BY: J.D.P. 02-14-06	METER ADDRESS: 11401 T.H. 169		CERTIFIED BY: <i>Michael P. Subrany</i>			LIC. NO. 19863
		UPDATED: RELABELLED PHASES 5 & 1 LOOPS.	MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 80 OF 122 SHEETS	
			INTERSECTION LAYOUT REVISE SIGNAL SYSTEM G T.H. 169 AT ELM CREEK PARKWAY & 114TH AVE IN CHAMPLIN, HENNEPIN COUNTY					

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: POLE NOTES
PATH & FILENAME: IP_PWP-d1382521\21520_SGL.dgn

MATCHLINE "B"

6 PA100 POLE FOUNDATION
TYPE PA100-A-50
D40-9 (DAVIT AT 350°)
2-ONE WAY SIGNALS OVERHEAD
(0' AND 12' FROM END OF MAST ARM)
1-TYPE 10B POLE MOUNTED AT 0°
1-TYPE 10B POLE MOUNTED AT 270°

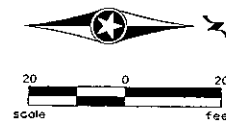
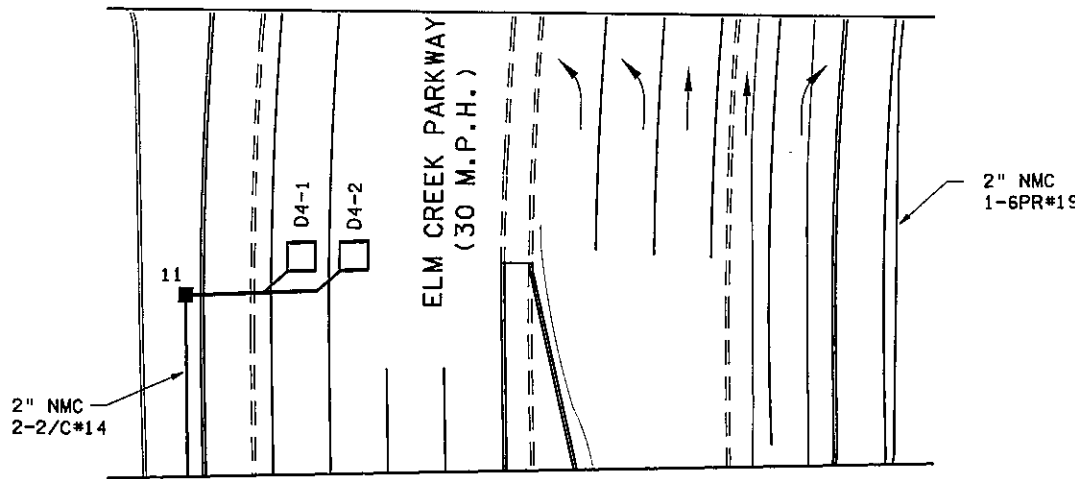
REMOVE: 2-PED IND

1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASE 1+6)
LUMINAIRE - 200 WATT H.P.S.

REMOVE: 2-PEDESTRIAN P.B. AND SIGNS

F&I: 2-TYPE R9-3a SIGNS FACING POLES 1 AND 4

EXTEND INTO HH-9:
3" RSC
2-12/C#12
2-3/C#12
1-3/C#12 (LUM.)
1-3/C#20



1 PA100 POLE FOUNDATION
TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
3-ONE WAY SIGNALS OVERHEAD
(0', 25' AND 40' FROM END OF MAST ARM)
1-TYPE 10B POLE MOUNTED AT 0°
1-TYPE 20B POLE MOUNTED AT 270°

REMOVE: 2-PED IND
F&I: 1-C.D. PED IND

1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASE 3+8)
LUMINAIRE - 200 WATT H.P.S.

REMOVE: 2-PEDESTRIAN P.B. AND SIGNS
F&I: 1-TYPE R9-3a SIGN FACING POLE 6

TYPE D SIGN
EXTEND INTO HH-3:
3" RSC
3-12/C #12
2-3/C #12
1-3/C #12 (LUM.)
1-3/C #20

MATCHLINE "C"

DIRECT BURIED
INTERCONNECT
1-6PR#19

2"NMC
2-2/C#14

DIRECT BURIED
INTERCONNECT
1-6PR#19

2"NMC
2-2/C#14

INP.-3A

INP.-4A

D6-1

D6-2

T.H. 169
(45 M.P.H.)

T.H. 169
(45 M.P.H.)

MATCHLINE "E"

MATCHLINE "F"

D2-2

D2-1

INP.-18

2"NMC
2-2/C#14

INP.-17A

2"NMC
2-2/C#14

MATCHLINE "D"

4 PA100 POLE FOUNDATION
TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
3-ONE WAY SIGNALS OVERHEAD
(0', 23' AND 35' FROM END OF MAST ARM)
1-TYPE 10A POLE MOUNTED AT 0°
1-TYPE 10B POLE MOUNTED AT 270°

REMOVE: 1-PED IND
F&I: 1-C.D. PED IND

1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASE 4+7)
LUMINAIRE - 200 WATT H.P.S.

REMOVE: 1-PEDESTRIAN P.B. AND SIGN
REMOVE: 1-TYPE R9-3a SIGN FACING POLE 3
REINSTALL: 1-TYPE R9-3a SIGN FACING POLE 6

TYPE D SIGN
EXTEND INTO HH-7:
3" RSC
2-12/C #12
3-3/C #12
1-3/C #12 (LUM.)
1-3/C #20

R9-3a SIGN FACING POLE 3

5 PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
1-TYPE 2C

REMOVE: 2-PED IND

REMOVE: 1-PEDESTRIAN P.B. AND SIGN

1-PEDESTRIAN PUSH BUTTON
AND SIGN (R10-4C)
EXTEND INTO HH-8:
2" RSC
1-12/C #12
2-3/C #12

2" NMC
2-2/C#14
1-6PR#19

2" NMC
1-6PR#19

2 PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
1-TYPE 2C

REMOVE: 2-PED IND

F&I: 2-C.D. PED IND
REMOVE: 1-PEDESTRIAN PB AND SIGN
F&I: 1-APS PB AND SIGN
(DOUBLE ARROW)(PB8-3)

EXTEND INTO HH-2:
2" RSC
1-12/C #12
2-3/C #12

3 PA100 POLE FOUNDATION
TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
2-ONE WAY SIGNALS OVERHEAD
(0' AND 12' FROM END OF MAST ARM)
1-TYPE 10A POLE MOUNTED AT 270°
1-TYPE 10B POLE MOUNTED AT 0°

REMOVE: 1-PED IND
F&I: 2-C.D. PED IND

1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASE 2+5)
LUMINAIRE - 200 WATT H.P.S.

REMOVE: 1-PEDESTRIAN P.B. AND SIGN
REMOVE: 1-TYPE R9-3a SIGN

TYPE D SIGN
EXTEND INTO HH-3:
3" RSC
2-12/C #12
2-3/C #12
1-3/C #12 (LUM.)
1-3/C #20

BY	DATE	REVISIONS

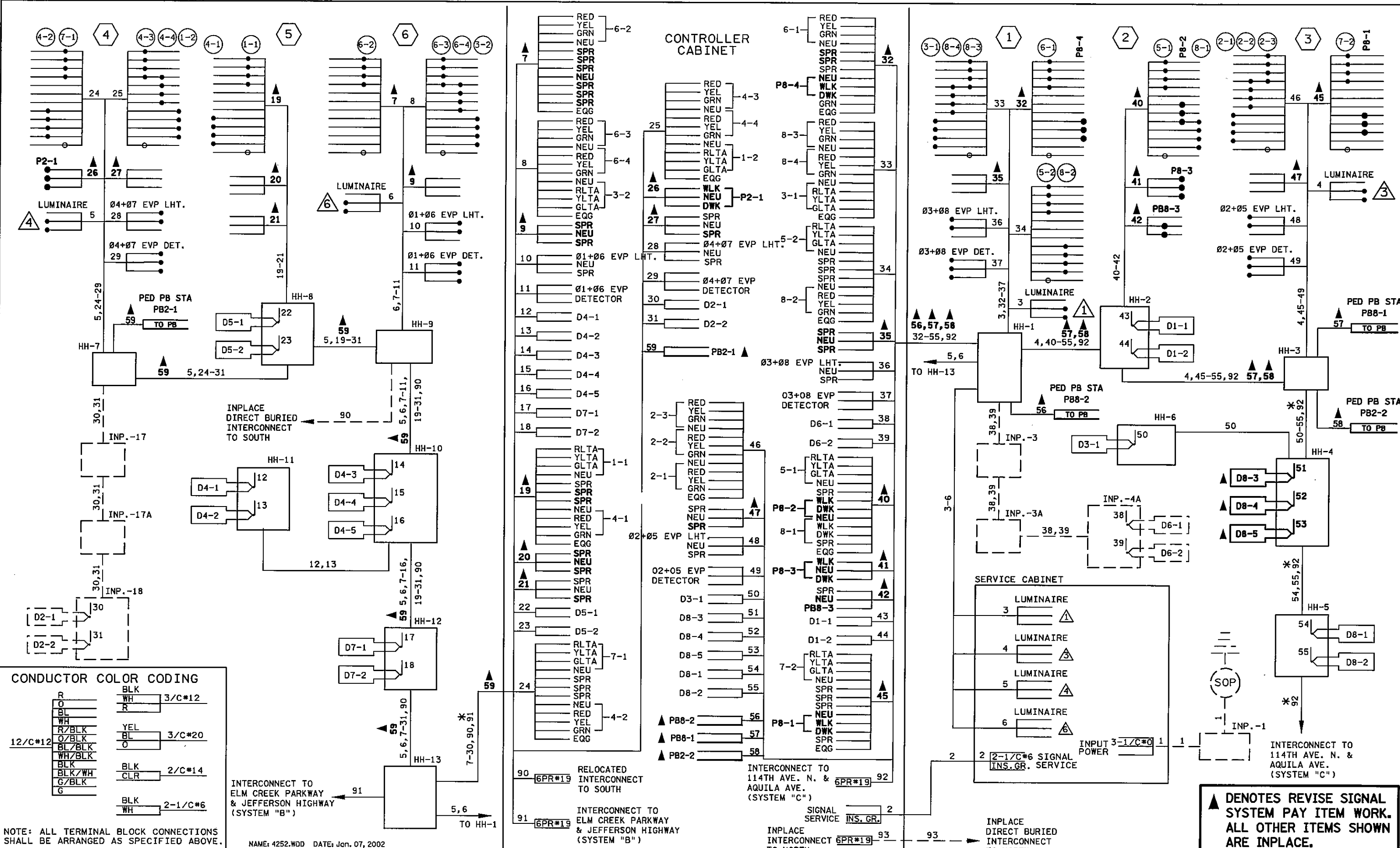
SYSTEM ID: 21520	T.E. 5373
METER ADDRESS: 11401 T.H. 169	
MASTER ID:	T.E.

POLE NOTES AND MATCHLINE LAYOUT
REVISE SIGNAL SYSTEM G
T.H. 169 AT ELM CREEK PARKWAY & 114TH AVE
IN CHAMPLIN, HENNEPIN COUNTY

S.A.P. NO.	DRAWN BY: MAS	CKD BY: BTJ	DATE: 4-21-11
CERTIFIED BY: <i>Michael P. Selinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
STATE PROJ. NO. 8825-393	SHEET NO. 81 OF 122 SHEETS		

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: WIRING
PATH & FILENAME: IP_PWP-d1382521\21520_SGL.dgn



CONDUCTOR COLOR CODING

R	BLK	3/C*12
O	WH	
BL	R	
WH	YEL	3/C*20
R/BLK	BL	
O/BLK	O	
BL/BLK	BLK	2/C*14
WH/BLK	CLR	
BLK/WH	BLK	
G/BLK	WH	2-1/C*6
G		

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

▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

BY	DATE	REVISIONS	SYSTEM ID: 21520	T.E. 5373	WIRING DIAGRAM LAYOUT REVISE SIGNAL SYSTEM G	S.A.P. NO.	DRAWN BY: MAS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 11401 T.H. 169		T.H. 169 AT ELM CREEK PARKWAY & 114TH AVE IN CHAMPLIN, HENNEPIN COUNTY	CERTIFIED BY: <i>Michael P. Sulvinsky</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 82 OF 122 SHEETS		

PLOTTED/REVISED: 4720520INFO1

DISTRICT #: METRO
PLOT NAME: T21520INFO1
PLOT FILENAME: IF:\P\2014\107\87\882521\T21520INFO.dgn

- (A)** EQUIPMENT PAD
CONTROLLER & CABINET
4" RSC TO HH-1
6-12/C#12
F&I 6-3/C#12
10-2/C#14
2-3/C#20
1-6PR#19
- (B)** SIGNAL SERVICE CABINET
2" RSC TO CONTROLLER CABINET
2-1/C#6
1-1/C#6 BARE GRD.
2" RSC TO HH-1
4-3/C#12
2" TO S.O.P.
3-1/C#0
3" STUB OUT THREAD & CAP BOTH ENDS
2-3" RSC (INTERCONNECT)
1-1/4" RSC (FUTURE PHONE)
S.O.P. - WOOD POLE
2" RSC TO INP.-HH-1
3-1/C#0
2" RSC RISER & WEATHERHEAD
3-1/C#0

- (6)** F&I-PA100 POLE FOUNDATION 2-2/C#14
TYPE PA100-A-50
D40-9 (DAVIT AT 350°)
2-ONE WAY SIGNALS OVERHEAD
(0' AND 12' FROM END OF MAST ARM)
1-TYPE 10B POLE MOUNTED AT 0°
1-TYPE 10B POLE MOUNTED AT 270°
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 1+6)
LUMINAIRE - 200 WATT H.P.S.
2-PEDESTRIAN P.B. AND SIGNS (R10-4C)
(A) TYPE D SIGN
EXTEND INTO HH-9:
3" RSC
2-12/C#12
2-3/C#12
1-3/C#12 (LUM.)
1-3/C#20

MATCHLINE "C" (SEE SHEET 55)

ELM CREEK PARKWAY (30 M.P.H.)

- (1)** PA100 POLE FOUNDATION TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
3-ONE WAY SIGNALS OVERHEAD (0', 25' AND 40' FROM END OF MAST ARM)
1-TYPE 10B POLE MOUNTED AT 0°
1-TYPE 20B POLE MOUNTED AT 270°
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 3+8)
LUMINAIRE - 200 WATT H.P.S.
2-PEDESTRIAN P.B. AND SIGNS (R10-4C)
(B) TYPE D SIGN
EXTEND INTO HH-3:
3" RSC
3-12/C#12
2-3/C#12
1-3/C#12 (LUM.)
1-3/C#20

LOOP DETECTORS			
DESIGNATION	NO. & SIZE/FT.	LOCATION	STATUS
D1-1,D1-2	2-6'X6'	10' AND 40'	F & I
D2-1,D2-2	1-6'X6'	475'	INP.
D3-1	2-6'X6'	10' AND 40'	F & I
D4-1,D4-2	1-6'X6'	120'	F & I
D4-3,D4-4	2-6'X6'	0' AND 14'	F & I
D4-5	1-6'X15'	0'	F & I
D5-1,D5-2	2-6'X6'	10' AND 40'	F & I
D6-1,D6-2	1-6'X6'	475'	INP.
D7-1,D7-2	2-6'X6'	10' AND 40'	F & I
D8-1,D8-2	1-6'X6'	120'	F & I
D8-3,D8-4	2-6'X6'	0' AND 14'	F & I
D8-5	1-6'X15'	0'	F & I

-LOCATION: DISTANCE FROM CROSSWALK/STOP LINE IN FEET
-ALL LOOP DETECTORS SHALL BE IN NMC CONDUIT, EXCEPT LOOPS IN EXISTING CONCRETE PAVEMENT WHICH SHALL BE SAWCUT.

LED SIGNAL INDICATIONS			
SIGNAL FACE	R	Y	G
1-1,1-2	←	←	←
2-1,2-2,2-3	●	●	●
3-1,3-2	←	←	←
4-1,4-2,4-3,4-4	●	●	●
5-1,5-2	←	←	←
6-1,6-2,6-3,6-4	●	●	●
7-1,7-2	←	←	←
8-1,8-2,8-3,8-4	●	●	●

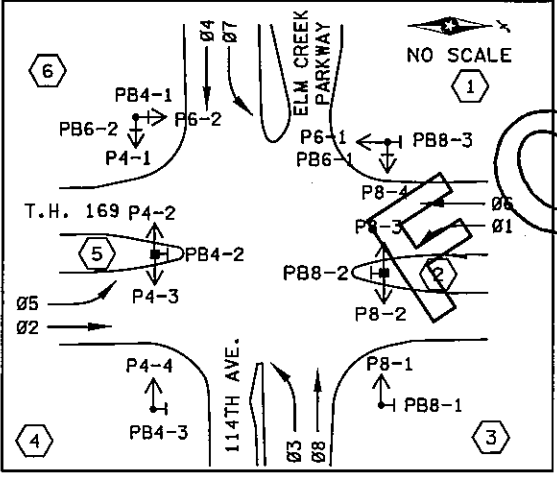
-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12"
-EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD

MATCHLINE "E" (SEE SHEET 55)

T.H. 169 (45 M.P.H.)

MATCHLINE "F" (SEE SHEET 55)

CONTROLLER PHASING, PEDESTRIAN INDICATIONS & PUSHBUTTON LAYOUT



- (4)** INP.-2" NMC REMOVE-2-2/C#14 F&I-2-2/C#14
- (4)** PA100 POLE FOUNDATION TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
3-ONE WAY SIGNALS OVERHEAD (0', 25' AND 35' FROM END OF MAST ARM)
1-TYPE 10A POLE MOUNTED AT 0°
1-TYPE 10B POLE MOUNTED AT 270°
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4+7)
LUMINAIRE - 200 WATT H.P.S.
2-PEDESTRIAN P.B. AND SIGNS (R10-4C)
(A) TYPE D SIGN
EXTEND INTO HH-7:
3" RSC
2-12/C#12
3-3/C#12
1-3/C#12 (LUM.)
1-3/C#20
R9-3a SIGN FACING POLE 3

- SIGNAL OPERATION NOTES**
- FLASH MODE SHALL BE ALL RED
 - Ø2 & Ø6 SHALL BE ON VEHICLE RECALL
 - Ø1 & Ø5 SHALL BE PROTECTED LEFT TURNS
 - Ø3 & Ø7 SHALL BE PROTECTED LEFT TURNS

MATCHLINE "D" (SEE SHEET 50)

114TH AVE (30 M.P.H.)

REVISED AT MN/DOT BY: J.D.P. 02-14-06
UPDATED: RELABELED PHASES 5 & I LOOPS.

NOTES:

- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS, LED PEDESTRIAN INDICATIONS, LED VEHICLE INDICATIONS AND PAINTING OF SIGNAL SYSTEM.
- EXACT LOCATION OF HANDHOLES, POLES AND LOOP DETECTORS SHALL BE DETERMINED BY THE ENGINEER.
- ALL ITEMS ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. ALL EXISTING EQUIPMENT THAT IS CURRENTLY IN PLACE THAT IS NOT SHOWN ON THIS SIGNAL PLAN SHALL BE REMOVED AND SALVAGED. (SEE SPECIAL PROVISIONS).
- SEE SHEET 57 FOR EXISTING SIGNAL LAYOUT.
- THE CONTRACTOR WILL INSURE THAT THE EXISTING TRAFFIC CONTROL SIGNAL SYSTEM IS KEPT IN OPERATION UNTIL INSTRUCTED OTHERWISE BY THE ENGINEER.
- EXISTING INTERCONNECT SHALL BE REMOVED FROM CONTROLLER CABINET TO THE SOUTH UNDER ELM CREEK PARKWAY AND REWIRED THRU HH-9, HH-10, HH-12 AND HH-13 TO THE CONTROLLER.
- * INDICATES ITEMS TO BE INCLUDED IN THE INTERCONNECT SYSTEM PAY ITEMS.
- REPLACE ALL EXISTING INCANDESCENT SIGNAL INDICATIONS (VEHICLE AND PEDESTRIAN) WITH LED SIGNAL INDICATIONS.
- A 3/4 INCH HALF COUPLING, 3/4 INCH PIPE NIPPLE AND CONDUIT OUTLET BODY FOR EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE MOUNTED 6' FROM THE END OF EACH MAST ARM.

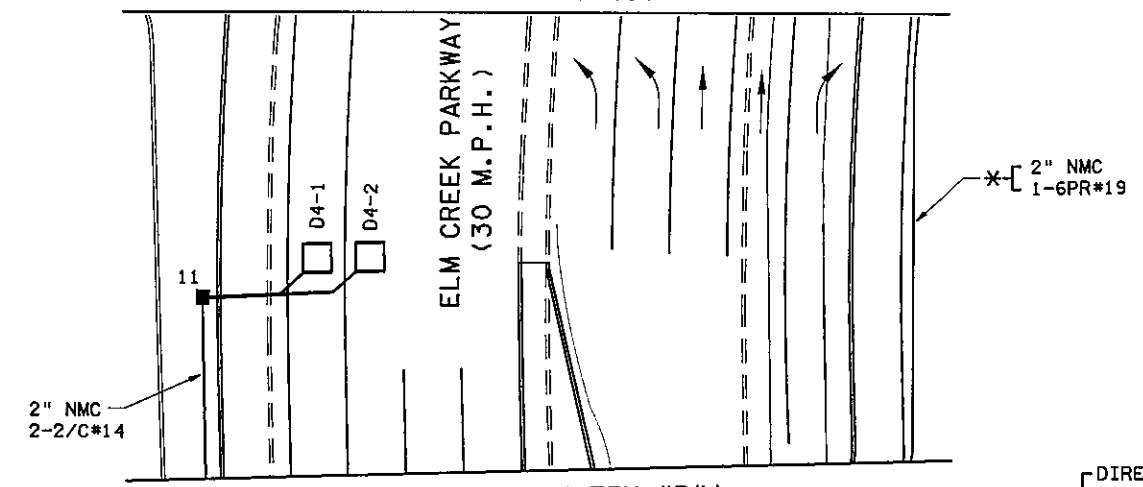
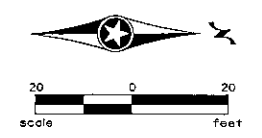
INTERSECTION LAYOUT TH 169/ELM CREEK PKWY & 114TH AVE

STATE PROJ. NO. 8825-393 SHEET NO. 83 OF 122 SHEETS

PLOTTED/REVISED: 4/20/00/INF 02

DISTRICT #: METRO
PLOT NAME: T21520INF02
PLOTED: 20-APR-2014 10:47:55 FILENAME: IF_P\WORK\4252\21520\T21520INF0.dgn

MATCHLINE "B" (SYSTEM "B")
(SEE SHEET 46)



MATCHLINE "C" (SYSTEM "D")
(SEE SHEET 54)

INP. DIRECT BURIED INTERCONNECT 1-6PR#19

INP. - 2" NMC REMOVE-2-2/C#14 F&I-2-2/C#14

INP. DIRECT BURIED INTERCONNECT 1-6PR#19

INP. - 2" NMC REMOVE-2-2/C#14 F&I-2-2/C#14

INP. - 4A

D6-1

D6-2

T.H. 169
(45 M.P.H.)

T.H. 169
(45 M.P.H.)

MATCHLINE "E" (SYSTEM "D")
(SEE SHEET 54)

MATCHLINE "F" (SYSTEM "D")
(SEE SHEET 54)

D2-2
D2-1

INP. - 18

INP. - 2" NMC REMOVE-2-2/C#14 F&I-2-2/C#14

INP. - 17

INP. - 2" NMC REMOVE-2-2/C#14 F&I-2-2/C#14

MATCHLINE "D" (SEE SHEET XX)

2" NMC 2-2/C#14 * - 1-6PR#19

* [2" NMC 1-6PR#19

114TH AVE
(30 M.P.H.)

D8-2
D8-1

FOR INFORMATION ONLY

1	11-02-01	MAB	JJK	MN/DOT REVISIONS
	12-19-01	MAB	JJK	CONSTRUCTION SET

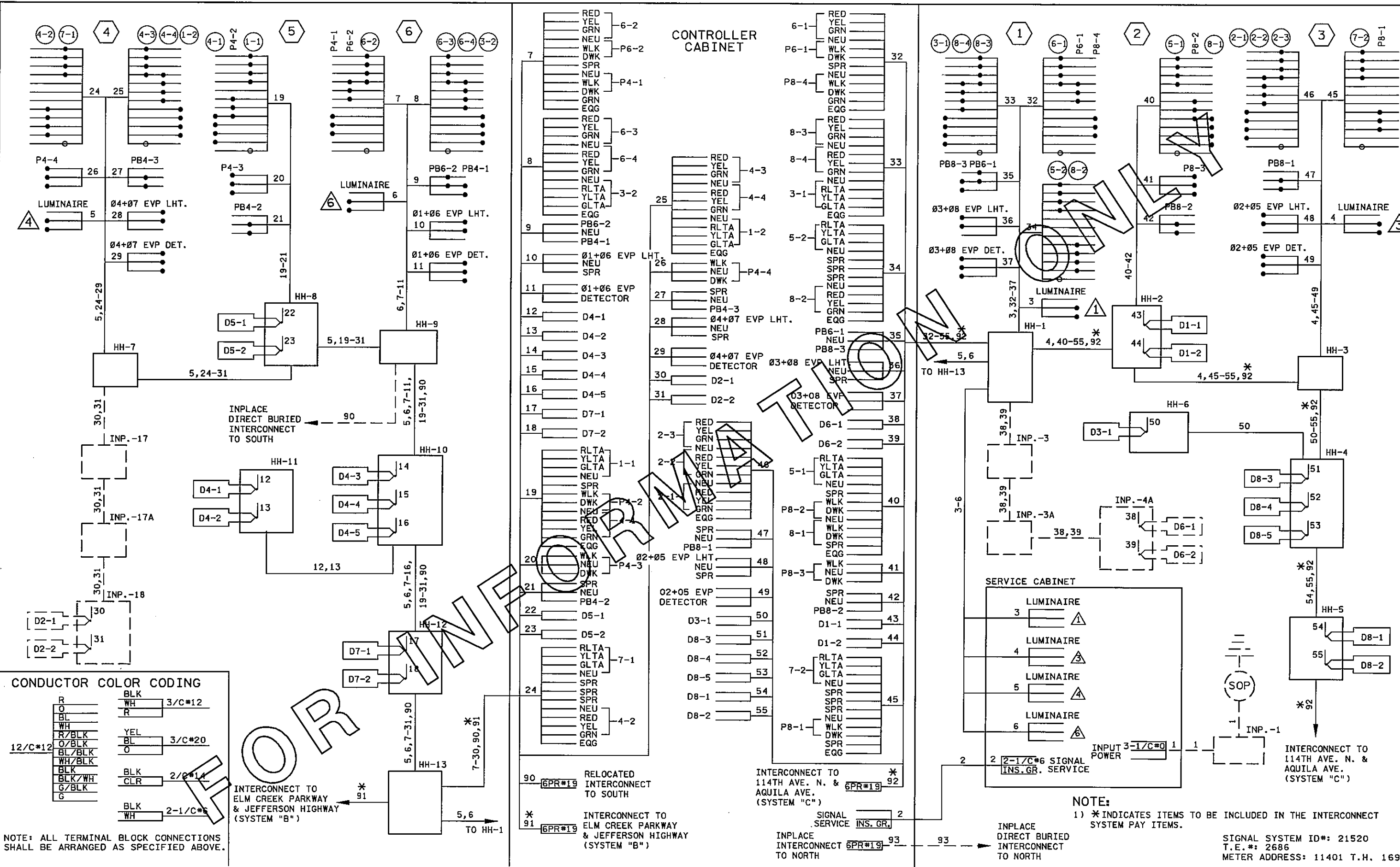
REVISED MATCHLINE LAYOUT
TH 169/ELM CREEK PKWY & 114TH AVE
(SYSTEM "D")

PLOTTED/REVISED: 4/20/520/INF0

PLOTTED: 20-APR-2014 10:07:55 FILENAME: IF:\PENNA\2521\T21520\INFO.dgn

DISTRICT #: METRO

IPLOT NAME: T21520INFO



CONDUCTOR COLOR CODING

R	BLK	3/C*12
O	WH	
BL	R	
WH	YEL	3/C*20
R/BLK	BL	
O/BLK	O	
BL/BLK	BLK	2/C*14
WH/BLK	CLR	
BLK	BLK	2-1/C*6
BLK/WH	WH	
G/BLK		
G		

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

- 1 11-02-01 MAB JJK MN/DOT REVISIONS
- 2 12-19-01 MAB JJK CONSTRUCTION SET
- 3 01-08-02 RWS JJK ADD EVP

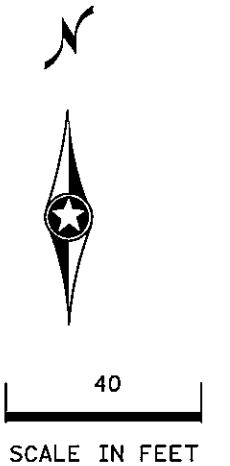
NAME: 4252.WDD DATE: Jan. 07, 2002

NOTE:
 1) * INDICATES ITEMS TO BE INCLUDED IN THE INTERCONNECT SYSTEM PAY ITEMS.

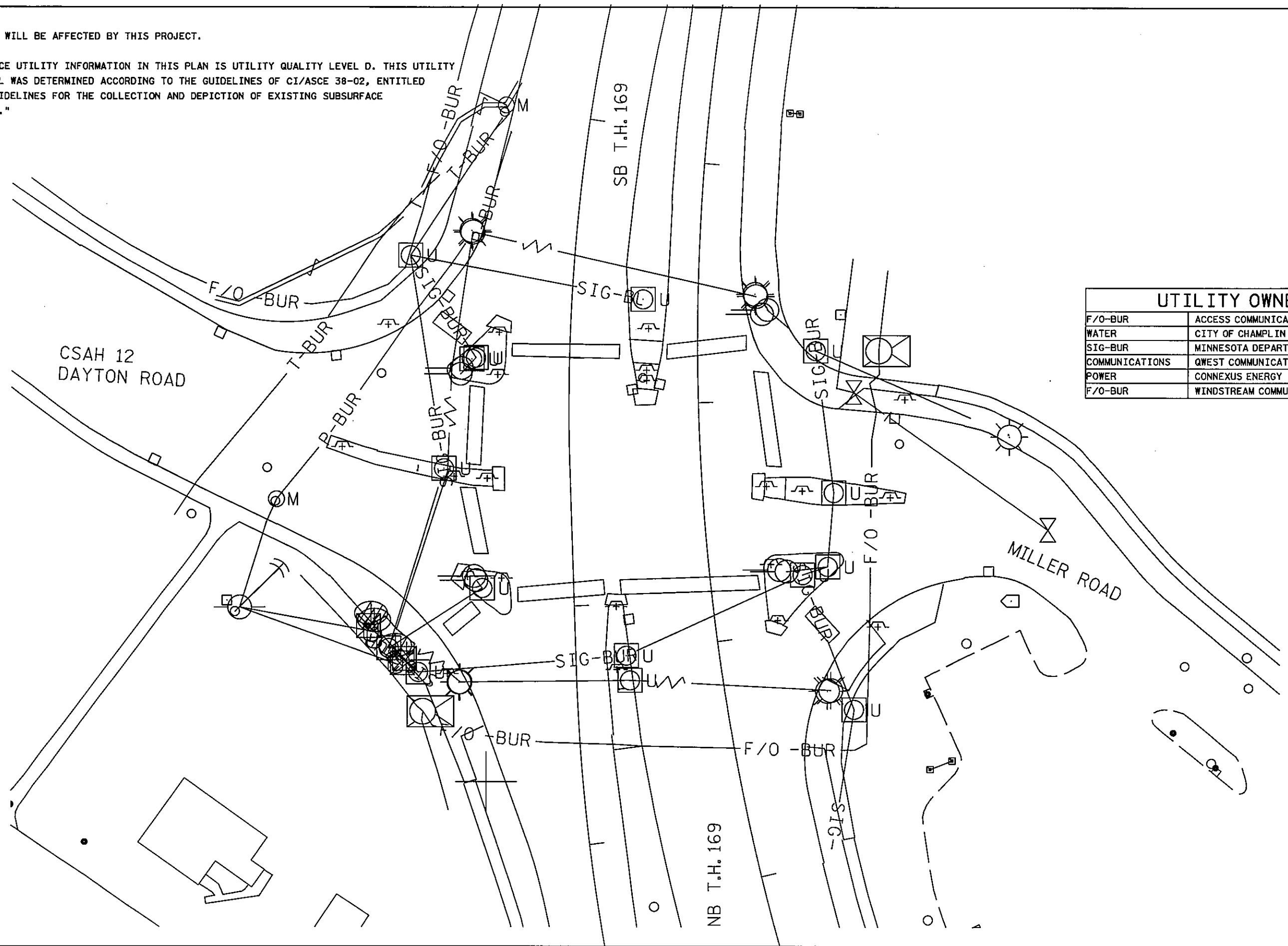
SIGNAL SYSTEM ID#: 21520
 T.E.#: 2686
 METER ADDRESS: 11401 T.H. 169

NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



UTILITY OWNERSHIP	
F/O-BUR	ACCESS COMMUNICATIONS, INC.
WATER	CITY OF CHAMPLIN
SIG-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION
POWER	CONNEXUS ENERGY
F/O-BUR	WINDSTREAM COMMUNICATIONS



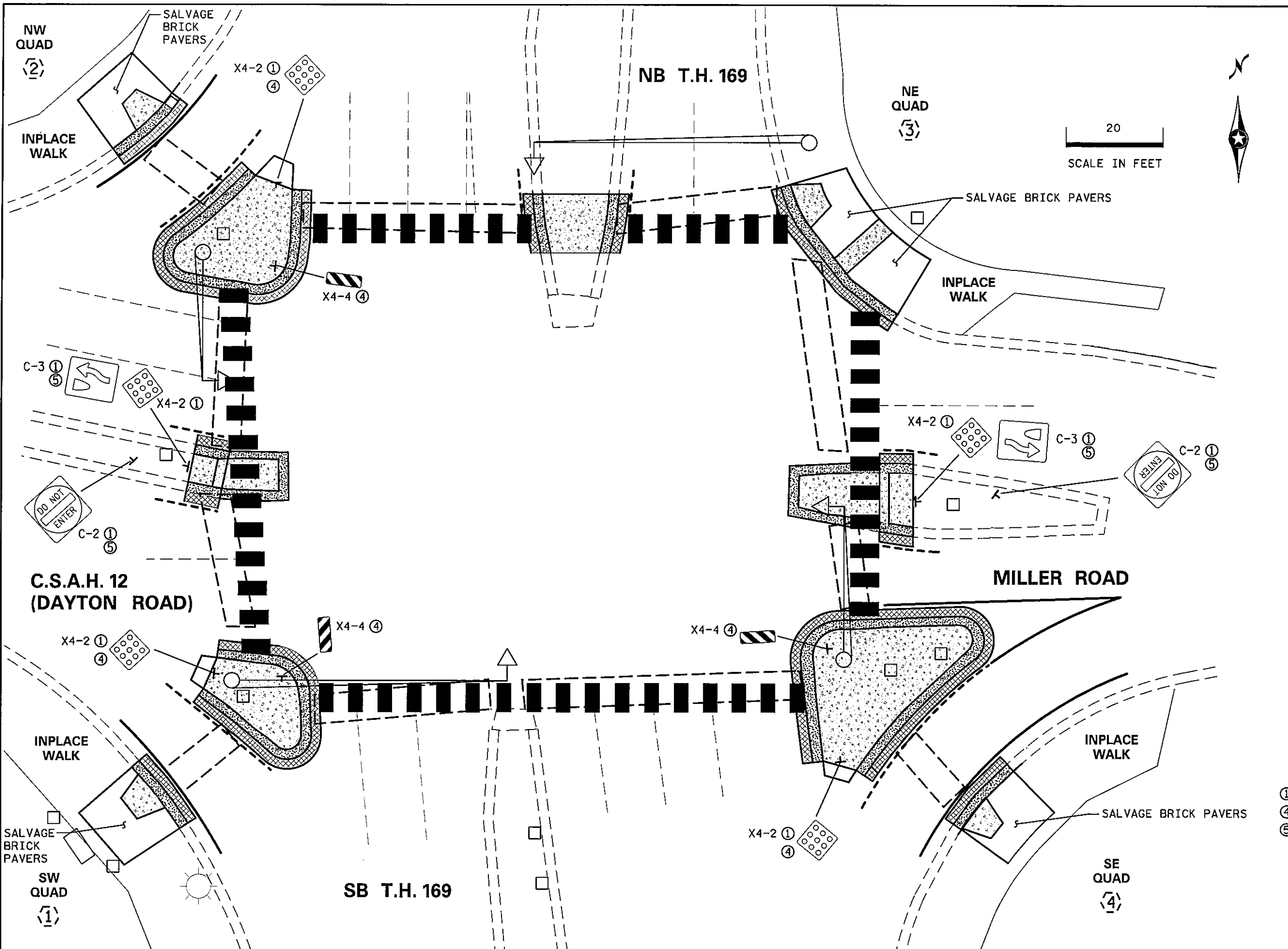
PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
 IPLOT NAME: UTILITIES
 PATH & FILENAME: IP_FWP-d\1382522\T21523ADAUTIL.dgn

BY	DATE	REVISIONS	SYSTEM ID: 21523 T.E. 5377	INPLACE TOPOGRAPHY AND UTILITY PLAN REVISE SIGNAL SYSTEM H T.H. 169 AT CSAH 12/MILLER ROAD IN CHAMPLIN, HENNEPIN COUNTY	S.A.P. NO.	DRAWN BY:BTJ	CKD BY:MAS	DATE:4-21-11
			METER ADDRESS: T.H. 169 AND DAYTON ROAD		CERTIFIED BY: <i>Michael P. Selinsky</i>	LIC. NO. 19683	DATE: 4-21-11	
			MASTER ID: T.E.		STATE PROJ.NO. 8825-393		SHEET NO. 86 OF 122 SHEETS	

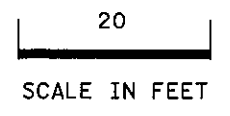
PLOTTED/REVISED/28/2011

DISTRICT #METRO
IPLOT NAME:ADAREMOVAL
PATH & FILENAME:P_PWP:d1382522\NEW121523ADAREMOVAL.dgn



LEGEND

- INPLACE SIGNAL POLE
- REMOVE CONC. CURB & GUTTER
- REMOVE CONCRETE WALK/PAVEMENT
- MILL BITUMINOUS SURFACE (2.0")
- REMOVE BITUMINOUS PAVEMENT
- INPLACE SIGNAL BASE NO.
- INPLACE HANDHOLE
- INPLACE CATCH BASIN
- PAVEMENT MARKING REMOVAL
- INPLACE EDGE OF PAVEMENT
- F&I CROSSWALK MARKING
- F&I 4" SOLID LINE WHITE
- F&I 4" SOLID LINE YELLOW



- ① F & I
- ④ REMOVE
- ⑤ REMOVE SIGN TYPE C

BY	DATE	REVISIONS	SYSTEM ID: 21523 T.E. 5377	REMOVAL, SIGNING AND PAVEMENT MARKING PLAN	S.A.P. NO.	DRAWN BY:MAS	CKD BY:BTJ	DATE:4-21-11
			METER ADDRESS: T.H. 169 AND DAYTON ROAD	REVISE SIGNAL SYSTEM H	CERTIFIED BY: <i>Michael P. Gubinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID: T.E.	T.H. 169 AT CSAH 12/MILLER ROAD	LICENSED PROFESSIONAL ENGINEER			
				IN CHAMPLIN, HENNEPIN COUNTY	STATE PROJ.NO. 8825-393	SHEET NO. 87	OF 122 SHEETS	

PLOTTED/REVISED/28/2011

DISTRICT #METRO
 IPLOT NAME:ADARAMP
 PATH & FILENAME:P_PWP:d1382522\NEW121523ADA_SGL.DGN

NB T.H. 169

SB T.H. 169

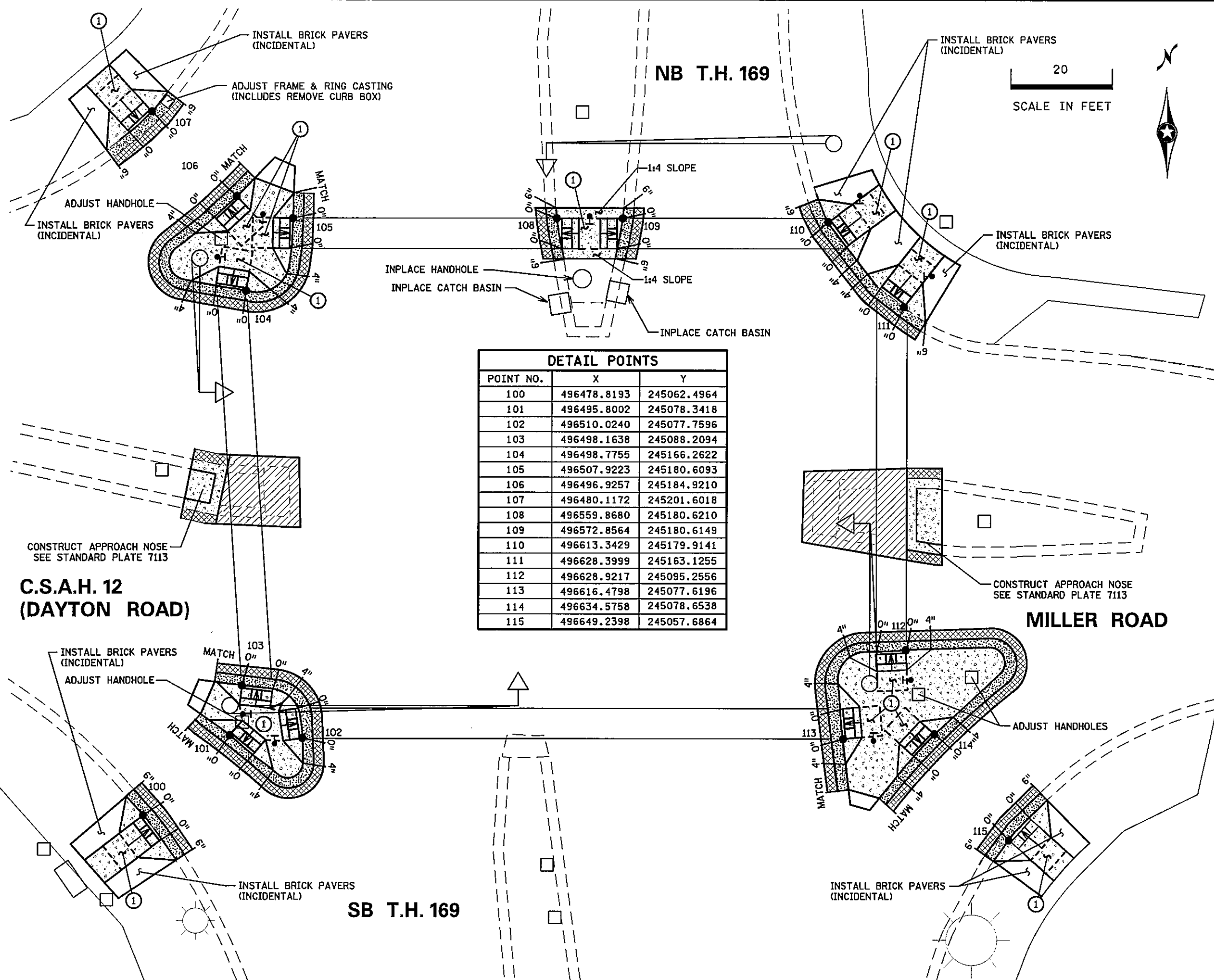
SCALE IN FEET
 20

LEGEND

- INPLACE SIGNAL POLE
- CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
- PEDESTRIAN PUSH BUTTON STATION
- INPLACE SIGNAL BASE NO.
- INPLACE HANDHOLE
- EDGE OF INPLACE SURFACING
- X" CURB HEIGHT AT INDICATED LOCATION
- INTERSECTION POINT OF CROSSWALK EDGE AND PEDESTRIAN RAMP EDGE AT FACE OF CURB
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- 6" CONCRETE WALK
- 2" BITUMINOUS OVERLAY, 2" WIDE
- SEE TYPICAL SECTION 1
- INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT

DETAIL POINTS

POINT NO.	X	Y
100	496478.8193	245062.4964
101	496495.8002	245078.3418
102	496510.0240	245077.7596
103	496498.1638	245088.2094
104	496498.7755	245166.2622
105	496507.9223	245180.6093
106	496496.9257	245184.9210
107	496480.1172	245201.6018
108	496559.8680	245180.6210
109	496572.8564	245180.6149
110	496613.3429	245179.9141
111	496628.3999	245163.1255
112	496628.9217	245095.2556
113	496616.4798	245077.6196
114	496634.5758	245078.6538
115	496649.2398	245057.6864



- GENERAL NOTES:**
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.

① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.

BY	DATE	REVISIONS	SYSTEM ID: 21523 T.E. 5377	PEDESTRIAN CURB RAMP DETAILS REVISE SIGNAL SYSTEM H	S.A.P. NO.	DRAWN BY: MAS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: T.H. 169 AND DAYTON ROAD	T.H. 169 AT CSAH 12/MILLER ROAD	CERTIFIED BY: <i>Michael P. Delaney</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID: T.E.	IN CHAMPLIN, HENNEPIN COUNTY	STATE PROJ. NO. 8825-393	SHEET NO. 88 OF 122 SHEETS		

PLOTTED/REVISED 08/20/2011

DISTRICT #METRO
PLOT NAME: INTERSECTION
PATH & FILENAME: P_PWP: d1382522\T21523_SGL.dgn

LOOP DETECTORS			
NUMBER	SIZE	FUNCTION	LOCATION
D1-1	6'x6'	1	40'
D1-2	6'x6'	1	10'
D2-1	6'x6'	1	250'
D2-2	6'x6'	1	250'
D3-1	6'x15'	3	125'
D3-3	2(6'x6')	7	AS SHOWN
D3-4	6'x15'	1	5' AND 20'
D4-1	6'x6'	1	120'
D4-2	6'x6'	1	120'
D4-3	2(6'x6')	1	5' AND 20'
D4-4	2(6'x6')	1	5' AND 20'
D5-1	6'x6'	1	40'
D5-2	6'x6'	1	40'
D5-3	2(6'x6')	1	10'
D6-1	6'x6'	1	250'
D6-2	6'x6'	1	250'

LOOP DETECTOR FUNCTIONS
 1 = CALL AND EXTEND
 7 = DELAY CALL IMMEDIATE EXTEND
 3 = EXTEND ONLY
 LOCATION = DISTANCE FROM DETECTOR TO CROSSWALK

F&I: PED PB STATION
 1-APS PB AND SIGN
 (RT ARROW) (PB6-2)
 EXTEND INTO HH 4:
 2" CONDUIT
 1-2/C *14

F&I: PED PB STATION
 1-APS PB AND SIGN
 (LT ARROW) (PB4-1)
 EXTEND INTO HH 4:
 2" CONDUIT
 1-2/C *14

REMOVE EXISTING
 WOOD POLE

F&I: PED PB STATION
 1-APS PB AND SIGN
 (LT ARROW) (PB2-1)
 EXTEND INTO HH 15:
 2" CONDUIT
 1-2/C *14

F&I: PED PB STATION
 1-APS PB AND SIGN
 (RT ARROW) (PB4-2)
 EXTEND INTO HH 16:
 2" CONDUIT
 1-2/C *14

F&I: PED PB STATION
 1-APS PB AND SIGN
 (DOUBLE ARROW) (PB3-3)
 EXTEND INTO HH 10:
 2" CONDUIT
 1-2/C *14

F&I: PED PB STATION
 1-APS PB AND SIGN
 (LT ARROW) (PB3-1)
 EXTEND INTO HH 11:
 2" CONDUIT
 1-2/C *14

F&I: PED PB STATION
 1-APS PB AND SIGN
 (RT ARROW) (PB2-2)
 EXTEND INTO HH 11:
 2" CONDUIT
 1-2/C *14

F&I: PED PB STATION
 1-APS PB AND SIGN
 (RT ARROW) (PB3-2)
 EXTEND INTO HH 7:
 2" CONDUIT
 1-2/C *14

F&I: PED PB STATION
 1-APS PB AND SIGN
 (LT ARROW) (PB6-1)
 EXTEND INTO HH 7:
 2" CONDUIT
 1-2/C *14

CABINET TO HH 1
 4" RSC
 5-12/C#12
 4-3/C#12
 8-2/C#14
 2-3/C#20

METER TO HH 20
 2" RSC
 3-17/C#2

LOAD CENTER TO HH 20
 1 1/4" RSC
 4-3/C#12

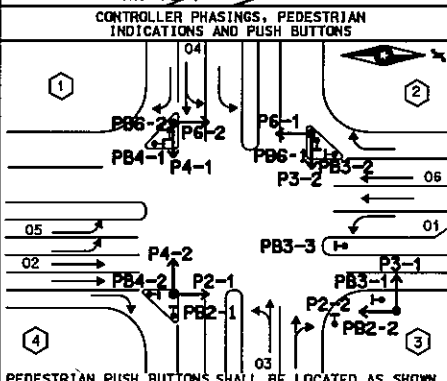
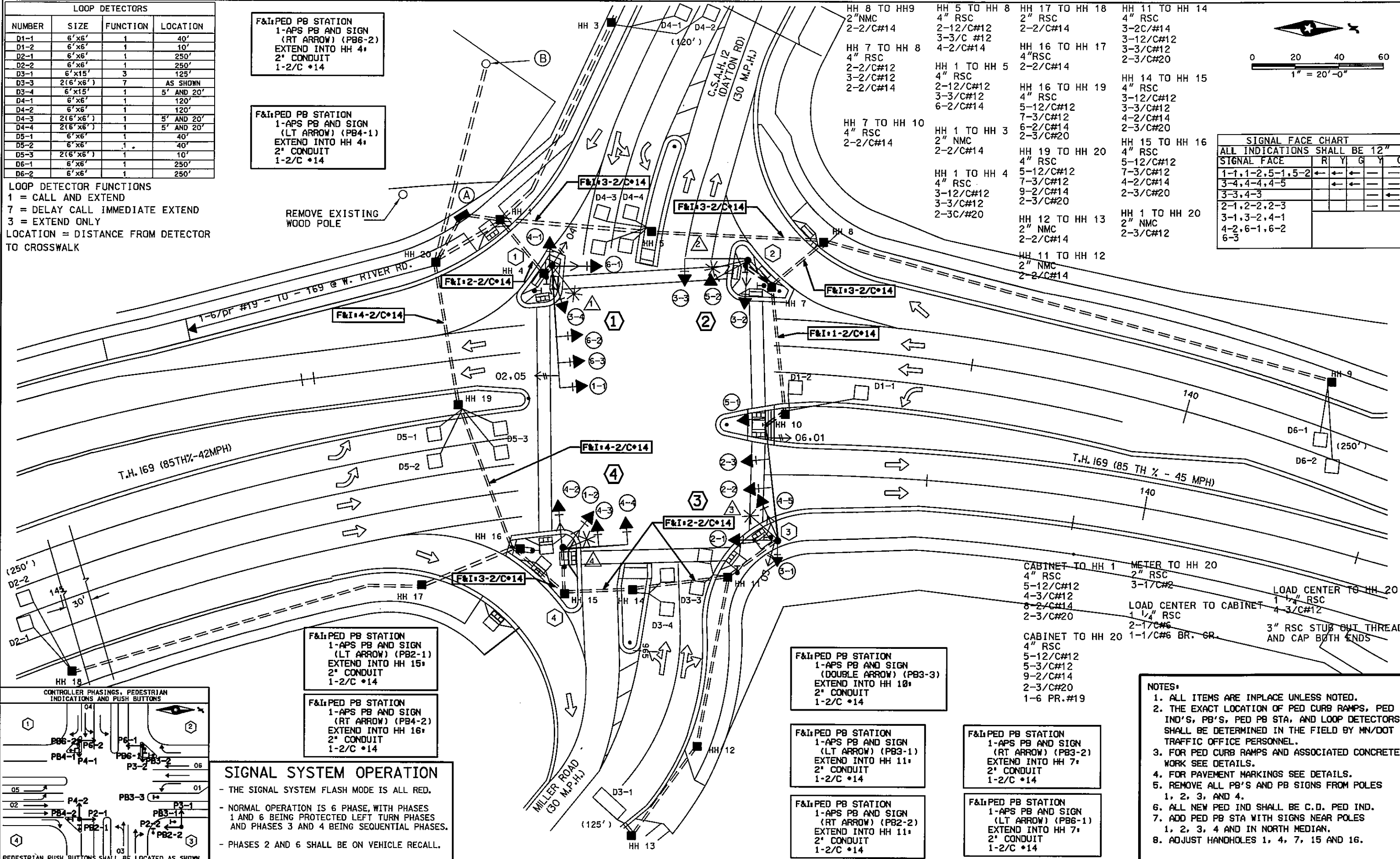
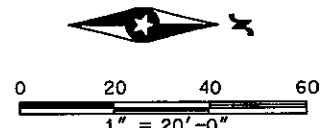
LOAD CENTER TO CABINET
 1 1/4" RSC
 2-17/C#6

CABINET TO HH 20
 4" RSC
 5-12/C#12
 5-3/C#12
 9-2/C#14
 2-3/C#20
 1-6 PR.#19

3" RSC STUB OUT THREAD
 AND CAP BOTH ENDS

SIGNAL FACE CHART
 ALL INDICATIONS SHALL BE 12"

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



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 6 BEING PROTECTED LEFT TURN PHASES AND PHASES 3 AND 4 BEING SEQUENTIAL PHASES.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 3, AND 4.
 6. ALL NEW PED IND SHALL BE C.D. PED IND.
 7. ADD PED PB STA WITH SIGNS NEAR POLES 1, 2, 3, 4 AND IN NORTH MEDIAN.
 8. ADJUST HANDHOLES 1, 4, 7, 15 AND 16.

1 TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
 PA100 POLE FOUNDATION
 3 - ONE WAY SIGNALS OVERHEAD (0', 11' AND 23' FROM END OF MASTARM)
 2-TYPE 10B - POLE MOUNTED AT 0° AND 270°

REMOVE: 2-PED IND
F&I: 2-C.D.PED IND

TYPE 10A - POLE MOUNTED AT 180°
 LUMINAIRE - 200 WATT HPS WITH P.E.C. & ST. LT. CHECK SWITCH
 1 - PEDESTRIAN PUSHBUTTON AND R10-4C SIGN

REMOVE: 1-PEDESTRIAN P.B. AND SIGN

EXTEND INTO HH 4
 3" RSC
 3-12/C#12
 3-3/C#12
 2-3/C#20

2 TYPE PA90-A-25-D40-9 (DAVIT AT 350°)
 PA90 POLE FOUNDATION
 ONE WAY SIGNAL OVERHEAD
 2-TYPE 10B - POLE MOUNTED AT 0° 270°

REMOVE: 2-PED IND
F&I: 2-C.D.PED IND

LUMINAIRE - 200 WATT HPS
 WITH P.E.C. AND ST. LT. CHECK SWITCH
 1- PEDESTRIAN PUSHBUTTON AND SIGN

REMOVE: 1-PEDESTRIAN P.B. AND SIGN

EXTEND INTO HH 7
 3" RSC
 2-12/C#12
 3-3/C#12

3 TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
 PA100 FOUNDATION
 3 - ONE WAY SIGNALS OVERHEAD (0', 19' AND 31' FROM END OF MASTARM)
 2-TYPE 10B - POLE MOUNTED AT 0° AND 270°

REMOVE: 2-PED IND
F&I: 2-C.D.PED IND

TYPE 10A - POLE MOUNTED AT 180°
 LUMINAIRE - 200 WATT HPS
 WITH P.E.C. AND ST. LT. CHECK SWITCH
 1 - PEDESTRIAN PUSHBUTTON AND SIGN

REMOVE: 1-PEDESTRIAN P.B. AND SIGN

EXTEND INTO HH 11
 3" RSC
 3-12/C#12
 3-3/C#12
 2-3/C#20

4 TYPE PA90-A-30-D40-9 (DAVIT AT 350°)
 PA90 POLE FOUNDATION
 2 - ONE WAY SIGNALS OVERHEAD (0', 11' FROM END OF MASTARM)
 2-TYPE 10B - POLE MOUNTED 0° AND 270°

REMOVE: 2-PED IND
F&I: 2-C.D.PED IND

LUMINAIRE - 200 WATT HPS WITH P.E.C & ST. LT. CHECK SWITCH
 1 - PEDESTRIAN PUSHBUTTON AND SIGN

REMOVE: 1-PEDESTRIAN P.B. AND SIGN

EXTEND INTO HH 15
 3" RSC
 2-12/C#12
 4-3/C#12

(A) EQUIPMENT PAD (SEE DETAIL)
 CONTROLLER AND CABINET
 SERVICE EQUIPMENT (PAD MOUNTED)

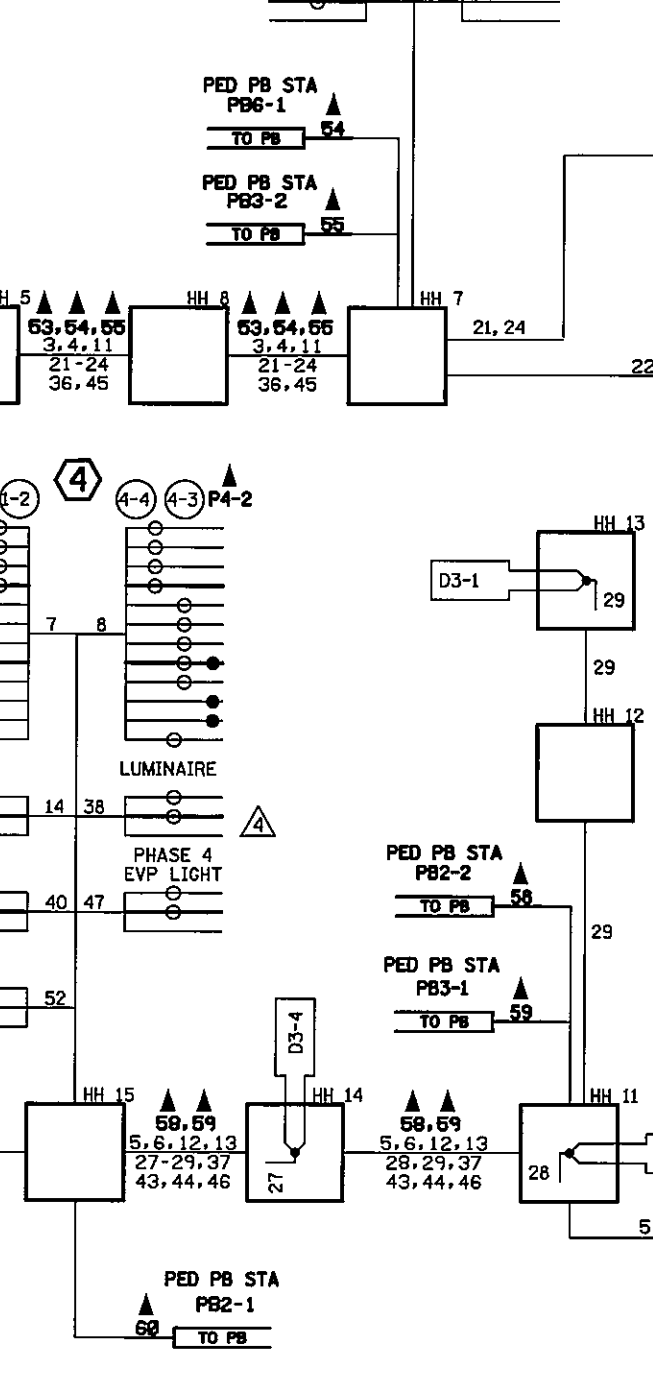
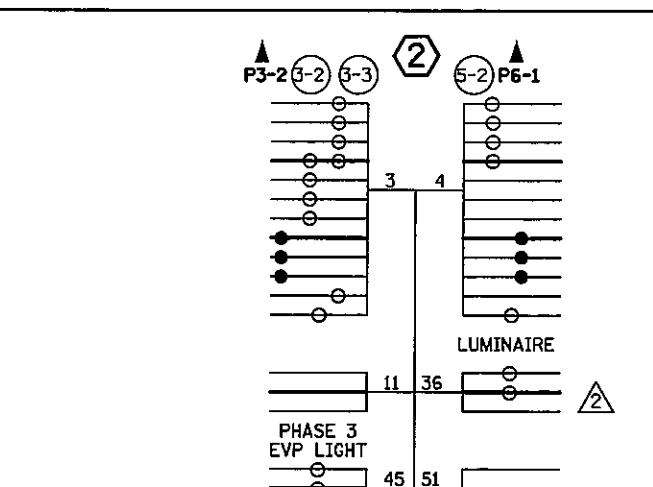
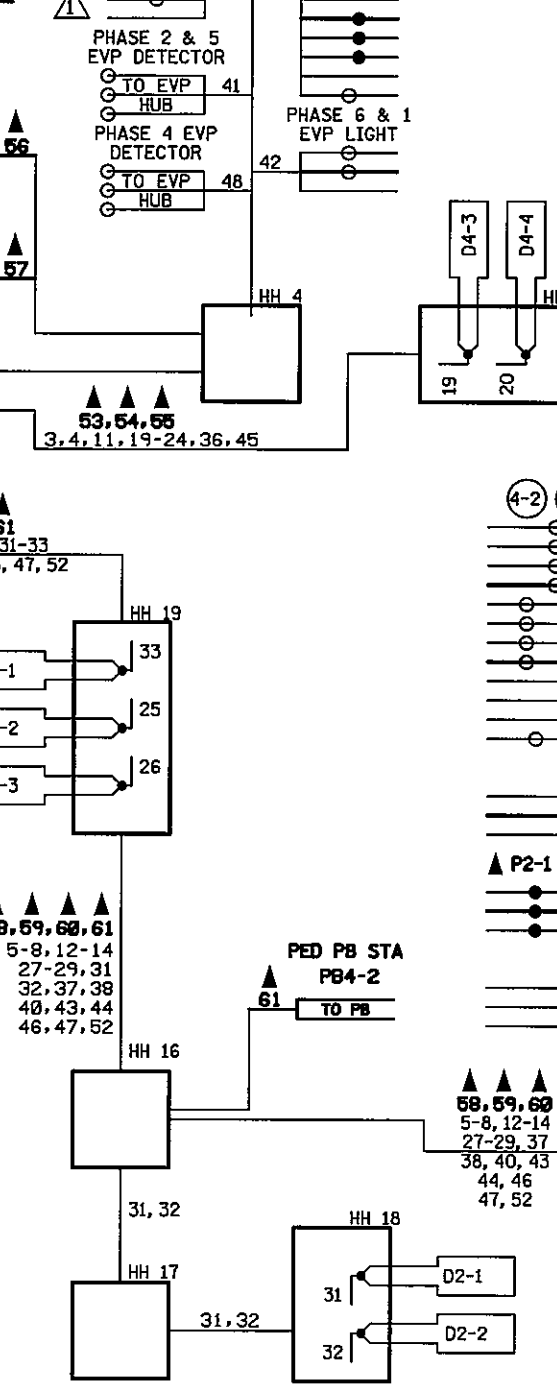
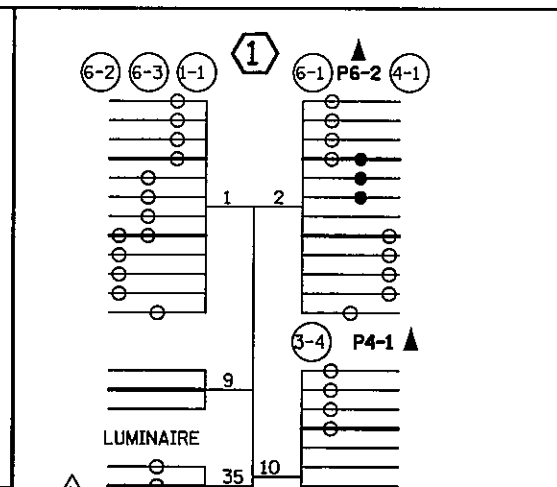
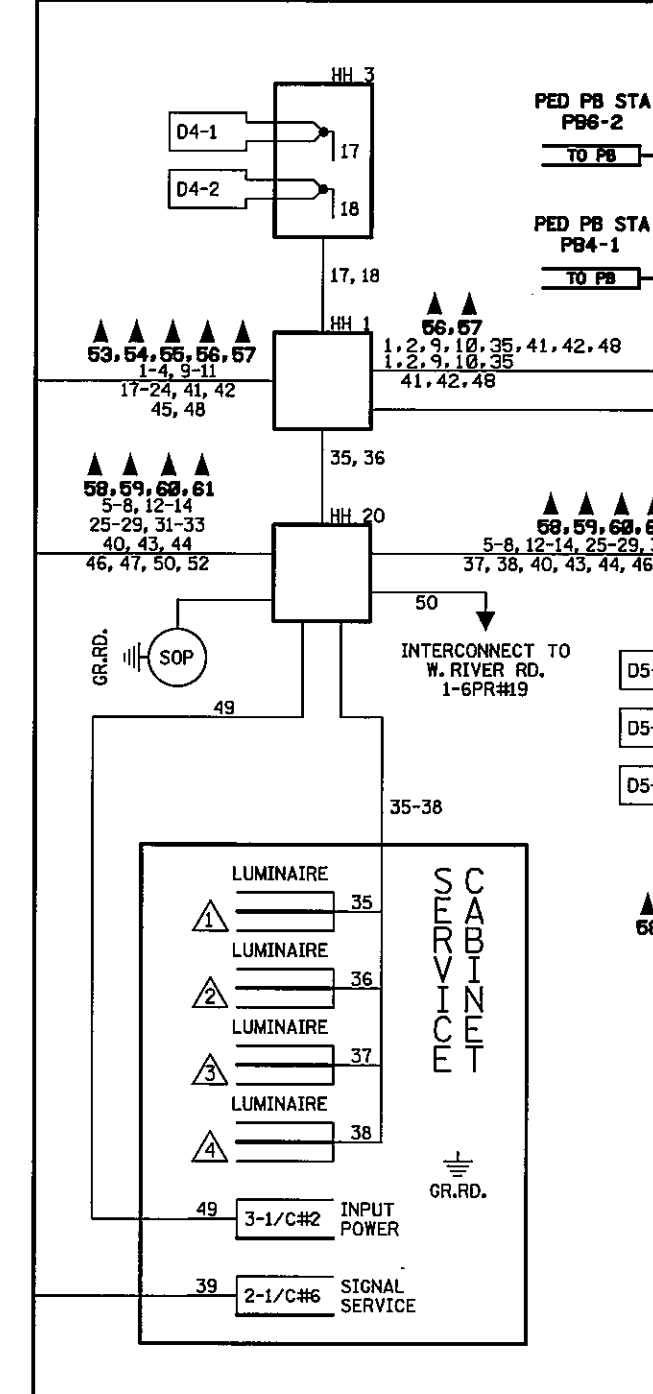
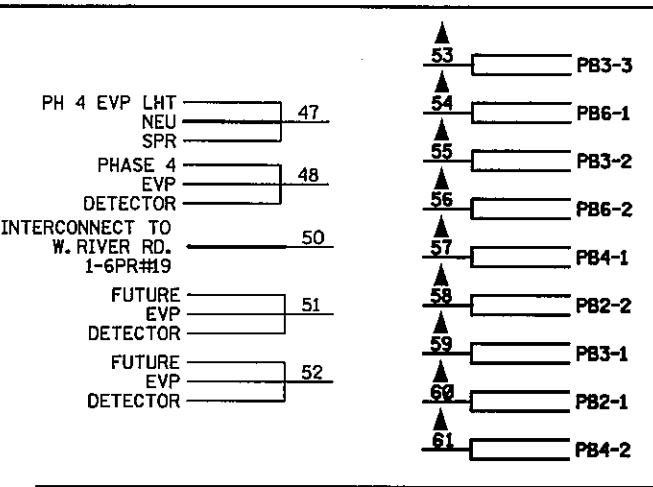
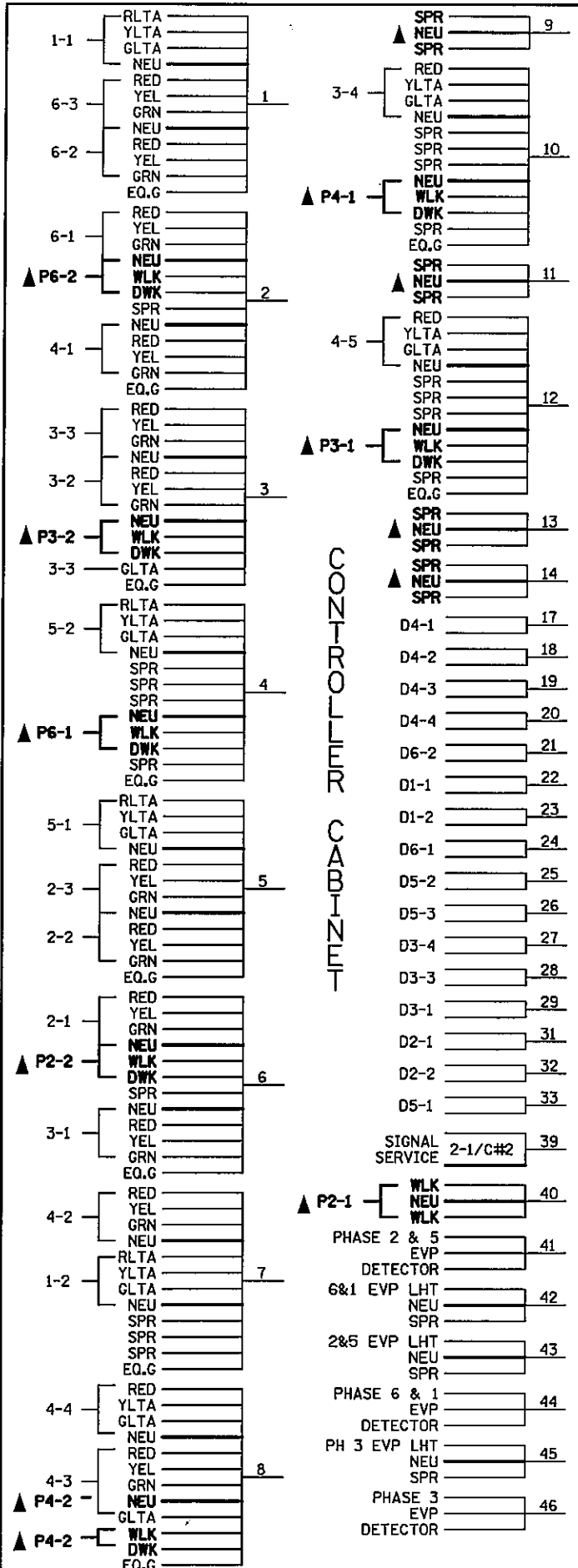
F&I: 5-2/C#14 TO HH 1
F&I: 4-2/C#14 TO HH 20

(B) S.O.P. INPLACE WOOD POLE
 ENCLOSED CIRCUIT BREAKER
 2" RSC RISER W/ WEATHERHEAD ABOVE
 CIRCUIT BREAKER W/ 3-1/C#2
 2" RSC BELOW CIRCUIT BREAKER
 INTO HH 20 WITH 3-1/C#2

BY	DATE	REVISIONS	SYSTEM ID: 21523 T.E. 5377	POLE NOTES REVISE SIGNAL SYSTEM H T.H. 169 AT C.S.A.H. 12 & MILLER ROAD IN CHAMPLIN, HENNEPIN COUNTY	S.A.P. NO.	DRAWN BY: MAS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: T.H. 169 AND DAYTON ROAD		CERTIFIED BY: <i>Michael P. Gubinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID: T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 90 OF 122 SHEETS		

PLOTTED/REVISED 04/20/2011

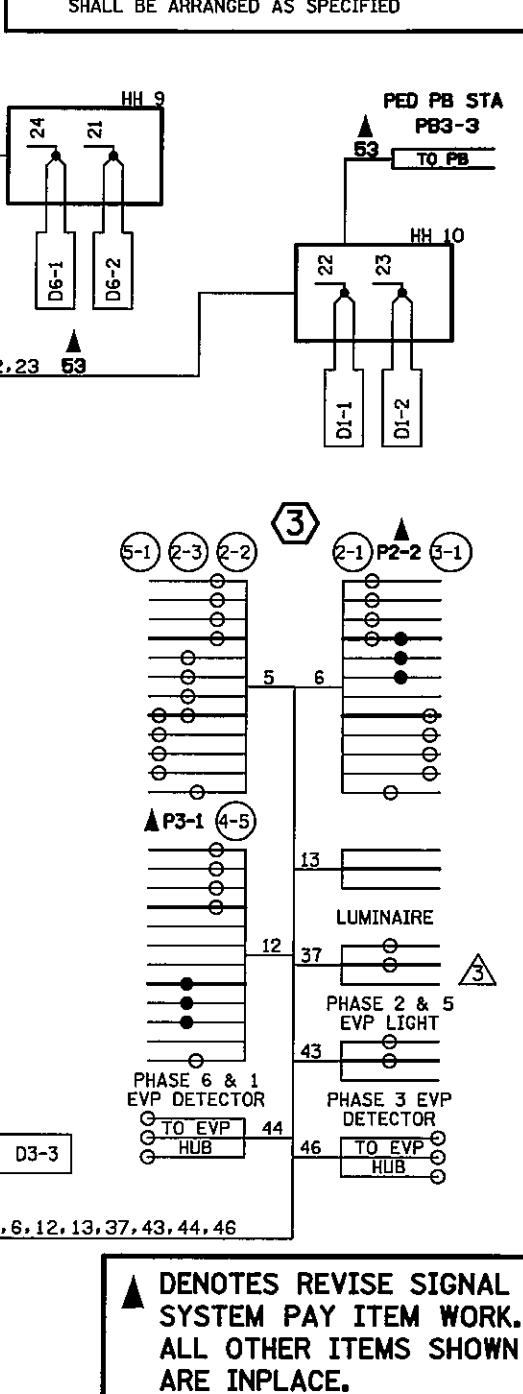
DISTRICT #: METRO
IPLOT NAME: WIRING
PATH & FILENAME: P_PWP: d1382522\T21523_SGL.dgn



CONDUCTOR COLOR CODE

R	3/C#12	R
O		WH
BL		BLK
WH	2/C#14	BLK
R/BLK		CLR
O/BLK		
BL/BLK		
WH/BLK		
BLK	3/C#20	R
BLK/WH		BLK
G/BLK		
G	2-1/C#	BLK
		WH
R	5/C#12	
O		
BL		
WH		
G		

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED



▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

BY	DATE	REVISIONS

SYSTEM ID: 21523 T.E. 5377
 METER ADDRESS: T.H. 169 AND DAYTON ROAD
 MASTER ID: T.E.

WIRING DIAGRAM
 REVISE SIGNAL SYSTEM H
 T.H. 169 AT C.S.A.H. 12 & MILLER ROAD
 IN CHAMPLIN, HENNEPIN COUNTY

S.A.P. NO.
 CERTIFIED BY: *Michael P. Libinsky*
 LICENSED PROFESSIONAL ENGINEER

DRAWN BY: MAS CKD BY: BTJ DATE: 4-21-11
 LIC. NO. 19863 DATE: 4-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 91 OF 122 SHEETS

PLOTTED/REVISED: 4/20/2011

LOOP DETECTORS

NUMBER	SIZE	FUNCTION	LOCATION
D1-1	6'x6'	1	40'
D1-2	6'x6'	1	10'
D2-1	6'x6'	1	250'
D2-2	6'x6'	1	250'
D3-1	6'x15'	3	125'
D3-3	2(6'x6')	7	AS SHOWN
D3-4	6'x15'	1	5' AND 20'
D4-1	6'x6'	1	120'
D4-2	6'x6'	1	120'
D4-3	2(6'x6')	1	5' AND 20'
D4-4	2(6'x6')	1	5' AND 20'
D5-1	6'x6'	1	40'
D5-2	6'x6'	1	40'
D5-3	2(6'x6')	1	10'
D6-1	6'x6'	1	250'
D6-2	6'x6'	1	250'

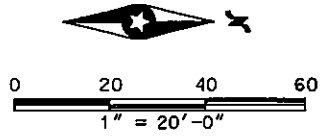
NOTES:

- 1) SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS
- 2) FOR SIGN DETAILS, SEE SIGNING SHEETS NOS. 80-85
- 3) SEE SPECIAL PROVISIONS FOR PEDESTRIAN INDICATIONS INFO.
- 4) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD
- 5) 1-3/C # 20 CABLE FOR EVP SHALL BE COILED IN THE BASE OF EACH SIGNAL POLE AT A LENGTH TO REACH THE END OF THE MAST ARM. A 1-3/C #12 CABLE FOR EVP INDICATOR LIGHT WILL END IN TERMINAL BLOCK IN POLE BASE.
- 6) REMOVE AND SALVAGE EXISTING SIGNAL SYSTEM AT THIS INTERSECTION. REMOVE AND SALVAGE TEMPORARY SIGNAL SYSTEM AT TH 169 AND RICHARDSON UPON NEW SYSTEM TURN-ON AT TH 169 & CSAH 12

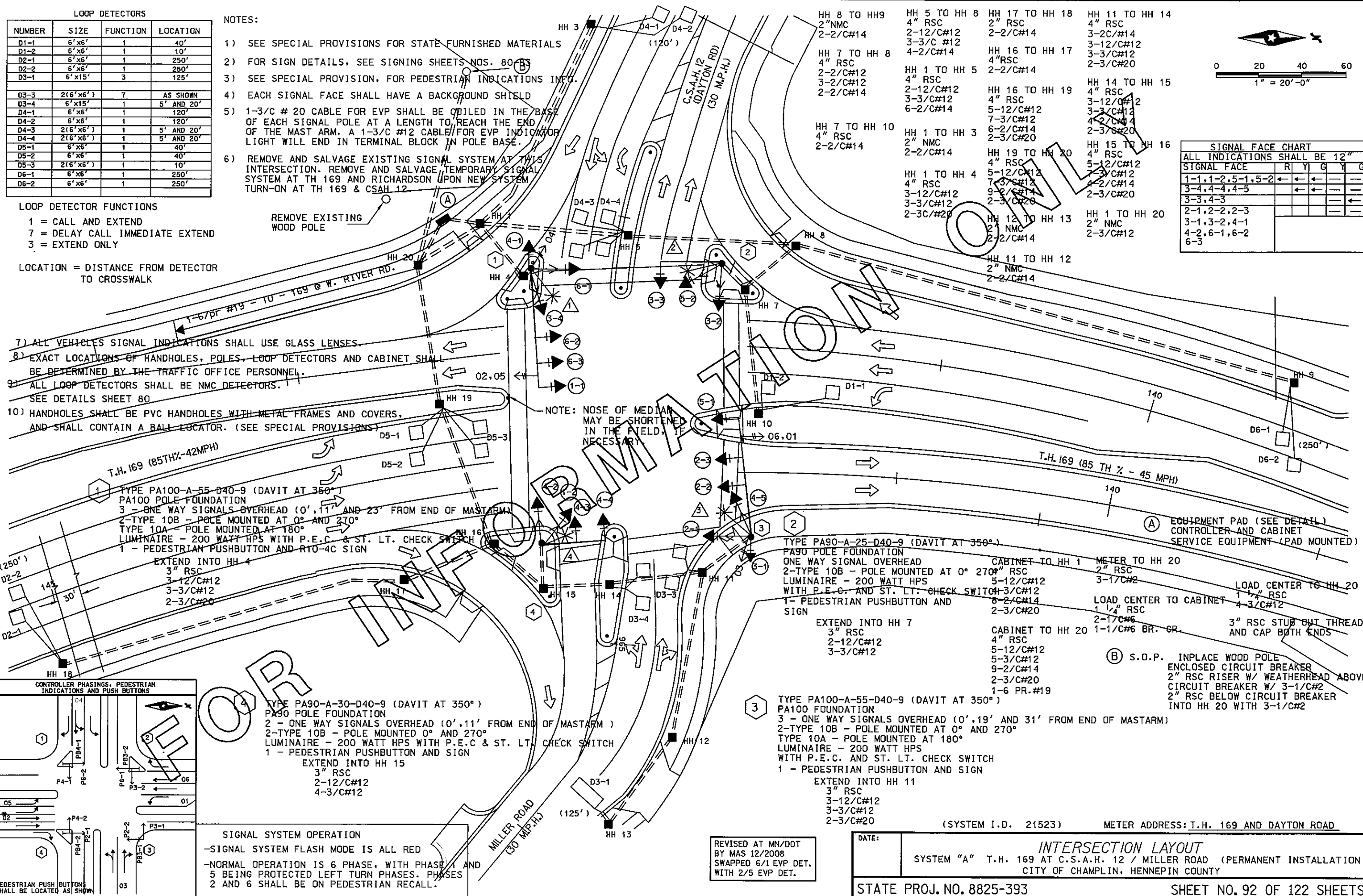
LOOP DETECTOR FUNCTIONS

- 1 = CALL AND EXTEND
- 7 = DELAY CALL IMMEDIATE EXTEND
- 3 = EXTEND ONLY

LOCATION = DISTANCE FROM DETECTOR TO CROSSWALK



SIGNAL FACE CHART					
ALL INDICATIONS SHALL BE 12"					
SIGNAL FACE	R	Y	G	Y	G
1-1, 1-2, 5-1, 5-2	←	←	←	←	←
3-4, 4-4, 4-5	←	←	←	←	←
3-3, 4-3	←	←	←	←	←
2-1, 2-2, 2-3					
3-1, 3-2, 4-1					
4-2, 6-1, 6-2					
6-3					



- 7) ALL VEHICLES SIGNAL INDICATIONS SHALL USE GLASS LENSES.
- 8) EXACT LOCATIONS OF HANDHOLES, POLES, LOOP DETECTORS AND CABINET SHALL BE DETERMINED BY THE TRAFFIC OFFICE PERSONNEL.
- 9) ALL LOOP DETECTORS SHALL BE NMC DETECTORS. SEE DETAILS SHEET 80
- 10) HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, AND SHALL CONTAIN A BALL LOCATOR. (SEE SPECIAL PROVISIONS)

NOTE: NOSE OF MEDIAN MAY BE SHORTENED IN THE FIELD, IF NECESSARY

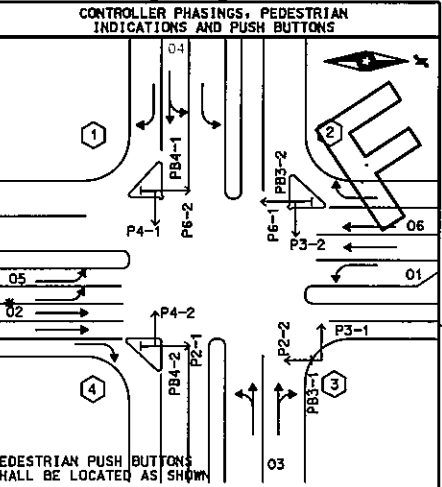
TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
 PA100 POLE FOUNDATION
 3 - ONE WAY SIGNALS OVERHEAD (0', 11' AND 23' FROM END OF MAST ARM)
 2-TYPE 10B - POLE MOUNTED AT 0° AND 270°
 TYPE 10A - POLE MOUNTED AT 180°
 LUMINAIRE - 200 WATT HPS WITH P.E.C. & ST. LT. CHECK SWITCH
 1 - PEDESTRIAN PUSHBUTTON AND RTO-4C SIGN

TYPE PA90-A-25-D40-9 (DAVIT AT 350°)
 PA90 POLE FOUNDATION
 ONE WAY SIGNAL OVERHEAD
 2-TYPE 10B - POLE MOUNTED AT 0° 270°
 LUMINAIRE - 200 WATT HPS WITH P.E.C. AND ST. LT. CHECK SWITCH
 1- PEDESTRIAN PUSHBUTTON AND SIGN

CABINET TO HH 1 METER TO HH 20
 4" RSC
 2" RSC
 3-17/C#2

LOAD CENTER TO HH 20
 1 1/4" RSC
 4-3/C#12

3" RSC STUB OUT THREAD AND CAP BOTH ENDS



TYPE PA90-A-30-D40-9 (DAVIT AT 350°)
 PA90 POLE FOUNDATION
 2 - ONE WAY SIGNALS OVERHEAD (0', 19' FROM END OF MAST ARM)
 2-TYPE 10B - POLE MOUNTED 0° AND 270°
 LUMINAIRE - 200 WATT HPS WITH P.E.C. & ST. LT. CHECK SWITCH
 1 - PEDESTRIAN PUSHBUTTON AND SIGN

EXTEND INTO HH 15
 3" RSC
 2-12/C#12
 4-3/C#12

TYPE PA100-A-55-D40-9 (DAVIT AT 350°)
 PA100 FOUNDATION
 3 - ONE WAY SIGNALS OVERHEAD (0', 19' AND 31' FROM END OF MAST ARM)
 2-TYPE 10B - POLE MOUNTED AT 0° AND 270°
 TYPE 10A - POLE MOUNTED AT 180°
 LUMINAIRE - 200 WATT HPS WITH P.E.C. AND ST. LT. CHECK SWITCH
 1 - PEDESTRIAN PUSHBUTTON AND SIGN

EXTEND INTO HH 11
 3" RSC
 3-12/C#12
 3-3/C#12
 2-3/C#20

SIGNAL SYSTEM OPERATION
 -SIGNAL SYSTEM FLASH MODE IS ALL RED
 -NORMAL OPERATION IS 6 PHASE, WITH PHASE 1 AND 5 BEING PROTECTED LEFT TURN PHASES. PHASES 2 AND 6 SHALL BE ON PEDESTRIAN RECALL.

REVISED AT MN/DOT BY MAS 12/2008 SWAPPED 6/1 EVP DET. WITH 2/5 EVP DET.

DATE: _____

STATE PROJ. NO. 8825-393

METER ADDRESS: T.H. 169 AND DAYTON ROAD

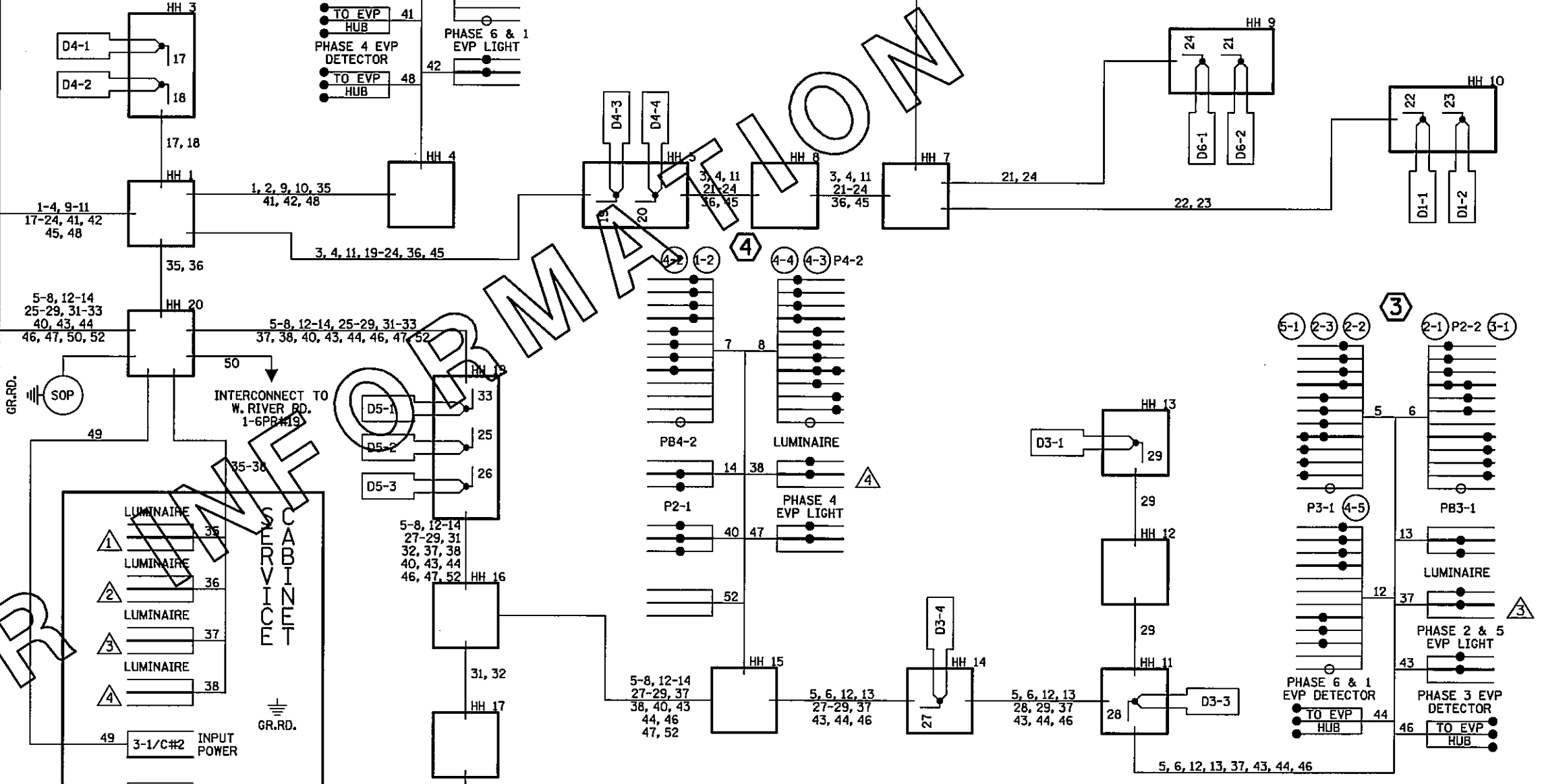
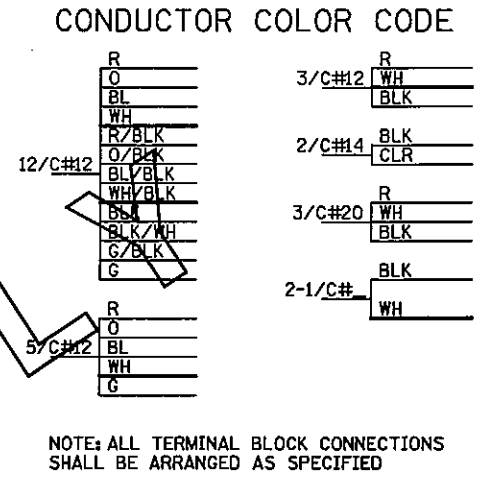
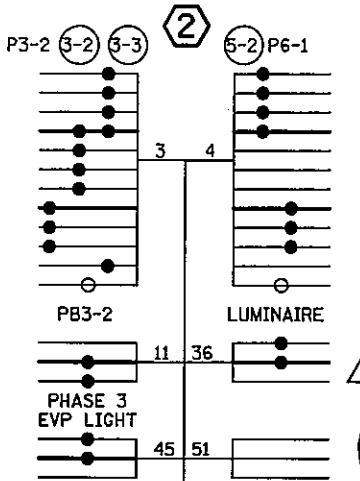
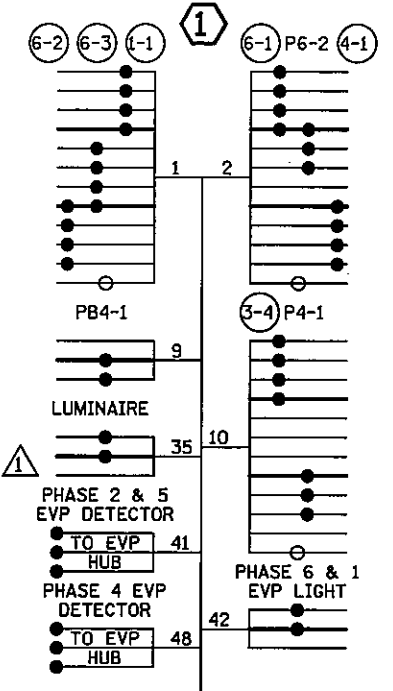
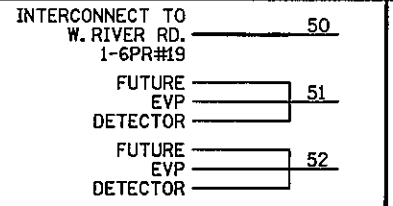
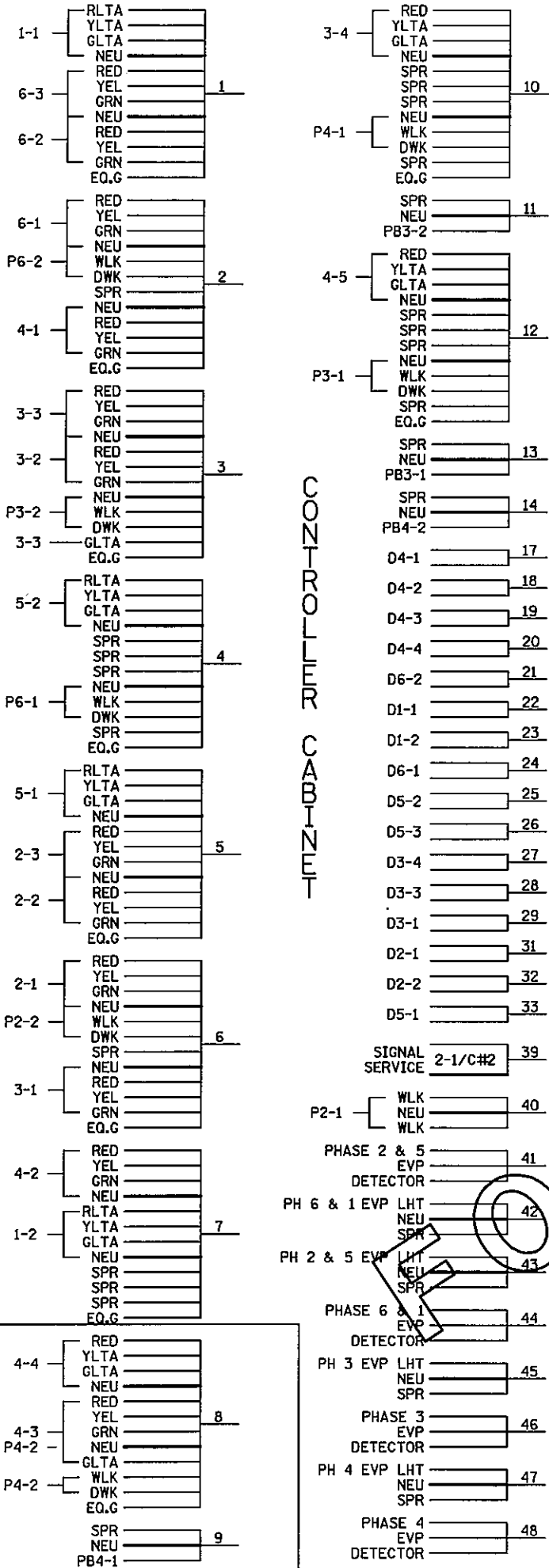
INTERSECTION LAYOUT
 SYSTEM "A" T.H. 169 AT C.S.A.H. 12 / MILLER ROAD (PERMANENT INSTALLATION)
 CITY OF CHAMPLIN, HENNEPIN COUNTY

SHEET NO. 92 OF 122 SHEETS

DISTRICT #: METRO
 IPLOT NAME: INFOINTERSECTION
 PATH & FILENAME: IP_PWP-df382522T21523INFO.dgn

PLOTTED/REVISED: 4/27/2011

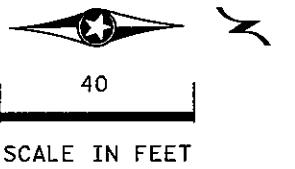
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PLOT NAME: INFOWIRING
PATH & FILENAME: IP_PWP-d\382522\21523\INFO.dgn



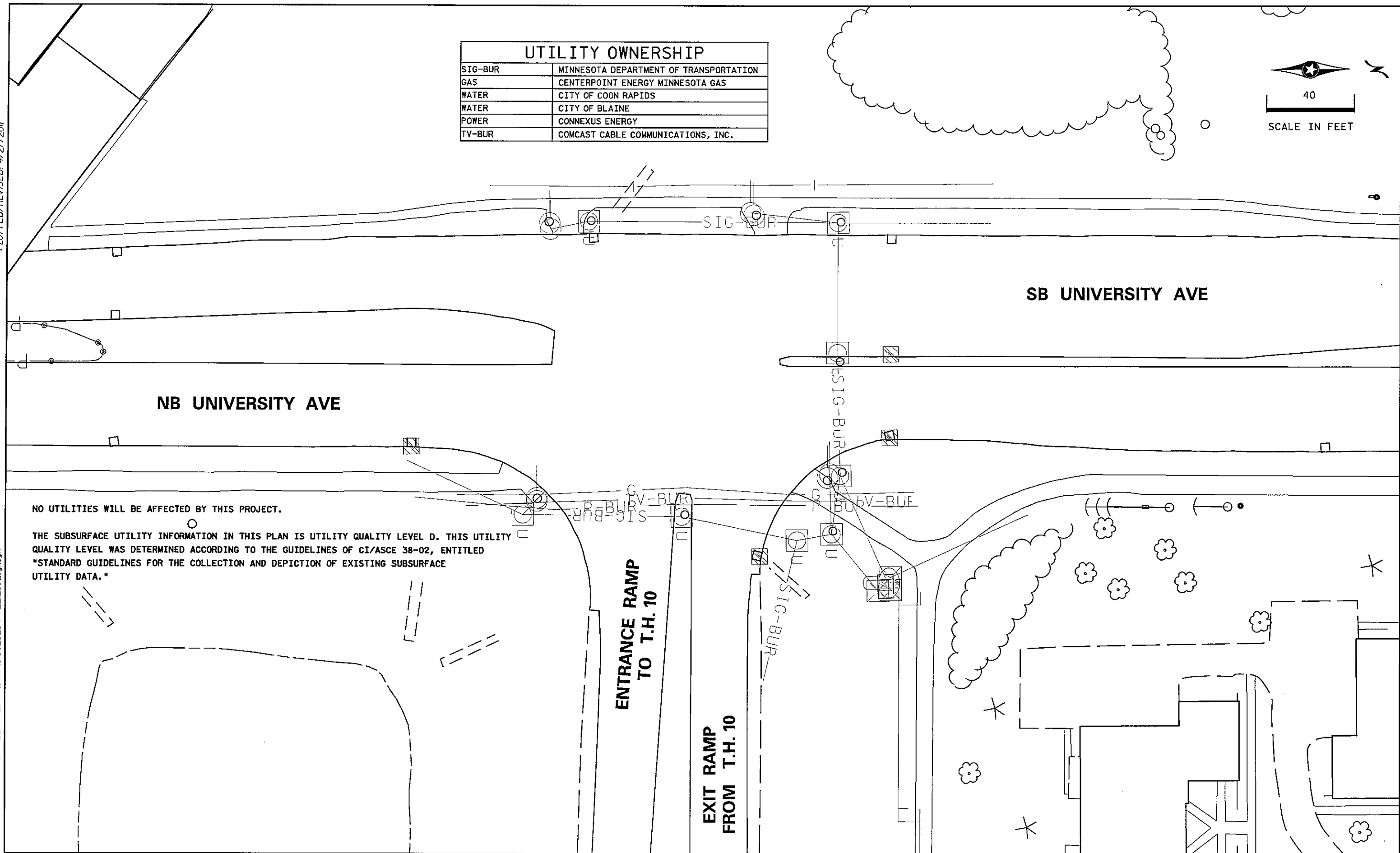
DRAWN BY:	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY:	CKD BY:	CKD BY:	MAS 12/08
DATE:	DATE:	DATE:	DATE:
SYSTEM ID: 21523			
METER ADDRESS: T.H. 169 AND DAYTON ROAD			

FIELD WIRING DIAGRAM
T.H. 169 AT CSAH 12/MILLER RD.
IN CHAMPLIN, HENNEPIN COUNTY

UTILITY OWNERSHIP	
SIG-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
GAS	CENTERPOINT ENERGY MINNESOTA GAS
WATER	CITY OF COON RAPIDS
WATER	CITY OF BLAINE
POWER	CONNEXUS ENERGY
TV-BUR	COMCAST CABLE COMMUNICATIONS, INC.



PLOTTED/REVISED: 4/27/2011



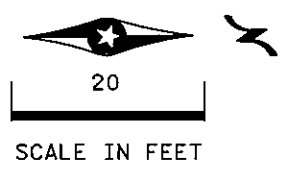
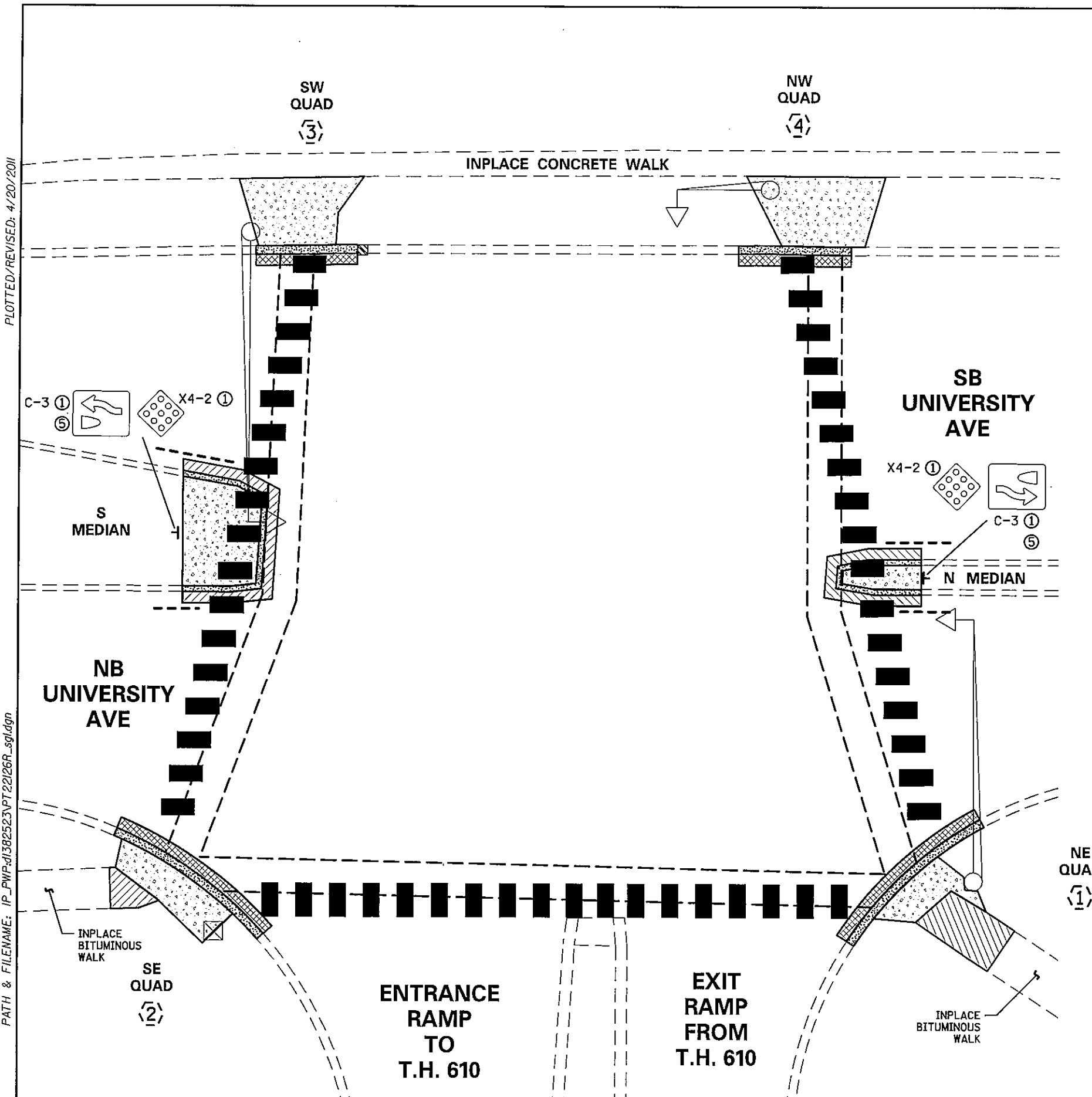
NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

DISTRICT #: METRO
 I/PLOT NAME: topog & utilities 1
 PATH & FILENAME: IP_PWP-d1382523VPT22126U_sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 22126	T.E. 5374	INPLACE TOPOGRAPHY AND UTILITIES PLAN REVISE SIGNAL SYSTEM I	S.A.P. NO.	DRAWN BY:GDS	CKD BY:BTJ	DATE:4-21-11	
			METER ADDRESS: 9601-UNIVERSITY AVE NE		T.H. 10 N. RAMP AT CSAH 51 (UNIVERSITY AVE.) IN BLAINE AND COON RAPIDS, ANOKA COUNTY	CERTIFIED BY: <i>Michael P. Subinski</i> LICENSED PROFESSIONAL ENGINEER			LIC. NO. 19863	DATE: 4-21-11
			MASTER ID:	T.E.		STATE PROJ.NO. 8825-393				SHEET NO. 94 OF 122 SHEETS

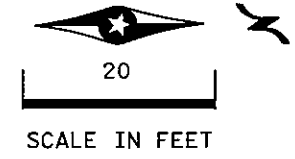
DISTRICT #: METRO
 IPLOT NAME: removals & pave mark 1
 PATH & FILENAME: IP_PWP-d1382523VPT22126R_sgl.dgn



LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK
	MILL BITUMINOUS SURFACE (2.0")
	REMOVE BITUMINOUS PAVEMENT
	INPLACE SIGNAL BASE NO.
	INPLACE SIGNAL PEDESTAL
	INPLACE CATCH BASIN
	REMOVE CROSSWALK
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING

- ① F & I
- ⑤ REMOVE SIGN TYPE C

BY	DATE	REVISIONS	SYSTEM ID: 22126	T.E. 5374	REMOVAL, SIGNING & PAVEMENT MARKING PLAN	S.A.P. NO.	DRAWN BY:GDS	CKD BY:BTJ	DATE:4-21-11
			METER ADDRESS: 9601-UNIVERSITY AVE NE		REVISE SIGNAL SYSTEM I	CERTIFIED BY: <i>Michael P. Gulinsky</i>	LIC. NO. 19863		DATE: 4-21-11
			MASTER ID:	T.E.	T.H. 10 N. RAMP AT CSAH 51 (UNIVERSITY AVE.)	STATE PROJ. NO. 8825-393			
					IN BLAINE AND COON RAPIDS, ANOKA COUNTY				SHEET NO. 95 OF 122 SHEETS

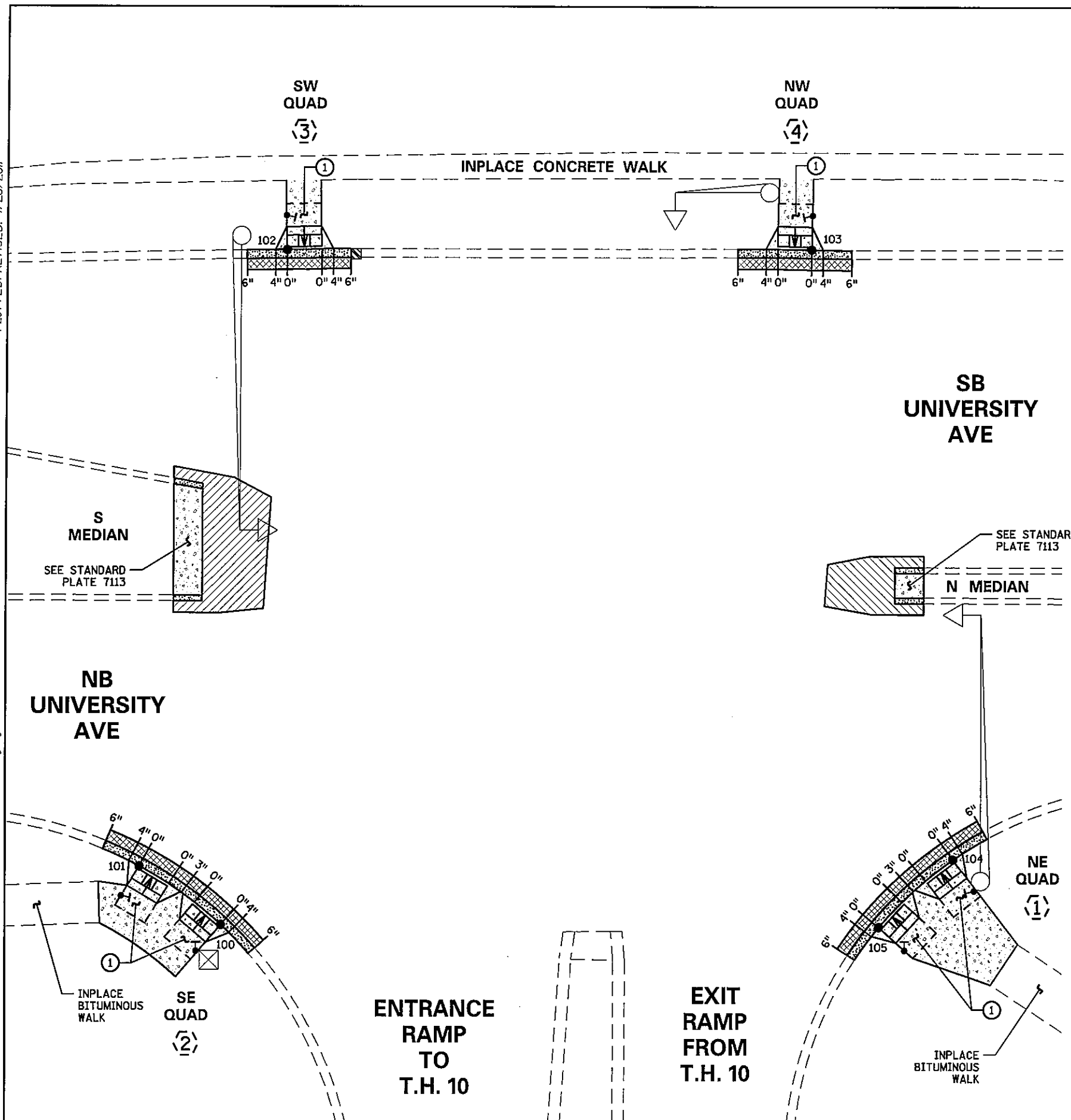


LEGEND	
	INPLACE SIGNAL POLE
	CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
	PEDESTRIAN PUSH BUTTON STATION
	INPLACE SIGNAL BASE NO.
	INPLACE SIGNAL PEDESTAL POLE
	EDGE OF INPLACE SURFACING
	X" CURB HEIGHT AT INDICATED LOCATION
	INTERSECTION POINT OF CROSSWALK EDGE AND PEDESTRIAN RAMP EDGE AT FACE OF CURB
	TRUNCATED DOMES (SEE STANDARD PLATE 7038)
	CONSTRUCT CONCRETE CURB & GUTTER
	6" CONCRETE WALK
	2" BITUMINOUS OVERLAY, 2' WIDE
	BITUMINOUS PAVEMENT
	INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT

DETAIL POINTS		
POINT NO.	X	Y
100	500050.0853	139788.5281
101	500039.7220	139774.4531
102	499932.0089	139800.6377
103	499932.7084	139892.1846
104	500039.6632	139916.0609
105	500051.3818	139903.0973

- GENERAL NOTES:
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.

① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.



PLOTTED/REVISED: 4/28/2011

DISTRICT #: METRO
 PLOT NAME: ped_ramp_detail1
 PATH & FILENAME: IP_PWP:d138253\PT22126D.spl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 22126	T.E. 5374	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9601-UNIVERSITY AVE NE		CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393	SHEET NO. 96 OF 122 SHEETS		

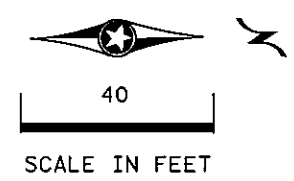
PEDESTRIAN CURB RAMP DETAILS
 REVISE SIGNAL SYSTEM I,
 T.H. 10 N. RAMP AT CSAH 51 (UNIVERSITY AVE.)
 IN BLAINE AND COON RAPIDS, ANOKA COUNTY

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1, D1-2	6x6	37
D1-3	2-6x6	7
D2-1, D2-2	6x6	293
D6-1, 6-2	6x6	302
D8-1	2-6x6	118
D8-2	6x15	-3
D8-3	6x6	18

-ALL LOOP DETECTORS ARE PVC
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

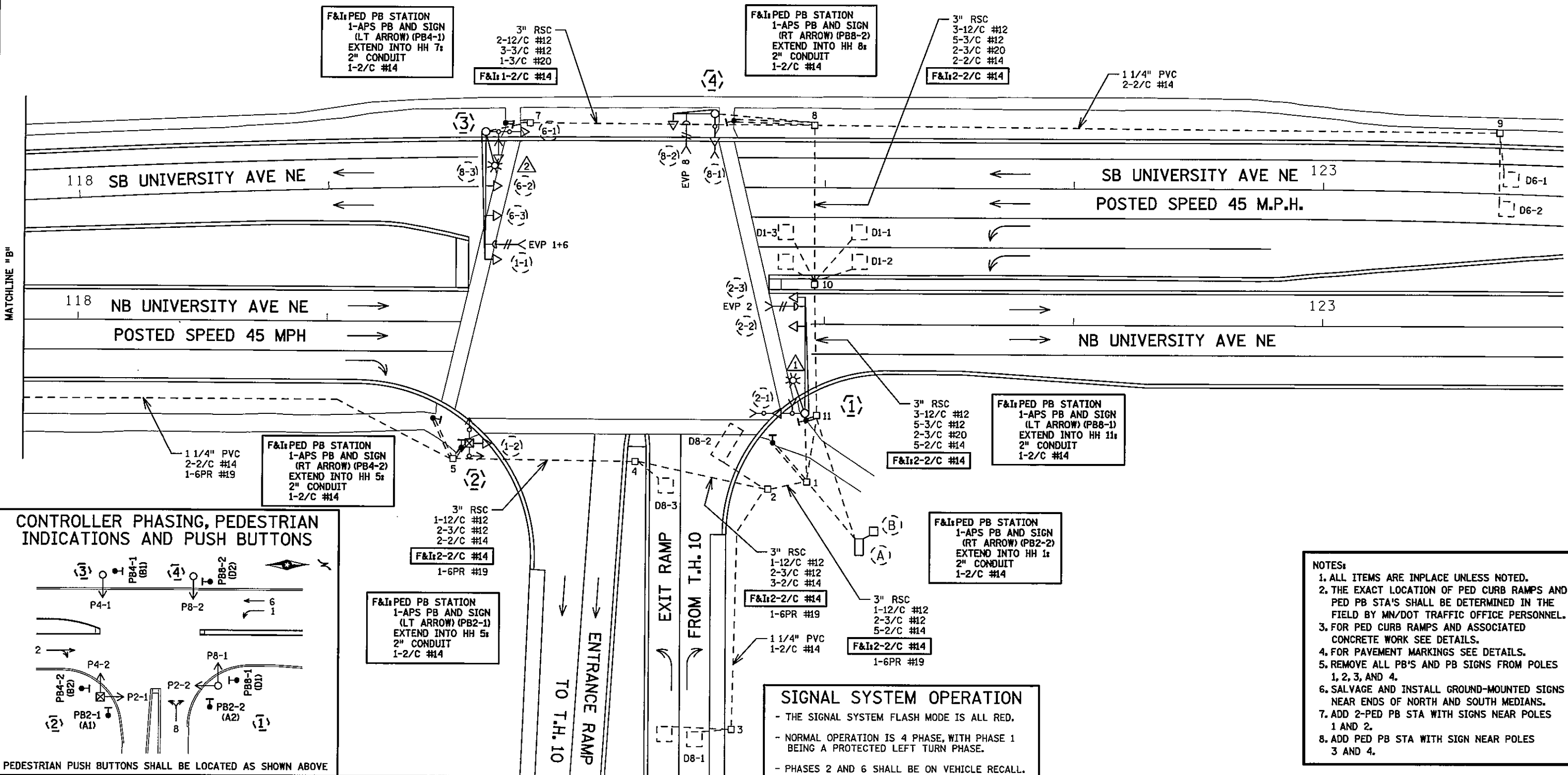
SIGNAL FACE CHART			
FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

-ALL SIGNAL INDICATIONS ARE 12" LED
-ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS

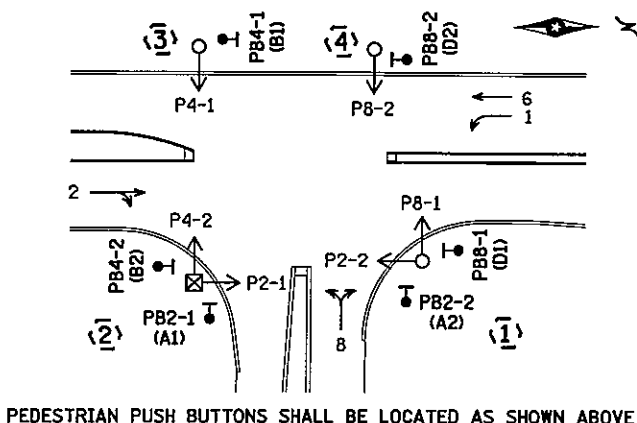


PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: layout 1
PATH & FILENAME: IP_PWP-d\382523\PT22126.sgl.dgn



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASE 1 BEING A PROTECTED LEFT TURN PHASE.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

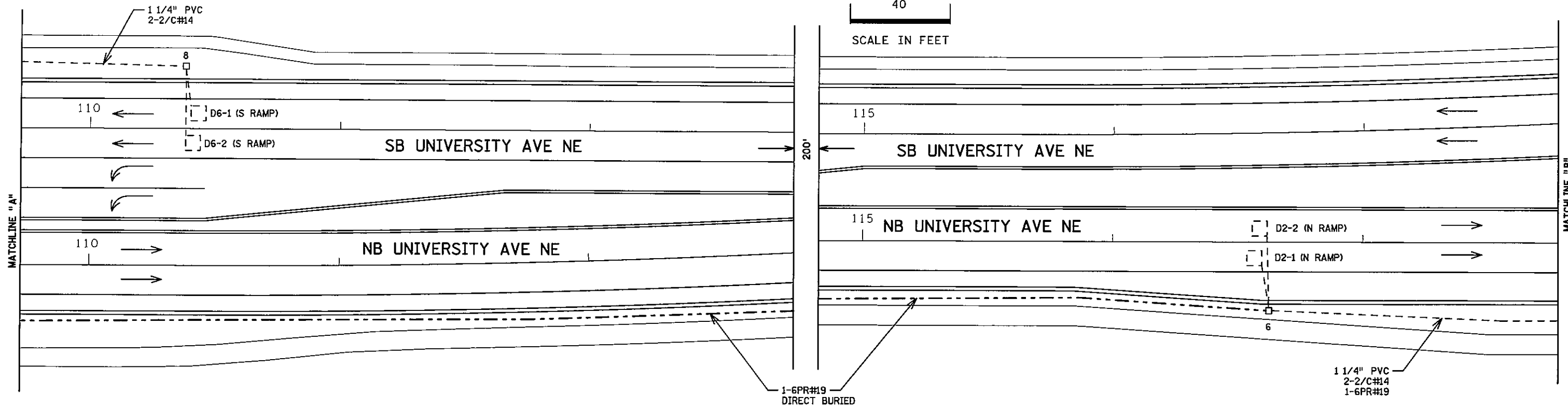
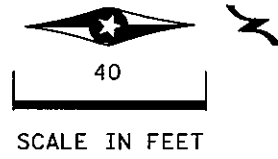
- NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS AND PED PB STA'S SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 3, AND 4.
 6. SALVAGE AND INSTALL GROUND-MOUNTED SIGNS NEAR ENDS OF NORTH AND SOUTH MEDIANS.
 7. ADD 2-PED PB STA WITH SIGNS NEAR POLES 1 AND 2.
 8. ADD PED PB STA WITH SIGN NEAR POLES 3 AND 4.

BY	DATE	REVISIONS	SYSTEM ID: 22126	T.E. 5374	INTERSECTION LAYOUT	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9601 UNIVERSITY AVE NE		REVISE SIGNAL SYSTEM I	CERTIFIED BY: <i>Michael P. Subanay</i>			
			MASTER ID:	T.E.	T.H. 10 N. RAMP AT CSAH 51 (UNIVERSITY AVE.)	LIC. NO. 19863			DATE: 4-21-11
					IN BLAINE AND COON RAPIDS, ANOKA COUNTY	STATE PROJ. NO. 8825-393			SHEET NO. 97 OF 122 SHEETS

PLOTTED/REVISED: 4/20/2011

MATCHLINE "A"

MATCHLINE "B"



③ PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 3-ONE WAY SIGNALS OVERHEAD
 (0', 17' AND 29' FROM END OF MAST ARM)
 TYPE 20B WITH C.D. PED IND AT 270 DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 1+6)

REMOVE: 1-PB AND SIGN

3" RSC TO HH 7:
 2-12/C #12
 3-3/C #12
 1-3/C #20

② PEDESTAL FOUNDATION
 10' SIGNAL PEDESTAL POLE
 AND BASE
 TYPE 1F WITH 2-C.D. PED IND

REMOVE: 2-PED PB AND SIGNS

1-SIGN (R6-1L) ONE WAY
 1-SIGN (R6-1R) ONE WAY
 3" RSC TO HH 5:
 1-12/C #12
 2-3/C #12

④ PA85 POLE FOUNDATION
 TYPE PA85-A-15
 ONE WAY SIGNAL OVERHEAD
 TYPE 10B WITH C.D. PED IND AT 270 DEG
 ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)

REMOVE: 1-PED PB AND SIGN

3" RSC TO HH 8:
 1-12/C #12
 2-3/C #12
 1-3/C #20

① PA100 POLE FOUNDATION
 TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)
 2-ONE WAY SIGNALS OVERHEAD
 (0' AND 11' FROM END OF MAST ARM)
 TYPE 10C AT WITH 2-C.D. PED IND 270 AT DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 2)

REMOVE: 2-PED PB AND SIGNS

1-SIGN (R6-1R) ONE WAY
 3" RSC TO HH 1:
 2-12/C #12
 2-3/C #12
 1-3/C #20

Ⓐ EQUIPMENT PAD
 SERVICE CABINET
 CONTROLLER AND CABINET:
 4" RSC TO HH 1: 4" RSC TO HH 11:
 3-12/C #12 3-12/C #12
 3-3/C #12 4-3/C #12
 1-3/C #20 2-3/C #20
 5-2/C #14 5-2/C #14

F&I: 3-2/C #14 **F&I: 3-2/C #14**

1-6PR #19
 3" RSC STUBBED OUT (THREADED
 AND CAPPED BOTH ENDS)
 SERVICE CABINET TO CONTROLLER CABINET:
 2" RSC
 2-1/C #6
 1-1/C #6 INS. GR.
 SERVICE CABINET TO HH 1:
 2" RSC
 2-3/C #12
 SERVICE CABINET TO TRANSFORMER:
 2" RSC
 3-1/C #2
 HH 2 TO HH 11:
 2" RSC
 1-3/C #12

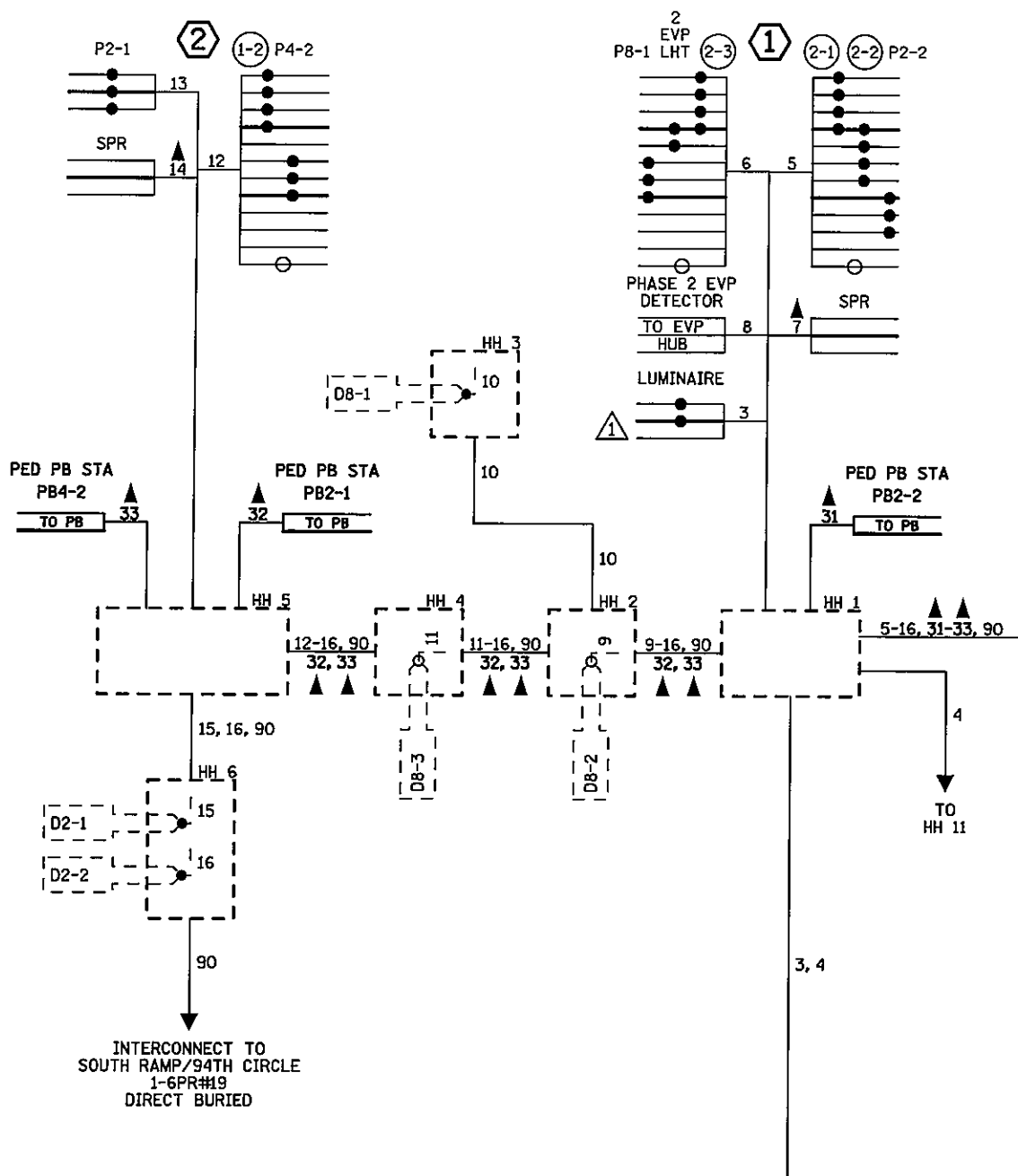
Ⓑ GROUND MOUNT TRANSFORMER
 2" RSC TO SERVICE CABINET:
 3-1/C #2

DISTRICT #: METRO
 IPLOT NAME: match line & notes 1
 PATH & FILENAME: IP_PWP:d\382523\PT22126_sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 22126	T.E. 5374	MATCH LINE LAYOUTS AND NOTES REVISE SIGNAL SYSTEM I T.H. 10 N. RAMP AT CSAH 51 (UNIVERSITY AVE.) IN BLAINE AND COON RAPIDS, ANOKA COUNTY	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9601-UNIVERSITY AVE NE			CERTIFIED BY: <i>Michael P. Subinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 98 OF 122 SHEETS		

PLOTTED/REVISED: 4/20/2011

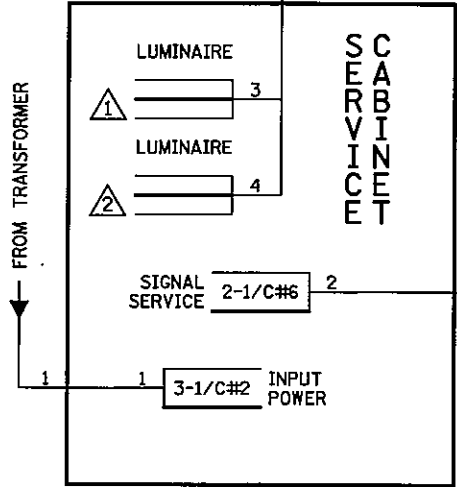
DISTRICT #: METRO
PLOT NAME: wiring 1
PATH & FILENAME: IP_PWP.d\382523\PT22126.sgl.dgn



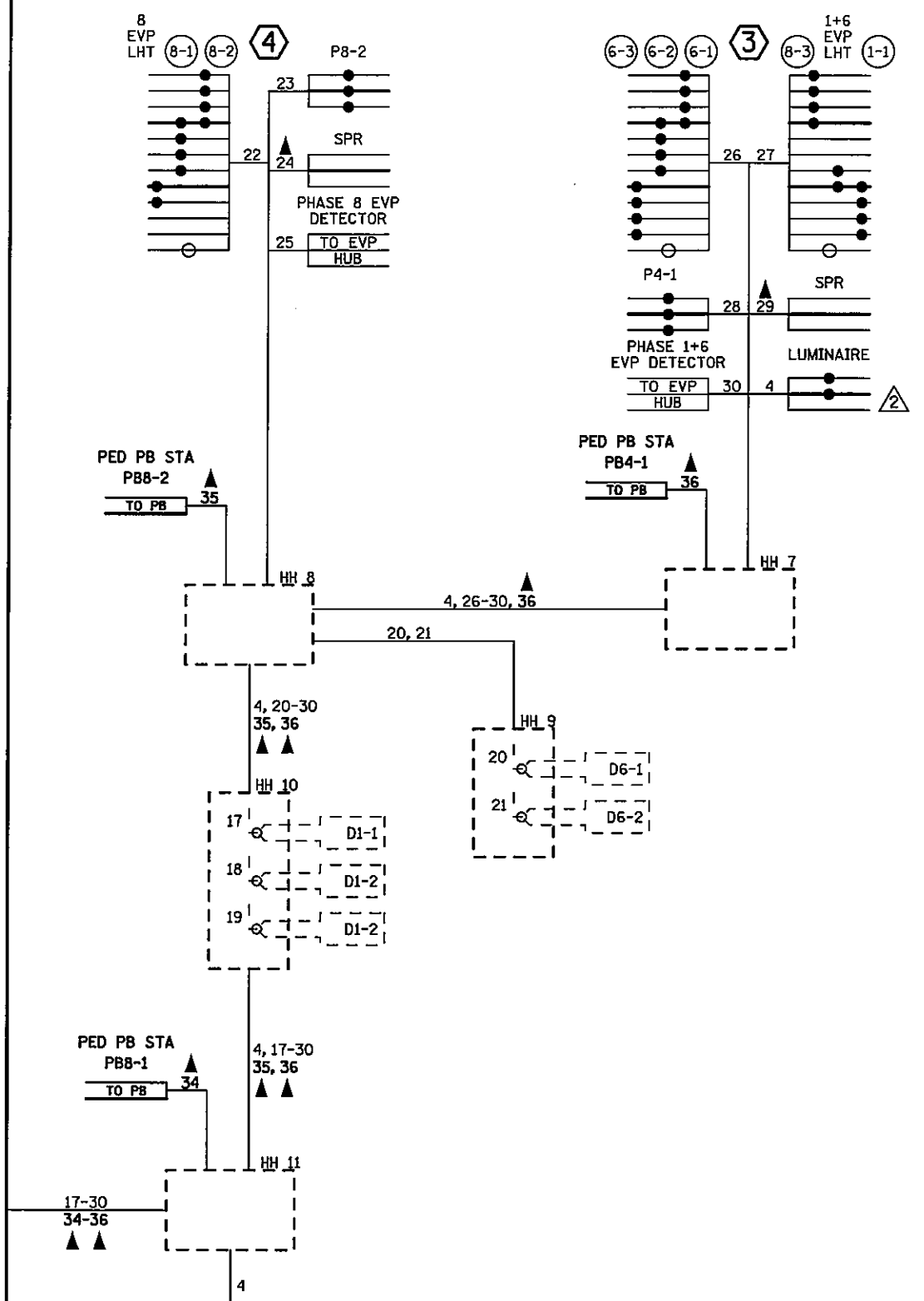
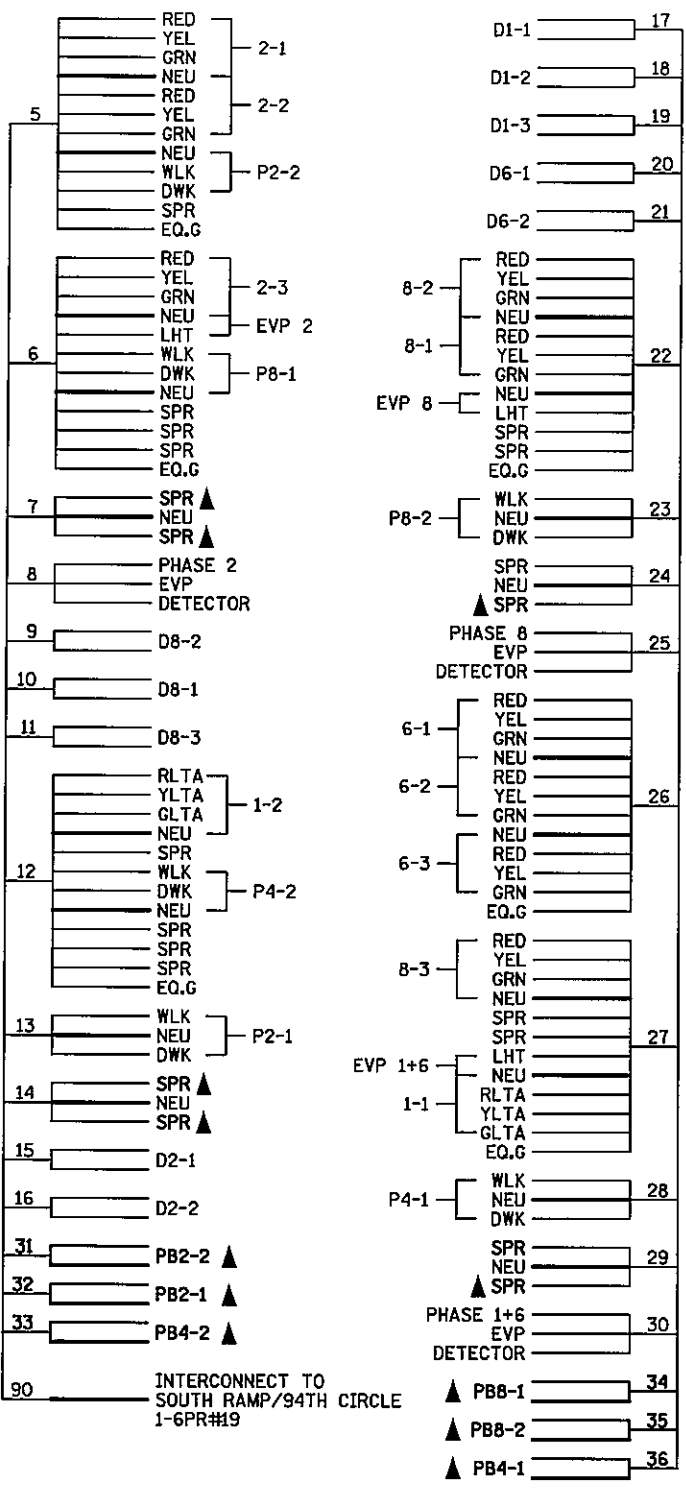
CONDUCTOR COLOR CODE

R	3/C#12	R
BL		WH
WH		BLK
R/BLK	2/C#14	BLK
O/BLK		CLR
BL/BLK		
WH/BLK		
BLK	3/C#20	R
BLK/WH		WH
G/BLK		BLK
G		
R	2-1/C#4	BLK
O		
BL	2-1/C#6	WH
WH		
G		

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED



CONTROLLER CABINET



▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

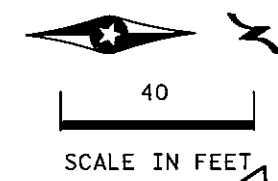
BY	DATE	REVISIONS	SYSTEM ID: 22126	T.E. 5374	FIELD WIRING DIAGRAM REVISE SIGNAL SYSTEM I	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9601-UNIVERSITY AVE NE		T.H. 10 N. RAMP AT CSAH 51 (UNIVERSITY AVE.) IN BLAINE AND COON RAPIDS, ANOKA COUNTY	CERTIFIED BY: <i>Michael P. Sulinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 99 OF 122 SHEETS		

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1, D1-2	6x6	40
D1-3	2-6x6	10
D2-1, D2-2	6x6	300
D6-1, 6-2	6x6	300
D8-1	2-6x6	120
D8-2	6x15	0
D8-3	6x6	20

-ALL LOOP DETECTORS ARE PVC UNLESS NOTED OTHERWISE
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

SIGNAL FACE CHART			
FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

-ALL SIGNAL INDICATIONS ARE 12" LED
-ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS

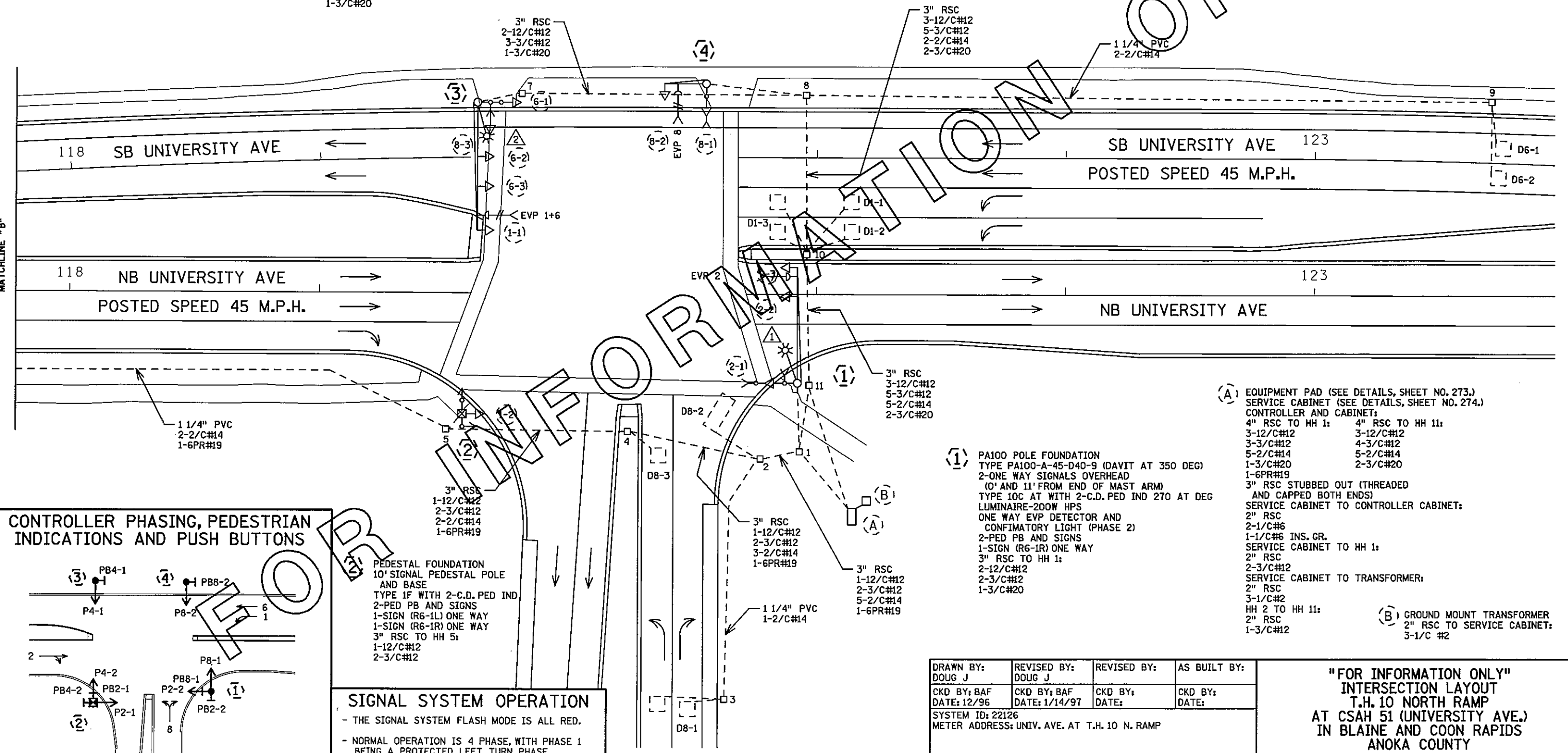


- (3) PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
3-ONE WAY SIGNALS OVERHEAD
(0', 17' AND 29' FROM END OF MAST ARM)
TYPE 20B WITH C.D. PED IND AT 270 DEG
LUMINAIRE-200W HPS
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)
2-PED PB AND SIGNS
3" RSC TO HH 7:
2-12/C#12
3-3/C#12
1-3/C#20
- (4) PA85 POLE FOUNDATION
TYPE PA85-A-15
ONE WAY SIGNAL OVERHEAD
TYPE 10B WITH C.D. PED IND AT 270 DEG
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 8)
2-PED PB AND SIGNS
3" RSC TO HH 8:
1-12/C#12
2-3/C#12
1-3/C#20

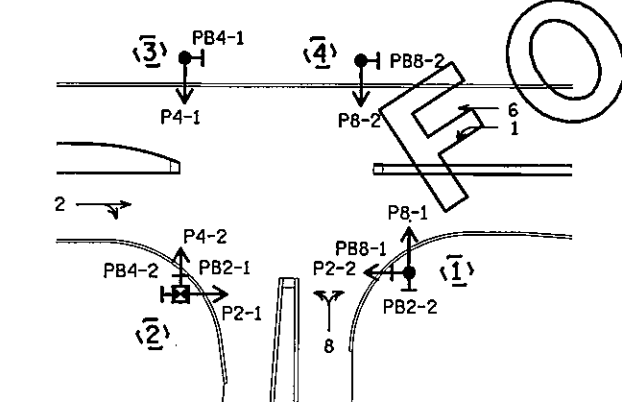
PLOTTED/REVISED: 4/20/2011

MATCHLINE "B"

DISTRICT #: METRO
PLOT NAME: Info only layout 1
PATH & FILENAME: IP_PWP-d\382523\PT22126\INFO\sgl.dgn



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



- PEDESTAL FOUNDATION**
10' SIGNAL PEDESTAL POLE AND BASE
TYPE 1F WITH 2-C.D. PED IND
2-PED PB AND SIGNS
1-SIGN (R6-1L) ONE WAY
1-SIGN (R6-1R) ONE WAY
3" RSC TO HH 5:
1-12/C#12
2-3/C#12

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASE 1 BEING A PROTECTED LEFT TURN PHASE.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

- (A) EQUIPMENT PAD (SEE DETAILS, SHEET NO. 273.)
SERVICE CABINET (SEE DETAILS, SHEET NO. 274.)
CONTROLLER AND CABINET:
4" RSC TO HH 1: 4" RSC TO HH 11:
3-12/C#12 3-12/C#12
3-3/C#12 4-3/C#12
5-2/C#14 5-2/C#14
1-3/C#20 2-3/C#20
1-6PR#19
3" RSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)
SERVICE CABINET TO CONTROLLER CABINET:
2" RSC
2-1/C#6
1-1/C#6 INS. GR.
SERVICE CABINET TO HH 1:
2" RSC
2-3/C#12
SERVICE CABINET TO TRANSFORMER:
2" RSC
3-1/C#2
HH 2 TO HH 11:
2" RSC
1-3/C#12
- (B) GROUND MOUNT TRANSFORMER
2" RSC TO SERVICE CABINET:
3-1/C #2
- (1) PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)
2-ONE WAY SIGNALS OVERHEAD
(0' AND 11' FROM END OF MAST ARM)
LUMINAIRE-200W HPS
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2)
2-PED PB AND SIGNS
1-SIGN (R6-1R) ONE WAY
3" RSC TO HH 1:
2-12/C#12
2-3/C#12
1-3/C#20

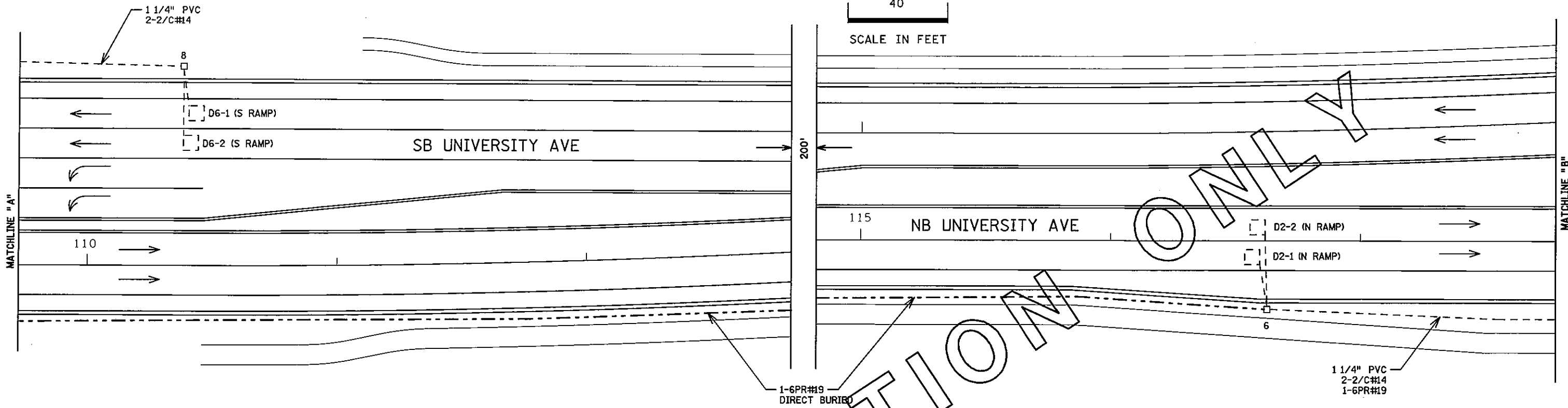
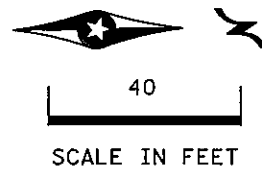
DRAWN BY: DOUG J	REVISED BY: DOUG J	REVISED BY:	AS BUILT BY:
CKD BY: BAF DATE: 12/96	CKD BY: BAF DATE: 1/14/97	CKD BY: DATE:	CKD BY: DATE:
SYSTEM ID: 22126 METER ADDRESS: UNIV. AVE. AT T.H. 10 N. RAMP			

"FOR INFORMATION ONLY"
INTERSECTION LAYOUT
T.H. 10 NORTH RAMP
AT CSAH 51 (UNIVERSITY AVE.)
IN BLAINE AND COON RAPIDS
ANOKA COUNTY

PLOTTED/REVISED: 4/20/2011

MATCHLINE "A"

MATCHLINE "B"



FOR INFORMATION ONLY

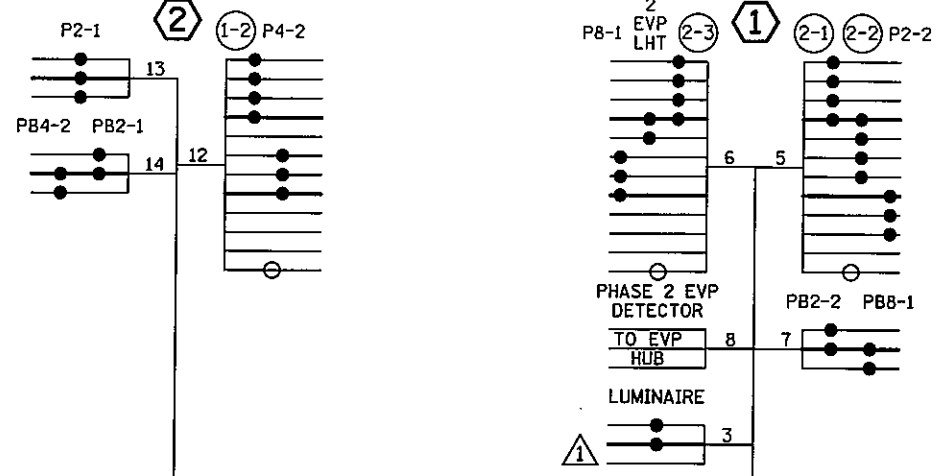
DISTRICT #: METRO
PLOT NAME: Info only match lines 1
PATH & FILENAME: IP_FWP-d1382523\PT22126\INFO1_sgl.dgn

DRAWN BY: DOUG J	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY: BAF DATE: 12/96	CKD BY: DATE:	CKD BY: DATE:	CKD BY: DATE:
SYSTEM ID: 22126 METER ADDRESS: UNIV. AVE. AT T.H. 10 N. RAMP			

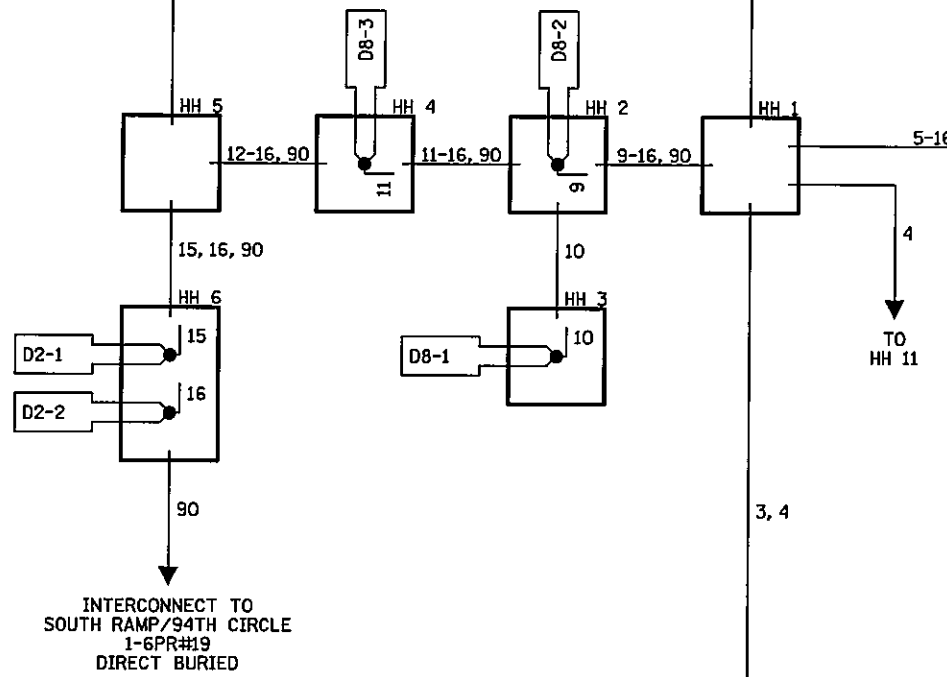
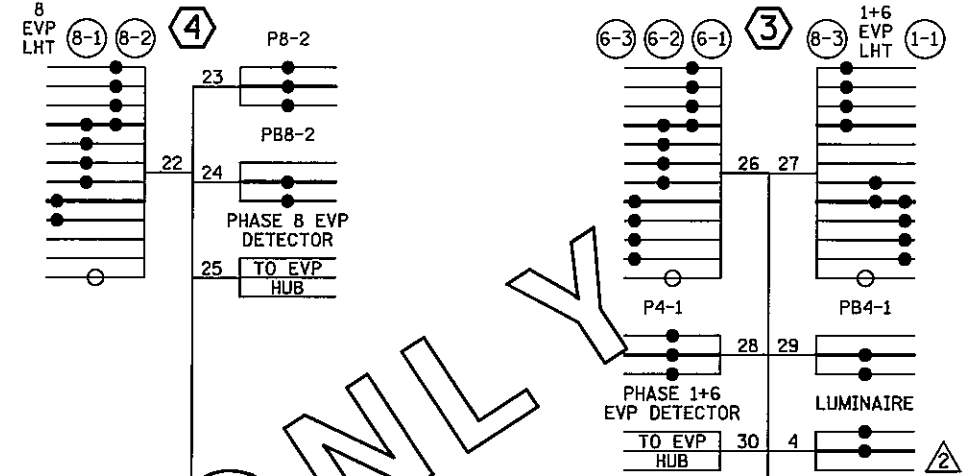
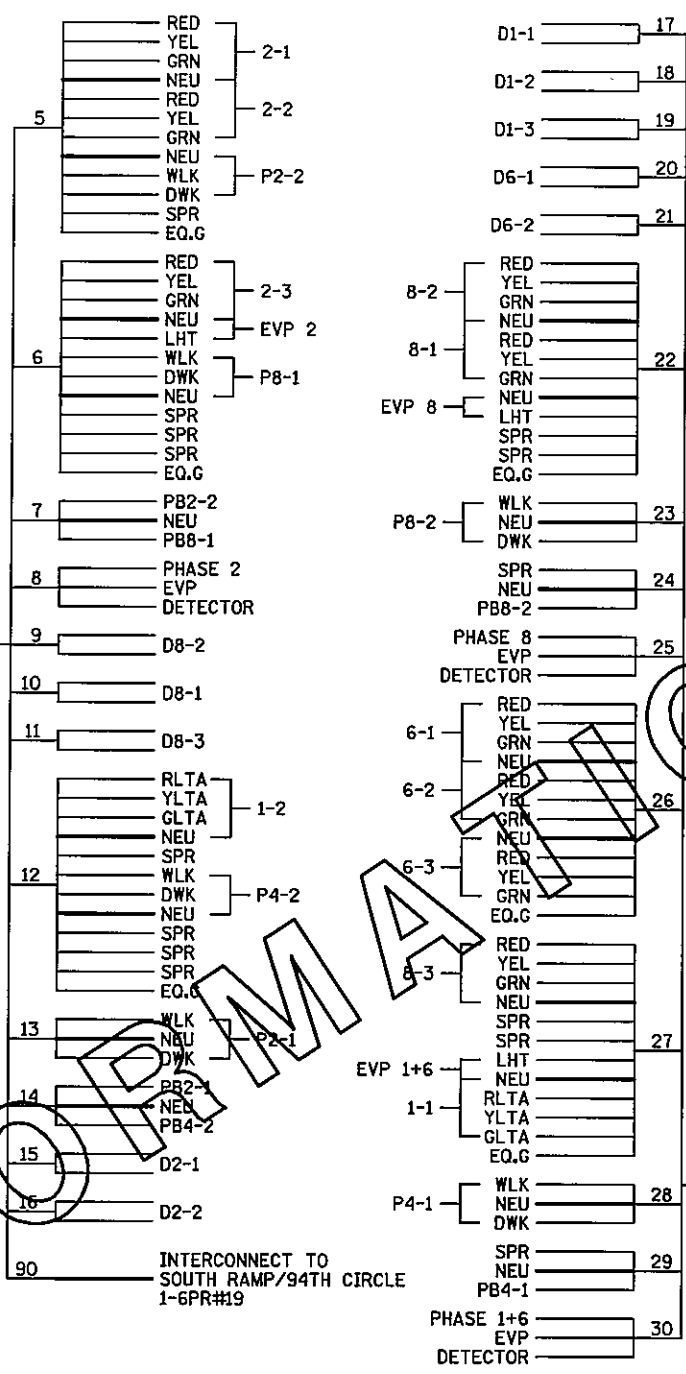
"FOR INFORMATION ONLY"
MATCHLINE/INTERCONNECT LAYOUT
T.H. 10 NORTH RAMP
AT CSAH 51 (UNIVERSITY AVE.)
IN BLAINE AND COON RAPIDS
ANOKA COUNTY

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
I PLOT NAME: Info only wiring 1
PATH & FILENAME: IP_PWP-d\382523\PT22126\INFO1_sgl.dgn



CONTROLLER CABINET



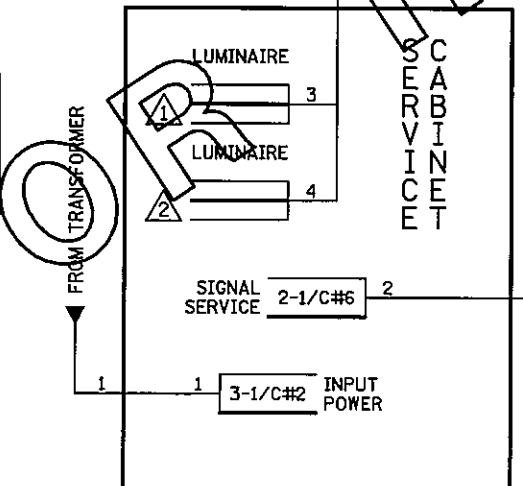
INTERCONNECT TO SOUTH RAMP/94TH CIRCLE 1-6PR#19 DIRECT BURIED

INTERCONNECT TO SOUTH RAMP/94TH CIRCLE 1-6PR#19

CONDUCTOR COLOR CODE

R	3/C#12	R	
O	WH		
BL	BLK		
WH			
R/BLK	2/C#14	BLK	
O/BLK	CLR		
BL/BLK			
WH/BLK			
BLK	3/C#20	R	
BLK/WH	WH		
C/BLK	BLK		
G			
		2-1/C#4	BLK
		2-1/C#6	WH
R			
O	5/C#12		
BL			
WH			
G			

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED

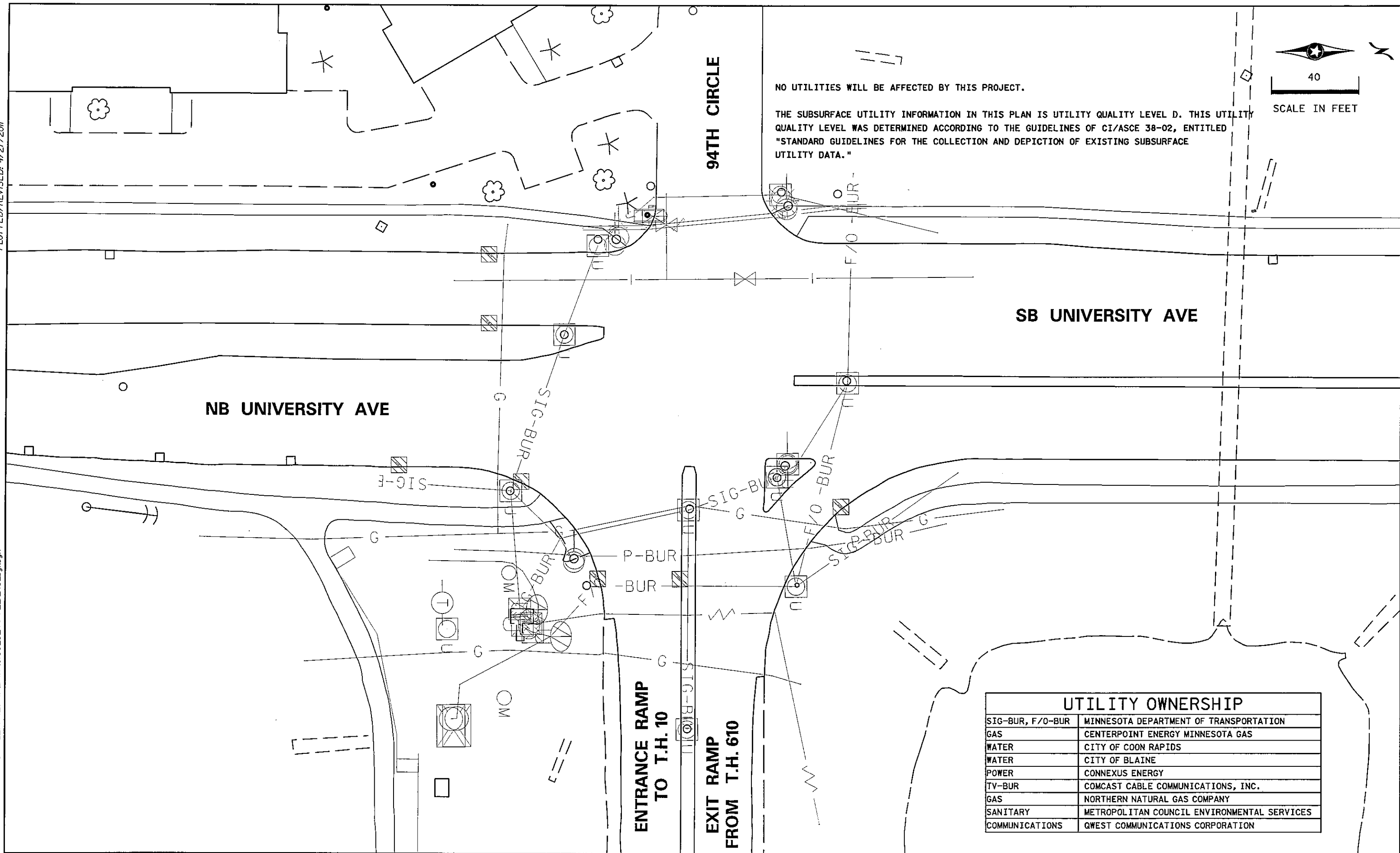


DRAWN BY: DOUG J	REVISED BY: DOUG J	REVISED BY:	AS BUILT BY:
CKD BY: BAF DATE: 12/96	CKD BY: BAF DATE: 1/14/97	CKD BY: DATE:	CKD BY: DATE:
SYSTEM ID: 22126 METER ADDRESS: UNIV. AVE. AT T.H. 10 N. RAMP			

"FOR INFORMATION ONLY"
FIELD WIRING DIAGRAM
T.H. 10 NORTH RAMP
AT CSAH 51 (UNIVERSITY AVE.)
IN BLAINE AND COON RAPIDS
ANOKA COUNTY

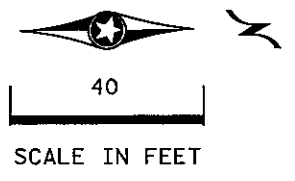
PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
 PLOT NAME: topog & utilities J
 PATH & FILENAME: IP_PWP-d1382524PT22124U_sgl.dgn



NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

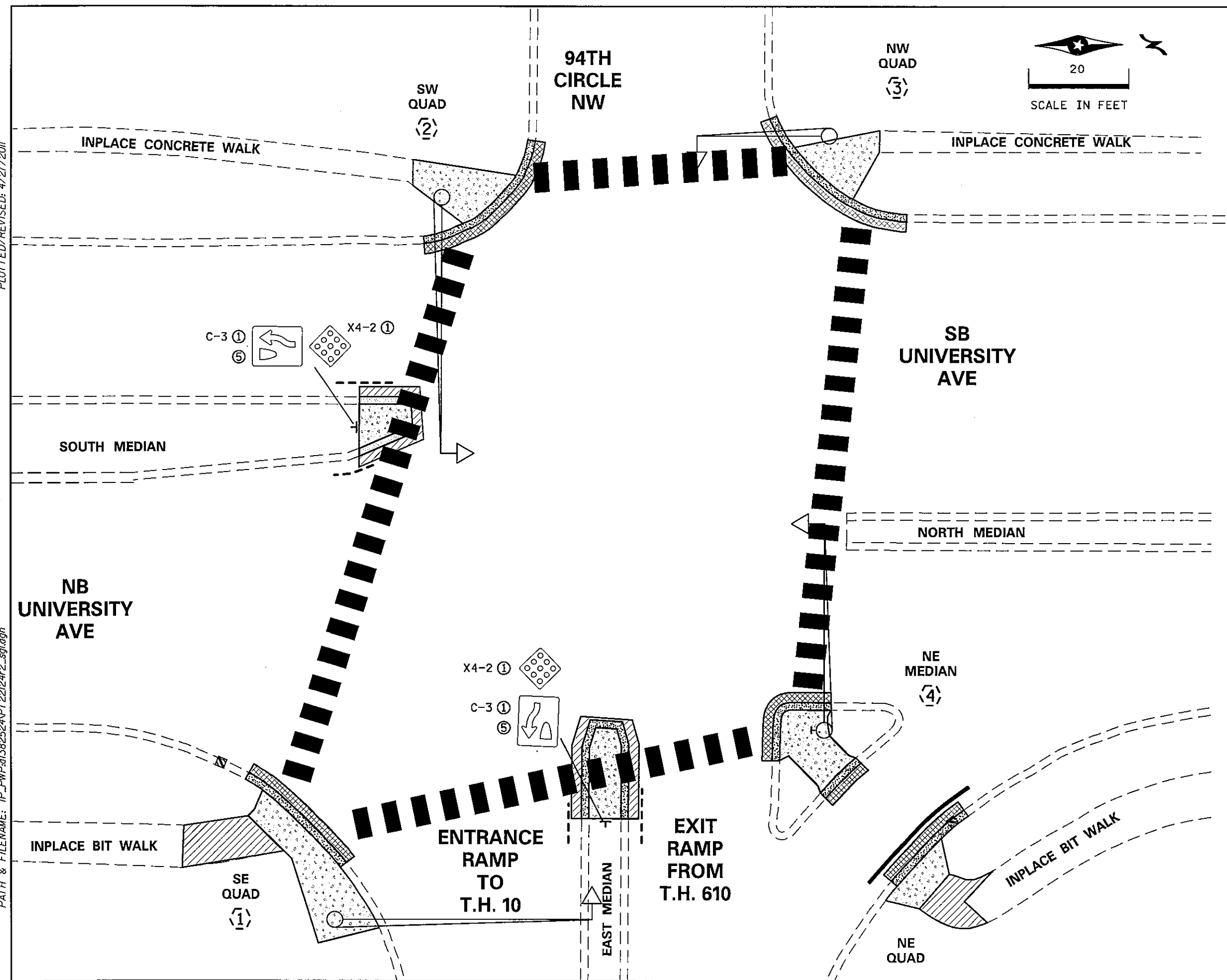


UTILITY OWNERSHIP	
SIG-BUR, F/O-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
GAS	CENTERPOINT ENERGY MINNESOTA GAS
WATER	CITY OF COON RAPIDS
WATER	CITY OF BLAINE
POWER	CONNEXUS ENERGY
TV-BUR	COMCAST CABLE COMMUNICATIONS, INC.
GAS	NORTHERN NATURAL GAS COMPANY
SANITARY	METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION

BY	DATE	REVISIONS	SYSTEM ID: 22124	T.E. 5375	INPLACE TOPOGRAPHY AND UTILITIES PLAN REVISE SIGNAL SYSTEM J T.H. 10 S. RAMP AT CSAH 51 (UNIVERSITY AVE.) IN BLAINE AND COON RAPIDS, ANOKA COUNTY	S.A.P. NO.	CERTIFIED BY: <i>Michael P. Lubinsky</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 4-21-11	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9401-UNIVERSITY AVE NE			STATE PROJ. NO. 8825-393						SHEET NO. 103 OF 122 SHEETS
			MASTER ID:	T.E.								

PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
 IPLOT NAME: removals & pave mark J
 PATH & FILENAME: IP_PWP-d1382524PT22124r2_sgl.dgn



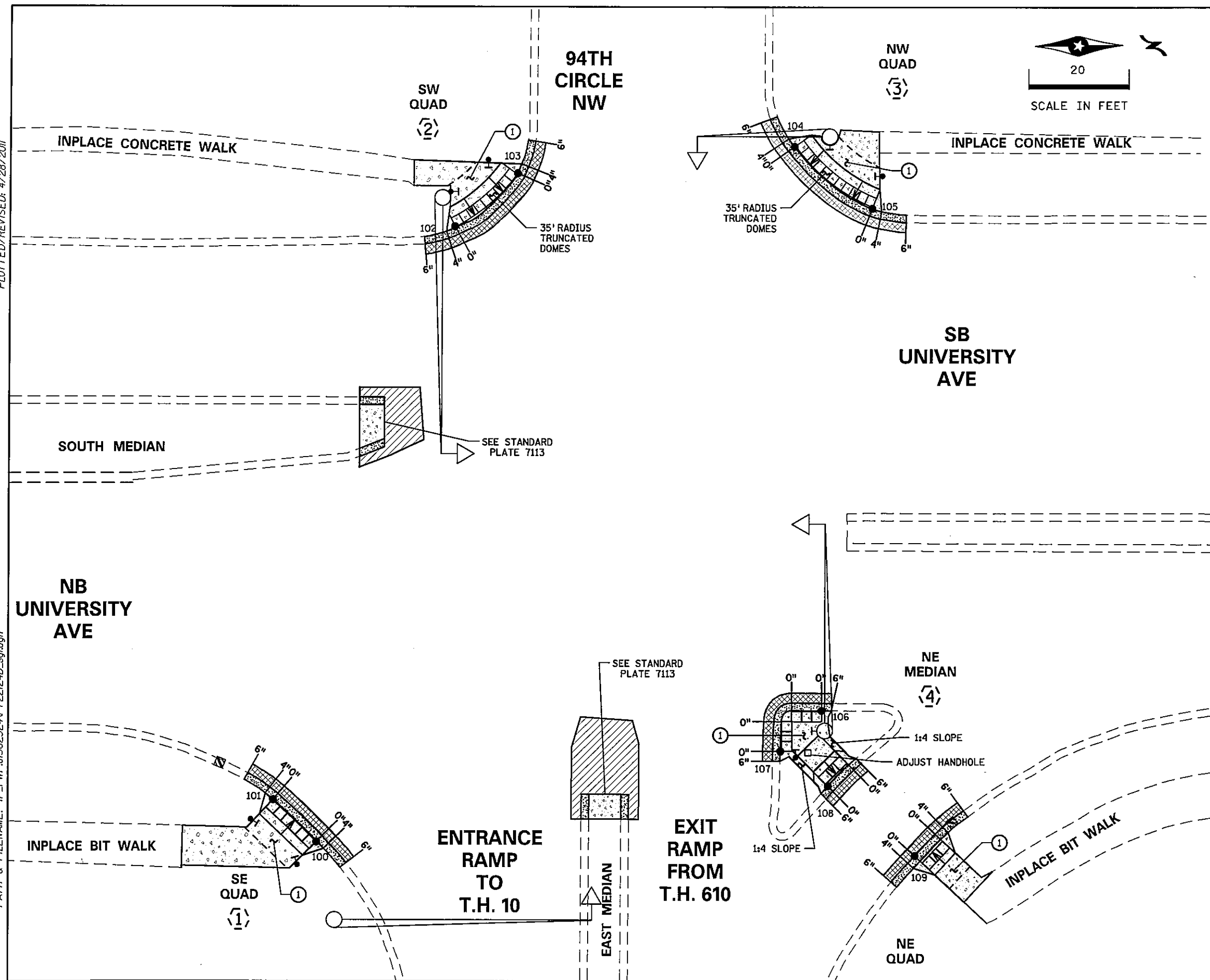
LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK
	MILL BITUMINOUS SURFACE (2.0")
	REMOVE BITUMINOUS PAVEMENT
	INPLACE SIGNAL BASE NO.
	INPLACE SIGNAL PEDESTAL
	INPLACE CATCH BASIN
	REMOVE CROSSWALK
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING
	F&I 4" SOLID LINE WHITE
	F&I 4" SOLID LINE YELLOW

① F & I
 ⑤ REMOVE SIGN TYPE C

BY	DATE	REVISIONS	SYSTEM ID: 22124	T.E. 5375	REMOVAL, SIGNING & PAVEMENT MARKING PLAN	S.A.P. NO.	DRAWN BY: BAM	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9601-UNIVERSITY AVE NE		REVISE SIGNAL SYSTEM J	CERTIFIED BY: <i>Michael P. Lubinsky</i>			LIC. NO. 19863
			MASTER ID:	T.E.	T.H. 10 S. RAMP AT CSAH 51 (UNIVERSITY AVE.)	LICENSED PROFESSIONAL ENGINEER			DATE: 4-21-11
					IN BLAINE AND COON RAPIDS, ANOKA COUNTY	STATE PROJ. NO. 8825-393			SHEET NO. 104 OF 122 SHEETS

PLOTTED/REVISED: 4/28/2011

DISTRICT #: METRO
 I/PLOT NAME: ped ramp detail J
 PATH & FILENAME: IP_PWP-d1382524PT22124D_sgl.dgn



LEGEND

- INPLACE SIGNAL POLE
- CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
- PEDESTRIAN PUSH BUTTON STATION
- INPLACE SIGNAL BASE NO.
- INPLACE SIGNAL PEDESTAL POLE
- EDGE OF INPLACE SURFACING
- CURB HEIGHT AT INDICATED LOCATION
- INTERSECTION POINT OF PEDESTRIAN RAMP EDGE AT FACE OF CURB
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- 6" CONCRETE WALK
- 2" BITUMINOUS OVERLAY, 2' WIDE
- BITUMINOUS PAVEMENT
- INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT

DETAIL POINTS		
POINT NO.	X	Y
100	500050.0244	138462.7681
101	500041.5120	138450.2115
102	499926.4424	138491.1541
103	499915.8488	138503.8615
104	499910.8773	138559.5247
105	499923.5062	138575.0783
106	500024.4560	138564.2378
107	500032.5577	138555.8914
108	500039.6539	138565.3589
109	500053.7440	138582.6860

- GENERAL NOTES:**
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.
- ① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT./FT. FOR DRAINAGE.

BY	DATE	REVISIONS	SYSTEM ID: 22124	T.E. 5375	S.A.P. NO.	DRAWN BY: BAM	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9601-UNIVERSITY AVE NE		CERTIFIED BY: <i>Michael P. Subrady</i>			LIC. NO. 19863
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 105 OF 122 SHEETS	

PEDESTRIAN CURB RAMP DETAILS
 REVISE SIGNAL SYSTEM J
 T.H. 10 S. RAMP AT CSAH 51 (UNIVERSITY AVE.)
 IN BLAINE AND COON RAPIDS, ANOKA COUNTY

LOOP DETECTOR CHART

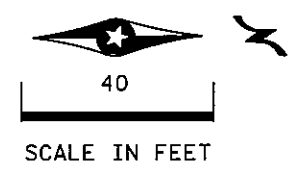
NUMBER	SIZE (FT)	LOCATION
D1-1, D1-2	6x6	36
D1-3	2-6x6	4
D2-1, D2-2	6x6	295
D4-1	6x15	-4
D4-2	6x6	16
D5-1, D5-2	6x6	35 & 5
D6-1, D6-2	6x6	294
D8-1	6x6	110
D8-2, D8-3	6x6	12 & 9

-ALL LOOP DETECTORS ARE PVC
-LOCATION: DISTANCE FROM
CROSSWALK/STOP BAR IN FEET

SIGNAL FACE CHART

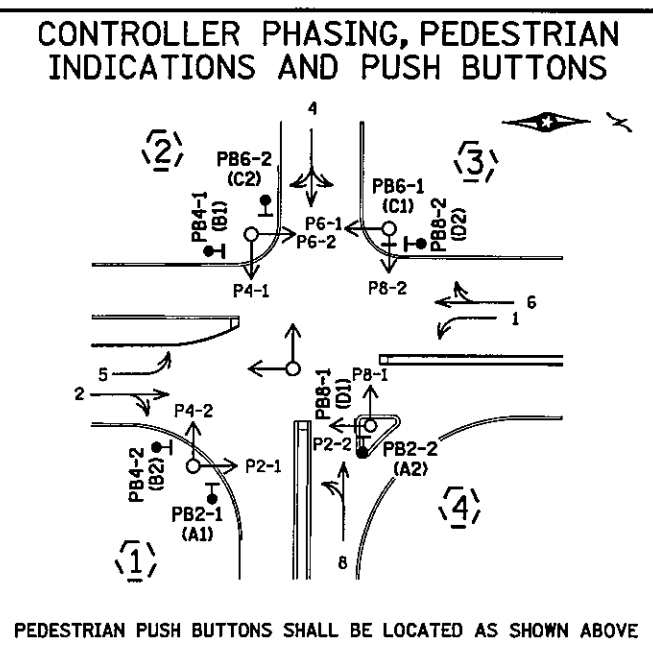
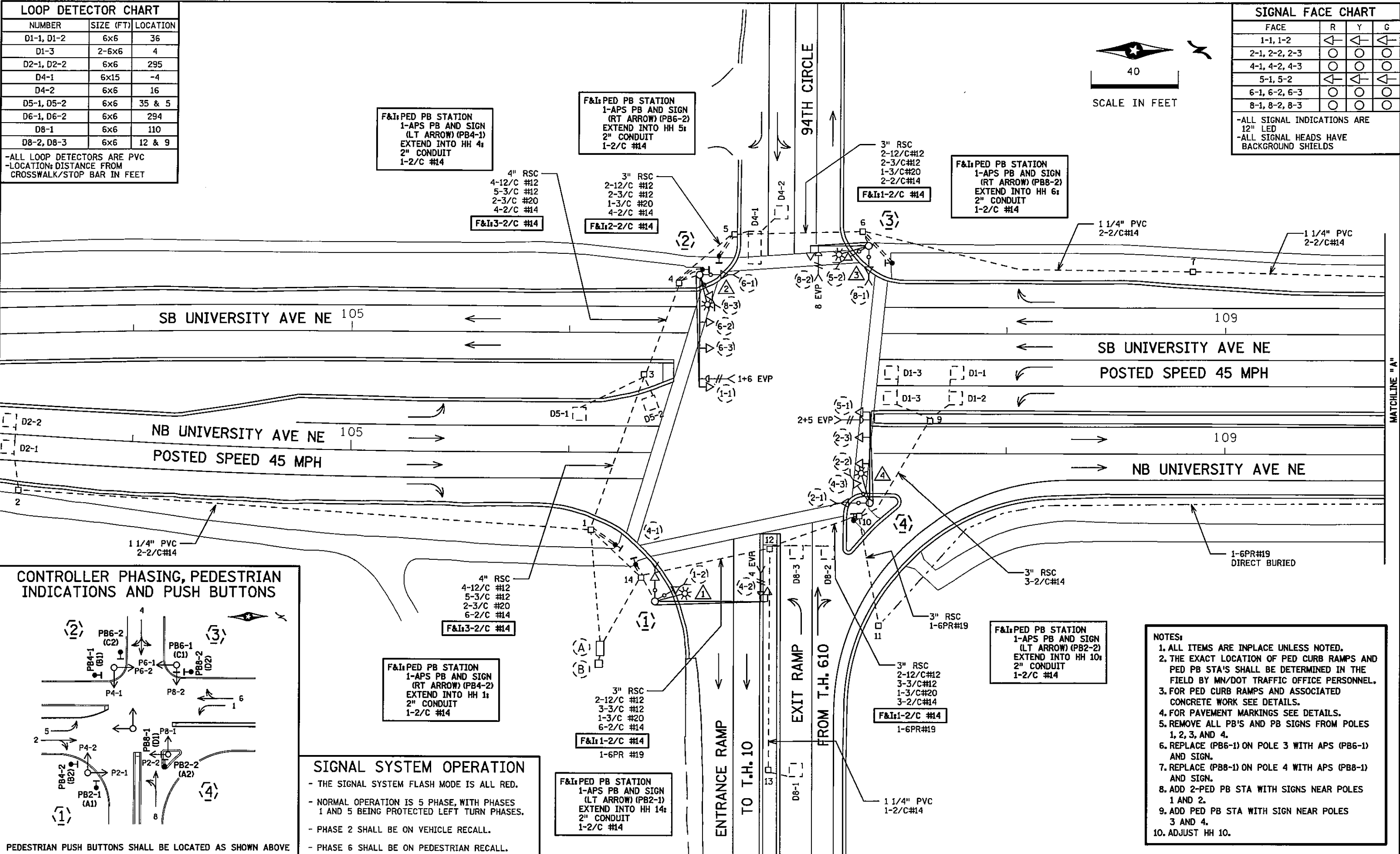
FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
4-1, 4-2, 4-3	○	○	○
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

-ALL SIGNAL INDICATIONS ARE
12" LED
-ALL SIGNAL HEADS HAVE
BACKGROUND SHIELDS



PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
PLOT NAME: layout J
PATH & FILENAME: IP_FWP-d138252-A\PT22124_sgl.dgn



SIGNAL SYSTEM OPERATION

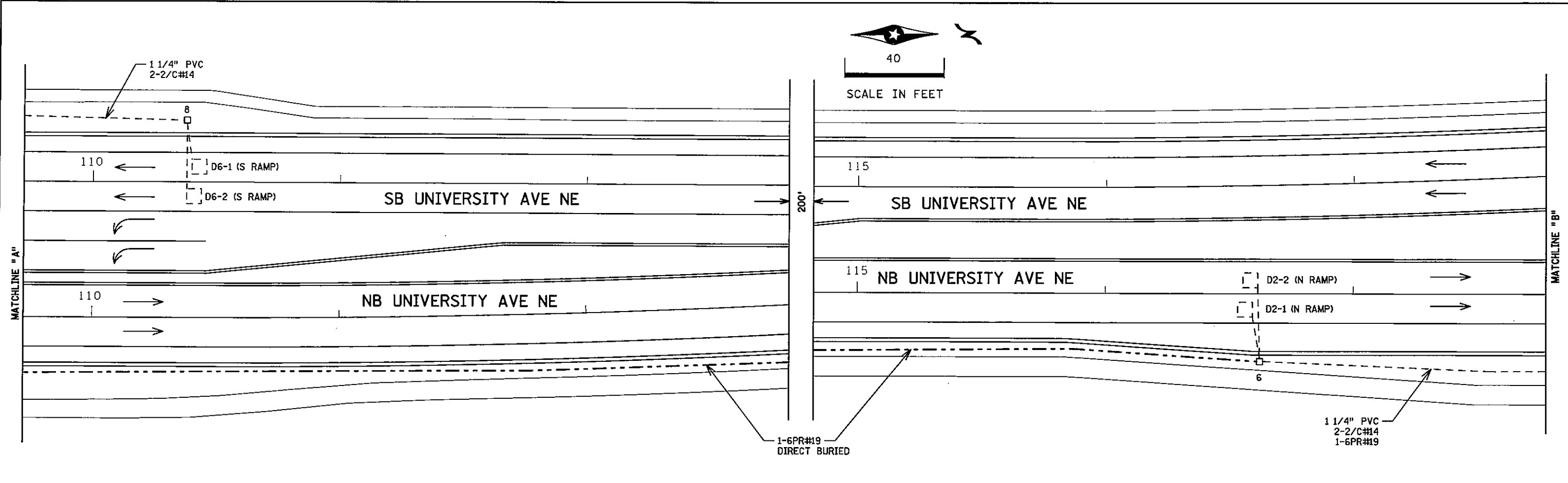
- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 5 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASE 2 SHALL BE ON VEHICLE RECALL.
- PHASE 6 SHALL BE ON PEDESTRIAN RECALL.

- ### NOTES:
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. THE EXACT LOCATION OF PED CURB RAMPS AND PED PB STA'S SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
 3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
 4. FOR PAVEMENT MARKINGS SEE DETAILS.
 5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 1, 2, 3, AND 4.
 6. REPLACE (PB6-1) ON POLE 3 WITH APS (PB6-1) AND SIGN.
 7. REPLACE (PB8-1) ON POLE 4 WITH APS (PB8-1) AND SIGN.
 8. ADD 2-PED PB STA WITH SIGNS NEAR POLES 1 AND 2.
 9. ADD PED PB STA WITH SIGN NEAR POLES 3 AND 4.
 10. ADJUST HH 10.

BY	DATE	REVISIONS	SYSTEM ID: 22124	T.E. 5375	INTERSECTION LAYOUT REVISE SIGNAL SYSTEM J T.H. 10 S. RAMP AT CSAH 51 (UNIVERSITY AVE.) IN BLAINE AND COON RAPIDS, ANOKA COUNTY	S.A.P. NO.	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9401 UNIVERSITY AVE NE			CERTIFIED BY: <i>Michael P. Subinsky</i>	LIC. NO. 19863	DATE: 4-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 106 OF 122 SHEETS		

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: match line & notes J
PATH & FILENAME: IP_PWP-d1382524PT22124_sgl.dgn



② PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 3-ONE WAY SIGNALS OVERHEAD
 (0', 17' AND 29' FROM END OF MAST ARM)
 TYPE 10B AT 0 DEG
 TYPE 10B AT 270 DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 (4' FROM END OF MAST ARM)

REMOVE: 2-PED PB AND SIGNS

1-SIGN (R6-1L) ONE WAY
 1-SIGN (R6-1R) ONE WAY
 3" RSC TO HH 4:
 2-12/C #12
 3-3/C #12
 1-3/C #20

① PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 ONE WAY SIGNAL OVERHEAD
 TYPE 10B AT 0 DEG
 TYPE 10B AT 270 DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 (4' FROM END OF MAST ARM)

REMOVE: 2-PED PB AND SIGNS

3" RSC TO HH 14:
 2-12/C #12
 2-3/C #12
 1-3/C #20

③ PA90 POLE FOUNDATION
 TYPE PA90-A-25-D40-9 (DAVIT AT 350 DEG)
 ONE WAY SIGNAL OVERHEAD
 TYPE 10B AT 0 DEG
 TYPE 10B AT 270 DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 (4' FROM END OF MAST ARM)

REMOVE: 2-PED PB AND SIGNS
F&I: 1-APS PB AND SIGN (LT ARROW) (PB6-1)

3" RSC TO HH 6:
 2-12/C #12
 2-3/C #12
 1-3/C #20

④ PA100 POLE FOUNDATION
 TYPE PA100-A-40-D40-9 (DAVIT AT 350 DEG)
 3-ONE WAY SIGNALS OVERHEAD
 (0', 11' AND 23' FROM END OF MAST ARM)
 TYPE 10B AT 0 DEG
 TYPE 10B AT 270 DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 (4' FROM END OF MAST ARM)

REMOVE: 2-PED PB AND SIGNS
F&I: 1-APS PB AND SIGN (LT ARROW) (PB8-1)

1-SIGN (R6-1L) ONE WAY
 1-SIGN (R6-1R) ONE WAY
 3" RSC TO HH 10:
 2-12/C #12
 3-3/C #12
 1-3/C #20

Ⓐ EQUIPMENT PAD
 SERVICE CABINET
 MASTER CONTROLLER, CONTROLLER AND CABINET
 4" RSC TO HH 14: 4" RSC TO HH 1:
 4-12/C #12 4-12/C #12
 3-3/C #12 3-3/C #12
 6-2/C #14 8-2/C #14
 2-3/C #20

F&I: 2-2/C #14

F&I: 4-2/C #14

2-3/C #20
 1-6PR #19
 3" RSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)
 SERVICE CABINET TO CONTROLLER CABINET:
 2" RSC
 2-1/C #6
 1-1/C #6 INS. GR.
 SERVICE CABINET TO HH 1:
 2" RSC
 4-3/C #12
 SERVICE CABINET TO TRANSFORMER:
 2" RSC
 3-1/C #2
 HH 1 TO HH 14:
 2" RSC
 2-3/C #12

Ⓑ GROUND MOUNT TRANSFORMER
 2" RSC TO SERVICE CABINET:
 3-1/C #2

BY	DATE	REVISIONS	SYSTEM ID: 22124	T.E. 5375	MATCH LINE LAYOUTS AND NOTES REVISE SIGNAL SYSTEM J T.H. 10 S. RAMP AT CSAH 51 (UNIVERSITY AVE.) IN BLAINE AND COON RAPIDS, ANOKA COUNTY	S.A.P. NO.	CERTIFIED BY: <i>Michael P. Subashy</i> LICENSED PROFESSIONAL ENGINEER	STATE PROJ. NO. 8825-393	DRAWN BY: GDS	CKD BY: BTJ	DATE: 4-21-11
			METER ADDRESS: 9401-UNIVERSITY AVE NE						LIC. NO. 19863		DATE: 4-21-11
			MASTER ID:	T.E.							SHEET NO. 107 OF 122 SHEETS

SIGNAL FACE CHART

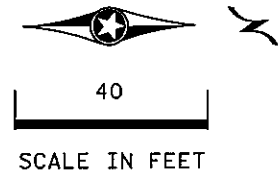
FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
4-1, 4-2, 4-3	○	○	○
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

-ALL SIGNAL INDICATIONS ARE 12"
 -ALL YELLOW AND GREEN SIGNAL INDICATIONS HAVE GLASS LENSES
 -ALL RED SIGNAL INDICATIONS ARE LED
 -ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS

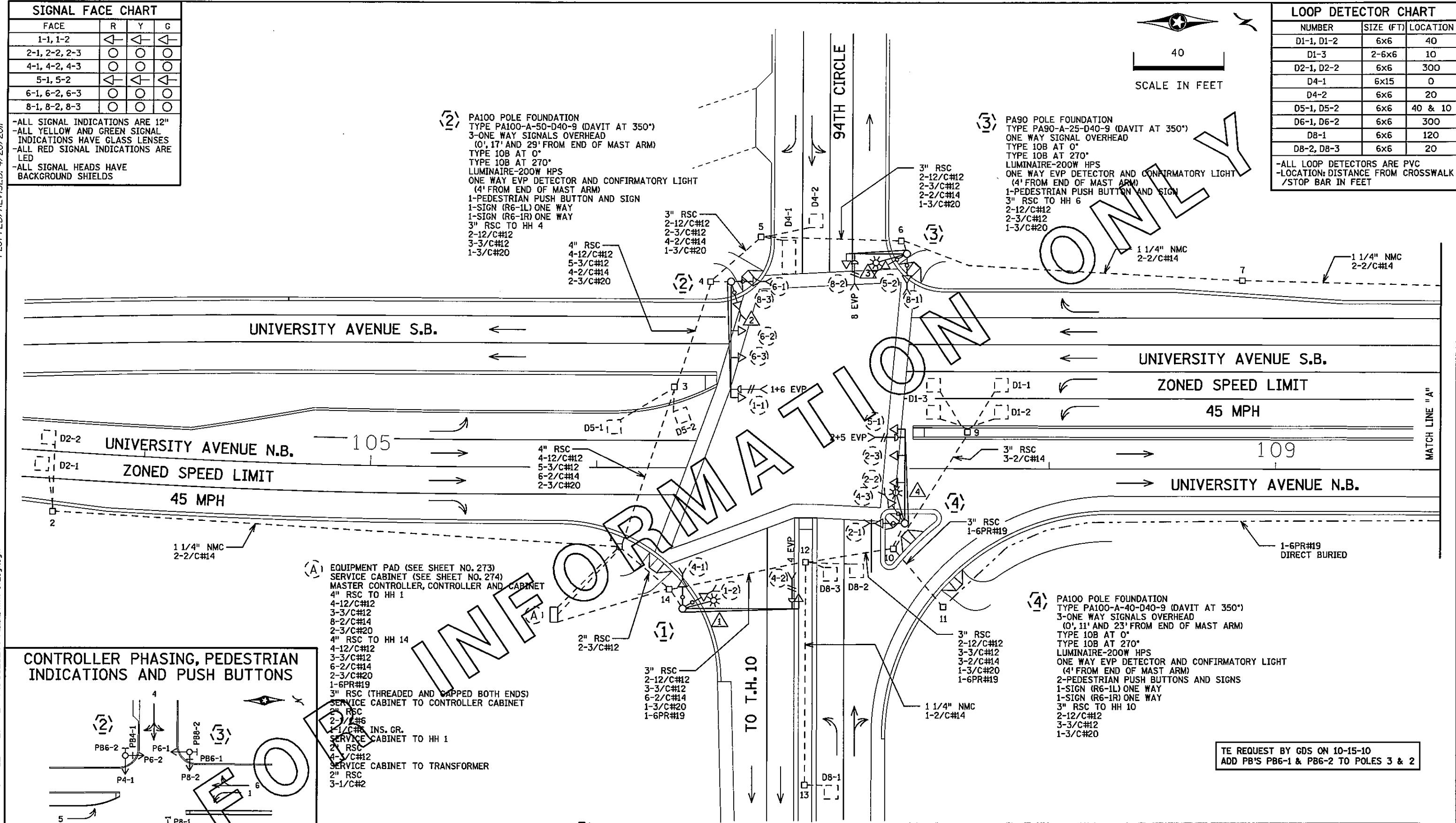
LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION
D1-1, D1-2	6x6	40
D1-3	2-6x6	10
D2-1, D2-2	6x6	300
D4-1	6x15	0
D4-2	6x6	20
D5-1, D5-2	6x6	40 & 10
D6-1, D6-2	6x6	300
D8-1	6x6	120
D8-2, D8-3	6x6	20

-ALL LOOP DETECTORS ARE PVC
 -LOCATION: DISTANCE FROM CROSSWALK /STOP BAR IN FEET

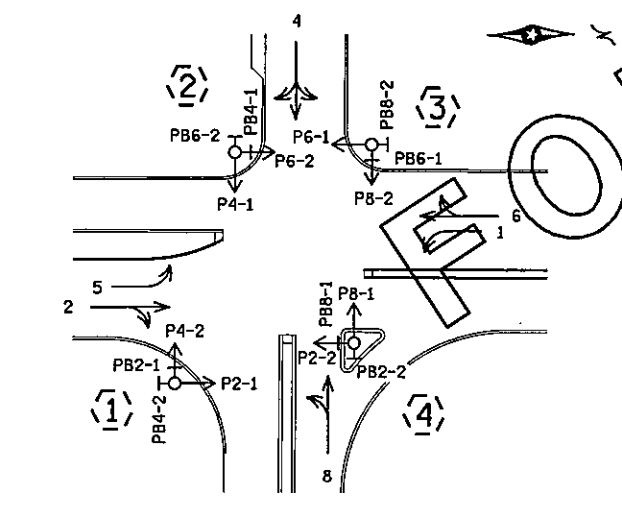


PLOTTED/REVISED: 4/20/2011



INFORMATION ONLY

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

SIGNAL SYSTEM OPERATION

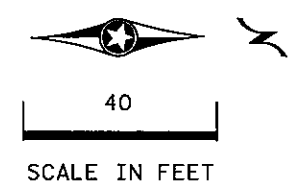
- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 5 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASE 2 SHALL BE ON VEHICLE RECALL.
- PHASE 6 SHALL BE ON PEDESTRIAN RECALL.

(1) PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350")
 ONE WAY SIGNAL OVERHEAD
 TYPE 10B AT 0"
 TYPE 10B AT 270"
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (4' FROM END OF MAST ARM)
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
 3" RSC TO HH 14
 2-12/C#12
 2-3/C#12
 1-3/C#20

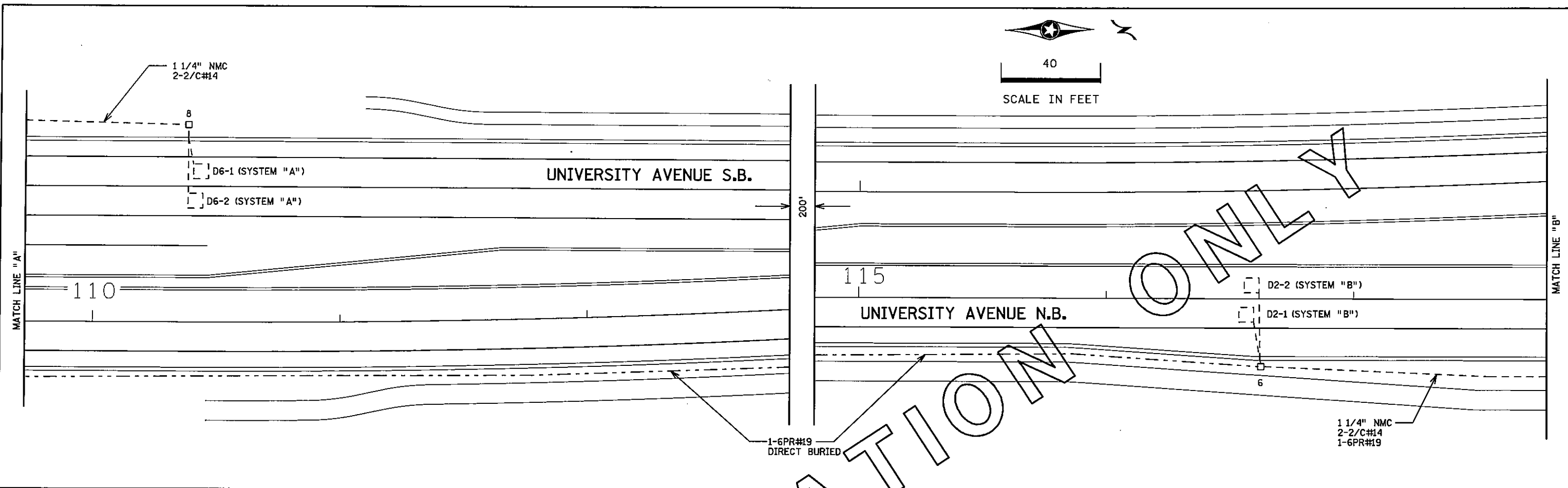
DRAWN BY: DOUG J	REVISED BY: DOUG J	REVISED BY: GDS	AS BUILT BY:
CKD BY: BAF DATE: 12/96	CKD BY: BAF DATE: 1/14/97	CKD BY: EJA DATE: 10-15-10	CKD BY:
SYSTEM ID: 22124 METER ADDRESS: 9401 UNIVERSITY AVE NE		MASTER ID: 22125	
S.P. 114-020-10 (COON RAPIDS)		S.P. 106-020-10 (BLAINE)	
S.P. 02-651-02 (ANOKA COUNTY)			

TE REQUEST BY GDS ON 10-15-10
 ADD PB'S PB6-1 & PB6-2 TO POLES 3 & 2

"FOR INFORMATION ONLY"
 INTERSECTION LAYOUT
 T.H. 10 SOUTH RAMP
 AT CSAH 51 (UNIVERSITY AVE. NE)
 IN BLAINE AND COON RAPIDS
 ANOKA COUNTY



PLOTTED/REVISED: 4/20/2011



FOR INFORMATION ONLY

DISTRICT #: METRO
 PLOT NAME: Info only match lines J
 PATH & FILENAME: IP_PWP-d\382524\PT22124\INFO_sgl.dgn

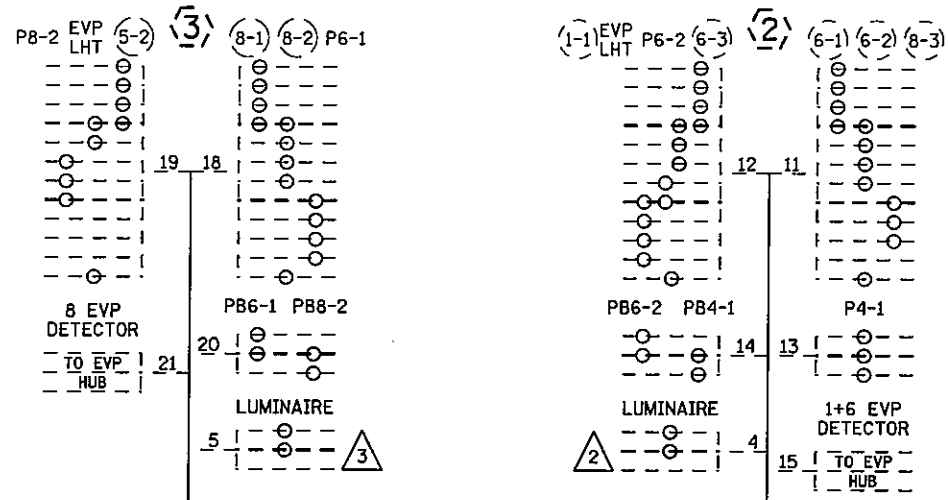
TE REQUEST BY GDS ON 10-15-10
 ADD PB'S PB6-1 & PB6-2 TO POLES 3 & 2

DRAWN BY: DOUG J	REVISED BY: DOUG J	REVISED BY: GDS	AS BUILT BY:
CKD BY: BAF DATE: 12/96	CKD BY: BAF DATE: 1/14/97	CKD BY: EJA DATE: 10-15-10	CKD BY: DATE:
SYSTEM ID: 22124		MASTER ID: 22125	
METER ADDRESS: 9401 UNIVERSITY AVE NE			
S.P. 114-020-10 (COON RAPIDS)			
S.P. 106-020-10 (BLAINE)			
S.P. 02-651-02 (ANOKA COUNTY)			

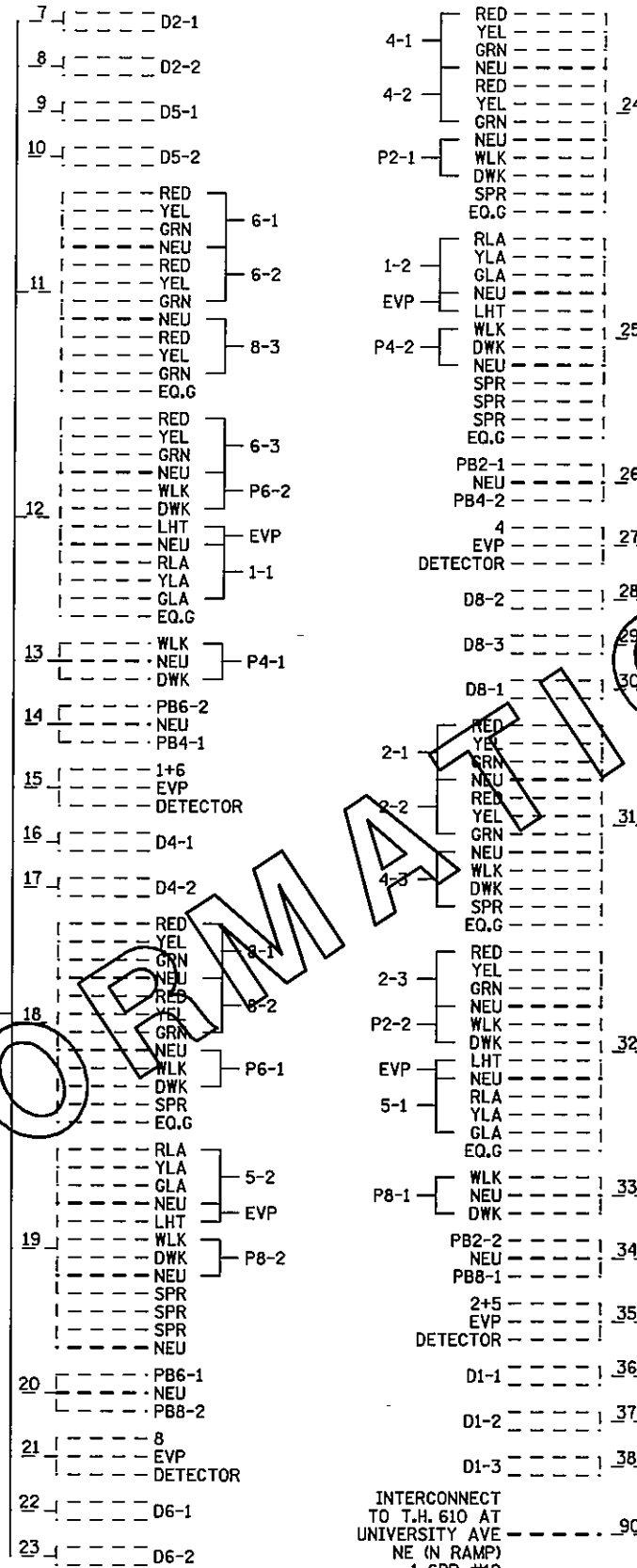
"FOR INFORMATION ONLY"
 MATCH LINE/INTERCONNECT LAYOUT
 T.H. 10 SOUTH RAMP
 AT CSAH 51 (UNIVERSITY AVE. NE)
 IN BLAINE AND COON RAPIDS
 ANOKA COUNTY

PLOTTED/REVISED: 4/20/2011

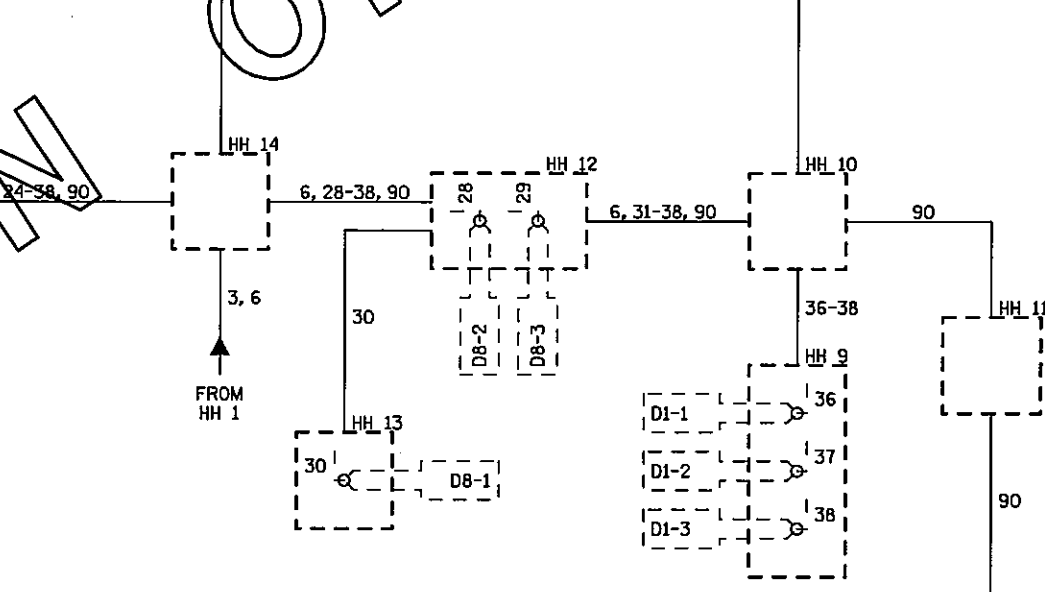
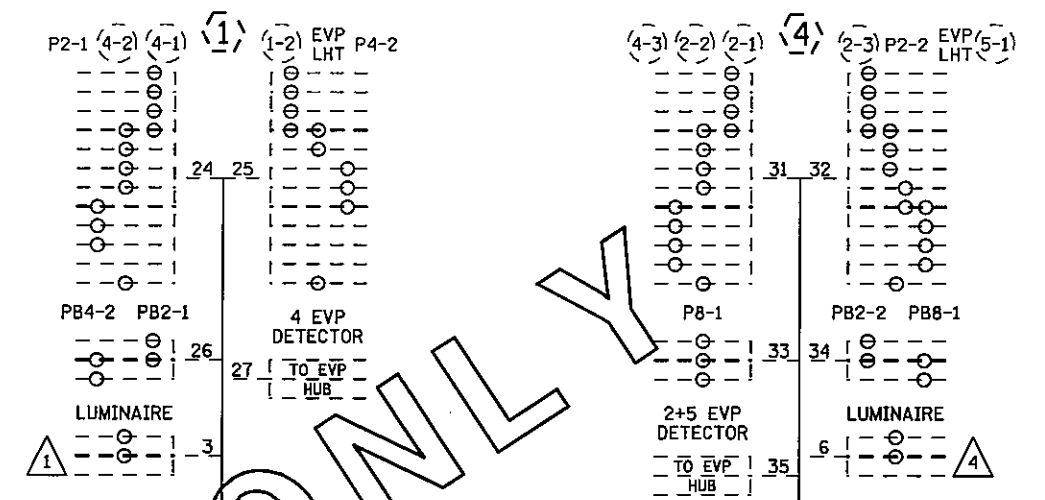
DISTRICT #: METRO
PLOT NAME: Info only wiring J
PATH & FILENAME: IP_PWP-d\382524\PT2212\4\INFO_sgl.dgn



CONTROLLER CABINET



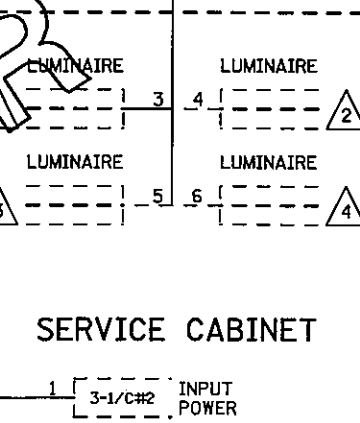
MASTER CONTROLLER



CONDUCTOR COLOR CODE

R	3/C#12	R
O		WH
BL		BLK
WH		
R/BLK	2/C#14	BLK
O/BLK		CR
BL/BLK		
WH/BLK		
BLK	3/C#20	R
BLK/WH		WH
G/BLK		BLK
G		
	2-1/C#4	BLK
	2-1/C#6	WH
R		
O	5/C#12	BL
BL		WH
WH		
G		

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED

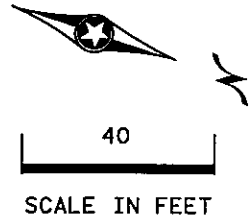


SIGNAL SERVICE 2-1/C#6

TE REQUEST BY GDS ON 10-15-10
ADD PB'S PB6-1 & PB6-2 TO POLES 3 & 2

DRAWN BY: DOUG J	REVISED BY: DOUG J	REVISED BY: GDS	AS BUILT BY:
CKD BY: BAF DATE: 12/96	CKD BY: BAF DATE: 1/14/97	CKD BY: EJA DATE: 10-15-10	CKD BY: DATE:
SYSTEM ID: 22124 MASTER ID: 22125 METER ADDRESS: 9401 UNIVERSITY AVE NE			
S.P. 114-020-10 (COON RAPIDS) S.P. 106-020-10 (BLAINE) S.P. 02-651-02 (ANOKA COUNTY)			

"FOR INFORMATION ONLY"
FIELD WIRING DIAGRAM
T.H. 10 SOUTH RAMP
AT CSAH 51 (UNIVERSITY AVE. NE)
IN BLAINE AND COON RAPIDS
ANOKA COUNTY

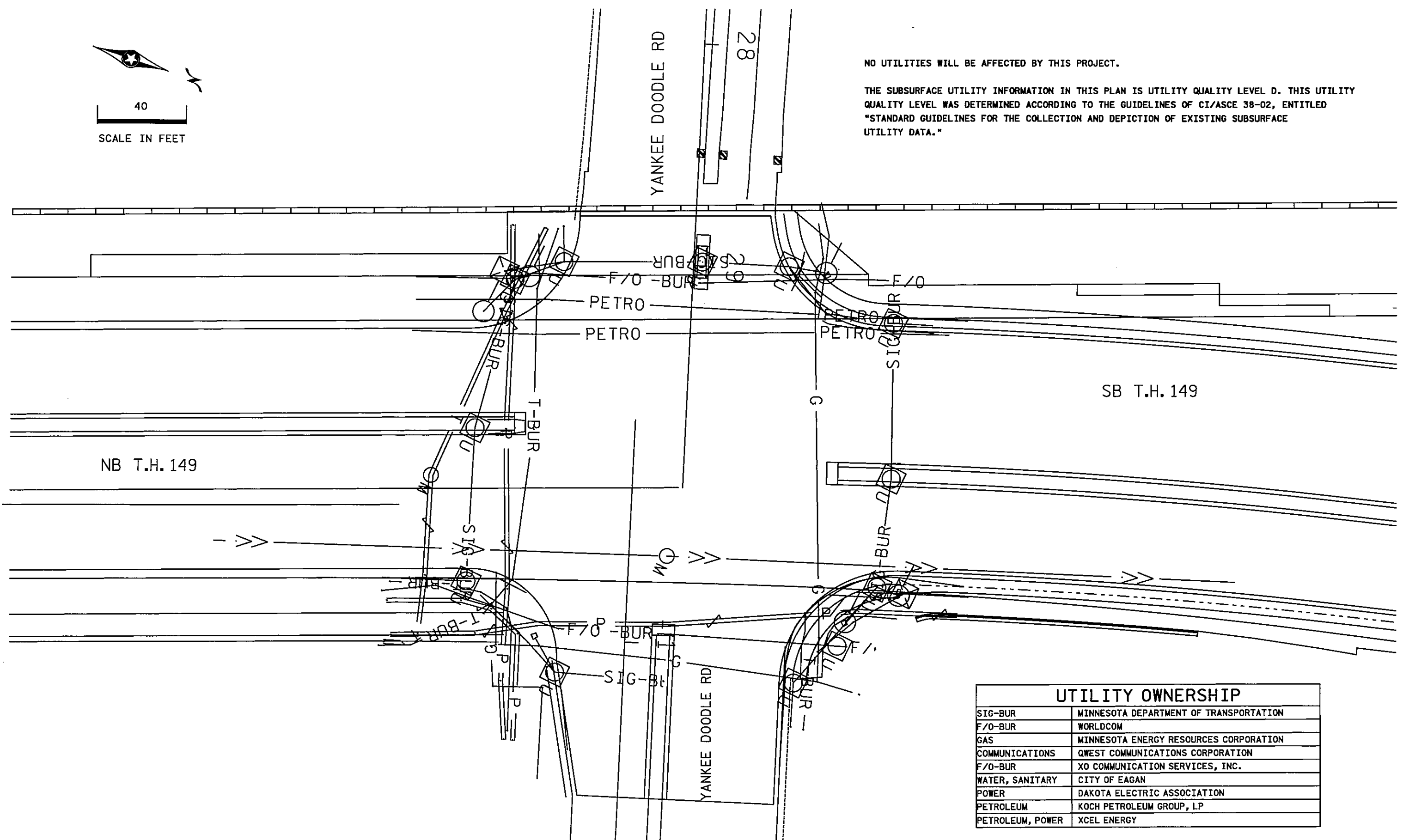


NO UTILITIES WILL BE AFFECTED BY THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

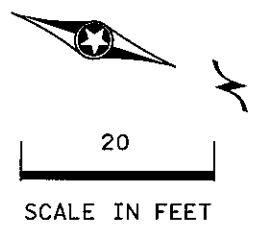
PLOTTED/REVISED BY 2/2011

DISTRICT #METRO
 IPLOT NAME=utilities layout
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UTILITY OWNERSHIP	
SIG-BUR	MINNESOTA DEPARTMENT OF TRANSPORTATION
F/O-BUR	WORLDCOM
GAS	MINNESOTA ENERGY RESOURCES CORPORATION
COMMUNICATIONS	QWEST COMMUNICATIONS CORPORATION
F/O-BUR	XO COMMUNICATION SERVICES, INC.
WATER, SANITARY	CITY OF EAGAN
POWER	DAKOTA ELECTRIC ASSOCIATION
PETROLEUM	KOCH PETROLEUM GROUP, LP
PETROLEUM, POWER	XCEL ENERGY

BY	DATE	REVISIONS	SYSTEM ID: 21946	T.E. 5376	INPLACE TOPOGRAPHY AND UTILITIES PLAN REVISE SIGNAL SYSTEM K T.H. 149 AT YANKEE DOODLE RD/CO RD 28 IN EAGAN, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11	
			METER ADDRESS: 3391 HWY 149			CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863			DATE: 04-21-11
			MASTER ID:	T.E.						
						STATE PROJ. NO. 8825-393	SHEET NO. 112 OF 122 SHEETS			



YANKEE DOODLE RD

INPLACE BITUMINOUS WALK

NW QUAD (3)

SW QUAD (1)

LEGEND	
	INPLACE SIGNAL POLE
	REMOVE CONC. CURB & GUTTER
	REMOVE CONCRETE WALK
	MILL BITUMINOUS SURFACE (2.0'')
	REMOVE BITUMINOUS SURFACING
	INPLACE SIGNAL BASE NO.
	INPLACE SIGNAL PEDESTAL
	INPLACE CATCH BASIN
	REMOVE CROSSWALK
	INPLACE EDGE OF PAVEMENT
	F&I CROSSWALK MARKING

SB T.H. 149

NB T.H. 149

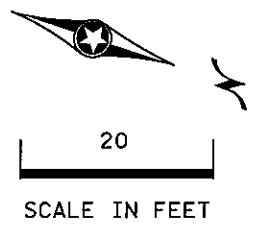
SE QUAD (6)

NE QUAD (4)

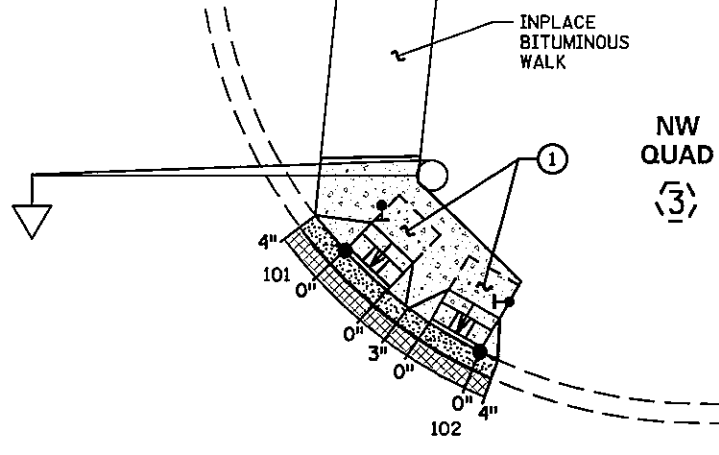
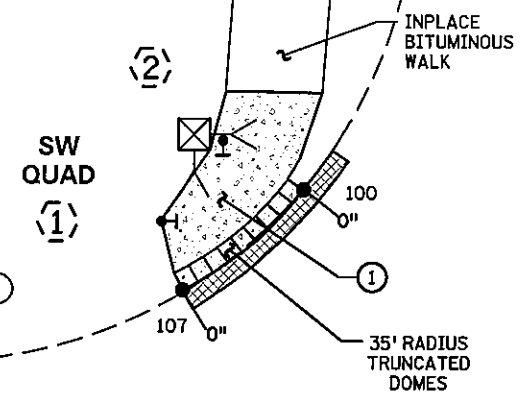
YANKEE DOODLE RD

DISTRICT #METRO
 IPLOT NAME:REMOVAL PLAN
 PATH & FILENAME:P:\PWP:d1382533\T219460 .sgl .dgn
 PLOTTED/REVISED:20/2011

BY	DATE	REVISIONS	SYSTEM ID: 21946	T.E. 5376	REMOVAL AND PAVEMENT MARKING PLAN REVISE SIGNAL SYSTEM K T.H. 149 AT YANKEE DOODLE RD/CO RD 28 IN EAGAN, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 3391 HWY 149			CERTIFIED BY: <i>Michael P. Suber</i>	LIC. NO. 19863	DATE: 04-21-11	
			MASTER ID:	T.E.		STATE PROJ. NO. 8825-393	SHEET NO. 113 OF 122 SHEETS		



YANKEE DOODLE RD

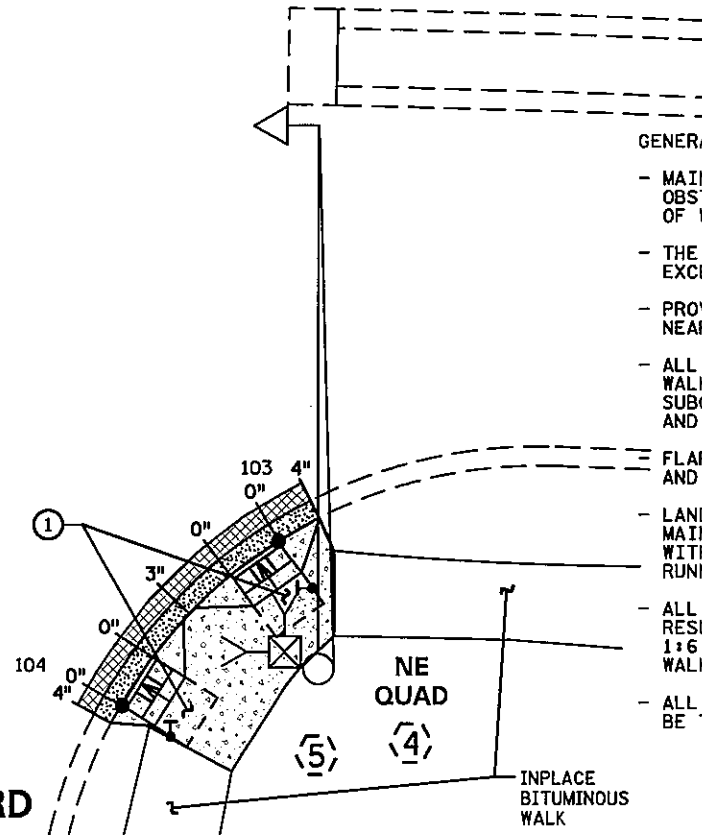
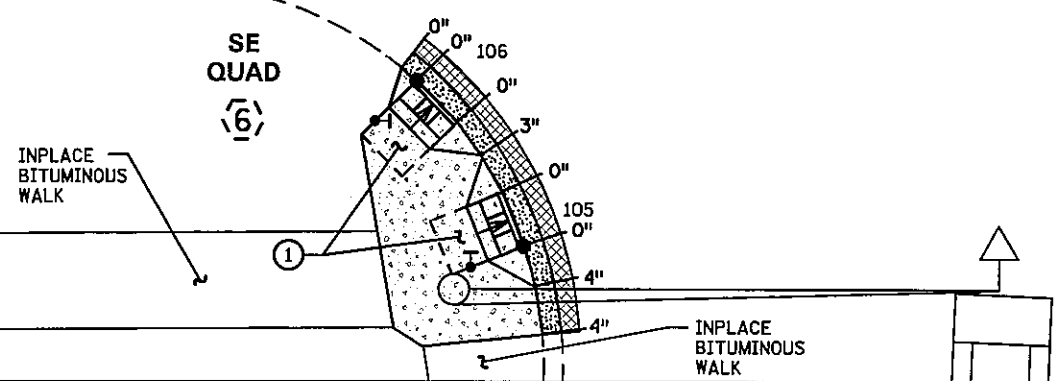


SB T.H. 149

- INPLACE SIGNAL POLE
- CONSTRUCT PEDESTRIAN CURB RAMP (SEE STD PLATE 7036)
- PEDESTRIAN PUSH BUTTON STATION
- INPLACE SIGNAL BASE NO.
- INPLACE SIGNAL PEDESTAL
- EDGE OF INPLACE SURFACING
- CURB HEIGHT AT INDICATED LOCATION
- INTERSECTION POINT OF PEDESTRIAN RAMP EDGE AT FACE OF CURB
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- 6" CONCRETE WALK
- 2" BITUMINOUS OVERLAY, 2' WIDE
- INDICATES 4' LONG PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 0.020 FT/FT MINIMUM AND 0.083 FT/FT MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 0.020 FT/FT

DETAIL POINTS		
POINT NO.	X	Y
100	551871.1505	231926.5748
101	551822.1063	232028.3806
102	551825.4415	232045.5381
103	551938.3103	232100.3773
104	551960.7628	232093.3005
105	552009.1061	231993.7052
106	551998.5937	231976.1991
107	551886.0623	231919.8910

NB T.H. 149



- GENERAL NOTES:**
- MAINTAIN A MINIMUM 4' WIDE PEDESTRIAN ACCESS ROUTE OBSTRUCTION TO OBSTRUCTION AND/OR OBSTRUCTION TO EDGE OF WALK.
 - THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL NOT EXCEED 0.020 FT/FT.
 - PROVIDE A SAW CUT AT ALL REMOVAL LIMITS OR REMOVE TO NEAREST JOINT.
 - ALL CURB RAMPS AND LANDING AREAS SHALL BE 6" CONCRETE WALK ON 3" CLASS 5 AGGREGATE BASE. ALL EXCAVATION, SUBGRADE PREPARATION, AGGREGATE BASE, COMMON BORROW, AND TOPSOIL BORROW SHALL BE INCIDENTAL.
 - FLARES SHALL BE 2' LONG ADJACENT TO NON-WALKABLE SURFACES AND 5' LONG ADJACENT TO WALKABLE SURFACES.
 - LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH CROSS SLOPE THAT DOES NOT EXCEED 0.020 FT/FT AND A RUNNING SLOPE THAT DOES NOT EXCEED 0.050 FT/FT.
 - ALL DISTURBED AREAS IN A CUT SECTION THAT ARE NOT OTHERWISE RESURFACED SHALL BE GRADED FLUSH WITH NEW SURFACING AT A 1:6 SLOPE FOR A DISTANCE OF UP TO 5 FEET FROM THE EDGE OF WALK TO MATCH SURROUNDING CONTOURS.
 - ALL DISTURBED AREAS SHALL HAVE 4" MINIMUM TOPSOIL AND SHALL BE TREATED AS DETAILED ON NOTE (8) ON SHEET 2.
 - ① CONSTRUCT 4'X4' MINIMUM PEDESTRIAN LANDING AREAS AT A MAXIMUM SLOPE OF 0.02 FT/FT FOR DRAINAGE.

YANKEE DOODLE RD

DISTRICT #METRO
 IPLOT NAME:20 scale ped ramps detail
 PATH & FILENAME:IP.PWP:d13825333\T21946D_sgl.dgn
 PLOTTED/REVISED:04/28/2011

BY	DATE	REVISIONS

SYSTEM ID: 21946 T.E. 5376
 METER ADDRESS: 3391 HWY 149
 MASTER ID: T.E.

PEDESTRIAN CURB RAMP DETAILS
 REVISE SIGNAL SYSTEM K
 T.H. 149 AT YANKEE DOODLE RD/CO RD 28
 IN EAGAN, DAKOTA COUNTY

S.A.P. NO. _____
 CERTIFIED BY *Michael P. Lubinsky* LIC. NO. 19863 DATE: 04-21-11
 STATE PROJ. NO. 8825-393 SHEET NO. 114 OF 122 SHEETS
 DRAWN BY: SJK CKD BY: BTJ DATE: 04-21-11

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: Intersection layout
PATH & FILENAME: IP_PWP-df382533E2Dseed04-AICDM.dgn

LOOP DETECTOR CHART

DESIGNATION	SIZE (FEET)	LOCATION
D1-1	2-6X6	40'
D1-2	2-6X6	10'
D2-1, D2-2	6X6	475'
D3-1	2-6X6	20', 50'
D3-2	2-6X6	5', 35'
D4-1, D4-2	6X6	285'
D4-3, D4-4	6X6	76'
D4-5	2-6X6	0', 15'
D4-6, D4-7	2-6X6	5', 20'
D5-1	2-6X6	40'
D5-2	2-6X6	10'
D6-1, D6-2	6X6	475'
D7-1	2-6X6	67', 82'
D7-2	2-6X6	5', 20'
D8-1, D8-2	6X6	250'
D8-3	2-6X6	0', 15'
D8-4, D8-5	2-6X6	5', 20'

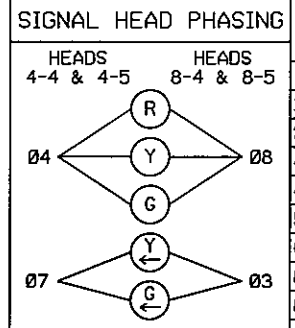
-ALL LOOPS DETECTORS SHALL BE 6'X6' NMC UNLESS OTHERWISE SPECIFIED.
-LOCATION: DISTANCE FROM CROSSWALK/STOP LINE IN FEET.

F&I: PED PB STA
1-APS PB AND SIGN (RT ARROW) (PB6-2)
EXTEND INTO HH 21:
2" CONDUIT
1-2/C*14

F&I: PED PB STA
1-APS PB AND SIGN (LT ARROW) (PB4-1)
EXTEND INTO HH 21:
2" CONDUIT
1-2/C*14

F&I: PED PB STA
1-APS PB AND SIGN (LT ARROW) (PB6-1)
EXTEND INTO HH 7:
2" CONDUIT
1-2/C*14

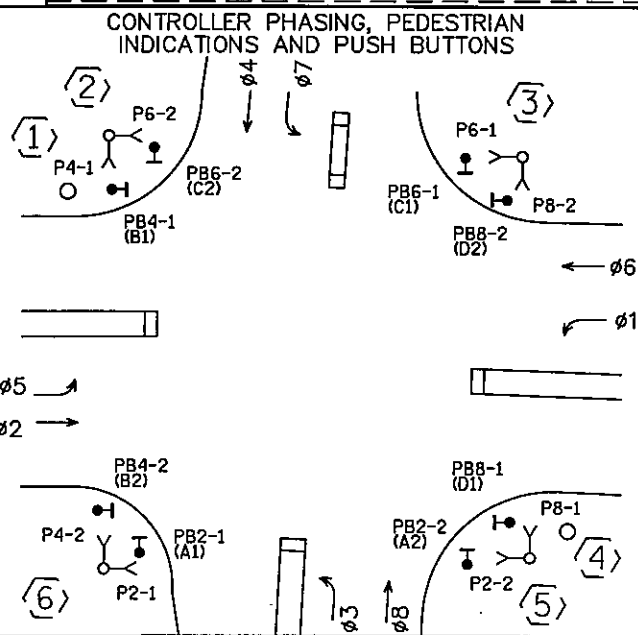
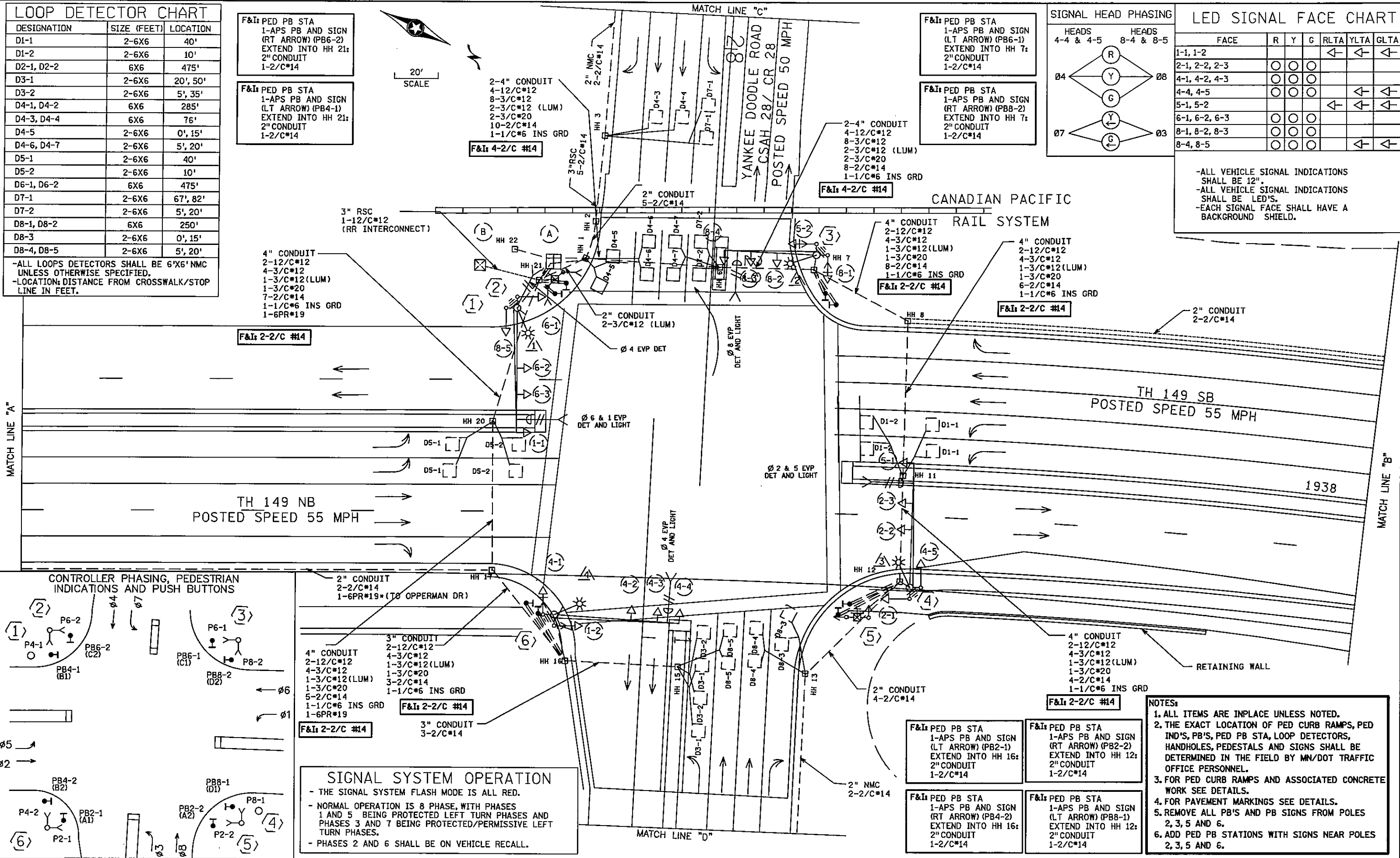
F&I: PED PB STA
1-APS PB AND SIGN (RT ARROW) (PB8-2)
EXTEND INTO HH 7:
2" CONDUIT
1-2/C*14



LED SIGNAL FACE CHART

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	○	○	○			
4-1, 4-2, 4-3	○	○	○			
4-4, 4-5	○	○	○	←	←	←
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	○	○	○			
8-1, 8-2, 8-3	○	○	○			
8-4, 8-5	○	○	○	←	←	←

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12".
-ALL VEHICLE SIGNAL INDICATIONS SHALL BE LED'S.
-EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.



SIGNAL SYSTEM OPERATION

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

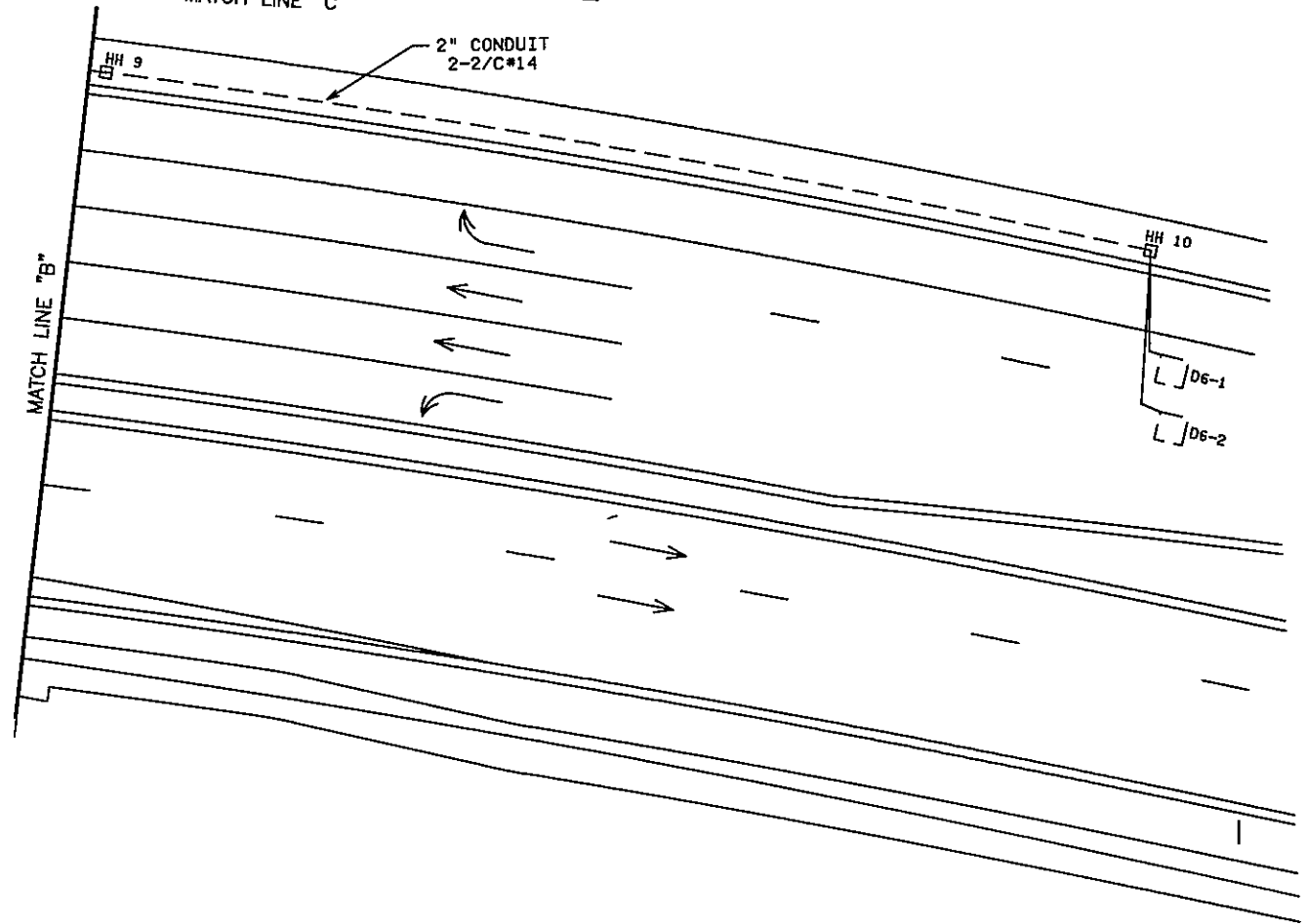
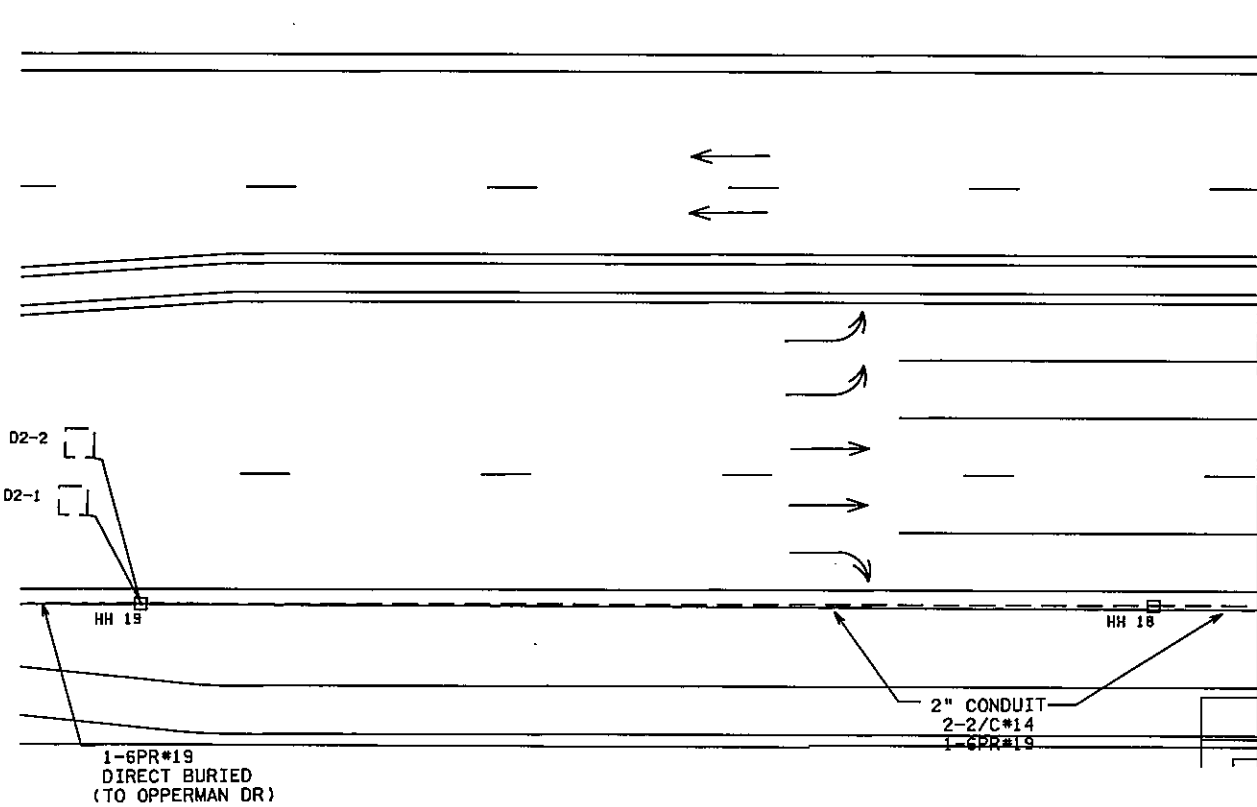
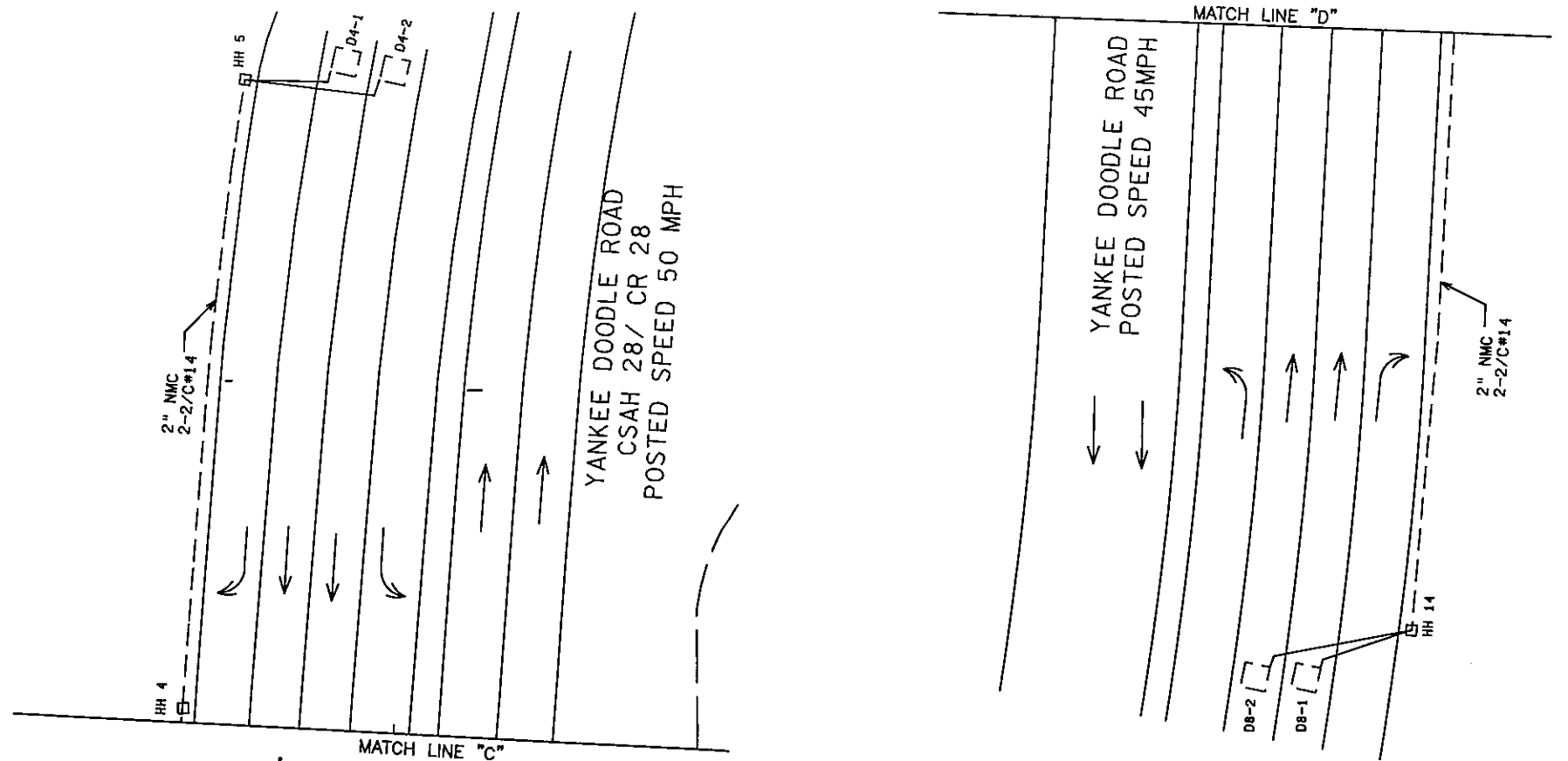
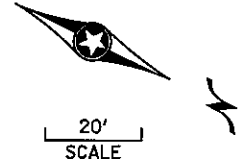
NOTES:

1. ALL ITEMS ARE IN PLACE UNLESS NOTED.
2. THE EXACT LOCATION OF PED CURB RAMPS, PED IND'S, PB'S, PED PB STA, LOOP DETECTORS, HANDHOLES, PEDESTALS AND SIGNS SHALL BE DETERMINED IN THE FIELD BY MN/DOT TRAFFIC OFFICE PERSONNEL.
3. FOR PED CURB RAMPS AND ASSOCIATED CONCRETE WORK SEE DETAILS.
4. FOR PAVEMENT MARKINGS SEE DETAILS.
5. REMOVE ALL PB'S AND PB SIGNS FROM POLES 2, 3, 5 AND 6.
6. ADD PED PB STATIONS WITH SIGNS NEAR POLES 2, 3, 5 AND 6.

BY	DATE	REVISIONS	SYSTEM ID: 21946	T.E. 5376	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 3391 HWY 149		CERTIFIED BY: <i>Michael P. Lubinsky</i>			LIC. NO. 19863
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 115 OF 122 SHEETS	
INTERSECTION LAYOUT REVISE SIGNAL SYSTEM K T.H. 149 AT YANKEE DOODLE RD/CO RD 28 IN EGAN, DAKOTA COUNTY								

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
 PLOT NAME: match lines
 PATH & FILENAME: IP_PWP-d\382533\E2D\see04-AICDM.dgn



BY	DATE	REVISIONS	SYSTEM ID: 21946	T.E. 5376	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 3391 HWY 149		CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863	DATE: 04-21-11	
			MASTER ID:	T.E.	STATE PROJ. NO. 8825-393		SHEET NO. 116 OF 122 SHEETS	

MATCH LINES
 REVISE SIGNAL SYSTEM K
 AT YANKEE DOODLE RD/CO RD 28
 IN EAGAN, DAKOTA COUNTY

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: pole notes
PATH & FILENAME: IP_PWP-df1382533VE2Dsee04-AIICDM.dgn

① PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
 3- ONE WAY SIGNAL OVERHEAD AT 0 FT, 17 FT AND 29 FT
 ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (POLE MOUNTED)
 2-TYPE 10A POLE MOUNTED AT 90° AND 180°
 1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
 LUMINAIRE 250-HPS
 TYPE D SIGN (D-5)
 EXTEND INTO HH 21
 3" CONDUIT
 2-12/C#12
 1-3/C#12
 1-3/C#12(LUM)
 2-3/C#20
 2-1/C#6 INS GRD

④ PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350)
 AT 17 FT AND 29 FT
 1-ONE-WAY SIGNAL OVERHEAD AT 0 FT, 17 FT AND 29 FT
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-TYPE 10A POLE MOUNTED AT 90 AND 180
 LUMINAIRE 250-HPS
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 EXTEND INTO HH 12
 3" CONDUIT
 2-12/C#12
 1-3/C#12
 1-3/C#12(LUM)
 1-3/C#20
 1-1/C#6 INS GRD

⑥ PA100 POLE FOUNDATION
 TYPE PA100-55-A-D40-12 (DAVIT AT 350°)
 3-ONE-WAY SIGNALS OVERHEAD AT
 0 FT, 11 FT AND 23 FT
 2-TYPE 10B POLE MOUNTED AT 90° AND 180°
 2-PEDESTRIAN INDICATIONS AT 90° AND 180°
 WITH COUNT DOWN TIMERS (FOR USE IN 10B MOUNTS)
 ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT

REMOVE: 2-PED PUSH BUTTONS AND SIGNS

1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 1-R10-12 SIGN (ADJ. TO HEAD 4-4)
 LUMINAIRE - 250HPS
 EXTEND INTO HH 16
 3" CONDUIT
 2-12/C#12
 4-3/C#12
 1-3/C#12(LUM)
 1-3/C#20
 1-1/C#6 INS GRD

Ⓐ EQUIPMENT PAD
 CONTROLLER AND CABINET
 SIGNAL SERVICE CABINET
 CONTROLLER TO HH 1
 2-4" CONDUIT
 4-12/C#12
 8-3/C#12
 2-3/C#20
 17-2/C#14
 1-1/C#6 INS GRD

CONTROLLER TO SERVICE CABINET
 2" CONDUIT
 2-1/C#6
 1-1/C#6 INS GRD
 SERVICE CABINET TO HH 1
 2" CONDUIT
 4-3/C#14 (LUM)
 SERVICE CABINET TO SOP VIA HH 22
 2" CONDUIT
 3-1/C#2

F&I: 4-2/C #14

CONTROLLER TO HH 21
 2-4" CONDUIT
 4-12/C#12
 8-3/C#12
 3-3/C#20
 7-2/C#14
 1-1/C#6 INS GRD
 1-6PR#19
 1-12/C#12(RR INTERCONNECT)

F&I: 4-2/C #14

② PEDESTAL FOUNDATION
 10' SIGNAL PEDESTAL & BASE
 2-PEDESTAL MOUNTED ONE WAY PEDESTRIAN
 INDICATIONS AT 45 AND 225 WITH COUNT DOWN TIMERS

REMOVE: 2-PED PUSH BUTTON AND SIGNS

1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
 1-R10-4b (L) SIGN
 EXTEND TO HH 21
 3" CONDUIT
 3-3/C#12
 2-1/C#6 INS GRD

⑤ PEDESTAL FOUNDATION
 10' SIGNAL PEDESTAL & BASE
 2-PEDESTAL MOUNTED ONE WAY PEDESTRIAN
 INDICATIONS AT 45 AND 225 WITH COUNT DOWN TIMERS

REMOVE: 2-PED PUSH BUTTON AND SIGNS

1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
 EXTEND TO HH 12
 3" CONDUIT
 3-3/C#12
 2-1/C#6 INS GRD

③ PA100 POLE FOUNDATION
 TYPE PA100-A-40-D40-9 (DAVIT AT 350 DEG)
 AT 11 FT AND 23 FT
 3-ONE-WAY SIGNAL OVERHEAD AT 0 FT, 11 FT AND 23 FT
 2-TYPE 10B POLE MOUNTED AT 90 AND 180
 2-PEDESTRIAN INDICATIONS WITH COUNT DOWN TIMERS

REMOVE: 2-PED PUSH BUTTONS AND SIGNS

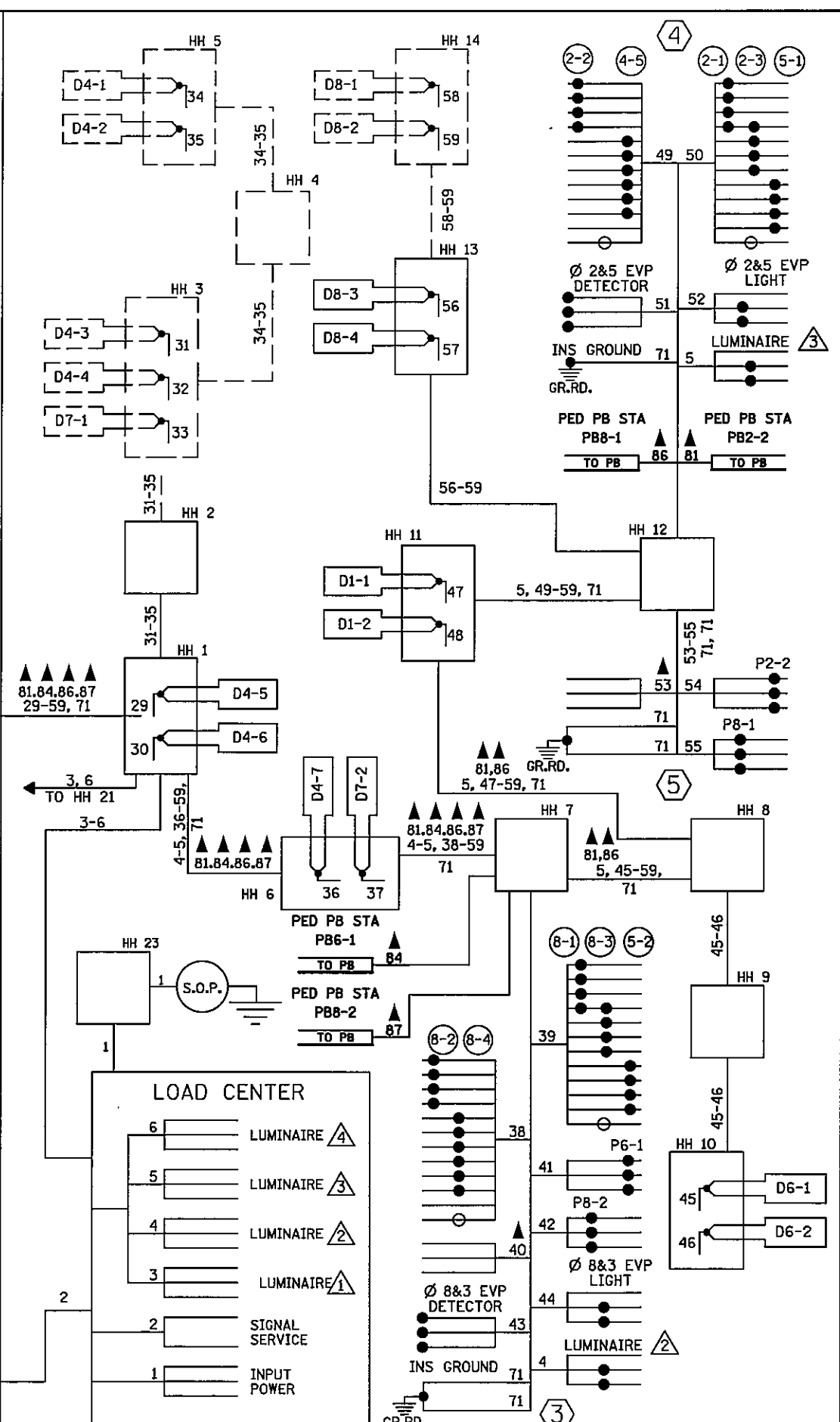
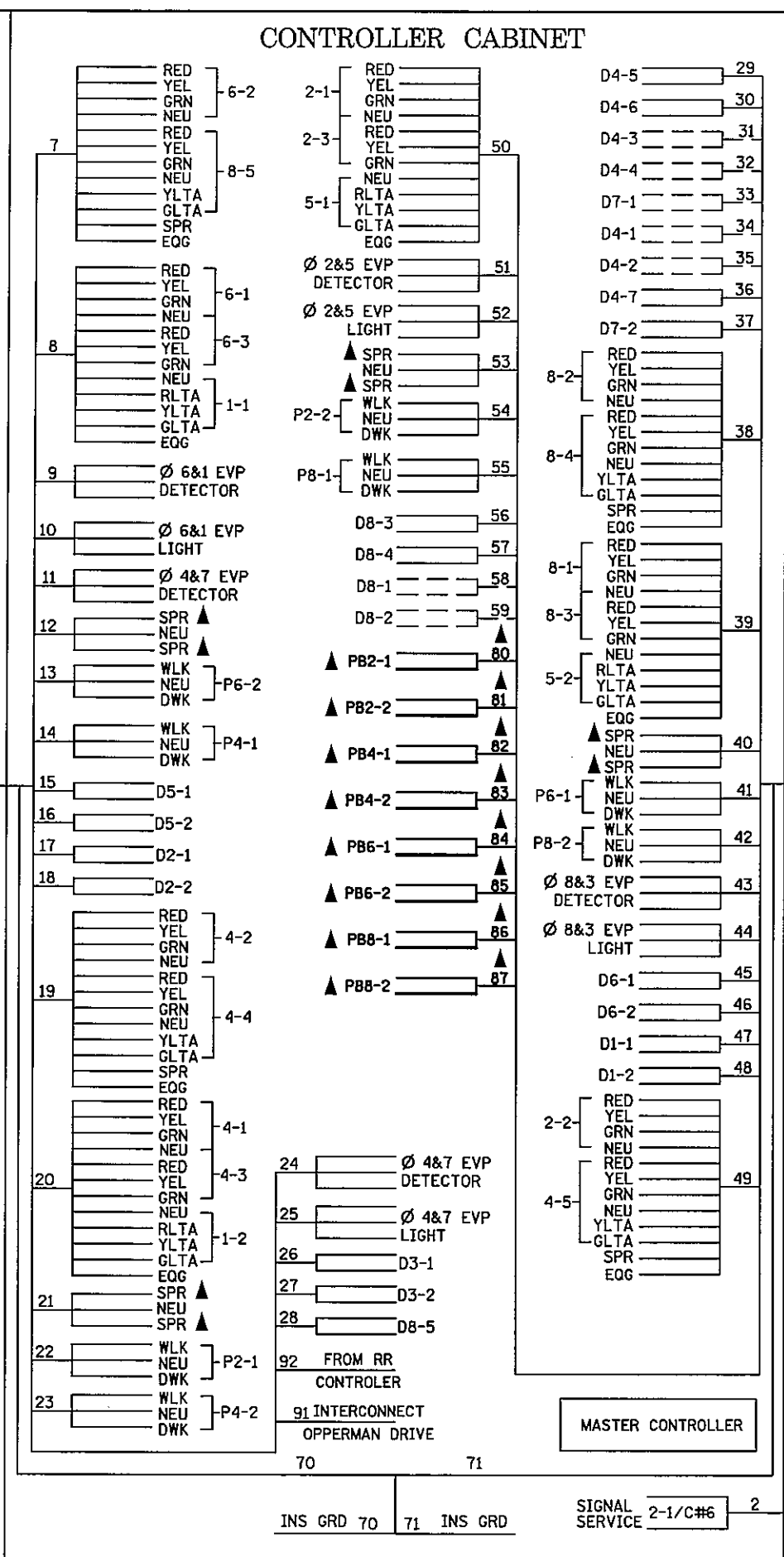
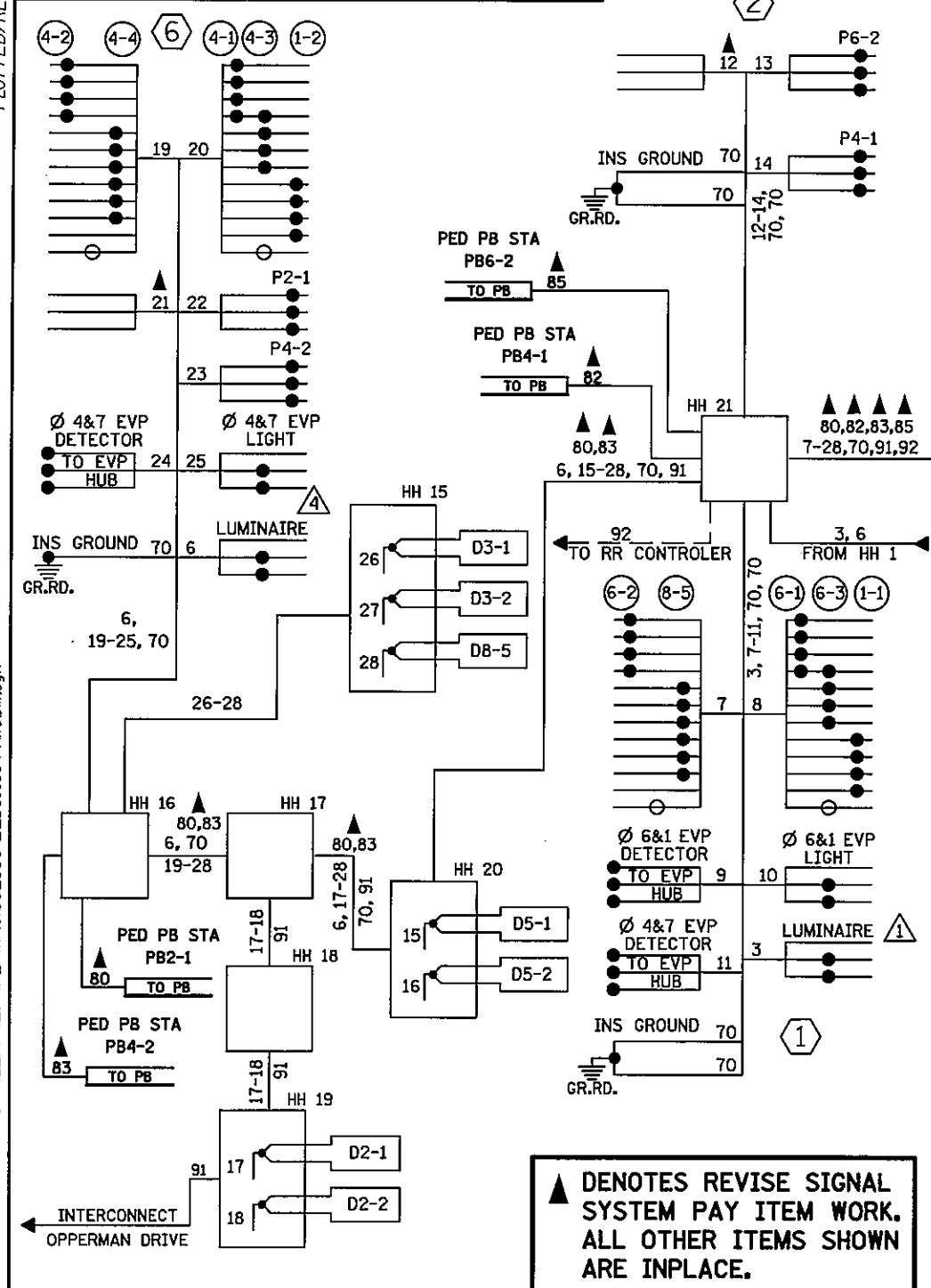
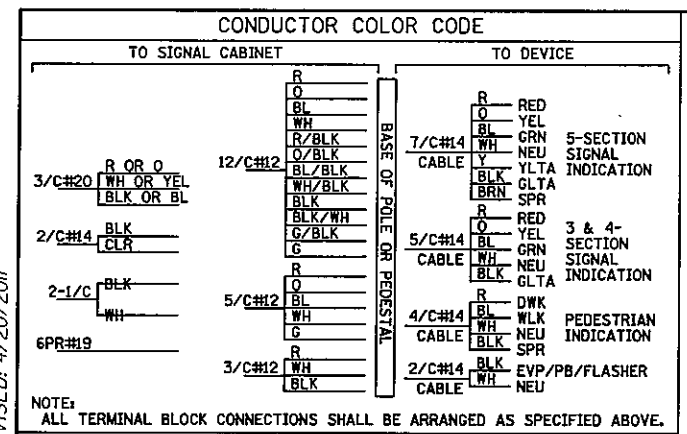
LUMINAIRE 250-HPS
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 1-R10-12 SIGN (ADJ. TO HEAD 8-4)
 EXTEND INTO HH 7
 3" CONDUIT
 2-12/C#12
 4-3/C#12
 1-3/C#12(LUM)
 1-3/C#20
 2-1/C#6 INS GRD

Ⓑ 2" RSC RISER AND WEATHERHEAD
 3-1/C#2
 EXTEND TO HH 22
 2" CONDUIT
 3-1/C#2

BY	DATE	REVISIONS	SYSTEM ID: 21946	T.E. 5376	POLE NOTES	S.A.P. NO.	DRAWN BY: SJK	CKD BY: BTJ	DATE: 04-21-11
			METER ADDRESS: 3391 HWY 149		REVISE SIGNAL SYSTEM K	CERTIFIED BY: <i>Michael P. Lubinsky</i>			04-21-11
			MASTER ID:	T.E.	T.H. 149 AT YANKEE DOODLE RD/CO RD 28 IN EAGAN, DAKOTA COUNTY	STATE PROJ. NO. 8825-393			
								SHEET NO. 117 OF 122 SHEETS	

PLOTTED/REVISED: 4/20/2011

DISTRICT #: METRO
PLOT NAME: wiring diagram
PATH & FILENAME: IP_PWP-df1382533VE2Dseed04-AICDM.dgn



PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
PROJECT NAME: Info only layout
PATH & FILENAME: IP_FWP-d1382533VE2Dseed04-AIICDM.dgn

LOOP DETECTOR CHART

DESIGNATION	SIZE (FEET)	LOCATION
D1-1	2-6X6	40'
D1-2	2-6X6	10'
D2-1, D2-2	6X6	475'
D3-1	2-6X6	20', 50'
D3-2	2-6X6	5', 35'
D4-1, D4-2	6X6	285'
D4-3, D4-4	6X6	76'
D4-5	2-6X6	0', 15'
D4-6, D4-7	2-6X6	5', 20'
D5-1	2-6X6	40'
D5-2	2-6X6	10'
D6-1, D6-2	6X6	475'
D7-1	2-6X6	67', 82'
D7-2	2-6X6	5', 20'
D8-1, D8-2	6X6	250'
D8-3	2-6X6	0', 15'
D8-4, D8-5	2-6X6	5', 20'

-ALL LOOPS DETECTORS SHALL BE 6'X6' NMC UNLESS OTHERWISE SPECIFIED.
-LOCATION: DISTANCE FROM CROSSWALK/STOP LINE IN FEET.

2-4" CONDUIT
4-12/C*12
8-3/C*12
2-3/C*12 (LUM)
2-3/C*20
10-2/C*14
1-1/C*6 INS GRD

4" CONDUIT
2-12/C*12
4-3/C*12
1-3/C*12(LUM)
1-3/C*20
7-2/C*14
1-1/C*6 INS GRD
1-6PR*19

2" CONDUIT
2-2/C*14
1-6PR*19*(TO OPERMAN DR)

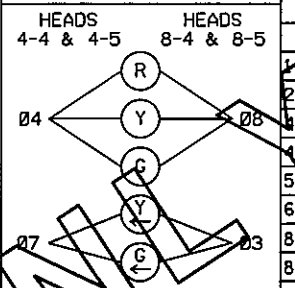
4" CONDUIT
2-12/C*12
4-3/C*12
1-3/C*12(LUM)
1-3/C*20
5-2/C*14
1-1/C*6 INS GRD
1-6PR*19

3" CONDUIT
3-2/C*14

SIGNAL SYSTEM OPERATION

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

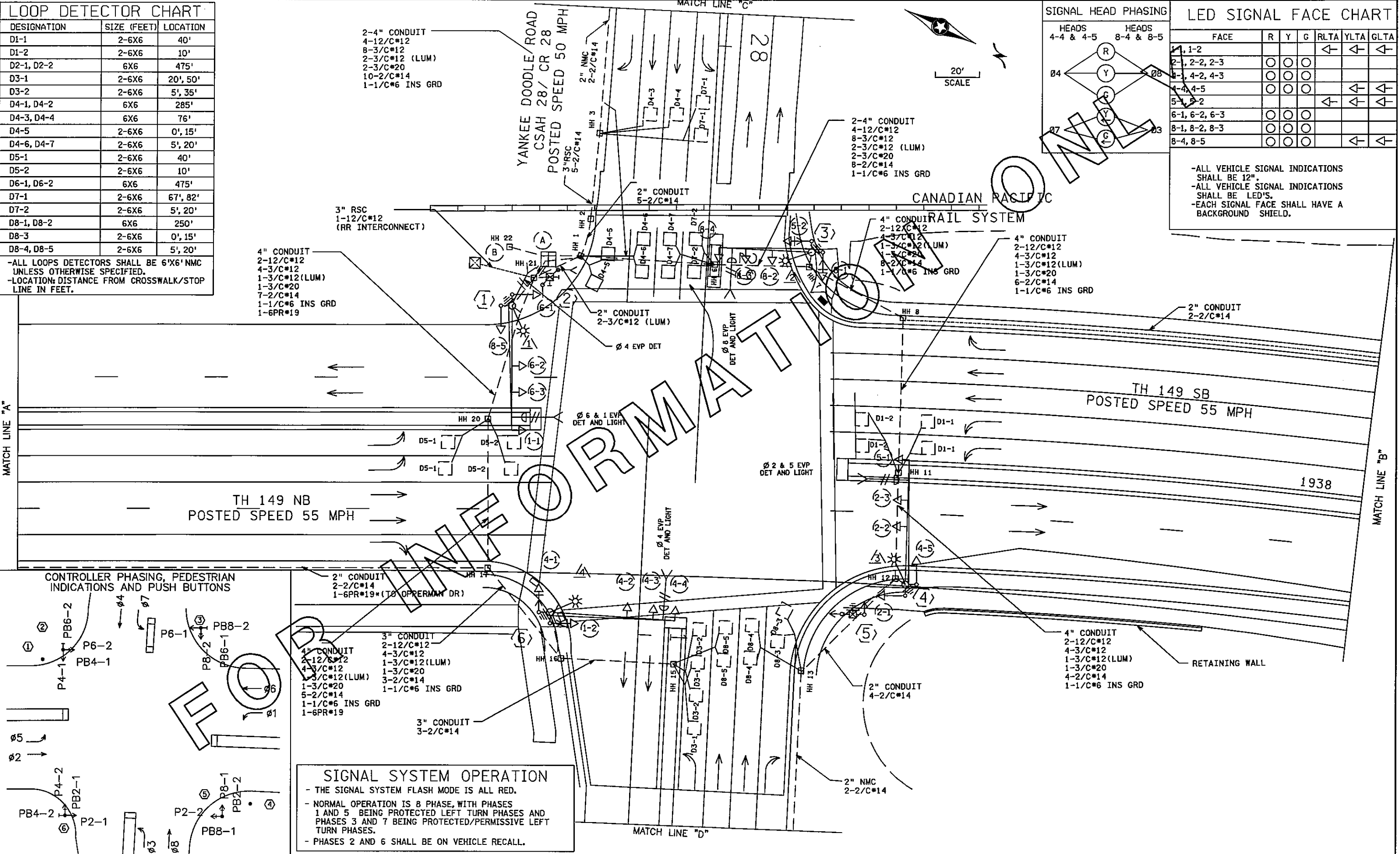
SIGNAL HEAD PHASING



LED SIGNAL FACE CHART

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	○	○	○			
3-1, 4-2, 4-3	○	○	○			
4-4, 4-5	○	○	○	←	←	←
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	○	○	○			
8-1, 8-2, 8-3	○	○	○			
8-4, 8-5	○	○	○	←	←	←

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12"
-ALL VEHICLE SIGNAL INDICATIONS SHALL BE LED'S.
-EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.



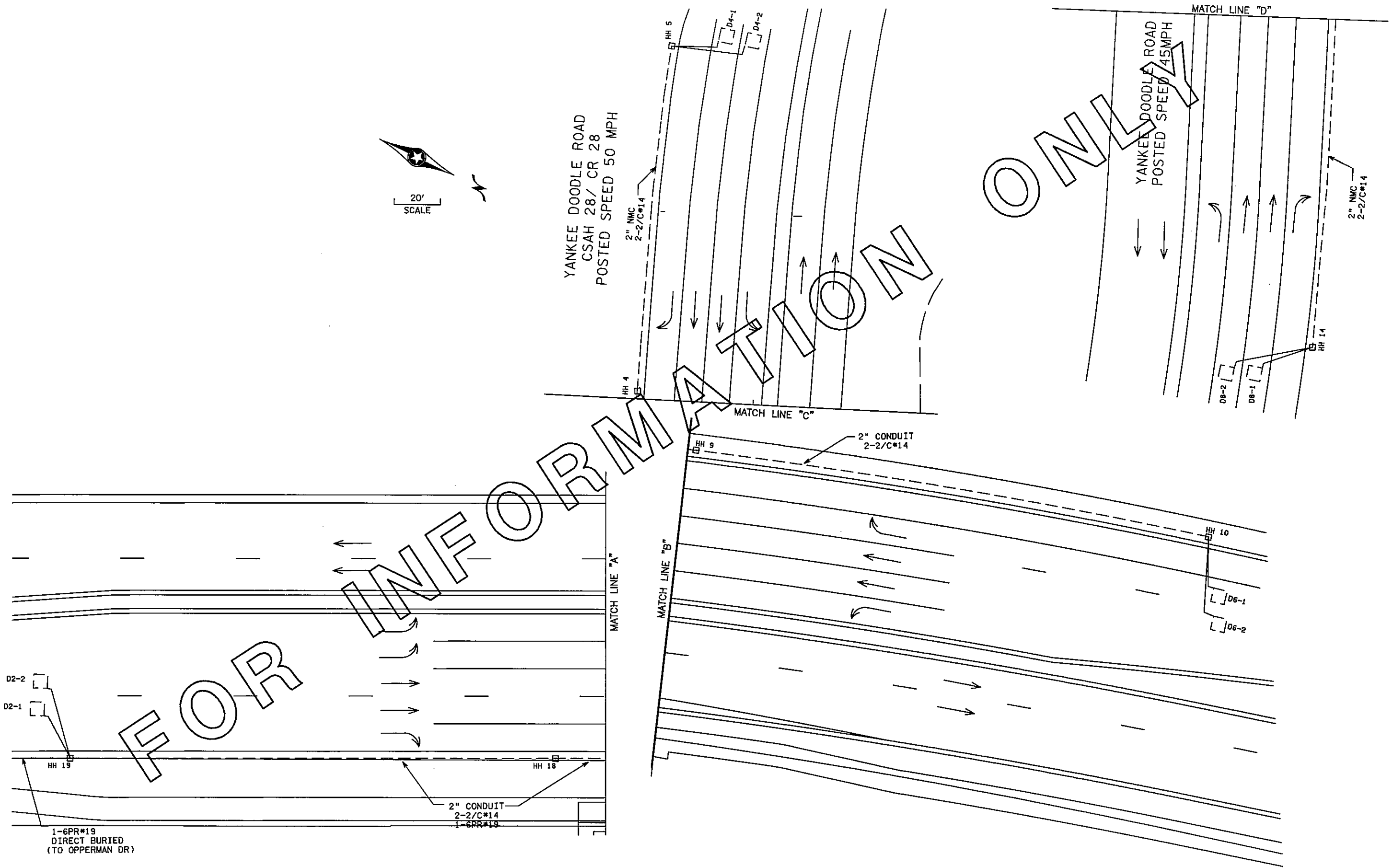
BY	DATE	REVISIONS

SYSTEM ID: 21946 T.E. 5376
METER ADDRESS: 3391 HWY 149
MASTER ID: T.E.

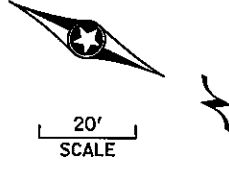
"FOR INFORMATION ONLY"
INTERSECTION LAYOUT
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 149 AT YANKEE DOODLE RD/CO RD 28
IN EAGAN, DAKOTA COUNTY

STATE PROJ. NO. 8825-393

SHEET NO. 119 OF 122 SHEETS



FOR INFORMATION ONLY



BY	DATE	REVISIONS

SYSTEM ID: 21946 T.E. 5376
 METER ADDRESS: 3391 HWY 149
 MASTER ID: T.E.

"FOR INFORMATION ONLY"
 MATCH LINES
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 149 AT YANKEE DOODLE RD/CO RD 28
 IN EAGAN, DAKOTA COUNTY

PLOTTED/REVISED: 4/27/2011

DISTRICT #: METRO
PILOT NAME: Info only pole notes
PATH & FILENAME: IP_PWP-d1382533VE2Dsee04-AICDM.dgn

① PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
 3- ONE WAY SIGNAL OVERHEAD AT 0 FT, 17 FT AND 29 FT
 ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (POLE MOUNTED)
 2-TYPE 10A POLE MOUNTED AT 90° AND 180°
 1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
 LUMINAIRE 250-HPS
 TYPE D SIGN (D-5)
 EXTEND INTO HH 21
 3" CONDUIT
 2-12/C#12
 1-3/C#12
 1-3/C#12(LUM)
 2-3/C#20
 1-3/C#20

④ PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350)
 AT 17 FT AND 29 FT
 1-ONE-WAY SIGNAL OVERHEAD AT 0 FT, 17 FT AND 29 FT
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-TYPE 10A POLE MOUNTED AT 90 AND 180
 LUMINAIRE 250-HPS
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 EXTEND INTO HH 12
 3" CONDUIT
 2-12/C#12
 1-3/C#12
 1-3/C#12(LUM)
 1-3/C#20
 1-1/C#6 INS GRD

⑥ PA100 POLE FOUNDATION
 TYPE PA100-55-A-D40-12 (DAVIT AT 350°)
 3-ONE-WAY SIGNALS OVERHEAD AT
 0 FT, 11 FT AND 23 FT
 2-TYPE 10B POLE MOUNTED AT 90° AND 180°
 2-PEDESTRIAN INDICATIONS AT 90° AND 180°
 WITH COUNT DOWN TIMERS (FOR USE IN 10B MOUNTS)
 ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
 2-PED PUSH BUTTONS AND SIGNS
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 LUMINAIRE - 250HPS
 EXTEND INTO HH 16
 3" CONDUIT
 2-12/C#12
 4-3/C#12
 1-3/C#12(LUM)
 1-3/C#20
 1-1/C#6 INS GRD

① EQUIPMENT PAD
 CONTROLLER AND CABINET
 SIGNAL SERVICE CABINET
 CONTROLLER TO HH 1
 2" CONDUIT
 4-12/C#12
 8-3/C#12
 2-3/C#20
 17-2/C#14
 1-1/C#6 INS GRD
 CONTROLLER TO HH 21
 2-4" CONDUIT
 4-12/C#12
 8-3/C#12
 3-3/C#20
 7-2/C#14
 1-1/C#6 INS GRD
 1-6PR#19*
 1-12/C#12(RR INTERCONNECT)

CONTROLLER TO SERVICE CABINET
 2" CONDUIT
 2-1/C#6
 1-1/C#6 INS GRD
 SERVICE CABINET TO HH 1
 2" CONDUIT
 4-3/C#14 (LUM)
 SERVICE CABINET TO SOP VIA HH 22
 2" CONDUIT
 3-1/C#2

② 2" RSC RISER AND WEATHERHEAD
 3-1/C#2
 EXTEND TO HH 22
 2" CONDUIT
 3-1/C#2

② PEDESTAL FOUNDATION
 10' SIGNAL PEDESTAL & BASE
 2-PEDESTAL MOUNTED ONE WAY PEDESTRIAN
 INDICATIONS AT 45 AND 225 WITH COUNT DOWN TIMERS
 2-PED PUSH BUTTON AND SIGNS
 1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
 1-R10-4b (L) SIGN
 EXTEND TO HH 21
 3" CONDUIT
 3-3/C#12
 2-1/C#6 INS GRD

⑤ PEDESTAL FOUNDATION
 10' SIGNAL PEDESTAL & BASE
 2-PEDESTAL MOUNTED ONE WAY PEDESTRIAN
 INDICATIONS AT 45 AND 225 WITH COUNT DOWN TIMERS
 2-PED PUSH BUTTON AND SIGNS
 1" CONDUIT STUBOUT & 5/8 " X 15' GROUND ROD
 EXTEND TO HH 12
 3" CONDUIT
 3-3/C#12
 2-1/C#6 INS GRD

③ PA100 POLE FOUNDATION
 TYPE PA100-A-40-D40-9 (DAVIT AT 350 DEG)
 AT 11 FT AND 23 FT
 3-ONE-WAY SIGNAL OVERHEAD AT 0 FT, 11 FT AND 23 FT
 2-TYPE 10B POLE MOUNTED AT 90 AND 180
 2-PEDESTRIAN INDICATIONS WITH COUNT DOWN TIMERS
 2-PED PUSH BUTTONS AND SIGNS
 LUMINAIRE 250-HPS
 1" CONDUIT STUBOUT AND 5/8 " X 15' GROUND ROD
 1-R10-12 SIGN (ADJ. TO HEAD 8-4)
 EXTEND INTO HH 7
 3" CONDUIT
 2-12/C#12
 4-3/C#12
 1-3/C#12(LUM)
 1-3/C#20
 2-1/C#6 INS GRD

FOR INFORMATION ONLY

BY	DATE	REVISIONS	SYSTEM ID: 21946	T.E. 5376
			METER ADDRESS: 3391 HWY 149	
			MASTER ID:	T.E.

"FOR INFORMATION ONLY"
 POLE NOTES
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 149 AT YANKEE DOODLE RD/CO RD 28
 IN EAGAN, DAKOTA COUNTY

STATE PROJ.NO. 8825-393

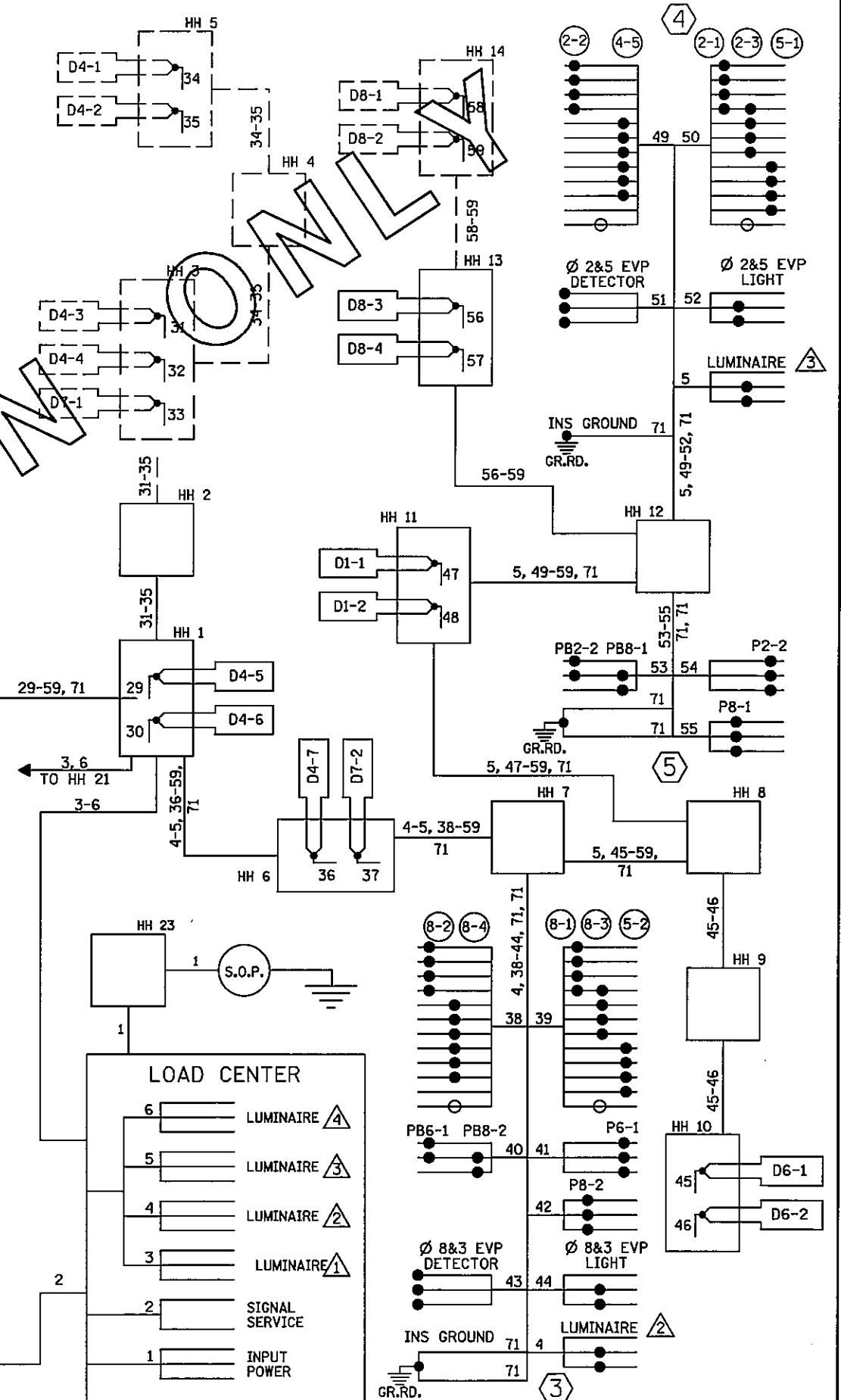
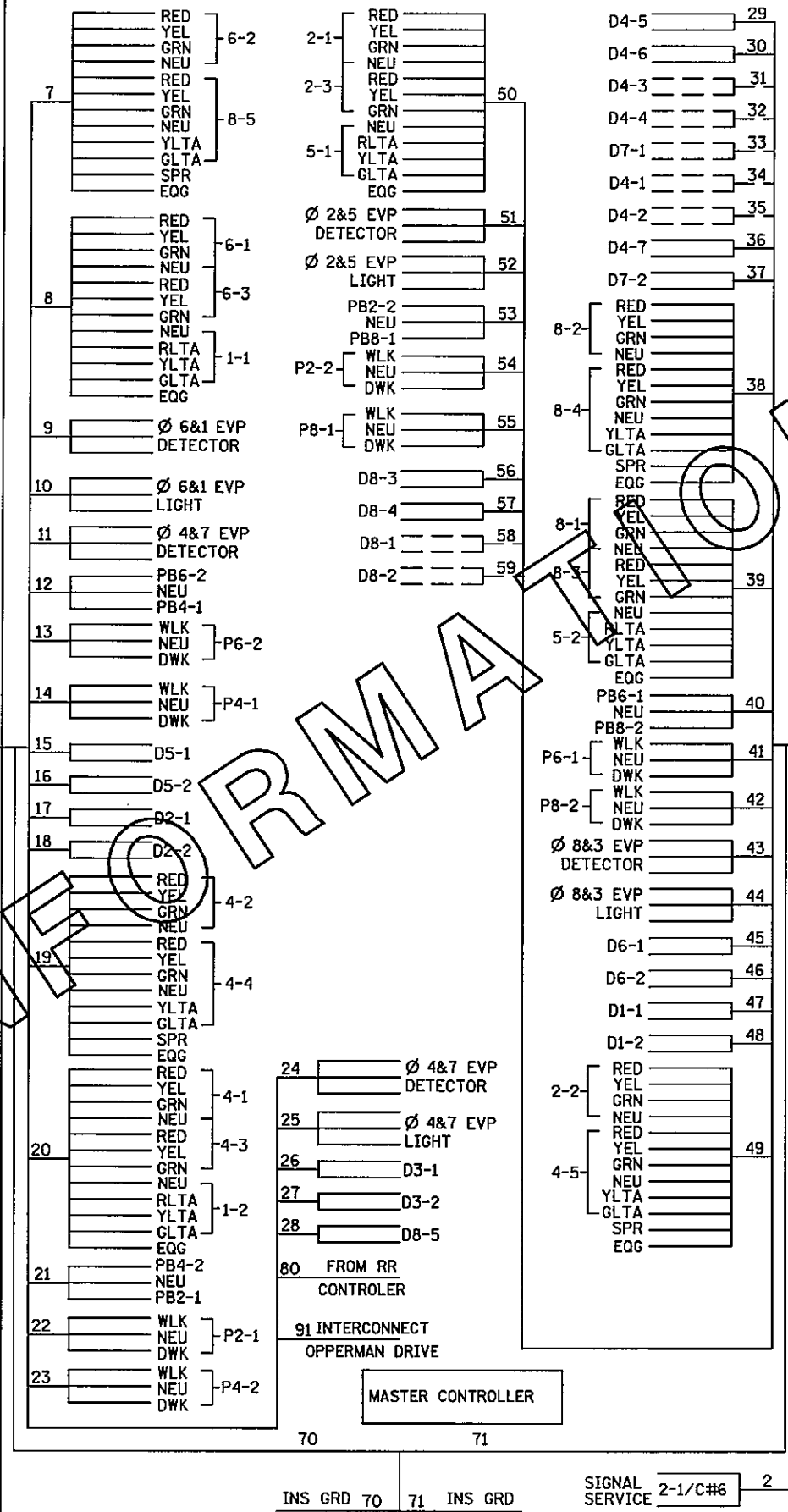
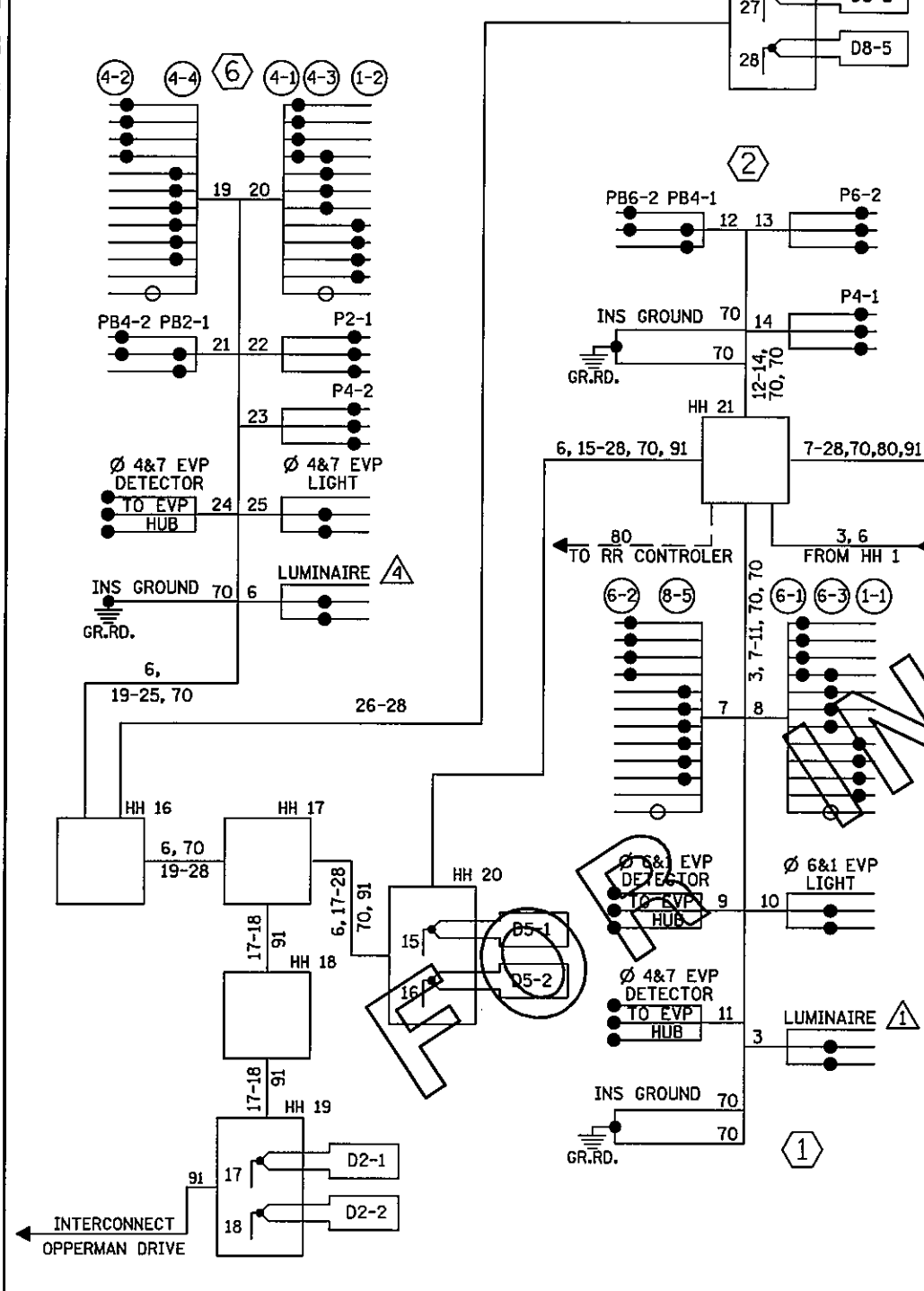
SHEET NO. 121 OF 122 SHEETS

PLOTTED/REVISED: 4/27/2011

CONDUCTOR COLOR CODE	
TO SIGNAL CABINET	TO DEVICE
R OR O	R RED
WH OR YEL	BL YEL
BLK OR BL	GRN GRN
	WH NEU
	YLTA YLTA
	GLTA GLTA
	SPR SPR
	EQG EQG
	DWK DWK
	WLK WLK
	NEU NEU
	BLK BLK
	WH WH
	BLK BLK
	NEU NEU

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

CONTROLLER CABINET



DISTRICT #: METRO
PLOT NAME: Info only wiring diagram
PATH & FILENAME: IP_PWP:d1382533\E20seed04-AICDM.dgn

BY	DATE	REVISIONS

SYSTEM ID: 21946 T.E. 5376
 METER ADDRESS: 3391 HWY 149
 MASTER ID: T.E.

"FOR INFORMATION ONLY"
 FIELD WIRING DIAGRAM
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 149 AT YANKEE DOODLE RD/CO RD 28
 IN EAGAN, DAKOTA COUNTY

STATE PROJ.NO. 8825-393

SHEET NO. 122 OF 122 SHEETS

NOTES & GUIDELINES

GENERAL INFORMATION:

1. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED.
2. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
3. ALL DISTANCES ARE APPROXIMATE.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MNMUTCD.
5. AN ANNUAL FALL REVIEW OF ALL TRAFFIC CONTROLS WILL BE MADE TO PREPARE FOR WINTER MAINTENANCE OF THE PROJECT. THIS MAY INCLUDE ADJUSTMENTS OR EXCHANGE OF ONE TRAFFIC CONTROL DEVICE FOR ANOTHER. READJUSTMENTS MAY AGAIN BE REQUIRED IN THE SPRING.
6. IF THE CONTRACTOR DECIDES TO PERFORM THE CONSTRUCTION WORK IN A SEQUENCE OTHER THAN SHOWN IN THIS TRAFFIC CONTROL PLAN THE CONTRACTOR SHALL PROVIDE COMPLETE REVISED TRAFFIC CONTROL PLANS TO BE APPROVED BY THE ENGINEER.

SIGNING:

1. ALL TRAFFIC CONTROL DEVICES, INCLUDING OVERHEAD SIGNS ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATION SHALL BE COVERED, REMOVED OR REVISED AS DIRECTED BY THE ENGINEER.
2. WHEN SIGNS ARE PLACED, THEY SHALL BE MOUNTED ON POSTS DRIVEN INTO THE GROUND AT THE PROPER HEIGHT AND LATERAL OFFSET AS SHOWN IN THE TYPICAL TEMP SIGN FRAMING & INSTALLATION DETAILS IN THE PLAN. IF THIS IS NOT POSSIBLE THEY WILL BE MOUNTED ON PORTABLE SUPPORTS AS APPROVED BY THE ENGINEER. WHEN THE SIGNS ARE REMOVED THE SIGN POSTS SHALL ALSO BE REMOVED AS SOON AS POSSIBLE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXTRA SIGNING NEEDED TO FACILITATE TRAFFIC SWITCHES OR FOR TRANSITIONING TRAFFIC FROM ONE STAGE TO ANOTHER.
4. ALL ORANGE WARNING AND ORANGE GUIDE SIGNS SHALL BE FABRICATED WITH SIGN SHEETING MATERIAL AS LISTED ON THE MN/DOT APPROVED PRODUCT LIST FOR "SHEETING FOR RIGID TEMPORARY WORK ZONE SIGNS".




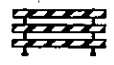



BARRICADES SHALL BE FABRICATED WITH SIGN SHEETING MATERIAL AS LISTED ON THE MN/DOT APPROVED PRODUCT LIST FOR BARRICADE SHEETING. NOTE THAT ASTM TYPE VII SHEETING IS NOT ALLOWED ON BARRICADES AFTER JANUARY 1, 2010.
5. LONGITUDINAL DROPOFFS SHALL BE SIGNED AS SHOWN IN THE "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" FIELD MANUAL UNLESS OTHERWISE SPECIFIED IN THESE PLANS.
6. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE FINAL SIGNS TO ASSURE THAT THE FINAL SIGNS ARE INSTALLED AS NEEDED, OR PROVIDE TEMPORARY SIGNING AT THEIR EXPENSE UNTIL THE FINAL SIGNING IS INSTALLED.

PAVEMENT MARKING:

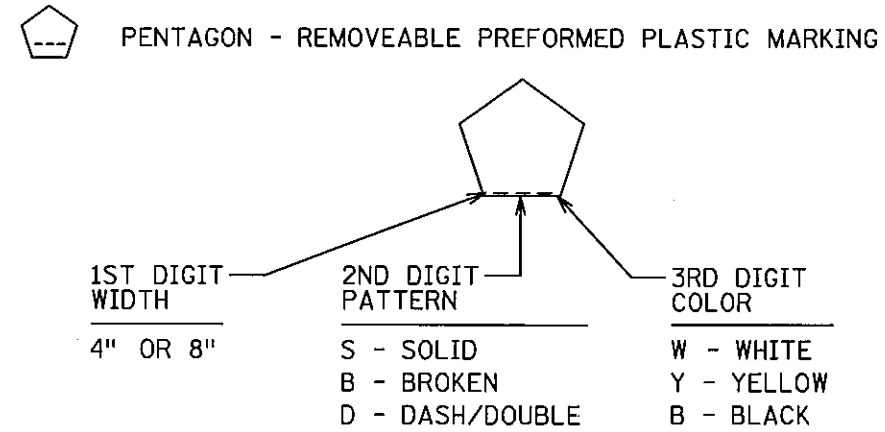
1. OBLITERATE ANY CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
2. PAINT, POLYMER LANE TAPE AND/OR TRPM'S ARE ACCEPTABLE TEMPORARY STRIPING ALTERNATIVES ACCORDING TO ACTUAL CONDITIONS ENCOUNTERED AS DIRECTED BY THE ENGINEER. GENERALLY, ONLY PAINT WILL BE USED BEFORE MAY 1ST OR WHEN THE OTHER MANUFACTURERS' SPECIFICATIONS CAN NOT BE MET.
3. TRPM'S (TEMPORARY RAISED PAVEMENT MARKERS) SHOULD BE USED TO SUPPLEMENT THE LONG TERM (MORE THAN 3 DAYS) EDGELINES ON ALL TRANSITION AREAS WHEN THE CONDITIONS ARE WITHIN THE MANUFACTURERS' SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PLACEMENT OF TEMPORARY AND FINAL STRIPING. MN/DOT TRAFFIC PERSONNEL WILL ASSIST IN THE SPOTTING OF TRANSITION AREAS, GORES AND TAPERS.

TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND

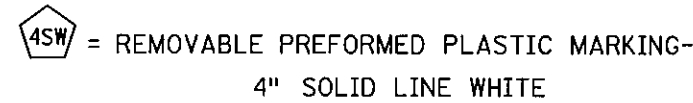
SYMBOL DESCRIPTION

-  AREA CLOSED TO TRAFFIC / WORK AREA
-  TRAFFIC CONTROL SIGN
-  TYPE III BARRICADE = 
-  DRUM-LIKE CHANNELIZER = 
-  TYPE A FLASHING WARNING LIGHT

STRIPING KEY



EXAMPLE:

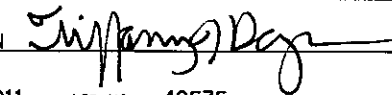


INDEX

TRAFFIC CONTROL SHEET NO. DESCRIPTIONS

TC1	TITLE SHEET
TC2	PAY ITEM/TRAFFIC CONTROL TABULATION SHEET
TC3	TH 51 AT COUNTY RD C TRAFFIC CONTROL DETAILS
TC4	TH 51 AT COUNTY RD C2 TRAFFIC CONTROL DETAILS
TC5	TH 51 AT LYDIA TRAFFIC CONTROL DETAILS
TC6	TH 55 AT TH 149 TRAFFIC CONTROL DETAILS
TC7	TH 5 AT TH 120 TRAFFIC CONTROL DETAILS
TC8	TH 36 AT TH 120 TRAFFIC CONTROL DETAILS
TC9-TC10	TH 169 AT 114TH TRAFFIC CONTROL DETAILS
TC11-TC12	TH 169 AT MILLER RD TRAFFIC CONTROL DETAILS
TC13-TC15	TH 10 AT UNIVERSITY AV TRAFFIC CONTROL DETAILS
TC16	TH 149 AT YANKEE DOODLE TRAFFIC CONTROL DETAILS

I HEREBY CERTIFY THAT SHEETS TC1 THROUGH TC16 OF THIS PLAN WERE 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

TIFFANY DAGON 
DATE 4/28/2011 LIC. NO. 40535
DESIGNER Scott Meler

TITLE: TRAFFIC CONTROL TITLE SHEET
STATE PROJ. NO. 8825-393 SHEET NO TC1 OF TC16 SHEETS



PLOTTED/REVISED: 4/28/2011


DISTRICT #: METRO
PLOT NAME: t8825393_title
PATH & FILENAME: IP_PWP-d140444v8825393_rc2.dgn





PLOTTED/REVISED: 4/22/2011

TRAFFIC CONTROL TABULATION		TC
ITEM	UNIT	TOTAL
TRAFFIC CONTROL	LUMP SUM	1
① REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	815

① 815' OF 12" SOLID WHITE

"R" SERIES			
SIGN	SIGN NO.	COLOR	SIZE
	R9-9	BLACK ON WHITE	30" X 18"
	R9-11b	BLACK ON WHITE	48" X 18"

"W" SERIES			
SIGN	SIGN NO.	COLOR	SIZE
	W20-1	BLACK ON ORANGE	48" x 48"

"M" SERIES			
SIGN	SIGN NO.	COLOR	SIZE
	M4-8a	BLACK ON ORANGE	24" X 18"
	M4-9mb	BLACK ON ORANGE	30" X 24"
	W11-2	BLACK ON YELLOW GREEN	48" X 48"
	W16-7mp	BLACK ON YELLOW GREEN	36" x 24"

DISTRICT *:
PLOT NAME:
PATH & FILENAME:

DRAWN BY: SNM

CHECKED BY: KMF

CERTIFIED BY *Tiffany G. Dacan*
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 40535 DATE 4/22/2011

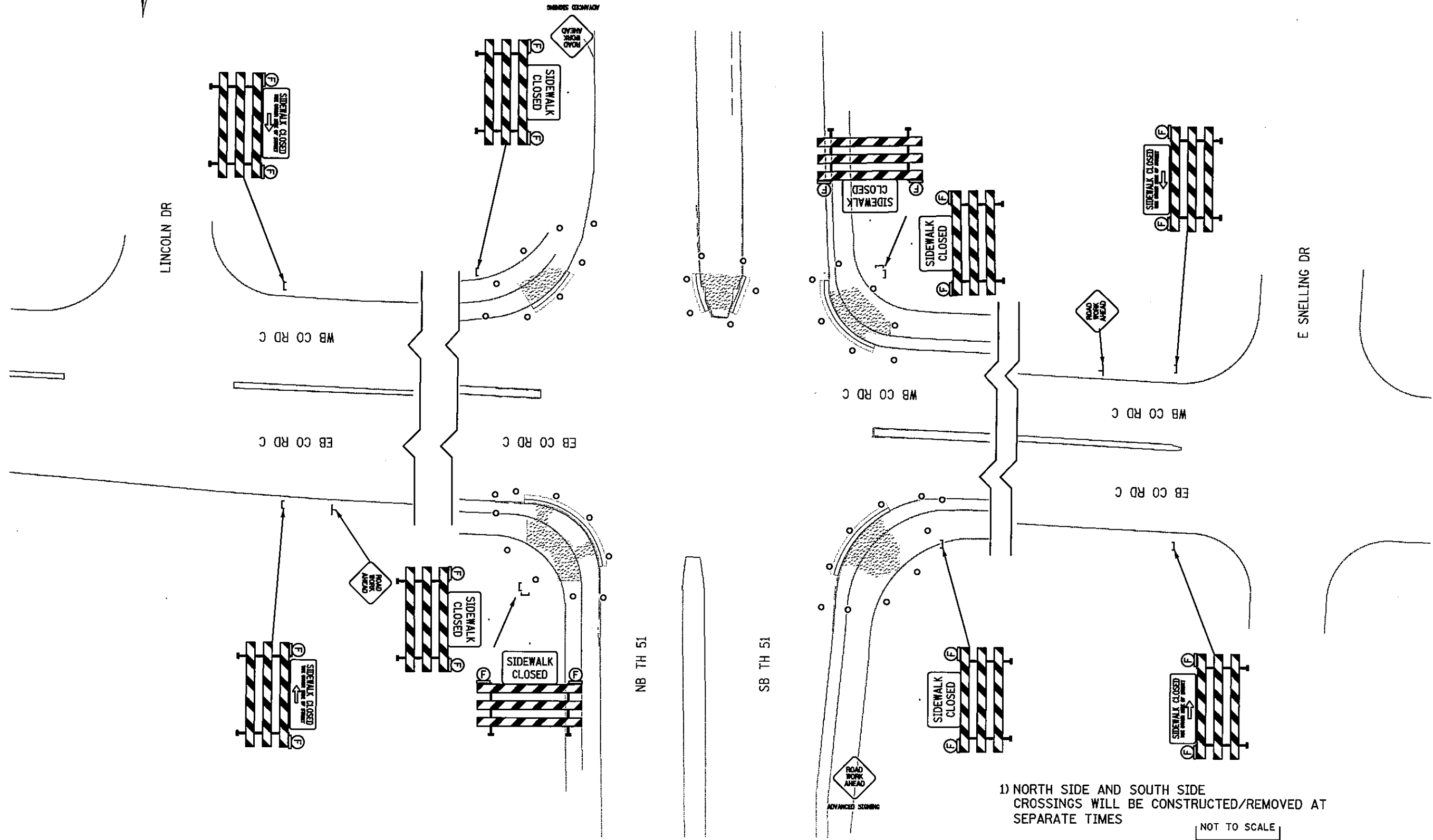
PAY ITEM/TRAFFIC CONTROL TABULATION

STATE PROJ. NO. 8825-393

SHEET NO. TC2 OF TC16 SHEETS

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PLOTTED/REVISED: 4/22/2011

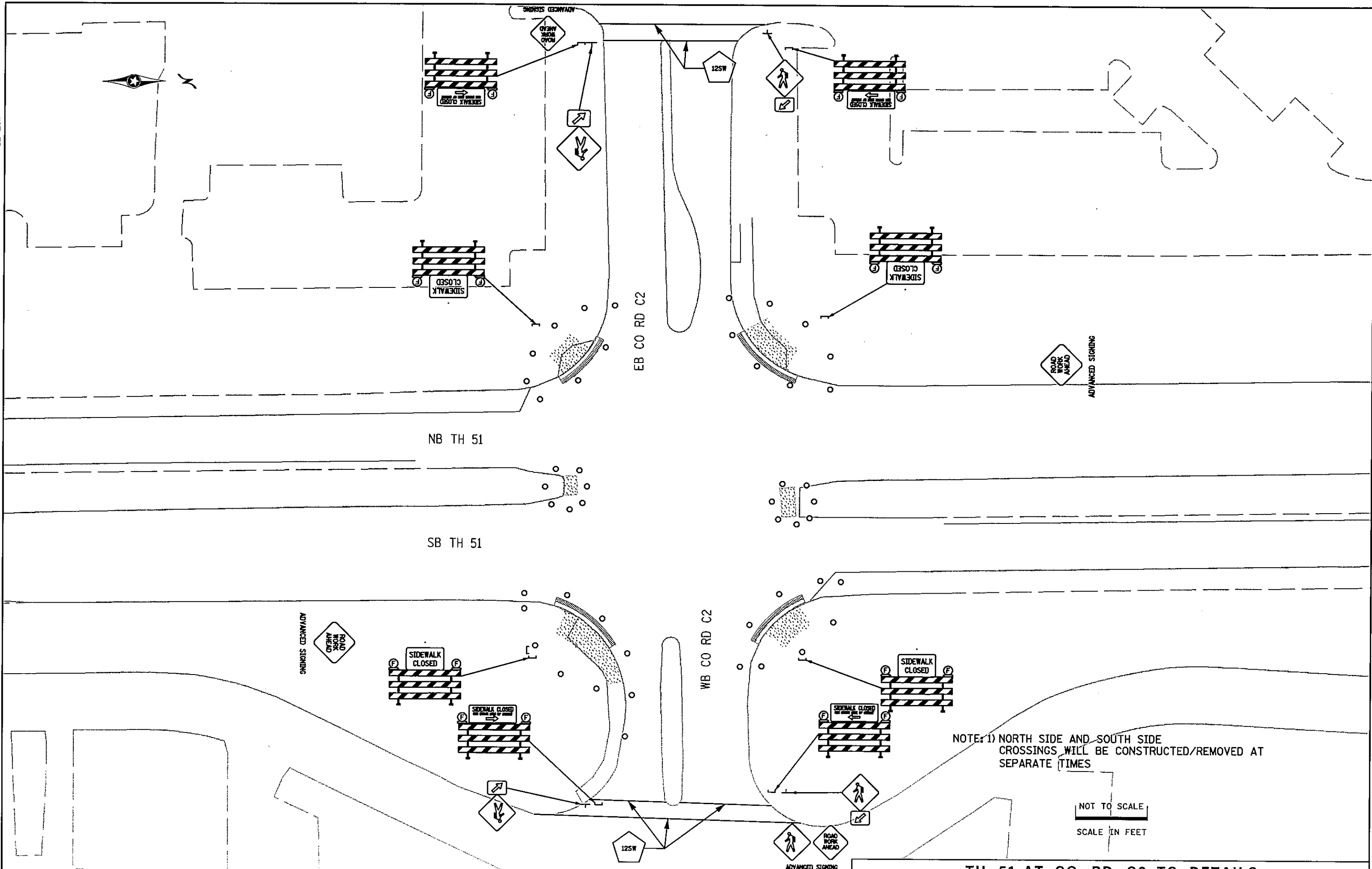


1) NORTH SIDE AND SOUTH SIDE CROSSINGS WILL BE CONSTRUCTED/REMOVED AT SEPARATE TIMES

NOT TO SCALE
 SCALE IN FEET

PLOTTED/REVISED: 4/22/2011

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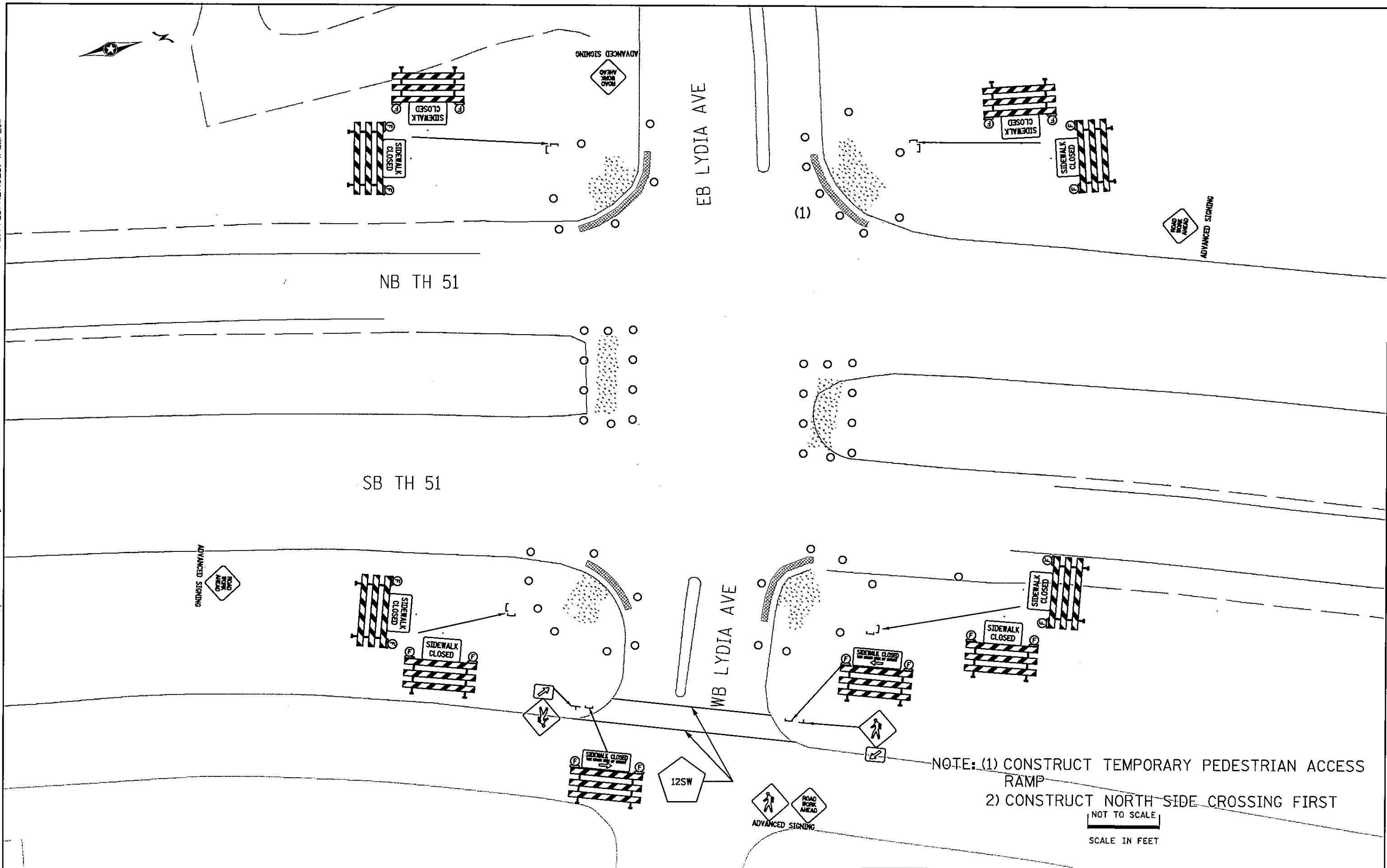


NOTE: 1) NORTH SIDE AND SOUTH SIDE CROSSINGS WILL BE CONSTRUCTED/REMOVED AT SEPARATE TIMES

NOT TO SCALE
SCALE IN FEET

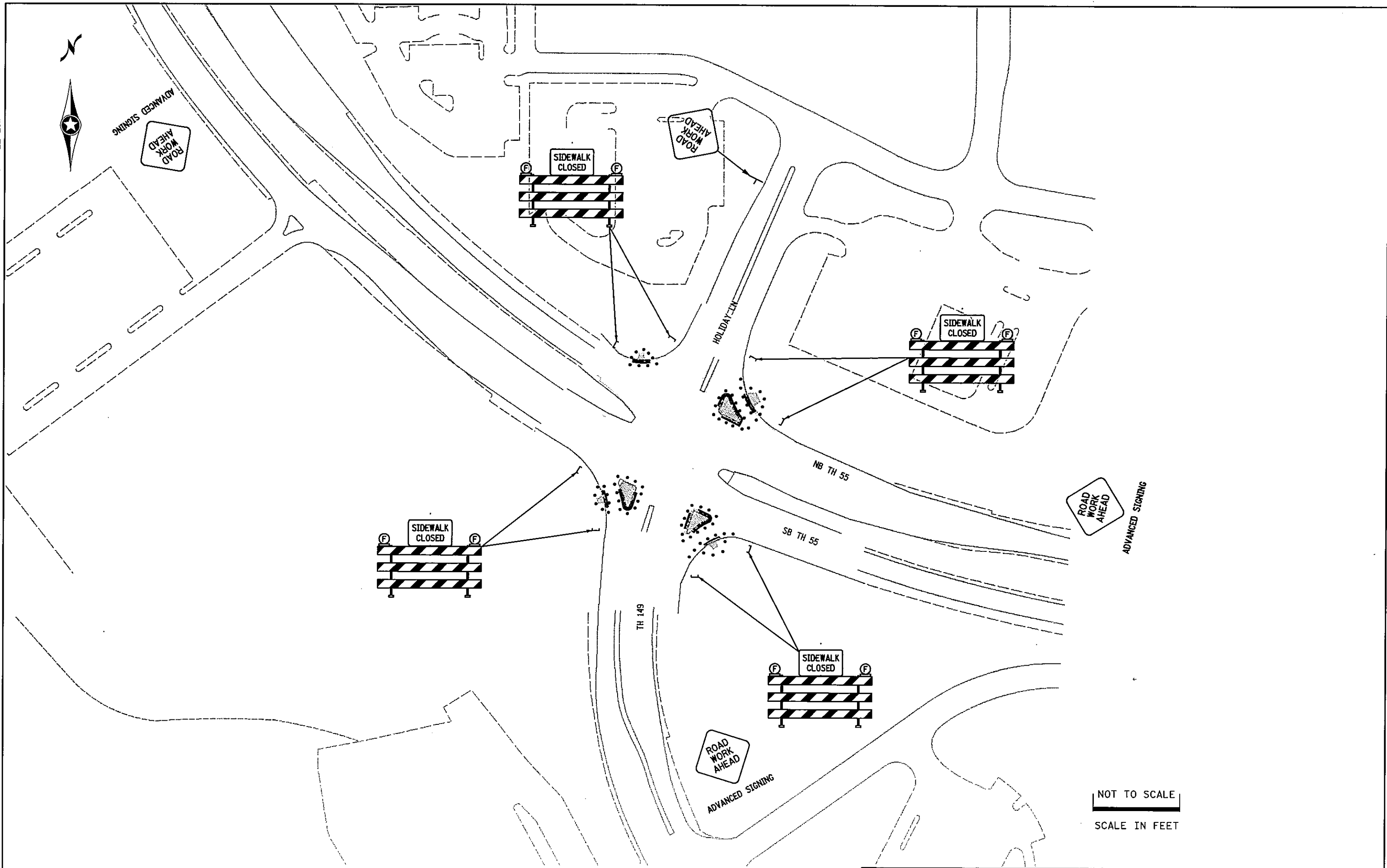
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PLOTTED/REVISED: 4/22/2011

DISTRICT #: METRO
PLOT NAME: 18825393_6
PATH & FILENAME: IP_PWP-d\104445\E20seed04-Common.dgn



NOT TO SCALE
SCALE IN FEET

TH 55 AT TH 149 TC DETAIL

DRAWN BY: SNM

CHECKED BY: KMF

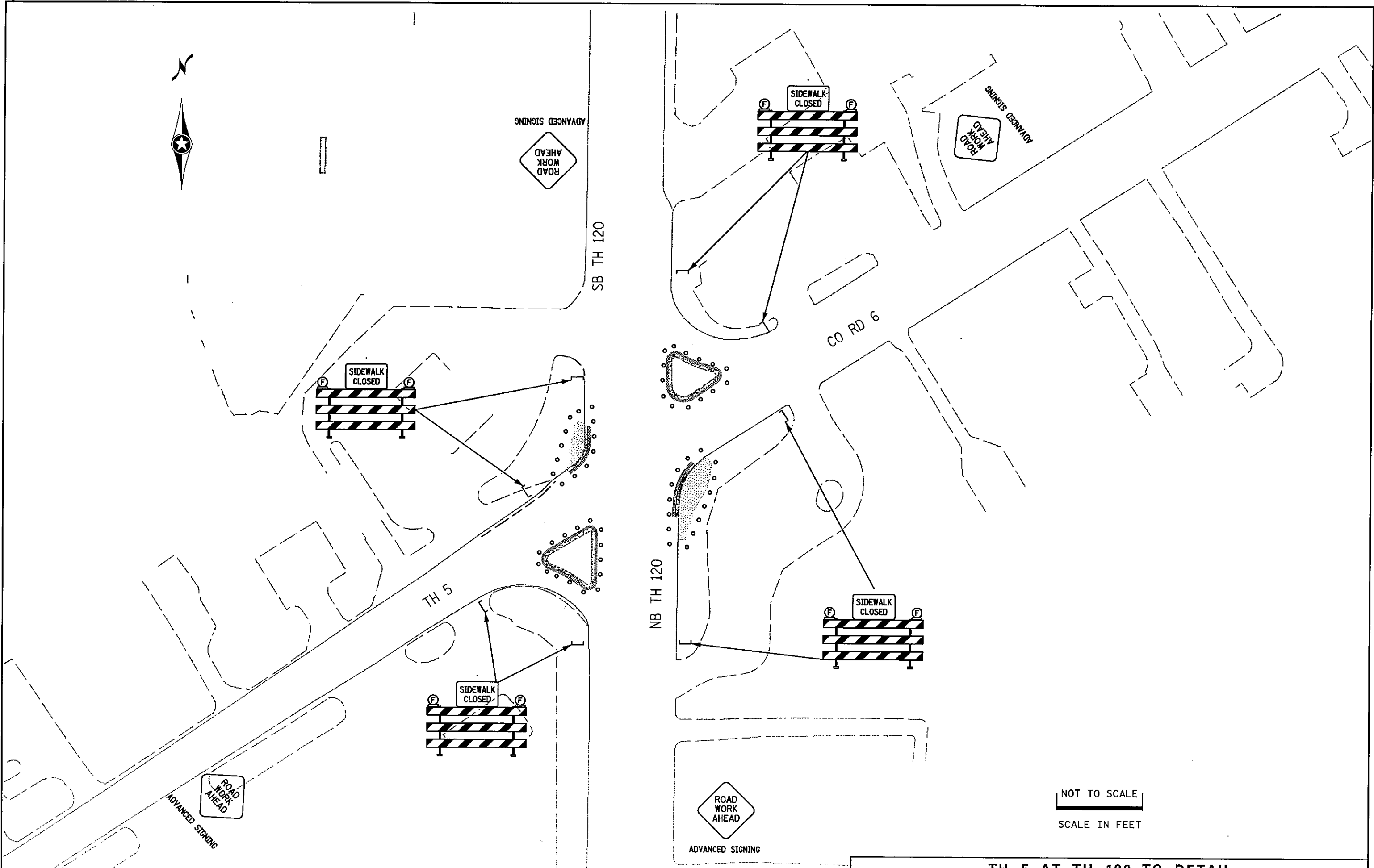
CERTIFIED BY *William A. Deane* LIC. NO. 40535 DATE 4/22/2011
LICENSED PROFESSIONAL ENGINEER

STATE PROJ. NO. 8825-393

SHEET NO. TC6 OF TC16 SHEETS

PLOTTED/REVISED: 4/22/2011

DISTRICT #: METRO
I/PLOT NAME: 18825393.7
PATH & FILENAME: IP_PWP-d\H04445-E2Dseed04-Common.dgn



DRAWN BY: SNM

CHECKED BY: KMF

CERTIFIED BY

William J. Degan
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 40535

DATE 4/22/2011

STATE PROJ. NO. 8825-393

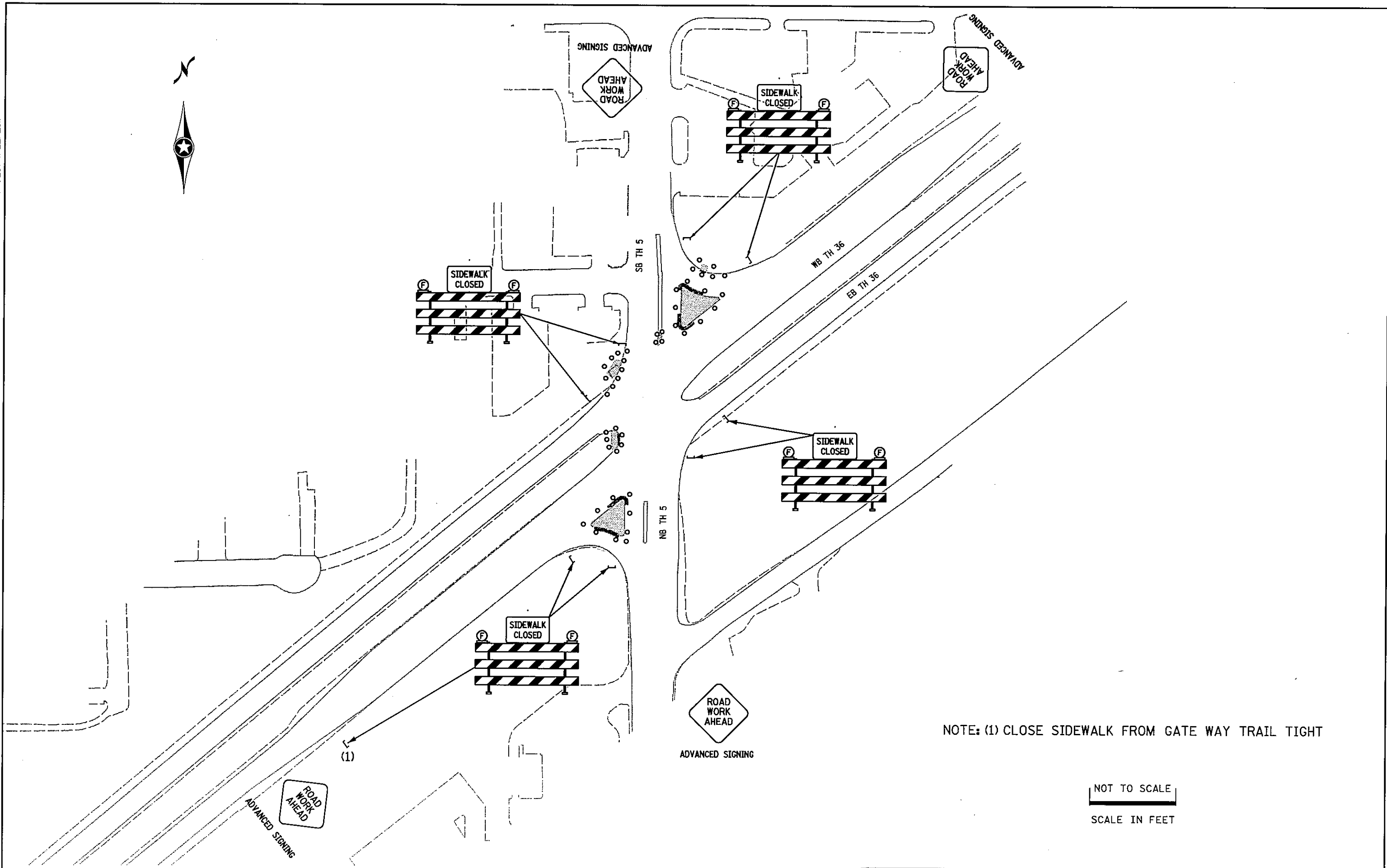
SHEET NO. TC7

OF TC16 SHEETS

TH 5 AT TH 120 TC DETAIL

PLOTTED/REVISED: 4/22/2011

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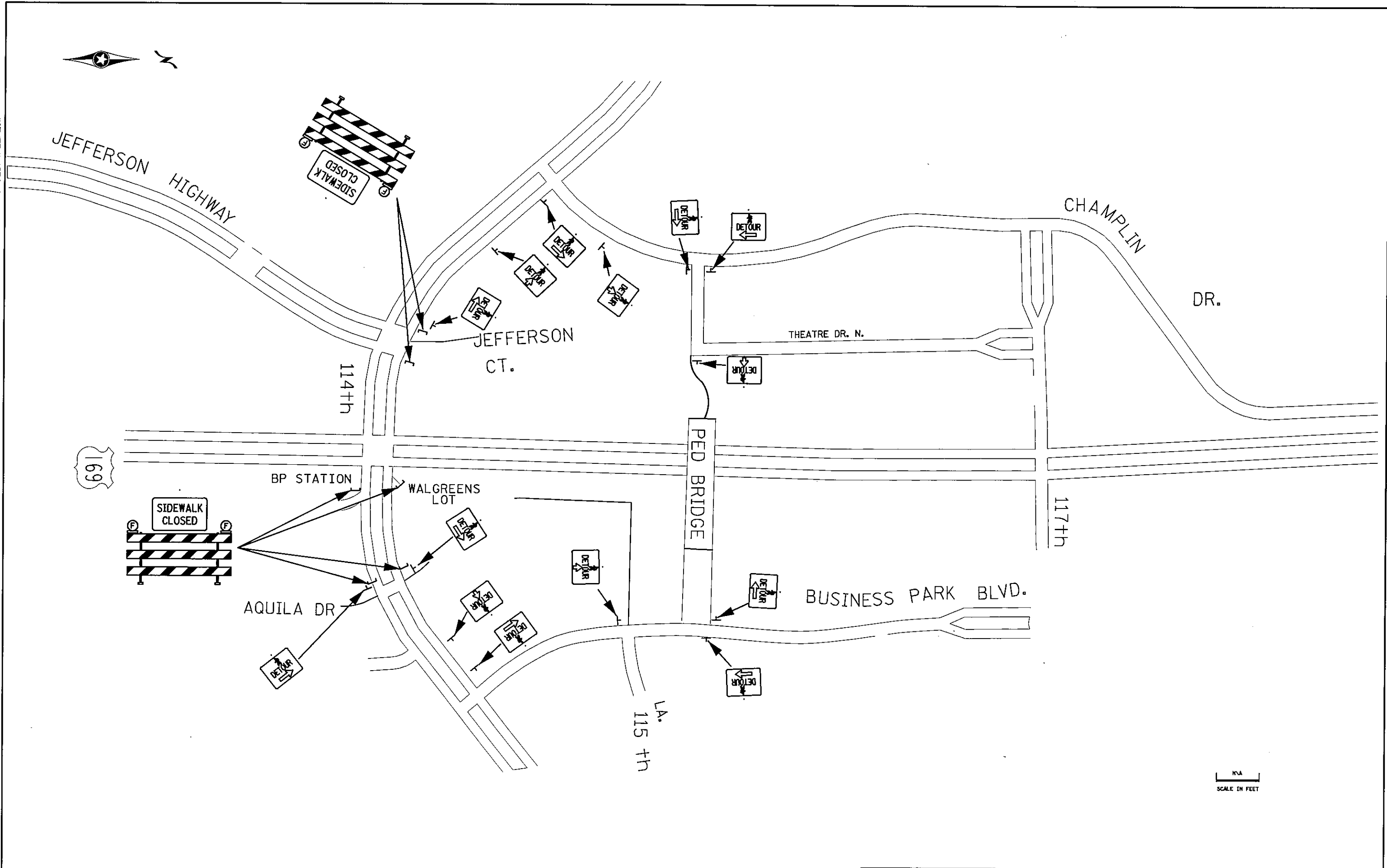
NOTE: (1) CLOSE SIDEWALK FROM GATE WAY TRAIL TIGHT

NOT TO SCALE
SCALE IN FEET

DRAWN BY: SNM	CHECKED BY: KMF	CERTIFIED BY: <i>William J. Degen</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 40535 DATE 4/22/2011	STATE PROJ. NO. 8825-393	TH 36 AT TH 120 TC DETAIL SHEET NO. TC8 OF TC16 SHEETS
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PLOTTED/REVISED: 4/22/2011

DISTRICT #: METRO
IPLOT NAME: 18825393_9
PATH & FILENAME: IP_PWP-d\404444\8825393_tc2.dgn



TH 169 AT 114TH PED DETOUR

DRAWN BY: SBM

CHECKED BY: KMF

CERTIFIED BY *Jeffery A. Damm*
LICENSED PROFESSIONAL ENGINEER

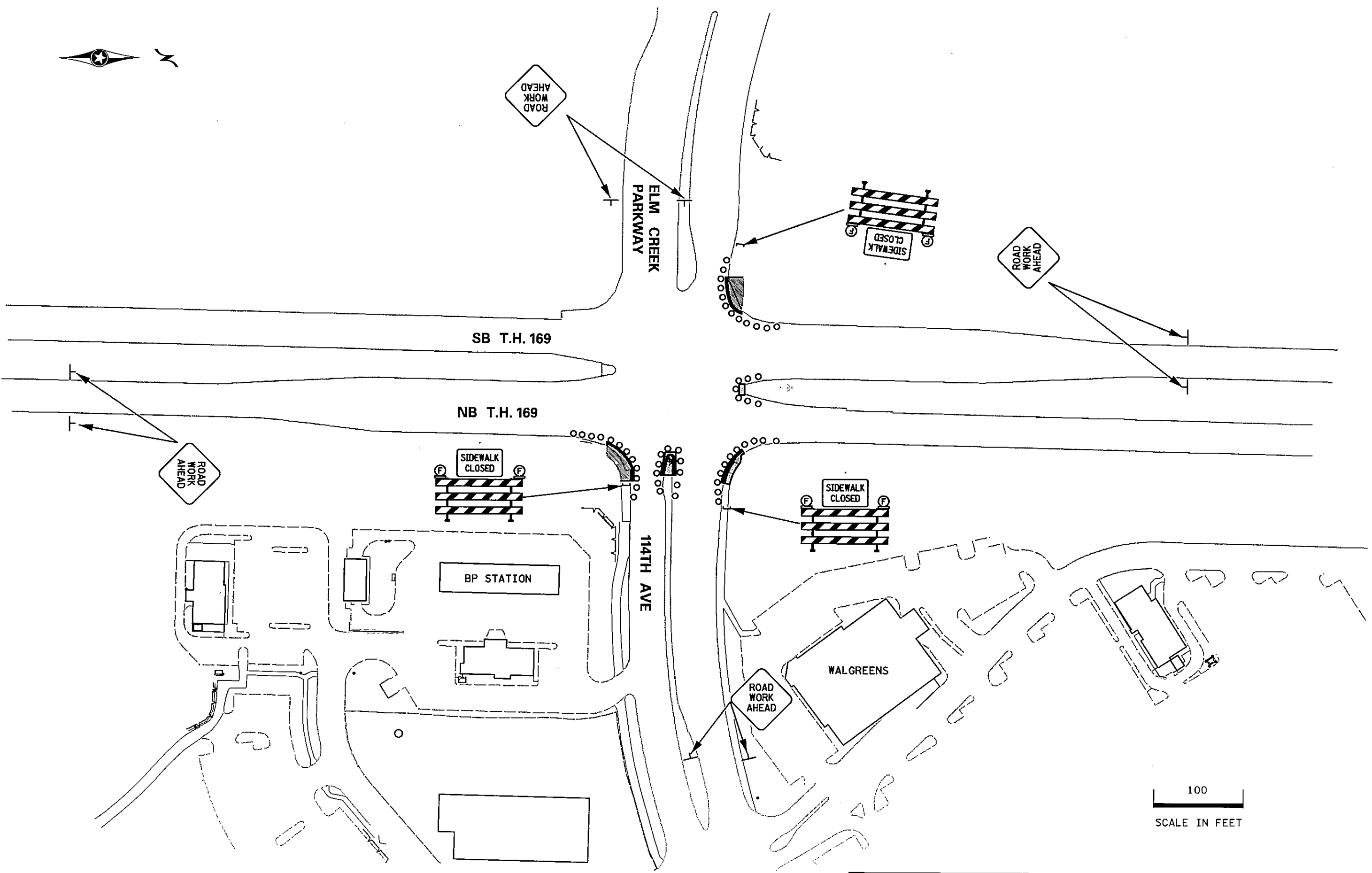
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STATE PROJ. NO. 8825-393

SHEET NO. TC9 OF TC16 SHEETS



PLOTTED/REVISED: 4/22/2011



100
SCALE IN FEET

DISTRICT #: METRO
IPLOT NAME: 18825393_I0
PATH & FILENAME: IP_PWP-d\404444\8825393_tc2.dgn

DRAWN BY: SBM

CHECKED BY: KMF

CERTIFIED BY *Tiffany A. Dagan*
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 40535 DATE 4/22/2011

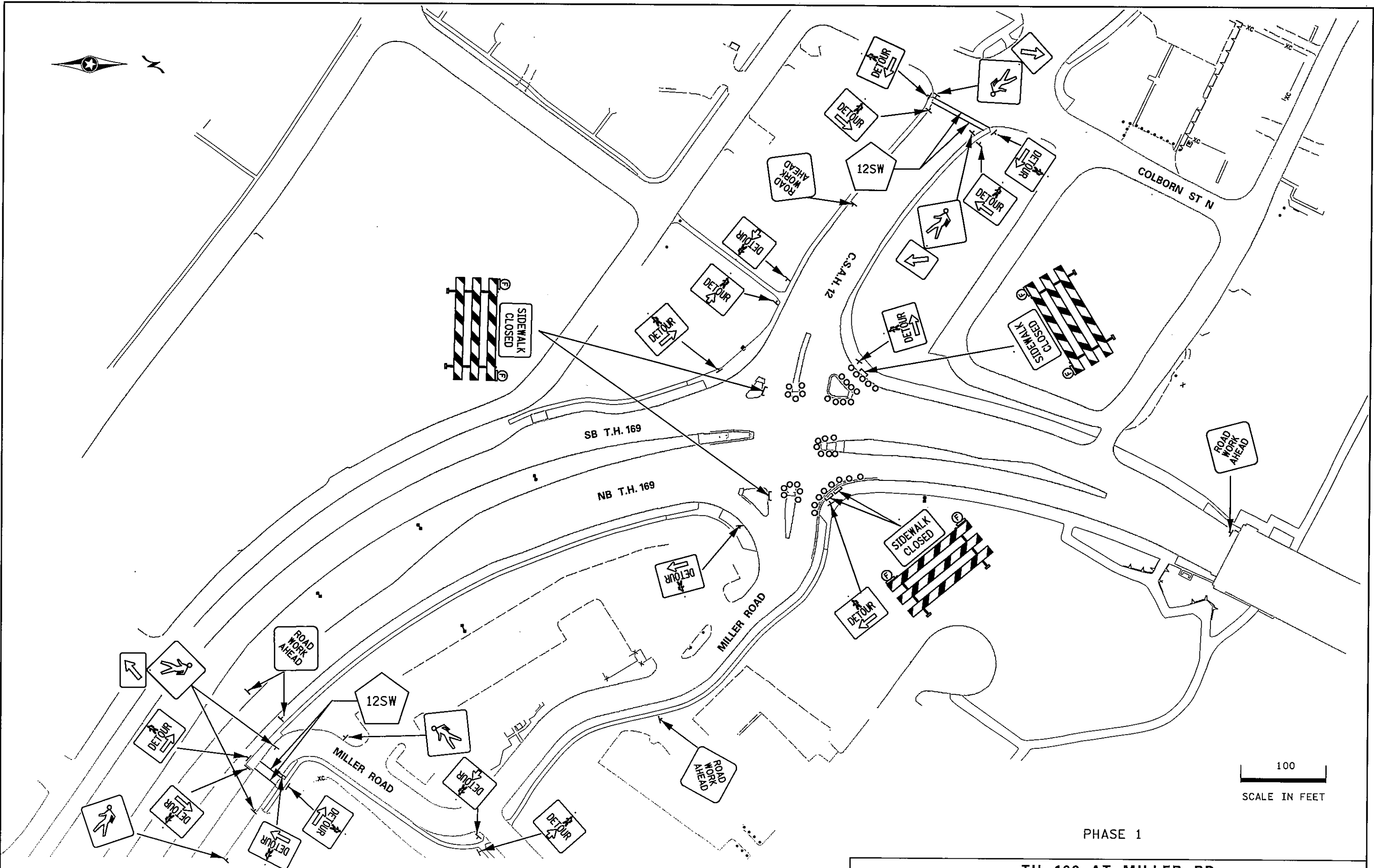
STATE PROJ. NO. 8825-393

SHEET NO. TC10 OF TC16 SHEETS

TH 169 AT 114TH TC DETAIL

PLOTTED/REVISED: 4/22/2011

DISTRICT #: METRO
PLOT NAME: 18825393.JI
PATH & FILENAME: IP_PWP-d\404444\8825393_tc2.dgn



PHASE 1

TH 169 AT MILLER RD

DRAWN BY: SBM

CHECKED BY: KMF

CERTIFIED BY *Tiffany A. Damm*
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 40535

DATE 4/22/2011

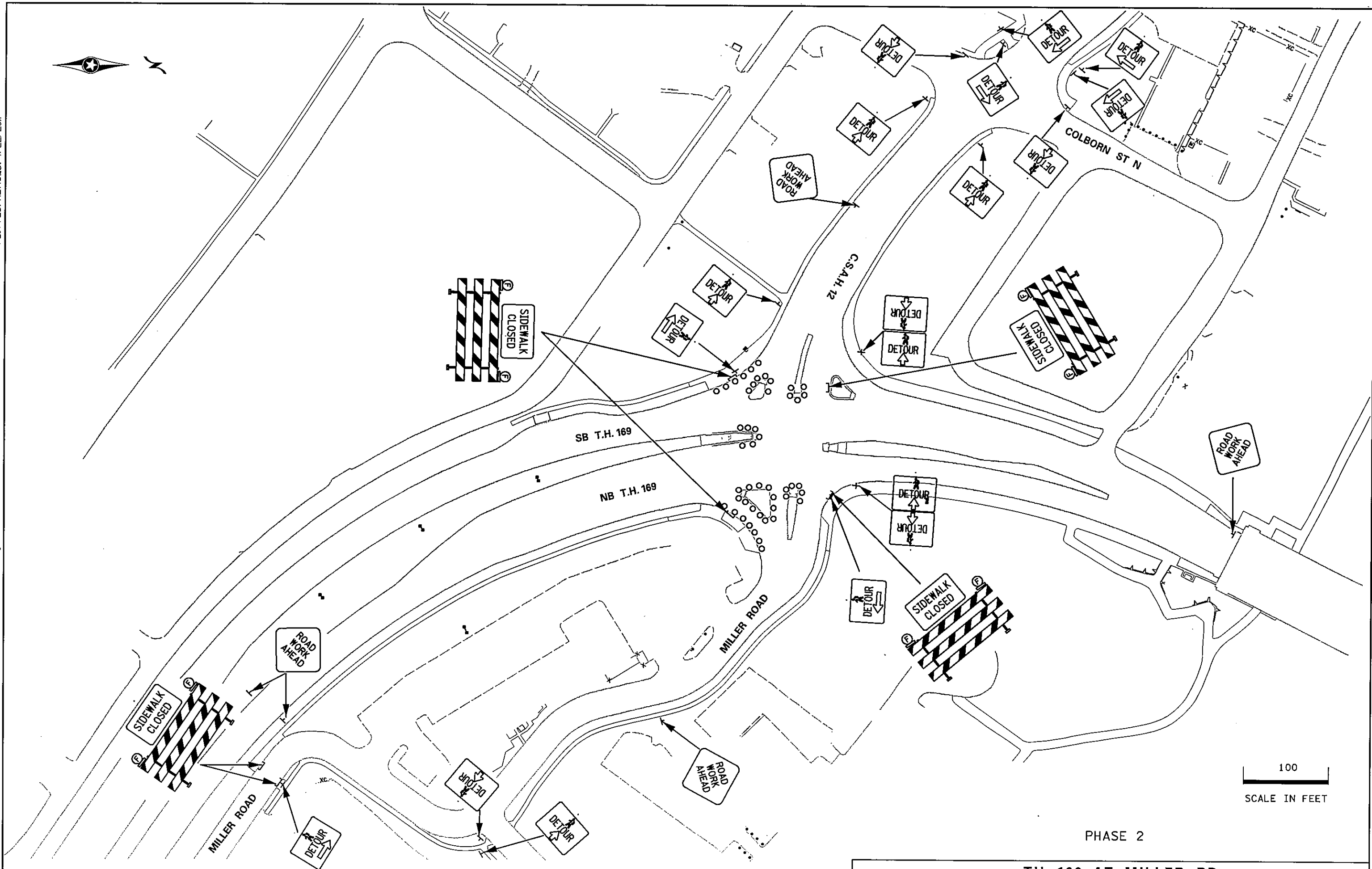
STATE PROJ. NO. 8825-393

SHEET NO. TC11

OF TC16 SHEETS

PLOTTED/REVISED: 4/22/2011

DISTRICT #: METRO
IPLOT NAME: 18825393_I2
PATH & FILENAME: IP_FWP-d\104444\8825393_tc2.dgn



PHASE 2

TH 169 AT MILLER RD

DRAWN BY: SBM

CHECKED BY: KMF

CERTIFIED BY *Tiffany A. Damm*
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 40535 DATE 4/22/2011

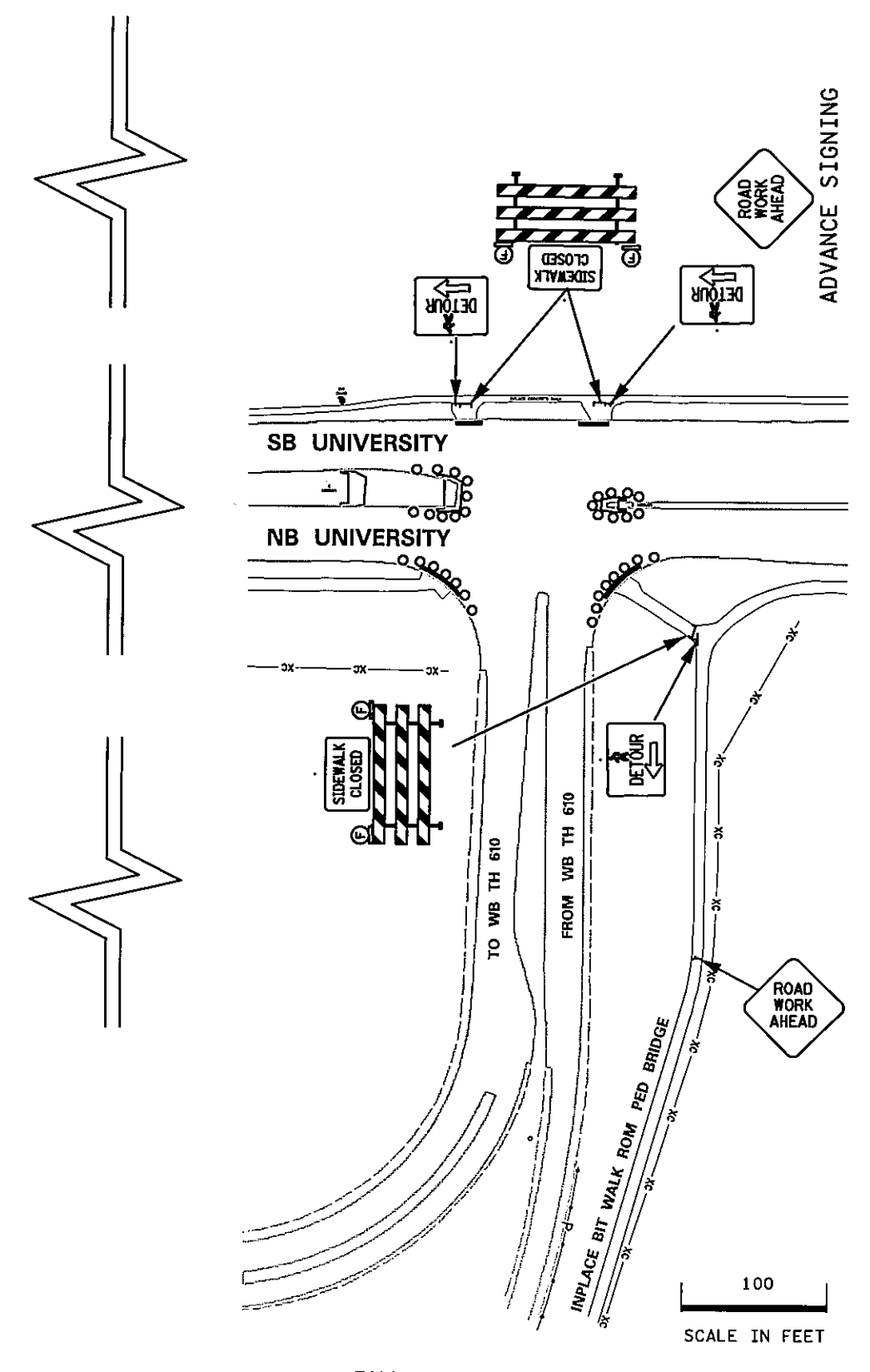
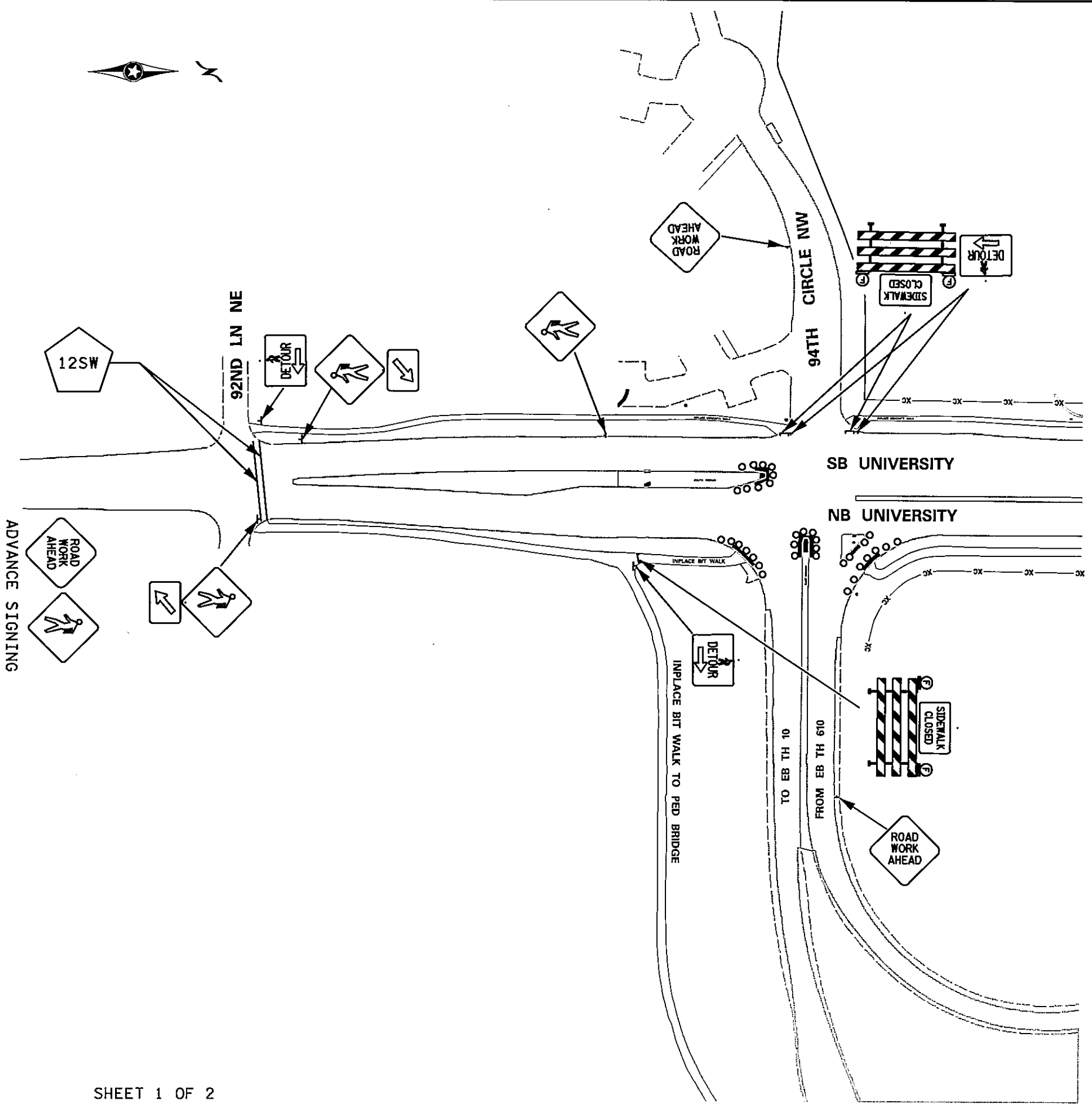
STATE PROJ. NO. 8825-393

SHEET NO. TC12 OF TC16 SHEETS

PLOTTED/REVISED: 4/22/2011

DISTRICT #: METRO
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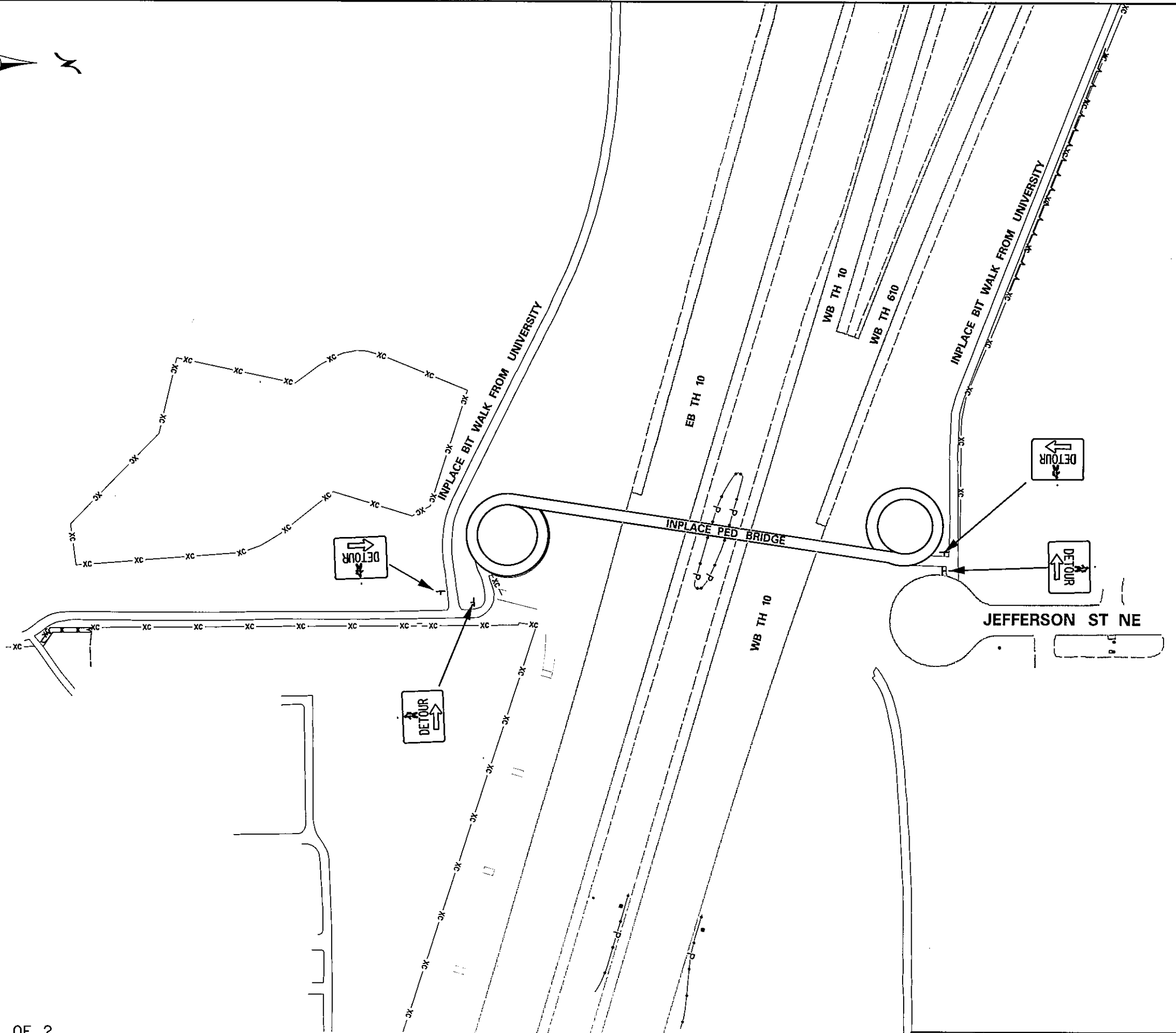
SHEET 1 OF 2



TH 10 / UNIVERSITY RAMPS

PLOTTED/REVISED: 4/28/2011

DISTRICT #: METRO
I/PLOT NAME: 18825393_14
PATH & FILENAME: IP_PWP-d1404444\8825393_tc2.dgn



SHEET 2 OF 2

PHASE 1

TH 10 / UNIVERSITY RAMPS

DRAWN BY: SBM

CHECKED BY: KMF

CERTIFIED BY

William J. Dwyer
LICENSED PROFESSIONAL ENGINEER

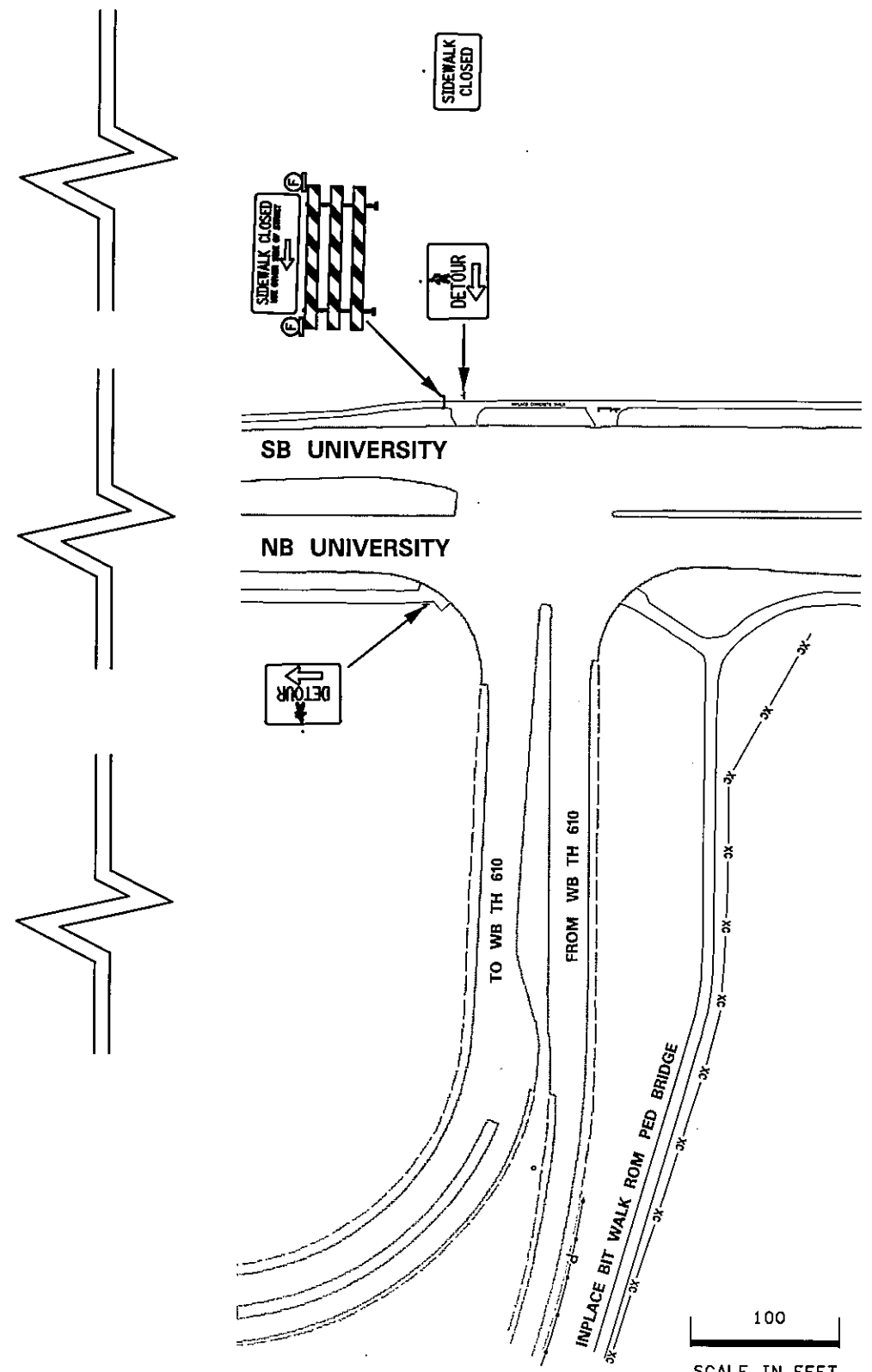
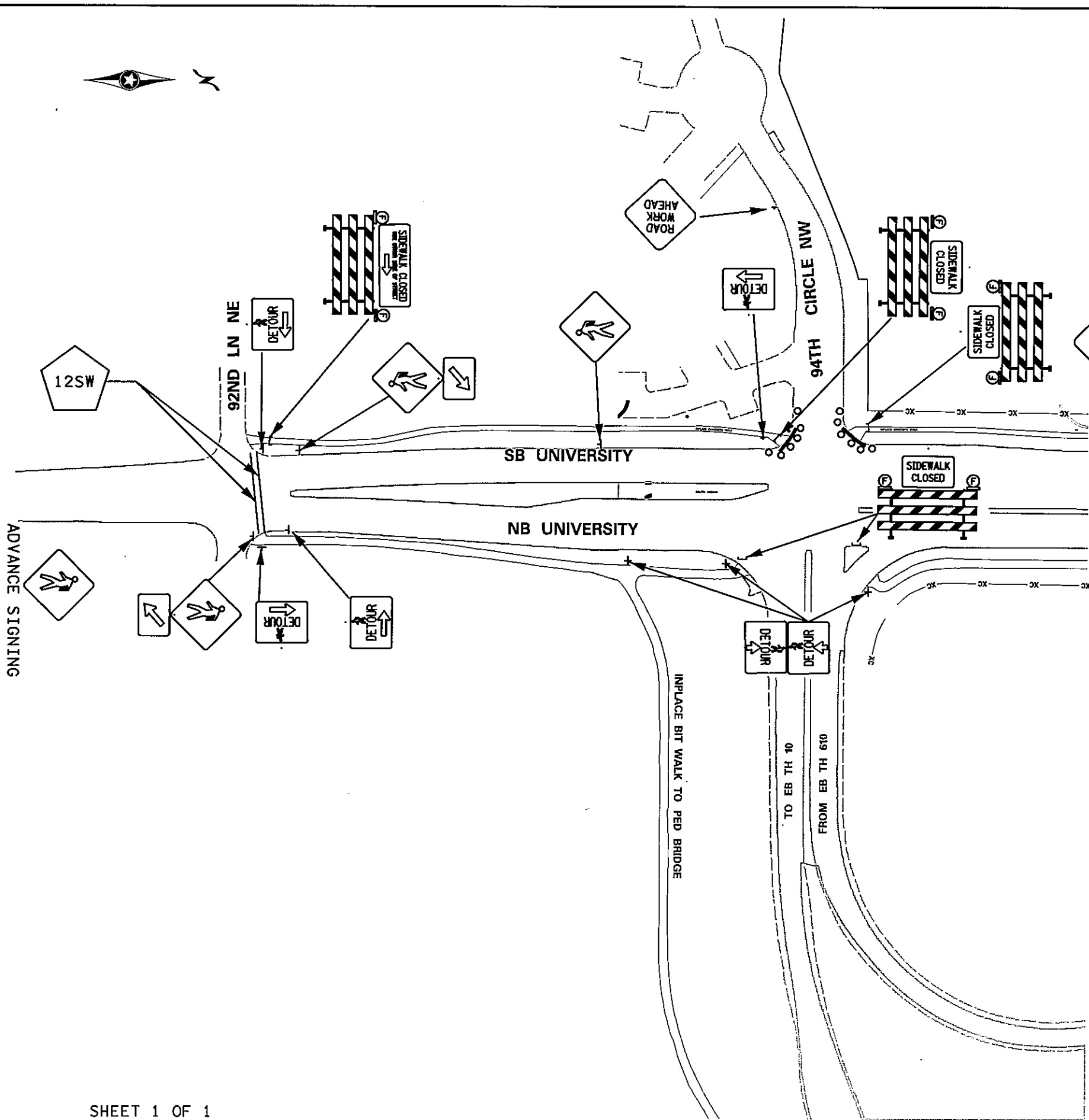
LIC. NO. 40535

DATE 4/28/2011

STATE PROJ. NO. 8825-393

SHEET NO. TC14

OF TC16 SHEETS



PHASE 2

SHEET 1 OF 1

TH 10 / UNIVERSITY AV RAMPS

DRAWN BY: SBM

CHECKED BY: KMF

CERTIFIED BY *William A. Dyer* LIC. NO. 40535 DATE 4/22/2011

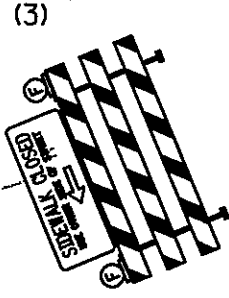
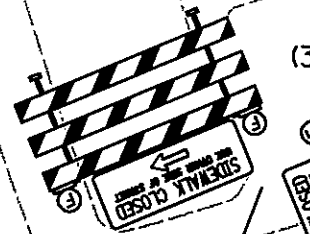
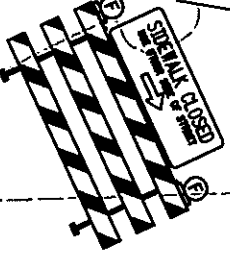
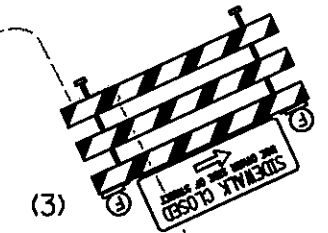
STATE PROJ. NO. 8825-393

SHEET NO. TC15 OF TC16 SHEETS

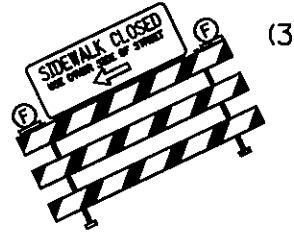
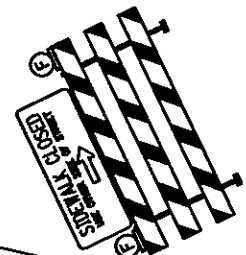
PLOTTED/REVISED: 4/22/2011



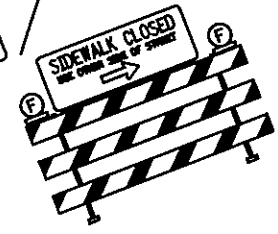
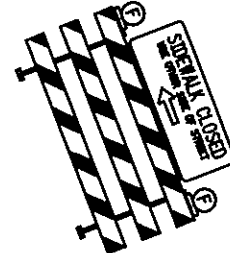
ADVANCED SIGNING
ROAD AHEAD CLOSED



ADVANCED SIGNING
ROAD AHEAD CLOSED



ADVANCED SIGNING
ROAD AHEAD CLOSED



TH 149

ADVANCED SIGNING
ROAD AHEAD CLOSED

- 1) ONLY ONE DIRECTION OF TRAVEL FOR PED. CROSSINGS WILL BE CONSTRUCTED/REMOVED AT ONE TIME
- 2) TEMPORARY PEDESTRIAN ACCESS ROUTE WILL BE CONSTRUCTED FOR THE OPEN DIRECTION OF TRAVEL WHEN NEEDED AROUND WORK AREA
- 3) TO BE USED AND SIGNED WITH EXISTING SIDEWALKS/OPEN DIRECTIONS OF TRAVEL

NOT TO SCALE
SCALE, IN FEET

DISTRICT #: METRO
IPLOT NAME: 18825393_16
PATH & FILENAME: IP_PWP-d1404445E2Dsee004-Common.dgn

DRAWN BY: SNM

CHECKED BY: KMF

CERTIFIED BY *William A. Dyer* LIC. NO. 40535 DATE 4/22/2011
LICENSED PROFESSIONAL ENGINEER

STATE PROJ. NO. 8825-393

SHEET NO. TC16 OF TC16 SHEETS

TH 149 AT YANKEE DOODLE RD