

MINNESOTA DEPARTMENT OF TRANSPORTATION

THE CITY OF MAPLEWOOD
RAMSEY COUNTY

COUNTY ROAD D (CSAH 19)

CITY PROJECT NO. 08-13

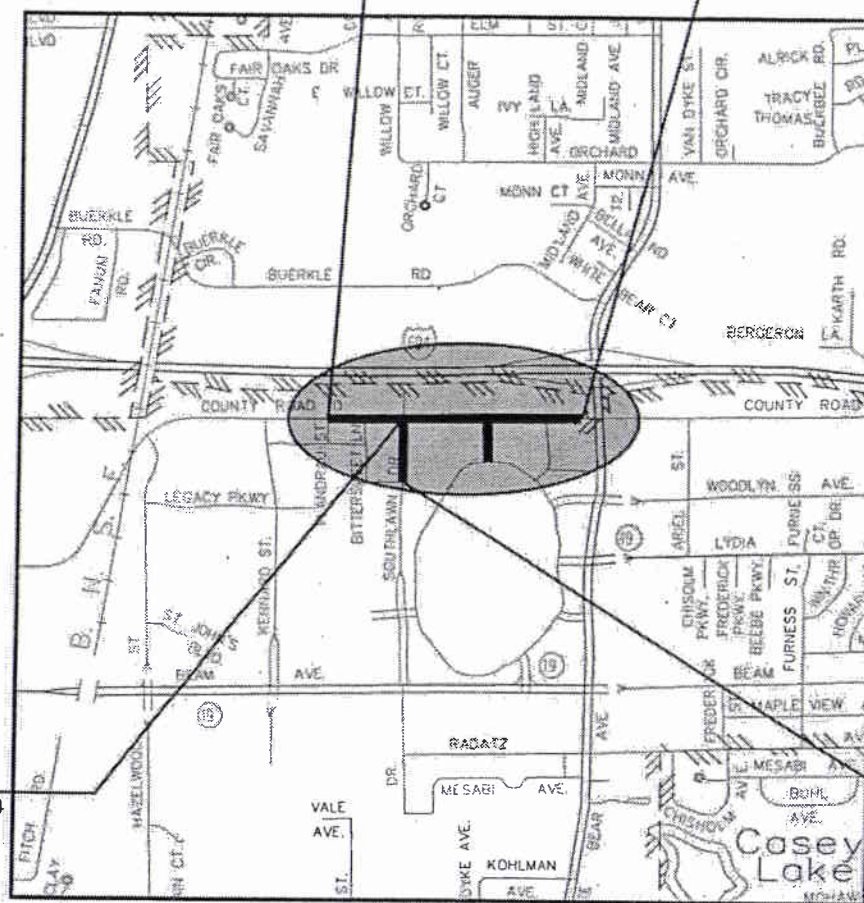
RAMSEY COUNTY PROJECT NO. P-3202

CONSTRUCTION PLANS FOR GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, CONCRETE SURFACING,
CONCRETE CURB AND GUTTER, STORM SEWER, UTILITY AND TRAFFIC SIGNAL IMPROVEMENTS

LOCATED ON: COUNTY ROAD D BETWEEN FLANDRAU STREET AND WHITE BEAR AVENUE (GEOGRAPHIC DESCRIPTION)

COUNTY ROAD D STATE PROJ. NO. 62-619-30 GROSS-LENGTH 2382.47 FEET 0.45 MILES
SOUTHLAWN DRIVE STATE PROJ. NO. 62-596-04 GROSS-LENGTH 593.15 FEET 0.11 MILES

COUNTY ROAD D BEGIN S.P. 62-619-30 STA. 72+80.00
COUNTY ROAD D END S.P. 62-619-30 STA. 96+62.47

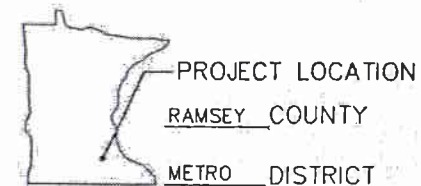
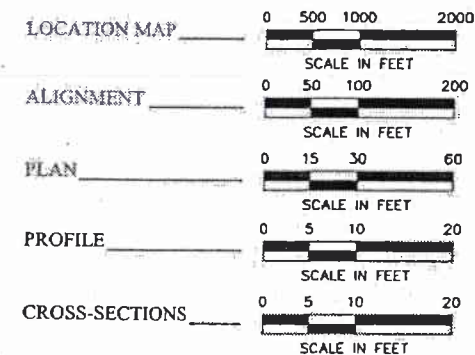


ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

PLAN SET SCALES



LEGEND

- EXISTING GATE VALVE
- EXISTING HYDRANT
- EXISTING CURB BOX
- EXISTING WATERMAIN MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING CATCH BASIN
- EXISTING GAS VALVE
- EXISTING CABLE TV BOX
- EXISTING TELEPHONE BOX
- EXISTING POWER POLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING ELECTRICAL TRANSFORMER
- EXISTING LIGHT POLE
- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING GAS MAIN
- EXISTING CABLE TV
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING UNDERGROUND POWER
- EXISTING OVERHEAD POWER
- EXISTING CURB AND GUTTER
- EXISTING FENCE
- EXISTING RIGHT-OF-WAY
- EXISTING MAILBOX
- EXISTING SOIL BORING
- EXISTING STREET SIGN
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED GATE VALVE
- PROPOSED HYDRANT
- PROPOSED MANHOLE (STORM OR SANITARY)
- PROPOSED CATCH BASIN
- PROPOSED WATERMAIN
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED CURB AND GUTTER

DESIGN DESIGNATION: COUNTY ROAD D - (S.P. 62-619-30)
STA. 72+00.00 TO 100+05.67

Functional Classification: MAJOR COLLECTOR
No. of Traffic Lanes = 4 No. of Parking Lanes = 0
ADT (Current Year) 2009 = 17,000 Design Speed 40 mph
ADT (Future Year) 2029 = 25,000 Based on STOPPING Sight Distance
DHV (Design Hr. Vol.) = N.A. Height of eye 3.5 Height of Object 2.0'
D (Directional Distr.) = 50 % Design Speed not achieved at: N.A.
T (Heavy Commercial) = 3.9 % STA. N.A. TO STA. N.A. MPH
R-Value 30 20 YR BESALS 1,802,000 Design Load 10 ton
K-Value 150 35 YR CESALS 4,708,590

NOTE: THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

THE EXACT LOCATION OF UNDERGROUND UTILITIES SHOWN IN THIS PLAN SET ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE PRIOR TO STARTING ANY EXCAVATION.

GOPHER STATE ONE CALL SYSTEM 1-800-252-1166

Minn. Proj. No. ES1065 (045)
2005 GOVERNING SPECIFICATIONS AS AMENDED

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION". ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO THE MNUTCD, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

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104	TRAFFIC SIGNAL CCTV SYSTEM DETAILS

THIS PLAN SET CONTAINS 104 SHEETS



2550 UNIVERSITY AVE. WEST, SUITE 345H ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-5116

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

DATE: 08/07/09 REG. NO. 44821

ENGINEER: Daniel J. Coyle
DANIEL J. COYLE, P.E.

APPROVED: [Signature] 8/10/2009
RAMSEY COUNTY ENGINEER

APPROVED: [Signature] 8/10/2009
MAPLEWOOD CITY ENGINEER

APPROVED: [Signature] 9/3/2009
METRO DISTRICT STATE AID ENGINEER - REVIEWED FOR COMPLIANCE WITH STATE-AID AND FEDERAL AID RULES/POLICY

APPROVED: [Signature] 9/3/2009
APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

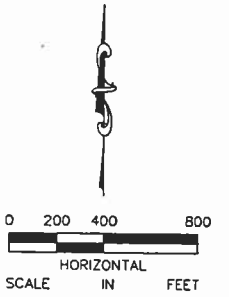
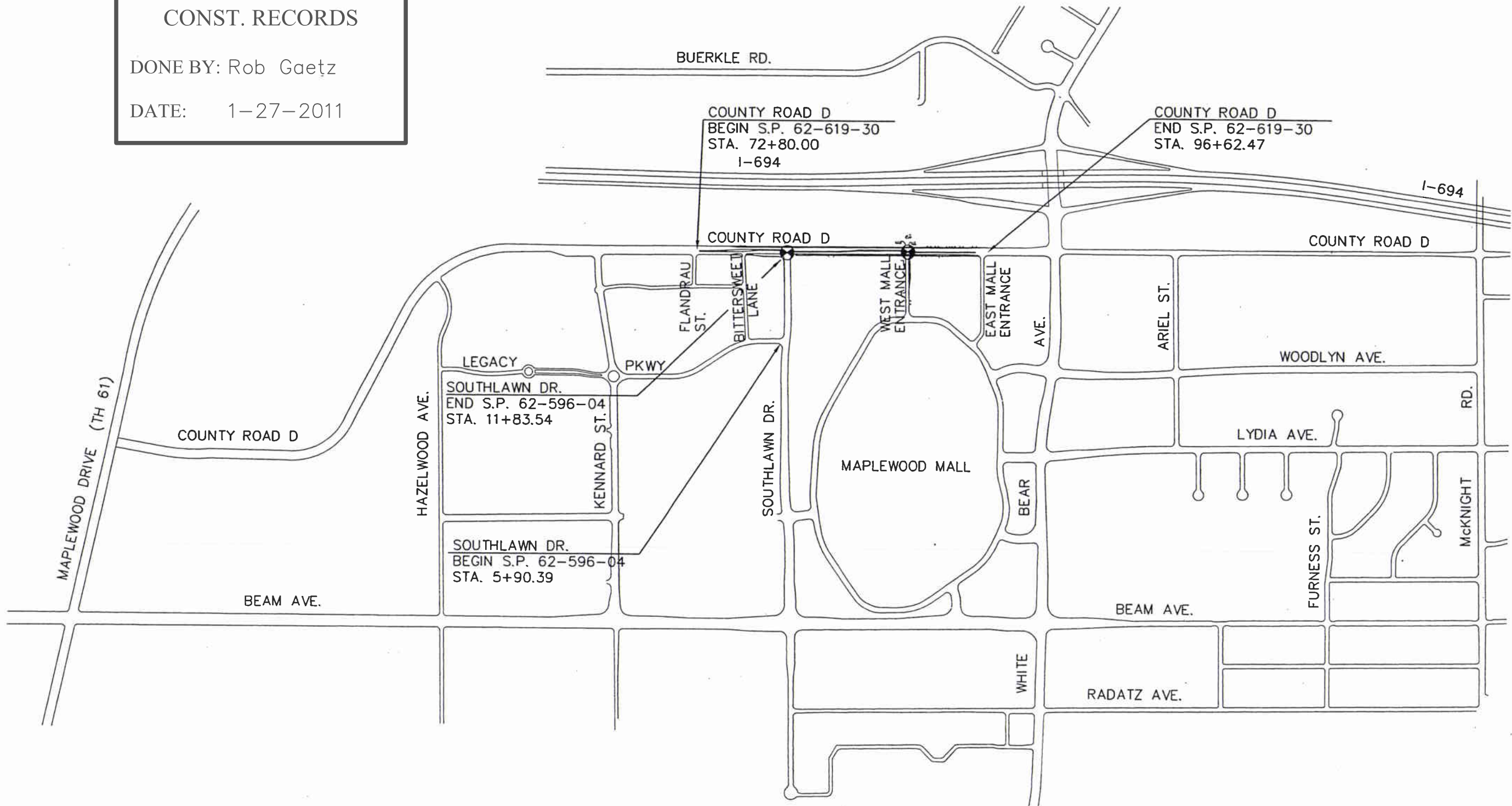
DATE: _____ REG. NO. _____

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



K:\IWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-GL001.dwg September 22, 2009 -- 8:01am

No.	Date	Revisions	App.

DRAWING NAME	CRD-GL001.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

Kimley-Horn and Associates, Inc.
2300 UNIVERSITY AVE. WEST, SUITE 340W
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-5116

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

Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MIN. LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
PROJECT LAYOUT

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
2
104

ITEM NO.	ITEM DESCRIPTION	UNIT	NOTES	TABS	TOTAL QUANTITY		S.P. 62-619-30		S.P. 62-596-04		NON-PARTICIPATING	
					ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY
2021.501	MOBILIZATION	LUMP SUM			1		0.95		0.05			
2031.501	FIELD OFFICE, TYPE SPECIAL-D	LUMP SUM	3		1		1					
2101.502	CLEARING	TREE	12		9		9					
2101.507	GRUBBING	TREE	12		9		9					
2102.501	PAVEMENT MARKING REMOVAL	SQ FT			3,800		3,800					
2104.501	REMOVE CONCRETE CURB AND GUTTER	LN FT		G	6,780		6,130		650			
2104.501	REMOVE RC PIPE SEWERS	LN FT		A	805		805					
2104.501	REMOVE WATER SERVICE	LN FT			375						375	
2104.503	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ FT		G	28,285		28,285					
2104.503	REMOVE BITUMINOUS TRAIL	SQ FT		G	3,950		3,950					
2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ FT		G	1,750		1,750					
2104.503	REMOVE CONCRETE SIDEWALK	SQ FT		G	1,265		1,265					
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	6	G	12,540		11,580		960			
2104.509	REMOVE CATCH BASIN	EACH		A	11		11					
2104.509	REMOVE MANHOLE (STORM)	EACH		A	4		4					
2104.509	REMOVE SKN	EACH			1		1					
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LN FT	1	G	1,325		1,325					
2104.523	SALVAGE CASTING (SANITARY)	EACH	3	K	13		13					
2104.523	SALVAGE CASTING (STORM)	EACH	3	A	18		18					
2104.523	SALVAGE LIGHT POLE	EACH			1		1					
2104.523	SALVAGE MARKER	EACH		Q	1		1					
2104.523	SALVAGE SIGN TYPE C	EACH		S,U	13		13					
2104.523	SALVAGE SIGN TYPE D	EACH		R	2		2					
2105.501	COMMON EXCAVATION (EV) (P)	CJ YD		I	18,557		15,639					
2105.507	SUBGRADE EXCAVATION (EV)	CJ YD	4		725		725		918			
2105.522	SELECT GRANULAR BORROW (CV)	CJ YD	3.4, 11		725		725					
2105.522	SELECT GRANULAR BORROW (CV) (P)	CJ YD	3.11	E	11,295		11,295					
2105.523	COMMON BORROW (CV) (P)	CJ YD			277		277					
2105.523	TOPSOIL BORROW (LV)	CJ YD		I	1092		1092					
2123.610	DISK HARROW	HOURL	4		100		90					
2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOURL	4		75		75		10			
2123.610	TRACTOR BACKHOE	HOURL	3.4		60		60					
2130.501	WATER	MGAL	2		250		250					
2131.502	CALCIUM CHLORIDE SOLUTION	GALLON	2.4		375		375					
2211.503	AGGREGATE BASE, CLASS 7 (CV) (P)	CY	3	E	4,517		4,218		299			
2232.501	MILL BITUMINOUS SURFACE (2")	SQ YD		G	3,225		3,225					
2301.502	CONCRETE PAVEMENT 8"	SQ YD	10	F	13,750		12,800		950			
2301.511	STRUCTURAL CONCRETE	CJ YD			3,060		3,060					
2301.529	REINFORCEMENT BARS (EPOXY COATED)	POUND			16,700		16,700					
2301.538	DOWEL BAR	EACH			5,000		5,000					
2301.602	DRILL AND GROUT DOWEL BAR (EPOXY COATED)	EACH			50		50					
2301.602	DRILL AND GROUT REINF BAR (EPOXY COATED)	EACH			50		50					
2301.603	PERMANENT TERMINAL HEADER	LN FT			110		110					
2301.604	INTEGRALLY COLORED CONCRETE PAVEMENT	SQ YD			250		250					
2301.607	INTEGRALLY COLORED STRUCTURAL CONCRETE	CJ YD			56		56					
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON		E	280		280					
2360.501	TYPE SP B WEARING COURSE MIXTURE (4.B)	TON		E	700		700					
2360.502	TYPE SP B NONWEARING COURSE MIXTURE (4.B)	TON		E	420		420					
2360.504	TYPE SP B WEARING COURSE MIXTURE FOR BIT DRIVEWAY PATCH (B)	SQ YD	3	E	1,070		1,070					
2360.504	TYPE SP B WEARING COURSE MIXTURE FOR TEMPORARY BITUMINOUS (B)	SQ YD	3.4	E	4,000		4,000					
2360.505	LEVELING COURSE (B)	TON		E	600		600					
2411.618	RETAINING WALL (MODULAR)	SQ FT			430		430					
2502.541	4" PERF TP PIPE DRAIN	LN FT			320		320					
2503.541	15" RCP SEWER, DES. 3006, CL V	LN FT		B	876		876					
2503.541	18" RCP SEWER, DES. 3006, CL V	LN FT		B	36		36					
2503.541	30" RCP SEWER, DES. 3006, CL III	LN FT		B	1,179		1,179					
2503.541	36" RCP SEWER, DES. 3006, CL III	LN FT		B	70		70					
2503.602	CONNECT TO EXSTNG STORM SEWER	EACH	3	B	1		1					
2503.602	CONSTRUCT BULKHEAD	EACH		A	5		5					
2503.602	CONSTRUCT TEMPORARY WEIR INSIDE EXSTNG 42" FES	LUMP SUM	9		1		1					
2504.602	ADJUST GATE VALVE AND BOX	EACH		L	25		25					
2504.602	WATER UTILITY HOLE	EACH	3		13		13					
2504.603	WATER UTILITY MAIN AND SERVICE TRENCH	LN FT	3		420		420				13	
2504.604	2" INSULATION	SQ YD	4		75		75				420	
2506.501	CONSTRUCT DRAINAGE STRUCTURE, DESIGN 48-4020	LN FT	7	B	102.5		102.5					
2506.501	CONSTRUCT DRAINAGE STRUCTURE, DESIGN 60-4020	LN FT	7	B	62.2		62.2					
2506.501	CONSTRUCT DRAINAGE STRUCTURE, DESIGN 72-4020	LN FT	7	B	7		7					
2506.501	CONSTRUCT DRAINAGE STRUCTURE, DESIGN 84-4020	LN FT		B	12.1		12.1					
2506.503	RECONSTRUCT MANHOLE (SANITARY)	LN FT		K	33.1		33.1					
2506.516	CASTING ASSEMBLY - SANITARY (R-1678-A FRAME, R-1422-0015 LID)	EACH	8	K	13		13					
2506.516	CASTING ASSEMBLY - STORM (R-1678-A FRAME, R-1422-0016 LID)	EACH		A	38		38					
2506.522	ADJUST FRAME AND RING CASTING (SANITARY)	EACH		K	9		9					
2506.522	ADJUST FRAME AND RING CASTING (STORM)	EACH		A	2		2					
2506.602	CONSTRUCT SURVEY MONUMENT MANHOLE	EACH			1		1					
2511.501	RANDOM RIPRAP, CLASS IV	CJ YD	3		35		35					
2511.511	GRANULAR FILTER 12" DEPTH	CJ YD	3		20		20					
2511.515	GEOTEXTILE FILTER, TYPE IV	SQ YD			25		25					
2521.501	6" CONCRETE WALK	SQ FT			1,200		1,200					
2531.501	CONCRETE CURB AND GUTTER DESIGN B612	LN FT		F	1,390		1,390					
2531.501	CONCRETE CURB AND GUTTER DESIGN B612 - MODIFIED	LN FT	3	F	2,060		2,060					
2531.501	CONCRETE CURB AND GUTTER DESIGN B618	LN FT		F	330		330		330			
2531.501	CONCRETE CURB AND GUTTER DESIGN B624	LN FT		F	3,395		3,395					
2531.501	CONCRETE CURB AND GUTTER DESIGN B624 - MODIFIED	LN FT	3	F	1,740		1,740					

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

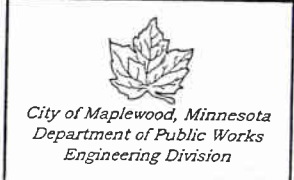
K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_EQT01.dwg, September 22, 2009 - 8:45am

No.	Date	Revisions	App.

Kimley-Horn and Associates, Inc.
 2550 UNIVERSITY AVE. WEST, SUITE 343N
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4167
 FAX. NO. (651) 645-5118

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

Daniel J. Boyle, P.E.
 DANIEL J. BOYLE, P.E.
 DATE: 08/07/09 MN LIC. NO. 44821



RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D IMPROVEMENTS

STATEMENT OF
 ESTIMATED QUANTITIES

CITY PROJECT	08-13	SHEET NO. 3
COUNTY PROJECT	P-3202	
S.P.	62-619-30	
S.P.	62-596-04	

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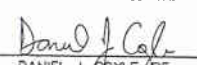


ITEM NO.	ITEM DESCRIPTION	UNIT	NOTES	TABS	TOTAL QUANTITY		S.P. 62-619-30				S.P. 62-596-04		NON-PARTICIPATING		
					ESTIMATED QUANTITY	FINAL QUANTITY	PARTICIPATING		STORM SEWER		PARTICIPATING		ESTIMATED QUANTITY	FINAL QUANTITY	
							ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY	ESTIMATED QUANTITY	FINAL QUANTITY			
2531.602	CONCRETE MEDIAN NOSE DESIGN 7113	EACH		F	8		8								
2531.603	CONCRETE VALLEY GUTTER	LN FT			455		455								
2531.604	INTEGRALLY COLORED 4-INCH CONCRETE MEDIAN	SQ YD	4		750		750								
2531.618	DETECTABLE WARNING PLATES	SQ FT			48		48								
2545.602	LIGHTING ASSEMBLY (RELOCATE)	EACH			1		1								
2563.601	TRAFFIC CONTROL	LUMP SUM	3		1		0.95		0.05						
2564.531	SIGN PANELS TYPE C	SQ FT		S, P	125		125								
2564.537	INSTALL SIGN TYPE C	EACH		S	8		8								
2564.552	HAZARD MARKER X4-2	EACH		P	6		6								
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM A	SIG SYS	3		1		1								
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM B	SIG SYS	3		1		1								
2565.601	ACCESSIBLE PEDESTRIAN SIGNALS	LUMP SUM			1		1								
2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM A	LUMP SUM			1		1								
2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM B	LUMP SUM			1		1								
2565.602	PVC HANDHOLE	EACH			5		5								
2565.603	2" NON-METALLIC CONDUIT	LN FT			1,600		1,600								
2565.603	24/C FIBER OPTIC CABLE - INTERCONNECT	LN FT			2,100		2,100								
2572.501	TEMPORARY FENCE (48" HIGH ORANGE PLASTIC)	LN FT	4.5		4,500		4,500								
2573.502	SILT FENCE, TYPE MACHINE SLICED	LN FT	4		500		500								
2573.502	SILT FENCE, TYPE HEAVY DUTY	LN FT	4		100		100								
2573.512	TEMPORARY DITCH CHECK, TYPE 2 (BIOROLLS)	LN FT	4	N	4,980		4,980								
2573.513	TEMPORARY DITCH CHECK, TYPE 5 (ROCK WEEPER)	CU YD	4	N	8		8								
2573.530	STORM DRAIN INLET PROTECTION	EACH		N	42		36								
2573.542	FLOC SOCK	EACH	4		25		25								
2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM			1		1								
2573.602	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EACH			8		8								
2573.610	MECHANICAL CLARIFICATION PUMPING	HOURL	4		30		30								
2575.501	SEEDING	ACRE	4	N	0.68		0.68								
2575.502	SEED MIXTURE 150TS WITH 50 LBS/ACRE WINTER WHEAT	POUND	4	N	62		62								
2575.505	SOD	SQ YD		N	2,550		2,200				350				
2575.523	EROSION CONTROL BLANKET, CATEGORY 3	SQ YD	4		500		500								
2575.525	EROSION STABILIZATION MAT (SCOUR STOP)	SQ YD	4		50		50								
2575.525	EROSION STABILIZATION MAT, CLASS 4	SQ YD	4		1,000		1,000								
2575.570	RAPID STABILIZATION METHOD 1 (TYPE 1 MULCH)	TON	4		1.6		1.6								
2575.570	RAPID STABILIZATION METHOD 3 (MULCH, HYDRAULIC STABILIZER)	MGAL	4	N	10		9.4				0.6				
2575.570	RAPID STABILIZATION METHOD 4 (CATEGORY 3 EC BLANKET, SEED)	SQ YD	4		1,000		1,000								
2581.501	REMOVABLE PREFORMED PLASTIC MARKING	LN FT		O	7,300		7,300								
2582.501	PAVT MSSG (LT ARROW) PAINT	EACH		O	5		5								
2582.501	PAVT MSSG (LT ARROW) POLY PREF - GR N	EACH		O	8		8								
2582.501	PAVT MSSG (RT ARROW) PAINT	EACH		O	2		2								
2582.501	PAVT MSSG (RT ARROW) POLY PREF - GR N	EACH		O	1		1								
2582.502	12" SOLID LINE YELLOW - EPOXY	LN FT		O	110		110								
2582.502	12" SOLID LINE YELLOW - PAINT	LN FT		O	100		100								
2582.502	4" BROKEN LINE WHITE - EPOXY	LN FT		O	900		900								
2582.502	4" BROKEN LINE WHITE - PAINT	LN FT		O	350		350								
2582.502	4" DOUBLE SOLID LINE YELLOW - PAINT	LN FT		O	4,175		4,175								
2582.502	4" SOLID LINE WHITE - EPOXY	LN FT		O	1,150		1,150								
2582.502	4" SOLID LINE WHITE - PAINT	LN FT		O	1,860		1,860								
2582.502	4" SOLID LINE YELLOW - EPOXY	LN FT		O	4,000		4,000								
2582.502	4" SOLID LINE YELLOW - PAINT	LN FT		O	2,200		2,200								
2582.502	6" SOLID LINE WHITE - EPOXY	LN FT		O	680		680								
2582.502	8" DOTTED LINE WHITE - PAINT	LN FT		O	50		50								
2582.503	CROSSWALK MARKING - POLY PREFORM (GR IN)	SQ FT		O	340		340								
	BID ALTERNATE #1 - SOUTHLAWN 5+90 TO 9+88														
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	6	G	2150						2150				
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LN FT	1	G	260						260				
2105.501	COMMON EXCAVATION (EV) (P)	CU YD		I	655						655				
2105.522	SELECT GRANULAR BORROW (CV) (P)	CU YD	3.11	E	487						487				
2211.501	AGGREGATE BASE, CLASS 7 (CV) (P)	TON	3.10		1265						1265				
2232.501	MILL BITUMINOUS SURFACE (2")	SQ YD		G	60						60				
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON		E	110						110				
2360.501	TYPE SP B WEARING COURSE MIXTURE (4.8)	TON		E	290						290				
2360.502	TYPE SP B NON-WEARING COURSE MIXTURE (4.8)	TON		E	290						290				
2504.602	ADJUST GATE VALVE AND BOX	EACH		L	1						1				
2506.522	ADJUST FRAME AND RING CASTING (SANITARY)	EACH		K	1						1				
2506.522	ADJUST FRAME AND RING CASTING (STORM)	EACH		A	2						2				
2531.501	CONCRETE CURB AND GUTTER DESIGN B618	LN FT		F	300						300				
2531.603	CONCRETE CURB & GUTTER SPOT REPLACEMENT	LN FT	4		300						300				
	BID ALTERNATE #2 - CCTV CAMERAS AND FELD CABINET HARDWARE														
2550.601	CCTV FIELD EQUIPMENT	LUMP SUM			1		1								
2550.602	CCTV ASSEMBLY	EACH			2		2								
	BID ALTERNATE #3 - CENTRAL VIDEO WORKSTATION SOFTWARE AND SUPPORTING HARDWARE														
2550.601	DIGITAL VIDEO MANAGEMENT SYSTEM	LUMP SUM			1		1								

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-EQT02.dwg September 22, 2009 8:49am

No.	Date	Revisions	App.	DRAWING NAME CRD-EQT02.dwg	 Kimley-Horn and Associates, Inc. <small>2550 UNIVERSITY AVE. WEST, SUITE 345H ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-5118</small>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  DANIEL J. BOYLE, P.E. DATE: 08/07/09 MN LIC. NO. 44821	 RAMSEY COUNTY	 <i>City of Maplewood, Minnesota</i> Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS STATEMENT OF ESTIMATED QUANTITIES	CITY PROJECT 08-13 COUNTY PROJECT P-3202 S.P. 62-619-30 S.P. 62-596-04	SHEET NO. 4 104
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ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

QUANTITY NOTES
1. SAWCUT SHALL BE FULL DEPTH
2. FOR DUST CONTROL
3. SEE SPECIAL PROVISIONS
4. THIS PAY ITEM TO BE USED IS TO BE USED IN LOCATIONS DETERMINED BY THE ENGINEER IN THE FIELD. THE REQUIREMENTS OF SPECIFICATION 1903 ARE HEREBY DELETED FOR THIS ITEM.
5. THIS PAY ITEM IS NOT FOR TRENCH PROTECTION. TRENCH PROTECTION IS THE CONTRACTOR'S EXPENSE.
6. SEE GEOTECHNICAL REPORT FOR AVERAGE THICKNESS OF EXISTING ROAD PAVEMENTS.
7. INCLUDES 4022 STRUCTURES.
8. SEE MAPLEWOOD STANDARD PLATE 400.
9. CONTRACTOR MAY USE ALTERNATIVE MATERIALS TO CONSTRUCT TEMPORARY WEIR. ALTERNATIVE METHODS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
10. STANDARD AND IRREGULAR WIDTH PAVEMENT IS INCLUDED IN THIS PAY ITEM AND QUANTITY.
11. COMMON EXCAVATION IS MEASURED TO THE BOTTOM OF THE 2' SELECT GRANULAR BORROW SHOWN ON THE TYPICAL SECTIONS. PLAN QUANTITY IS FOR 2' SELECT GRANULAR BORROW. MEASURED QUANTITY IS FOR BACKFILL OF ANY UNSUITABLE AREAS BELOW COMMON EXCAVATION.
12. SEE REMOVAL PLAN.


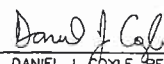


(P) = PLAN QUANTITY

MAPLEWOOD STANDARD PLATES	
* TO BE USED IN CASE SANITARY SERVICE REPLACEMENT OR ADJUSTMENT IS NECESSARY TO FACILITATE PROPOSED CONSTRUCTION	
PLATE NO.	DESCRIPTION
301	MANHOLE FRAME AND LID DETAILS
400	SANITARY SEWER MANHOLE
410	SANITARY SEWER SERVICE*
410A	SANITARY SEWER SERVICE REPLACEMENT (MAIN TO R/W)*
D-2	GATE VALVE AND BOX INSTALLATION
D-3	HYDRANT INSTALLATION
D-5	PIPE INSULATION DETAIL

RAMSEY COUNTY STANDARD DETAILS	
THE FOLLOWING STANDARD DETAILS SHALL APPLY ON THIS PROJECT	
DESCRIPTION	
PEDESTRIAN CURB RAMP AT 6' SIDEWALK	

MN/DOT STANDARD PLATES	
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT	
PLATE NO.	DESCRIPTION
1070L	REINFORCED PANEL OVER CULVERTS
1103J	TYPICAL DOWEL BAR ASSEMBLY
1141D	PAVEMENT KEYWAY FOR KEYS JOINT CONSTRUCTION
1150Q	CONSTRUCTION OF HEADER JOINTS
3000L	REINFORCED CONCRETE PIPE (5 SHEETS)
3006G	GASKET JOINT FOR RC PIPE (2 SHEETS)
3133C	RIPRAP AT RCP OUTLETS
4005L	MANHOLE OR CATCH BASIN - DESIGN F
4006L	MANHOLE OR CATCH BASIN - DESIGN G OR DESIGN H
4010H	CONCRETE SHORT CONE AND ADJUSTING RING
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN
4022A	MANHOLE OR CATCH BASIN COVER
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4108F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4110F	COVER CASTING FOR MANHOLE
4132F	CATCH BASIN FRAME CASTING (FOR SQUARE GRATE)
4154B	CATCH BASIN GRATE CASTING
4180J	MANHOLE OR CATCH BASIN STEP
7020J	CONCRETE CURB - DESIGNS B, V, S, DR AND BR
7100H	CONCRETE CURB AND GUTTER - DESIGN B AND DESIGN V
7109C	MEDIAN NOSE AND ISLAND
7111J	INSTALLATION OF CATCH BASIN CASTINGS
7112C	INSTALLATION AND REINFORCEMENT OF CATCH BASIN AND MANHOLE CASTINGS
8000I	STANDARD BARRICADES
8114A	PVC HANDHOLE/PULLBOX
8115D	PEDESTRIAN PUSH BUTTON INSTALLATION
8120M	POLE FOUNDATION (PA 85)
8121E	TRANSFORMER BASE & POLE BASE PLATE
8123E	POLE & MAST ARM
8124E	MAST ARM SIGNAL HEAD MOUNTS
8126H	POLE FOUNDATION (PA90 AND PA100)

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-QTY01.dwg September 22, 2009 - 8:01am

No.	Date	Revisions	App.	DRAWING NAME CRD-QTY01.dwg	 <p>Kimley-Horn and Associates, Inc. 2350 UNIVERSITY AVE. WEST, SUITE 340M ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-5116</p>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  DANIEL J. BOYLE, PE DATE: 08/07/09 MN LIC. NO. 44821	 <p>RAMSEY COUNTY</p>	 <p><i>City of Maplewood, Minnesota</i> Department of Public Works Engineering Division</p>	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS QUANTITY NOTES AND STANDARD PLATES	CITY PROJECT	08-13	SHEET NO. 5						
																		104

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CONSTRUCTION NOTES	
1.	WATER, GAS, ELECTRIC, TELEPHONE, SEWER, FIBER OPTIC AND TV CABLE LINES SHOWN ON THE DRAWINGS ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION, BUT MAY NOT REFLECT ACTUAL LOCATIONS OR ELEVATIONS. THE CONTRACTOR SHALL VERIFY
2.	UTILITY COMPANIES WILL RELOCATE THEIR FACILITIES CONCURRENTLY WITH THE CONSTRUCTION OPERATIONS UNDER THIS CONTRACT. CONTRACTOR SHALL SCHEDULE CONSTRUCTION IN COOPERATION WITH UTILITY RELOCATION.
3.	PROVIDE FOR REMOVAL AND DISPOSAL (OUTSIDE OF CONSTRUCTION ZONE) OF ALL INPLACE STRUCTURES THAT WILL INTERFERE WITH CONSTRUCTION. DISPOSAL OF ITEMS REMOVED UNDER THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF MN/DOT SPEC 2104.3C3.
4.	SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL, MUCK AND OTHER UNSUITABLE MATERIALS
5.	EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF MN/DOT SPECS 2104.3C3 AND 2105.3D.
6.	SELECT GRANULAR SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC 3149.2B2.
7.	THE TOP OF SUBGRADE GRADE ON THIS PROJECT IS DEFINED AS THE BOTTOM OF THE CLASS 7 AGGREGATE BASE.
8.	COMPACTION IN GRADING ITEMS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH MN/DOT SPEC 2105.3F2 "QUALITY COMPACTION METHOD."
9.	COMPACTION OF BITUMINOUS LAYERS ON ALL PERMANENT SECTIONS SHALL BE BY THE "ORDINARY COMPACTION METHOD" IN ACCORDANCE WITH MN/DOT SPEC 2360.6C.
10.	WHEN EXCAVATING ADJACENT TO INPLACE PAVEMENT, NO MATERIAL SHALL BE REMOVED FROM INSIDE AN APPROXIMATE 2:1 SLOPED LINE DRAWN DOWNWARD AND OUTWARD FROM THE BOTTOM OF THE INPLACE PAVEMENT.
11.	STABILIZING AGGREGATE SHALL BE APPLIED IF NECESSARY TO ACHIEVE SATISFACTORY SURFACE STABILITY AS DETERMINED BY THE ENGINEER. THE MATERIAL SHALL SATISFY THE REQUIREMENTS OF SECTION 3149.2C AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 2105.3G OF THE MN/
12.	USE TACK COAT BETWEEN ALL BITUMINOUS LIFTS. THE BITUMINOUS TACK COAT SHALL BE APPLIED AT A UNIFORM RATE OF 0.05 GAL/SQ. YD. THE APPLICATION RATE IS FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY). THE ASPHALT EMULSION MAY BE FURTHER DILUTED IN
13.	ALL USES OF THE WORD "INCIDENTAL" IN THESE CONSTRUCTION DOCUMENTS SHALL BE CONSTRUED TO MEAN INCIDENTAL WORK FOR WHICH NO DIRECT COMPENSATION SHALL BE MADE.
14.	ALL DRAINAGE STRUCTURES TYPE MH AND CB SHALL HAVE A MINIMUM 6" OF CONCRETE ADJUSTING RINGS.
15.	THERE IS NO PAY ITEM FOR CONNECTING TO EXISTING STORM MANHOLES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF RC PIPE BY THE LINEAR FOOT.
16.	EXCESS COMMON EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE COST FOR DISPOSAL SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND NO ADDITIONAL COMPENSATION WILL BE PAID OUTSIDE THE PRICE BID FOR COMMON EXCAVATION.
17.	WHERE A PROPOSED ROADWAY BEGINS OR TERMINATES AT AN EXISTING ROADWAY, PROVIDE A VERTICAL NOTCH TO THE BOTTOM OF THE AGGREGATE OR BITUMINOUS BASE AND A 20H:1V TAPER.
18.	PROVIDE 20H:1V TAPERS BETWEEN LONGITUDINAL CHANGES IN SUBCUT DEPTHS.
19.	PROVIDE FOR A SAWCUT WHERE PLACING NEW PAVEMENT NEXT TO INPLACE PAVEMENT.

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U	SALVAGE SIGN TYPE C	20
V	TEMPORARY FENCE	NOT USED

BASIS FOR ESTIMATED QUANTITIES	
2211	AGGREGATE BASE CLASS 7 - 140 LB/CF
2350 & 2360 MIXES	BITUMINOUS MIXTURES - 110 LBS PER 1" THICKNESS PER SQUARE YARD
2357.502	BITUMINOUS MIXTURES FOR TACK COAT ESTIMATED AT 0.05 GALLONS PER SQUARE YARD PER APPLICATION
2575.502	SEED MIXTURE 150 TS 40 LBS PER ACRE W/50 LBS PER ACRE WINTER WHEAT (+20%)
2575.560	HYDRAULIC SOIL STABILIZER TYPE 6 ESTIMATED AT 3000 LBS PER ACRE

**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011

UTILITY CONTACTS	
RAMSEY COUNTY JERRY AUGÉ, P.E. 1425 PAUL KIRKWOOD DRIVE ARDEN HILLS, MN 55112 651-266-7117	MnDOT ROGER VANDENHEUVEL (ONE CALL OPERATIONS) 6000 MINNEHAHA AVENUE SAINT PAUL, MN 55111 612-725-2370
CITY OF MAPLEWOOD MICHAEL THOMPSON, P.E. 1902 COUNTY ROAD B EAST MAPLEWOOD, MN 55109 651-755-8959 michael.thompson@ci.maplewood.mn.us	GOPHER STATE ONE CALL EMERGENCY LOCATION 651-454-0002
SAINT PAUL REGIONAL WATER SERVICES BRAD EILTS 1900 RICE STREET SAINT PAUL, MN 55113 651-266-6350 brad.eilts@ci.stpaul.mn.us	ACCESS COMMUNICATIONS, INC. DAVID JENSON 5005 CHESHIRE LANE N SUITE 1 PLYMOUTH, MN 55446-3719 763-545-9998
AT&T JIM KULOUSEK 612-656-9840	BP PIPELINES INC. DEB HUBERTY 980 E. BERWOOD AVENUE SUITE 100 VADNAIS HEIGHTS, MN 55110 651-486-7701
COMCAST JOHN BEDNORZ 3050 ECHO LAKE DRIVE MAHTOMEDI, MN 55115 651-248-3850 john_bednorz@cable.comcast.com	QWEST GAIL SHERRICK 390 COMMERCE DRIVE WOODBURY, MN 55125 651-714-7540 gail.sherrick@qwest.com
XCEL ENERGY (ELECTRIC) BJ GRANT 1700 E COUNTY ROAD E WHITE BEAR LAKE, MN 55110 651-7793135 bjgrant@xcelenergy.com	XCEL ENERGY (GAS) CHARLIE RAUSCH 825 RICE STREET 3RD FLOOR (GAS DEPARTMENT) SAINT PAUL, MN 55117 651-748-3307 charles.g.rausch@xcelenergy.com

EROSION & SEDIMENT CONTROL CONTACTS	
MINNESOTA POLLUTION CONTROL AGENCY CONSTRUCTION STORMWATER PERMIT PROGRAM 520 LAFAYETTE ROAD NORTH ST. PAUL, MN 55155-4194 651-296-6300	RAMSEY COUNTY PUBLIC WORKS E&S CONTROL COORDINATOR 1425 PAUL KIRKWOOD DRIVE ARDEN HILLS, MN 55112-3933 JERRY AUGÉ 651-266-7117
RAMSEY-WASHINGTON METRO WATERSHED DISTRICT 2665 NOEL DRIVE LITTLE CANADA, MN 55117 TINA CARSTENS 651-792-7950	CONTRACTOR - TBD EROSION & SEDIMENT CONTROL SUPERVISOR

No.	Date	Revisions	App.	DRAWING NAME
				CRD-NTS01.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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

Daniel J. Boyle
DANIEL J. BOYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821

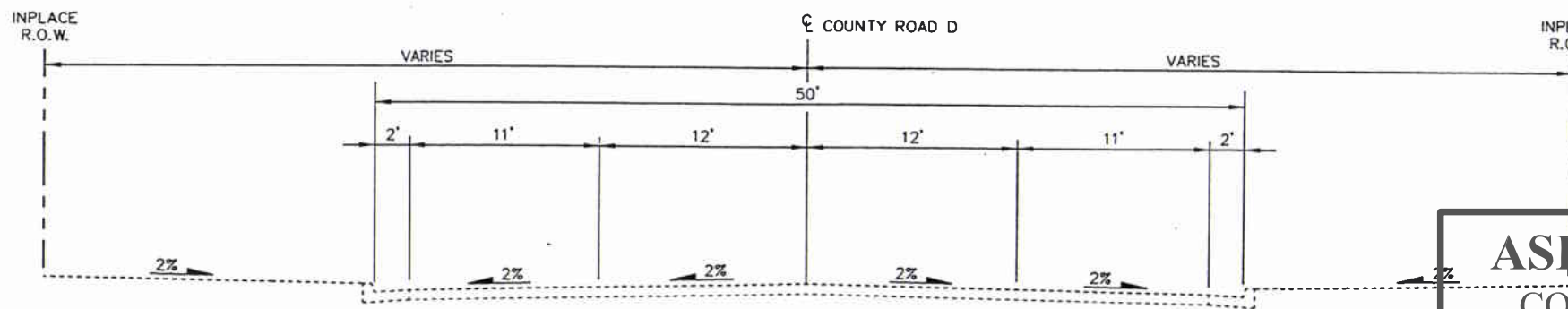


**RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS**

CONSTRUCTION NOTES, TABULATION INDEX,
BASIS FOR ESTIMATED QUANTITIES, AND
UTILITY CONTACTS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
6
104

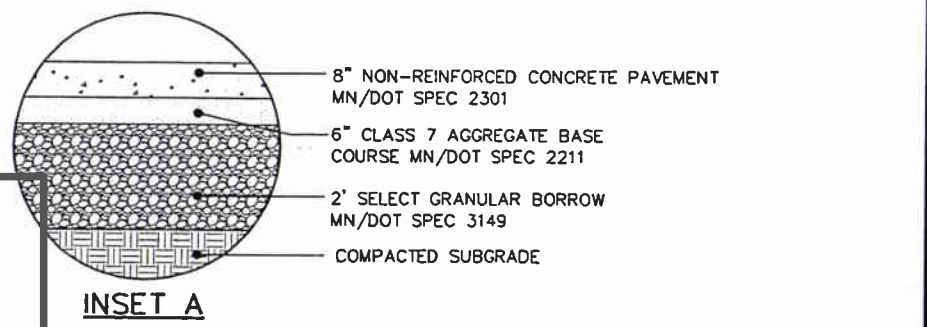


INPLACE TYPICAL SECTION COUNTY ROAD D

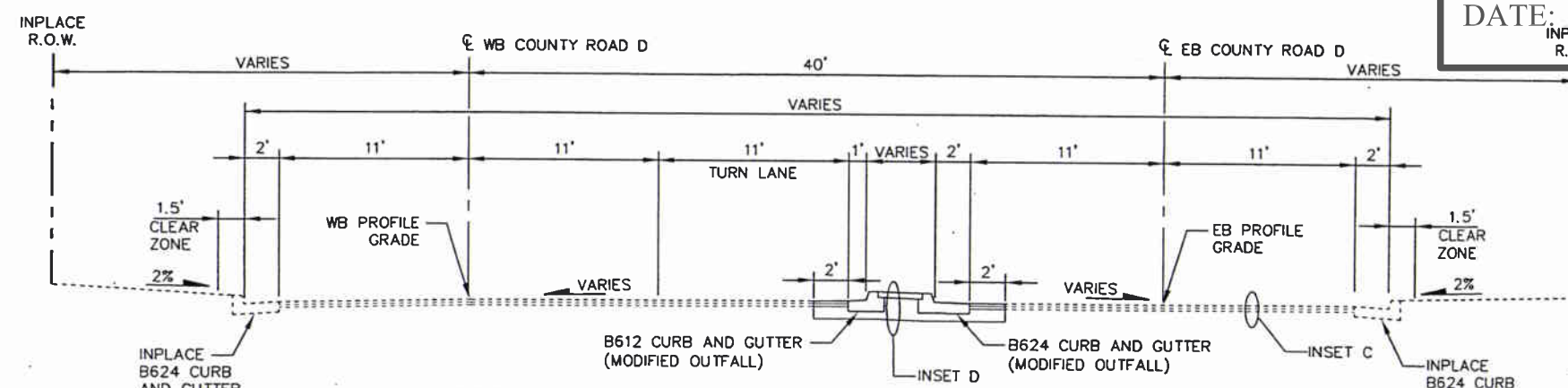
ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

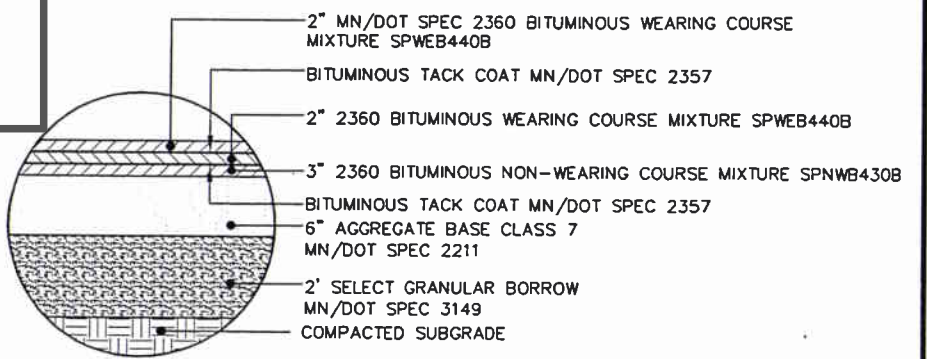
DATE: 1-27-2011



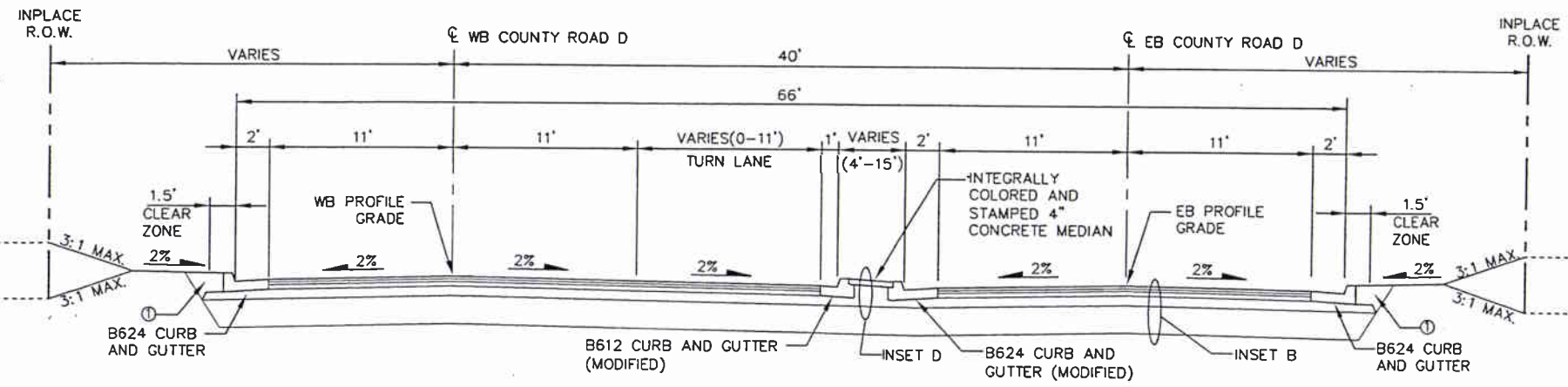
INSET A



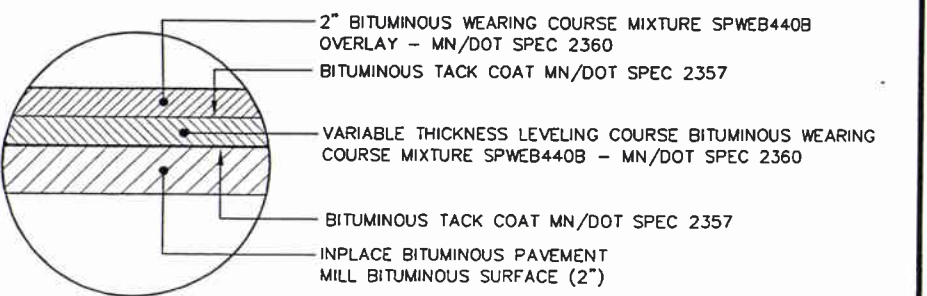
PROPOSED TYPICAL SECTION COUNTY ROAD D
 BITUMINOUS OVERLAY
 STA. 72+80.00 TO STA. 75+07.37



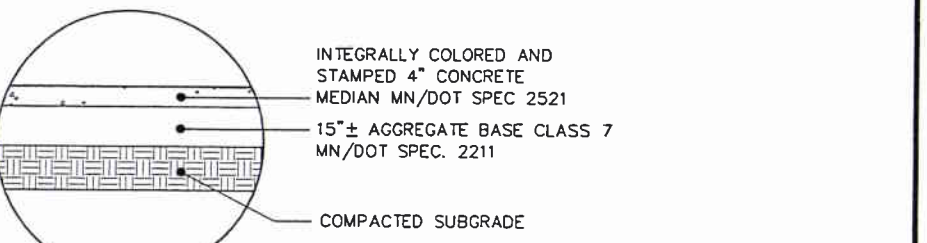
INSET B



PROPOSED TYPICAL SECTION COUNTY ROAD D
 BITUMINOUS PAVEMENT W/WESTBOUND LEFT TURN LANE
 STA. 75+07.37 TO STA. 76+46.49



INSET C



INSET D

⓪ BACKFILL WITH COMMON BORROW

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No.	Date	Revisions	App.

DRAWING NAME	CRD-TYP01.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

Kimley-Horn
and Associates, Inc.

2250 UNIVERSITY AVE. WEST, SUITE 345H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 545-4197
FAX. NO. (651) 545-5116

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Daniel J. Coyle PE
 DANIEL J. COYLE PE
 DATE: 08/07/09 MN LIC. NO. 44821

RAMSEY COUNTY

City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

TYPICAL SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

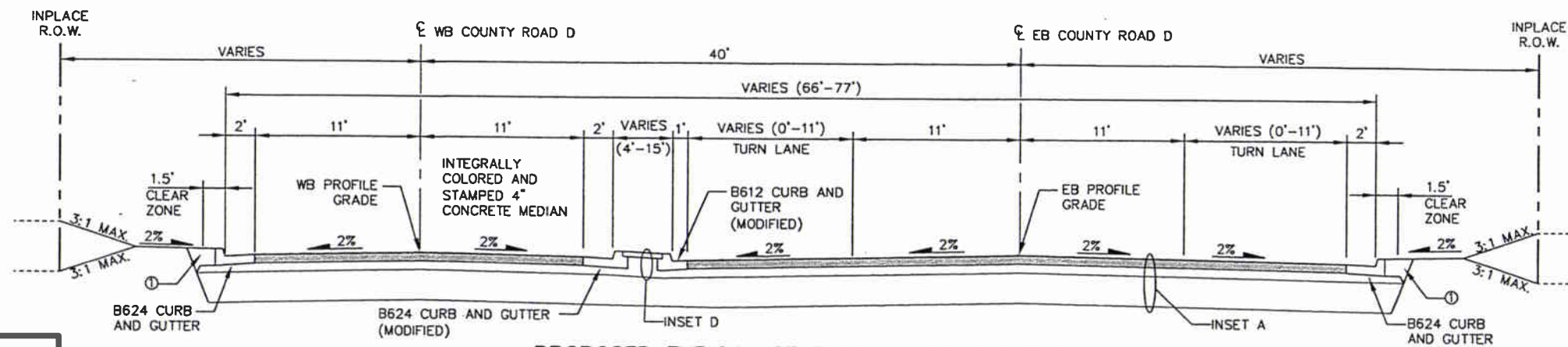
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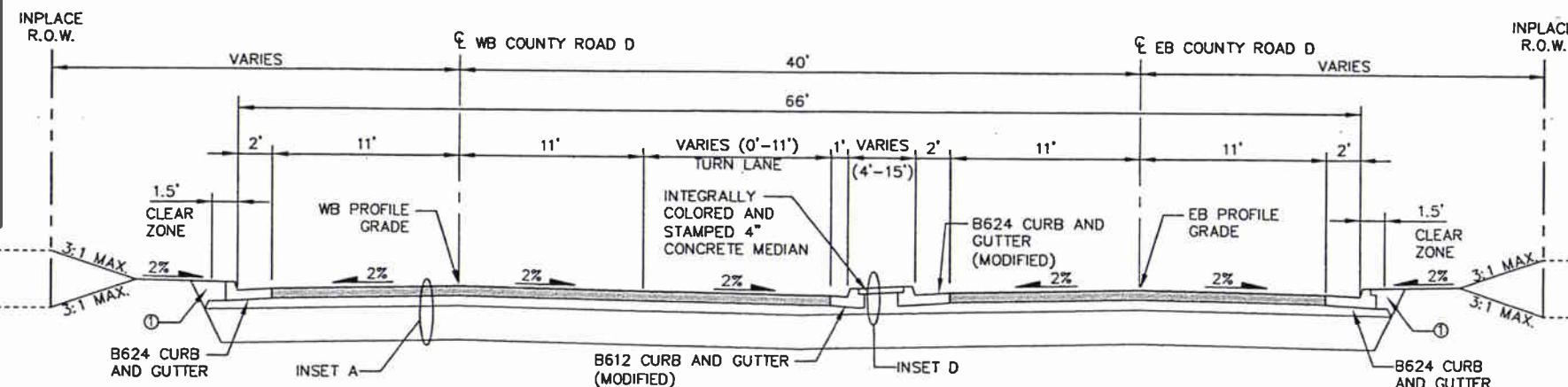
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

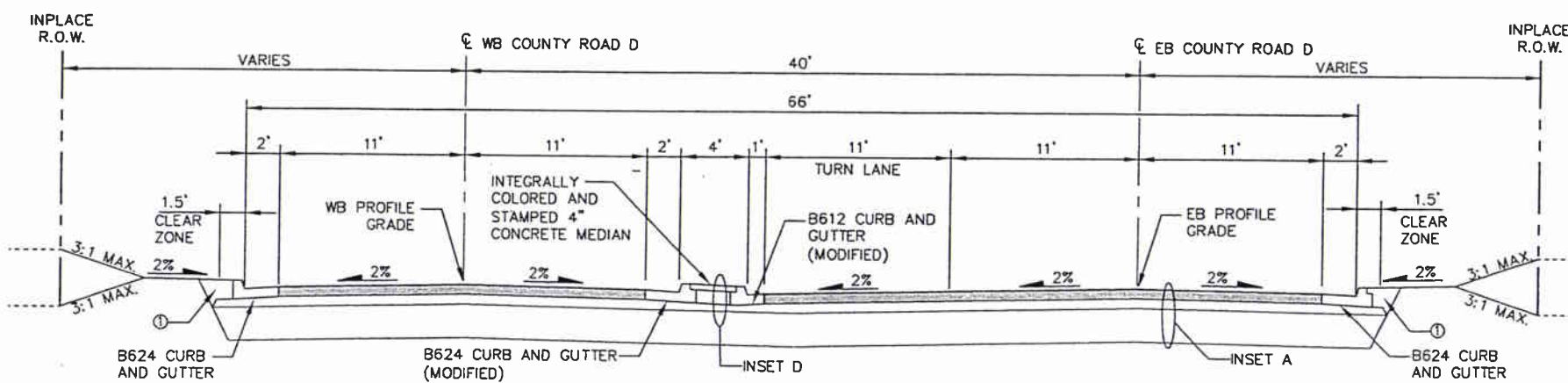
DATE: 1-27-2011



PROPOSED TYPICAL SECTION COUNTY ROAD D
CONCRETE PAVEMENT W/ RIGHT TURN LANE
STA. 76+46.49 TO STA. 79+49.53



PROPOSED TYPICAL SECTION COUNTY ROAD D
CONCRETE PAVEMENT
STA. 79+49.53 TO STA. 83+35.00
STA. 83+35.00 TO STA. 84+85.00 ②
STA. 88+60.00 TO STA. 94+05.00



PROPOSED TYPICAL SECTION COUNTY ROAD D
CONCRETE PAVEMENT W/EASTBOUND LEFT TURN LANE
STA. 84+85.00 TO STA. 88+60.00

- ① BACKFILL WITH COMMON BORROW
- ② LT. TURN LANE WIDTH TAPER B612 CURB BOTH SIDES OF MEDIAN

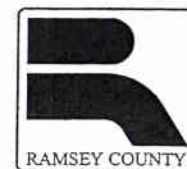
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No.	Date	Revisions	App.	DRAWING NAME
				CRD-TYP02.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
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Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821



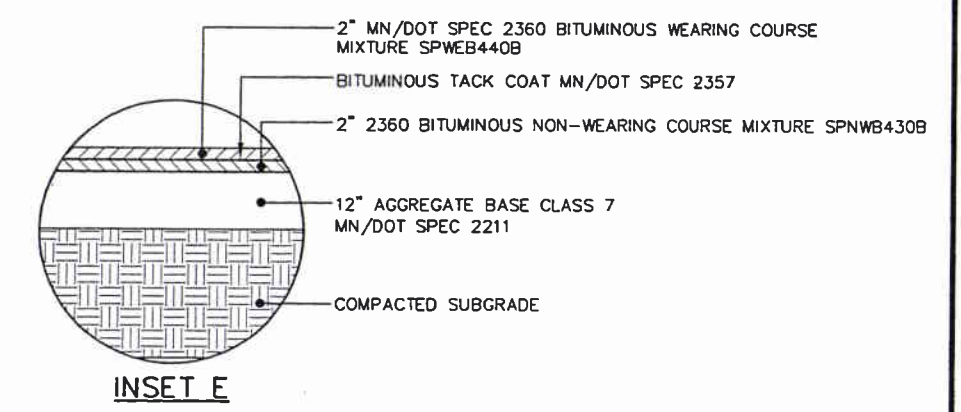
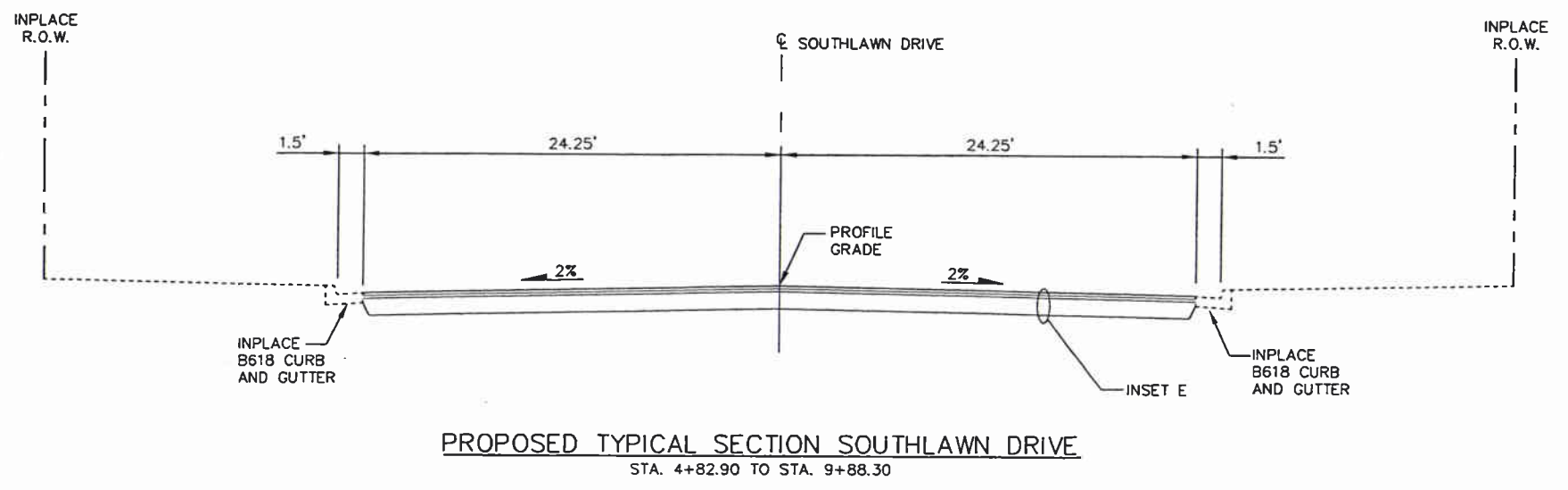
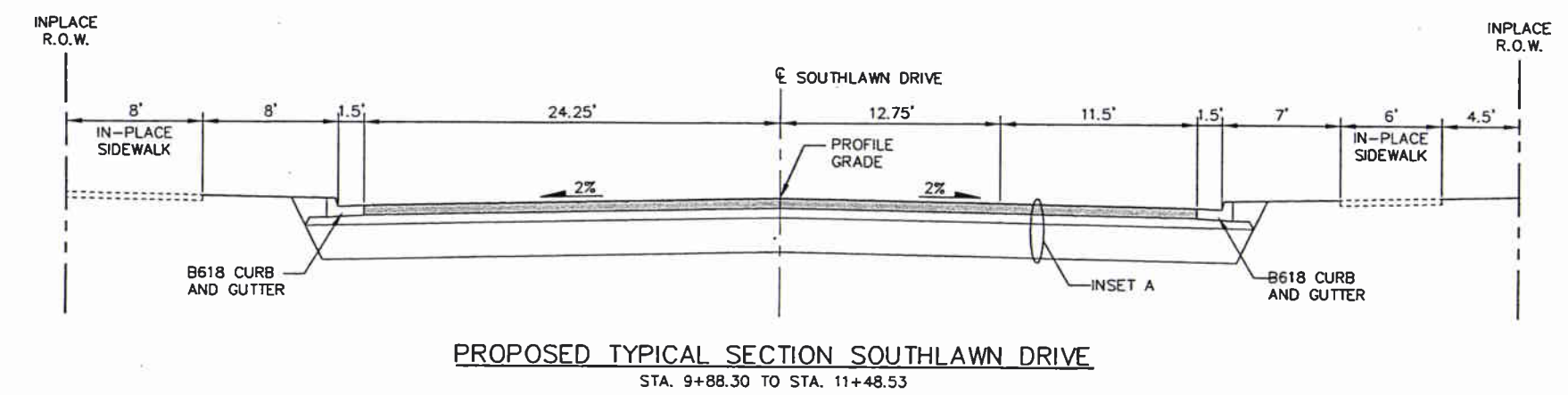
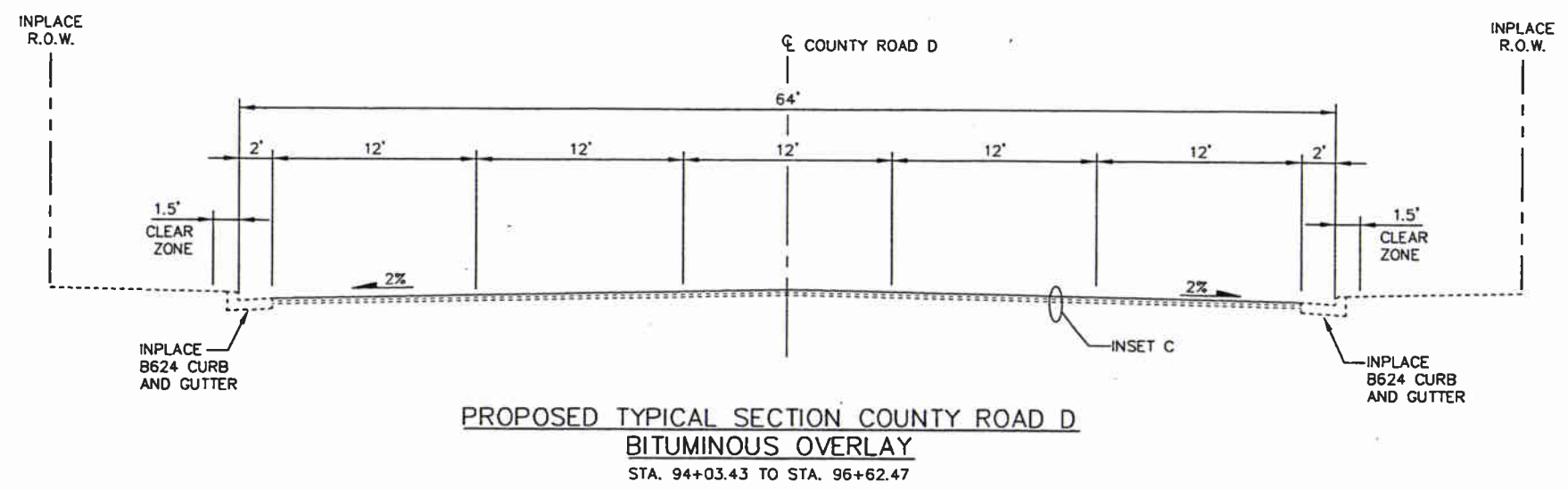
RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
TYPICAL SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
8
104

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



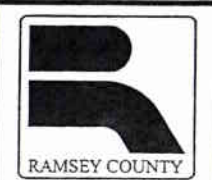
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No.	Date	Revisions	App.	DRAWING NAME
				CRD-TYP03.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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

Daniel J. Coyle
 DANIEL J. COYLE, PE
 DATE: 08/07/09 MN LIC. NO. 44821



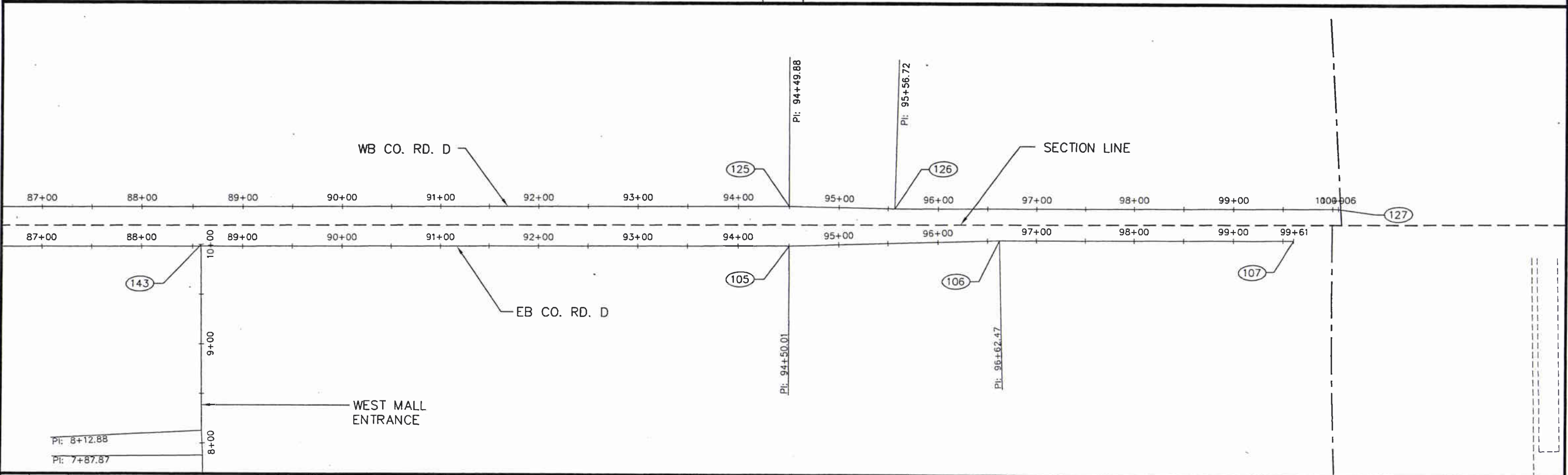
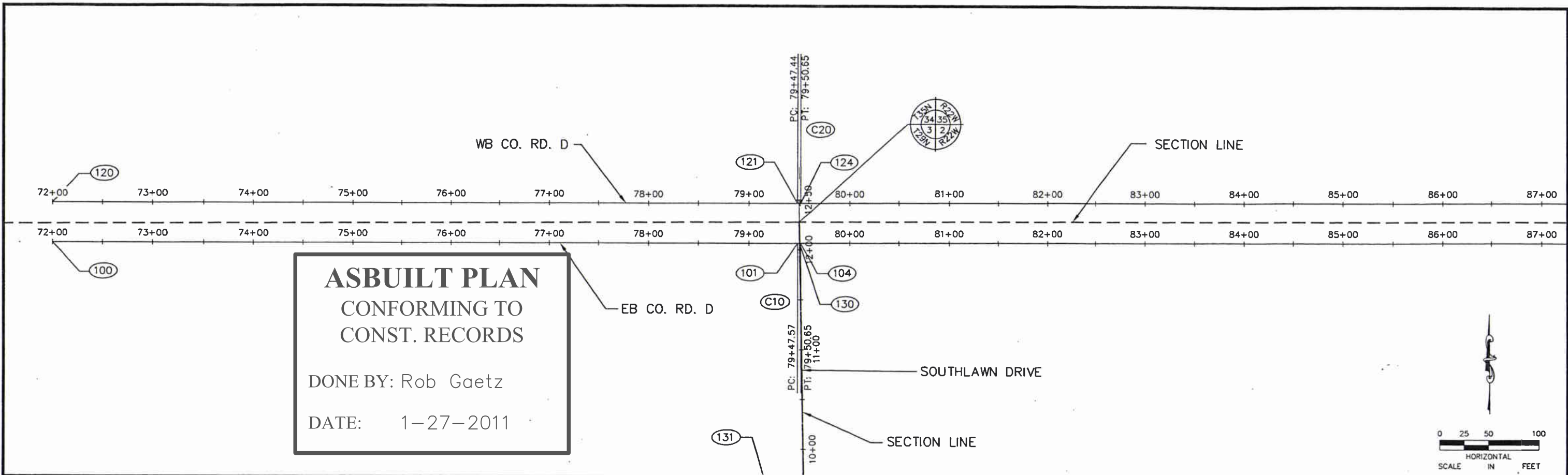
City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 TYPICAL SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

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 9
 104

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No.	Date	Revisions	App.

Kimley-Horn and Associates, Inc.
 2350 UNIVERSITY AVE. WEST, SUITE 345H
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4197
 FAX. NO. (651) 645-3116

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 DANIEL J. COYLE, PE
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City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 ALIGNMENT PLAN

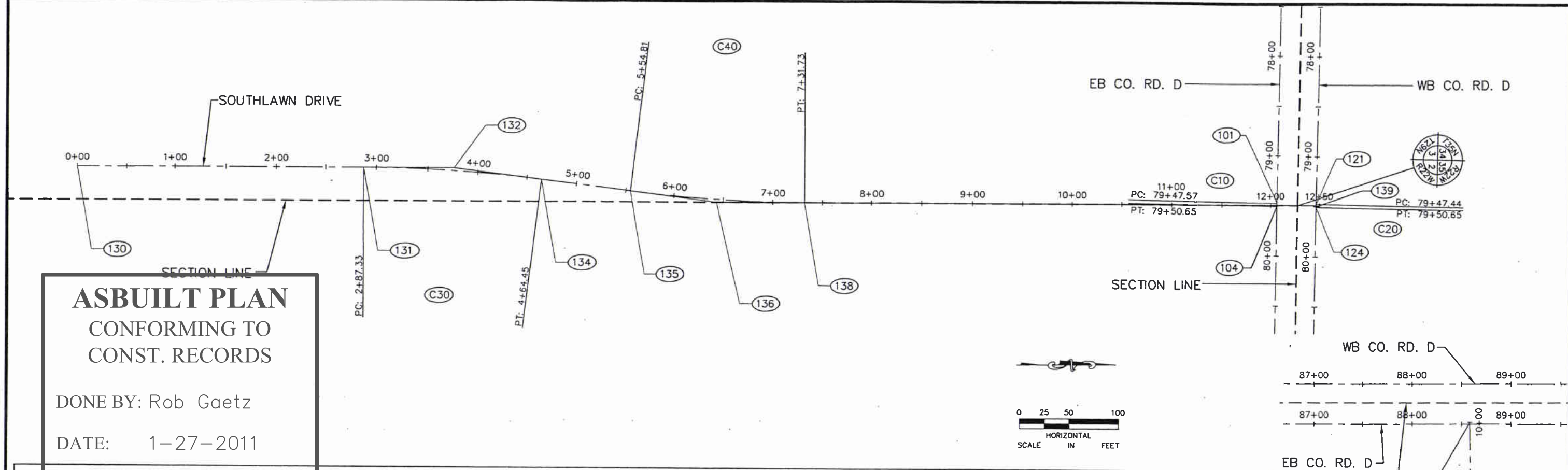
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
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 10
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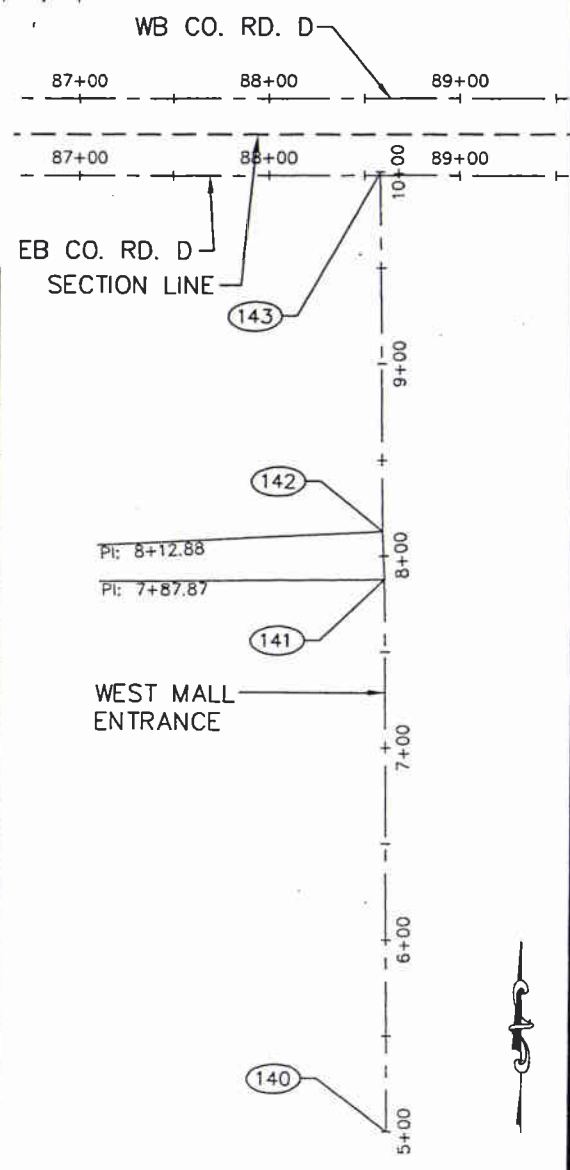
ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



ALIGNMENT DATA

POINT NUMBER	CURVE NUMBER	ROADWAY	POINT TYPE	STATION	NOTES	CURVE DATA					COORDINATES		AZIMUTH
						DELTA	DEGREE	RADIUS (FT.)	TANGENT (FT.)	LENGTH (FT.)	NORTHING	EASTING	
100		COUNTY ROAD D EAST BOUND	POT	72+00.00							189395.18	591742.85	89°57'40"
101			PC	79+47.57							189395.69	592490.42	
102	(C10)		PI	79+49.11		0°10'37" L	5°43'46"	1000.00	1.54	3.09	189395.69	592491.96	PI
103			CC								190395.69	592489.74	
104			PT	79+50.65							189395.69	592493.50	89°47'04"
105			PT	94+50.01							189401.34	593992.85	88°21'14"
106			PT	96+62.47							189407.44	594205.22	89°47'09"
107		COUNTY ROAD D EAST BOUND	POT	99+60.95							189408.56	594503.70	
120		COUNTY ROAD D WEST BOUND	POT	72+00.00							189435.18	591742.82	89°57'40"
121			PC	79+47.44							189435.69	592490.27	
122	(C20)		PI	79+49.05		0°10'37" L	5°30'33"	1040.00	1.61	3.21	189435.69	592491.87	PI
123			CC								190475.69	592489.56	
124			PT	79+50.65							189435.69	592493.48	89°47'04"
125			PT	94+49.88							189441.34	593992.69	91°12'59"
126			PT	95+56.72							189439.07	594099.50	89°47'08"
127		COUNTY ROAD D WEST BOUND	POT	100+05.67							189440.75	594548.46	
130		SOUTHLAWN DRIVE	POT	0+00.00							188190.45	592482.73	358°53'11"
131			PC	2+87.33							188477.72	592477.14	
132	(C30)		PI	3+76.00		7°05'05" R	3°59'60"	1432.44	88.67	177.12	18566.38	59245.42	PI
133			CC								188505.56	593909.31	
134			PT	4+64.45							188654.58	592484.64	5°58'16"
135			PC	5+54.81							188744.44	592494.04	
136	(C31)		PI	6+43.38		7°04'39" L	4°00'01"	1432.34	88.58	176.93	188832.53	592503.26	PI
137			CC								188893.44	591069.48	
138			PT	7+31.73							188921.09	592501.55	358°53'37"
139		SOUTHLAWN DRIVE	POT	12+50.00							189439.26	592491.54	
140		WEST MALL ENTRANCE	POT	5+00.00							188901.04	593407.67	359°22'07"
141			PT	7+87.87							189188.90	593404.49	357°04'37"
142			PT	8+12.88							189213.87	593403.22	359°22'07"
143		WEST MALL ENTRANCE	POT	9+100.00							189400.98	593401.16	



No.	Date	Revisions	App.

DRAWING NAME CRD-ALG01.dwg
DESIGNED BY: RBC
DRAWN BY: HMW
CHECKED BY: KRB, ATB
DATE: 08/07/09
PROJECT NO. 160500029.2.101



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Daniel J. Boyle
 DANIEL J. BOYLE PE
 DATE: 08/07/09 MN LIC. NO. 44821



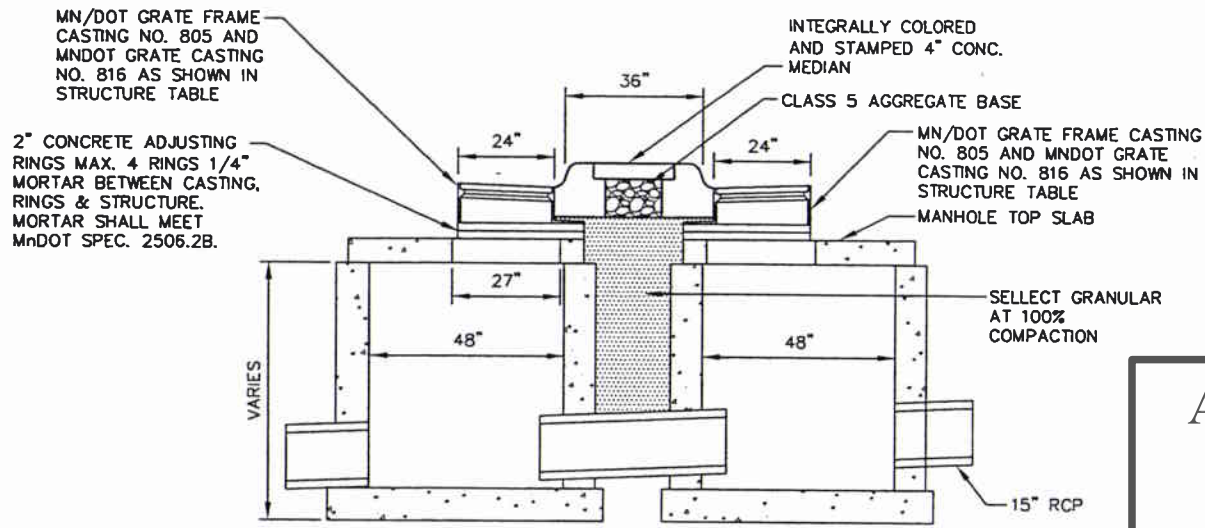
City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D IMPROVEMENTS
 ALIGNMENT PLAN

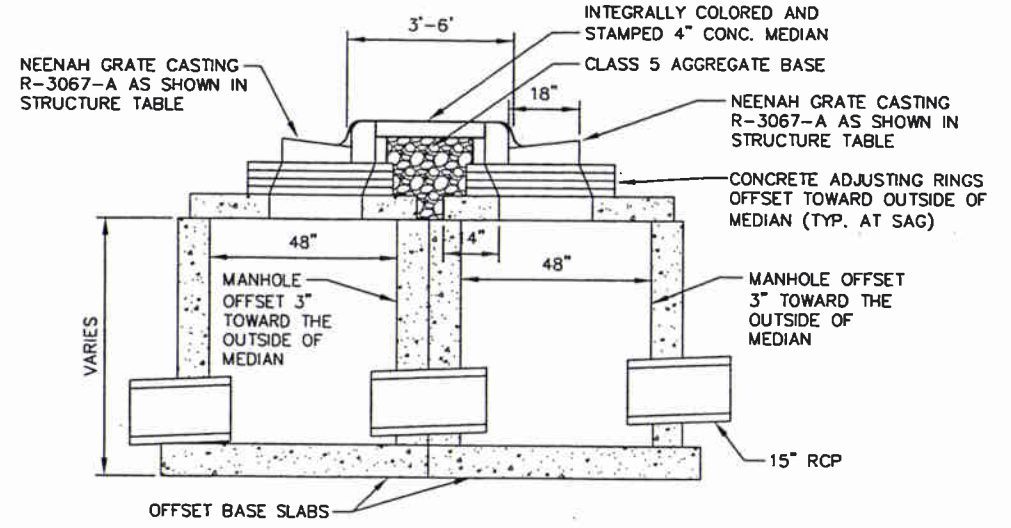
CITY PROJECT	08-13	SHEET NO. 11
COUNTY PROJECT	P-3202	
S.P.	62-619-30	
S.P.	62-596-04	

104

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MEDIAN CATCHBASINS (ON GRADE) SECTION

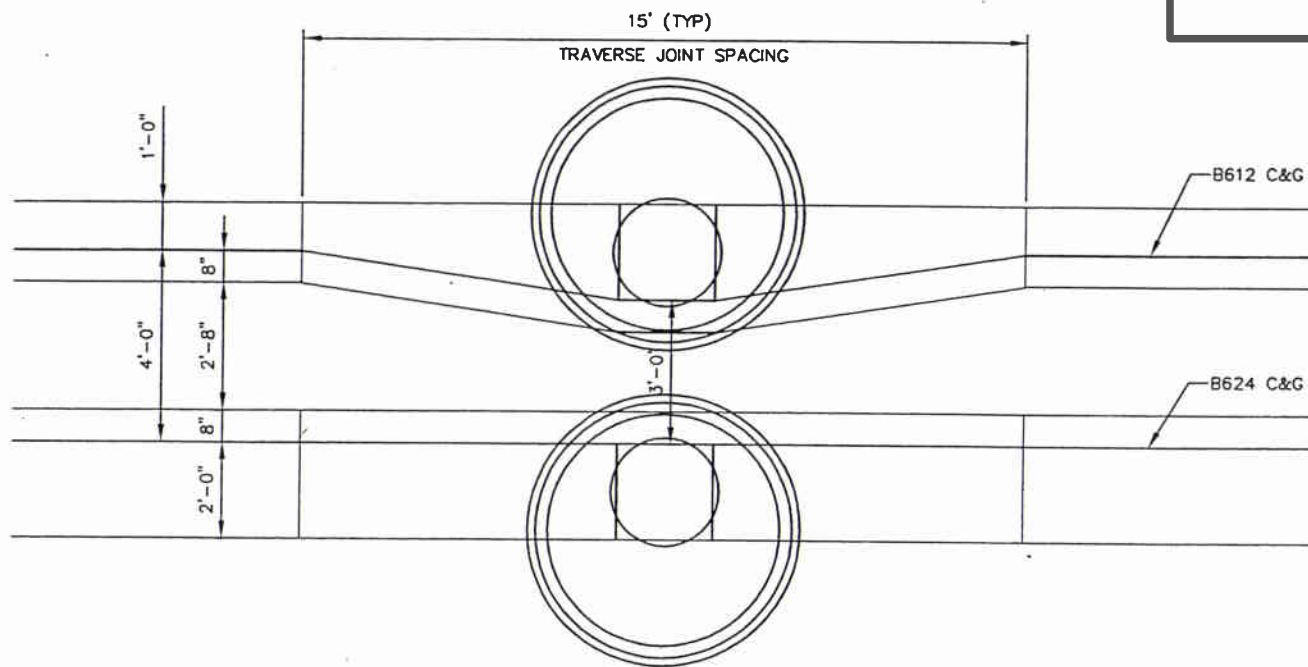


MEDIAN CATCHBASINS (IN SAG) SECTION

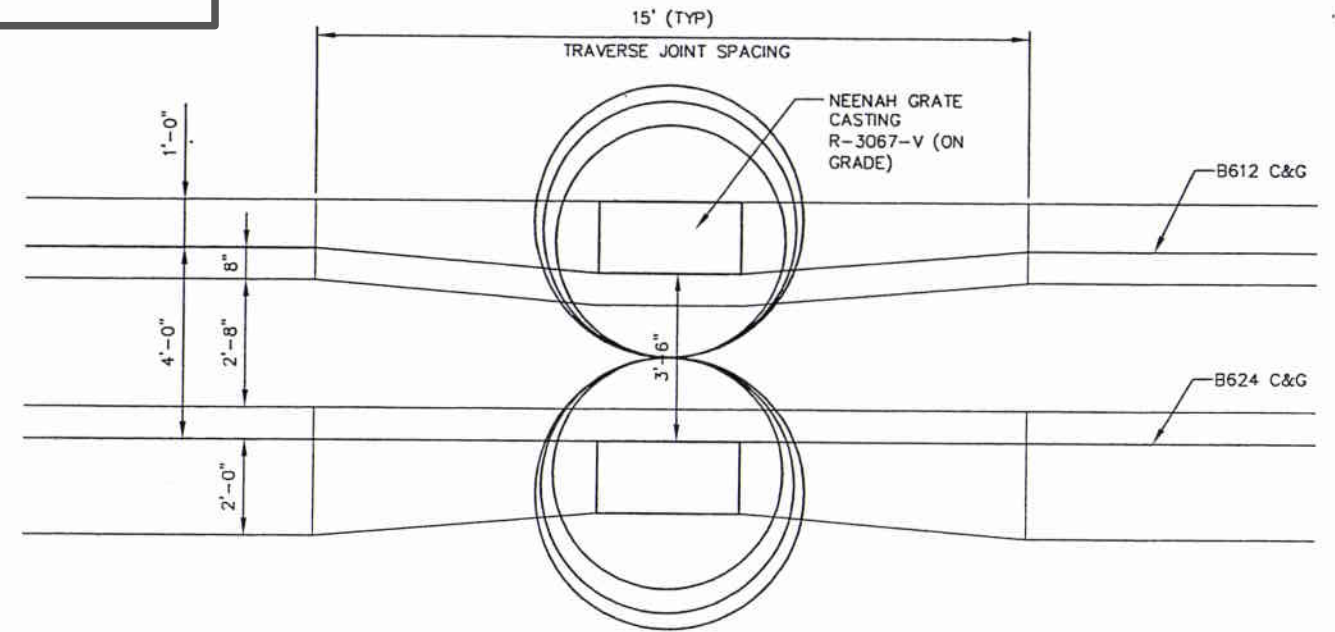
ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



MEDIAN CATCHBASINS (ON GRADE) SECTION



MEDIAN CATCHBASINS (IN SAG) SECTION

No.	Date	Revisions	App.	DRAWING NAME
				CRD-DTL02.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
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				DATE: 08/07/09
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Daniel J. Boyle
 DANIEL J. BOYLE, PE
 DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS

DETAILS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 13
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INPLACE SANITARY SEWER STRUCTURES TABULATION - K

NO.	ROAD ALIGNMENT	STATION	OFFSET	STRUCT TYPE	INPLACE CASTING EL.	ADJ MH	NEW CASTING EL.	RECONSTRUCT MANHOLE (L.F.)	SALVAGE CASTING	F&I CASTING	REMARKS	NOTE #
14	EB CO. RD. D	73+93	21' LT	SAN-ECC CONE	932.42	1	931.65	-	1	1	ADJUST AND REPLACE RINGS	8
15	EB CO. RD. D	77+83	22' LT	SAN-ECC CONE	932.34		931.95		1	1	ADJUST AND REPLACE RINGS ROTATE CONE 90 DEG CCW	7,8
16	EB CO. RD. D	81+23	22' LT	SAN-ECC CONE	925.32	1	925.12	-	1	1	ADJUST AND REPLACE RINGS	8
17	EB CO. RD. D	83+59	22' LT	SAN-ECC CONE	924.27	1	923.71	-	1	1	ADJUST AND REPLACE RINGS	8
18	EB CO. RD. D	86+07	22' LT	SAN-ECC CONE	927.81	-	927.59	5.5	1	1	ADJUST AND REPLACE RINGS ROTATE CONE 90 DEG CCW	7,8
19	EB CO. RD. D	89+08	22' LT	SAN-ECC CONE	933.71	-	933.05	7.9	1	1	RECONSTRUCT SAN MH	7
20	EB CO. RD. D	89+63	22' LT	SAN-ECC CONE	933.76	-	933.82	9.7	1	1	RECONSTRUCT SAN MH	7
21	EB CO. RD. D	91+08	22' LT	SAN-ECC CONE	935.28	-	935.51	10	1	1	RECONSTRUCT SAN MH	7
25	EB CO. RD. D	84+58	22' LT	SAN-ECC CONE	937.72	1	937.68	-	1	1	ADJUST AND REPLACE RINGS	8
26	EB CO. RD. D	98+14	21' LT	SAN-ECC CONE	943.41	1	943.15	-	1	1	ADJUST AND REPLACE RINGS	8
28	EB CO. RD. D	79+75	20' RT	SAN-ECC CONE	927.32	1	927.88	-	1	1	ADJUST AND REPLACE RINGS	8
31	EB CO. RD. D	80+05	21' RT	SAN-ECC CONE	928.26	1	928.21	-	1	1	ADJUST AND REPLACE RINGS	8
33	EB CO. RD. D	76+13	21' LT	SAN-ECC CONE	933.42	1	933.70	-	1	1	ADJUST AND REPLACE RINGS	8
35	SOUTHLAWN	5+90	7' RT			1					ADJUST	8
TOTALS								33.1	13	13		

INPLACE WATERMAIN ITEMS TABULATION - L

ROAD ALIGNMENT	STATION	OFFSET	ADJUST/REMOVE GATE VALVE	REMOVE/RELOCATE HYD*	REMARKS
WB CO. RD. D	74+03	12' LT			SERVICE PIPE
EB CO. RD. D	74+04	2' LT	1		
WB CO. RD. D	75+03	12' LT			
EB CO. RD. D	76+38	0 LT	1		
EB CO. RD. D	76+58	10' RT		1	
WB CO. RD. D	77+94	14' LT			CUTOFF*
EB CO. RD. D	77+94	5' LT	1		
EB CO. RD. D	79+89	30' RT		1	
WB CO. RD. D	81+22	14' LT			BEND
WB CO. RD. D	81+32	26' LT	1		
EB CO. RD. D	81+32	6' LT	1		
EB CO. RD. D	81+33	1' RT	1		
EB CO. RD. D	81+37	3' LT	1		
EB CO. RD. D	81+41	1' RT	1		
EB CO. RD. D	81+41				CUTOFF*
WB CO. RD. D	81+45	21' LT		1	
EB CO. RD. D	81+95	9' RT	1		
EB CO. RD. D	81+95	11' RT		1	
EB CO. RD. D	83+73	8' RT	1		
EB CO. RD. D	83+73	0 LT			CUTOFF*
EB CO. RD. D	83+77	8' RT	1		
EB CO. RD. D	83+77	0 LT			CUTOFF*
WB CO. RD. D	85+90	23' LT		1	
EB CO. RD. D	85+90	11' RT	1		
EB CO. RD. D	85+94	11' RT	1		
EB CO. RD. D	85+94				SERVICE REPLACEMENT*
WB CO. RD. D	85+96	26' LT			PROTECT
EB CO. RD. D	85+98	2' LT	1		
WB CO. RD. D	85+98	26' LT			PROTECT
EB CO. RD. D	86+03	0 LT	1		
EB CO. RD. D	87+70	10' RT		1	
EB CO. RD. D	87+90	6' RT	1		
EB CO. RD. D	88+55				RELOCATE VALVE TO BLVD*
EB CO. RD. D	88+81				RELOCATE VALVE TO BLVD*
EB CO. RD. D	89+17				RELOCATE VALVE TO BLVD*
EB CO. RD. D	89+70	10' RT	1		
EB CO. RD. D	89+73	10' RT	1		
EB CO. RD. D	89+73				SERVICE REPLACEMENT*
WB CO. RD. D	90+88				CUTOFF*
EB CO. RD. D	90+88	7' LT	1		
WB CO. RD. D	90+98				SERVICE PIPE
EB CO. RD. D	90+98	7' LT	1		
EB CO. RD. D	91+93	10' RT		1	
EB CO. RD. D	92+55	1' RT	1		
EB CO. RD. D	92+70	1' LT	1		
EB CO. RD. D	92+70				SERVICE REPLACEMENT*
WB CO. RD. D	93+37	16' LT			SERVICE REPLACEMENT*
WB CO. RD. D	94+25	24' LT			SERVICE REPLACEMENT*
EB CO. RD. D	94+25	3' LT	1		
EB CO. RD. D	94+43				RELOCATE VALVE TO BLVD*
EB CO. RD. D	95+76	7' LT	1		
WB CO. RD. D	95+77				SERVICE PIPE
EB CO. RD. D	95+84	14' RT		1	
EB CO. RD. D	95+89	8' RT	1		
SOUTHLAWN	9+48	13' RT	1		
TOTALS			26	8	

* WORK BY OTHERS; TRENCHING BY CONTRACTOR

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

INPLACE STORM SEWER STRUCTURES TABULATIONS - A

NO.	ROAD ALIGNMENT	STATION	OFFSET	INPLACE CASTING EL.	NEW CASTING EL.	ADJUST CASTING EACH	SALVAGE CASTING EACH	F&I CASTING EACH	CASTING TYPE	REMOVE MH EACH	REMOVE CB EACH	REMOVE PIPE L.F.	CONSTRUCT BULKHEAD EACH	REMARKS
2220	EB CO. RD. D	78+85	2' RT				1				1	75		
2221	EB CO. RD. D	78+85	16' RT				1				1	15		
2222	EB CO. RD. D	79+59	8' RT				1			1				
2228	WB CO. RD. D	79+59	7' LT				1				1	110		
2229	WB CO. RD. D	79+59	15' LT				1			1		10		
2238	EB CO. RD. D	82+98	6' RT				1				1	15		
2342	WB CO. RD. D	83+00	10' LT				1				1	12		
2341	WB CO. RD. D	83+08	17' LT				1			1		398	1	
2239	EB CO. RD. D	83+09	6' LT				1			1				
2329	WB CO. RD. D	86+33	15' LT	928.59	928.59		1	1	R-1678-A			8	1	
2330	WB CO. RD. D	86+34	7' LT				1				1	52		
4123	EB CO. RD. D	86+35	3' RT				1				1			
4124	EB CO. RD. D	89+58	3' RT				1				1			
2323	WB CO. RD. D	89+59	6' LT				1				1	50	1	
2322	WB CO. RD. D	89+59	16' LT	934.17	934.32		1	1	R-1678-A				1	
2262	EB CO. RD. D	92+50	3' RT				1				1			
7000	WB CO. RD. D	92+58	7' LT				1				1	50		
7000A	WB CO. RD. D	92+58	15' LT	936.96	936.96		1	1	R-1678-A			10	1	
2303	WB CO. RD. D	95+47	15' LT											PROTECT
2302A	WB CO. RD. D	95+58	8' LT											PROTECT
2302	WB CO. RD. D	95+58	15' LT											PROTECT
2273	EB CO. RD. D	95+60	10' RT											PROTECT
	SOUTHLAWN	5+90	10' LT			1								PROTECT
	SOUTHLAWN	5+90	25' LT											PROTECT
	SOUTHLAWN	5+90	25' RT											PROTECT
	SOUTHLAWN	5+97	25' LT											PROTECT
	SOUTHLAWN	8+06	3' LT			1								PROTECT
	SOUTHLAWN	8+08	25' LT											PROTECT
	SOUTHLAWN	8+08	25' RT											PROTECT
	SOUTHLAWN	8+13	25' LT											PROTECT
TOTALS						2	18	3		4	11	805	5	

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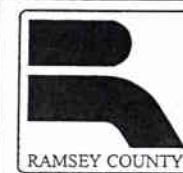
No.	Date	Revisions	App.	DRAWING NAME
				CRD-TAB01.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2101



**Kimley-Horn
and Associates, Inc.**
2550 UNIVERSITY AVE. WEST, SUITE 345W
ST. PAUL, MINNESOTA 55114
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DANIEL J. BOYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
INPLACE STRUCTURES
TABULATION

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
14
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COUNTY ROAD D

Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
72+50.00	0.00	0.00	0.00	0.00	0.00	0.00
73+00.00	0.10	14.64	0.09	13.55	0.09	13.55
73+50.00	0.00	23.05	0.09	34.90	0.19	48.45
74+00.00	0.00	20.29	0.00	40.13	0.19	88.58
74+50.00	0.00	19.95	0.00	37.26	0.19	125.84
75+00.00	0.00	14.09	0.00	31.52	0.19	157.36
75+08.39	0.28	191.12	0.04	31.88	0.23	189.24
75+50.00	0.42	257.09	0.54	345.37	0.77	534.61
76+00.00	0.18	240.57	0.56	460.80	1.33	995.42
76+14.19	0.01	322.45	0.05	147.91	1.38	1143.32
76+50.00	0.00	258.20	0.01	385.10	1.39	1528.43
77+00.00	0.05	265.39	0.05	484.81	1.44	2013.23
77+50.00	0.21	259.58	0.24	486.08	1.68	2499.32
78+00.00	0.06	253.32	0.25	474.91	1.93	2974.23
78+50.00	0.22	245.02	0.25	461.42	2.18	3435.65
79+00.00	1.14	204.40	1.26	416.13	3.44	3851.77
79+50.00	0.00	338.29	1.06	502.49	4.50	4354.26
80+00.00	0.00	189.91	0.00	489.07	4.50	4843.33
80+50.00	0.00	226.92	0.00	385.96	4.50	5229.29
81+00.00	0.00	226.29	0.00	419.65	4.50	5648.94
81+50.00	0.00	222.15	0.00	415.23	4.50	6064.17
82+00.00	0.00	213.91	0.00	403.76	4.50	6467.93
82+50.00	0.05	218.43	0.05	400.32	4.55	6868.25
82+78.13	0.01	231.25	0.03	234.21	4.58	7102.46
83+00.00	0.00	232.13	0.00	187.71	4.58	7290.17
83+50.00	0.00	250.49	0.00	446.86	4.58	7737.03
84+00.00	0.00	237.97	0.00	452.28	4.58	8189.31
84+50.00	0.00	218.62	0.00	422.77	4.58	8612.08
85+00.00	0.07	205.01	0.06	392.25	4.64	9004.34
85+50.00	1.19	209.86	1.16	384.14	5.80	9388.48
86+00.00	10.36	213.83	10.69	392.31	16.49	9780.79
86+50.00	6.72	206.67	15.82	389.36	32.31	10170.15
87+00.00	0.79	206.23	6.96	382.32	39.26	10552.47
87+50.00	0.10	204.80	0.83	380.59	40.09	10933.06
88+00.00	3.25	200.84	3.11	375.60	43.20	11308.65

COUNTY ROAD D

Total Volume Table							
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol	
88+50.00	0.00	226.29	3.01	395.49	46.21	11704.14	
88+59.33	0.00	228.22	0.00	78.57	46.21	11782.71	
89+00.00	0.84	198.77	0.63	321.55	46.84	12104.25	
89+50.00	0.02	207.14	0.80	375.84	47.64	12480.10	
89+85.75	0.00	209.94	0.02	276.15	47.66	12756.24	
90+00.00	0.00	210.41	0.00	110.90	47.66	12867.14	
90+28.52	0.00	203.98	0.00	218.83	47.66	13085.98	
90+50.00	0.00	200.93	0.00	161.09	47.66	13247.07	
90+85.87	0.00	200.70	0.00	266.76	47.66	13513.83	
91+00.00	0.00	198.90	0.00	104.58	47.66	13618.41	
91+15.93	0.13	197.11	0.04	116.79	47.70	13735.20	
91+50.00	0.05	215.63	0.11	260.44	47.81	13995.64	
91+76.65	0.00	222.05	0.03	215.98	47.84	14211.62	
92+00.00	0.00	223.78	0.00	192.80	47.84	14404.42	
92+18.54	0.00	222.42	0.00	153.17	47.84	14557.60	
92+50.00	0.73	213.20	0.43	253.81	48.27	14811.41	
92+78.59	0.00	215.56	0.39	226.98	48.66	15038.39	
93+00.00	0.07	201.46	0.03	165.36	48.68	15203.75	
93+50.00	0.02	203.37	0.08	374.84	48.77	15578.59	
93+78.52	0.06	207.36	0.04	216.94	48.81	15795.53	
94+00.00	0.66	172.26	0.29	150.99	49.10	15946.52	
94+36.18	6.49	2.79	4.79	117.30	53.89	16063.81	
94+50.00	6.76	1.58	3.39	1.12	57.28	16064.93	
95+00.00	2.89	3.57	8.82	4.73	66.11	16069.66	
95+50.00	0.50	18.01	3.14	19.98	69.25	16089.64	
96+00.00	0.00	23.86	0.47	38.77	69.72	16128.42	
96+50.00	0.00	12.48	0.00	33.65	69.72	16162.07	
97+00.00	0.00	0.00	0.00	11.68	69.72	16173.75	

SOUTHLAWN DRIVE

Total Volume Table							
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol	
5+50.00	0.00	0.00	0.00	0.00	0.00	0.00	
5+90.58	0.00	66.09	0.00	49.65	0.00	49.65	
6+00.00	0.00	65.93	0.00	23.03	0.00	72.68	
6+50.00	0.00	65.44	0.00	121.58	0.00	194.27	
7+00.00	0.00	64.53	0.00	120.28	0.00	314.54	
7+50.00	0.00	63.89	0.00	118.89	0.00	433.43	
8+00.00	0.00	64.07	0.00	118.48	0.00	551.91	
8+50.00	0.00	64.92	0.00	119.44	0.00	671.35	
9+00.00	0.00	64.26	0.00	119.61	0.00	790.96	
9+50.00	0.00	66.28	0.00	120.86	0.00	911.82	
9+88.30	0.00	75.70	0.00	100.71	0.00	1012.53	
10+00.00	0.00	188.65	0.00	57.26	0.00	1069.79	
10+50.00	0.00	185.83	0.00	346.74	0.00	1416.53	
11+00.00	0.00	184.17	0.00	342.59	0.00	1759.12	
11+48.53	0.00	185.05	0.00	331.82	0.00	2090.94	

WEST MALL ENTRANCE

Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
5+00.00	0.00	0.00	0.00	0.00	0.00	0.00
5+50.00	0.00	0.00	0.00	0.00	0.00	0.00
6+00.00	0.00	98.64	0.00	91.33	0.00	91.33
6+31.28	0.00	93.79	0.00	111.48	0.00	202.82
6+50.00	0.02	86.84	0.01	62.60	0.01	265.42
6+93.78	0.00	91.90	0.02	144.93	0.03	410.35
7+00.00	0.00	87.80	0.00	20.68	0.03	431.03
7+50.00	0.52	96.05	0.48	170.24	0.51	601.27
8+00.00	0.68	115.55	1.10	196.67	1.61	797.94
8+50.00	1.00	123.44	1.58	220.04	3.19	1017.98
9+00.00	0.29	127.64	1.20	232.48	4.39	1250.46
9+50.00	0.00	149.30	0.27	256.42	4.66	1506.88
9+98.25	0.00	0.00	0.00	133.40	4.66	1640.28

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

BITUMINOUS PAVEMENT REMOVAL CALCULATIONS FOR EARTHWORK								
ALIGNMENT	STATION	TO	STATION	LOCATION	BITUMINOUS	BITUMINOUS	AVERAGE BIT	BITUMINOUS
					REMOVAL	DRIVEWAY		
					S.F.	S.F.	FT.	C.Y.
EB CO. RD. D	72+80		78+50	LT & RT	16,806	925	0.46	303
EB CO. RD. D	78+50		86+50	LT & RT	41,848	1,492	0.46	738
EB CO. RD. D	86+50		93+50	LT & RT	33,258	4,914	0.5	707
EB CO. RD. D	93+50		94+05	LT & RT	2,865	1,238	0.54	82
SOUTHLAWN	5+90		11+66	LT & RT	27,995	-	0.5	518
MALL ENT.	5+53		9+87	LT & RT	-	14,150	0.33	173
TOTALS								2,522

EARTHWORK SUMMARY TABULATION - I	
COMMON EXCAVATION	19,905 CY (EV)
BITUMINOUS PAVEMENT REMOVAL	- 2,522 CY (EV)
TOTAL COMMON EXCAVATION	17,383 CY (EV)
COMMON BORROW	80 CY (CV)
SELECT GRANULAR BORROW	12,000 CY (CV)
TOPSOIL BORROW	649 CY (CV)
COMMON BORROW BEHIND CURB AND GUTTER	197 CY (CV)
TOPSOIL MATERIAL	649 CY (CV) x 1.45 = 942 CY (LV)

*NOTE: TOPSOIL QUANTITIES DO NOT MATCH STATEMENT OF ESTIMATED QUANTITIES AS THE OVERALL PROJECT MAY REQUIRE ADDITIONAL SOD & TOPSOIL FOR POTENTIAL PRIVATE UTILITY INSTALLATION STABILIZATION.

BASIS OF EARTHWORK QUANTITIES	
1.	SHRINKAGE FACTORS: USE A SHRINKAGE FACTOR OF 145% FOR TOPSOIL (LOOSE VOLUME TO COMPACTED VOLUME).
2.	EXCESS MATERIAL SHALL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE DISPOSED OF OFF SITE AS APPROVED BY THE ENGINEER
3.	COMMON EXCAVATION INCLUDES 2' SUBCUT
4.	UTILITY EXCAVATION IS NOT INCLUDED IN EXCAVATION TOTALS.

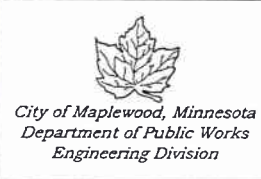
K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-ERW01.dwg September 22, 2009 - 8:05am

No.	Date	Revisions	App.	DRAWING NAME
				CRD-ERW01.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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

Daniel J. Doyle
DANIEL J. DOYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821



RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

EARTHWORK TABULATION
& SUMMARY

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
15
104

**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz


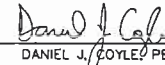


DATE: 1-27-2011

REMOVE PAVEMENT, CONCRETE CURB AND GUTTER, DRIVEWAYS, WALKS AND SAWING TABULATION - G												
ALIGNMENT	STATION	TO	STATION	LOCATION	REMOVE						MILL	SAWING
					BITUMINOUS PAVEMENT ROADWAY	BITUMINOUS PAVEMENT DRIVEWAY	CONCRETE PAVEMENT DRIVEWAY	BITUMINOUS TRAIL	CONCRETE C&G	CONCRETE WALK	2" BITUMINOUS	BITUMINOUS
					S.Y.	S.F.	S.F.	S.F.	L.F.	S.F.	S.Y.	L.F.
EB CO. RD. D	72+00		78+50	LT & RT	2,050	1,065	375	75	800	50	1,425	550
EB CO. RD. D	78+50		86+50	LT & RT	5,115	1,715	-	3,875	1,860	285	-	120
EB CO. RD. D	86+50		93+50	LT & RT	4,065	10,525	855	-	2,215	930	-	410
EB CO. RD. D	93+50		101+00	LT & RT	350	830	520	-	215	-	1,800	70
SOUTHLAWN	5+90		11+66	LT & RT	3,110	-	-	-	650	-	60	260
MALL ENT.	5+53		9+87	LT & RT	-	14,150	-	-	1,040	-	-	175
TOTALS					14,690	28,285	1,750	3,950	6,780	1,265	3,285	1,585

EROSION CONTROL AND TURF ESTABLISHMENT TABULATION - N											
ROAD ALIGNMENT	STATION	STATION	OFFSET	LT/RT	SEEDING	SEED MIX 150TS W/ 50 LB/ACRE WINTER WHEAT	SOD	TEMPORARY DITCH CHECK, TYPE 2 (BIOROLLS)	TEMPORARY DITCH CHECK TYPE 5 (ROCK WEEPER)	STORM DRAIN INLET PROTECTION	RAPID STABILIZATION METHOD 3
					ACRE	LB.	SY	L.F.	C.Y.	EACH	MGAL
WB CTY. RD. D	72+00	78+50	-	LT	0.05	6		570			0.6
EB CTY. RD. D	72+00	78+50	-	RT			250	570			0.6
WB CTY. RD. D	78+50	86+50	-	LT	0.15	13		850		10	1.8
EB CTY. RD. D	78+50	86+50	-	RT	0.18	16	50	850		11	2.16
WB CTY. RD. D	86+50	94+50	-	LT	0.13	12		850		5	1.56
EB CTY. RD. D	86+50	94+50	-	RT	0.15	13		850		8	1.8
WB CTY. RD. D	94+50	96+00	-	LT	0.02	2		110			0.24
EB CTY. RD. D	94+50	96+00	-	RT							
WB CTY. RD. D	83+30	-	360'	LT					8		
SOUTHLAWN	9+88	11+66	-	LT/RT			350	330		6	0.6
MALL ENT.	5+50	9+90	-				700			2	0.64
TOTALS					0.68	62	1350	4,980	8	42	10

*NOTE: SOD QUANTITIES DO NOT MATCH STATEMENT OF ESTIMATED QUANTITIES AS THE OVERALL PROJECT
MAY REQUIRE ADDITIONAL SOD FOR POTENTIAL PRIVATE UTILITY INSTALLATION STABILIZATION.

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No.	Date	Revisions	App.	DRAWING NAME CRD-TAB10.dwg	 Kimley-Horn and Associates, Inc. <small>2300 UNIVERSITY AVE. WEST, SUITE 340H ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4187 FAX. NO. (651) 645-5118</small>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  DANIEL J. BOYLE PE DATE: 08/07/09 MN LIC. NO. 44821	 RAMSEY COUNTY	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS TABULATIONS	CITY PROJECT	08-13	SHEET NO. 16 104
				DESIGNED BY: RBC						COUNTY PROJECT	P-3202	
				DRAWN BY: HMW						S.P.	62-619-30	
				CHECKED BY: KRB, ATB						S.P.	62-596-04	
				DATE: 08/07/09								
				PROJECT NO. 160500029.2.101								

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PROPOSED CONCRETE TABULATION - F												
ROADWAY ALIGNMENT	COUNTY ROAD D		LOCATION	CONCRETE PAVEMENT S.Y.	CURB AND GUTTER					MEDIAN NOSE EACH	MEDIAN S.Y.	
	STATION	TO STATION			B612 L.F.	B612-MODIFIED L.F.	B618 L.F.	B624 L.F.	B624-MODIFIED L.F.			VALLEY GUTTER L.F.
MAINLINE												
EB CO. RD. D	76+47	78+50	LT & RT	960								
WB CO. RD. D	76+47	78+50	LT & RT	550								
EB CO. RD. D	78+50	86+50	LT & RT	3,170								
WB CO. RD. D	78+50	86+50	LT & RT	2,830								
EB CO. RD. D	86+50	93+50	LT & RT	2,325								
WB CO. RD. D	86+50	93+50	LT & RT	2,580	350							
EB CO. RD. D	93+50	94+04	LT & RT	165								
WB CO. RD. D	93+50	94+04	LT & RT	220								
SOUTHLAWN	9+88	11+66	LT & RT	950								
MAINLINE CURB												
EB CO. RD. D	75+09	76+03	RT					105				
EB CO. RD. D	76+26	78+50	RT					240				
EB CO. RD. D	78+50	79+55	RT					95				
EB CO. RD. D	79+75	82+47	RT					305				
EB CO. RD. D	82+47	83+07	RT						62			
EB CO. RD. D	82+93	86+50	RT					365				
EB CO. RD. D	86+50	88+46	RT					215				
EB CO. RD. D	88+73	89+65	RT					110				
EB CO. RD. D	89+65	90+08	RT						44			
EB CO. RD. D	90+08	90+94	RT					90				
EB CO. RD. D	90+95	91+38	RT						44			
EB CO. RD. D	91+38	93+50	RT					215				
EB CO. RD. D	93+50	94+19	RT					80				
WB CO. RD. D	75+09	75+89	LT					85				
WB CO. RD. D	75+90	76+35	LT						45			
WB CO. RD. D	76+35	78+50	LT					220				
WB CO. RD. D	78+50	79+33	LT					90				
WB CO. RD. D	79+70	86+50	LT					695				
WB CO. RD. D	86+50	88+43	LT					200				
WB CO. RD. D	88+75	90+06	LT					140				
WB CO. RD. D	90+06	90+52	LT						47			
WB CO. RD. D	90+52	90+67	LT					15				
WB CO. RD. D	90+67	91+07	LT					50				
WB CO. RD. D	91+07	91+57	LT						40			
WB CO. RD. D	91+57	91+95	LT						40			
WB CO. RD. D	91+95	91+98	LT					5				
WB CO. RD. D	91+98	92+40	LT						42			
WB CO. RD. D	92+40	92+58	LT					20				
WB CO. RD. D	91+58	93+01	LT						43			
WB CO. RD. D	93+01	93+55	LT					55				
WB CO. RD. D	93+55	94+04	LT						48			
SOUTHLAWN	5+90	9+88	LT					150				
SOUTHLAWN	5+90	9+88	RT					150				
SOUTHLAWN	9+88	11+66	LT					165				
SOUTHLAWN	9+88	11+66	RT					165				
MALL ENTRANCE	5+53	9+87	LT & RT		1040							
MEDIAN CONCRETE												
EB CO. RD. D	72+82	78+50	LT								362	
EB CO. RD. D	78+50	78+90	LT								10	
EB CO. RD. D	80+12	86+50	LT								187	
EB CO. RD. D	86+50	88+15	LT								47	
EB CO. RD. D	89+03	93+50	LT								134	
EB CO. RD. D	93+50	93+85	LT								10	
MEDIAN CURB												
EB CO. RD. D	72+82	75+81	LT					300		1		
EB CO. RD. D	75+81	78+50	LT			270						
EB CO. RD. D	78+50	78+90	LT			40				1		
EB CO. RD. D	80+12	83+35	LT					325		1		
EB CO. RD. D	83+45	86+50	LT			315						
EB CO. RD. D	86+50	88+15	LT			165				1		
EB CO. RD. D	89+03	93+50	LT					450		1		
EB CO. RD. D	93+50	93+85	LT					35		1		
WB CO. RD. D	72+82	76+07	RT			325						
WB CO. RD. D	76+07	78+50	RT					245				
WB CO. RD. D	78+50	78+90	RT					40				
WB CO. RD. D	80+12	84+70	RT			460						
WB CO. RD. D	84+70	86+50	RT					180				
WB CO. RD. D	86+50	88+15	RT					165				
WB CO. RD. D	89+03	93+50	RT			450						
WB CO. RD. D	93+50	93+85	RT			35						
TOTALS				13,750	1,390	2,060	630	3,395	1,740	455	6	750


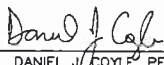


PROPOSED BITUMINOUS TABULATION - E										
ROADWAY ALIGNMENT	COUNTY ROAD D			LOCATION	BITUMINOUS PAVEMENT		BITUMINOUS OVERLAY		BIT DRIVEWAY PATCH SPWEB4408 S.Y.	TACK COAT GAL
	STATION	TO STATION			BIT WEAR SPWEB4408 TON	BIT NON-WEAR SPNWB4308 TON	BIT OVERLAY SPWEB4408 TON	VARIABLE THICKNESS LEVELING COURSE SPWEB4408 TON		
EB CO. RD. D	72+79.95	75+08.45	LT & RT				70	105		27
WB CO. RD. D	72+79.95	75+07.40	LT & RT				100	153		39
WB CO. RD. D	75+89.26	76+34.38	LT						21	
EB CO. RD. D	75+08.45	76+46.47	LT & RT	58	125					22
WB CO. RD. D	75+07.40	76+46.49	LT & RT	52	105					20
EB CO. RD. D	82+46.65	83+07.34	RT						64	
WB CO. RD. D	87+80.66	88+83.02	LT						43	
WB CO. RD. D	88+83.02	89+30.26	LT						700	
EB CO. RD. D	89+64.61	90+08.30	RT						25	
WB CO. RD. D	90+06.12	90+51.49	LT						35	
WB CO. RD. D	90+67.02	91+06.60	LT						30	
EB CO. RD. D	90+94.26	91+37.90	RT						26	
WB CO. RD. D	91+56.94	91+95.27	LT						26	
WB CO. RD. D	91+97.69	92+39.77	LT						32	
WB CO. RD. D	92+58.24	93+01.13	LT						33	
WB CO. RD. D	93+55.32	94+03.56	LT						35	
EB CO. RD. D	94+03.56	96+62.47	LT & RT				115	172		44
WB CO. RD. D	94+03.56	96+62.47	LT & RT				115	170		43
SOUTHLAWN	5+90	9+88	LT & RT	260	260					110
MALL ENT	5+53	9+87	LT & RT	190	190					85
TOTALS				560	680	400	600	1070		390

AGGREGATE BASE TABULATION - E					
ROADWAY ALIGNMENT	STATION	TO STATION	LOCATION	AGG BASE CL 7 (CV)(P)	SELECT GRANULAR BORROW (CV)(P)
				C.Y.	C.Y.
EB CO. RD. D	75+08	76+47	MEDIAN	61	115
WB CO. RD. D	75+08	76+47	LT & RT	82	350
EB CO. RD. D	75+08	76+47	LT & RT	93	385
EB CO. RD. D	76+47	78+90	MEDIAN	45	75
EB CO. RD. D	80+12	88+15	MEDIAN	101	155
EB CO. RD. D	89+03	93+85	MEDIAN	61	95
WB CO. RD. D	76+47	94+04	LT & RT	1,222	5,130
EB CO. RD. D	76+47	94+04	LT & RT	1,188	4,990
SOUTHLAWN	4+82	9+88	LT & RT	707	-
SOUTHLAWN	9+88	11+48	LT & RT	261	705
MALL ENT	5+53	9+87	LT & RT	696	-
TOTALS				4,517	12,000

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

No.	Date	Revisions	App.	DRAWING NAME CRD-TAB12.dwg	 Kimley-Horn and Associates, Inc. <small>2300 UNIVERSITY AVE. WEST, SUITE 343N ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX NO. (651) 645-5116</small>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  DANIEL J. COYLE, PE DATE: 08/07/09 MN LIC. NO. 44821	 RAMSEY COUNTY	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS TABULATIONS	CITY PROJECT 08-13 COUNTY PROJECT P-3202 S.P. 62-619-30 S.P. 62-596-04	SHEET NO. 18 <hr/> 104
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LOCATION	PERMANENT PAVEMENT MARKINGS TABULATION - O										PAVEMENT MESSAGES			
	4" SOLID LINE WHITE (EPOXY)	4" BROKEN LINE WHITE (EPOXY)	4" SOLID LINE YELLOW (EPOXY)	4" BROKEN LINE YELLOW (EPOXY)	4" DOUBLE LINE YELLOW (EPOXY)	6" SOLID LINE WHITE (EPOXY)	8" BROKEN LINE WHITE (EPOXY)	12" SOLID LINE YELLOW (EPOXY)	24" SOLID LINE WHITE (EPOXY)		ZEBRA CROSS WALK (EPOXY)	LEFT TURN ARROW (EPOXY)	RIGHT TURN ARROW (EPOXY)	ONLY (EPOXY)
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. FT.	EACH	EACH	EACH
COUNTY ROAD D	1,150	900	4,000			680		110						
TOTAL	1,150	900	4,000			680		110						

LOCATION	PERMANENT PAVEMENT MARKINGS TABULATION - O										PAVEMENT MESSAGES			
	4" SOLID LINE WHITE (TAPE)	4" BROKEN LINE WHITE (TAPE)	4" SOLID LINE YELLOW (TAPE)	4" BROKEN LINE YELLOW (TAPE)	4" DOUBLE LINE YELLOW (TAPE)	8" SOLID LINE WHITE (TAPE)	8" BROKEN LINE WHITE (TAPE)	12" SOLID LINE YELLOW (TAPE)	24" SOLID LINE WHITE (TAPE)		ZEBRA CROSS WALK (TAPE)	LEFT TURN ARROW (TAPE)	RIGHT TURN ARROW (TAPE)	ONLY (TAPE)
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. FT.	EACH	EACH	EACH
COUNTY ROAD D											340	8	1	
(INCLUDES SOUTHLAWN DR. APPROACH TO COUNTY ROAD D)														
MALL ENTRANCE														
TOTAL											340	8	1	

LOCATION	TEMPORARY PAVEMENT MARKINGS TABULATION - O										PAVEMENT MESSAGES			
	4" SOLID LINE WHITE (TAPE)	4" BROKEN LINE WHITE (TAPE)	4" SOLID LINE YELLOW (TAPE)	4" BROKEN LINE YELLOW (TAPE)	4" DOUBLE LINE YELLOW (TAPE)	8" SOLID LINE WHITE (TAPE)	8" BROKEN LINE WHITE (TAPE)	12" SOLID LINE YELLOW (TAPE)	24" SOLID LINE WHITE (TAPE)		ZEBRA CROSS WALK (TAPE)	LEFT TURN ARROW (TAPE)	RIGHT TURN ARROW (TAPE)	ONLY (TAPE)
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. FT.	EACH	EACH	EACH
COUNTY ROAD D	1,850		1,150		2,150									
TOTAL	1,850		1,150		2,150									

LOCATION	TEMPORARY PAVEMENT MARKINGS TABULATION - O										PAVEMENT MESSAGES			
	4" SOLID LINE WHITE (PAINT)	4" BROKEN LINE WHITE (PAINT)	4" SOLID LINE YELLOW (PAINT)	4" BROKEN LINE YELLOW (PAINT)	4" DOUBLE LINE YELLOW (PAINT)	8" SOLID LINE WHITE (PAINT)	8" BROKEN LINE WHITE (PAINT)	12" SOLID LINE YELLOW (PAINT)	24" SOLID LINE WHITE (PAINT)		ZEBRA CROSS WALK (PAINT)	LEFT TURN ARROW (PAINT)	RIGHT TURN ARROW (PAINT)	ONLY (PAINT)
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. FT.	EACH	EACH	EACH
COUNTY ROAD D	1,200		2,200		2,600			100						
(INCLUDES SOUTHLAWN DR. APPROACH TO COUNTY ROAD D)														
TOTAL	1,200		2,200		2,600			100						

LOCATION	PERMANENT PAVEMENT MARKINGS TABULATION - O										PAVEMENT MESSAGES			
	4" SOLID LINE WHITE (PAINT)	4" BROKEN LINE WHITE (PAINT)	4" SOLID LINE YELLOW (PAINT)	4" BROKEN LINE YELLOW (PAINT)	4" DOUBLE LINE YELLOW (PAINT)	8" SOLID LINE WHITE (PAINT)	8" DOTTED LINE WHITE (PAINT)	12" SOLID LINE YELLOW (PAINT)	24" SOLID LINE WHITE (PAINT)		ZEBRA CROSS WALK (PAINT)	LEFT TURN ARROW (PAINT)	RIGHT TURN ARROW (PAINT)	ONLY (PAINT)
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. FT.	EACH	EACH	EACH
COUNTY ROAD D	500	350			1,150		50					5	2	
(INCLUDES SOUTHLAWN DR. APPROACH TO COUNTY ROAD D)														
MALL ENTRANCE	160				425									
TOTAL	660	350			1,575		50					5	2	

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
DATE: 1-27-2011

NOTES:
1. ALL PERMANENT POLYPREFORMED PAVEMENT MARKINGS SHALL BE ROLLED INTO THE MAT BY THE FINISH ROLLER DURING THE PLACEMENT OF WEAR COURSE OR GROUND INTO CONCRETE PAVEMENT.

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-TAB20.dwg September 22, 2009 - 8:05am

No.	Date	Revisions	App.

DRAWING NAME CRD-TAB20.dwg	
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS PAVEMENT MARKINGS TABULATIONS	CITY PROJECT	08-13	SHEET NO. 19 104
	COUNTY PROJECT	P-3202	
	S.P.	62-619-30	
	S.P.	62-596-04	

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-TAB21.dwg September 22, 2009 - 8:06am

SIGN PANELS (TYPE C) TABULATION - P

SIGN NO.	SIZE (IN.)	AREA (SQ. IN.)	AREA (SQ. FT.)	QUANT.	POSTS			MOUNTING HEIGHT (FEET) (1)	SQUARE FEET PER SIGN TYPE	TYPE	NOTES
					NO & TYPE	KNEE BRACE QTY	LENGTH (FT)				
R3-2	24" X 24"	576	4.00	1	1U	-	12.5	7.0	4.00	no left turn	
R3-7L	30" X 30"	900	6.25	1	1U	-	13.0	7.0	6.25	left lane must turn left	
R3-7L	30" X 30"	900	6.25	5	1U	-	13.0	7.0	31.25	left lane must turn left	(2)
R3-7R	30" X 30"	900	6.25	1	1U	-	13.0	7.0	6.25	right lane must turn right	
R4-7	24" X 30"	720	5.00	12	1U	-	13.0	7.0	60.00	keep right	(2) (6)
R6-1R	30" X 12"	360	2.50	1	1U	-	9.5	7.0	2.50	one way right	(2) (5)
W9-1R	36" X 36"	1,296	9.00	1	2U	-	15.5	8.0	9.00	right lane ends	
W20-100P	30" X 24"	720	5.00	1	2U	-	-	6.0	5.00	800 feet	mounted under W9-1R
TOTALS				23			89.5		124.25		

**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011

SIGN PANELS (SERIES X) - TABULATION P

SIGN NO.	SIZE (IN.)	QUANT.	UNIT	TYPE	NOTES
X4-2	18" X 18"	6	each	hazzard marker	(5) (9)

SALVAGE MARKER (SERIES X) (8) - TABULATION Q

SIGN NO.	SIZE (IN.)	QUANT.	UNIT	TYPE	NOTES
X4-4R	12" X 36"	1	each	clearance marker	(4)

SALVAGE AND INSTALL SIGN (TYPE C) (7) (8) - TABULATION S

SIGN NO.	SIZE (IN.)	QUANT.	POSTS			MOUNTING HEIGHT (FE)	PANEL LEGEND	NOTES
			NO & TYPE	KNEE BRACE QTY	LENGTH (FT)			
R2-1	24" X 30"	1	1U	-	13.0	7.0	speed limit 35	
W3-3	36" X 36"	1	1U	-	14.5	7.0	signal ahead	
W6-1	36" X 36"	1	1U	-	14.5	7.0	divided highway begins	
I-8	24" X 24"	1	1U	-	13.8	7.0	library	
M6-1R	21" X 15"	1	-	-	-	-	right arrow	mounted under I-8
I-8	24" X 24"	1	1U	-	13.8	7.0	library	
M6-1L	21" X 15"	1	-	-	-	-	left arrow	mounted under I-8
R3-30ALA	54" X 30"	1	2U	-	13.0	7.0	lane use control	

SALVAGE SIGN (TYPE C) (7) (8) - TABULATION U

SIGN NO.	SIZE (IN.)	QUANT.	POSTS		PANEL LEGEND	NOTES
			NO & TYPE	KNEE BRACE QTY		
R1-1	30" X 30"	2	1U	-	stop sign	remains in place until signal is operational & (4)
R1-1	30" X 30"	1	1U	-	stop sign	remains in place until signal is operational & (4)
SPECIAL	24" X 30"	1	1U	-	no left turn	remains in place until signal is operational / mounted under R1-1 / (4)
R8-2A	18" X 18"	1	1U	-	no parking	(4)
R8-2A	18" X 18"	1	1U	-	no parking	mounted with R2-1 & (4)

SALVAGE SIGN (TYPE D) (8) - TABULATION R

SIGN NO.	SIZE (IN.)	QUANT.	POSTS			MOUNTING HEIGHT (FEET)	PANEL LEGEND	NOTES
			NO & TYPE	KNEE BRACE QTY	LENGTH (FT)			
D1-1	varies	1	1U	-	12.5	7.0	Co Rd D	remain in place until mast arm signs are installed & (3)
D1-1	varies	1	-	-	-	-	Southlawn Dr	mounted with Co Rd D (D1-1) & (3)

NOTES:

1. MOUNTING HEIGHT IS MINIMUM; SEE SIGN DETAIL SHEET FOR TYPICAL MOUNTING.
2. MOUNT IN CONCRETE.
3. SALVAGED SIGNS SHALL BE RETURNED TO THE CITY OF MAPLEWOOD. THE LOCATION AND TIME OF DELIVERY OF SALVAGED SIGNS SHALL BE COORDINATED WITH THE ENGINEER. HAULING THE SALVAGED SIGNS IS INCIDENTAL TO THE WORK.
4. SALVAGED SIGNS AND MARKERS SHALL BE RETURNED TO RAMSEY COUNTY. THE LOCATION AND TIME OF DELIVERY OF SALVAGED SIGNS AND MARKERS SHALL BE COORDINATED WITH THE ENGINEER. HAULING THE SALVAGED SIGNS AND MARKERS IS INCIDENTAL TO THE WORK.
5. 4 FOOT MOUNTING HEIGHT.
6. INSTALL A MINIMUM OF 4 FEET BACK FROM THE TOP OF THE PLOWABLE MEDIAN NOSE.
7. NEW SIGN POSTS SHALL BE PROVIDED FOR ALL SIGNS THAT ARE SALVAGED AND INSTALLED. NEW SIGN POSTS SHALL BE INCLUSIVE TO THE WORK.
8. SIGNS DAMAGED OR LOST DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR.
9. MOUNT UNDER R4-7 AND COLORS SHALL BE YELLOW ON BLACK.

No.	Date	Revisions	App.

DRAWING NAME
CRD-TAB21.dwg
DESIGNED BY: BJB
DRAWN BY: HMW
CHECKED BY: BJB
DATE: 08/07/09
PROJECT NO. 160500029.2.101



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



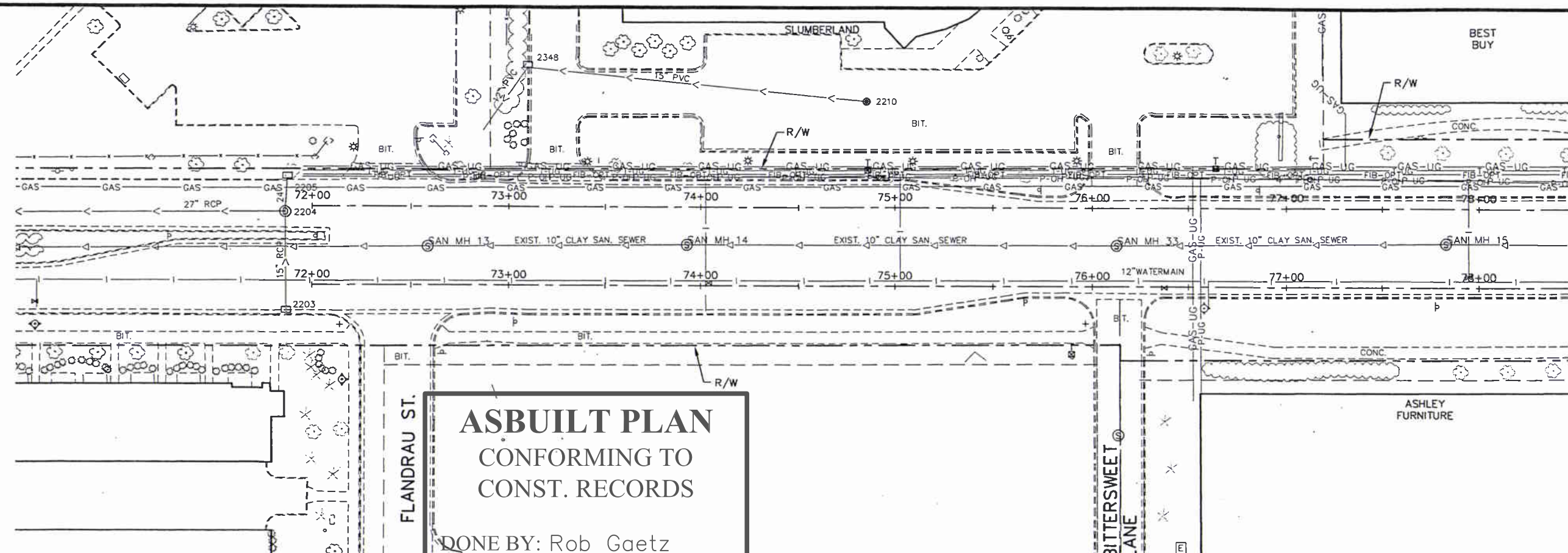
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
SIGNING
TABULATIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

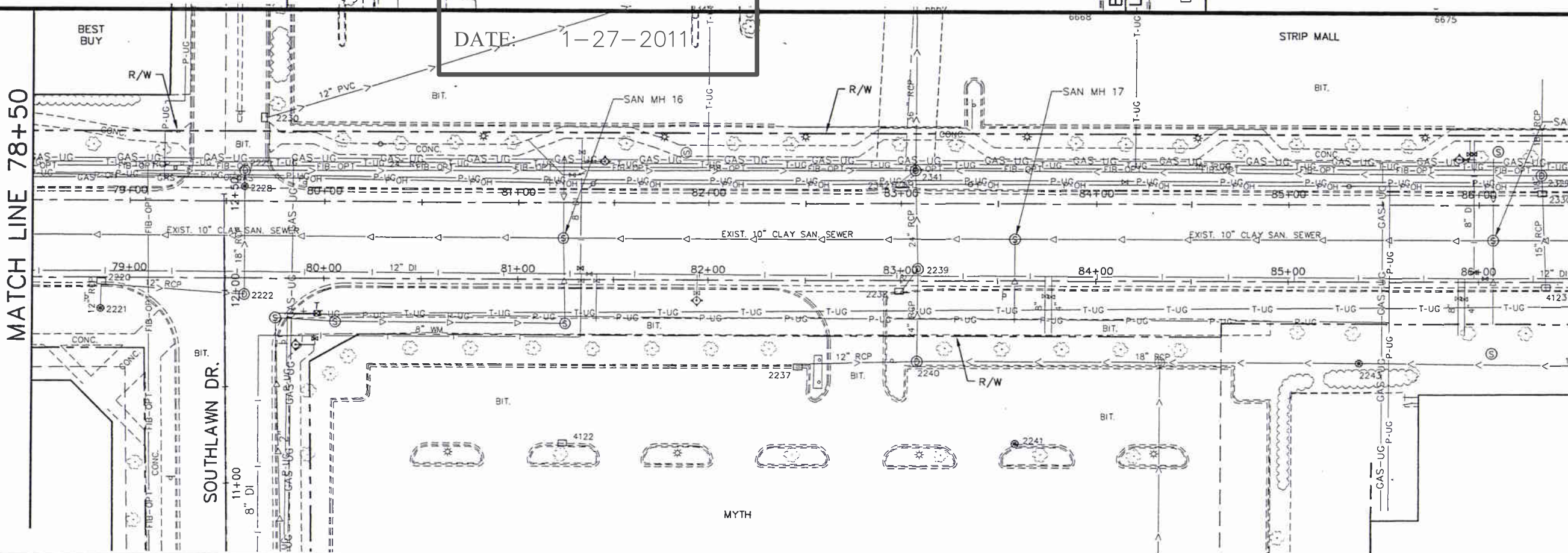
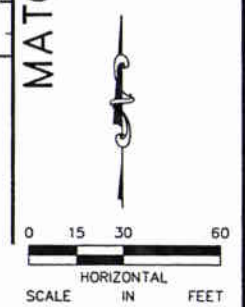
SHEET NO.
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104

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ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
 DONE BY: Rob Gaetz
 DATE: 1-27-2011

MATCH LINE 78+50



MATCH LINE 86+50

No.	Date	Revisions	App.

DRAWING NAME CRD-EXC01.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
 2330 UNIVERSITY AVE. WEST, SUITE 340W
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4127
 FAX. NO. (651) 645-5116

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

Daniel J. Coyle
 DANIEL J. COYLE PE
 DATE: 08/07/09 MN LIC. NO. 44821

RAMSEY COUNTY

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D EAST & WEST BOUND
 EXISTING TOPOGRAPHY
 & UTILITIES
 STA. 72+00 TO STA. 86+50

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 21
 104

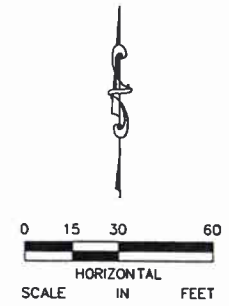
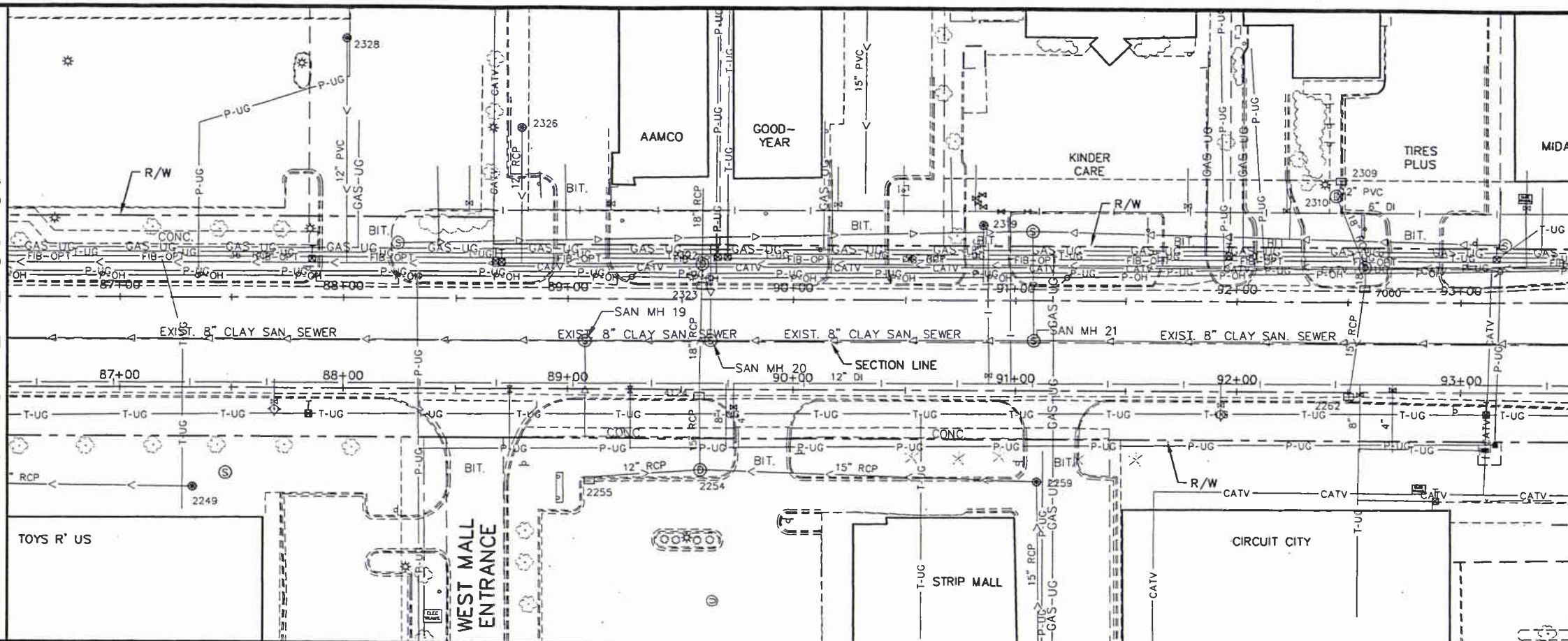
ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

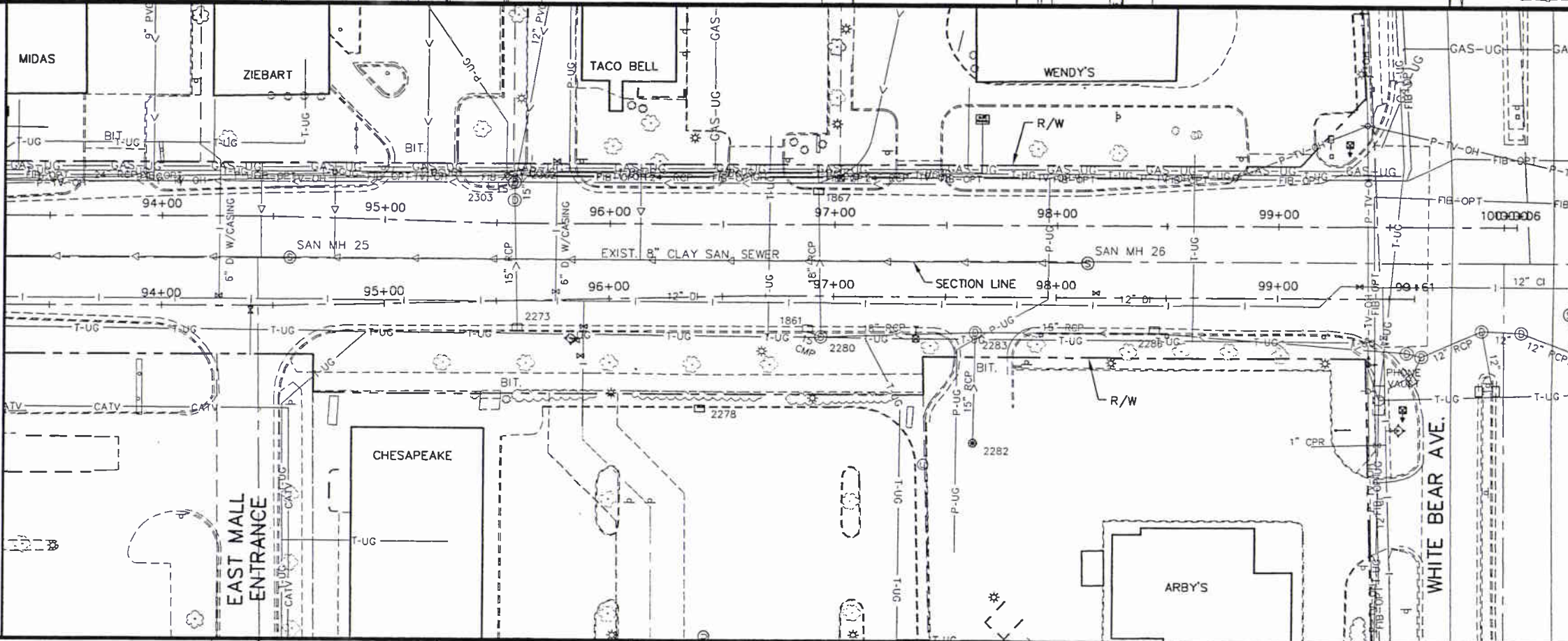
DATE: 1-27-2011

MATCH LINE 86+50

MATCH LINE 93+50



MATCH LINE 93+50



No.	Date	Revisions	App.

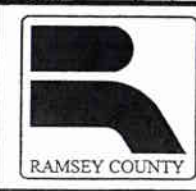
DRAWING NAME
CRD-EXC02.dwg

DESIGNED BY: RBC
DRAWN BY: HMW
CHECKED BY: KRB, ATB
DATE: 08/07/09
PROJECT NO. 160500029.2.101



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

Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821



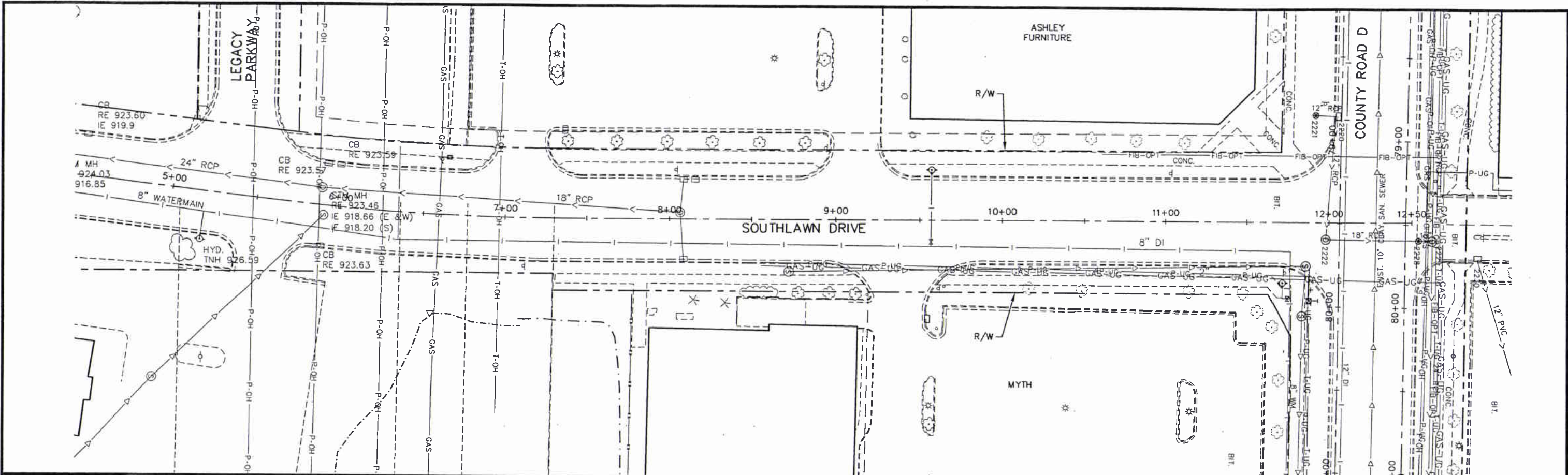
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
COUNTY ROAD D EAST & WEST BOUND
EXISTING TOPOGRAPHY
& UTILITIES
STA. 86+50 TO STA. 101+00

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

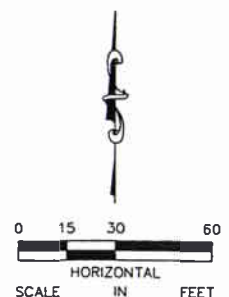
SHEET NO.
22
104

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**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz
DATE: 1-27-2011



No.	Date	Revisions	App.

DRAWING NAME CRD-EXC03.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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

Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821

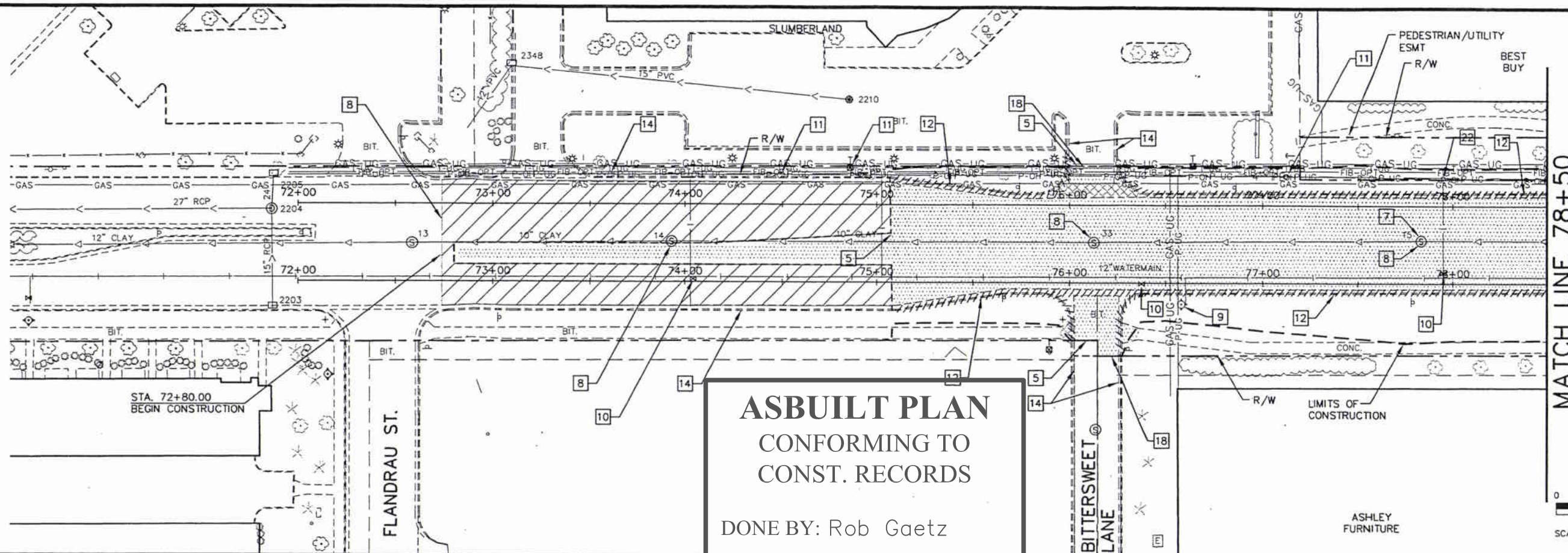


City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
SOUTHLAWN DRIVE
EXISTING TOPOGRAPHY
& UTILITIES
STA. 4+50 TO STA. 12+06.42

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
23
104



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

GENERAL REMOVAL NOTES:

- CONTRACTOR SHALL CALL GOPHER STATE ONE CALL AT 651-454-0002. ALL UTILITIES MUST BE LOCATED PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ROADWAY & STREET SIGN POSTS AND/OR BRACKETS WITHIN THE CONSTRUCTION LIMITS SHALL BE SALVAGED BY THE CONTRACTOR. SEE SIGN TABULATION.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY STRUCTURES THAT ARE NOT BEING REMOVED OR RELOCATED.
- 1 NOT USED
 - 2 NOT USED
 - 3 NOT USED
 - 4 TRENCH BOXES OR OTHER TRENCH STABILIZATION METHODS MAY BE REQUIRED DURING CONSTRUCTION TO MINIMIZE REMOVAL LIMITS.
 - 5 CONTRACTOR TO VERIFY REMOVAL LIMITS WITH ENGINEER PRIOR TO SAWCUTTING.
 - 6 REMOVE EXISTING STORM MANHOLE OR STORM CATCH BASIN. SEE STORM SEWER TABULATION.
 - 7 RECONSTRUCT EXISTING SANITARY MANHOLE. SEE SANITARY SEWER TABULATION.
 - 8 ADJUST EXISTING SANITARY MANHOLE CASTING ASSEMBLY. REPLACE RINGS. SEE SANITARY SEWER TABULATION.
 - 9 REMOVE/RELOCATE EXISTING HYDRANT AND GATE VALVE (BY OTHERS). SEE WATER MAIN TABULATION.
 - 10 REMOVE/ADJUST EXISTING GATE VALVE. SEE WATER MAIN TABULATION.
 - 11 EXISTING UTILITY TO BE REMOVED/RELOCATED (BY OTHERS).

GENERAL REMOVAL NOTES:

- 12 REMOVE EXISTING CONCRETE CURB AND GUTTER.
- 13 CONCRETE CURB & GUTTER SPOT REPLACEMENT
- 14 PROTECT CURB AND GUTTER.
- 15 ADJUST EXISTING STORM STRUCTURE CASTING ASSEMBLY. REPLACE RINGS. SEE STORM SEWER TABULATION.
- 16 REMOVE STORM SEWER. SEE STORM SEWER TABULATION.
- 17 NOT USED
- 18 SAWING BITUMINOUS PAVEMENT.
- 19 PROTECT ALL EXISTING ITEMS OUTSIDE OF ROW.
- 20 PROTECT ITEM.
- 21 REMOVE AND REPLACE EXISTING WATER SERVICE (BY OTHERS). SEE WATER MAIN TABULATION.
- 22 WATER SERVICE CUTOFF (BY OTHERS). SEE WATER MAIN TABULATION.
- 23 RELOCATE VALVE HOUSING INTO BOULEVARD (BY OTHERS). SEE WATER MAIN TABULATION.
- 24 REMOVE MISCELLANEOUS STRUCTURE.

LEGEND

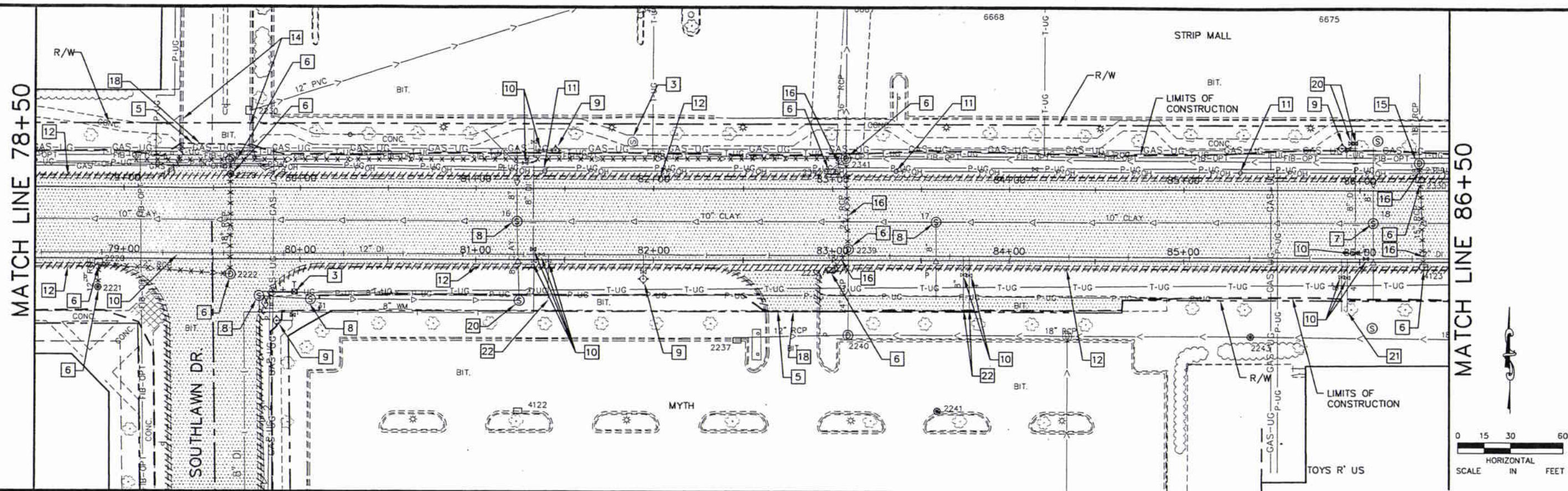
- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE SURFACE
- CLEARING & GRUBBING
- REMOVE TREE
- REMOVE CONCRETE CURB & GUTTER
- REMOVE UTILITY LINES
- SAWING PAVEMENT
- LIMITS OF CONSTRUCTION
- MILL BITUMINOUS SURFACE (2")

UTILITY NOTES:

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-REM01.dwg September 22, 2009 - 8:10am

No.	Date	Revisions	App.	DRAWING NAME CRD-REM01.dwg	 Kimley-Horn and Associates, Inc. <small>2300 UNIVERSITY AVE. WEST, SUITE 340W ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-5116</small>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE, PE DATE: 08/07/09 MN LIC. NO. 44821	 RAMSEY COUNTY	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS COUNTY ROAD D EAST & WEST BOUND REMOVALS & SAWCUTS PLAN STA. 72+00 TO STA. 78+50	CITY PROJECT 08-13 COUNTY PROJECT P-3202 S.P. 62-619-30 S.P. 62-596-04	SHEET NO. 24 <hr/> 104
				DESIGNED BY: RBC							
				DRAWN BY: HMW							
				CHECKED BY: KRB, ATB							
				DATE: 08/07/09							
				PROJECT NO. 160500029.2.101							



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

GENERAL REMOVAL NOTES:

- CONTRACTOR SHALL CALL GOPHER STATE ONE CALL AT 651-454-0002. ALL UTILITIES MUST BE LOCATED PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ROADWAY & STREET SIGN POSTS AND/OR BRACKETS WITHIN THE CONSTRUCTION LIMITS SHALL BE SALVAGED BY THE CONTRACTOR. SEE SIGN TABULATION.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY STRUCTURES THAT ARE NOT BEING REMOVED OR RELOCATED.
- 1 NOT USED
 - 2 NOT USED
 - 3 NOT USED
 - 4 TRENCH BOXES OR OTHER TRENCH STABILIZATION METHODS MAY BE REQUIRED DURING CONSTRUCTION TO MINIMIZE REMOVAL LIMITS.
 - 5 CONTRACTOR TO VERIFY REMOVAL LIMITS WITH ENGINEER PRIOR TO SAWCUTTING.
 - 6 REMOVE EXISTING STORM MANHOLE OR STORM CATCH BASIN. SEE STORM SEWER TABULATION.
 - 7 RECONSTRUCT EXISTING SANITARY MANHOLE. SEE SANITARY SEWER TABULATION.
 - 8 ADJUST EXISTING SANITARY MANHOLE CASTING ASSEMBLY. REPLACE RINGS. SEE SANITARY SEWER TABULATION.
 - 9 REMOVE/RELOCATE EXISTING HYDRANT AND GATE VALVE (BY OTHERS). SEE WATER MAIN TABULATION.
 - 10 REMOVE/ADJUST EXISTING GATE VALVE. SEE WATER MAIN TABULATION.
 - 11 EXISTING UTILITY TO BE REMOVED/RELOCATED (BY OTHERS).
 - 12 REMOVE EXISTING CONCRETE CURB AND GUTTER.
 - 13 CONCRETE CURB & GUTTER SPOT REPLACEMENT
 - 14 PROTECT CURB AND GUTTER.
 - 15 ADJUST EXISTING STORM STRUCTURE CASTING ASSEMBLY. REPLACE RINGS. SEE STORM SEWER TABULATION.
 - 16 REMOVE STORM SEWER. SEE STORM SEWER TABULATION.
 - 17 NOT USED

GENERAL REMOVAL NOTES:

- 18 SAWING BITUMINOUS PAVEMENT.
- 19 PROTECT ALL EXISTING ITEMS OUTSIDE OF ROW.
- 20 PROTECT ITEM.
- 21 REMOVE AND REPLACE EXISTING WATER SERVICE (BY OTHERS). SEE WATER MAIN TABULATION.
- 22 WATER SERVICE CUTOFF (BY OTHERS). SEE WATER MAIN TABULATION.
- 23 RELOCATE VALVE HOUSING INTO BOULEVARD (BY OTHERS). SEE WATER MAIN TABULATION.
- 24 REMOVE MISCELLANEOUS STRUCTURE.

LEGEND

- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE SURFACE
- CLEARING & GRUBBING
- REMOVE TREE
- REMOVE CONCRETE CURB & GUTTER
- REMOVE UTILITY LINES
- SAWING PAVEMENT
- LIMITS OF CONSTRUCTION
- MILL BITUMINOUS SURFACE (2")

UTILITY NOTES:

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_REM02.dwg, September 22, 2009 - 8:12am

No.	Date	Revisions	App.	DRAWING NAME
				CRD-REM02.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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

Daniel J. Coyle
 DANIEL J. COYLE PE
 DATE: 08/07/09 MR LIC. NO. 44821



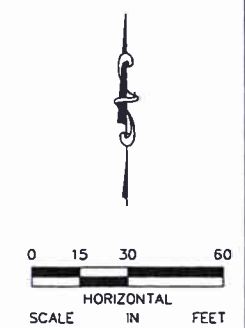
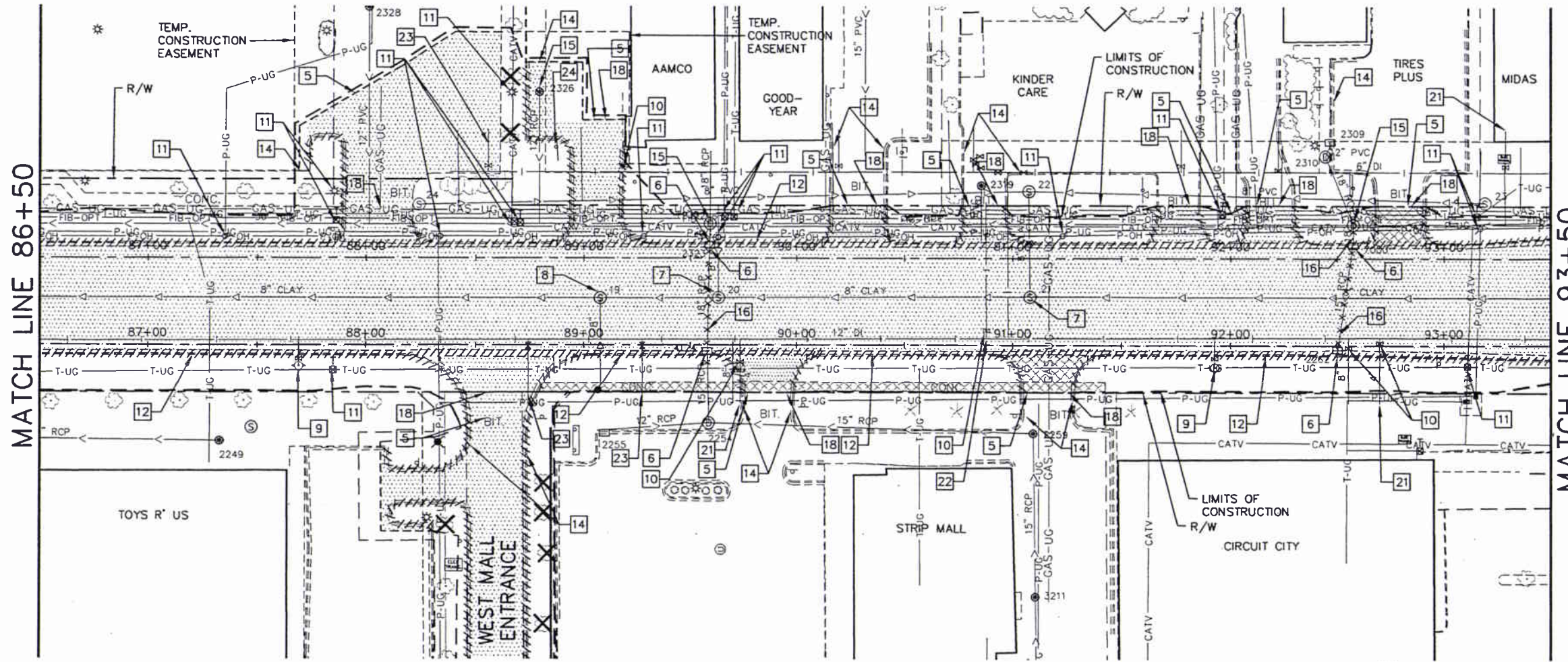
City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS COUNTY ROAD D EAST & WEST BOUND REMOVALS & SAWCUTS PLAN STA. 78+50 TO STA. 86+50	CITY PROJECT	08-13	SHEET NO. 25 104
	COUNTY PROJECT	P-3202	
	S.P.	62-619-30	
	S.P.	62-596-04	

ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



GENERAL REMOVAL NOTES:

- CONTRACTOR SHALL CALL GOPHER STATE ONE CALL AT 651-454-0002. ALL UTILITIES MUST BE LOCATED PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ROADWAY & STREET SIGN POSTS AND/OR BRACKETS WITHIN THE CONSTRUCTION LIMITS SHALL BE SALVAGED BY THE CONTRACTOR. SEE SIGN TABULATION.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY STRUCTURES THAT ARE NOT BEING REMOVED OR RELOCATED.
- 1 NOT USED
 - 2 NOT USED
 - 3 NOT USED
 - 4 TRENCH BOXES OR OTHER TRENCH STABILIZATION METHODS MAY BE REQUIRED DURING CONSTRUCTION TO MINIMIZE REMOVAL LIMITS.
 - 5 CONTRACTOR TO VERIFY REMOVAL LIMITS WITH ENGINEER PRIOR TO SAWCUTTING.
 - 6 REMOVE EXISTING STORM MANHOLE OR STORM CATCH BASIN. SEE STORM SEWER TABULATION.
 - 7 RECONSTRUCT EXISTING SANITARY MANHOLE. SEE SANITARY SEWER TABULATION.
 - 8 ADJUST EXISTING SANITARY MANHOLE CASTING ASSEMBLY. REPLACE RINGS. SEE SANITARY SEWER TABULATION.
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 - 11 EXISTING UTILITY TO BE REMOVED/RELOCATED (BY OTHERS).

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- 12 REMOVE EXISTING CONCRETE CURB AND GUTTER.
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- 15 ADJUST EXISTING STORM STRUCTURE CASTING ASSEMBLY. REPLACE RINGS. SEE STORM SEWER TABULATION.
- 16 REMOVE STORM SEWER. SEE STORM SEWER TABULATION.
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- 20 PROTECT ITEM.
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- 22 WATER SERVICE CUTOFF (BY OTHERS). SEE WATER MAIN TABULATION.
- 23 RELOCATE VALVE HOUSING INTO BOULEVARD (BY OTHERS). SEE WATER MAIN TABULATION.
- 24 REMOVE MISCELLANEOUS STRUCTURE.

LEGEND

- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE SURFACE
- CLEARING & GRUBBING
- REMOVE TREE
- REMOVE CONCRETE CURB & GUTTER
- REMOVE UTILITY LINES
- SAWING PAVEMENT
- LIMITS OF CONSTRUCTION
- MILL BITUMINOUS SURFACE (2")

UTILITY NOTES:

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K:\IWC_Civil\County\RAMSEY_WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-REMO3.dwg September 22, 2009 - 8:14am

No.	Date	Revisions	App.

**Kimley-Horn
and Associates, Inc.**
2250 UNIVERSITY AVE. WEST, SUITE 345M
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 545-4187
FAX. NO. (651) 545-5116

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

Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821

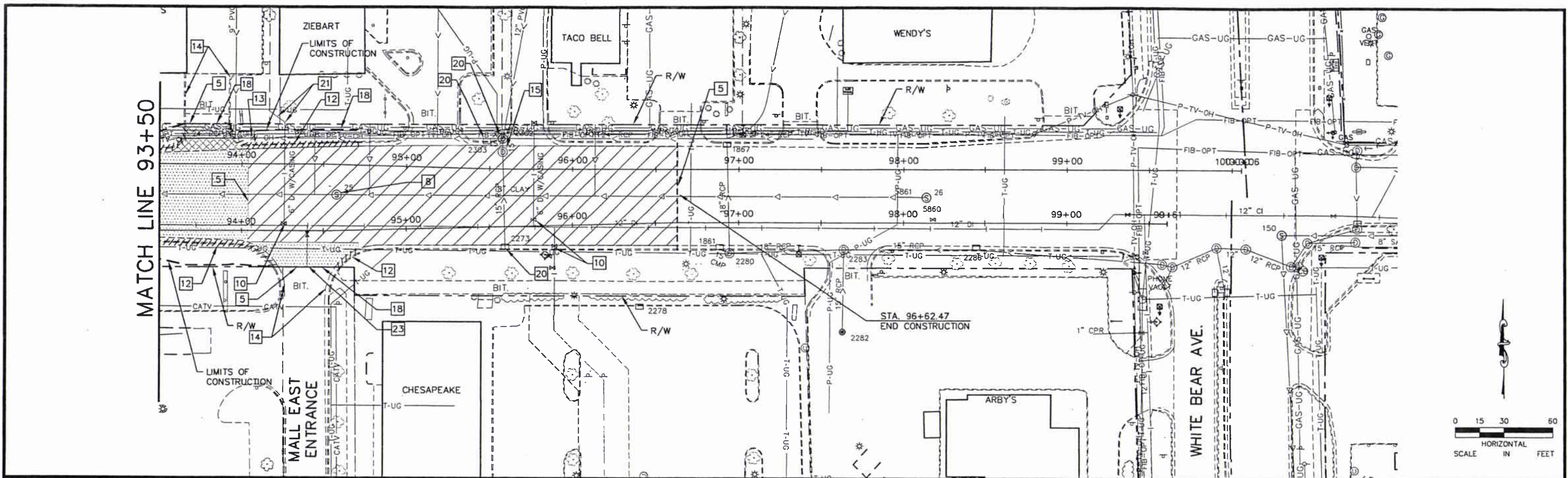


City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
COUNTY ROAD D EAST & WEST BOUND
REMOVALS &
SAWCUTS PLAN
STA. 86+50 TO STA. 93+50

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
26
104



GENERAL REMOVAL NOTES:

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- 23 RELOCATE VALVE HOUSING INTO BOULEVARD (BY OTHERS). SEE WATER MAIN TABULATION.
- 24 REMOVE MISCELLANEOUS STRUCTURE.

LEGEND

- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE SURFACE
- CLEARING & GRUBBING
- REMOVE TREE
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**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011

No.	Date	Revisions	App.	DRAWING NAME
				CRD-REM04.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
COUNTY ROAD D EAST & WEST BOUND
REMOVALS &
SAWCUTS PLAN
STA. 93+50 TO STA. 101+00

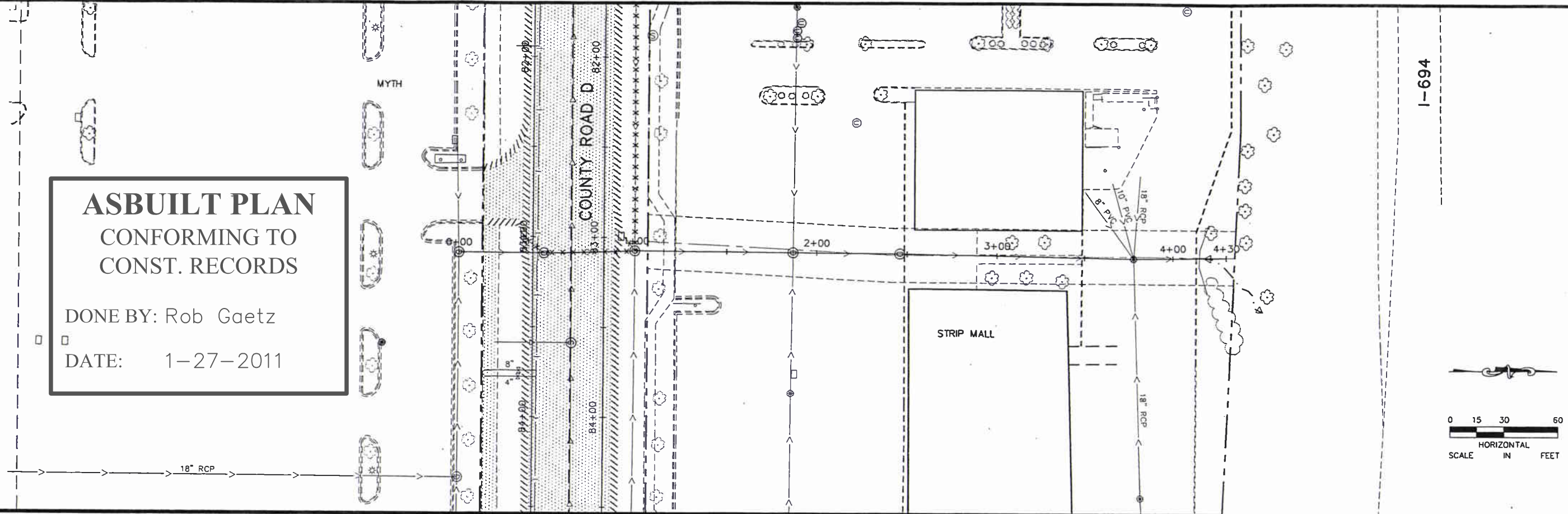
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
27
104

ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



GENERAL REMOVAL NOTES:

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- 23 RELOCATE VALVE HOUSING INTO BOULEVARD (BY OTHERS). SEE WATER MAIN TABULATION.
- 24 REMOVE MISCELLANEOUS STRUCTURE.

LEGEND

- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE SURFACE
- CLEARING & GRUBBING
- REMOVE TREE
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No.	Date	Revisions	App.	DRAWING NAME CRD-REM05.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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

Daniel J. Coyle
DANIEL J. COYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821

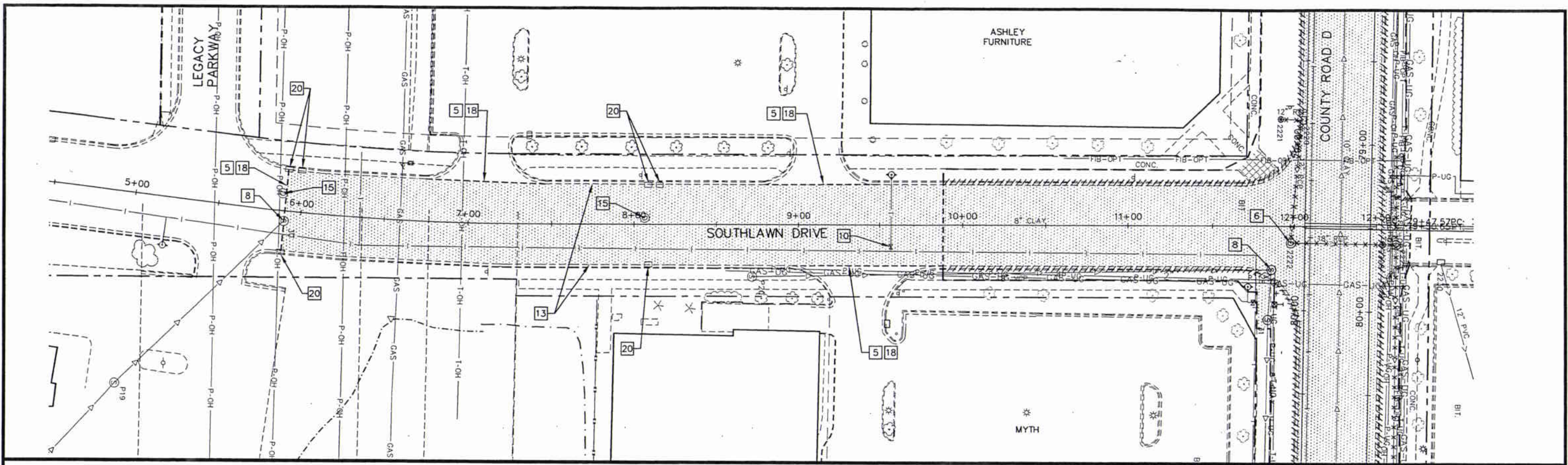


City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
EASEMENT
REMOVALS AND SAWCUT PLAN

CITY PROJECT	08-13	SHEET NO. 28
COUNTY PROJECT	P-3202	
S.P.	62-619-30	
S.P.	62-596-04	

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-REM06.dwg September 22, 2009 - 8:19am



GENERAL REMOVAL NOTES:

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GENERAL REMOVAL NOTES:

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LEGEND

- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE SURFACE
- CLEARING & GRUBBING
- REMOVE TREE
- REMOVE CONCRETE CURB & GUTTER
- REMOVE UTILITY LINES
- SAWING PAVEMENT
- LIMITS OF CONSTRUCTION
- MILL BITUMINOUS SURFACE (2")

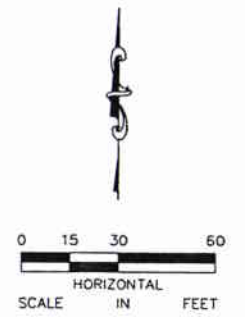
UTILITY NOTES:

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**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011



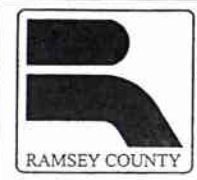
No.	Date	Revisions	App.

DRAWING NAME	CRD-REM06.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

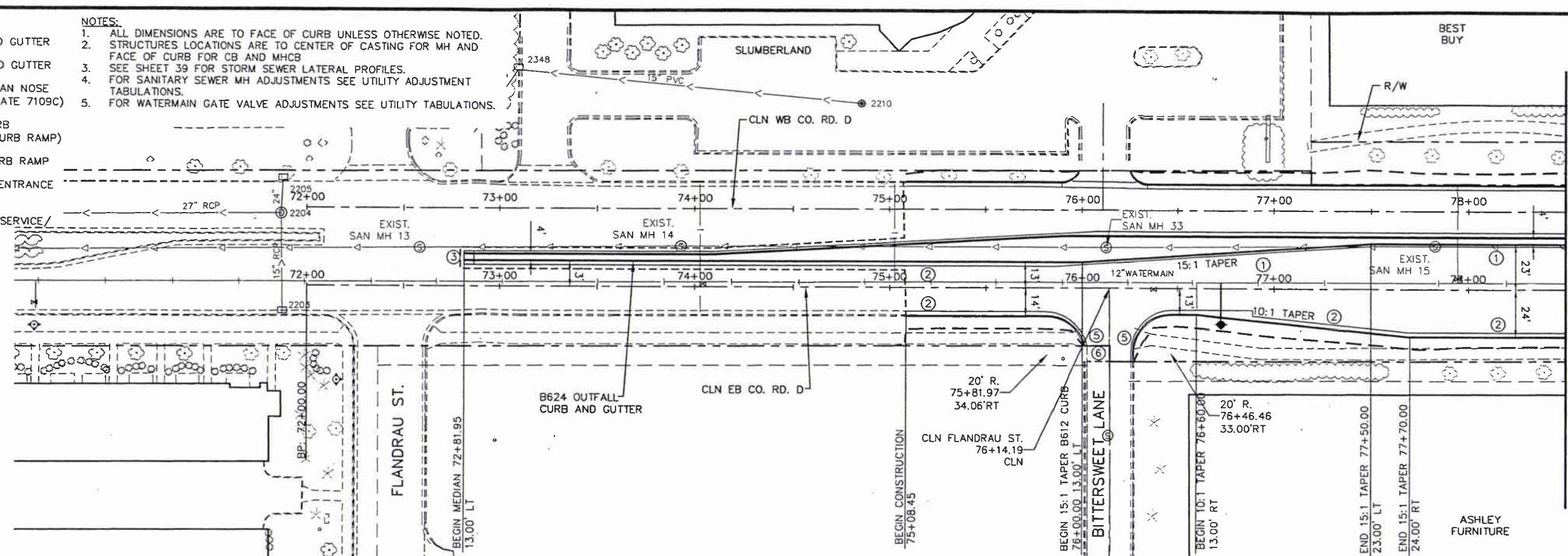
RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
SOUTHLAWN DRIVE
REMOVALS AND
SAWCUT PLAN
STA. 4+50 TO STA. 12+06.42

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

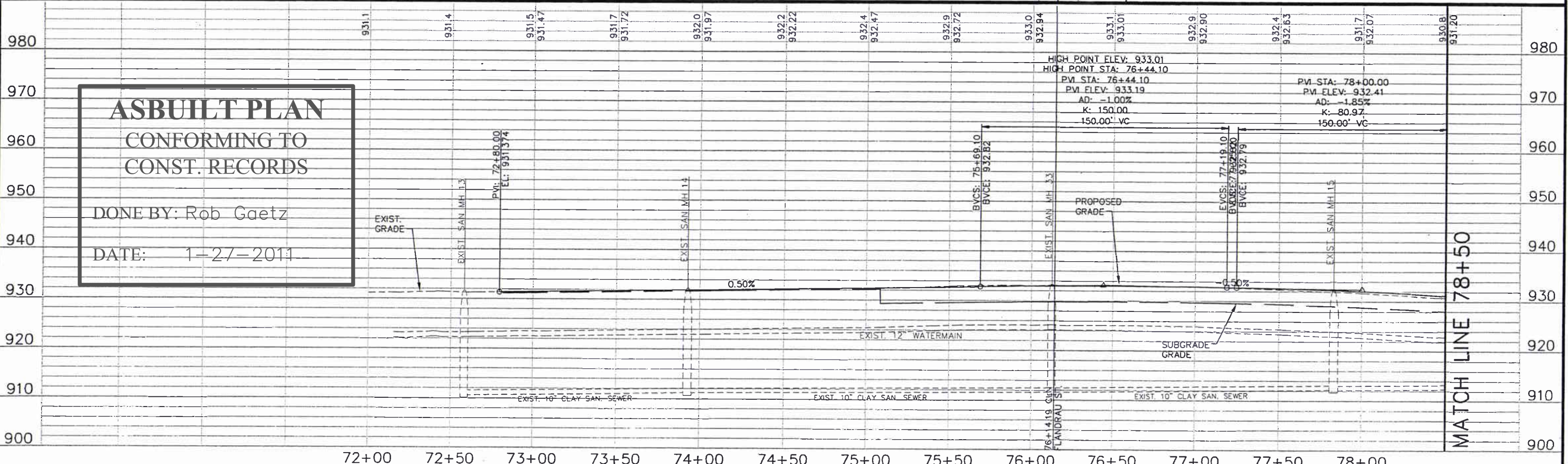
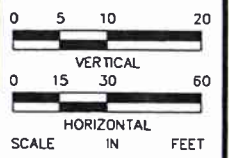
SHEET NO.
29
104

- LEGEND**
- ① B612 CURB AND GUTTER
 - ② B624 CURB AND GUTTER
 - ③ CONCRETE MEDIAN NOSE (MNDOT STD PLATE 7109C)
 - ④ DEPRESSED CURB (FUTURE PED CURB RAMP)
 - ⑤ PEDESTRIAN CURB RAMP
 - ⑥ SEE DRIVEWAY ENTRANCE DETAIL
 - ⑦ OFFSET WATER SERVICE/HYDRANT LEAD.

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. STRUCTURES LOCATIONS ARE TO CENTER OF CASTING FOR MH AND FACE OF CURB FOR CB AND MHCB
 3. SEE SHEET 39 FOR STORM SEWER LATERAL PROFILES.
 4. FOR SANITARY SEWER MH ADJUSTMENTS SEE UTILITY ADJUSTMENT TABULATIONS.
 5. FOR WATERMAIN GATE VALVE ADJUSTMENTS SEE UTILITY TABULATIONS.



MATCH LINE 78+50



MATCH LINE 78+50

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS
 DONE BY: Rob Gaetz
 DATE: 1-27-2011

K:\TWC\Civil\RAMSEY\WHITE BEAR\DWG\PLAN SHEETS\COUNTY ROAD D\CRD-PPF01.dwg September 22, 2009 - 8:20am

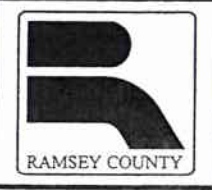
No.	Date	Revisions	App.

DRAWING NAME	CRD-PPF01.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
 2250 UNIVERSITY AVE WEST, SUITE 200
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4197
 FAX. NO. (651) 645-3718

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Daniel J. Coyle
 DANIEL J. COYLE, PE
 DATE: 08/07/09 MN LIC. NO. 44821

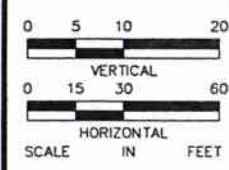
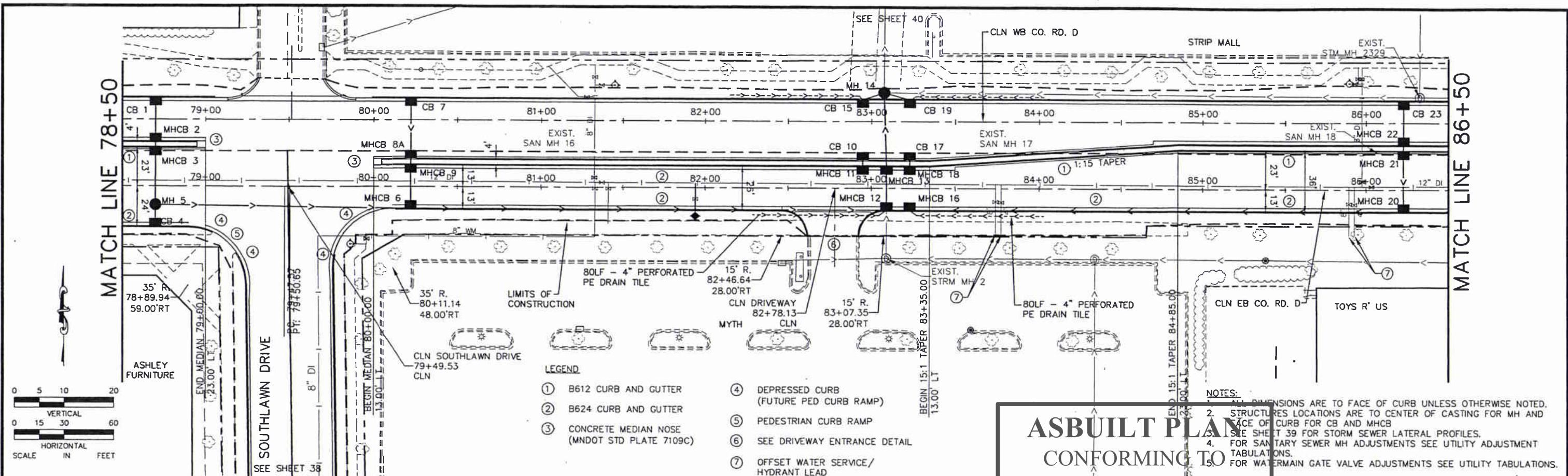


City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D EAST BOUND
 STREET AND STORM SEWER
 PLAN AND PROFILE
 STA. 72+00 TO STA. 78+50

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
30
104



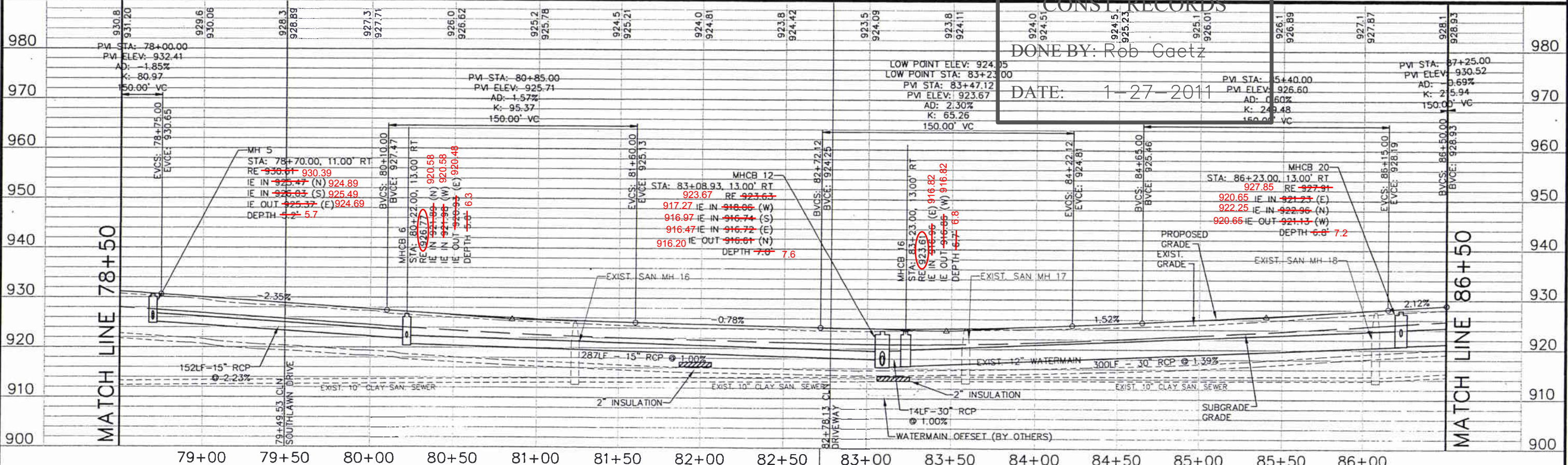
- LEGEND**
- ① B612 CURB AND GUTTER
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ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

NOTES:

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3. SEE SHEET 39 FOR STORM SEWER LATERAL PROFILES.
4. FOR SANITARY SEWER MH ADJUSTMENTS SEE UTILITY ADJUSTMENT TABULATIONS.
5. FOR WATERMAIN GATE VALVE ADJUSTMENTS SEE UTILITY TABULATIONS.



No.	Date	Revisions	App.

DRAWING NAME
CRD-PPF02.dwg

DESIGNED BY: RBC
 DRAWN BY: HMW
 CHECKED BY: KRB, ATB
 DATE: 08/07/09
 PROJECT NO. 160500029.2.101

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

Daniel J. Coyle
 DANIEL J. COYLE PE
 DATE: 08/07/09, M.I.C. NO. 44821

RAMSEY COUNTY

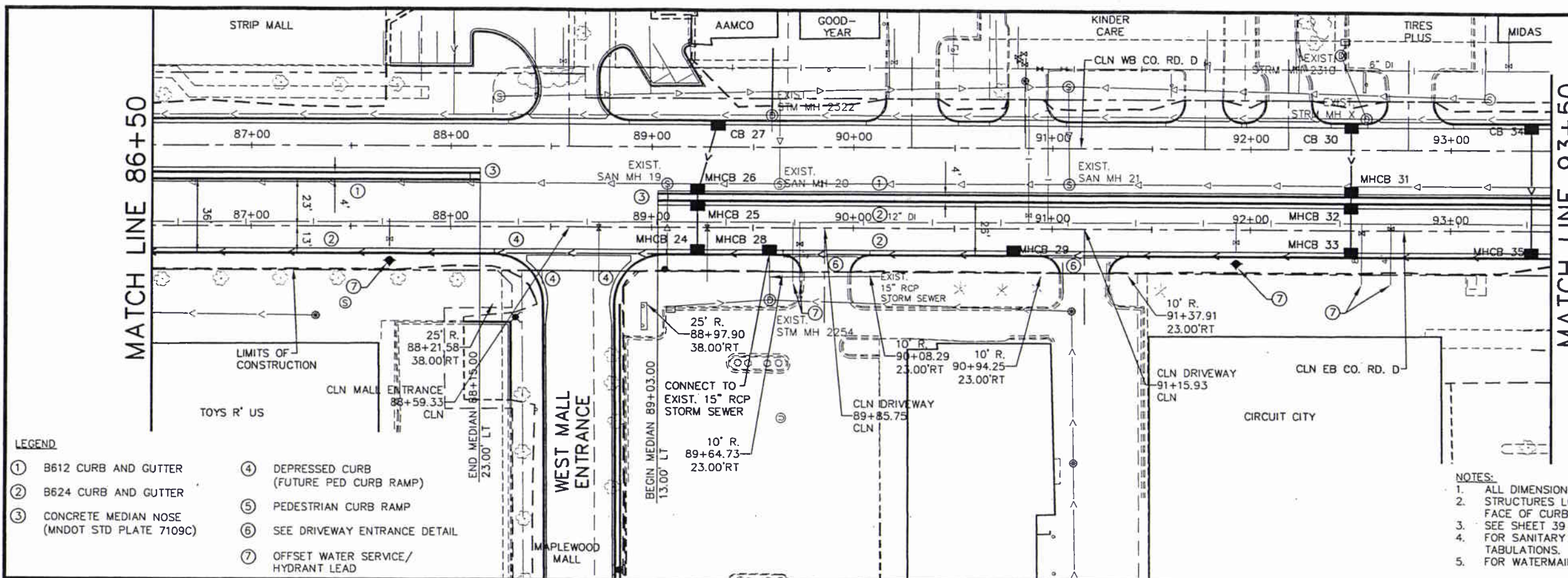
City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS COUNTY ROAD D EAST BOUND STREET AND STORM SEWER PLAN AND PROFILE STA. 78+50 TO STA. 86+50	CITY PROJECT 08-13	SHEET NO. 31
	COUNTY PROJECT P-3202	
	S.P. 62-619-30	
	S.P. 62-596-04	104

ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

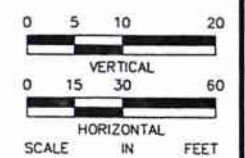


MATCH LINE 93+50

MATCH LINE 86+50

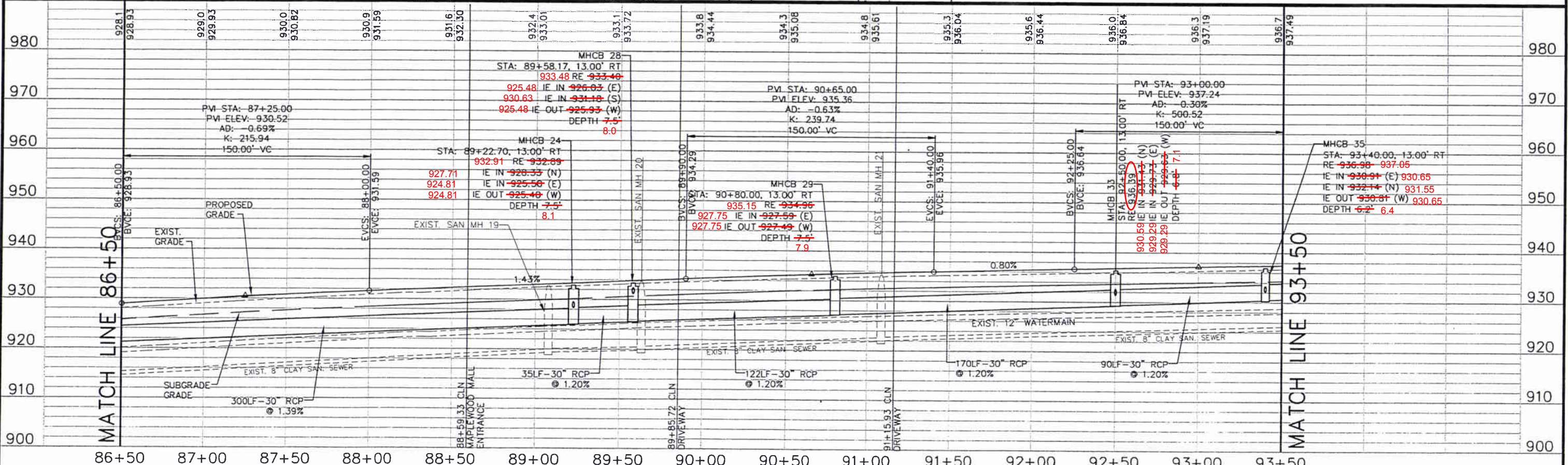
LEGEND

- ① 8612 CURB AND GUTTER
- ② 8624 CURB AND GUTTER
- ③ CONCRETE MEDIAN NOSE (MNDOT STD PLATE 7109C)
- ④ DEPRESSED CURB (FUTURE PED CURB RAMP)
- ⑤ PEDESTRIAN CURB RAMP
- ⑥ SEE DRIVEWAY ENTRANCE DETAIL
- ⑦ OFFSET WATER SERVICE/HYDRANT LEAD



NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. STRUCTURES LOCATIONS ARE TO CENTER OF CASTING FOR MH AND FACE OF CURB FOR CB AND MHCBS
3. SEE SHEET 39 FOR STORM SEWER LATERAL PROFILES.
4. FOR SANITARY SEWER MH ADJUSTMENTS SEE UTILITY ADJUSTMENT TABULATIONS.
5. FOR WATERMAIN GATE VALVE ADJUSTMENTS SEE UTILITY TABULATIONS.



No.	Date	Revisions	App.

DRAWING NAME CRD-PPF03.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2550 UNIVERSITY AVE. WEST, SUITE 340W
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 845-4977
FAX. NO. (651) 845-3116

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

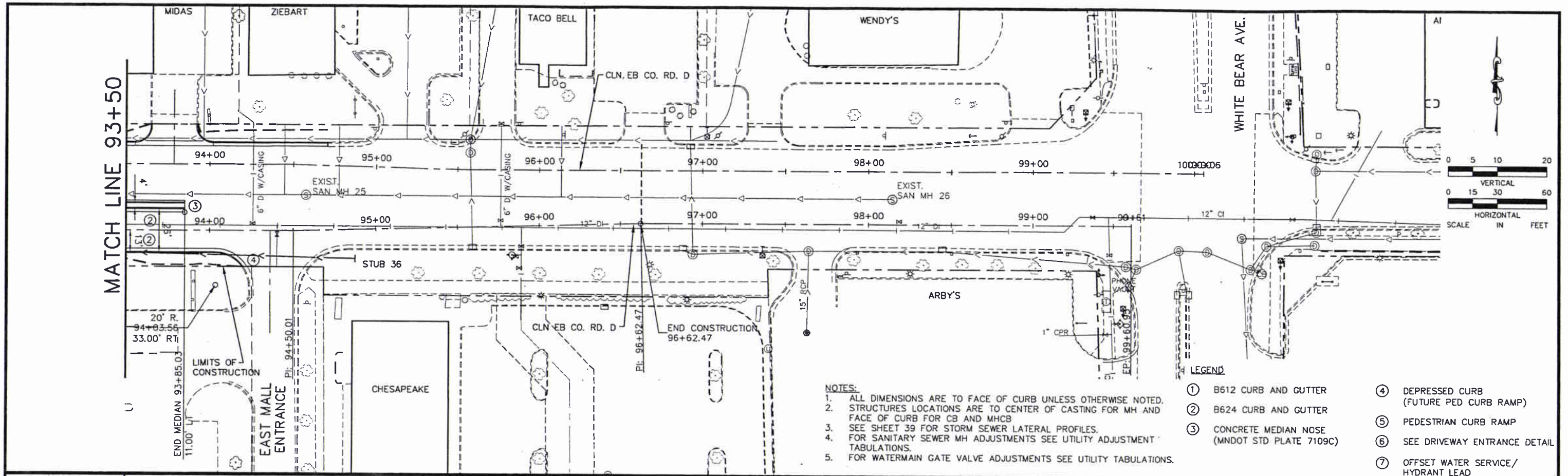
Daniel J. Coyle
DANIEL J. COYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821

RAMSEY COUNTY

City of Maplewood, Minnesota
Department of Public Works
Engineering Division

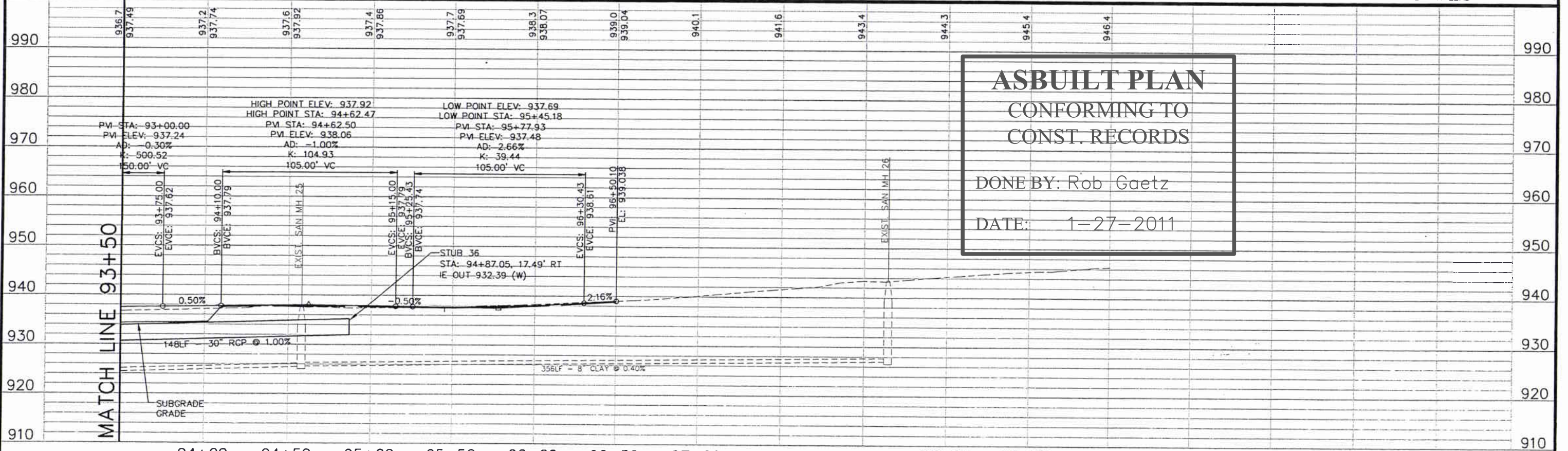
RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
COUNTY ROAD D EAST BOUND
STREET AND STORM SEWER
PLAN AND PROFILE
STA. 86+50 TO STA. 93+50

CITY PROJECT	08-13	SHEET NO. 32
COUNTY PROJECT	P-3202	
S.P.	62-619-30	104
S.P.	62-596-04	



- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. STRUCTURES LOCATIONS ARE TO CENTER OF CASTING FOR MH AND FACE OF CURB FOR CB AND MHCB
 3. SEE SHEET 39 FOR STORM SEWER LATERAL PROFILES.
 4. FOR SANITARY SEWER MH ADJUSTMENTS SEE UTILITY ADJUSTMENT TABULATIONS.
 5. FOR WATERMAIN GATE VALVE ADJUSTMENTS SEE UTILITY TABULATIONS.

- LEGEND**
- ① B612 CURB AND GUTTER
 - ② B624 CURB AND GUTTER
 - ③ CONCRETE MEDIAN NOSE (MNDOT STD PLATE 7109C)
 - ④ DEPRESSED CURB (FUTURE PED CURB RAMP)
 - ⑤ PEDESTRIAN CURB RAMP
 - ⑥ SEE DRIVEWAY ENTRANCE DETAIL
 - ⑦ OFFSET WATER SERVICE/HYDRANT LEAD



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

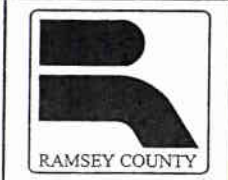
DATE: 1-27-2011

No.	Date	Revisions	App.

Kimley-Horn and Associates, Inc.
 2000 UNIVERSITY AVE. WEST, SUITE 340M
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4337
 FAX. NO. (651) 645-5116

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

David J. Coyle
 DANIEL J. COYLE, PE
 DATE: 08/07/09 MN LIC. NO. 44821



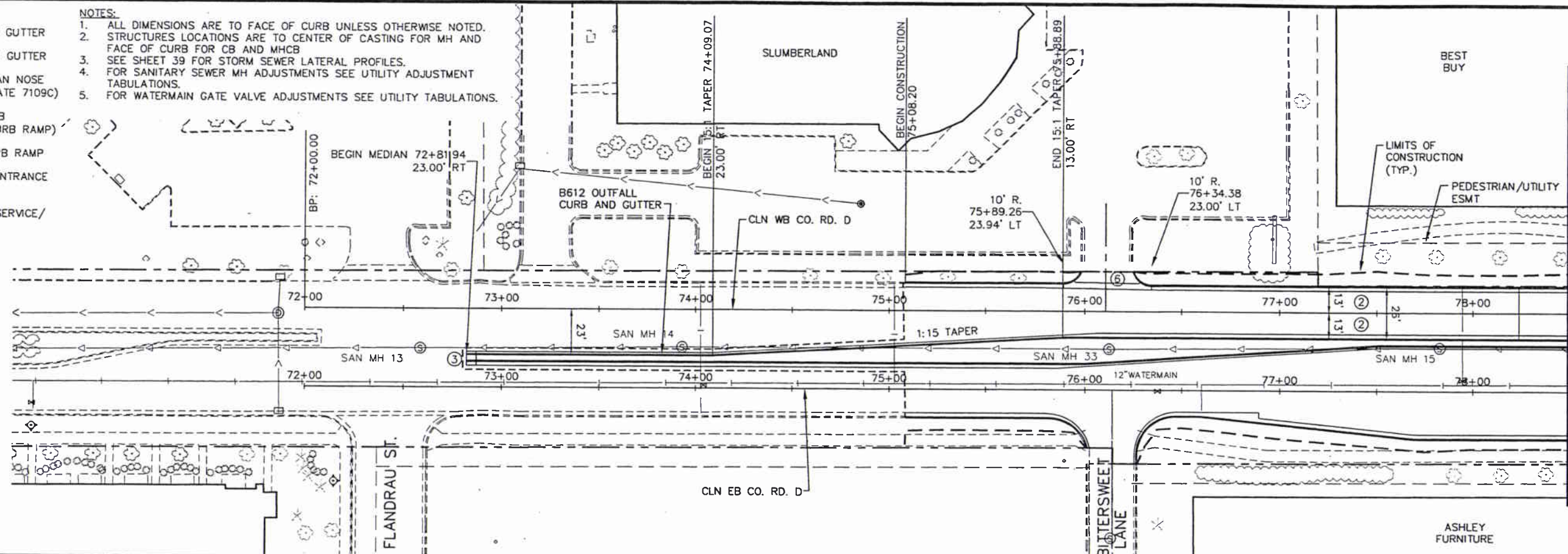
CITY OF MAPLEWOOD
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D EAST BOUND
 STREET AND STORM SEWER
 PLAN AND PROFILE
 STA. 93+50 TO STA. 102+50

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

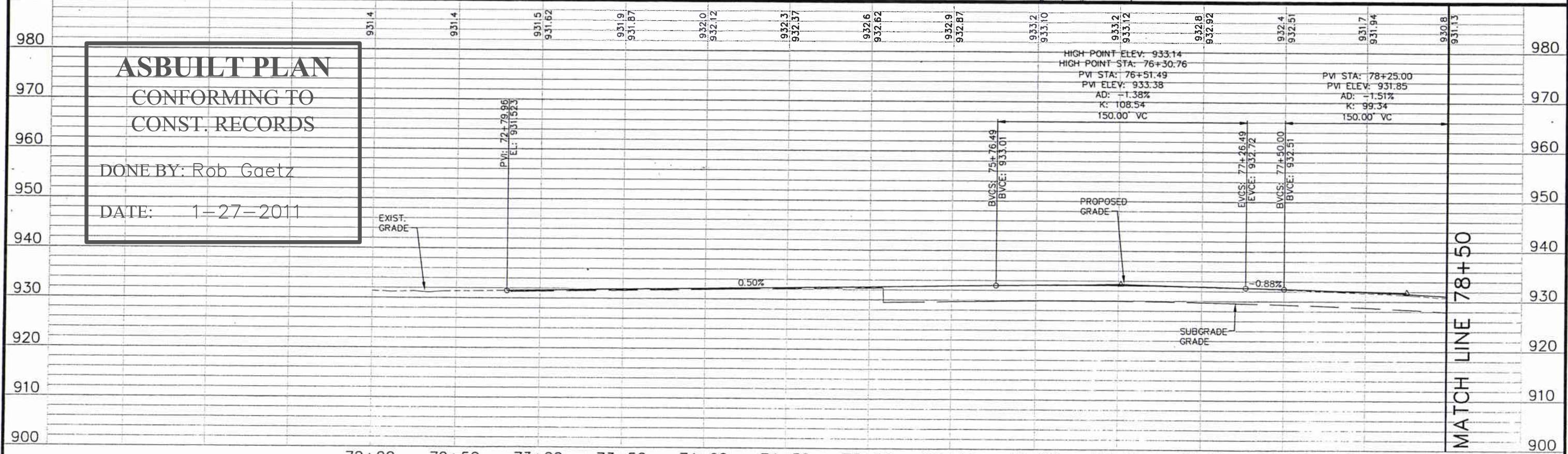
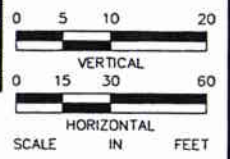
SHEET NO.
33
 104

- LEGEND**
- ① B612 CURB AND GUTTER
 - ② B624 CURB AND GUTTER
 - ③ CONCRETE MEDIAN NOSE (MNDOT STD PLATE 7109C)
 - ④ DEPRESSED CURB (FUTURE PED CURB RAMP)
 - ⑤ PEDESTRIAN CURB RAMP
 - ⑥ SEE DRIVEWAY ENTRANCE DETAIL
 - ⑦ OFFSET WATER SERVICE/HYDRANT LEAD.

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. STRUCTURES LOCATIONS ARE TO CENTER OF CASTING FOR MH AND FACE OF CURB FOR CB AND MHCB
 3. SEE SHEET 39 FOR STORM SEWER LATERAL PROFILES.
 4. FOR SANITARY SEWER MH ADJUSTMENTS SEE UTILITY ADJUSTMENT TABULATIONS.
 5. FOR WATERMAIN GATE VALVE ADJUSTMENTS SEE UTILITY TABULATIONS.

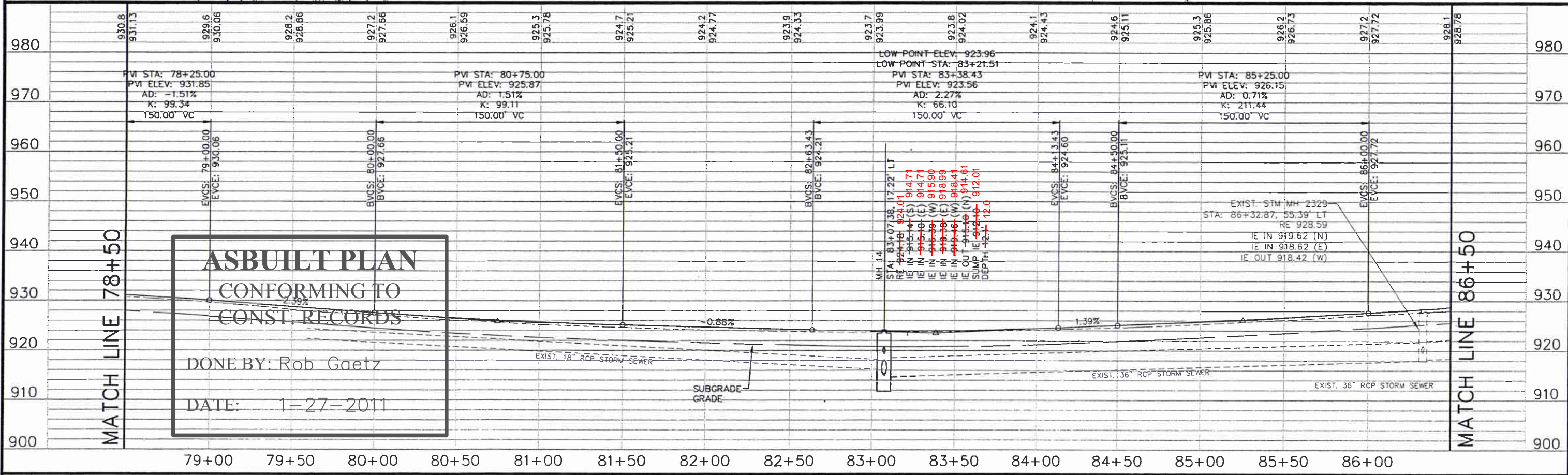
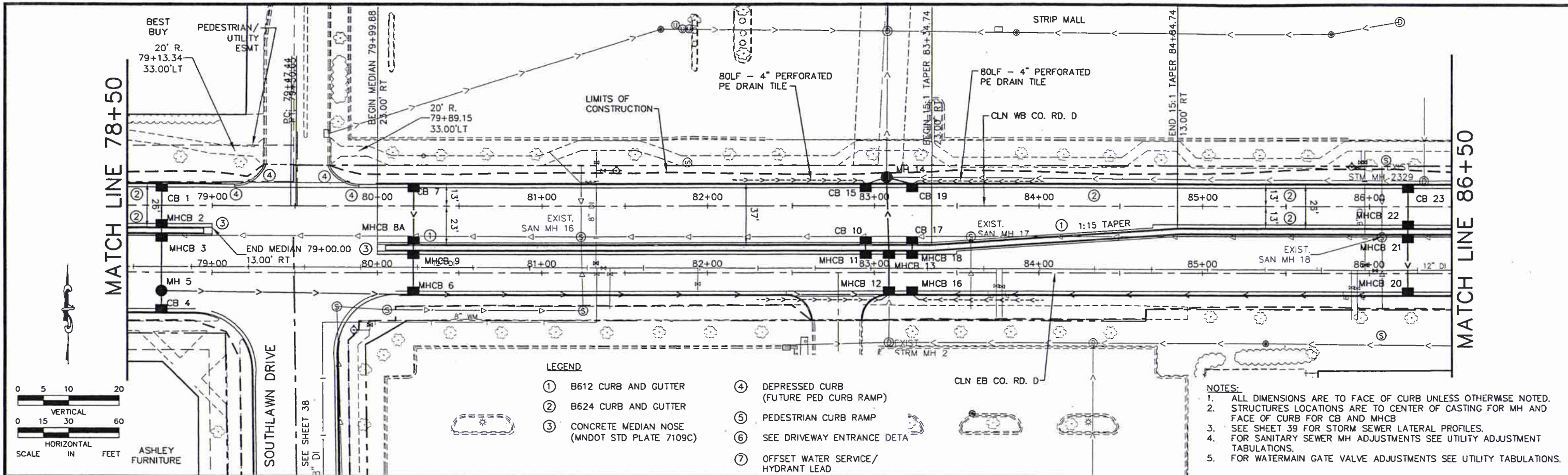


MATCH LINE 78+50

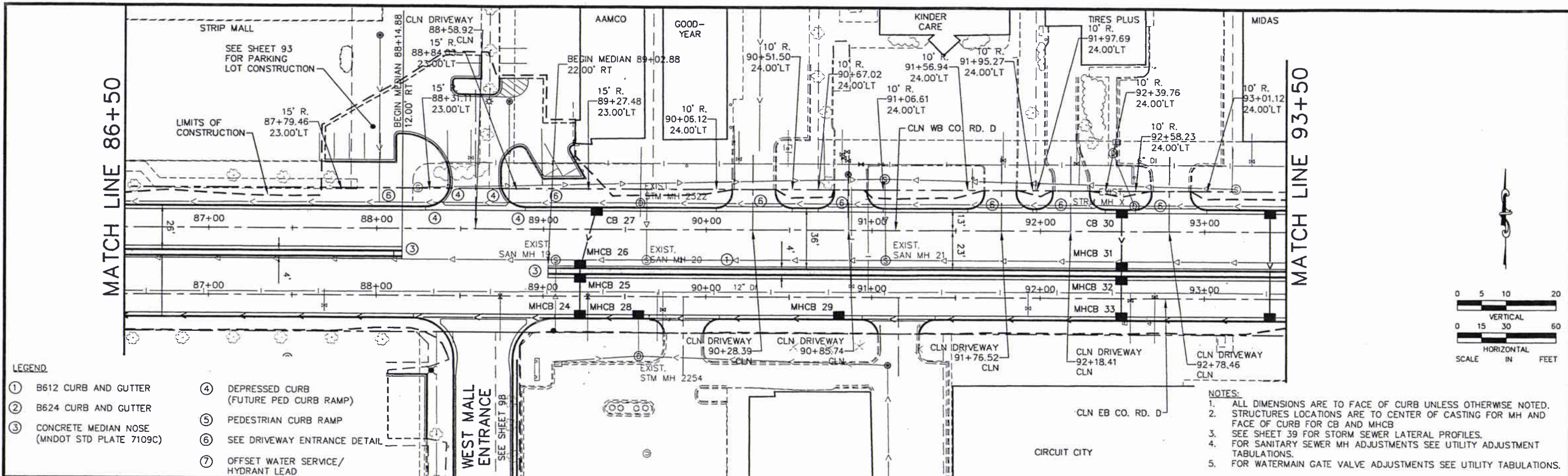


MATCH LINE 78+50

No.	Date	Revisions	App.	DRAWING NAME CRD-PPF05.dwg	 2100 UNIVERSITY AVE. WEST, SUITE 340N ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 845-4137 FAX. NO. (651) 845-3116	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE, PE DATE: 08/07/09 MN LIC. NO. 44821	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS COUNTY ROAD D WEST BOUND STREET AND STORM SEWER PLAN AND PROFILE STA. 72+00 TO STA. 78+50	CITY PROJECT 08-13 COUNTY PROJECT P-3202 S.P. 62-619-30 S.P. 62-596-04	SHEET NO. 34 104
				DESIGNED BY: RBC						
				DRAWN BY: HMW						
				CHECKED BY: KRB, ATB						
				DATE: 08/07/09						
				PROJECT NO. 160500029.2.101						

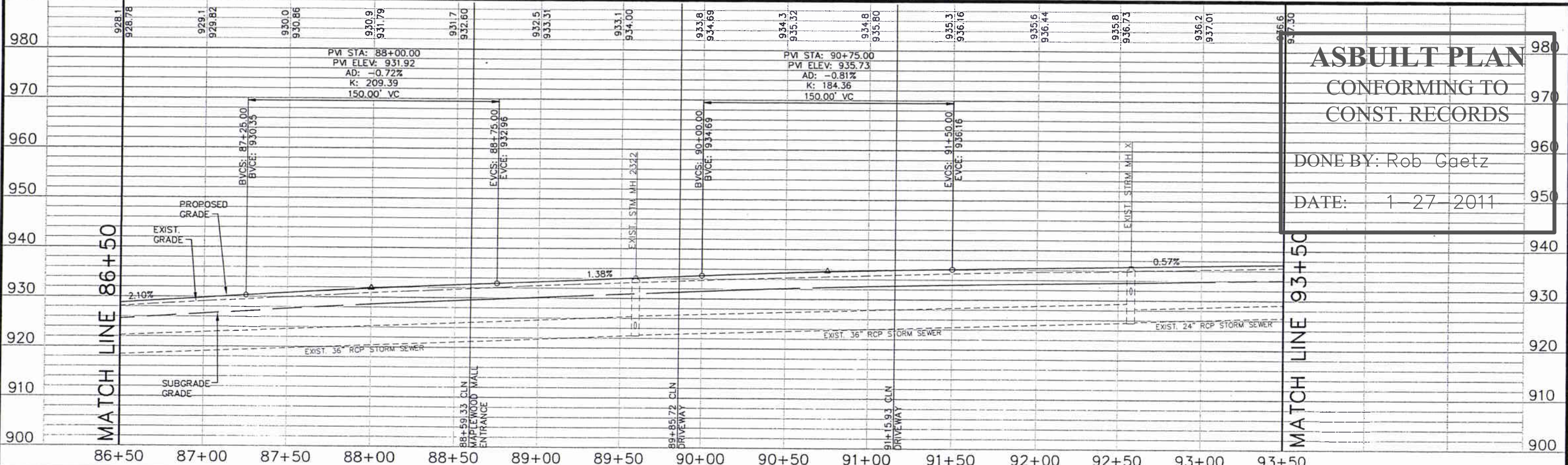
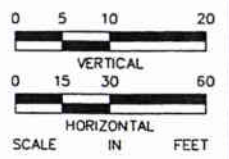


No.	Date	Revisions	App.	DRAWING NAME CRD-PPF06.dwg	 2200 UNIVERSITY AVE. WEST, SUITE 343N ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-3116	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE, PE DATE: 08/07/09 MN LIC. NO. 44821	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS COUNTY ROAD D WEST BOUND STREET AND STORM SEWER PLAN AND PROFILE STA. 78+50 TO STA. 86+50	CITY PROJECT	08-13	SHEET NO. 35
		COUNTY PROJECT	P-3202								
		S.P.	62-619-30								
		S.P.	62-596-04								



- LEGEND**
- ① B612 CURB AND GUTTER
 - ② B624 CURB AND GUTTER
 - ③ CONCRETE MEDIAN NOSE (MNDOT STD PLATE 7109C)
 - ④ DEPRESSED CURB (FUTURE PED CURB RAMP)
 - ⑤ PEDESTRIAN CURB RAMP
 - ⑥ SEE DRIVEWAY ENTRANCE DETAIL
 - ⑦ OFFSET WATER SERVICE/HYDRANT LEAD

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. STRUCTURES LOCATIONS ARE TO CENTER OF CASTING FOR MH AND FACE OF CURB FOR CB AND MHCB
 3. SEE SHEET 39 FOR STORM SEWER LATERAL PROFILES.
 4. FOR SANITARY SEWER MH ADJUSTMENTS SEE UTILITY ADJUSTMENT TABULATIONS.
 5. FOR WATERMAIN GATE VALVE ADJUSTMENTS SEE UTILITY TABULATIONS.



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

No.	Date	Revisions	App.

DRAWING NAME	CRD-PPF07.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

Kimley-Horn and Associates, Inc.
 2350 UNIVERSITY AVE. WEST, SUITE 340W
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4157
 FAX NO. (651) 645-5116

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

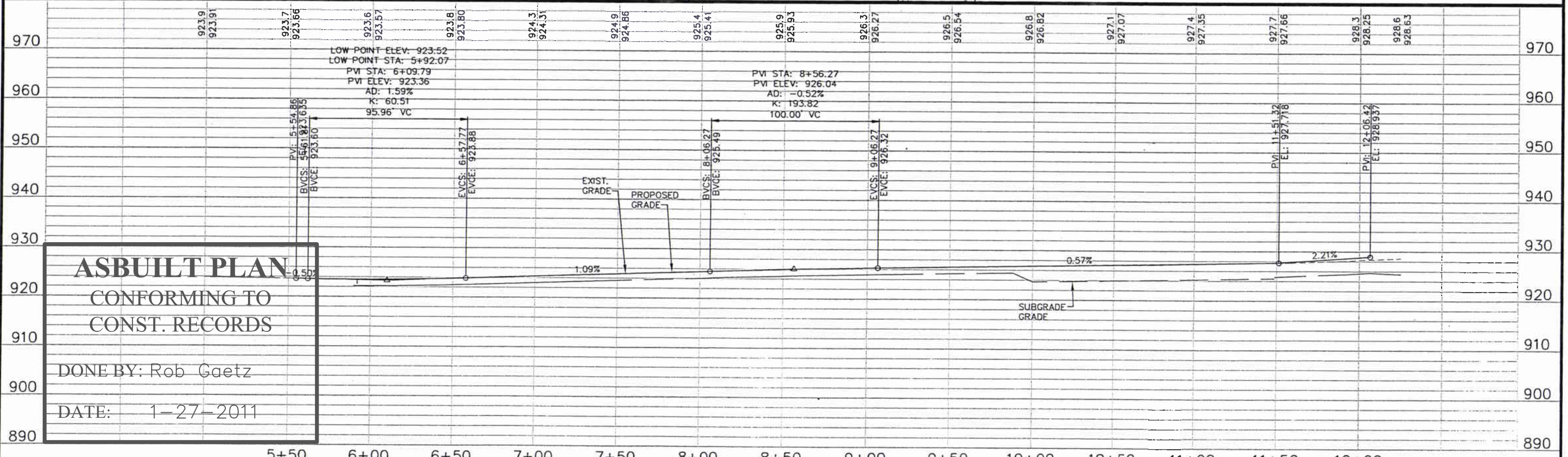
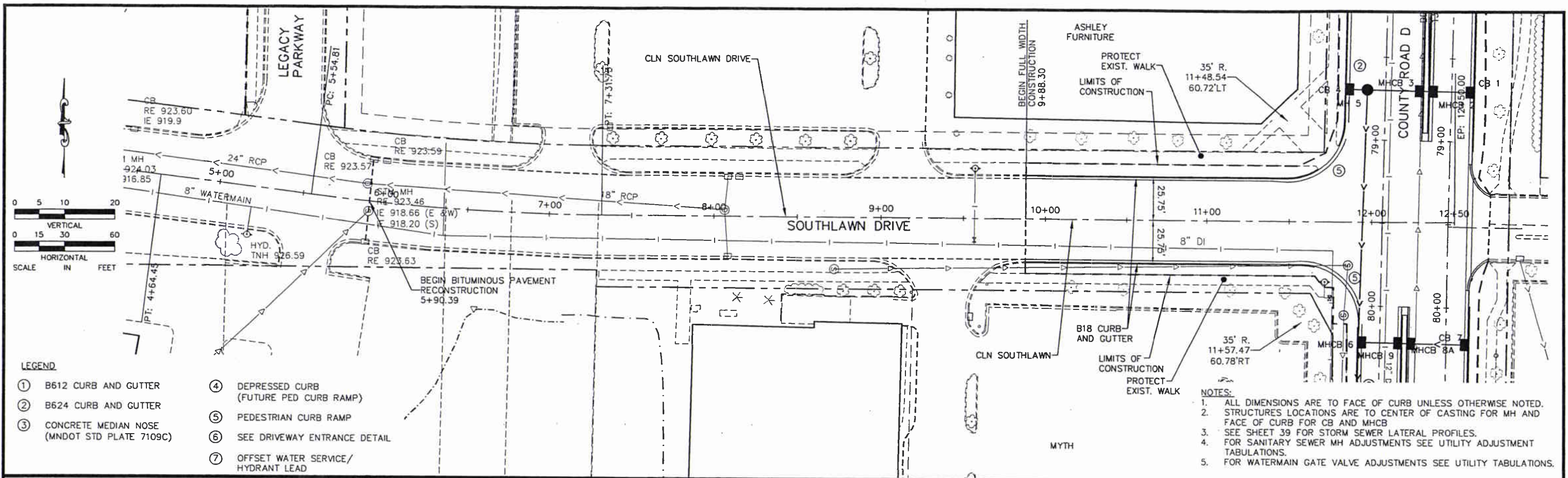
Daniel J. Cal...
 DANIEL J. CAL... PE
 DATE: 08/07/09 M.L.C. NO. 44821

RAMSEY COUNTY

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D WEST BOUND
 STREET AND STORM SEWER
 PLAN AND PROFILE
 STA. 86+50 TO STA. 93+50

CITY PROJECT	08-13	SHEET NO. 36
COUNTY PROJECT	P-3202	
S.P.	62-619-30	104
S.P.	62-596-04	

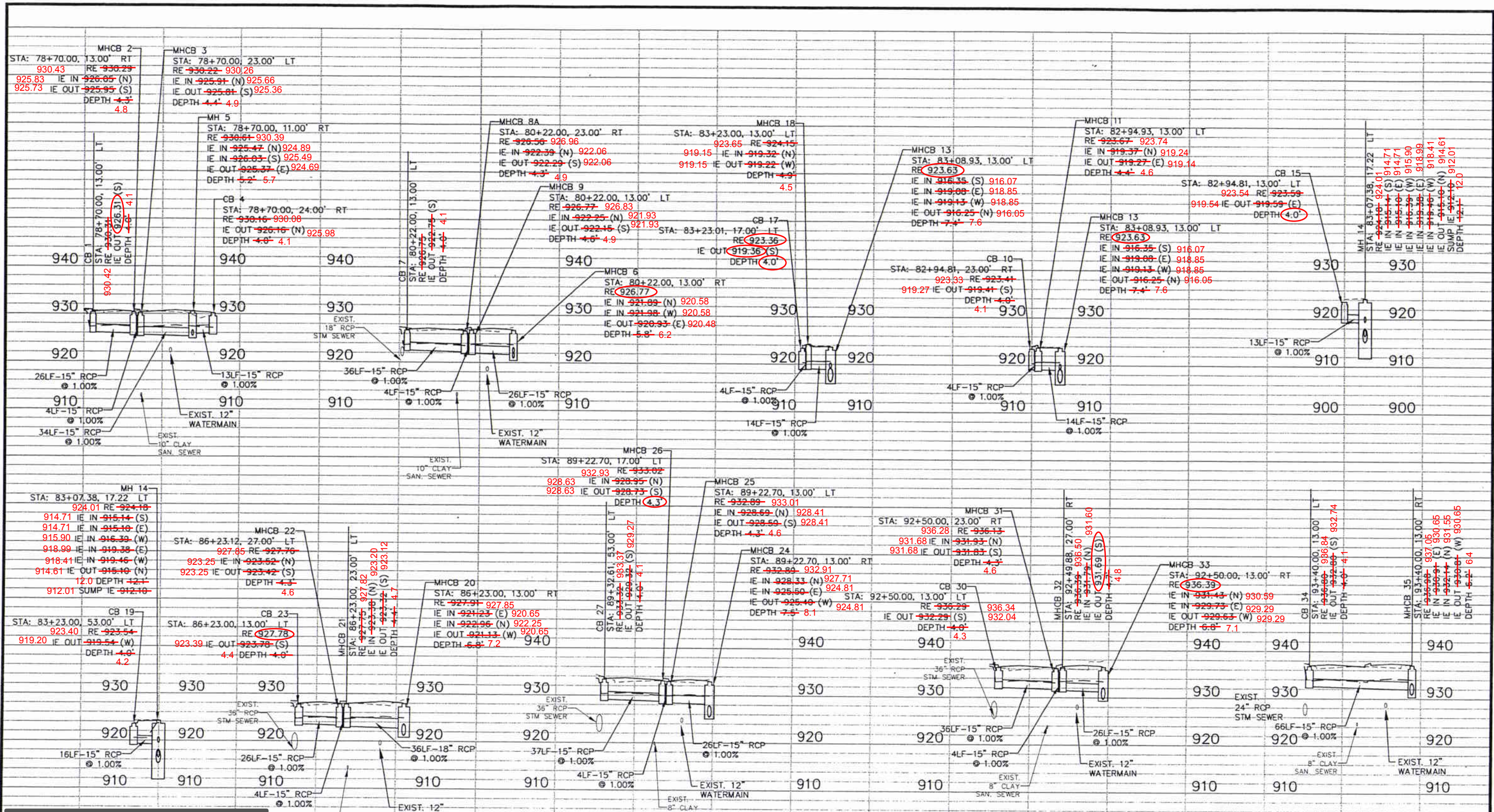


ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

No.	Date	Revisions	App.	DRAWING NAME CRD-PPF09.dwg	DESIGNED BY: RBC	DRAWN BY: HMW	CHECKED BY: KRB, ATB	DATE: 08/07/09	PROJECT NO. 160500029.2.101							
							I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE PE DATE: 08/07/09 MN LIC. NO. 44821		 City of Maplewood, Minnesota Department of Public Works Engineering Division		RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS SOUTHSLAWN DRIVE PLAN AND PROFILE STA. 4+50 TO STA. 12+06.42		CITY PROJECT 08-13 COUNTY PROJECT P-3202 S.P. 62-619-30 S.P. 62-596-04		SHEET NO. 38 104	

K:\TWC_Civil\County\RAMSEY_WHITE_BEAR_DWC\PLAN_SHEETS\COUNTY_ROAD_D\CRD-PFL01.dwg September 22, 2009 - 8:31am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

No.	Date	Revisions
		DONE BY: Rob Gaetz
		DATE: 1-27-2011

App.	DRAWING NAME
	CRD-PFL01.dwg
	DESIGNED BY: RBC
	DRAWN BY: HMW
	CHECKED BY: KRB, ATB
	DATE: 08/07/09
	PROJECT NO. 150500029.2.101



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

Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MY LIC. NO. 44821



RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
STORM SEWER PROFILES

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
39
104

**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011

- NOTES:
1. UNLESS OTHERWISE NOTED, ALL TRANSVERSE CONTRACTION JOINTS ARE C2ED WITH 15' SPACING.
 2. SEE MNDOT STANDARD PLATE 1070L FOR SUPPLEMENTAL STEEL OVER CULVERTS DETAIL.
 3. CONTRACTOR TO SUBMIT FINAL JOINTING FOR REVIEW BY ENGINEER.

LEGEND

	SUPPLEMENTAL STEEL OVER CULVERTS
	BITUMINOUS PAVEMENT
	BITUMINOUS OVERLAY
	BITUMINOUS DRIVEWAY PATCH
	CONCRETE APRON
	INTEGRALLY COLORED CONCRETE CROSSWALK SEE DETAIL SHEET 43



MATCH LINE 78+50

MATCH LINE 86+50

K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_D\CRD-CPV01.dwg September 22, 2009 - 8:33am

No.	Date	Revisions	App.

DRAWING NAME CRD-CPV01.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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

Daniel J. Coyle
DANIEL J. COYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821

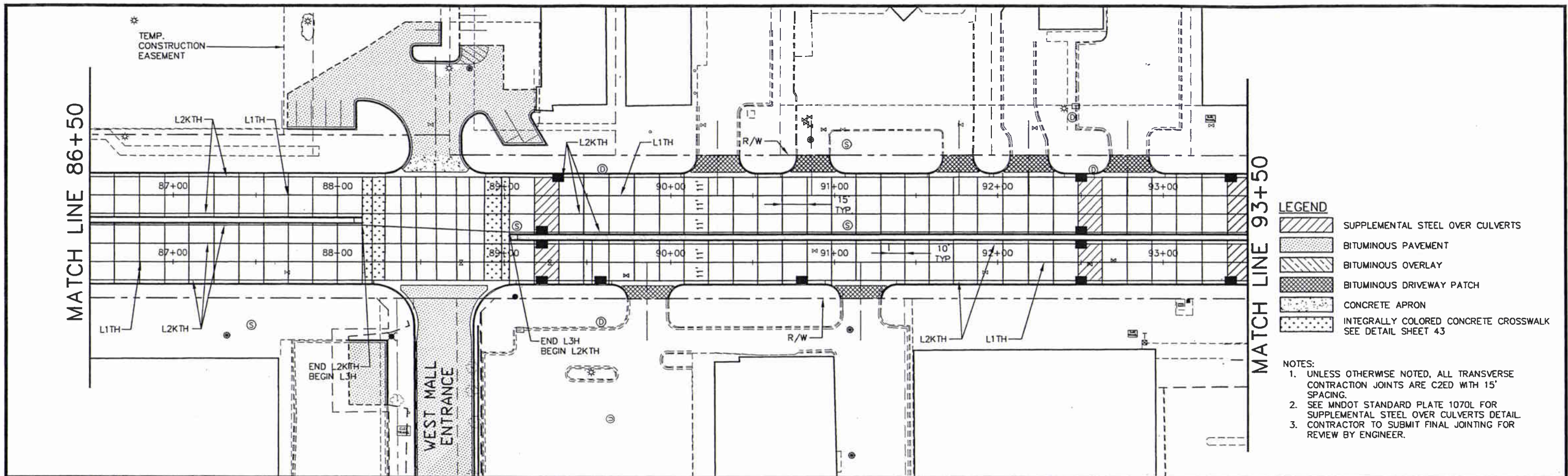


City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
COUNTY ROAD D EAST & WEST BOUND
CONSTRUCTION PLAN
CONCRETE PAVING

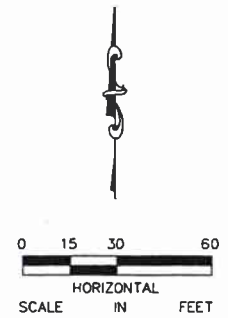
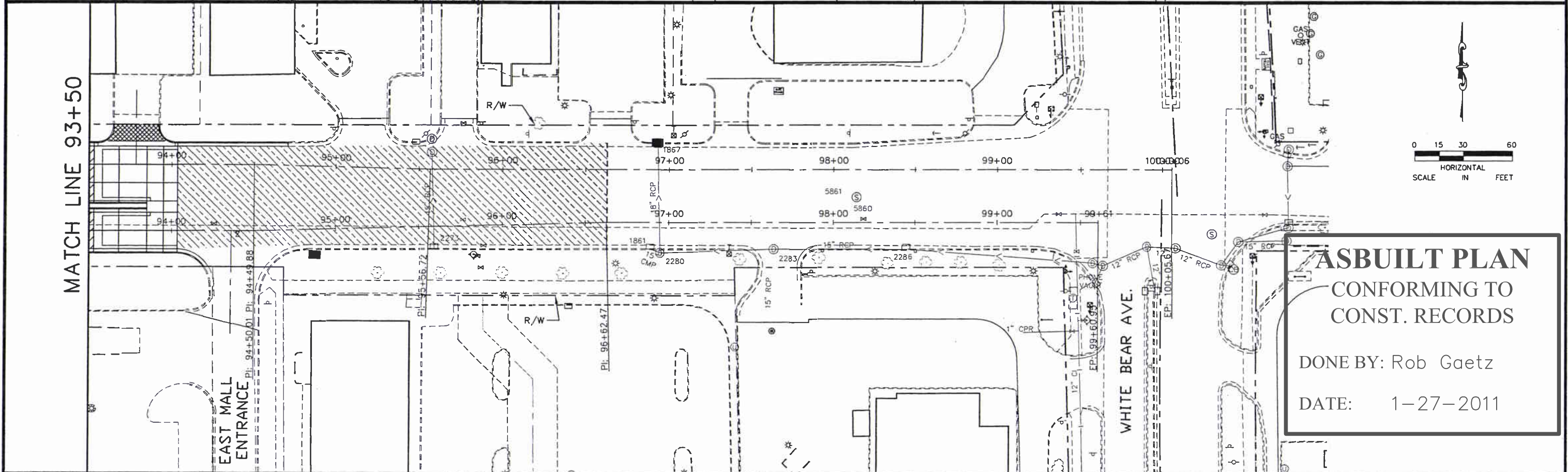
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
41
104



- LEGEND**
- SUPPLEMENTAL STEEL OVER CULVERTS
 - BITUMINOUS PAVEMENT
 - BITUMINOUS OVERLAY
 - BITUMINOUS DRIVEWAY PATCH
 - CONCRETE APRON
 - INTEGRALLY COLORED CONCRETE CROSSWALK
SEE DETAIL SHEET 43

- NOTES:**
1. UNLESS OTHERWISE NOTED, ALL TRANSVERSE CONTRACTION JOINTS ARE C2ED WITH 15' SPACING.
 2. SEE MNDOT STANDARD PLATE 1070L FOR SUPPLEMENTAL STEEL OVER CULVERTS DETAIL.
 3. CONTRACTOR TO SUBMIT FINAL JOINTING FOR REVIEW BY ENGINEER.

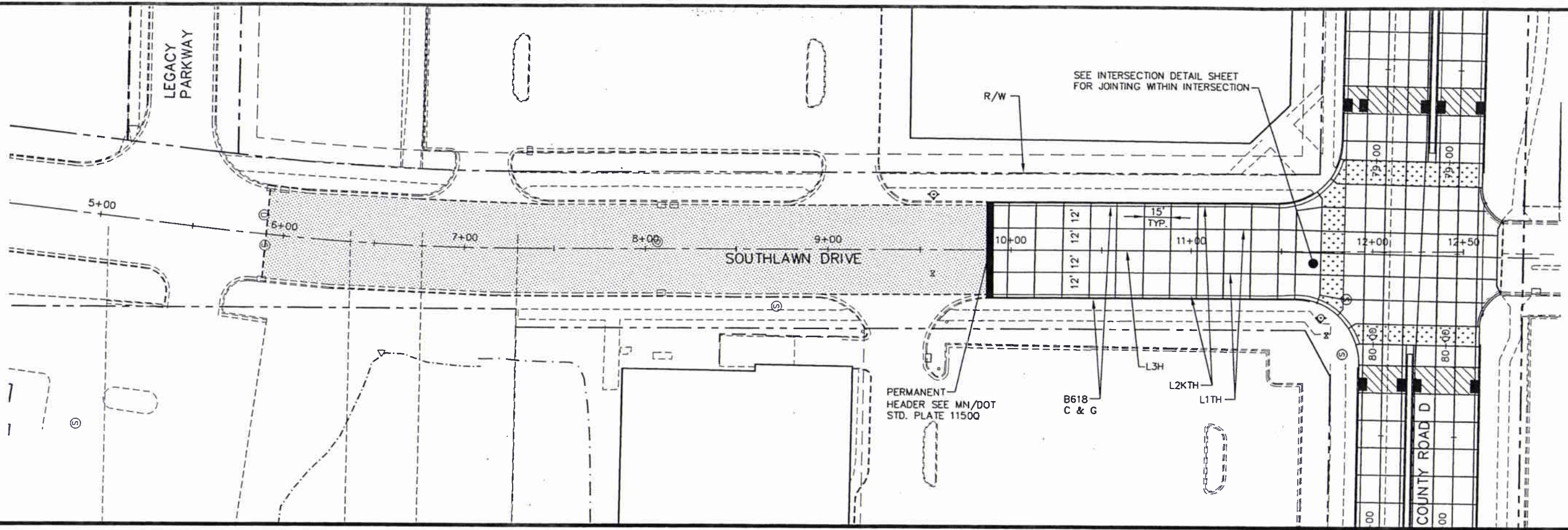


ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

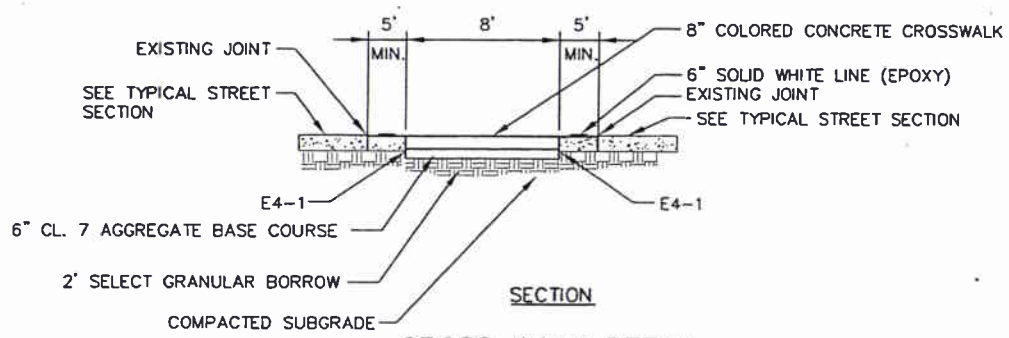
No.	Date	Revisions	App.	DRAWING NAME	 Kimley-Horn and Associates, Inc. <small>2350 UNIVERSITY AVE. WEST, SUITE 340M ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-1197 FAX. NO. (651) 645-5116</small>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE PE DATE: 08/07/09 MN LIC. NO. 44821	 RAMSEY COUNTY	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY	CITY PROJECT 08-13 COUNTY PROJECT P-3202 S.P. 62-619-30 S.P. 62-596-04	SHEET NO. 42 104
				CRD-CPV02.dwg					DESIGNED BY: RBC DRAWN BY: HMW CHECKED BY: KRB, ATB DATE: 08/07/09 PROJECT NO. 160500029.2.101		

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_D\CRD-CPV03.dwg September 22, 2009 - 8:36am



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



CROSS WALK DETAIL
 (ALIGN CROSSWALK AND DEPRESSED CURB RAMP FOR FUTURE PED CURB RAMP)

CONSTRUCTION PHASING

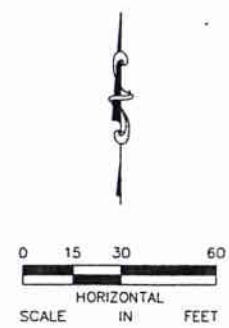
1. PAVE CONCRETE THROUGH CROSSWALK (PAID FOR AS CONCRETE AND STRUCTURAL CONCRETE)
2. SAWCUT AND REMOVE CONCRETE IN CROSSWALK (PAID FOR AS REMOVE CONCRETE DRIVEWAY PAVEMENT)
3. RECOMPACT EXISTING CLASS 7 AGGREGATE BASE
4. POUR INTEGRALLY COLORED CONCRETE CROSSWALK

LEGEND

- SUPPLEMENTAL STEEL OVER CULVERTS
- BITUMINOUS PAVEMENT
- BITUMINOUS OVERLAY
- BITUMINOUS DRIVEWAY PATCH
- CONCRETE APRON
- INTEGRALLY COLORED CONCRETE CROSSWALK SEE DETAIL SHEET 43

NOTES:

1. UNLESS OTHERWISE NOTED, ALL TRANSVERSE CONTRACTION JOINTS ARE C2ED WITH 15' SPACING.
2. SEE MNDOT STANDARD PLATE 1070L FOR SUPPLEMENTAL STEEL OVER CULVERTS DETAIL.
3. CONTRACTOR TO SUBMIT FINAL JOINING FOR REVIEW BY ENGINEER.



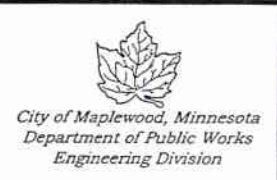
No.	Date	Revisions	App.

DRAWING NAME	CRD-CPV03.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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

Daniel J. Coyle
 DANIEL J. COYLE PE
 DATE: 08/07/09 MN LIC. NO. 44821

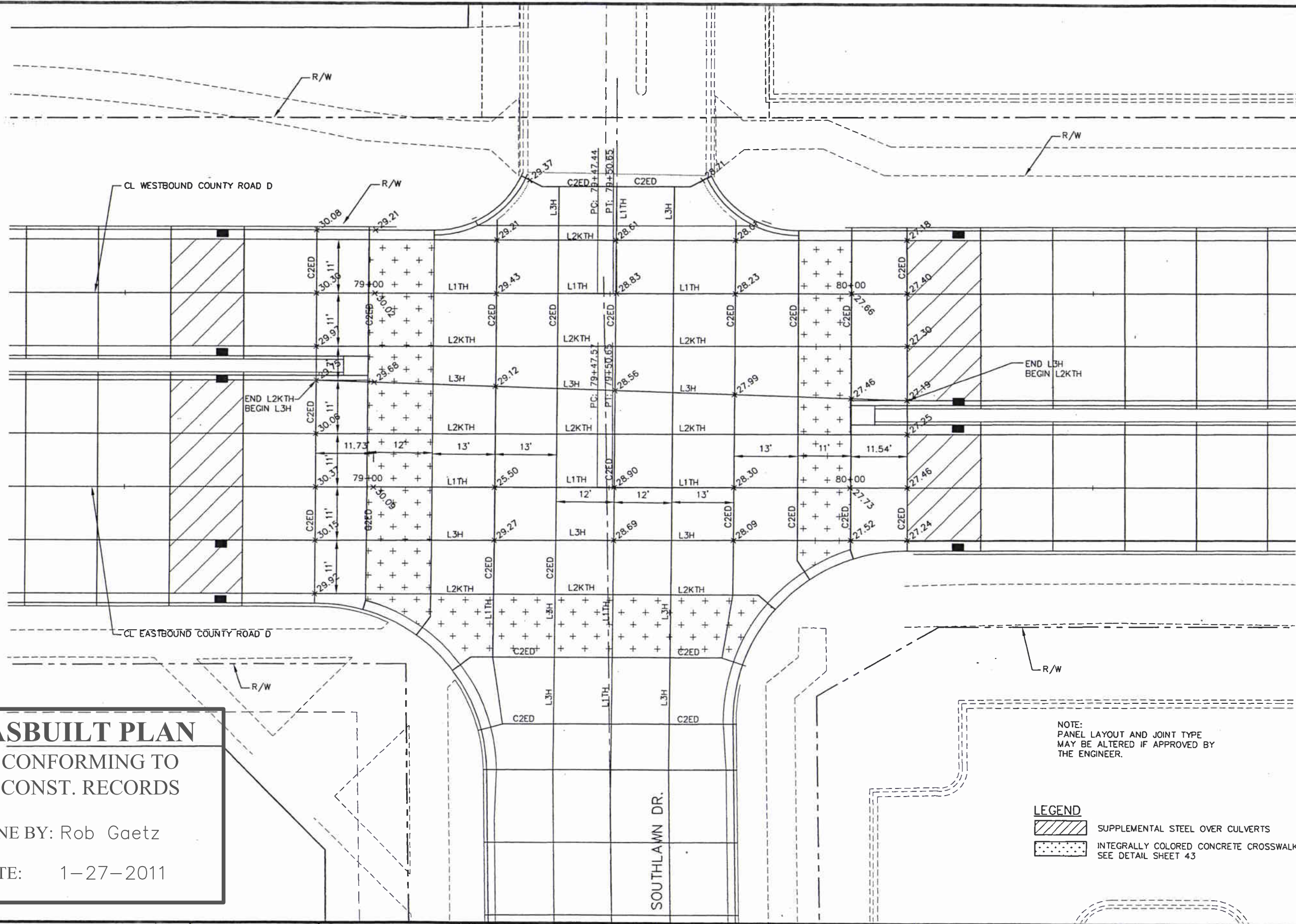


RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D IMPROVEMENTS
 SOUTHLAWN DRIVE
 CONSTRUCTION PLAN
 CONCRETE PAVING
 STA. 4+50 TO STA. 12+06.42

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
43
 104

K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_D\CRD-STD02.dwg September 22, 2009 - 8:37am



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

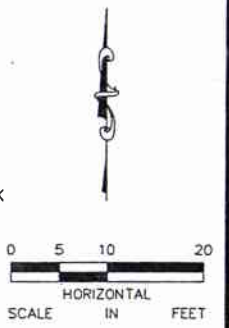
DONE BY: Rob Gaetz
 DATE: 1-27-2011

NOTE:
 PANEL LAYOUT AND JOINT TYPE
 MAY BE ALTERED IF APPROVED BY
 THE ENGINEER.

LEGEND

SUPPLEMENTAL STEEL OVER CULVERTS

INTEGRALLY COLORED CONCRETE CROSSWALK
 SEE DETAIL SHEET 43



No.	Date	Revisions	App.

DRAWING NAME
 CRD-STD02.dwg

DESIGNED BY: RBC
 DRAWN BY: HMW
 CHECKED BY: KRB, ATB
 DATE: 08/07/09
 PROJECT NO. 160500029.2.101

**Kimley-Horn
 and Associates, Inc.**

2500 UNIVERSITY AVE. WEST, SUITE 345H
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4197
 FAX. NO. (651) 645-5116

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

David J. Coyle
 DANIEL J. COYLE, PE
 DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

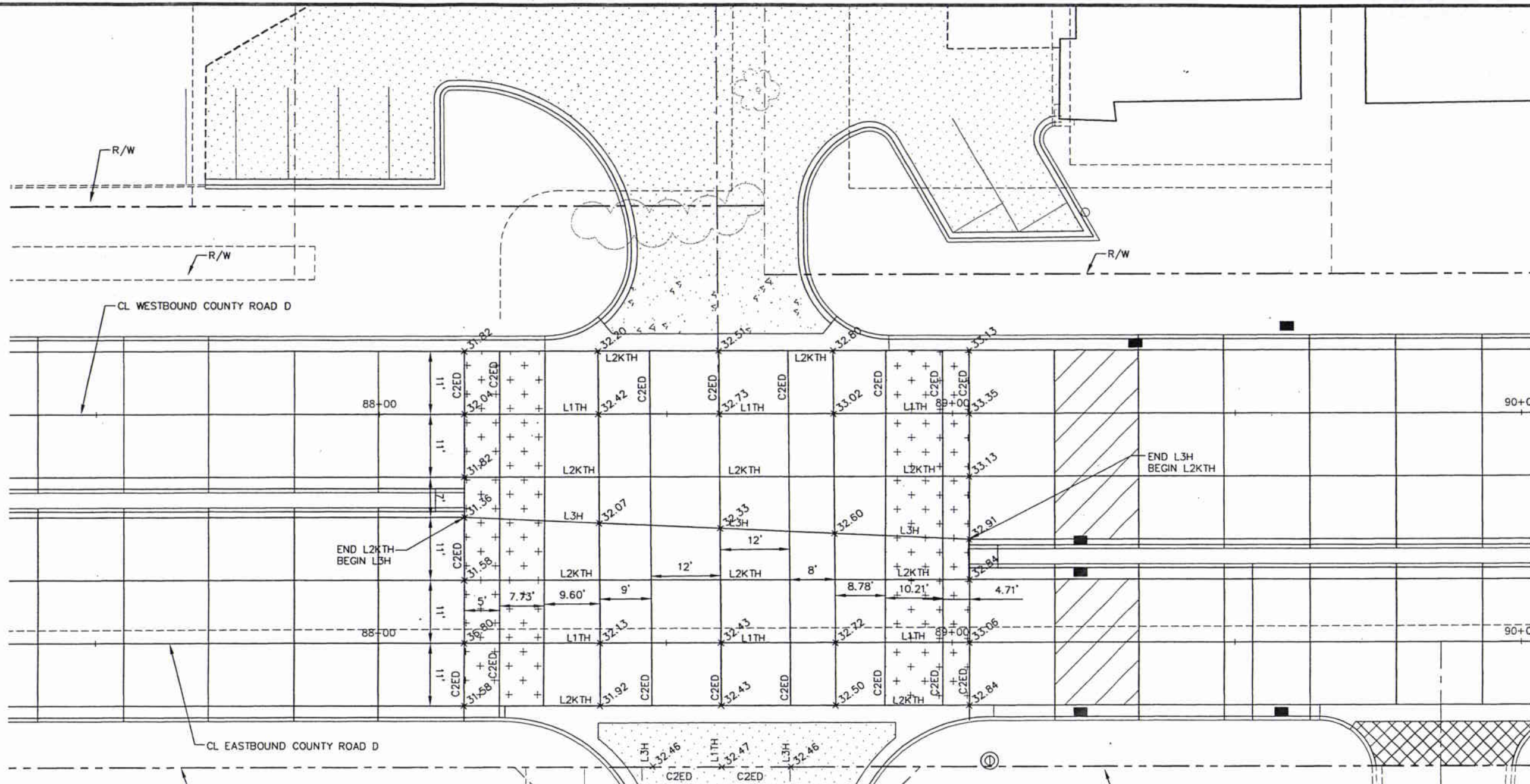
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D AND
 INTERSECTION DETAIL
 SOUTHLAWN DRIVE

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 44

104



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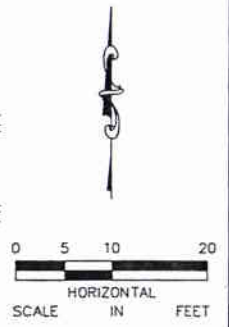


ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

NOTE:
 PANEL LAYOUT AND JOINT TYPE MAY BE
 ALTERED IF APPROVED BY THE ENGINEER.

- LEGEND**
-  SUPPLEMENTAL STEEL OVER CULVERTS
 -  INTEGRALLY COLORED CONCRETE CROSSWALK
SEE DETAIL SHEET 43



No.	Date	Revisions	App.

DRAWING NAME CRD-STD03.dwg
DESIGNED BY: RBC
DRAWN BY: HMW
CHECKED BY: KRB, ATB
DATE: 08/07/09
PROJECT NO. 160500029.2.101



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Daniel J. Coyle
 DANIEL J. COYLE PE
 DATE: 08/07/09 MN LIC. NO. 44821



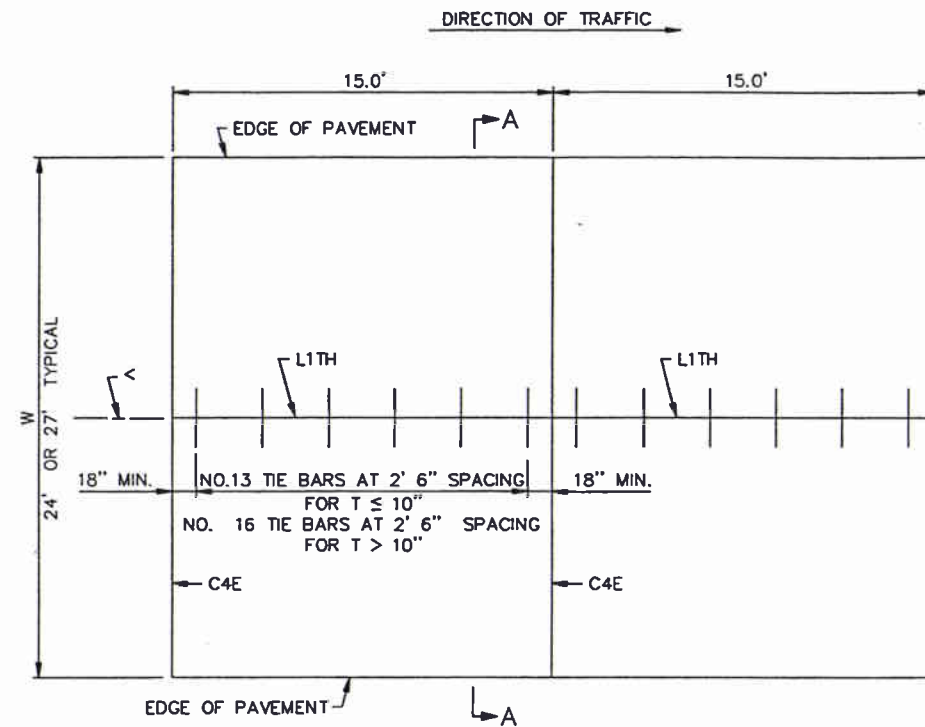
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City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

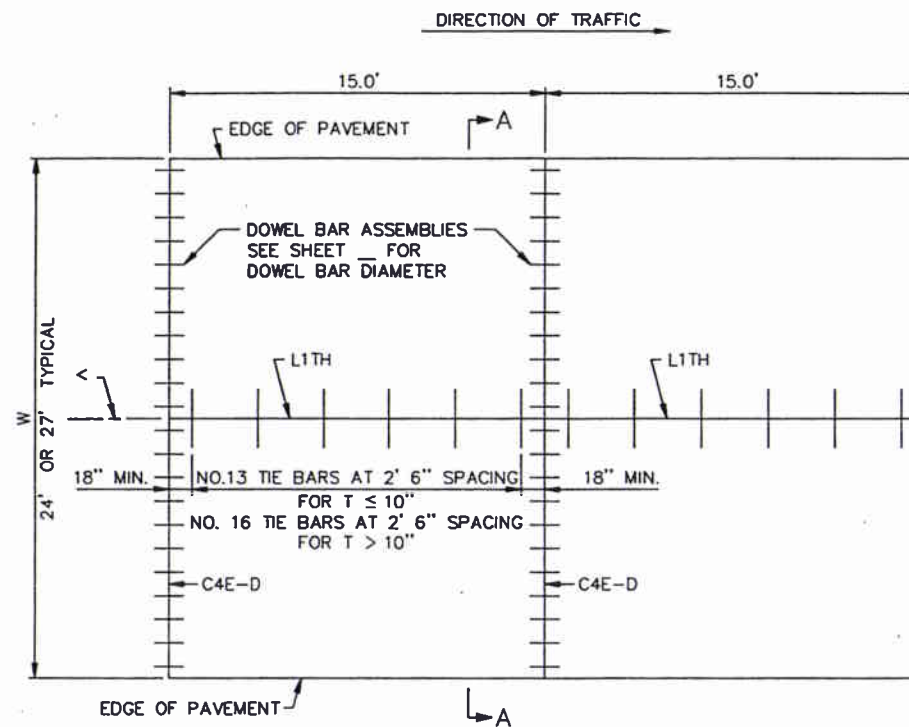
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D AND
 INTERSECTION DETAIL
 MAPLEWOOD MALL ENTRANCE

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

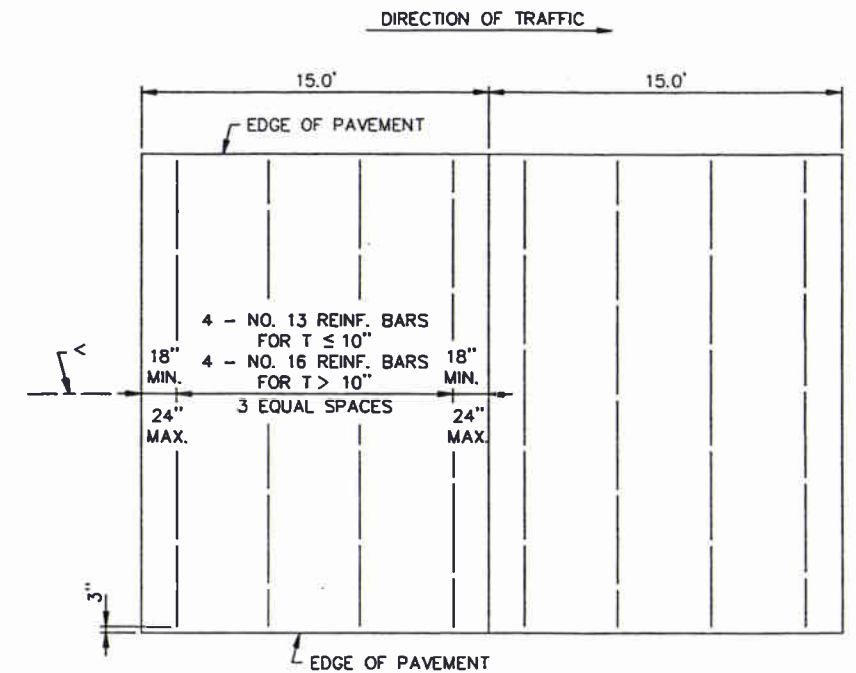
SHEET NO.
45
 104



MAINLINE PAVEMENT
UNDOWELED



MAINLINE PAVEMENT
DOWELED



SUPPLEMENTAL PANEL REINFORCEMENT

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

GENERAL NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.

WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R. R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, C4E-D.

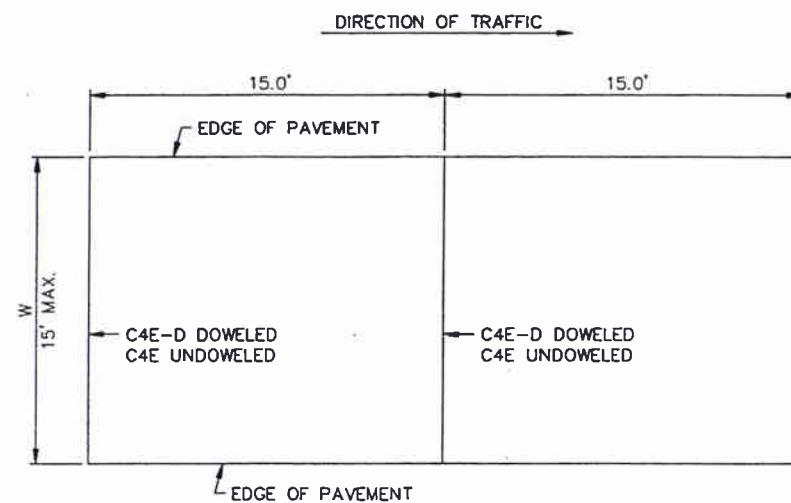
DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE 1103.

ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53. FOR ADDITIONAL REINFORCEMENT OVER CULVERTS, SEE STANDARD PLATE 1070.

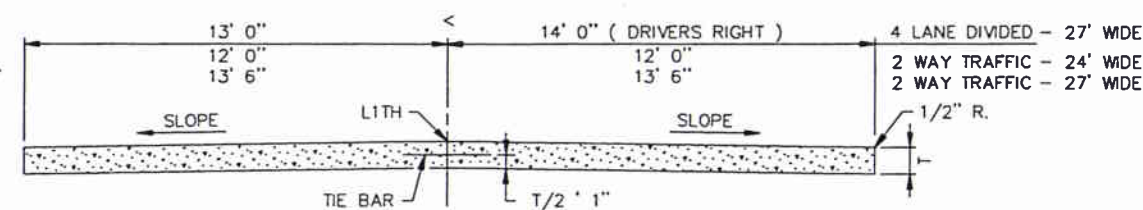
TIE BARS:
USE NO. 13 BARS 2' 6" LONG, AT 2' 6" SPACING. FOR T ≤ 10" USE NO. 16 BARS 3' 0" LONG AT 2' 6" SPACING FOR T > 10".

SUPPLEMENTAL PANEL REINFORCEMENT:
PLACE IN PANELS WHERE PAVEMENT WIDTH EXCEEDS 15.0' WITHOUT A LONGITUDINAL JOINT, AND IN THE MIDDLE LANE(S) WHERE TIED PAVEMENT WIDTH EXCEEDS 4 LANES. USE NO. 13 BARS FOR PAVEMENT THICKNESS 10" OR LESS. USE NO. 16 BARS FOR PAVEMENT THICKNESS GREATER THAN 10". PLACEMENT DEPTH SHALL BE PLANNED T/2 ' 1".

NO MORE THAN TWO LANES SHALL BE PAVED AT THE SAME TIME.



PAVEMENT 2 FT. THRU 15 FT. WIDTH



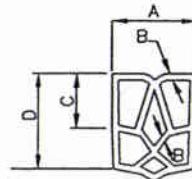
SECTION A-A

STANDARD SHEET NO. 5-297.217	TITLE: CONCRETE MAINLINE PAVEMENT 15.0 FT. PANEL LENGTH
STANDARD APPROVED: OCTOBER 1, 1998	
REVISION DATE 1-21-2000	SP 62-619-30 SP 62-596-04 (CSAH 19) SHEET NO. 46 OF 104 SHEETS

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REQUIRED DIMENSIONS

JOINT TYPE	TRANSVERSE
NOMINAL SEALER SIZE	1 1/16"
A	0.69" + 0.13" - 0.05"
B	0.08" ± 0.02"
C	0.25" MIN.
D	0.63" MIN.



SPEC. REFERENCE 3721

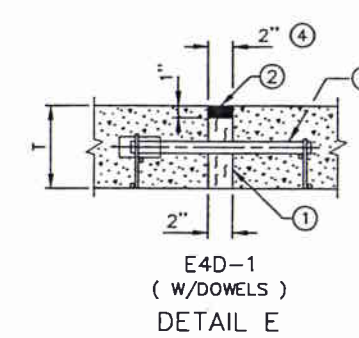
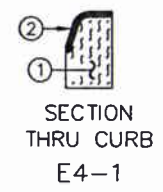
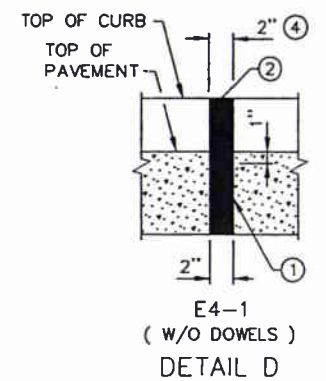
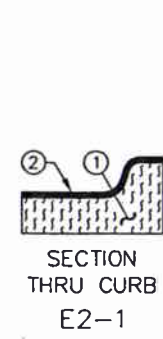
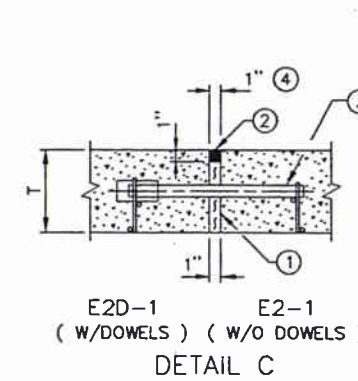
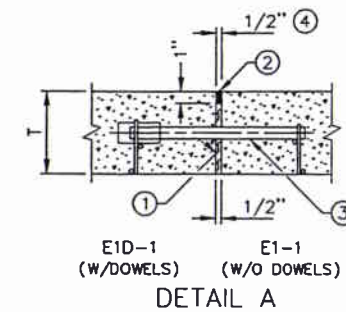
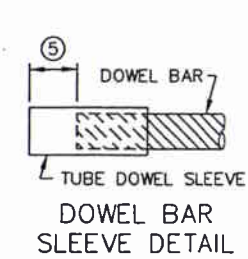
TYPICAL SHAPE FOR SATISFACTORY INSTALLATION IN JOINT (5 CELL MIN.)

CONTRACTION JOINT SEALER
PREFORMED ELASTIC TYPE

NOTES:

"A" DIMENSION SHALL APPLY AT ANY POINT THROUGHOUT "C" DEPTH. IN ITS FINAL POSITION, THE TOP CORNERS OF THE PREFORMED JOINT SEALER SHALL BE PLACED NOT LESS THAN 1/8 IN., NOR MORE THAN 5/16 IN. BELOW THE PAVEMENT SURFACE.

SHARP INTERNAL CORNERS WILL NOT BE PERMITTED. ALL CORNERS SHALL BE PROVIDED WITH SUITABLE FILLET. CURRENTLY APPROVED CONFIGURATIONS ARE ON FILE IN THE MATERIALS ENGINEERING SECTION, MINNESOTA DEPARTMENT OF TRANSPORTATION.

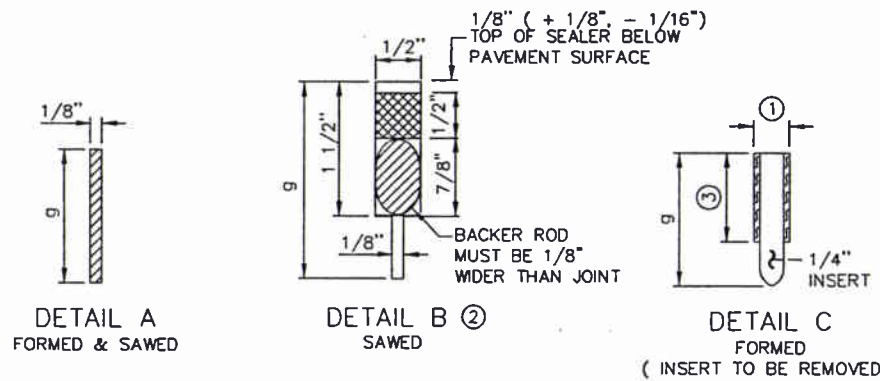


CONTRACTION JOINT CLASS DESIGNATION, DETAIL & SEALER SPEC. TABLE

CLASS DESIGNATION WITHOUT DOWELS	CLASS DESIGNATION WITH DOWELS	JOINT DETAIL	JOINT SEALER SPEC.
C1A	C1A-D	A	UNSEALED
C2A	C2A-D	A	3725
C2B	C2B-D	B	3725
C2X	C2X-D	B OR C	3725
C3D	C3D-D	D	3721
C3X	C3X-D	C OR D	3721
C4E	C4E-D	E	3722

DOWEL BAR DIAMETER TABLE

PAVEMENT THICKNESS T	DOWEL BAR DIAMETER
6" - 6 1/2"	1"
7" - 10"	1 1/4"
10 1/2" - 14"	1 1/2"



LEGEND

- C = CONTRACTION JOINT
- NO. = SEALANT TYPE
- 1 = UNSEALED
- 2 = 3725
- 3 = 3721
- 4 = 3722

EXAMPLE

- LETTER = DETAIL
- X = MORE THAN 1 DETAIL
- D = DOWEL BARS

NOTES:

- 1 DESIGN C3X OR C3X-D -PRIOR TO INSTALLING PREFORMED JOINT SEALER IN THE FORMED JOINT (DETAIL C), THE JOINT SHALL BE WIDENED TO A NOMINAL WIDTH OF 3/8" BY SAWING ALONG THE FULL LENGTH OF THE FORMED JOINT.
- 2 DESIGN C2X OR C2X-D -PRIOR TO SEALING FORMED JOINT (DETAIL C) WITH HOT POUR SEALER THE JOINT SHALL BE WIDENED TO A NOMINAL WIDTH OF 1/2". SAW ALONG THE FULL LENGTH OF THE FORMED JOINT TO DEPTH OF 3/4" (+ 1/8", - 1/16"). THE SEALER SHALL BE FILLED TO THE SAME DEPTH AS SHOWN IN DETAIL B.
- 3 DESIGN C2B OR C2B-D -PRIOR TO SEALING JOINT (DETAIL B) WITH HOT POUR JOINT SEALER, A 5/8" DIA. CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 5/8" BELOW THE SURFACE OF THE PAVEMENT.
- 3 WHEN USING PREFORMED JOINT SEALER, THE DEPTH SHALL BE 1/4" MORE THAN THE PREFORMED SEALER, WHEN COMPRESSED, TO FIT THE JOINT DESIGN WIDTH.
- 4 THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A 1/2" DIA. CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 1/2" BELOW THE SURFACE OF THE PAVEMENT. NON SELF-LEVELING SILICONE SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEALANT BEAD THICKNESS OF 1/4".

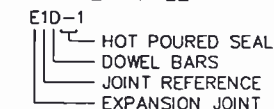
EXPANSION JOINTS

CLASS DESIGNATION WITH DOWELS	CLASS DESIGNATION WITHOUT DOWELS	JOINT DETAIL	JOINT SEALER SPEC.
E1D-1	E1-1	A	3723
E2D-1	E2-1	C	3723
	E4-1	D	3723
E4D-1		E	3723
	E8S-1	6	3725

LEGEND

- E = EXPANSION JOINT
- NO. = JOINT REFERENCE
- D = DOWEL BARS
- S = CONCRETE SILL
- 1 = HOT POURED SEAL

EXAMPLE



NOTES:

- 1 PREFORMED JOINT FILLER MATERIAL, SPEC. 3702.
- 2 JOINT SEALER SPEC. 3723. TOP OF SEALER, FLUSH TO 1/8" BELOW TOP OF PAVEMENT SURFACE. MAKE TOP OF SEALER FOR CURB SECTION E JOINTS FLUSH WITH SURFACE ± 1/8".
- 3 DOWEL BAR ASSEMBLY, SEE STANDARD PLATE 1103.
- 4 THE FIRST NUMBER IN THE JOINT DESIGNATION IS EQUAL TO HALF OF THE JOINT NUMBER IN 1/2" INTERVALS (I.E. E1 = 1/2", E2 = 1", E4 = 2", AND E8 = 4").
- 5 SPACE FROM END OF DOWEL BAR TO END OF SLEEVE TO BE EQUAL TO EXPANSION JOINT WIDTH.
- 6 SEE STANDARD PLAN 5-297.223 FOR E8S JOINT DETAIL.

EXPANSION JOINTS
DESIGN E

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

GENERAL NOTES:

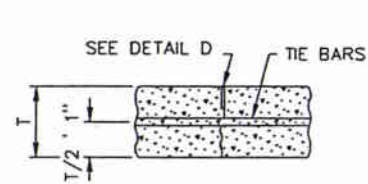
- SEE STANDARD PLATE 1103, DOWEL BAR ASSEMBLY.
- SEE STANDARD PLATE 1150, CONSTRUCTION OF HEADER JOINTS. SEE STANDARD PLANS 5-297.217 AND 5-297.219, CONCRETE MAINLINE/RAMP PAVEMENT.
- SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATION TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.
- FOR UNBONDED OVERLAYS, THE JOINT DEPTH " g " SHALL BE T/3.
- FOR CONCRETE PAVEMENT, THE JOINT DEPTH " g " SHALL BE T/4.

CONTRACTION JOINTS
DESIGN C

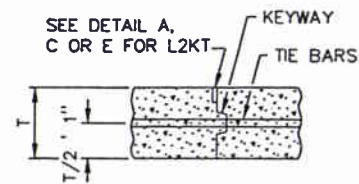
STANDARD SHEET NO.
5-297.221 (1 OF 2)
STANDARD APPROVED:
JUNE 6, 2005

TITLE:
PAVEMENT JOINTS
CONTRACTION (DESIGN C) AND EXPANSION (DESIGN E)

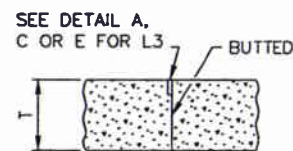
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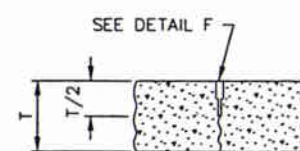
L1 & L1T



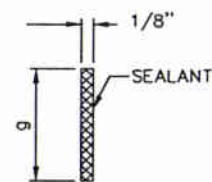
L2KT



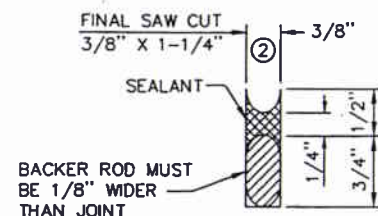
L3



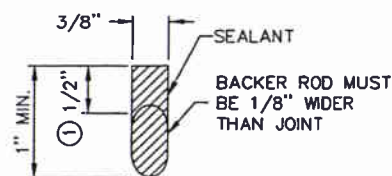
L4



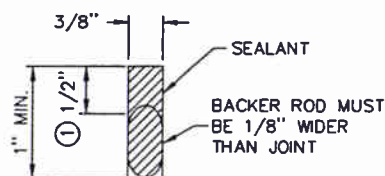
DETAIL B
(SAWED & SEALED WITH SPEC. 3723)



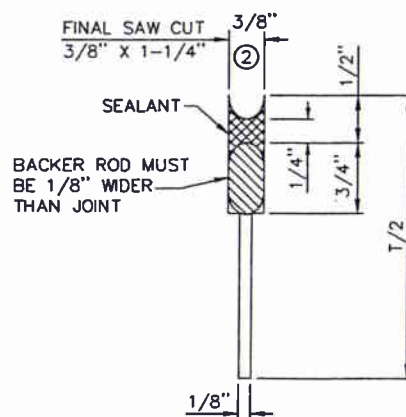
DETAIL C
(SAWED AND SEALED WITH SPEC. 3722)



DETAIL D
(FORMED & SEALED WITH SPEC. 3723)



DETAIL E
(SAWED & SEALED WITH SPEC. 3723)



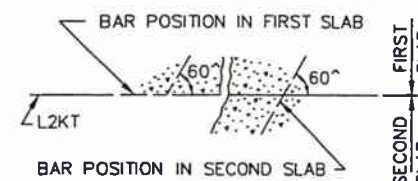
DETAIL F
(SAWED AND SEALED WITH SPEC. 3722)

LONGITUDINAL JOINT CLASS DESIGNATION, DETAIL & SEALER SPECIFICATION TABLE

CLASS DESIGNATION				JOINT DETAIL	JOINT SEALER SPECIFICATION
WITHOUT TIE BARS	WITH TIE BARS	WITH KEYWAY & TIE BARS	BUTTED		
L1H	L1TH			B	3723
		L2KTH		D OR E	3723
		L2KTS		C	3722
			L3H	D OR E	3723
			L3S	C	3722
L4S				F	3722

LEGEND
 L = LONGITUDINAL JOINT
 NO. = JOINT REFERENCE
 K = KEYWAY
 T = TIE BARS
 U = UNSEALED
 H = HOT POUR (SEALANT)
 S = SILICONE (SEALANT)

JOINT REFERENCE NUMBERS
 1 = SAWED TO A DEPTH OF T/3
 2 = KEYED CONSTRUCTION JOINT
 3 = BUTTED CONSTRUCTION JOINT
 4 = SAWED TO A DEPTH OF T/2



TIE BAR BENDING DETAIL

LONGITUDINAL JOINT NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

THE TIE BAR SPACING FOR ALL L2KT JOINTS SHALL BE 2' - 6" CENTER TO CENTER AND BENT 60° AS SHOWN, EXCEPT WHEN NOTED OTHERWISE IN THE PLANS.

THE BARS IN THE L2KT JOINTS SHALL BE THE SAME SIZE AND LENGTH AS USED FOR THE L1T JOINTS, WHEN TYING PAVEMENT TO PAVEMENT. THE BARS IN THE L2KT JOINTS SHALL BE NO. 13 X 2' - 6", WHEN TYING CURB & GUTTER TO PAVEMENT.

ALL TIE BARS SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53.

NORMALLY, TIED PAVEMENT WIDTHS SHALL NOT EXCEED FOUR LANES, EXCEPT BRIDGE APPROACH PANELS AND PAVEMENT TAPERS.

JOINT WIDTH TOLERANCE IS + 1/16 IN. TO - 1/32 IN.

FOR CONCRETE PAVEMENT THE JOINT DEPTH "g" SHALL BE T/3 INCHES.

SPEC. 3723 SEALER - TOP OF SEALER FLUSH TO - 3/16 IN. BELOW TOP OF PAVEMENT SURFACE.

- ① THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 400 DEGREES F, WITH A DIAMETER 1/8 IN. LARGER THAN THE JOINT OPENING, MAY BE PLACED 1/2 IN. BELOW THE TOP OF THE PAVEMENT.
- ② THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A 1/2 IN. DIAMETER CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 1/2 IN. BELOW THE SURFACE OF THE PAVEMENT. NON-SELF-LEVELING SILICONE SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEALANT BEAD THICKNESS OF 1/4 IN.

GENERAL NOTES:

SEE STANDARD PLATE 1103, DOWEL BAR ASSEMBLY. SEE STANDARD PLATE 1141, PAVEMENT KEYWAY. SEE STANDARD PLANS 5-297.217 AND 5-297.219 FOR CONCRETE MAINLINE AND RAMP PAVEMENT.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATIONS TO BE USED & SPECIAL REINFORCEMENT REQUIRED.

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

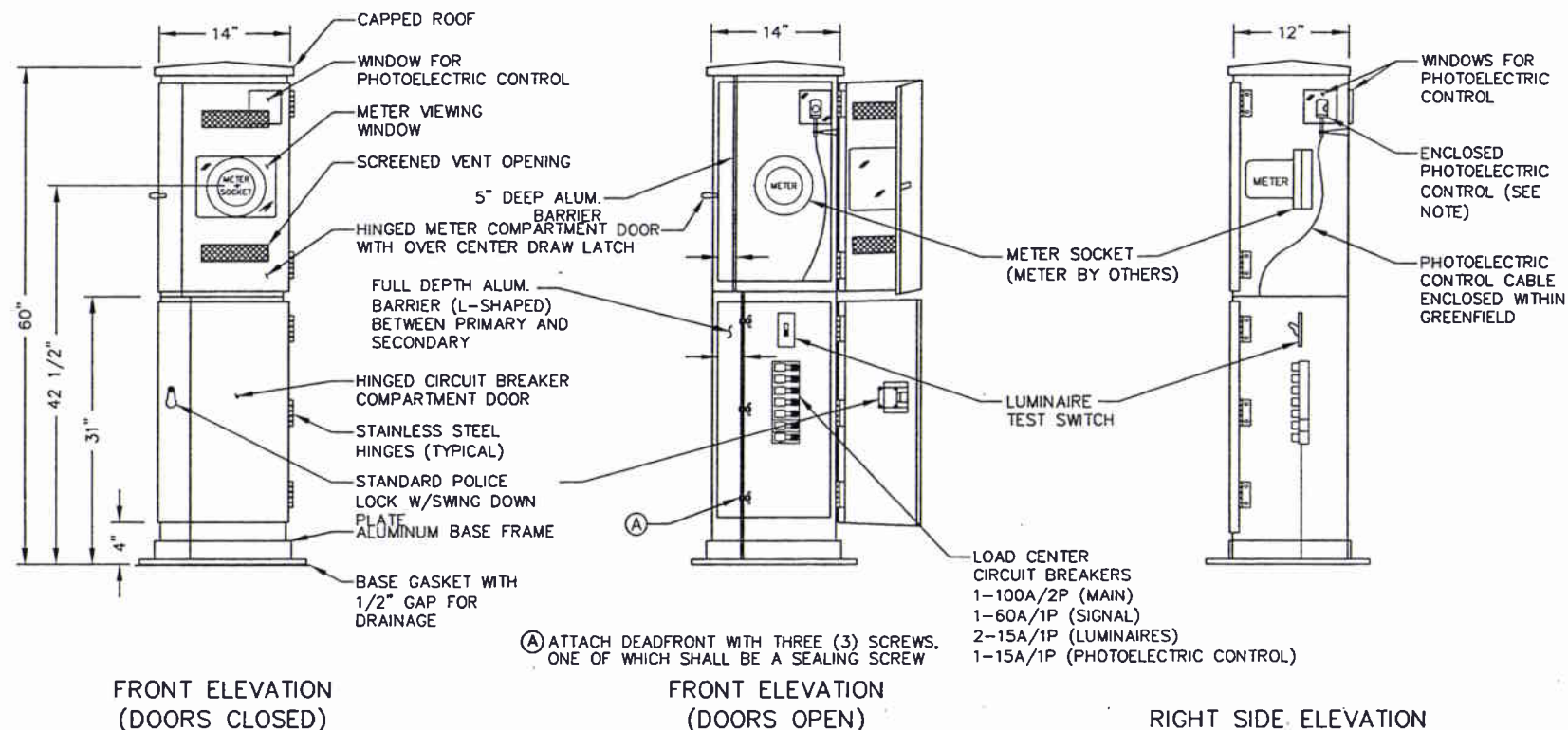
DATE: 1-27-2011

STANDARD SHEET NO.
5-297.221 (2 OF 2)
STANDARD APPROVED:
JUNE 6, 2005

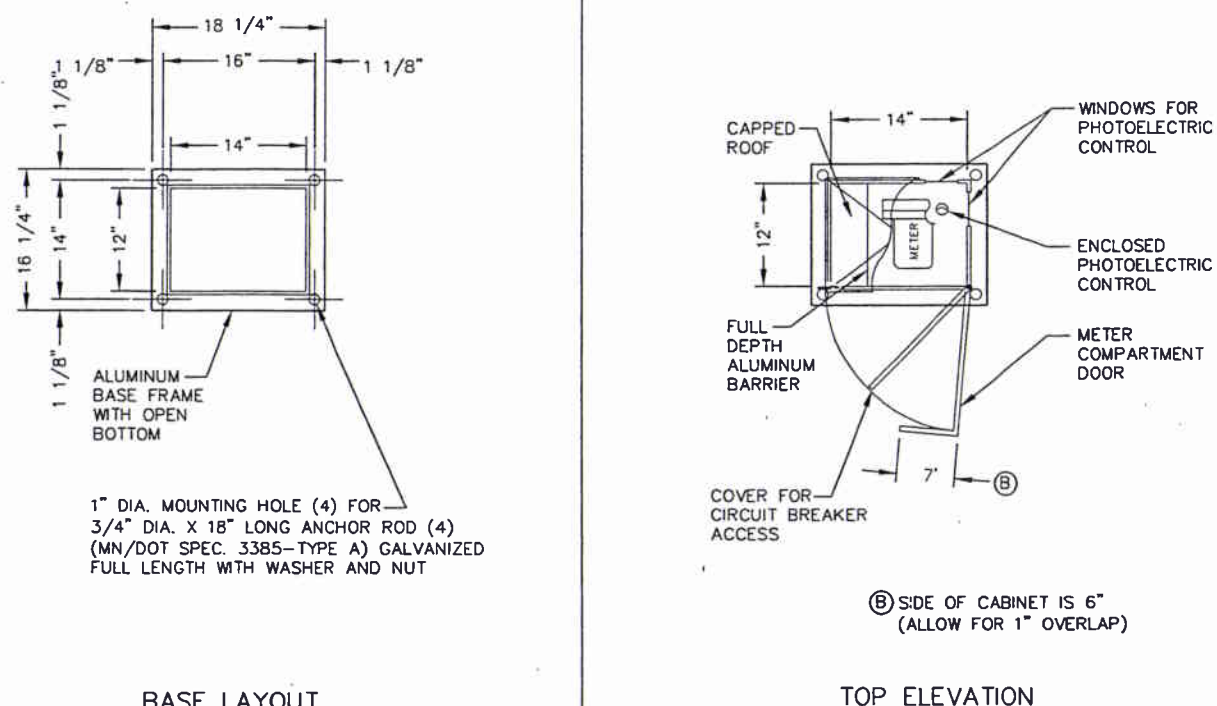
TITLE:
PAVEMENT JOINTS
LONGITUDINAL (DESIGN L)

SP 62-619-30 SP 62-596-04 (CSAH 19) SHEET NO. 48 OF 104 SHEETS

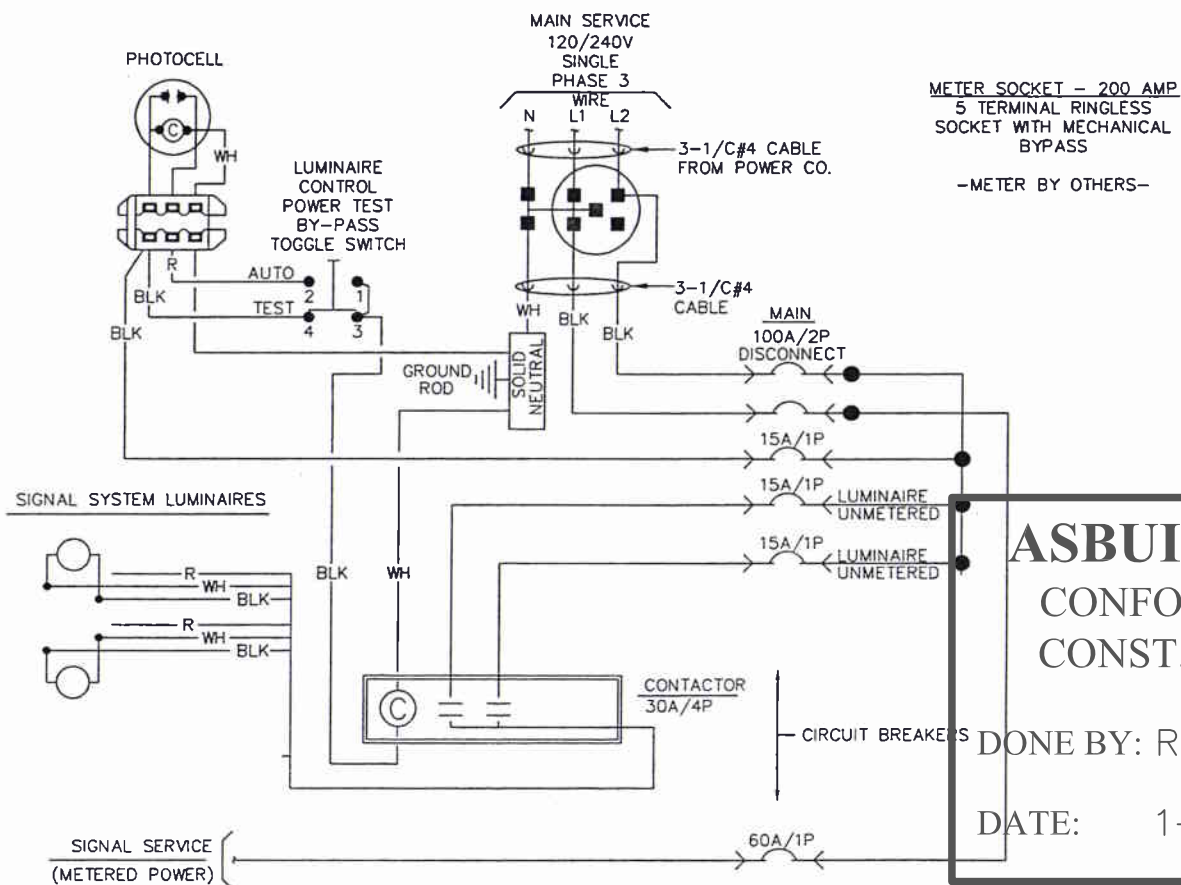
SERVICE CABINET DETAILS



CABINET BASE DETAILS



FEED POINT WIRING DIAGRAM



CONSTRUCTION NOTES

1. THE SERVICE CABINET SHALL BE FABRICATED FROM FORMED AND WELDED 0.125" ANNOZIZED ALUMINUM.
2. ALL HINGES, HINGE PINS AND LOCKS SHALL BE OF NON-CORRODING MATERIALS.
3. SERVICE CABINET DOORS SHALL BE ATTACHED TO THE ENCLOSURE WITH LIFT-OFF PHENOLIC HINGES.
4. METER COMPARTMENT DOORS SHALL BE SECURED WITH AN OVER CENTER DRAW LATCH AND DUAL LOCKING FIXTURE WITH LOCK.
5. THE CIRCUIT BREAKER COMPARTMENT DOOR SHALL BE SECURED WITH A STANDARD POLICE LOCK EQUIPPED WITH A SWING DOWN PLATE WITH TWO (2) KEYS.
6. BOTH DOOR OPENINGS SHALL BE SEALED WITH NEOPRENE GASKETS TO FORM A COMPLETE SEAL WITH THE ENCLOSURE.
7. THE VIEWING WINDOW (7" X 7" MINIMUM) AND PHOTOELECTRIC CONTROL WINDOW (4" X 4") SHALL BE CLEAR LEXAN MATERIAL.
8. CIRCUIT BREAKERS SHALL BE 120/240 VOLT AC, 60 HZ AND SHALL BE CLEARLY MARKED WITH THE "ON" AND "OFF" POSITIONS AND IDENTIFIED WITH THE LOAD WHICH IT IS CARRYING (E.G. "SIGNALS" OR "LIGHTING").
9. ALL CIRCUIT BREAKERS SHALL BE CLEARLY MARKED IN A MANNER THAT WILL NOT DETERIORATE WITH MOISTURE OR AGE.
10. SHORT CIRCUIT RATING - 10,000 AIC SYMMETRICAL.
11. PROVIDE CLEARANCE TO INSTALL OR REMOVE THE PHOTOELECTRIC CONTROL CELL.
12. PHOTOELECTRIC CONTROL LENS SHALL BE ORIENTED TO ELIMINATE INTERFERENCE BY MANMADE LIGHT SOURCES, PHOTOELECTRIC CONTROL LENS SHALL NORMALLY FACE NORTH AND EAST.
13. ALL CONDUIT ENTERING FOUNDATION SHALL BE SEALED WITH AN APPROVED DUCT SEALER.
14. THE SERVICE CABINET SHALL BE U.L. LISTED AND APPROVED FOR USE AS OUTDOOR WEATHER PROOF SERVICE ENTRANCE EQUIPMENT.
15. THE SERVICE CABINET SHALL BE WELDED TO THE BASE IN ACCORDANCE WITH U.L. STANDARDS.
16. SEE INTERSECTION LAYOUT FOR THE REQUIRED NUMBER OF LUMINAIRES AT THIS INTERSECTION.
17. THE BASE GASKET SHALL CONSIST OF THE FOLLOWING:
 - FOUR (4) STRIPS, SIZED TO FIT BASE.
 - INCLUDE CORNER HOLE/SLOTS TO ACCOMMODATE THE 3/4" ANCHOR RODS.
 - GASKET MATERIAL SHALL BE 1/2" THICK SOLID BUTYL RUBBER.
 - PROVIDE 1/2" GAP FOR WATER DRAINAGE.

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

FIELD WIRING DIAGRAM CABLE NUMBERS		
CABLE NO.	CABLE	USE
1	3-1/C#4	INPUT POWER
2	2-1/C#6	SIGNAL SERVICE
3	3/C#14	LUMINAIRE - 1
4	3/C#14	LUMINAIRE - 2

K:\TWC_Civil\Count\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY ROAD_D\CRD-TSIG02.dwg September 22, 2009 - 8:39am

No.	Date	Revisions	App.

DRAWING NAME	CRD-TSIG02.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

2550 UNIVERSITY AVE. WEST, SUITE 340H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-5116

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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

TRAFFIC SIGNAL DETAIL
(SYSTEMS "A" & "B")
SIGNAL SERVICE CABINET

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

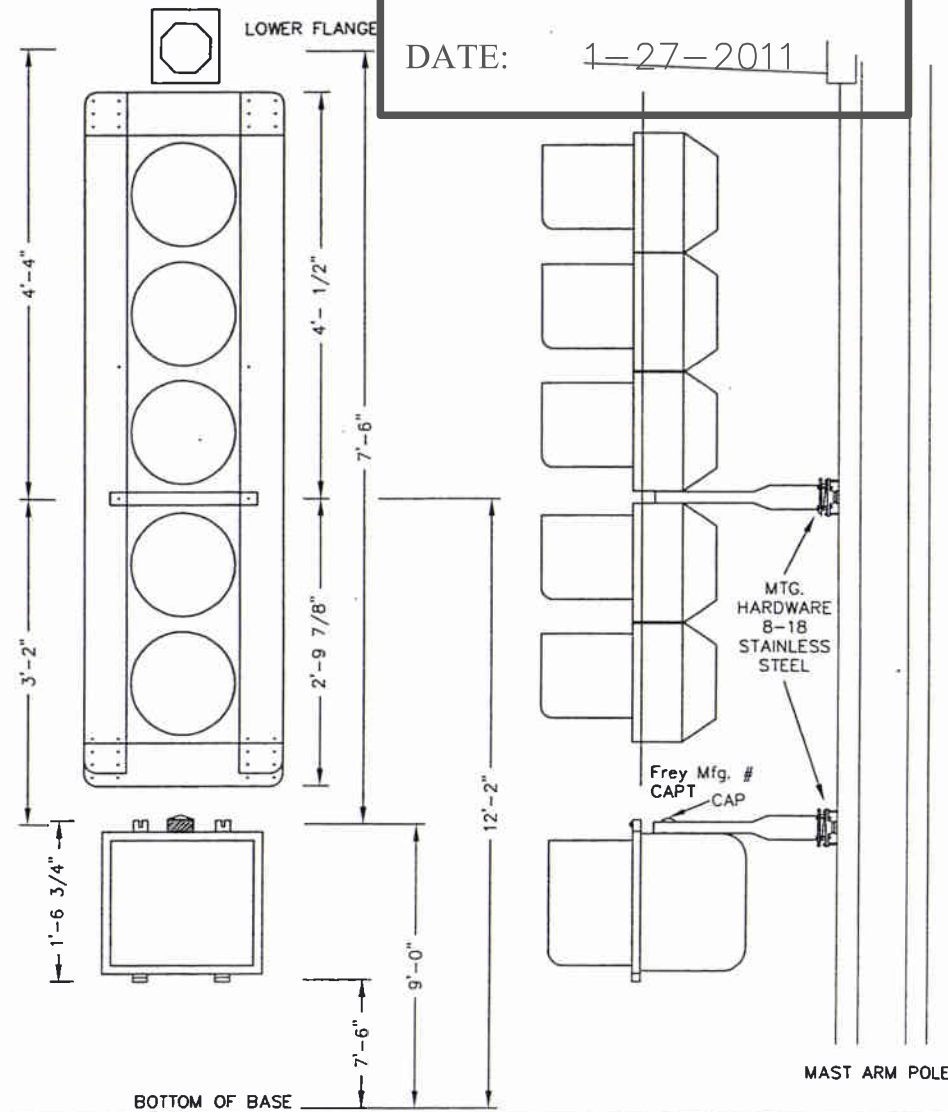
SHEET NO.
50
104

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

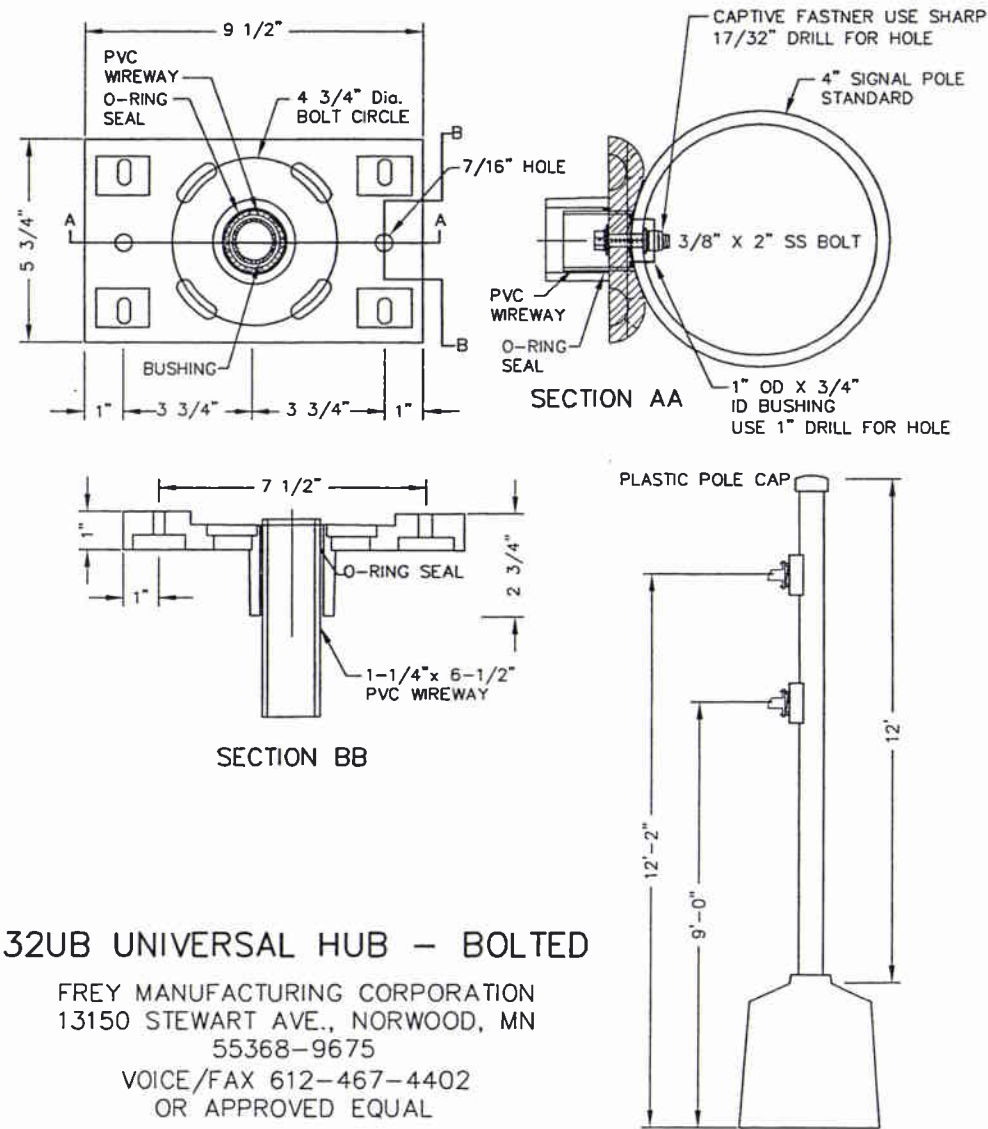
DONE BY: Rob Gaetz

DATE: 1-27-2011

POLE MOUNTING CONFIGURATION



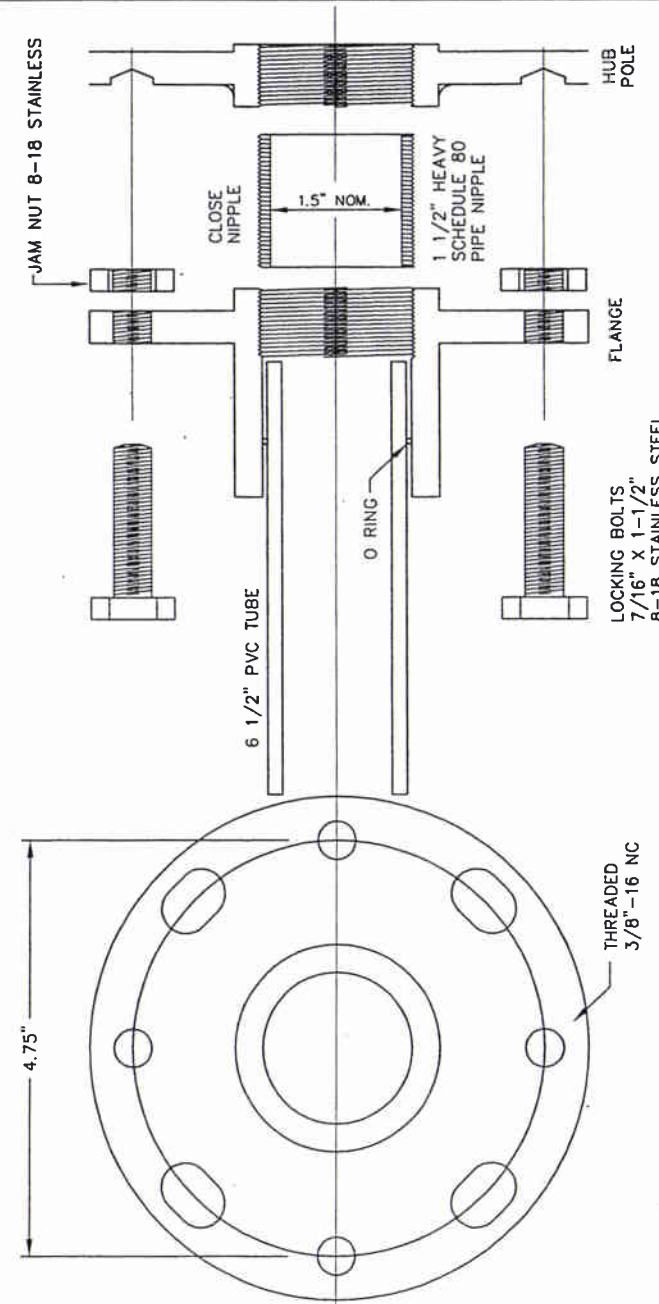
PEDESTAL POLE MOUNTING DETAIL



32UB UNIVERSAL HUB - BOLTED

FREY MANUFACTURING CORPORATION
13150 STEWART AVE., NORWOOD, MN
55368-9675
VOICE/FAX 612-467-4402
OR APPROVED EQUAL

SIGNAL HEAD MTG. ASSEMBLY FOR MAST-ARM POLES



ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND

STANDARD PLATE	P1	Date 9/6/2000
BACK_HD4.dwg		Drawn by RHH

RAMSEY COUNTY PUBLIC WORKS

STANDARD PLATE	P3	Date 9/5/2000
Hub Universal.dwg		Drawn by RHH

RAMSEY COUNTY PUBLIC WORKS

COUNTY STANDARD PLATE	P2	Date 9/1/2000
MOUNTING POLE.dwg		Drawn by RHH

RAMSEY COUNTY PUBLIC WORKS

No.	Date	Revisions	App.

DRAWING NAME	CRD-TSIG03.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

TRAFFIC SIGNAL DETAIL
(SYSTEM "A" & "B")
ONE WAY MOUNT DETAILS

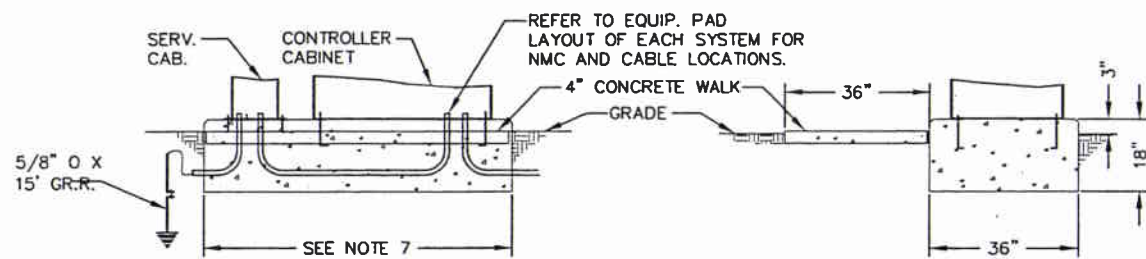
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.A.P.	62-619-30
S.A.P.	62-596-04

SHEET NO.	51
	104

EQUIPMENT PAD FOUNDATION

NOTES:

- ANCHOR RODS, NUTS AND WASHERS PER MN/DOT 3385 OR APPROVED EQUAL SET AS RECOMMENDED BY CABINET MANUFACTURER (NUMBER, SIZE AND LENGTH OF ANCHOR RODS) SHALL BE AS REQUIRED BY THE CABINET (MANUFACTURER).
- UPPER PART OF FOUNDATION SHALL BE BEVELED OR CHAMFERED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER IN THE FIELD.
- TOP OF CONDUITS SHALL BE THREADED AND CAPPED AFTER INSTALLATION (UNTIL CABLES ARE INSTALLED). CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE CONCRETE AND SHALL BE LOCATED INSIDE THE CABINET WHERE DIRECTED BY THE ENGINEER BUT SHALL NOT INTERFERE WITH CABINET FUNCTIONS.
- CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR FOUNDATION AND CONCRETE WALK.
- CONDUITS WHICH HAVE BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
- EXACT LOCATIONS OF CONDUIT WITHIN THE PAD SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.
- REFER TO EQUIPMENT PAD LAYOUT OF EACH SYSTEM FOR FOUNDATION SIZE, CONDUIT PLACEMENT AND EQUIPMENT TO BE INSTALLED.



FRONT VIEW

SIDE VIEW

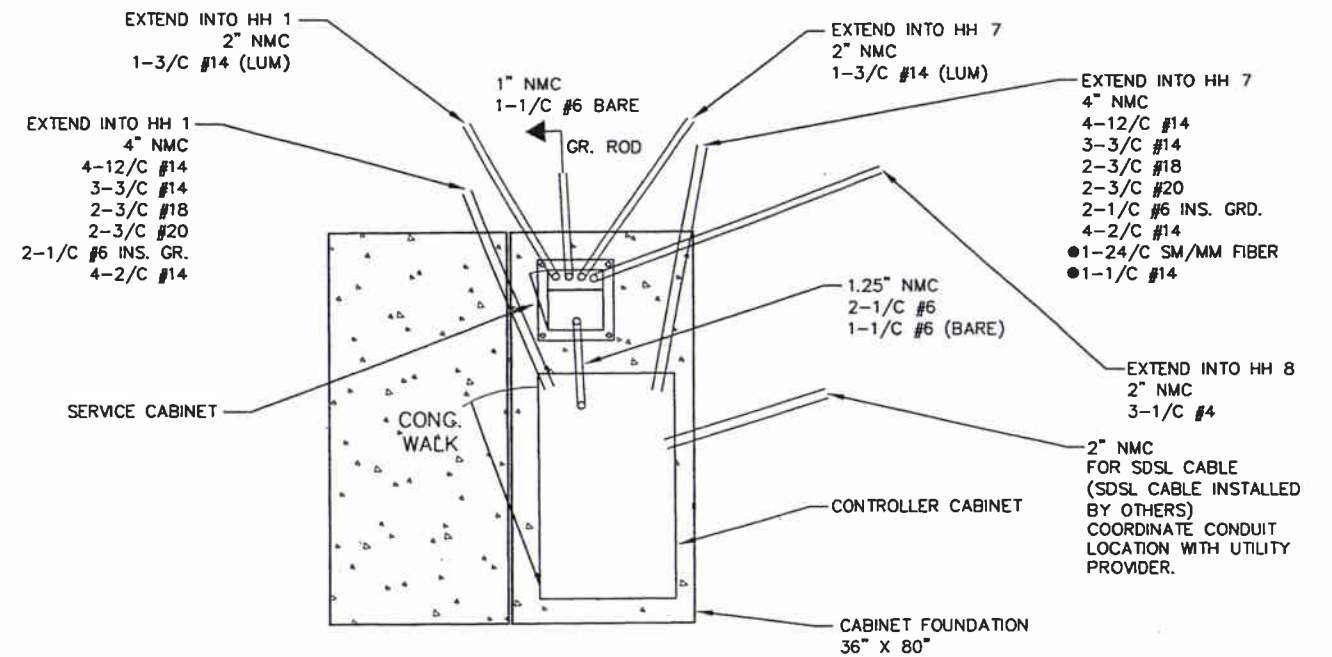
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

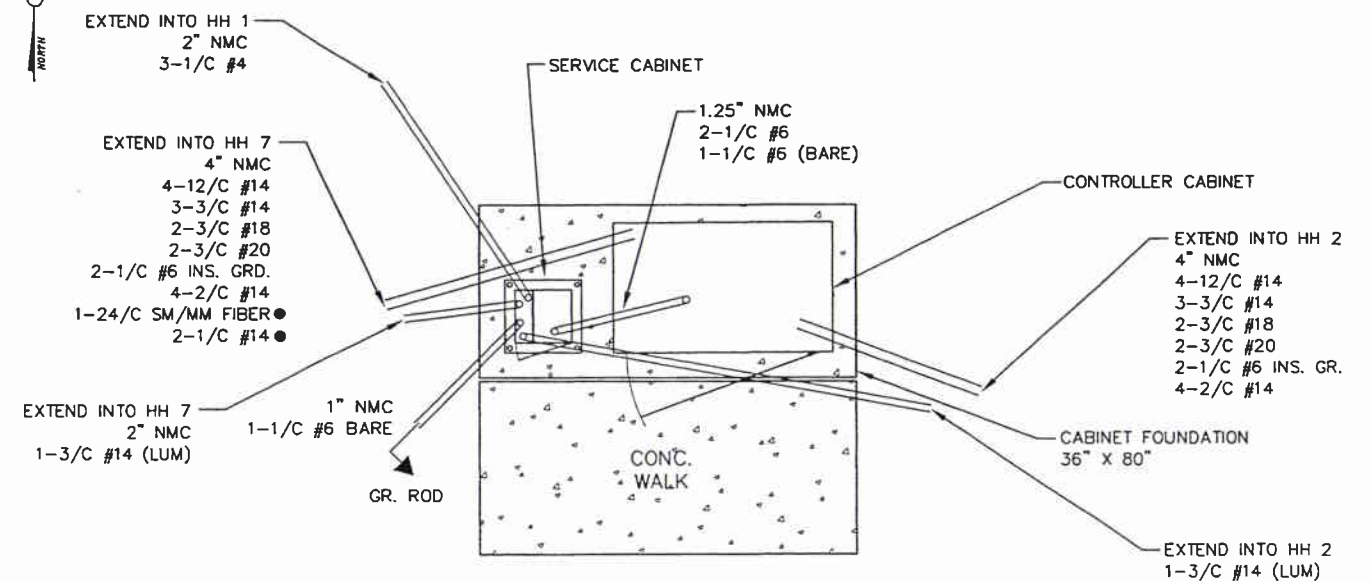
EQUIPMENT PAD LAYOUT SYSTEM A

COUNTY ROAD D / SOUTHLAWN DRIVE



EQUIPMENT PAD LAYOUT SYSTEM B

COUNTY ROAD D / WEST MALL ACCESS



K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-TSIG04.dwg September 22, 2009 - 8:39am

No.	Date	Revisions	App.

DRAWING NAME	CRD-TSIG04.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



**Kimley-Horn
and Associates, Inc.**

2250 UNIVERSITY AVE. WEST, SUITE 345H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 545-1197
FAX. NO. (651) 545-5116

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

Brandon J. Bourdon
BRANDON J. BOURDON

DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

TRAFFIC SIGNAL DETAIL
(SYSTEM "A" & "B")
EQUIPMENT PAD FOUNDATION DETAIL

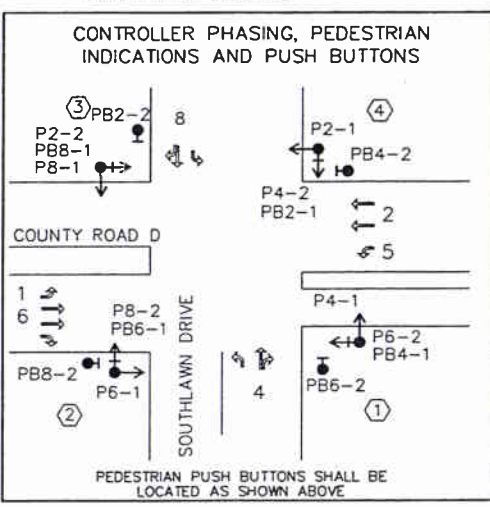
CITY PROJECT	08-13	SHEET NO. 52
COUNTY PROJECT	P-3202	
S.P.	62-619-30	104
S.P.	62-596-04	

NOTES:

- THE LOCATION OF POLES, LOOP DETECTORS, VIDEO DETECTION CAMERAS, AND EQUIPMENT PAD SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- ITEMS DENOTED WITH A ● ARE INCIDENTAL TO THE INTERCONNECT PAY ITEM.
- SIGNING SHOWN IN POLE NOTES ARE INCIDENTAL TO THE SIGNAL SYSTEM.
- ALL MAST ARM MOUNTED TYPE "D" SIGNS ARE INCIDENTAL TO THE SIGNAL SYSTEM.
- CONTRACTOR SHALL VERIFY GROUND WATER LEVELS WHEN INSTALLING POLE, FOUNDATIONS AND SHALL DE-WATER AS NECESSARY DURING FOUNDATION INSTALLATION. THIS WORK SHALL BE INCIDENTAL TO THE SIGNAL SYSTEM.
- NO OPEN CUT TRENCHING OF THE ROADWAYS WILL BE ALLOWED IN AREAS THAT ARE OPEN TO TRAFFIC OR WILL BE REOPENED TO TRAFFIC PRIOR TO THE INSTALLATION OF PAVEMENT.
- SEE OTHER PLAN SHEETS FOR PEDESTRIAN RAMPS, GROUND MOUNTED SIGNING, PAVEMENT AND CROSSWALK MARKINGS, AND ROADWAY PLANS.
- THE LOCATION OF THE TRANSFORMER HAS NOT BEEN FINALIZED. THE CONTRACTOR SHALL COORDINATE WITH XCEL ENERGY.
- VIDEO DETECTION CAMERAS SHALL BE MOUNTED ON 6 FT. HEIGHT EXTENSION BRACKET. ALL PEDESTRIAN DETECTORS SHALL BE ACCESSIBLE PEDESTRIAN DETECTORS. PEDESTRIAN PUSH BUTTON STATION SHALL BE IN ACCORDANCE WITH THE DETAILS. SEE PEDESTRIAN PUSH BUTTON STATION DETAIL.
- INTERCONNECT, LISTED AS 1-24/C SM/MM FIBER, SHALL BE 12 MULTIMODE, 12 SINGLEMODE FIBER OPTIC CABLE FROM MN/DOT APPROVED PRODUCT LIST.

- (A) EQUIPMENT PAD - SEE DETAILS**
- SERVICE CABINET
EXTEND INTO HH 8
2" NMC
3-1/C #4
EXTEND INTO HH 1
2" NMC
1-3/C #14 (LUM)
EXTEND INTO HH 7
2" NMC
1-3/C #14 (LUM)
- CONTROLLER CABINET
EXTEND INTO HH 1
4" NMC
4-12/C #14
3-3/C #14
2-3/C #18
2-3/C #20
2-1/C #6 INS. GRD.
4-2/C #14
EXTEND INTO HH 7
4" NMC
4-12/C #14
3-3/C #14
2-3/C #18
2-3/C #20
2-1/C #6 INS. GRD.
4-2/C #14
● 1-24/C SM/MM FIBER
● 1-1/C #14
- BETWEEN SERVICE AND CONTROLLER CABINET
1.25" NMC
2-1/C #6
1-1/C #6 (BARE)

- (B) SOP - TRANSFORMER (BY XCEL)**
- 2" CONDUIT TO HH 6
3-1/C #4
2" WEATHERHEAD AND RISER

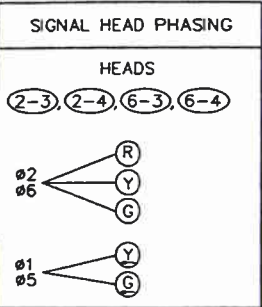


SIGNAL SYSTEM OPERATIONS

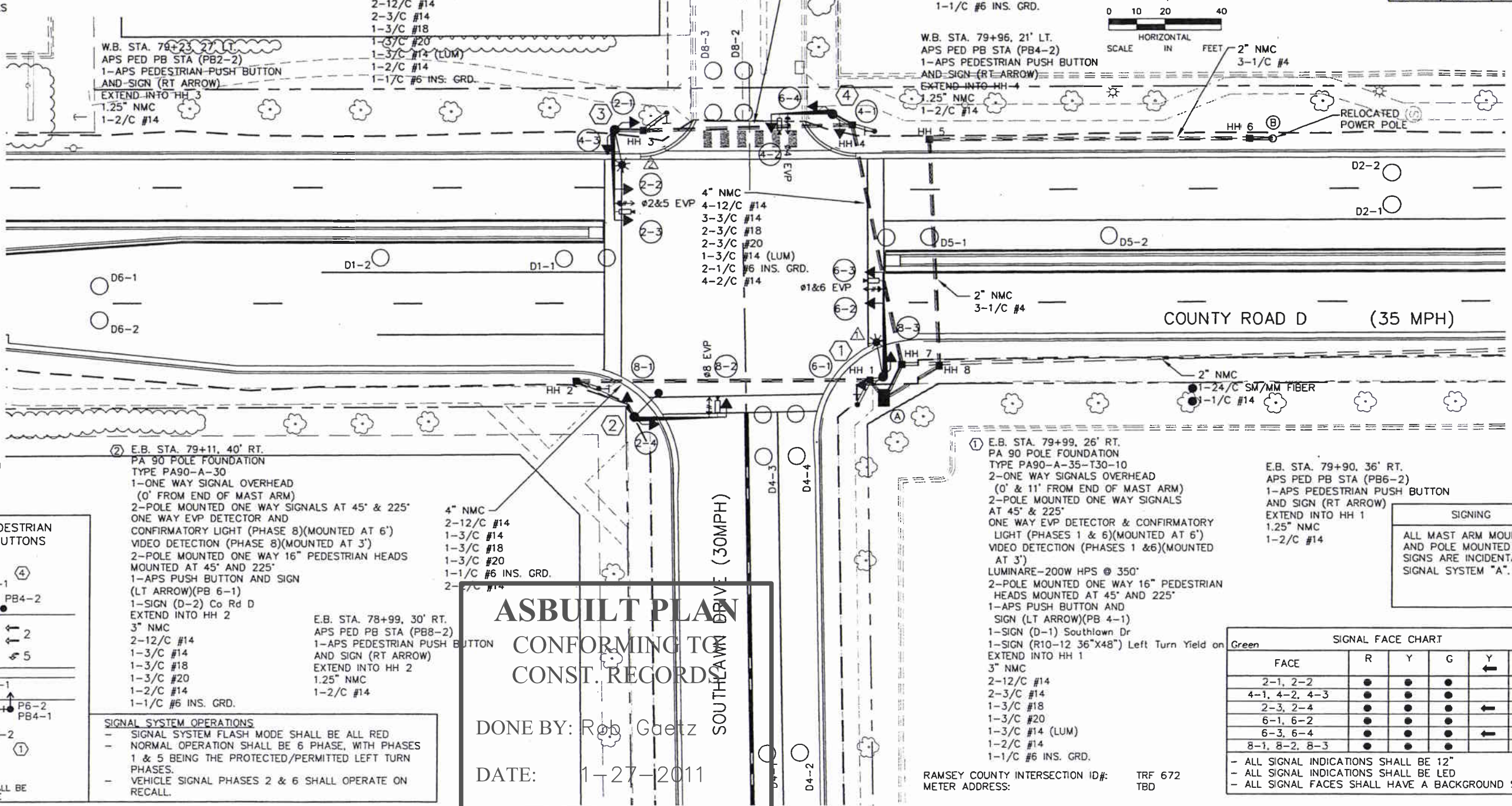
- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED
- NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 & 5 BEING THE PROTECTED/PERMITTED LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 & 6 SHALL OPERATE ON RECALL.

(3) W.B. STA. 79+04, 21' LT.
PA 90 POLE FOUNDATION
TYPE PA90-A-30-T30-10
2-ONE WAY SIGNALS OVERHEAD
(0' & 11' FROM END OF MAST ARM)
2-POLE MOUNTED ONE WAY SIGNALS AT 45' AND 225'
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (PHASES 2 & 5)(MOUNTED AT 6')
VIDEO DETECTION (PHASES 2 & 5)(MOUNTED AT 3')
LUMINARE-200W HPS @ 350'
2-POLE MOUNTED ONE WAY
16" PEDESTRIAN HEADS MOUNTED AT 45' AND 225'
1-APS PUSH BUTTON AND SIGN (LT ARROW)(PB8-1)
1-SIGN (D-3) Southlawn Dr
1-SIGN (R10-12, 36"x48") Left Turn Yield on Green
EXTEND INTO HH 3
3" NMC
2-12/C #14
2-3/C #14
1-3/C #18
1-3/C #20
1-3/C #12 (LUM)
1-2/C #14
1-1/C #6 INS. GRD.

(4) W.B. STA. 79+81, 27' LT.
PA 85 POLE FOUNDATION
TYPE PA85-A-20
1-ONE WAY SIGNAL OVERHEAD
(0' FROM END OF MAST ARM)
2-POLE MOUNTED ONE WAY SIGNALS AT 45' & 225'
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (PHASE 4)(MOUNTED AT 6')
VIDEO DETECTION (PHASE 4)(MOUNTED AT 3')
2-POLE MOUNTED ONE WAY
16" PEDESTRIAN HEADS MOUNTED AT 45' AND 225'
1-APS PUSH BUTTON AND SIGN (LT ARROW)(PB2-1)
1-SIGN (D-4) Co Rd D
EXTEND INTO HH 4
3" NMC
2-12/C #14
1-3/C #14
1-3/C #18
1-3/C #20
1-2/C #14
1-1/C #6 INS. GRD.



DETECTORS		
NUMBER	TYPE	LOCATION
D1-1	VIDEO	0' & 15'
D1-2	VIDEO	80'
D2-1	VIDEO	180'
D2-2	VIDEO	180'
D4-1	VIDEO	120'
D4-2	VIDEO	120'
D4-3	VIDEO	0' & 15'
D4-4	VIDEO	0' & 15'
D5-1	VIDEO	0' & 15'
D5-2	VIDEO	80'
D6-1	VIDEO	180'
D6-2	VIDEO	180'
D8-1	VIDEO	80'
D8-2	VIDEO	0' & 15'
D8-3	VIDEO	0' & 15'



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
DATE: 1-27-2011

SIGNING

ALL MAST ARM MOUNTED AND POLE MOUNTED SIGNS ARE INCIDENTAL TO SIGNAL SYSTEM "A".

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

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

No.	Date	Revisions	App.

DRAWING NAME	CRD-TSIG05.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

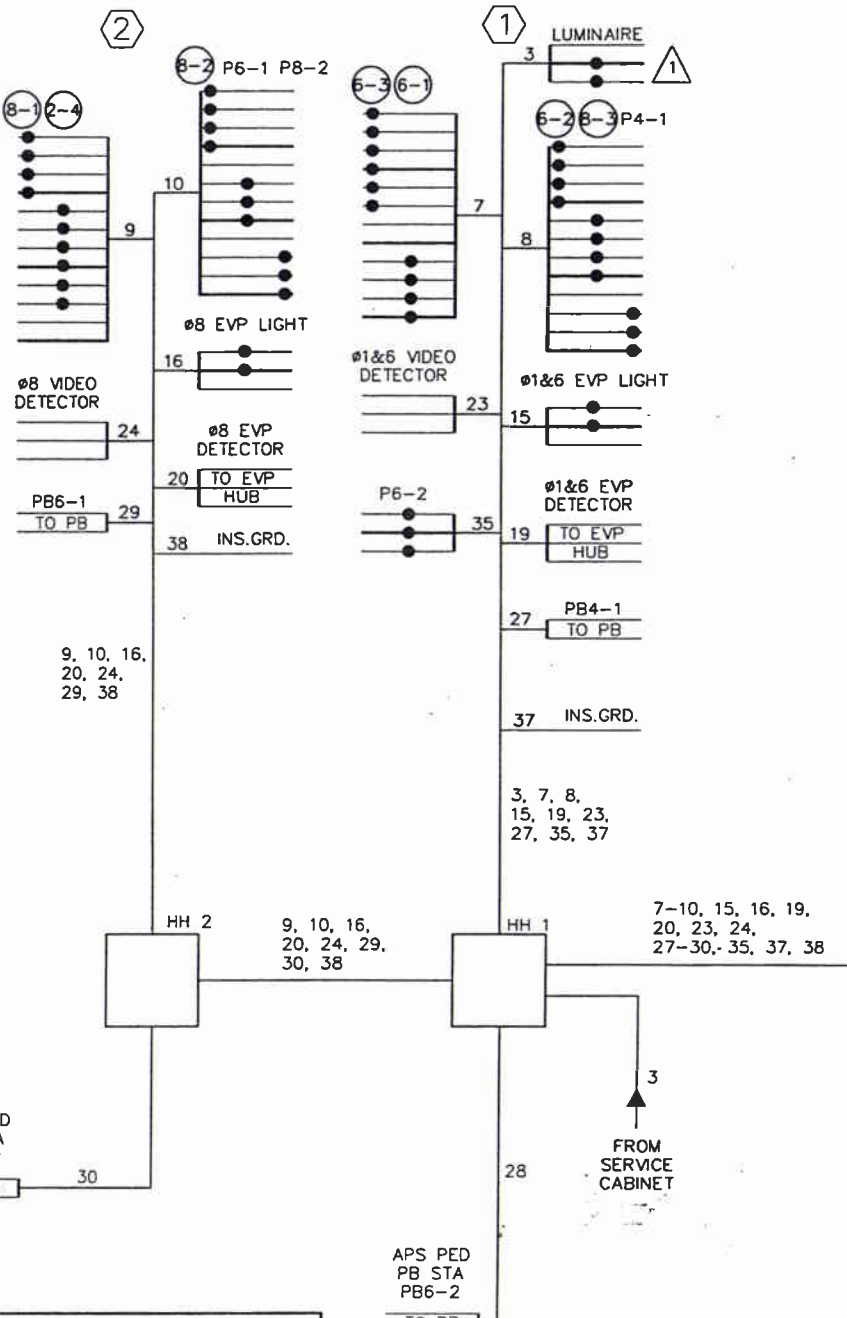
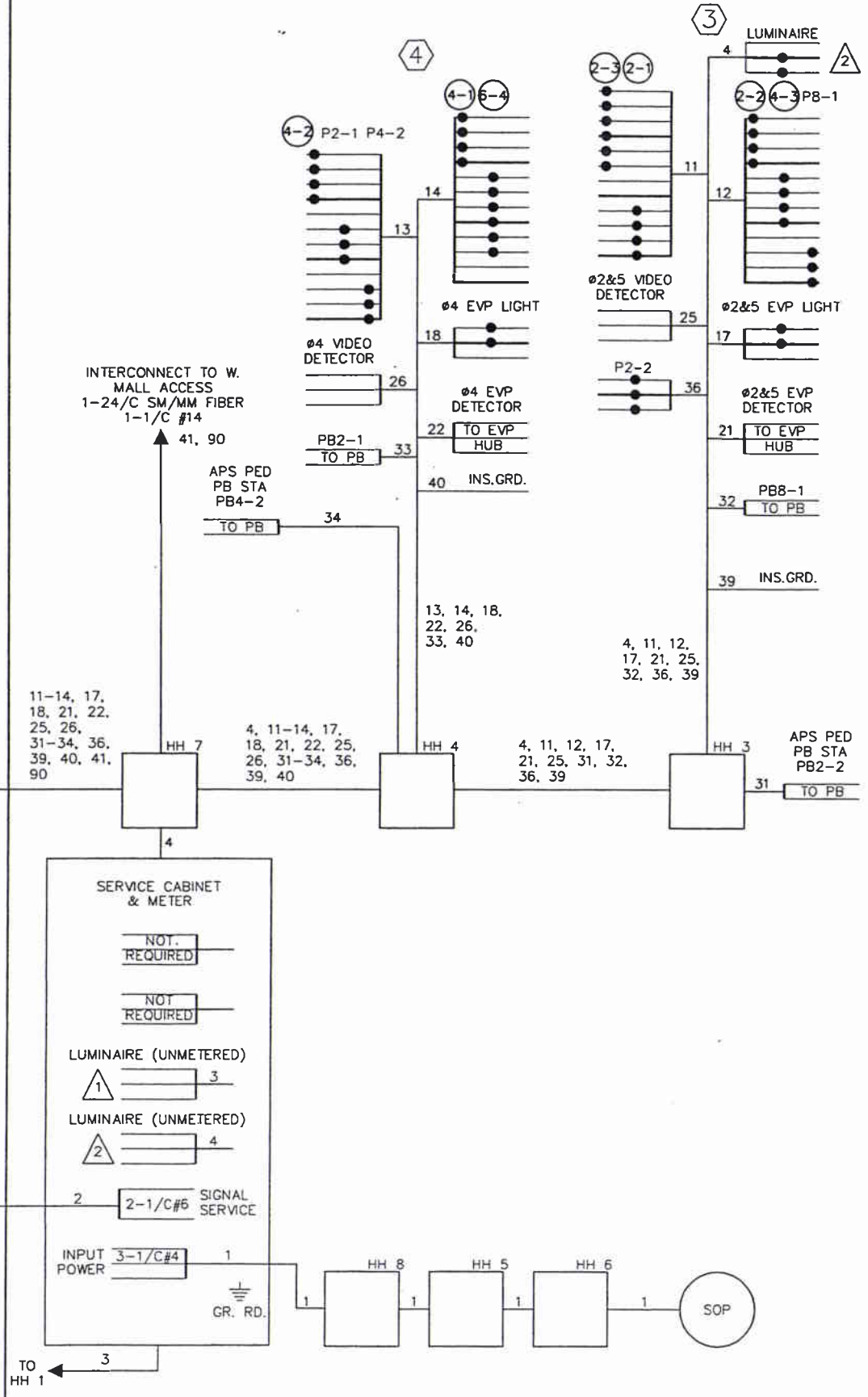
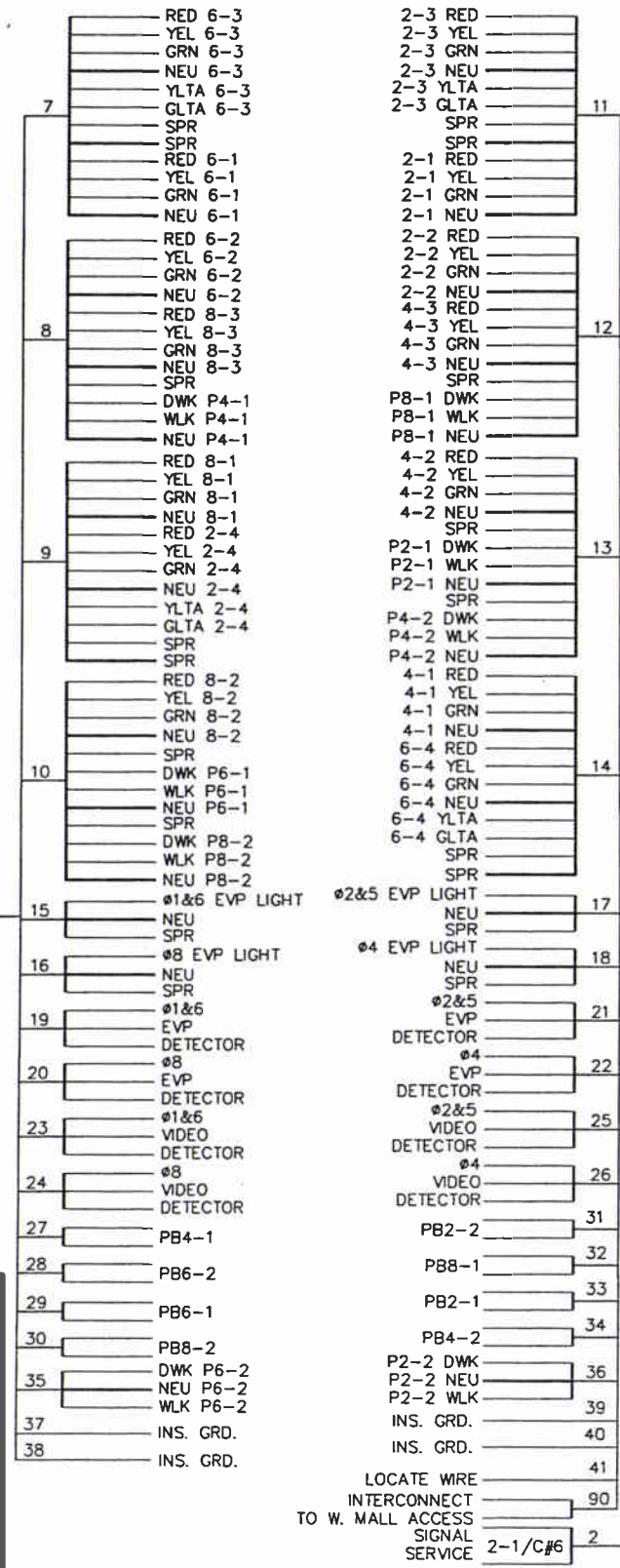
RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D IMPROVEMENTS

TRAFFIC SIGNALS (SYSTEM "A")
INTERSECTION LAYOUT
COUNTY ROAD D/SOUTHLAWN DRIVE

CITY PROJECT	08-13	SHEET NO. 53
COUNTY PROJECT	P-3202	
S.P.	62-619-30	104
S.P.	62-596-04	

K:\TWC_Civil\County\RAMSEY_WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-TSIG06.dwg September 22, 2009 - 8:40am

CONTROLLER CABINET



CONDUCTOR COLOR CODING	
3-1/C#4	BLK
R	WH
BLK	3/C#14
R	BLK
O	WH
BL	3/C#18
WH	3/C#20
R/BLK	R OR O
O/BLK	WH OR YEL
BL/BLK	BL OR BLK
WH/BLK	BLK CLEAR
BLK	2/C#14
BLK/WH	0 1/C#14
BLK/R	
WH/R	
1/C#6 G	

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

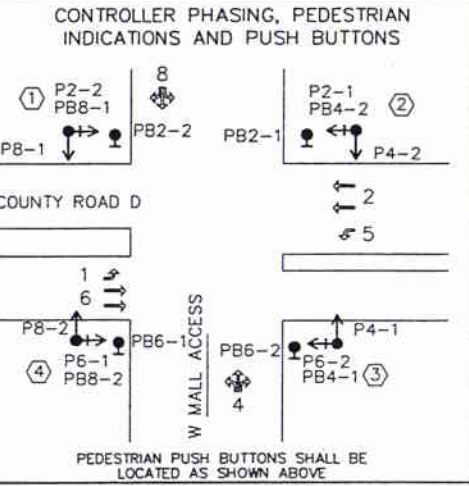
DONE BY: Rob Gaetz
 DATE: 1-27-2011

No.	Date	Revisions	App.	DRAWING NAME CRD-TSIG06.dwg	 2250 UNIVERSITY AVE. WEST, SUITE 200 ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4497 FAX. NO. (651) 645-3116	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. BRANDON J. BOURDON DATE: 08/07/09 MN LIC. NO. 43709	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS		CITY PROJECT	08-13	SHEET NO. 54	
DESIGNED BY: BJB		COUNTY PROJECT	P-3202	TRAFFIC SIGNALS (SYSTEM "A") FIELD WIRING DIAGRAM COUNTY ROAD D/SOUTHLAWN DRIVE				S.P.	62-619-30	S.P.	62-596-04		104
DRAWN BY: HMW													
CHECKED BY: BJB													
DATE: 08/07/09													
PROJECT NO. 160500029.2.101													

- NOTES:**
- THE LOCATION OF POLES, LOOP DETECTORS, VIDEO DETECTION CAMERAS, AND EQUIPMENT PAD SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
 - ITEMS DENOTED WITH A ● ARE INCIDENTAL TO THE INTERCONNECT PAY ITEM.
 - SIGNING SHOWN IN POLE NOTES ARE INCIDENTAL TO THE SIGNAL SYSTEM.
 - ALL MAST ARM MOUNTED TYPE "D" SIGNS ARE INCIDENTAL TO THE SIGNAL SYSTEM.
 - CONTRACTOR SHALL VERIFY GROUND WATER LEVELS WHEN INSTALLING POLE FOUNDATIONS AND SHALL DE-WATER AS NECESSARY DURING FOUNDATION INSTALLATION. THIS WORK SHALL BE INCIDENTAL TO THE SIGNAL SYSTEM.
 - NO OPEN CUT TRENCHING OF THE ROADWAYS WILL BE ALLOWED IN AREAS THAT ARE OPEN TO TRAFFIC OR WILL BE REOPENED TO TRAFFIC PRIOR TO THE INSTALLATION OF PAVEMENT.
 - SEE OTHER PLAN SHEETS FOR PEDESTRIAN RAMPS, GROUND MOUNTED SIGNING, PAVEMENT AND CROSSWALK MARKINGS, AND ROADWAY PLANS.
 - THE LOCATION OF THE TRANSFORMER HAS NOT BEEN FINALIZED. THE CONTRACTOR SHALL COORDINATE WITH XCEL ENERGY.
 - VIDEO DETECTION CAMERAS SHALL BE MOUNTED ON 6 FT. HEIGHT EXTENSION BRACKET.
 - PEDESTRIAN PUSH BUTTON STATION SHALL BE IN ACCORDANCE WITH THE DETAILS. SEE PEDESTRIAN PUSH BUTTON STATION DETAIL. THE PEDESTRIAN DETECTION SHALL NOT BE APS.
 - INTERCONNECT, LISTED AS 1-24/C SM/MM FIBER, SHALL BE 12 MULTIMODE, 12 SINGLEMODE FIBER OPTIC CABLE FROM MN/DOT APPROVED PRODUCT LIST.

- (A) EQUIPMENT PAD - SEE DETAILS**
- SERVICE CABINET
EXTEND INTO HH 1
2" NMC
3-1/C #4
EXTEND INTO HH 2
2" NMC
1-3/C #14 (LUM)
EXTEND INTO HH 7
2" NMC
1-3/C #14 (LUM)
- CONTROLLER CABINET
EXTEND INTO HH 2
4" NMC
4-12/C #14
3-3/C #14
2-3/C #18
2-3/C #20
2-1/C #6 INS. GRD.
4-2/C #14
EXTEND INTO HH 7
4" NMC
4-12/C #14
3-3/C #14
2-3/C #18
2-3/C #20
2-1/C #6 INS. GRD.
4-2/C #14
- 2-24/C SM/MM FIBER
● 1-1/C #14
- BETWEEN SERVICE AND CONTROLLER CABINET
1.25" NMC
2-1/C #6
1-1/C #6 (BARE)

- (B) SOP - TRANSFORMER (BY XCEL)**
- 2" CONDUIT TO HH 6
3-1/C #4
2" WEATHERHEAD AND RISER



- (4) E.B. STA. 88+20, 20' RT.**
PA 90 POLE FOUNDATION
TYPE PA90-A-30
1-ONE WAY SIGNAL OVERHEAD (0' FROM END OF MAST ARM)
2-POLE MOUNTED ONE WAY SIGNALS AT 45' & 225'
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (PHASE 8)(MOUNTED AT 6')
VIDEO DETECTION (PHASE 8)(MOUNTED AT 3')
2-POLE MOUNTED ONE WAY 16" PEDESTRIAN HEADS MOUNTED AT 45' AND 225'.
1-PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b, 6"x10")(PB8-2)
1-SIGN (D-2) Co Rd D
EXTEND INTO HH 5
3" NMC
2-12/C #14
1-3/C #14
1-3/C #18
1-3/C #20
1-2/C #14
1-1/C #6 INS. GRD.
- E.B. STA. 88+30, 21' RT.
PED PB STA (PB6-1)
1-PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b, 6"x10")
EXTEND INTO HH 5
1.25" NMC
1-2/C #14

- SIGNAL SYSTEM OPERATIONS**
- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
 - NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 & 5 BEING THE PROTECTED/PERMITTED LEFT TURN PHASES.
 - VEHICLE SIGNAL PHASES 2 & 6 SHALL OPERATE ON RECALL.

- (1) W.B. STA. 88+13, 21' LT.**
PA 90 POLE FOUNDATION
TYPE PA90-A-30-T30-10
2-ONE WAY SIGNALS OVERHEAD (0' & 11' FROM END OF MAST ARM)
2-POLE MOUNTED ONE WAY SIGNALS AT 45' AND 225'
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (PHASES 2 & 5)(MOUNTED AT 6')
VIDEO DETECTION (PHASES 2 & 5)(MOUNTED AT 3')
LUMINARE-200W HPS @ 350'
2-POLE MOUNTED ONE WAY 16" PEDESTRIAN HEADS MOUNTED AT 45' AND 225'.
1-PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b, 6"x10")(PB8-1)
1-SIGN (R10-12, 36"x48") Left Turn Yield on Green
EXTEND INTO HH 2
3" NMC
2-12/C #14
2-3/C #14
1-3/C #18
1-3/C #20
1-3/C #14 (LUM)
1-2/C #14
1-1/C #6 INS. GRD.

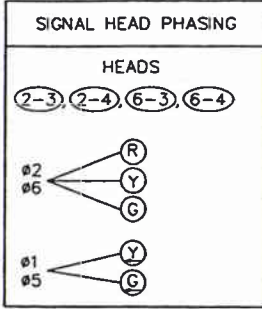
- (2) W.B. STA. 88+95, 20' LT.**
PA 85 POLE FOUNDATION
TYPE PA85-A-25
1-ONE WAY SIGNAL OVERHEAD (0' FROM END OF MAST ARM)
2-POLE MOUNTED ONE WAY SIGNALS AT 45' & 225'
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (PHASE 4)(MOUNTED AT 6')
VIDEO DETECTION (PHASE 4)(MOUNTED AT 3')
2-POLE MOUNTED ONE WAY 16" PEDESTRIAN HEADS MOUNTED AT 45' AND 225'.
1-PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b, 6"x10")(PB4-2)
1-SIGN (D-1) Co Rd D
EXTEND INTO HH 3
3" NMC
2-12/C #14
1-3/C #14
1-3/C #18
1-3/C #20
1-2/C #14
1-1/C #6 INS. GRD.

- W.B. STA. 88+82, 23' LT.
PED PB STA (PB2-1)
1-PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b, 6"x10")
EXTEND INTO HH 3
1.25" NMC
1-2/C #14

- 4" NMC
4-12/C #14
3-3/C #14
2-3/C #18
2-3/C #20
1-3/C #14 (LUM)
2-1/C #6 INS. GRD.
4-2/C #14
● 1-24/C SM/MM FIBER
● 2-1/C #14

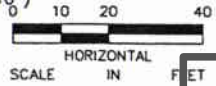
- E.B. STA. 88+91, 21' RT.
PED PB STA (PB6-2)
1-PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b, 6"x10")
EXTEND INTO HH 4
1.25" NMC
1-2/C #14

- (3) E.B. STA. 89+05, 20' RT.**
PA 90 POLE FOUNDATION
TYPE PA90-A-30-T30-10
2-ONE WAY SIGNALS OVERHEAD (0' & 11' FROM END OF MAST ARM)
2-POLE MOUNTED ONE WAY SIGNALS AT 45' & 225'
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (PHASES 1 & 6)(MOUNTED AT 6')
VIDEO DETECTION (PHASES 1 & 6)(MOUNTED AT 3')
LUMINARE-200W HPS @ 350'
1-SIGN (R10-12, 36"x48") Left Turn Yield on Green
2-POLE MOUNTED ONE WAY 16" PEDESTRIAN HEADS MOUNTED AT 45' AND 225'.
1-PEDESTRIAN PUSH BUTTON AND SIGN (R10-4b, 6"x10")(PB4-1)
EXTEND INTO HH 4
3" NMC
2-12/C #14
2-3/C #14
2-3/C #14
1-3/C #18
1-3/C #20
1-3/C #14 (LUM)
1-2/C #14
1-1/C #6 INS. GRD.



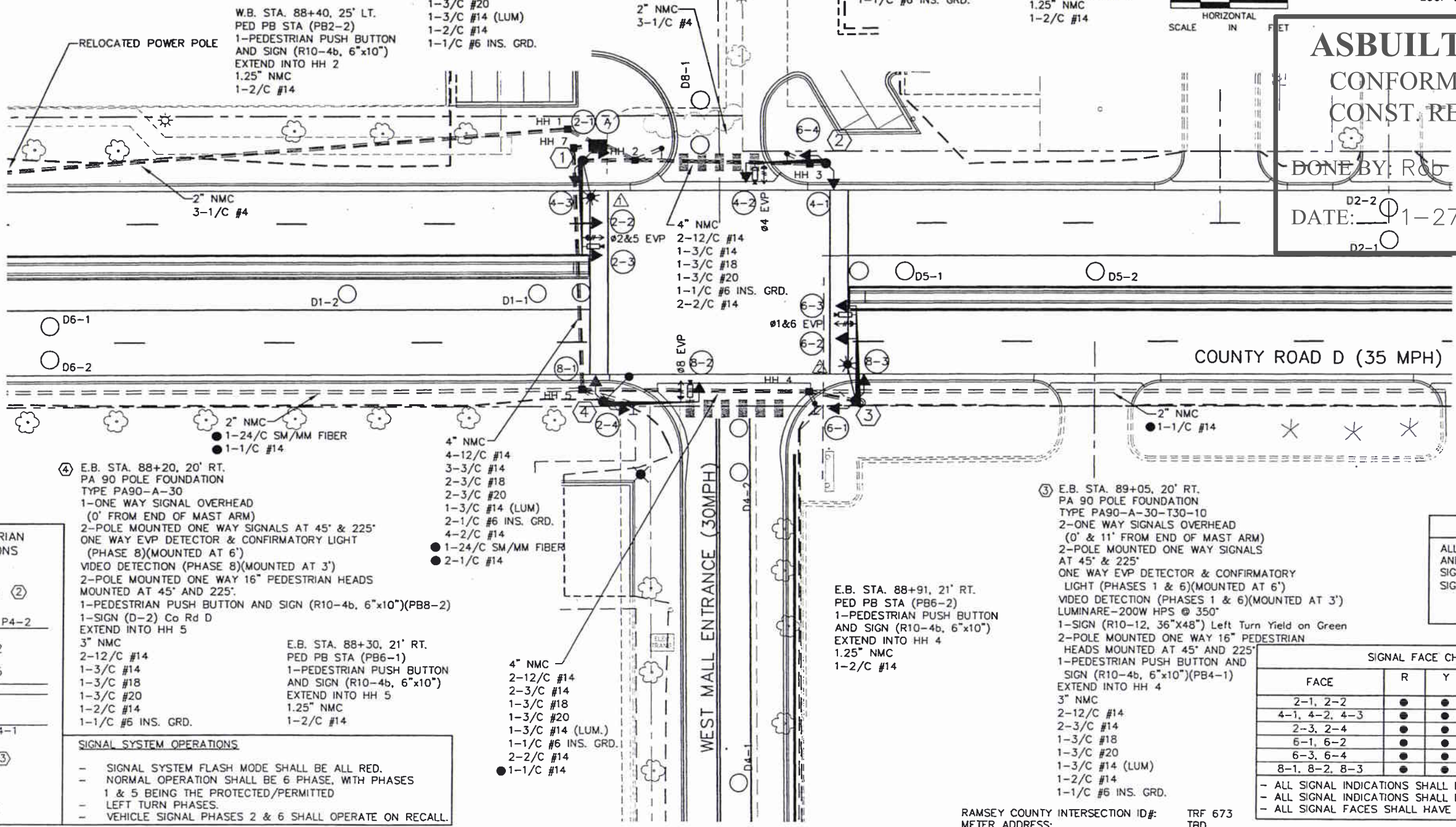
DETECTORS		
NUMBER	TYPE	LOCATION
D1-1	VIDEO	0' & 15'
D1-2	VIDEO	80'
D2-1	VIDEO	180'
D2-2	VIDEO	180'
D4-1	VIDEO	120'
D4-2	VIDEO	0' & 15'
D5-1	VIDEO	0' & 15'
D5-2	VIDEO	80'
D6-1	VIDEO	180'
D6-2	VIDEO	180'
D8-1	VIDEO	0' & 15'

NOTE: LOCATION = DISTANCE FROM STOP BAR OR CROSSWALK TO FRONT OF LOOP DETECTION.



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
DATE: 1-27-2011



SIGNING

ALL MAST ARM MOUNTED AND POLE MOUNTED SIGNS ARE INCIDENTAL TO SIGNAL SYSTEM "B".

SIGNAL FACE CHART

FACE	R	Y	G	←	→
2-1, 2-2	●	●	●		
4-1, 4-2, 4-3	●	●	●		
2-3, 2-4	●	●	●	←	→
6-1, 6-2	●	●	●		
6-3, 6-4	●	●	●	←	→
8-1, 8-2, 8-3	●	●	●		

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

RAMSEY COUNTY INTERSECTION ID#: TRF 673
METER ADDRESS: TBD

No.	Date	Revisions	App.

DRAWING NAME	
CRD-TSIG08.dwg	
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

2550 UNIVERSITY AVE. WEST, SUITE 340N
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 845-4197
FAX. NO. (651) 845-5118

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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709

City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

TRAFFIC SIGNALS (SYSTEM "B")
INTERSECTION LAYOUT
COUNTY ROAD D/WEST MALL ACCESS

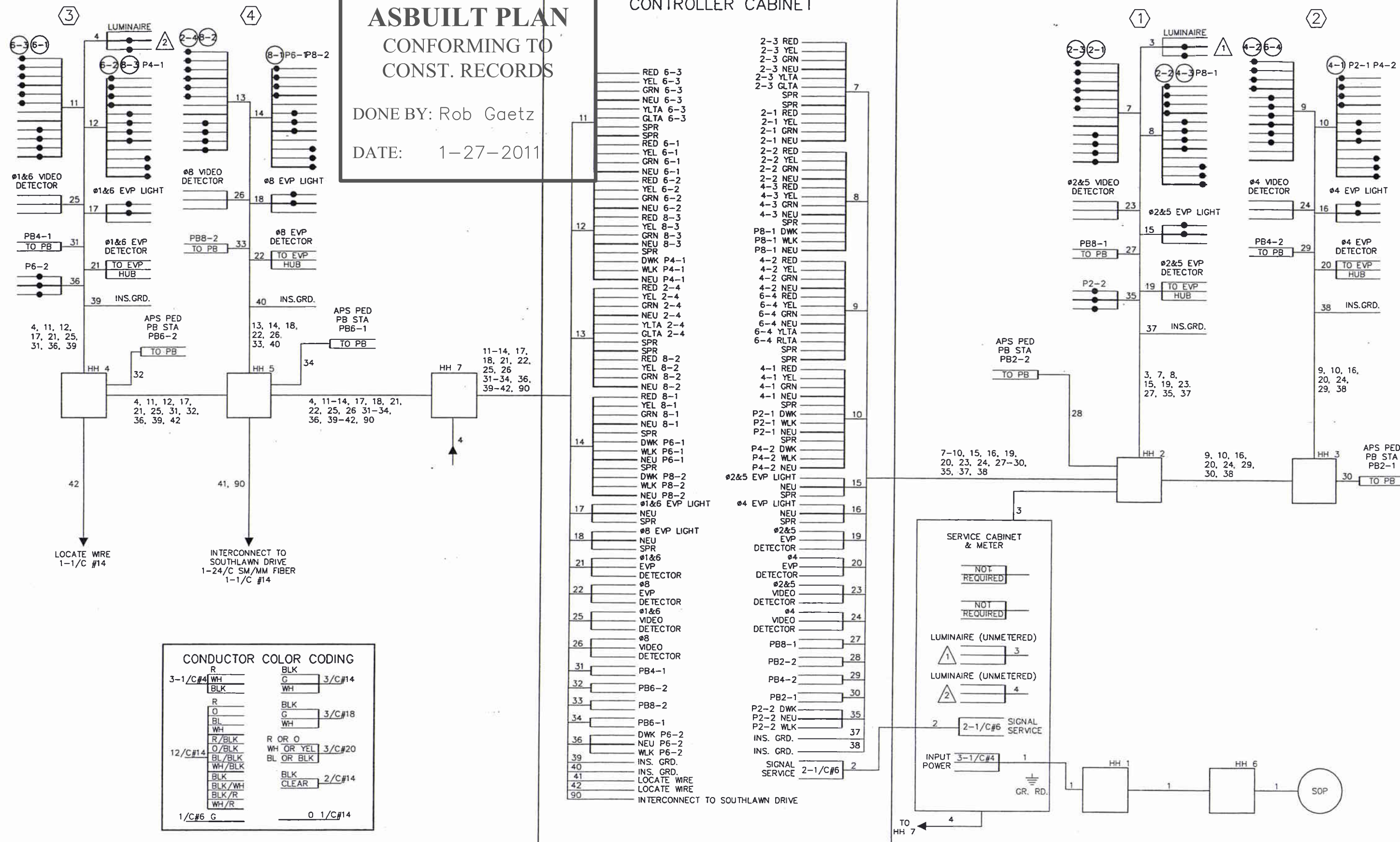
CITY PROJECT	08-13	SHEET NO.
COUNTY PROJECT	P-3202	56
S.P.	62-619-30	
S.P.	62-596-04	104

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_D\CRD-TSIG08.dwg September 22, 2009 - 8:42am

K:\TWC_Civil\County\RAMSEY\WHITE-BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-TSIG09.dwg September 22, 2009 - 8:42am

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS
 DONE BY: Rob Gaetz
 DATE: 1-27-2011

CONTROLLER CABINET



CONDUCTOR COLOR CODING

3-1/C#4	R	BLK	3/C#14
	WH	WH	
	BLK		
	R	BLK	3/C#18
	O	G	
	BL	WH	
	WH		
12/C#14	R/BLK	R OR O	3/C#20
	O/BLK	WH OR YEL	
	BL/BLK	BL OR BLK	
	WH/BLK		
	BLK	BLK	2/C#14
	BLK/WH	BLK CLEAR	
	BLK/R		
	WH/R		
1/C#6	G		0 1/C#14

- RED 6-3
- YEL 6-3
- GRN 6-3
- NEU 6-3
- YLTA 6-3
- GLTA 6-3
- SPR
- SPR
- RED 6-1
- YEL 6-1
- GRN 6-1
- RED 6-2
- YEL 6-2
- GRN 6-2
- NEU 6-2
- RED 8-3
- YEL 8-3
- GRN 8-3
- NEU 8-3
- SPR
- DWK P4-1
- WLK P4-1
- NEU P4-1
- RED 2-4
- YEL 2-4
- GRN 2-4
- NEU 2-4
- YLTA 2-4
- GLTA 2-4
- SPR
- RED 8-2
- YEL 8-2
- GRN 8-2
- NEU 8-2
- RED 8-1
- YEL 8-1
- GRN 8-1
- NEU 8-1
- SPR
- DWK P6-1
- WLK P6-1
- NEU P6-1
- SPR
- DWK P8-2
- WLK P8-2
- NEU P8-2
- SPR
- 01&6 EVP LIGHT
- NEU
- SPR
- 08 EVP LIGHT
- NEU
- SPR
- 01&6 DETECTOR
- EVP
- 08
- EVP
- DETECTOR
- 01&6
- VIDEO
- DETECTOR
- 08
- VIDEO
- DETECTOR
- PB4-1
- PB8-2
- PB8-2
- PB6-1
- DWK P6-2
- NEU P6-2
- WLK P6-2
- INS. GRD.
- INS. GRD.
- SIGNAL SERVICE
- 2-1/C#6
- 2
- 4
- INTERCONNECT TO SOUTHLAWN DRIVE

No.	Date	Revisions	App.

DRAWING NAME	CRD-TSIG09.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

Kimley-Horn and Associates, Inc.
 2550 UNIVERSITY AVE. WEST, SUITE 340N
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 845-4197
 FAX. NO. (651) 845-3116

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

Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709

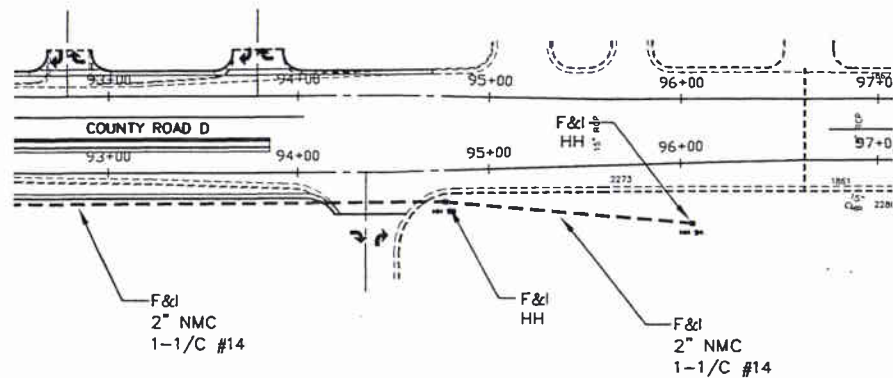
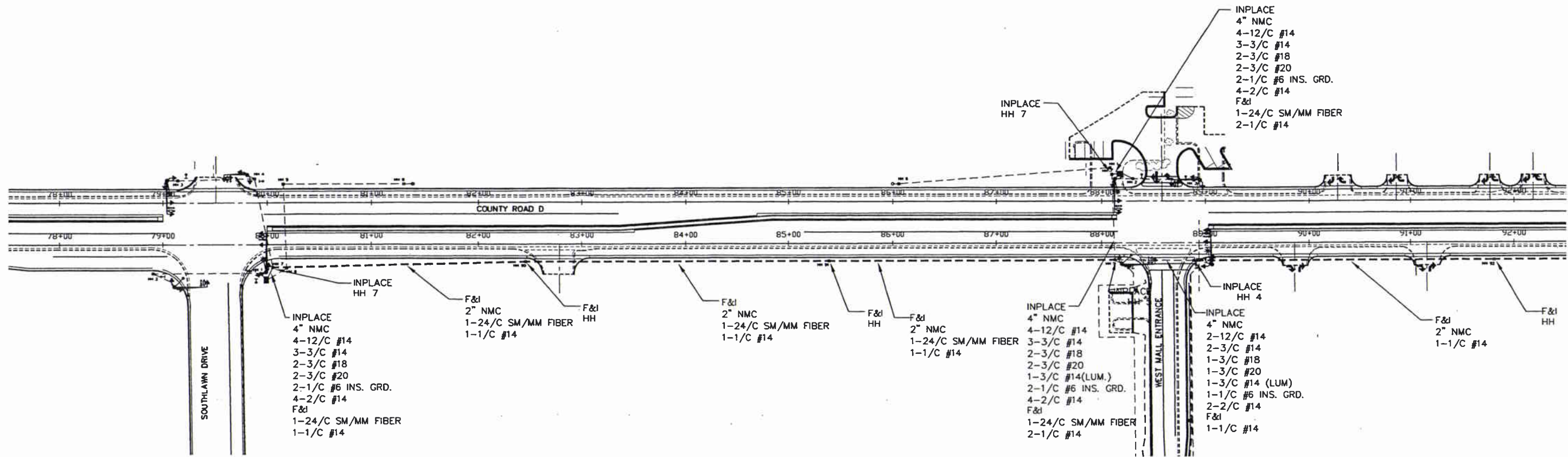
RAMSEY COUNTY

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS

TRAFFIC SIGNALS (SYSTEM "B")
 FIELD WIRING DIAGRAM
 COUNTY ROAD DWEST MALL ACCESS

CITY PROJECT	08-13	SHEET NO. 57
COUNTY PROJECT	P-3202	
S.P.	62-619-30	104
S.P.	62-596-04	



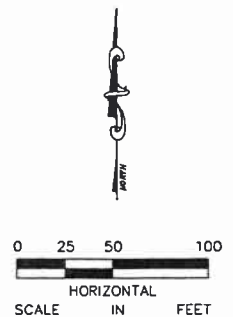
NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002). THIS IS REQUIRED BY MINNESOTA STATUTE 2160.
2. UNLESS NOTED AS INPLACE, ALL INTERCONNECT SYSTEMS SHALL BE FURNISHED AND INSTALLED.
3. THE LOCATION OF THE CONDUIT ROUTE SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
4. INTERCONNECT, LISTED AS 1-24/C SM/MM FIBER, SHALL BE 12 MULTIMODE, 12 SINGLEMODE FIBER OPTIC CABLE FROM MN/DOT APPROVED PRODUCT LIST.

**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011



K:\TWC_Civil\Count\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-TSIG11.dwg September 22, 2009 - 8:43am

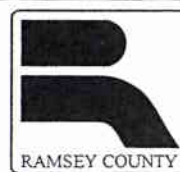
No.	Date	Revisions	App.

DRAWING NAME	CRD-TSIG11.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709

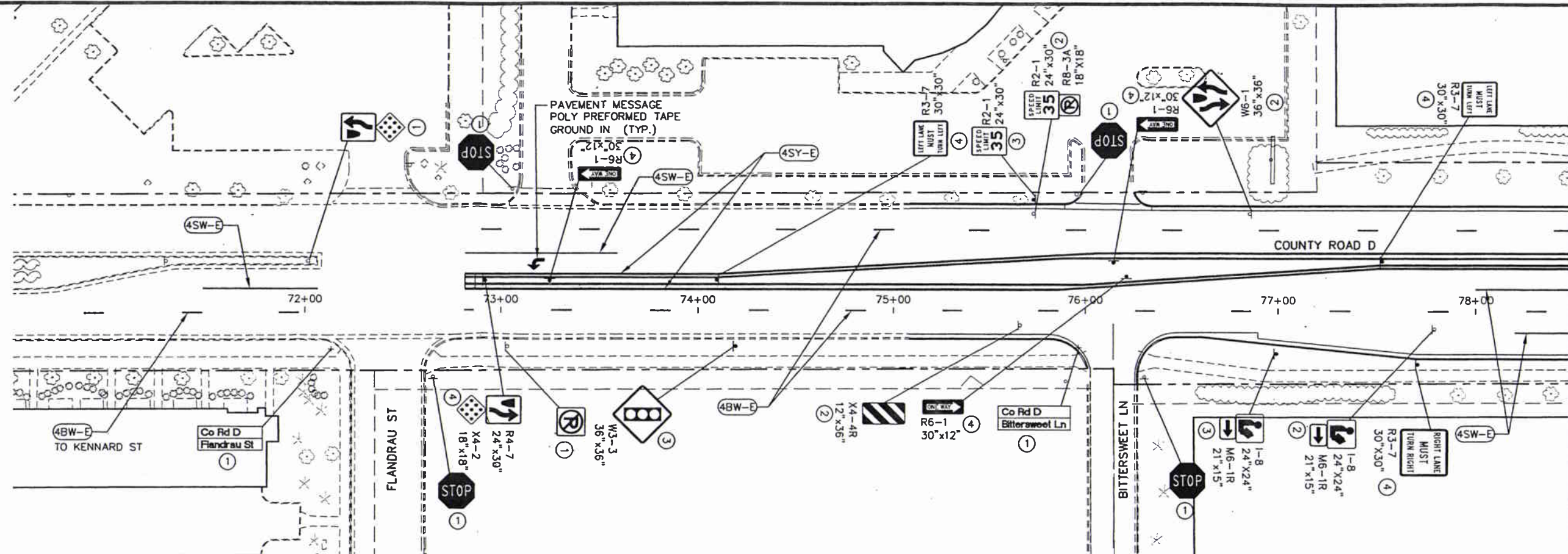


City of Maplewood, Minnesota
Department of Public Works
Engineering Division

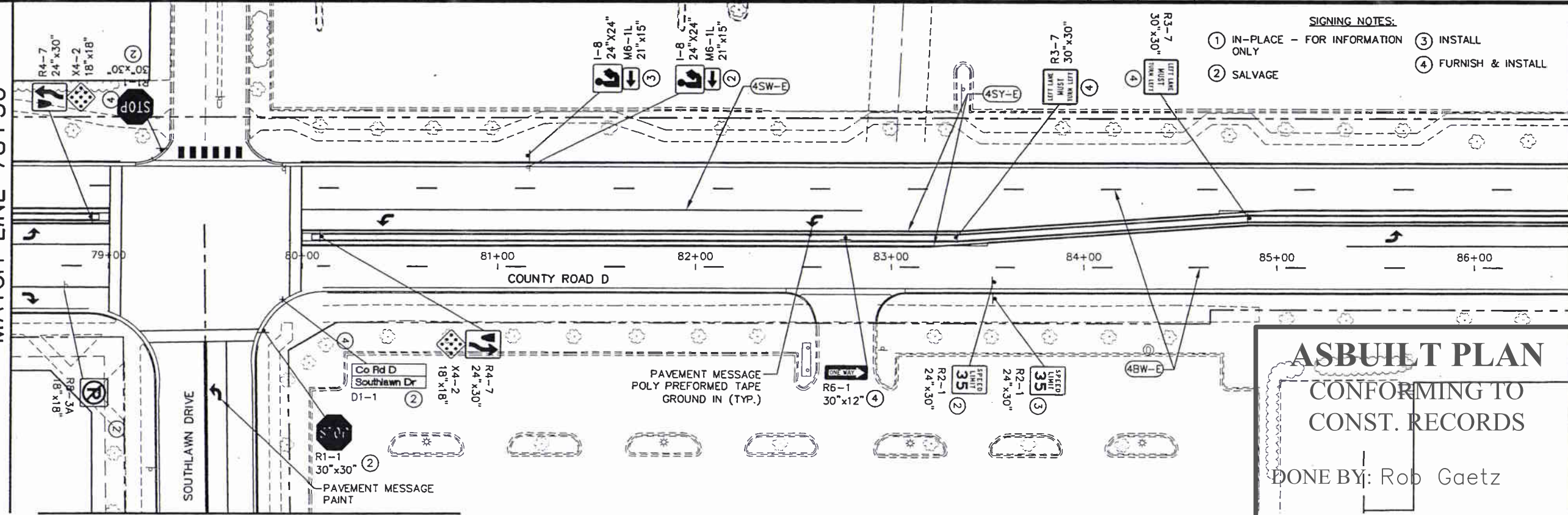
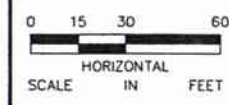
RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
TRAFFIC SIGNAL SYSTEMS "A & B"
INTERCONNECT LAYOUT

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
59
104



MATCH LINE 78+50



MATCH LINE 78+50

MATCH LINE 86+50

- SIGNING NOTES:**
- ① IN-PLACE - FOR INFORMATION ONLY
 - ② SALVAGE
 - ③ INSTALL
 - ④ FURNISH & INSTALL

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS
 DONE BY: Rob Gaetz
 DATE: 1-27-2011

No.	Date	Revisions	App.

DRAWING NAME
CRD-SGN01.dwg

DESIGNED BY: BJB
 DRAWN BY: HMW
 CHECKED BY: BJB
 DATE: 08/07/09
 PROJECT NO. 160500029.2.101

2550 UNIVERSITY AVE. WEST, SUITE 345H
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 845-4197
 FAX. NO. (651) 845-5116

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

Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D EAST & WEST BOUND
 SIGNING AND
 STRIPING PLAN
 STA. 72+00 TO STA. 86+50

CITY PROJECT	08-13	SHEET NO. 60
COUNTY PROJECT	P-3202	
S.P.	62-619-30	104
S.P.	62-596-04	

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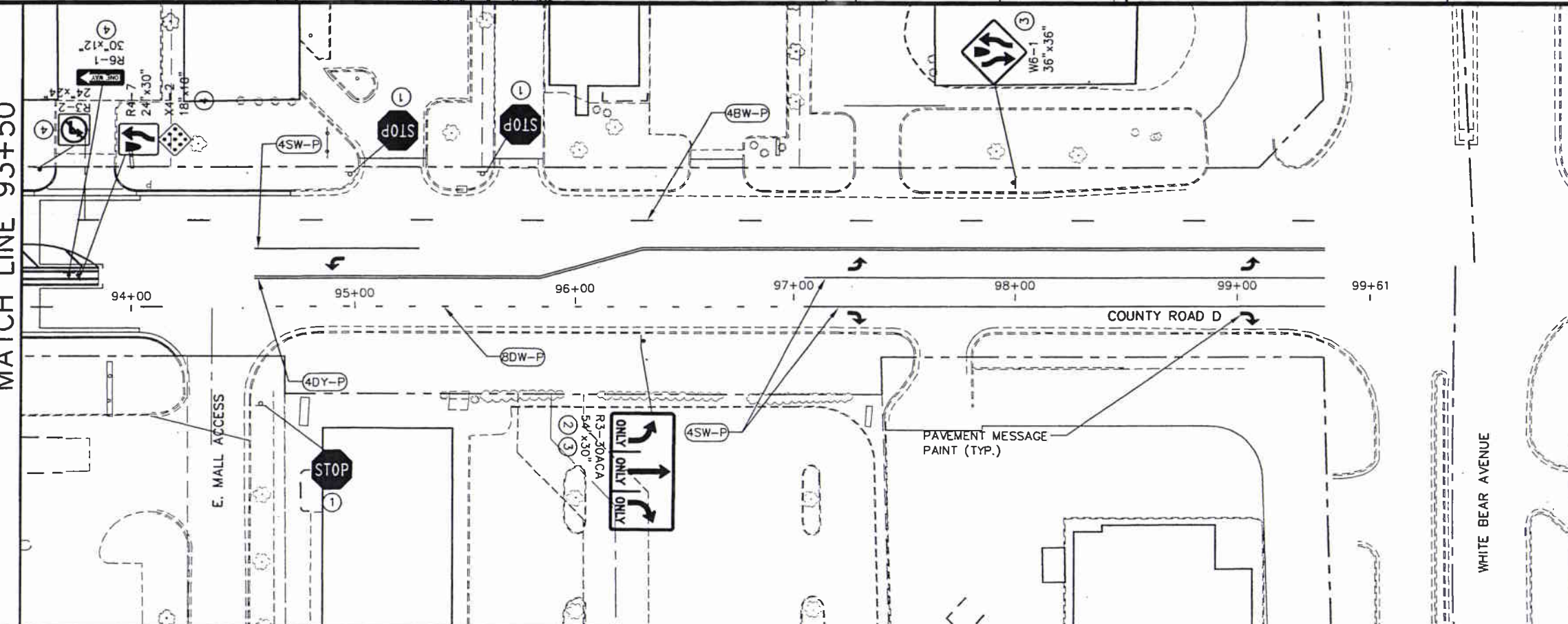
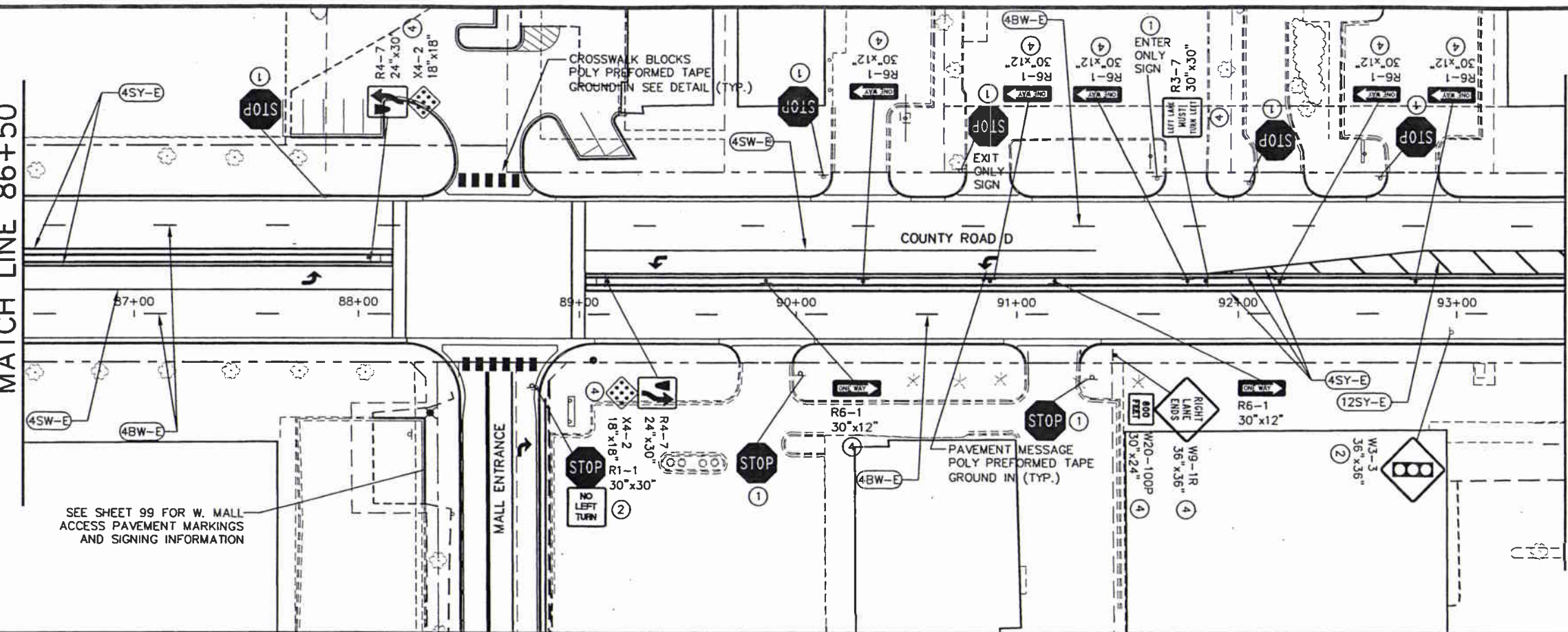
K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-SCN02.dwg September 22, 2009 - 8:46am

MATCH LINE 86+50

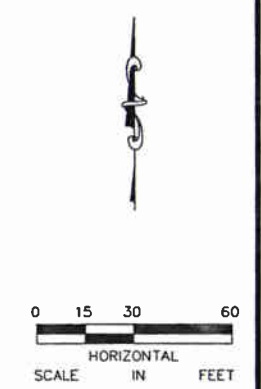
MATCH LINE 93+50

MATCH LINE 93+50

SEE SHEET 99 FOR W. MALL ACCESS PAVEMENT MARKINGS AND SIGNING INFORMATION



- SIGNING NOTES:
- ① IN-PLACE - FOR INFORMATION ONLY
 - ② SALVAGE
 - ③ INSTALL
 - ④ FURNISH & INSTALL




ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

No.	Date	Revisions	App.


DRAWING NAME: CRD-SCN02.dwg
 DESIGNED BY: BJB
 DRAWN BY: HMW
 CHECKED BY: BJB
 DATE: 08/07/09
 PROJECT NO. 160500029.2.101




Kimley-Horn and Associates, Inc.
 2250 UNIVERSITY AVE. WEST, SUITE 340N
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 845-4197
 FAX. NO. (651) 845-2116

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

Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709



RAMSEY COUNTY

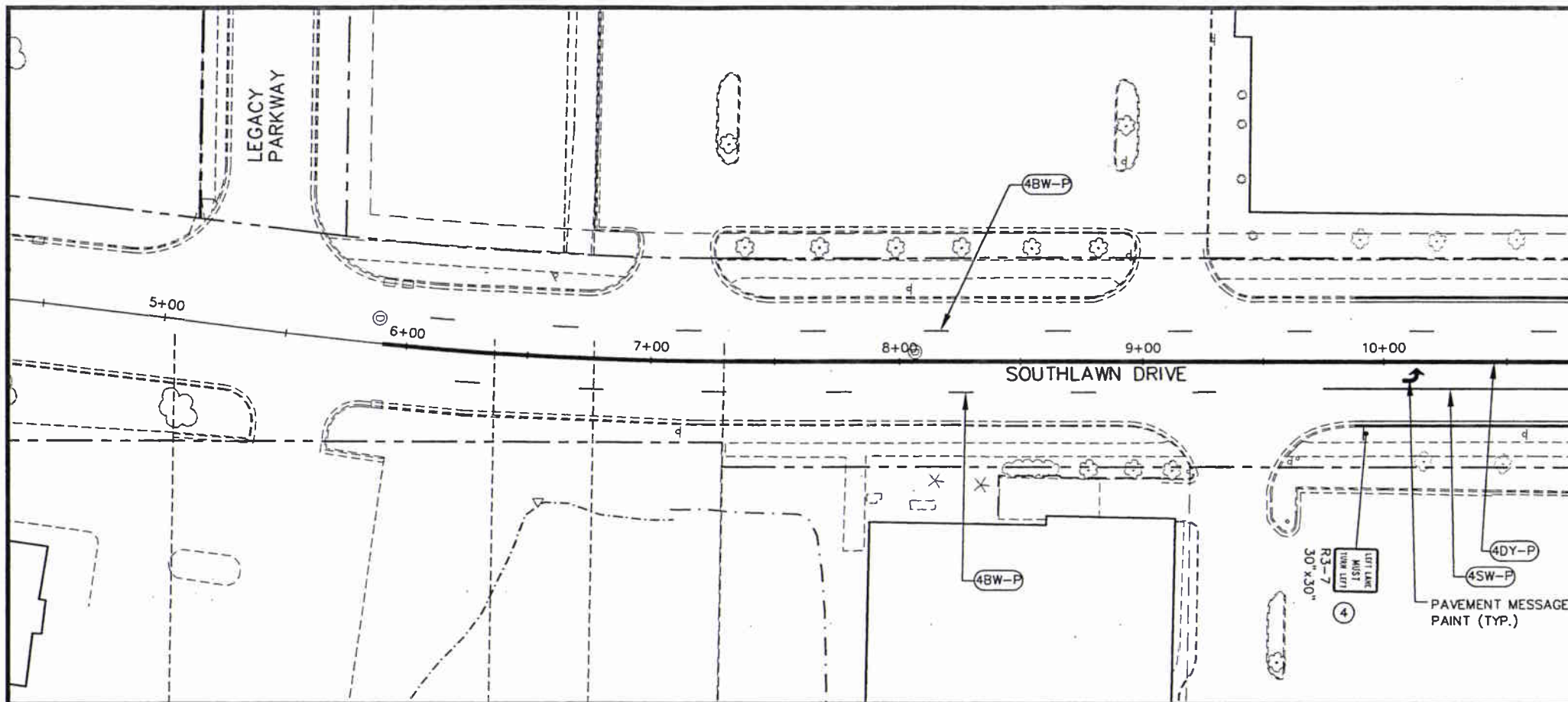


City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D EAST & WEST BOUND
 SIGNING &
 STRIPING PLAN
 STA. 86+50 TO STA. 102+50

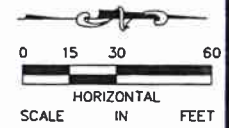
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 61
 104



MATCH LINE - SEE SHEET 60

- SIGNING NOTES:**
- ① IN-PLACE - FOR INFORMATION ONLY
 - ② SALVAGE
 - ③ INSTALL
 - ④ FURNISH & INSTALL



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011

No.	Date	Revisions	App.

<p>DRAWING NAME CRD-SGN03.dwg</p> <p>DESIGNED BY: BJB</p> <p>DRAWN BY: HMW</p> <p>CHECKED BY: BJB</p> <p>DATE: 08/07/09</p> <p>PROJECT NO.: 160500029.2.101</p>	<p>Kimley-Horn and Associates, Inc.</p> <p><small>2500 UNIVERSITY AVE. WEST, SUITE 340N ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-3116</small></p>	<p>I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.</p> <p style="text-align: center;"><i>Brandon J. Bourdon</i> BRANDON J. BOURDON</p> <p>DATE: 08/07/09 MN LIC. NO. 43709</p>
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<p>RAMSEY COUNTY</p>	<p><i>City of Maplewood, Minnesota</i> Department of Public Works Engineering Division</p>
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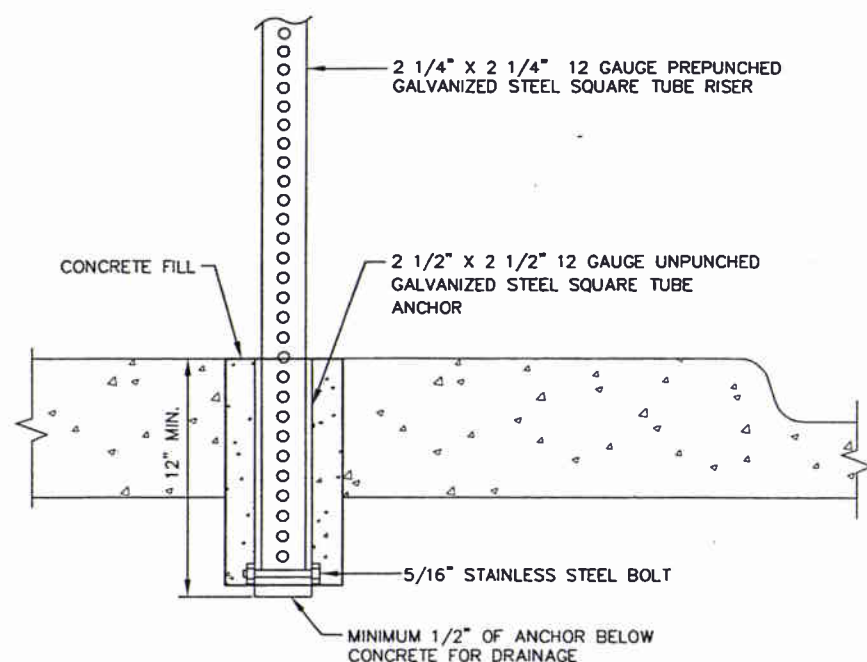
<p>RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS</p> <p>SOUTHLAWN DRIVE SIGNING & STRIPING PLAN STA. 4+50 TO STA. 12+06.42</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">CITY PROJECT</td> <td style="width: 50%;">08-13</td> </tr> <tr> <td>COUNTY PROJECT</td> <td>P-3202</td> </tr> <tr> <td>S.P.</td> <td>62-619-30</td> </tr> <tr> <td>S.P.</td> <td>62-596-04</td> </tr> </table>	CITY PROJECT	08-13	COUNTY PROJECT	P-3202	S.P.	62-619-30	S.P.	62-596-04	<p>SHEET NO.</p> <p style="font-size: 24px; font-weight: bold;">62</p> <hr style="width: 50%; margin: 0 auto;"/> <p style="font-size: 24px; font-weight: bold;">104</p>
CITY PROJECT	08-13									
COUNTY PROJECT	P-3202									
S.P.	62-619-30									
S.P.	62-596-04									

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RAMSEY COUNTY SIGN POST INSTALLATION

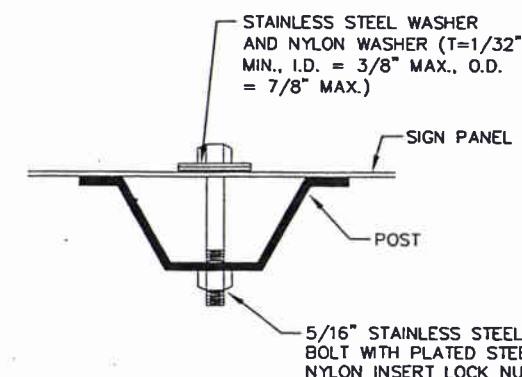
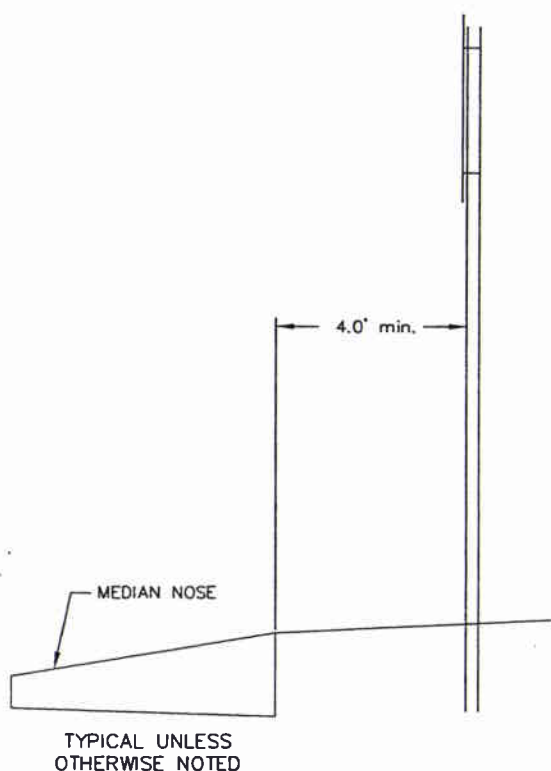
*ALL RAMSEY COUNTY SIGNS SHALL BE SINGLE POST UNLESS NOTED ON PLANSHEETS
 *DOUBLE POSTED SIGNS SHALL HAVE LATERAL AND KNEE BRACING AS SHOWN IN STRUCTURAL DETAILS SHEET
 *BREAKAWAY SIGN POST FOUNDATION AS SHOWN SHALL BE INCIDENTAL TO CONCRETE MEDIAN

TYPE C SIGNS, DELINEATORS & MARKERS IN CONCRETE

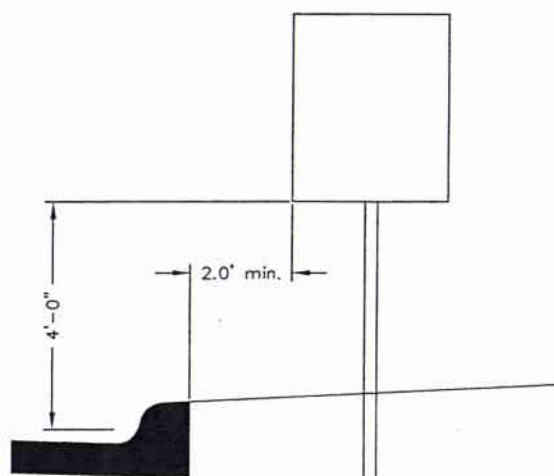


- NOTES:**
1. DRILL AN 8" DIAMETER HOLE THE FULL DEPTH OF THE ANCHOR.
 2. DRILL 3/8" HOLES ON OPPOSITE SIDES OF THE UNPUNCHED GALVANIZED STEEL SQUARE TUBE ANCHOR, APPROX. 1" FROM THE BOTTOM OF THE ANCHOR. INSERT A 5/16" STAINLESS STEEL BOLT THROUGH THE HOLES AND SECURE WITH A STAINLESS STEEL LOCK NUT 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.

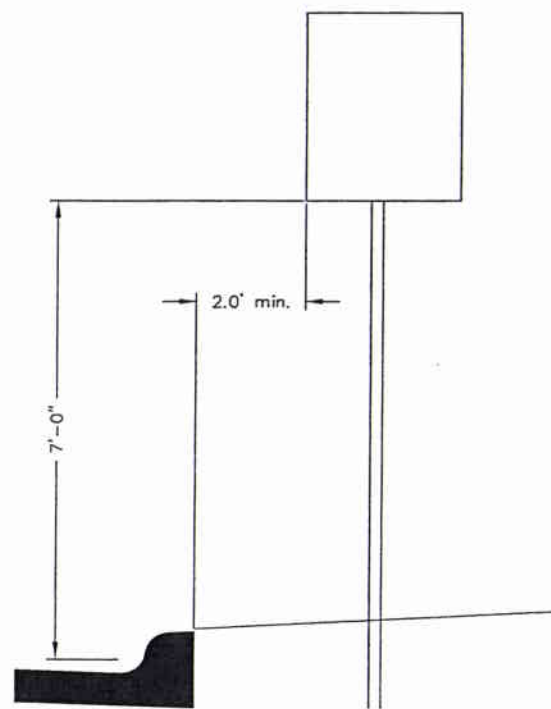
TYPE "C" POST (GROUND INSTALLATION)



"U" POST MOUNTING TYPE "C" SIGNS



W1-6, W1-7, W1-8, R6-1, X4-2, X4-4, X4-5, X4-6, X4-11 SHALL HAVE 4' MOUNTING HEIGHT TO BOTTOM OF SIGN



TYPICAL UNLESS OTHERWISE NOTED AT LEFT

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

NOTES:

1. USE 3# RISER STUB POSTS, WITH 2# RISER POSTS, ALL SHALL CONFORM TO MN/DOT SPECIFICATION 3401.
2. MOUNTING (PUNCHING CODE) FOR TYPE "C" SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
3. ALL RISER (VERTICAL) "U" POSTS SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7 FEET LONG.
4. USE STAINLESS STEEL 5/16" BOLTS AND WASHERS WITH PLATED STEEL NYLON INSERT LOCK NUTS AS SHOWN.
5. STAINLESS STEEL WASHER WITH THE SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
6. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - APRIL 1995."
7. ALL TRAFFIC CONTROL DEVICES SHALL HAVE WIDE ANGLE PRISMATIC RETROREFLECTIVE SHEETING FOR VISUAL PERFORMANCE (V.I.P.)

K:\TWC\Civil\County\RAMSEY\WHITE-BEAR\DWG\PLAN-SHEETS\COUNTY_ROAD_D\CARD-SGN10.dwg September 22, 2009 - 8:48am

No.	Date	Revisions	App.	DRAWING NAME
				CRD-SGN10.dwg
				DESIGNED BY: BJB
				DRAWN BY: HMW
				CHECKED BY: BJB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101

Kimley-Horn and Associates, Inc.
 2500 UNIVERSITY AVE. WEST, SUITE 340M
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4197
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Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 SIGNING DETAILS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 63
 104

TRAFFIC CONTROL NOTES AND GUIDELINES

GENERAL INFORMATION:

1. TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MN MUTCD), INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
2. REMOVE CONFLICTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS AS DIRECTED BY ENGINEER.
3. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THE TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED.
4. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER IN FIELD.
5. ALL DISTANCES ARE APPROXIMATE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MN MUTCD.
7. 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.
8. SIGN INSTALLATIONS SHALL NOT OBSTRUCT EXISTING SIGNS.
9. THE TRAFFIC CONTROL AND PHASING PLANS DEPICT A GENERAL PLAN FOR MAINTAINING TRAFFIC. ADDITIONAL TRAFFIC CONTROL WILL BE REQUIRED TO COMPLETE SPECIFIC PORTIONS OF THE PROJECT. ADDITIONAL TRAFFIC CONTROL REQUIRED BY THE PROJECT, BUT NOT DEPICTED ON THESE PLANS, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR TRAFFIC CONTROL.

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 INSTALLED, THEY SHALL BE MOUNTED ON POSTS DRIVEN INTO THE GROUND AT THE PROPER HEIGHT AND LATERAL OFFSET AS DETAILED IN THE MN MUTCD. IF THIS IS NOT POSSIBLE THEY WILL BE MOUNTED ON PORTABLE SUPPORTS AS APPROVED BY THE ENGINEER. WHEN THE SIGN PANELS ARE REMOVED, THE SIGN POSTS SHALL 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 SIGNS SHALL BE MADE OF HIGH PERFORMANCE FLUORESCENT SIGN SHEETING OR AN APPROVED SUBSTITUTE.
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 MARKINGS:

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.
3. TAPE SHALL BE USED FOR TEMPORARY STRIPING ON CONCRETE AND WEARING COURSES THAT ARE TO REMAIN IN-PLACE. PAINT SHALL BE USED ON BITUMINOUS SURFACES THAT WILL RECEIVE A FINAL LIFT OF ASPHALT OR THAT WILL BE REMOVED DURING A LATER PHASE OF WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND INSTALLATION OF TEMPORARY AND FINAL STRIPING.

PHASING NOTES:

1. ALL EXISTING TRAFFIC MOVEMENTS ON COUNTY ROAD TO AND FROM CONNECTING PUBLIC ROADS TO MAIN STREET SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE NOTED IN THE TRAFFIC CONTROL PLANS.
2. ACCESS TO BUSINESSES SHALL BE MAINTAINED AT ALL TIMES. THE ENGINEER MAY DIRECT THE CONTRACTOR TO INSTALL SPECIAL CONSTRUCTION SIGNS TO DESIGNATE ACCESS POINTS. WHERE A BUSINESS IS SERVED BY MORE THAN ONE ENTRANCE, THE CONTRACTOR MAY CLOSE ONLY ONE ENTRANCE TO A PROPERTY AT A TIME.
3. THE CONTRACTOR SHALL MAINTAIN TWO LANES OF TRAFFIC (ONE LANE IN EACH DIRECTION) AND THE TURN LANES INDICATED ON THE PLANS AT ALL TIMES DURING CONSTRUCTION. MINIMUM LANE WIDTH FOR THROUGH AND TURN LANES SHALL BE AT LEAST 11'.

CONSTRUCTION SCHEDULE:

1. THE PROJECT SHALL BE CONSTRUCTED IN 4 MAJOR PHASES. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL LAYOUTS TO THE ENGINEER FOR REVIEW AND APPROVAL AT LEAST FIVE (5) WORKING DAYS PRIOR TO CONSTRUCTION. ONE 11 FOOT WIDE LANE SHALL BE PROVIDED IN EACH DIRECTION OF TRAVEL ON COUNTY ROAD D AT ALL TIMES.
2. PHASE 0 MAY INCLUDE UTILITY RELOCATIONS, AND SHARED ENTRANCE CONSTRUCTION (AAMCO / STRIP MALL AT STA. 85+50). PHASE 0 UTILITY WORK MAY INCLUDE TRENCHING FOR HYDRANT RELOCATIONS, WATER SERVICE CUTOFFS AND VALVE CUT-INS, AND COORDINATION WITH SAINT PAUL REGIONAL WATER SERVICES.
3. PHASE 1 INCLUDES CONSTRUCTION OF STORM SEWER CATCH BASINS AND MANHOLES AND STORM SEWER PIPE ON THE SOUTH SIDE OF COUNTY ROAD D, CONCRETE PAVING OF THE EASTBOUND TRAFFIC LANES, AND CONCRETE CURB AND GUTTER ON THE SOUTH SIDE OF COUNTY ROAD D. TRAFFIC WILL BE SHIFTED TO THE EXISTING WESTBOUND LANES. SOUTHLAWN DRIVE AND THE MALL ENTRANCE WILL BE CONSTRUCTED IN PHASE 1. SOUTHLAWN DRIVE AND MALL ENTRANCE MAY EACH BE CLOSED FOR UP TO 30 DAYS AND TRAFFIC DETOURED. HOWEVER, SOUTHLAWN DRIVE AND MACY'S DRIVEWAY MAY NOT BE CLOSED SIMULTANEOUSLY.
4. PHASE 2 INCLUDES CONSTRUCTION OF STORM SEWER CATCH BASINS AND MANHOLES AND STORM SEWER PIPE ON THE NORTH SIDE OF COUNTY ROAD D, CONCRETE PAVING OF THE WESTBOUND TRAFFIC LANES, AND CONCRETE CURB AND GUTTER ON THE NORTH SIDE OF COUNTY ROAD D. TRAFFIC WILL BE SHIFTED TO THE NEW EASTBOUND LANES.

CONSTRUCTION SCHEDULE (CONT.):

5. PHASE 3 INCLUDES SANITARY MANHOLE ADJUSTMENTS AND RECONSTRUCTS, MEDIAN CONCRETE CURB AND GUTTER, AND MEDIAN CONSTRUCTION. TRAFFIC WILL BE SHIFTED TO THE FAR NORTH WESTBOUND AND SOUTH EASTBOUND LANES TO COMPLETE MEDIAN WORK.
6. ALL WORK, INCLUDING FINAL CLEAN UP, SHALL BE COMPLETED BY OCTOBER 15, 2010. IN 2009 THE CONTRACTOR SHALL ANTICIPATE SOME UTILITY RELOCATION CONFLICTS AND SHALL COORDINATE THE WORK AS PER MN/DOT 1505.
7. THE CONTRACTOR MAY CLOSE PORTIONS OF THE NORTH OR SOUTH APPROACHES TO COUNTY ROAD D AT THE SOUTHLAWN DRIVE INTERSECTION FOR UP TO 7 CONSECUTIVE DAYS FOR CONCRETE PAVEMENT CONSTRUCTION AS LONG AS ONE 11' LANE IN EACH DIRECTION IS MAINTAINED AND OPPOSING TURNING MOVEMENT CONFLICTS DO NOT ARISE UNDER THE MODIFIED INTERSECTION GEOMETRY.
8. ACCESS TO BUSINESSES ON THE NORTH AND SOUTH SIDES OF COUNTY ROAD D SHALL BE MAINTAINED AT ALL TIMES. ALL ACCESSES TO BUSINESSES SHALL BE MAINTAINED UNLESS THE CONDITIONS OF SECTION S-5.1.C.2 ARE SATISFIED.

CONSTRUCTION INFORMATION SIGNING:

1. THE CONTRACTOR SHALL USE CONSTRUCTION INFORMATION SIGNING AS SHOWN IN THE PLAN AND WHICH ARE TO BE USED AS FOLLOWS:

G20-X2 WORK ZONE ADVANCE NOTICE SIGNS WITH THE CORRECT STARTING DATE DISPLAYED BEFORE WORK BEGINS. ONCE WORK BEGINS, THE START DATE LEGEND SHALL BE COVERED BY THE SUGGESTED PLAQUE CONTAINED IN THIS PLAN. IF NO ALTERNATE MESSAGE IS SUGGESTED OR IF DIRECTED BY THE PROJECT ENGINEER, THE CORRECT ESTIMATED FINISH DATE, MONTH, OR SEASON SHALL BE DISPLAYED. THESE SIGNS WILL NOT BE MEASURED SEPERATELY AND SHALL BE INCLUSIVE TO THE TRAFFIC CONTROL.

G20-X2 SIGNING NOT VISIBLE TO THE MOTORING PUBLIC ONCE WORK BEGINS WILL BE MOVED BY THE CONTRACTOR TO A SITE IN ADVANCE OF THE WORK ZONE AS DIRECTED BY THE PLAN OR PROJECT ENGINEER.

2. TWO G20-X2 SIGNS SHALL BE INSTALLED ON COUNTY ROAD D; ONE SIGN FOR EASTBOUND TRAFFIC AND ONE SIGN FOR WESTBOUND TRAFFIC. THE SIGNS SHALL BE INSTALLED NEAR THE LIMITS OF CONSTRUCTION AT A LOCATION APPROVED BY THE ENGINEER.
3. TWO PROJECT FUNDING SOURCE SIGNS AS DETAILED ON SHEET 66 SHALL BE INSTALLED ON COUNTY ROAD D; ONE SIGN FOR EASTBOUND TRAFFIC AND ONE SIGN FOR WESTBOUND TRAFFIC. THE SIGNS SHALL BE INSTALLED NEAR THE LIMITS OF CONSTRUCTION AT A LOCATION APPROVED BY THE ENGINEER. THESE SIGNS WILL NOT BE MEASURED SEPERATELY AND SHALL BE INCLUSIVE TO TRAFFIC CONTROL. CONTACT THE ENGINEER FOR THE LOGO ARTWORK.

TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	TRAFFIC CONTROL SIGN
	TYPE III BARRICADE
	REFLECTIVE DRUM
	TRAFFIC FLOW
	WORK AREA
	TYPE A FLASHING WARNING LIGHT

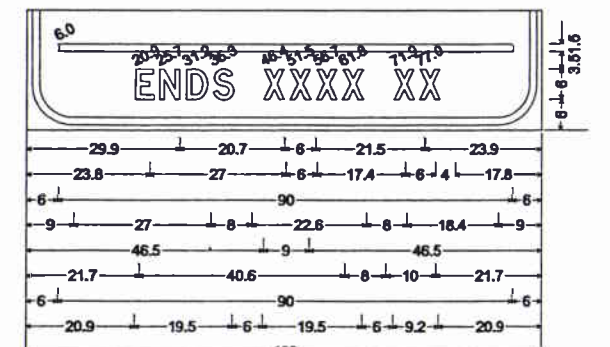
STRIPING LEGEND

	4" SOLID LINE WHITE - PAINT
	4" SOLID LINE YELLOW - PAINT
	4" DOUBLE SOLID LINE YELLOW - PAINT
	12" SOLID LINE YELLOW - PAINT
	4" SOLID LINE WHITE - REMOVABLE POLYPREFORM TAPE
	4" SOLID LINE YELLOW - REMOVABLE POLYPREFORM TAPE
	4" DOUBLE SOLID LINE YELLOW - REMOVABLE POLYPREFORM TAPE

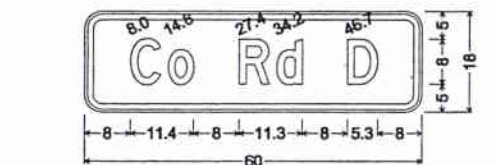
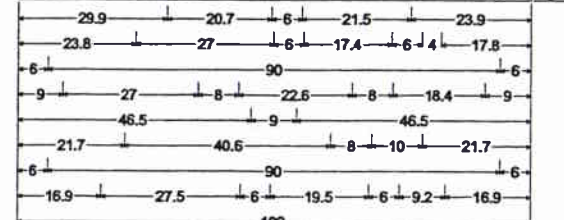
SIGN LEGEND							
ITEM	SIGN NO.	COLOR	SIZE	ITEM	SIGN NO.	COLOR	SIZE
	W6-3	BLACK ON ORANGE	48 x 48		W20-1	BLACK ON ORANGE	48 x 48
	W1-3R	BLACK ON ORANGE	30 x 30		W21-X5(LEFT)	BLACK ON ORANGE	48 x 48
	W1-6R	BLACK ON ORANGE	48 x 24		W21-X5(RIGHT)	BLACK ON ORANGE	48 x 48
	R3-7L	BLACK ON WHITE	30 x 30		W1-4(RIGHT)	BLACK ON ORANGE	30 x 30
	W1-3L	BLACK ON ORANGE	30 x 30		W1-4(LEFT)	BLACK ON ORANGE	30 x 30
	R3-2	BLACK & RED ON WHITE	24 x 24		R4-7	BLACK ON WHITE	24 x 30
	TYPE III BARRICADE	WHITE ON ORANGE			W1-6L	BLACK ON ORANGE	48 x 24
	TYPE III BARRICADE	WHITE ON ORANGE			D1-X2	BLACK ON ORANGE	60 x 18
	TYPE A FLASHER				R30-ACA	BLACK ON WHITE	54 x 30

INSTALL 14 DAYS PRIOR TO JOB STARTING

INSTALL AFTER JOB BEGINS



G20-X2 9.0" Radius, 1.5" Border, 1.0" Indent, Black on Orange; "ROAD WORK" D; "County Road D" D; "White Bear Ave" D; "TO" D; "Kennard St" D; "BEGINS" D; "XXXX XX" D;



D3-X1_60x18; 3.0" Radius, 1.0" Border, 0.5" Indent, Black on Orange; "Co Rd D" D;

SIGN PANEL LAYOUTS

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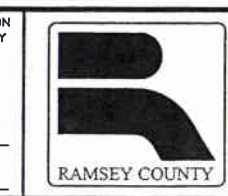
CONST. RECORDS

No.	Date	Revisions	App.
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME
CRD-TRF20.dwg
DESIGNED BY: BJB
DRAWN BY: HMW
CHECKED BY: BJB
DATE: 08/07/09
PROJECT NO. 160500029.2.101

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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709

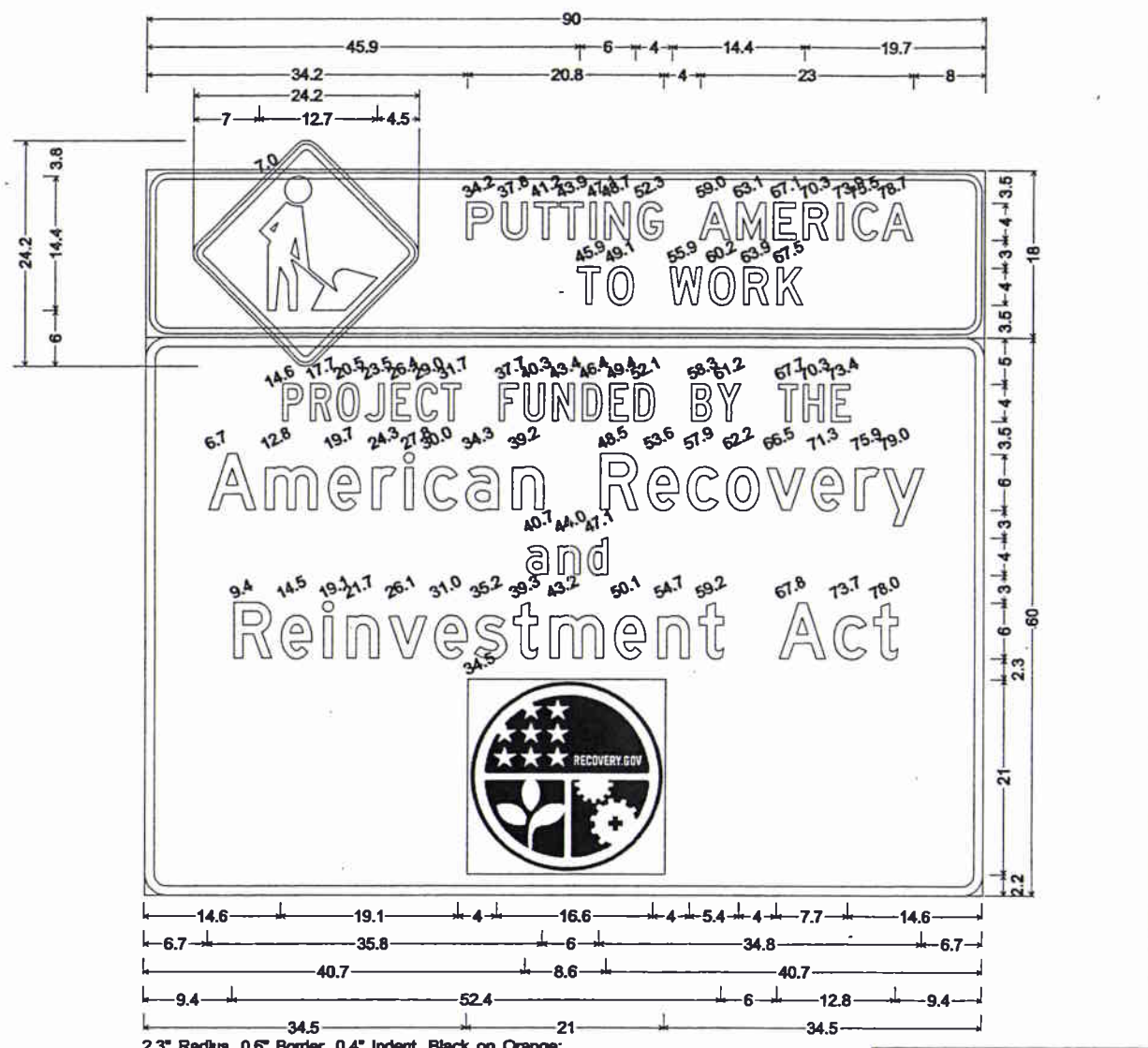


City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D IMPROVEMENTS

TRAFFIC CONTROL NOTES AND LEGENDS

CITY PROJECT	08-13	SHEET NO.
COUNTY PROJECT	P-3202	65
S.P.	62-619-30	
S.P.	62-596-04	104



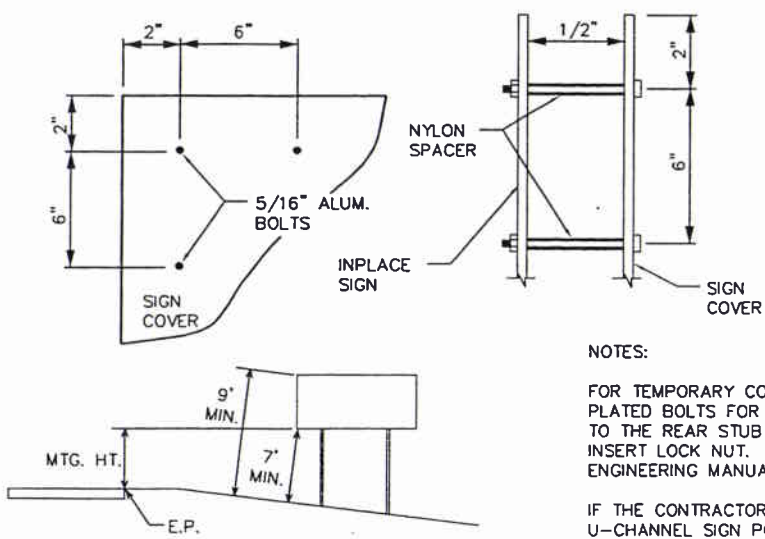
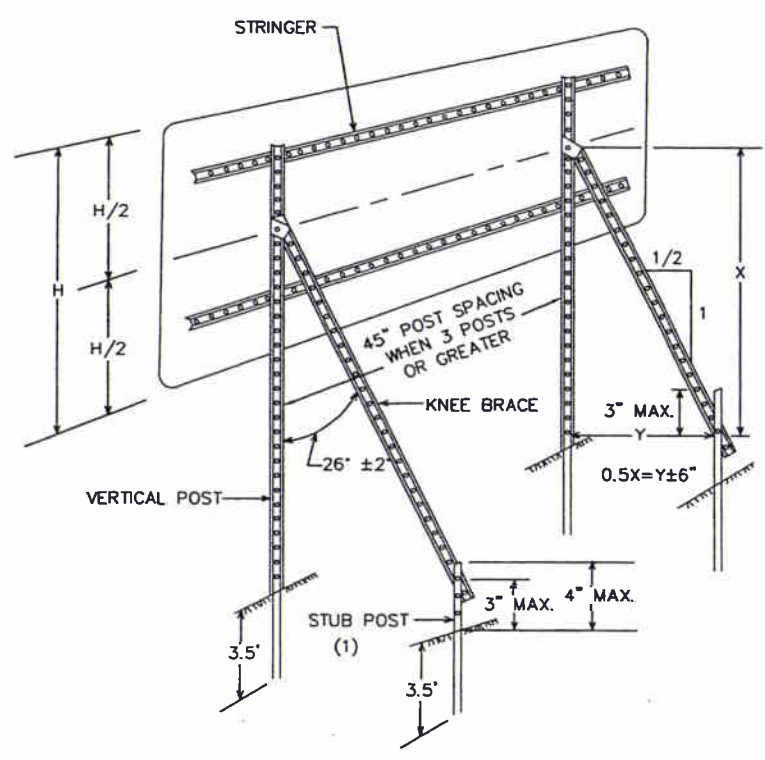
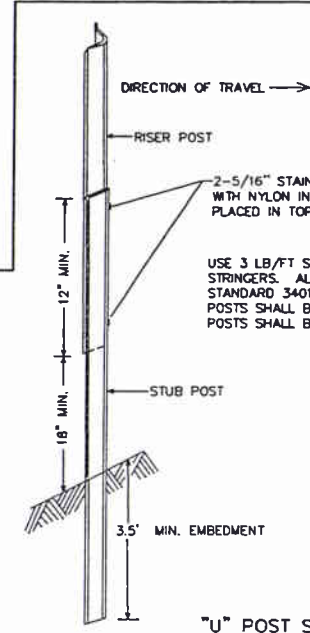
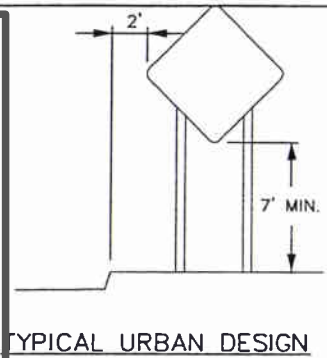
2.3" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
 "PUTTING AMERICA" D; "TO WORK" D;
 2.3" Radius, 1.0" Border, White on Green;
 "PROJECT FUNDED BY THE" C; "American Recovery" D; "and" D; "Reinvestment Act" D;
 W21-1a_18x18;
 18.0" across sides 1.5" Radius,
 0.6" Border, 0.4" Indent, Black on Orange;

SIGN PANEL LAYOUTS

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



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

SIGN DATA

SIGNS TO BE INSTALLED ON DRIVEN U-POSTS SHALL BE INSTALLED IN ACCORDANCE WITH TABLE 1 OR TABLE 2 BELOW. SIGN PANELS SHALL BE INSTALLED ON SIGN STRUCTURES TO MEET THE MINIMUM 5 FEET DEPICTED ON THE TYPICAL RURAL DESIGN DETAIL, THE 7 FEET DEPICTED ON THE TYPICAL URBAN DESIGN DETAIL, OR MINIMUM 7 AND 9 FEET DEPICTED ON THE TYPICAL MOUNTING DETAIL ON THIS SHEET.

TABLE 1

STANDARD CONSTRUCTION SIGNS IN MN/DOT STANDARD SIGNS MANUAL

PANEL SIZE (IN.)	POSTS			
	NO. & TYPE	SPACING (IN.)	KNEE BRACES QUANT.	LENGTH (FT.)
24 x 24	2-U	18	0	13
30 x 24	2-U	18	0	13
36 x 30	2-U	24	0	13
36 x 36	2-U	18	0	14
42 x 36	2-U	30	0	14
48 x 48	2-U	30	0	15
60 x 60	2-U	42	1	16
72 x 72	2-U	42	2	17
96 x 54	2-U	54	2	16
168 x 132	4-U	48	4	20

GENERAL NOTES:
 1. POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICE.
 2. SEE STANDARD SIGNS MANUAL FOR PUNCHING HOLES.

TABLE 2

SPECIAL DESIGN CONSTRUCTION SIGNS

PANEL SIZE		POSTS			
LENGTH (IN.)	HEIGHT (IN.)	NO. & TYPE	SPACING (IN.)	KNEE BRACES QUANT.	LENGTH (FT.)
54-96	78	2-U	42	2	20
102-138	78	3-U	45	3	20
144-180	78	4-U	45	4	20

NOTES:

FOR TEMPORARY CONSTRUCTION SIGN FRAMING, THE CONTRACTOR MAY USE GRADE 5 ZINC PLATED BOLTS FOR ALL BOLTED CONNECTIONS, EXCEPT FOR THE KNEE BRACE CONNECTION TO THE REAR STUB POST, WHICH SHALL UTILIZE A 5/16 INCH STAINLESS STEEL BOLT AND NYLON INSERT LOCK NUT. ADDITIONAL SIGN FRAMING DETAILS CAN BE FOUND IN THE TRAFFIC ENGINEERING MANUAL PART 6.

IF THE CONTRACTOR ELECTS TO USE SOME OTHER TYPE OF SIGN SUPPORT (OTHER THAN U-CHANNEL SIGN POSTS) FOR MOUNTING CONSTRUCTION SIGNS, DETAILS OF THE PROPOSED SIGN STRUCTURE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE SIGN STRUCTURE COMPONENTS. ANY SIGN STRUCTURE TO BE SUBMITTED TO THE ENGINEER SHALL BE AN FHWA ACCEPTED BREAKAWAY SIGN SUPPORT. SIGN STRUCTURE SHALL ALSO BE APPROVED FOR 90 MPH WIND LOAD.

SIGNS SHOWN TO BE COVERED SHALL BE COVERED WITH THE SAME COLOR AS THE SIGN BACKGROUND. THE CONTRACTOR SHALL INSTALL COVERS OR ADDITIONAL SIGNS USING A MINIMUM 1/2" NYLON SPACER BETWEEN THE INPLACE SIGN AND THE COVERING MATERIAL. HOLES WILL BE DRILLED IN THE COVER AND THE INPLACE SIGN AND SHALL BE INSTALLED IN ACCORDANCE TO THE SIGN PANEL DETAIL. SPACERS ARE REQUIRED. MID-PANEL SPACING SHALL BE NO GREATER THAN 24".

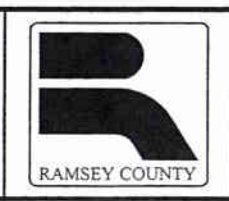
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No.	Date	Revisions	App.

Kimley-Horn and Associates, Inc.
 2550 UNIVERSITY AVE. WEST, SUITE 300H
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 845-1187
 FAX. NO. (651) 845-5116

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

Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS

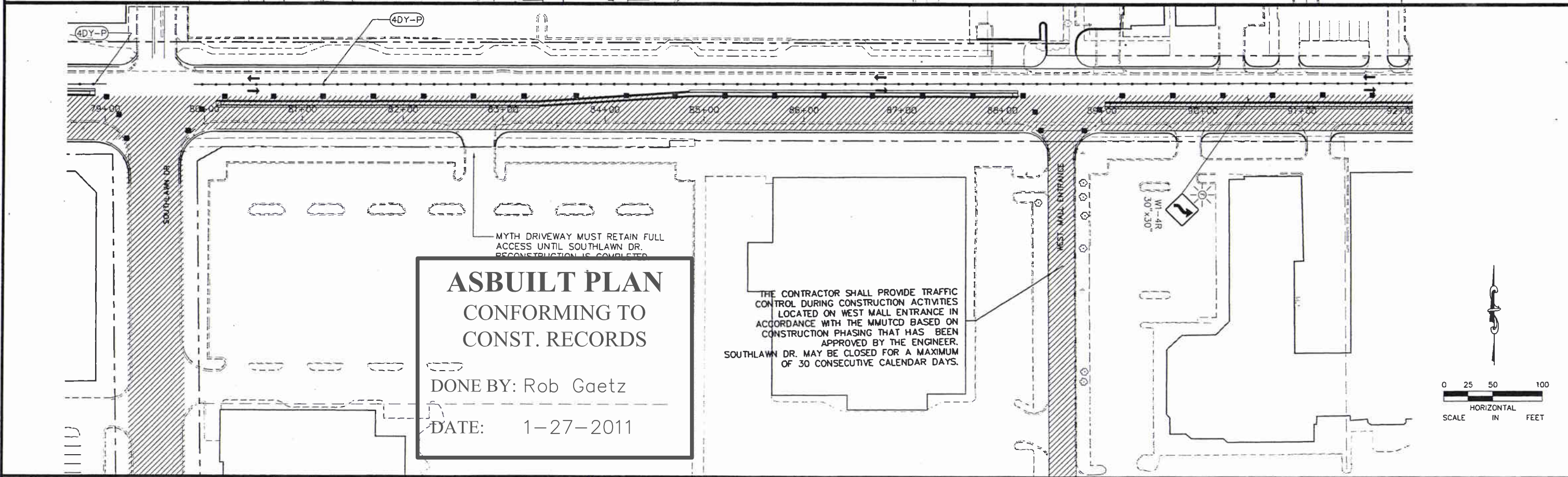
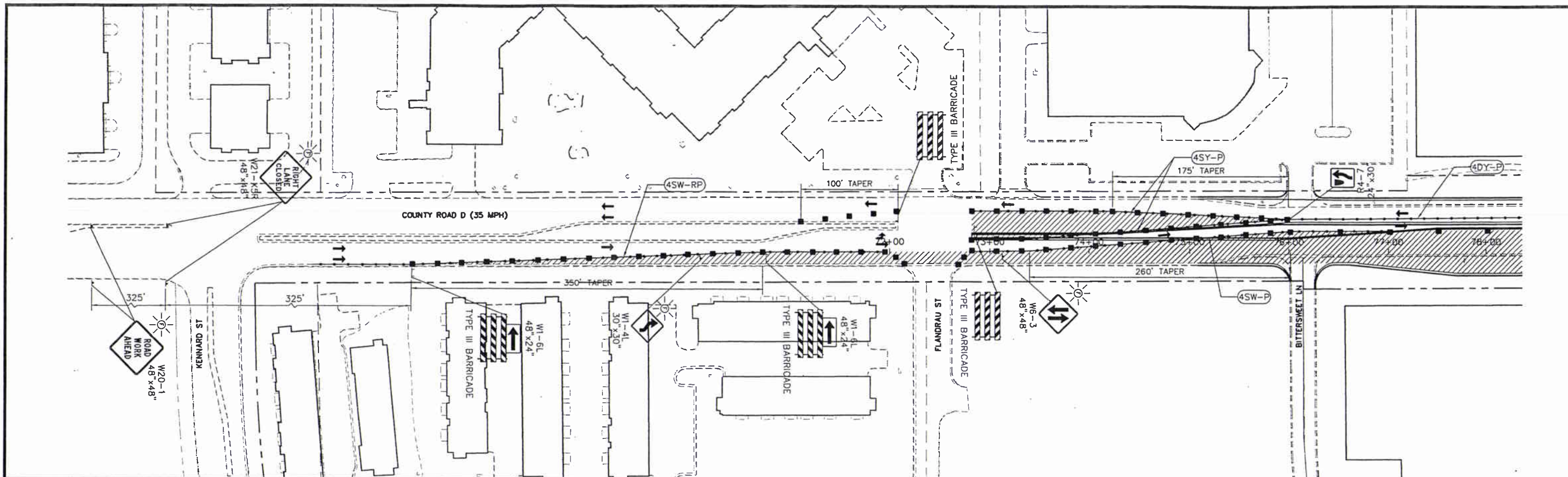
TRAFFIC CONTROL DETAILS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.:	62-619-30
S.P.:	62-596-04

SHEET NO.
66

104

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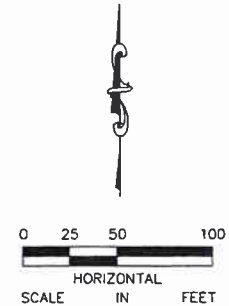


**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011

THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DURING CONSTRUCTION ACTIVITIES LOCATED ON WEST MALL ENTRANCE IN ACCORDANCE WITH THE MMUTCD BASED ON CONSTRUCTION PHASING THAT HAS BEEN APPROVED BY THE ENGINEER. SOUTHLAWN DR. MAY BE CLOSED FOR A MAXIMUM OF 30 CONSECUTIVE CALENDAR DAYS.



No.	Date	Revisions	App.

DRAWING NAME
CRD-TRF03.dwg

DESIGNED BY: BJB

DRAWN BY: HMW

CHECKED BY: BJB

DATE: 08/07/09

PROJECT NO. 16050029.2.101

**Kimley-Horn
and Associates, Inc.**

2550 UNIVERSITY AVE. WEST, SUITE 343H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX NO. (651) 645-5116

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

Brandon J. Bourdon
BRANDON J. BOURDON

DATE: 08/07/09 MN LIC. NO. 43709



*City of Maplewood, Minnesota
Department of Public Works
Engineering Division*

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

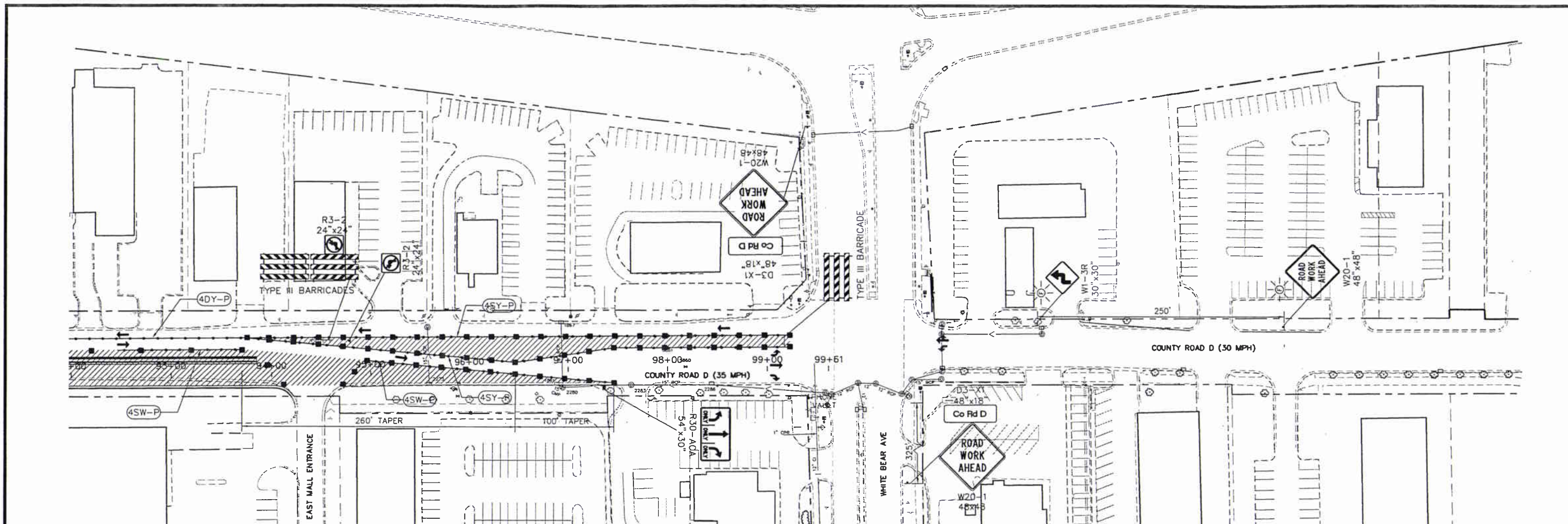
TRAFFIC CONTROL PLAN
PHASE 1

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
67

104

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ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
DATE: 1-27-2011

SOUTHLAWN DR.

THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DURING CONSTRUCTION ACTIVITIES LOCATED ON SOUTHLAWN DR. IN ACCORDANCE WITH THE MMUTCD BASED ON CONSTRUCTION PHASING THAT HAS BEEN APPROVED BY THE ENGINEER. SOUTHLAWN DR. MAY BE CLOSED FOR A MAXIMUM OF 30 CONSECUTIVE CALENDAR DAYS.

No.	Date	Revisions	App.

DRAWING NAME	CRD-TRF04.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

Kimley-Horn and Associates, Inc.
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ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-3176

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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



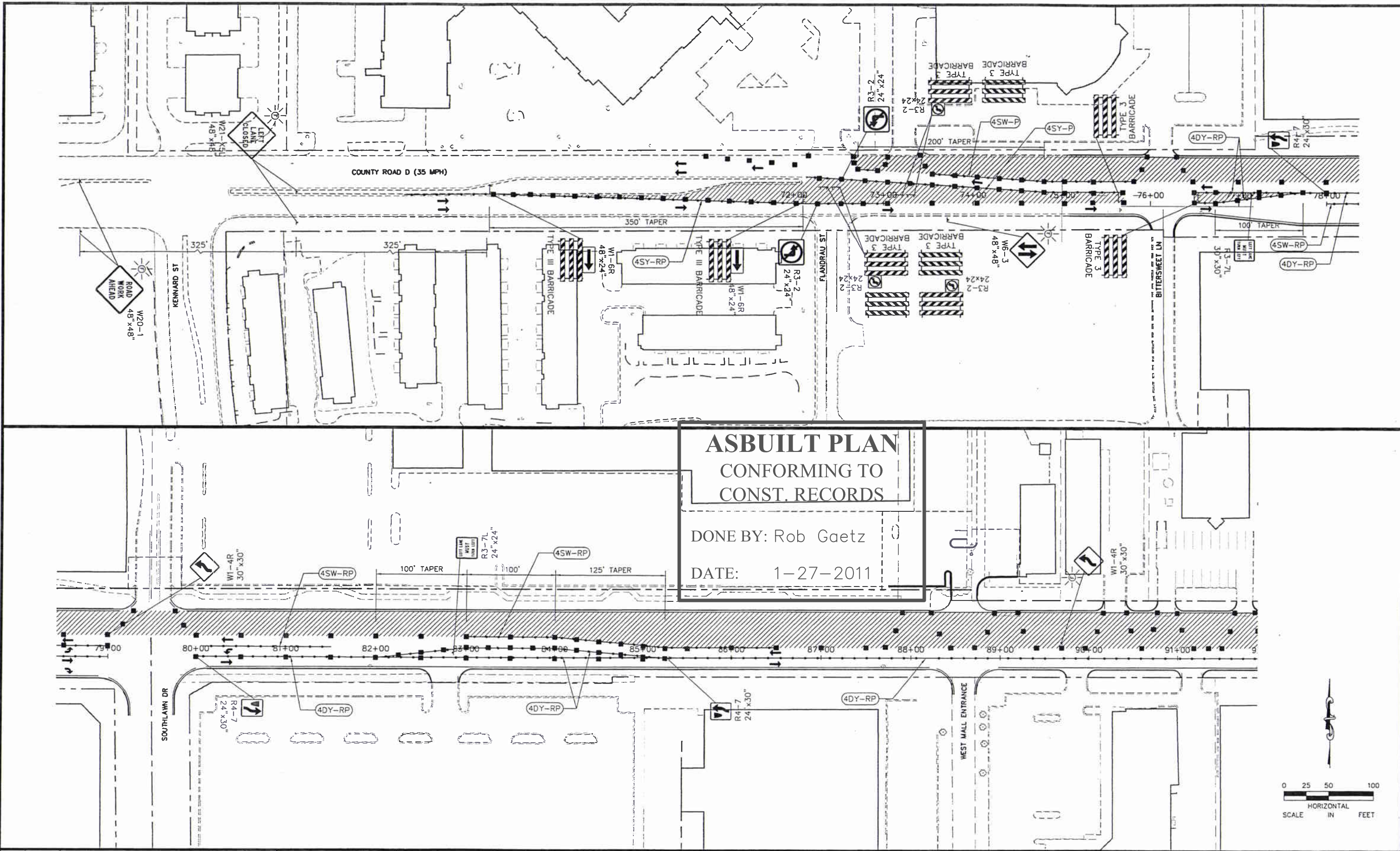
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
TRAFFIC CONTROL PLAN
PHASE 1

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
68
104

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**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz
DATE: 1-27-2011

No.	Date	Revisions	App.

DRAWING NAME	CRD-TRF05.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
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ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX NO. (651) 645-5116

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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

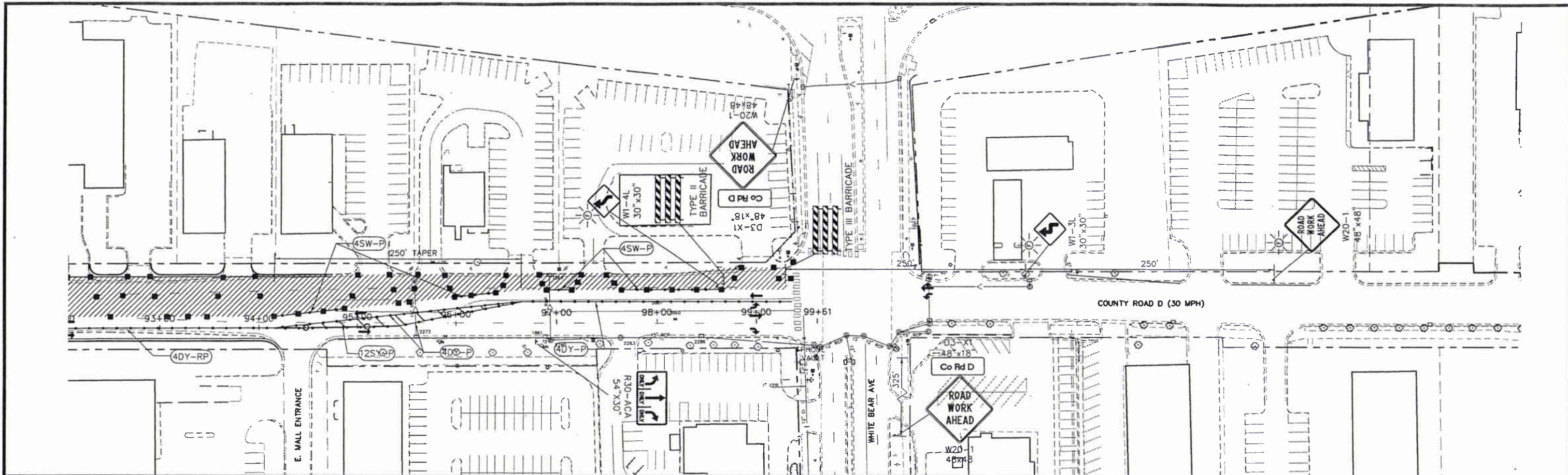
TRAFFIC CONTROL PLAN
PHASE 2

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
69

104

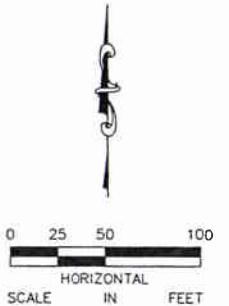
K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_D\CRD-TRF06.dwg September 22, 2009 - 8:52am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011



No.	Date	Revisions	App.

DRAWING NAME	CRD-TRF06.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2200 UNIVERSITY AVE. WEST, SUITE 240H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 845-4197
FAX. NO. (651) 845-5116

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

Brandon J. Bourdon
BRANDON J. BOURDON
DATE: 08/07/09 MN LIC. NO. 43709



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

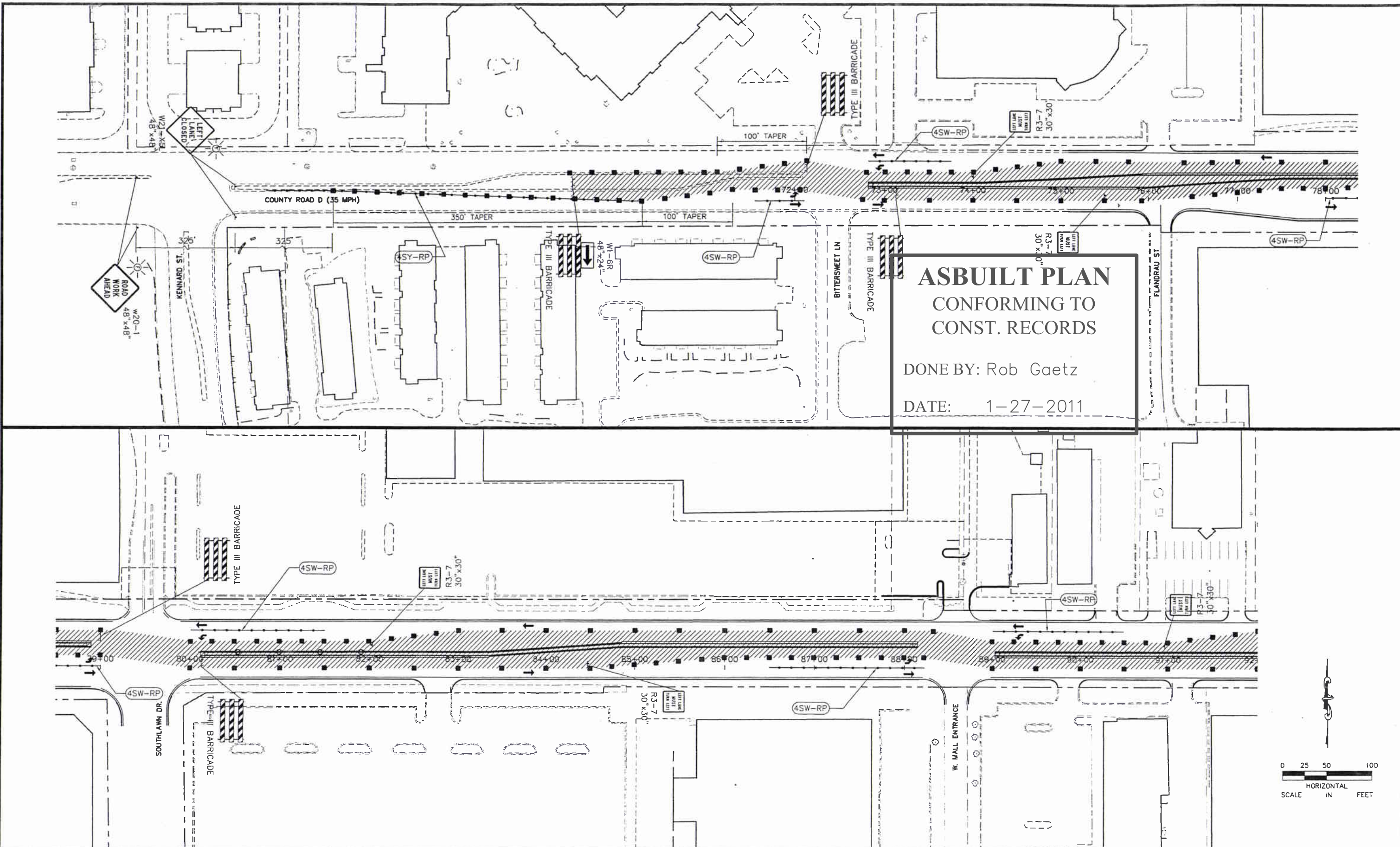
RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

TRAFFIC CONTROL PLAN
PHASE 2

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

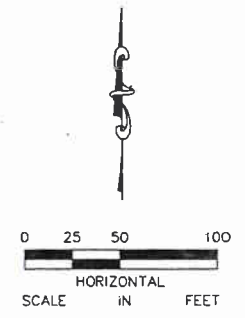
SHEET NO.
70
104

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ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



No.	Date	Revisions	App.

DRAWING NAME	CRD-TRF07.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
 2550 UNIVERSITY AVE. WEST, SUITE 345H
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4197
 FAX. NO. (651) 645-5116

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Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709

RAMSEY COUNTY

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

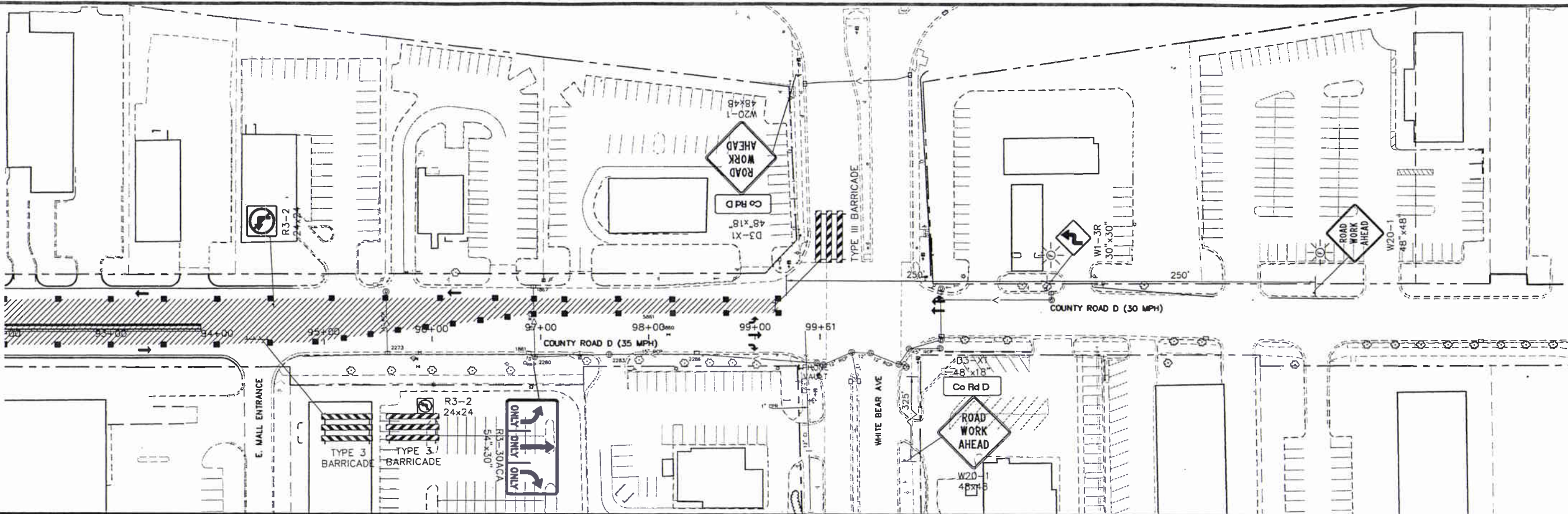
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS

TRAFFIC CONTROL PLAN
 PHASE 3

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 71

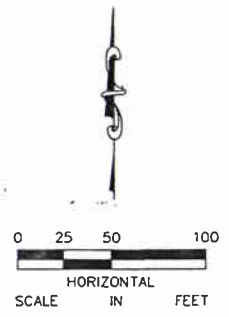
104



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_D\CRD-TRF08.dwg September 22, 2009 - 8:54am

No.	Date	Revisions	App.

DRAWING NAME CRD-TRF08.dwg	
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709




 City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

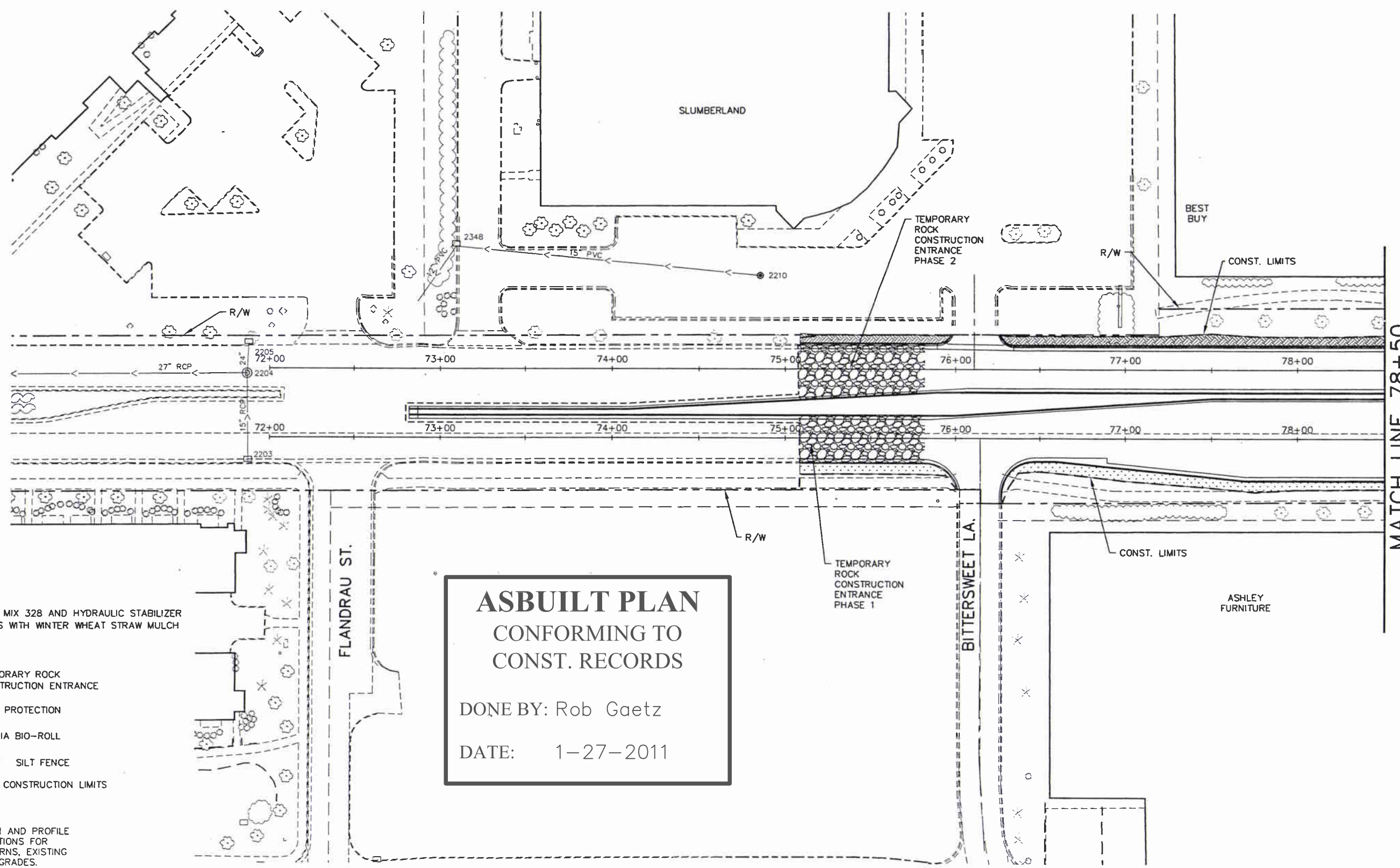
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS

TRAFFIC CONTROL PLAN
 PHASE 3

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 72
 104

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-TFE01.dwg September 22, 2009 - 8:55am



MATCH LINE 78+50

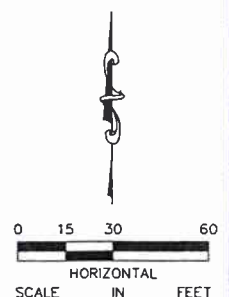
- LEGEND**
- SEED MIX 328 AND HYDRAULIC STABILIZER 150TS WITH WINTER WHEAT STRAW MULCH
 - SOD
 - TEMPORARY ROCK CONSTRUCTION ENTRANCE
 - INLET PROTECTION
 - 12" DIA BIO-ROLL
 - SILT FENCE
 - CONSTRUCTION LIMITS

- NOTES:**
1. REFERENCE PLAN AND PROFILE AND CROSS SECTIONS FOR DRAINAGE PATTERNS, EXISTING AND PROPOSED GRADES.
 2. REFERENCE CONSTRUCTION PHASING PLAN FOR INFORMATION RELATED TO MINIMIZING DISTURBED AREAS.

**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011



No.	Date	Revisions	App.	DRAWING NAME CRD-TFE01.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2350 UNIVERSITY AVE. WEST, SUITE 345H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 845-4187
FAX. NO. (651) 845-5116

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

Daniel J. Coyle
DANIEL J. COYLE
DATE: 08/07/09 MN LIC. NO. 44821

RAMSEY COUNTY

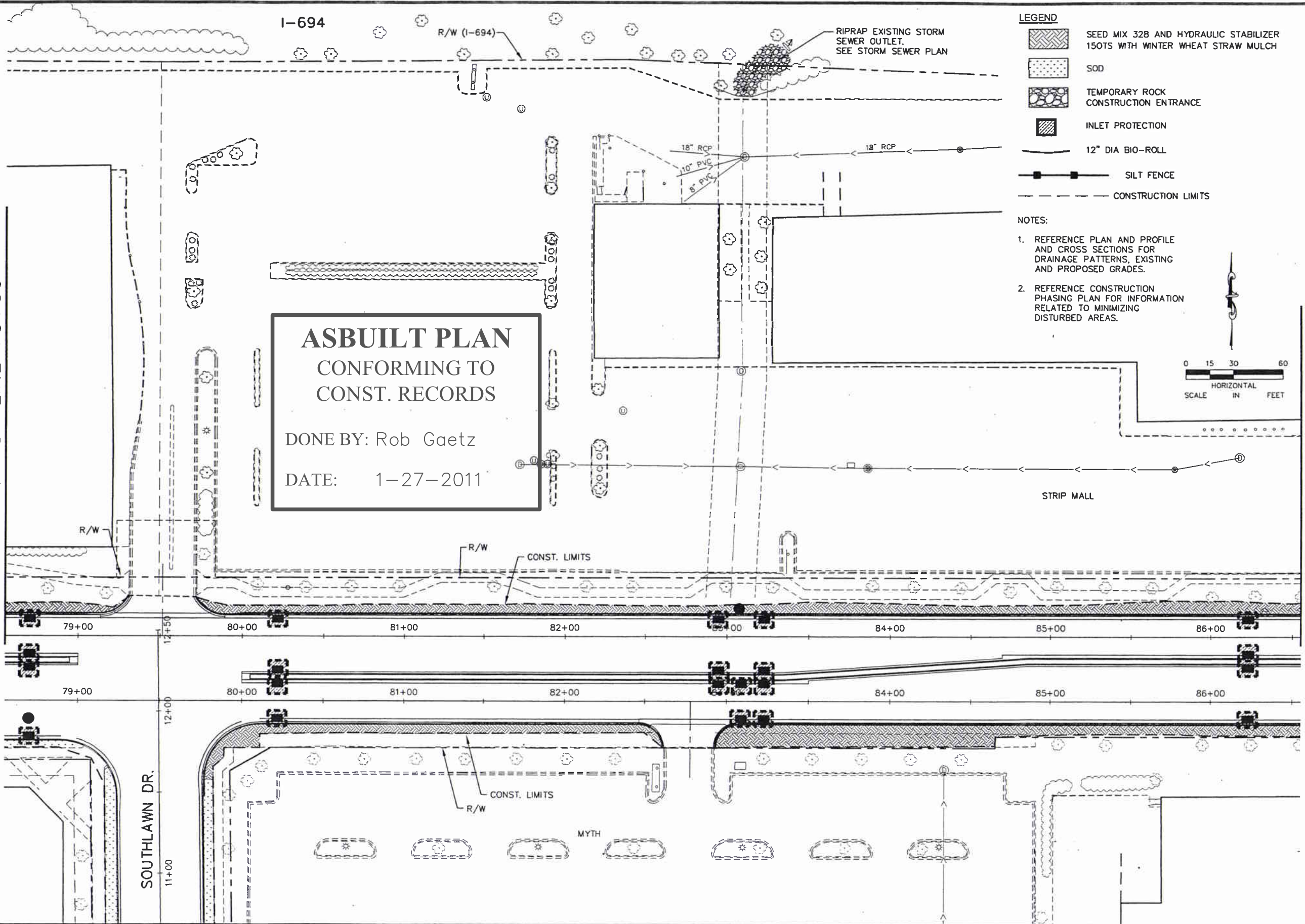
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

**RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
COUNTY ROAD D
EROSION CONTROL &
TURF ESTABLISHMENT
STA. 72+00 TO STA. 86+50**

CITY PROJECT	08-13	SHEET NO.
COUNTY PROJECT	P-3202	73
S.P.	62-619-30	104
S.P.	62-596-04	

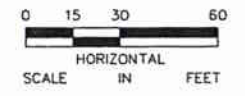
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MATCH LINE 78+50



- LEGEND**
- SEED MIX 328 AND HYDRAULIC STABILIZER 150TS WITH WINTER WHEAT STRAW MULCH
 - SOD
 - TEMPORARY ROCK CONSTRUCTION ENTRANCE
 - INLET PROTECTION
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 2. REFERENCE CONSTRUCTION PHASING PLAN FOR INFORMATION RELATED TO MINIMIZING DISTURBED AREAS.










**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

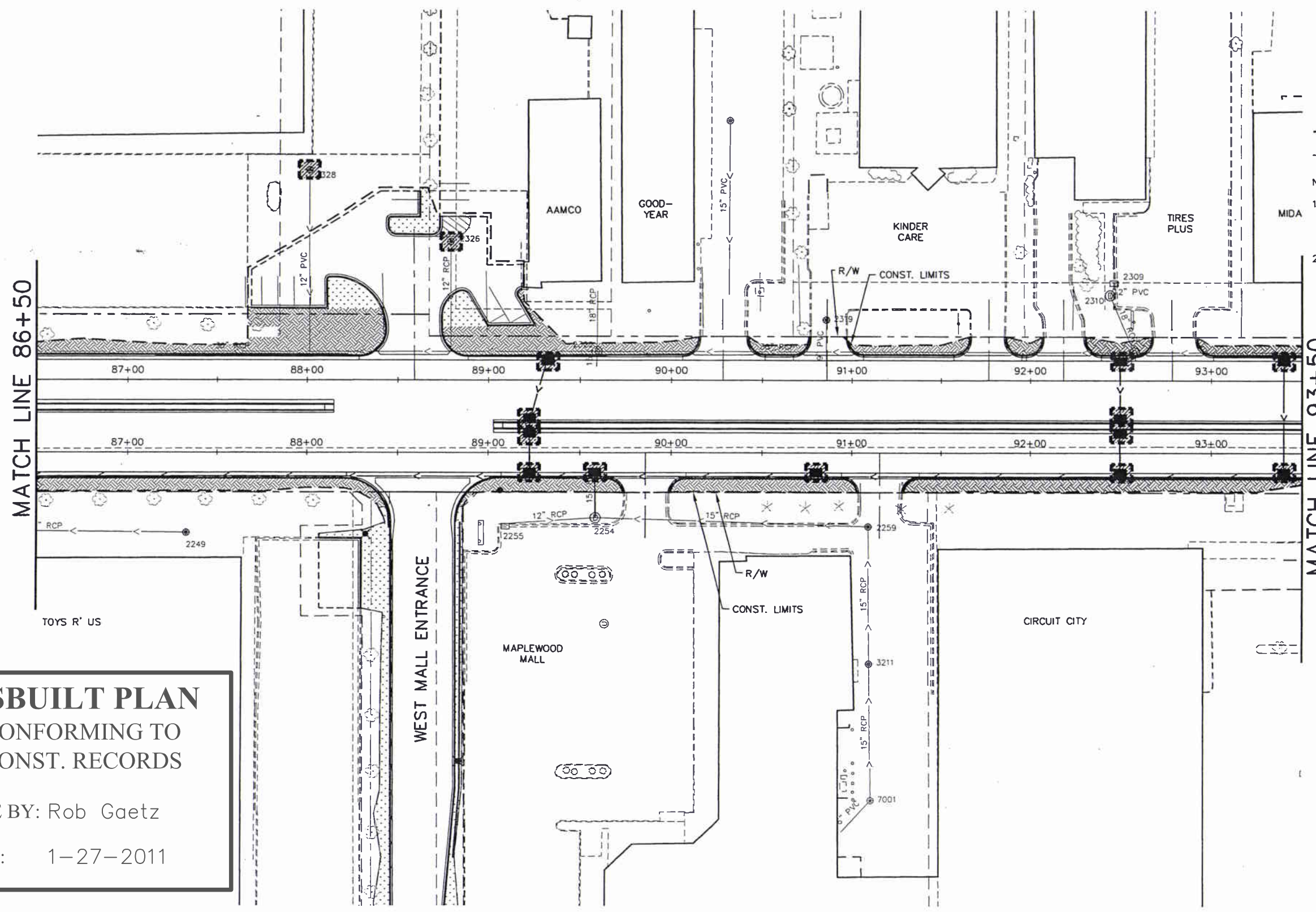
DONE BY: Rob Gaetz
DATE: 1-27-2011

MATCH LINE 86+50

No.	Date	Revisions	App.	DRAWING NAME CRD-TFE01A.dwg	 2200 UNIVERSITY AVE. WEST, SUITE 345H ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-3116	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE, P.E. DATE: 08/07/09 MN LIC. NO. 44821	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS COUNTY ROAD D EROSION CONTROL & TURF ESTABLISHMENT STA. 78+50 TO STA. 86+50	CITY PROJECT	08-13	SHEET NO. 74 104			
													COUNTY PROJECT	P-3202
									S.P.	62-619-30				
									S.P.	62-596-04				

- LEGEND**
-  SEED MIX 328 AND HYDRAULIC STABILIZER 150TS WITH WINTER WHEAT STRAW MULCH
 -  SOD
 -  TEMPORARY ROCK CONSTRUCTION ENTRANCE
 -  INLET PROTECTION
 -  12" DIA BIO-ROLL
 -  SILT FENCE
 -  CONSTRUCTION LIMITS

- NOTES:**
1. REFERENCE PLAN AND PROFILE AND CROSS SECTIONS FOR DRAINAGE PATTERNS, EXISTING AND PROPOSED GRADES.
 2. REFERENCE CONSTRUCTION PHASING PLAN FOR INFORMATION RELATED TO MINIMIZING DISTURBED AREAS.

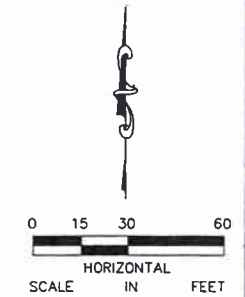



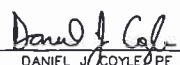


MATCH LINE 86+50

MATCH LINE 93+50

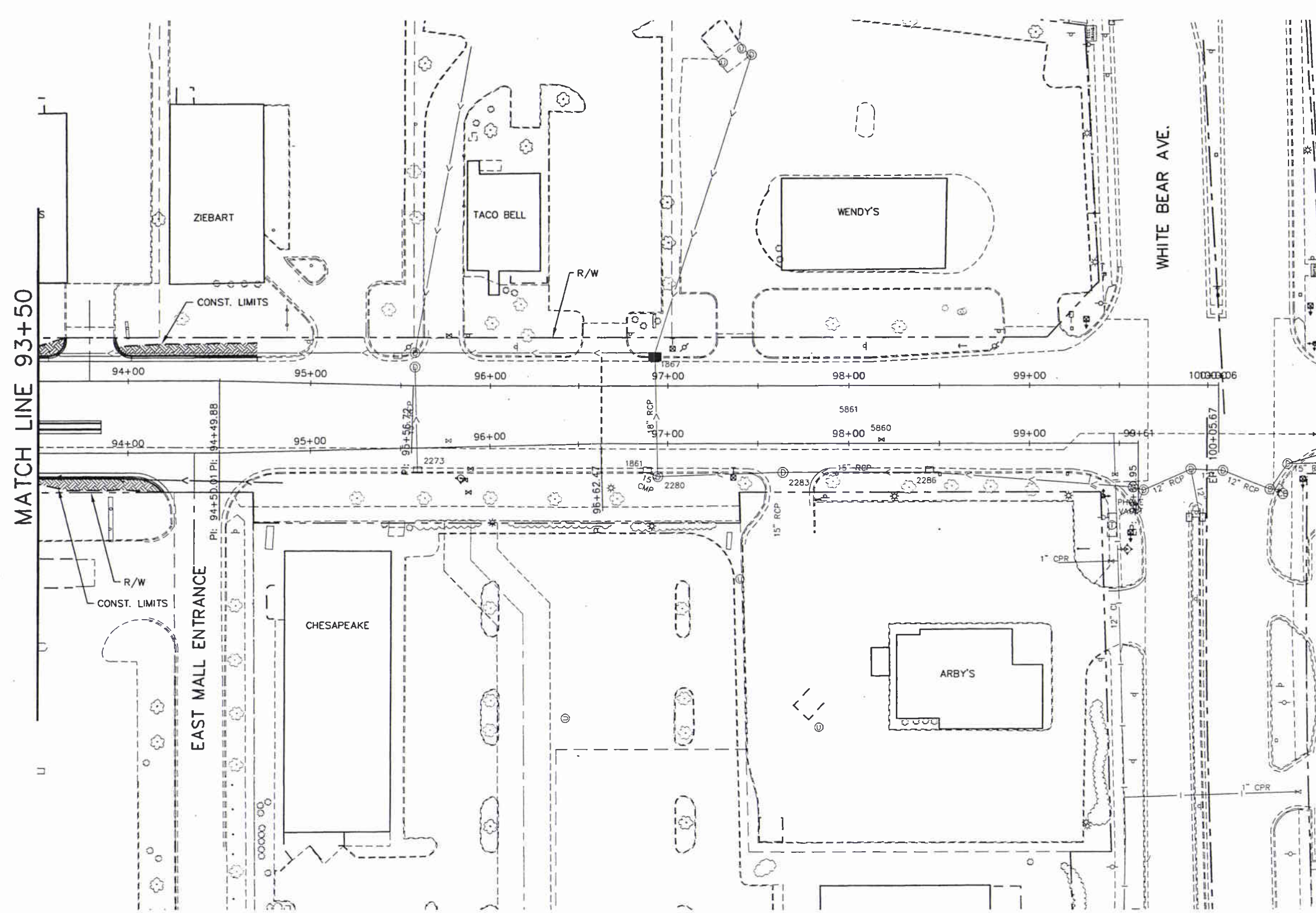
ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



No.	Date	Revisions	App.	DRAWING NAME CRD-TFE02.dwg	 Kimley-Horn and Associates, Inc. <small>2550 UNIVERSITY AVE. WEST, SUITE 345H ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4187 FAX. NO. (651) 645-3118</small>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  DANIEL J. COYLE DATE: 08/07/09 MN LIC. NO. 44821	 RAMSEY COUNTY  City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS COUNTY ROAD D EROSION CONTROL & TURF ESTABLISHMENT STA. 86+50 TO STA. 93+50	CITY PROJECT	08-13	SHEET NO. 75 104
				COUNTY PROJECT					P-3202		
				S.P.					62-619-30		
				S.P.					62-596-04		

MATCH LINE 93+50



- LEGEND**
- SEED MIX 328 AND HYDRAULIC STABILIZER 150TS WITH WINTER WHEAT STRAW MULCH
 - SOD
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 - CONSTRUCTION LIMITS

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 2. REFERENCE CONSTRUCTION PHASING PLAN FOR INFORMATION RELATED TO MINIMIZING DISTURBED AREAS.

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

No.	Date	Revisions	App.

DRAWING NAME
CRD-TFE02A.dwg

DESIGNED BY: RBC

DRAWN BY: HMW

CHECKED BY: KRB, ATB

DATE: 08/07/09

PROJECT NO. 160500029.2.101

**Kimley-Horn
and Associates, Inc.**
 2350 UNIVERSITY AVE. WEST, SUITE 340N
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 845-4197
 FAX. NO. (651) 845-5116

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Daniel J. Coyle
 DANIEL J. COYLE, P.E.
 DATE: 08/07/09 MN LIC. NO. 44821

RAMSEY COUNTY

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

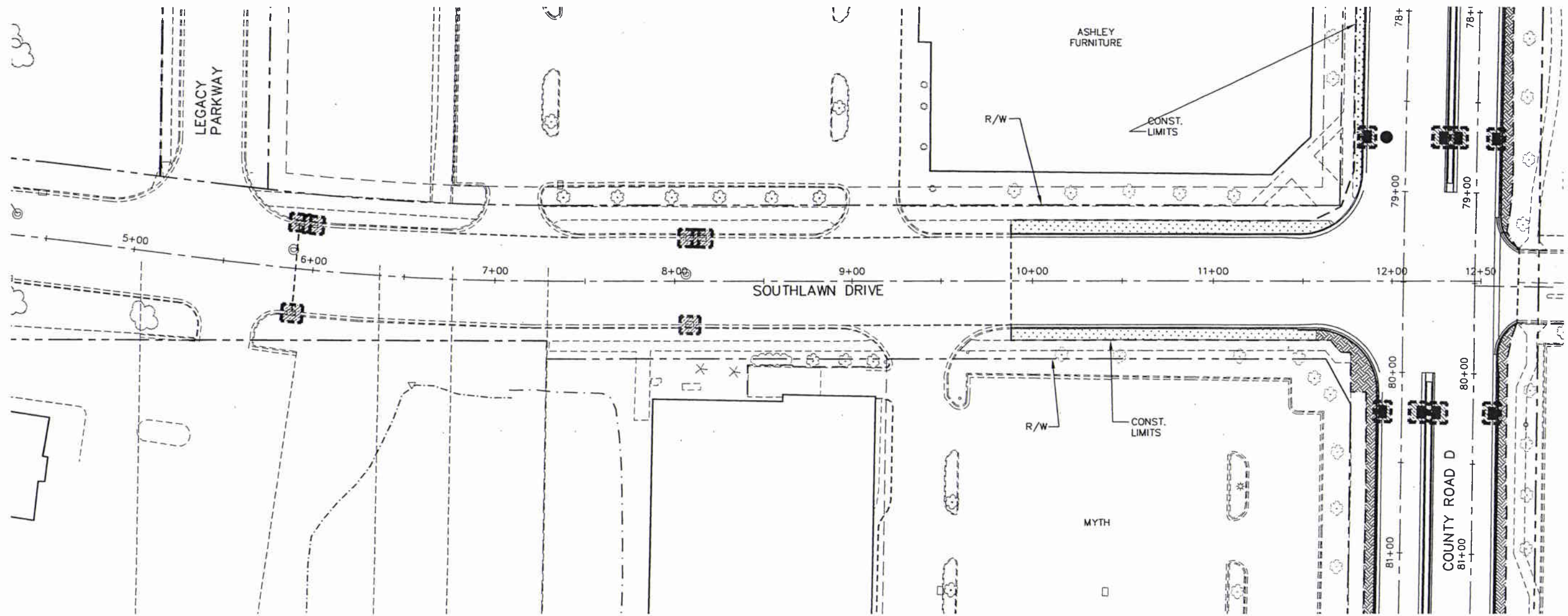
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D
 EROSION CONTROL &
 TURF ESTABLISHMENT
 STA. 93+50 TO STA. 102+50

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
76

104








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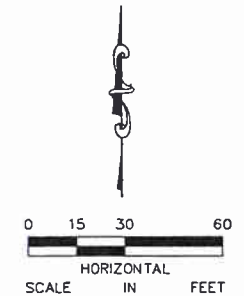
**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011

- LEGEND**
-  SEED MIX 328 AND HYDRAULIC STABILIZER 150TS WITH WINTER WHEAT STRAW MULCH
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 -  12" DIA BIO-ROLL
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- NOTES:**
1. REFERENCE PLAN AND PROFILE AND CROSS SECTIONS FOR DRAINAGE PATTERNS, EXISTING AND PROPOSED GRADES.
 2. REFERENCE CONSTRUCTION PHASING PLAN FOR INFORMATION RELATED TO MINIMIZING DISTURBED AREAS.



No.	Date	Revisions	App.

DRAWING NAME	CRD-TFE03.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



**Kimley-Horn
and Associates, Inc.**
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Daniel J. Doyle
DANIEL J. DOYLE, P.E.
DATE: 08/07/09 MN LIC. NO. 44821



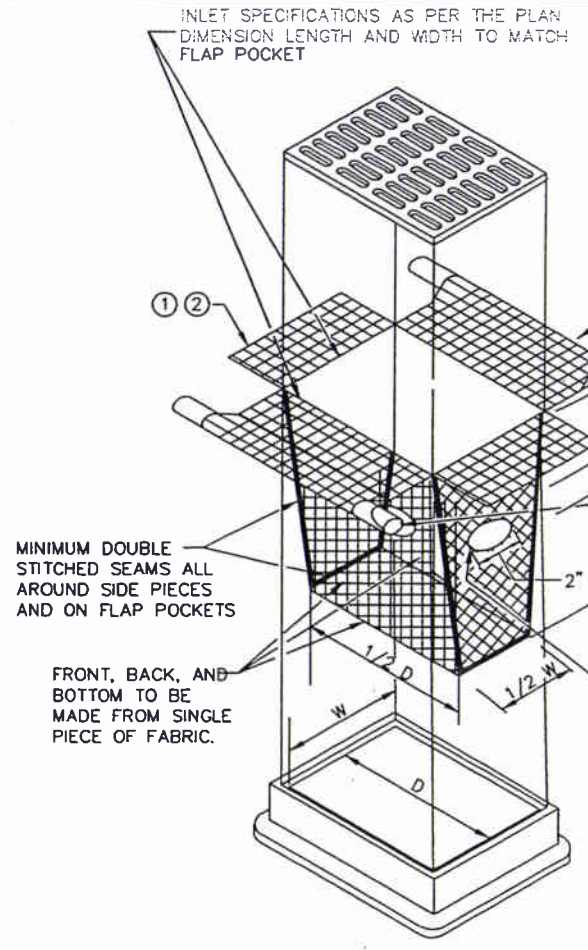
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
SOUTHLAWN DRIVE
EROSION CONTROL &
TURF ESTABLISHMENT
STA. 4+50 TO STA. 12+06.42

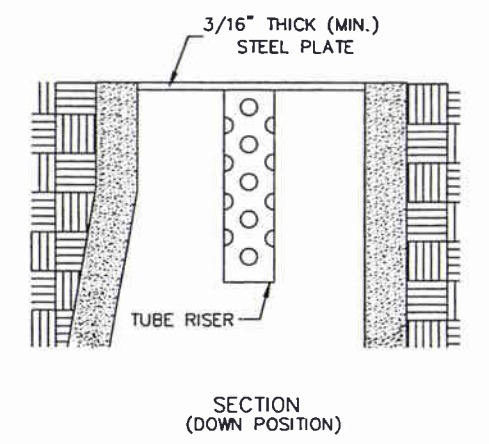
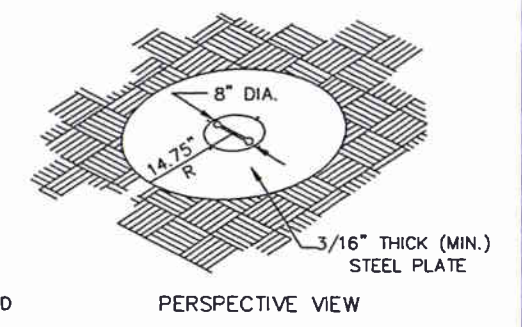
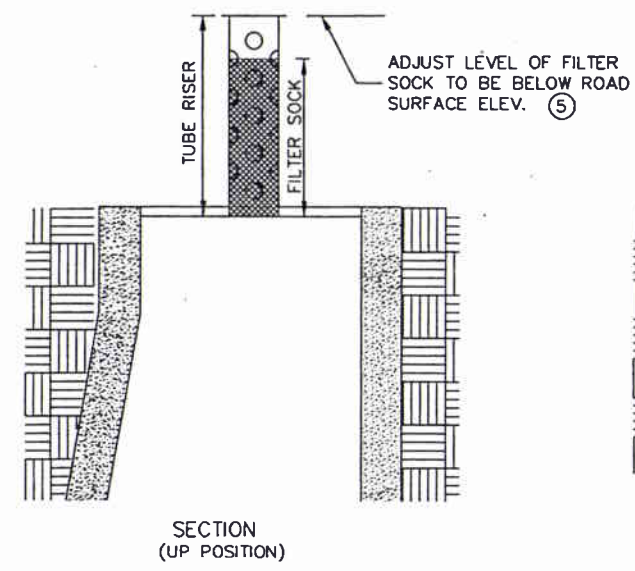
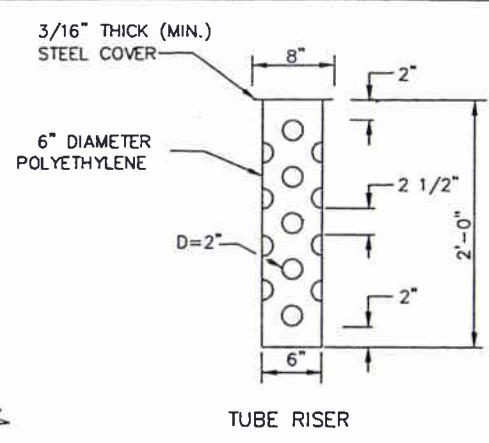
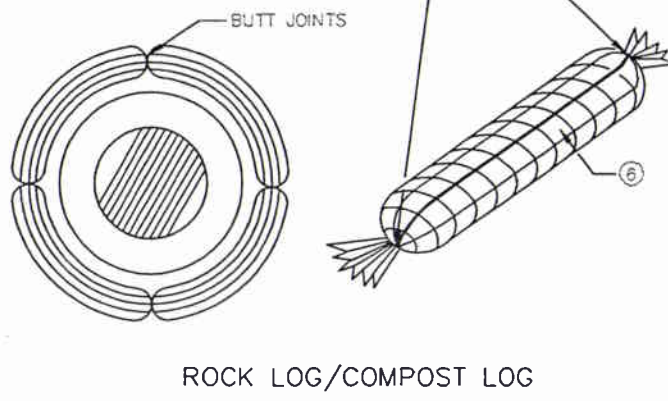
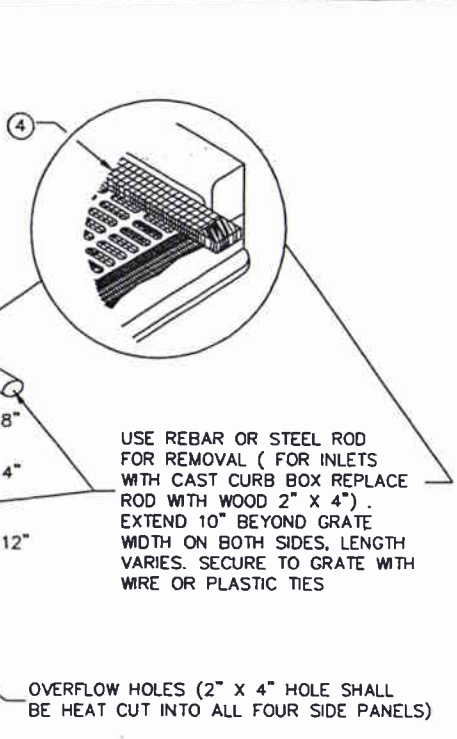
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
77
104

K:\TWC-Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-ER010.dwg September 22, 2009 - 9:00am

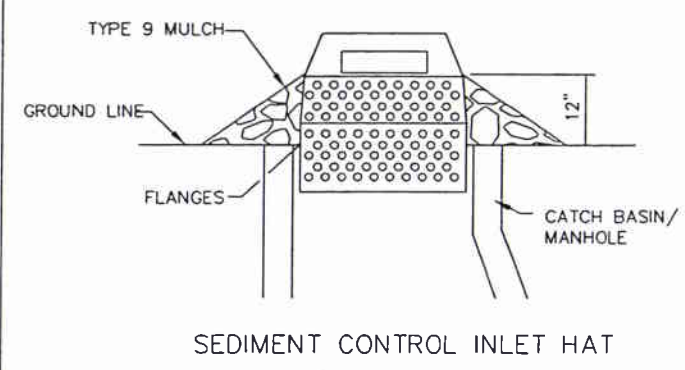


FILTER BAG INSERT ③
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)



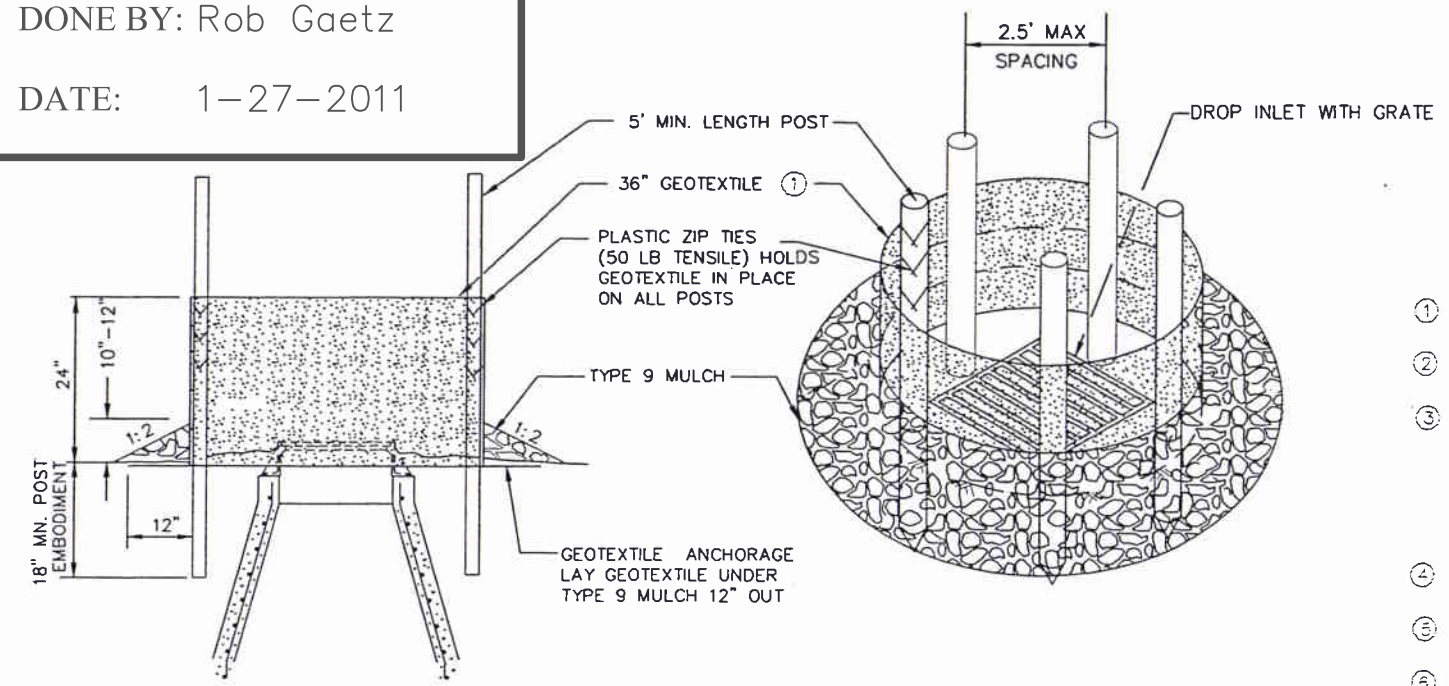
POP-UP HEAD

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: Rob Gaetz
DATE: 1-27-2011



SEDIMENT CONTROL INLET HAT

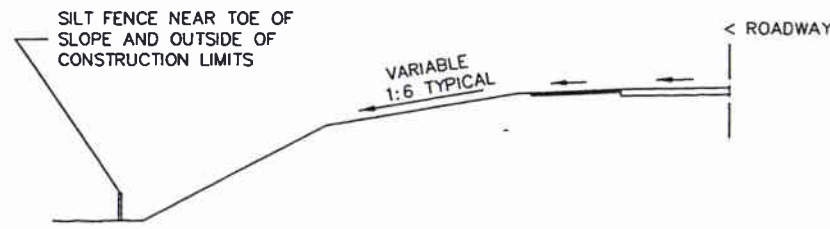
NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.



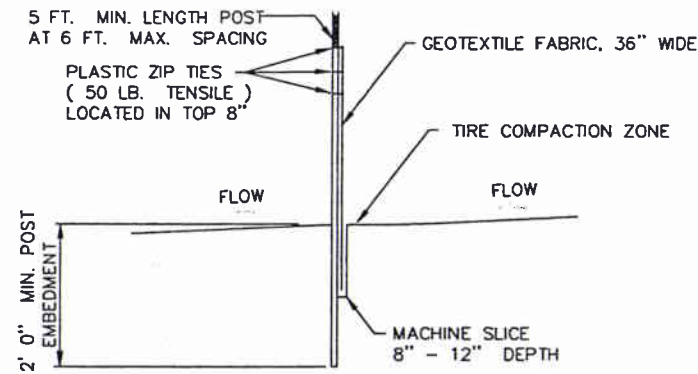
SILT FENCE RING AND ROCK FILTER BERM
USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 OR LESS

- 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.

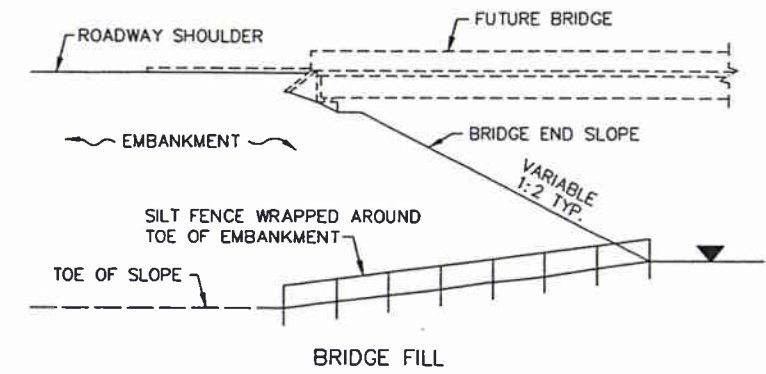
STANDARD SHEET NO. 297.405 (4 OF 4)	TITLE: TEMPORARY SEDIMENT CONTROL STORM DRAIN INLET PROTECTION
STANDARD APPROVED: SEPTEMBER 27, 2006	
SP 62-619-30 SP 62-596-04 (CSAH 19) SHEET NO. 78 OF 104 SHEETS	



LOCATION OF SILT FENCE AT TOE OF ROADWAY EMBANKMENT



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

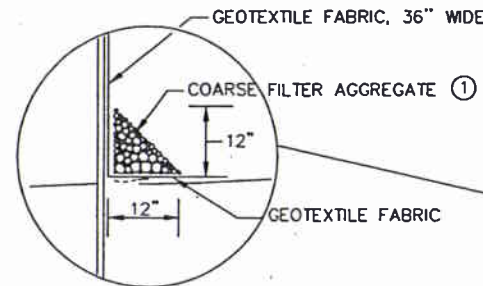


DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: STAGNANT
CONTRIBUTING SLOPE AREA: 1/2 ACRE

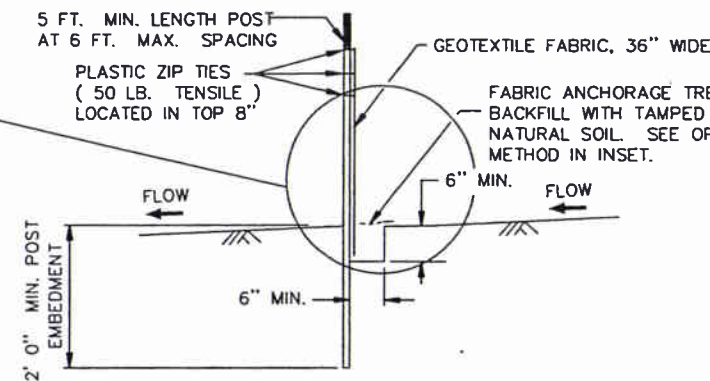
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

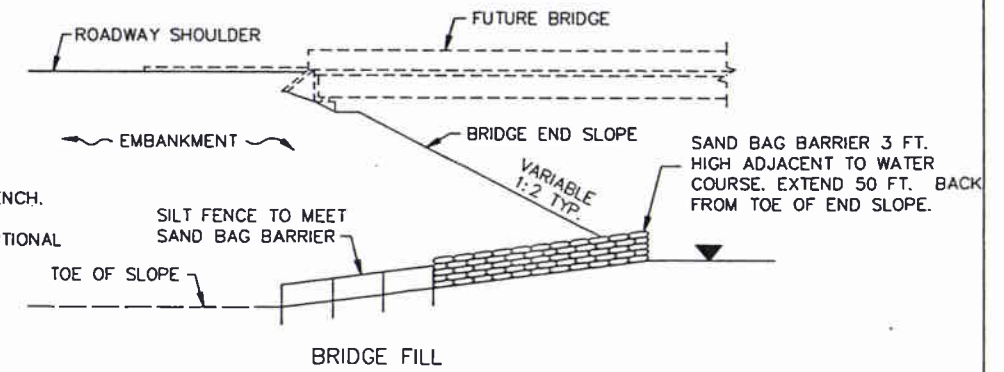
DATE: 1-27-2011



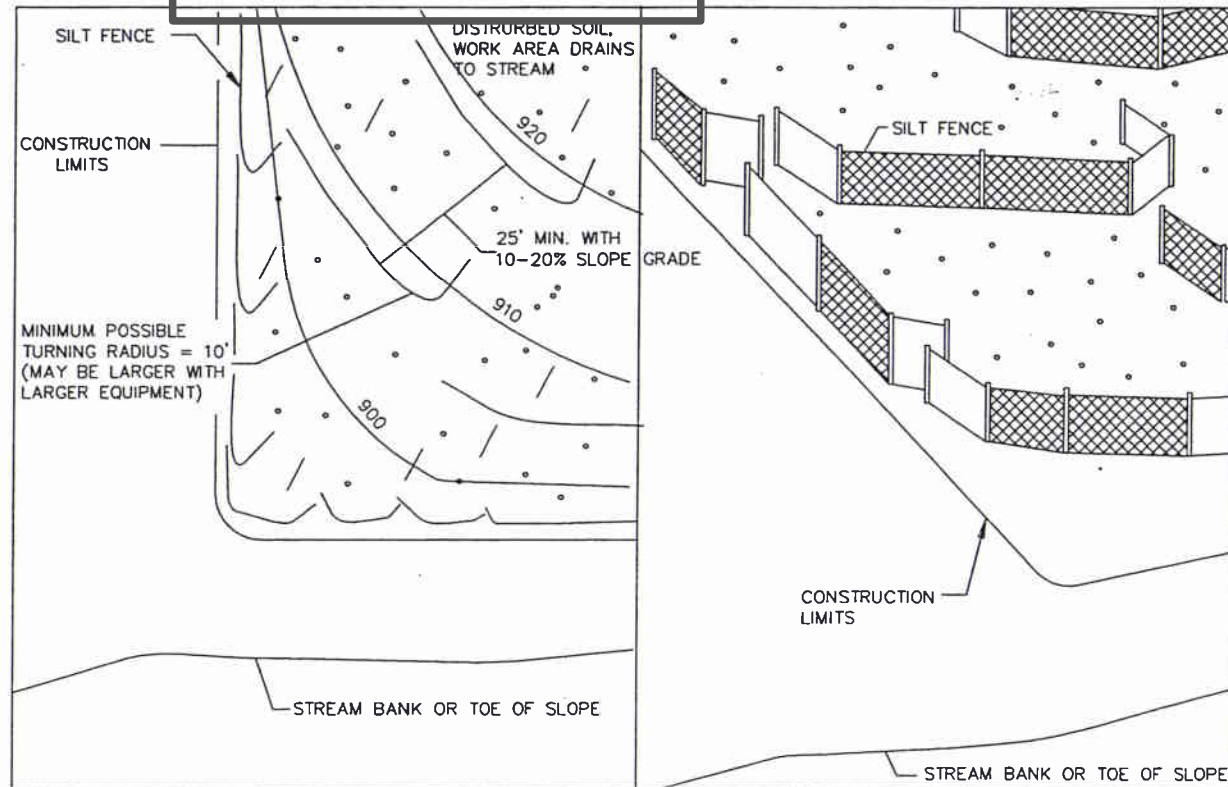
OPTIONAL METHOD FOR SILT FENCE, HEAVY DUTY



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



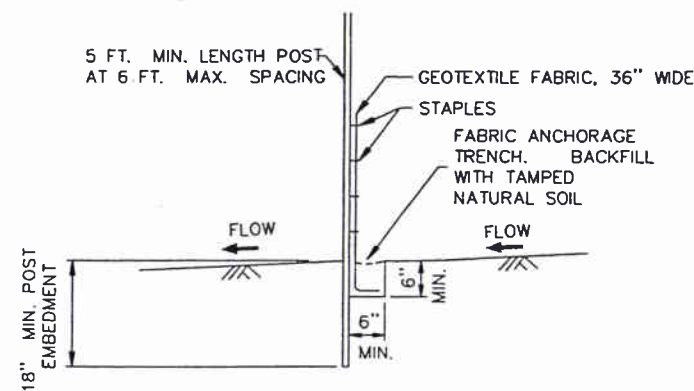
DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC.
CONTRIBUTING SLOPE AREA: 1 ACRE



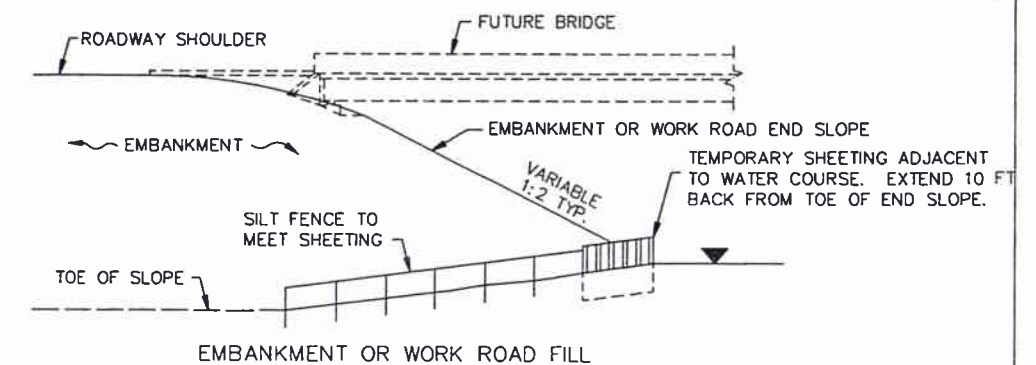
PLAN VIEW

SIDE VIEW

SILT FENCE, J-HOOK INSTALLATION



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



DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC.
CONTRIBUTING SLOPE AREA: 3 ACRES
SILT FENCE AT BRIDGE EMBANKMENT ADJACENT TO WATER

NOTES:

SEE SPECS. 2573, 3149 & 3886.

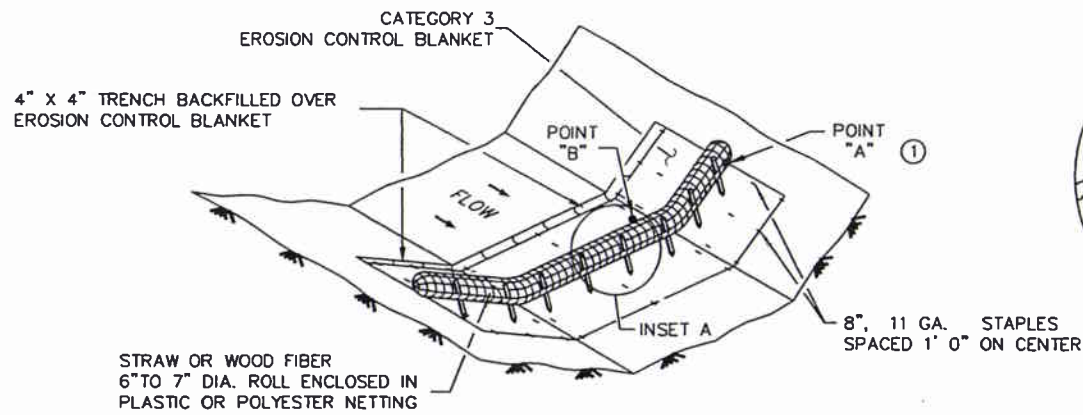
① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.

STANDARD SHEET NO. 5-297.408 (1 OF 2)	TITLE: TEMPORARY SEDIMENT CONTROL SILT FENCE
STANDARD APPROVED: SEPTEMBER 27, 2006	
SP 62-619-30 SP 62-596-04 (CSAH 19) SHEET NO.79 OF 104 SHEETS	

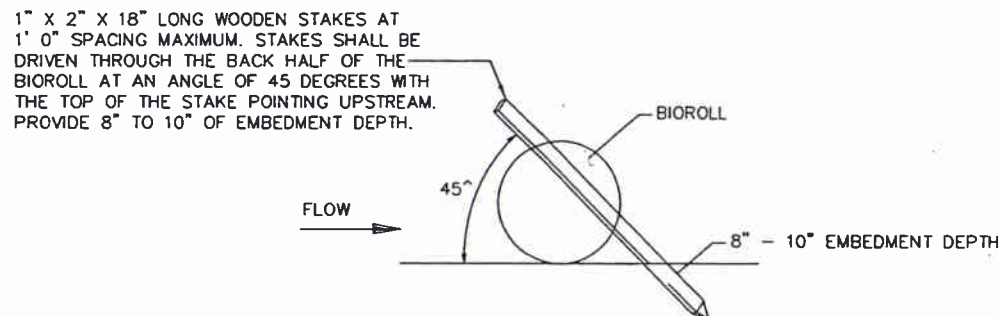
ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

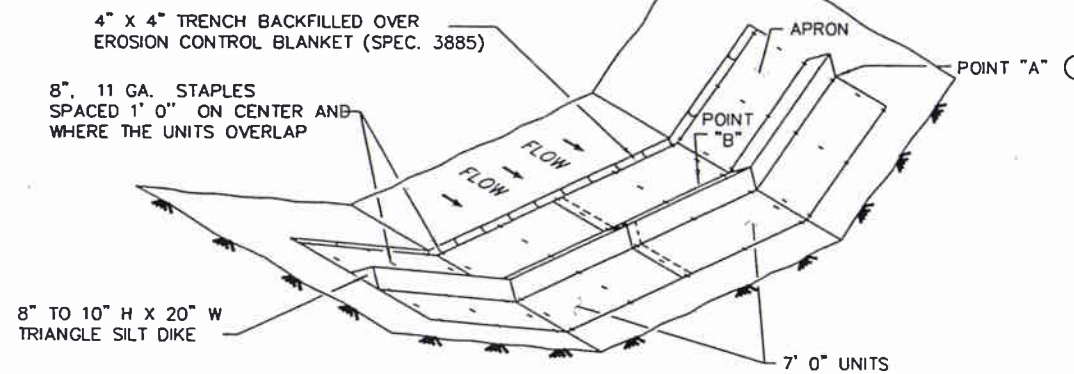
DATE: 1-27-2011



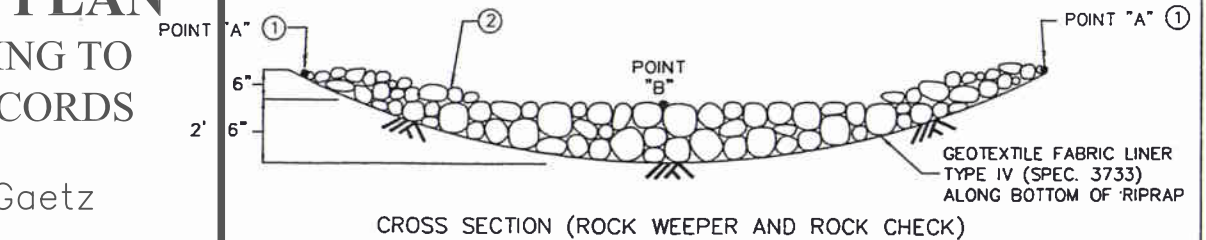
TYPE 3: BIOROLL BLANKET SYSTEM DITCH CHECK



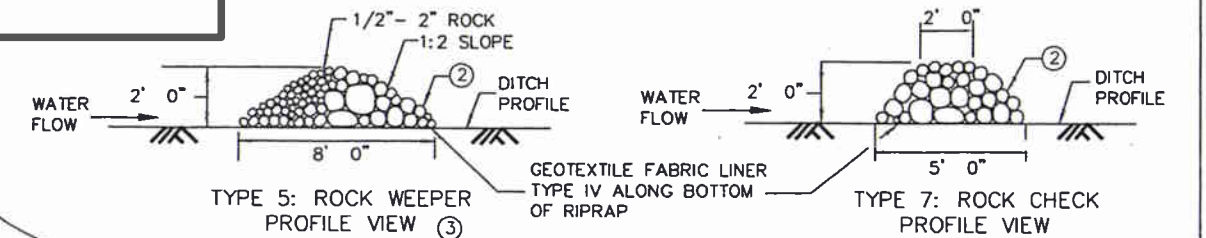
BIOROLL STAKING DETAIL



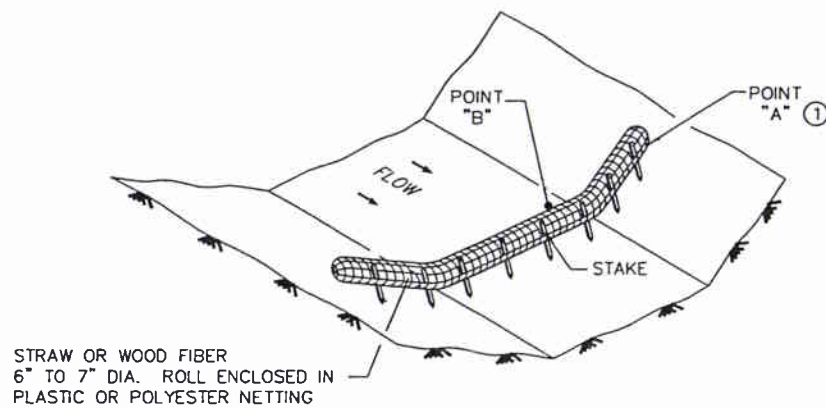
TYPE 6: GEOTEXTILE TRIANGULAR DIKE DITCH CHECK



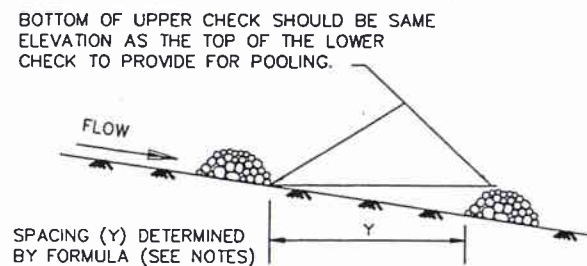
CROSS SECTION (ROCK WEEPER AND ROCK CHECK)



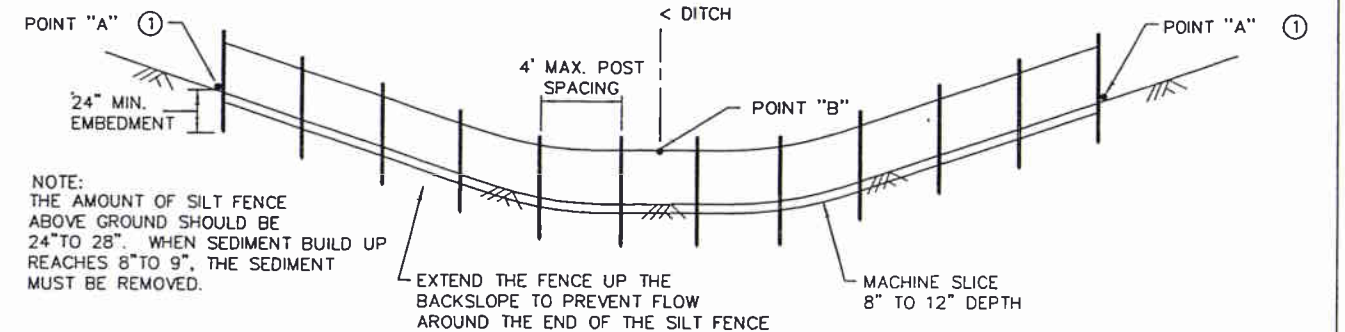
TYPE 5: ROCK WEEPER AND
TYPE 7: ROCK CHECK DITCH CHECKS
USE ON ROUGH GRADED AREAS



TYPE 2: BIOROLL DITCH CHECK
USE ON ROUGH GRADED AREAS



DITCH CHECK SPACING ④



TYPE 1: SLICED IN SILT FENCE DITCH CHECK

NOTES:

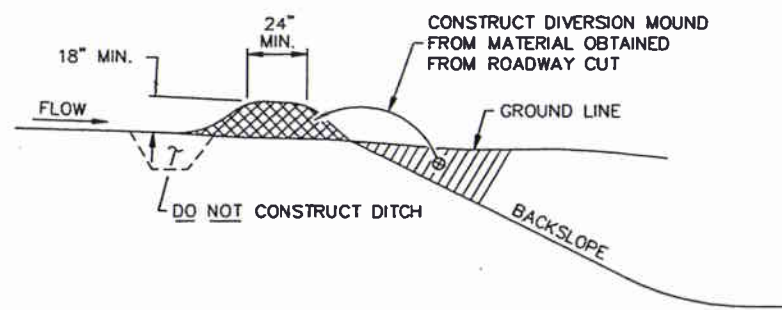
- SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.
- APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:

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

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

STANDARD SHEET NO.
5-297.405 (3 OF 4)
STANDARD APPROVED:
SEPTEMBER 27, 2006

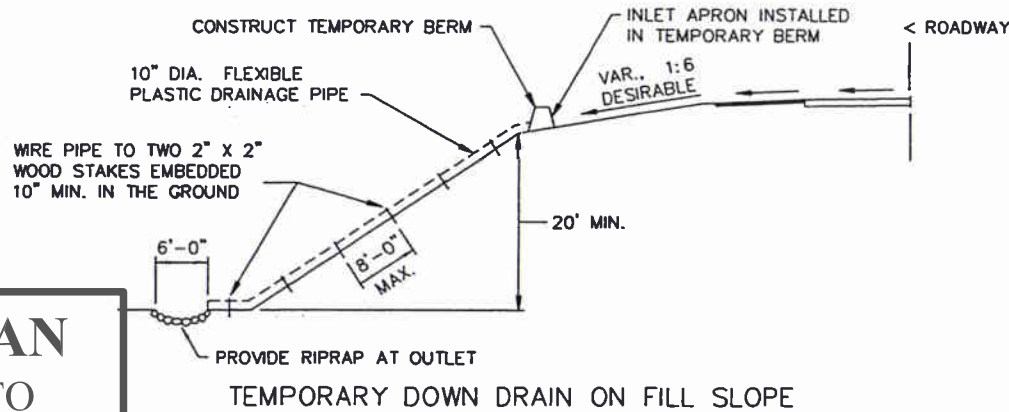
TEMPORARY SEDIMENT CONTROL
DITCH CHECK/BARRIER



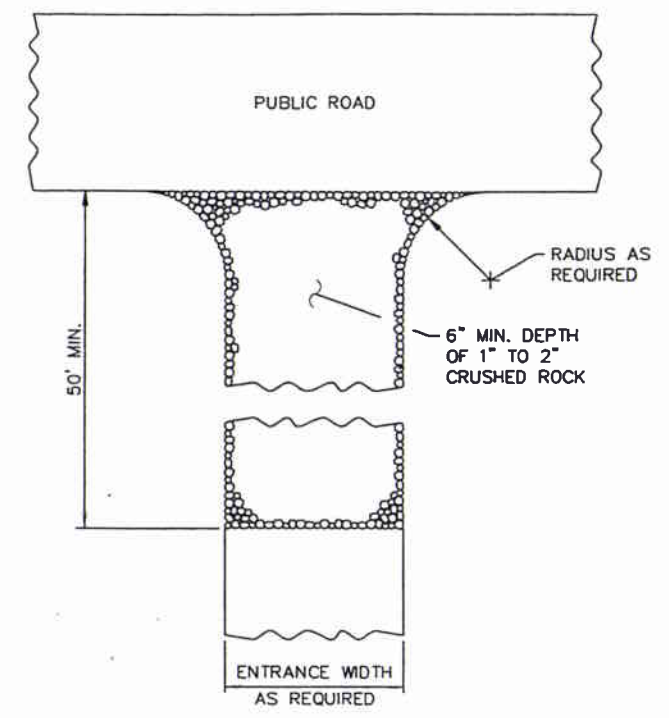
DIVERSION MOUND
 DESIGN GUIDELINES:
 STORM FREQUENCY: 10 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 5 ACRES
 MAXIMUM DIVERSION: GRADE 5%

ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

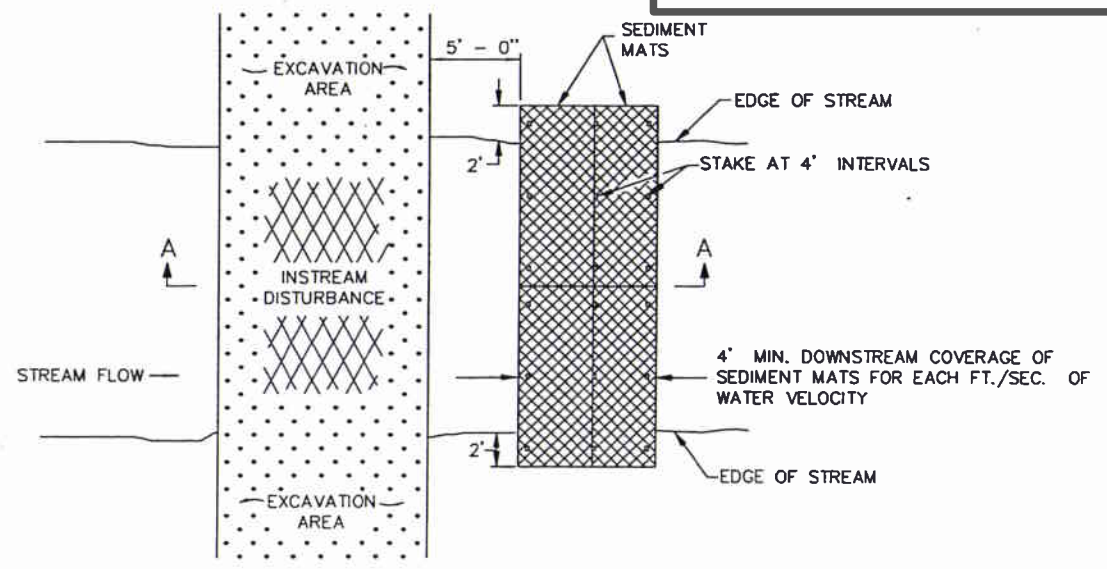
DONE BY: Rob Gaetz
 DATE: 1-27-2011



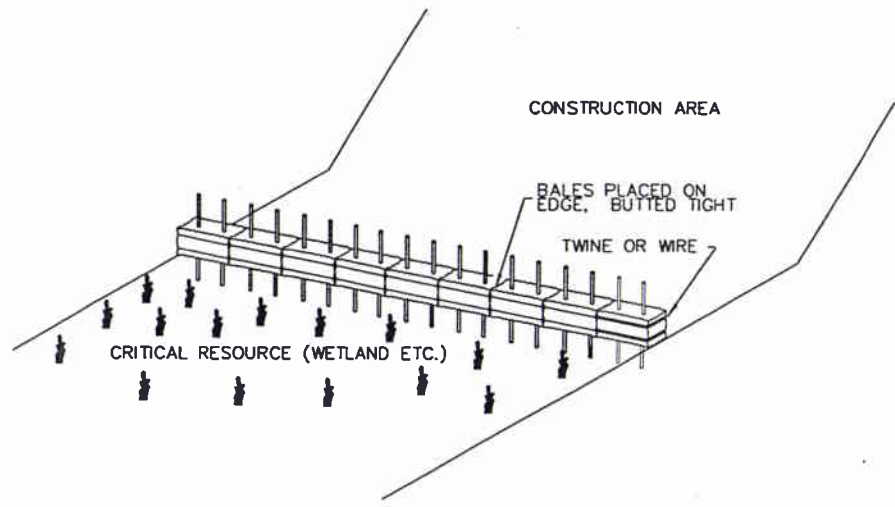
DESIGN GUIDELINES:
 STORM FREQUENCY: 2 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 3 ACRES



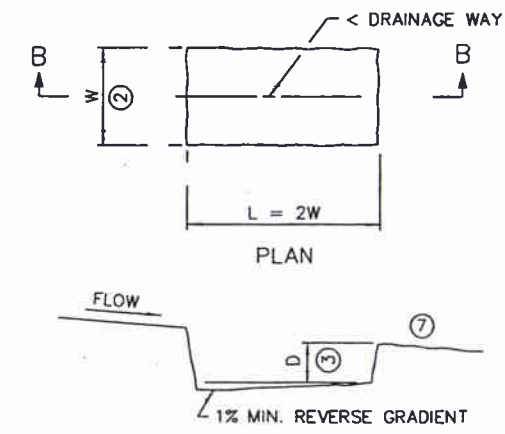
ROCK CONSTRUCTION ENTRANCE ①



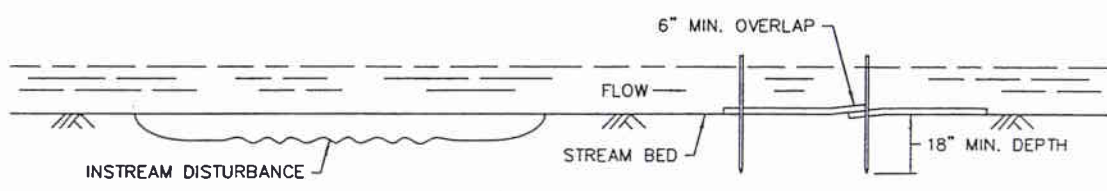
PLAN VIEW



BALE BARRIERS
 TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS



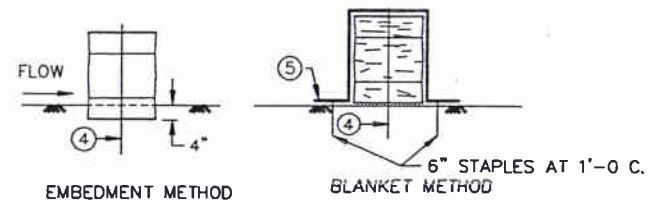
SECTION B-B
SEDIMENT TRAP DETAIL



SECTION A-A

SEDIMENT MAT ⑥
 TYPICAL STREAM BED INSTALLATION

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



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

NOTES:

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

STANDARD SHEET NO. 5-297.405 (2 of 4)	TITLE: TEMPORARY SEDIMENT CONTROL MISCELLANEOUS DETAILS
STANDARD APPROVED: SEPTEMBER 27, 2006	
SP 62-619-30 SP 62-596-04 (CSAH 19) SHEET NO. 81 OF 104 SHEETS	

K:\TWC_Civil\County\RAMSEY\WHITE-BEAR\DWG\PLAN SHEETS\COUNTY_ROAD_D\CRD-ER040.dwg September 22, 2009 - 9:00am

STORM WATER POLLUTION PREVENTION PLAN SUMMARY

PLEASE SEE THE SWPPP IN THE PROJECT MANUAL FOR OTHER POLLUTION PREVENTION GUIDANCE.

GENERAL SITE DESCRIPTION

PROJECT NAME AND LOCATION: COUNTY ROAD D, CP 08-13
NORTH HALF SECTION 3, TOWNSHIP 29N, RANGE 22W
NORTH HALF SECTION 2, TOWNSHIP 29N, RANGE 22W
SOUTH OF INTERSTATE 694
BETWEEN FLANDRAU STREET AND WHITE BEAR AVENUE
MAPLEWOOD, MN

OWNER NAME AND ADDRESS: JERRY AUGÉ, P.E.
PROJECT MANAGER
RAMSEY COUNTY
DEPARTMENT OF PUBLIC WORKS
1425 PAUL KIRKWOLD DRIVE
ARDEN HILLS, MN 55112-3933

EROSION CONTROL SUPERVISER DESCRIPTION OF DUTIES:

- IMPLEMENT THE SWPPP.
- OVERSEE MAINTENANCE PRACTICES IDENTIFIED IN THE SWPPP.
- CONDUCT OR PROVIDE FOR INSPECTION AND MONITORING ACTIVITIES
- IDENTIFY OTHER POTENTIAL POLLUTANT SOURCES AND MAKE SURE THEY ARE ADDED TO THE PLAN.
- IDENTIFY ANY DEFICIENCIES IN THE SWPPP AND MAKE SURE THEY ARE CORRECTED
- IF CHANGES IN CONSTRUCTION PLANS ARE NOT ADDRESSED IN THE SWPPP THEN THE SWPPP MUST BE AMENDED TO INCLUDE THE CONSTRUCTION PLAN

DESCRIPTION OF EXISTING SITE CONDITIONS: COUNTY ROAD D IS AN EXISTING 4 LANE STREET CONSISTING OF ASPHALT PAVEMENT, CURB AND GUTTER, UTILITIES AND LANDSCAPED BOULEVARDS.

DESCRIPTION OF PROJECT: THE PROJECT CONSISTS OF RECONSTRUCTING COUNTY ROAD D WEST OF WHITE BEAR AVENUE, SPANNING APPROXIMATELY 1,900 FEET. THE PROJECT WILL INCLUDE REMOVAL OF BITUMINOUS PAVEMENT, CLEARING AND GRUBBING OF TREES AND VEGETATION, AND THE RELOCATION OF ABOVE AND BELOW GROUND UTILITIES. PROPOSED IMPROVEMENTS INCLUDE GRADING, BITUMINOUS PAVING, CONCRETE CURB AND GUTTER, AND STORM SEWER IMPROVEMENTS.

CONSTRUCTION WILL DISTURB AN AREA OF 250,470 SQ FT, OR 5.75 ACRES.

ALL PROPOSED ACTIVITIES WOULD BE CLASSIFIED AS SOIL DISTURBING.

SEQUENCE OF CONSTRUCTION ACTIVITIES: THE SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES WILL BE AS FOLLOWS:

- (1) INSTALL CONSTRUCTION EXIT/ENTRANCE
- (2) INSTALL INLET PROTECTION DEVICES ON EXISTING INLETS.
- (3) INSTALL ALL OTHER TEMPORARY EROSION AND SEDIMENT CONTROLS.
- (4) INSTALL RIPRAP EROSION CONTROL MEASURES
- (5) EXISTING PAVEMENT AND VEGETATION WILL BE REMOVED.
- (6) CONSTRUCT STORM SEWER AND OTHER UTILITY IMPROVEMENTS.
- (7) CONSTRUCT CONCRETE CURB & GUTTER AND BITUMINOUS PAVING.
- (8) PLACE SEED AND HYDRAULIC STABILIZER.
- (9) REMOVAL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

ENVIRONMENTAL REVIEW: THERE HAS BEEN NO ENVIRONMENTAL REVIEW OR COMMON PLAN OF DEVELOPMENT FOR THIS PROJECT.

SPECIAL OR IMPAIRED WATERS: THERE ARE NO KNOWN SPECIAL OR IMPAIRED WATERS WITHIN ONE MILE OF THE PROPOSED CONSTRUCTION LIMITS.

CALCAREOUS FENS: THERE ARE NO KNOWN OR PROPOSED DISCHARGES TO CALCAREOUS FENS ON THIS PROJECT.

GEOTECHNICAL INFORMATION:

A SOIL ANALYSIS WAS COMPLETED BY BRAUN INTERTEC CORPORATION AND IS DETAILED IN THE REPORT DATED JANUARY 7, 2009. UNDER THE EXISTING PAVEMENT AND/OR TOPSOIL, EXISTING FILL RANGING FROM 3 TO 9 FEET CAN BE ANTICIPATED. THE FILL CONSISTS MOSTLY OF SILTY SAND (SP), POORLY GRADED SAND WITH SILT (SP-SM), SILT (ML) AND CLAYEY SAND (SC). BELOW THE EXISTING FILL, GLACIAL SOILS CAN BE ANTICIPATED CONSISTING OF FINE GRAINED SANDS (SM, SP-SM, AND SP) WITH AREAS OF SILT AND SILTY CLAYEY SAND (SC-SM).

EROSION CONTROL AND DETAILS SHEET AND SPECIFICATION NUMBERS:

SHEETS 73-82, AND MN/DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION PERTAINING TO EROSION AND SEDIMENT CONTROL DEVICES.

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES TAB:

SILT FENCE: 600 LINEAR FEET
TEMPORARY DITCH CHECK, TYPE 2 (BIOROLLS) 4,980 L
TEMPORARY DITCH CHECK, TYPE 5 (ROCK WEEPER) 8 CY
INLET PROTECTION: 42 DEVICES
EROSION CONTROL SUPERVISOR: 1 LUMP SUM
STREET SWEEPER W/PICK-UP BROOM: 75 HOURS
SEEDING (150TS WITH WINTER WHEAT - 50 LBS/ACRE): 62 LB: 0.7 ACRE
RAPID STABILIZATION METHOD 3 (MULCH, HYDRAULIC STABILIZER): 10 MGAL
TEMPORARY ROCK CONSTRUCTION ENTRANCE: 8 EACH
RIP RAP, CLASS 4: 35 CY
GRANULAR FILTER: 20 CY
MECHANICAL CLARIFICATION PUMPING: 30 HOURS
AREA OF DISTURBANCE: 250,470 SQ FT
EXISTING IMPERVIOUS AREA: 180,774 SQ FT
NEW IMPERVIOUS AREA: 209,088 SQ FT
NET ADDITIONAL IMPERVIOUS AREA: 28,314 SQ FT

STABILIZATION PRACTICES:

TEMPORARY STABILIZATION INCLUDES THE INSTALLATION BIROLLS DOWN GRADIENT OF THE AREA TO BE DISTURBED. INLET PROTECTION WILL ALSO BE REQUIRED ON ALL PROPOSED STORM SEWER CATCH BASINS AND MAINTAINED THROUGHOUT CONSTRUCTION. WHEREVER POSSIBLE, TREES, GRASS, AND OTHER VEGETATIVE COVER SHALL BE REQUIRED ON ALL EXPOSED SOILS IF GRADING COMPLETION WILL BE DELAYED MORE THAN 14 DAYS.

PERMANENT (FINAL) STABILIZATION INCLUDES PLACEMENT OF BITUMINOUS PAVEMENT, CURB AND TURFED AREAS.

ANY REMOVALS SHALL BE LIMITED TO THAT WHICH IS REQUIRED AND IN AN ORDER THAT IS CONSISTENT WITH THE REMOVAL AND CONSTRUCTION SEQUENCE.

TEMPORARY STORM WATER MANAGEMENT:

DURING CONSTRUCTION STORM WATER WILL BE RETAINED IN THE WORK AREA WHEN POSSIBLE OR DIRECTED TO THE STORM SEWER LOCATED THROUGHOUT THE SITE. CONSTRUCTION WILL BE PHASED TO LIMIT THE DISTURBANCE AREA.

PERMANENT STORM WATER MANAGEMENT:

STORM WATER WILL SURFACE FLOW AND BE COLLECTED BY CATCH BASINS AND CONVEYED TO THE EXISTING STORM SEWER SYSTEM. PROPOSED DRAINAGE CHARACTERISTICS WILL GENERALLY FOLLOW THE SAME PATTERNS AS EXISTING CONDITIONS. THE STORM SEWER SYSTEM DISCHARGES TO THE NORTH IN THE EXISTING I-694 ROW. AS PART OF THE PROJECT, THE OUTFALL LOCATION WILL RECEIVE PERMANENT RIP RAP AND WILL REMOVE ANY CONSTRUCTION SEDIMENT DEPOSITS PRIOR TO SUBMITTING. SINCE THERE IS LESS THAN ONE ACRE OF NEW IMPERVIOUS SURFACES, ADDITIONAL PERMANENT STORMWATER TREATMENT FACILITIES ARE NOT REQUIRED FOR THE PROJECT.

OTHER CONTROLS

WASTE MATERIALS:

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN METAL DUMPSTERS. DUMPSTERS WILL BE EMPTIED AS NEEDED AND THE WASTE WILL BE HAULED OFFSITE AND DISPOSED OF PROPERLY.

HAZARDOUS WASTE MATERIALS:

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER.

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTBALE UNITS AS REQUIRED BY LOCAL REGULATION.

OFF-SITE VEHICLE TRACKING:

THE PAVED STREETS ADJACENT TO THE PROJECT WILL NEED TO BE SWEEPED NIGHTLY TO REMOVE EXCESS MUD, DIRT, OR ROCK TRACKED AWAY FROM THE SITE. DUMP TRUCKS HAULING MATERIAL TO AND FROM THE CONSTRUCTION AREA WILL BE COVERED WITH A TARPULIN. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ROCK ENTRANCES AT POINTS OF EXIT FROM PAVEMENT AS DIRECTED BY THE ENGINEER.

DEWATERING AND BASIN DRAINING:

DEWATERING OPERATIONS ARE NOT ANTICIPATED TO BE REQUIRED FOR THIS PROJECT. IF DEWATERING PROCEDURES ARE REQUIRED, WATER SHALL BE PUMPED TO TEMPORARY SEDIMENTATION BASINS. CONTAMINATED WATER SHALL NOT BE PUMPED TO TURFED AREAS OR STORM SEWER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION OF ANY PERMITS REQUIRED FOR DEWATERING.

PRODUCT SPECIFIC PRACTICES

CONCRETE, CONCRETE TOOLS AND TRUCKS MUST ALL WASH OUT IN A DESIGNATED AREA. THE DESIGNATED AREA MUST BE CLEARLY IDENTIFIED ON THE SITE AND COMMUNICATED TO ALL PERSONNEL INVOLVED WITH CAST-IN-PLACE CONCRETE AS THE WASHOUT AREA. THIS DESIGNATED AREA MUST MEET MPCA REGULATIONS OF A DEFINED CONCRETE WASHOUT AREA. THE FOLLOWING THREE OPTIONS ARE CONSIDERED AN APPROVED METHOD:

- (1) KEEPING ALL CONCRETE WASHOUT SELF-CONTAINED AND RETURNED TO AN INDUSTRIAL SITE TO BE DISPOSED OF IN A MPCA APPROVED MANNER.
- (2) PROVIDING A PREFABRICATED CONCRETE WASHOUT CONTAINER THAT ALL CONCRETE WASHOUT CAN BE COLLECTED IN. THESE CONTAINERS SHOULD BE MAINTAINED ON A REGULAR BASIS.
- (3) CREATING A SELF INSTALLED WASHOUT FACILITY WITH AN IMPERMEABLE LINER. AN ENGINEERED CLAY LINER WILL BE CONSIDERED AN IMPERMEABLE LINER.

FOR ADDITIONAL INFORMATION ON CONCRETE WASHOUT REGULATIONS, PLEASE SEE THE MPCA'S MEMORANDUM "CONCRETE WASHOUT GUIDANCE."

ASBUILT PLAN

CONFORMING TO

CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

TIMING OF CONTROL MEASURES

THE FOLLOWING CONTROL MEASURES WILL BE COORDINATED WITH CONSTRUCTION ACTIVITIES:

- SILT FENCE/BIO ROLLS SHALL BE CONSTRUCTED PRIOR TO ANY SOIL DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL PERMANENT STABILIZATION HAS TAKEN PLACE.
- STORM SEWER INLET PROTECTION DEVICES SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL PERMANENT STABILIZATION HAS TAKEN PLACE.
- CLEARING, GRADING, AND PAVEMENT REMOVAL WILL NOT OCCUR IN AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.
- A STABILIZED CONSTRUCTION SITE ENTRANCE WILL BE CONSTRUCTED BEFORE CLEARING AND GRADING BEGINS.
- EROSION AND SEDIMENT CONTROL DEVICES WILL BE SATISFACTORILY MAINTAINED UNTIL THE CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR EROSION HAS PASSED.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

THE STORM WATER POLLUTION PREVENTION PLAN REFLECTS MINNESOTA POLLUTION CONTROL AGENCY (MPCA) GUIDELINES FOR STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION ACTIVITIES. THE STORM WATER POLLUTION PREVENTION PLAN HAS BEEN PREPARED IN ACCORDANCE WITH ALL OF THE PROVISIONS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT.

MAINTENANCE AND INSPECTION RECORDS




THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING INSPECTION AND MAINTENANCE PRACTICES TO MAINTAIN EROSION AND SEDIMENT CONTROLS:

- ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER IN 24 HOURS. THE INSPECTION WILL BE DONE BY THE EROSION CONTROL SUPERVISOR.
- ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF THE REPORT.
- BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
- SILT FENCE WILL BE INSPECTED FOR A DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.

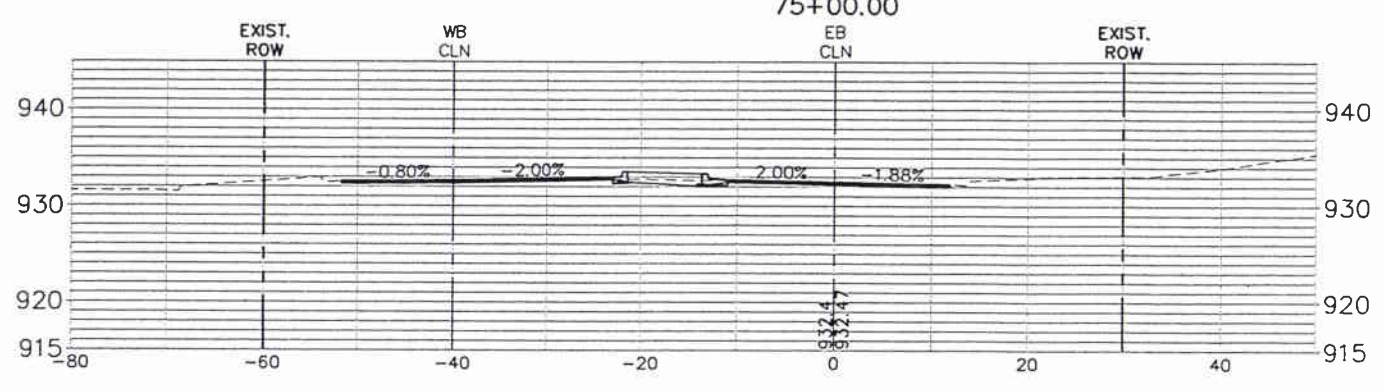
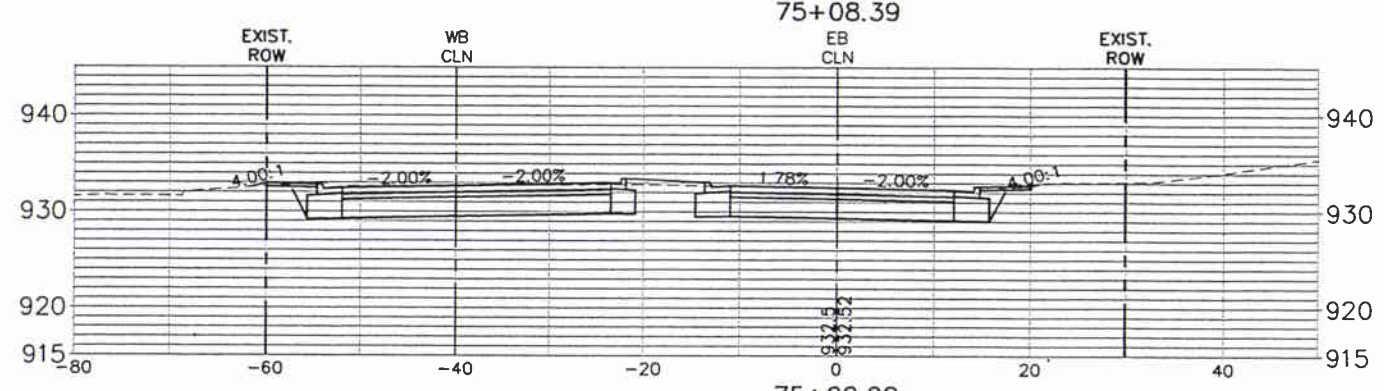
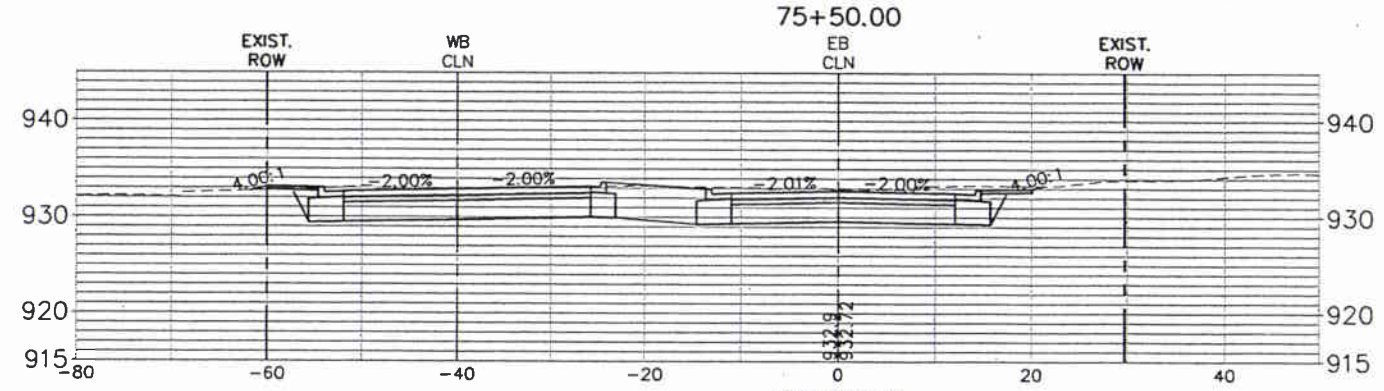
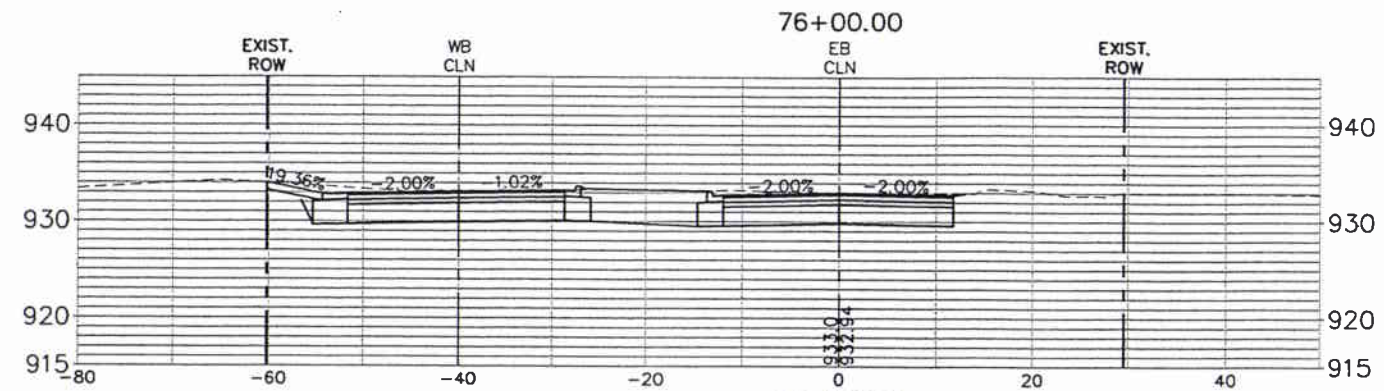
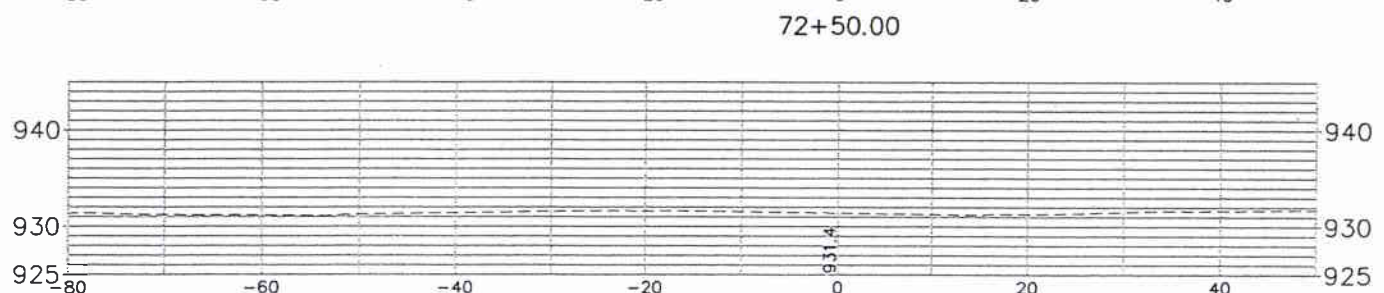
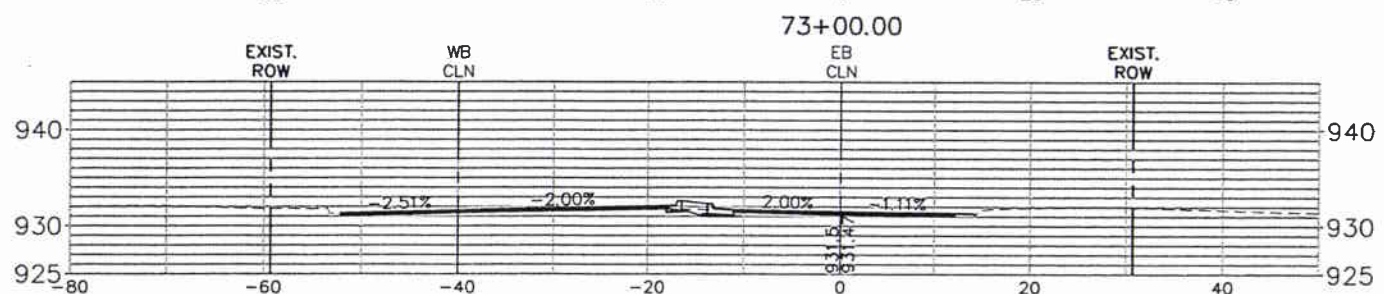
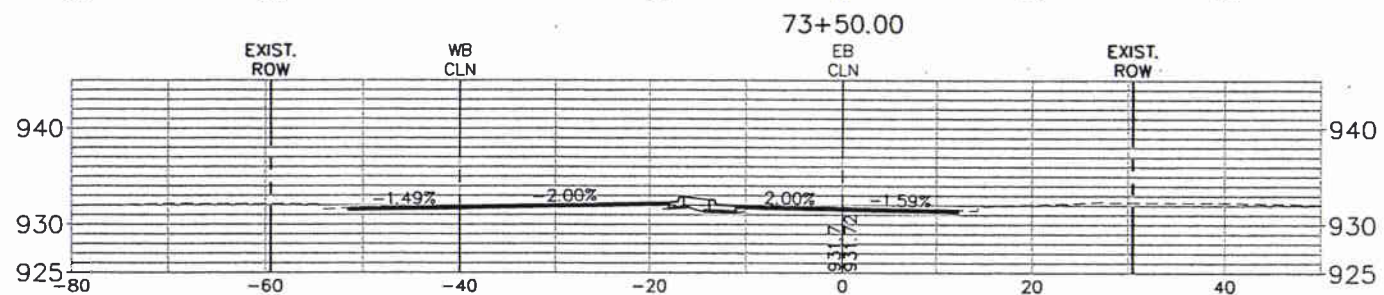
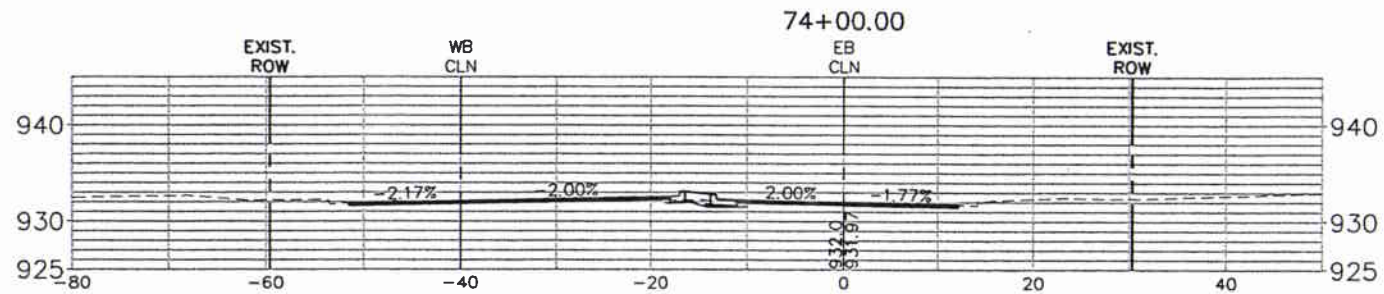
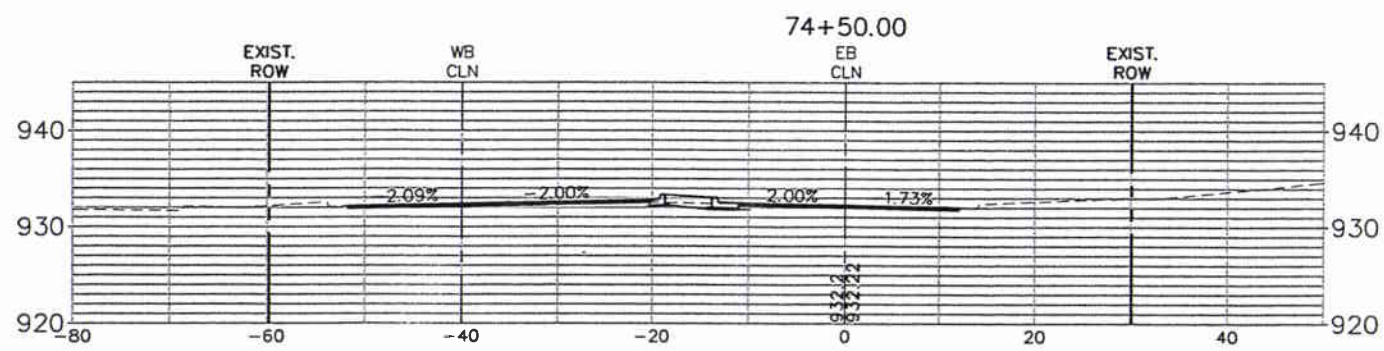
INVENTORY FOR POLLUTION PREVENTION PLAN

POLLUTANTS THAT RESULT FROM CLEARING, GRADING, EXCAVATION, AND BUILDING MATERIALS AND HAVE THE POTENTIAL TO BE PRESENT IN THE STORM WATER RUNOFF ARE AS FOLLOWS: CONCRETE, ASPHALT, CLEANING SOLVENTS, PAINTS, FUELS, PETROLEUM BASED PRODUCTS, FERTILIZERS, WOOD AND SOLID WASTES.

K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN SHEETS\COUNTY\ROAD_D\CRD-SWPPP.dwg September 22, 2009 - 9:00am

No.	Date	Revisions	App.	DRAWING NAME CRD-SWPPP.dwg	 <p style="font-size: small;">2550 UNIVERSITY AVE. WEST, SUITE 345H ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-5116</p>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	 <p style="font-size: small;">RAMSEY COUNTY</p>	 <p style="font-size: small;">City of Maplewood, Minnesota Department of Public Works Engineering Division</p>	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS	CITY PROJECT	08-13	SHEET NO. 82 104		
				DESIGNED BY: RBC									COUNTY PROJECT	P-3202
				DRAWN BY: HMW									S.P.	62-619-30
				CHECKED BY: KRB, ATB									S.P.	62-596-04
				DATE: 08/07/09										
				PROJECT NO. 160500029.2.101		DATE: 08/07/09 MN LIC. NO. 44821								

K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS01.dwg September 22, 2009 - 9:01am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

No	Date	Revisions	App.
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME CRD-XCS01.dwg
DESIGNED BY: RBC
DRAWN BY: HMW
CHECKED BY: KRB, ATB
DATE: 08/07/09
PROJECT NO. 160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2550 UNIVERSITY AVE. WEST, SUITE 340M
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-5116

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

Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

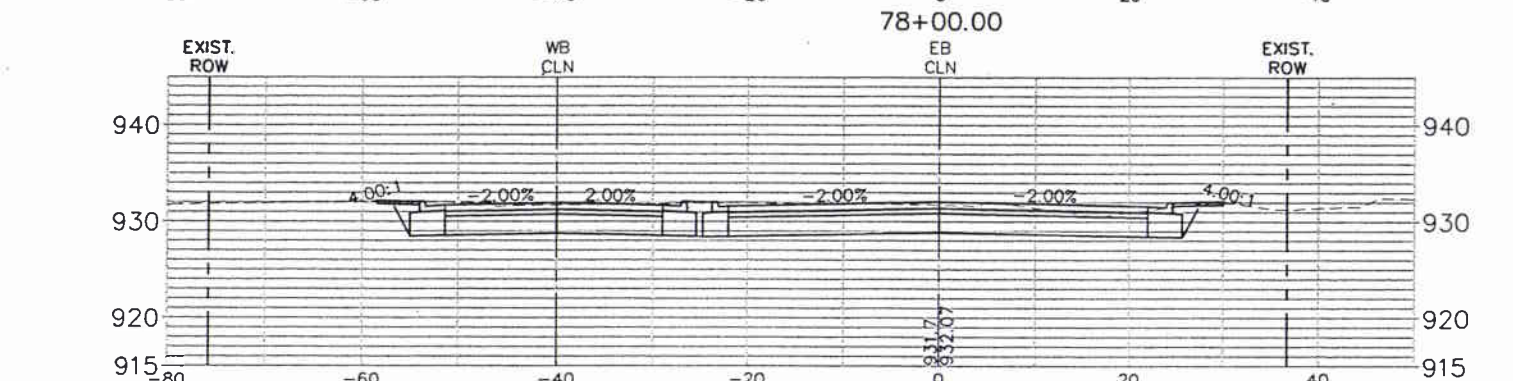
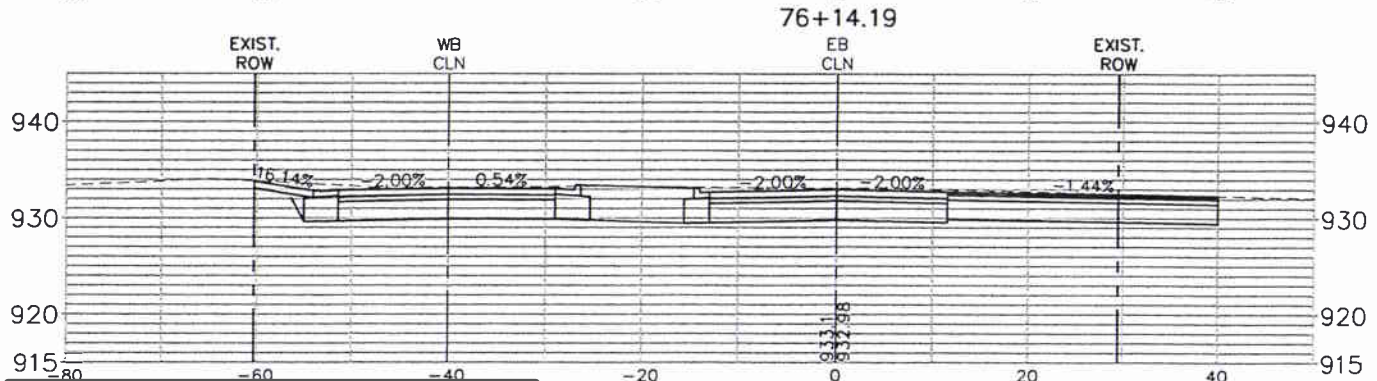
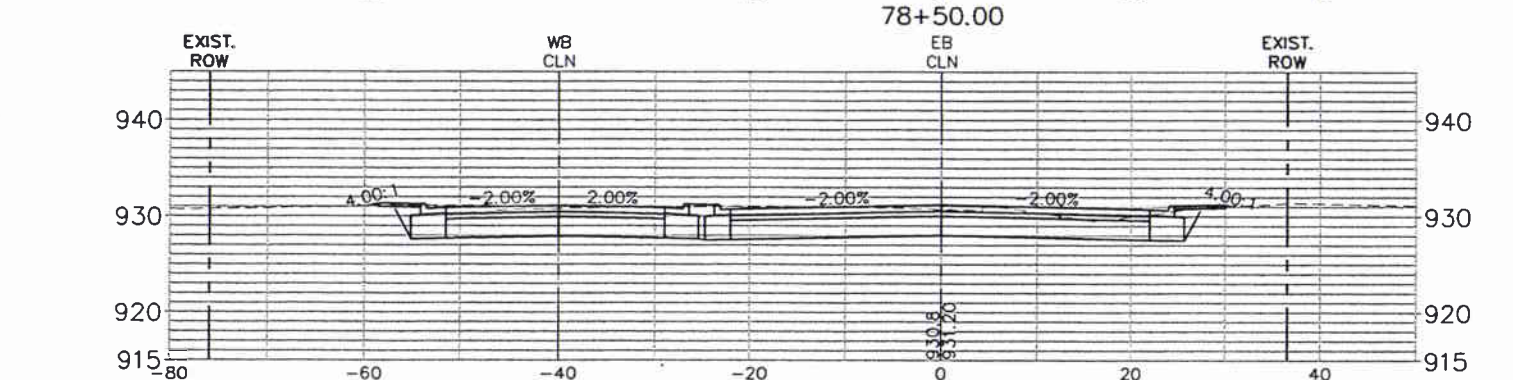
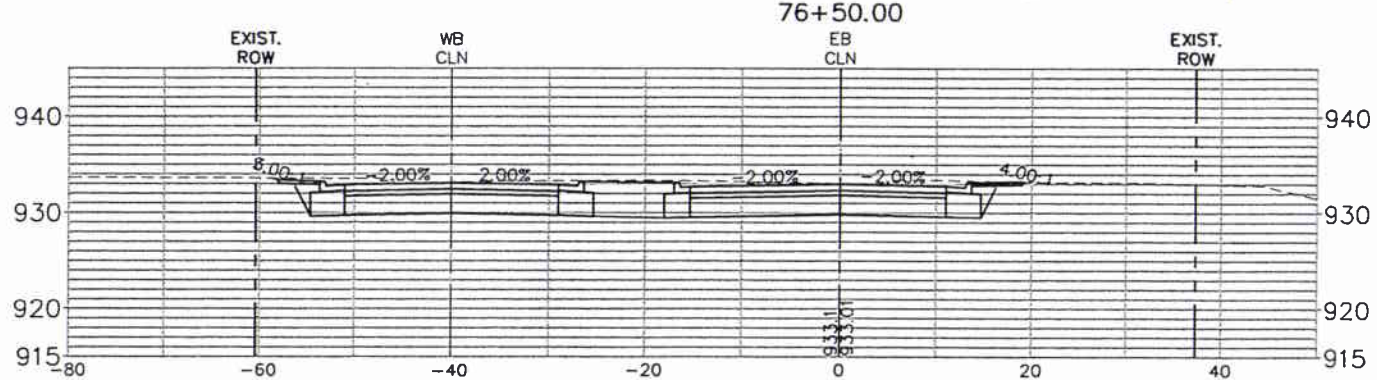
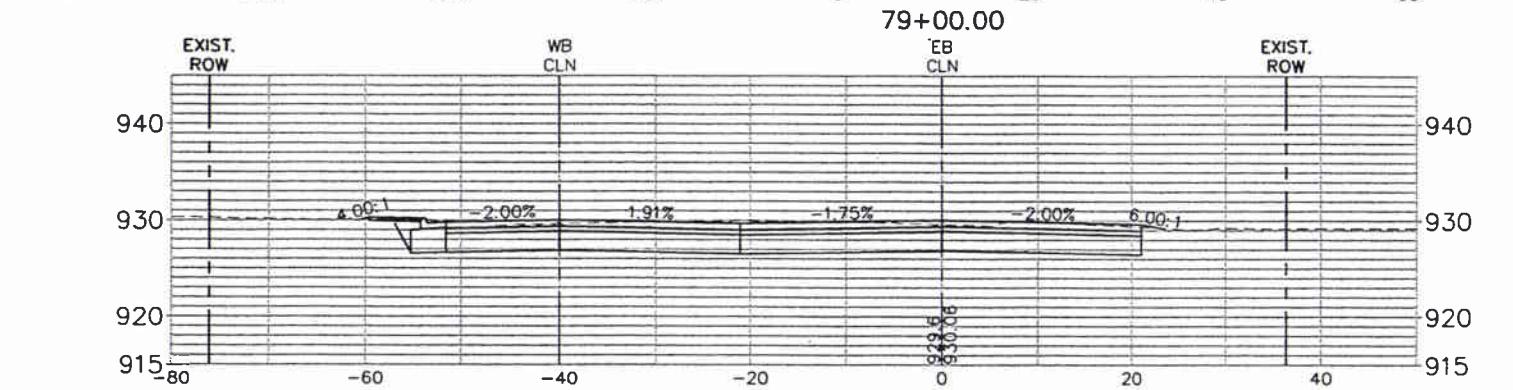
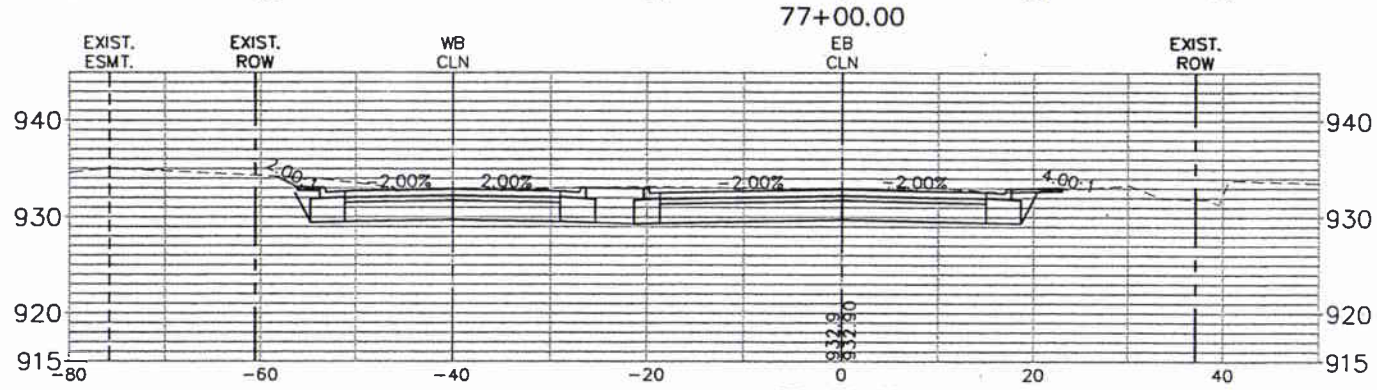
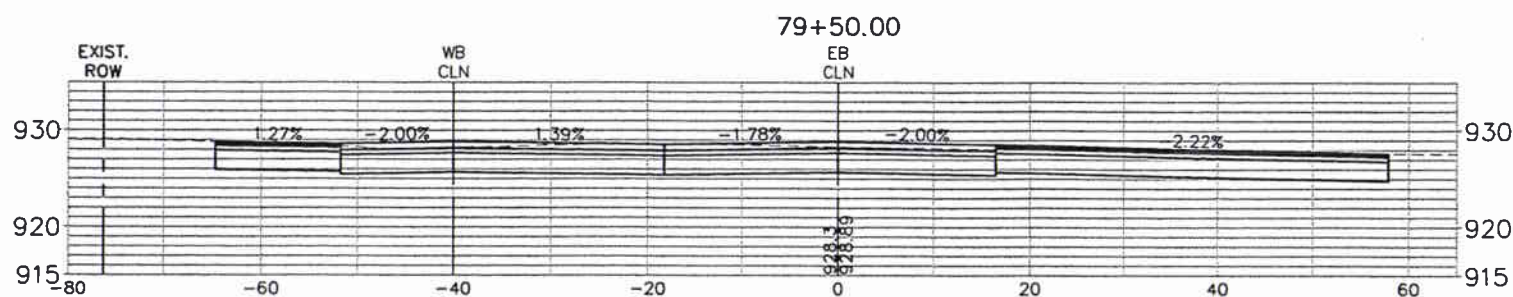
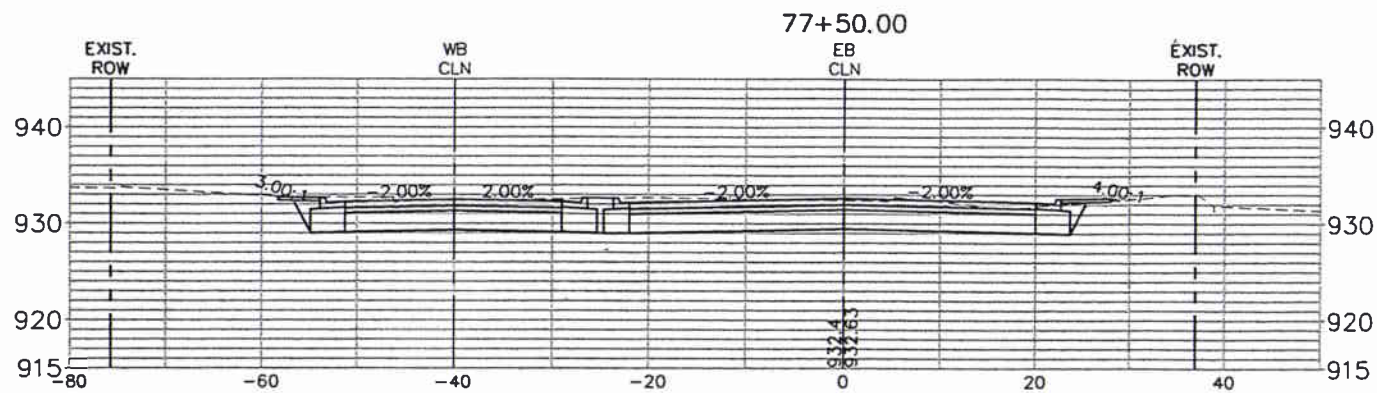
COUNTY ROAD D
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
83

104

K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS02.dwg September 22, 2009 - 9:02am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

No.	Date	Revisions	App.
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME	CRD-XCS02.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2530 UNIVERSITY AVE. WEST, SUITE 345N
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-5116

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

Daniel J. Coyette
DANIEL J. COYETTE
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

**RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS**

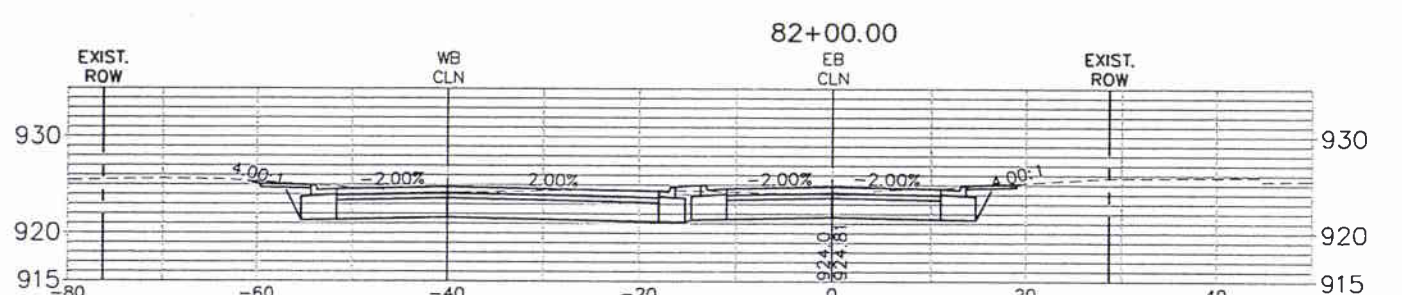
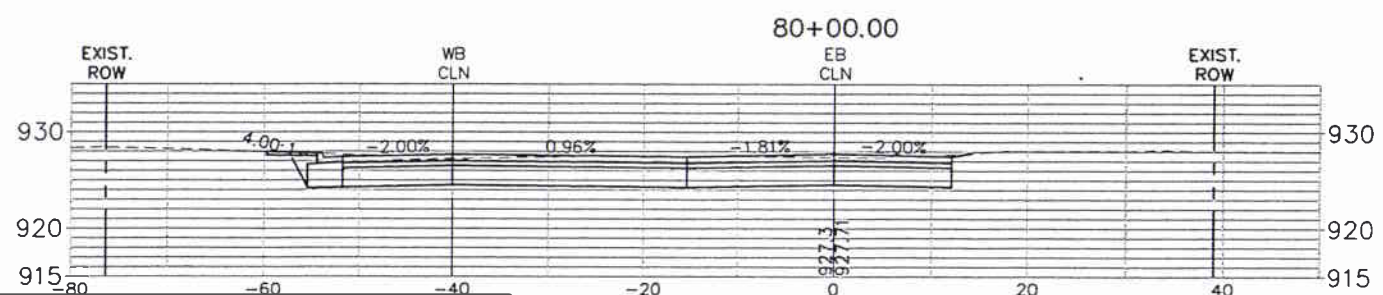
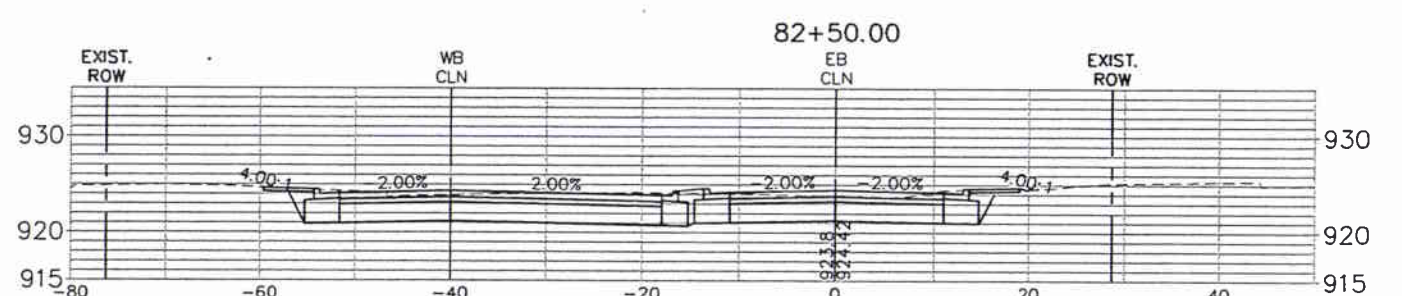
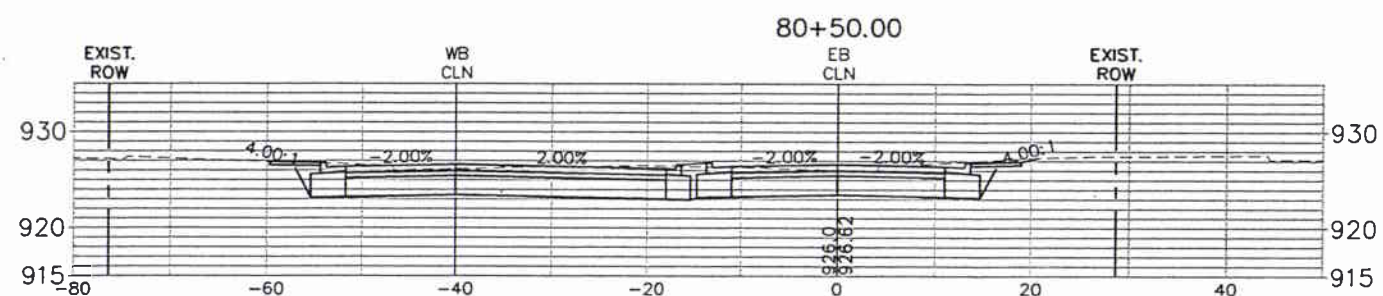
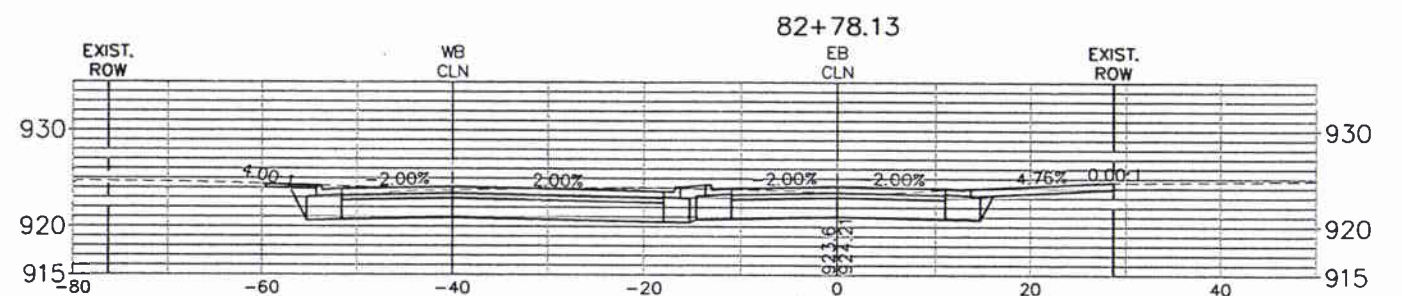
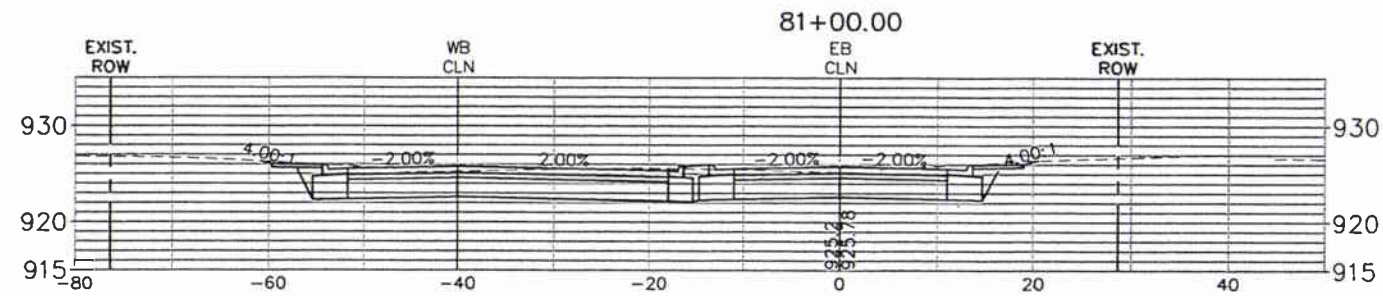
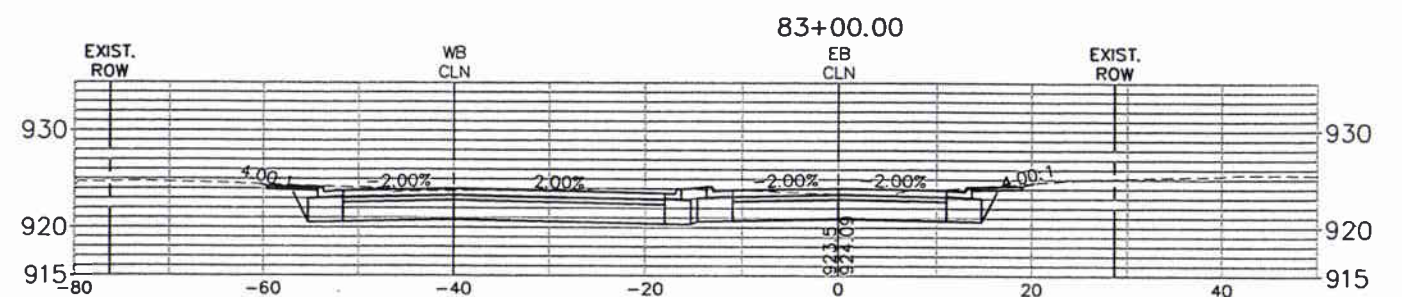
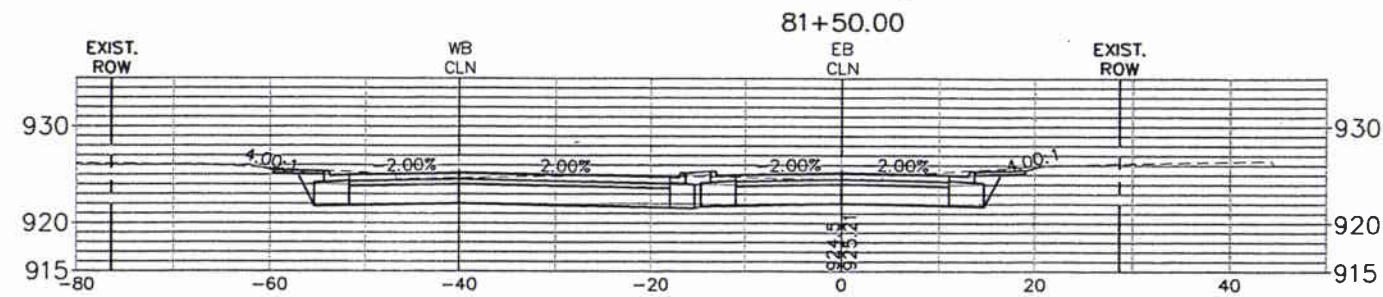
COUNTY ROAD D
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
84

104

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS03.dwg September 22, 2009 - 9:03am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

No.	Date	Revisions	App.
DONE BY: Rob Gaetz			
DATE: 1-27-2011			

DRAWING NAME	CRD-XCS03.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2200 UNIVERSITY AVE. WEST, SUITE 340W
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 643-4197
FAX. NO. (651) 643-5116

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

Daniel J. Coyle
DANIEL J. COYLE
DATE: 08/07/09 MN LIC. NO. 44821



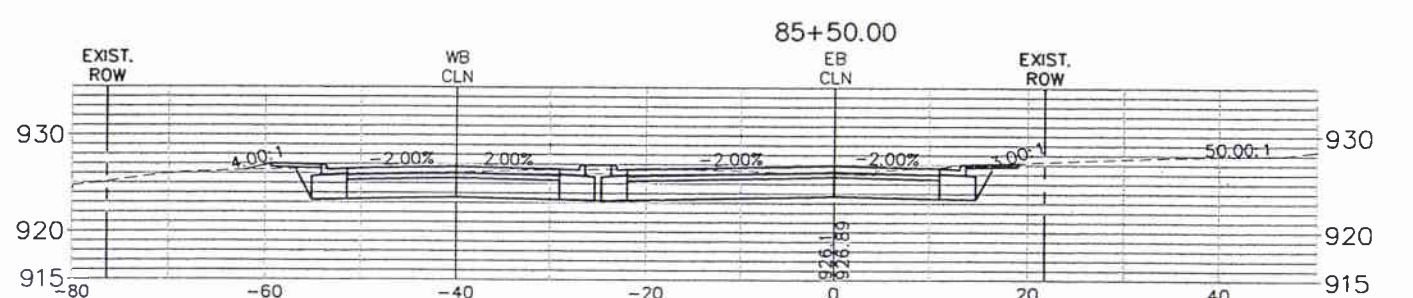
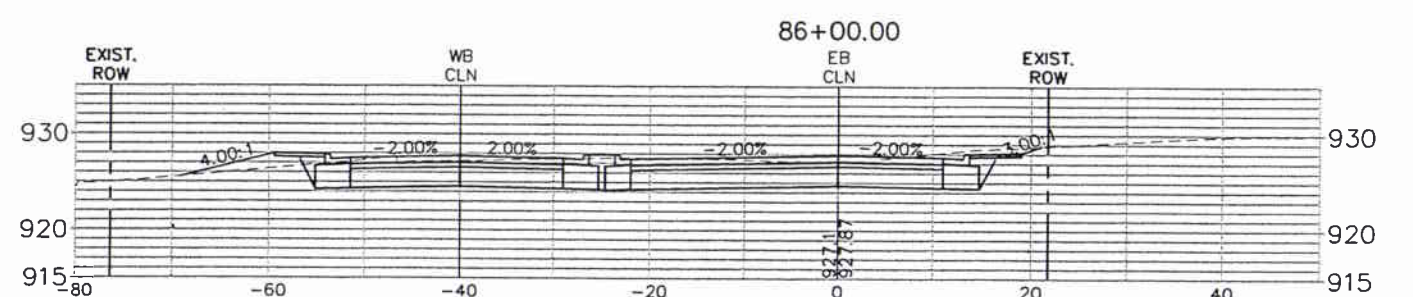
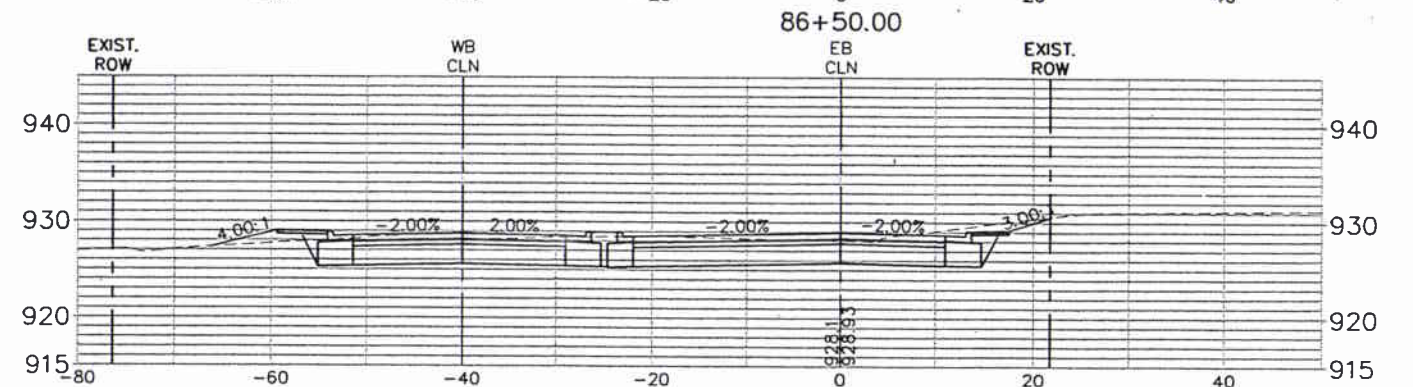
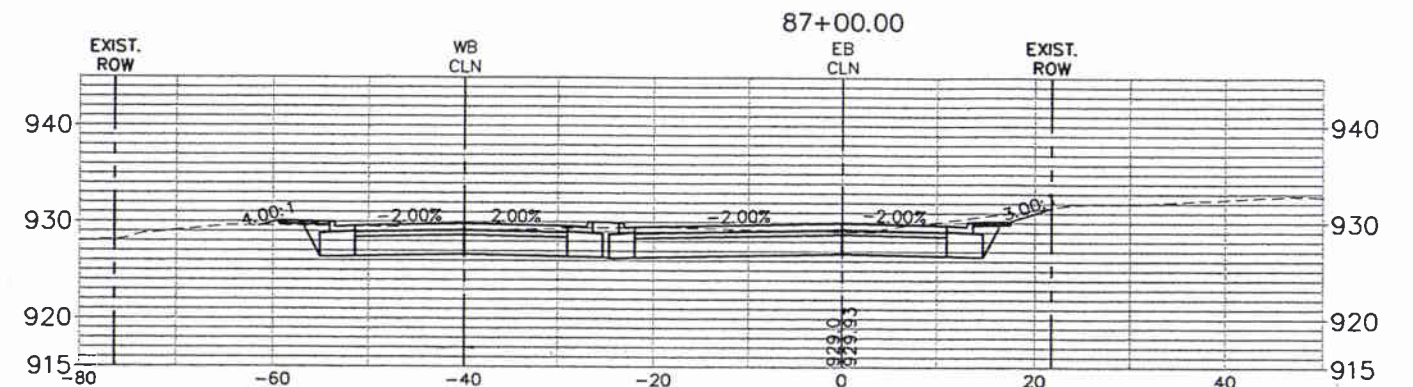
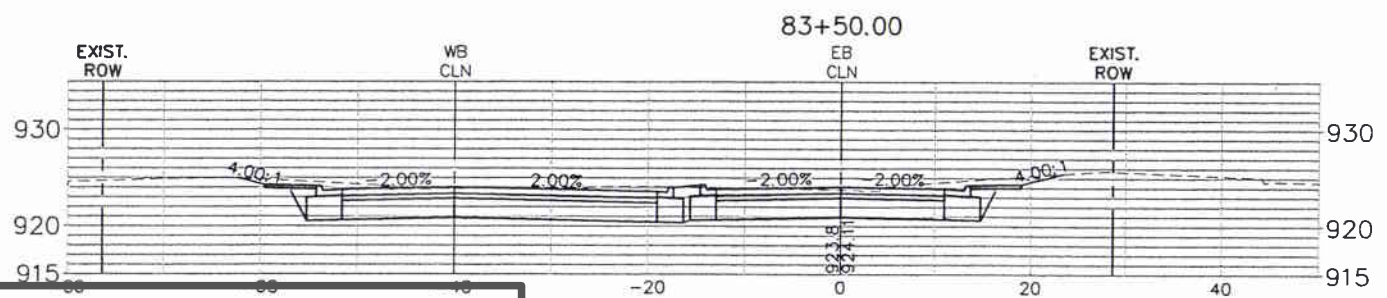
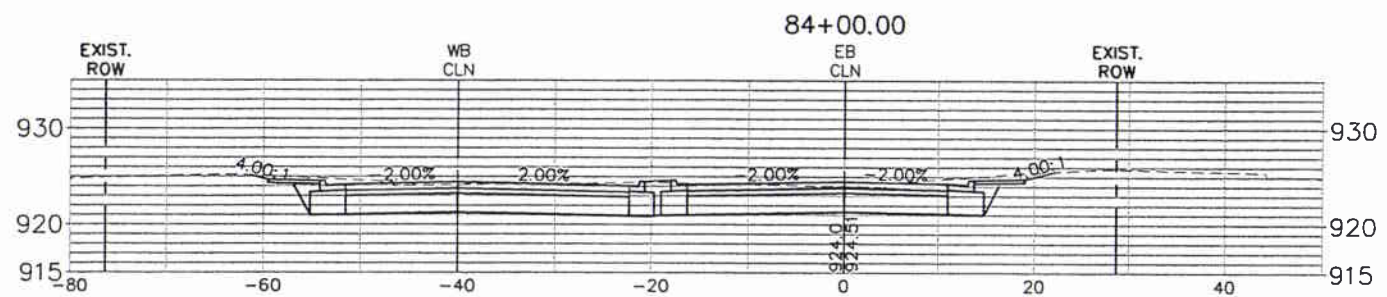
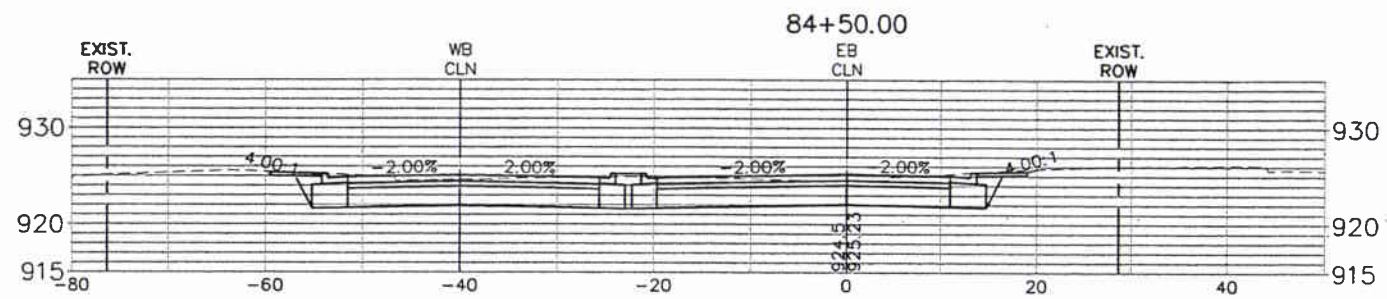
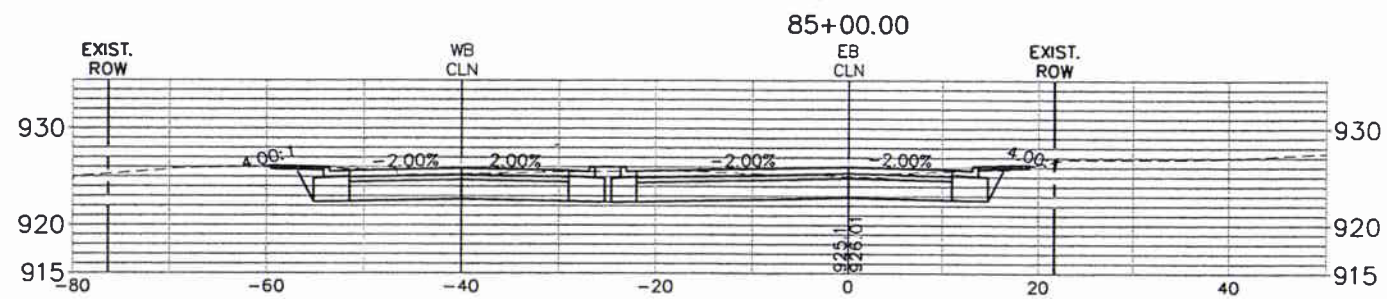
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
COUNTY ROAD D
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
85
104

K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS04.dwg September, 22, 2009 -- 9:04am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

No.	Date	Revisions	App.
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME CRD-XCS04.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2330 UNIVERSITY AVE. WEST, SUITE 345H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4177
FAX. NO. (651) 645-5116

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

Daniel J. Coyle
DANIEL J. COYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

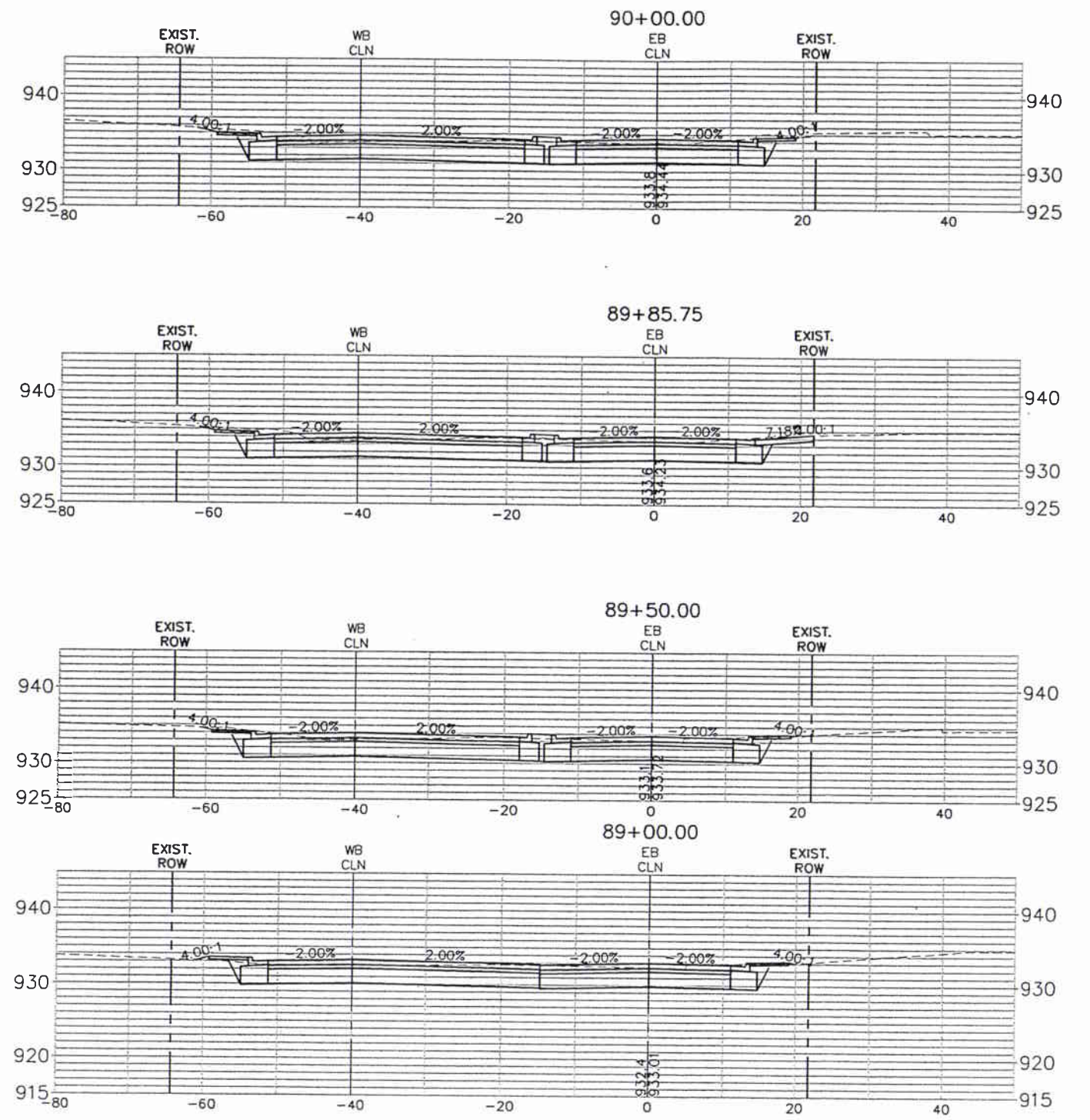
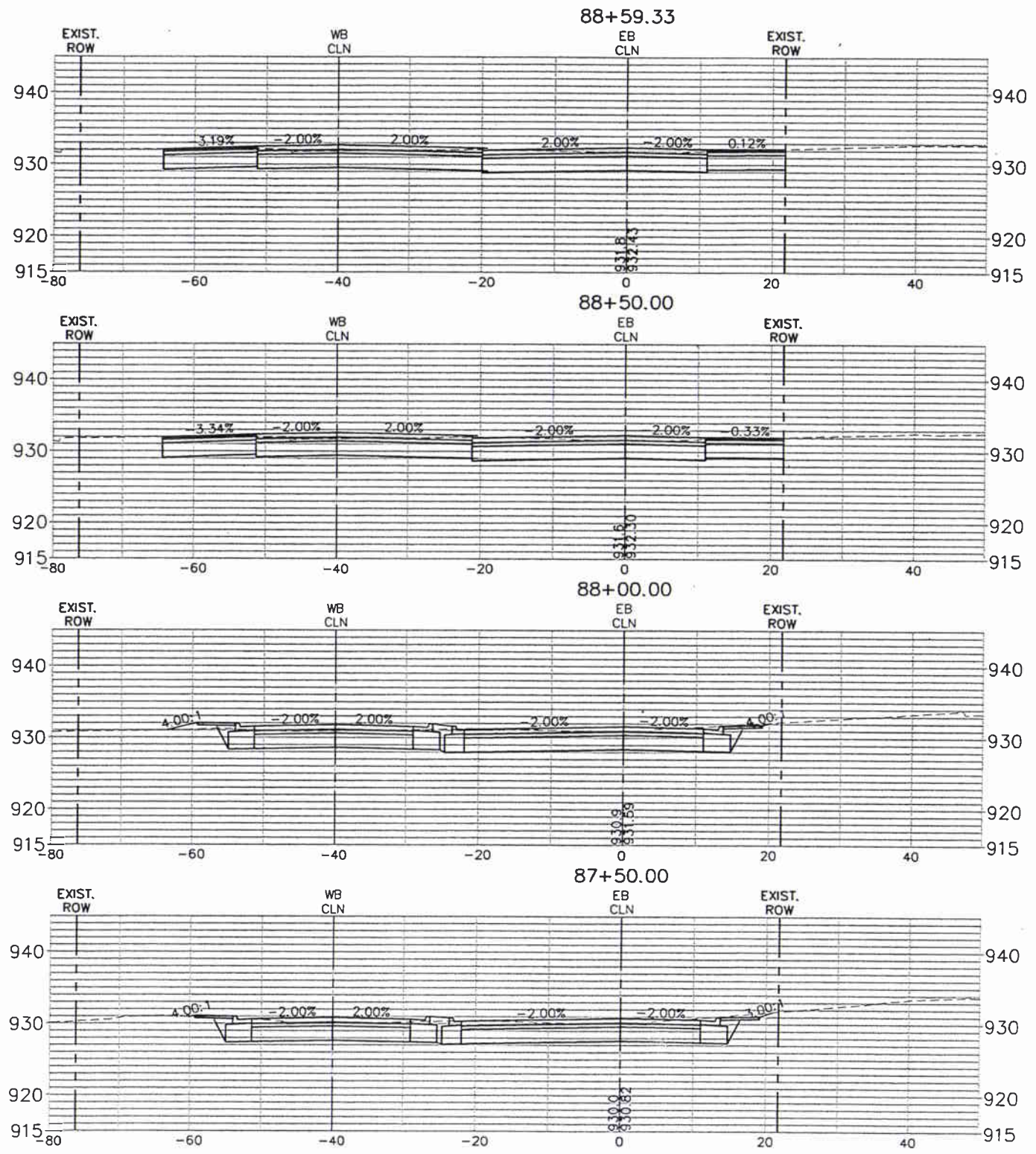
COUNTY ROAD D
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
86

104

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS05.dwg September 22, 2009 - 9:05am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

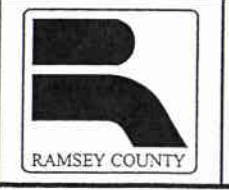
No.	Date	Revisions	App.
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME	CRD-XCS05.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2330 UNIVERSITY AVE. WEST, SUITE 343N
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-5116

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

Daniel J. Coyle
DANIEL J. COYLE, P.E.
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

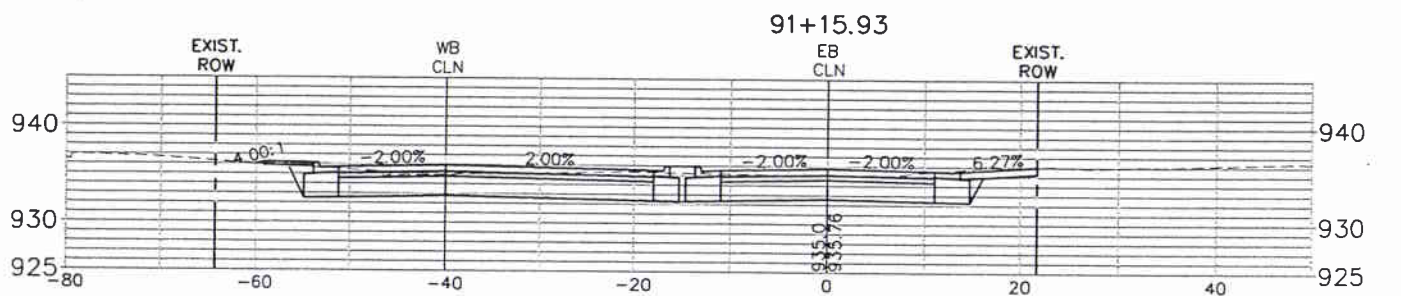
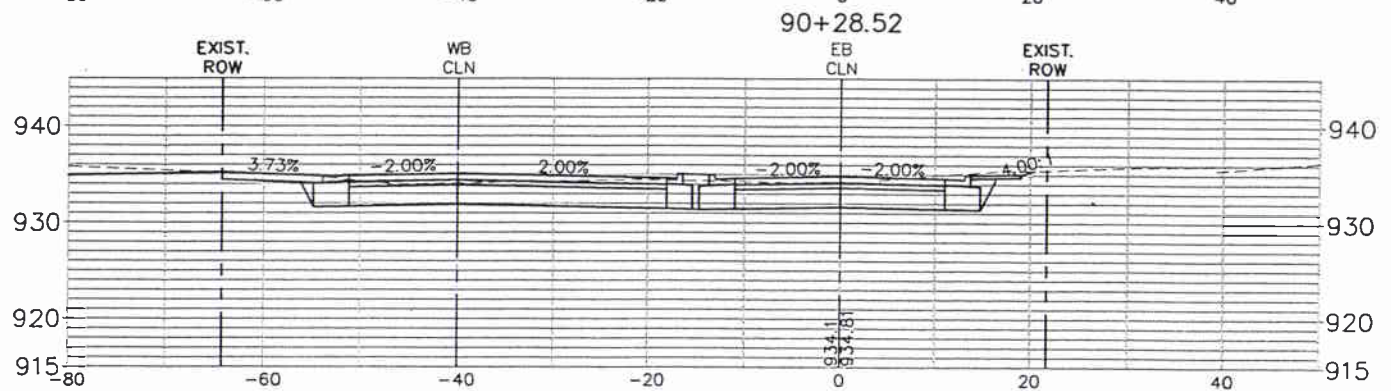
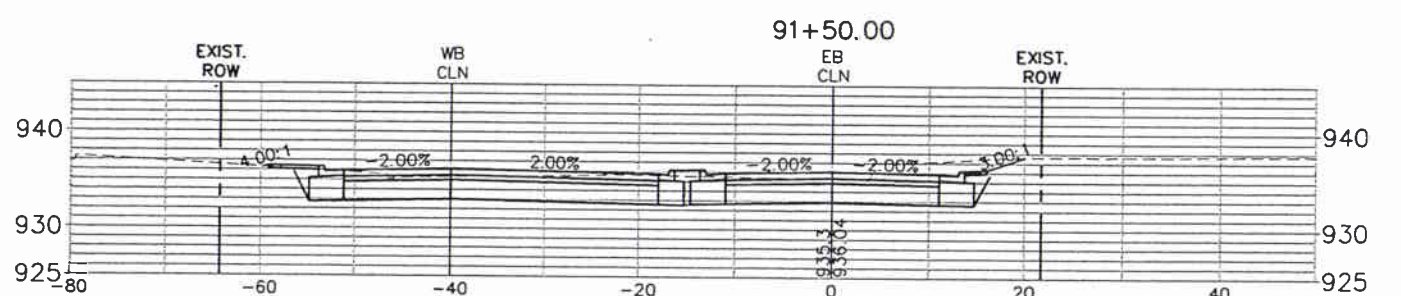
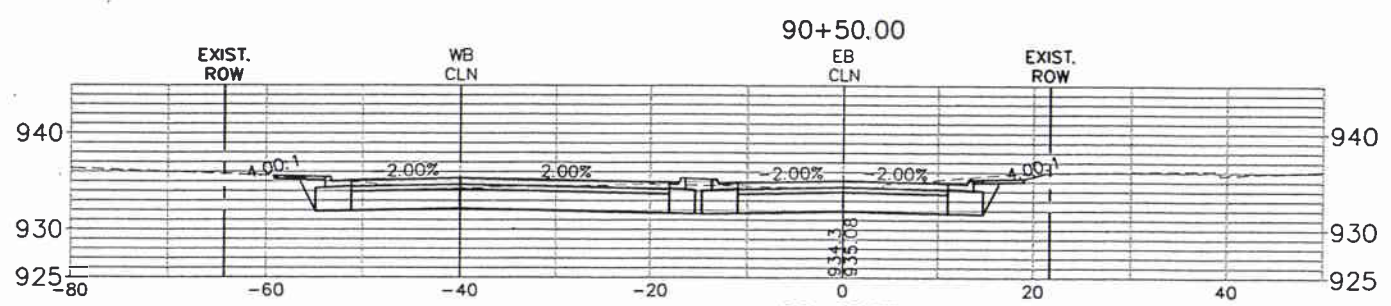
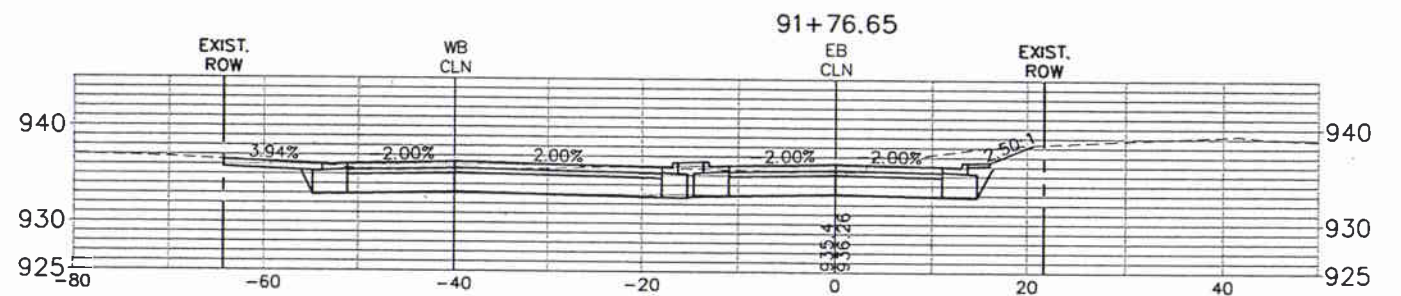
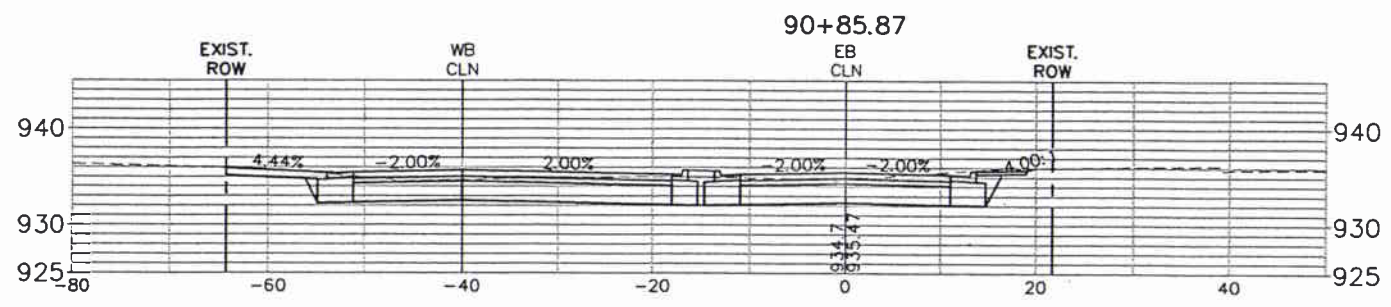
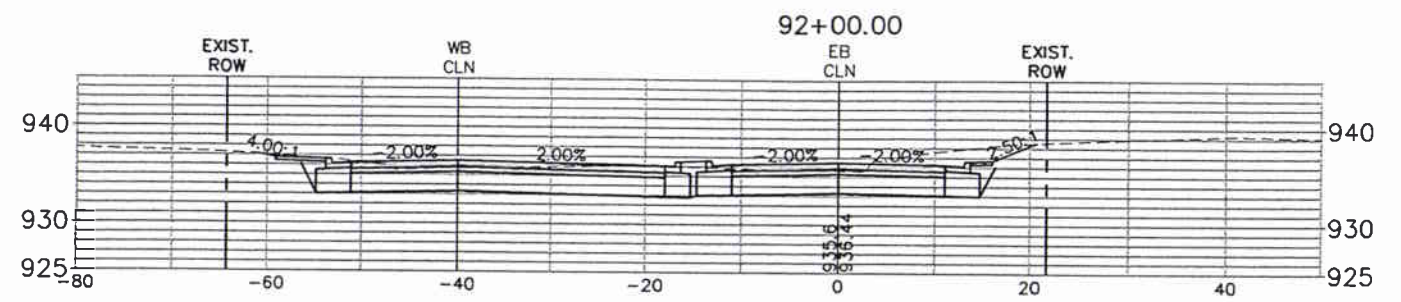
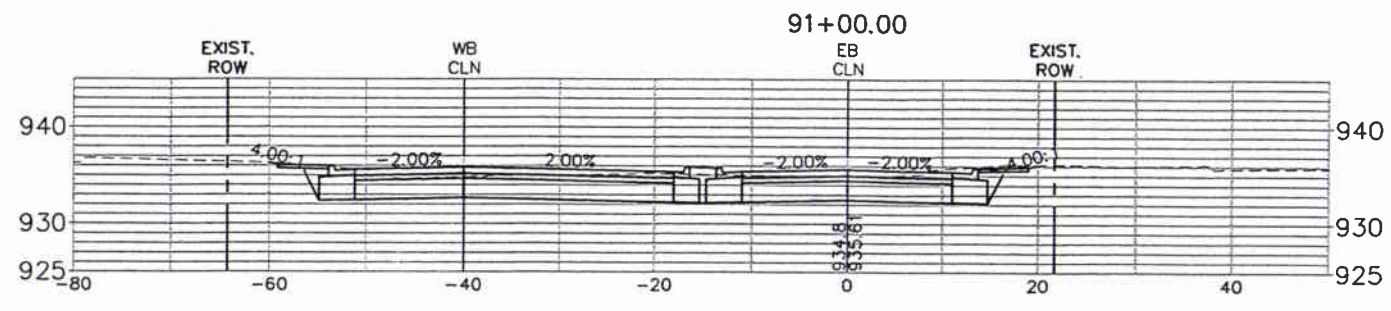
RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

COUNTY ROAD D
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
87
104

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS06.dwg September 22, 2009 - 9:06am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

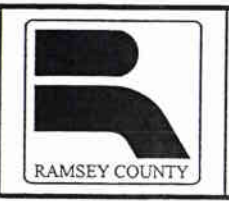
No.	Date	Revisions	App
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME	CRD-XCS06.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

**Kimley-Horn
and Associates, Inc.**
2350 UNIVERSITY AVE. WEST, SUITE 345H
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-5116

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

Daniel J. Coyle
DANIEL J. COYLE PE
DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS

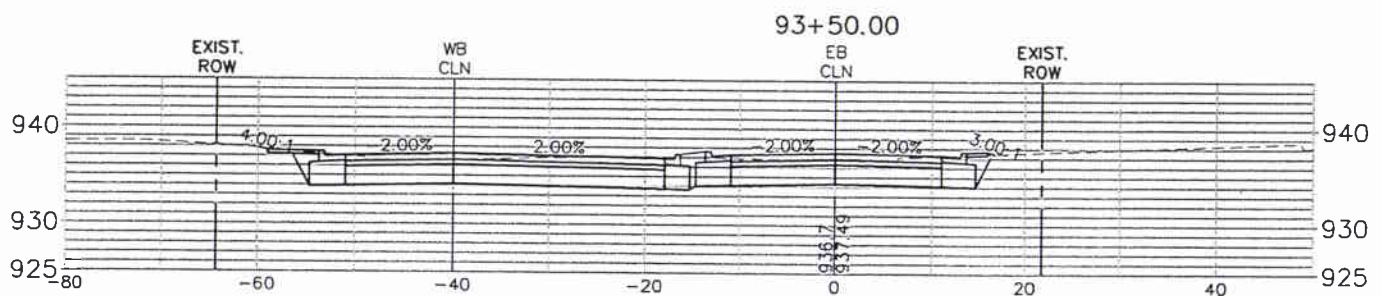
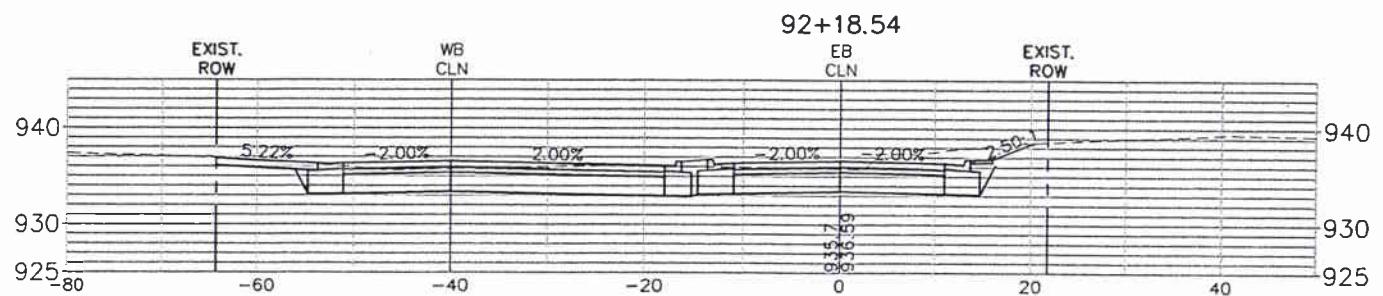
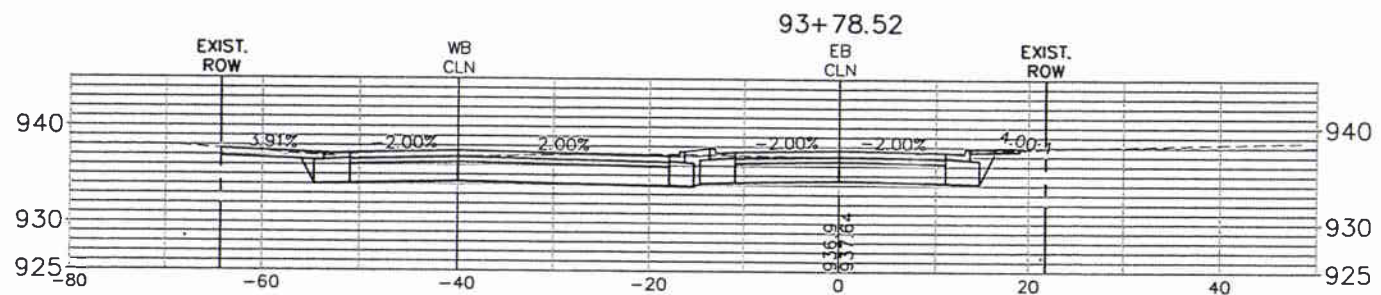
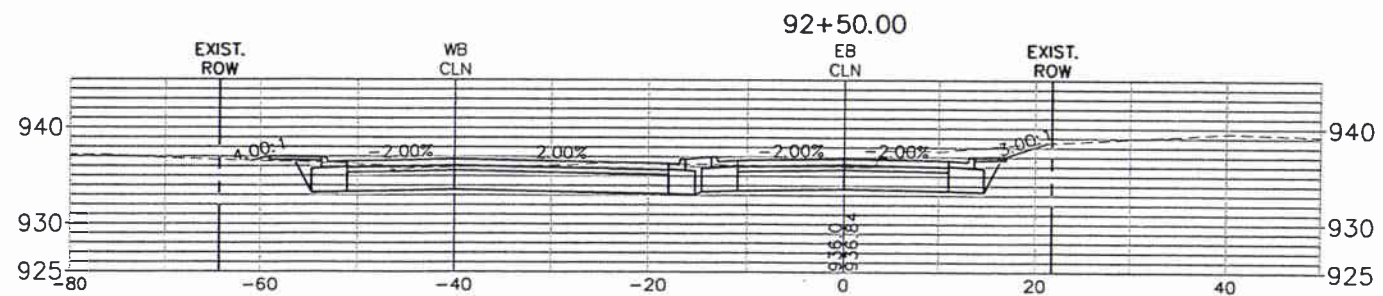
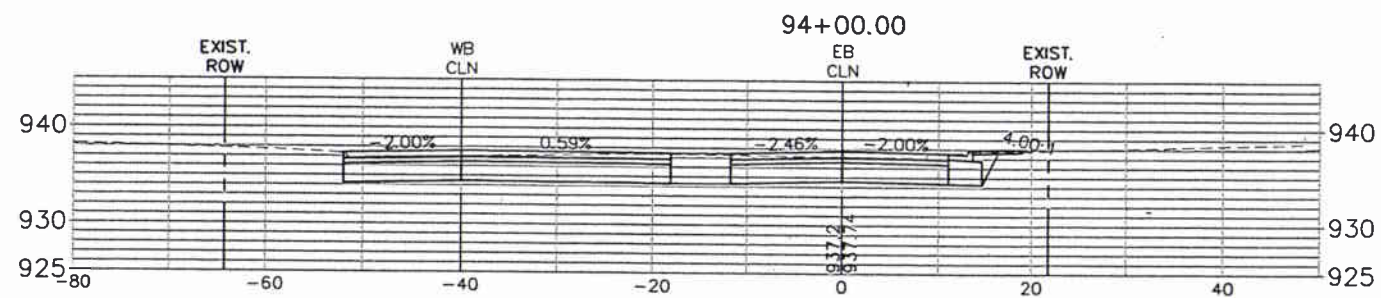
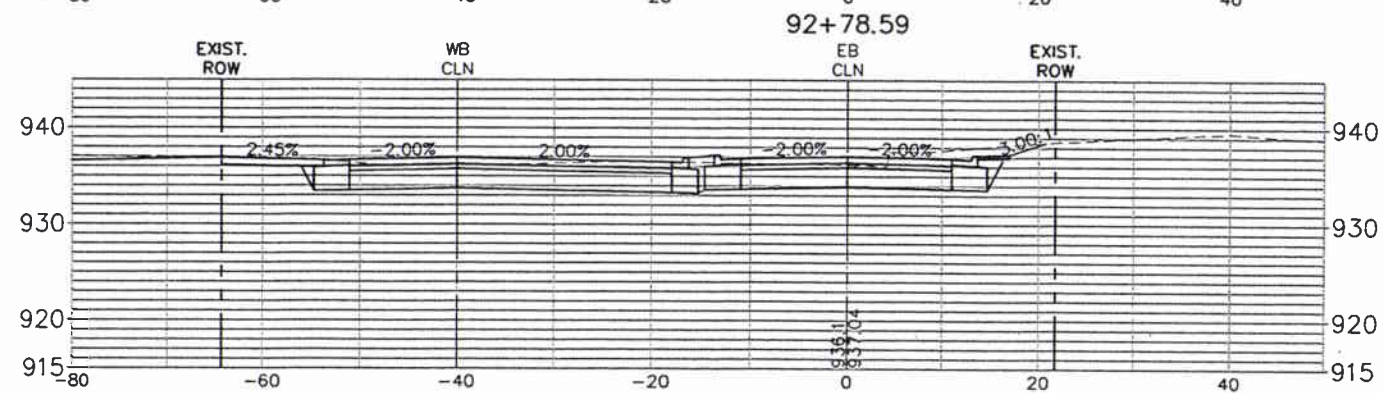
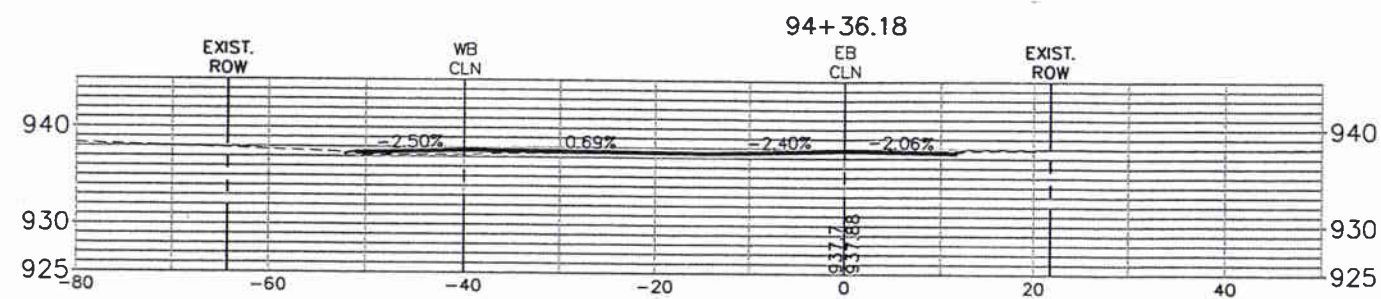
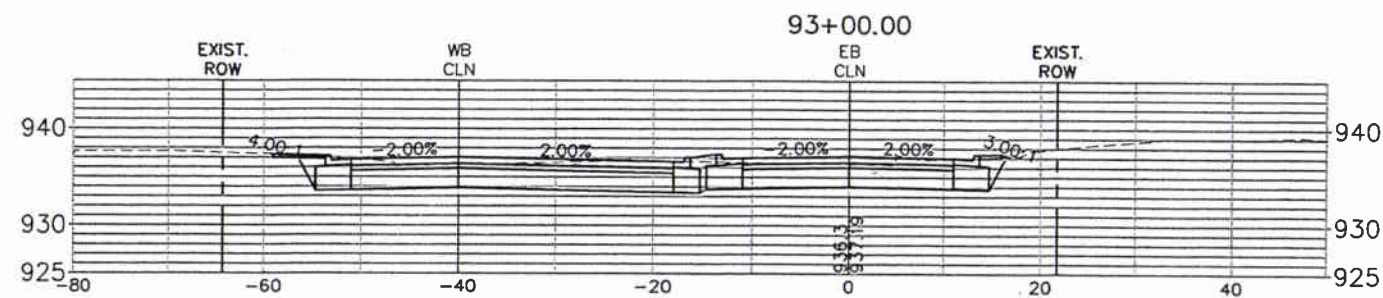
COUNTY ROAD D
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
88

104

K:\TMC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS07.dwg, September 22, 2009 - 9:07am



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

No.	Date	Revisions	App.
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME CRD-XCS07.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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

Daniel J. Coyle
DANIEL J. COYLE, P.E.
DATE: 08/07/09 MN LIC. NO. 44821



**RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS**

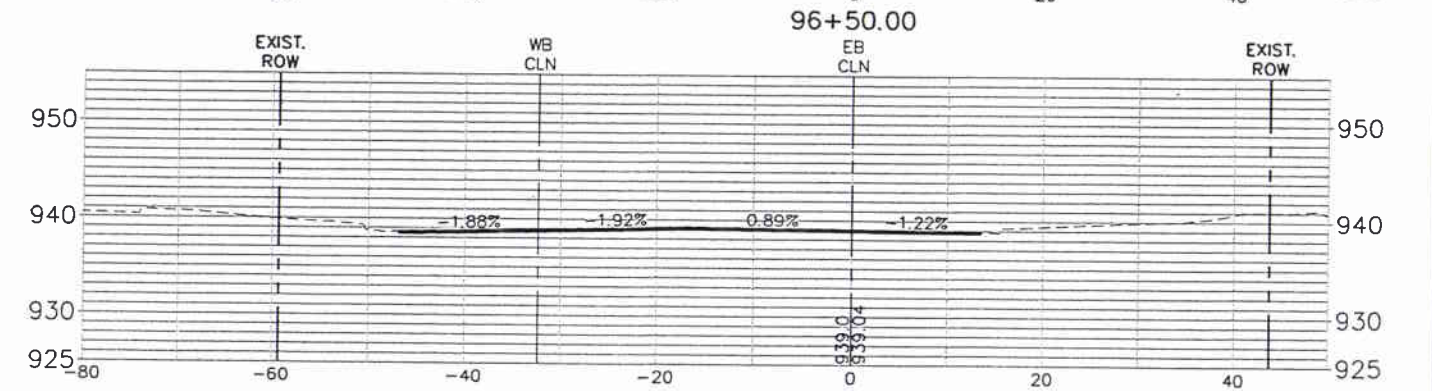
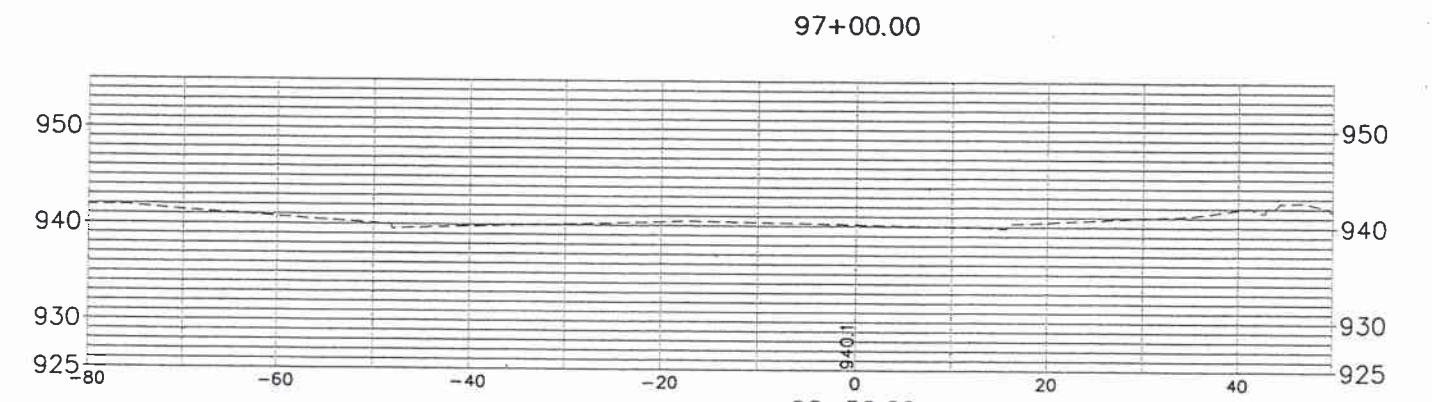
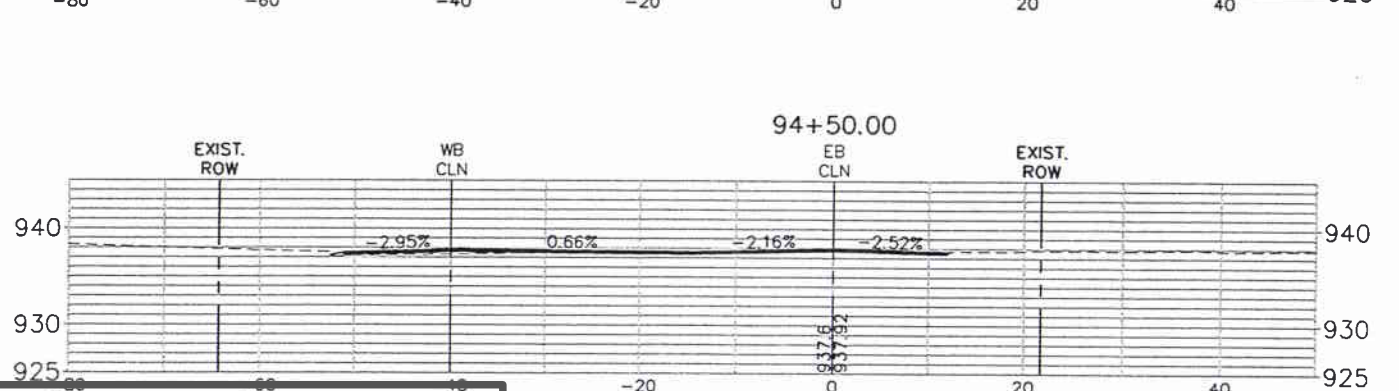
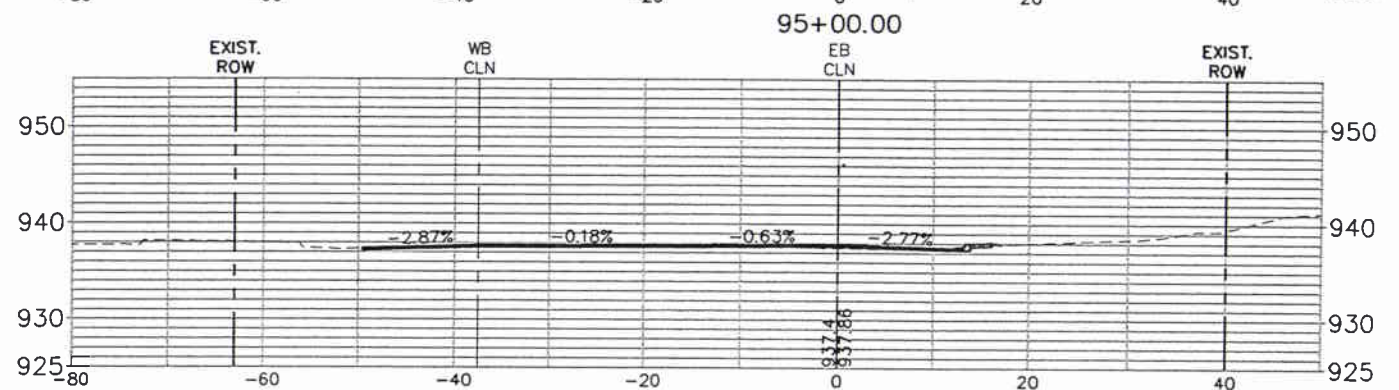
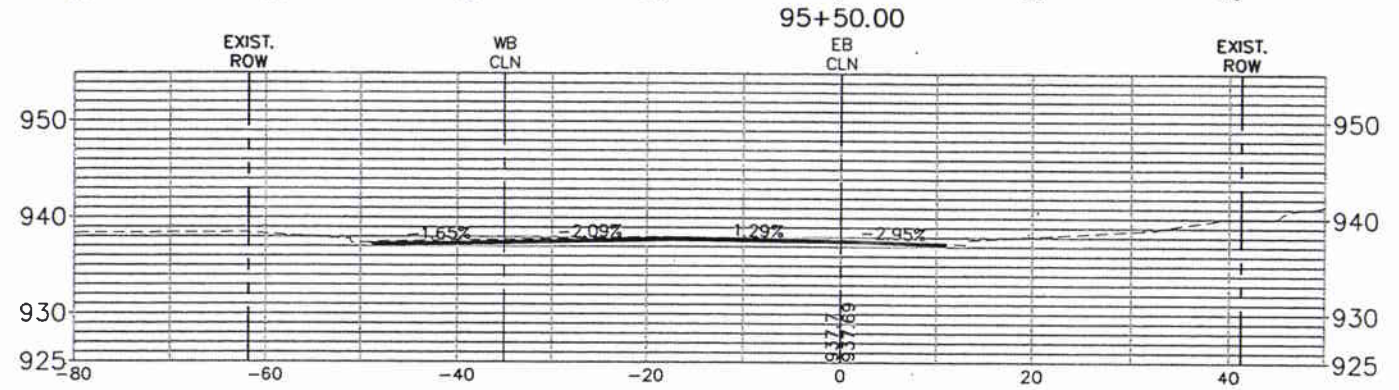
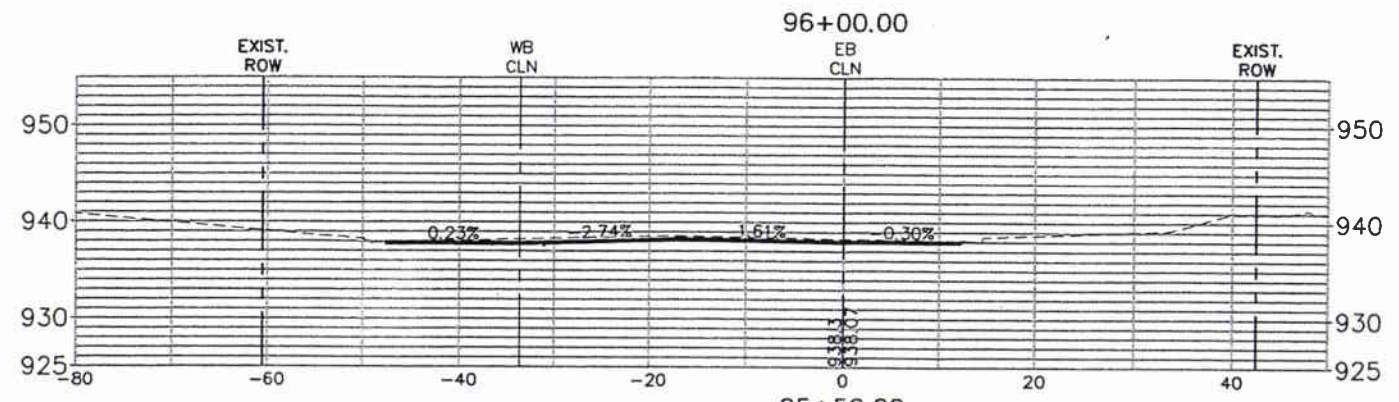
COUNTY ROAD D
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
89

104

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS08.dwg, September 22, 2009 - 9:08am



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

No.	Date	Revisions	App.
		DONE BY: Rob Gaetz	
		DATE: 1-27-2011	

DRAWING NAME	CRD-XCS08.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	16050029.2.101



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

Daniel J. Coyle
 DANIEL J. COYLE
 DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D
 CROSS SECTIONS

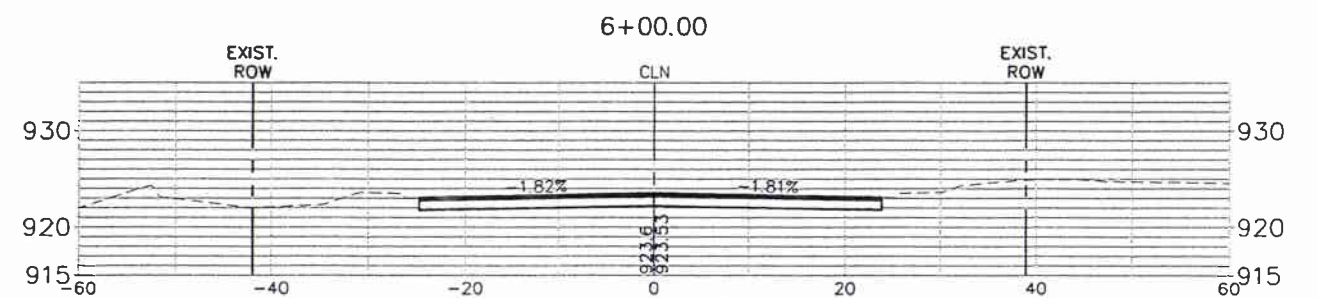
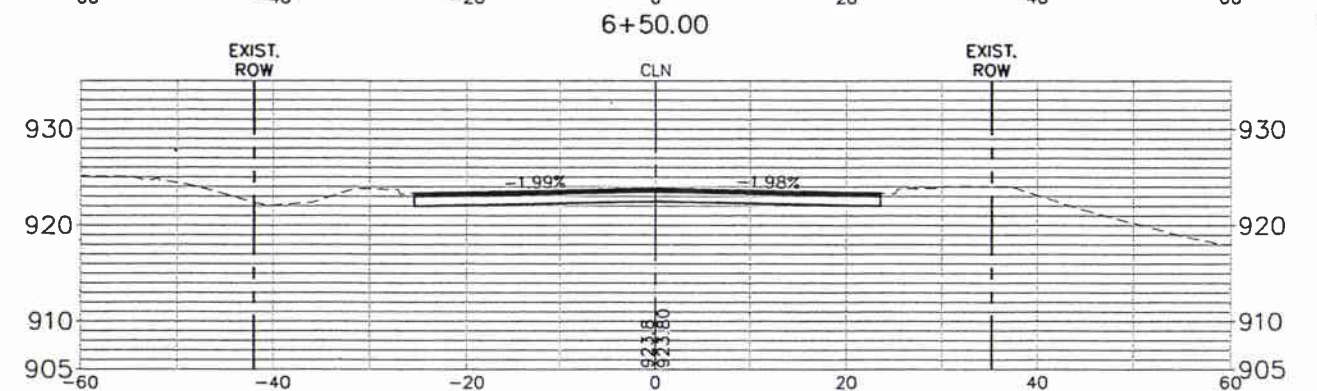
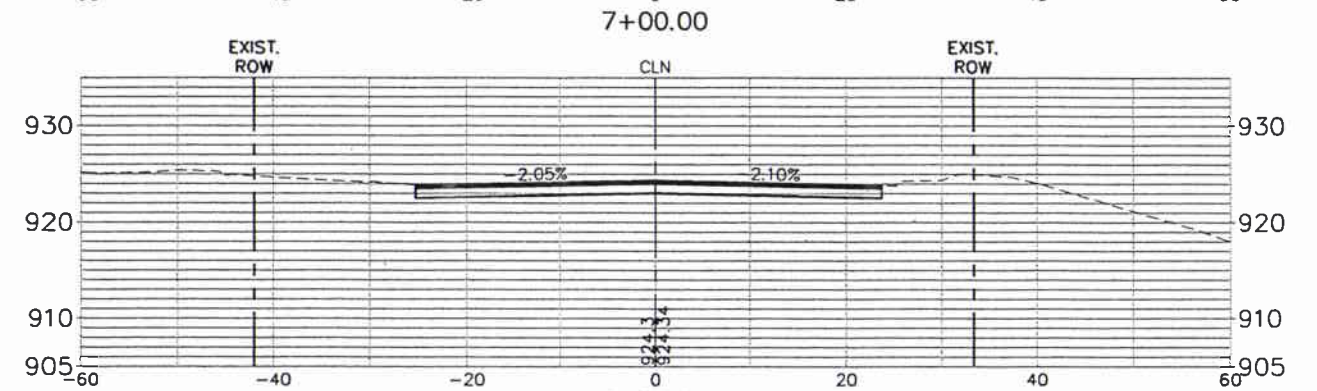
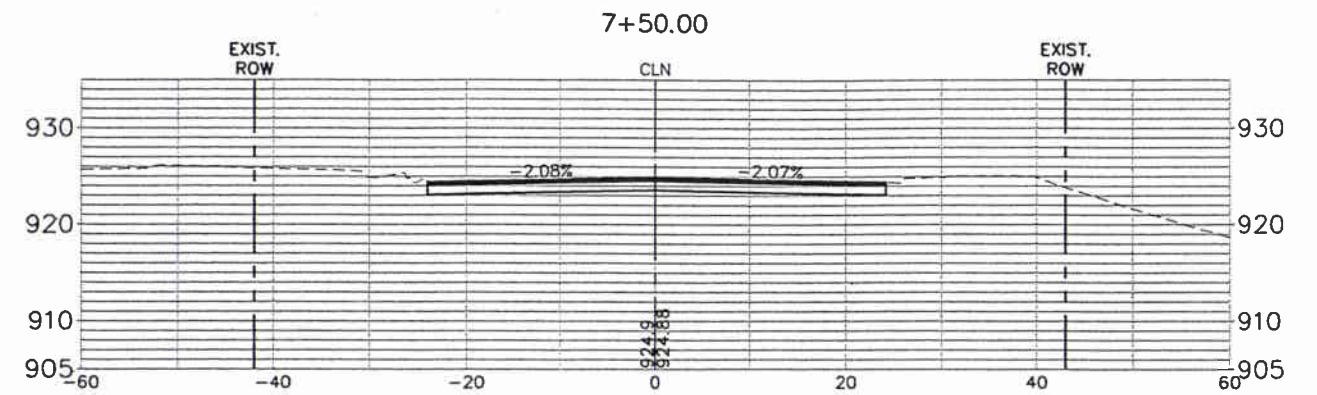
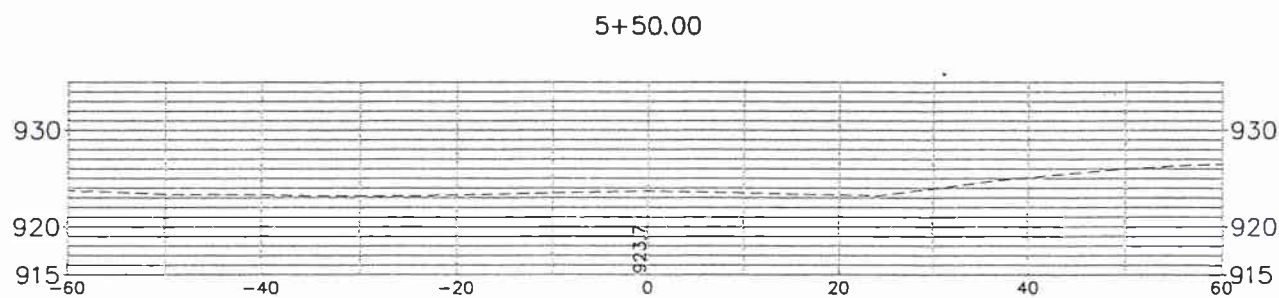
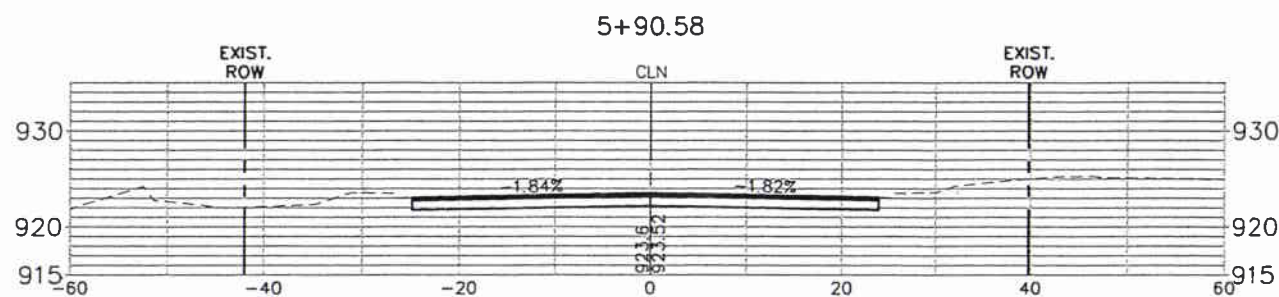
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
90
104

ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS09.dwg September 22, 2009 - 9:09am

No.	Date	Revisions	App.

DRAWING NAME	CRD-XCS09.dwg
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



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

Daniel J. Coyle
DANIEL J. COYLE, P.E.
DATE: 08/07/09 MN LIC. NO. 44821



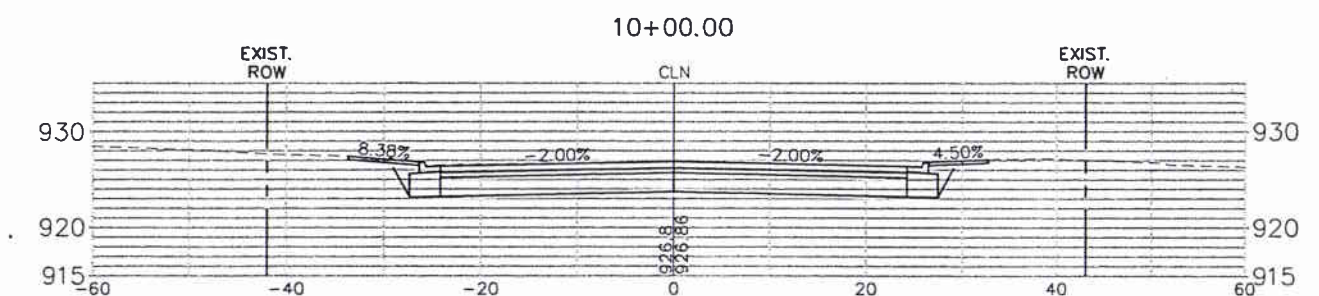
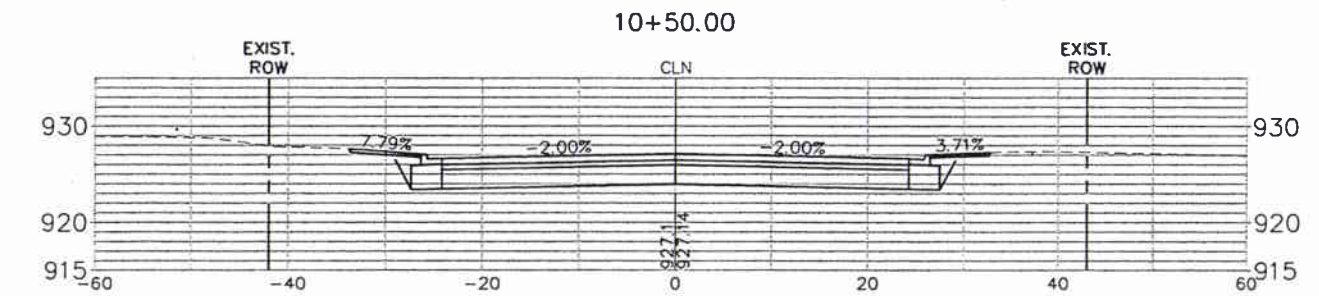
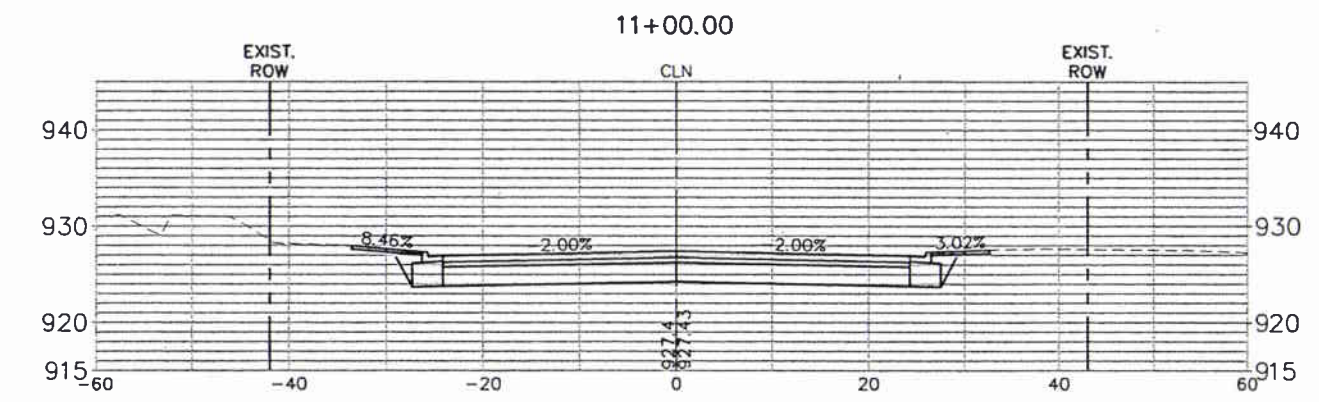
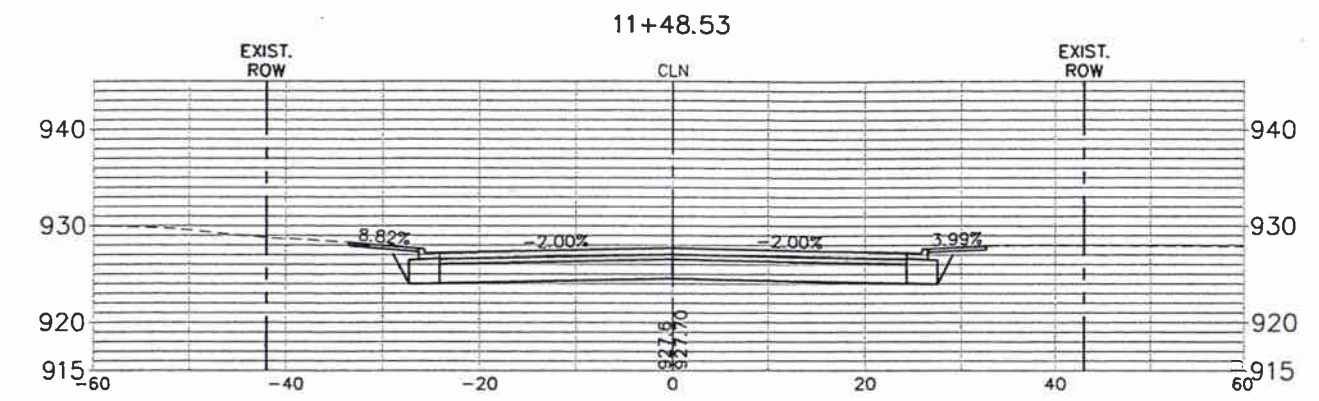
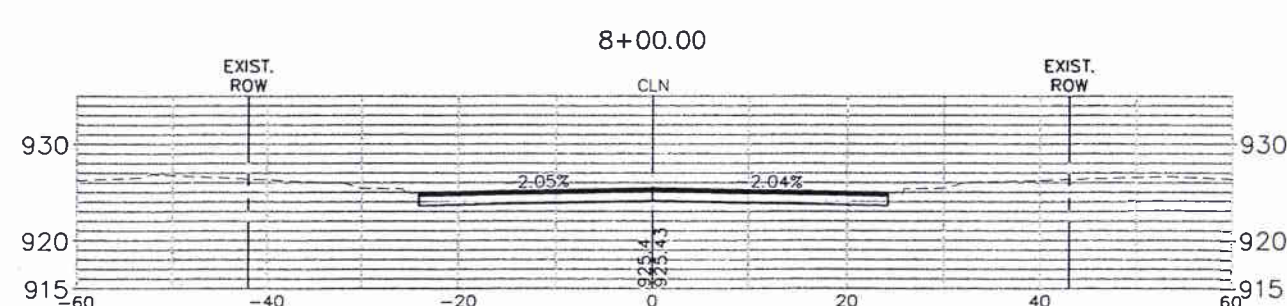
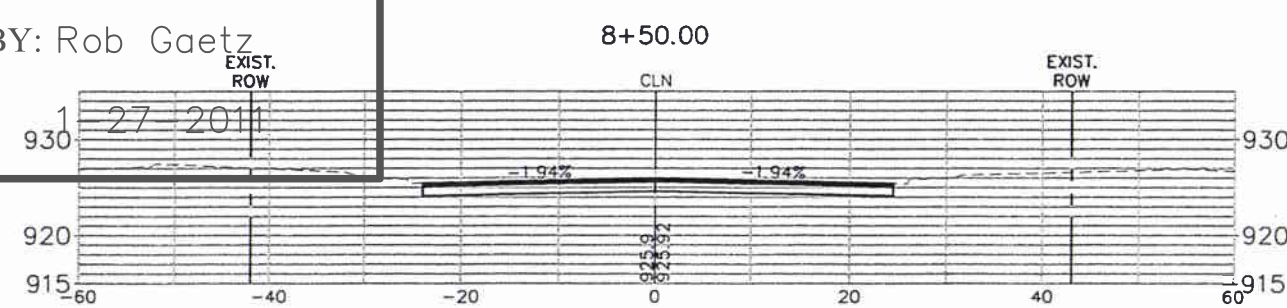
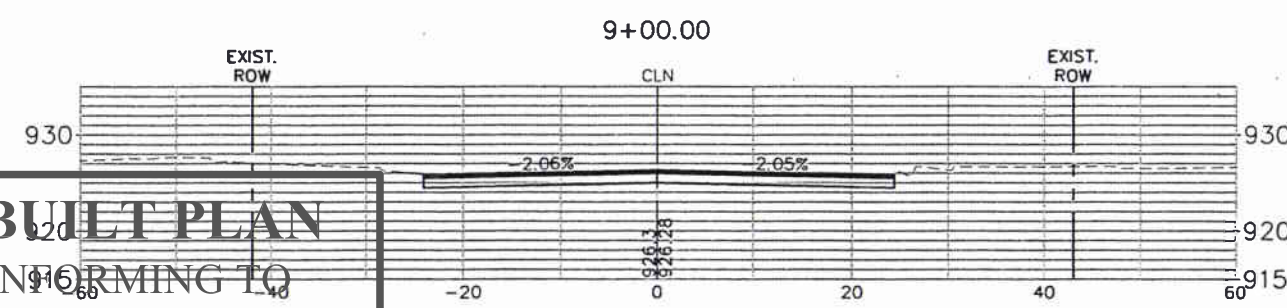
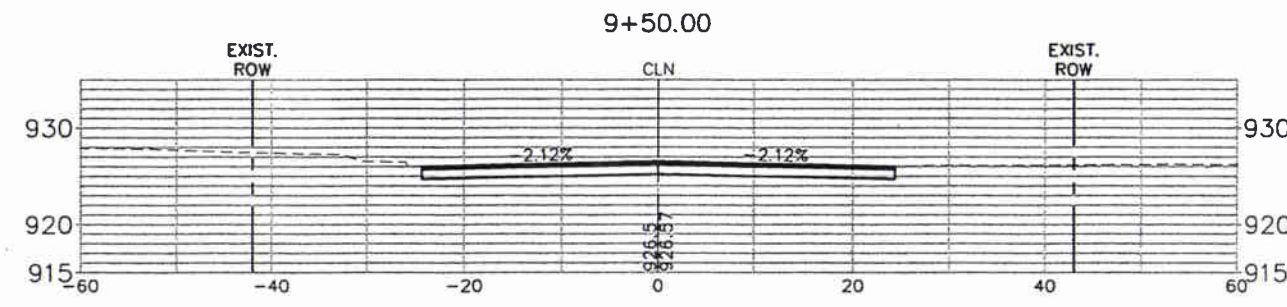
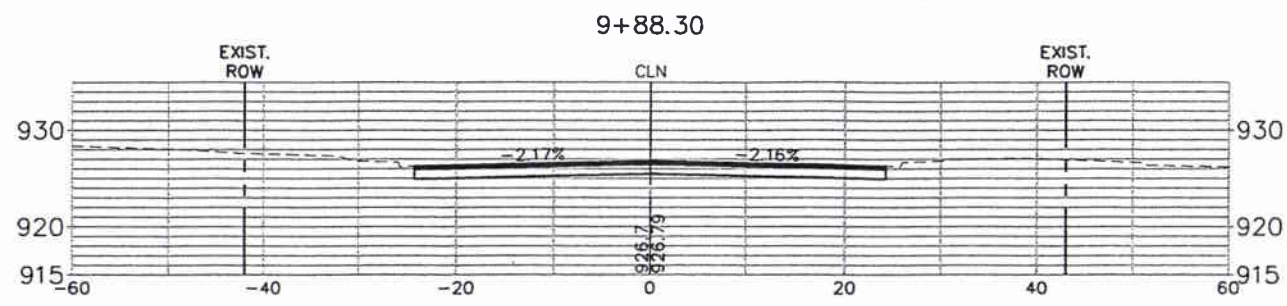
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
SOUTHLAWN DRIVE
CROSS SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
91
104

K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\CRD-XCS10.dwg September 22, 2009 - 9:12am



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 11/27/2011

No.	Date	Revisions	App.

DRAWING NAME CRD-XCS10.dwg
DESIGNED BY: RBC
DRAWN BY: HMW
CHECKED BY: KRB, ATB
DATE: 08/07/09
PROJECT NO. 160500029.2.101



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

Daniel J. Coyle
 DANIEL J. COYLE
 DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 SOUTHLAWN DRIVE
 CROSS SECTIONS

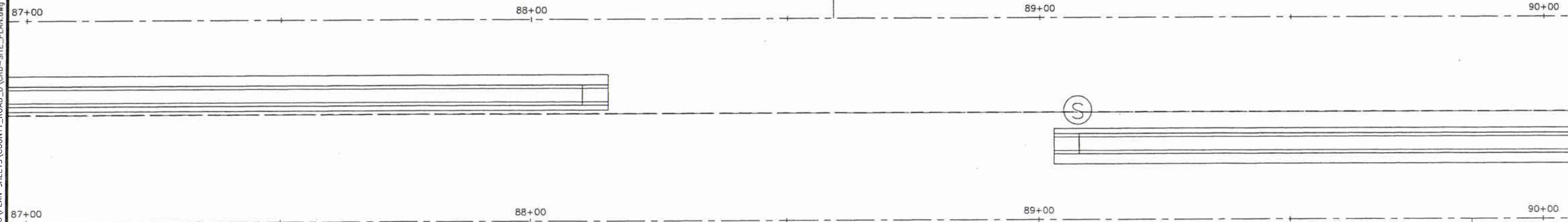
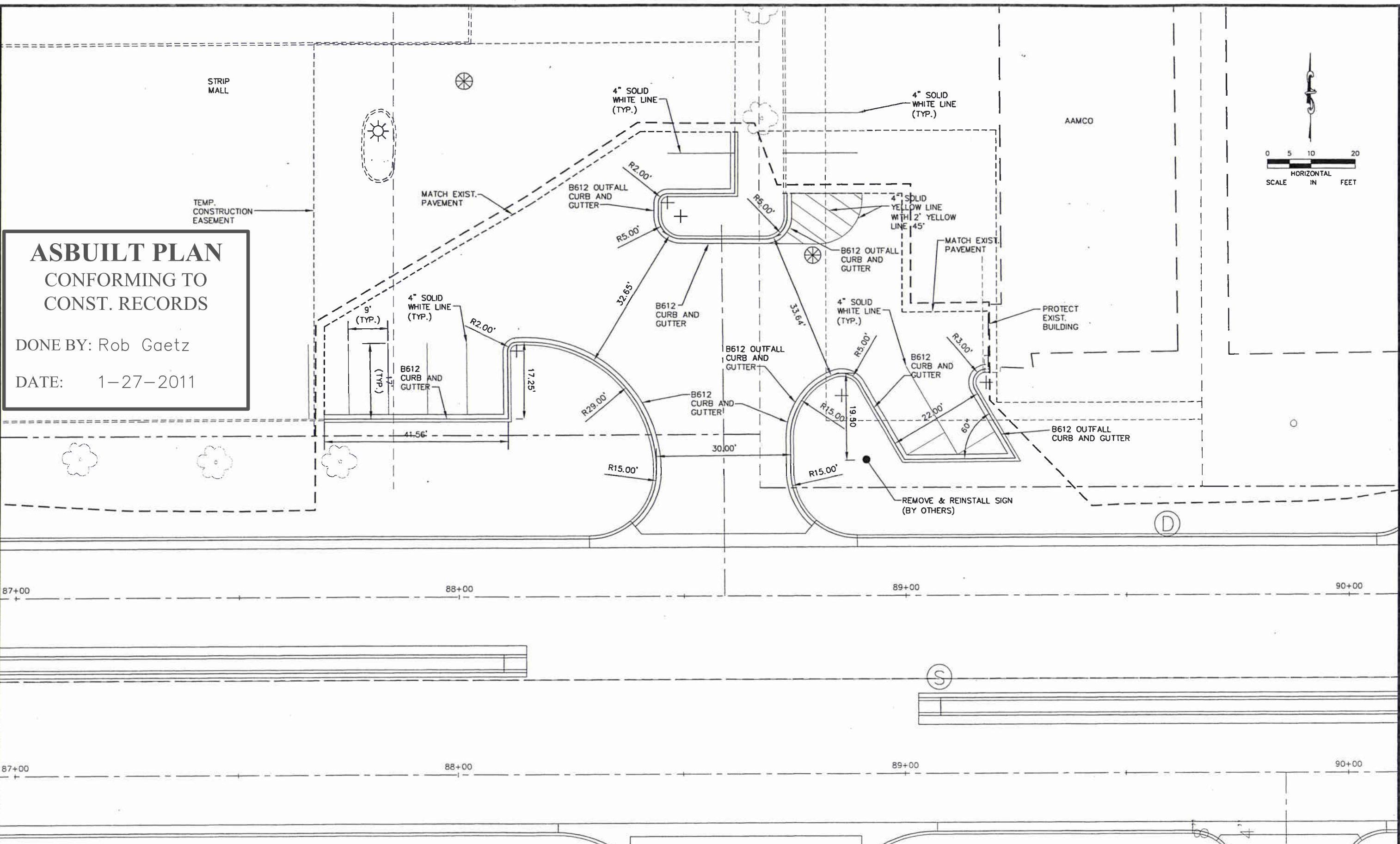
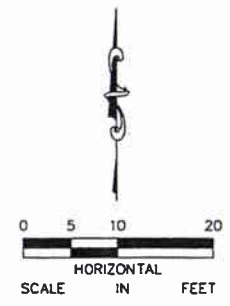
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 92
 104

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ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



No.	Date	Revisions	App.

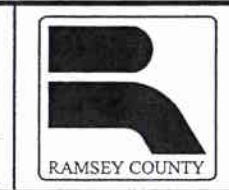
DRAWING NAME
 CRD-SITE_PLAN.dwg

DESIGNED BY: RBC
 DRAWN BY: HMW
 CHECKED BY: KR, ATB
 DATE: 08/07/09
 PROJECT NO. 160500029.2.101



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

Daniel J. Coyle
 DANIEL J. COYLE, PE
 DATE: 08/07/09 MR LIC. NO. 44821



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

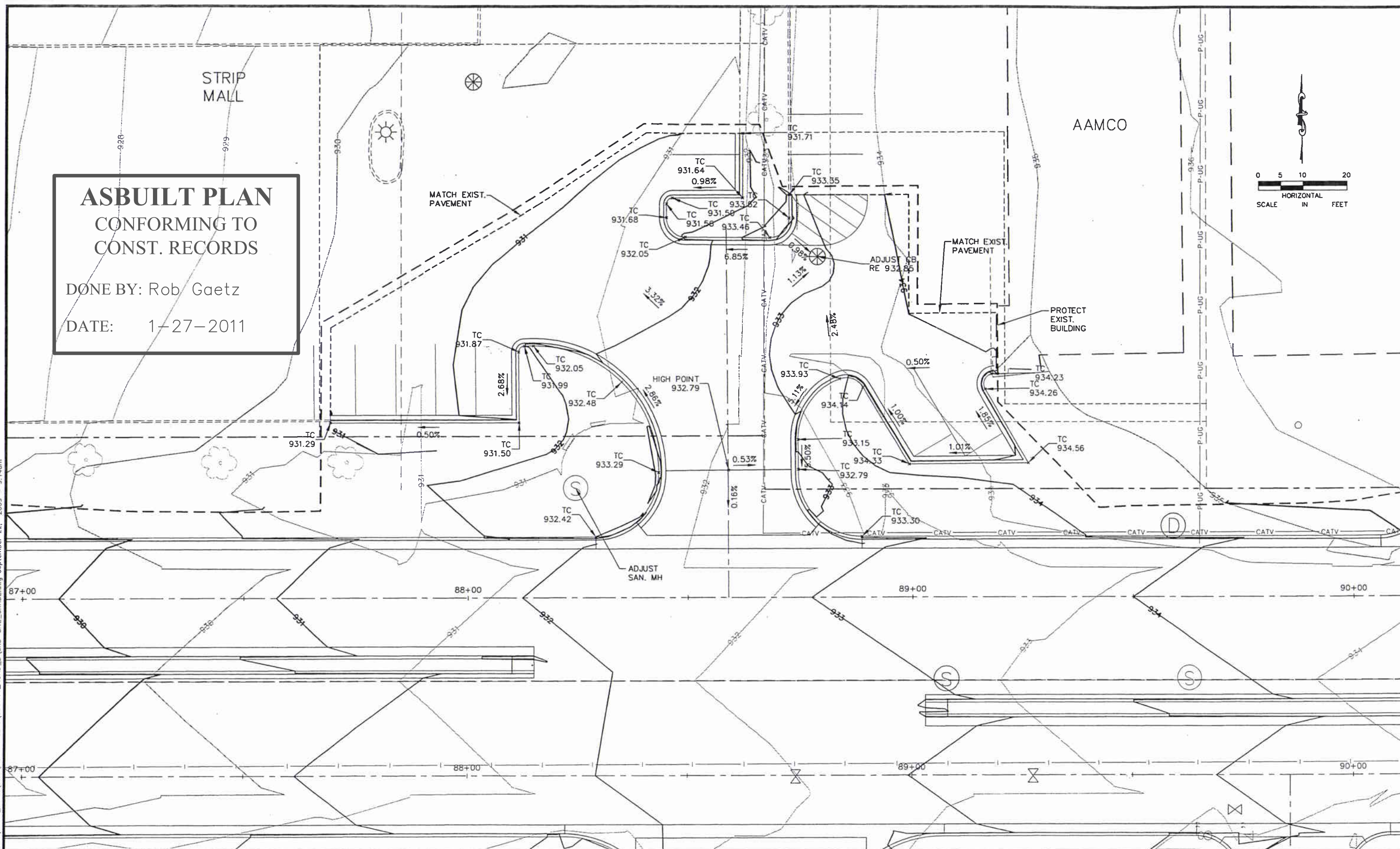
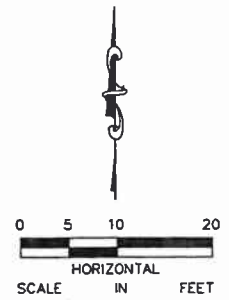
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 COUNTY ROAD D AND
 AAMCO SHARED DRIVEWAY
 SITE PLAN

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 93
 104

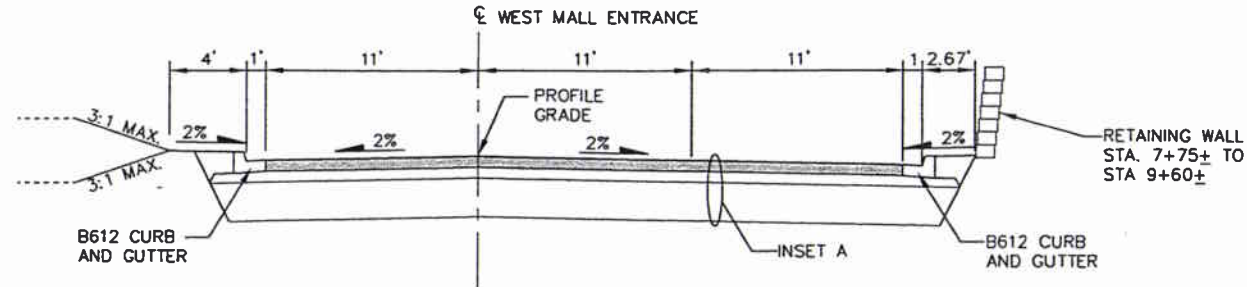
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011

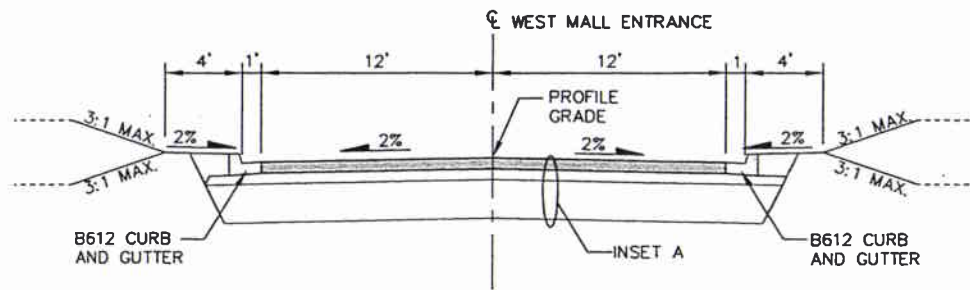


No.	Date	Revisions	App.	DRAWING NAME	 Kimley-Horn and Associates, Inc. <small>2550 UNIVERSITY AVE. WEST, SUITE 345H ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4197 FAX. NO. (651) 645-5116</small>	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE, PE DATE: 08/07/09 MN LIC. NO. 44821	 RAMSEY COUNTY City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY		SHEET NO. 94 104	
				CRD-SITE_GRADE.dwg				CITY OF MAPLEWOOD	CITY PROJECT		08-13
				DESIGNED BY: RBC				COUNTY ROAD D	COUNTY PROJECT		P-3202
				DRAWN BY: HMW				COUNTY ROAD D AND	S.P.		62-619-30
				CHECKED BY: KRB, ATB				AAMCO SHARED DRIVEWAY	S.P.		62-596-04
				DATE: 08/07/09	GRADING PLAN						
				PROJECT NO. 160500029.2.101							

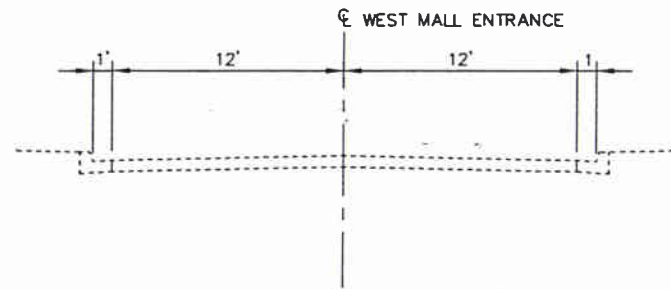
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PROPOSED TYPICAL SECTION WEST MALL ENTRANCE
STA. STA. 7+15.44 TO STA. 9+87.13



PROPOSED TYPICAL SECTION WEST MALL ENTRANCE
STA. 5+53.69 TO STA. 7+15.44

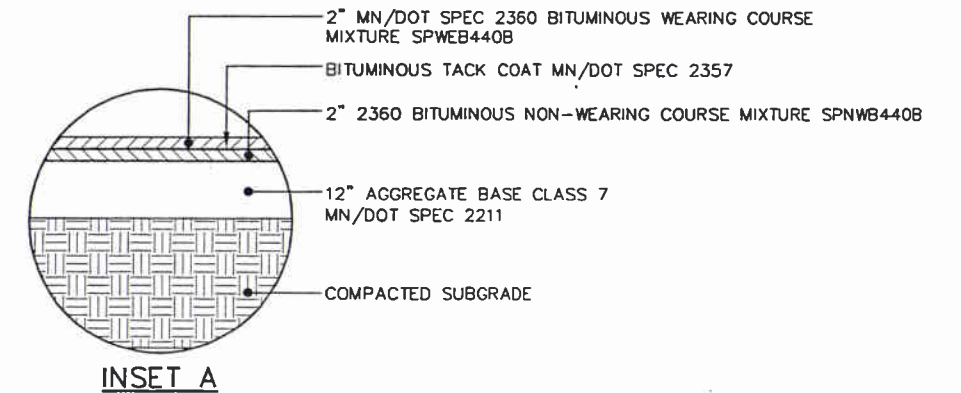


INPLACE TYPICAL SECTION WEST MALL ENTRANCE

**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011



K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\MALL-ENT-TYP01.dwg September 22, 2009 - 9:14am

No.	Date	Revisions	App.	DRAWING NAME
				MALL-ENT-TYP01.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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

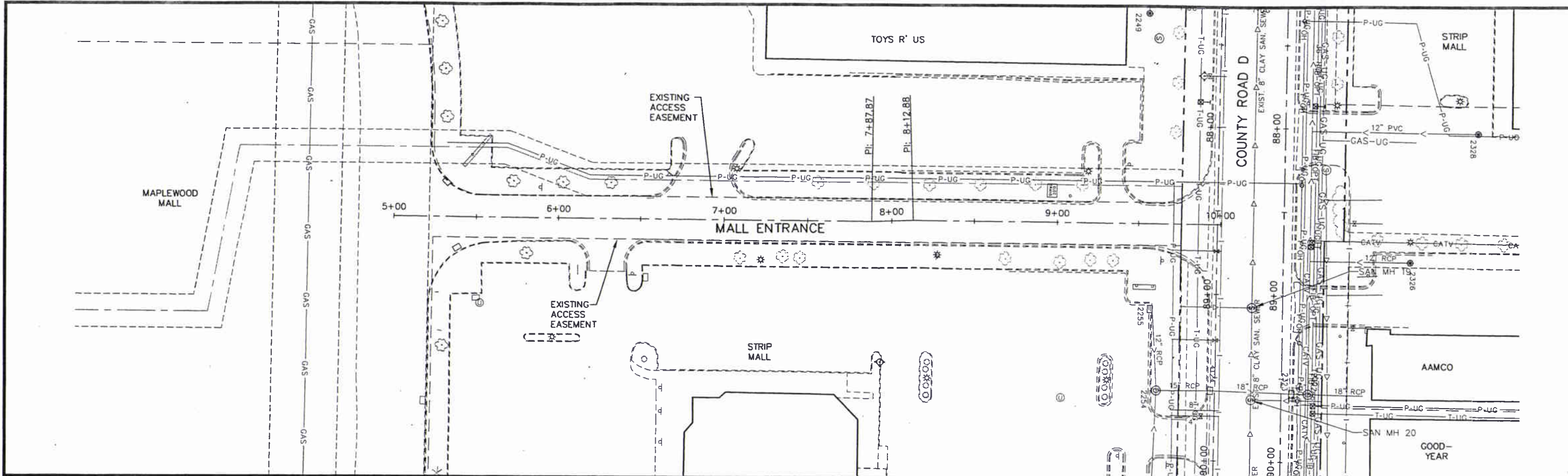
Daniel J. Coyle
DANIEL J. COYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821



RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
TYPICAL SECTIONS

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

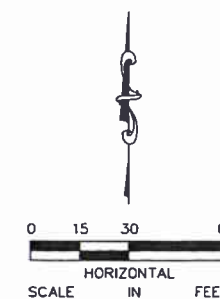
SHEET NO.
95
104



**ASBUILT PLAN
CONFORMING TO
CONST. RECORDS**

DONE BY: Rob Gaetz

DATE: 1-27-2011



K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\MALL-ENT-EXC01.dwg September 22, 2009 - 9:15am

No.	Date	Revisions	App.

DRAWING NAME MALL-ENT-EXC01.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101



**Kimley-Horn
and Associates, Inc.**
2550 UNIVERSITY AVE. WEST, SUITE 340W
ST. PAUL, MINNESOTA 55114
TEL. NO. (651) 645-4197
FAX. NO. (651) 645-3116

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

Daniel J. Coyle
DANIEL J. COYLE PE

DATE: 08/07/09 MN LIC. NO. 44821



*City of Maplewood, Minnesota
Department of Public Works
Engineering Division*

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
MALL ENTRANCE
EXISTING TOPOGRAPHY
& UTILITIES
STA. 86+50 TO STA. 94+50

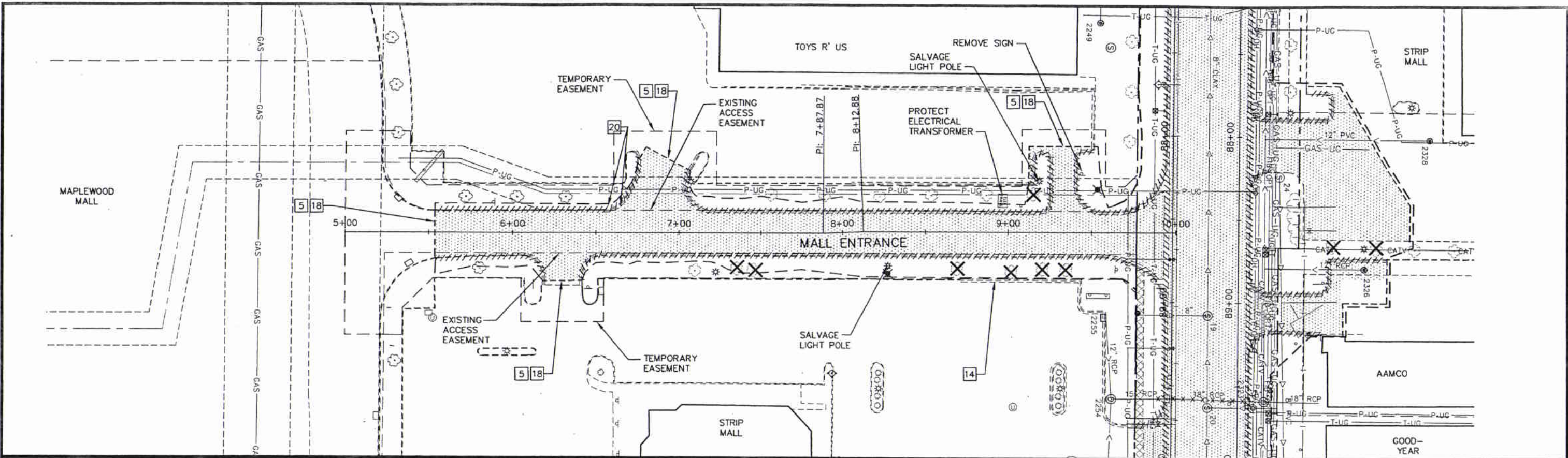
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.

96

104

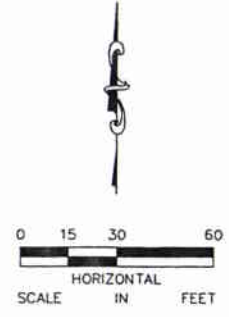
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ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



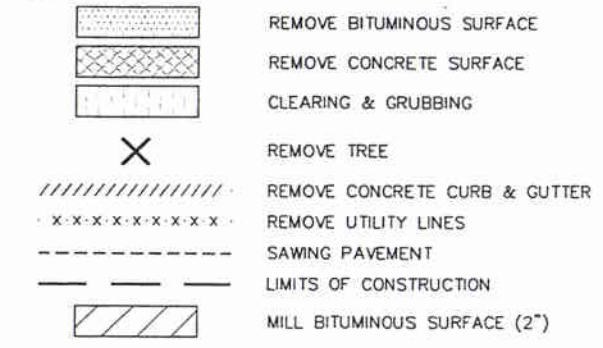
GENERAL REMOVAL NOTES:

- CONTRACTOR SHALL CALL GOPHER STATE ONE CALL AT 651-454-0002. ALL UTILITIES MUST BE LOCATED PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ROADWAY & STREET SIGN POSTS AND/OR BRACKETS WITHIN THE CONSTRUCTION LIMITS SHALL BE SALVAGED BY THE CONTRACTOR. SEE SIGN TABULATION.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY STRUCTURES THAT ARE NOT BEING REMOVED OR RELOCATED.
- 1 NOT USED
- 2 NOT USED
- 3 NOT USED
- 4 TRENCH BOXES OR OTHER TRENCH STABILIZATION METHODS MAY BE REQUIRED DURING CONSTRUCTION TO MINIMIZE REMOVAL LIMITS.
- 5 CONTRACTOR TO VERIFY REMOVAL LIMITS WITH ENGINEER PRIOR TO SAWCUTTING.
- 6 REMOVE EXISTING STORM MANHOLE OR STORM CATCH BASIN. SEE STORM SEWER TABULATION.
- 7 RECONSTRUCT EXISTING SANITARY MANHOLE. SEE SANITARY SEWER TABULATION.
- 8 ADJUST EXISTING SANITARY MANHOLE CASTING ASSEMBLY. REPLACE RINGS. SEE SANITARY SEWER TABULATION.
- 9 REMOVE/RELOCATE EXISTING HYDRANT AND GATE VALVE (BY OTHERS). SEE WATER MAIN TABULATION.
- 10 REMOVE/ADJUST EXISTING GATE VALVE. SEE WATER MAIN TABULATION.
- 11 EXISTING UTILITY TO BE REMOVED/RELOCATED (BY OTHERS).
- 12 REMOVE EXISTING CONCRETE CURB AND GUTTER.
- 13 CONCRETE CURB & GUTTER SPOT REPLACEMENT
- 14 PROTECT CURB AND GUTTER.
- 15 ADJUST EXISTING STORM STRUCTURE CASTING ASSEMBLY. REPLACE RINGS. SEE STORM SEWER TABULATION.
- 16 REMOVE STORM SEWER. SEE STORM SEWER TABULATION.
- 17 NOT USED

GENERAL REMOVAL NOTES:

- 18 SAWING BITUMINOUS PAVEMENT.
- 19 PROTECT ALL EXISTING ITEMS OUTSIDE OF ROW.
- 20 PROTECT ITEM.
- 21 REMOVE AND REPLACE EXISTING WATER SERVICE (BY OTHERS). SEE WATER MAIN TABULATION.
- 22 WATER SERVICE CUTOFF (BY OTHERS). SEE WATER MAIN TABULATION.
- 23 RELOCATE VALVE HOUSING INTO BOULEVARD (BY OTHERS). SEE WATER MAIN TABULATION.
- 24 REMOVE MISCELLANEOUS STRUCTURE.

LEGEND



UTILITY NOTES:

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C1/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

No.	Date	Revisions	App.

DRAWING NAME MALL-ENT-REM01.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

2200 UNIVERSITY AVE. WEST, SUITE 340W
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 845-4197
 FAX. NO. (651) 845-3118

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

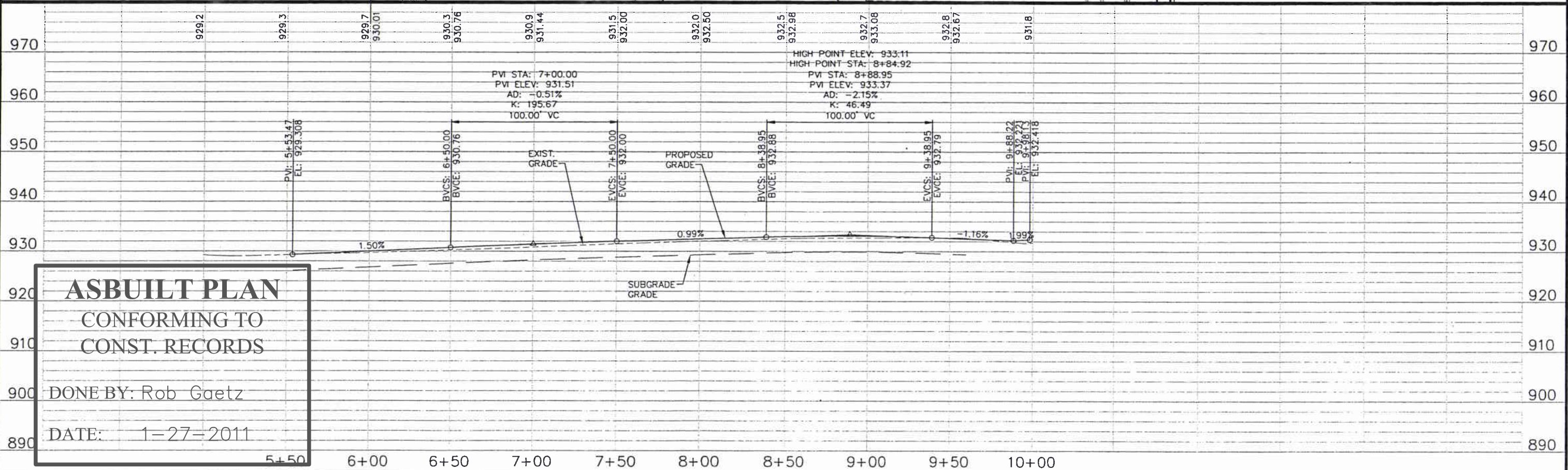
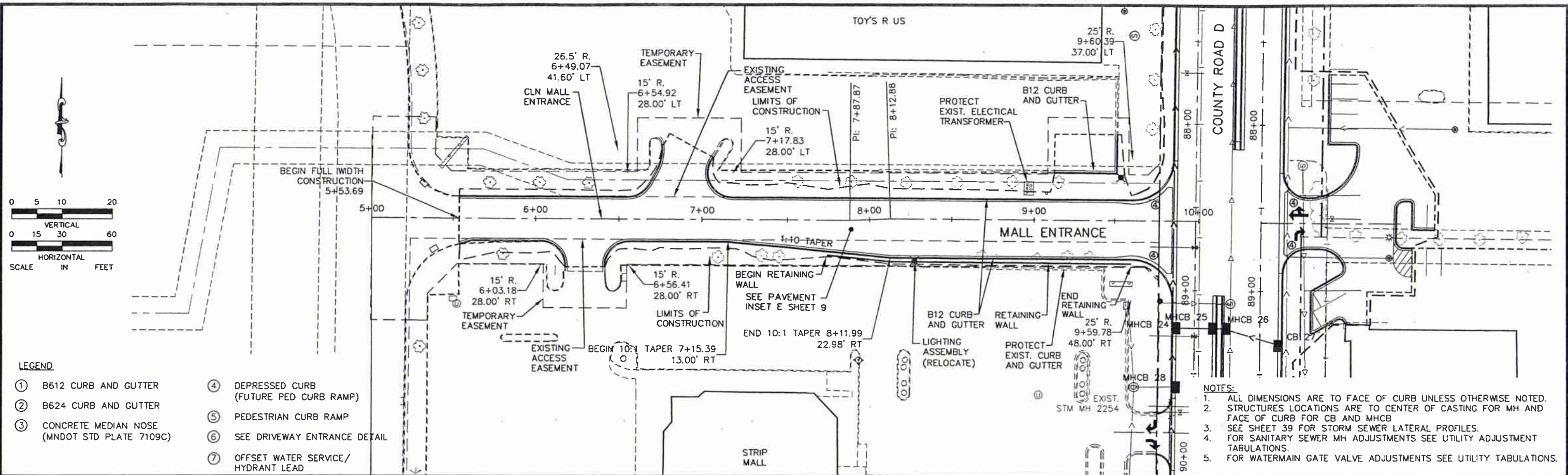
Daniel J. Coyle
 DANIEL J. COYLE PE
 DATE: 08/07/09 MR LIC. NO. 44821

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

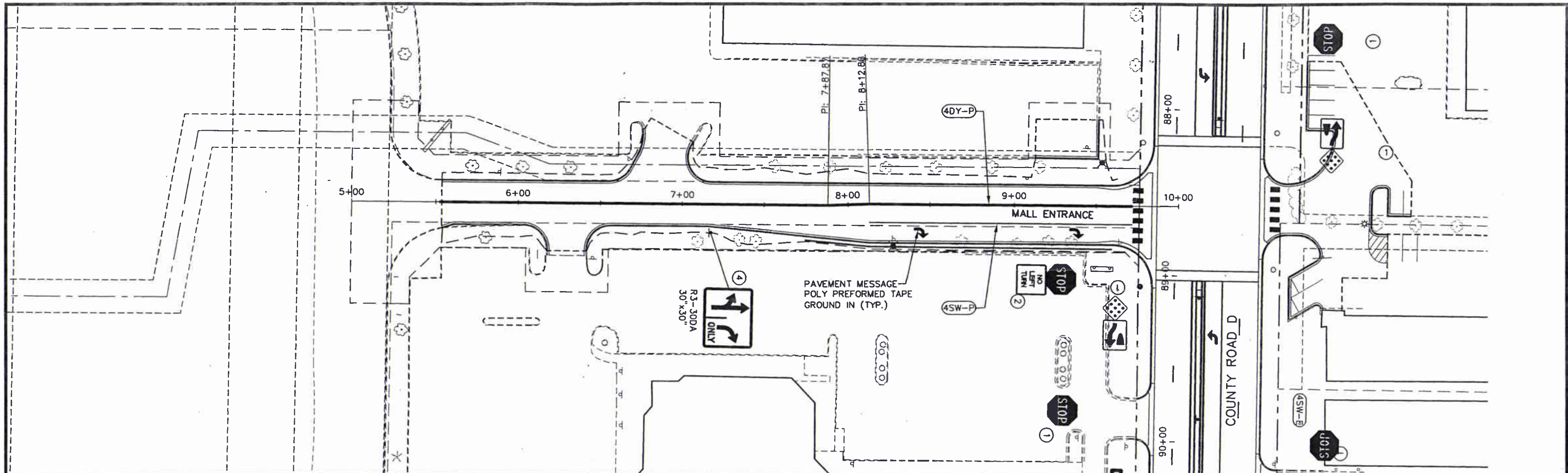
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 MALL ENTRANCE
 REMOVAL &
 SAWCUT PLAN
 STA. 86+50 TO STA. 94+50

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 97
 104



No.	Date	Revisions	App.	 2250 UNIVERSITY AVE. WEST, SUITE 340W ST. PAUL, MINNESOTA 55114 TEL. NO. (651) 645-4187 FAX. NO. (651) 645-5116	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DANIEL J. COYLE, PE DATE: 08/07/09 MN LIC. NO. 44821	 City of Maplewood, Minnesota Department of Public Works Engineering Division	RAMSEY COUNTY CITY OF MAPLEWOOD COUNTY ROAD D IMPROVEMENTS STREET AND STORM SEWER PLAN AND PROFILE STA. 86+50 TO STA. 94+50	CITY PROJECT	08-13	SHEET NO. 98 104
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								S.P.	62-619-30	
								S.P.	62-596-04	

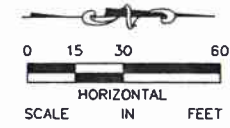


ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

- SIGNING NOTES:**
- ① IN-PLACE - FOR INFORMATION ONLY
 - ② SALVAGE
 - ③ INSTALL
 - ④ FURNISH & INSTALL



K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\MALL-ENT--SGN01.dwg September 22, 2009 - 9:20am

No.	Date	Revisions	App.

DRAWING NAME
MALL-ENT--SGN01.dwg

DESIGNED BY: BJB

DRAWN BY: HMW

CHECKED BY: BJB

DATE: 08/07/09

PROJECT NO. 160500029.2.101

Kimley-Horn and Associates, Inc.
 2300 UNIVERSITY AVE. WEST, SUITE 345H
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4197
 FAX. NO. (651) 645-5116

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Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709

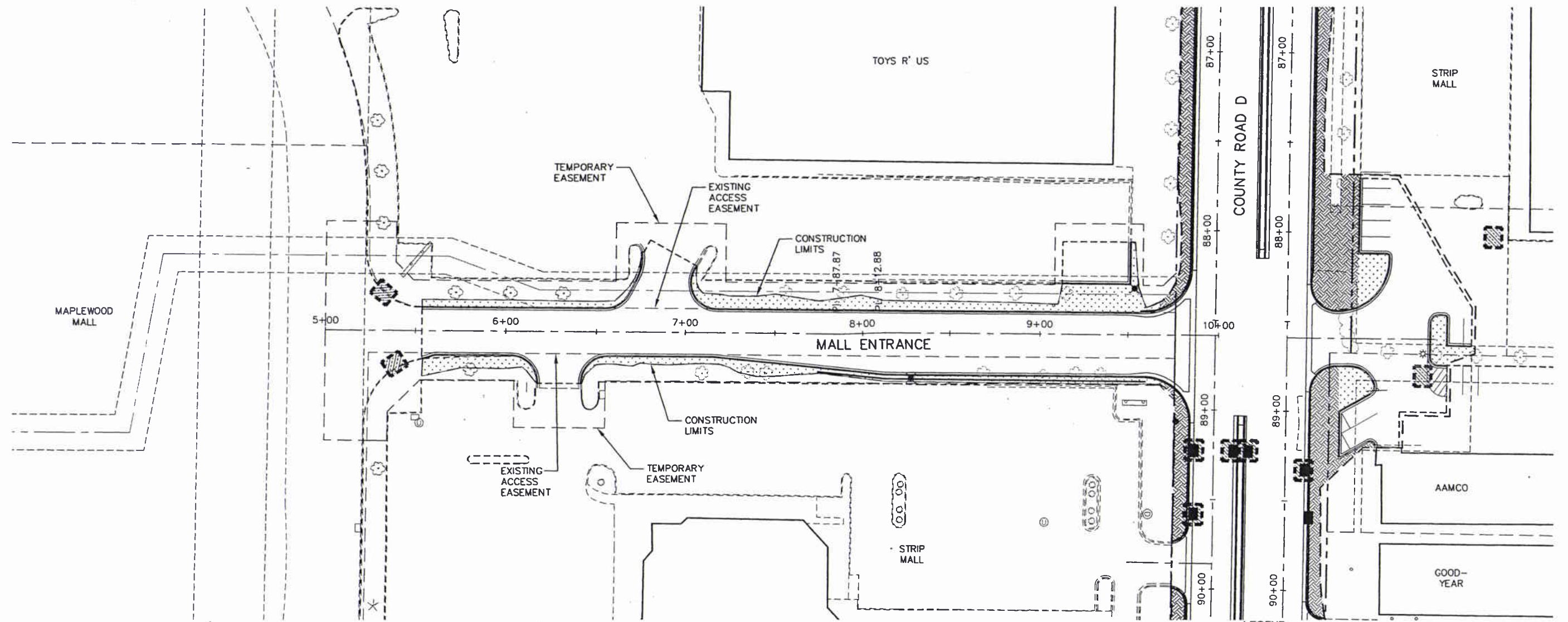
RAMSEY COUNTY

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D IMPROVEMENTS
 MALL ENTRANCE SIGNING & STRIPING PLAN
 STA. 86+50 TO STA. 94+50

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 99
 104



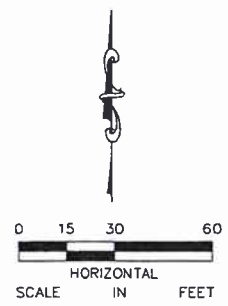
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011

- LEGEND**
- SEED MIX 328 AND HYDRAULIC STABILIZER 150TS WITH WINTER WHEAT STRAW MULCH
 - SOD
 - TEMPORARY ROCK CONSTRUCTION ENTRANCE
 - INLET PROTECTION
 - 12" DIA BIO-ROLL
 - SILT FENCE
 - CONSTRUCTION LIMITS

- NOTES:**
1. REFERENCE PLAN AND PROFILE AND CROSS SECTIONS FOR DRAINAGE PATTERNS, EXISTING AND PROPOSED GRADES.
 2. REFERENCE CONSTRUCTION PHASING PLAN FOR INFORMATION RELATED TO MINIMIZING DISTURBED AREAS.



K:\TWC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\MALL_ENT-TFE01.dwg September 22, 2009 - 9:21am

No.	Date	Revisions	App.	DRAWING NAME MALL-ENT-TFE01.dwg
				DESIGNED BY: RBC
				DRAWN BY: HMW
				CHECKED BY: KRB, ATB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101

Kimley-Horn and Associates, Inc.
2350 UNIVERSITY AVE. WEST, SUITE 340N
 ST. PAUL, MINNESOTA 55114
 TEL. NO. (651) 645-4197
 FAX. NO. (651) 645-3116

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

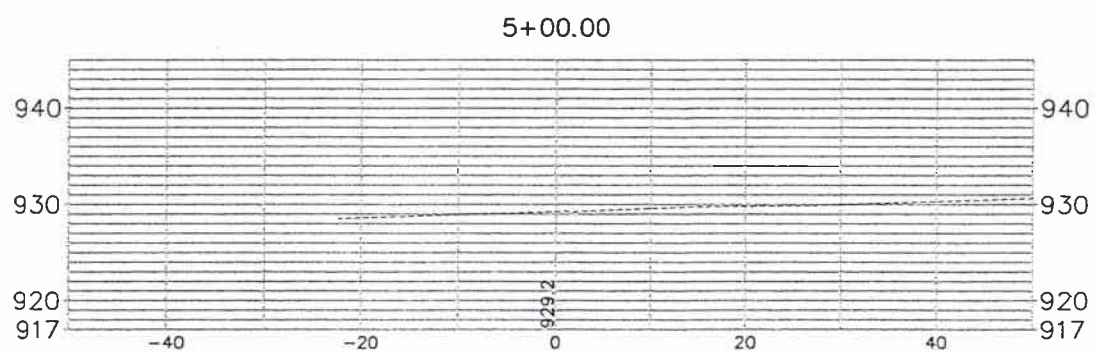
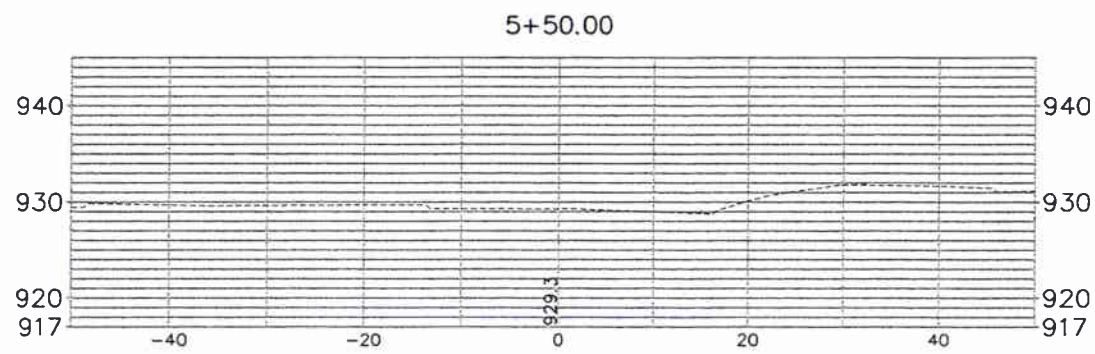
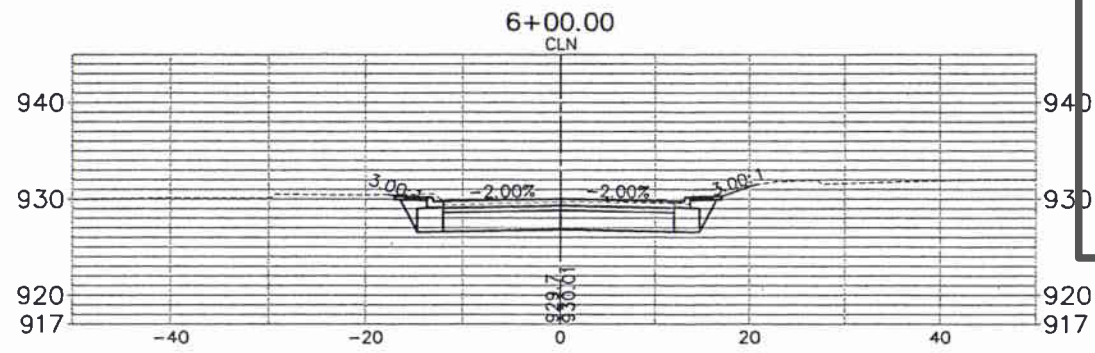
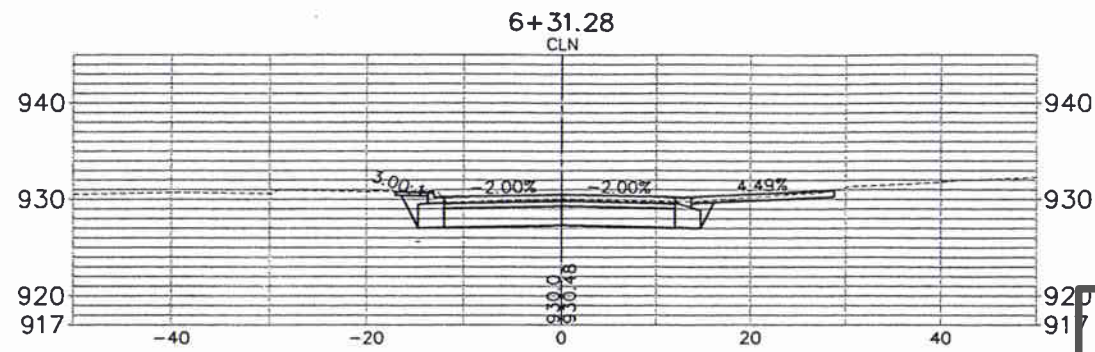
Daniel J. Coyle
 DANIEL J. COYLE
 DATE: 08/07/09 MN LIC. NO. 44821



City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

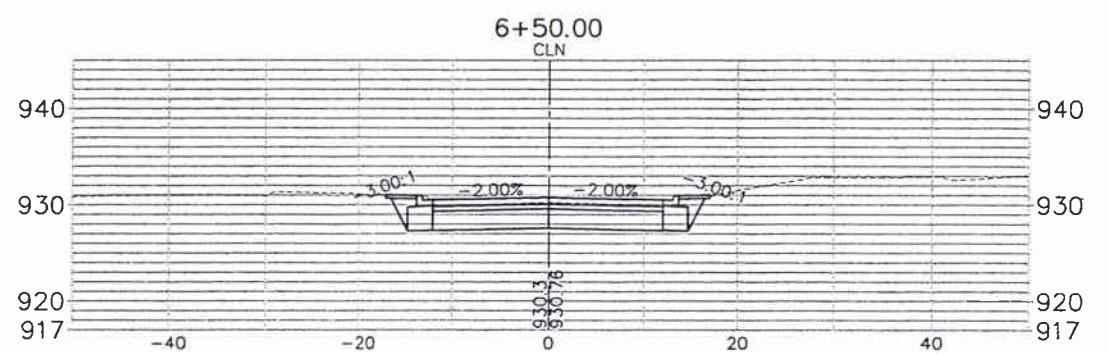
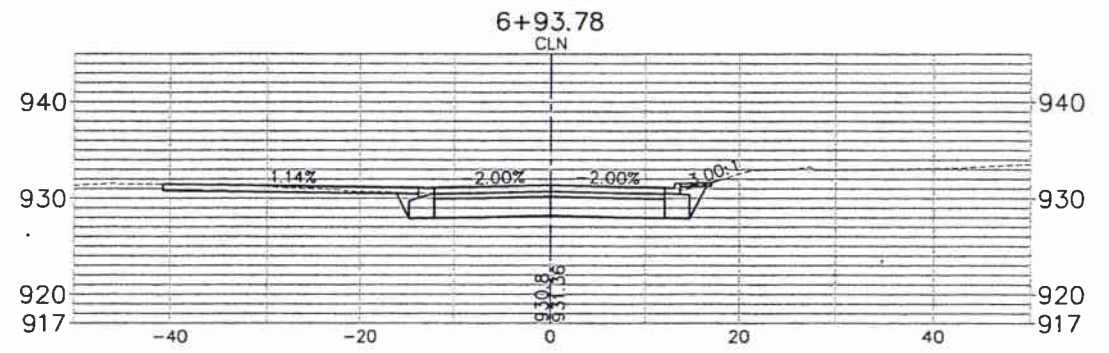
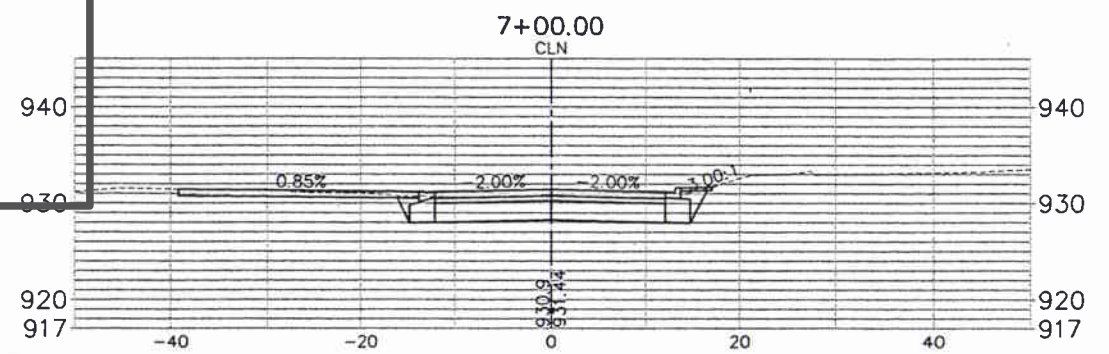
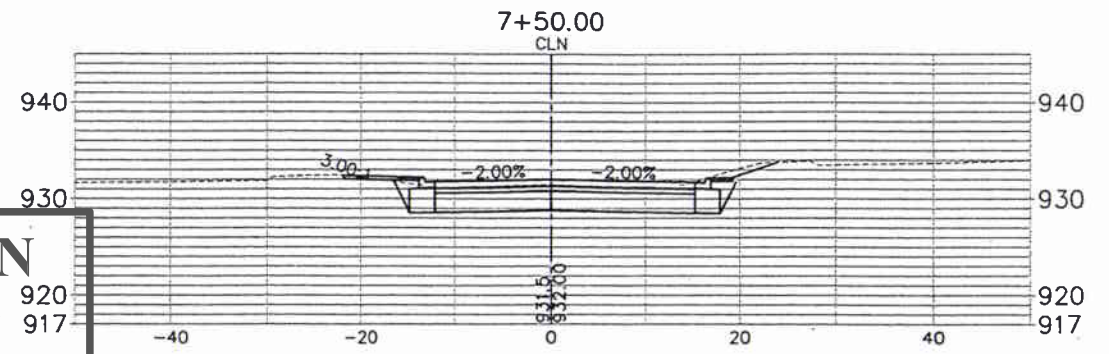
RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D IMPROVEMENTS
 MALL ENTRANCE
 EROSION CONTROL & TURF ESTABLISHMENT
 STA. 86+50 TO STA. 94+50

CITY PROJECT	08-13	SHEET NO.
COUNTY PROJECT	P-3202	100
S.P.	62-619-30	
S.P.	62-596-04	104



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



K:\TMC\Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\MALL-ENT-XSEC01.dwg September 22, 2009 - 9:22am

No.	Date	Revisions	App.

DRAWING NAME MALL-ENT-XSEC01.dwg	
DESIGNED BY:	RBC
DRAWN BY:	HMW
CHECKED BY:	KRB, ATB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

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

Donald J. Boyle
 DANIEL J. BOYLE, P.E.
 DATE: 08/07/09 MN LIC. NO. 44821

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS

MALL ENTRANCE
 CROSS SECTIONS
 STA. 86+50 TO STA. 94+50

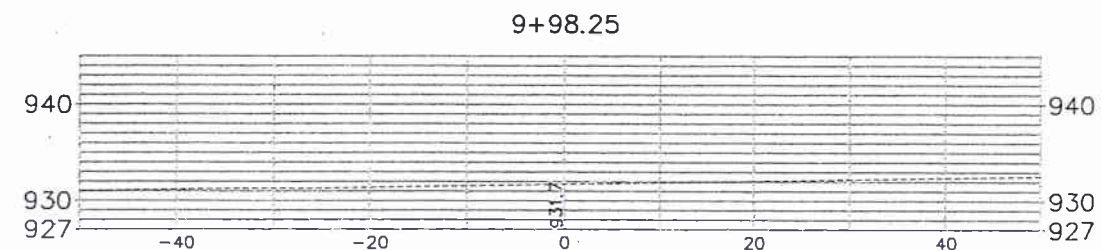
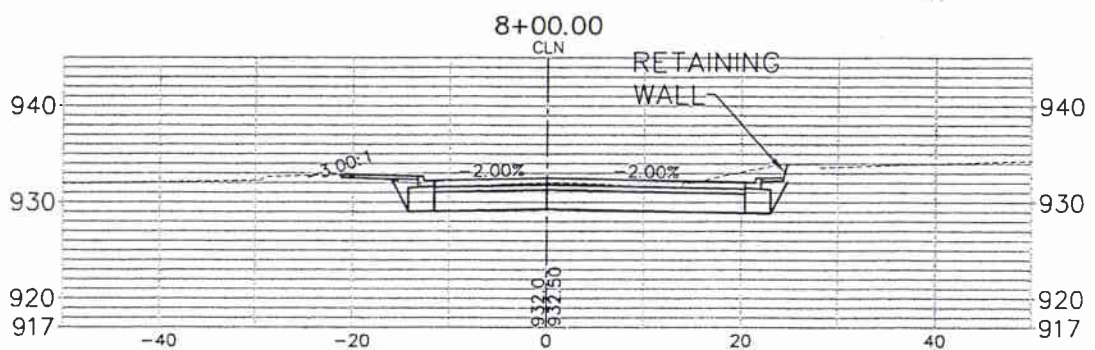
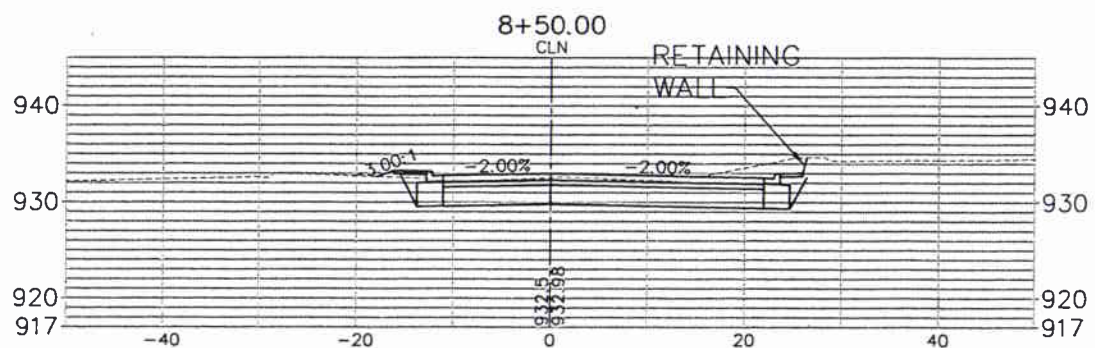
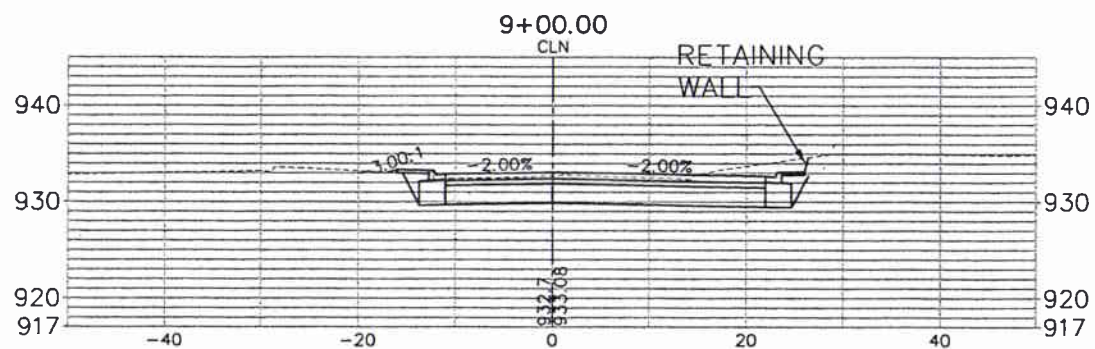
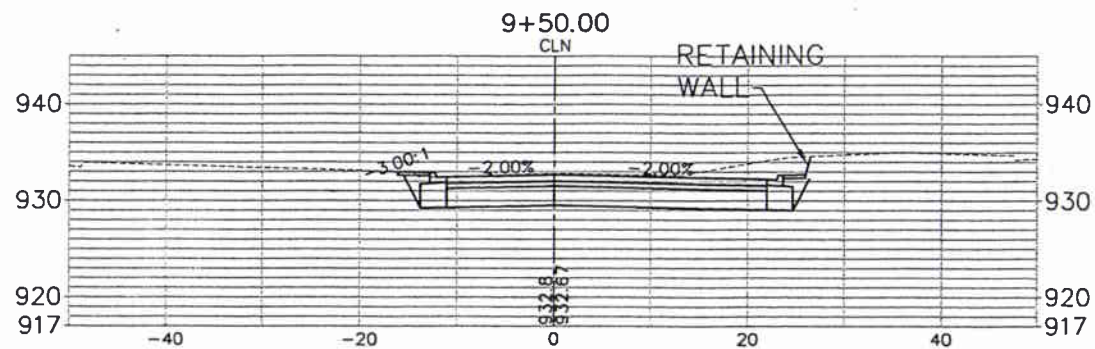
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.A.P.	62-619-30
S.A.P.	62-596-04

SHEET NO.
 101
 104

ASBUILT PLAN CONFORMING TO CONST. RECORDS

DONE BY: Rob Gaetz

DATE: 1-27-2011



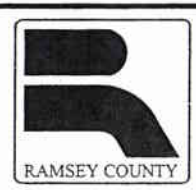
K:\TWC_Civil\County\RAMSEY\WHITE_BEAR\DWG\PLAN_SHEETS\COUNTY_ROAD_D\MALL-ENT-XSEC02.dwg September 22, 2009 - 9:23am

No.	Date	Revisions	App.

DRAWING NAME
MALL-ENT-XSEC02.dwg
DESIGNED BY: RBC
DRAWN BY: HMW
CHECKED BY: KRB, ATB
DATE: 08/07/09
PROJECT NO. 160500029.2.101



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Daniel J. Coyle
DANIEL J. COYLE, PE
DATE: 08/07/09 MN LIC. NO. 44821



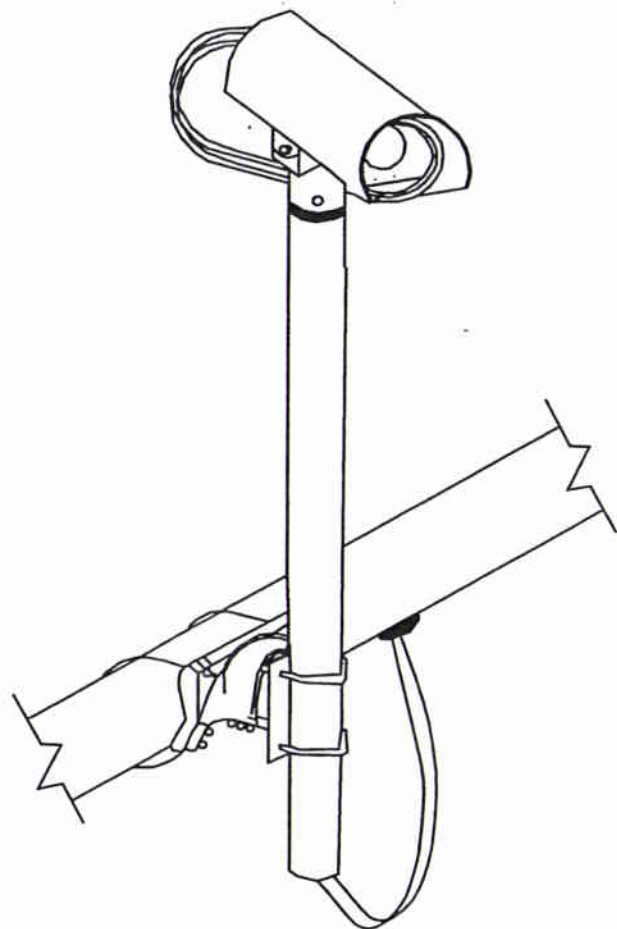
City of Maplewood, Minnesota
Department of Public Works
Engineering Division

RAMSEY COUNTY
CITY OF MAPLEWOOD
COUNTY ROAD D
IMPROVEMENTS
MALL ENTRANCE
CROSS SECTIONS
STA. 86+50 TO STA. 94+50

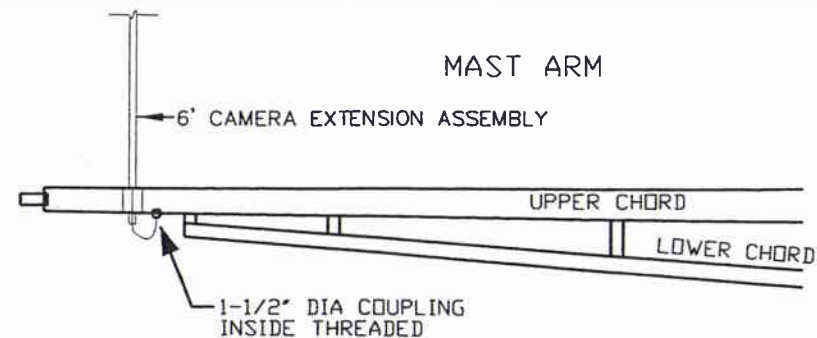
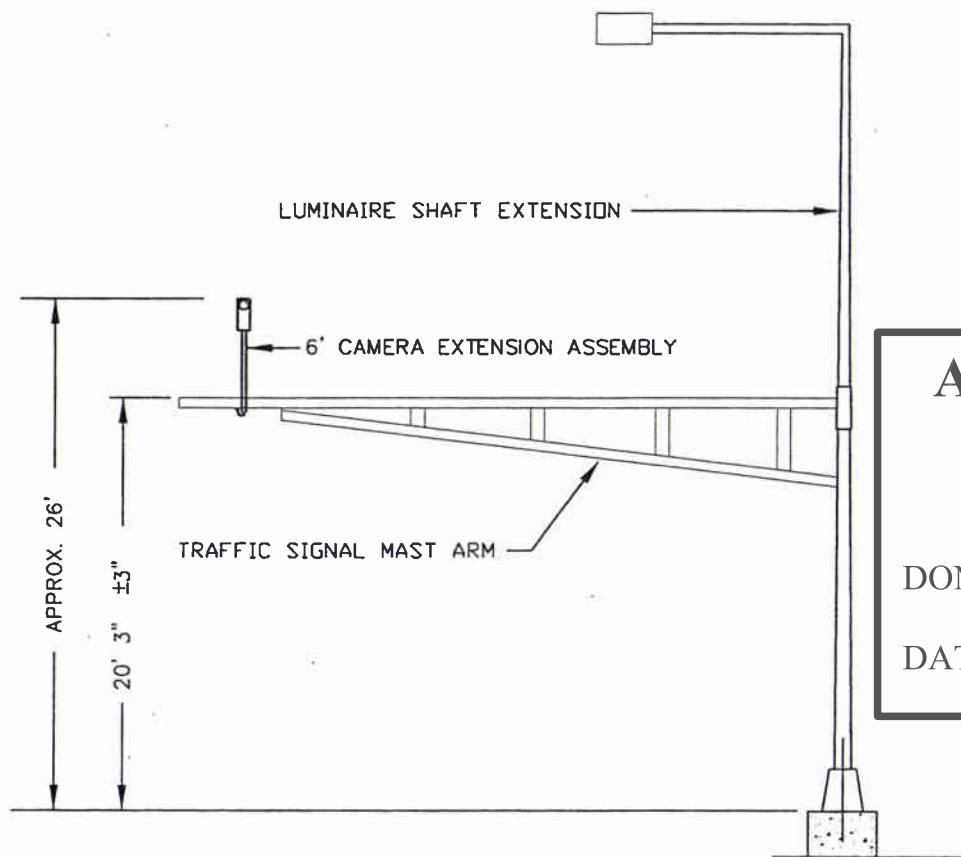
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.A.P.	62-619-30
S.A.P.	62-596-04

SHEET NO.
102
104

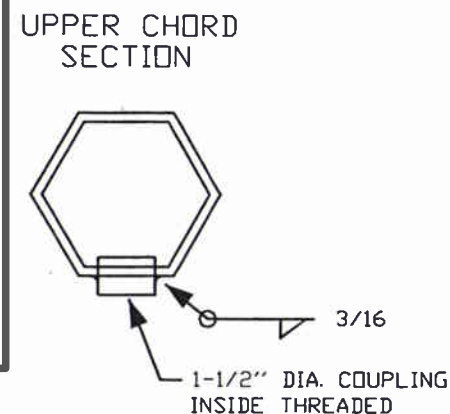
TYPICAL MAST ARM CAMERA MOUNTING DETAILS



MAST ARM CAMERA INSTALLATION

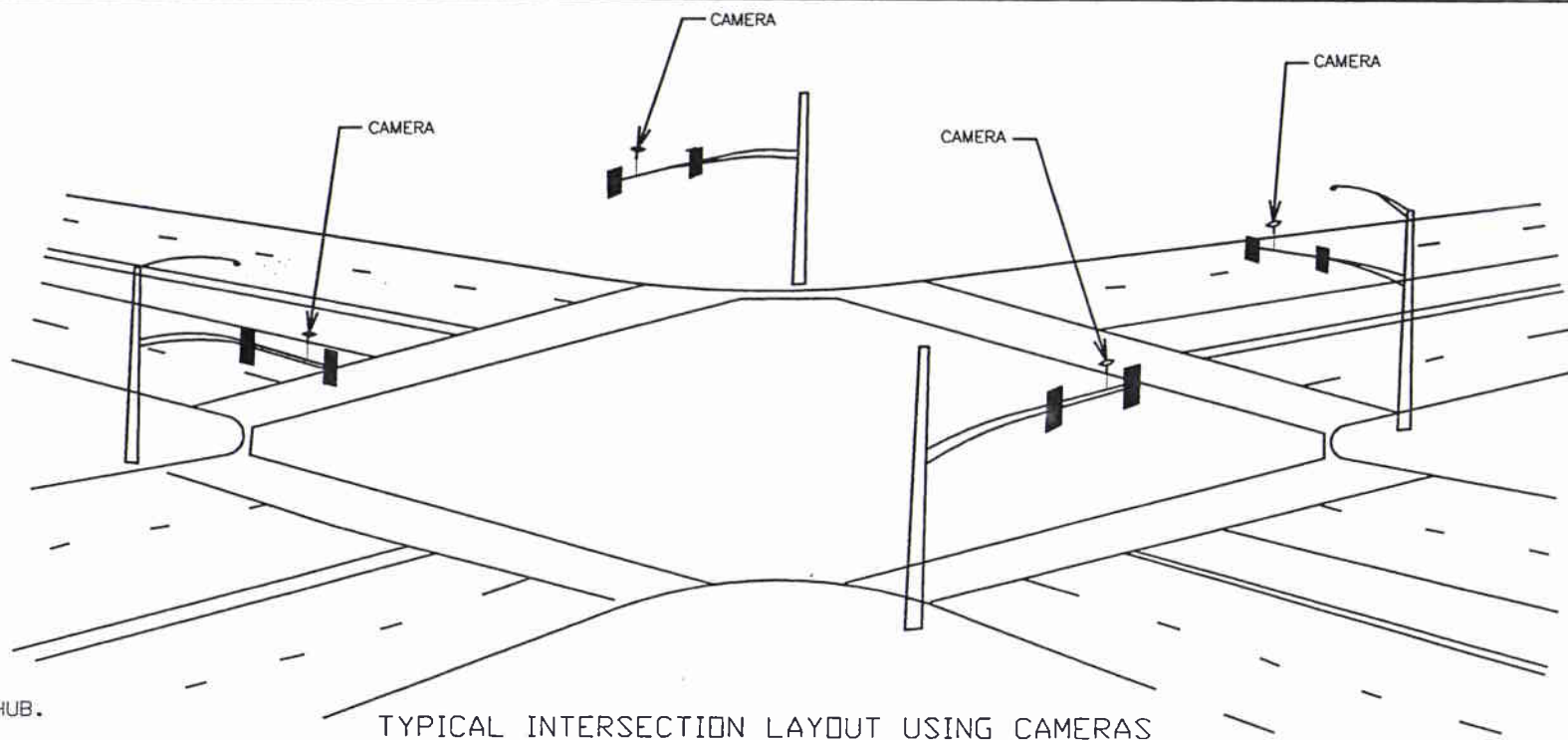


ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS
 DONE BY: Rob Gaetz
 DATE: 1-27-2011



NOTES:

- 1) ALL CAMERA DETECTION EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.
- 2) IT IS DESIRABLE FOR CABLES BETWEEN THE CAMERA AND THE TRAFFIC SIGNAL CONTROL CABINET TO BE CONTINUOUS, HOWEVER, A SPLICE (APPROVED FOR OUTDOOR USE) WILL BE ALLOWED IN THE TRANSFORMER BASE OF THE SIGNAL POLE.
- 3) CAMERA DETECTOR CABLES SHALL BE RUN THROUGH INSIDE OF POLE AND MAST ARM OVER TO CAMERA (NO SPLICE).
- 4) CABLES FOR CAMERA OPERATION SHALL BE AS INDICATED IN THE SPECIAL PROVISIONS AND SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE MANUFACTURER OF THE VIDEO DETECTION SYSTEM USED.
- 5) WHERE THE CABLES ARE ROUTED THROUGH THE MAST ARM, PROVIDE BUSHINGS TO PROTECT THE CABLES.
- 6) THE 6-FOOT CAMERA MOUNTING EXTENSION ASSEMBLY SHALL CONSIST OF A MAST ARM MOUNTING BRACKET THAT IS CONSTRUCTED OF CAST ALUMINUM. THE MAST ARM MOUNTING BRACKET SHALL BE ATTACHED TO THE MAST ARM WITH STAINLESS STEEL STRAPS, USING STAINLESS STEEL MOUNTING HARDWARE.
- 7) A 1 1/2" HALF COUPLING, 1 1/2" PIPE NIPPLE AND CONDUIT OUTLET BODY FOR CAMERA CABLES SHALL BE F&I ON THE UNDER SIDE OF MAST ARM SEE SIGNAL LAYOUT FOR LOCATION OF HUB.



TYPICAL INTERSECTION LAYOUT USING CAMERAS
 (DRAWING NOT TO SCALE)

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No.	Date	Revisions	App.	DRAWING NAME CRD-TSIG13.dwg
				DESIGNED BY: BJB
				DRAWN BY: HMW
				CHECKED BY: BJB
				DATE: 08/07/09
				PROJECT NO. 160500029.2.101



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Brandon J. Bourdon
 BRANDON J. BOURDON
 DATE: 08/07/09 MN LIC. NO. 43709

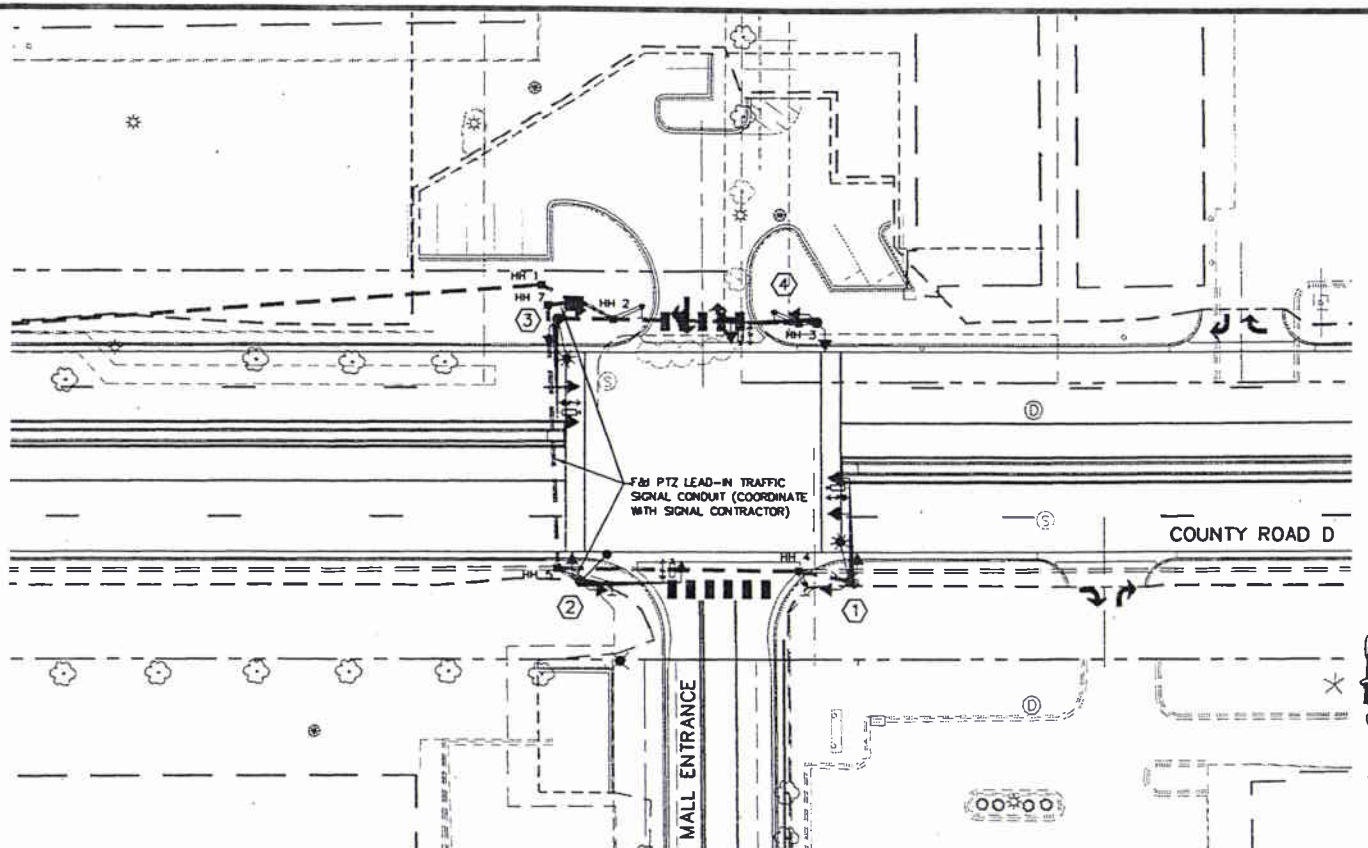
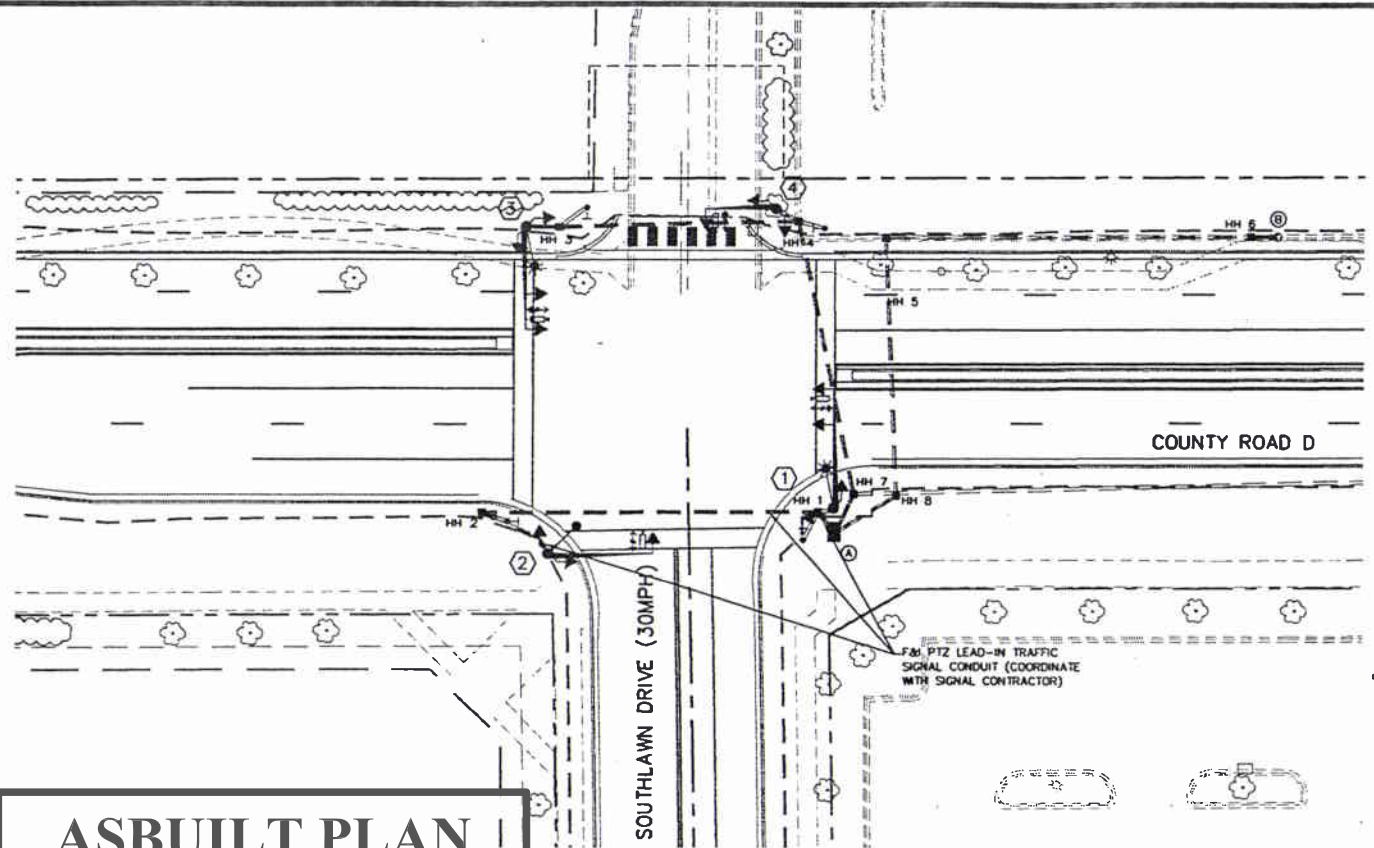


City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS
 TRAFFIC SIGNAL DETAIL
 (SYSTEMS "A" & "B")
 VIDEO DETECTOR DETAILS

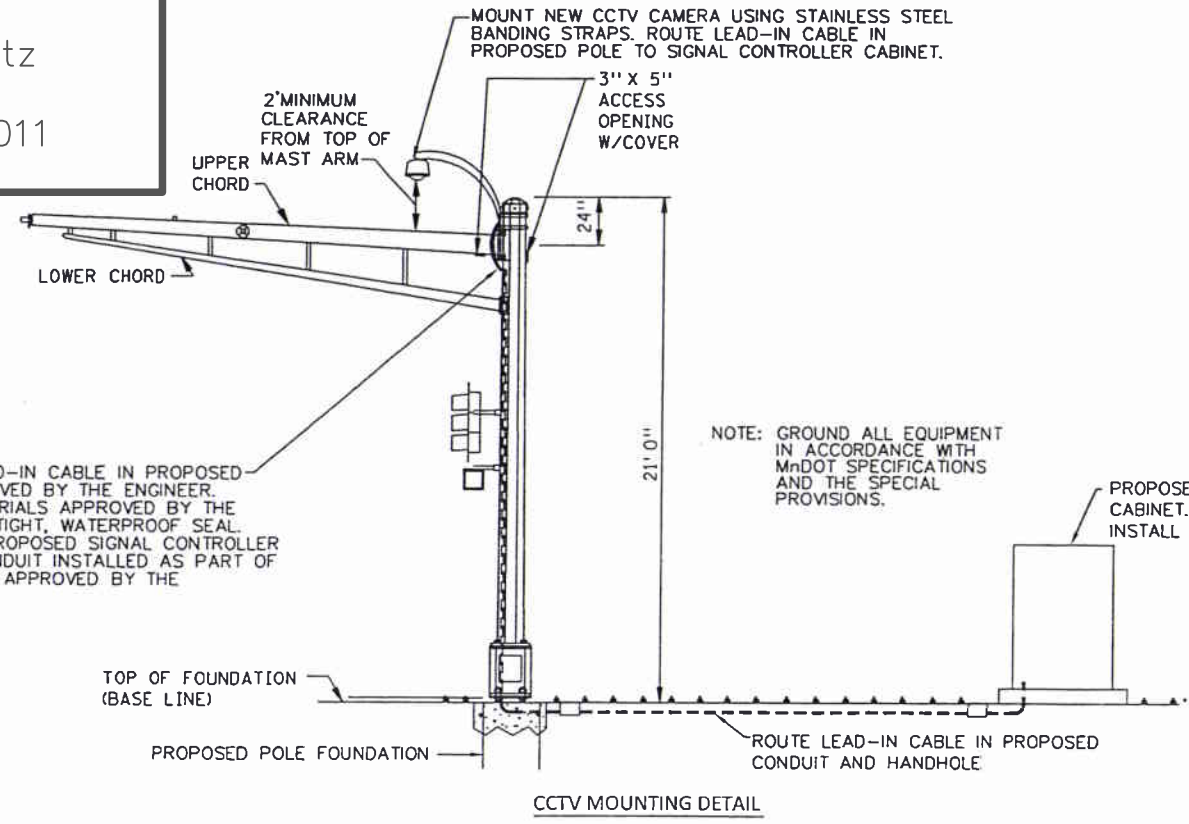
CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	62-596-04

SHEET NO.
 103
 104



ASBUILT PLAN
 CONFORMING TO
 CONST. RECORDS

DONE BY: Rob Gaetz
 DATE: 1-27-2011



PROVIDE ENTRANCE HOLE FOR LEAD-IN CABLE IN PROPOSED METAL POLE USING METHOD APPROVED BY THE ENGINEER. USE GROUTING AND SEALANT MATERIALS APPROVED BY THE ENGINEER TO CREATE A WEATHER TIGHT, WATERPROOF SEAL. ROUTE CCTV LEAD-IN CABLE TO PROPOSED SIGNAL CONTROLLER VIA POLE AND TRAFFIC SIGNAL CONDUIT INSTALLED AS PART OF TRAFFIC SIGNAL CONSTRUCTION AS APPROVED BY THE ENGINEER.

NOTE: GROUND ALL EQUIPMENT IN ACCORDANCE WITH MnDOT SPECIFICATIONS AND THE SPECIAL PROVISIONS.

PROPOSED SIGNAL CONTROLLER CABINET. INSTALL NEW VIDEO ENCODER. INSTALL NEW DSL ROUTER (AT MASTER ONLY).

LEGEND:

PAN, TILT, ZOOM DOME TYPE CAMERA AND MOUNT

NOTES:

1. INSTALL PAN, TILT, ZOOM DOME TYPE CAMERA TO SIGNAL POLES WITHOUT LUMINAIRE EXTENSION AS SHOWN IN DETAIL.
2. MOUNT PAN, TILT, ZOOM DOME TYPE CAMERA AT 315°.
3. THE LOCATION OF THE SDLS DROP HAS NOT BEEN FINALIZED. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY AND PROVIDE CONNECTIVITY BETWEEN THE UTILITY PEDESTAL AND THE DSL ROUTER IN THE SIGNAL CONTROL CABINET.

No.	Date	Revisions	App.

DRAWING NAME	CRD-TSIG12.dwg
DESIGNED BY:	BJB
DRAWN BY:	HMW
CHECKED BY:	BJB
DATE:	08/07/09
PROJECT NO.	160500029.2.101

Kimley-Horn and Associates, Inc.
 2550 UNIVERSITY AVE. WEST, SUITE 340H
 ST. PAUL, MINNESOTA, 55114
 TEL. NO. (651) 645-4197
 FAX. NO. (651) 645-5116

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Brandon J. Bourdon
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RAMSEY COUNTY

City of Maplewood, Minnesota
 Department of Public Works
 Engineering Division

RAMSEY COUNTY
 CITY OF MAPLEWOOD
 COUNTY ROAD D
 IMPROVEMENTS

CCTV SYSTEM DETAIL
 (SYSTEMS "A" & "B")

CITY PROJECT	08-13
COUNTY PROJECT	P-3202
S.P.	62-619-30
S.P.	

SHEET NO.
104

104

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