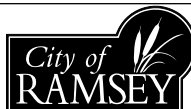


STORM SEWER TABULATIONS

STRUCTURE LOCATION (1)					STRUCTURE PAY HEIGHT (3), (4), (8)				(5) STEPS REQUIRED	RECONSTRUCT DRAINAGE STRUCTURE	F&I CASTING ASSEMBLY	(2) TOP CASTING ELEV.	OUTLET ELEV. BOTTOM	CIRCULAR PIPE DESIGN 3006 (6),(7)			DRAINS TO			COMMENTS
STRUCT. NO.	ALIGNMENT	STATION	OFFSET FT	SIDE	F	H	4020-48	4020-60						15" RCP CL IV	18" RCP CL IV	24" RCP CL III	STRUCT. NO.	PIPE GRADE FT/FT	INVERT ELEV.	
					LIN FT	LIN FT	LIN FT	LIN FT						LIN FT	LIN FT	LIN FT				
103	SUNWOOD DRIVE	6+09.4	55.0	LT	4.3				Y		F	872.91	868.88		91.0		104	0.007	868.24	
104	SUNWOOD DRIVE	6+09.4	36.0	RT			5.3		Y		F	873.26	868.24		166.6		105	0.008	866.99	
105	SUNWOOD DRIVE	7+75.7	50.9	RT			4.7		Y		F	870.91	866.49			79.8	112	0.005	866.09	
106	SUNWOOD DRIVE	7+65.0	17.7	RT	4.8				Y		F	871.65	867.16		33.9		105	0.005	866.99	
107	SUNWOOD DRIVE	7+65.0	47.0	LT	4.5				Y		F	872.00	867.78		66.7		106	0.009	867.16	
112	SUNWOOD DRIVE	9+97.5	39.1	RT				5.3	Y		F	871.04	866.09			130.0	116	0.007	864.14	
113	WB FLANGE RT	71+71.5	1.0	RT	3.9						F	871.18	867.58		80.1		112	0.01	866.84	
115	WB FLANGE RT	72+51.9	1.0	RT		4.0					F	871.70	868.00		80.2		113	0.005	867.58	
116	SUNWOOD DRIVE	11+13.1	23.1	RT			5.1		Y		F	869.97	865.14			89.4	117	0.015	863.80	
117	SUNWOOD DRIVE	12+07.1	24.5	RT				6.8	Y		F	869.27	863.80			79.1	121	0.015	862.61	
118	SUNWOOD DRIVE	12+07.1	12.5	LT	4.9				Y		F	869.50	864.89	37.0			117	0.01	864.52	
121	SUNWOOD DRIVE	12+85.1	24.5	RT			6.4		Y		F	868.75	862.61			115.5	5004	0.015	860.88	
122	SUNWOOD DRIVE	14+17.7	12.5	LT	4.0				Y		F	868.31	864.63	41.2			5008	0.008	863.98	
130	SUNWOOD DRIVE	12+07.1	40.0	RT												15.5	117	0.01	864.02	STUB OUT
5004	SUNWOOD DRIVE	13+63.6	94.9	RT					Y		G	867.9	859.90				5008	EX.	EX.	
5008	SUNWOOD DRIVE	14+20.1	24.1	RT							F	867.97	859.6				EXISTING	EX.	EX.	
123	SUNWOOD DRIVE	17+09.4	17.6	LT			5.7		Y		F	870.03	864.28							

NOTES:

- (1) STATION AND OFFSETS ARE GIVEN TO CENTER OF GRATE. INVERT ELEVATIONS ARE GIVEN AT CENTER OF STRUCTURE.
- (2) TOP OF CASTING ELEVATIONS ARE TO CENTER OF GRATE.
- (3) PAY HEIGHTS ARE FROM BOTTOM OF CASTING TO INVERT PLUS 0.7'
- (4) TYPE 4020 STRUCTURE WITH TYPE F OR G CASTINGS REQUIRE 4022 TOP SLABS.
- (5) IF STEPS ARE REQUIRED, STRUCTURE TO INCLUDE MANHOLE STEPS 16" ON CENTER. SEE MN/DOT STANDARD PLATE 4180.
- (6) CLASS C BEDDING TO BE USED FOR RC PIPE UNLESS OTHERWISE NOTED.
- (7) LENGTH GIVEN TO CENTER OF STRUCTURE.
- (8) SEE SHEET 12A FOR TOP SLAB DETAIL FOR 4020 STRUCTURE THAT USE F OR G CASTINGS.



SUNWOOD DRIVE REALIGNMENT
SUNWOOD DRIVE
RAMSEY, MINNESOTA

PROJ. NO. RAM12019
DESIGNED BY: MHD/NRA
CHECKED BY: CNC
APPROVED BY: RGS

DATE	REVISION	REVIEW
7/25/2012	CHANGE ORDER #1	RGS
9/14/2012	CHANGE ORDER #1	RGS

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

Robert Schunicht
NAME: ROBERT SCHUNICHT
Registration No: 12105
DATE: 9/14/2012

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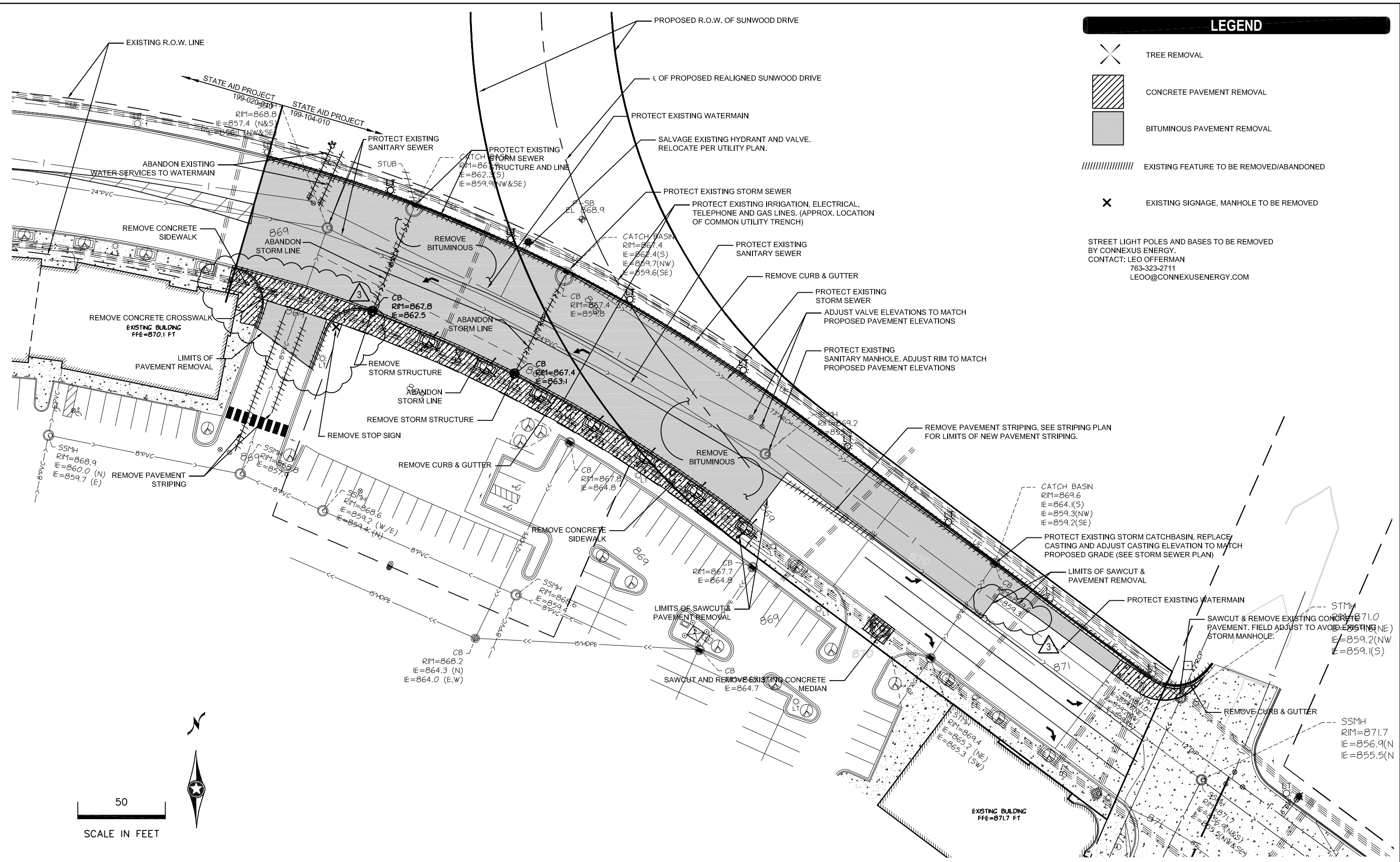
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Tel: 612-252-9070
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STORM SEWER TABULATIONS
(SHEET 1 OF 1)

S.A.P. NO. 199-104-010, C.P. NO.12-20

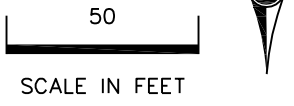
SHEET NO. 4AR/ 67A



LEGEND

- TREE REMOVAL
- CONCRETE PAVEMENT REMOVAL
- BITUMINOUS PAVEMENT REMOVAL
- EXISTING FEATURE TO BE REMOVED/ABANDONED
- EXISTING SIGNAGE, MANHOLE TO BE REMOVED

STREET LIGHT POLES AND BASES TO BE REMOVED BY CONNEXUS ENERGY.
 CONTACT: LEO OFFERMAN
 763-323-2711
 LEOO@CONNEXUSENERGY.COM



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SUNWOOD DRIVE REALIGNMENT
 SUNWOOD DRIVE
 RAMSEY, MINNESOTA

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CHECKED BY:	CNC
APPROVED BY:	RGS

DATE	7/25/2012
8/07/2012	
9/14/2012	

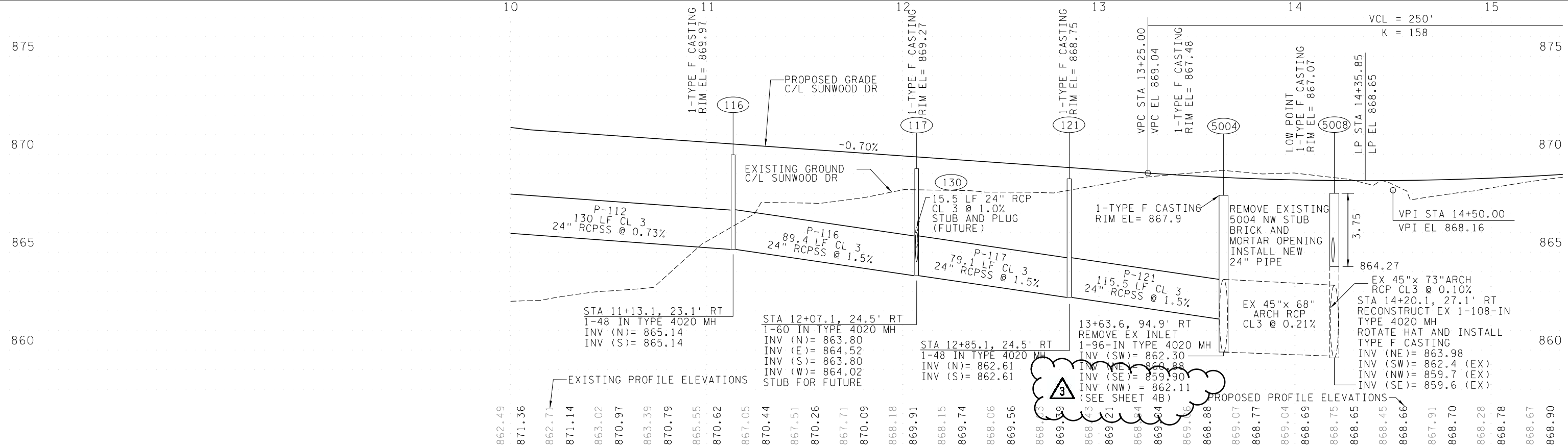
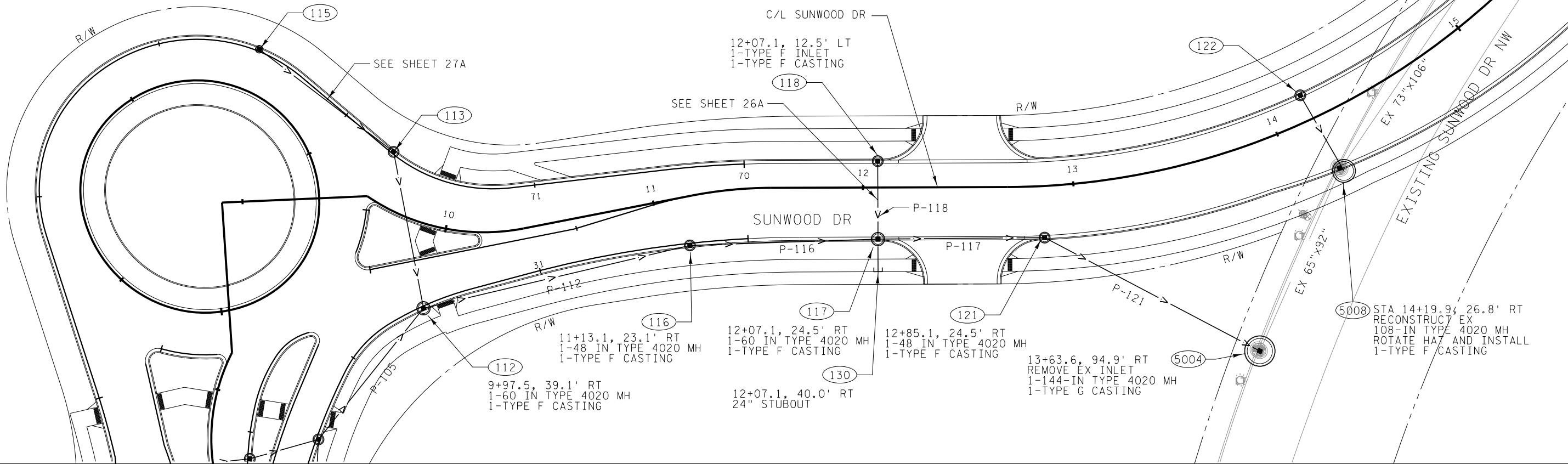
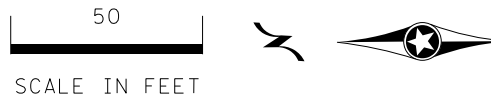
REVISION	CHANGE ORDER #1
CHANGE ORDER #2	
CHANGE ORDER #3	

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SUNWOOD DRIVE REALIGNMENT
 SUNWOOD DRIVE
 RAMSEY, MINNESOTA

PROJ. NO.	RAM12019	DATE	7/25/2012	REVISION		REVIEW	RGS
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CHECKED BY:	CNC						
APPROVED BY:	RGS						

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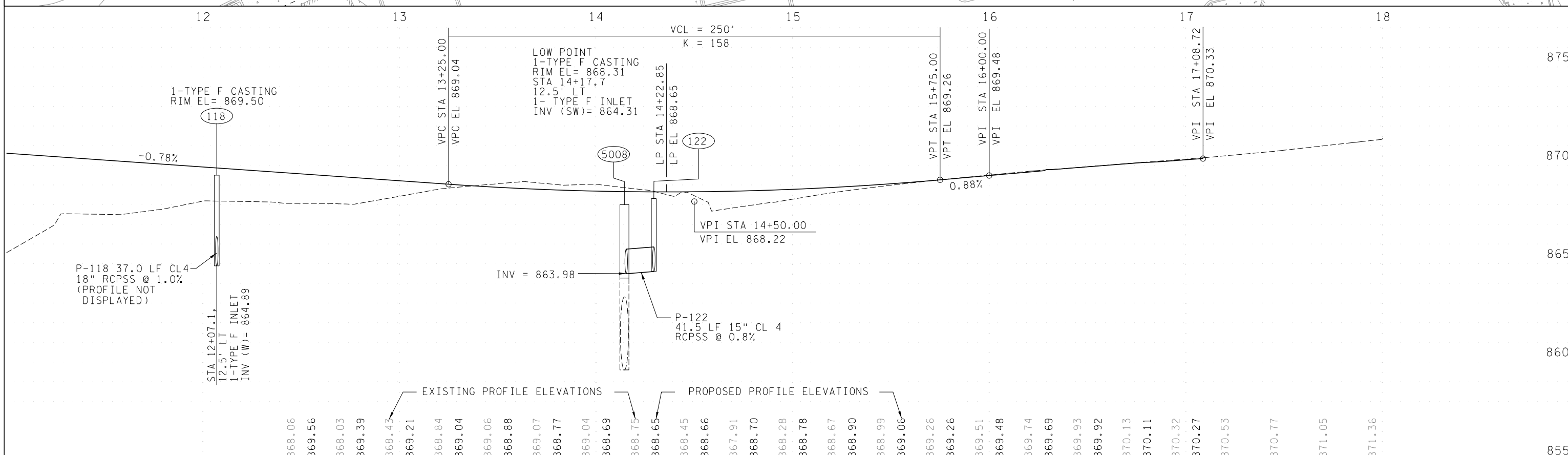
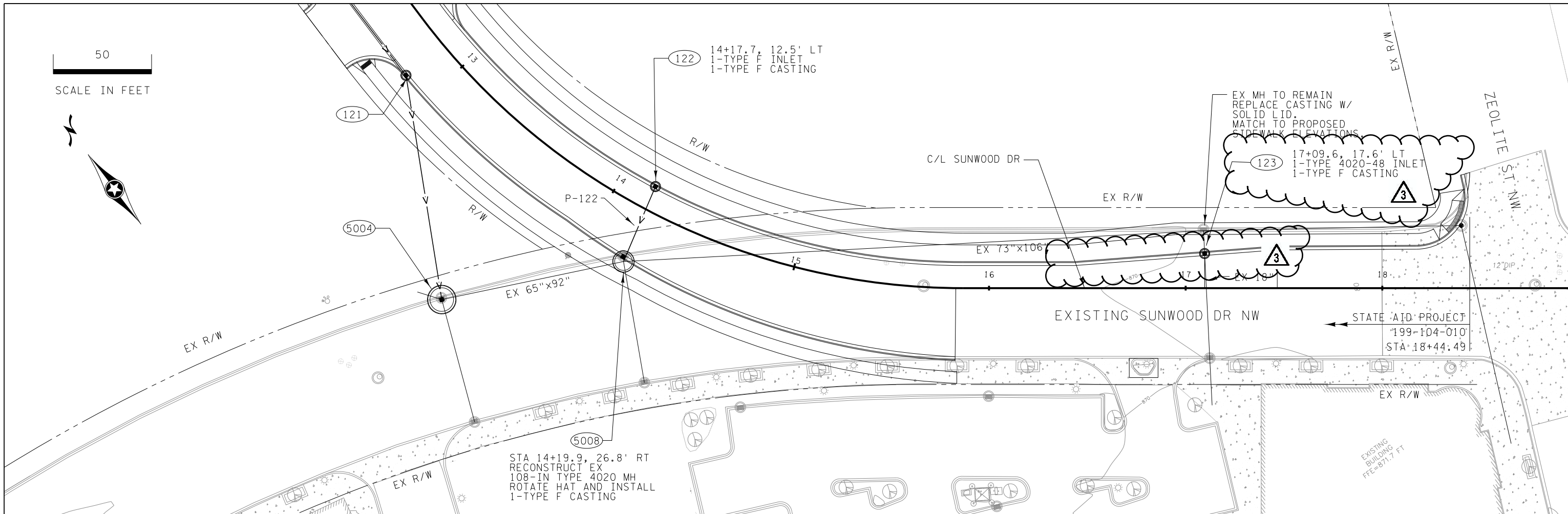
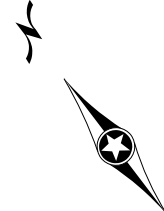
PROFILE AND STORM SEWER PLAN
 (SHEET 2 OF 5)

S.A.P. NO. 199-104-010, C.P. NO.12-20

SHEET NO.25AR/ 67A

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50
SCALE IN FEET



STATION	EXISTING PROFILE ELEVATIONS	PROPOSED PROFILE ELEVATIONS
12+00	868.06	868.06
12+10	869.56	869.56
12+20	868.03	868.03
12+30	869.39	869.39
12+40	868.43	868.43
12+50	869.21	869.21
13+00	868.84	868.84
13+10	869.04	869.04
13+20	869.06	869.06
13+30	868.88	868.88
13+40	869.07	869.07
13+50	868.77	868.77
14+00	869.04	869.04
14+10	868.69	868.69
14+20	868.75	868.75
14+30	868.65	868.65
14+40	868.45	868.45
14+50	868.66	868.66
15+00	867.91	867.91
15+10	868.70	868.70
15+20	868.28	868.28
15+30	868.78	868.78
15+40	868.67	868.67
15+50	868.90	868.90
16+00	868.99	868.99
16+10	869.06	869.06
16+20	869.26	869.26
16+30	869.26	869.26
16+40	869.51	869.51
16+50	869.48	869.48
17+00	869.74	869.74
17+10	869.69	869.69
17+20	869.93	869.93
17+30	869.92	869.92
17+40	870.13	870.13
17+50	870.11	870.11
18+00	870.32	870.32
18+10	870.27	870.27
18+20	870.53	870.53
18+30	870.77	870.77
18+40	871.05	871.05
18+50	871.36	871.36

SUNWOOD DRIVE REALIGNMENT
SUNWOOD DRIVE
RAMSEY, MINNESOTA

PROJ. NO.	RAM12019
DESIGNED BY:	MHD/NRA
CHECKED BY:	CNC
APPROVED BY:	RGS
DATE	7/25/2012
REVISION	CHANGE ORDER #1
	CHANGE ORDER #3

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Registration No: 12105
DATE: 9/14/2012

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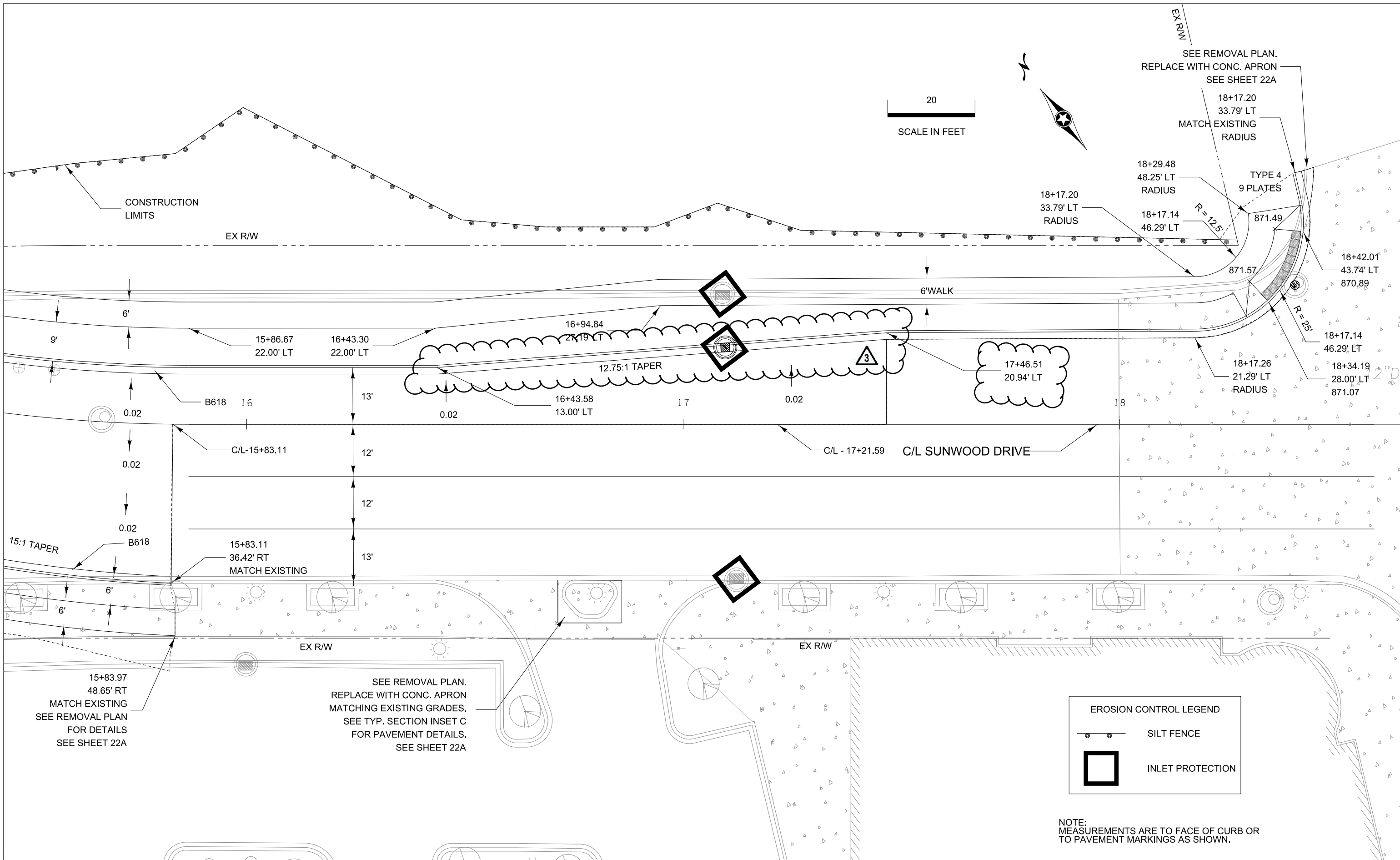
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PROFILE AND STORM SEWER PLAN
(SHEET 3 OF 5)

S.A.P. NO. 199-104-010, C.P. NO.12-20

SHEET NO.26AR/ 67A

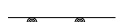

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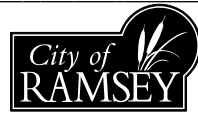
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SCALE IN FEET



EROSION CONTROL LEGEND

-  SILT FENCE
-  INLET PROTECTION

NOTE:
MEASUREMENTS ARE TO FACE OF CURB OR
TO PAVEMENT MARKINGS AS SHOWN.



SUNWOOD DRIVE REALIGNMENT
SUNWOOD DRIVE
RAMSEY, MINNESOTA

PROJ. NO.	RAM12019	DATE	7/25/2012	REVISION		REVIEW	RGS
DESIGNED BY:	MHD/NRA	9/14/2012	CHANGE ORDER #1				RGS
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APPROVED BY:	RGS						

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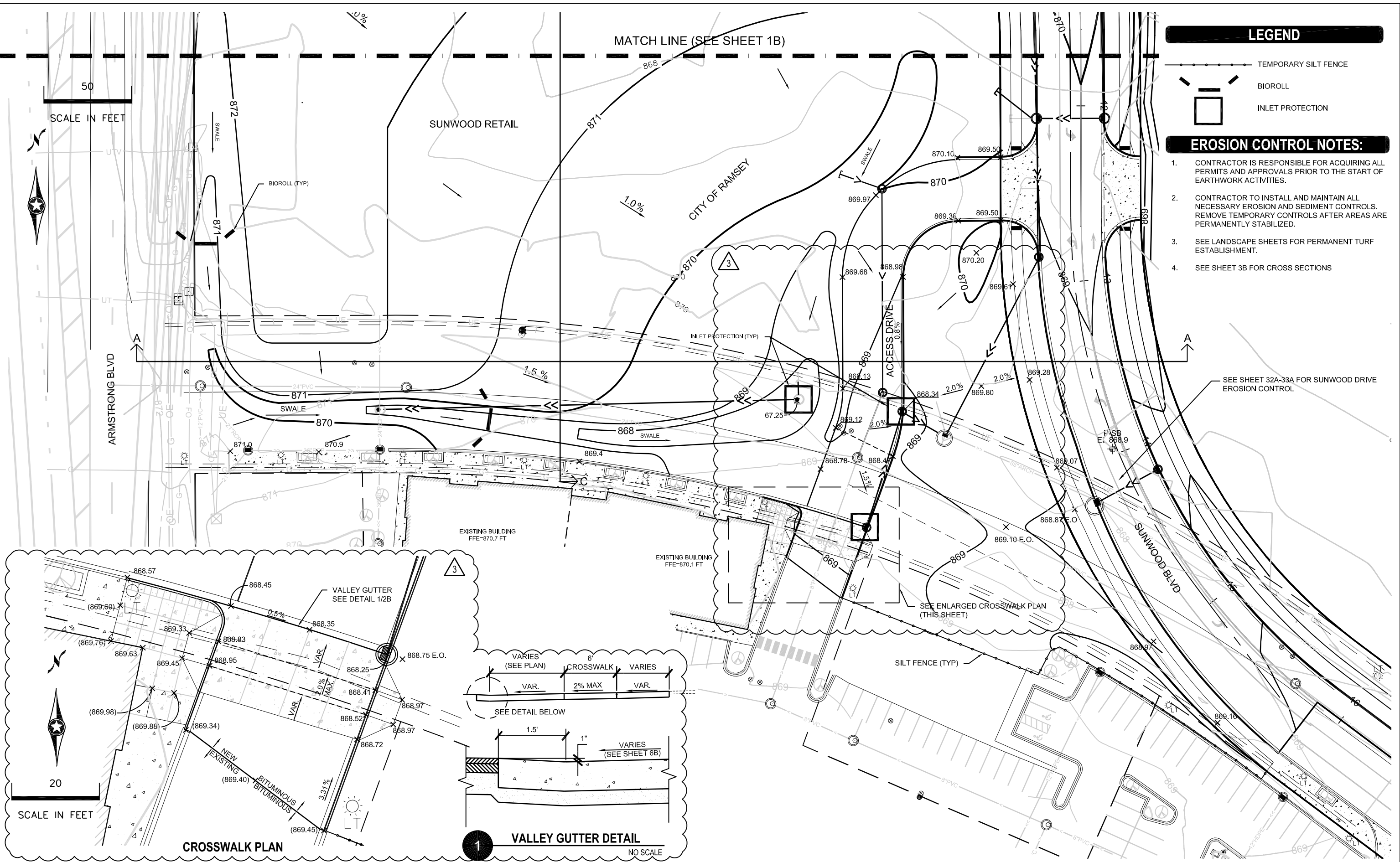
CONSTRUCTION PLAN
(SHEET 6 OF 6)

S.A.P. NO. 199-104-010, C.P. NO.12-20

SHEET NO.34AR/ 67A

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LEGEND

- TEMPORARY SILT FENCE
- BIOROLL
- INLET PROTECTION

EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS AND APPROVALS PRIOR TO THE START OF EARTHWORK ACTIVITIES.
2. CONTRACTOR TO INSTALL AND MAINTAIN ALL NECESSARY EROSION AND SEDIMENT CONTROLS. REMOVE TEMPORARY CONTROLS AFTER AREAS ARE PERMANENTLY STABILIZED.
3. SEE LANDSCAPE SHEETS FOR PERMANENT TURF ESTABLISHMENT.
4. SEE SHEET 3B FOR CROSS SECTIONS

50
SCALE IN FEET



ARMSTRONG BLVD

SUNWOOD RETAIL

MATCH LINE (SEE SHEET 1B)

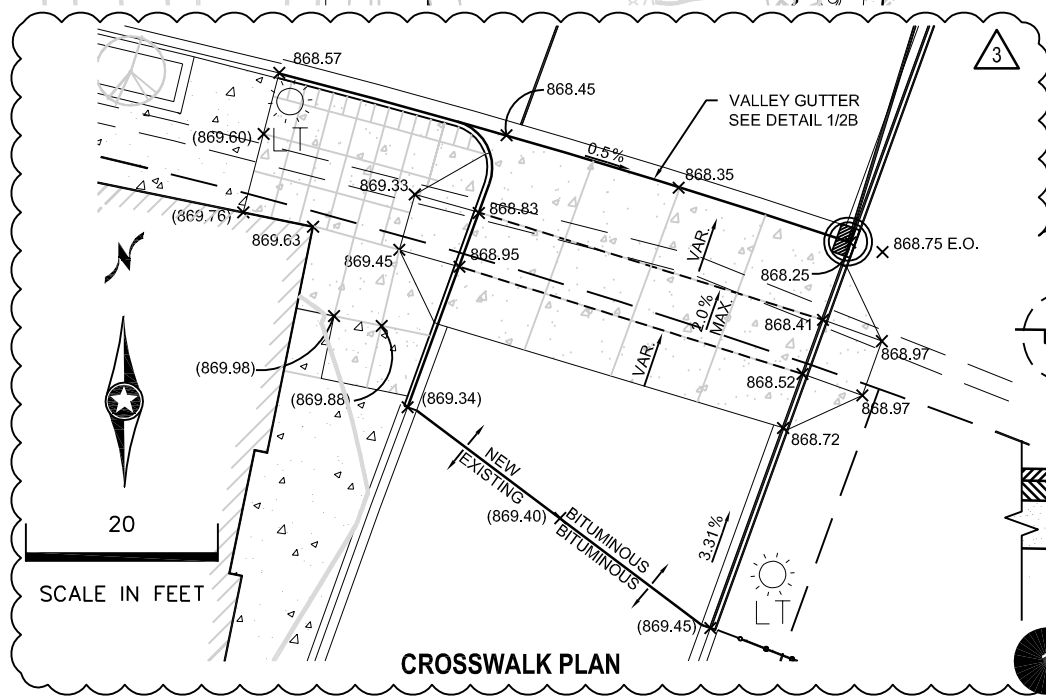
CITY OF RAMSEY

ACCESS DRIVE
0.8%

SUNWOOD BLVD

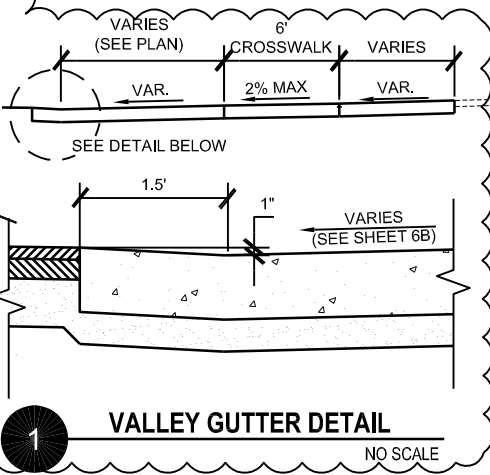
SEE SHEET 32A-33A FOR SUNWOOD DRIVE EROSION CONTROL

SEE ENLARGED CROSSWALK PLAN (THIS SHEET)



20
SCALE IN FEET

CROSSWALK PLAN



VALLEY GUTTER DETAIL

NO SCALE

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SUNWOOD DRIVE REALIGNMENT
SUNWOOD DRIVE
RAMSEY, MINNESOTA

PROJ. NO. RAM12019
DESIGNED BY: RTS
CHECKED BY: CNC
APPROVED BY: RGS

DATE
7/25/2012
8/07/2012
9/14/2012

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CHANGE ORDER #1
CHANGE ORDER #2
CHANGE ORDER #3

REVIEW
RGS
RGS
RGS

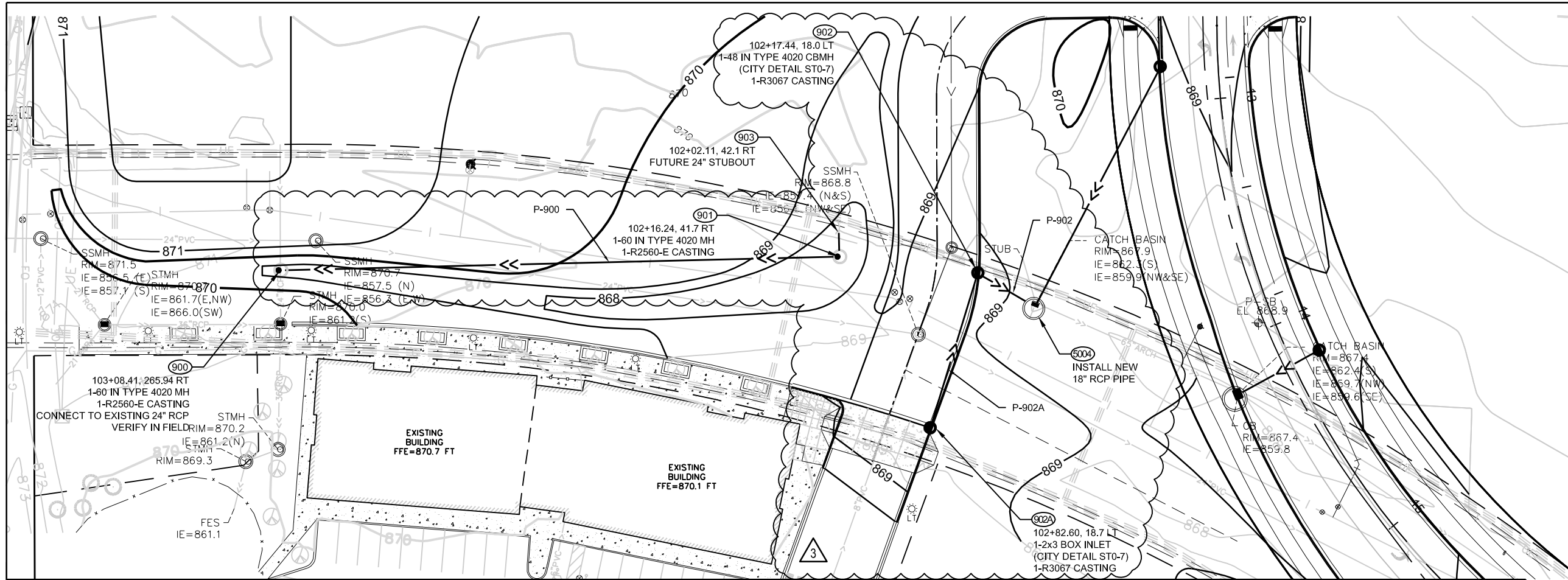
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DATE: 09/14/2012



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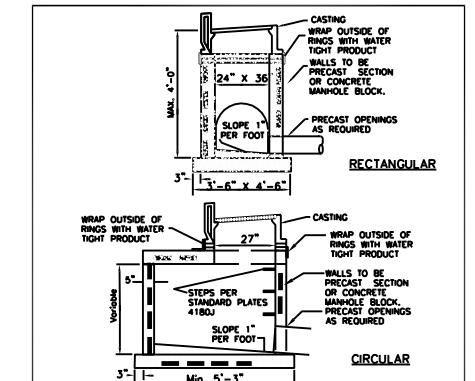
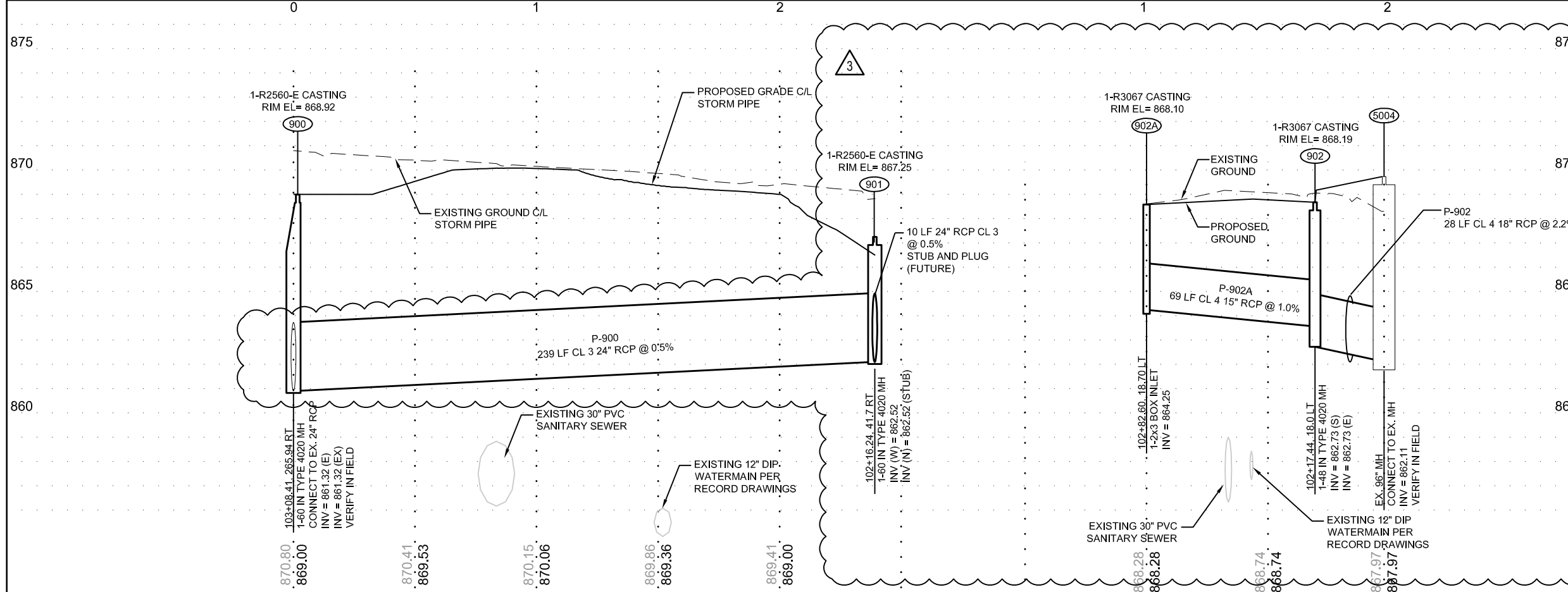
MASS GRADING, DRAINAGE, EROSION & SEDIMENT CONTROL PLANS
SUNWOOD RETAIL

S.A.P. NO. 199-104-010, C.P. NO. 12-20
SHEET NO.2BR / 14B



50
SCALE IN FEET

DEWATER AS NECESSARY TO INSTALL WATERMAIN AND SANITARY SEWER. PAYMENT FOR ALL DEWATERING IS A LUMP SUM AMOUNT. SEE SPECIFICATIONS.



- NOTES:
- MANHOLE INVERT SHALL SLOPE TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
 - CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB.
 - CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX. 7-2" RINGS, MIN 2-2" RINGS
 - CIRCUIT BETWEEN RINGS
 - SHIMS USED FOR LEVELING SHALL BE METAL OR CONCRETE
 - A 10 GAUGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINES.
 - CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
 - STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET
 - TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

APPROVED DATE: 4-2012
STANDARD DETAILS CATCH BASIN
CITY PLATE No. STO-7

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SUNWOOD DRIVE REALIGNMENT
SUNWOOD DRIVE
RAMSEY, MINNESOTA

PROJ. NO. RAM12019
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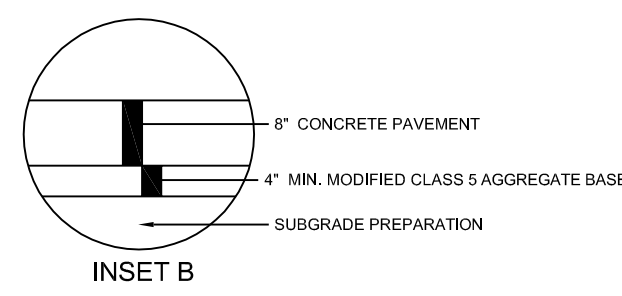
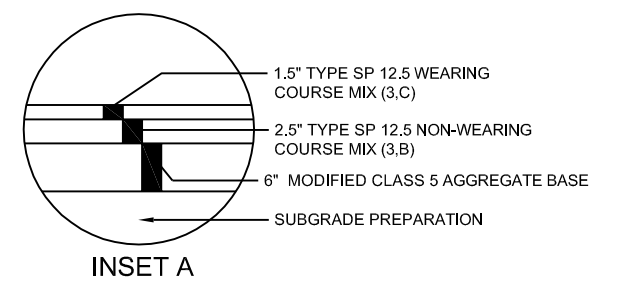
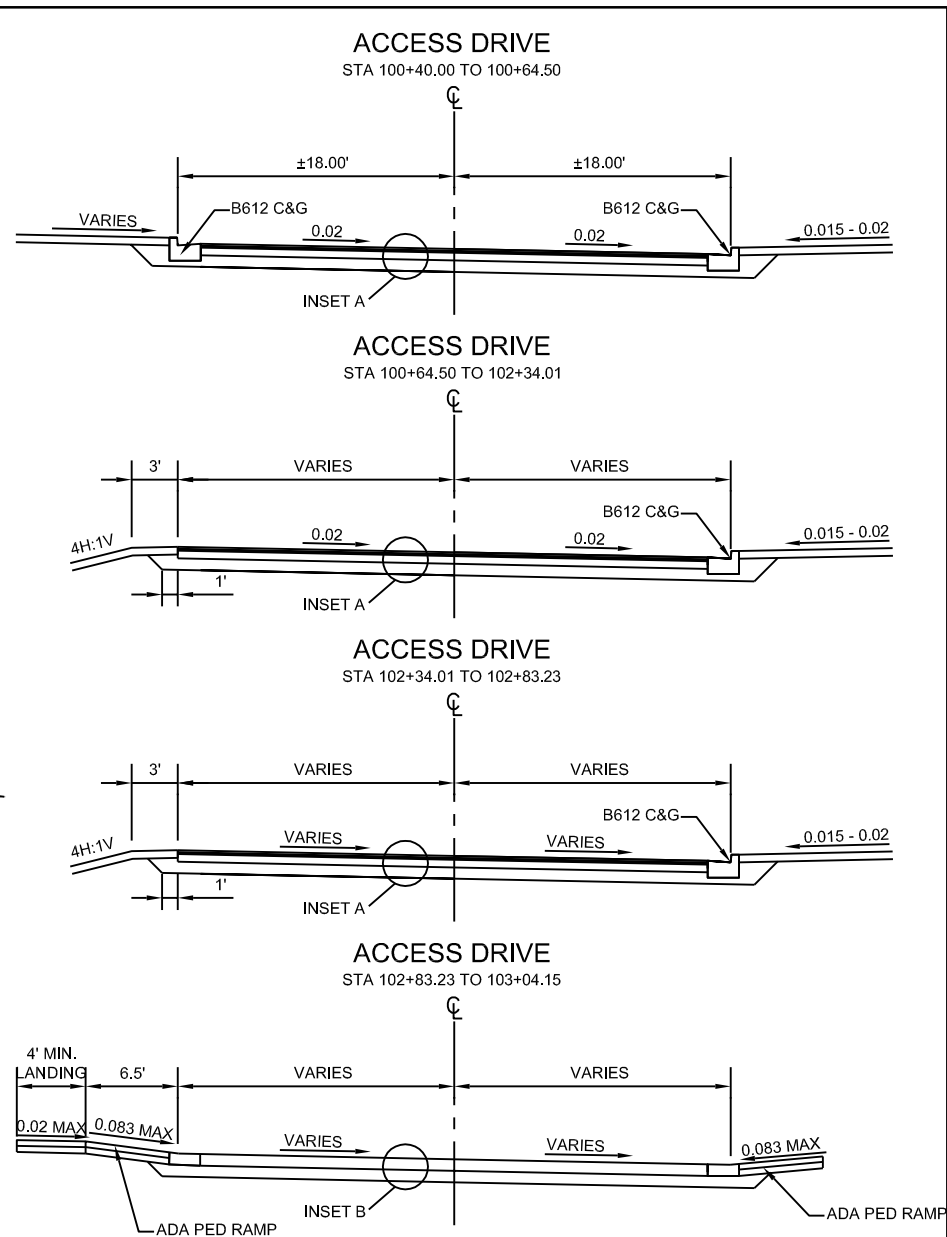
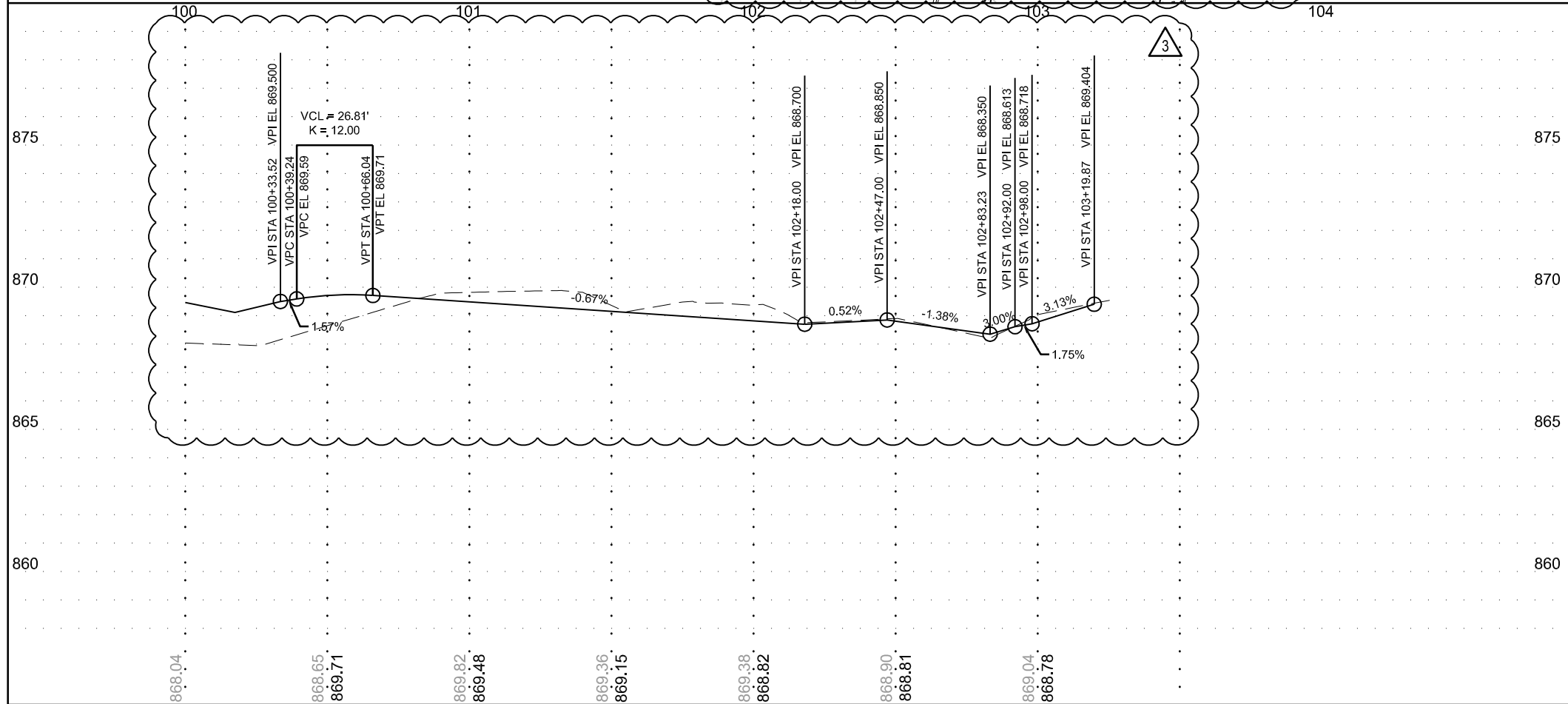
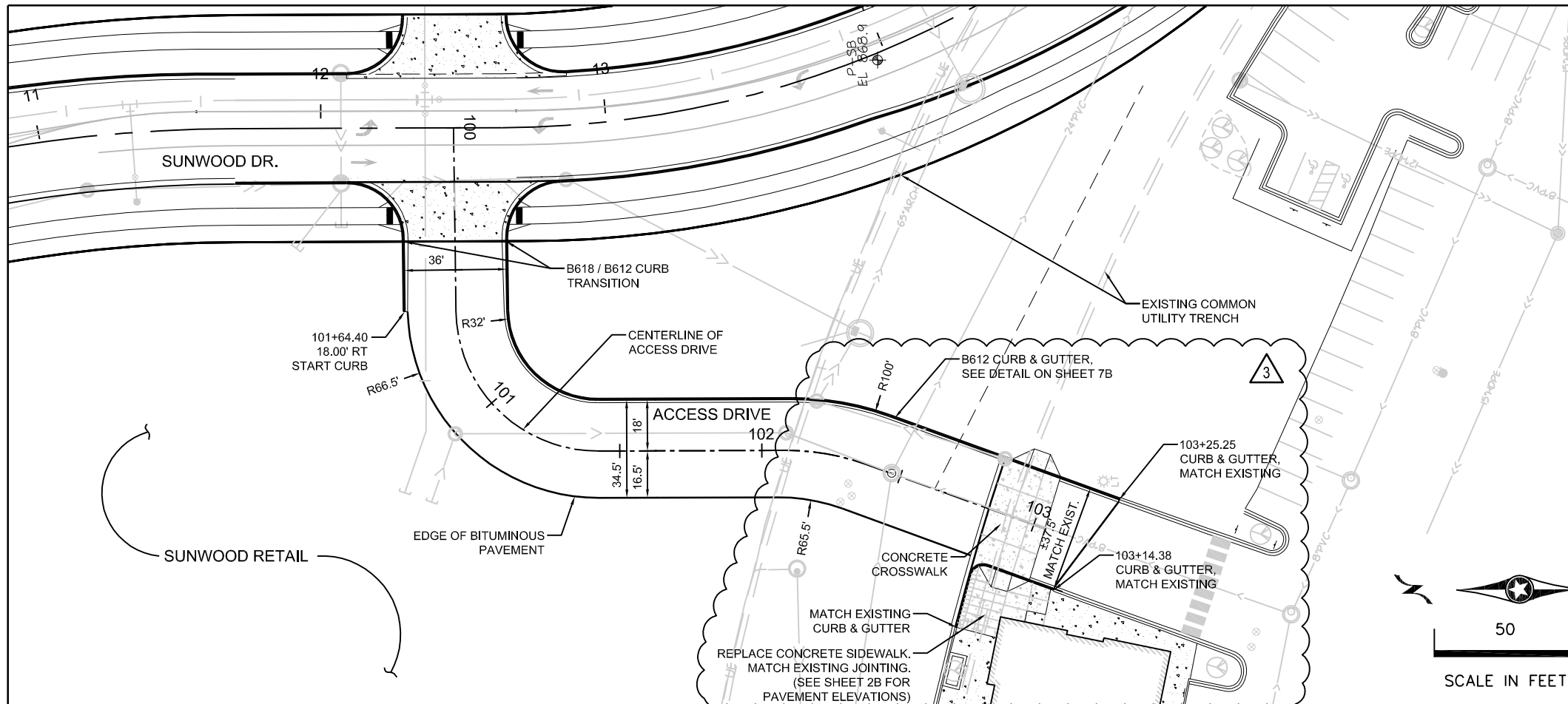
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CHANGE ORDER #3

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RGS

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STORM SEWER PLAN AND PROFILE
SUNWOOD RETAIL
S.A.P. NO. 199-104-010, C.P. NO. 12-20
SHEET NO. 4BR / 14B



SUNWOOD DRIVE REALIGNMENT
SUNWOOD DRIVE
RAMSEY, MINNESOTA

PROJ. NO.	RAM12019	DATE	7/25/2012	REVISION		REVIEW	RGS
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APPROVED BY:	RGS		CHANGE ORDER #3				RGS

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ACCESS DRIVE PLAN AND PROFILE
SUNWOOD RETAIL

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SHEET NO.6BR / 14B

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