

CITY OF RAMSEY

STREET CONSTRUCTION PLANS FOR BITUMINOUS RECLAMATION AND PAVING.

S.A.P. 199-104-011

S.A.P. LOCATED ON SUNWOOD DRIVE BETWEEN RAMSEY BOULEVARD AND BUNKER LAKE BOULEVARD
 FROM NW 1/4 OF THE SW 1/4 OF S27, T32, R25 TO NW 1/4 OF THE SE 1/4 OF S27, T32, R25

GOVERNING SPECIFICATIONS

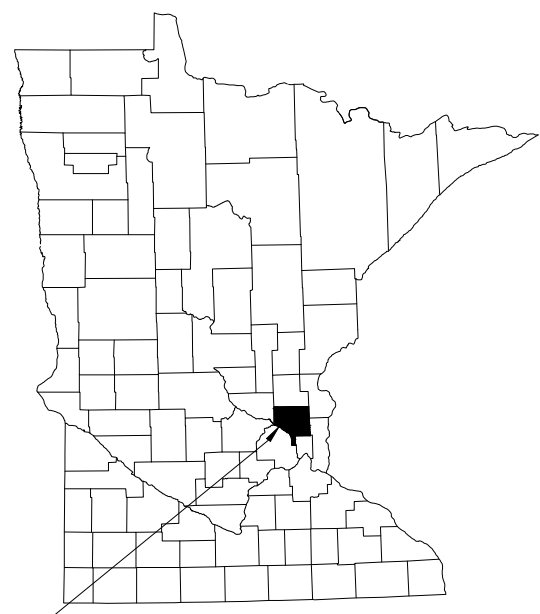
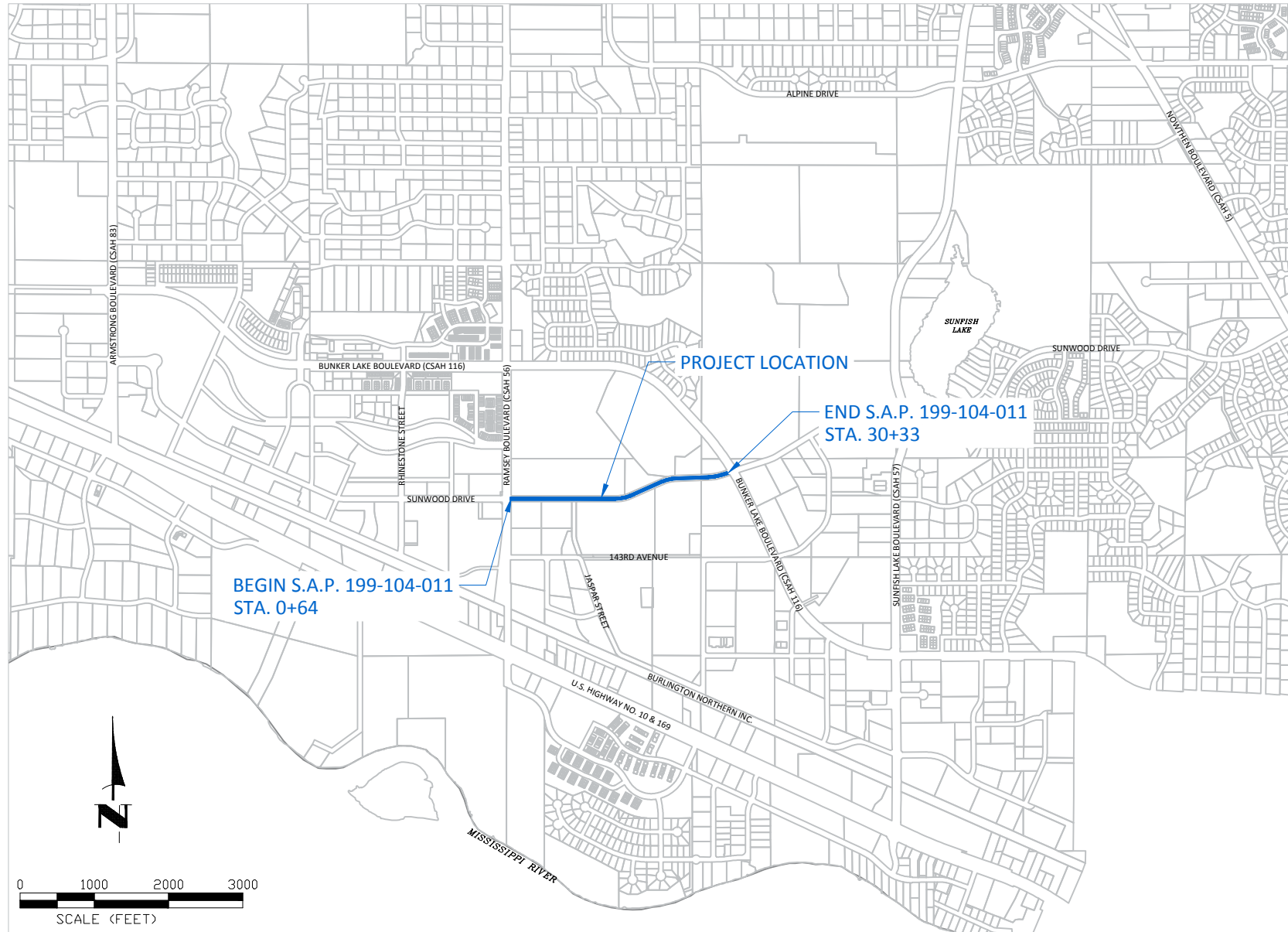
THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

SHEET INDEX
THIS PLAN CONTAINS 18 SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SHEET INDEX
3	STATEMENT OF ESTIMATED QUANTITIES
4	TYPICAL SECTION
5	DETAILS
6-8	EROSION CONTROL AND RESTORATION
9-11	REMOVALS
12	ALIGNMENT LAYOUT
13-15	STREET AND STORM SEWER
16	STRIPING PLAN
17-18	SWPPP



CITY OF RAMSEY
 ANOKA COUNTY, MINNESOTA
 DISTRICT: METRO

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

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL 1-800-252-1166 OR 651-454-0002

LEGEND

	MAILBOX		EASEMENT
	LIGHT POLE		RIGHT OF WAY
	TREE		ELECTRIC
	SHRUB		GAS
	SIGN		TELECOMMUNICATIONS
	POLE		STORM SEWER
	FLOOD LIGHT		TREE LINE
	VALVE		SPLIT RAIL FENCE
	UTILITY PEDESTAL		LANDSCAPING
	HAND HOLE		RETAINING WALL
	EXISTING CATCH BASIN		5' CONTOUR LINE
	EXISTING MANHOLE		1' CONTOUR LINE
	EXISTING FLARED END		SILT FENCE
	REMOVE TREE		CONCRETE CURB & GUTTER
	3'X2' CATCH BASIN		
	CATCH BASIN MANHOLE		
	INLET PROTECTION		
	RECLAIM BITUMINOUS PAVEMENT		
	EDGE MILL		
	REMOVE BITUMINOUS PAVEMENT		
	REMOVE BITUMINOUS DRIVE		
	REMOVE CONCRETE VALLEY GUTTER		
	CONCRETE PAVEMENT		
	BITUMINOUS PAVEMENT		
	SOD		



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.

40116 DATE _____
 BRUCE R WESTBY, P.E. LIC. NO.
 RAMSEY CITY ENGINEER

DATE _____
 DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

DATE _____
 STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

NO.	PROJECT	STA. TO STA.	GROSS LENGTH	BRIDGE LENGTH	NET LENGTH	NET LENGTH (MILES)	ADT (2015)	ADT (2037)	DESIGN ESAL	R VALUE	TON DESIGN	DESIGN SPEED	NUMBER OF LANES	WIDTH OF LANES	NUMBER OF PARKING LANES	WIDTH OF PKG LANES	FUNCTIONAL CLASSIFICATION
①	S.A.P. 199-104-011 SUNWOOD DRIVE	0+64 TO 30+33	2969 FT	0 FT	2969 FT	0.56 MI.	3500	7380	499,000	50	10	40	2	EB - 12' WB - 12'	2	8'	COLLECTOR

Apr 11, 2017 - 3:10pm
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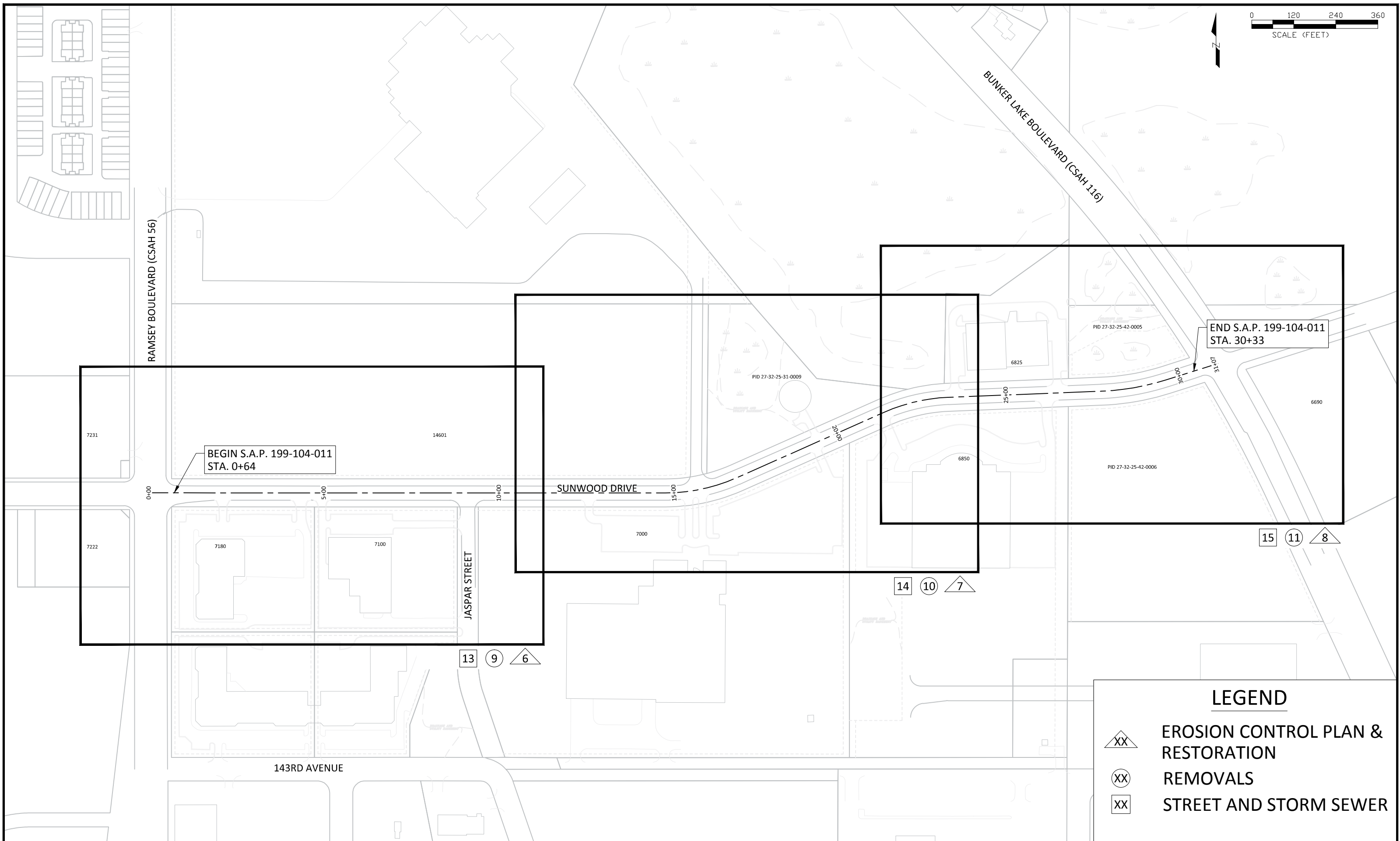
CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

STOPPING SIGHT DISTANCE BASED ON:
 3.5 FT - HEIGHT OF EYE
 2.0 FT - HEIGHT OF OBJECT

DATUM:
 VERTICAL: NAVD 88
 HORIZONTAL: ANOKA COUNTY COORDINATES (1996 ADJUSTMENT)

S.A.P. 199-104-011




DATE	REVISION



BEGIN S.A.P. 199-104-011
STA. 0+64

END S.A.P. 199-104-011
STA. 30+33

LEGEND

-  EROSION CONTROL PLAN & RESTORATION
-  REMOVALS
-  STREET AND STORM SEWER

DATE	REVISION
Apr 11, 2017 - 3:10pm	
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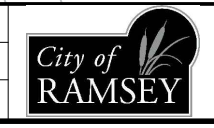
DESIGNED BY: JJJ
 DRAWN BY: JJJ
 CHECKED BY: BRW

DATE: 4/11/17
 FILE No. 17-00

BRUCE W. WESTBY
 Date: 4/11/17 Lic. No. 40116

DESIGNED BY: JJJ
 DRAWN BY: JJJ
 CHECKED BY: BRW

DATE: 4/11/17
 FILE No. 17-00



CITY OF RAMSEY
 7550 SUNWOOD DRIVE
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SHEET INDEX
 S.A.P. 199-104-011

SUNWOOD DRIVE 2017 OVERLAY - RAMSEY TO BUNKER
 CITY PROJECT NO. 17-00
 CITY OF RAMSEY, MINNESOTA

ESTIMATED QUANTITIES

NON-PARTICIPATING

PAGE NO.	NOTE	ITEM NO.	ITEM	UNIT	S.A.P. 199-104-011 SUNWOOD DRIVE		TOTAL ESTIMATED QUANTITY
					STREET	STORM SEWER	
		2021.501	MOBILIZATION	LS	1	-	1
10 - 12	4	2104.501	REMOVE CONCRETE CURB AND GUTTER	LF	1073	-	1073
10 - 12	4	2104.505	REMOVE CONCRETE VALLEY GUTTER	SY	208	-	208
10 - 12	4	2104.505	REMOVE BITUMINOUS PAVEMENT	SY	536	-	536
10 - 12		2104.511	SAWING CONCRETE PAVEMENT - FULL DEPTH	LF	300	-	300
10 - 12		2104.513	SAWING BITUMINOUS PAVEMENT - FULL DEPTH	LF	500	-	500
10 - 12		2130.501	WATER	MGAL	75	-	75
10 - 12		2215.501	STABILIZED FULL DEPTH RECLAMATION	SY	12126	-	12126
10 - 12		2232.501	MILL BITUMINOUS PAVEMENT (2' WIDTH X 1.5" DEPTH)	SY	48	-	48
10 - 12	1, 8	2331.607	HAUL BIT PAVEMENT RECLAMATION (LV)	CY	1600	-	1600
10 - 12	7	2331.609	BITUMINOUS MATERIAL FOR MIXTURE	TON	172	-	172
14 - 16	2	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	883	-	883
14 - 16	3	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C) (2.0")	TON	1660	-	1660
14 - 16	3	2360.502	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (SPNWB330C) (2")	TON	1664	-	1664
10 - 12		2504.602	ADJUST VALVE BOX	EA	4	-	4
14 - 16	6	2506.502	GROUT CATCH BASIN	EA	-	7	7
10 - 12		2506.522	ADJUST FRAME AND RING CASTING	EA	9	-	9
14 - 16		2506.602	ADJUST CATCH BASIN CASTING	EA	-	6	6
14 - 16	8	2531.501	CONCRETE CURB & GUTTER DESIGN B618 (HE)	LF	1073	-	1073
14 - 16	8	2531.604	7" CONCRETE VALLEY GUTTER (HE)	SY	281	-	281
10 - 12	5	2563.601	TRAFFIC CONTROL	LS	1	-	1
7 - 9		2573.530	STORM DRAIN INLET PROTECTION	EA	30	-	30
7 - 9	1	2574.525	COMMON TOPSOIL BORROW (LV)	CY	40	-	40
7 - 9		2575.505	SODDING TYPE LAWN	SY	284	-	284
17		2582.501	PAVT MSSG (LT ARROW) EPOXY	EA	2	-	2
17		2582.501	PAVT MSSG (RT-THRU ARROW) EPOXY	EA	1	-	1
17		2582.502	24" SOLID LINE YELLOW - EPOXY	LF	50	-	50
17		2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	LF	3163	-	3163
17		2582.502	4" SOLID LINE WHITE - EPOXY	LF	5120	-	5120

STORM SEWER CASTING RESET SCHEDULE

PAGE No.	STRUCTURE	STATION	OFFSET
14	CBMH 204	5+51.72	R - 21.0'
14	CBMH 203B	8+51.54	R - 21.2'
14	CBMH 203	8+85.38	R - 20.5'
14	CB 203C	9+50.10	R - 21.1'
15	CB 305	13+45.19	R - 21.0'
15	CB 402A	17+95.69	R - 20.6'

NOTE:

SEE CITY STANDARD PLATE STO-13, SHEET 5 FOR STORM SEWER CASTING RESET.

PAY ITEM NOTES:

- EV TO CV CONVERSION FACTOR = 1.2
- ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 0.07 GAL/SY.
- ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 110 LB/SY-IN.
- REMOVAL LIMITS WILL BE MARKED IN THE FIELD BY CITY STAFF.
- LUMP SUM QUANTITY SHALL INCLUDE ALL COST REQUIRED FOR MAINTAINING PEDESTRIAN ACCESS ROUTES, AND ALL FLAGGING OPERATIONS AS NECESSARY.
- GROUT CATCH BASIN SHALL OCCUR AFTER BITUMINOUS WEARING COURSE LIFT IS APPLIED.
- APPLICATION RATE OF 4.5% BITUMINOUS MATERIAL FOR STABILIZED FULL DEPTH RECLAMATION USED FOR ESTIMATION PURPOSES ONLY. SEE STABILIZED FULL DEPTH RECLAMATION MIX DESIGN FOR FINAL APPLICATION RATE.
- CONTRACTOR SHALL STOCKPILE ENOUGH RECLAIM MATERIAL ON-SITE TO PLACE UNDER THE REPLACED CONCRETE CURB AND GUTTER AND CONCRETE VALLEY GUTTER. 6" OF RECLAIM MATERIAL SHALL BE PLACED UNDER CONCRETE CURB AND GUTTER TO 6" BEHIND THE BACK OF CURB. 8" OF RECLAIM MATERIAL SHALL BE PLACED UNDER CONCRETE VALLEY GUTTER. THIS SHALL BE INCIDENTAL TO THE PAY ITEMS.

GENERAL NOTES:

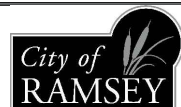
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. IT IS NO GUARANTEED ANY OR ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING IRRIGATION SYSTEMS WITHIN THE PROJECT CONSTRUCTION LIMITS BEFORE COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING DAMAGE TO IRRIGATION SYSTEMS WHERE POSSIBLE.

DATE	REVISION

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DESIGNED BY: JFJ
 DRAWN BY: JFJ
 CHECKED BY: BRW
 DATE: 4/11/17
 FILE No. 17-00

BRUCE W. WESTBY
 Date: 4/11/17 Lic. No. 40116

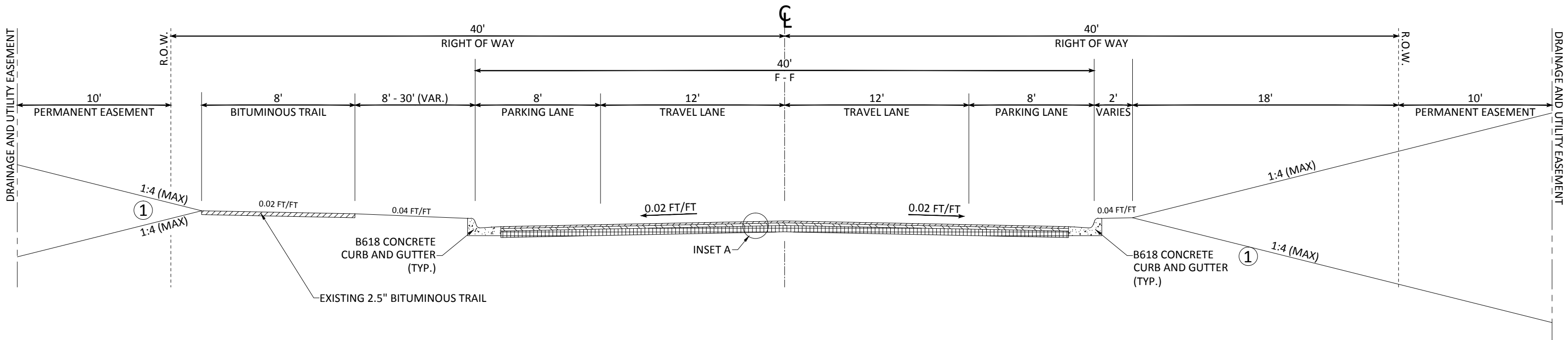


CITY OF RAMSEY
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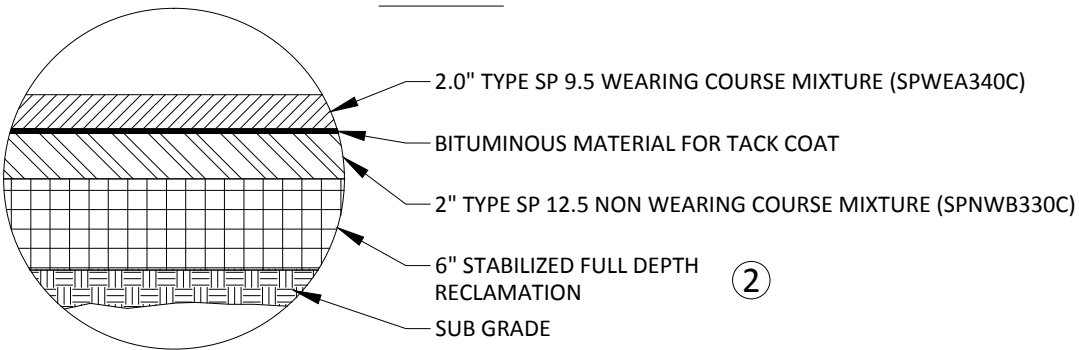
STATEMENT OF ESTIMATED QUANTITIES
 S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
 CITY PROJECT NO. 17-00
 CITY OF RAMSEY, MINNESOTA

PROPOSED SUNWOOD DRIVE TYPICAL SECTION



INSET A:

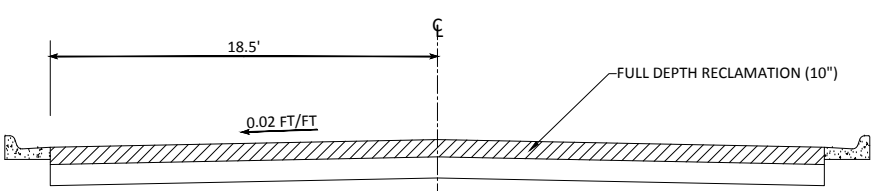


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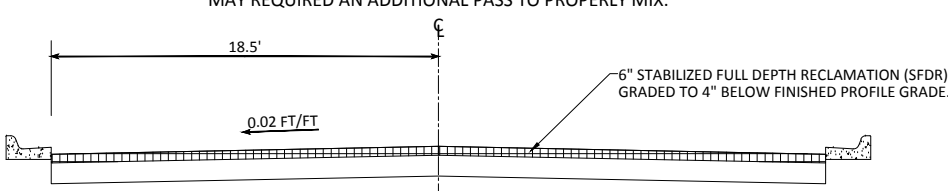
- ① GRADE TO MATCH EXISTING GROUND. ESTABLISH TURF USING A MINIMUM OF 4" COMMON TOPSOIL BORROW AND SODDING TYPE LAWN. SEE CITY PLATE NO. ERO-6 FOR COMMON TOPSOIL BORROW.
- ② STABILIZED FULL DEPTH RECLAMATION (SFDR), SEE THE SPECIFIED MIXTURE. SPREADING, COMPACTION AND ROLLING PER SPECIFICATIONS

20 YR DESIGN LANE BESALS:	499,000
DESIGN R-VALUE:	40
REQUIRED SECTION	
MINIMUM BIT (GE)	7.32
MIN. AGG. BASE (GE)	6.00
TOTAL REQUIRED GE	13.32
PROPOSED SECTION	
WEARING COURSE (2.0")	4.50
NON-WEAR COURSE (2.0")	4.50
TOTAL BIT	9.00
FDR STABILIZED (6.0")	9.00
TOTAL PROPOSED GE	18.00

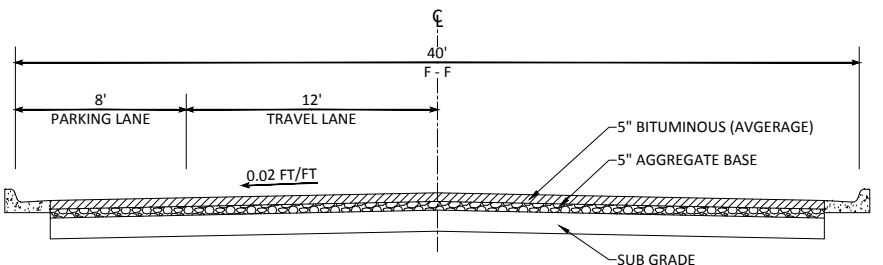
STEP 1: FULL DEPTH RECLAMATION OF EXISTING PAVEMENT SECTION (10")



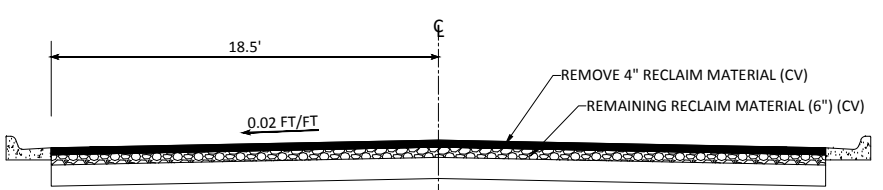
STEP 3: STABILIZE FULL DEPTH RECLAMATION, SPREAD AND COMPACT THE MIXTURE. MAY REQUIRED AN ADDITIONAL PASS TO PROPERLY MIX.



EXISTING PAVEMENT SECTION



STEP 2: REMOVE EXCESS RECLAMATION MATERIAL TO 4" BELOW FINISHED PROFILE GRADE.



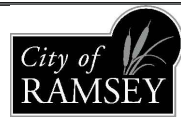
NOTE: NOT TO SCALE

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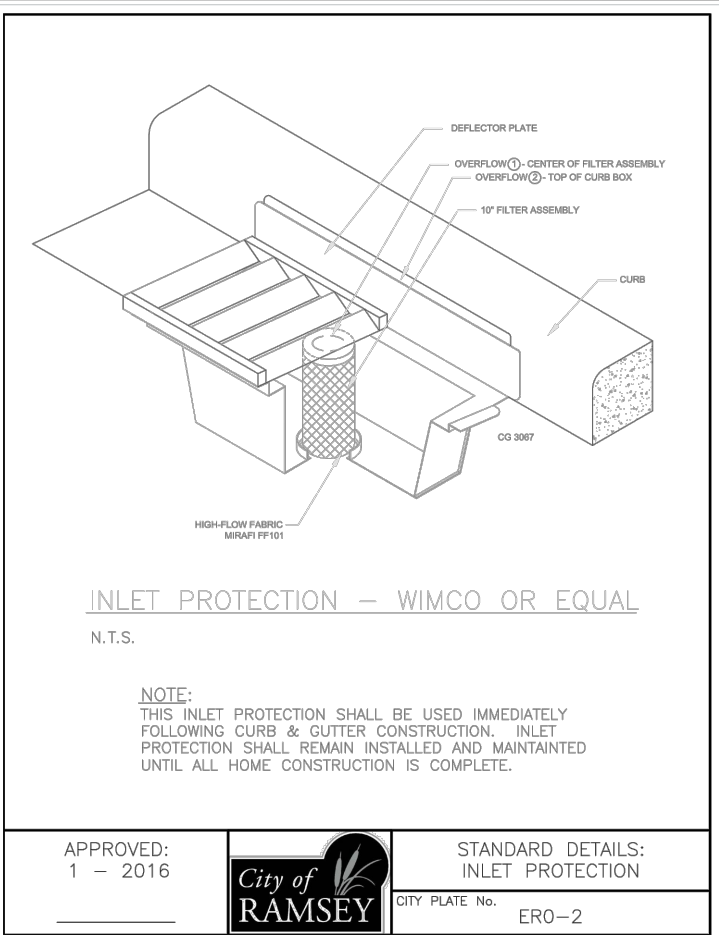
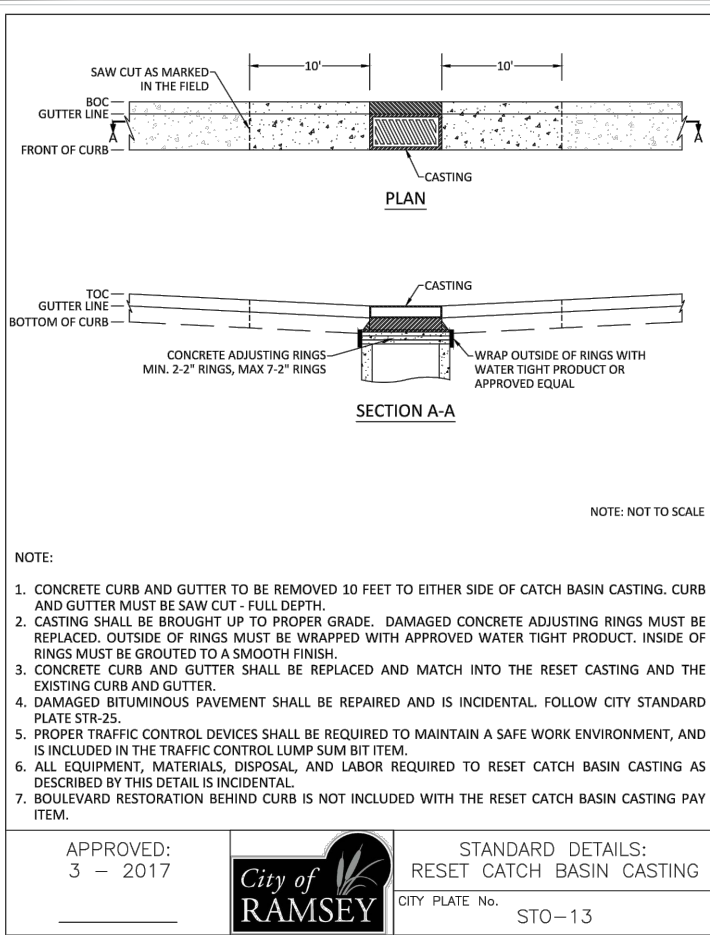
DESIGNED BY: JJF	DATE: 4/11/17
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CITY OF RAMSEY
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(763) 427-1410 FAX (763) 433-9898

TYPICAL
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA



MNDOT 2016 SPEC

REQUIREMENT	RANGE	TEST METHOD
MATERIAL PASSING THE 3/4 IN [19MM]	100%	ASTM D 422
MATERIAL PASSING NO. 4 [4.75MM]	>85%	-
CLAY	5% - 35%	ASTM D 422
SILT	5% - 70%	ASTM D 422
SAND	10% - 75%	ASTM D 422
ORGANIC MATTER	3% - 15%	ASTM D 2974
pH	6.1-7.8	ASTM G 51

NOTE:

1. INSTALLATION OF 4" OF TOPSOIL MEETING MNDOT SPECIFICATION 3877A COMMON TOPSOIL BORROW, MAY BE REQUIRED ACROSS ALL DISTURBED AREAS.
2. A SOIL CERTIFICATION FROM A GEOTECHNICAL FIRM MUST BE PROVIDED VERIFYING THE TOPSOIL MEETS SPECIFICATION ALONG WITH LOAD TICKETS TO VERIFY THE SOURCE OF MATERIAL AND QUANTITY.
3. TOPSOIL MUST COME FROM A CITY APPROVED SOURCE.

APPROVED: 1 - 2016

City of RAMSEY

CITY PLATE No. ERO-6

STANDARD DETAILS: TOPSOIL REQUIREMENTS

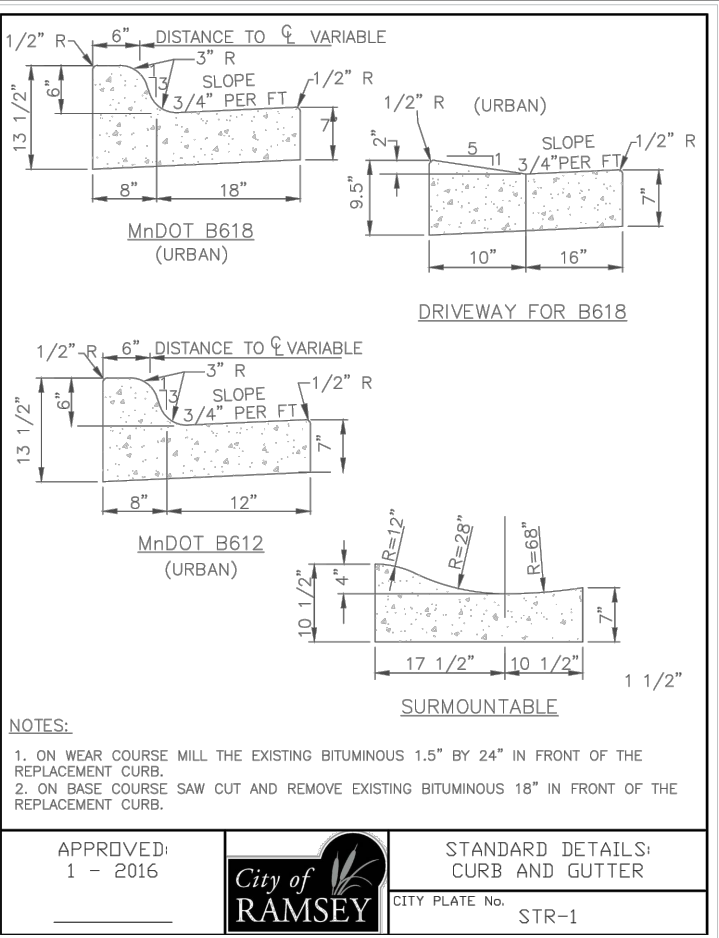


TABLE A

MODIFIED CLASS 5 SPECIFICATIONS

% PASSING

1"	100
3/4"	90 - 100
3/8"	50 - 80
No. 4	35 - 70
No. 10	20 - 60
No. 40	10 - 35
No. 200	5 - 10

NOTES:

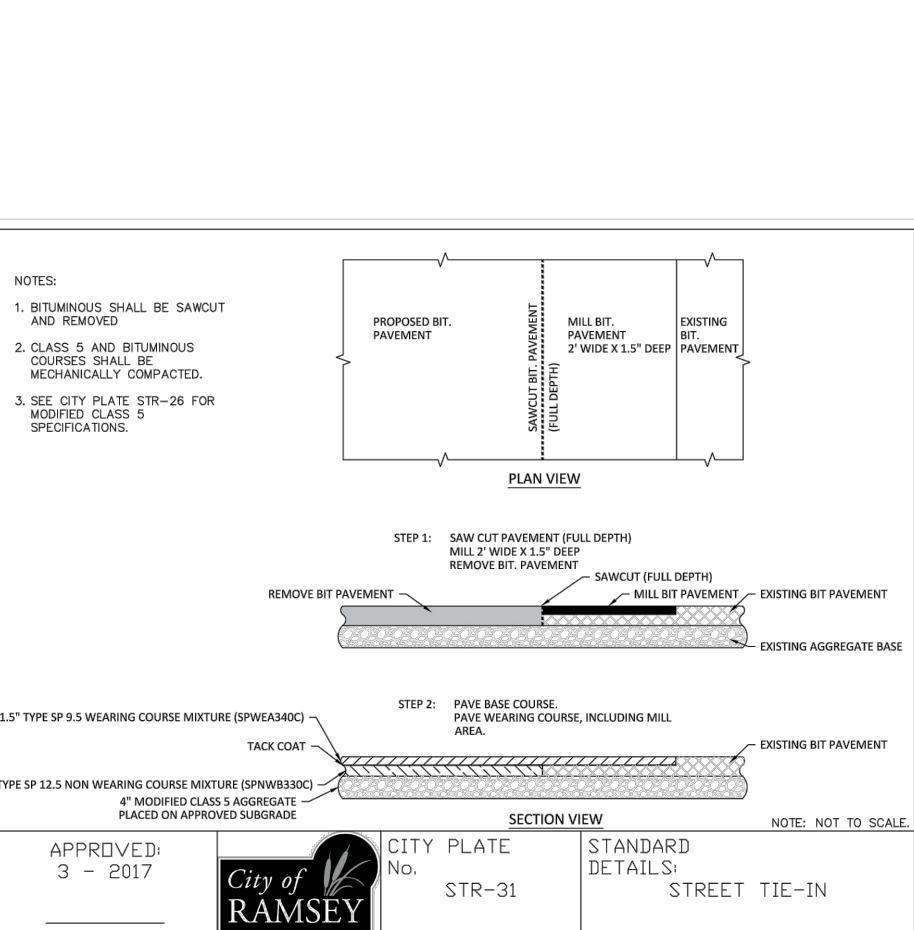
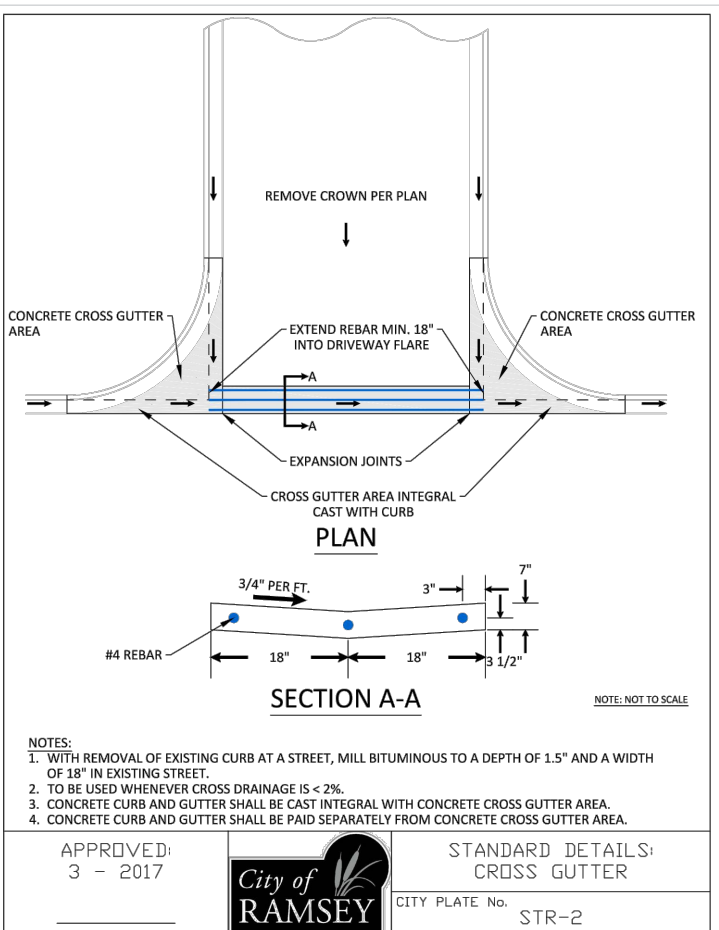
1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
2. IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.
3. IN THE EVENT THAT RECYCLED MATERIAL IS USE IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

APPROVED: 2 - 2003

City of RAMSEY

STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATIONS

CITY PLATE No. STR-26



MNDOT STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY

PLATE NO.	DESCRIPTION
3007 E	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
4011 E	PRECAST CONCRETE BASE
4022 A	MANHOLE OR CATCH BASIN COVER (3FT. X 2FT. OPENING)
4026 A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4108 F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4180 J	MANHOLE OR CATCH BASIN STEP
7100 H	CONCRETE CURB AND GUTTER DESIGN B AND DESIGN V
8000 J	CHANNELIZERS (3 SHEETS)

DATE	REVISION

Apr 11, 2017 - 3:11pm
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DETAILS

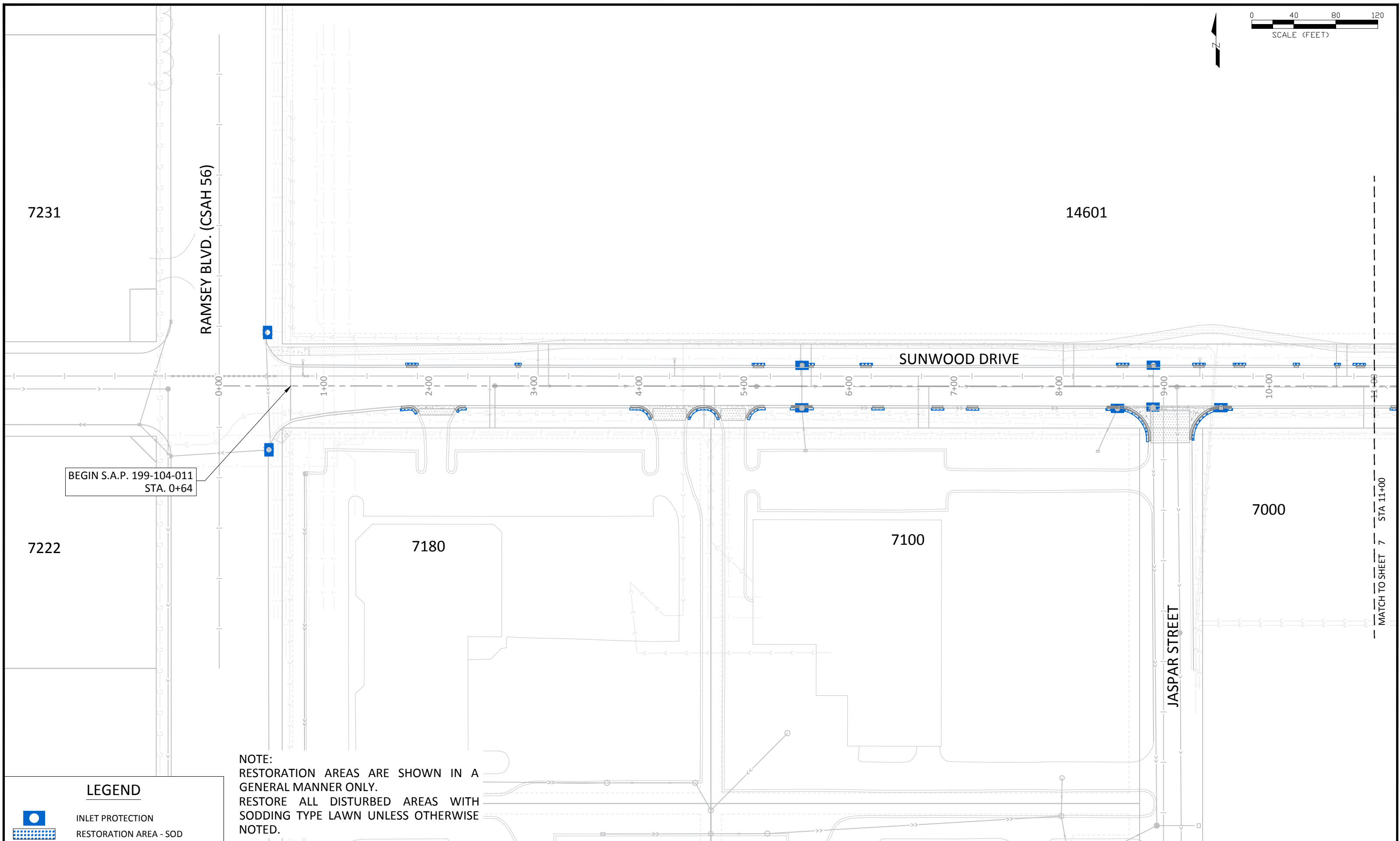
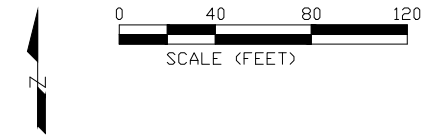
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION

CITY PROJECT NO. 17-00

CITY OF RAMSEY, MINNESOTA

SHEET 5 OF 18 SHEETS



BEGIN S.A.P. 199-104-011
STA. 0+64

NOTE:
RESTORATION AREAS ARE SHOWN IN A
GENERAL MANNER ONLY.
RESTORE ALL DISTURBED AREAS WITH
SODDING TYPE LAWN UNLESS OTHERWISE
NOTED.

LEGEND

	INLET PROTECTION
	RESTORATION AREA - SOD

DATE	REVISION

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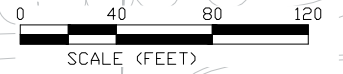
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EROSION CONTROL AND RESTORATION
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA



PID 27-32-25-31-0009

DRAINAGE AND UTILITY EASEMENT

14601

SUNWOOD DRIVE

6850



7000

MATCH TO SHEET 6 STA 11+00

MATCH TO SHEET 8 STA 22+50

NOTE:
 RESTORATION AREAS ARE SHOWN IN A
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 RESTORE ALL DISTURBED AREAS WITH
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LEGEND

-  INLET PROTECTION
-  RESTORATION AREA - SOD

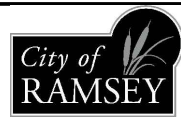
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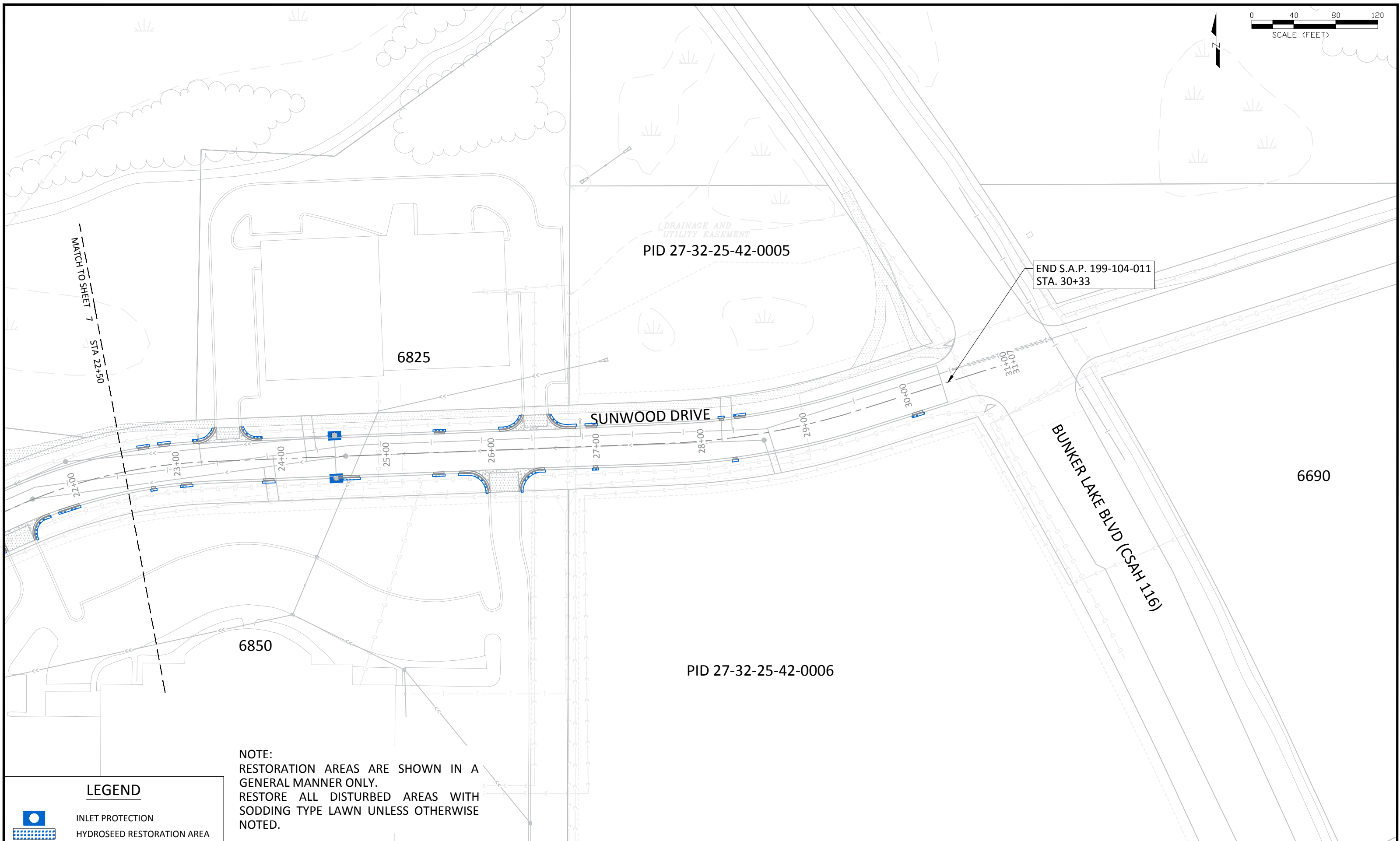


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EROSION CONTROL AND RESTORATION
 S.A.P. 199-104-011



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 CITY OF RAMSEY, MINNESOTA

Apr 11, 2017 - 3:12pm
 G:\Engineering\AutoCad Dwg\Projects\N-2\Sunwood Drive Recon. 2017 - Ramsey to Bunker\Plan Drawings\Erosion Control Plan.dwg



NOTE:
RESTORATION AREAS ARE SHOWN IN A GENERAL MANNER ONLY.
RESTORE ALL DISTURBED AREAS WITH SODDING TYPE LAWN UNLESS OTHERWISE NOTED.

LEGEND

-  INLET PROTECTION
-  HYDROSEED RESTORATION AREA

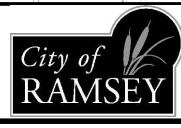
DATE	REVISION

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BRUCE W. WESTBY
Date: 4/11/17 Lic. No. 40116

DESIGNED BY: JJF
DRAWN BY: JJF
CHECKED BY: BRW

DATE: 4/11/17
FILE No. 17-00



CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

EROSION CONTROL AND RESTORATION
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA



7231

RAMSEY BLVD. (CSAH 56)

14601

FULL-DEPTH RECLAMATION
SEE TYPICAL SHEET 4 FOR DETAILS.

ADJUST VALVE BOX (2)

ADJUST FRAME AND
RING CASTING

ADJUST FRAME AND
RING CASTING

ADJUST VALVE BOX

ADJUST FRAME AND
RING CASTING

BEGIN S.A.P. 199-104-011
STA. 0+64

SUNWOOD DRIVE

2' x 1.5" DEEP EDGE MILL
SEE CITY DETAIL STR-31

REMOVE CONCRETE
CURB & GUTTER (TYP.)

REMOVE CONCRETE VALLEY GUTTER
REMOVE BITUMINOUS DRIVE
SAWCUT FULL-DEPTH
ONE ENTRANCE MUST REMAIN OPEN
TO TRAFFIC AT ALL TIMES

REMOVE CONCRETE VALLEY GUTTER
REMOVE BITUMINOUS DRIVE
SAWCUT FULL-DEPTH

REMOVE CONCRETE VALLEY GUTTER
REMOVE BITUMINOUS DRIVE
SAWCUT FULL-DEPTH
INTERSECTION MUST REMAIN OPEN
TO TRAFFIC AT ALL TIMES

2' x 1.5" DEEP EDGE MILL
SEE CITY DETAIL STR-31

7222

7180

7100

JASPAR STREET

MATCH TO SHEET 10 STA 11+00

LEGEND

	ADJUST VALVE BOX		MILL & RECLAIM PAVEMENT
	ADJUST FRAME AND RING CASTING		EDGE MILL BITUMINOUS PAVEMENT
	REMOVE CURB & GUTTER		REMOVE BITUMINOUS PAVEMENT
	SAWCUT - FULL DEPTH		REMOVE CONCRETE VALLEY GUTTER

NOTE:

1. ALL DRIVEWAY REMOVALS MUST BE SAWCUT.
2. CONCRETE CURB AND GUTTER REMOVALS ARE SHOWN IN AN APPROXIMATE WAY ONLY.
3. 4' MINIMUM CURB AND GUTTER REMOVAL LENGTH.

NOTE:

4. CONCRETE CURB AND GUTTER REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
5. PROTECT LANDSCAPING AND IRRIGATION. PROPERTY OWNERS ARE TO LOCATE AND MOVE IRRIGATION BEFORE CONSTRUCTION.

NOTE:

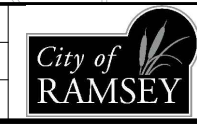
6. A FULL WATER TRUCK SHALL BE ON-SITE AT ALL TIMES FOR DUST CONTROL.
7. CONTRACTOR SHALL PLACE MIN 6" RECLAIM MATERIAL UNDER REPLACEMENT CURB & GUTTER AND VALLEY GUTTER.

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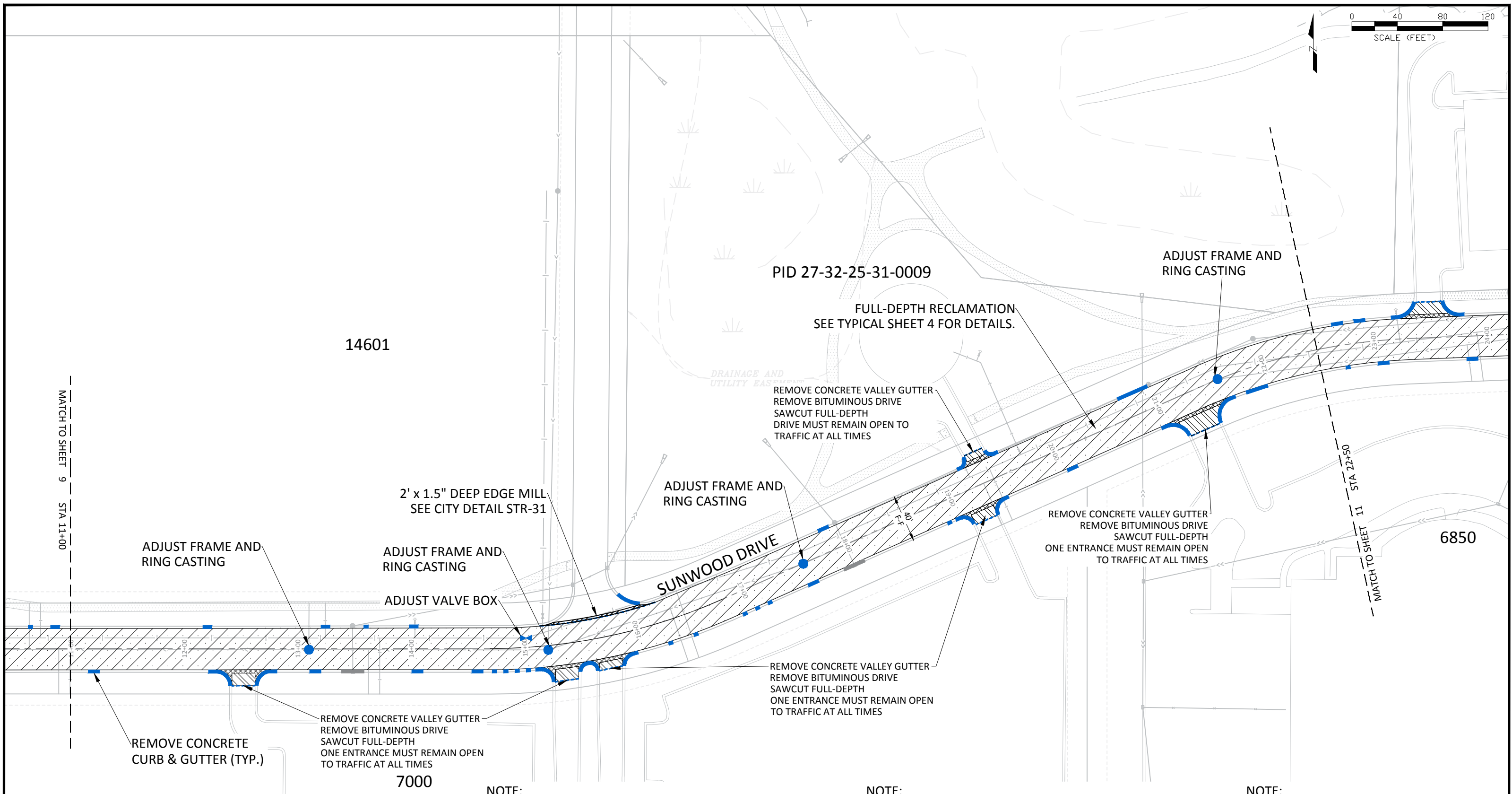


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REMOVALS
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA

SHEET 9 OF 18 SHEETS



LEGEND

	ADJUST VALVE BOX		RECLAIM BITUMINOUS PAVEMENT
	ADJUST FRAME AND RING CASTING		EDGE MILL BITUMINOUS PAVEMENT
	REMOVE CURB & GUTTER		REMOVE BITUMINOUS PAVEMENT
	SAWCUT - FULL DEPTH		REMOVE CONCRETE VALLEY GUTTER

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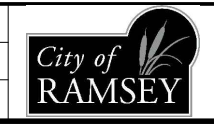
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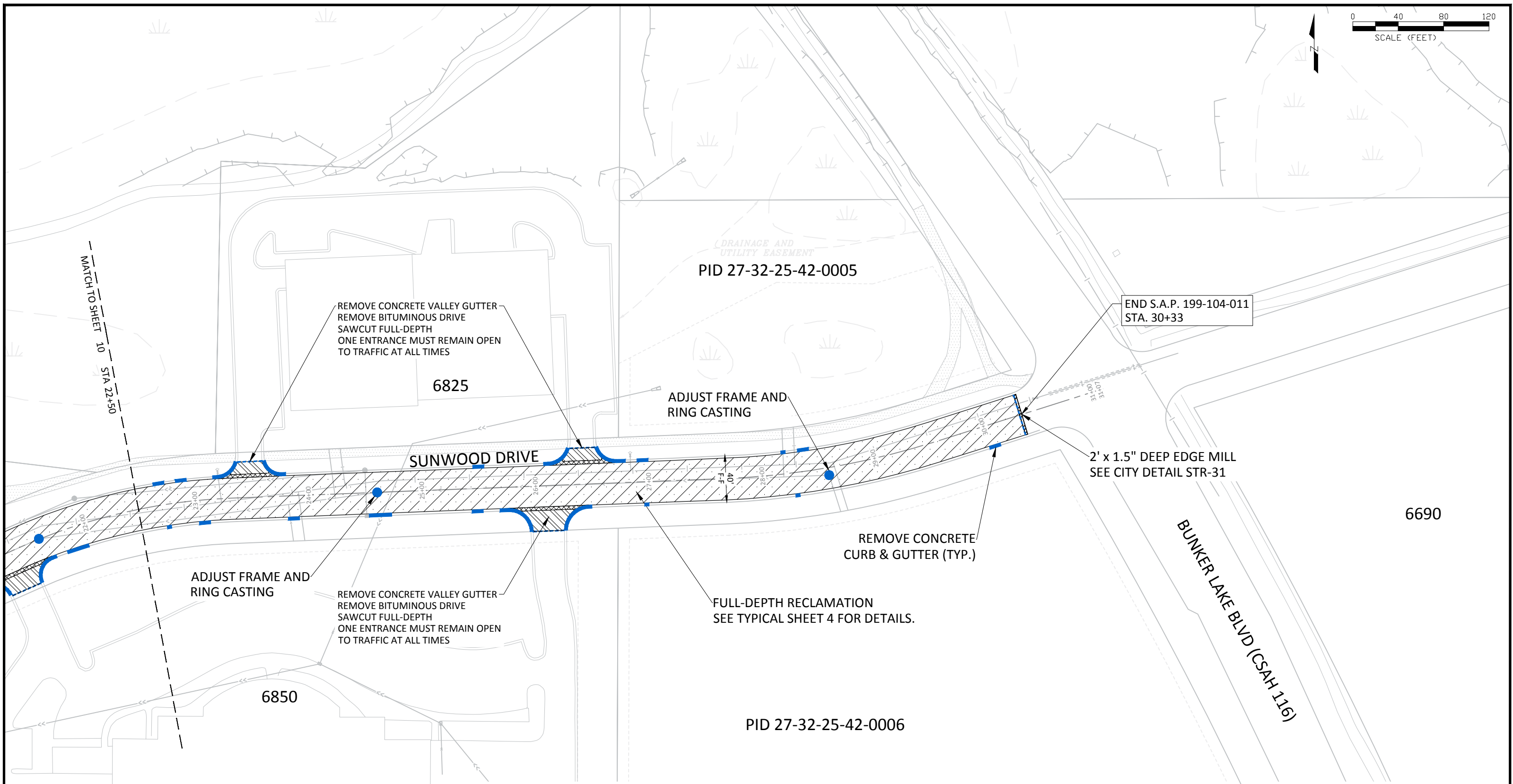
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REMOVALS
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CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA



LEGEND

- | | | | |
|--|-------------------------------|--|-------------------------------|
| | ADJUST VALVE BOX | | RECLAIM BITUMINOUS PAVEMENT |
| | ADJUST FRAME AND RING CASTING | | EDGE MILL BITUMINOUS PAVEMENT |
| | REMOVE CURB & GUTTER | | REMOVE BITUMINOUS PAVEMENT |
| | SAWCUT - FULL DEPTH | | REMOVE CONCRETE VALLEY GUTTER |

NOTE:

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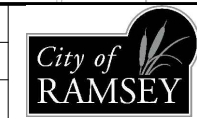
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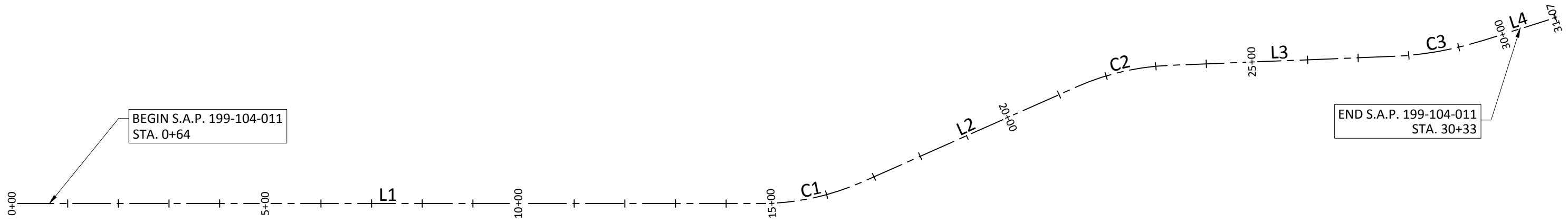
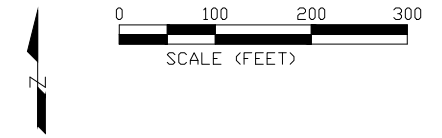
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REMOVALS
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA



LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L1	1466.30'	S89° 59' 39.40"E	(452839.9792,171922.0222)	(454306.2794,171921.8757)
L2	460.29'	N66° 02' 59.90"E	(454510.8018,171965.2444)	(454931.4643,172152.0960)
L3	436.52'	N87° 43' 09.94"E	(455115.6220,172195.0027)	(455551.7952,172212.3731)
L4	155.69'	N72° 29' 35.16"E	(455736.2506,172244.5449)	(455884.7268,172291.3789)

CURVE TABLE: ALIGNMENTS						HORZ. CURVE DESIGN		
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT	DESIGN SPEED	RATE OF (e)	MIN. RADIUS
C1	503.701	210.601	N78° 01' 40.25"E	(454306.2794,171921.8757)	(454510.8018,171965.2444)	40 MPH	NORMAL CROWN	667
C2	502.961	190.222	N76° 53' 04.92"E	(454931.4643,172152.0960)	(455115.6220,172195.0027)	40 MPH	NORMAL CROWN	667
C3	706.651	187.792	N80° 06' 22.55"E	(455551.7952,172212.3731)	(455736.2506,172244.5449)	40 MPH	NORMAL CROWN	667

VERTICAL CURVE DESIGN

CREST VERTICAL CURVES DESIGN SPEED 40 MPH
 MINIMUM CURVE LENGTH, (A < 4.4) - 120'

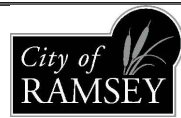
SAG VERTICAL CURVES DESIGN SPEED 40 MPH
 MINIMUM CURVE LENGTH, (A < 3.0) - 120'

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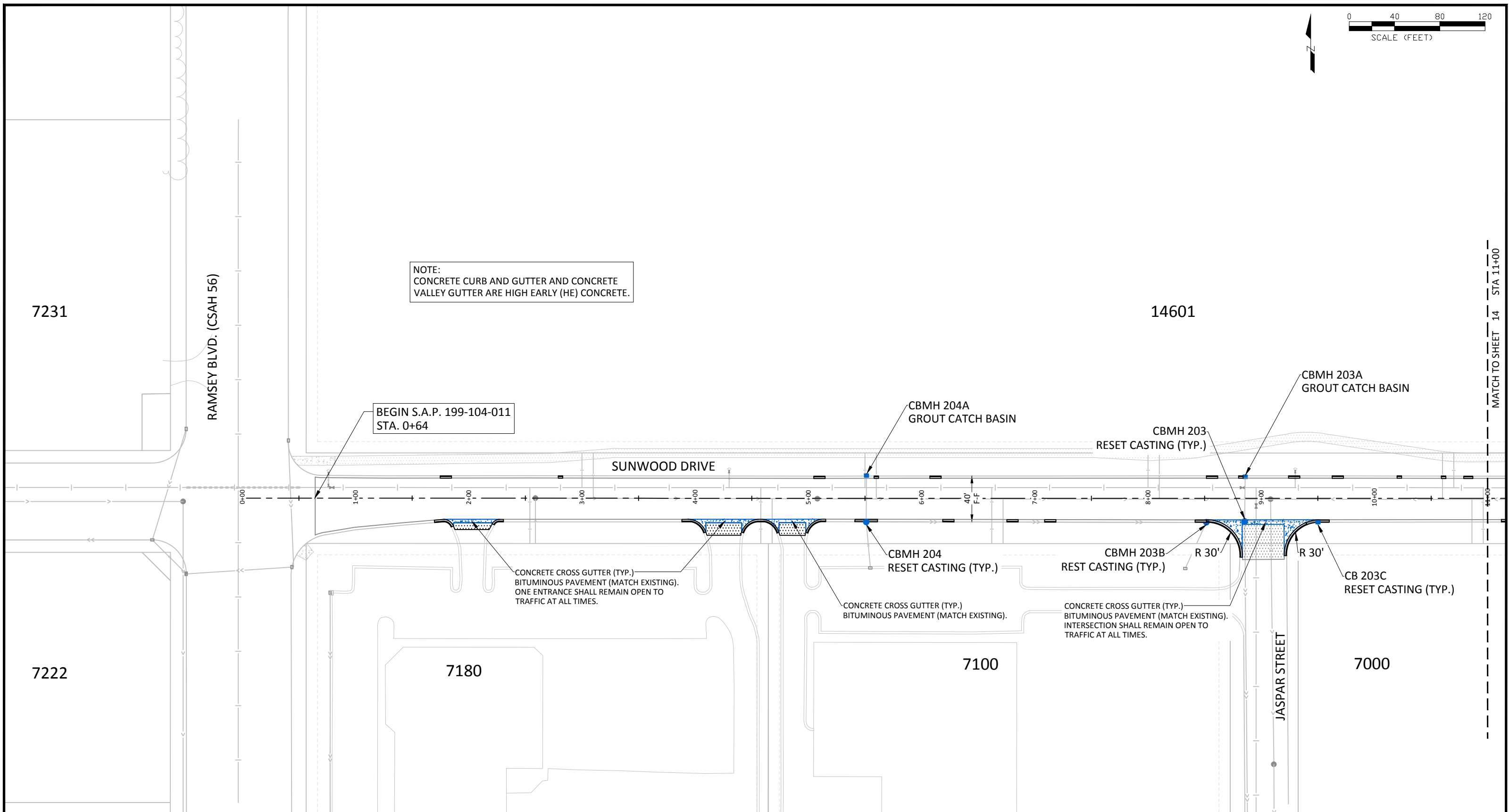
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ALIGNMENT LAYOUT
 S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
 CITY PROJECT NO. 17-00
 CITY OF RAMSEY, MINNESOTA



NOTE:
CONCRETE CURB AND GUTTER AND CONCRETE VALLEY GUTTER ARE HIGH EARLY (HE) CONCRETE.



BEGIN S.A.P. 199-104-011
STA. 0+64

CONCRETE CROSS GUTTER (TYP.)
BITUMINOUS PAVEMENT (MATCH EXISTING).
ONE ENTRANCE SHALL REMAIN OPEN TO
TRAFFIC AT ALL TIMES.

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BITUMINOUS PAVEMENT (MATCH EXISTING).

CONCRETE CROSS GUTTER (TYP.)
BITUMINOUS PAVEMENT (MATCH EXISTING).
INTERSECTION SHALL REMAIN OPEN TO
TRAFFIC AT ALL TIMES.

LEGEND

	CONCRETE VALLEY GUTTER		CATCH BASIN MANHOLE
	BITUMINOUS PAVEMENT		2 X 3 CATCH BASIN
	PROPOSED CURB & GUTTER		WATERMAIN VALVE
			SANITARY MANHOLE

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. IT IS NOT GUARANTEED ANY OR ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTE: THE FIRST 10' OF CONCRETE CURB AND GUTTER REPLACEMENT ON EACH SIDE OF THE CATCH BASIN IS INCIDENTAL TO THE RESET CATCH BASIN CASTING PAY ITEM.

NOTE: CONTRACTOR SHALL PLACE 6" OF RECLAIM MATERIAL UNDER REPLACEMENT CONCRETE CURB & GUTTER TO 6" BEHIND CURB. CONTRACTOR SHALL PLACE 8" OF RECLAIM MATERIAL UNDER CONCRETE VALLEY GUTTERS. SEE PAY ITEM NOTE No.8 SHEET 3.

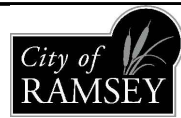
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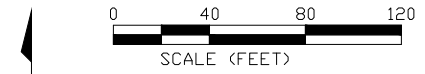
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STREET AND STORM SEWER
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA



PID 27-32-25-31-0009

14601

NOTE:
CONCRETE CURB AND GUTTER AND CONCRETE VALLEY GUTTER ARE HIGH EARLY (HE) CONCRETE.

CBMH 304
GROUT CATCH BASIN

ENTRANCE SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES.

CBMH 402
GROUT CATCH BASIN

SUNWOOD DRIVE

CBMH 403
GROUT CATCH BASIN

CONCRETE CROSS GUTTER (TYP.)
BITUMINOUS PAVEMENT (MATCH EXISTING).
ENTRANCE SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES.

CONCRETE CROSS GUTTER (TYP.)
BITUMINOUS PAVEMENT (MATCH EXISTING).
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CB 402A
RESET CASTING (TYP.)

CONCRETE CROSS GUTTER (TYP.)
BITUMINOUS PAVEMENT (MATCH EXISTING).
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CB 305
RESET CASTING (TYP.)

CONCRETE CROSS GUTTER (TYP.)
BITUMINOUS PAVEMENT (MATCH EXISTING).
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7000

CONCRETE CROSS GUTTER (TYP.)
BITUMINOUS PAVEMENT (MATCH EXISTING).
ONE ENTRANCE SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES.

6850

MATCH TO SHEET 13 STA 11+00

MATCH TO SHEET 15 STA 22+50

LEGEND

- CONCRETE VALLEY GUTTER
- BITUMINOUS PAVEMENT
- PROPOSED CURB & GUTTER
- CATCH BASIN MANHOLE
- 2 X 3 CATCH BASIN
- WATERMAIN VALVE
- SANITARY MANHOLE

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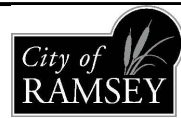
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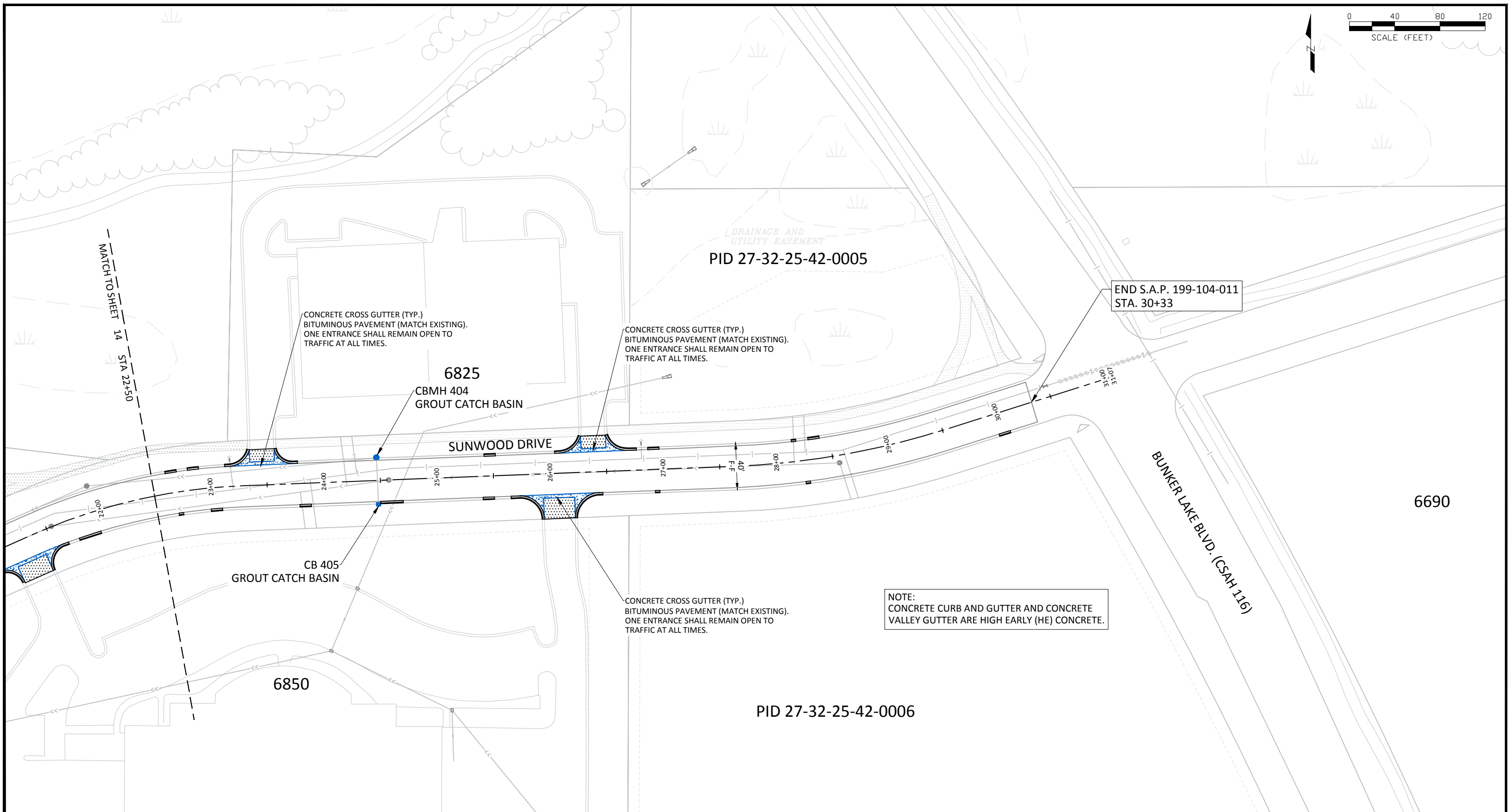


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CITY OF RAMSEY, MINNESOTA

Apr 11, 2017 - 3:14pm
G:\Engineering\AutoCad Dwg\Projects N-Z\Sunwood Drive Recon. 2017 - Ramsey to Bunker\Plan Drawings\Street and Storm.dwg



END S.A.P. 199-104-011
STA. 30+33

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LEGEND	
	CONCRETE VALLEY GUTTER
	BITUMINOUS PAVEMENT
	PROPOSED CURB & GUTTER
	CATCH BASIN MANHOLE
	2 X 3 CATCH BASIN
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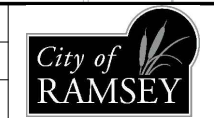
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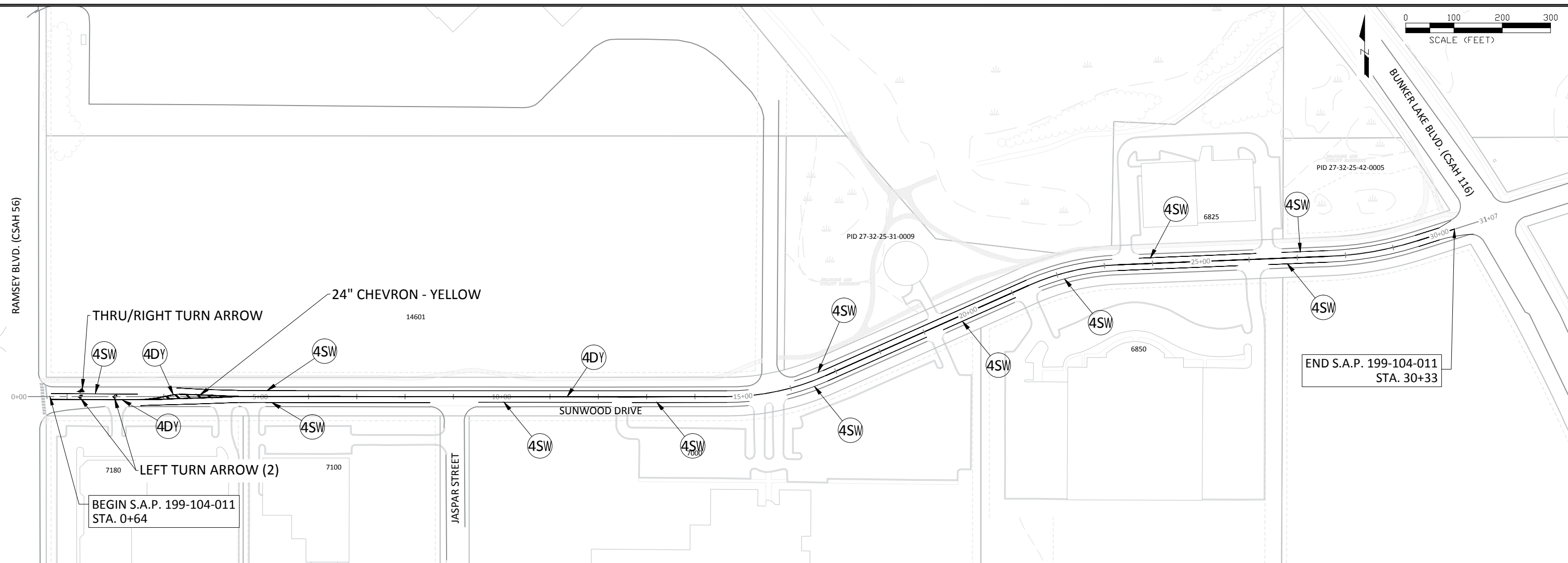
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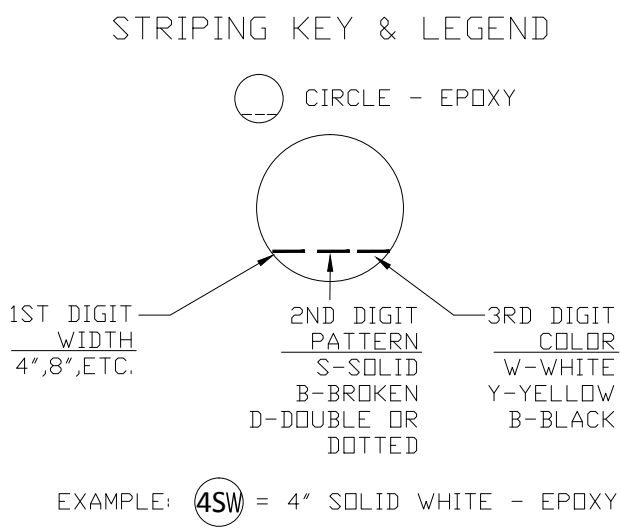
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STREET AND STORM SEWER
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA



STRIPING SUMMARY					
LINE	SEGMENT NO.	START STATION	END STATION	LENGTH (FEET)	KEY
CENTERLINE	1. CL	0+70	4+55	389	4, D, Y
	2. CL	2+58	4+55	197	4, D, Y
	3. CL	4+55	30+64	2577	4, D, Y
ISLAND CHEVRON	1. CL CHV	2+87	4+19	50	24, S, Y
EASTBOUND FOGLINE	1. E	2+52	8+52	600	4, S, W
	2. E	9+52	12+28	275	4, S, W
	3. E	12+70	15+12	243	4, S, W
	4. E	15+89	19+01	314	4, S, W
	5. E	19+39	21+02	164	4, S, W
	6. E	21+55	25+76	417	4, S, W
	7. E	26+40	30+67	432	4, S, W
WESTBOUND FOGLINE	1. W	3+27	15+12	1184	4, S, W
	2. W	16+12	23+17	708	4, S, W
	3. W	23+72	26+15	243	4, S, W
	4. W	26+68	30+32	361	4, S, W
WESTBOUND TURNLANE	1. W TURN	0+67	2+46	179	4, S, W
		TOTALS	4, S, W	5120	LIN. FT.
			4, D, Y	3163	LIN. FT.
			24" CHEVRON	50	LIN. FT.



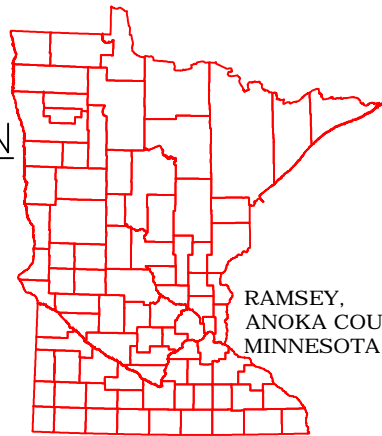
PERMANENT PAVEMENT MARKING GENERAL NOTES AND GUIDELINES:

1. THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. THE CONTRACTOR WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.
2. EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.
3. TOLERANCE OF 1/4 INCH UNDER OR 1/4 OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO 1/2 FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.
4. THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. THIS WORK SHALL BE INCIDENTAL TO PAVEMENT MARKING.
5. THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.
6. FOR 15 MIL APPLICATIONS, GLASS BEADS SHALL BE APPLIED AT A RATE OF AT LEAST 25 LB/GAL. THE "NO-TRACKING" CONDITION SHALL BE DETERMINED ON AN APPLICATION OF SPECIFIED THICKNESS TO THE PAVEMENT AND COVERED WITH GLASS BEADS AT THE RATE OF AT LEAST 25 LB/GAL.
7. OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES °F OR GREATER.
8. PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

SUNWOOD DRIVE RECONSTRUCTION

CITY OF RAMSEY
ANOKA COUNTY, MINNESOTA



RAMSEY,
ANOKA COUNTY,
MINNESOTA

RESPONSIBLE PARTIES

The Contractor and Owner must apply for coverage under the MPCA's General Storm Water Permit for Construction Activity as required by the National Pollution Discharge Elimination System (NPDES) Phase II program. Coverage under the permit will begin automatically 7 calendar days after the electronic submittal date or after the postmarked date of a complete application. (Longer time frames will apply to areas that disturb 50 acres or discharge within 1 mile of a special water)

	COMPANY	CONTACT PERSON	PHONE
OWNER:	CITY OF RAMSEY	BRUCE WESTBY, PE	763-433-9825
SWPPP DESIGNER:	CITY OF RAMSEY	LEONARD LINTON, PE	763-433-9834
CONTRACTOR:			
SITE MANAGER:			
PARTY RESPONSIBLE FOR LONG TERM O&M:	CITY OF RAMSEY	BRUCE WESTBY, PE	763-433-9825

Individuals listed above, including the SWPPP preparer, individual overseeing implementation of, revising and amending the SWPPP, individuals performing or supervising the installation, maintenance and repair of BMP's must be trained. At least one individual present on the permitted project, or available within 72 hours shall be trained in the applicable job duties. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Copies of the SWPPP preparer information is included in the Project Manual. The contractor shall provide information for the individual(s) overseeing implementation, supervising installation, maintenance, and repair of BMP's to be included in the Project Manual prior to the start of construction. This information shall be kept up to date until the project NDT is filed.

Documentation shall include:

- Names of trained personnel associated with this project.
- Dates of training, names of instructor(s) and entity providing training.
- Content of training course or workshop including the number of hours trained.
- As an alternative to a, b, and c listed above, a photocopy of the current Erosion and Stormwater Management card issued by the University of Minnesota can be attached to the SWPPP as suitable documentation of training.

SPECIAL ENVIRONMENTAL CONSIDERATIONS:

Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
Does any portion of the site have the potential to affect threatened or endangered species?	NO
Does any portion of this site discharge to a Calcareous fen and the letter of approval from the DNR is located in the Project Manual?	NO
Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a Known or discovered archeological site?	NO
Have any Karst features been identified in the project vicinity?	NO
Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO

GENERAL STORMWATER DISCHARGE REQUIREMENTS

All requirements listed in Part III of the permit for the design of permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

- The expected amount, frequency, intensity and duration of precipitation.
- The nature of stormwater runoff and run-on at the site.
- Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
- The range of soil particle sizes expected to be present on the site.

LEGEND



PROJECT AREAS

Total Project Size (disturbed area) =	2.72	acres
Existing area of impervious surface =	2.66	acres
Post construction area of Impervious surface =	2.66	acres
New impervious surface area created =	0.00	acres

Planned Construction Start Date: June, 2017
Estimated Construction Completion Date: Oct, 2017

PERMANENT STORMWATER MANAGEMENT SYSTEM

Type of storm water management used if more than 1 acre of new impervious surface is created:
Wet Sedimentation Pond
Infiltration/ Filtration
Regional Pond
Permanent Stormwater Management Not Required

PROJECT LOCATION

County: ANOKA Township: 32 Range: 25 Section: 27 Latitude: 45.1357 Longitude: 93.2637

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	LOCATION
TEMPORARY EROSION CONTROL MEASURES	SHEETS NO. 6 - 8
FINAL STABILIZATION	SHEETS NO. 6 - 8
STORM SEWER TABULATION	SHEETS NO. 3
EROSION AND SEDIMENT CONTROL DETAILS	SHEETS NO. 5

CERTIFICATION:

LEONARD LINTON: DESIGN OF CONSTRUCTION SWPPP EXPIRES MAY 31, 2019
INSTRUCTOR UNIVERSITY MN EROSION & STORMWATER MANAGEMENT CERTIFICATION PROGRAM.

DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:

Construction activities include: Site grading, storm sewer construction, temporary erosion and sediment control, roadway, and permanent stabilization.

Project description:

The project consists of rehabilitation of 0.56 miles of existing bituminous street, with the existing concrete curb and gutter remaining in-place. The drainage for the existing street flows to a storm water basin located relatively in the center of the project and another basin located south of the project. Storm water from these basins than flow through a series of ponds and storm sewer, eventually draining to the Mississippi River. There will be minor repairs to the existing storm sewer system, with no change to the outfalls. The system is designed to handle the 2.5 inch rainfall and rate control.

DOCUMENT RETENTION

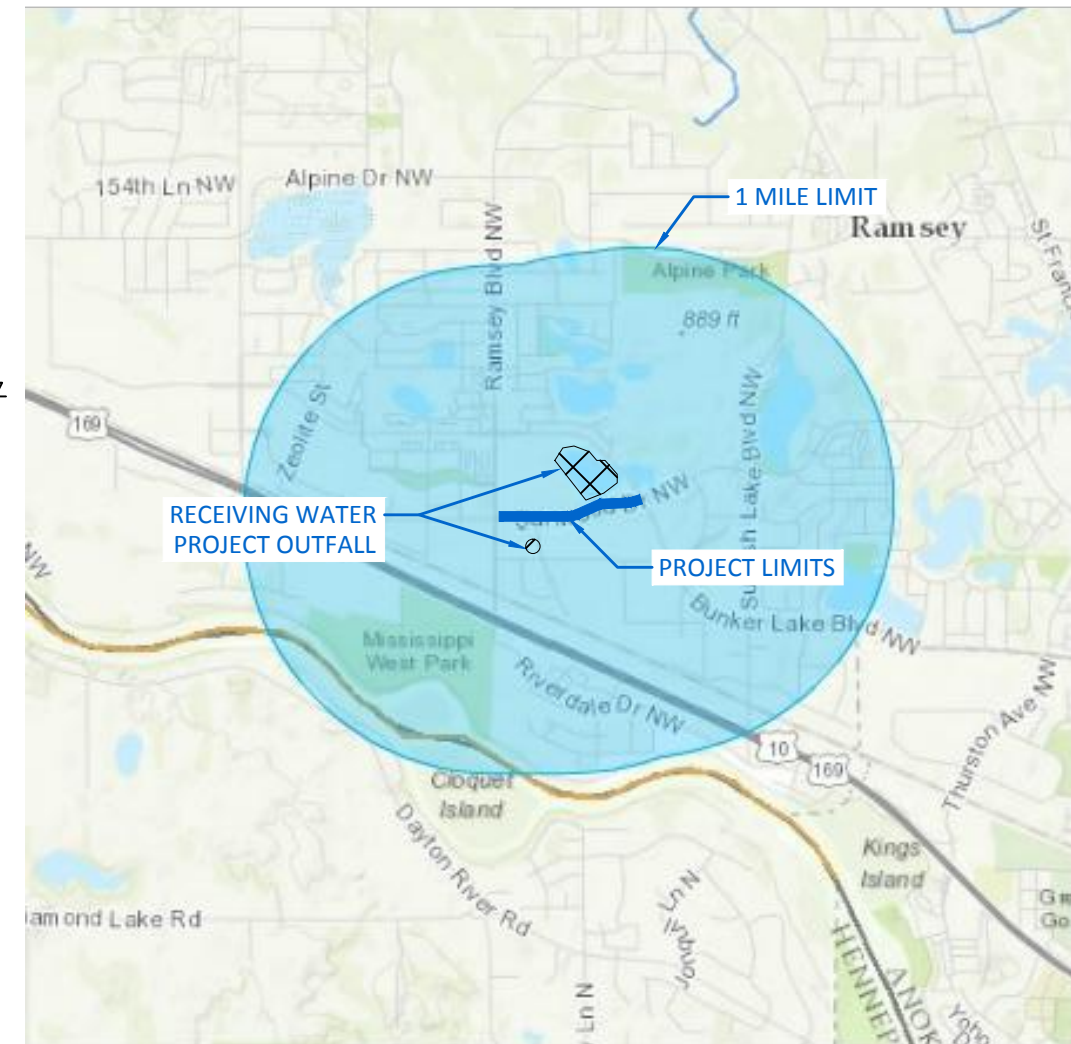
The following documentation will be retained for a period of not less than 3-years from the date of submittal of the NDT in compliance with Part III.E of the permit.

- The final SWPPP
- Copies of all stormwater related permits required for the project
- Records of all inspection and maintenance conducted during construction
- Copies of all permanent operation and maintenance agreements; including all right-of-way, contracts, covenants and other binding requirements regarding perpetual maintenance, and
- All required calculations for design of temporary and permanent BMPs.

RECEIVING WATERS

Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, are identified on the USGS 7.5min quad map within 1 mile of the project boundary. Receiving waters that are impaired, the impairment and WLA are listed as follows. All specific BMPs relative to construction activities listed in this permit for special and impaired waters have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	APPENDIX A SPECIAL WATER?	FLOWS TO IMPAIRED WATER WITHIN 1 MILE?	USEPA APPROVED TMDL?
NONE	N/A	NO	NO	NO
N/A				



IMPLEMENTATION SCHEDULE AND PHASING

- Furnish & install perimeter sediment control, inlet protection and construction exit.
- Rough grade site
- Reset and Grout storm structures
- Furnish & install concrete curb, bituminous pavement.
- Add additional temporary BMPs as necessary during construction based on inspection reports
- Submit Notice of Termination NDT to MPCA within 30 days of final stabilization.

EROSION PREVENTION PRACTICES

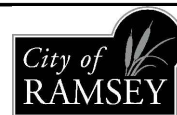
- The permittee(s) must plan for and implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion, so that the inspection and maintenance requirements are complied with. The location of areas not to be disturbed must be delineated (e.g. With flags, stakes, signs, silt fence, etc.) on the development site before work begins.
- All exposed soil areas must be stabilized as soon as possible, but in no case later than 14 days after the construction area has temporarily or permanently ceased.

DATE	REVISION

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

BRUCE R WESTBY
Date: 4/11/17 Lic. No. 40116

DESIGNED BY:
JFF
DRAWN BY:
JFF
DATE:
4/11/17
CHECKED BY:
BRW
FILE NO.
17-00



CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

SWPPP
S.A.P. 199-104-011

SUNWOOD DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA

SHEET
17
OF
18
SHEETS

These areas include constructed storm water management pond side slopes, and any exposed soil areas with a positive slope to a storm water conveyance system, such as a curb and gutter system, storm sewer inlet, temporary or permanent drainage ditch or other natural or man made systems that discharge to a surface water.

3. The normal wetted perimeter of any temporary or permanent drainage ditch that drains water from a construction site, or diverts water around a site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge to any surface water. Stabilization must be completed within 24 hours of connecting to a surface water.

4. Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.

5. All disturbed areas, except roadways, building areas, parking areas, islands and sidewalk, shall be restored with minimum 6 inches topsoil, seeded and mulched within 7 days of completion of site grading. Seeding shall be in accordance with mn/dot specification 2575 (c)100 lbs/acre (or approved equal). Dormant seeding areas shall be seeded and mulched in accordance with mn/dot specifications. Straw mulching quantity shall be two tons per acre. Where slopes exceed or equal 1:3, a polypropylene netting or wood fiber blanket shall be provided and staked over the mulched area. Fertilizer (15-0-10) shall be applied at a rate of 400 pounds per acre (can be omitted in landscaped areas if landscaped seeding is done concurrently).

6. Refer to landscape plan for areas to be seeded or sodded for erosion control.

SEDIMENT CONTROL PRACTICES

1. Sediment control practices must minimize sediment from entering surface waters, including curb and gutter systems and storm sewer inlets.

A. Temporary or permanent drainage ditches and sediment basins that are designed as part of a treatment system (e.g., ditches with rock check dams) require sediment control practices only as appropriate for site conditions.

B. If the down gradient treatment system is overloaded, additional upgradient sediment control practices must be installed to eliminate the overloading, and the swppp must be amended to identify these additional practices.

C. In order to maintain sheet flow and minimize rills and/or gullies, there shall be no unbroken slope length of greater than 75 feet for slopes with a grade of 1:3 or steeper.

2. Sediment control practices must be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices shall remain in place until final stabilization has been established.

3. The timing of the installation of sediment control practices may be adjusted to accommodate short-term activities such as clearing or grubbing, or passage of vehicles. Any short-term activity must be completed as quickly as possible and the sediment control practices must be installed immediately after the activity is completed. However, sediment control practices must be installed before the next precipitation event even if the activity is not complete.

4. All storm drain inlets must be protected by appropriate bmps during construction until all sources with potential for discharging to the inlet have been stabilized.

5. Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including storm water conveyances such as curb and gutter systems, or conduits and ditches.

6. Stockpile areas which remain on the site for more than seven days shall be seeded, mulched, and surrounded by silt fence.

7. Vehicle tracking of sediment from the construction site must be minimized by bmps such as stone pads, concrete or steel wash racks, or equivalent systems. Street sweeping must be used if such bmps are not adequate to prevent sediment from being tracked onto the street.

8. The permittee must install temporary sedimentation basins as required.

DEWATERING AND BASIN DRAINING

1. Dewatering or basin draining (e.g., pumped discharges, trench/ditch cuts for drainage) related to the construction activity that may have turbid or sediment laden discharge water must be discharged to a temporary or permanent sedimentation basin on the project site whenever possible. If the water cannot be discharged to a sedimentation basin prior to entering the surface water, it must be treated with the appropriate bmps, such that the discharge does not adversely affect the receiving water or downstream landowners. The permittee(s) must ensure that discharge points are adequately protected from erosion and scour. The discharge must be dispersed over natural rock riprap, sand bags, plastic sheeting or other accepted energy dissipation measures. Adequate sedimentation control measures are required for discharge water that contains suspended solids.

2. All water from dewatering or basin draining activities must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in wetlands causing significant adverse impact to the wetland.

INSPECTIONS AND MAINTENANCE

1. The permittee(s) (either the owner or operator, whoever is identified in the swppp) must routinely inspect the construction site once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted within 7 days.

2. All inspections and maintenance conducted during construction must be recorded in writing and these records must be retained with the SWPPP. Records of each inspection and maintenance activity shall include:

a. Date and time of inspections;

b. Name of person(s) conducting inspections;

c. Findings of inspections, including recommendations for corrective actions;

d. Corrective actions taken (including dates, times, and party completing maintenance activities);

e. Date and amount of all rainfall events greater than 1/2 inch (0.5 inches) in 24 hours; and

f. Documentation of changes made to the SWPPP as required in part iii.A.4.

3. Where parts of the construction site have undergone final stabilization, but work remains on other parts of the site, inspections of the stabilized areas may be reduced to once per month. Where work has been suspended due to frozen ground conditions, the required inspections and maintenance must take place within 24 hours after runoff occurs at the site or 24 hours prior to resuming construction, whichever comes first.

4. All erosion prevention and sediment control BMP's must be inspected to ensure integrity and effectiveness. All nonfunctional BMP's must be repaired, replaced, or supplemented with functional bmps. The permittee(s) must investigate and comply with the following inspection and maintenance requirements:

a. All silt fences must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.

B. Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches 1/2 the storage volume. Drainage and removal must be completed within 72 hours of discovery, or as soon as field conditions allow access.

C. Surface waters, including drainage ditches and conveyance systems, must be inspected for evidence of sediment being deposited by erosion. The permittee(s) must remove all deltas and sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems, and restabilize the areas where sediment removal results in exposed soil. The removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. The permittee shall use all reasonable efforts to obtain access. If precluded, removal and stabilization must take place within seven (7) calendar days of obtaining access. The permittee is responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work.

D. Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all off-site paved surfaces, within 24 hours of discovery, or if applicable, within a shorter time.

E. The permittee(s) are responsible for the operation and maintenance of temporary and permanent water quality management BMP's, as well as all erosion prevention and sediment control BMP's, for the duration of the construction work at the site. The permittee(s) are responsible until another permittee has assumed control over all areas of the site that have not been finally stabilized or the site has undergone final stabilization, and a not has been submitted to the MPCA.

F. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts (e.g., fugitive sediment in streets could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).

5. All infiltration areas must be inspected to ensure that no sediment from ongoing construction activities is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.

6. Storm sewer pipes and structures to be inspected and cleaned out.

POLLUTION PREVENTION MANAGEMENT MEASURES

The permittee(s) shall implement the following pollution prevention management measures on the site:

1. Solid waste: collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with mpcas disposal requirements.

2. Hazardous materials: oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with mpcas regulations.

3. External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

FINAL STABILIZATION

The permittee(s) must ensure final stabilization of the site. The permittee(s) must submit a not within 30 days after final stabilization is complete, or another owner/operator (permittee) has assumed control over all areas of the site that have not undergone final stabilization. Final stabilization can be achieved in one of the following ways:

1. All soil disturbing activities at the site have been completed and all soils must be stabilized by a uniform perennial vegetative cover with a density of 70 percent over the entire previous surface area, or other equivalent means necessary to prevent soil failure under erosive conditions and;

a. All drainage ditches, constructed to drain water from the site after construction is complete, must be stabilized to preclude erosion;

b. All temporary synthetic, and structural erosion prevention and sediment control bmps (such as silt fence) must be removed as part of the site final stabilization; and

c. The permittee(s) must clean out all sediment from conveyances and from temporary sedimentation basins that are to be used as permanent water quality management basins. Sediment must be stabilized to prevent it from being washed back into the basin, conveyances or drainageways discharging off-site or to surface waters. The cleanout of permanent basins must be sufficient to return the basin to design capacity.

2. Final vegetation cover shall be in Project Specifications.

3. For residential construction only, final stabilization has been achieved when temporary erosion protection and down gradient perimeter control for individual lots has been completed and the residence has been transferred to the homeowner. Additionally, the permittee must distribute the MPCA "Homeowner fact sheet" to the homeowner to inform the homeowner of the need for, and benefits of, final stabilization.

SEQUENCE OF CONSTRUCTION

Construction shall proceed in the following sequence:

1. Contractor shall schedule and conduct a pre-construction meeting with the city.

2. Contractor shall secure all necessary permits and licenses.

3. Furnish & install erosion control measures.

4. Maintain erosion control measures, i.e., silt fence, temporary rock construction entrance.

5. Reclaim existing bituminous pavement and base. Remove excess reclamation material.

6. Remove damaged curb and gutter, reset catch basins per plan.

7. Prepare reclaim material, stabilize grade and compact reclaim material.

8. Furnish & install concrete curb, base course of bituminous pavement

9. Grout catch basins per plan.

10. Furnish & install wear course of bituminous pavement.

11. Remove erosion control after vegetation is established.

ADDITIONAL STORMWATER POLLUTION PREVENTION, GRADING PLAN AND SCHEDULE NOTES

1. All slopes to be 1:4 unless approved by the city engineer.

2. Below grade structures shall be protected and meet drainage requirements per the city engineer.

3. Construction operation hours are from 7:00am-10:00pm Mon.-Sat.

4. Call Gopher State One Call for utility locations prior to any work at 1-800-252-1166.

5. Permittee may need to modify SWPPP if the general objectives of controlling pollutants is not being met.

6. Operator shall implement these and any other bmp's that may be required to meet the general permit requirements.

7. Site is not in karst area or pollution or remediation site.

8. Silt fence to be installed downhill from any grading activity.

9. If tracking onto adjacent streets occurs a street sweeper shall be used to clean streets within 8 hours or as directed by the engineer.

10. Dust control may be necessary during rough grading. No grading can take place if wind speed exceeds 25 mph.

11. Solid waste shall be collected and disposed of properly and must comply with MPCA disposal requirements.

12. Hazardous materials shall be stored properly to prevent spills and vandalism

13. No engine degreasing is allowed on site. External washing of vehicles shall be limited to a defined area (bone yard) on site.

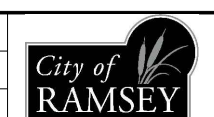
14. Permittee(s) shall adhere to all SWPPP specifications on this plan and other mpcas permit requirements.

DATE	REVISION

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

BRUCE R WESTBY
Date: 4/11/17 Lic. No. 40116

DESIGNED BY: JFF	DATE: 4/11/17
DRAWN BY: JFF	FILE NO.:
CHECKED BY: BRW	17-01



CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

SWPPP
S.A.P. 199-122-008

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 17-00
CITY OF RAMSEY, MINNESOTA