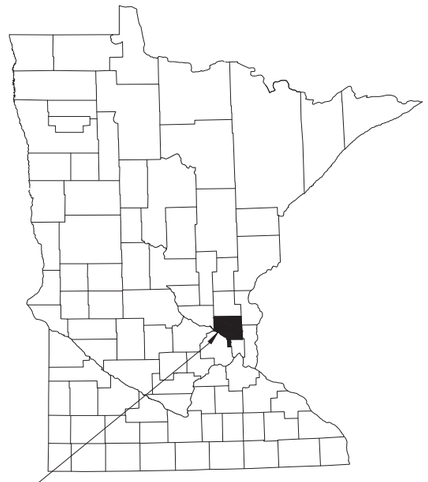
CITY OF RAMSEY
SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY IMPROVEMENT PROJECT NO. 25-02

S.A.P. 199-104-015 LOCATED ON SUNWOOD DRIVE BETWEEN NOWTHEN BOULEVARD (CSAH 5) AND ERKIUM STREET
FROM NW 1/4 OF THE NW 1/4 OF S25, T32, R25 TO NW 1/4 OF THE NW 1/4 OF S25, T32, R25



CITY OF RAMSEY
ANOKA COUNTY, MINNESOTA
DISTRICT: METRO

PROJECT	STA. TO STA.	GROSS LENGTH	BRIDGE LENGTH	NET LENGTH	NET LENGTH (MILES)	ADT (2025)	ADT (2045)	DESIGN ESAL	R VALUE	TON DESIGN	DESIGN SPEED	NUMBER OF LANES	WIDTH OF LANES	FUNCTIONAL CLASSIFICATION
S.A.P. 199-104-015 SUNWOOD DR	0+61 TO 11+07	1,046 FT	0 FT	1,046 FT	0.20 MI	1,050	1,155	351,000	70	10	30 MPH	2	12'	COLLECTOR

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

Call before you dig
811
651 454-0002 Metro
800 252-1166 Outstate
www.gopherstateonecall.org

GOVERNING SPECIFICATIONS

THE 2020 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 25 SHEETS

LEGEND

- SANITARY MANHOLE
- CATCH BASIN
- FLARED END SECTION
- CULVERT END SECTION
- HYDRANT
- VALVE
- TREE - CONIFEROUS
- TREE - DECIDUOUS
- SHRUB
- LIGHT POLE
- SIGN
- MAILBOX
- PEDESTAL - TELECOM
- PEDESTAL - ELECTRIC
- HAND HOLE
- REMOVE BIT PAVE
- REMOVE CONCRETE PAVE
- REMOVE GRAVEL SURFACE
- MILL BIT PAVEMENT
- RECLAIM BIT PAVEMENT
- CONSTRUCTION EXIT
- RIPRAP CLASSIII
- CURB & GUTTER
- VALLEY GUTTER
- Easement - Drainage & Utility
- Easement - Northern Natural Gas
- Easement - Roadway
- LOT LINE
- ELECTRIC LINE
- ELECTRIC LINE - BURIED
- ELECTRIC LINE - OVERHEAD
- GAS LINE
- TELECOMMUNICATION LINE
- TELECOMM - OVERHEAD
- FIBER OPTIC LINE
- TREE LINE
- LANDSCAPE
- RETAINING WALL
- FENCE
- SILT FENCE
- FLOTATION SILT CURTAIN
- WATERMAIN
- SANITARY SEWER
- STORM SEWER
- DRAIN TILE
- LANDSCAPE - ROCK
- LANDSCAPE - MULCH
- LANDSCAPE - RIP RAP
- BIT PAVEMENT
- PR. CONCRETE WALK
- PR. SEEDING AREA

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.

JOE FERIANCEK, P.E. — 57095 LIC. NO. — DATE 11/22/24

APPROVED: _____ CITY ENGINEER, CITY OF RAMSEY — DATE 11/22/24

Lucas Lortie — Digitally signed by Lucas Lortie Date: 2024.12.17 11:03:28 -06'00' — DATE _____
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

Lucas Lortie — Digitally signed by Lucas Lortie Date: 2024.12.17 11:03:46 -06'00' — DATE _____
STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

SHEET 01 OF 25 SHEETS

City of RAMSEY
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)

SAP 199-104-015

DATE	REVISION
12/16/24	ADDED SWPPP

Dec 16, 2024 - 10:05am
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Title Sheet.dwg

STATEMENT OF ESTIMATED QUANTITIES							
IP 25-02 MSA Sunwood Drive - CSAH 5 to Erkium Street Reconstruction							
					S.A.P. 199-112-010		
					PROJECT TOTAL	PARTICIPATING	NON-PARTICIPATING
						STREET	WATERMAIN
NOTES	**ITEM NO.**	**MNDOT NO.**	**ITEM**	**UNIT**		**QUANTITY**	**QUANTITY**
	1	2021.501	MOBILIZATION	LS	1	1	0
	2	2104.502	REMOVE VALVE BOX & VALVE EXTENSION	EA	1	0	1
1	3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	230	230	0
1	4	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LF	65	65	0
1	5	2104.503	REMOVE CONCRETE CURB AND GUTTER	LF	285	285	0
1	6	2104.504	REMOVE CONCRETE VALLEY GUTTER	SY	81	81	0
1	7	2104.504	REMOVE CONCRETE PAVEMENT	SY	145	145	0
1	8	2104.518	REMOVE BITUMINOUS PAVEMENT	SY	60	60	0
	9	2106.507	EXCAVATION - COMMON (EV)	CY	260	260	0
8	10	2106.607	HAUL & STOCKPILE RECLAIM MATERIAL (LV)	CY	1050	1050	0
	11	2112.604	SUBGRADE PREPARATION	SY	4800	4800	0
	12	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	5	5	0
	13	2130.523	WATER	MGAL	10	10	0
	14	2211.507	AGGREGATE BASE CLASS 5 MODIFIED (CV)	CY	760	760	0
9	15	2215.504	FULL DEPTH RECLAMATION	SY	4600	4600	0
1	16	2231.603	SAWED & SEALED JOINT	EA	30	30	0
	17	2232.504	MILL BITUMINOUS PAVEMENT 2.0"	SY	360	360	0
3	18	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	350	350	0
4	19	2360.509	TYPE SP 12.5 NON WEARING COURSE MIXTURE (3,C)	TON	520	520	0
4	20	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)	TON	560	560	0
	21	2503.602	GROUT CATCH BASIN	EA	4	4	0
	22	2504.602	ADJUST VALVE BOX	EA	4	4	0
	23	2504.602	VALVE BOX	EA	1	0	1
	24	2506.502	ADJUST FRAME & RING CASTING	EA	5	5	0
11	25	2521.518	6" CONCRETE WALK	SY	150	150	0
	26	2521.602	DRILL & GROUT REINF BAR (EPOXY COATED)	EA	70	70	0
11	27	2531.503	CONCRETE CURB & GUTTER DESIGN B618	LF	285	285	0
11	28	2531.604	7" CONCRETE VALLEY GUTTER	SY	80	80	0
	29	2531.618	TRUNCATED DOMES	SF	240	240	0
7	30	2563.601	TRAFFIC CONTROL	LS	1	1	0
	31	2563.601	ALTERNATE PEDESTRIAN ROUTE	LS	1	1	0
	32	2573.502	STORM DRAIN INLET PROTECTION	EA	4	4	0
	33	2573.602	STABILIZED CONSTRUCTION EXIT	EA	2	2	0
2,10	34	2574.507	TOPSOIL (LV)	CY	30	30	0
5	35	2574.508	FERTILIZER TYPE 3	LBS	10	10	0
	36	2575.505	SEEDING	ACRE	0.05	0.05	0
6	37	2575.508	HYDRAULIC MULCH MATRIX	LBS	200	200	0
5	38	2575.508	SEED MIXTURE 25-151	LBS	10	10	0
	39	2575.602	LANDSCAPE RESTORATION	EA	1	1	0
	40	2582.503	4" SOLID LINE PAINT (MULTI-COMP)	LF	1700	1700	0
	41	2582.503	4" DOUBLE SOLID LINE PAINT (MULTI-COMP)	LF	850	850	0
	42	2582.518	CROSSWALK PAINT (MULTI-COMP)	SF	144	144	0

PAY ITEM NOTES:

1. REMOVAL LIMITS SHALL BE MARKED IN THE FIELD BY CITY STAFF.
2. LV TO CV CONVERSION FACTOR = 1.30.
3. ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 0.07 GAL/SY.
4. ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 113 LB/SY-IN.
5. ESTIMATED QUANTITY BASED ON 200 LB/ACRE.
6. ESTIMATED QUANTITY BASED ON 4000 LB/ACRE.
7. LUMP SUM QUANTITY SHALL INCLUDE ALL COST REQUIRED FOR MAINTAINING ALL FLAGGING OPERATIONS AS NECESSARY, MAINTAINING PEDESTRIAN ACCESS ROUTES, ANY SIGNAGE AND BARRICADES AS NECESSARY.
8. RECLAMATION STOCKPILE LOCATION IS AT 16600 SAINT FRANCIS BLVD. THE EXPECTED RECLAMATION DEPTH IS 8 INCHES.
9. SHAPING OF RECLAMATION MATERIAL TO PROFILE AND CROSS SLOPES MATCHING THE PLANS IS INCIDENTAL TO THE FULL-DEPTH RECLAMATION PAY ITEM.
10. STOCKPILING OF ANY SALVAGED TOPSOIL USED IS INCIDENTAL TO THE TOPSOIL PAY ITEM.
11. FINISH WITH CLEAR CURING COMPOUND

GENERAL NOTES:

1. 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.
2. 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.
3. STREET INTERSECTION RADII ASSUMED 20', UNLESS OTHERWISE NOTED.
4. PERMANENT SIGN REMOVAL AND INSTALLATION IS TO BE PERFORMED BY CITY OF RAMSEY PUBLIC WORKS DEPARTMENT.
5. THE CENTERLINE PROFILES ARE GENERALLY REMAINING THE SAME. THIS IS PROPOSED TO BE ACHIEVED BY RECLAIMING AND HAULING OFF 8 INCHES OF THE EXISTING BITUMINOUS AND AGGREGATE BASE, REMOVAL OF 2 INCHES OF SUBSOIL, SUBGRADE PREPARATION, PLACEMENT OF 6 INCHES OF AGGREGATE BASE (RECLAMATION MATERIAL MEETING CITY OF RAMSEY STANDARD DETAIL STR-26 MAY BE USED AS AGGREGATE BASE CLASS 5 MODIFIED), PLACEMENT OF 2 INCHES NON-WEAR COURSE BITUMINOUS PAVEMENT AND PLACEMENT OF 2 INCHES WEAR COURSE BITUMINOUS PAVEMENT.
6. STREET CROSS SLOPES SHALL HAVE A MINIMUM 2% GRADE.
7. SEEDING AND RESTORATION NUMBERS WERE DETERMINED BASED ON 4' OF DISTURBANCE FROM THE EDGE OF CURB AND CONCRETE WALK REPLACEMENTS.

DATE	REVISION

Nov 22, 2024 - 2:02pm
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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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC	
DRAWN BY:	LWC	DATE: 11/22/24
CHECKED BY:	JJF	FILE: 25-02

City of RAMSEY

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

STATEMENT OF ESTIMATED QUANTITIES

S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 02 OF 25 SHEETS

PAVEMENT MARKING TABULATION						
DESCRIPTION	DIRECTION	STATION		CROSSWALK	4" SOLID LINE	4" DOUBLE LINE
		START	END	WHITE	WHITE	YELLOW
				SF	LF	LF
FOG LINE	EB	0+61	3+32		260	
CENTERLINE		0+61	3+32			270
FOG LINE	WB	0+61	3+32		280	
FOG LINE	EB	3+93	6+95		305	
CENTERLINE		3+93	6+95			302
FOG LINE	WB	3+93	6+95		298	
FOG LINE	EB	7+60	10+38		276	
CENTERLINE		7+60	10+38			277
FOG LINE	WB	7+60	10+38		279	
CROSSWALK		10+88	10+96	144		
TOTALS				144	1698	849

DATE	REVISION

Nov 22, 2024 - 10:33am
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City of RAMSEY

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

TABULATIONS

S.A.P. 199-104-015

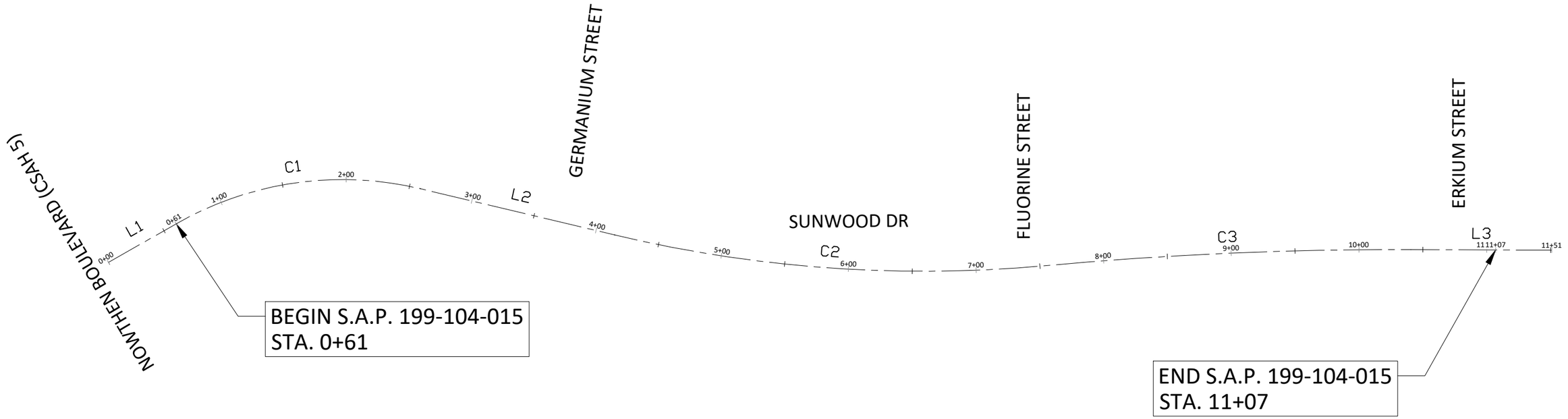
SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

0 40 80 120
SCALE (FEET)

N

LINE TABLE: ALIGNMENTS			
LINE #	LENGTH	DIRECTION	ALIGNMENT NAME
L1	61.49'	N60° 19' 27"E	Sunwood
L2	156.52'	S76° 36' 40"E	Sunwood
L3	110.23'	S89° 46' 26"E	Sunwood

CURVE TABLE: ALIGNMENTS				
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	ALIGNMENT NAME
C1	262.12'	197.01'	N81° 51' 24"E	Sunwood
C2	1043.58'	339.42'	S85° 55' 43"E	Sunwood
C3	2996.80'	286.21'	N87° 29' 24"E	Sunwood



DATE	REVISION

Nov 22, 2024 - 10:20am
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CHECKED BY:	JJF	FILE: 25-02

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

ALIGNMENT LAYOUT

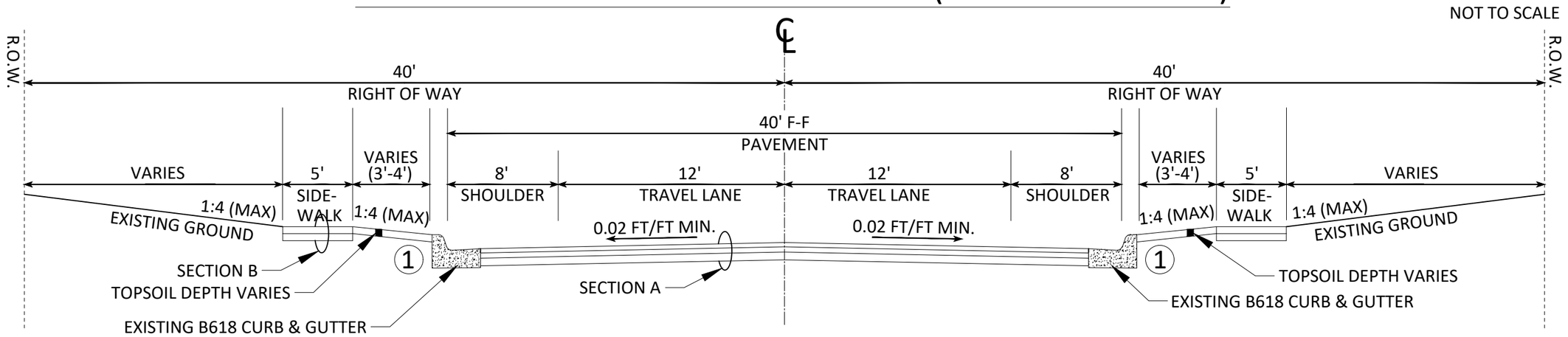
S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 04 OF 25 SHEETS

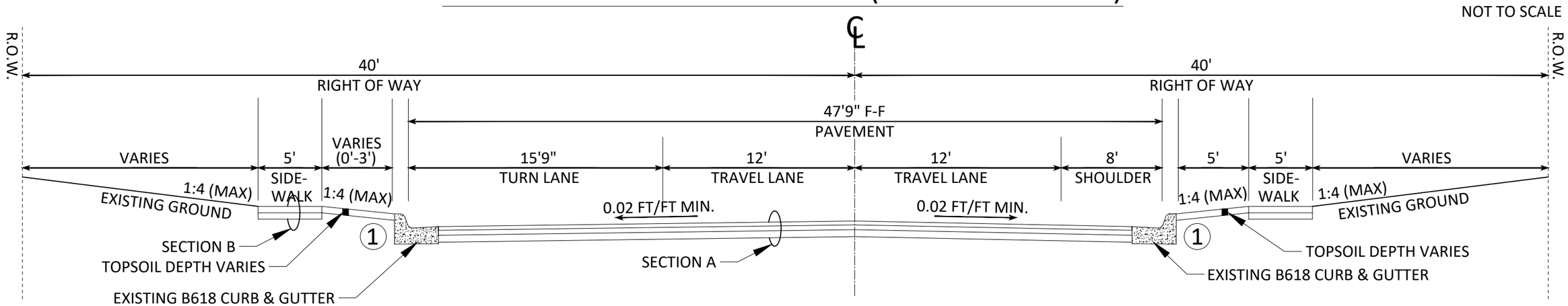
TYPICAL SECTION: RECONSTRUCTION (STA. 3+32 - 11+07)

NOT TO SCALE



TYPICAL SECTION: TURN LANE (STA. 0+61 - 3+32)

NOT TO SCALE



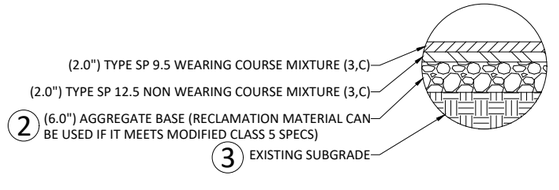
REFERENCE NOTES:

① GRADE TO MATCH EXISTING GROUND (1:4 MAX, 4% MIN). ESTABLISH TURF USING A MINIMUM OF 4" TOPSOIL AND HYDROSEED WITH MNDOT SEED MIXTURES PER SPECIFICATIONS.
SEE CITY DETAIL ERO-6 ON SHEET 06 FOR TOPSOIL REQUIREMENTS.

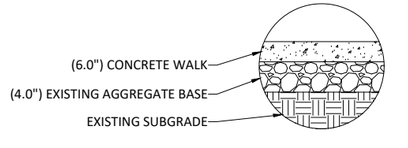
② MODIFY CLASS 5 AGGREGATE BASE PER CITY STANDARD DETAIL STR-26 ON SHEET 06. RECYCLED RECLAMATION MATERIAL MEETING STR-26 MAY BE USED AS AGGREGATE BASE.

③ CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD, THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING CLASS 5 AGGREGATE BASE. THIS PROCESS SHALL BE INCIDENTAL TO THE SUBGRADE PREPARATION PAY ITEM.

SECTION A: ROADWAY



SECTION B: SIDEWALK



DATE	REVISION

Dec 13, 2024 - 9:13am
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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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC		
DRAWN BY:	LWC	DATE:	11/22/24
CHECKED BY:	JJF	FILE:	25-02

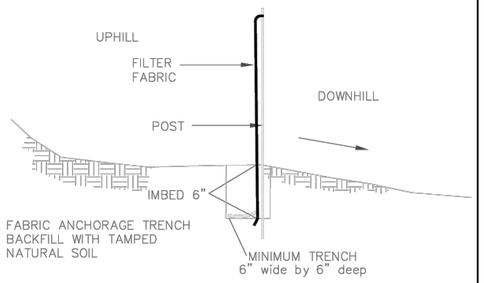
City of RAMSEY

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

TYPICAL SECTION

S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

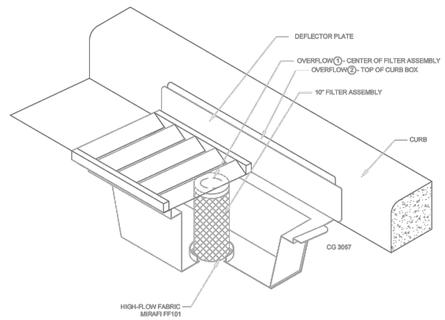


INSTALL AS PER FILTER FABRIC MANUFACTURER'S RECOMMENDATIONS

SILT FENCE DETAIL

NO SCALE

APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: SILT FENCE
		CITY PLATE No. ERO–1

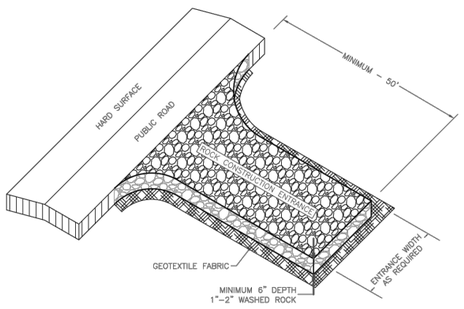


INLET PROTECTION – WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINTED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: INLET PROTECTION
		CITY PLATE No. ERO–2



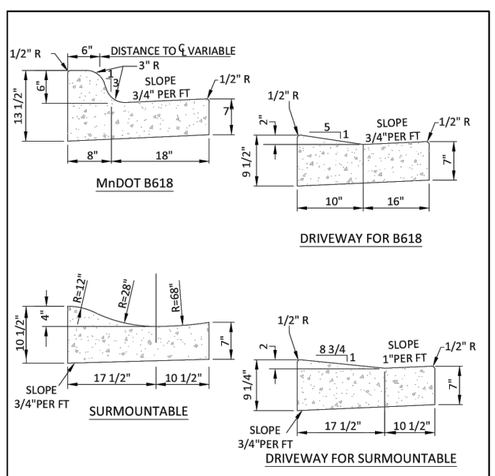
NOTE:
1. MINIMUM CONSTRUCTION ENTRANCE WIDTH EQUAL TO PROPOSED ROADWAY WIDTH.
2. WIDTH OF RADIUS AS REQUIRED TO ENSURE VEHICLES DO NOT TRACK ONTO PUBLIC ROAD.
3. MAINTAINENCE AS REQUIRED TO PREVENT TRACKING ONTO PUBLIC ROADS. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE ENTRANCE AS NEEDED.

NOT TO SCALE

APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: ROCK CONSTRUCTION ENTRANCE
		CITY PLATE No. ERO–5

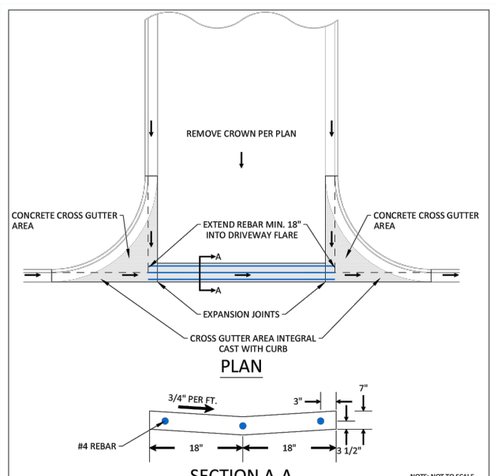
Notes:
1. INSTALLATION OF 4" OF TOPSOIL REQUIRED ACROSS ALL DISTURBED AREAS.
2. TOPSOIL IS DEFINED AS BLACK DIRT COMPOSED OF UNCONSOLIDATED MATERIAL, LARGELY UNDECOMPOSED ORGANIC MATTER WHICH IS SUITABLE FOUNDATION FOR VEGETATIVE GROWTH.
3. THE COMPOSITION OF TOPSOIL SHOULD CONTAIN NO MORE THAN THIRTY-FIVE PERCENT (35%) SAND CONTENT.

APPROVED: 7 – 2019	City of RAMSEY	STANDARD DETAILS: TOPSOIL REQUIREMENTS
		CITY PLATE No. ERO–6



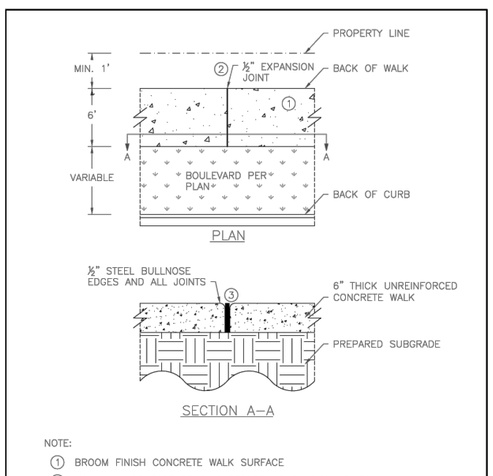
NOTES:
1. ON WEAR COURSE MILL THE EXISTING BITUMINOUS 1.5" BY 24" IN FRONT OF THE REPLACEMENT CURB. (INCIDENTAL TO CURB REPLACEMENT)
2. ON BASE COURSE SAW CUT AND REMOVE EXISTING BITUMINOUS 18" IN FRONT OF THE REPLACEMENT CURB. (INCIDENTAL TO CURB REPLACEMENT)

APPROVED: 10 - 2024	City of RAMSEY	STANDARD DETAILS: CURB AND GUTTER
		CITY PLATE No. STR-1



NOTES:
1. WITH REMOVAL OF EXISTING CURB AT A STREET, MILL BITUMINOUS TO A DEPTH OF 1.5" AND A WIDTH OF 18" IN EXISTING STREET.
2. TO BE USED WHENEVER CROSS DRAINAGE IS < 2%.
3. CONCRETE CURB AND GUTTER SHALL BE CAST INTEGRAL WITH CONCRETE CROSS GUTTER AREA.
4. CONCRETE CURB AND GUTTER SHALL BE PAID SEPARATELY FROM CONCRETE CROSS GUTTER AREA.

APPROVED: 3 - 2017	City of RAMSEY	STANDARD DETAILS: CROSS GUTTER
		CITY PLATE No. STR-2



NOTE:
① BROOM FINISH CONCRETE WALK SURFACE
② MAXIMUM 100 FOOT SPACING BETWEEN EXPANSION JOINTS
③ 1/2" EXPANION JOINT MEETING MNDOT SPEC 3702. PROVIDE ONE PIECE OF FILLER FOR THE ENTIRE DEPTH AND WIDTH OF THE JOINT

NOT TO SCALE

APPROVED: 10 – 2015	City of RAMSEY	STANDARD DETAILS: CONCRETE SIDEWALK
		CITY PLATE No. STR–3

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

DATE	REVISION

Nov 22, 2024 - 10:45am
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Details.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC		
DRAWN BY:	LWC	DATE:	11/22/24
CHECKED BY:	JJF	FILE:	25-02

City of RAMSEY

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

CITY DETAILS

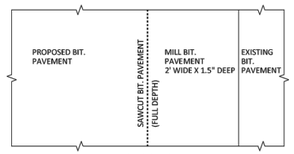
S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

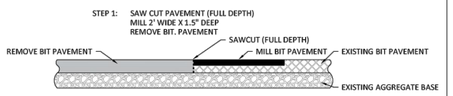
SHEET 06 OF 25 SHEETS

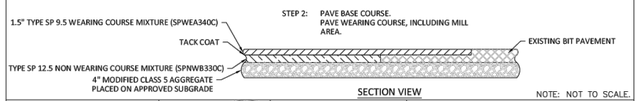
NOTES:

1. BITUMINOUS SHALL BE SAWCUT AND REMOVED
2. CLASS 5 AND BITUMINOUS COURSES SHALL BE MECHANICALLY COMPACTED.
3. SEE CITY PLATE STR-26 FOR MODIFIED CLASS 5 SPECIFICATIONS.



PLAN VIEW





SECTION VIEW

NOTE: NOT TO SCALE.

APPROVED:
3 - 2017

City of RAMSEY

CITY PLATE No. STR-31

STANDARD DETAILS: STREET TIE-IN

STANDARD PLATES	
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT	
7038 A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
7100 H	CONCRETE CURB AND GUTTER (DESIGN B)
8000 K	TEMPORARY CHANNELIZERS - (3 SHEETS)

DATE	REVISION

Nov 22, 2024 - 10:40am
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Details.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

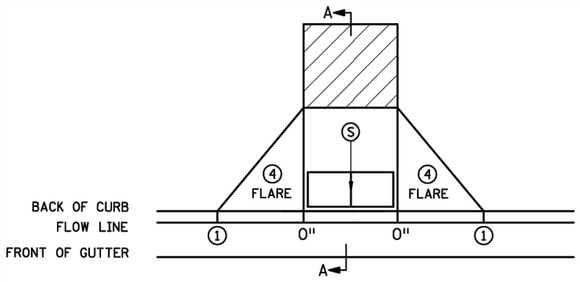
DESIGNED BY:	LWC	
DRAWN BY:	LWC	DATE: 11/22/24
CHECKED BY:	JJF	FILE: 25-02

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

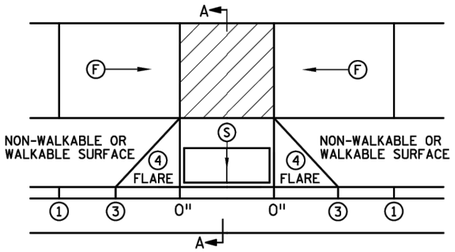
CITY DETAILS

S.A.P. 199-104-015

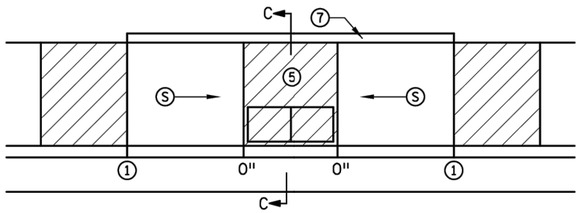
SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA



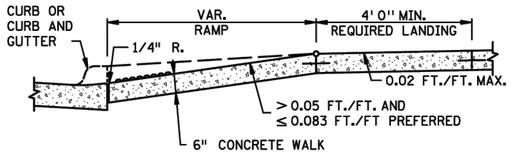
PERPENDICULAR



TIERED PERPENDICULAR

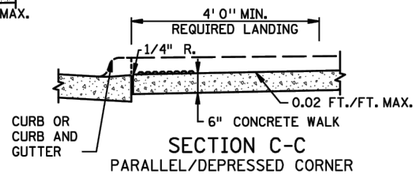


PARALLEL



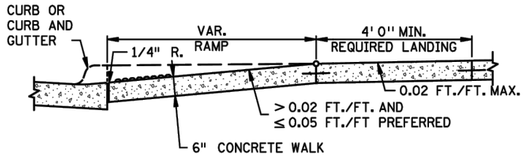
SECTION A-A

PERPENDICULAR/TIERED/DIAGONAL



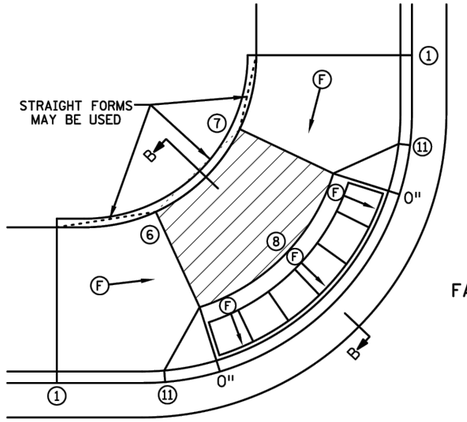
SECTION C-C

PARALLEL/DEPRESSED CORNER

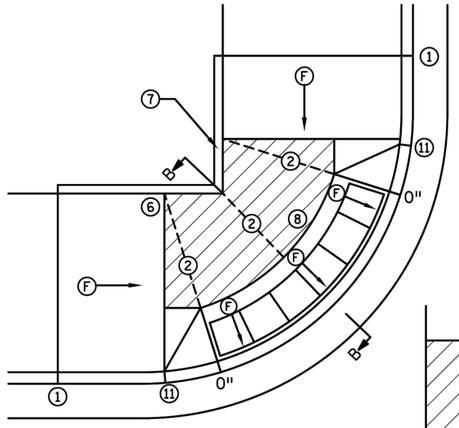


SECTION B-B

FAN

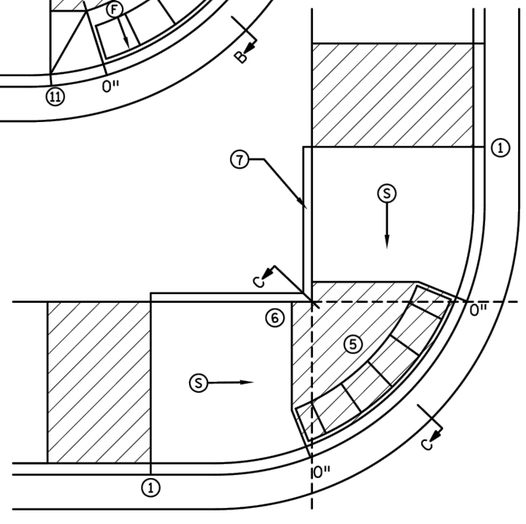


FAN⑩

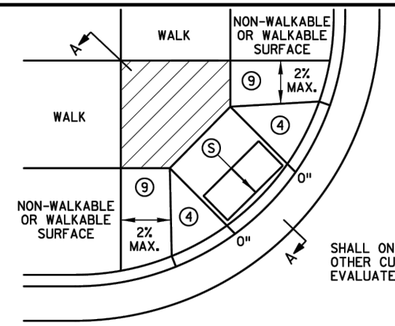


MODIFIED FAN ⑩

USED WHEN RIGHT-OF-WAY IS CONSTRAINED



DEPRESSED CORNER



DIAGONAL

SHALL ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH. (EXCEPT AS STATED IN ⑥ BELOW.

TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.

WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.

① MATCH FULL HEIGHT CURB.
② 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
③ 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
④ SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
⑤ DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
⑥ THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
⑦ WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
⑧ A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.
⑨ PAVE FULL WALK WIDTH.
⑩ "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.
⑪ INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

- (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.
- X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021

JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS STYRBICKI
STATE DESIGN ENGINEER

STANDARD PLAN 5-297.250 | 1 OF 6

APPROVED: 11-04-2021
REVISED:

PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

DATE	REVISION

Nov 22, 2024 - 10:46am
C:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Details.dwg

City of RAMSEY

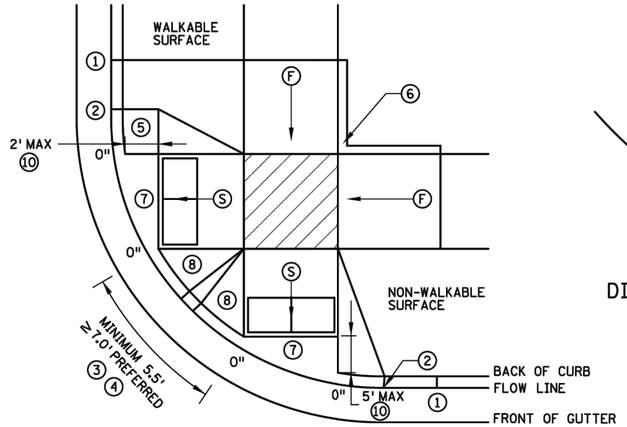
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

MNDOT PEDESTRIAN RAMP DETAILS

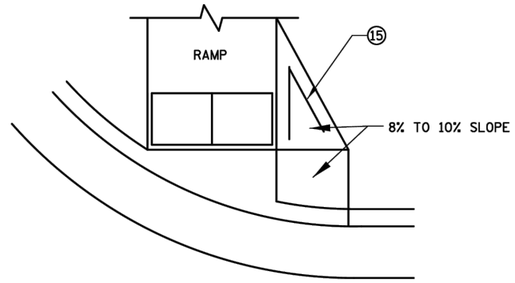
S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

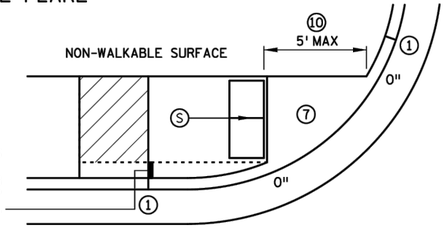
SHEET 08 OF 25 SHEETS



COMBINED DIRECTIONAL

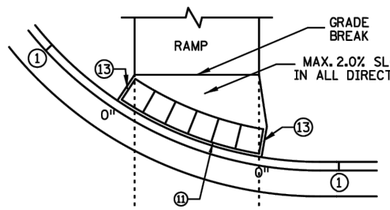


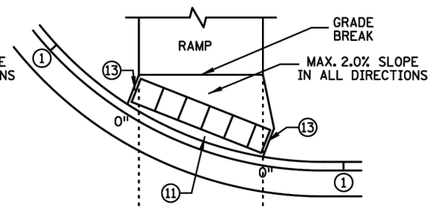
DIRECTIONAL RAMP WALKABLE FLARE



IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.

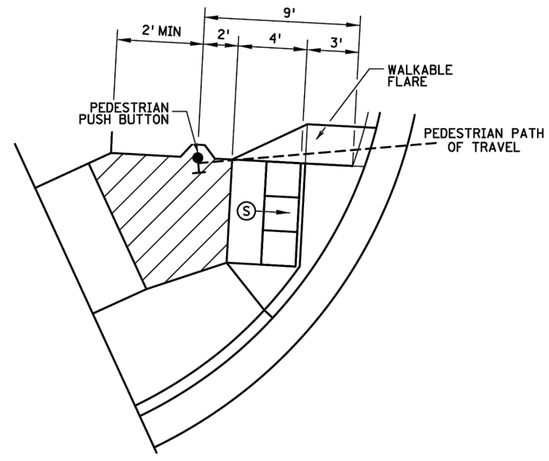
STANDARD ONE-WAY DIRECTIONAL ⑨





DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED ⑫

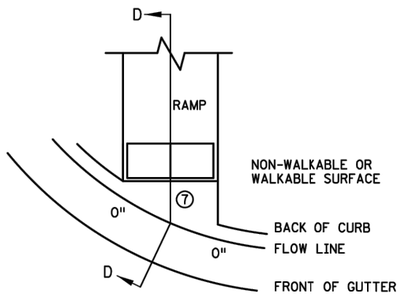
ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB

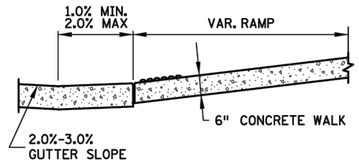


SEMI-DIRECTIONAL RAMP ③④⑨

3' DOME SETBACK, 4' LONG RAMP AND PUSH BUTTON 9' FROM THE BACK OF CURB

PRIMARILY USED FOR APS APPLICATIONS WHERE THE PAR DOES NOT CONTINUE PAST THE PUSH BUTTON (DEAD-END SIDEWALK)





SECTION D-D

CURB FOR DIRECTIONAL RAMPS ⑭

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

① MATCH FULL CURB HEIGHT.

② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.

③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).

④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.

⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.

⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.

⑧ 8% TO 10% WALKABLE FLARE.

⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.

⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.

⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.

⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.

⑮ PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF FORMS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

(F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021
JEFFREY J. PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 2 OF 6

APPROVED: 11-04-2021
REVISED:
THOMAS J. STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

DATE	REVISION

Nov 22, 2024 - 10:46am
C:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkum St 25-02\Plan Drawings\Details.dwg

City of RAMSEY

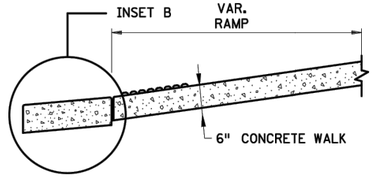
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

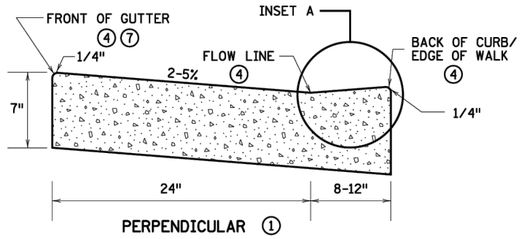
MNDOT PEDESTRIAN RAMP DETAILS

S.A.P. 199-104-015

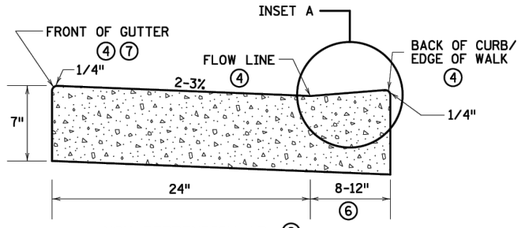
SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 09 OF 25 SHEETS

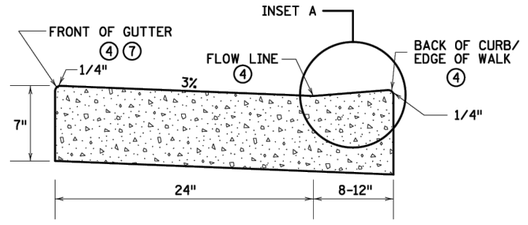




PERPENDICULAR ①

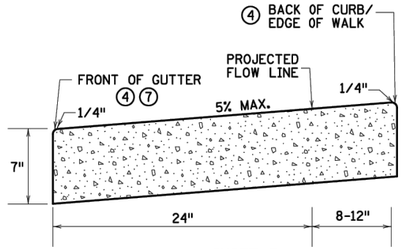


NON PERPENDICULAR ②



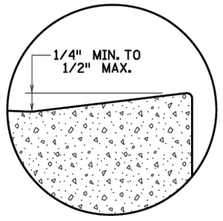
FOR CURB MACHINE PLACEMENT AROUND RADIUS ③
(REGARDLESS OF RAMP TYPE)

PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL

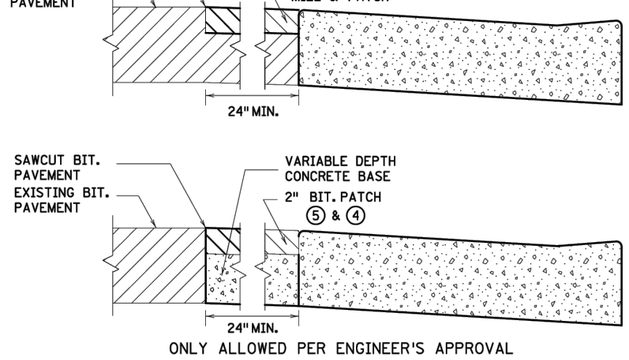


INSET B

OUTFLOW GUTTER ⑧



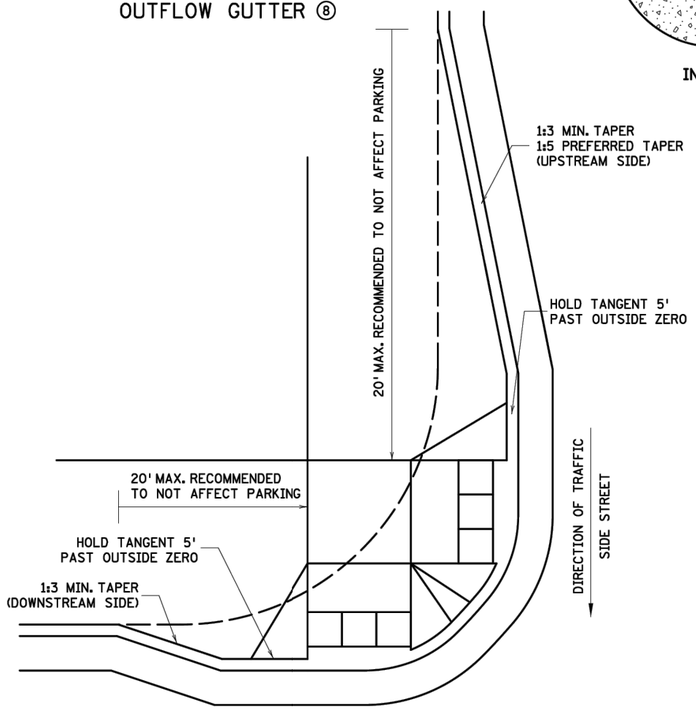
INSET A



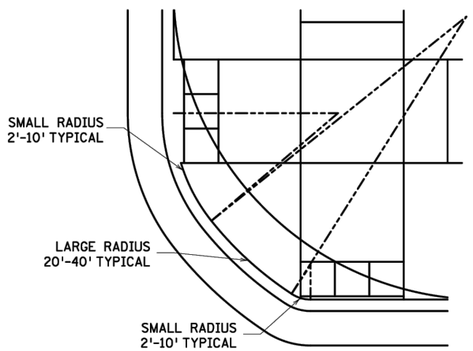
ONLY ALLOWED PER ENGINEER'S APPROVAL

PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER

FOR USE ON CURB RAMP RETROFITS



ADA CURB EXTENSION WITH COMPOUND RADIUS (BUMP OUT) ⑪



COMBINED DIRECTIONAL ⑩
(COMPOUND RADIUS)

NOTES:

POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM.
NO PONDING SHALL BE PRESENT IN THE PAR.
ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.

① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.

② FOR USE AT CURB RAMPS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS & DEPRESSED CORNERS.

③ BEGIN GUTTER SLOPE TRANSITION 10' OUTSIDE OF ALL CURB RAMPS.

④ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".

⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.

⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS. SEE SHEET 2 FOR DIRECTIONAL CURB SLOPE REQUIREMENTS.

⑦ TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. TOP 1.5" OF THE GUTTER FACE MUST BE A FORMED EDGE. PAR GUTTER SHALL NOT BE OVERLAID.

⑧ SHOULD BE USED AT VERTICALLY CONSTRAINED AREAS WHEN AT A DRAINAGE HIGH POINT OR SUPER ELEVATED ROADWAY SEGMENTS.

⑨ DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT 1' MINIMUM FROM ALL JOINTS.

⑩ HELPS PROVIDE TWO SEPARATE RAMPS, REDUCES THE DOME SETBACK LENGTH AND MINIMIZES DIRECTIONAL CURB. THIS RADIUS DESIGN CLOSELY FOLLOWS THE TURNING VEHICLE PATH WHILE OPTIMIZING CURB RAMP LENGTH.

⑪ CURB EXTENSIONS SHOULD BE USED IN VERTICALLY CONSTRAINED AREAS, USUALLY IN DOWNTOWN ROADWAY SEGMENTS WHERE ON-STREET PARKING IS AVAILABLE. CURB EXTENSIONS SHOULD BE CONSIDERED FOR APS INTERSECTIONS WHERE SPACE IS LIMITED.
PUSH BUTTONS MUST MEET APS CRITERIA AS DESCRIBED IN THE PUSH BUTTON LOCATION DETAIL SHEET.

REVISION:

APPROVED: 11-04-2021

JEFFREY J. PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS STYRBICKI
STATE DESIGN ENGINEER

STANDARD PLAN 5-297.250 | 3 OF 6

APPROVED: 11-04-2021
REVISED:

PEDESTRIAN CURB RAMP DETAILS

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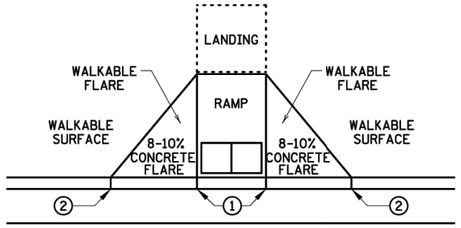
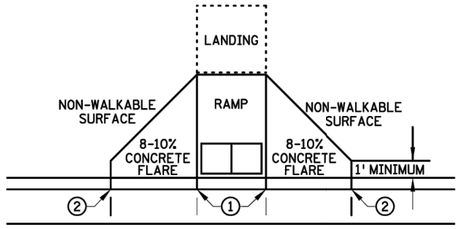
SUNWOOD DRIVE - CSAH 5 TO ERKUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

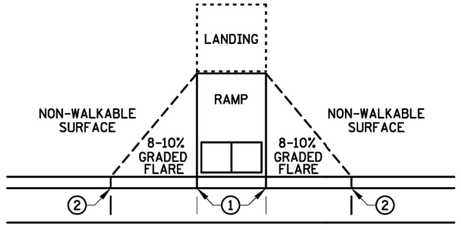
SHEET 10 OF 25 SHEETS



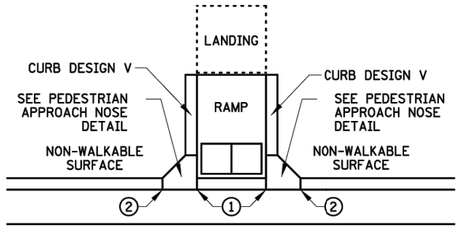
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

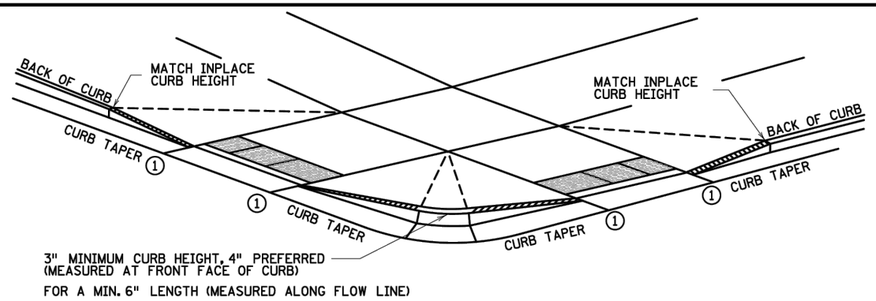


GRADED FLARES

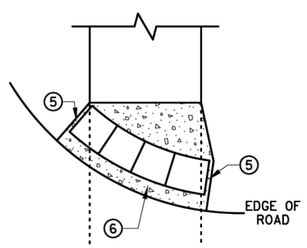


RETURNED CURB ④

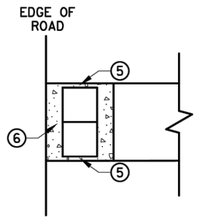
TYPICAL SIDE TREATMENT OPTIONS ③ ⑩



DETECTABLE EDGE WITH ⑦
CURB AND GUTTER

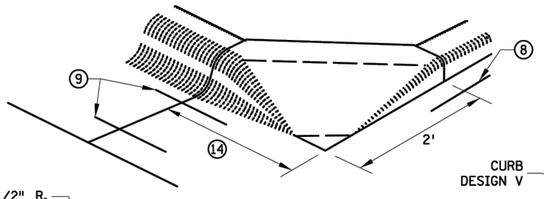


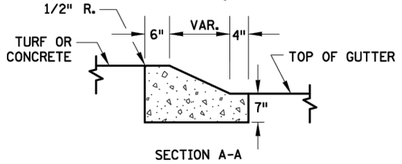
RADIAL DETECTABLE WARNING



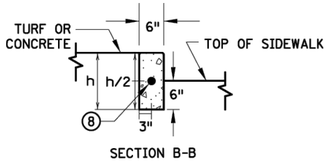
RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

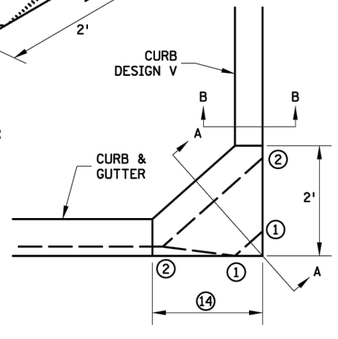




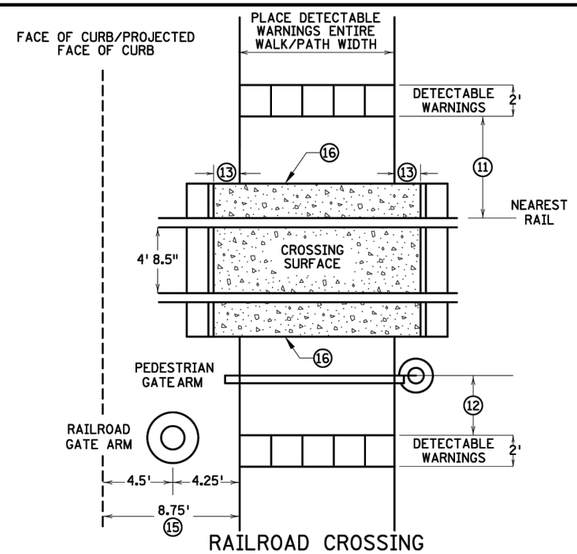
SECTION A-A



SECTION B-B



PEDESTRIAN APPROACH
NOSE DETAIL
(FOR RETURNED CURB
SIDE TREATMENT)



RAILROAD CROSSING
PLAN VIEW

NOTES:

INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3 INCH CURB HEIGHT. INCREASE CURB TAPER LENGTH AT LESS THAN 8% OR REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.

A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

① 0" CURB HEIGHT. SEE INSET A ON SHEET 3 OF 6.

② FULL CURB HEIGHT.

③ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.

④ TYPICALLY USED FOR MEDIANS AND ISLANDS.

⑤ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" MAX. BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑥ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF BITUMINOUS ROADWAY AND/OR BITUMINOUS SHARED-USE PATH TO PROVIDE VISUAL CONTRAST.

⑦ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS. AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.

⑧ DRILL AND GROUT 1 - NO. 4 12" LONG REINFORCEMENT BAR (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE V CURB.

⑨ DRILL AND GROUT 2 - NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE CURB AND GUTTER.

⑩ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6' LONG RAMP FOR 6" HIGH CURB). WHEN THE INITIAL LANDING IS MORE THAN 1" BELOW FULL HEIGHT CURB REFER TO SHEETS 1 & 2 TO MODIFY THE CURB HEIGHT TAPERS AND MAINTAIN POSITIVE BOULEVARD DRAINAGE. CONSTRUCT THESE TAPERS AT 0"-3" AT 8-10%, THEN LESS THAN 5% FROM 3" CURB TO FULL CURB HEIGHT.

⑪ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.

⑫ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM. THIS CRITERIA GOVERNS OVER NOTE ⑪.

⑬ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.

⑭ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.

⑮ SIDEWALK TO BE PLACED 8.75' MIN. FROM THE FACE OF CURB/PROJECTED FACE OF CURB. THIS ENSURES MIN. CLEARANCE BETWEEN THE SIDEWALK AND GATE ARM COUNTERWEIGHT SUPPORTS.

⑯ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.

REVISION:

APPROVED: 11-04-2021
JEFFREY D. PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 4 OF 6

APPROVED: 11-04-2021
REVISED:
THOMAS J. STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

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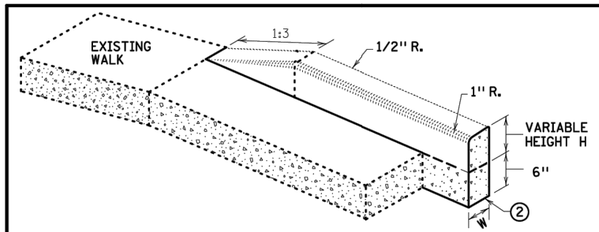
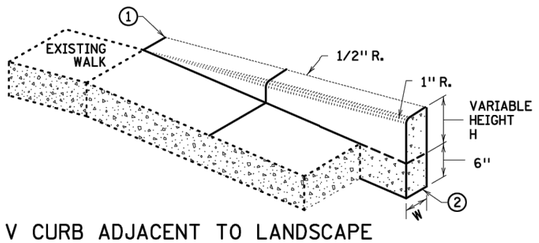
SHEET 11 OF 25 SHEETS



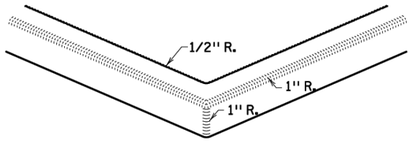
V CURB ADJACENT TO LANDSCAPE

CURB WITHIN SIDEWALK LIMITS

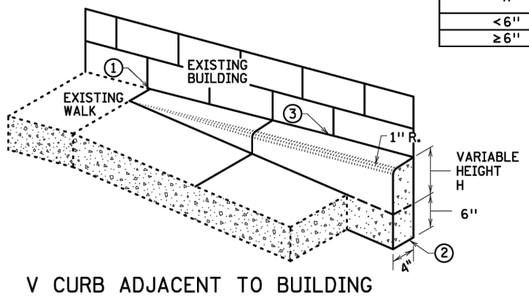


V CURB ADJACENT TO LANDSCAPE

CURB OUTSIDE SIDEWALK LIMITS

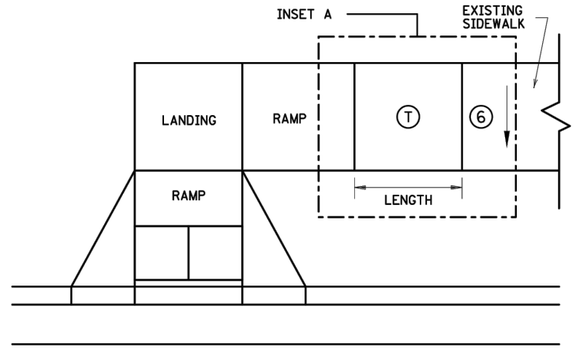


V CURB INTERSECTION

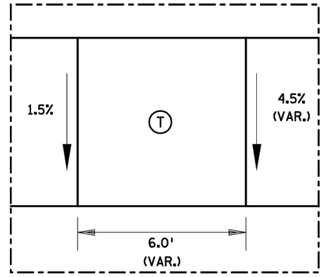


V CURB ADJACENT TO BUILDING OR BARRIER

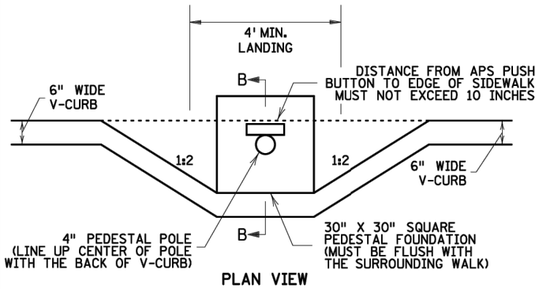
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



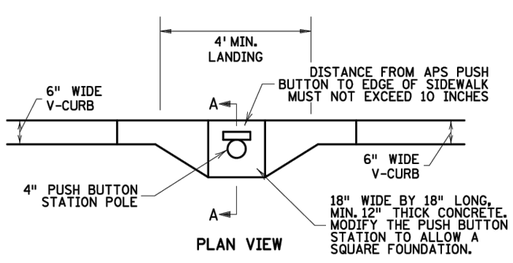
TRANSITION PANEL ④⑤



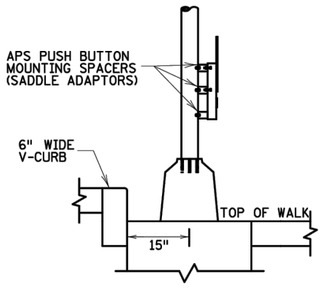
INSET A



PLAN VIEW

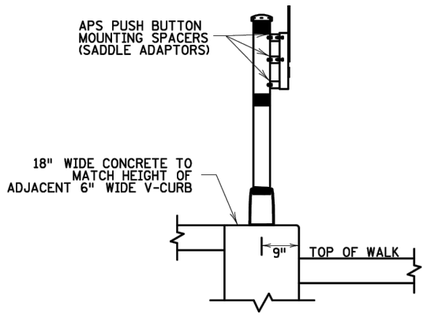


PLAN VIEW



SECTION B-B

SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



SECTION A-A

PUSH BUTTON STATION (V-CURB)

NOTES:

A WALKABLE FLARE IS AN 8-10% CONCRETE FLARE THAT IS REQUIRED WHEN THE FLARE IS ADJACENT TO A WALKABLE SURFACE, OR WHEN THE PEDESTRIAN PATH OF TRAVEL OF A PUSH BUTTON TRAVERSES THE FLARE.

ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.

WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.

V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.

V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.

① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.

② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.

③ CONSTRUCT USING APPROVED EXPANSION MATERIAL PER MNDOT TYPE A-E EXPANSION. LEAVE A MINIMUM ½" TOP GAP AND SEAL WITH MNDOT APPROVED SILICONE PER MNDOT SPEC 3722.

④ THE MAX. RATE OF CROSS SLOPE TRANSITIONING IS 1' LINEAR FOOT OF SIDEWALK PER HALF PERCENT CROSS SLOPE. WHEN PAR WIDTH IS GREATER THAN 6' OR THE RUNNING SLOPE IS GREATER THAN 5%, DOUBLE THE CALCULATED TRANSITION LENGTH.

⑤ TRANSITION PANELS ARE TO ONLY BE USED AFTER THE RAMP, OR IF NEEDED, LANDING ARE AT THE FULL CURB HEIGHT (TYPICAL SECTION).

⑥ EXISTING CROSS SLOPE GREATER THAN 2.0%.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

Ⓢ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

Ⓣ TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.

REVISION:

APPROVED: 11-04-2021

JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS CZYRBICKI
STATE DESIGN ENGINEER

STANDARD PLAN 5-297.250 | 5 OF 6

APPROVED: 11-04-2021
REVISED:

PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

DATE	REVISION

Nov 22, 2024 - 10:47am
O:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkum St 25-02\Plan Drawings\Details.dwg

City of RAMSEY

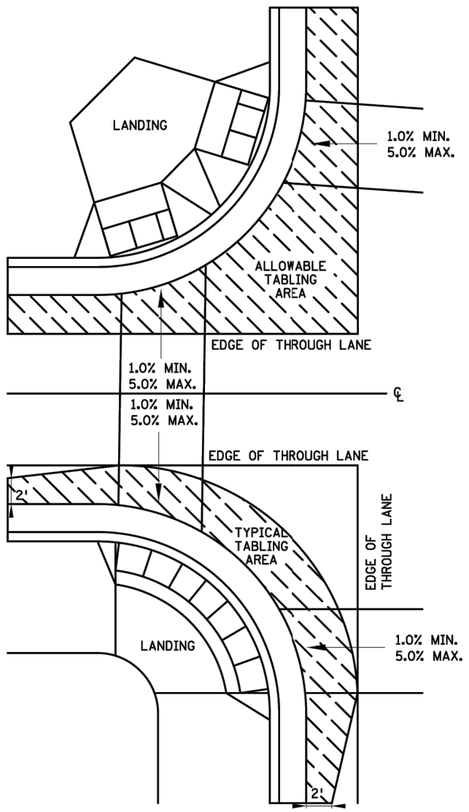
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

MNDOT PEDESTRIAN RAMP DETAILS

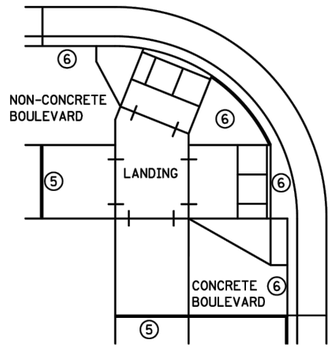
S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

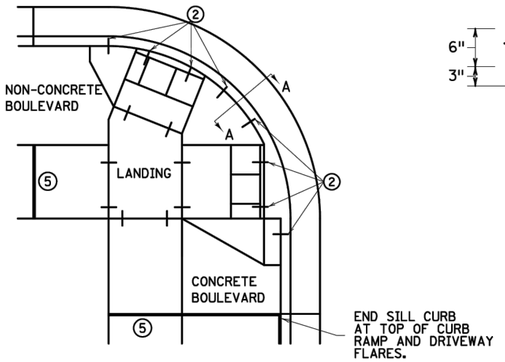
SHEET 12 OF 25 SHEETS



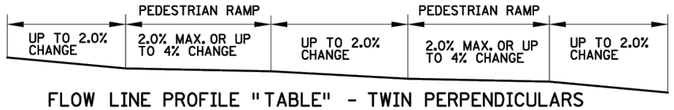
CURB LINE AND ROAD CROSSING ADJUSTMENTS



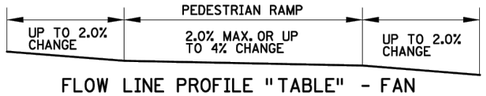
EXPANSION MATERIAL PLACEMENT
FOR CONCRETE ROADWAYS



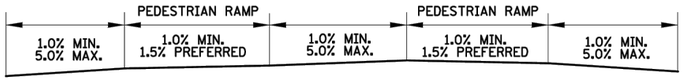
CURB LINE REINFORCEMENT ④
PLACEMENT ON BITUMINOUS ROADWAYS



FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS

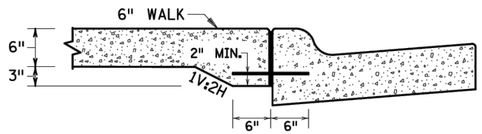


FLOW LINE PROFILE "TABLE" - FAN

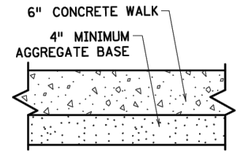


FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS

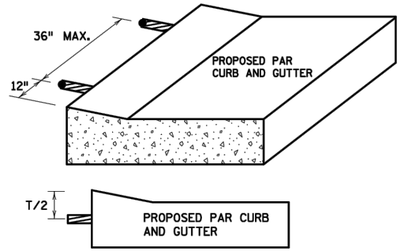
FLOW LINE PROFILE RAISE - FAN



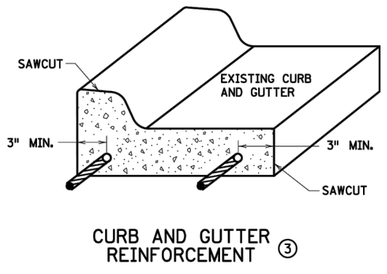
SECTION VIEW A-A
THICKENED SECTION
THROUGH CURB RAMP FLARES



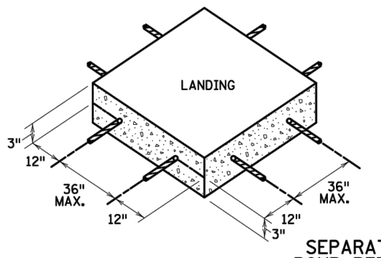
TYPICAL SIDEWALK SECTION
WITHIN INTERSECTION CORNER

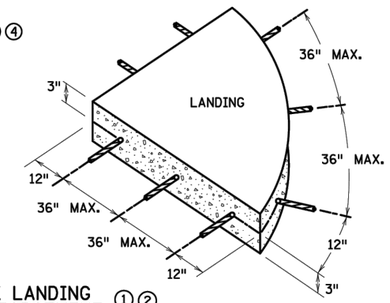


CURB RAMP REINFORCEMENT DETAILS ②④



CURB AND GUTTER
REINFORCEMENT ③





SEPARATE LANDING
POUR REINFORCEMENT ①②

GENERAL NOTES:

"TABLING" OF CROSSWALKS MEANS MAINTAINING LESS THAN 2% CROSS SLOPE WITHIN A CROSSWALK, IS REQUIRED WHEN A ROADWAY IS IN A STOP OR YIELD CONDITION AND THE PROJECT SCOPE ALLOWS.

RECONSTRUCTION PROJECTS: ON FULL PAVEMENT REPLACEMENT PROJECTS "TABLING" OF ENTIRE CROSSWALK SHALL OCCUR WHEN FEASIBLE.

MILL & OVERLAY PROJECTS: "TABLING" OF FLOW LINES, IN FRONT OF THE PEDESTRIAN RAMP, IS REQUIRED WHEN THE EXISTING FLOW LINE IS GREATER THAN 2%. WARPING OF THE BITUMINOUS PAVEMENT CAN NOT EXTEND INTO THE THROUGH LANE. TABLE THE FLOW LINE TO 2% OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA;

1) 1.0% MIN. CROSS-SLOPE OF THE ROAD
2) 5.0% MAX. CROSS-SLOPE OF THE ROAD
3) "TABLE" FLOW LINE UP TO 4% CHANGE FROM EXISTING SLOPE IN FRONT OF PEDESTRIAN RAMP
4) UP TO 2% CHANGE IN FLOW LINE FROM EXISTING SLOPE BEYOND THE PEDESTRIAN CURB RAMP

STAND-ALONE ADA RETROFITS: FOLLOW MILL & OVERLAY CRITERIA ABOVE HOWEVER ALL PAVEMENT WARPING IS DONE WITH BITUMINOUS PATCHING ON BITUMINOUS ROADWAYS AND FULL-DEPTH APRON REPLACEMENT ON CONCRETE ROADWAYS.

RAISING OF CURB LINES SHOULD OCCUR IN VERTICALLY CONSTRAINED AREAS. RAISE THE CURB LINES ENOUGH TO ALLOW COMPLIANT RAMPS OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA;

1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
3) 5.0% RECOMMENDED MAX. FLOW LINE
4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

NOTES:

① TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET FOR ALL SEPARATELY POURED INITIAL LANDINGS.

② DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) AT 36" MAXIMUM CENTER TO CENTER MINIMUM 12" SPACING FROM CONSTRUCTION JOINTS. BARS TO BE ADJUSTED TO MATCH RAMP GRADE. BARS TO BE PAID BY EACH.

③ DRILL AND GROUT 2 - NO. 4 X 12" LONG (6" EMBEDDED) REINFORCEMENT BARS (EPOXY COATED). REINFORCEMENT REQUIRED FOR ALL CONSTRUCTION JOINTS. BARS TO BE PAID BY EACH.

④ THIS CURB LINE REINFORCEMENT DETAIL SHALL BE USED ON BITUMINOUS ROADWAYS. FOR CONCRETE ROADWAYS, SEE NOTE 6.

⑤ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.

⑥ USE AN APPROVED TYPE F (1/4 INCH THICK) SEPARATION MATERIAL. SEPARATION MATERIAL SHALL MATCH FULL HEIGHT DIMENSION OF ADJACENT CONCRETE.

REVISION:

APPROVED: 11-04-2021
JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 6 OF 6

APPROVED: 11-04-2021
REVISED:
THOMAS STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

DATE	REVISION

Nov 22, 2024 - 10:47am
G:\Engineering\Acad\Cad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkrum St 25-02\Plan Drawings\Details.dwg

City of RAMSEY

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

MNDOT PEDESTRIAN RAMP DETAILS

S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 13 OF 25 SHEETS

0 5 10 15
SCALE (FEET)

N

869.20
13'
FHC
3'
0" HC
868.87
F
869.10
3'
0" HC
868.99
FHC

FHC
0" HC
868.54
5'
3'
868.76
S
3'
4'
868.66
0" HC
868.40
FHC

SUNWOOD DR

GERMANIUM ST

FHC
0" HC
869.06
869.24
5'
3'
F
869.34
3'
0" HC
869.00
8'
FHC

FHC
0" HC
868.30
3'
7'
868.63
0" HC
868.53
FHC
S
3'
7'
868.73

LEGEND

- (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- LANDING AREA - 4'X4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS.
- CONCRETE
- BITUMINOUS PAVEMENT
- 2" BITUMINOUS OVERLAY
- TRUNCATED DOME
- DRAINAGE FLOW ARROW
- GUTTER LINE
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- P–BUR BURIED POWER
- C BURIED COMMUNICATIONS
- FO BURIED FIBRE OPTIC
- G BURIED GAS
- STREET LIGHT

DATE	REVISION

Nov 22, 2024 - 11:03am
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkrum St 25-02\Plan Drawings\Intersection Details.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC		
DRAWN BY:	LWC	DATE:	11/22/24
CHECKED BY:	JJF	FILE:	25-02

City of RAMSEY

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

INTERSECTION DETAILS - SUNWOOD DR & GERMANIUM ST
S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 14 OF 25 SHEETS

0 5 10 15
SCALE (FEET)

N

FLUORINE ST

SUNWOOD DR

867.05
3'
FHC
0" HC
866.72
866.95
3'
0" HC
866.80
FHC

FHC
3'
0" HC
866.62
867.12
867.02
3'
FHC
0" HC
866.76

LEGEND

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- CONCRETE
- BITUMINOUS PAVEMENT
- 2" BITUMINOUS OVERLAY
- TRUNCATED DOME
- DRAINAGE FLOW ARROW
- GUTTER LINE
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- P—BUR BURIED POWER
- C BURIED COMMUNICATIONS
- FO BURIED FIBRE OPTIC
- G—G—G—G—G BURIED GAS
- STREET LIGHT

0" HC
866.68
FHC
3' 3'
866.94
867.04
0" HC
866.60
FHC
3'
9'

866.96
3'
FHC
0" HC
866.64
867.06
3'
0" HC
866.56
8'
FHC

DATE	REVISION

Nov 22, 2024 - 12:37pm
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Intersection Details.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC	
DRAWN BY:	LWC	DATE: 11/22/24
CHECKED BY:	JJF	FILE: 25-02

City of RAMSEY

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

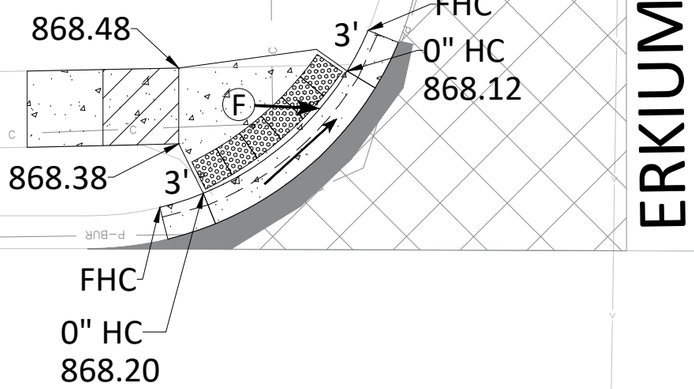
INTERSECTION DETAILS - SUNWOOD DR & FLUORINE ST
S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 15 OF 25 SHEETS

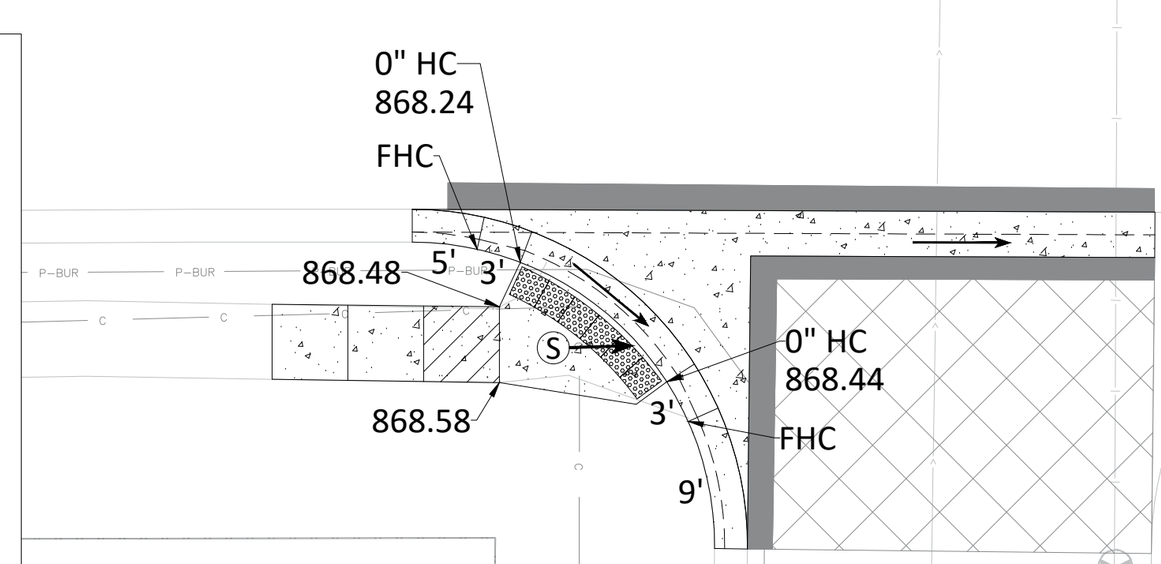
0 5 10 15
SCALE (FEET)

N



ERKIUM ST

SUNWOOD DR



LEGEND

- (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- LANDING AREA - 4'X4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS.
- CONCRETE
- BITUMINOUS PAVEMENT
- 2" BITUMINOUS OVERLAY
- TRUNCATED DOME
- DRAINAGE FLOW ARROW
- GUTTER LINE
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- BURIED POWER
- BURIED COMMUNICATIONS
- BURIED FIBRE OPTIC
- BURIED GAS
- STREET LIGHT

DATE	REVISION

Nov 22, 2024 - 2:28pm
C:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Intersection Details.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC		
DRAWN BY:	LWC	DATE:	11/22/24
CHECKED BY:	JJF	FILE:	25-02

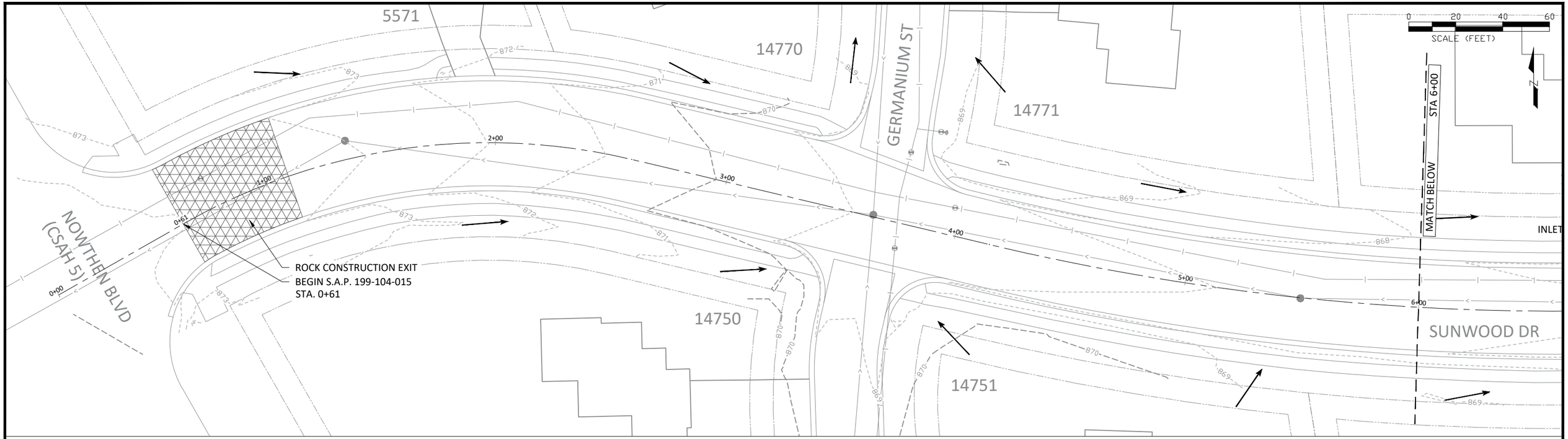
City of RAMSEY

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

INTERSECTION DETAILS - SUNWOOD DR & ERKIUM ST
S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

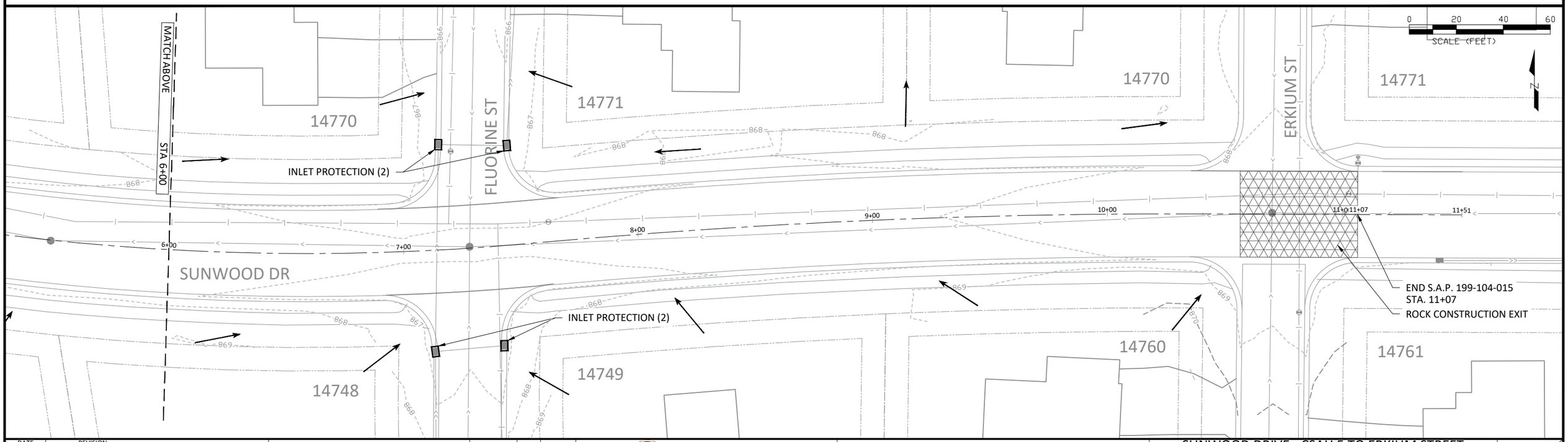
SHEET 16 OF 25 SHEETS



LEGEND

- INLET PROTECTION
- DRAINAGE ARROW
- CONSTRUCTION EXIT
- LOT LINE
- EASEMENT - DRAINAGE & UTILITY
- MINOR CONTOUR
- MAJOR CONTOUR

NOTE:
1. ROCK CONSTRUCTION EXITS MUST BE MAINTAINED THROUGHOUT THE PROJECT, THE CONTRACTOR WILL BE RESPONSIBLE FOR SWEEPING TRACKING ONTO ADJACENT STREETS WITHIN 3 HOURS OF NOTIFICATION BY THE CITY.



DATE	REVISION

Nov 22, 2024 - 11:08am
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Erosion Control.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

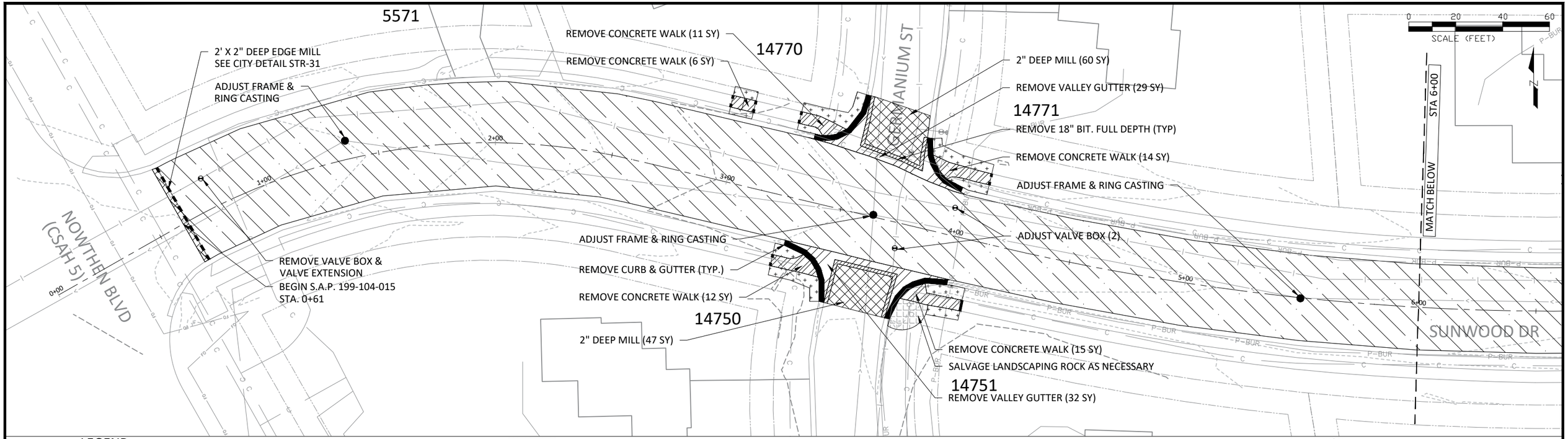
DESIGNED BY:	LWC		
DRAWN BY:	LWC	DATE:	11/22/24
CHECKED BY:	JJF	FILE:	25-02

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

EROSION CONTROL

S.A.P. 199-104-015

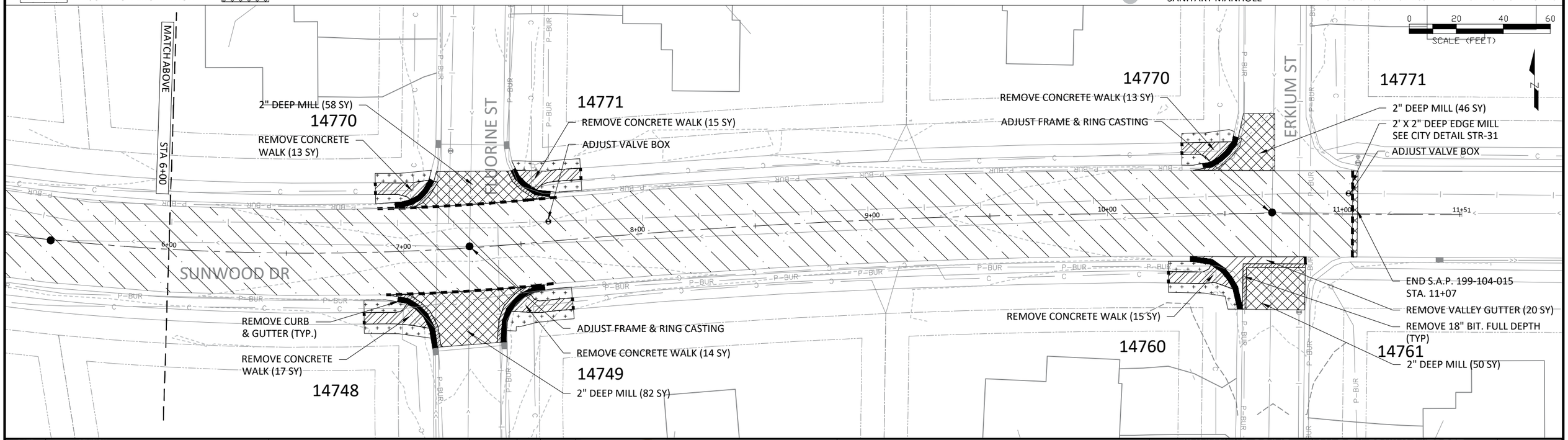
SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA



LEGEND

- SAWCUT - FULL DEPTH
- REMOVE CURB - CONCRETE
- COMMON EXCAVATION
- FULL DEPTH RECLAMATION
- REMOVE PAVEMENT - BITUMINOUS
- REMOVE CONCRETE VALLEY GUTTER
- MILL BITUMINOUS PAVEMENT - STREET TIE-IN
- REMOVE CONCRETE WALK
- LANDSCAPE - ROCK
- EASEMENT - DRAINAGE & UTILITY
- LOT LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- UNDERGROUND POWER
- COMMUNICATION LINE
- GAS LINE
- WATERMAIN
- SANITARY SEWER
- STORM SEWER
- WATERMAIN VALVE
- HYDRANT
- CATCH BASIN
- SANITARY MANHOLE

NOTE:
1. REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
2. PROTECT LANDSCAPING AND IRRIGATION. PROPERTY OWNERS ARE TO LOCATE AND MOVE IRRIGATION BEFORE CONSTRUCTION.
3. EROSION CONTROL MUST BE IN-PLACE PRIOR TO REMOVALS.



DATE	REVISION

Nov 22, 2024 - 1:41pm
C:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Removals.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC	
DRAWN BY:	LWC	DATE: 11/22/24
CHECKED BY:	JJF	FILE: 25-02

City of RAMSEY

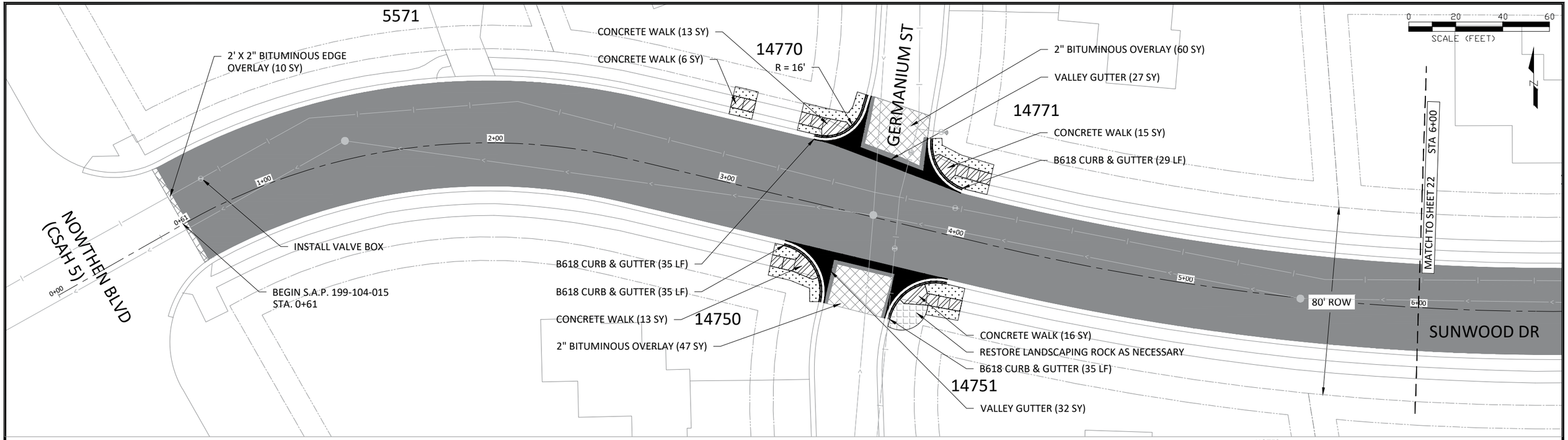
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

REMOVALS

S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 18 OF 25 SHEETS

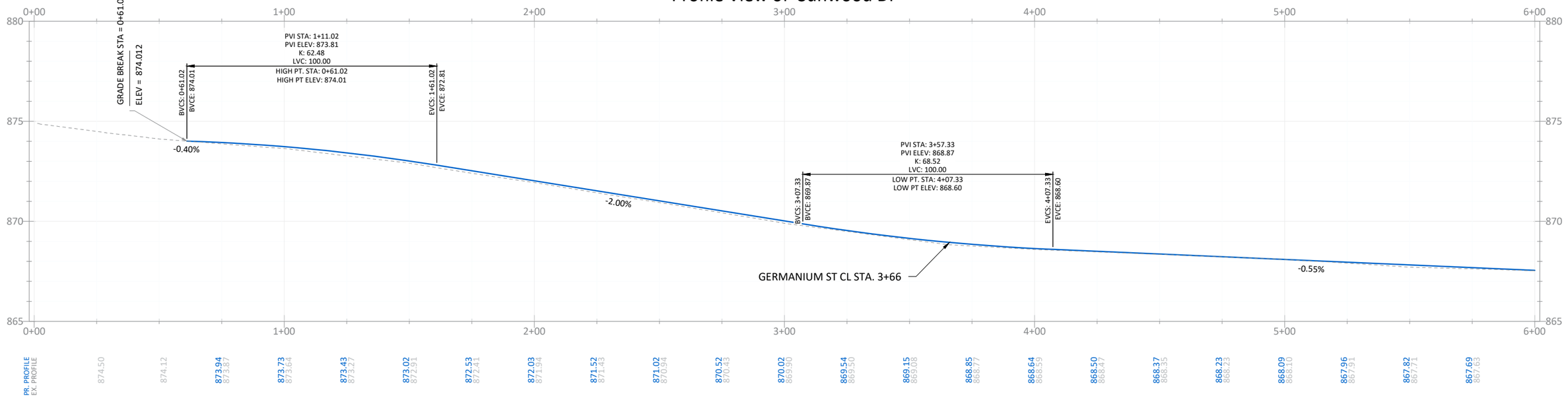


LEGEND

- BIT PAVEMENT
- 2" BITUMINOUS OVERLAY
- B618 CURB & GUTTER
- VALLEY GUTTER
- CONCRETE WALK
- SEEDING AREA
- EASEMENT - DRAINAGE & UTILITY
- LOT LINE
- LANDSCAPE - ROCK
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- WATERMAIN VALVE
- HYDRANT
- CATCH BASIN
- SANITARY MANHOLE
- GROUT CATCH BASIN

NOTES:
1. ALL RADII TO BE CONSTRUCTED AT 20' UNLESS OTHERWISE NOTED.
2. TYPICAL SECTION SEE SHEET 05.
3. RESTORATION AREAS ARE SHOWN IN A GENERAL MANNER ONLY.
4. RESTORE ALL DISTURBED AREAS WITH 4" TOPSOIL, HYDROSEED, MNDOT SEED MIX 25-151, AND HYDRAULIC MATRIX TYPE MULCH UNLESS OTHERWISE NOTED.
5. CONSTRUCTION LIMITS BORDER ALL HATCHED AREAS ON PLAN VIEW.

Profile View of Sunwood Dr



PR. PROFILE	874.50	874.12	873.94	873.73	873.43	873.02	872.53	872.03	871.52	871.02	870.52	870.02	869.54	869.15	868.85	868.64	868.50	868.37	868.23	868.09	867.96	867.82	867.69
EX. PROFILE			873.87	873.64	873.27	872.91	872.41	871.94	871.43	870.94	870.43	869.90	869.50	869.08	868.77	868.59	868.47	868.35	868.23	868.10	867.91	867.71	867.63

DATE	REVISION

Dec 13, 2024 - 9:11am
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Street Improvements.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC	
DRAWN BY:	LWC	DATE: 11/22/24
CHECKED BY:	JJF	FILE: 25-02

City of RAMSEY

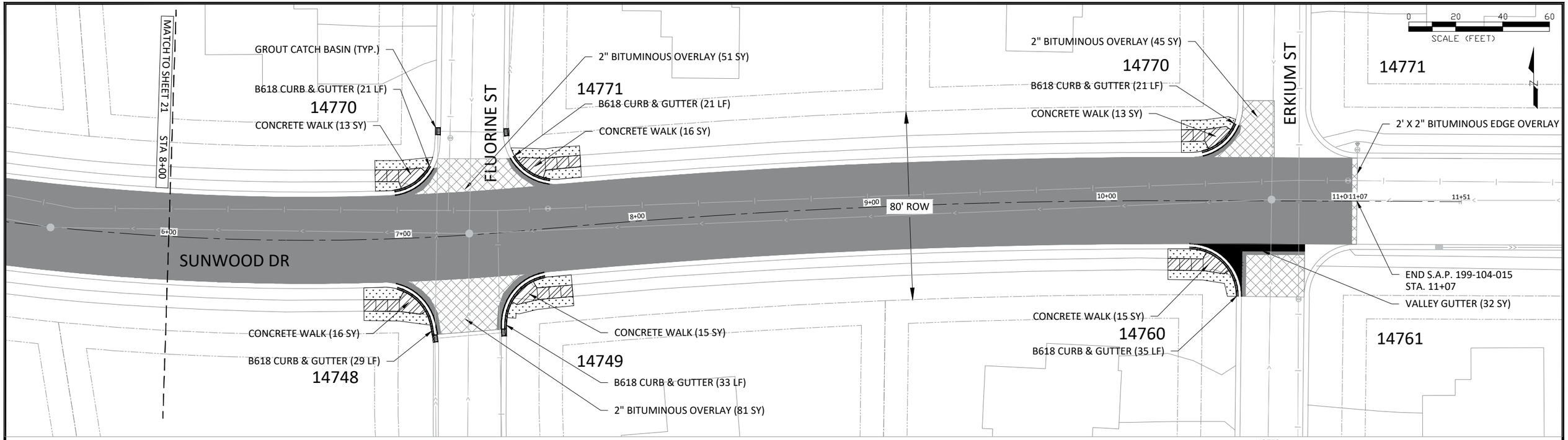
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

STREET CONSTRUCTION

S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 19 OF 25 SHEETS

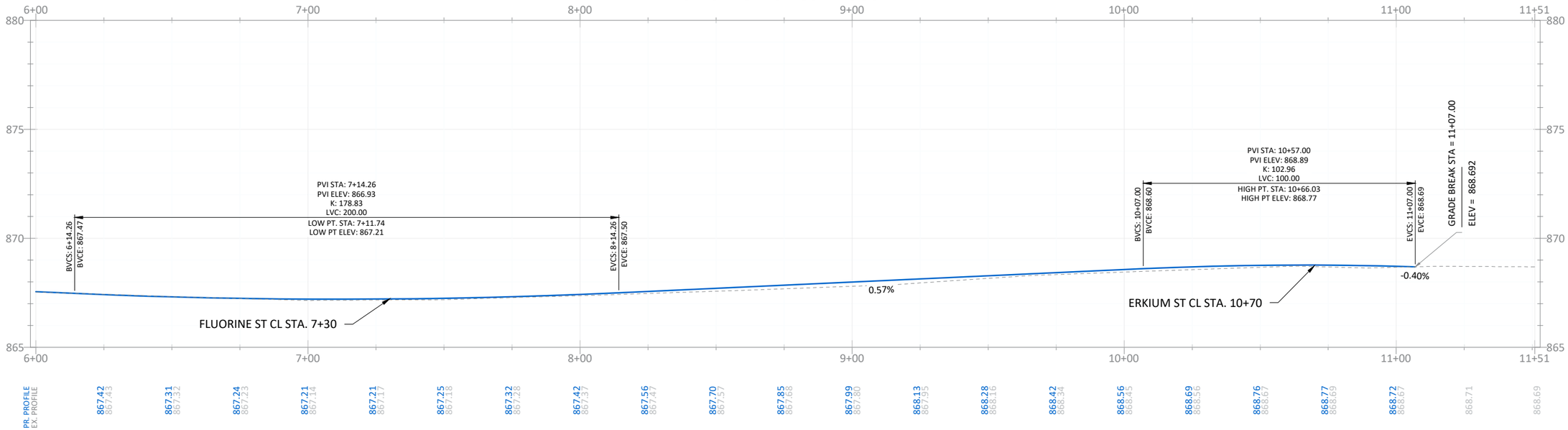


LEGEND

- BIT PAVEMENT
- 2" BITUMINOUS OVERLAY
- B618 CURB & GUTTER
- VALLEY GUTTER
- CONCRETE WALK
- SEEDING AREA
- EASEMENT - DRAINAGE & UTILITY
- LOT LINE
- LANDSCAPE - ROCK
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- WATERMAIN VALVE
- HYDRANT
- CATCH BASIN
- SANITARY MANHOLE
- GROUT CATCH BASIN

NOTES:
1. ALL RADII TO BE CONSTRUCTED AT 20' UNLESS OTHERWISE NOTED.
2. TYPICAL SECTION SEE SHEET 05.
3. RESTORATION AREAS ARE SHOWN IN A GENERAL MANNER ONLY.
4. RESTORE ALL DISTURBED AREAS WITH 4" TOPSOIL, HYDROSEED, MNDOT SEED MIX 25-151, AND HYDRAULIC MATRIX TYPE MULCH UNLESS OTHERWISE NOTED.
5. CONSTRUCTION LIMITS BORDER ALL HATCHED AREAS ON PLAN VIEW.

Profile View of Sunwood Dr



DATE	REVISION

Dec 13, 2024 - 9:10am
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CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

LEGEND

STRIPING KEY & LEGEND

PAVEMENT MARKING

CROSSWALK MARKING

CIRCLE - EPOXY

1ST DIGIT WIDTH 4",8",ETC.

2ND DIGIT PATTERN S-SOLID B-BROKEN D-DOUBLE

3RD DIGIT COLOR W-WHITE Y-YELLOW B-BLACK

EXAMPLE: 4SW = 4" SOLID WHITE - EPOXY

5571

14770

14771

14750

14751

14748

14749

14760

14761

GERMANIUM ST

NOWTHEN BLVD (CSAH 5)

SUNWOOD DR

FLUORINE ST

ERKIUM ST

MATCH ABOVE

MATCH BELOW

4SW

4DY

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 11+51

(6) 3'x 8' CROSSWALK MARKING (MULTI-COMP)

0 20 40 60 SCALE (FEET)

N

DATE	REVISION

Nov 22, 2024 - 1:49pm
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City of RAMSEY

CITY OF RAMSEY
7550 SUNWOOD DRIVE
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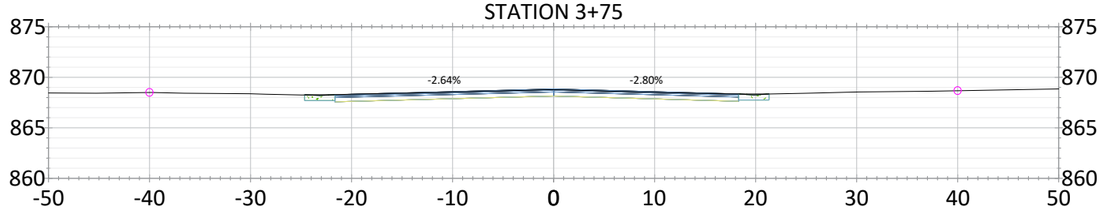
PAVEMENT MARKING

S.A.P. 199-104-015

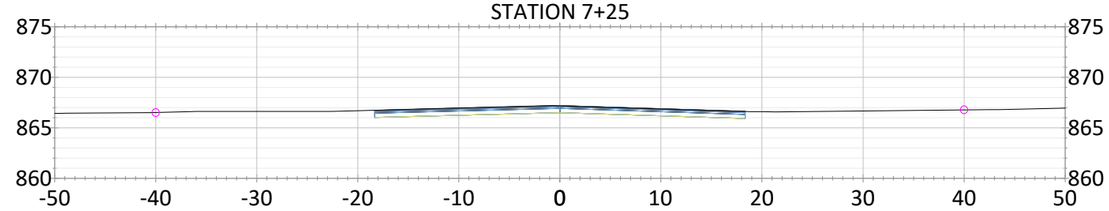
SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 21 OF 25 SHEETS

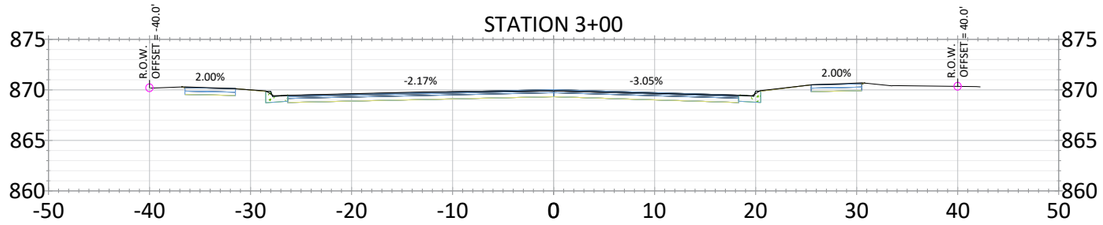
STATION 3+75



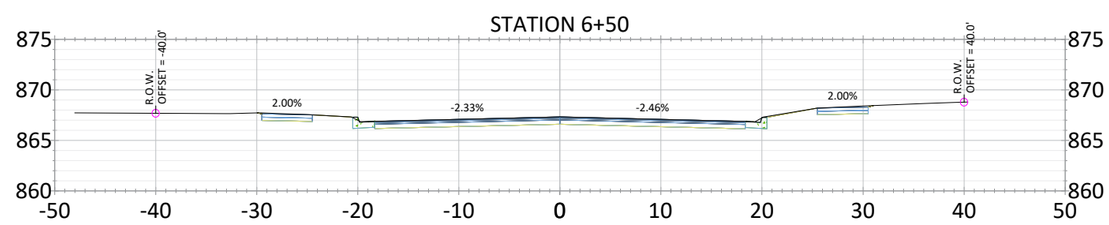
STATION 7+25



STATION 3+00



STATION 6+50



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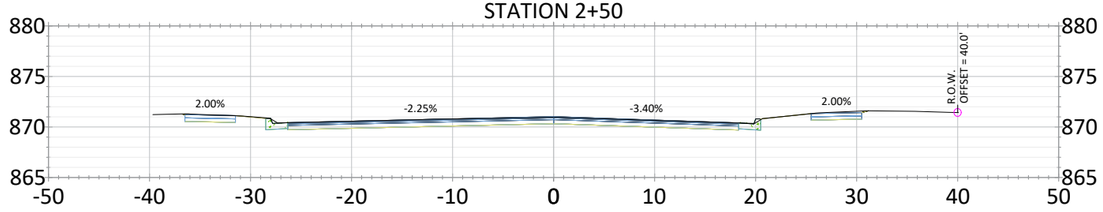

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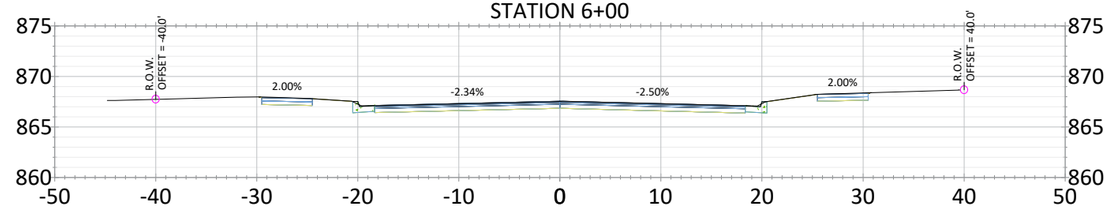
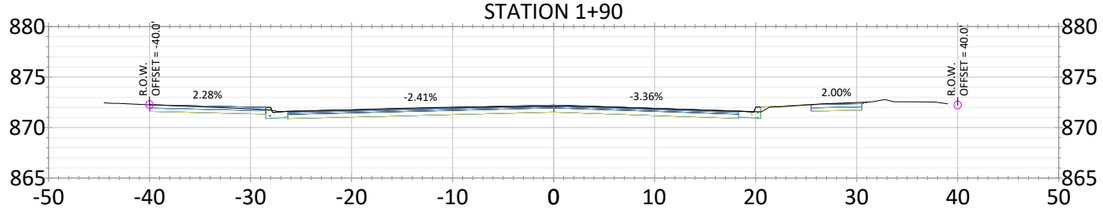
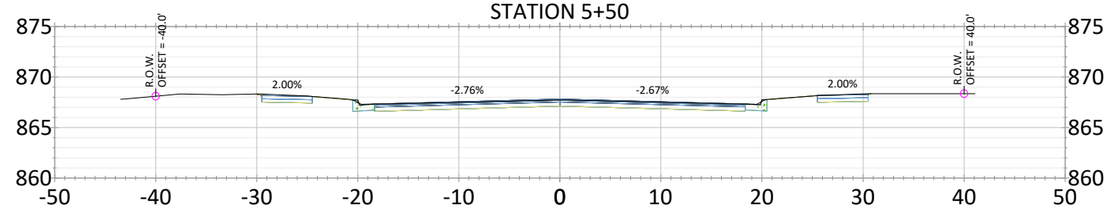


STATION 1+90



STATION 5+50



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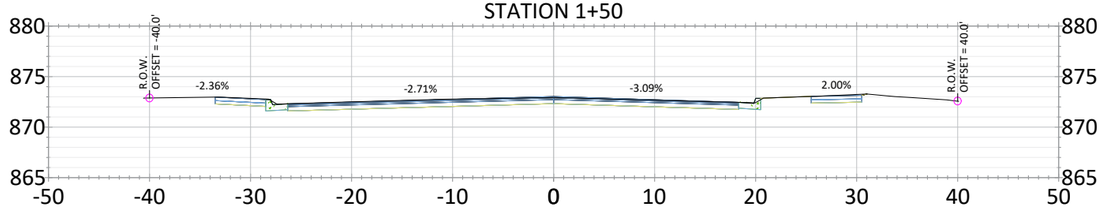

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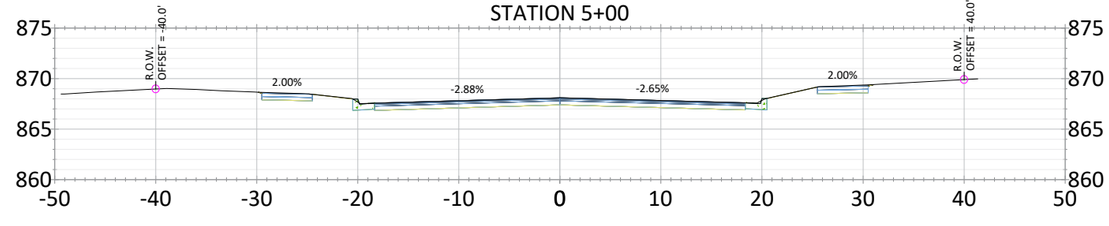

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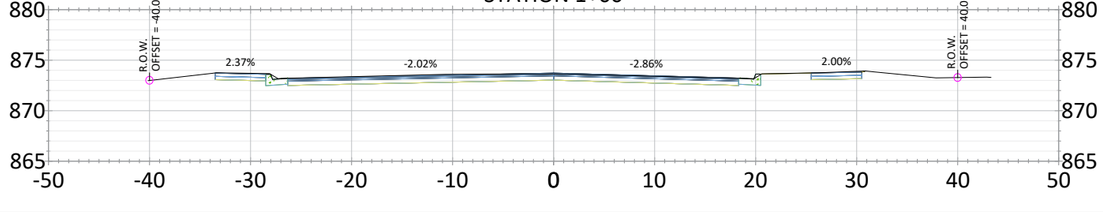
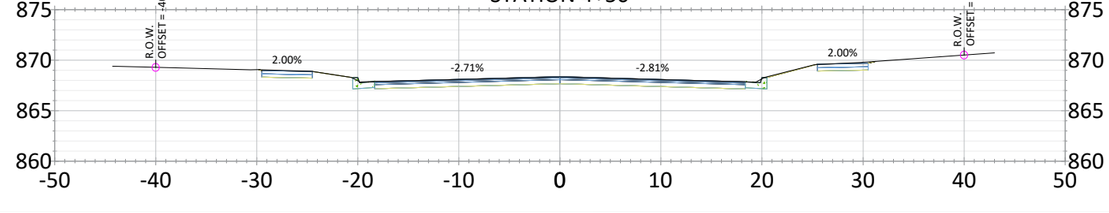


STATION 4+50



DATE	REVISION

Nov 22, 2024 - 2:21pm
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JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC		
DRAWN BY:	LWC	DATE:	11/22/24
CHECKED BY:	JJF	FILE:	25-02

City of RAMSEY

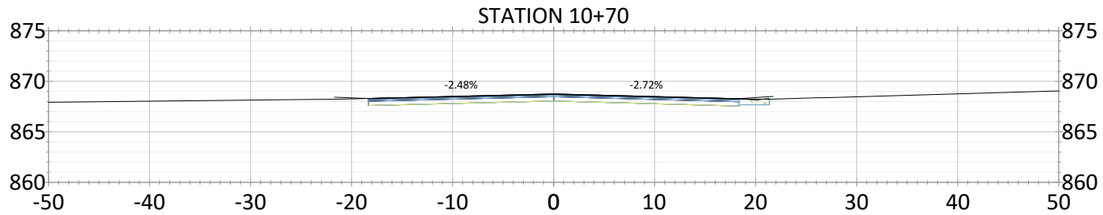
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

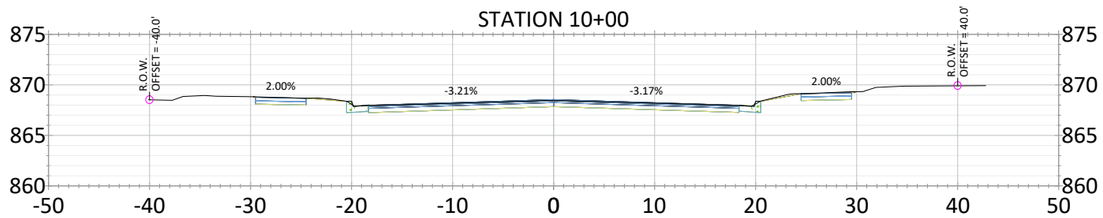
CROSS SECTIONS - STA. 1+00 - 7+25

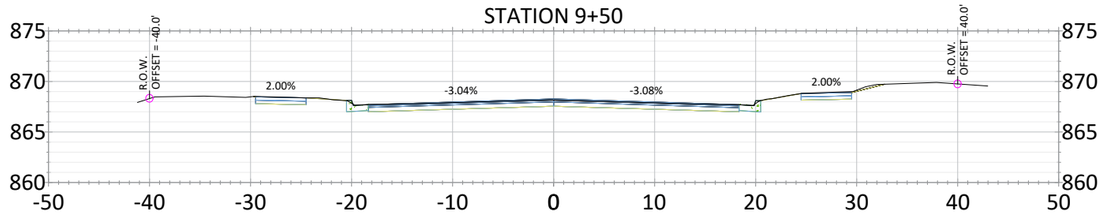
S.A.P. 199-104-015

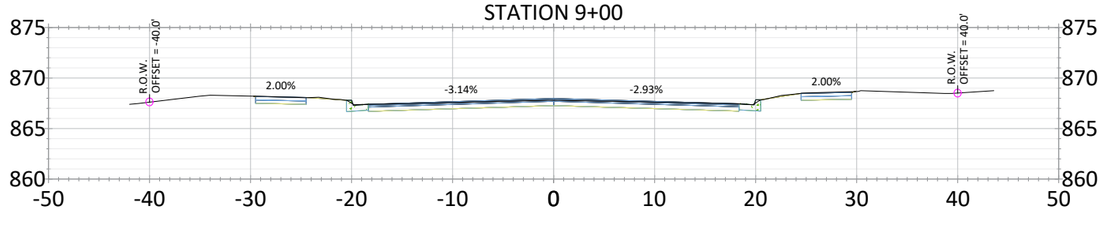
SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

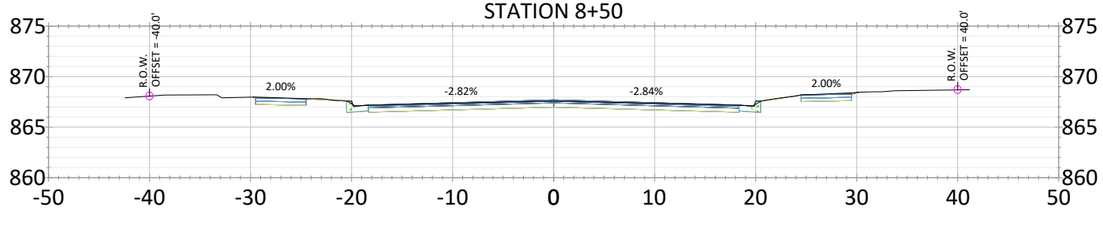
SHEET 22 OF 25 SHEETS

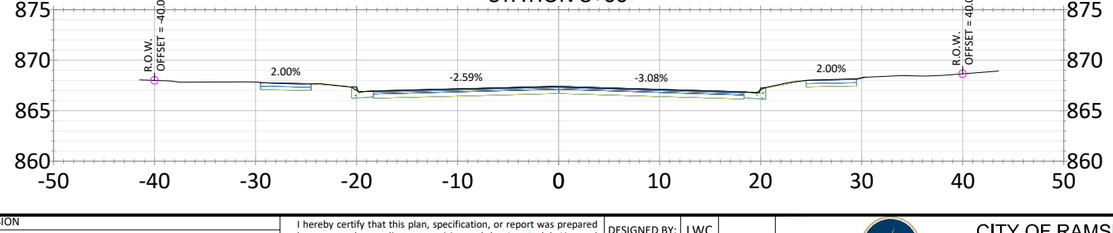












DATE	REVISION

Nov 22, 2024 - 2:22pm
C:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\Cross Sections.dwg

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Date 11/22/24 Lic. No. 57095

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CHECKED BY:	JJF	FILE: 25-02

City of RAMSEY

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

CROSS SECTIONS - STA. 8+00 - 10+70

S.A.P. 199-104-015

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET
RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 23 OF 25 SHEETS

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION

CITY OF RAMSEY
ANOKA COUNTY, MINNESOTA

DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:

Construction activities include; Site Grading, Temporary Erosion and Sediment Control, Roadway Construction, and Permanent Stabilization.

Project Description: This project consists of reconstructing 0.20 miles of existing urban bituminous streets, using full depth reclamation. The project also includes the replacement of 10 pedestrian ramps and 3 concrete valley gutters. The drainage for the existing streets use concrete curb and gutter. Outfall locations will remain the same.

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 disturbing 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	LOGAN CZECH	763-453-2531
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 NOT is filed.

Documentation shall include:

a. Names of trained personnel associated with this project.
b. Dates of training, names of instructor(s) and entity providing training.
c. Content of training course or workshop including the number of hours trained.
d. 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.

DOCUMENTATION RETENTION:

The following documentation will be retained for a period of not less than 3-years form the date of submittal of the NOT.

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

IMPLEMENTATION SCHEDULE AND PHASING:

1. Furnish & Install inlet protection.
2. Reclamation of existing bituminous pavement.
3. Remove excess subsoil.
4. Place aggregate base material.
5. Rough grade site.
6. Furnish & install curb & gutter.
7. Furnish & install bituminous pavement.
8. Add additional temporary BMP's as necessary during construction based on inspection reports.
9. Submit Notice of Termination (NOT) to MPCA within 30 days of final stabilization.

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 which 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 pervious 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 BMP's (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 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 drainage ways 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 the 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.

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 this 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

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 MPCA disposal regulations.
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 MPCA 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.

GENERAL STORMWATER DISCHARGE REQUIREMENTS:

All requirements listed in Part 15 of the permit for the design of permanent stormwater treatment system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

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

RECEIVING WATERS:

Recieving 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 BMP's relative to construction activities listed in this permit for special and impaired waters have been incorporated into this plan. All specific BMP's listed in approved TMDLs and those BMP's 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?
RUM RIVER	RIVER	YES	YES	YES
DO; FISHESBIO; INVERTBIO				

PROJECT AREAS:

Total project size (disturbed area) =	1.13	acres
Existing area of impervious surface =	1.08	acres
Post construction area of impervious surface =	1.08	acres
Impervious surface area increased =	0.00	acres

Planned construction start date: **May 2025**
Planned construction completion date: **August 2025**

PROJECT LOCATION:

County: ANOKA Township: 32 Range: 25 Section: 25 Latitude: 45.238529 Longitude: -93.406599

PERMANENT STORMWATER MANAGEMENT SYSTEM:

Type of storm water management used if more than 1 acre of new impervious surface is created:

a. Wet Sedimentation Pond
b. Infiltration / Filtration
c. Regional Pond
d. Permanent Stormwater Management Not Required

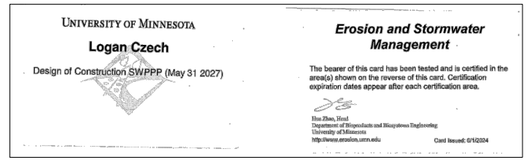
LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN:

DESCRIPTION	LOCATION
TEMPORARY EROSION CONTROL MEASURES	SHEET No. 17
FINAL STABILIZATION	SHEETS No. 19 - 20
EROSION AND SEDIMENT CONTROL DETAILS	SHEET No. 06

EROSION AND SEDIMENT CONTROL QUANTITIES:

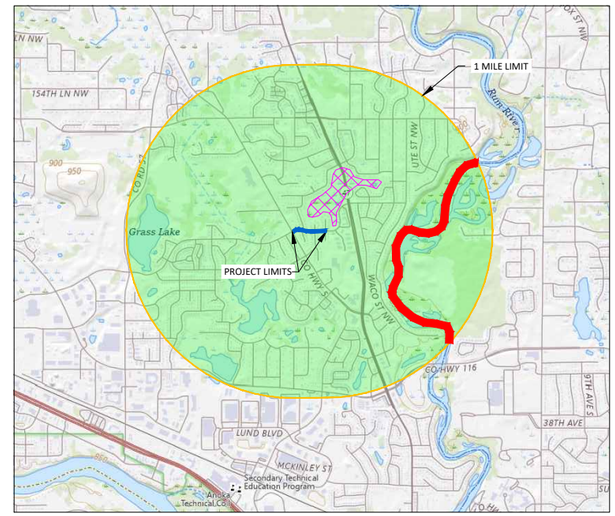
			S.A.P. 199-112-010		
			PROJECT TOTAL	PARTICIPATING	NON-PARTICIPATING
2573.502	STORM DRAIN INLET PROTECTION	EA	4	4	0
2573.602	STABILIZED CONSTRUCTION EXIT	EA	2	2	0

CERTIFICATION:



LEGEND

PROJECT LIMITS
RECEIVING WATER
1 MILE LIMIT
IMPAIRED WATER



DATE	REVISION
12/16/24	ADDED SWPPP

Dec 16, 2024 - 2:05pm
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\02-SWPPP.dwg

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SWPPP

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA

SHEET 24 OF 25 SHEETS

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, inlet protection.
5. Reclaim existing bituminous pavement and base.
6. Haul-off excess reclamation material.
7. Remove excess subsoil.
8. Place aggregate base material.
8. Grade and compact base material.
9. Furnish & install curb & gutter
13. Furnish & install base course of bituminous pavement
14. Complete restoration per plan.
14. Furnish & install wear course of bituminous pavement
15. 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 7:00 a.m. - 10:00 p.m. Monday through Saturday.
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 the plan and other MPCA permit requirements.

EROSION PREVENTION PRACTICES:

1. 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.
2. All exposed soil areas must be stabilized as soon as practical, but in no case later than 7 days after the construction area has temporarily or permanently ceased.
   These areas include constructed stormwater management pond side slopes, and any exposed soil areas with a positive slope to a stormwater 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 4 inches topsoil, seeded and mulched within 7 days of completion of site grading. Seeding shall be in accordance with MnDOT Specification 2575. Where side slopes exceed or equal 1:3 and running slope is greater than 1:50, a polypropylene netting or wood fiber blanket shall be provided and staked over the mulched area. Seed and mulch types and applications rates are per plan and specification.
6. Refer to restoration plan for areas to be seeded or sodded for erosion control.

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 BMP's, 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 rip rap, 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.

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 BMP's 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 stormwater 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 BMP's 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.

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 persons conducting inspections;
   c. Accurate findings of inspections, including the specific location where corrective actions are needed;
   d. Corrective actions taken (including dates, times, and party completing maintenance activities);
   e. Date of all rainfall events greater than ½ inches in 24 hours, and the amount of rainfall for each event. Permittee(s) must obtain rainfall amounts by either a properly maintained rain gauge installed onsite, a weather station that is within one (1) mile of your location, or a weather reporting system that provides site specific rainfall data from radar summaries;
   f. If permittee(s) observe a discharge (i.e., color, odor, settled or suspended solids, oil sheen, and other obvious indicators of pollutant(s);
   g. Any amendments to the SWPPP proposed as a result of the inspection must be documented as required in Section 6 of the general permit within seven (7) calendar days.
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 occurs 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 BMP's. The permittee(s) must investigate and comply with the following inspection and maintenance requirements:
   a. All silt fence must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches ⅓ 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 ½ 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 paved surfaces within 3 hours after notification by the City that sweeping is required.
   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.

DATE	REVISION
12/16/24	ADDED SWPPP

Dec 16, 2024 - 2:06pm
G:\Engineering\AutoCad Dwgs\Projects N-Z\Sunwood Drive - CSAH 5 to Erkium St 25-02\Plan Drawings\GI\SWPPP.dwg

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

JOE FERIANCEK
Date 11/22/24 Lic. No. 57095

DESIGNED BY:	LWC		
DRAWN BY:	LWC	DATE:	11/22/24
CHECKED BY:	JJF	FILE:	25-02

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
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SWPPP

SUNWOOD DRIVE - CSAH 5 TO ERKIUM STREET RECONSTRUCTION
CITY PROJECT NO. 25-02
CITY OF RAMSEY, MINNESOTA