

CITY OF RAMSEY

NEIGHBORHOOD OVERLAY IMPROVEMENTS

CITY IMPROVEMENT PROJECT NO. 22-04

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

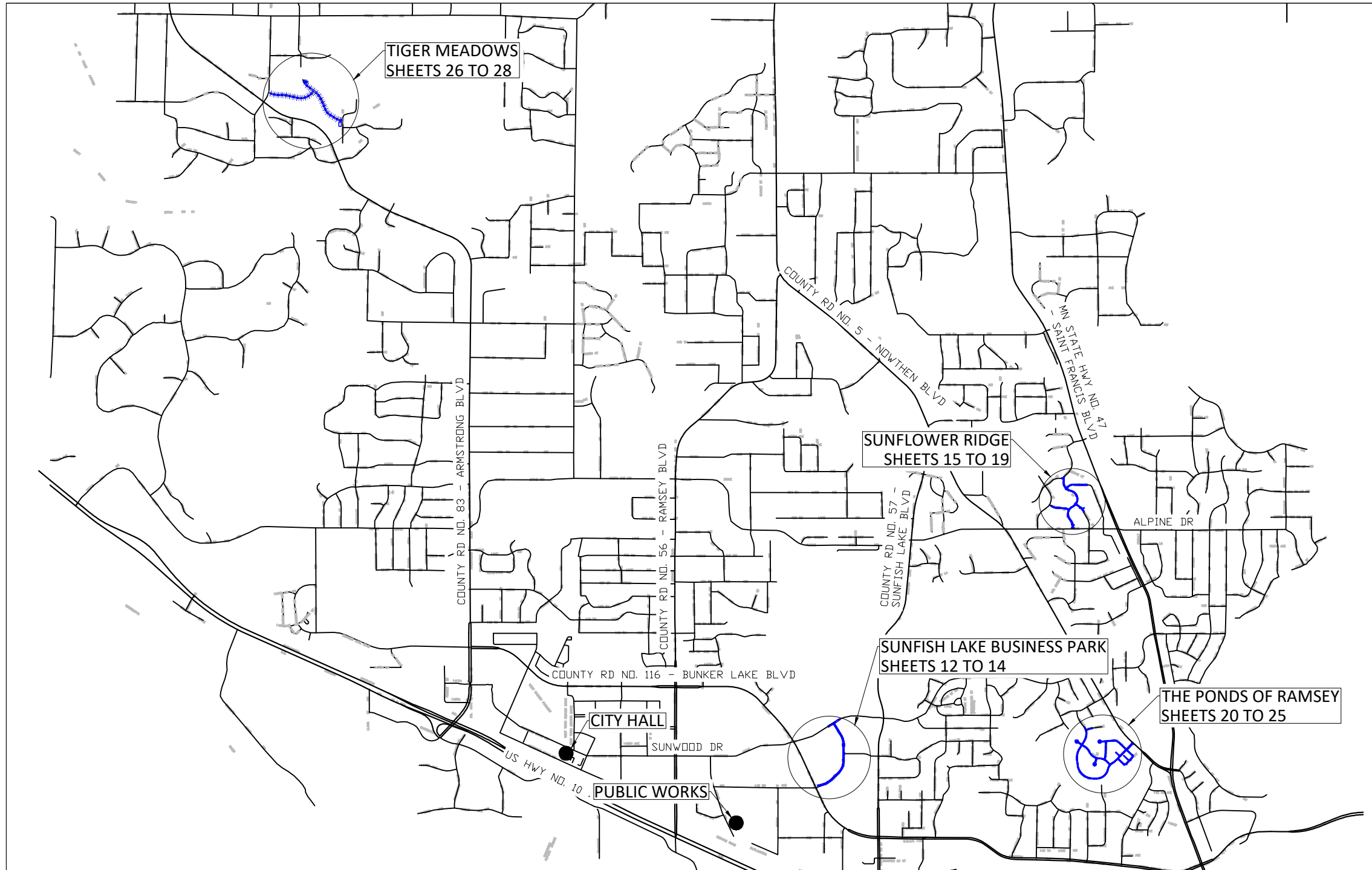
ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

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 XX SHEETS

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01	TITLE SHEET
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15-19	BITUMINOUS MILL & OVERLAY - SUNFLOWER RIDGE
20-25	BITUMINOUS MILL & OVERLAY - THE PONDS OF RAMSEY
26-28	BITUMINOUS MILL & OVERLAY - TIGER MEADOWS



LEGEND

- | | | | |
|--|--|--|-------------------------|
| | ADJUST SANITARY FRAME AND RING CASTING | | EASEMENT |
| | ADJUST STORM FRAME AND RING CASTING | | RIGHT OF WAY |
| | RESET CATCH BASIN | | ELECTRIC LINE |
| | GROUT CATCH BASIN | | GAS LINE |
| | FLARED END SECTION | | TELECOMMUNICATIONS LINE |
| | HYDRANT | | STORM SEWER |
| | ADJUST VALVE BOX | | SANITARY SEWER |
| | LIGHT POLE | | WATERMAIN |
| | | | SAWCUT FULL DEPTH |

- | | |
|--|---|
| | REMOVE CONCRETE WALK |
| | REMOVE BITUMINOUS TRAIL |
| | BITUMINOUS PAVEMENT PATCH |
| | HYDROSEED |
| | SODDING TYPE LAWN |
| | REMOVE & REPLACE CONCRETE CURB & GUTTER |
| | MILL & OVERLAY BITUMINOUS PAVEMENT |

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%.

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%.

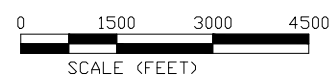
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Joe Feriancek
 JOE FERIANCEK, P.E.
 CIVIL ENGINEER II

57095 DATE 03/17/22
 LIC. NO.

DATE	REVISION

SHEET 01 OF 28 SHEETS



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

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

21-04 2021 NEIGHBORHOOD OVERLAY IMPROVEMENTS

STATEMENT OF ESTIMATED QUANTITIES

NOTE	ITEM No.	MNDOT No.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
	1	2021.501	MOBILIZATION	LS	1
1	2	2104.503	REMOVE CONCRETE CURB AND GUTTER	LF	1,373
1	3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	2,206
1	4	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LF	560
1	5	2104.504	REMOVE BITUMINOUS PAVEMENT	SY	90
1	6	2104.504	REMOVE CONCRETE WALK	SY	258
2	7	2211.507	AGGREGATE BASE CLASS 5 MODIFIED (CV)	CY	64
8	8	2231.604	BITUMINOUS PATCH	SY	432
1	9	2232.504	MILL BITUMINOUS SURFACE (2.0")	SY	25,100
1	10	2232.504	MILL BITUMINOUS SURFACE (1.5")	SY	20,853
3	11	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	3,217
4	12	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) 2.0"	TON	2,836
4	13	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) 1.5"	TON	1,767
	14	2503.602	GROUT CATCH BASIN	EA	68
	15	2503.602	RESET CATCH BASIN	EA	5
	16	2503.603	INTERIOR CHIMNEY SEAL	EA	54
	17	2504.602	ADJUST VALVE BOX	EA	48
6	18	2506.502	ADJUST FRAME AND RING CASTING	EA	57
6	19	2521.504	6" CONCRETE WALK	SY	347
6	20	2531.503	CONCRETE CURB & GUTTER DESIGN B618	LF	140
5	21	2531.503	CONCRETE CURB & GUTTER DESIGN SURMOUNTABLE	LF	1,233
	22	2531.604	7" CONCRETE VALLEY GUTTER	SY	7
	23	2531.618	TRUNCATED DOMES	SF	385
5	24	2540.601	LANDSCAPE RESTORATION	LS	1
7	25	2563.601	TRAFFIC CONTROL	LS	1
	26	2574.507	TOPSOIL (LV)	CY	45
	27	2574.508	FERTILIZER TYPE 3	LBS	2
	28	2575.504	SODDING TYPE LAWN	SY	345
10	29	2575.505	SEEDING	ACRE	0.02
9	30	2575.508	HYDRAULIC MULCH MATRIX	LBS	52
11	31	2575.508	SEED MIXTURE 25-151	LBS	2

PAY ITEM NOTES:

1. REMOVAL LIMITS SHALL BE MARKED IN THE FIELD BY CITY STAFF.
2. EV TO CV CONVERSION FACTOR = 1.25.
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. 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.
6. FINISH WITH CLEAR CURING COMPOUND.
7. CV TO LV CONVERSION FACTOR = 1.3.
8. BITUMINOUS PAVEMENT PATCH INCLUDES REMOVAL OF BITUMINOUS PAVEMENT BITUMINOUS CURB AND AGGREGATE BASE AS NECESSARY. INCLUDES PLACING AGGREGATE BASE, BITUMINOUS PAVEMENT AND BITUMINOUS CURB AS NECESSARY. BITUMINOUS PATCH AREAS WILL BE MARKED IN THE FIELD BY CITY STAFF AFTER THE MILLING OPERATION.
9. ESTIMATED QUANTITY BASED ON 120 LB/ACRE.
10. ESTIMATED QUANTITY BASED ON 4000 LB/ACRE.
11. ESTIMATED QUANTITY BASED ON 100 LB/ACRE.

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. PAVEMENT RADII AT INTERSECTIONS ARE ASSUMED 20 FEET AND AT CUL-DE-SAC ENTRANCES ARE ASSUMED TO BE 50 FEET UNLESS OTHERWISE NOTED.

DATE	REVISION

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

Joe Feriancek
 JOE FERIANCEK
 Date 03/17/22 Lic. No. 57095

DESIGNED BY:	LWC	DATE:	03/17/22
DRAWN BY:	LWC	FILE:	22-04
CHECKED BY:	JJF		



CITY OF RAMSEY
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 RAMSEY, MN 55303
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22-04 - STATEMENT OF ESTIMATED QUANTITIES

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA

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%) SANDS CONTENT.

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

APPROVED: 1 - 2016
 City of Ramsey
 STANDARD DETAILS: SANITARY MANHOLE
 CITY PLATE No. SEV-1

APPROVED: 4 - 2007
 City of Ramsey
 STANDARD DETAILS: CATCH BASIN
 CITY PLATE No. STO-1

APPROVED: 7 - 2016
 City of Ramsey
 STANDARD DETAILS: STDRM/WATER CASTING
 CITY PLATE No. STO-4

APPROVED: 3 - 2017
 City of Ramsey
 STANDARD DETAILS: RESET CATCH BASIN CASTING
 CITY PLATE No. STO-13

APPROVED: 1 - 2016
 City of Ramsey
 STANDARD DETAILS: CURB AND GUTTER
 CITY PLATE No. STR-1

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

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

APPROVED: 4 - 2018
 City of Ramsey
 STANDARD DETAILS: COMMERCIAL DRIVEWAY CURB/CUT
 CITY PLATE No. STR-14

APPROVED: 2 - 2004
 City of Ramsey
 STANDARD DETAILS: RESIDENTIAL DRIVEWAY
 CITY PLATE No. STR-19

APPROVED: 6 - 2016
 City of Ramsey
 STANDARD DETAILS: STREET PATCHING STANDARDS
 CITY PLATE No. STR-25

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

APPROVED: 2 - 2003
 City of Ramsey
 STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATIONS
 CITY PLATE No. STR-26

APPROVED: 1 - 2016
 City of Ramsey
 STANDARD DETAILS: RESIDENTIAL DRIVEWAY - NO SIDEWALK
 CITY PLATE No. STR-30

APPROVED: 3 - 2017
 City of Ramsey
 STANDARD DETAILS: REPLACE STORM SEWER CASTING
 CITY PLATE No. STR-2

APPROVED: 1 - 2016
 City of Ramsey
 STANDARD DETAILS: BITUMINOUS TRAIL
 CITY PLATE No. PARK-1

APPROVED: 1 - 2022
 City of Ramsey
 STANDARD DETAILS: SANITARY MANHOLE ADJUSTING RINGS & CHIMNEY SEAL
 CITY PLATE No. SEV-7

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Joe Ferianec
 JOE FERIANEC
 Date 03/17/22 Lic. No. 57095

DESIGNED BY: LWC
 DRAWN BY: LWC
 CHECKED BY: JIF

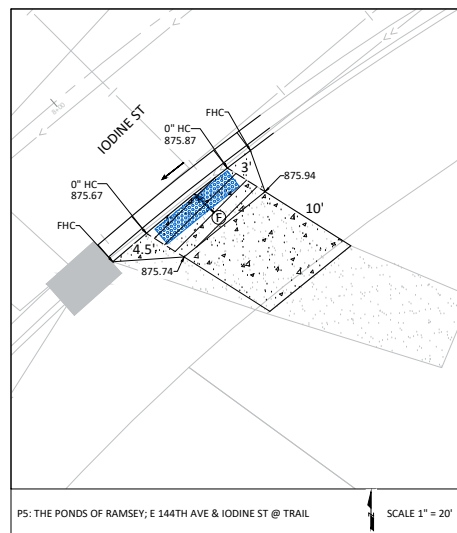
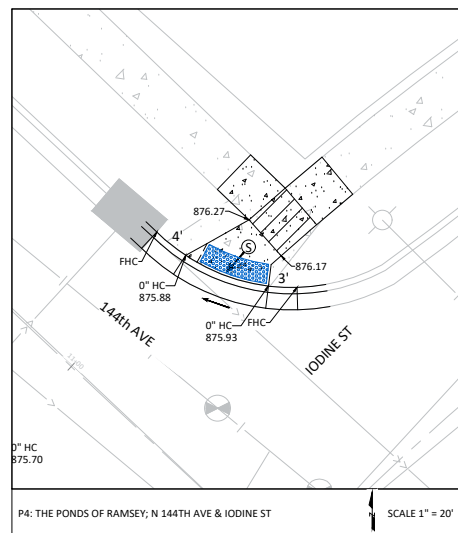
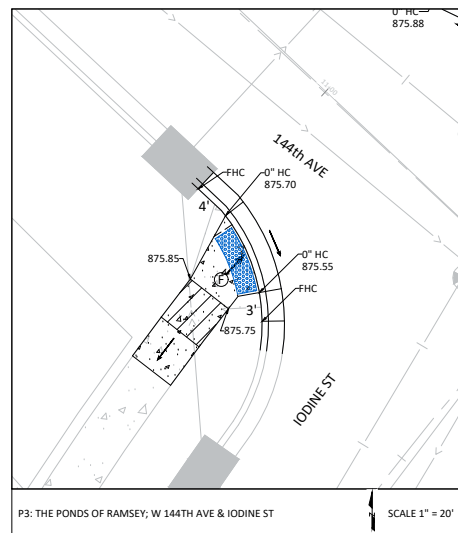
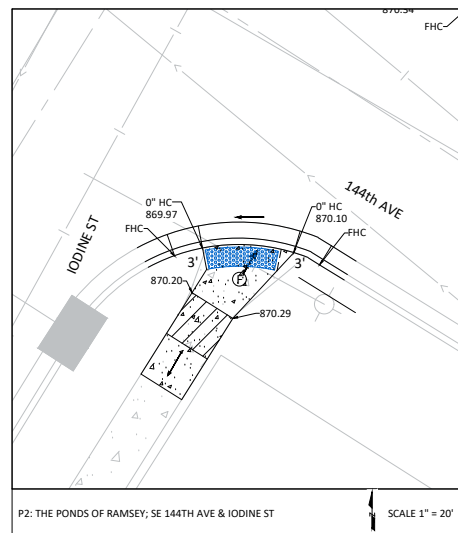
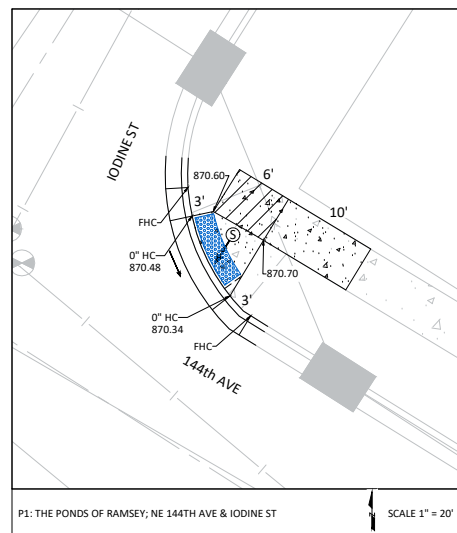
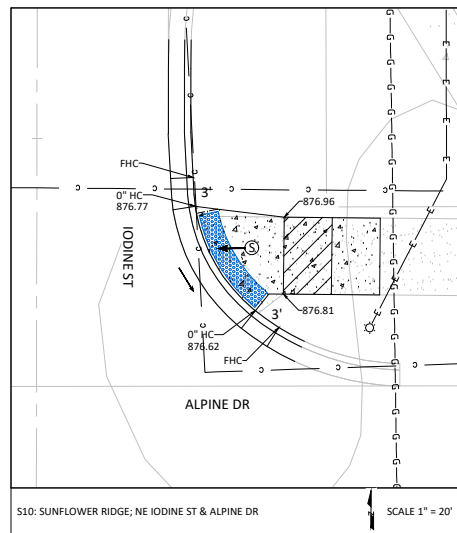
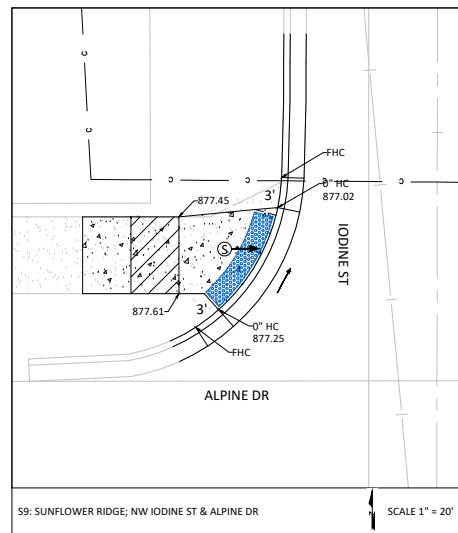
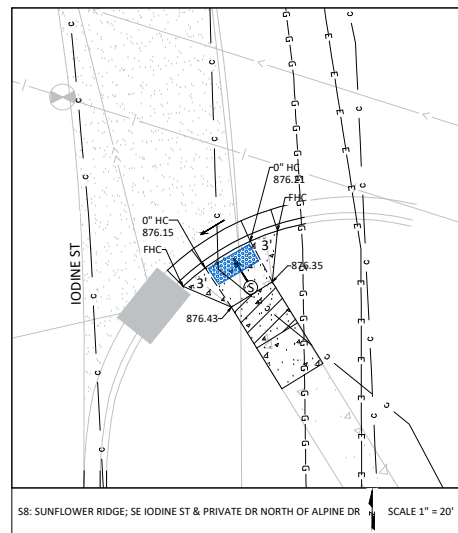
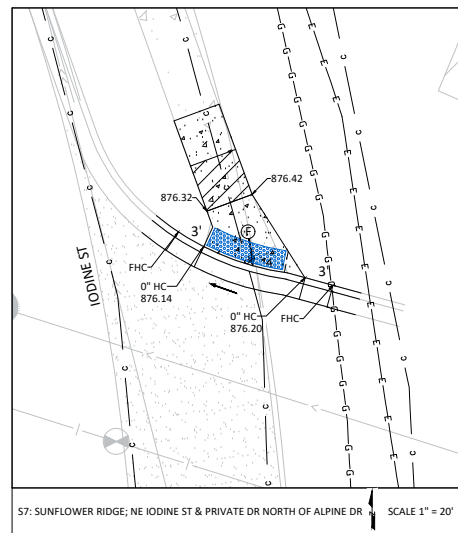
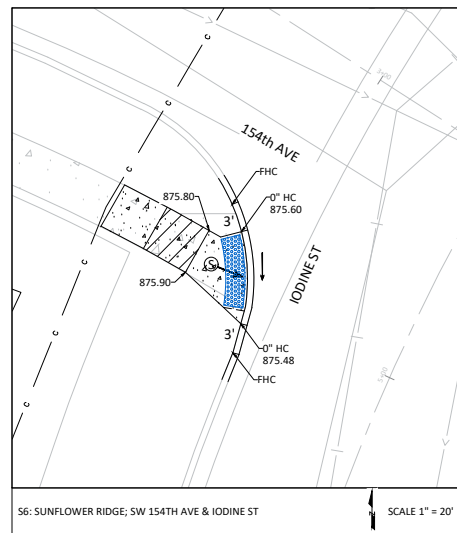
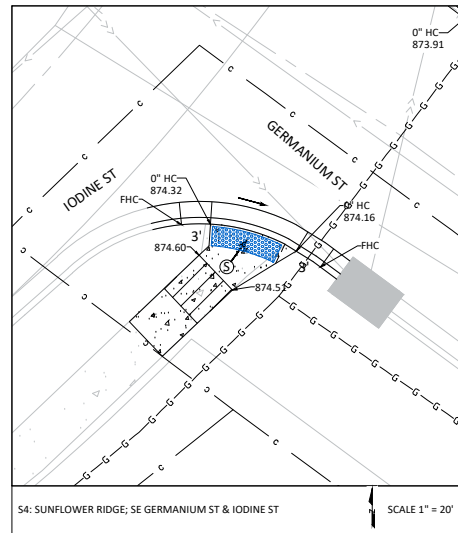
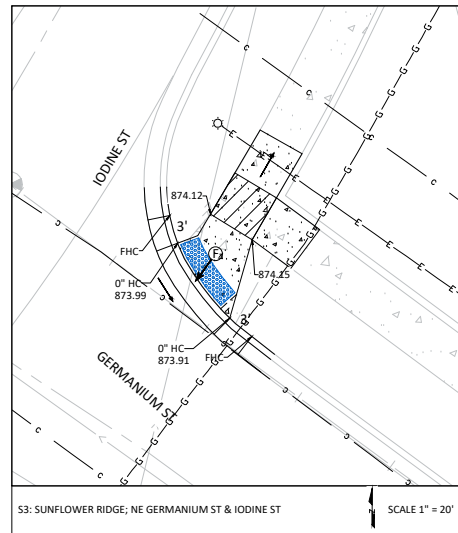
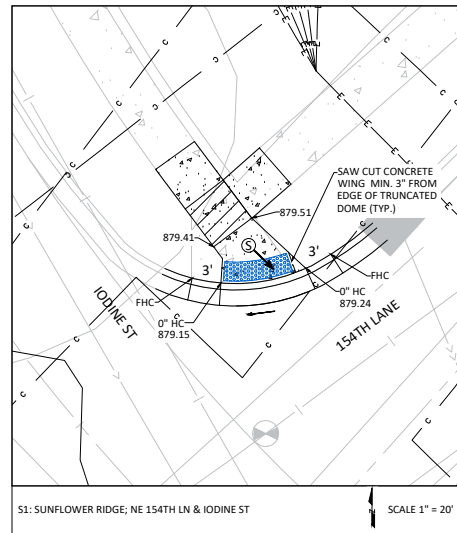
DATE: 03/17/22
 FILE: 22-04

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

22-04 - CITY DETAILS

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA

SHEET 03 OF 28 SHEETS



- ### PED RAMP LEGEND
- Ⓢ 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%.
 - Ⓣ 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.
 - DRAINAGE FLOW ARROW
 - c- ELECTRIC LINE
 - t- TELECOMMUNICATIONS LINE
 - g- GAS LINE
 - - - SAW CUT CONCRETE

NOTE:

- PEDESTRIAN RAMP LANDINGS AND ADDITIONAL PANEL REMOVALS ARE TO ASSUMED TO BE 5 FT LONG EACH UNLESS OTHERWISE NOTED.
- SAW CUTS SHOWN ARE TO PREVENT UNWANTED CRACKING AT EDGE OF TRUNCATED DOMES. ADDITIONAL SAW CUTTING MAY BE REQUIRED AT EDGE OF CONCRETE PANELS.

DATE	REVISION

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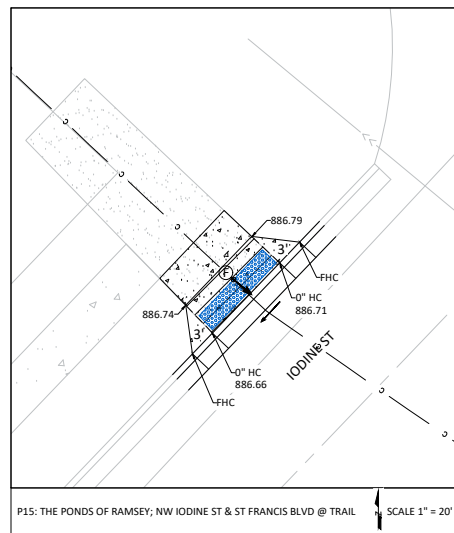
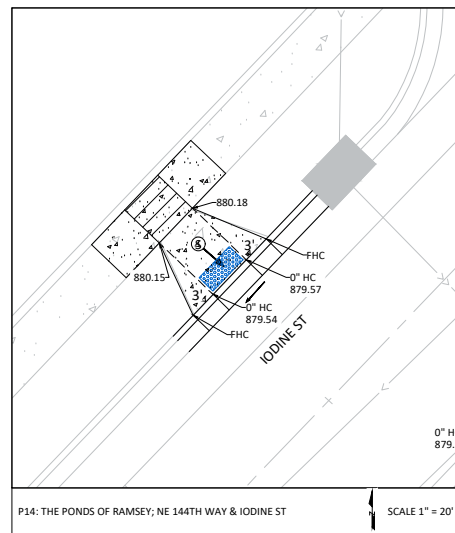
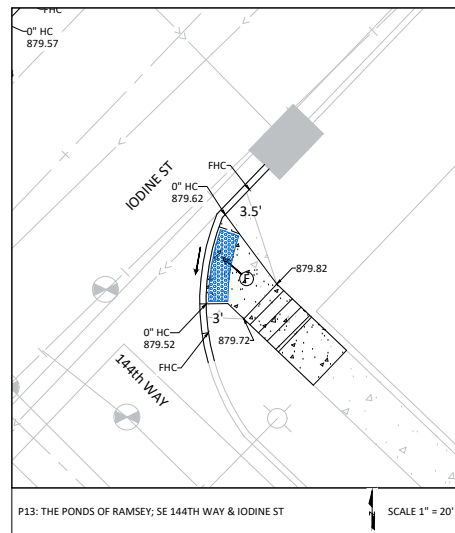
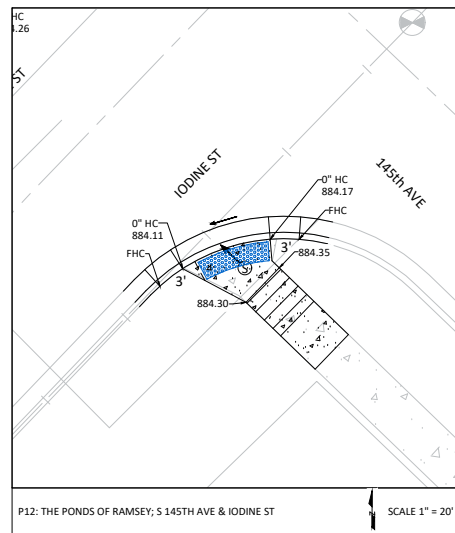
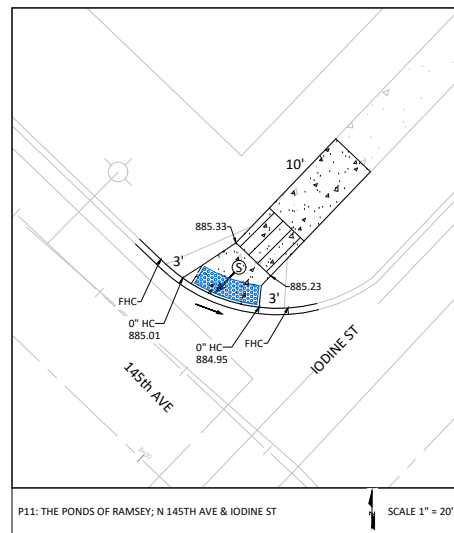
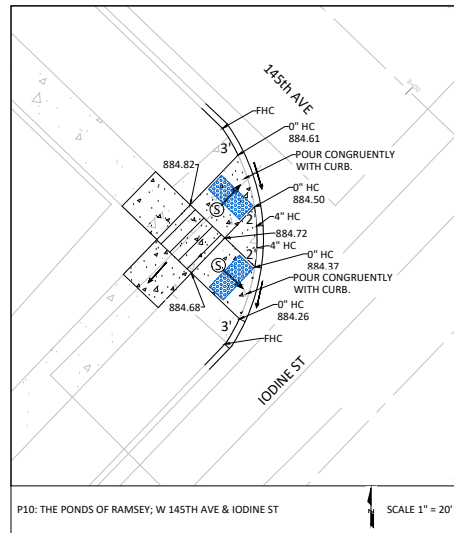
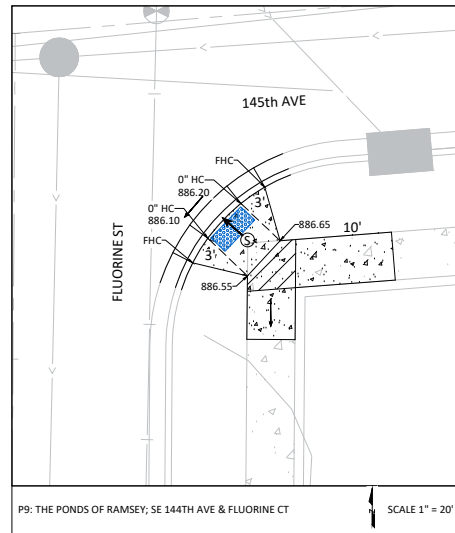
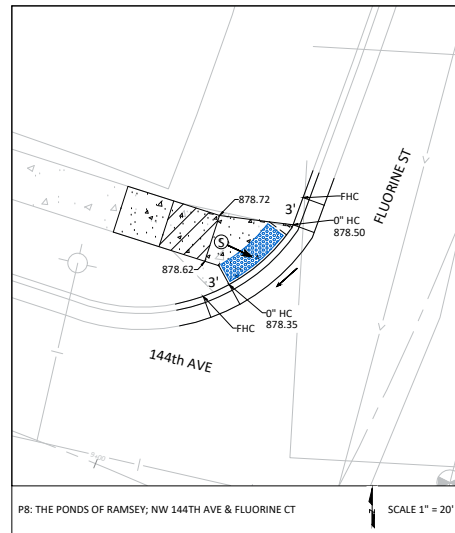
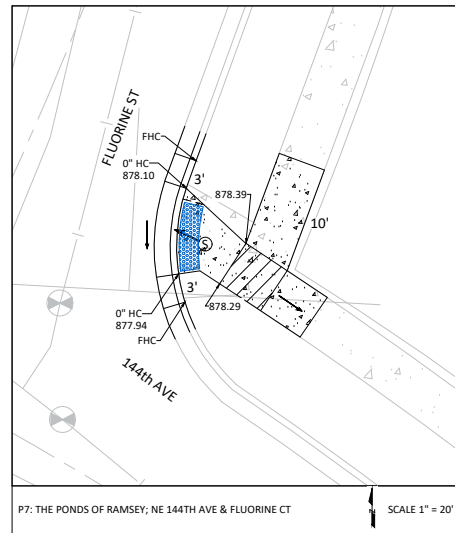
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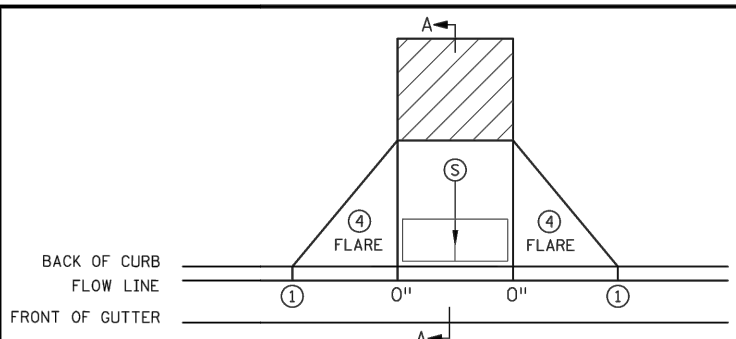
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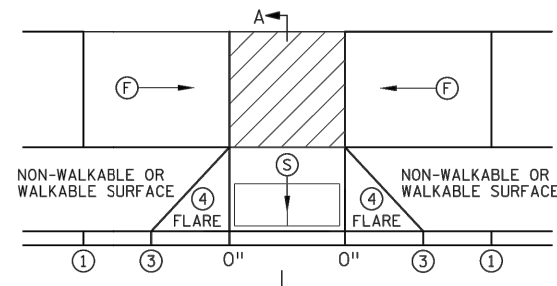
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 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA

PLOTTED/REVISED: 4-APR-2018

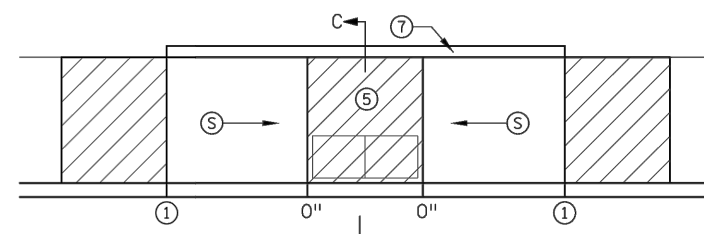
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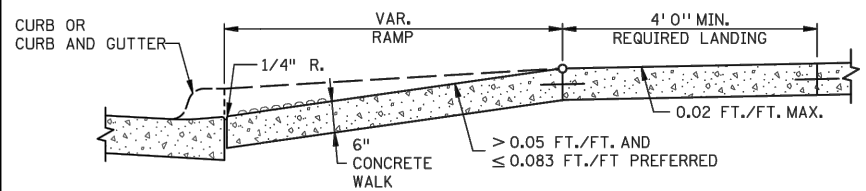
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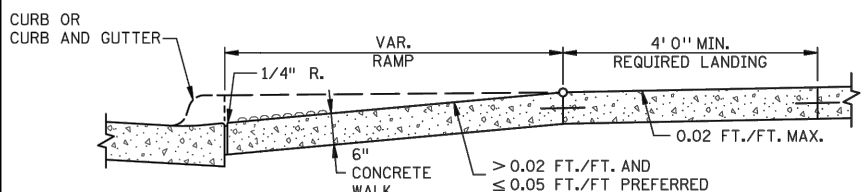
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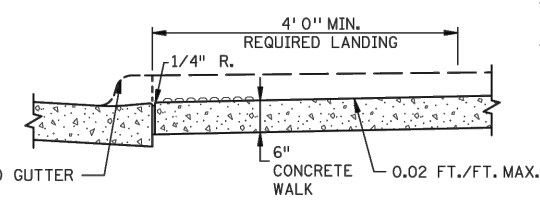
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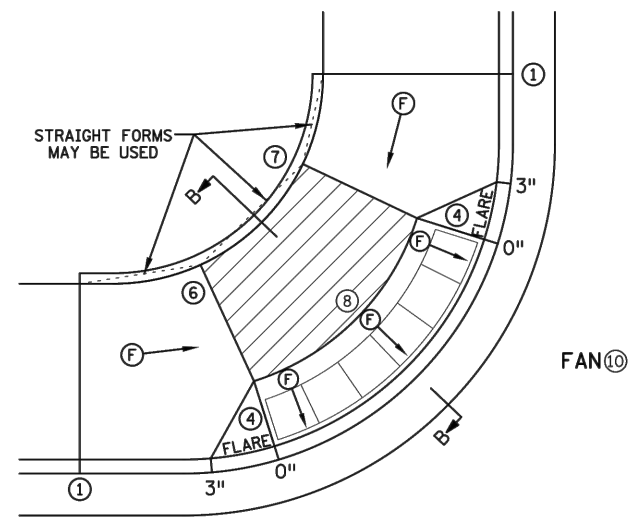
SECTION A-A
 PERPENDICULAR/TIERED/DIAGONAL



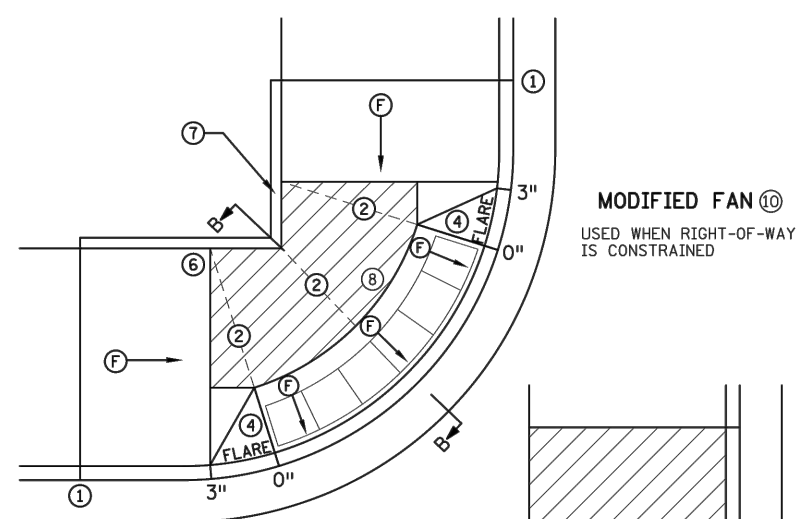
SECTION B-B
 FAN



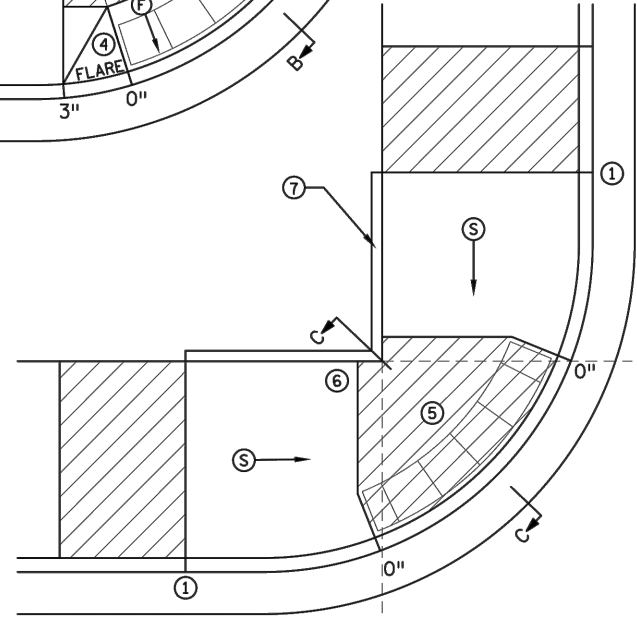
SECTION C-C
 PARALLEL/DEPRESSED CORNER



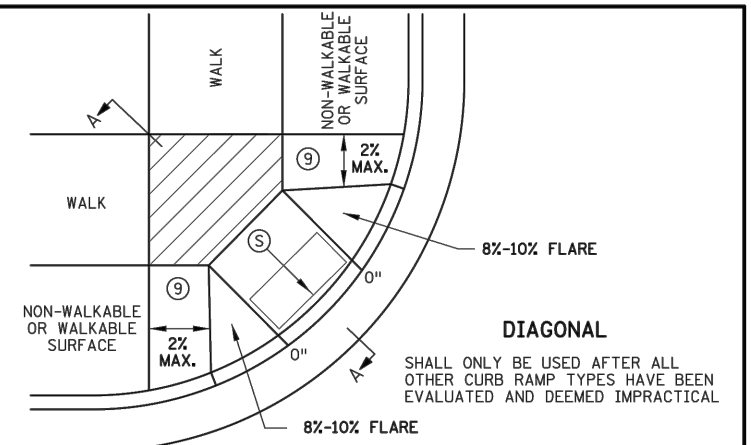
FAN 10



MODIFIED FAN 10
 USED WHEN RIGHT-OF-WAY IS CONSTRAINED



DEPRESSED CORNER



DIAGONAL

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 INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY, FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISIONS - PROSECUTION OF WORK (ADA).
 - 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 ENTIRE WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK. DETECTABLE WARNING SHOULD BE 6" LESS THAN THE PAR/TRAIL WIDTH. ARC LENGTH OF 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, WHEN INITIAL LANDING IS AT FULL CURB HEIGHT.
 - 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 SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
 - 8 A 7' MIN TOP RADIUS GRADE BREAK 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.

LEGEND	
(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%.
[Hatched Box]	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: JANUARY 23, 2017
 OPERATIONS ENGINEER

MINNESOTA DEPARTMENT OF TRANSPORTATION
 STANDARD PLAN 5-297.250 1 OF 6
 APPROVED: 1-23-2017
 REVISOR:
 STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota
 JOE FERIANECK
 Date 03/17/22 Lic. No. 57095

DESIGNED BY: LWC
 DRAWN BY: LWC DATE: 03/17/22
 CHECKED BY: JIF FILE: 22-04

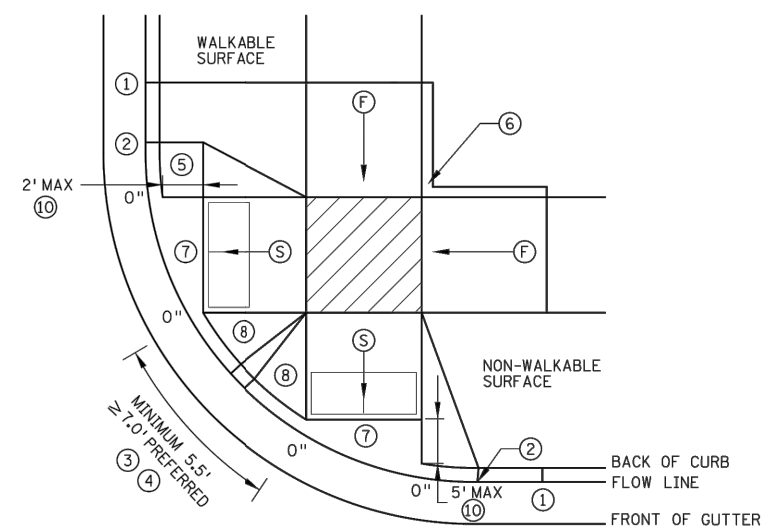
CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

22-04 - MNDOT PED RAMP DETAILS

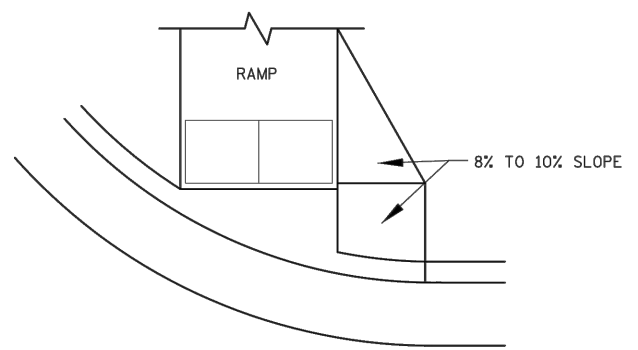
NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA

PLOTTED/REVISED: 4-APR-2018

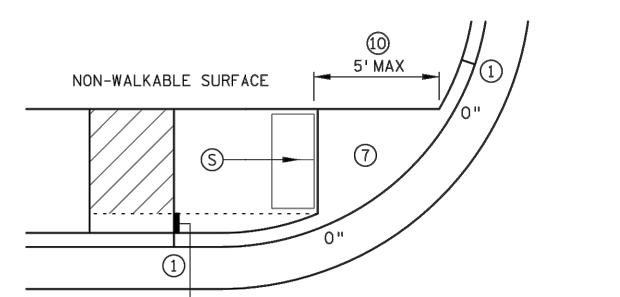
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COMBINED DIRECTIONAL ⑨

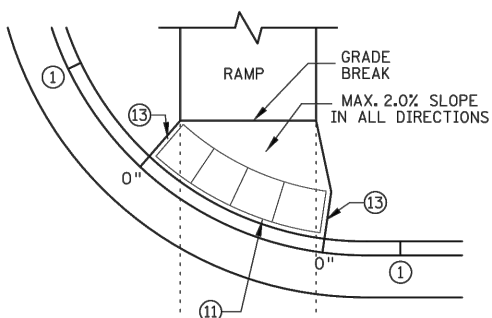


DIRECTIONAL RAMP WALKABLE FLARE



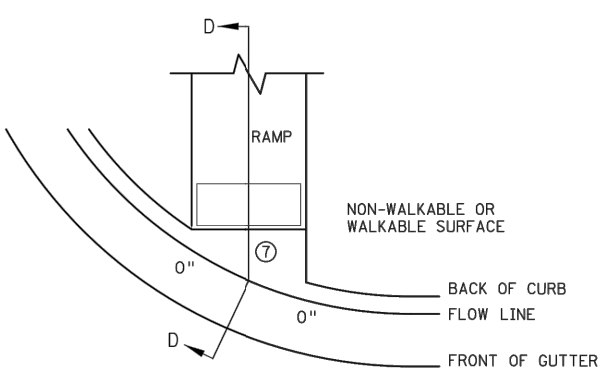
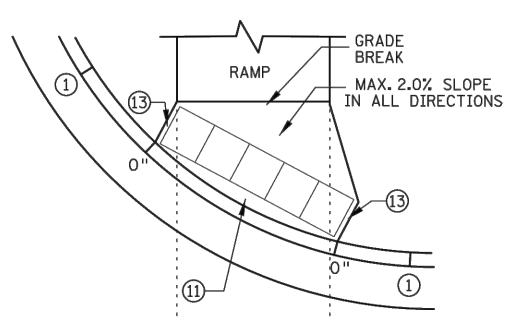
STANDARD ONE-WAY DIRECTIONAL ⑨

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.

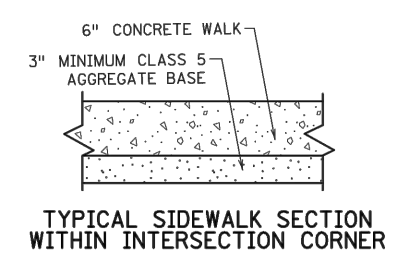
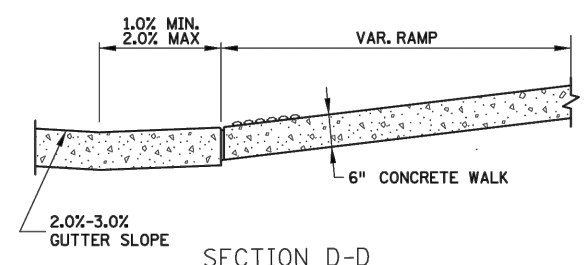


ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB

DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED ⑫



CURB FOR DIRECTIONAL RAMPS ⑭



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%.
Ⓣ	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

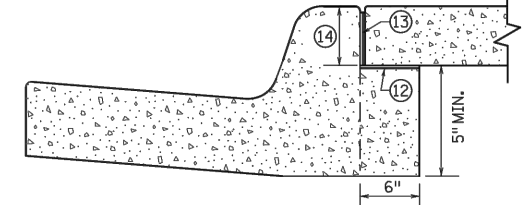
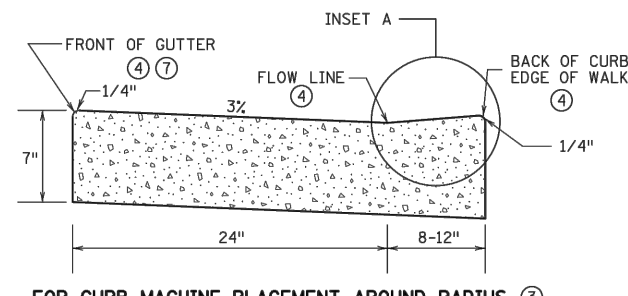
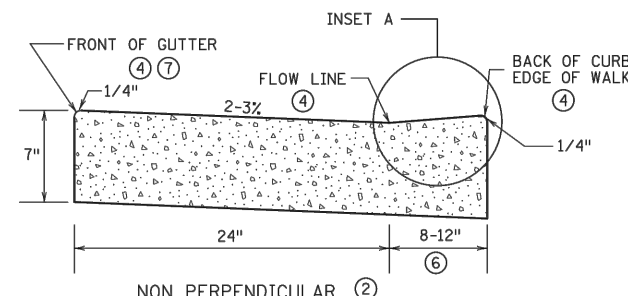
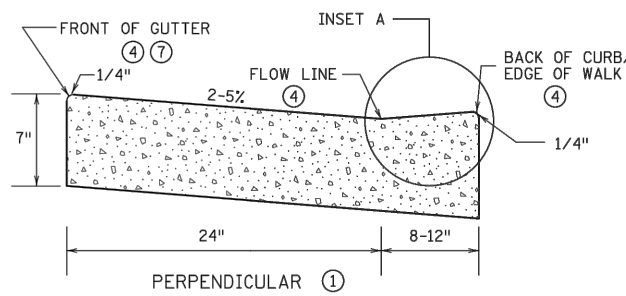
- NOTES:
- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' 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 ENTIRE WIDTH OF SHARED-USE PATH AND THE ENTIRE PAR WIDTH OF THE WALK. DETECTABLE WARNING SHOULD BE 6" LESS THAN THE PAR/PATH WIDTH. ARC LENGTH OF 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 SHOULD 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.

REVISION:
APPROVED: JANUARY 23, 2017
<i>[Signature]</i> OPERATIONS ENGINEER

	STANDARD PLAN 5-297.250	2 OF 6	PEDESTRIAN CURB RAMP DETAILS	
		APPROVED: 1-23-2017		
DEPARTMENT OF TRANSPORTATION	STATE DESIGN ENGINEER	STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS

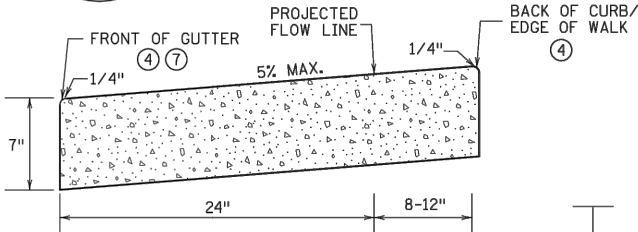
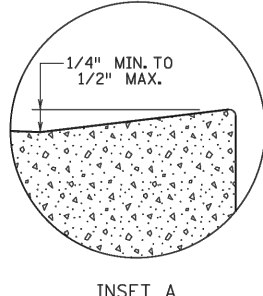
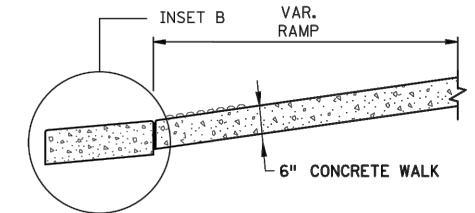
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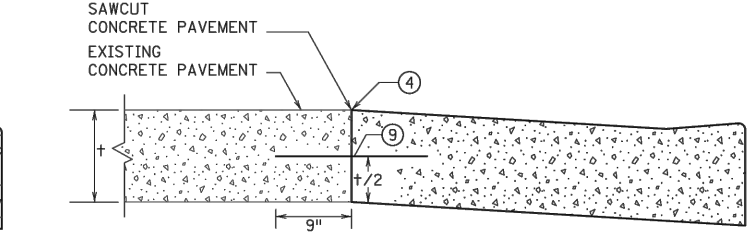
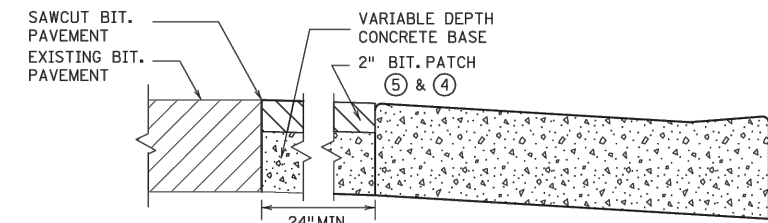
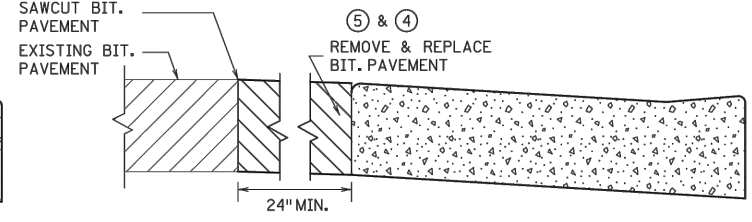
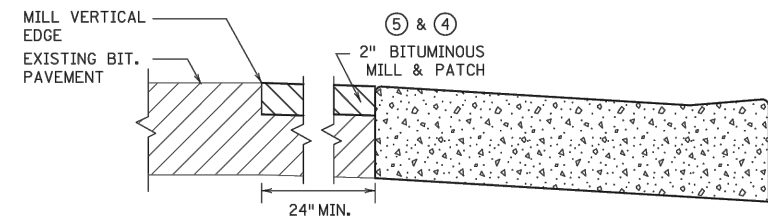


OPTIONAL SILL CURB WHEN SIDEWALK IS AT BACK OF CURB
CONCRETE SILL TO BE USED ONLY WHEN SPECIFIED IN THE PLAN.

PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL



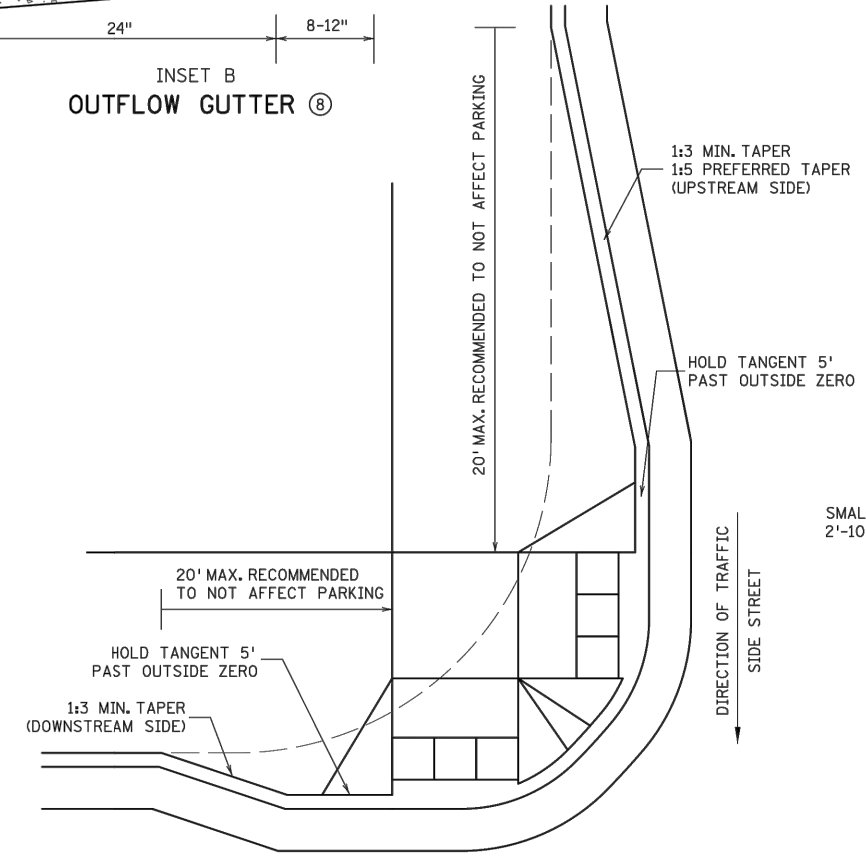
INSET B OUTFLOW GUTTER



ONLY ALLOWED PER ENGINEER'S APPROVAL

PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER
FOR USE ON CURB RAMP RETROFITS

- 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 RAMP.
 - ② FOR USE AT CURB RAMP 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 RAMP.
 - 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.
 - ⑫ PLACE BOND BREAKER BETWEEN WALK AND TOP OF SILL.
 - ⑬ 1/2\" PREFORMED JOINT FILLER PER MNDOT SPEC. 3702.
 - ⑭ DIMENSION TO BE SAME AS SIDEWALK THICKNESS, 4\" MIN.



COMBINED DIRECTIONAL (COMPOUND RADIUS)

REVISION:
APPROVED: JANUARY 23, 2017
<i>[Signature]</i> OPERATIONS ENGINEER

DIRECTION OF TRAFFIC
MAIN STREET



STANDARD PLAN 5-297.250 3 OF 6
[Signature]
APPROVED: 1-23-2017
REVISOR:
STATE PROJ. NO.

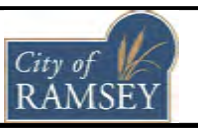
PEDESTRIAN CURB RAMP DETAILS
(T.H.) SHEET NO. OF SHEETS

DATE	REVISION

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

JOE FERIANECK
Date 03/17/22 Lic. No. 57095

DESIGNED BY: LWC	DATE: 03/17/22
DRAWN BY: LWC	FILE: 22-04
CHECKED BY: JIF	



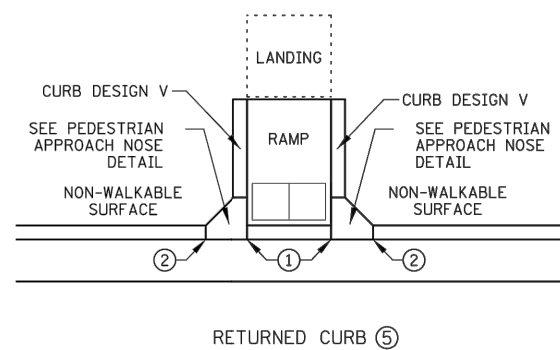
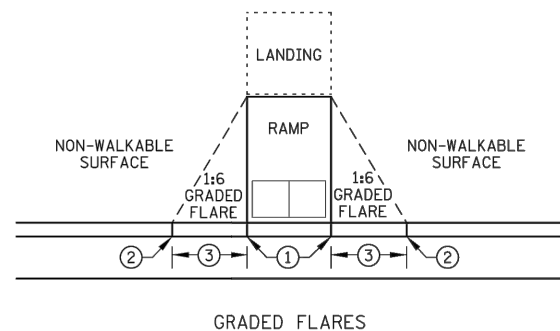
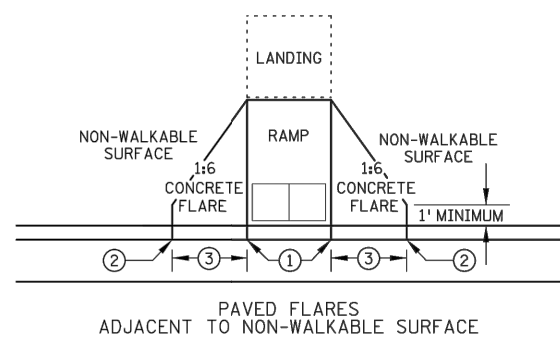
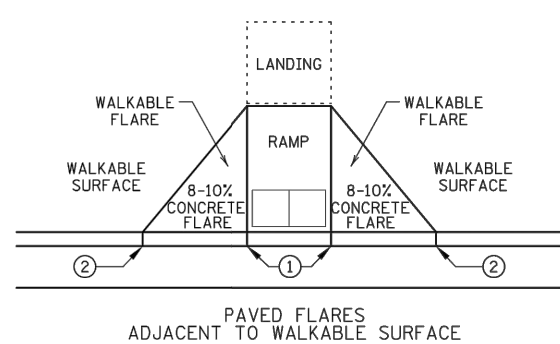
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

22-04 - MNDOT PED RAMP DETAILS

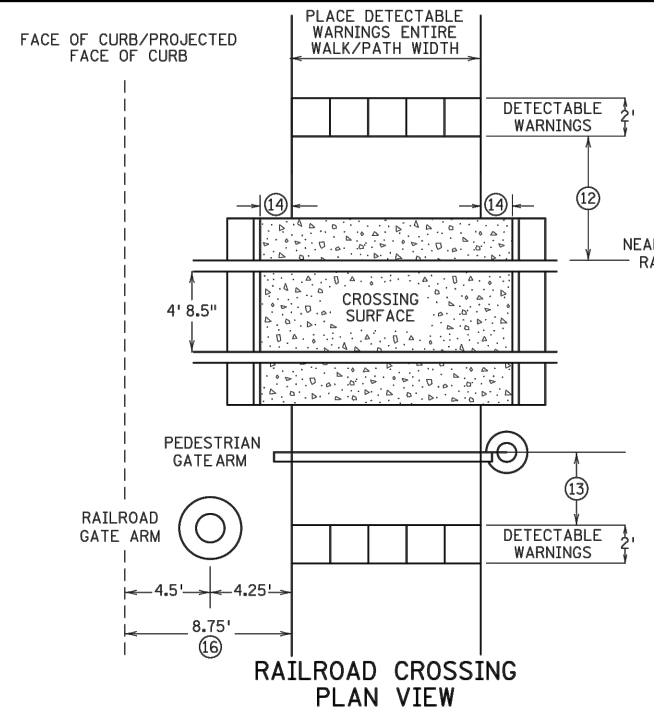
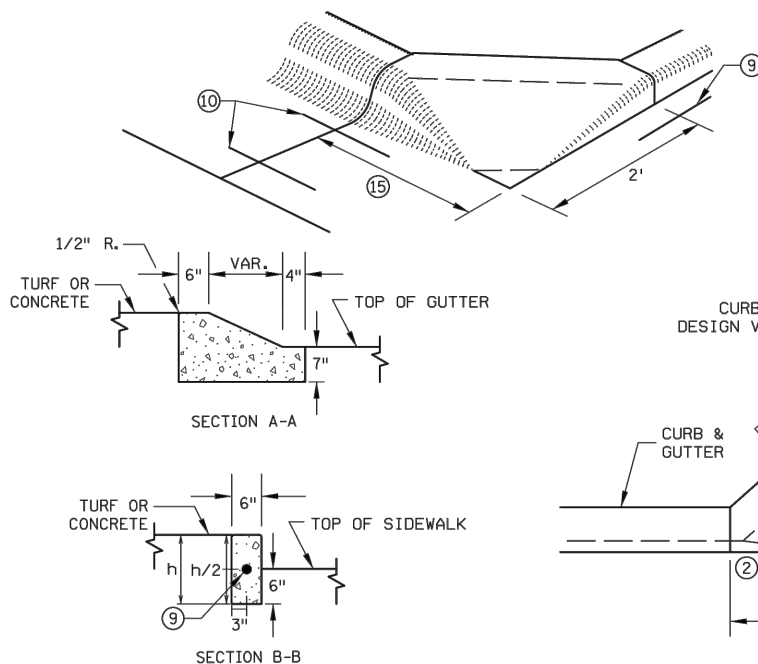
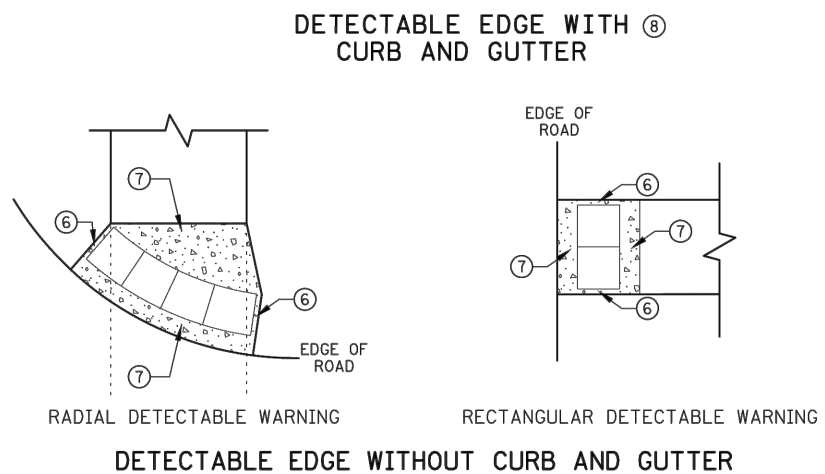
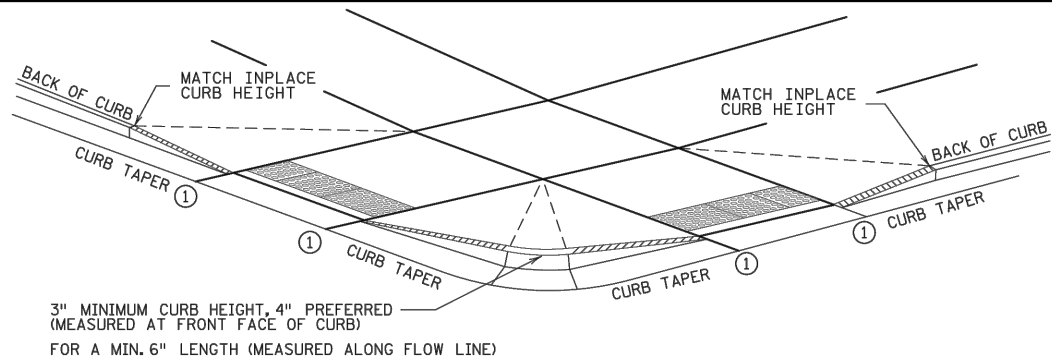
NEIGHBORHOOD OVERLAY IMPROVEMENTS
CITY PROJECT NO. 22-04
CITY OF RAMSEY, MINNESOTA

PLOTTED/REVISED: 4-APR-2018

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TYPICAL SIDE TREATMENT OPTIONS ④ ⑪



- NOTES:
- 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.
 - ② FULL CURB HEIGHT.
 - ③ 2' FOR 4" HIGH CURB AND 3' FOR 6" HIGH CURB.
 - ④ 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.
 - ⑤ TYPICALLY USED FOR MEDIANS AND ISLANDS.
 - ⑥ 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.
 - ⑦ 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.
 - ⑧ 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.
 - ⑨ 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.
 - ⑩ 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.
 - ⑪ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6" HIGH 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.
 - ⑫ 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.
 - ⑬ 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 ⑫.
 - ⑭ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.
 - ⑮ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.
 - ⑯ 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.

REVISION:
APPROVED: JANUARY 23, 2017
<i>[Signature]</i> OPERATIONS ENGINEER

	STANDARD PLAN 5-297.250	4 OF 6	PEDESTRIAN CURB RAMP DETAILS	
	APPROVED: 1-23-2017 REVISION:			
DEPARTMENT OF TRANSPORTATION <i>[Signature]</i> STATE DESIGN ENGINEER	STATE PROJ. NO.	(T.H.)	SHEET NO.	OF SHEETS

DATE	REVISION

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

JOE FERIANECK
Date 03/17/22 Lic. No. 57095

DESIGNED BY:	LWC
DRAWN BY:	LWC
CHECKED BY:	JJF
DATE:	03/17/22
FILE:	22-04

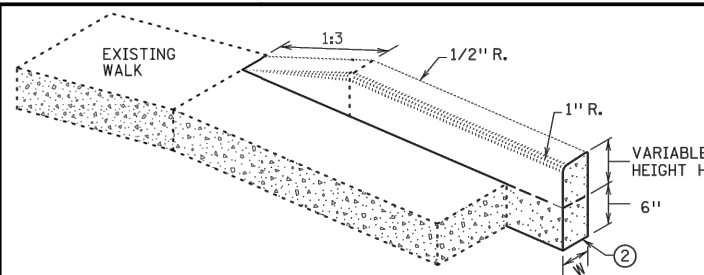
CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

22-04 - MNDOT PED RAMP DETAILS

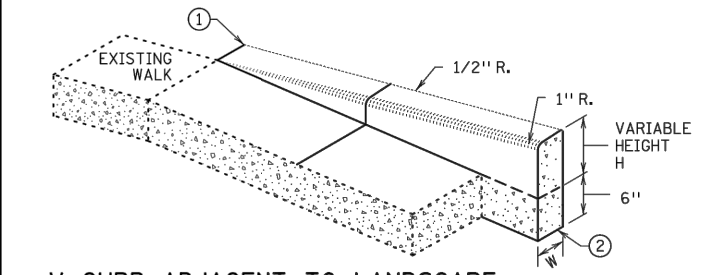
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 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA

PLOTTED/REVISED: 4-APR-2018

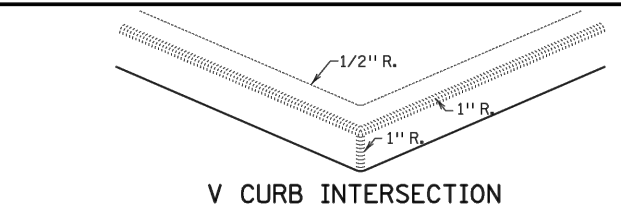
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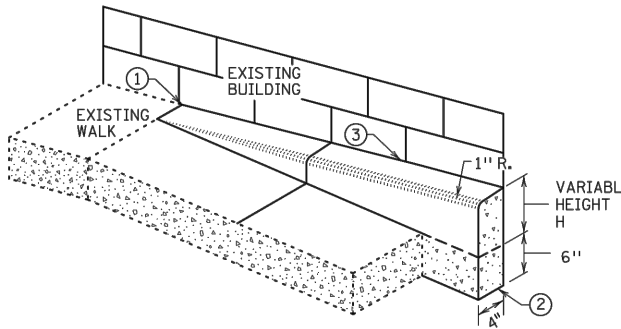
V CURB ADJACENT TO LANDSCAPE
 CURB WITHIN SIDEWALK LIMITS



V CURB ADJACENT TO LANDSCAPE
 CURB OUTSIDE SIDEWALK LIMITS

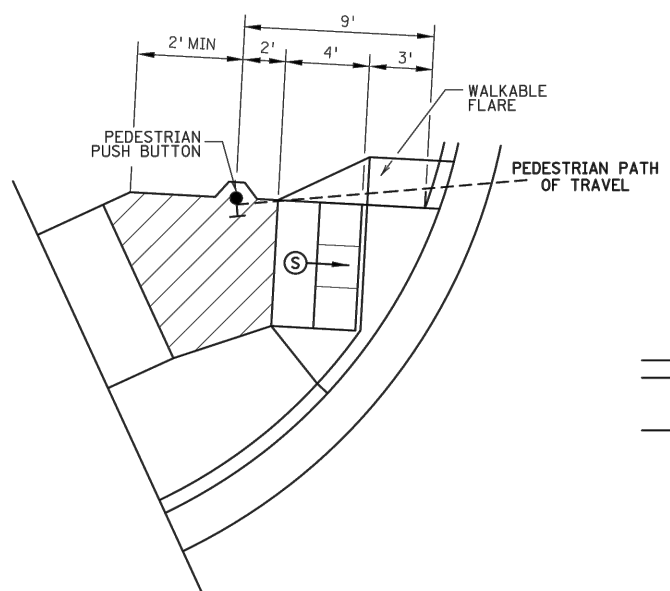


V CURB INTERSECTION

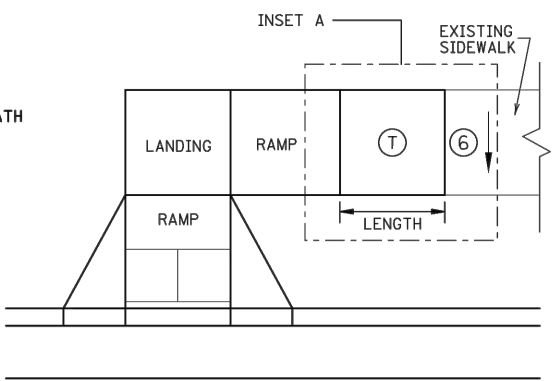


V CURB ADJACENT TO BUILDING
 OR BARRIER

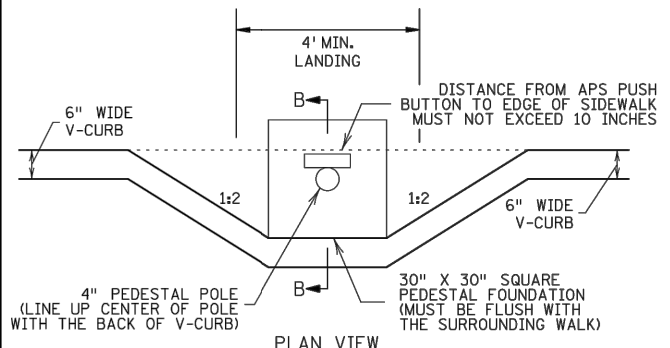
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



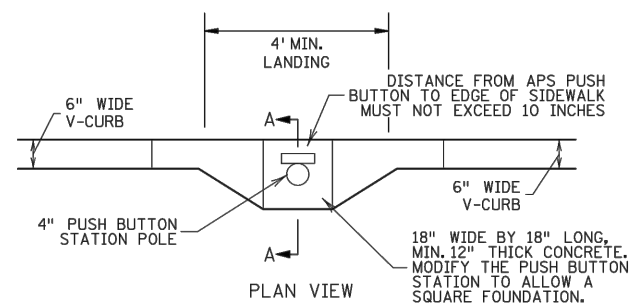
SEMI-DIRECTIONAL RAMP (3,4,9)
 3' DOME SETBACK, 4' LONG RAMP AND
 PUSH BUTTON 9' FROM THE BACK OF CURB
 PRIMARILY USED FOR APS APPLICATIONS
 WHERE THE PAR DOES NOT CONTINUE PAST
 THE PUSH BUTTON (DEAD-END SIDEWALK)



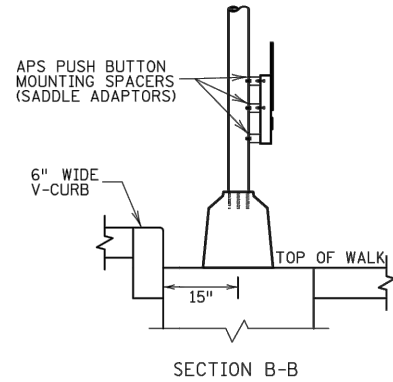
TRANSITION PANEL (4,5)



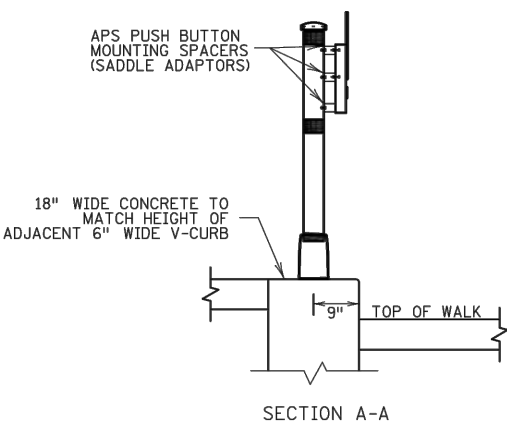
SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



PUSH BUTTON STATION (V-CURB)



SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



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.
- END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V-CURB.
- 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.
- TRANSITION PANEL(S) ARE TO ONLY BE USED AFTER THE RAMP, OR IF NEEDED, LANDING ARE AT THE FULL CURB HEIGHT (TYPICAL SECTION).
- 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.

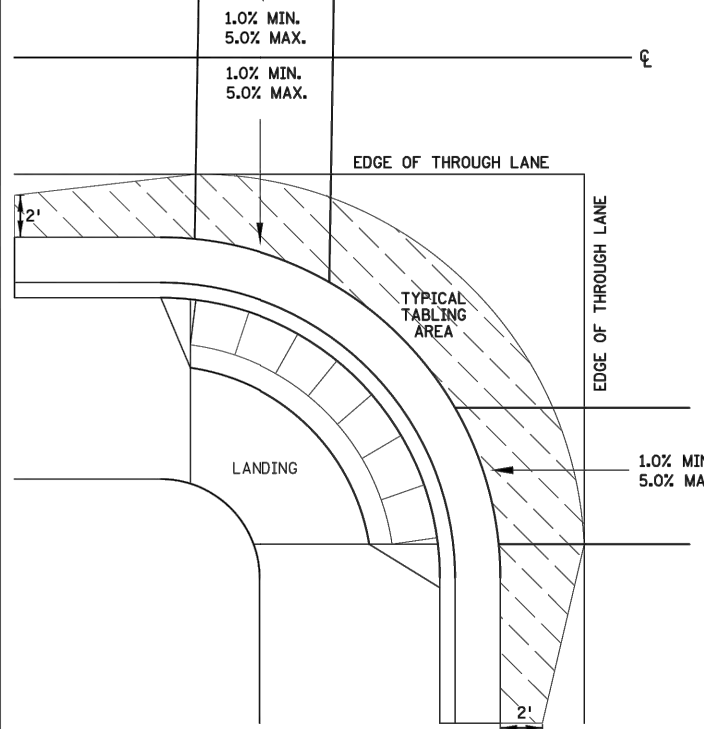
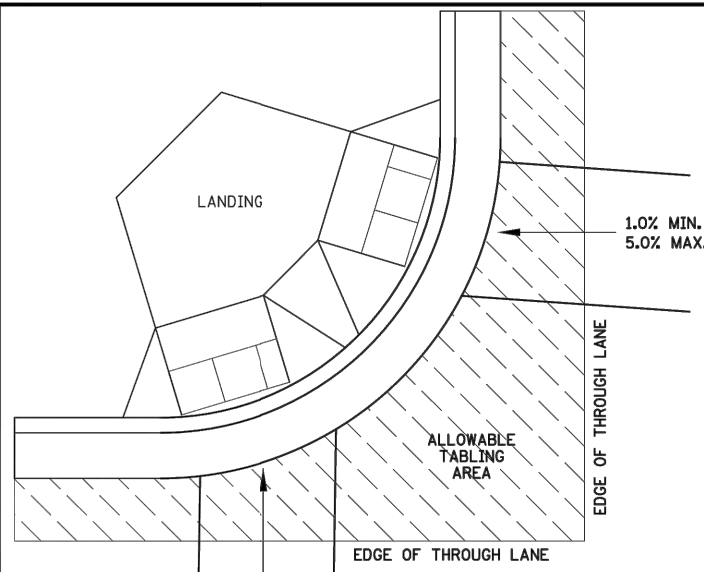
- INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.
- 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: JANUARY 23, 2017
OPERATIONS ENGINEER

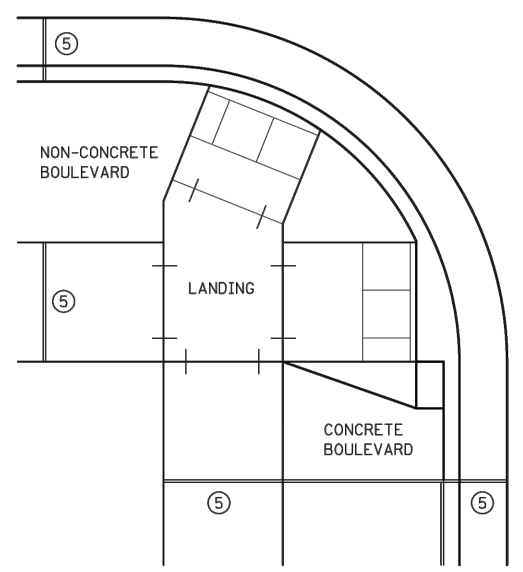
	STANDARD PLAN 5-297.250	5 OF 6	PEDESTRIAN CURB RAMP DETAILS	
		APPROVED: 1-23-2017	STATE PROJ. NO.	(T.H.) SHEET NO. OF SHEETS

PLOTTED/REVISED: 4-APR-2018

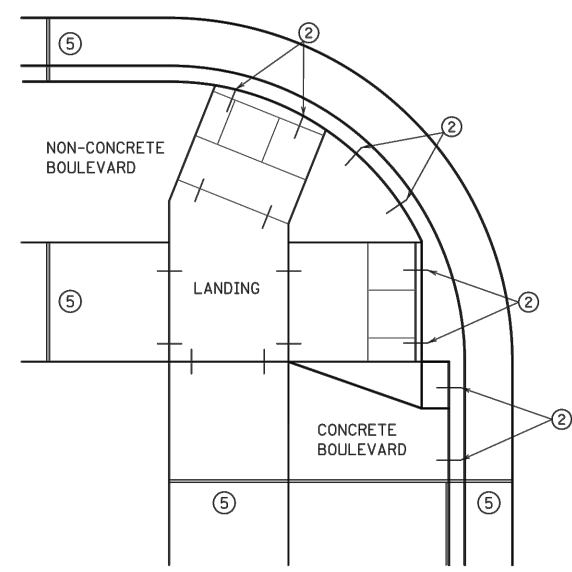
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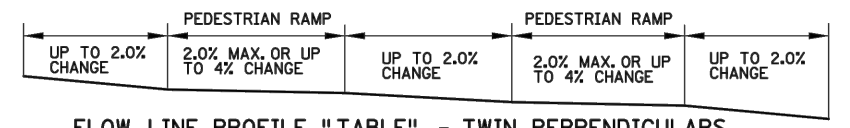
CURB LINE AND ROAD CROSSING ADJUSTMENTS



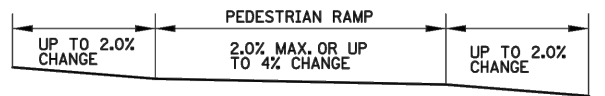
EXPANSION MATERIAL PLACEMENT FOR CONCRETE AND BITUMINOUS ROADWAYS



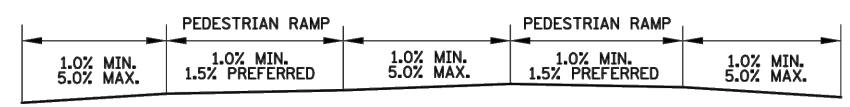
OPTIONAL CURB LINE REINFORCEMENT PLACEMENT ON BITUMINOUS ROADWAYS



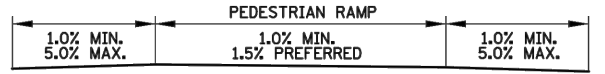
FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



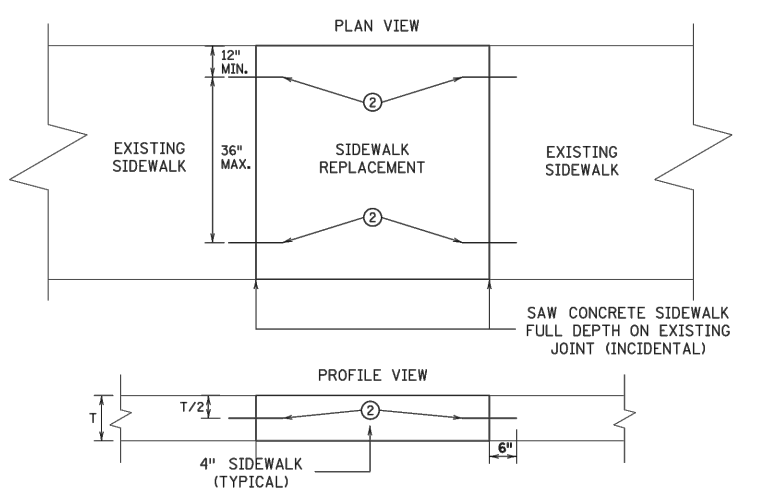
FLOW LINE PROFILE "TABLE" - FAN



FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS

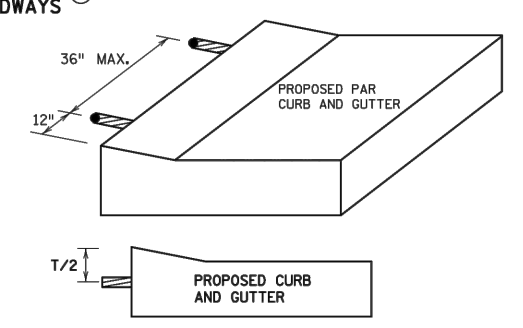


FLOW LINE PROFILE RAISE - FAN

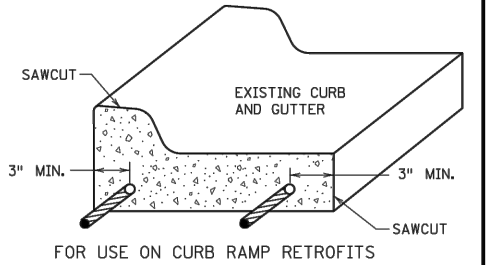


OPTIONAL SIDEWALK REINFORCEMENT

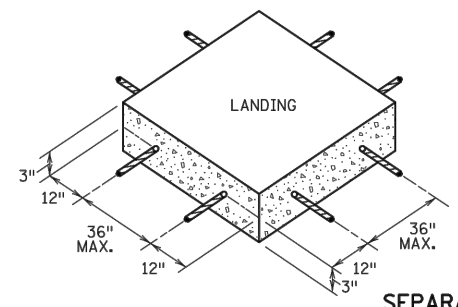
SIDEWALK REINFORCEMENT TO BE USED ONLY WHEN SPECIFIED IN THE PLAN.



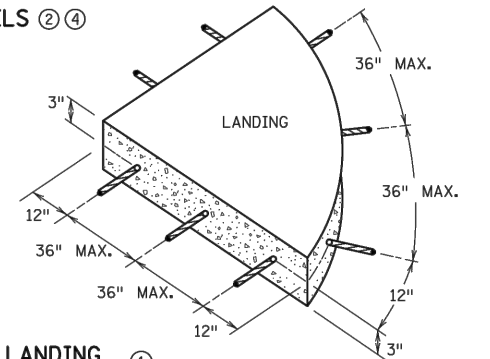
OPTIONAL CURB LINE REINFORCEMENT DETAILS



CURB AND GUTTER REINFORCEMENT



SEPARATE LANDING POUR REINFORCEMENT



"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 AT 36" MAXIMUM CENTER TO CENTER (EPOXY COATED). BARS TO BE ADJUSTED TO MATCH RAMP GRADE.
- 3) DRILL AND GROUT 2 - NO. 4 X 12" LONG REINFORCEMENT BARS (EPOXY COATED). REINFORCEMENT REQUIRED FOR ALL CONSTRUCTION JOINTS WITHIN RADIUS.
- 4) THIS OPTIONAL CURB LINE REINFORCEMENT DETAIL SHOULD ONLY BE USED ON BITUMINOUS ROADWAYS WHEN SPECIFIED IN THE PLAN.
- 5) 1/2 IN. PREFORMED JOINT FILLER MATERIAL PER MNDOT SPEC. 3702.

REVISION:
APPROVED: JANUARY 23, 2017
OPERATIONS ENGINEER

	STANDARD PLAN 5-297.250	6 OF 6	PEDESTRIAN CURB RAMP DETAILS	
		APPROVED: 1-23-2017		
DEPARTMENT OF TRANSPORTATION	STATE DESIGN ENGINEER	STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS



BUNKER LAKE BLVD

SAWCUT - FULL DEPTH
MATCH EXISTING PAVEMENT

ADJUST VALVE BOX (TYP.)

14280
B618 CURB (TYP.)

ADJUST FRAME AND RING CASTING (TYP.)

REMOVE AND REPLACE CONCRETE
CURB AND GUTTER (TYP.)

BITUMINOUS PAVEMENT PATCH AROUND CASTING (2 SQ YD)

RESET CATCH BASIN CASTING (TYP.)
SEE DETAIL SHEET 03










GROUT CATCH BASIN (TYP.)

MATCH TO SHEET 13 STA 5+00

NOTE:

1. 2" BITUMINOUS PAVEMENT MILL AND OVERLAY, FULL WIDTH.
2. CONCRETE CURB AND GUTTER REMOVALS ARE SHOWN IN AN APPROXIMATE WAY ONLY. REMOVALS SHALL BE MINIMUM FULL PANEL LENGTH.
3. REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
4. PROTECT LANDSCAPING AND IRRIGATION.
5. RESTORATION SHALL INCLUDE 4" TOPSOIL AND HYDROSEEDING
6. PRIOR TO ADJUSTING CASTING, INTERIOR CHIMNEY SEAL MUST BE INSTALLED PER MANUFACTURER RECOMMENDATIONS, WHICH INCLUDES EXPOSING MANHOLE TOP SECTION DOWN FAR ENOUGH TO FIT OVERHANG OF CHIMNEY SEAL.

LEGEND

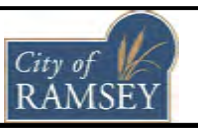
-  ADJUST FRAME AND RING CASTING
-  ADJUST VALVE BOX
-  RESET CATCH BASIN
-  GROUT CATCH BASIN
-  HYDROSEED
-  MILL & OVERLAY BITUMINOUS PAVEMENT (2")
-  BITUMINOUS PAVEMENT PATCH
-  REMOVE & REPLACE CONCRETE CURB & GUTTER
-  SAWCUT FULL DEPTH

DATE	REVISION

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

Joe Feriancek
JOE FERIANCEK
Date 03/17/22 Lic. No. 57095

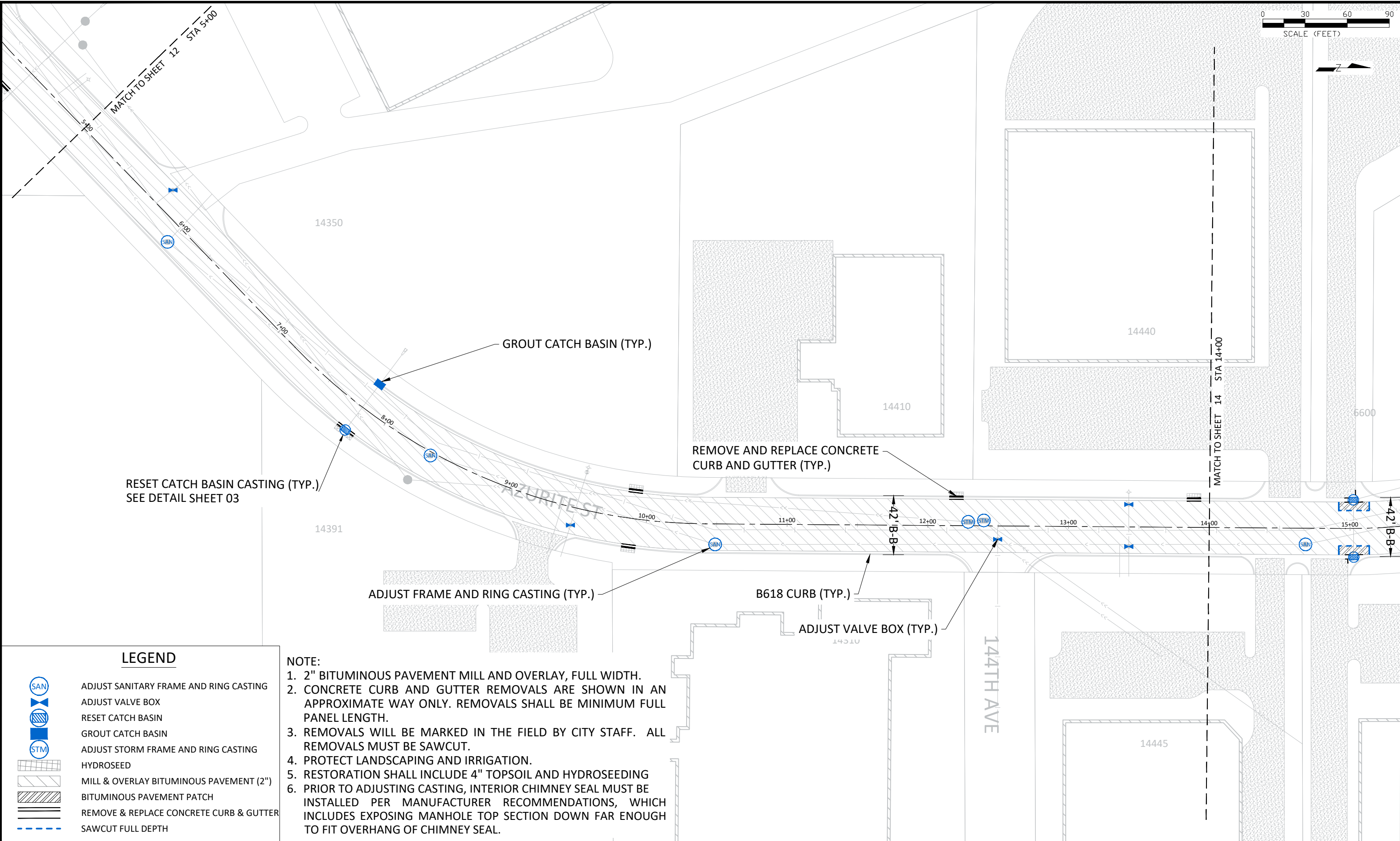
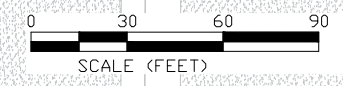
DESIGNED BY:	LWC	DATE:	03/17/22
DRAWN BY:	LWC	FILE:	22-04
CHECKED BY:	JJF		



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

22-04 - MILL AND OVERLAY SUNFISH LAKE
BUSINESS PARK 2ND

NEIGHBORHOOD OVERLAY IMPROVEMENTS
CITY PROJECT NO. 22-04
CITY OF RAMSEY, MINNESOTA



LEGEND

- ADJUST SANITARY FRAME AND RING CASTING
- ADJUST VALVE BOX
- RESET CATCH BASIN
- GROUT CATCH BASIN
- ADJUST STORM FRAME AND RING CASTING
- HYDROSEED
- MILL & OVERLAY BITUMINOUS PAVEMENT (2")
- BITUMINOUS PAVEMENT PATCH
- REMOVE & REPLACE CONCRETE CURB & GUTTER
- SAWCUT FULL DEPTH

NOTE:

1. 2" BITUMINOUS PAVEMENT MILL AND OVERLAY, FULL WIDTH.
2. CONCRETE CURB AND GUTTER REMOVALS ARE SHOWN IN AN APPROXIMATE WAY ONLY. REMOVALS SHALL BE MINIMUM FULL PANEL LENGTH.
3. REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
4. PROTECT LANDSCAPING AND IRRIGATION.
5. RESTORATION SHALL INCLUDE 4" TOPSOIL AND HYDROSEEDING
6. PRIOR TO ADJUSTING CASTING, INTERIOR CHIMNEY SEAL MUST BE INSTALLED PER MANUFACTURER RECOMMENDATIONS, WHICH INCLUDES EXPOSING MANHOLE TOP SECTION DOWN FAR ENOUGH TO FIT OVERHANG OF CHIMNEY SEAL.

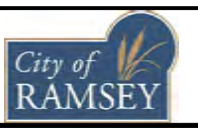
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JOE FERIANCEK
 Date 03/17/22 Lic. No. 57095

DESIGNED BY: LWC
 DRAWN BY: LWC
 CHECKED BY: JJF

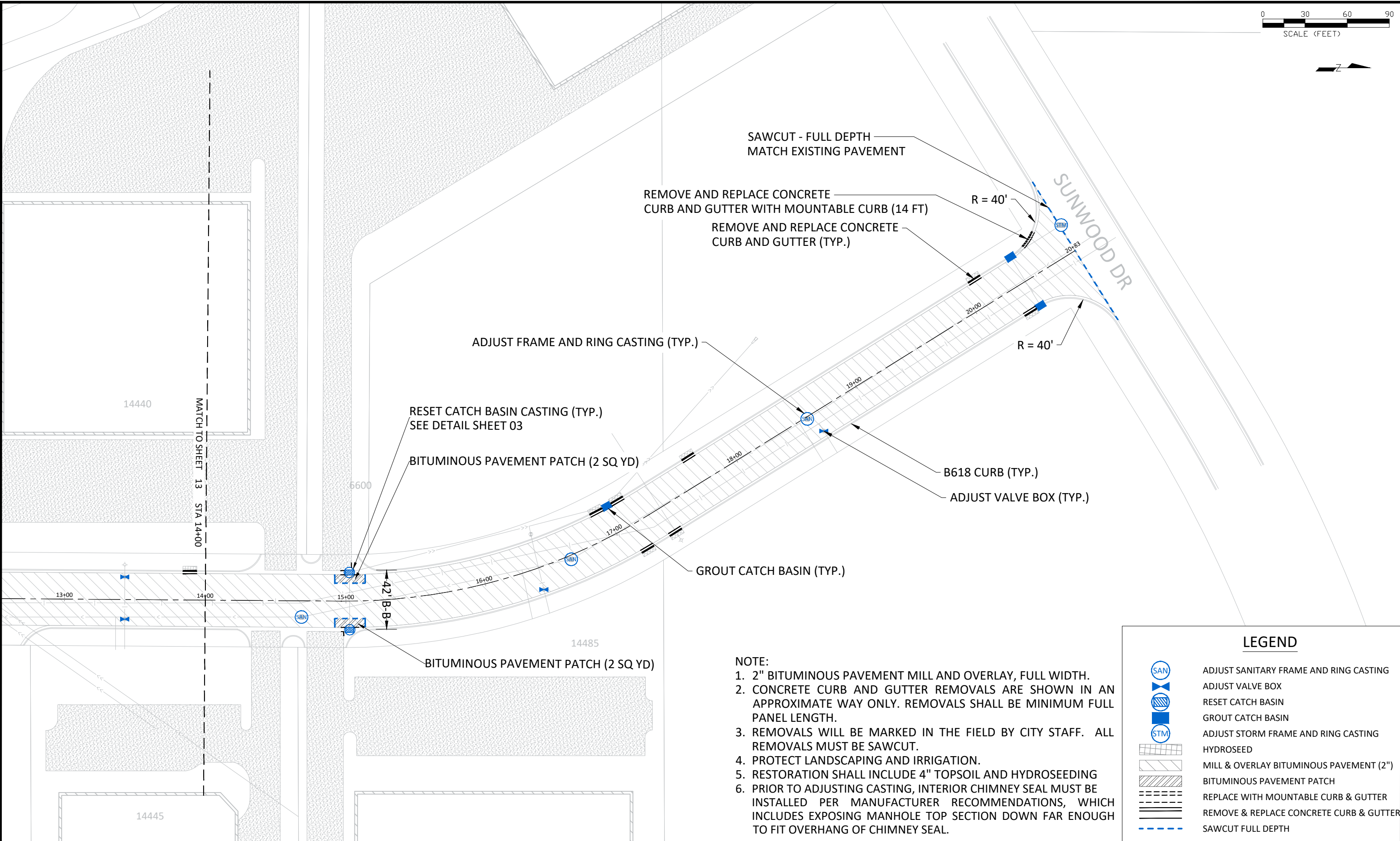
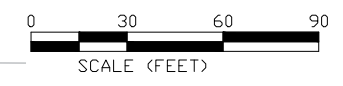
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CITY OF RAMSEY
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 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

22-04 - MILL AND OVERLAY SUNFISH LAKE BUSINESS PARK 2ND

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA



- NOTE:**
1. 2" BITUMINOUS PAVEMENT MILL AND OVERLAY, FULL WIDTH.
 2. CONCRETE CURB AND GUTTER REMOVALS ARE SHOWN IN AN APPROXIMATE WAY ONLY. REMOVALS SHALL BE MINIMUM FULL PANEL LENGTH.
 3. REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
 4. PROTECT LANDSCAPING AND IRRIGATION.
 5. RESTORATION SHALL INCLUDE 4" TOPSOIL AND HYDROSEEDING
 6. PRIOR TO ADJUSTING CASTING, INTERIOR CHIMNEY SEAL MUST BE INSTALLED PER MANUFACTURER RECOMMENDATIONS, WHICH INCLUDES EXPOSING MANHOLE TOP SECTION DOWN FAR ENOUGH TO FIT OVERHANG OF CHIMNEY SEAL.

LEGEND	
	ADJUST SANITARY FRAME AND RING CASTING
	ADJUST VALVE BOX
	RESET CATCH BASIN
	GROUT CATCH BASIN
	ADJUST STORM FRAME AND RING CASTING
	HYDROSEED
	MILL & OVERLAY BITUMINOUS PAVEMENT (2")
	BITUMINOUS PAVEMENT PATCH
	REPLACE WITH MOUNTABLE CURB & GUTTER
	REMOVE & REPLACE CONCRETE CURB & GUTTER
	SAWCUT FULL DEPTH

DATE	REVISION

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Joe Feriancek
 JOE FERIANCEK
 Date 03/17/22 Lic. No. 57095

DESIGNED BY:	LWC	DATE:	03/17/22
DRAWN BY:	LWC	FILE:	22-04
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 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

22-04 - MILL AND OVERLAY SUNFISH LAKE
 BUSINESS PARK 2ND

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA



ALPINE DR

JODINE ST

GERMAN A

15340
15344
15346
15348
ADJUST FRAME AND RING CASTING (TYP.)
GROUT CATCH BASIN (TYP.)
SURMOUNTABLE CURB (TYP.)

SAWCUT - FULL DEPTH
MATCH EXISTING PAVEMENT

BITUMINOUS PAVEMENT
PATCH (124 SQ YD)

RESET CATCH BASIN CASTING (TYP.)
SEE DETAIL SHEET 03

ADJUST VALVE BOX (TYP.)

REMOVE AND REPLACE CONCRETE
CURB AND GUTTER (TYP.)

LEGEND

- ADJUST SANITARY FRAME AND RING CASTING
- ADJUST VALVE BOX
- RESET CATCH BASIN
- GROUT CATCH BASIN
- SODDING TYPE LAWN
- REMOVE CONCRETE WALK
- REMOVE BITUMINOUS TRAIL
- BITUMINOUS PAVEMENT PATCH
- MILL & OVERLAY BITUMINOUS PAVEMENT (2")
- REMOVE & REPLACE CONCRETE CURB & GUTTER
- SAWCUT FULL DEPTH

NOTE:

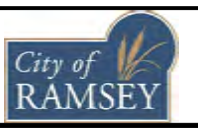
1. 2" BITUMINOUS PAVEMENT MILL AND OVERLAY, FULL WIDTH.
2. CONCRETE CURB AND GUTTER REMOVALS ARE SHOWN IN AN APPROXIMATE WAY ONLY. REMOVALS SHALL BE MINIMUM FULL PANEL LENGTH.
3. REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
4. PROTECT LANDSCAPING AND IRRIGATION.
5. RESTORATION SHALL INCLUDE 4" TOPSOIL AND SODDING TYPE LAWN.
6. PRIOR TO ADJUSTING CASTING, INTERIOR CHIMNEY SEAL MUST BE INSTALLED PER MANUFACTURER RECOMMENDATIONS, WHICH INCLUDES EXPOSING MANHOLE TOP SECTION DOWN FAR ENOUGH TO FIT OVERHANG OF CHIMNEY SEAL.

DATE	REVISION

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Joe Feriancek
JOE FERIANCEK
Date 03/17/22 Lic. No. 57095

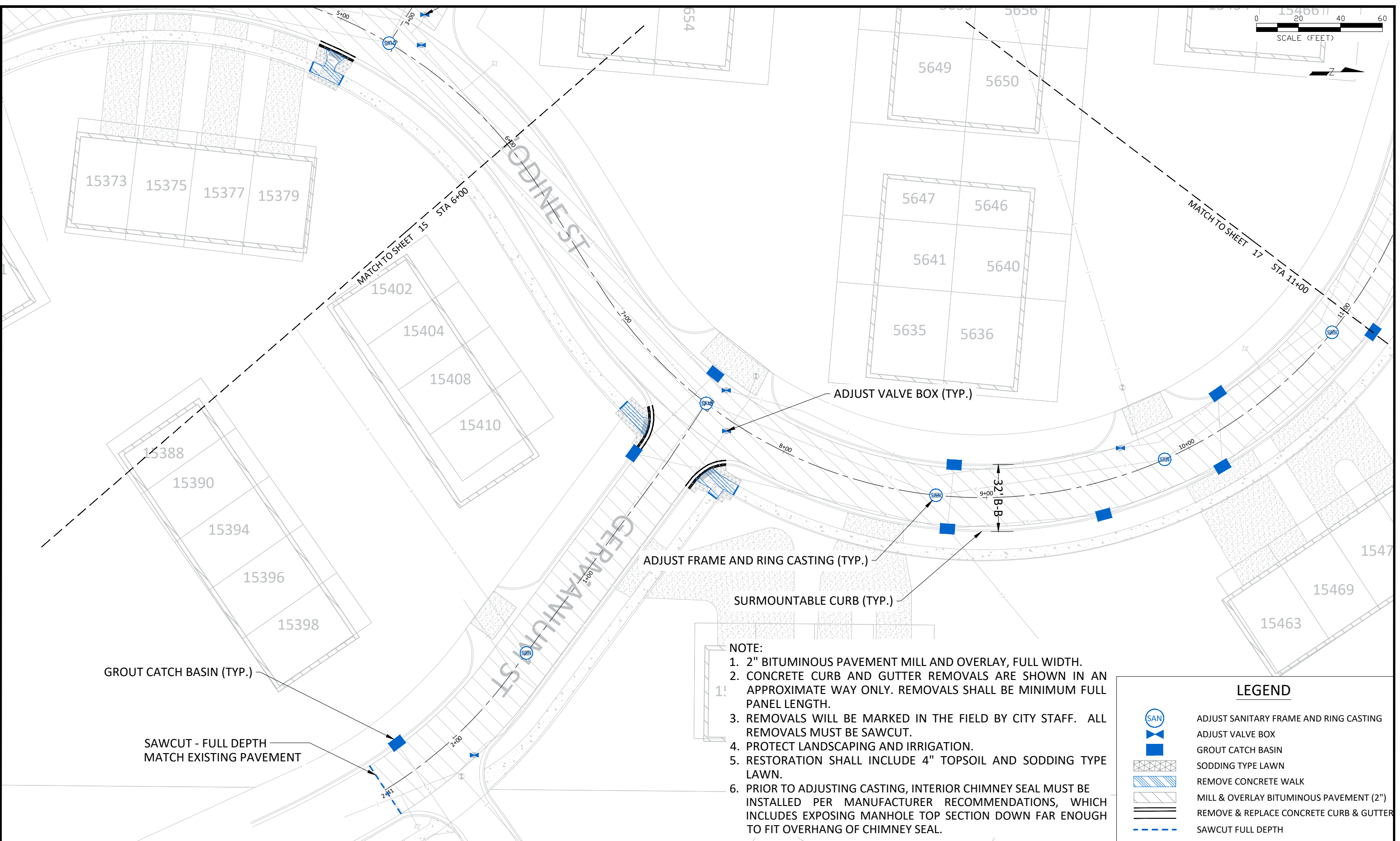
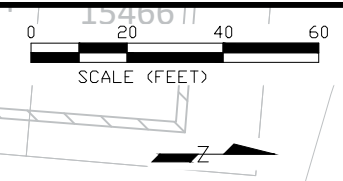
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DRAWN BY: LWC DATE: 03/17/22
CHECKED BY: JJF FILE: 22-04



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

22-04 - MILL AND OVERLAY SUNFLOWER RIDGE

NEIGHBORHOOD OVERLAY IMPROVEMENTS
CITY PROJECT NO. 22-04
CITY OF RAMSEY, MINNESOTA



- NOTE:**
1. 2" BITUMINOUS PAVEMENT MILL AND OVERLAY, FULL WIDTH.
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LEGEND

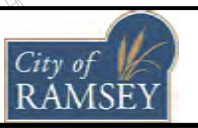
- ADJUST SANITARY FRAME AND RING CASTING
- ADJUST VALVE BOX
- GROUT CATCH BASIN
- SODDING TYPE LAWN
- REMOVE CONCRETE WALK
- MILL & OVERLAY BITUMINOUS PAVEMENT (2")
- REMOVE & REPLACE CONCRETE CURB & GUTTER
- SAWCUT FULL DEPTH

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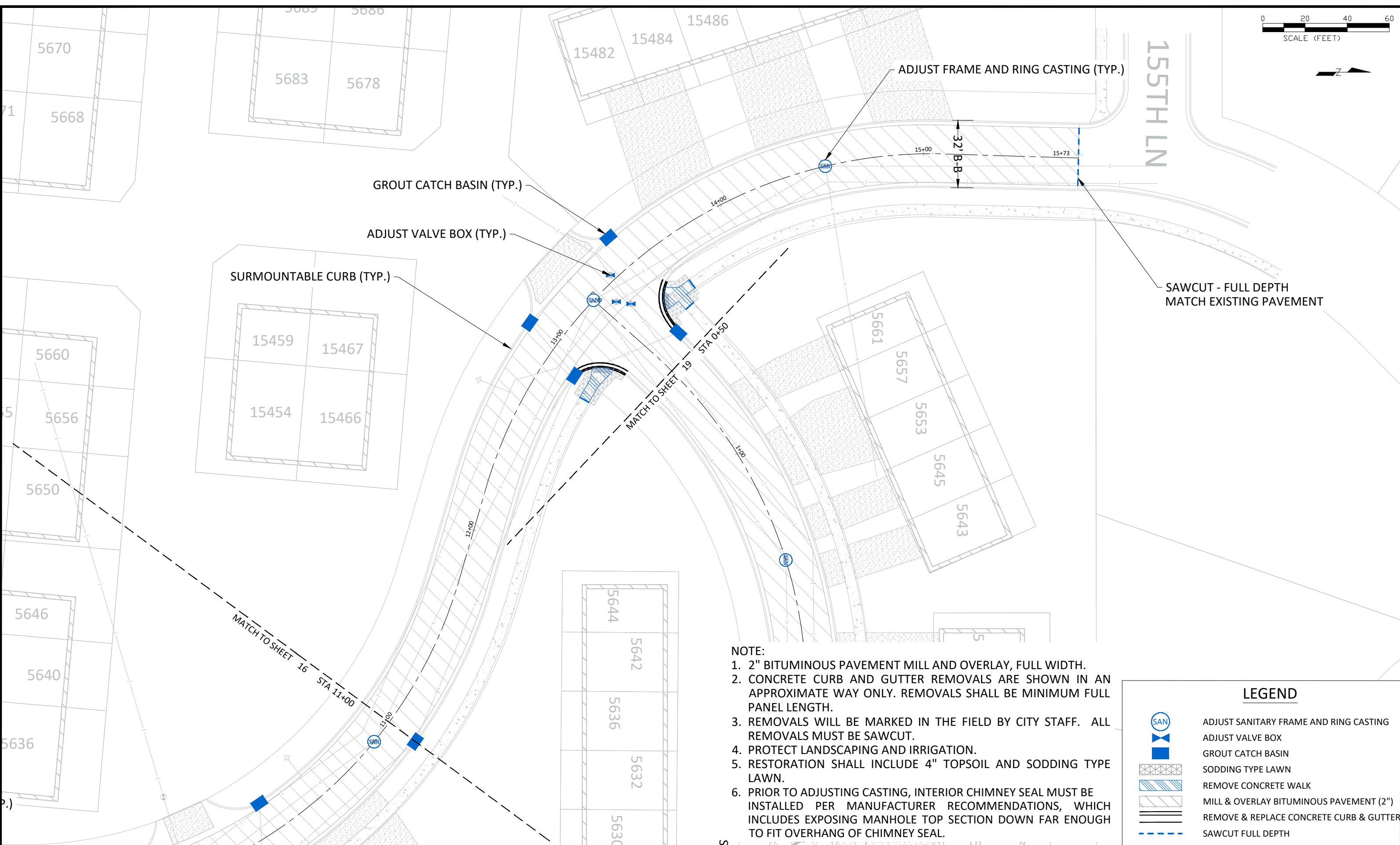
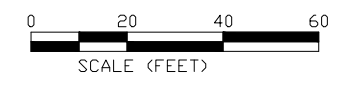
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NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA



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LEGEND	
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	ADJUST VALVE BOX
	GROUT CATCH BASIN
	SODDING TYPE LAWN
	REMOVE CONCRETE WALK
	MILL & OVERLAY BITUMINOUS PAVEMENT (2")
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	SAWCUT FULL DEPTH

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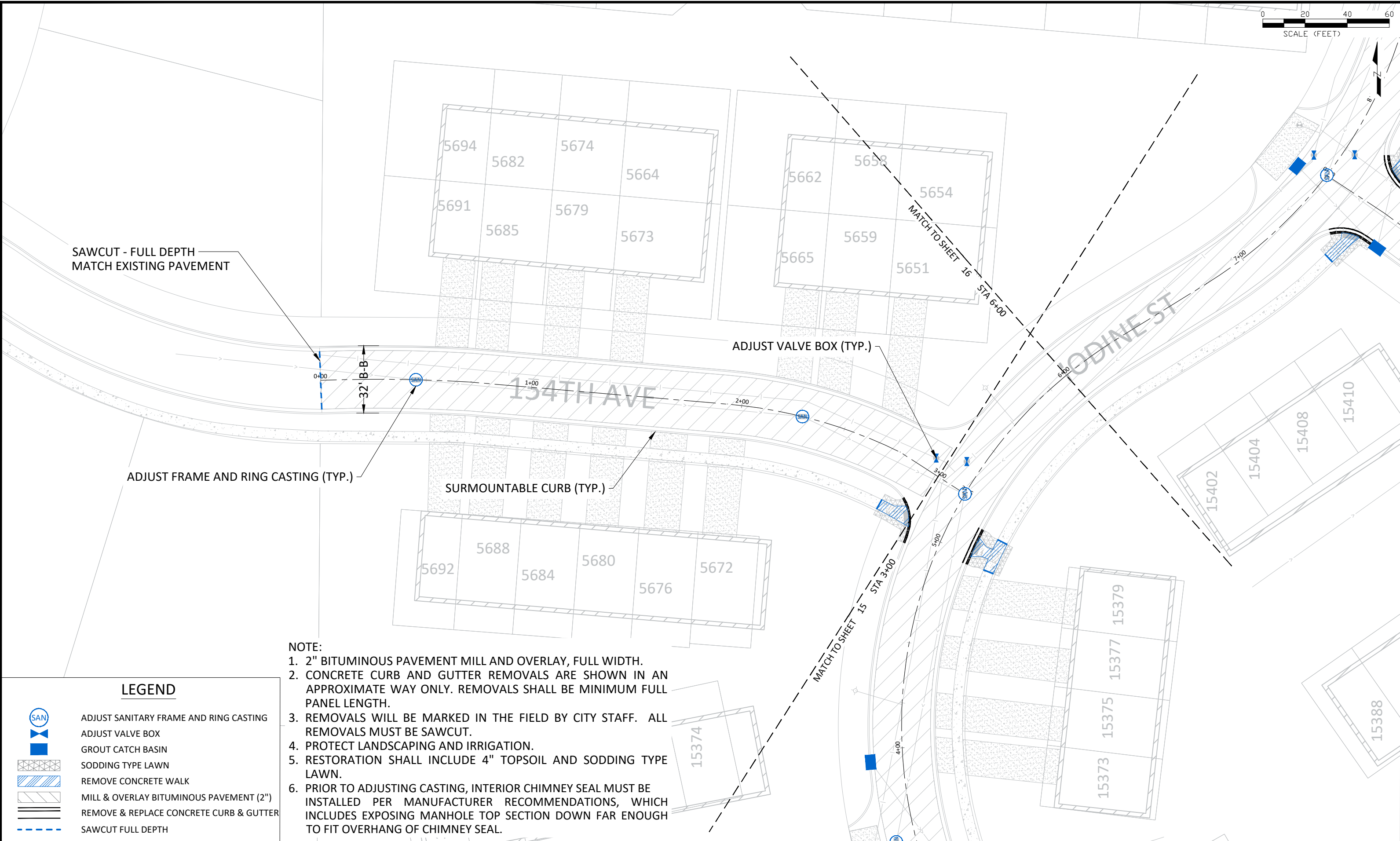
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22-04 - MILL AND OVERLAY SUNFLOWER RIDGE

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA



SAWCUT - FULL DEPTH
MATCH EXISTING PAVEMENT

ADJUST VALVE BOX (TYP.)

ADJUST FRAME AND RING CASTING (TYP.)

SURMOUNTABLE CURB (TYP.)

154TH AVE

IODINE ST

- NOTE:**
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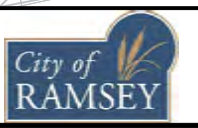
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- GROUT CATCH BASIN
- SODDING TYPE LAWN
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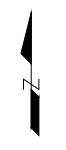
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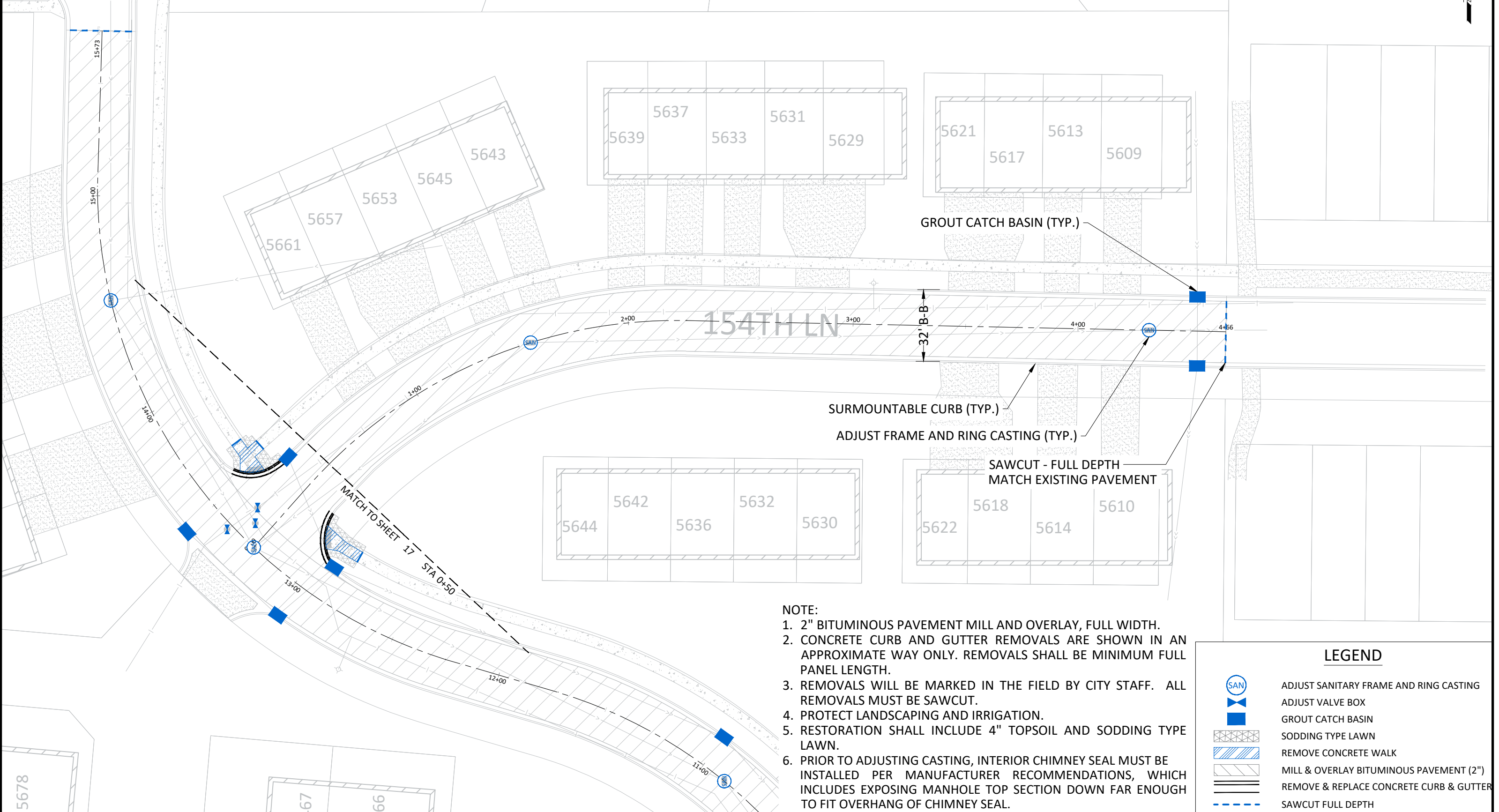
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NEIGHBORHOOD OVERLAY IMPROVEMENTS
CITY PROJECT NO. 22-04
CITY OF RAMSEY, MINNESOTA











55TH LN



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LEGEND

-  ADJUST SANITARY FRAME AND RING CASTING
-  ADJUST VALVE BOX
-  GROUT CATCH BASIN
-  SODDING TYPE LAWN
-  REMOVE CONCRETE WALK
-  MILL & OVERLAY BITUMINOUS PAVEMENT (2")
-  REMOVE & REPLACE CONCRETE CURB & GUTTER
-  SAWCUT FULL DEPTH

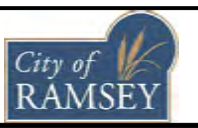
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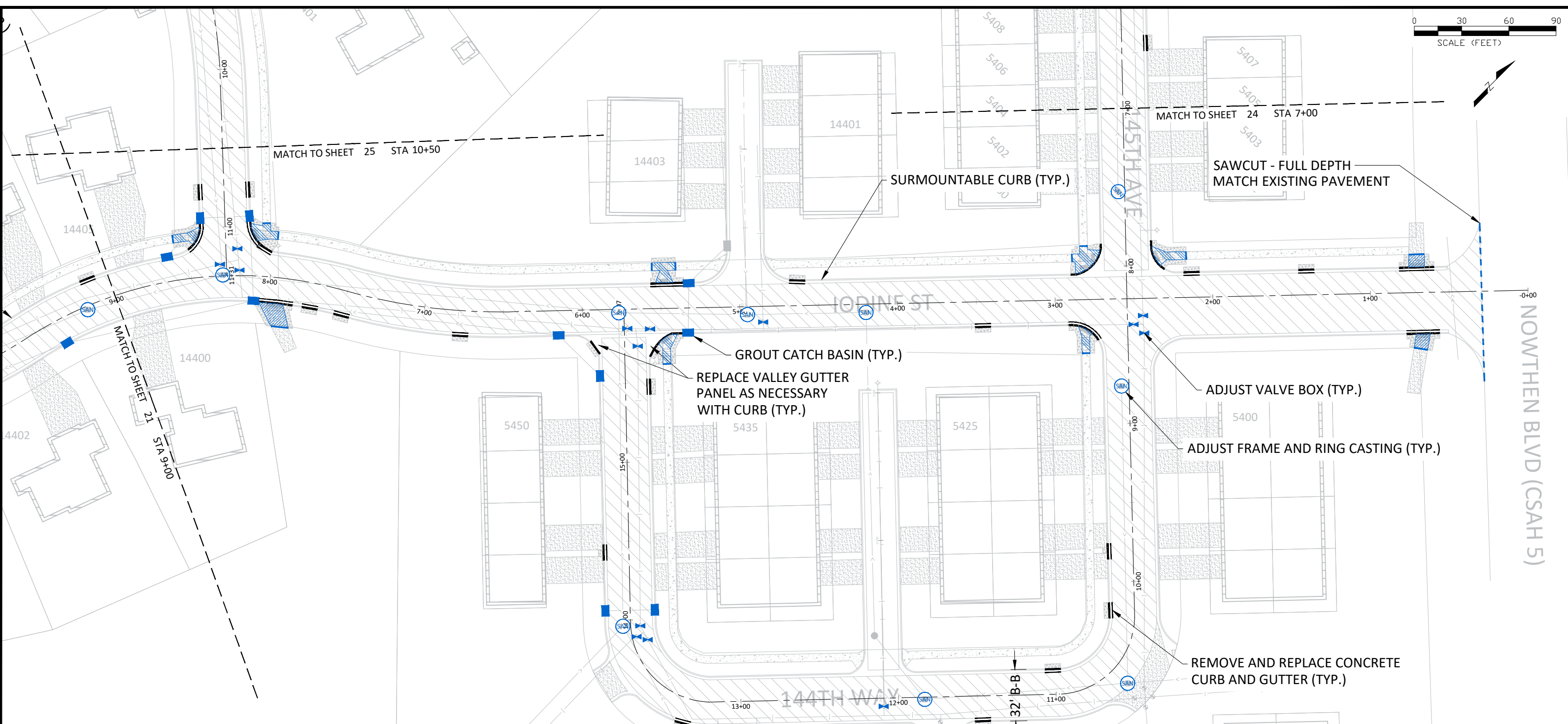
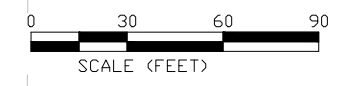
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

CITY OF RAMSEY
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22-04 - MILL AND OVERLAY SUNFLOWER RIDGE

NEIGHBORHOOD OVERLAY IMPROVEMENTS
CITY PROJECT NO. 22-04
CITY OF RAMSEY, MINNESOTA



LEGEND

-  ADJUST SANITARY FRAME AND RING CASTING
-  ADJUST VALVE BOX
-  GROUT CATCH BASIN
-  SODDING TYPE LAWN
-  REMOVE CONCRETE WALK
-  REMOVE BITUMINOUS TRAIL
-  BITUMINOUS PAVEMENT PATCH
-  MILL & OVERLAY BITUMINOUS PAVEMENT (1.5")
-  REMOVE & REPLACE CONCRETE CURB & GUTTER
-  SAWCUT FULL DEPTH

NOTE:

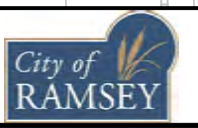
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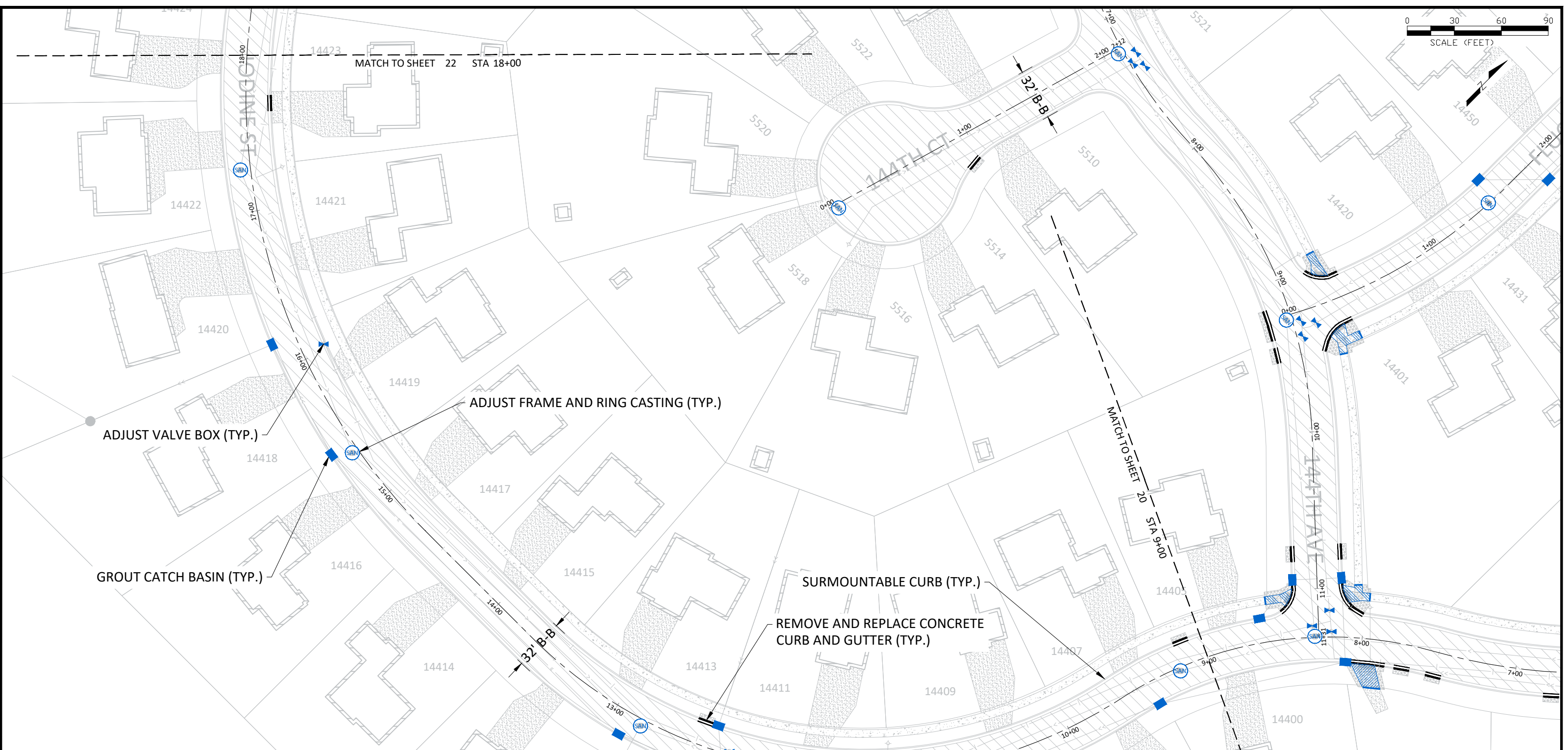
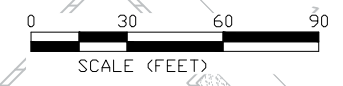
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DRAWN BY:	LWC	FILE:	22-04
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


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

22-04 - MILL AND OVERLAY THE PONDS OF RAMSEY

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA



LEGEND

-  ADJUST SANITARY FRAME AND RING CASTING
-  ADJUST VALVE BOX
-  GROUT CATCH BASIN
-  SODDING TYPE LAWN
-  REMOVE CONCRETE WALK
-  BITUMINOUS PAVEMENT PATCH
-  MILL & OVERLAY BITUMINOUS PAVEMENT (1.5")
-  REMOVE & REPLACE CONCRETE CURB & GUTTER

NOTE:

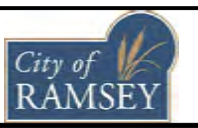
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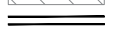
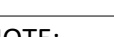


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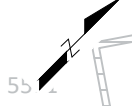
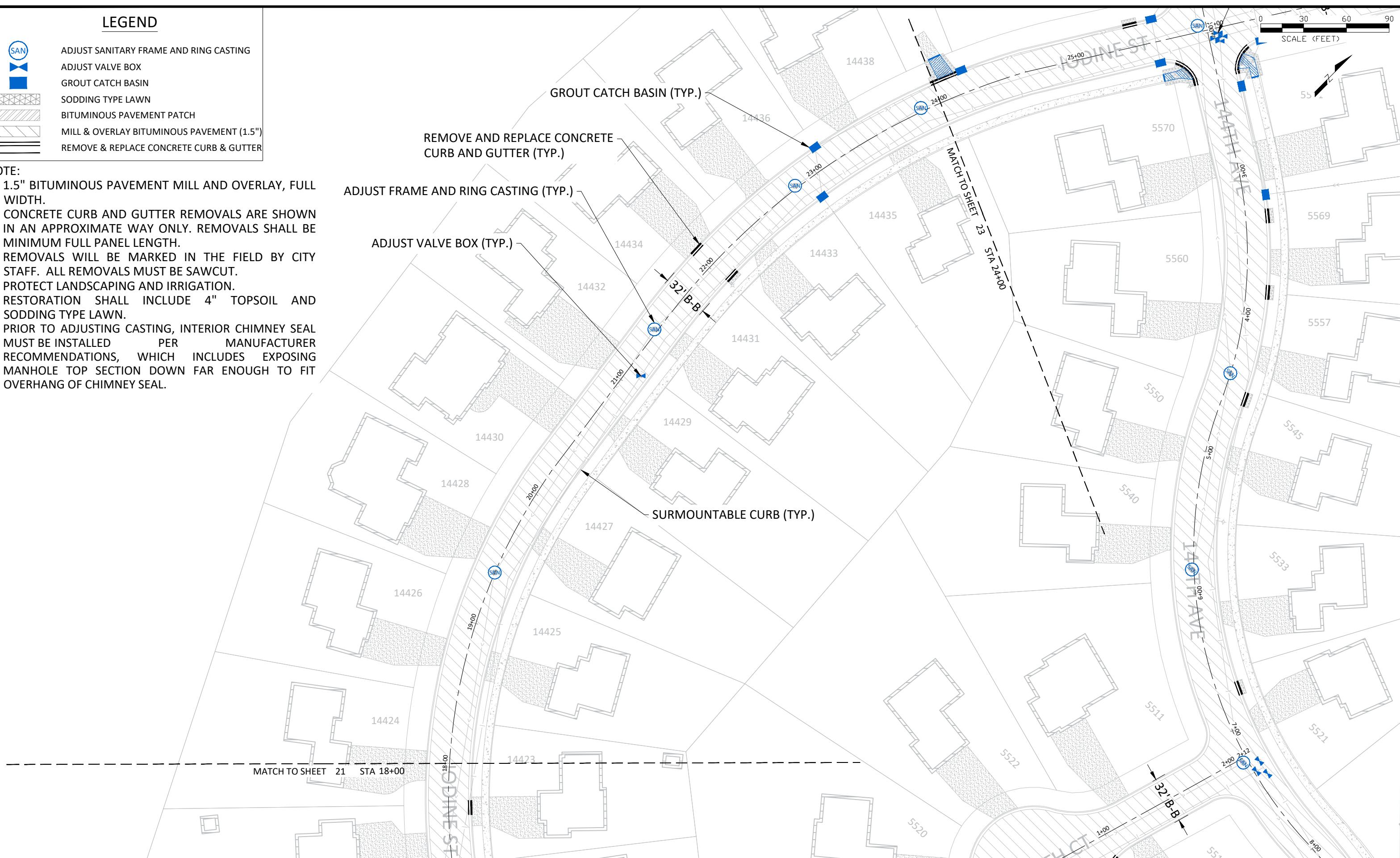
22-04 - MILL AND OVERLAY THE PONDS OF RAMSEY

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA

LEGEND

-  ADJUST SANITARY FRAME AND RING CASTING
-  ADJUST VALVE BOX
-  GROUT CATCH BASIN
-  SODDING TYPE LAWN
-  BITUMINOUS PAVEMENT PATCH
-  MILL & OVERLAY BITUMINOUS PAVEMENT (1.5")
-  REMOVE & REPLACE CONCRETE CURB & GUTTER

- NOTE:**
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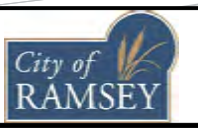
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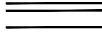

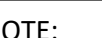


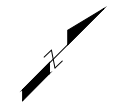
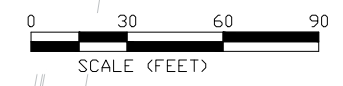
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22-04 - MILL AND OVERLAY THE PONDS OF RAMSEY

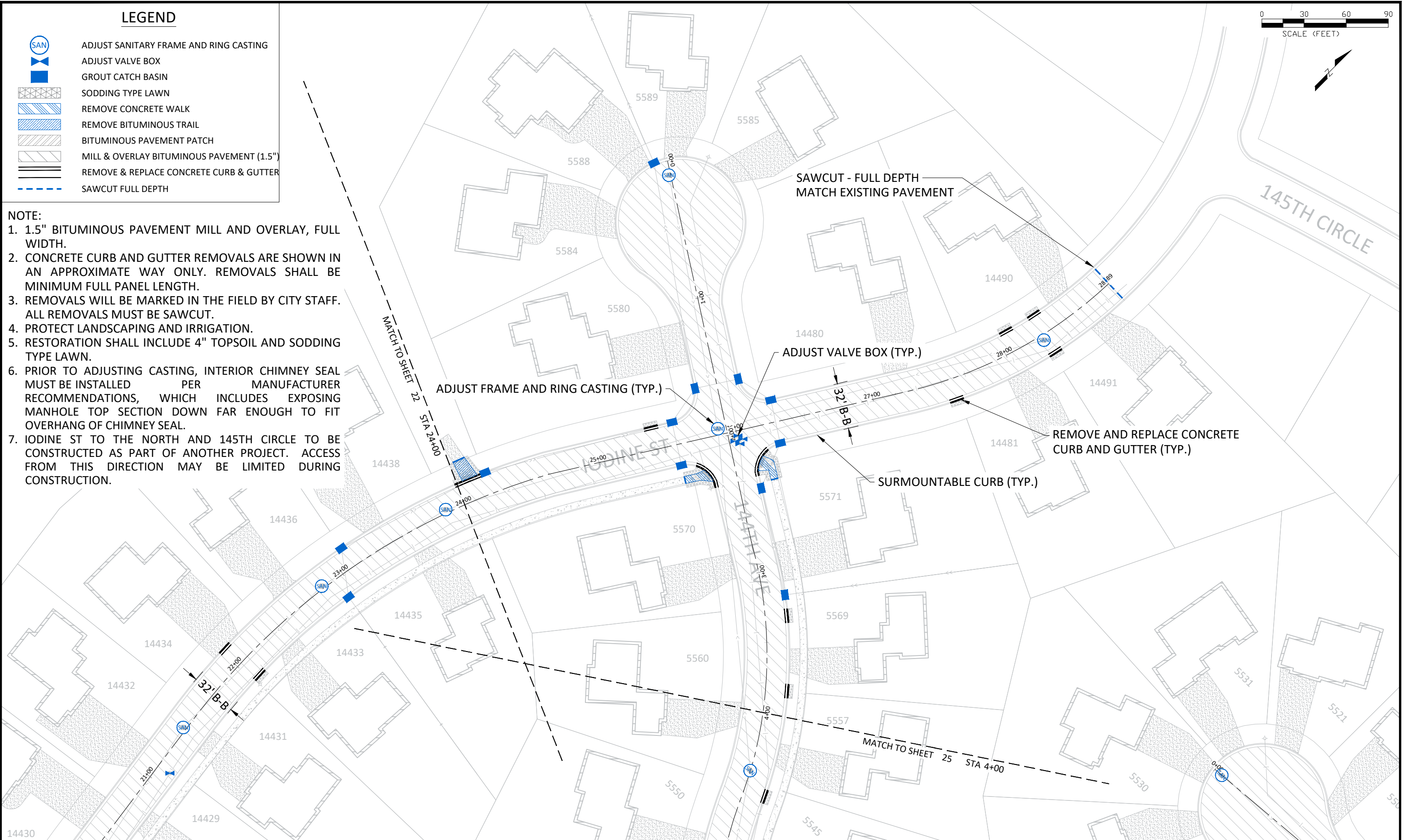
NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA

LEGEND

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-  SODDING TYPE LAWN
-  REMOVE CONCRETE WALK
-  REMOVE BITUMINOUS TRAIL
-  BITUMINOUS PAVEMENT PATCH
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-  SAWCUT FULL DEPTH



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 7. IODINE ST TO THE NORTH AND 145TH CIRCLE TO BE CONSTRUCTED AS PART OF ANOTHER PROJECT. ACCESS FROM THIS DIRECTION MAY BE LIMITED DURING CONSTRUCTION.

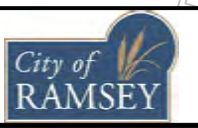


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Joe Feriancek
 JOE FERIANCEK
 Date 03/17/22 Lic. No. 57095

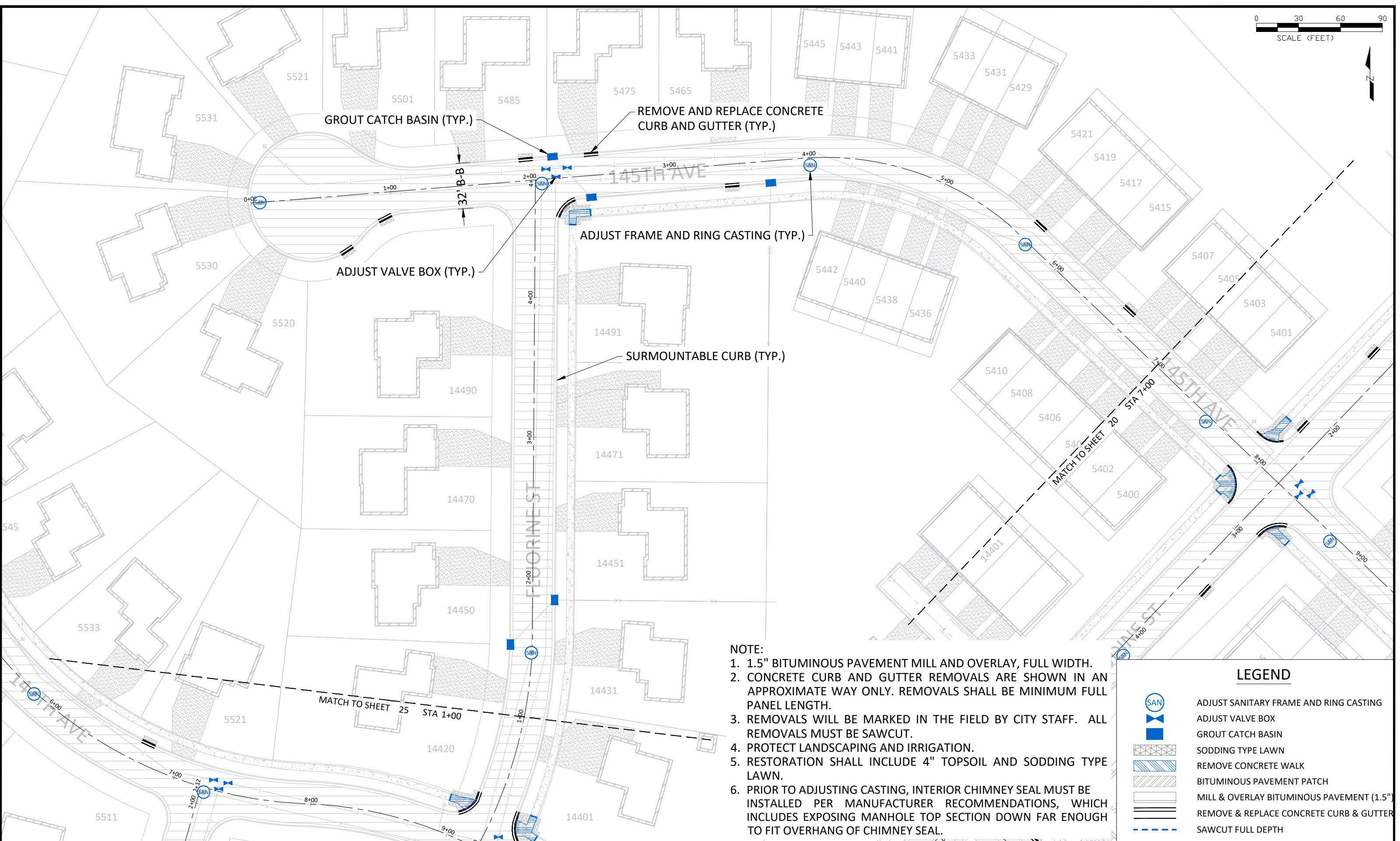
DESIGNED BY: LWC
 DATE: 03/17/22
 DRAWN BY: LWC
 FILE: 22-04
 CHECKED BY: JJF



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

22-04 - MILL AND OVERLAY THE PONDS OF RAMSEY

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA



- NOTE:**
1. 1.5" BITUMINOUS PAVEMENT MILL AND OVERLAY, FULL WIDTH.
 2. CONCRETE CURB AND GUTTER REMOVALS ARE SHOWN IN AN APPROXIMATE WAY ONLY. REMOVALS SHALL BE MINIMUM FULL PANEL LENGTH.
 3. REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
 4. PROTECT LANDSCAPING AND IRRIGATION.
 5. RESTORATION SHALL INCLUDE 4" TOPSOIL AND SODDING TYPE LAWN.
 6. PRIOR TO ADJUSTING CASTING, INTERIOR CHIMNEY SEAL MUST BE INSTALLED PER MANUFACTURER RECOMMENDATIONS, WHICH INCLUDES EXPOSING MANHOLE TOP SECTION DOWN FAR ENOUGH TO FIT OVERHANG OF CHIMNEY SEAL.

LEGEND

	ADJUST SANITARY FRAME AND RING CASTING
	ADJUST VALVE BOX
	GROUT CATCH BASIN
	SODDING TYPE LAWN
	REMOVE CONCRETE WALK
	BITUMINOUS PAVEMENT PATCH
	MILL & OVERLAY BITUMINOUS PAVEMENT (1.5")
	REMOVE & REPLACE CONCRETE CURB & GUTTER
	SAWCUT FULL DEPTH

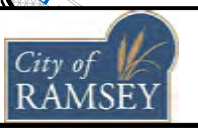
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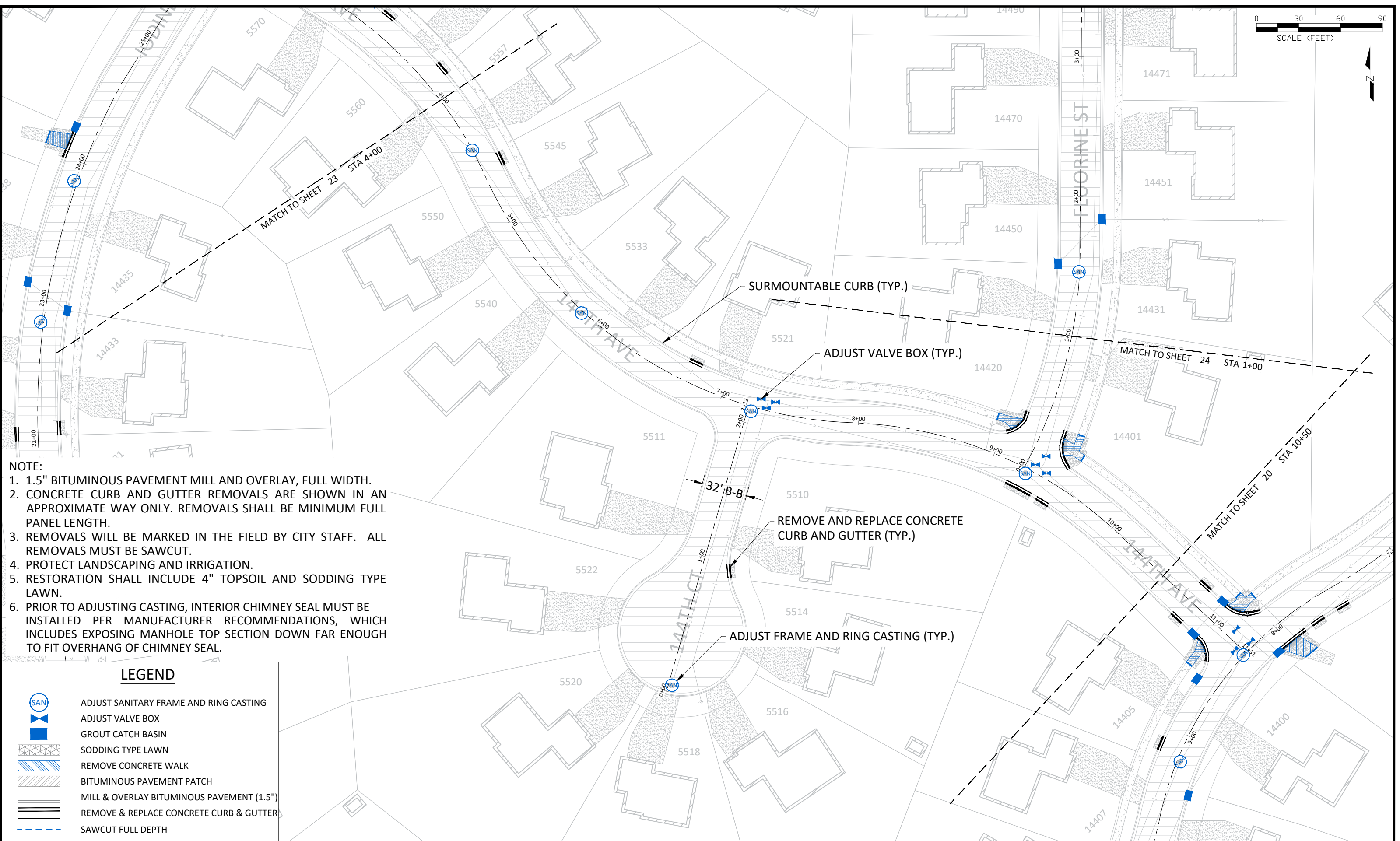
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 - RESTORATION SHALL INCLUDE 4" TOPSOIL AND SODDING TYPE LAWN.
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LEGEND

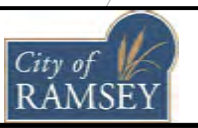
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	ADJUST VALVE BOX
	GROUT CATCH BASIN
	SODDING TYPE LAWN
	REMOVE CONCRETE WALK
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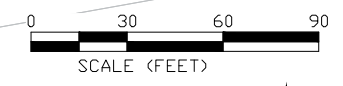
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CITY PROJECT NO. 22-04
CITY OF RAMSEY, MINNESOTA



TIGER ST

SAWCUT - FULL DEPTH
MATCH EXISTING PAVEMENT

SAWCUT - FULL DEPTH
MATCH EXISTING PAVEMENT

REMOVE AND REPLACE CONCRETE
CURB AND GUTTER (TYP.)

SURMOUNTABLE CURB (TYP.)

GROUT CATCH BASIN (TYP.)







BITUMINOUS PAVEMENT PATCH (30 SQ YD)

MATCH TO SHEET 21
STA 9+00

170TH AVE

8660

LEGEND

-  GROUT CATCH BASIN
-  HYDROSEED
-  MILL & OVERLAY BITUMINOUS PAVEMENT (2")
-  BITUMINOUS PAVEMENT PATCH
-  SAWCUT FULL DEPTH
-  REMOVE & REPLACE CONCRETE CURB & GUTTER

NOTE:

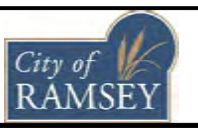
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4. PROTECT LANDSCAPING AND IRRIGATION.
5. RESTORATION SHALL INCLUDE 4" TOPSOIL AND HYDROSEED.

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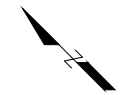
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22-04 - MILL AND OVERLAY TIGER MEADOWS

NEIGHBORHOOD OVERLAY IMPROVEMENTS
 CITY PROJECT NO. 22-04
 CITY OF RAMSEY, MINNESOTA









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SURMOUNTABLE CURB (TYP.)

REMOVE AND REPLACE CONCRETE CURB AND GUTTER (TYP.)

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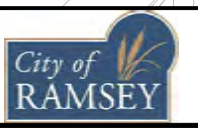
-  GROUT CATCH BASIN
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-  BITUMINOUS PAVEMENT PATCH
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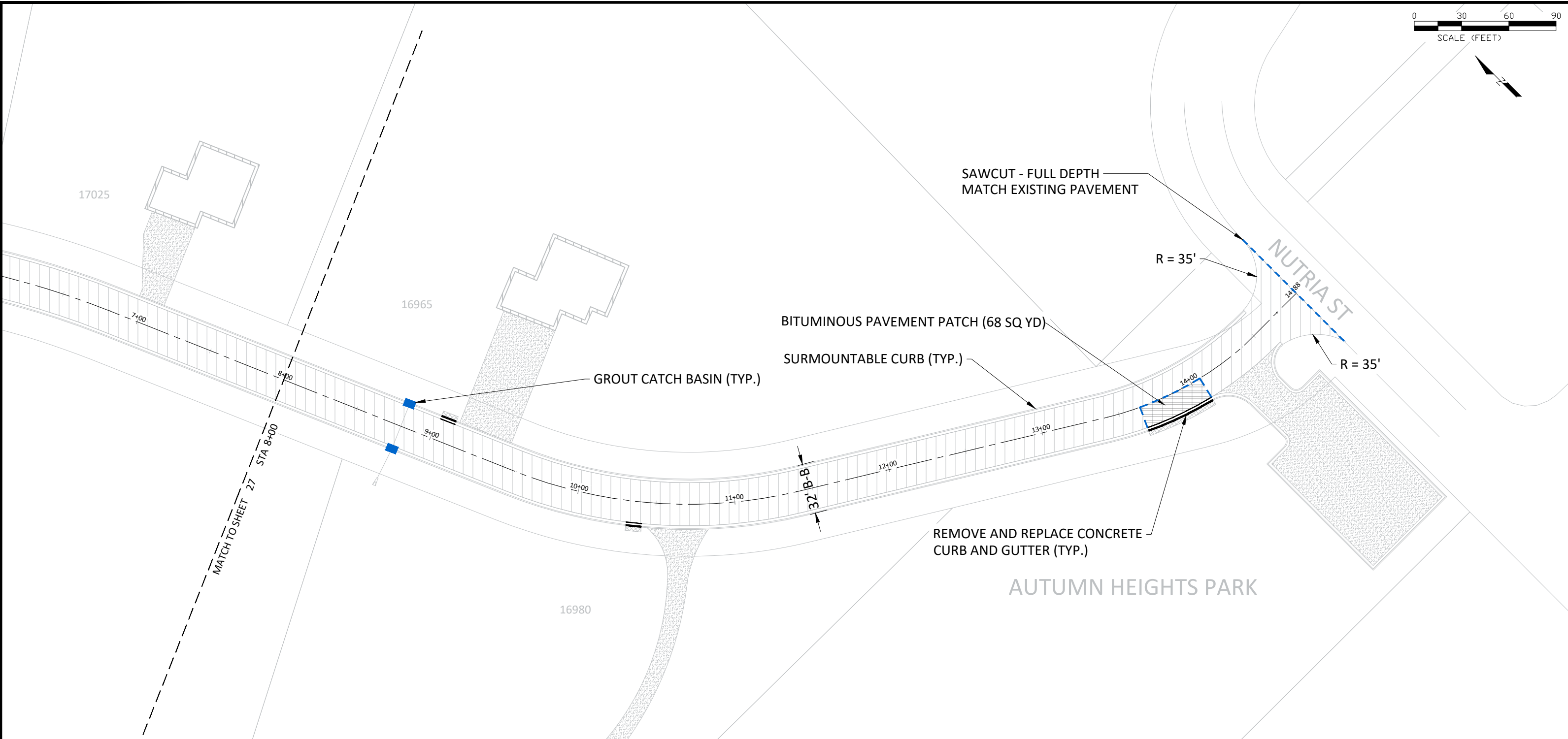
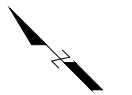
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



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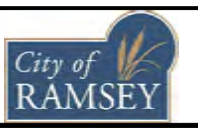
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