

LEGEND

	= CORPORATE LIMITS
	= CENTERLINE
EXISTING	
	= R.O.W.
	= PROPERTY LINE
	= UNDERGROUND TELEPHONE LINE
	= UNDERGROUND ELECTRIC LINE
	= UNDERGROUND ELECTRIC 3 PHASE
	= OVERHEAD ELECTRIC LINE
	= GAS MAIN
	= GASOLINE MAIN
	= UNDERGROUND CABLE TV
	= UNDERGROUND FIBER OPTIC LINE
	= TELEPHONE/CABLE TV PEDESTAL
	= CONTROL CABINET/TRANSFORMER
	= SIGN
	= CATCH BASIN
	= STORM SEWER MANHOLE
	= OUTLET CONTROL STRUCTURE
	= STORM SEWER LINE
	= CONCRETE CURB & GUTTER
PROPOSED	
	= CONCRETE CURB & GUTTER
	= CATCH BASIN
	= STORM SEWER LINE

CITY OF**ANDOVER, MINNESOTA**
CONSTRUCTION PLANS
FOR**2025 FULL DEPTH RECLAMATION (MEADOWS OF ROUND LAKE AREA)**

CITY PROJECT 25-11A

AND

2025 SIDEWALK REPAIRS

CITY PROJECT 25-08

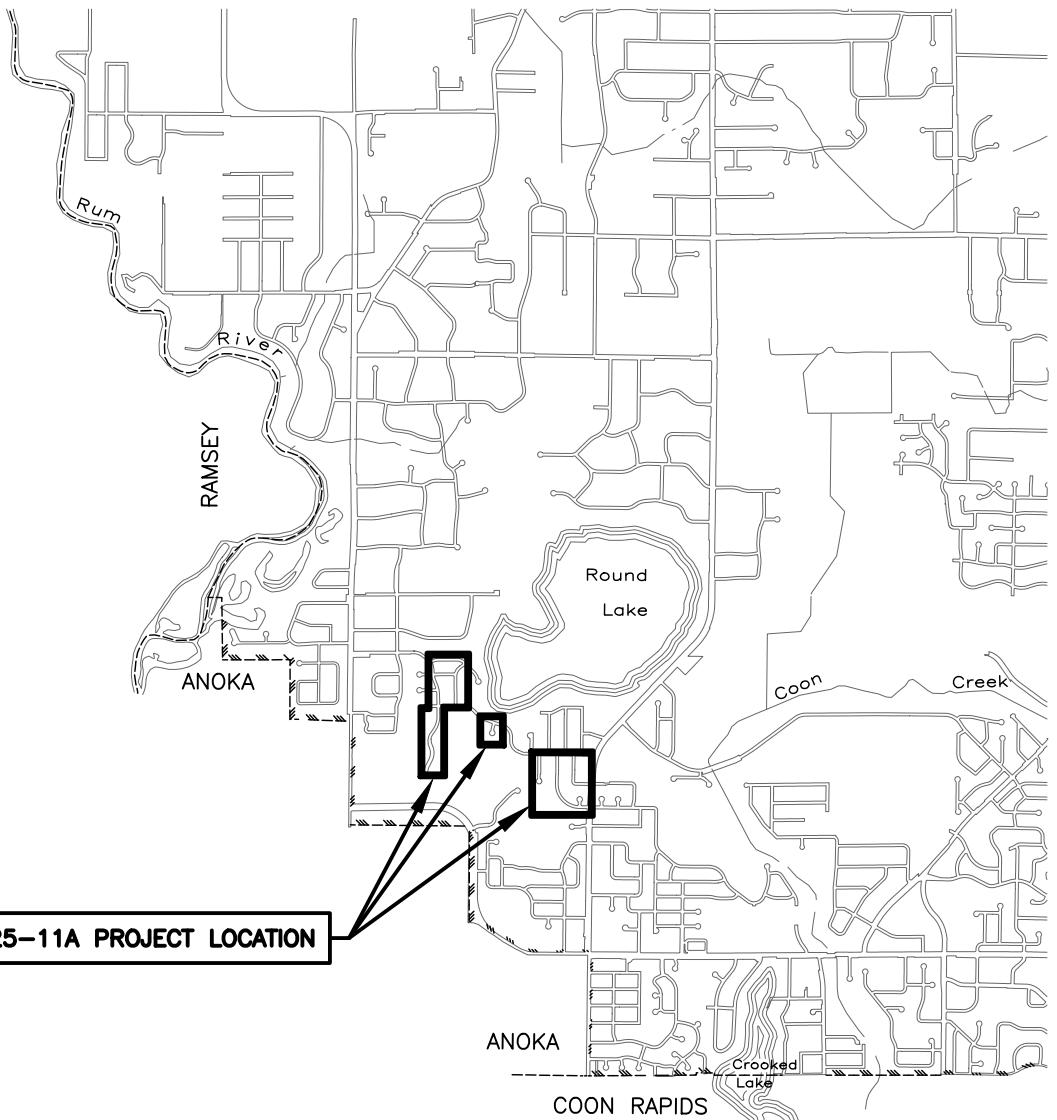
GOVERNING SPECIFICATIONS
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF
TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION"
SHALL GOVERN.

CITY OF ANDOVER 2025 UTILITY AND STREET CONSTRUCTION
SPECIFICATIONS SHALL APPLY.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST
MMUTCD, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY
TRAFFIC CONTROL ZONE LAYOUTS.

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THIS PLAN CONTAINS 23 SHEETS

NO SCALE

PLAN REVISIONS SUMMARY		
NO.	BY	DATE
NO.	BY	DATE
REVISIONS		

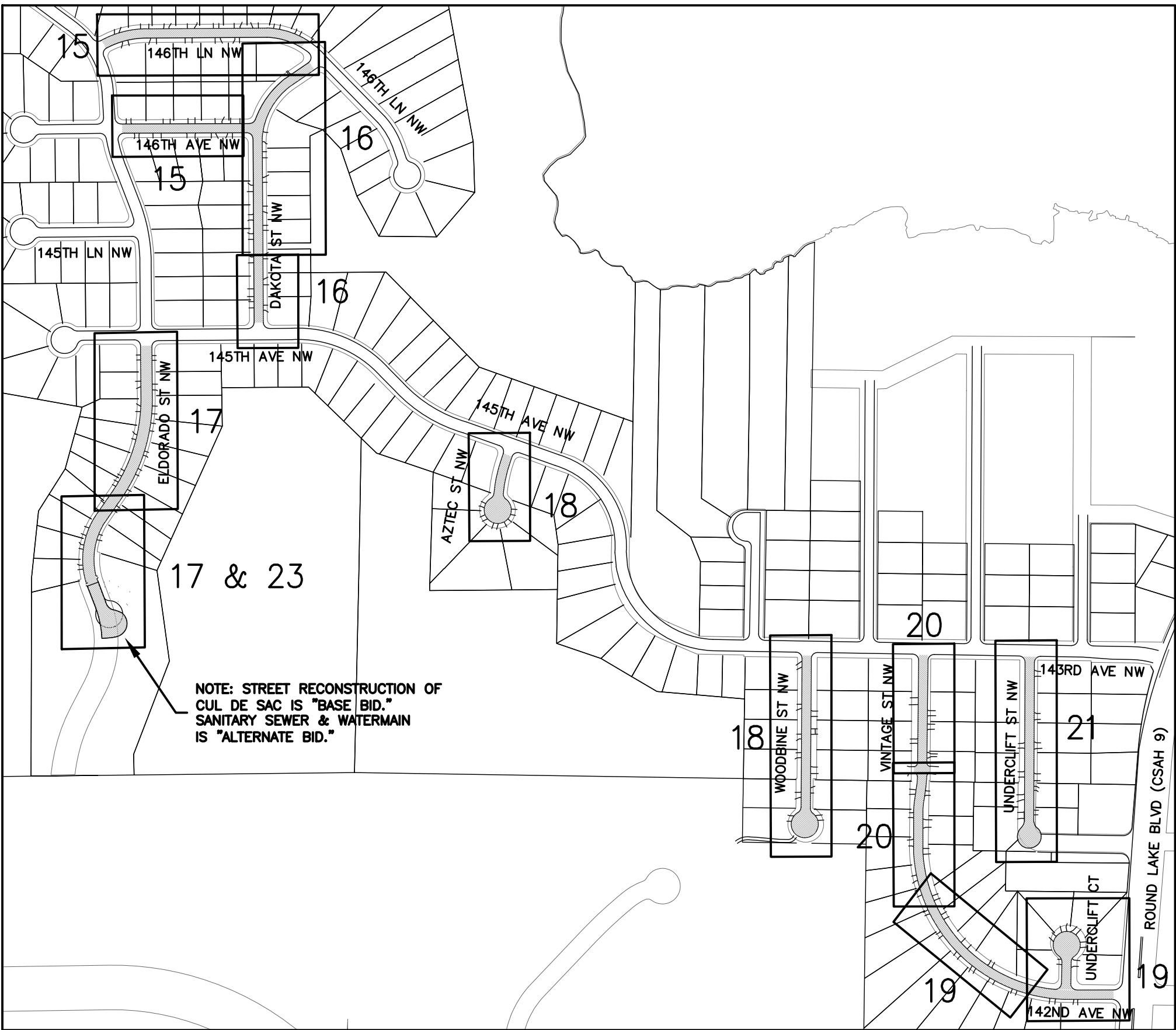


ANDOVER, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY
DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 DAVID D. BERKOWITZ, PE
ANDOVER DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
DATE MAY 6TH, 2025 LIC. NO. 26757

TITLE SHEET & LEGEND

SHEET NO. 1 OF 23 SHEETS



NO SCALE

2025 FULL DEPTH RECLAMATION (25-11A)



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR JOINTLY WITH ME FOR THE PURPOSE OF OBTAINING A CENSUS OF POPULATION AND AN APPRAISAL OF PROPERTY UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID D. BERKOWITZ
REG. NO. 26757
DATE: MAY 6TH, 2025

David D. Berkowitz
Signature

DESIGNED NO. DATE BY DESCRIPTION OF REVISIONS

DRAWN JUL JBL

CHECKED DDB

STATEMENT OF ESTIMATED QUANTITIES

2025 FULL DEPTH RECLAMATION (C.P. 25-11A) (BASE BID) Meadows of Round Lake Area			TOTAL QUANTITIES		
NOTES	ITEM NO.	DESCRIPTION	UNIT	EST. QUAN.	ACT. QUAN.
	1	2021.501	Mobilization	LS	1.00
	2	2101.502	Grubbing	EA	1
1	3	2104.502	Salvage Casting (Storm)	EA	1
2	4	2104.503	Remove Curb & Gutter	LF	3,300
3	5	2104.503	Sawing Concrete Pavement (Full Depth)	LF	190
3	6	2104.503	Sawing Bit Pavement (Full Depth)	LF	670
3	7	2104.518	Remove Concrete Pavement	SF	2,160
3	8	2104.518	Remove Bituminous Pavement	SF	3,410
4	9	2104.602	Salvage and Reinstall Mailbox	EA	13
5	10	2105.607	Common Excavation (EV)	CY	170
6	11	2105.607	Subgrade Excavation (EV)	CY	90
7	12	2105.607	Salvage Reclaim Material (LV)	CY	3,030
8	13	2105.607	Select Granular Borrow (LV)	CY	120
9	14	2112.519	Subgrade Preparation	RDST	65.1
10	15	2130.523	Water	MGAL	50
11	16	2211.509	Aggregate Base Class 5	TN	60
12	17	2215.504	Full Depth Reclamation	SY	23,720
	18	2232.504	Mill Bituminous Surface (1.5")	SY	20
	19	2357.506	Bituminous Material For Tack Coat	Gal	1,200
	20	2360.509	Type SP 9.5 Wearing Course Mix (2,C)	TN	2,380
13	21	2360.509	Type SP 9.5 Bit Mixture for Patching (2,C)	TN	70
	22	2360.509	Type SP 12.5 Wearing Course Mixture (2,C)	TN	2,380
14	23	2504.602	Adjust Gate Valve Box	EA	5
15	24	2504.602	Adjust Gate Valve Box - F&I New Valve Box Top	EA	2
16	25	2504.602	Gate Valve Casting Adjustment	EA	2
17	26	2504.602	Irrigation System Modifications	EA	100
18	27	2506.502	Manhole Casting Adjustment	EA	3
19,20	28	2506.502	Adjust Frame & Ring Casting	EA	23
20,21	29	2506.502	Casting Assembly - Sanitary	EA	2
20,21	30	2506.502	Casting Assembly - Storm	EA	2
20	31	2506.502	Install Casting - Storm	EA	1
22	32	2506.602	Mud Existing Casting Rings	EA	12
23	33	2506.602	Mud Doghouse	EA	2
24	34	2506.607	Fill Catch Basin Sump-Pour Invert	CY	7
25	35	2521.618	6" Concrete Walk - Special	SF	100
	36	2531.503	Concrete Curb and Gutter B618	LF	325
	37	2531.503	Concrete Curb and Gutter Surmountable	LF	4,000
	38	2531.504	6" Concrete Driveway Pavement	SY	200
	39	2531.602	Saw and Seal Concrete Curb & Gutter	EA	60
	40	2531.604	8" Concrete Valley Gutter	SY	40
	41	2531.618	Truncated Domes	SF	20
	42	2563.601	Traffic Control	LS	1.00
	43	2573.502	Storm Drain Inlet Protection	EA	25
	44	2573.503	Silt Fence, Type HI or MS	LF	550
	45	2573.503	Sediment Control Log Type Wood Chip	LF	100
	46	2573.607	Rock Ditch Check - 1.5" Nom. Diameter	CY	5
	47	2574.507	Loam Topsoil Borrow (LV)	CY	310
	48	2574.508	Fertilizer Type 1	LB	40
	49	2575.504	Sodding Type Lawn	SY	1,620
26	50	2575.504	Rolled Erosion Prevention Category 20	SY	140
27	51	2575.505	Weed Spraying	ACRE	0.20
	52	2575.505	Seeding	ACRE	0.20
	53	2575.508	Seed Mixture 25-151	LB	40
	54	2582.503	18" Solid Line Paint - White	LF	16
	55	2582.518	Pavement Message Paint	SF	170

C.P. 25-11A Base Bid Notes:

- Includes plating structure if necessary.
- Regardless of type/dimension of curb. Includes sawcut of curb. Excavation and off-site disposal of material behind curb necessary for replacement incidental.
- Regardless of depth.
- Includes salvage and reinstall of existing mailbox, and temporary placement of mailbox in barrel at each existing location during construction.
- Excavation for Eldorado Street CDS relocation, and all excavation not otherwise addressed. Includes disposing excess or unsuitable material off-site.
- For exc. beneath reclaimed agg. base where profile grade lowered or where unsuitable material discovered. Dispose excess and/or unsuitable material off-site.
- For excavating / hauling / stockpiling / disposing off-site excess reclaim material. Excess material property of contractor. 1.5 expansion factor assumed from CV to LV.
- Only to be used if sufficient material not generated on-site for subgrade excavation backfill, if necessary, and buildup of Eldorado St CDS.
- For grading and compacting reclaim material during construction and prior to paving.
- For dust control only as directed by the engineer. Water to achieve compaction shall be incidental.
- For material imported from outside project limits. Class 7 reclaim acceptable. Item includes furnishing, hauling, placing and compacting.
- Removal of existing crack fill material from curb / pavement edge is incidental to this item prior to paving.
- For patching adjacent to curb replacement in non-reclaimed areas, utility replacements, and driveway aprons.
- Adjust valve box top to grade, includes sawcut, pavement removal, plating, lowering for reclaim and adjust to final grade. Use item if existing valve box top can be adjusted.
- Use item if existing valve box top is rusted shut and not adjustable. Includes sawcut, pavement removal, plating, remove existing valve box top and F&I new valve box top.
- F&I gate valve casting adjustment(if necessary). Clean and glue to existing frame.
- Based upon number or irrigation heads removed / replaced. Item shall include all items necessary to temporarily cap existing systems, replace damaged lines, heads, adjust systems, and return them to pre-project condition or better. Work shall be performed by a licensed irrigation contractor.
- F&I manhole casting adjustment (if necessary). Contractor to verify casting diameter. Clean and glue to existing frame. Neenah R-1979 series, or approved equal.
- Item includes sawcut, pavement removal, plating, salvaging and reinstalling casting regardless of required adjusting rings.
- Includes new concrete adjusting rings regardless of depth, Infi-Shield Gator Wrap (manholes), or wrap rings with geotextile fabric and concrete collar (catch basins).
- For use if salvaged casting breaks or is unuseable.
- Protect casting, touch up mud on existing concrete adjustment rings inside structure.
- Item shall include regrouting all doghouses within structure. The "Each" item refers to each structure regardless of the number of doghouses in the structure.
- Item shall include filling sump with redi-mix, pouring invert, and constructing benches up to 1/3 of pipe diameter. Item includes regrouting doghouses as necessary.
- For pedestrian curb ramp construction.
- Straw or wood fiber blanket is an acceptable alternative. Netting material shall be jute netting.
- Only to be used if requested by engineer prior to or during site restoration.

STATEMENT OF ESTIMATED QUANTITIES

2025 FULL DEPTH RECLAMATION (C.P. 25-11A) (ALTERNATE BID) Eldorado Street Cul De Sac Utilities					TOTAL QUANTITIES	
NOTES	ITEM NO.	DESCRIPTION	UNIT	EST. QUAN.	ACT. QUAN.	
	101	2106.601	Dewatering	LS	1	
1	102	2503.602	Connect to Existing Sanitary Manhole	EACH	1	
	103	2503.602	Construct Sanitary Sewer Manhole - Type 301	EACH	1	
	104	2503.602	4" PVC Sewer Service Cleanout	EACH	1	
2	105	2503.602	Construct 8" Inside Drop	EACH	1	
	106	2503.603	4" PVC Pipe Sewer - Schedule 40	LF	100	
	107	2503.603	8" PVC Sanitary Sewer SDR 35	LF	139	
	108	2503.603	Clean and Televise Sanitary Sewer	LF	139	
	109	2504.602	Connect to Existing 8" Water Main	EACH	1	
	110	2504.602	8" Gate Valve & Box	EACH	1	
	111	2504.602	1" Corporation Stop	EACH	1	
	112	2504.602	1" Curb Stop and Box	EACH	1	
	113	2504.603	8" Watermain Ductile Iron CL 52	LF	90	
	114	2504.603	1" Type K Copper Pipe	LF	100	
	115	2504.608	Ductile Iron Fittings	LB	230	
	116	2506.502	Casting Assembly - Sanitary	EA	2	

C.P. 25-11A Alternate Bid Notes:

- Core drill existing sanitary sewer manhole and install watertight boot.
- Includes all items and appurtenances for complete installation, including 8x8 wye, 8" 45 degree bend, 8" PVC SDR 35 pipe, grouting flowline.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECTION AND SUPERVISED BY A PROFESSIONAL ENGINEER ACCORDING TO THE LAWS AND STANDARDS OF THE STATE OF MINNESOTA AND THAT IT HAS NOT BEEN MADE PUBLIC EXCEPT AS PROVIDED FOR IN THE LAW.		DESIGNED NO. _____	DATE BY _____	REVISIONS DESCRIPTION NO. _____
		DRAWN NO. _____	REVISIONS DESCRIPTION NO. _____	REVISIONS DESCRIPTION NO. _____
		JUL _____	DRW _____	JBK _____
		REG. NO. 26757	REG. NO. _____	REG. NO. _____
		DAVID D. BERKOWITZ	DAVID D. BERKOWITZ	DAVID D. BERKOWITZ
		DATE MAY 6TH, 2025	DATE MAY 6TH, 2025	DATE MAY 6TH, 2025
		2025 FULL DEPTH RECLAMATION (C.P. 25-11A) 2025 SIDEWALK REPAIRS (C.P. 25-08)		

EARTHWORK TABLE		City Project 25-11A - Meadows of Round Lake Area	
Aggregate Base Class 7 (Reclaim)		Roadway Length =	6,507 LF
Existing 3" +/- of bituminous and 4"-5" +/- aggregate base based on road cores		Existing Bituminous Area =	23,720 SY
Reclaim 7-8" deep (pull some sand into reclaim)			
Salvaged Reclaim			
Volume of salvaged reclaim material (2.75") =	1,820 CY (CV)	2.75" over entire reclaimed area	
Volume of salvaged reclaim material (7") =	180	7" over existing Eldorado Street CDS	
Volume of salvaged reclaim material (7") =	20 CY (CV)	7" salvage in areas of subgrade correction, if any	30 LF x 24' wide
Total Salvaged Reclaim =	<u>2,020</u> CY (CV)	Available material to be re-used on-site	
	3,030 CY (LV)		
Salvaged Reclaim / Class 5 Required			
Volume required for Eldorado Street CDS (12" +/-)	300 CY (CV)	Use salvaged reclaim to build up Eldorado St CDS	
Volume required in subgrade correction Areas (5" min.) =	20 CY (CV)		
Total Salvaged Reclaim / Class 5 Required	<u>320</u> CY (CV)		
Subgrade Excavation			
Volume of subgrade exc. material for profile lowering =	0 CY (EV)		
Volume of subgrade exc. material - correction areas (3') =	90 CY (EV)	Assume 3' depth in correction excavation, if any areas found	
Total Salvaged Reclaim =	<u>90</u> CY (EV)		
Common Excavation			
Volume of common exc. material - Eldorado CDS =	170 CY (EV)	Strip topsoil, excavate 6" +/- over new Eldorado St CDS location outside of existing road core.	
Total Common Excavation =	<u>170</u> CY (EV)		
Topsoil Borrow			
Volume of topsoil in curb replacement areas =	222 CY (CV)	Assume 1.75' wide x 1' deep	
Volume of topsoil over existing Eldorado St CDS =	33 CY (CV)	3" over disturbed area of Eldorado St CDS removal	
Total Topsoil Borrow =	<u>510</u> CY (CV)	Utilize any salvaged common exc. if suitable.	
EARTHWORK SUMMARY			
Reclaimed Aggregate Base			
Volume of salvaged reclaim material available =	2,020 CY (CV)		
<u>Volume of required reclaim material =</u>	<u>320</u> CY (CV)		
Balance of reclaim material =	1,700 CY (CV)		
	2,550 CY (LV)	Haul and dispose of excess. Excess property of contractor	
Common Excavation	170 CY (EV)	Haul and dispose of unsuitable, excess material off-site. Use clean material where existing Eldorado St CDS removed.	
Subgrade Excavation	90 CY (EV)	Haul and dispose of unsuitable and excess material off-site.	
Topsoil Borrow	<u>510</u> CY (CV)		
	<u>720</u> CY (LV)		
Select Granular Borrow	120 CY (LV)	For backfill of subgrade correction, if necessary and if material needed for Eldorado St CDS subgrade. Only used if sufficient material not available on-site.	
Excess Excavation Material to Dispose of Off-Site	1,900 CY (EV)	Excess reclaim, and assumed 75% of common exc material and subgrade exc material	
	2,470 CY (LV)	Note: Does not include common excavation behind curb replacement (incidental to curb removal)	

BASIS OF ESTIMATED QUANTITIES		
Bituminous Wear Course	120	# / SY / inch
Bit. Non-Wear Course	120	# / SY / inch
Aggregate Base, Class 5	110	# / SY / inch
Tack Coat	0.05	Gal / SY
Fertilizer Type 1 (Analysis 20-10-10)	200	# / acre
Seed Mixture 25-151	200	# / acre

2025 Sidewalk Repairs

City Project: 25-08

STATEMENT OF ESTIMATED QUANTITIES

2025 Sidewalk Repairs City Project: 25-08					TOTAL ESTIMATED QUANTITIES	
NOTES	ITEM NO.	DESCRIPTION	UNIT	EST. QUAN.	ACT. QUAN.	
	201	2021.501	Mobilization	LS	1	
	202	2104.503	Sawing Concrete Pavement (Full Depth)	LF	50	
1	203	2104.518	Remove Concrete Pavement	SF	230	
	204	2521.518	4" Concrete Walk	SF	230	
	205	2563.601	Traffic Control	LS	1	
	206	2574.507	Loam Topsoil Borrow (LV)	CY	2	
	207	2574.508	Fertilizer Type 3	LB	2	
	208	2575.504	Rolled Erosion Prevention Category 20	SY	20	
	209	2575.505	Seeding	ACRE	0.01	
	210	2575.508	Seed Mixture 25-151	LB	2	

C.P. 25-08 Notes:

1. Regardless of depth.

2025 FDR: (Meadows of Round Lake Area) (C.P. 25-11A)

CB / MH #	Fill Sump / Pour Invert (CY) (2)	Structure Diameter (ft)	Sump Depth (ft)	Mud Dog House (Each)	Mud Rings (Each)	Adjust Frame & Ring Casting (Each)	Salvage & Install Casting (Each)	# Exist Rings (Inches) (1)
DCB108	0.8	4	1		1			6
DCB109		4	1		1			6
DCB112	0.8	4	1		1			12
DCB116	1.2	5	1		1			8
DCB117		5	1		1			4
DCB118	1.2	5	1		1			6
DCB114		4	1	1	1			6
DCB115	0.8	4	1		1			4
DCB428		4	1		1			12
DCB429		4	1				1	4
DCB1745		4	1	1	1			8
DCB1746	0.8	4	1		1			4
DCB1747	0.8	4	1		1			2
Total	7			2	12	0	1	

Notes 1): When installing casting, 6" and 1" rings shall be used so that there are no more than 5 rings per casting.
2) Mudding of doghouses incidental to filling CB sump.

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

David D. Berkowitz

DAVID D. BERKOWITZ
DATE MAY 6TH, 2025
REG. NO. 26757

ANDOVER

GENERAL NOTES:

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.
CITY OF ANDOVER 2025 UTILITY AND STREET CONSTRUCTION SPECIFICATIONS SHALL APPLY.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO AND BE INSTALLED IN ACCORDANCE WITH THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD)" AND THE "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL", NEWEST ADDITIONS.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE EXCAVATING 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. THE CONTRACTOR IS REQUIRED TO CALL GOPHER ONE CALL AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION. (651-454-2000)

CONSTRUCTION NOTES:

ROAD WORK AHEAD SIGNS SHALL BE MAINTAINED AT ALL INTERSECTING ROADS TO THE PROJECT. TYPE B CHANNELIZERS SHALL BE USED IN ALL NECESSARY LOCATIONS. TRAIL CLOSED SIGNS ON TYPE III BARRICADES SHALL BE PLACED AT ALL LOCATIONS IMPACTED BY PEDESTRIAN RAMP/SIDEWALK/TRAIL IMPROVEMENTS.

CONSTRUCTION SHALL BE STAGED SUCH THAT TRAFFIC IS MAINTAINED AT ALL TIMES. CONTRACTOR SHALL USE FLAG PERSON, IF NEEDED (INCIDENTAL TO TRAFFIC CONTROL).

COMPACTION OF ALL BITUMINOUS MIXTURE SHALL BE BY THE "SPECIFIED DENSITY METHOD" EXCEPT FOR PATCHES AND TRAILS, WHICH SHALL BE BY THE "ORDINARY COMPACTION METHOD".

THE CONTRACTOR SHALL USE FLAG PERSON'S AND APPROPRIATE TRAFFIC CONTROL DEVICES TO DIRECT TRAFFIC AT INTERSECTING COUNTY ROADS. ALL TRAFFIC CONTROL MUST BE ACCEPTABLE TO THE ANOKA COUNTY HIGHWAY DEPARTMENT. CONTRACTOR SHALL APPLY FOR A PERMIT FOR WORKING WITHIN ANOKA COUNTY RIGHT OF WAY. PROVIDE A COPY OF COUNTY PERMIT TO CITY ENGINEER.

ABSENT A ROAD CLOSURE, RECONSTRUCTION SHALL BE PERFORMED IN A MANNER TO ALLOW LOCAL TRAFFIC TO BE MAINTAINED TO A MINIMUM OF HALF THE ROADWAY WIDTH. THE CONTRACTOR SHALL USE FLAG PERSON'S TO DIRECT TRAFFIC AS NEEDED.

CONTRACTOR SHALL PROVIDE 3 DAY NOTICE PRIOR TO POTENTIAL ROAD CLOSURE FOR UNDERGROUND UTILITY CONSTRUCTION. TYPE 3 BARRICADES WITH "ROAD CLOSED" SHALL BE INSTALLED ON BOTH SIDES OF UTILITY CONSTRUCTION ACTIVITY. STAGE CONSTRUCTION TO ALLOW FOR LOCAL RESIDENT ACCESS AS NEEDED.

DURING ALL ASPECTS OF CONSTRUCTION DRIVEWAYS SHALL BE RAMPED WITH GRAVEL IN A TIMELY MANNER TO PROVIDE RESIDENTS ACCESS. UPON THREE DAYS OF CURE, CONC. CURBING AT DRIVEWAYS SHALL BE BACKFILLED & RAMPED WITH GRAVEL TO PROVIDE ACCESS.

DURING THE CONSTRUCTION OF CONC. CURB & DRIVEWAYS, THE CONTRACTOR SHALL COORDINATE WITH ENGINEER TO NOTIFY RESIDENTS OF PENDING CONSTRUCTION ACTIVITY. A THREE DAY NOTICE IS REQUIRED PRIOR TO POURING CONC. CURB & DRIVEWAYS. IMMEDIATELY UPON COMPLETION THE ROADWAY SHALL BE GRADED TO ALLOW RESIDENTS TO PARK ON STREET ADJACENT TO THEIR PROPERTY.

CONCRETE CURBING SHALL BE KNOCKED DOWN AT ALL DRIVEWAY ENTRANCES (INCIDENTAL). CONSTRUCT B618 C&G ON ALL RADII, CATCH BASIN LOCATIONS & ADDITIONAL LOCATIONS AS NOTED ON PLAN. (PAID AS SURMOUNTABLE C&G).

EXISTING MAILBOXES SHALL BE SALVAGED AND REINSTALLED WHERE CALLED OUT IN PLANS. DURING CONSTRUCTION TEMPORARY MAILBOXES SHALL BE PLACED NEAR THE ORIGINAL MAILBOX LOCATION. THE TEMPORARY MAILBOXES SHALL BE MOUNTED ON BARRELS TO BE PORTABLE. PROPERTY OWNER MAY SUPPLY NEW POST AND/OR BOX TO BE PLACED IN THE ORIGINAL LOCATION.

RESIDENTS WILL BE ASKED TO MARK IRRIGATION PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING SYSTEMS. WHERE BOULEVARD IRRIGATION MODIFICATIONS ARE REQUIRED THE IRRIGATION LINES/HEADS SHALL BE REMOVED & DISPOSED. REMAINING LINES SHALL BE PLUGGED & MARKED. ALL REPLACED IRRIGATION LINES/HEADS SHALL BE WITH NEW COMMERCIAL GRADE MATERIALS. CONTRACTOR WILL BE PAID A UNIT PER HEAD REPLACED. EXISTING LOCATIONS SHOWN ON PLANS ARE ONLY SCHEMATIC. ALL WORK SHALL BE BY AN IRRIGATION CONTRACTOR LICENSED TO WORK IN THE CITY OF ANDOVER.

THE CONTRACTOR SHALL PROTECT, SALVAGE AND REPAIR ALL EXISTING LANDSCAPING IN KIND. THIS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

THE FOLLOWING CONSTRUCTION ITEM'S SHALL OCCUR PRIOR TO COMMENCING THE RECLAIMING OPERATION. INSTALL TRAFFIC CONTROL, REMOVE STREET SIGN'S (CITY), INSTALL TEMP. EROSION CONTROL MEASURES, IDENTIFY & CAP IRRIGATION SYSTEMS IN AREAS OF CURB REPLACEMENT, SALVAGE LANDSCAPING, REMOVE EX. & INSTALL TEMP. MAILBOX'S WHERE IDENTIFIED IN PLANS, EXCAVATE BOULEVARD MATERIAL PER TYPICAL SECTION.

MACHINE CURB ON STRETCHES OVER 100'. ALSO, SALVAGE AND INSTALL MAILBOXES IN AREAS WHERE THERE WILL BE MACHINE CURB.

EXISTING DRIVEWAYS SHALL BE SAWCUT AS DIRECTED BY ENGINEER, REMOVED AND DISPOSED OF OFF SITE. BITUMINOUS AND CONCRETE DRIVEWAYS SHALL BE REPLACED IN KIND. GRAVEL DRIVEWAYS SHALL BE REPLACED WITH A 10-15' BITUMINOUS APRON. ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITY SHALL BE SAWCUT AND REPAIRED IN KIND AT THE CONTRACTORS EXPENSE.

WHERE SUBGRADE EXCAVATION UTILITY WORK OCCURS WITHIN THE ROADWAY THE RECLAIMED BASE SHALL BE SALVAGED & REPLACED PER THE TYPICAL SECTION (INCIDENTAL). THIS WORKSHALL BE DONE IN A MANNER SO RECLAIMED BASE IS NOT CONTAMINATED WITH SPOIL MATERIAL. COMPACTION OF THE RECLAIMED BASE MATERIAL SHALL BE ACHIEVED BY THE PENETRATION INDEX METHOD IN ACCORDANCE WITH MNDOT 2211.3C3. THE BOTTOM OF THE SUBCUTS SHALL BE SHAPED AND COMPACTION BY THE "QUALITY COMPACTION METHOD"

THE CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL MATERIAL, IF ANY, FOR RE-USE (LITTLE IS EXPECTED). RE-USED TOPSOIL SHALL BE CLEAN WITH NO SOD CHUNKS / EXISTING VEGETATION. TOPSOIL STRIPPING, IF ANY, SHALL BE CONSIDERED INCIDENTAL.

SELECT EXCAVATED MATERIALS SHALL BE UTILIZED TO THE FULLEST EXTENT WITHIN THE PROJECT LIMITS TO BACKFILL PROPOSED CURB & GUTTERS. ANY EXCESS MATERIAL, OR MATERIAL WITH DEBRIS / SOD CHUCKS SHALL BE DISPOSED OF OFF-SITE.

EXCAVATION AND DISPOSAL OF SOIL/TURF MATERIAL SHALL BE INCIDENTAL TO REMOVAL PAY ITEMS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL MINIMIZE EXCAVATION AND DISTURBANCE ALONG THE PROJECT CORRIDOR.

ALL DISTURBED AREAS SHALL BE BACKFILLED WITH SALVAGED TOPSOIL, IF ANY. DISTURBED AREAS SHALL BE RESTORED WITH TOPSOIL, FERTILIZER, & SOD. ALL RESTORATION SHALL OCCUR WITHIN 7 DAYS OF GRADING COMPLETION. SOIL STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF ROUGH GRADING OR INACTIVITY (INCIDENTAL). RESTORATION WORK SHALL BE COMPLETED PRIOR TO PAVING WEARING COURSE.

ALL EXISTING SIGNS SHALL BE REMOVED AND REPLACED BY THE ANDOVER SIGN DEPARTMENT UNLESS CALLED OUT OTHERWISE IN THE PLANS. COORDINATE WITH MINIMUM 48 HOUR NOTICE WITH ENGINEER IN FIELD.

CONCRETE WASHOUT SHALL BE CONTAINED WITHIN CONCRETE TRUCKS, NOT DISPOSED OF ON-SITE.

CONTRACTOR SHALL SWEEP ALL MATERIAL OFF ADJACENT STREETS DUE TO CONSTRUCTION ACTIVITY, DAILY AS NECESSARY (INCIDENTAL).

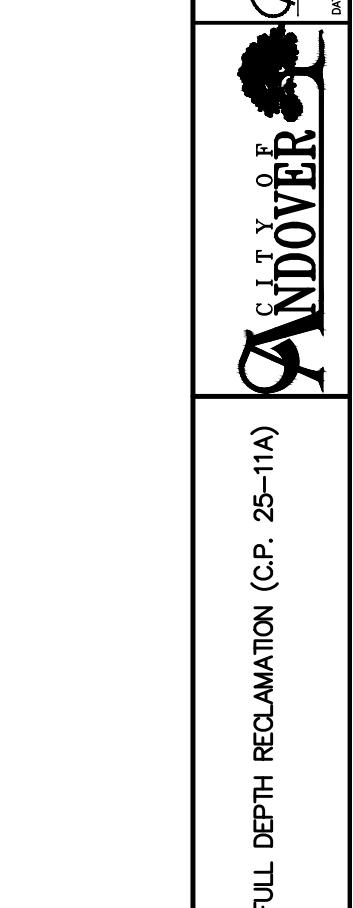
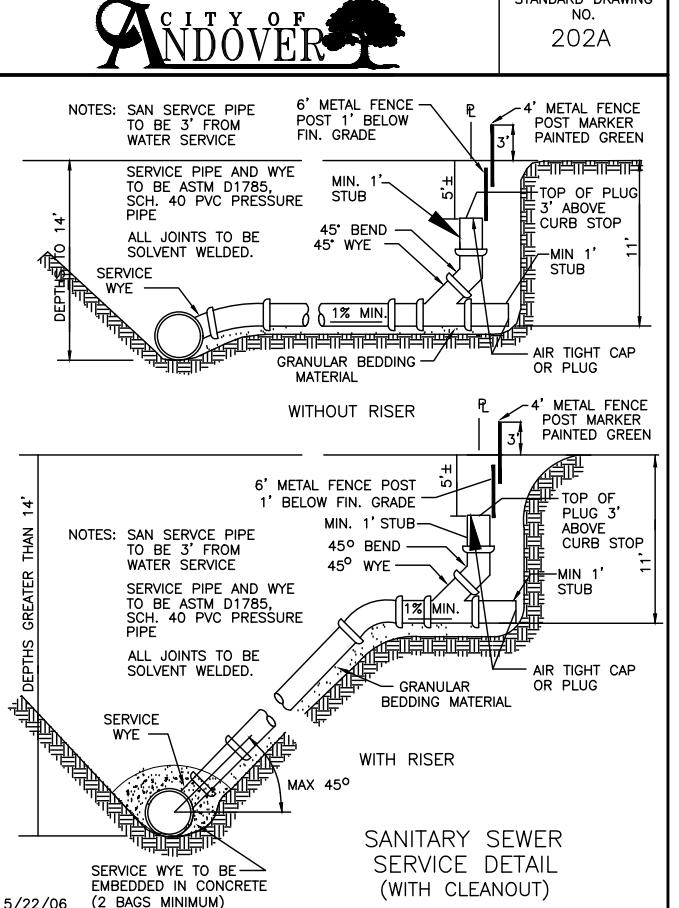
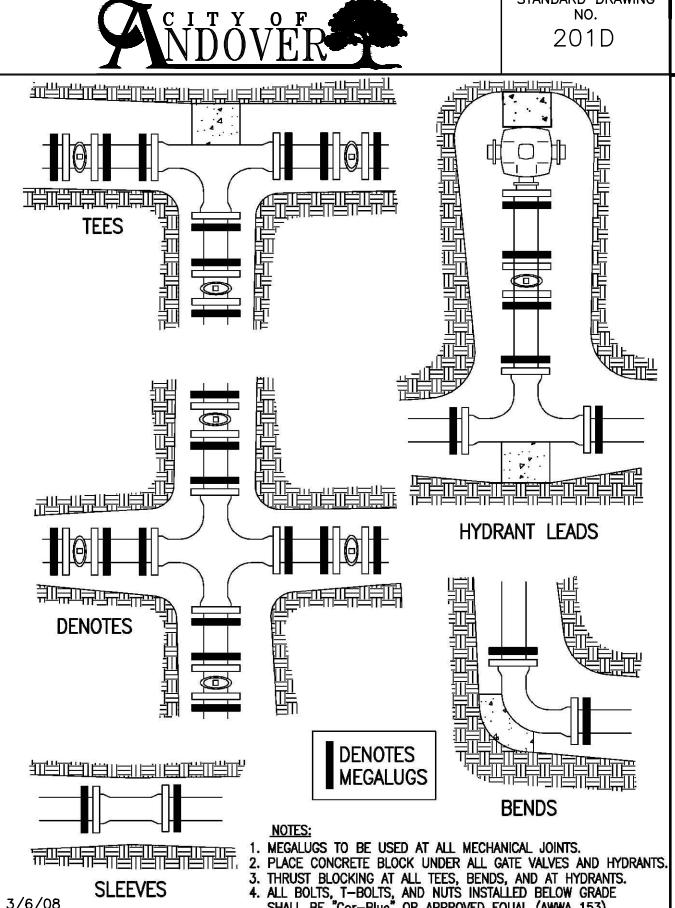
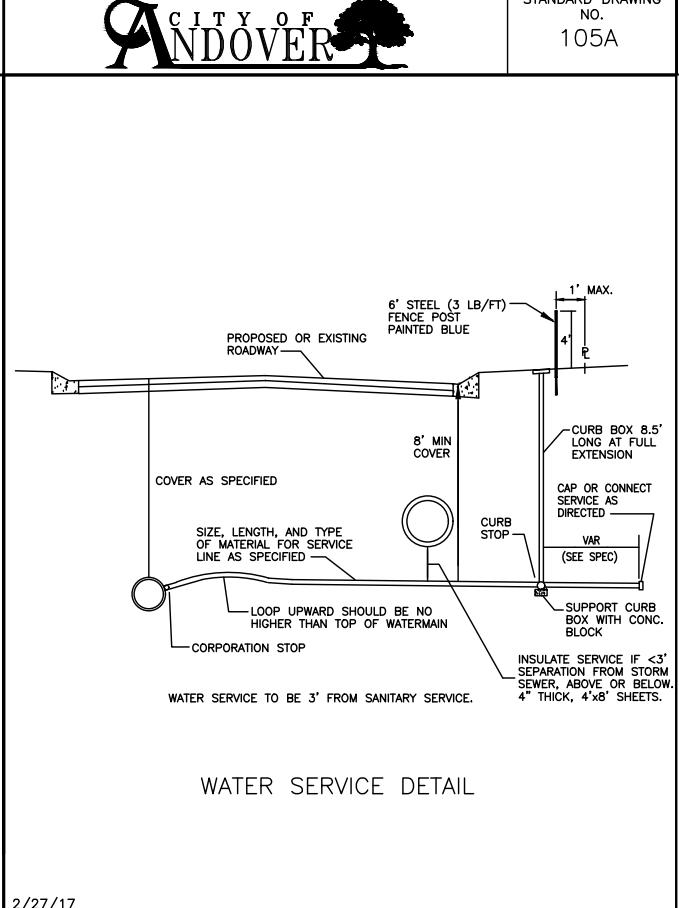
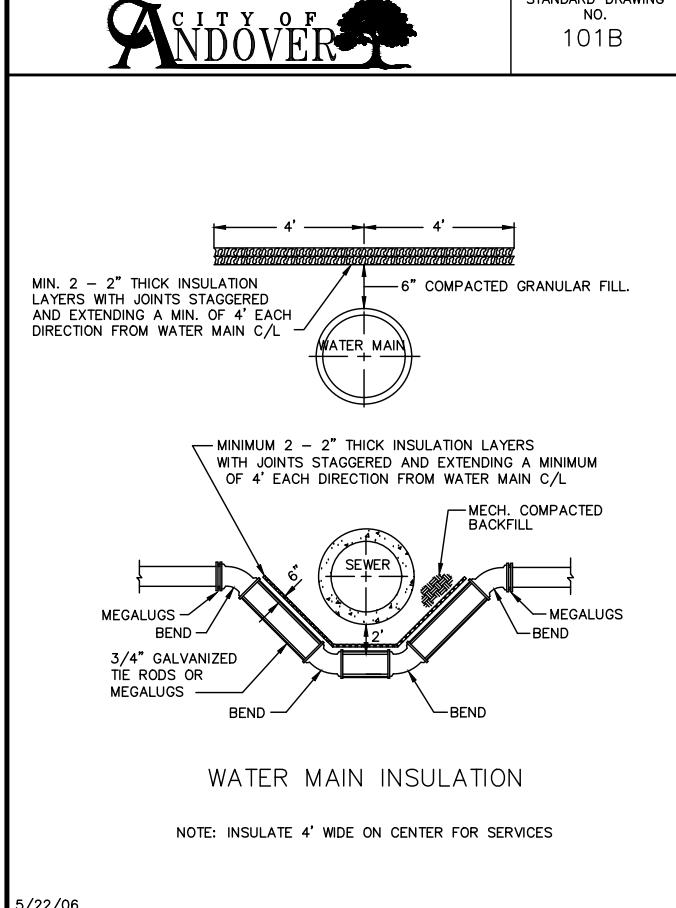
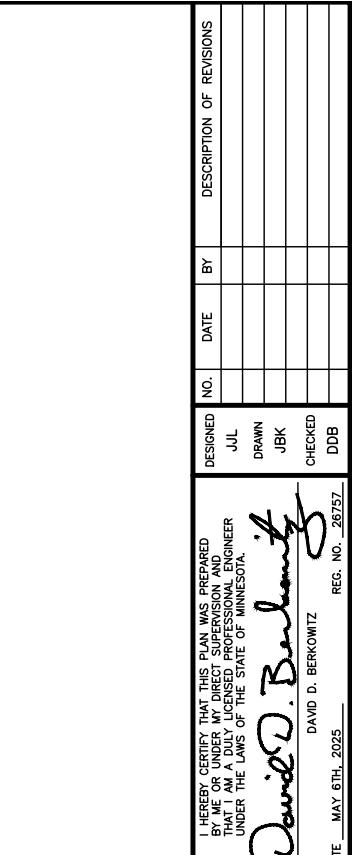
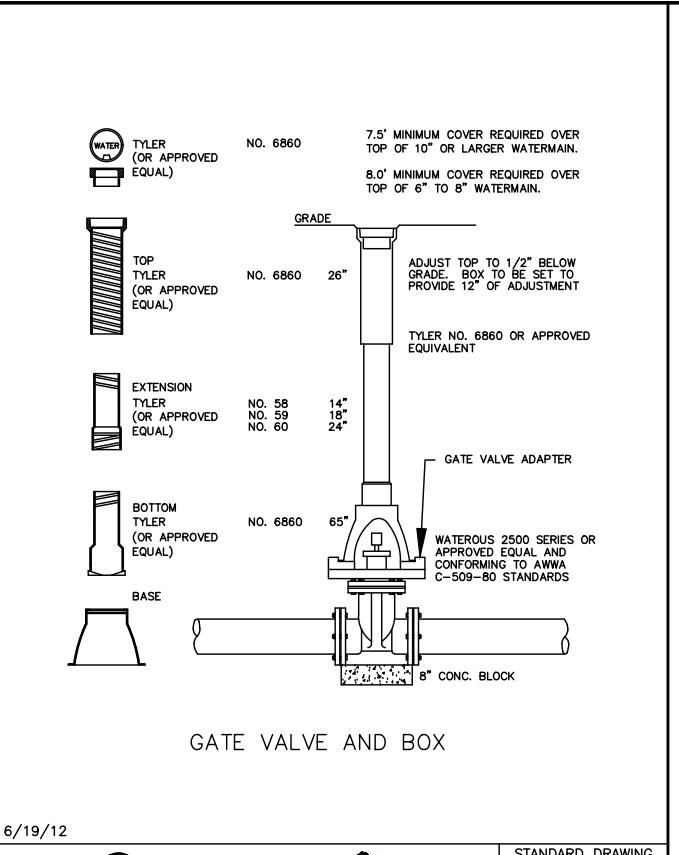
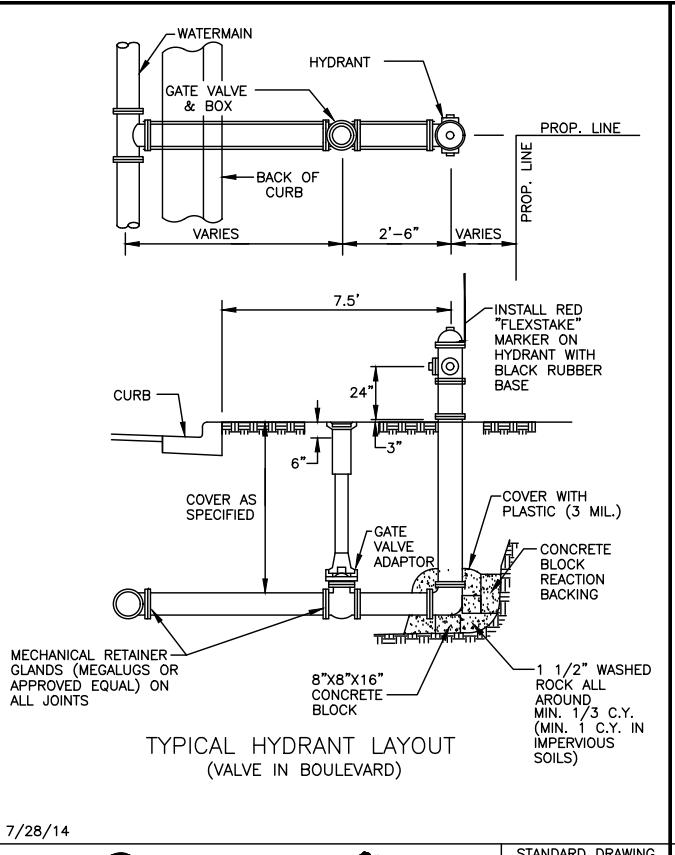
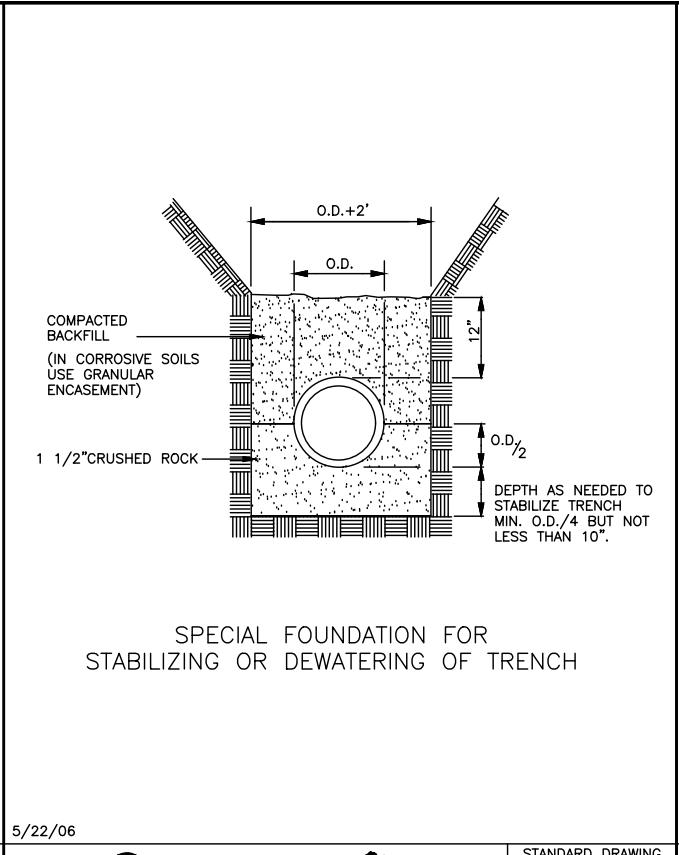
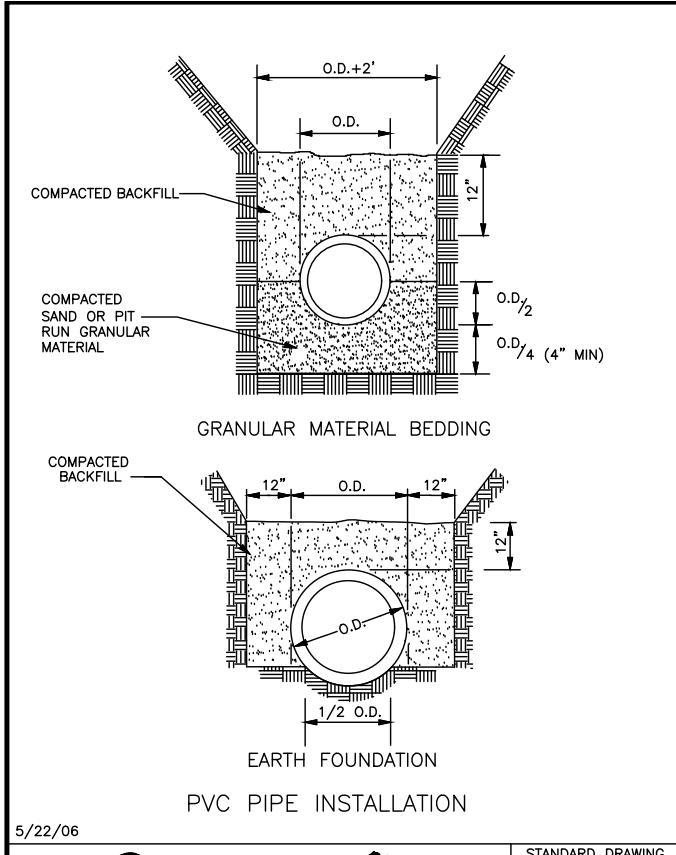
CONTRACTOR IS REQUIRED TO REPAIR AND MAINTAIN ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES (INCIDENTAL).

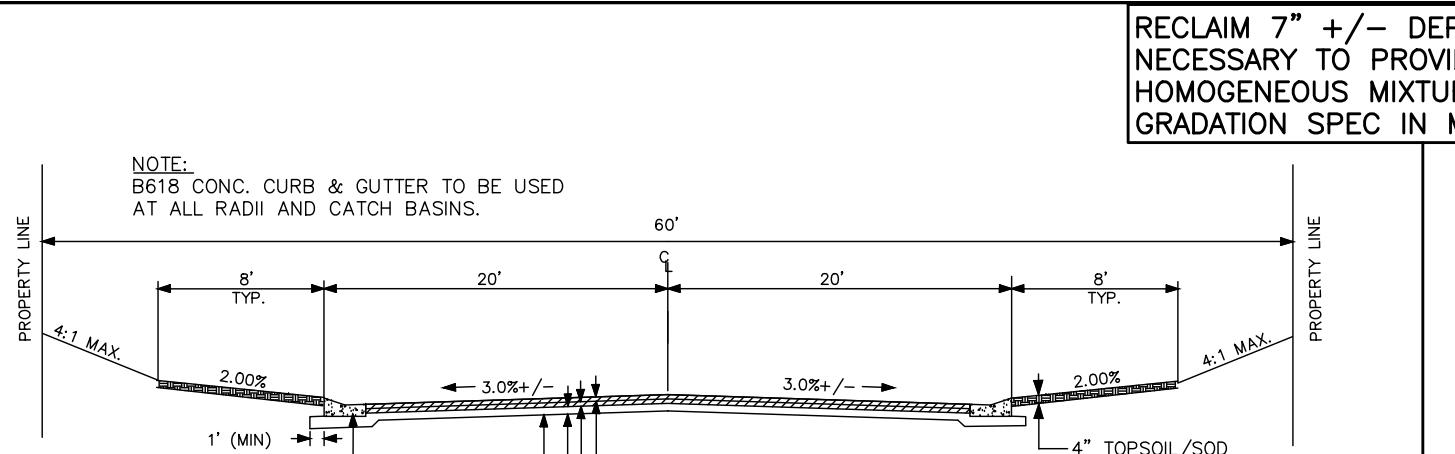
CONTRACTOR SHALL REMOVE ALL TEMPORARY SEDIMENT CONTROL PRACTICES ONCE VEGETATION IS RE-ESTABLISHED (INCIDENTAL).

REFER TO SWPPP IN PROJECT SPECIFICATION FOR ADDITIONAL CONSTRUCTION/EROSION CONTROL REQUIREMENTS.

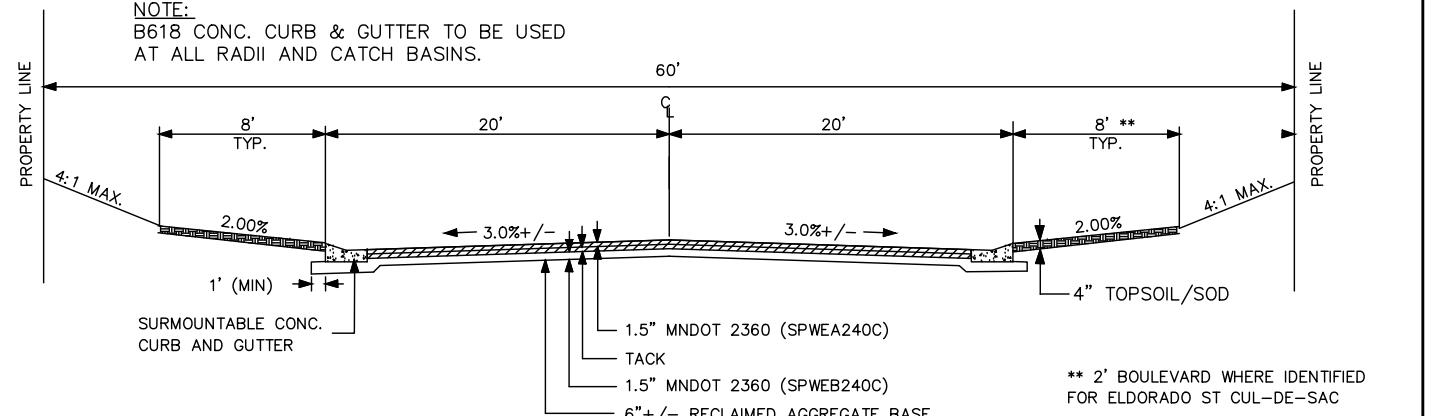
WHEN CONNECTING NEW PAVED SURFACING TO ANY IN-PLACE PAVEMENTS, CUT VERTICALLY TO THE BOTTOM OF THE IN-PLACE PAVEMENTS OR TO THE BOTTOM OF THE NEW SURFACING, WHICHEVER IS DEEPER, THEN AT 2(V):1(H) SLOPE TO THE TOP OF THE SUBGRADE.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR MY DIRECT PRINCIPAL FOR THE CITY OF ANDOVER UNDER THE LAWS OF THE STATE OF MINNESOTA			
DESIGNED NO.	DATE BY	DRAWN JUL	CHECKED JKB DDB
REG. NO. 26757 DAVID D. BERKOWITZ DATE MAY 6TH, 2025			
			
2025 FULL DEPTH RECLAMATION (C.P. 25-1A)			

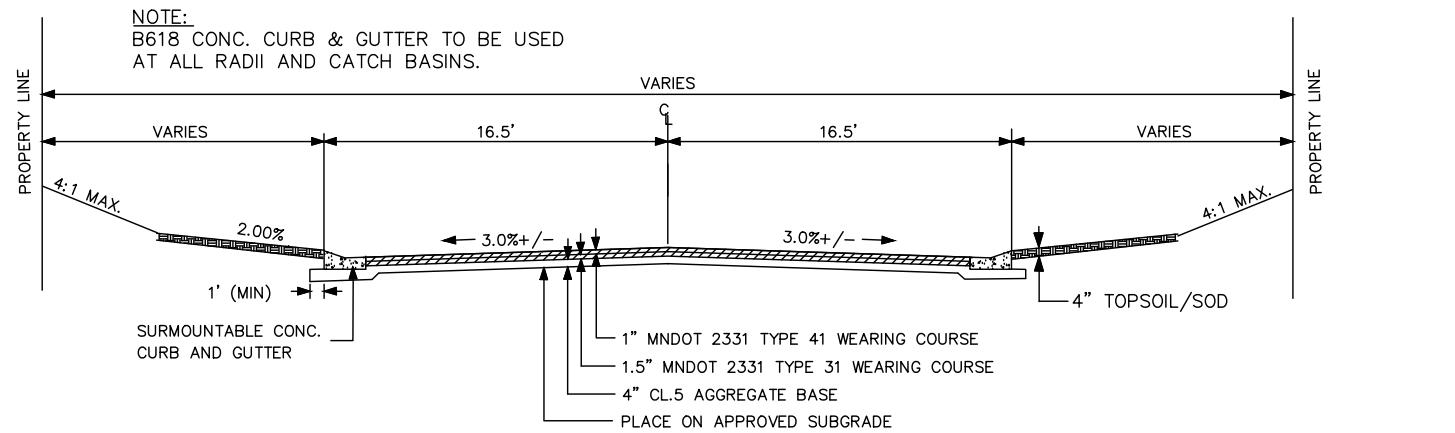




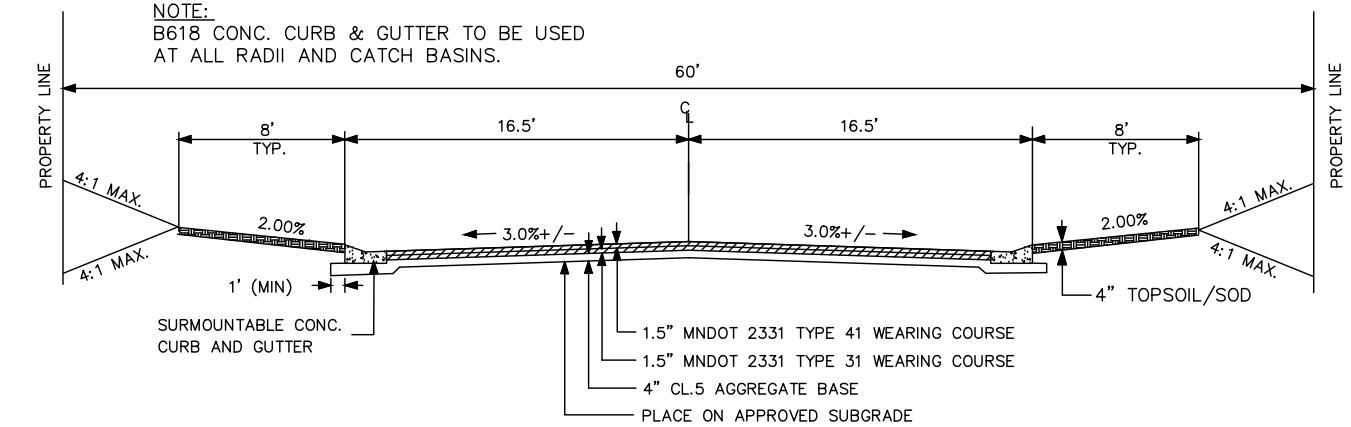
**25-11A EXISTING STREET SECTION
ELDORADO ST**



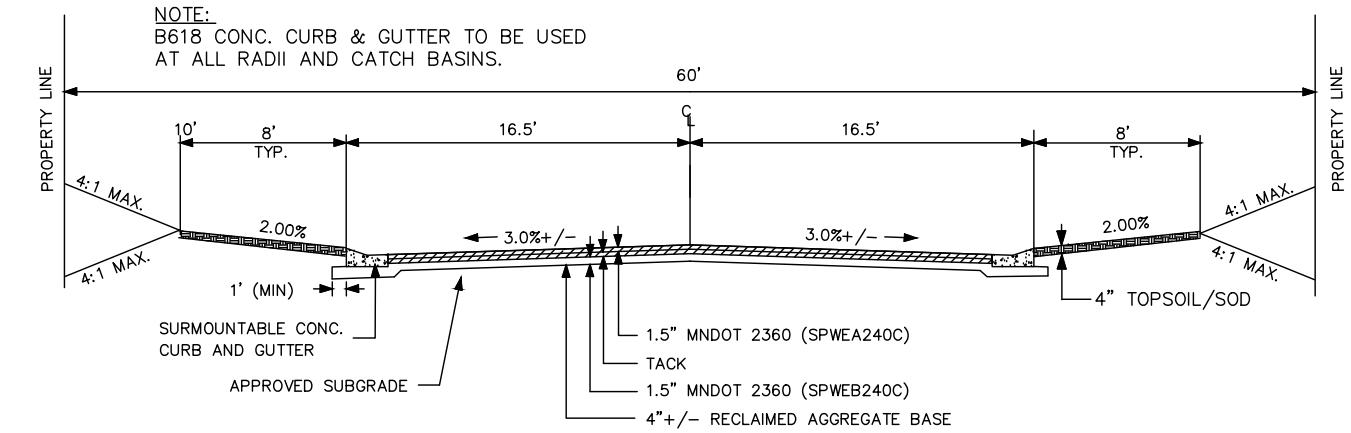
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ELDORADO ST



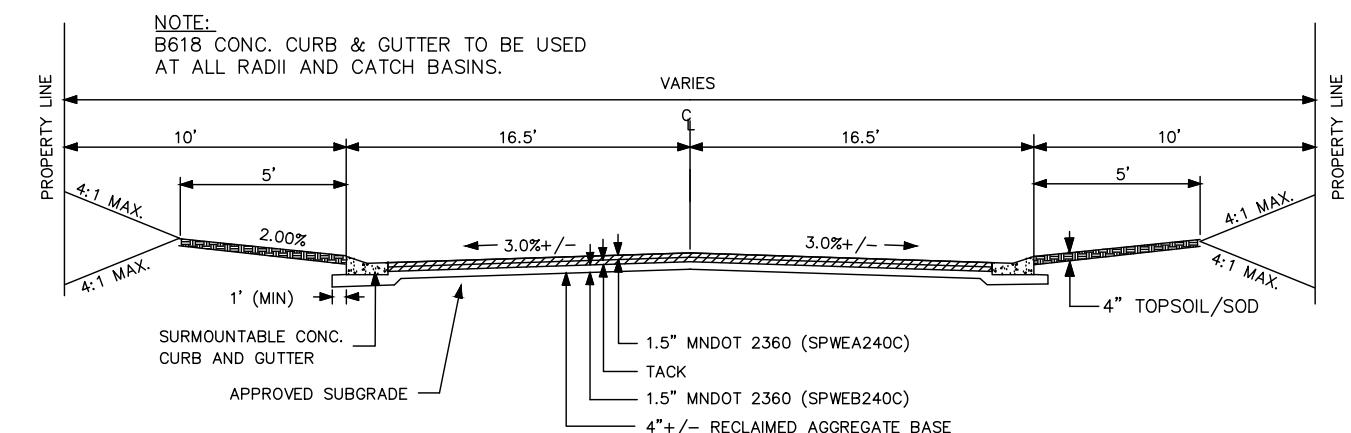
25-11A EXISTING STREET SECTION
VINTAGE ST NW & 142ND AVE NW



25-11A EXISTING STREET SECTION



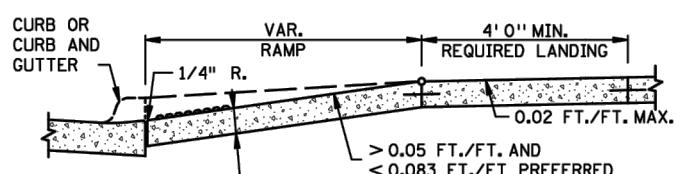
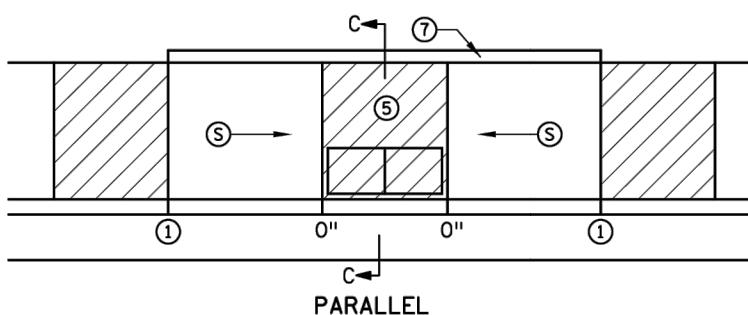
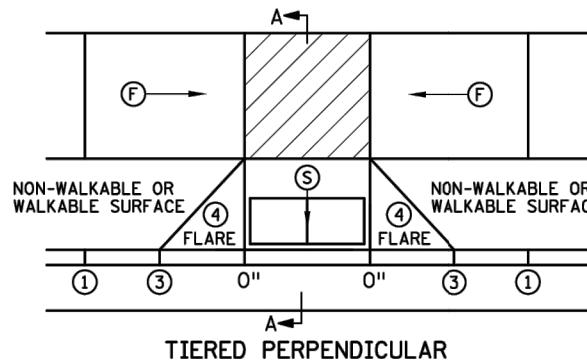
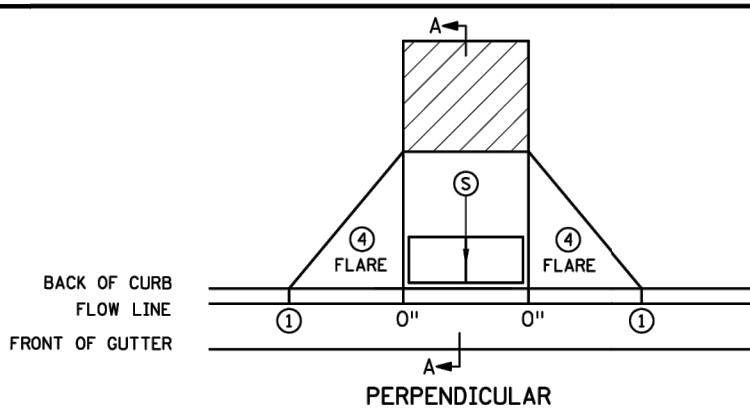
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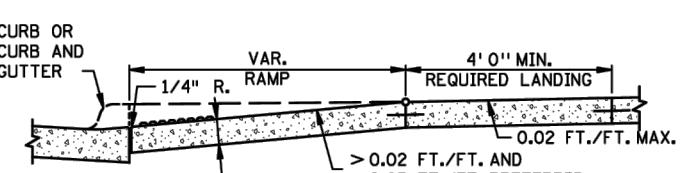
25-11A PROPOSED STREET SECTION
VINTAGE ST NW & 142ND AVE NW

CLINTON ANDOVER		CITY OF ANDOVER		CLINTON COUNTY, IOWA	
CLINTON ANDOVER		CITY OF ANDOVER		CLINTON COUNTY, IOWA	
I HEREBY CERTIFY THAT THIS PLAN WAS DRAWN, SIGNED AND SEALED BY ME, A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DESIGNED JUL		NO. DATE BY DESCRIPTION OF REVISIONS	
<i>David D. Berkowitz</i>		DRAWN JJK		CHECKED DDB	
DAVID D. BERKOWITZ		REG. NO. 26157		DATE MAY 6TH, 2025	

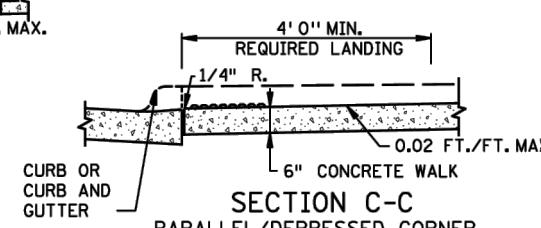
2025 EDITION READING PASSAGE (CB 25-11A)



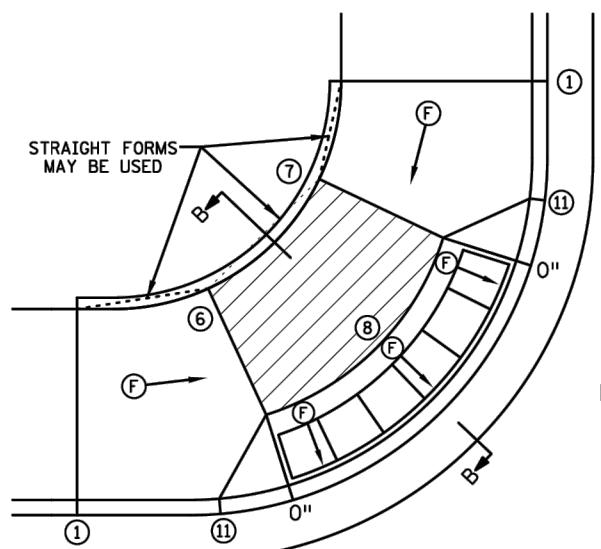
SECTION A-A
PERPENDICULAR/TIERED/DIAGONAL



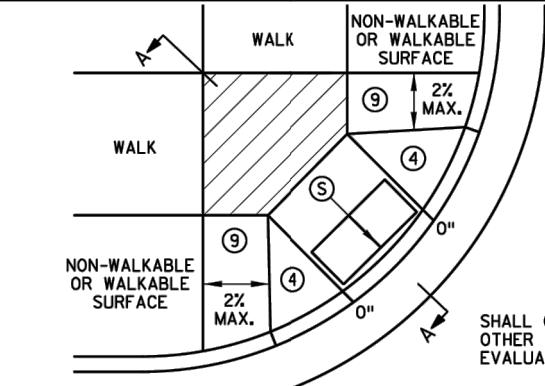
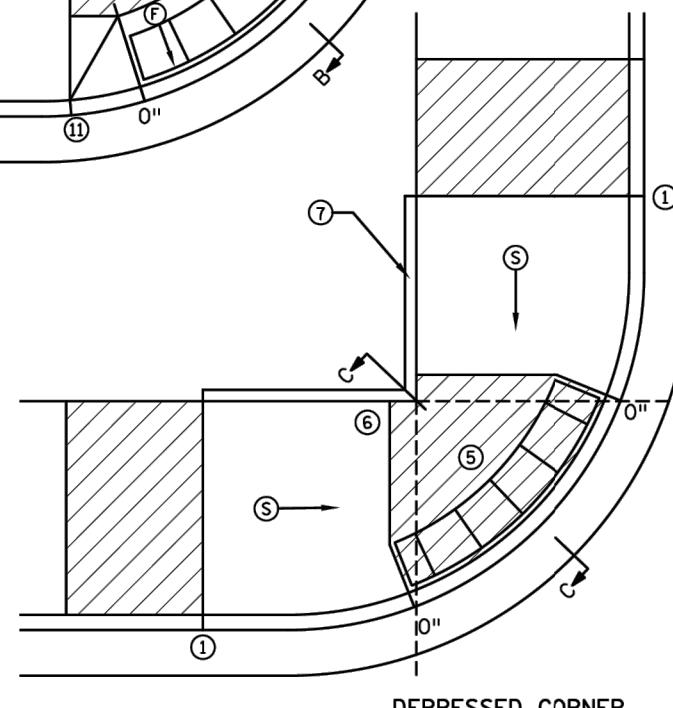
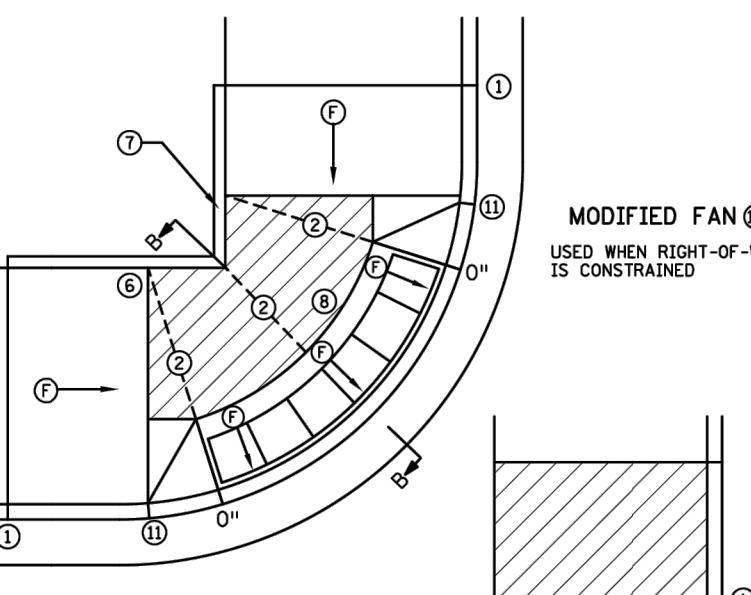
SECTION B-B
FAN



SECTION C-C
PARALLEL/DEPRESSED CORNER



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



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 WARNING 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 WARNING 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 WARNING SHOULD NOT BE GREATER THAN 20 FEET.

RECTANGULAR DETECTABLE WARNING SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNING 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 WARNING 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.

⑤ 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%.

⑥ 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%.

⑦ 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	
<i>Jeff J. Pel</i>	
W.F. PERKINS OPERATIONS DIVISION	

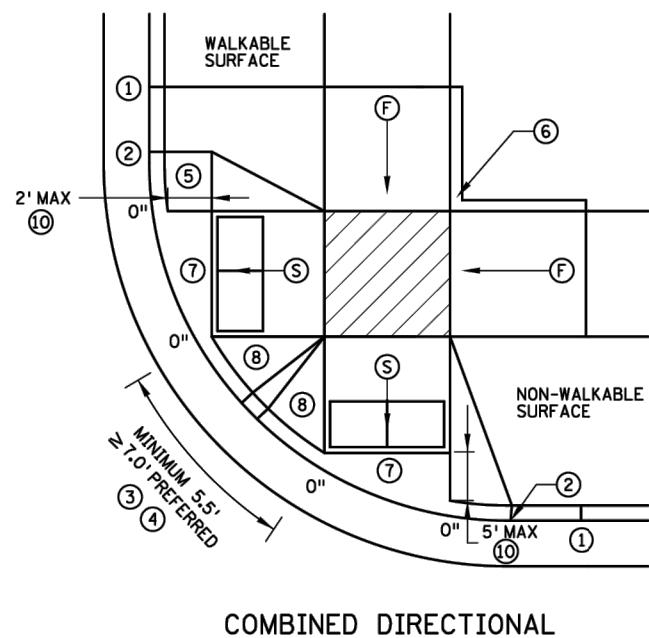


STANDARD PLAN 5-297.250 | 1 OF 6
APPROVED: 11-04-2021
REVISED:
THOMAS STYRICKI
STATE DESIGN ENGINEER

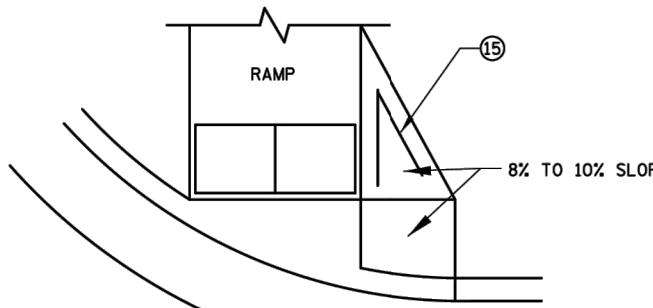
STATE PROJ. NO.

(TH) SHEET NO. 9 OF 23 SHEETS

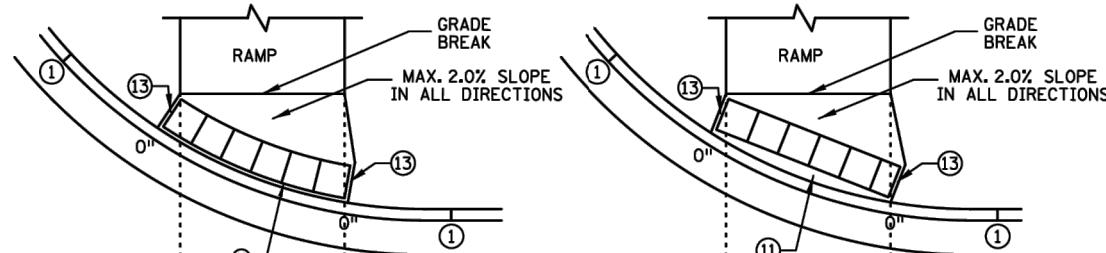
PEDESTRIAN CURB RAMP DETAILS



COMBINED DIRECTIONAL



DIRECTIONAL RAMP WALKABLE FLARE

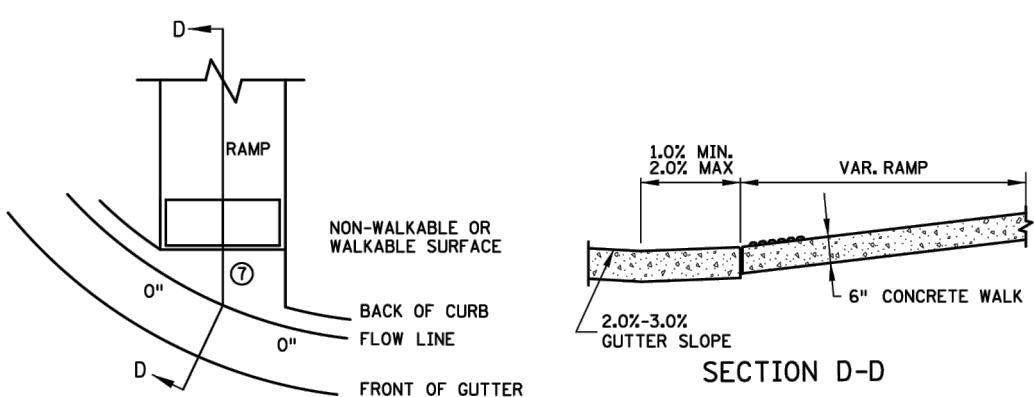


STANDARD ONE-WAY DIRECTIONAL ⑨

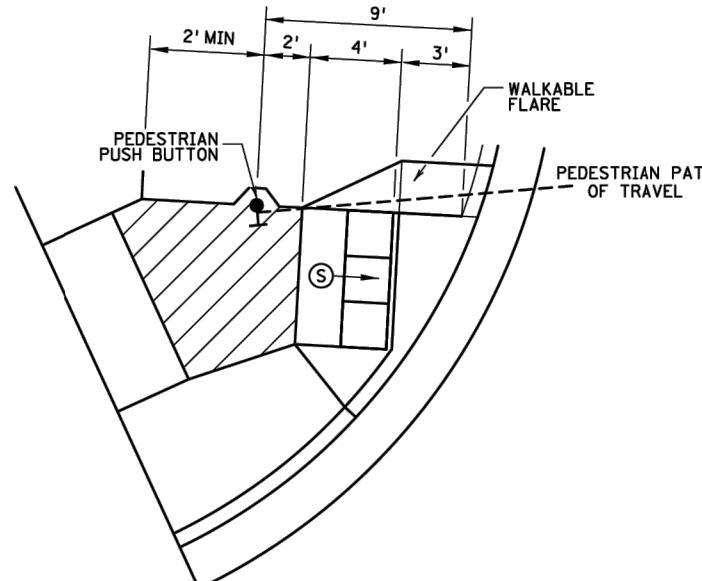
IF NON-CONCRETE BLVD. IS
CONSTRUCTED AND IS LESS THAN 2'
IN WIDTH AT TOP OF CURB
TRANSITION, PAVE CONCRETE RAMP
WIDTH TO ADJACENT BACK OF CURB.

DETECTABLE WARNING PLACEMENT WHEN
SETBACK CRITERIA IS EXCEEDED ⑫

ONE-WAY DIRECTIONAL WITH DETECTABLE
WARNING AT BACK OF CURB



CURB FOR DIRECTIONAL RAMPS ⑯



SEMI-DIRECTIONAL RAMP ⑯

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)

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 TRAVESED 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.

⑤ 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%.

⑥ 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	
<i>Jeff J. Pelin</i> WILLIAM FREY PERKINS OPERATIONS DIVISION	

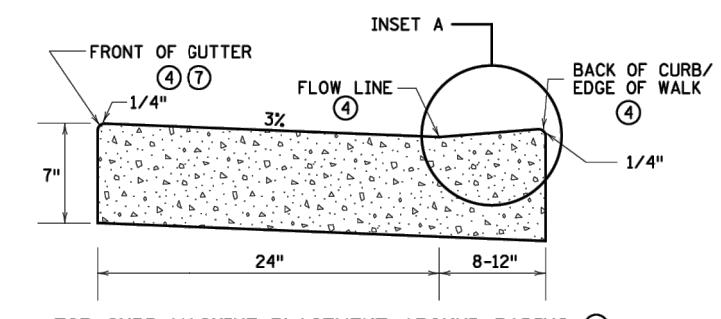
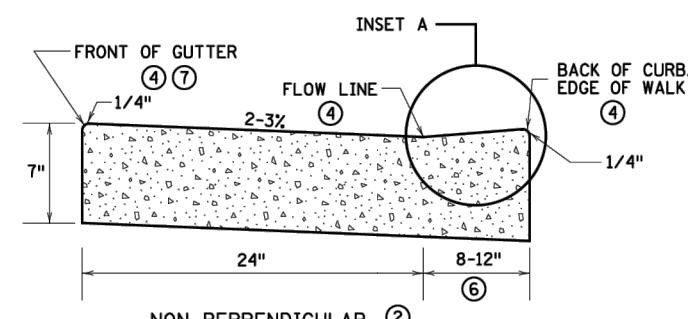
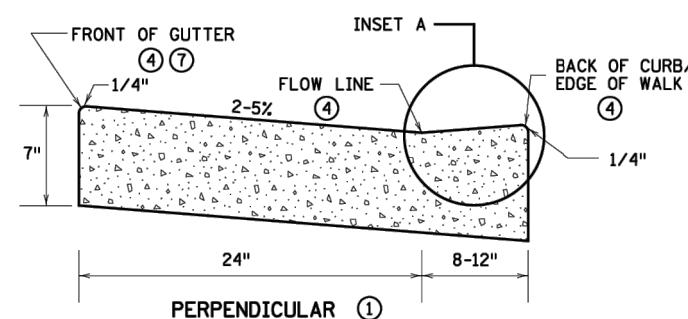
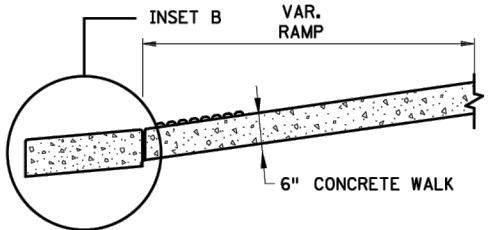


STANDARD PLAN 5-297.250
APPROVED: 11-04-2021
REVISED:

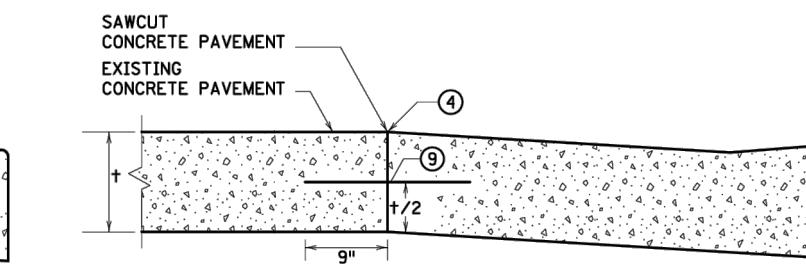
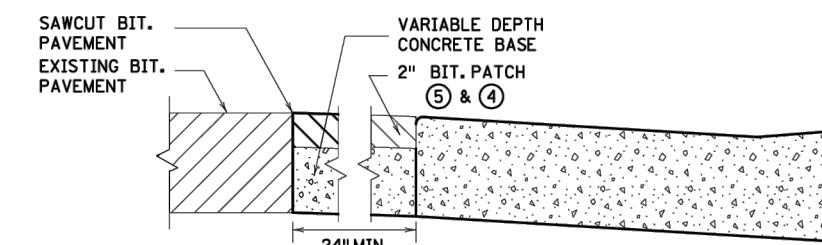
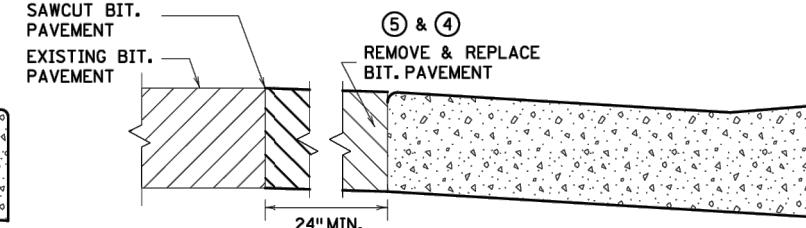
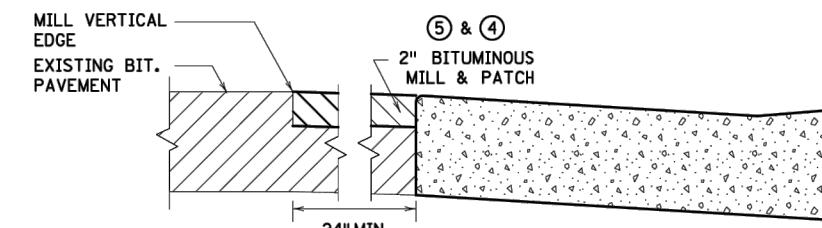
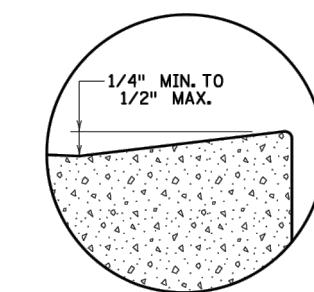
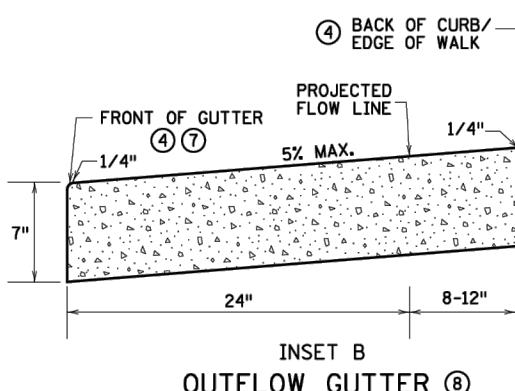
THOMAS STYRICKI
STATE DESIGN ENGINEER

2 OF 6
STATE PROJ. NO. (T.H.) SHEET NO. 10 OF 23 SHEETS

PEDESTRIAN CURB RAMP DETAILS

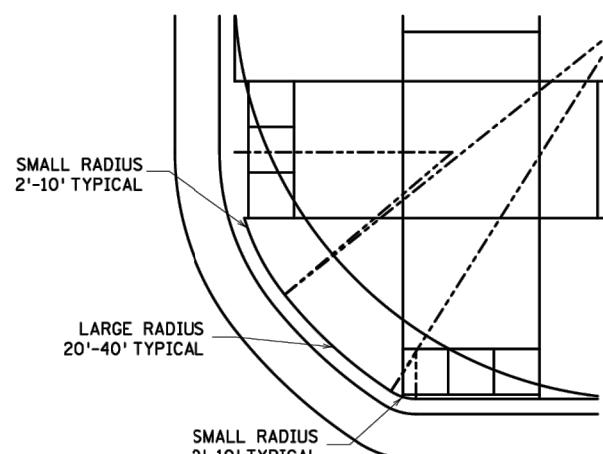
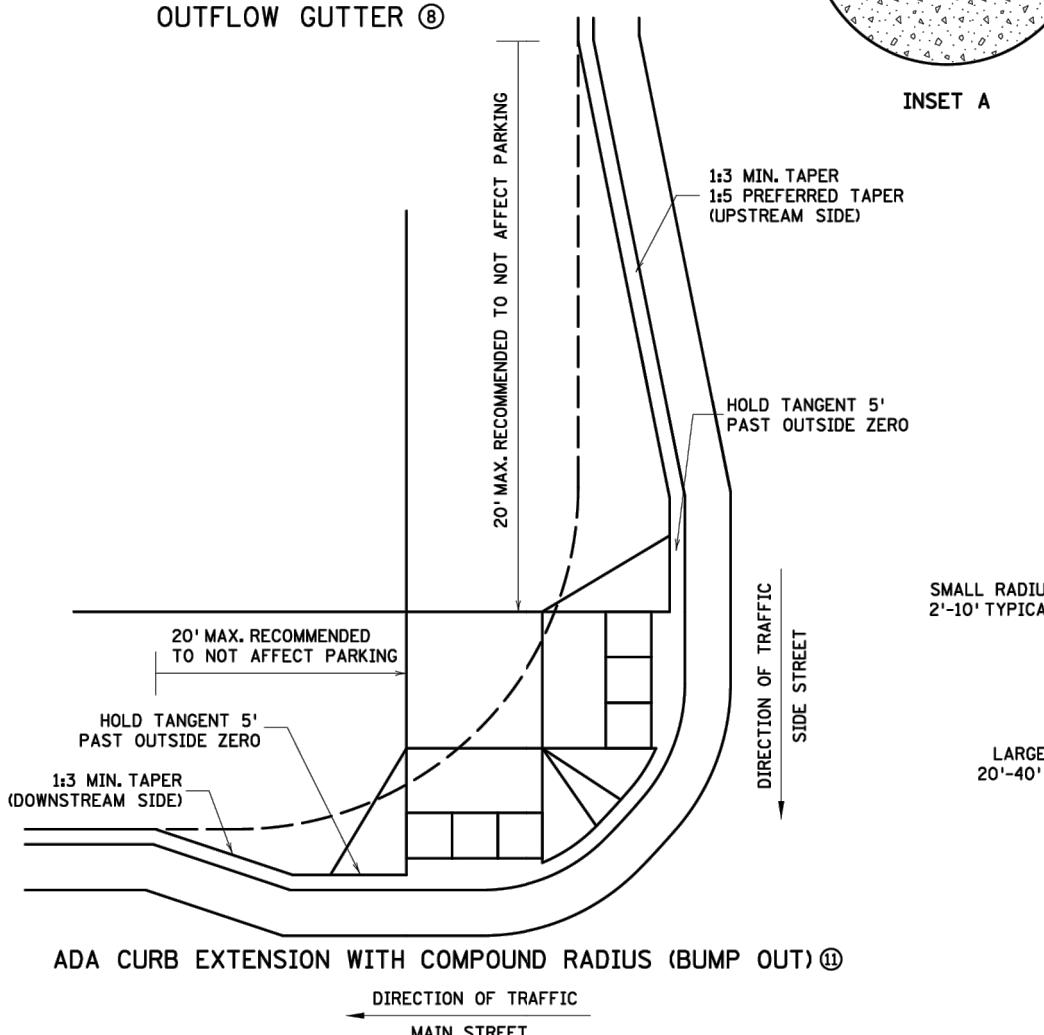


PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL



ONLY ALLOWED PER ENGINEER'S APPROVAL

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



COMBINED DIRECTIONAL ⑫
(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			
<i>Jeff J. Pei</i> W.FRE PERKINS OPERATIONS DIVISION			

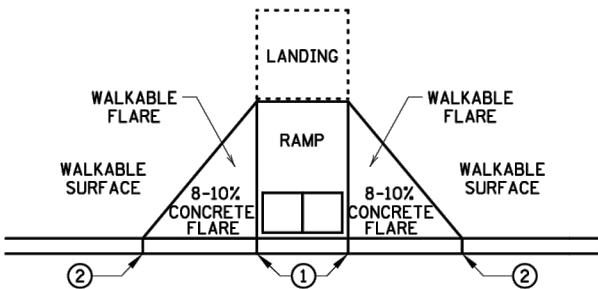


STANDARD PLAN 5-297.250	3 OF 6
APPROVED: 11-04-2021	
REVISED:	
THOMAS STYRICKI STATE DESIGN ENGINEER	

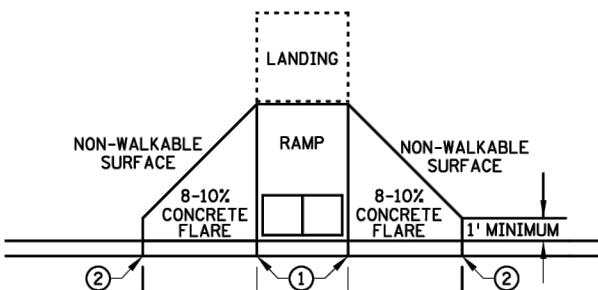
PEDESTRIAN CURB RAMP DETAILS

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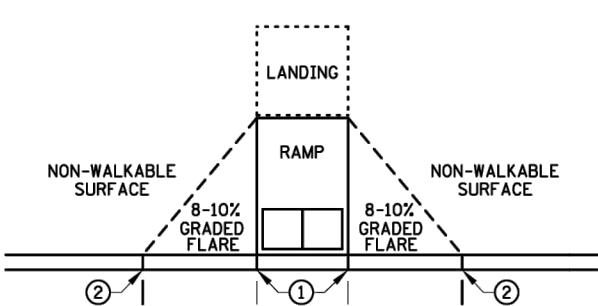
(TH) SHEET NO. 11 OF 23 SHEETS



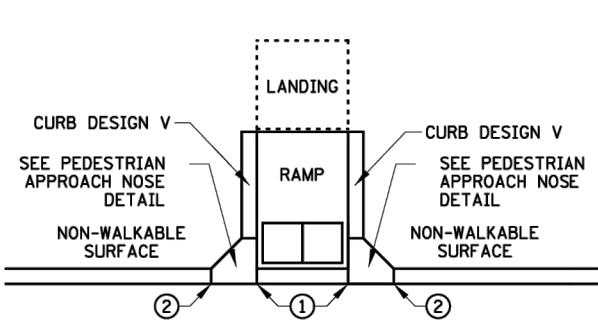
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

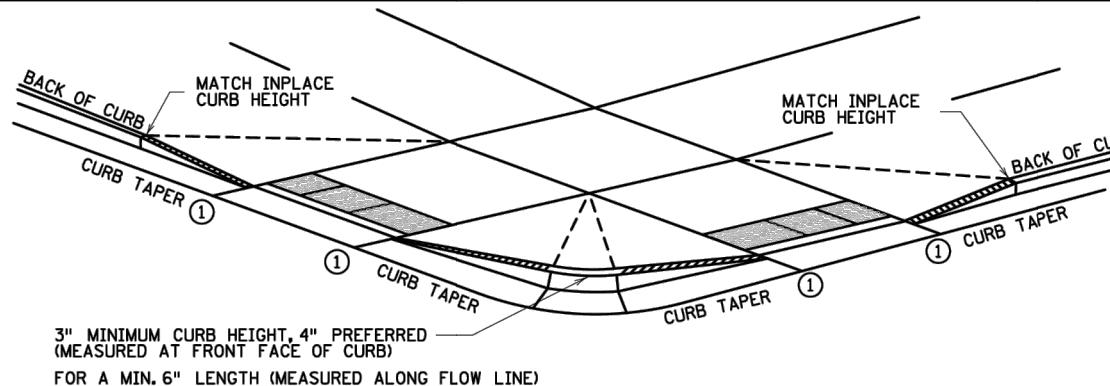


GRADED FLARES



RETURNED CURB ④

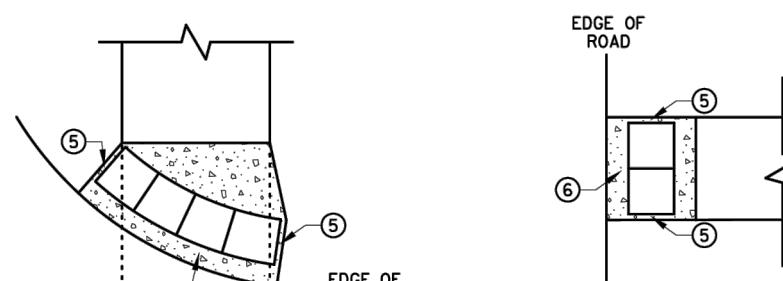
TYPICAL SIDE TREATMENT OPTIONS ③ ⑩



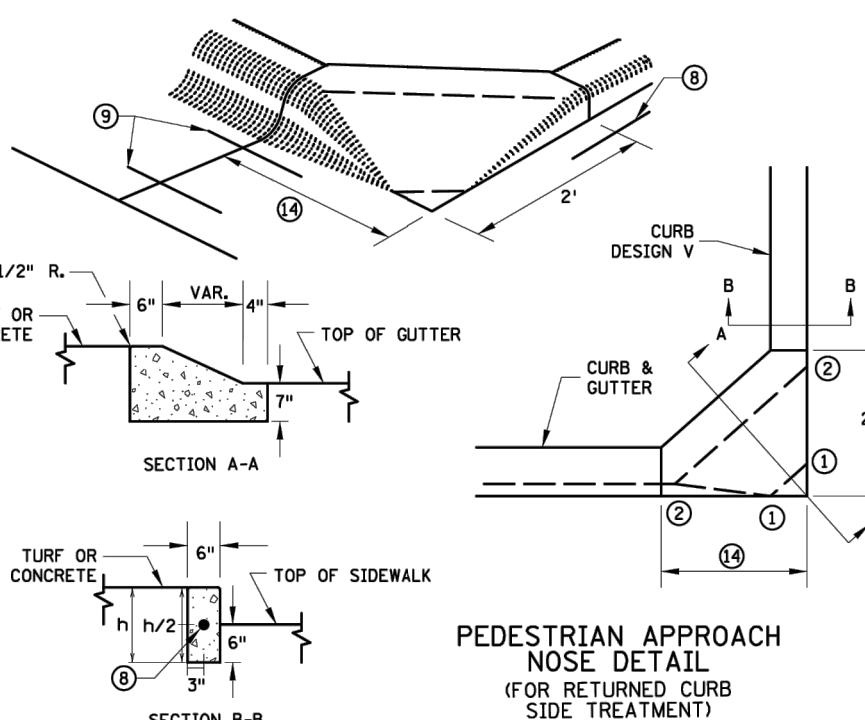
3" MINIMUM CURB HEIGHT, 4" PREFERRED
(MEASURED AT FRONT FACE OF CURB)

FOR A MIN. 6" LENGTH (MEASURED ALONG FLOW LINE)

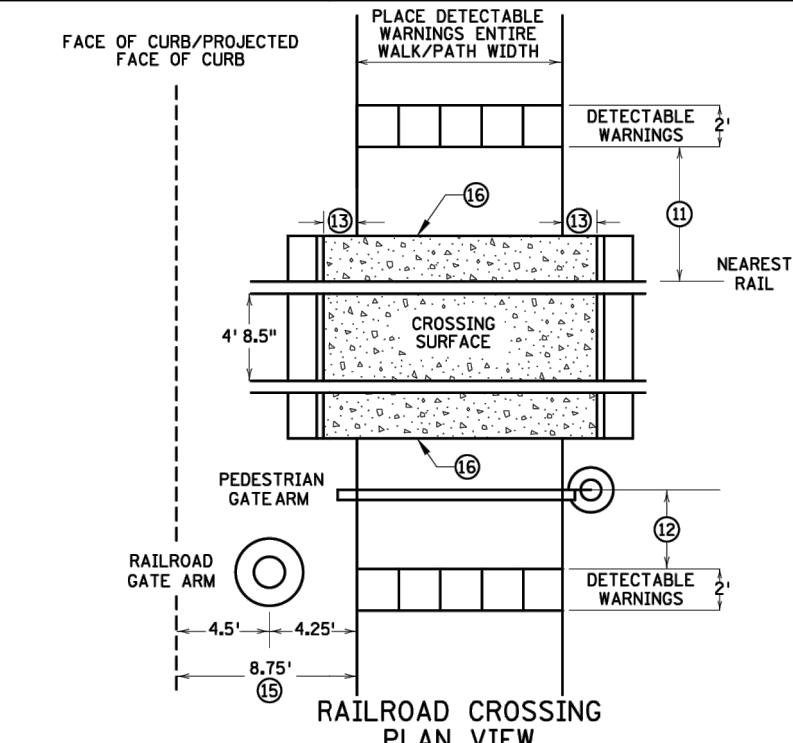
DETECTABLE EDGE WITH ⑦
CURB AND GUTTER



RADIAL DETECTABLE WARNING
RECTANGULAR DETECTABLE WARNING
DETECTABLE EDGE WITHOUT CURB AND GUTTER



PEDESTRIAN APPROACH
NOSE DETAIL
(FOR RETURNED CURB
SIDE TREATMENT)



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 TRAVESED 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 MEDIANIS 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 MEDIANIS 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

Jeff J. Pelin
FRE PERKINS
OPERATIONS DIVISION



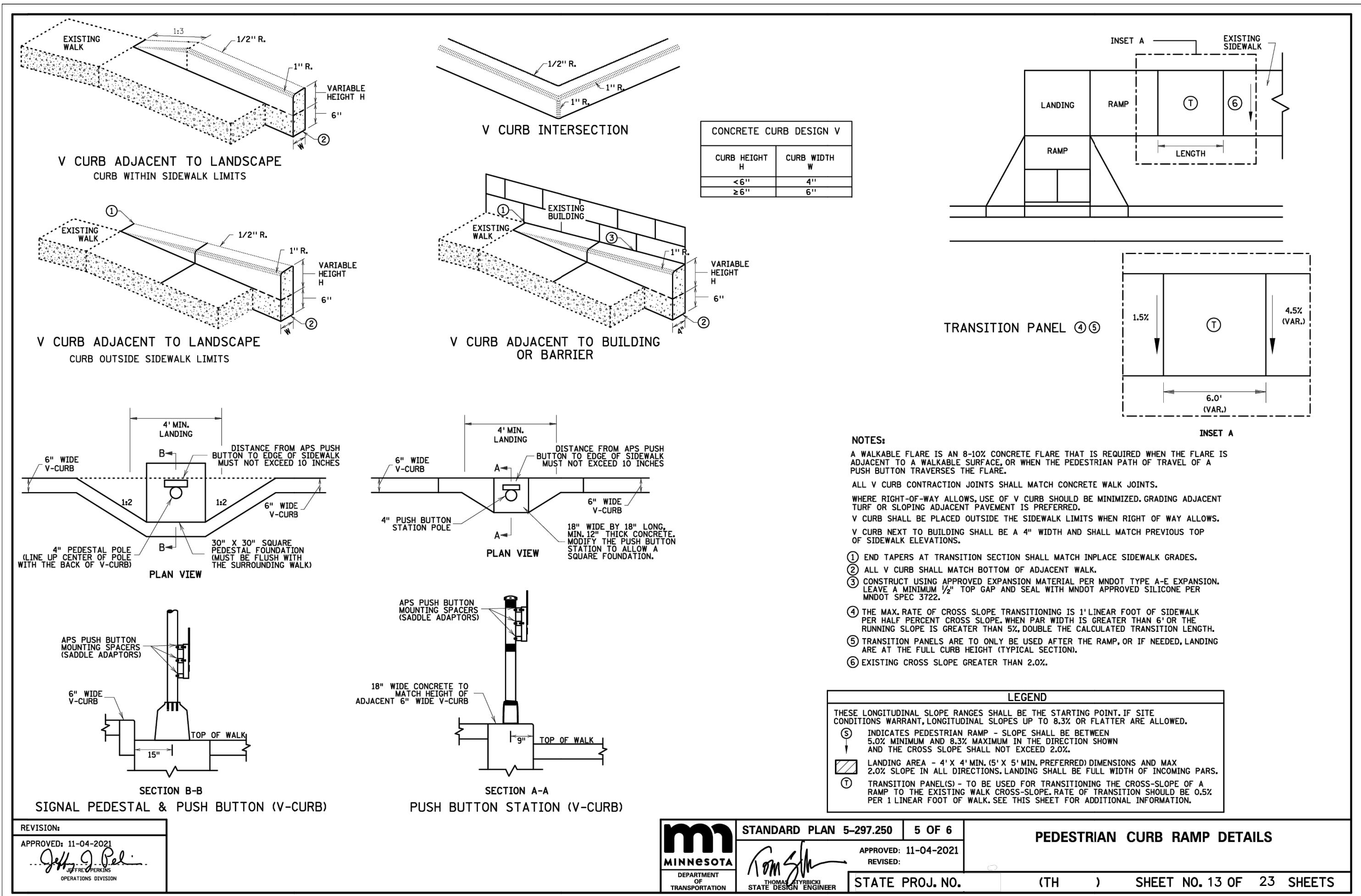
STANDARD PLAN 5-297.250 | 4 OF 6

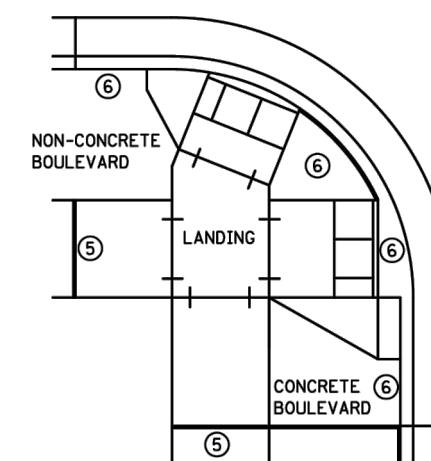
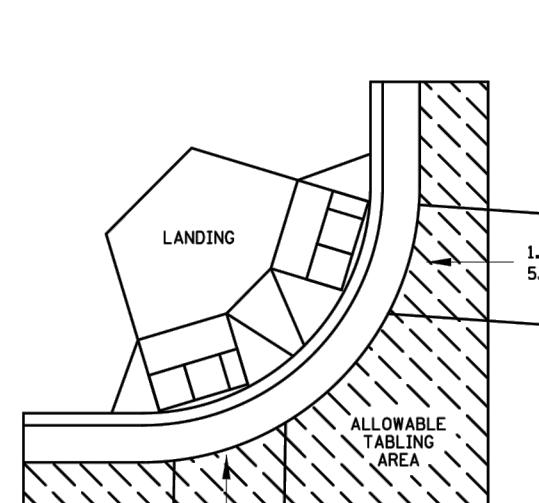
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REVISED:

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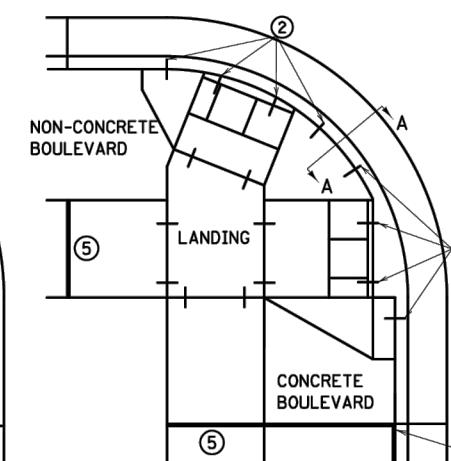
PEDESTRIAN CURB RAMP DETAILS

(TH) SHEET NO. 12 OF 23 SHEETS

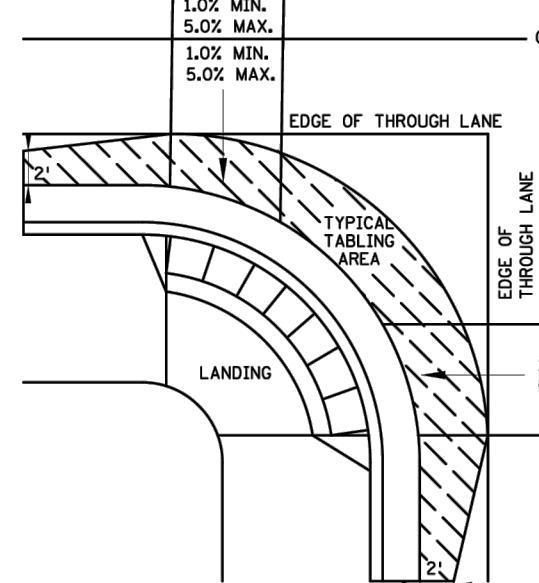




EXPANSION MATERIAL PLACEMENT
FOR CONCRETE ROADWAYS



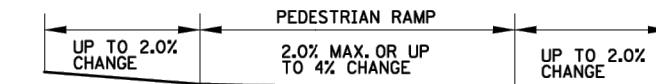
CURB LINE REINFORCEMENT ④
PLACEMENT ON BITUMINOUS ROADWAYS



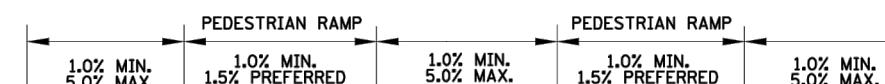
CURB LINE AND ROAD CROSSING ADJUSTMENTS



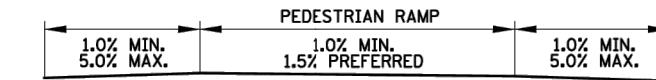
FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



FLOW LINE PROFILE "TABLE" - FAN



FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS



FLOW LINE PROFILE RAISE - FAN

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:

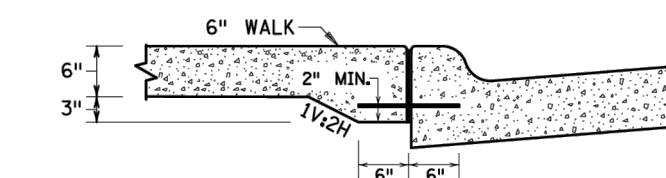
- 1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
- 2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
- 3) 5.0% RECOMMENDED MAX. FLOW LINE
- 4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

REVISION:		
APPROVED: 11-04-2021		
 JEFFREY O. PELE OPERATIONS DIVISION		

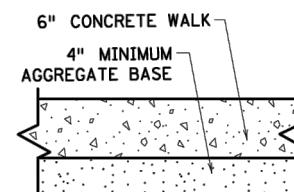


STANDARD PLAN 5-297.250	6 OF 6
 TOM S. SLOBODA THOMAS SLOBODA STATE DESIGN ENGINEER	
APPROVED: 11-04-2021	REVISED:
STATE PROJ. NO.	(TH)

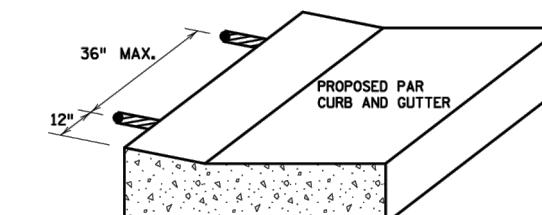
PEDESTRIAN CURB RAMP DETAILS



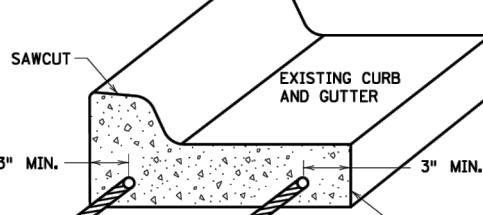
SECTION VIEW A-A
THICKENED SECTION
THROUGH CURB RAMP FLARES



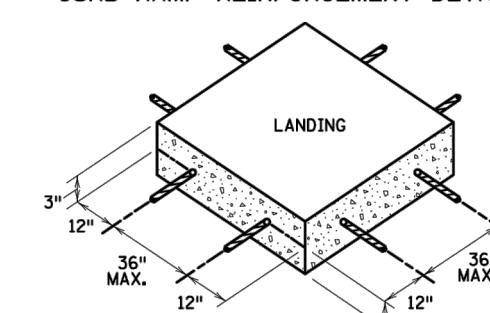
TYPICAL SIDEWALK SECTION
WITHIN INTERSECTION CORNER



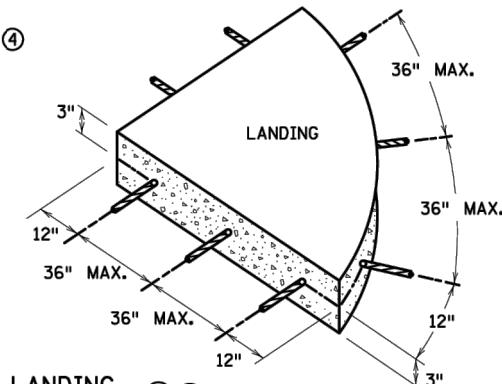
CURB RAMP REINFORCEMENT DETAILS ②④



CURB AND GUTTER
REINFORCEMENT ③

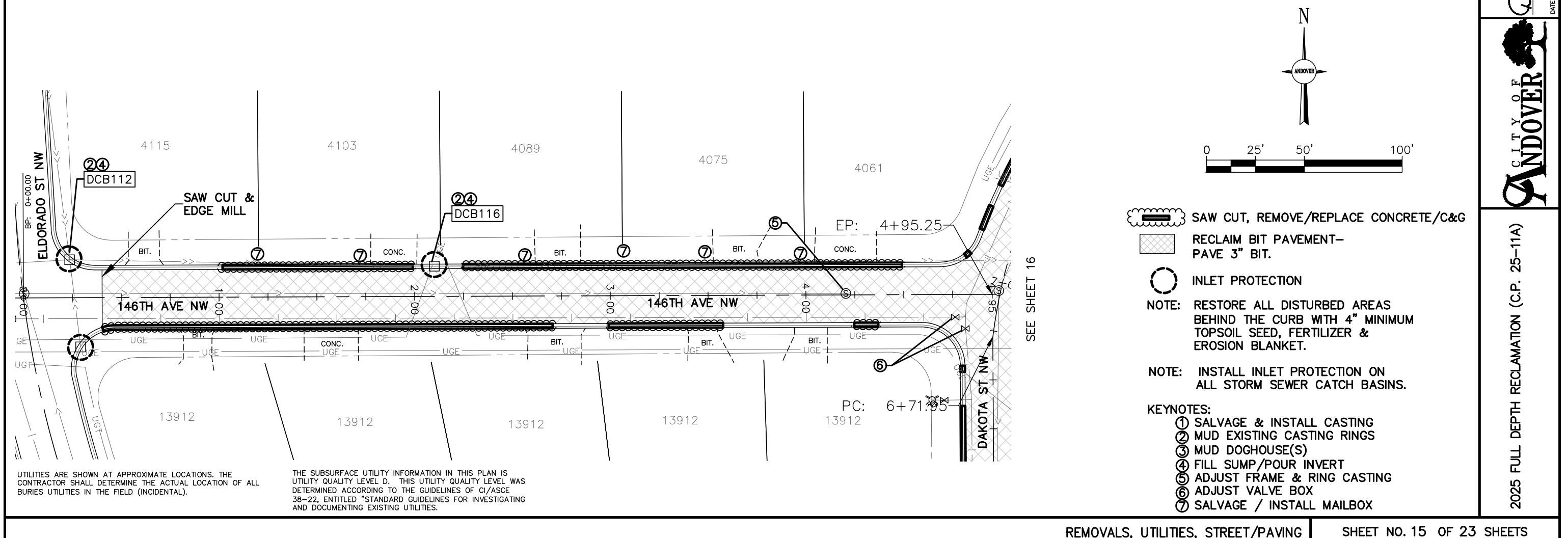
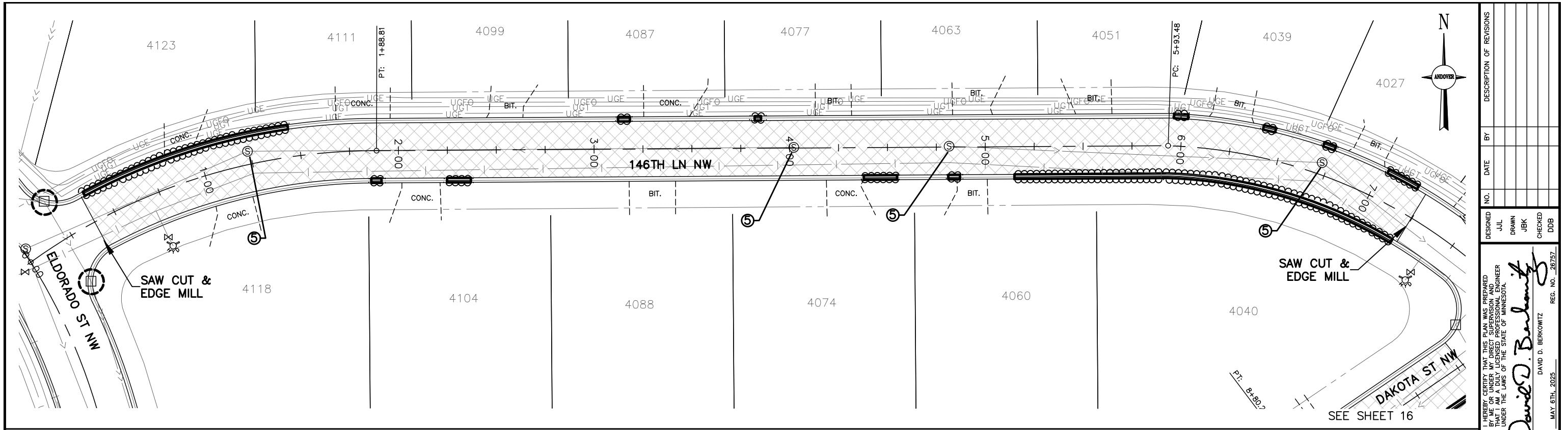


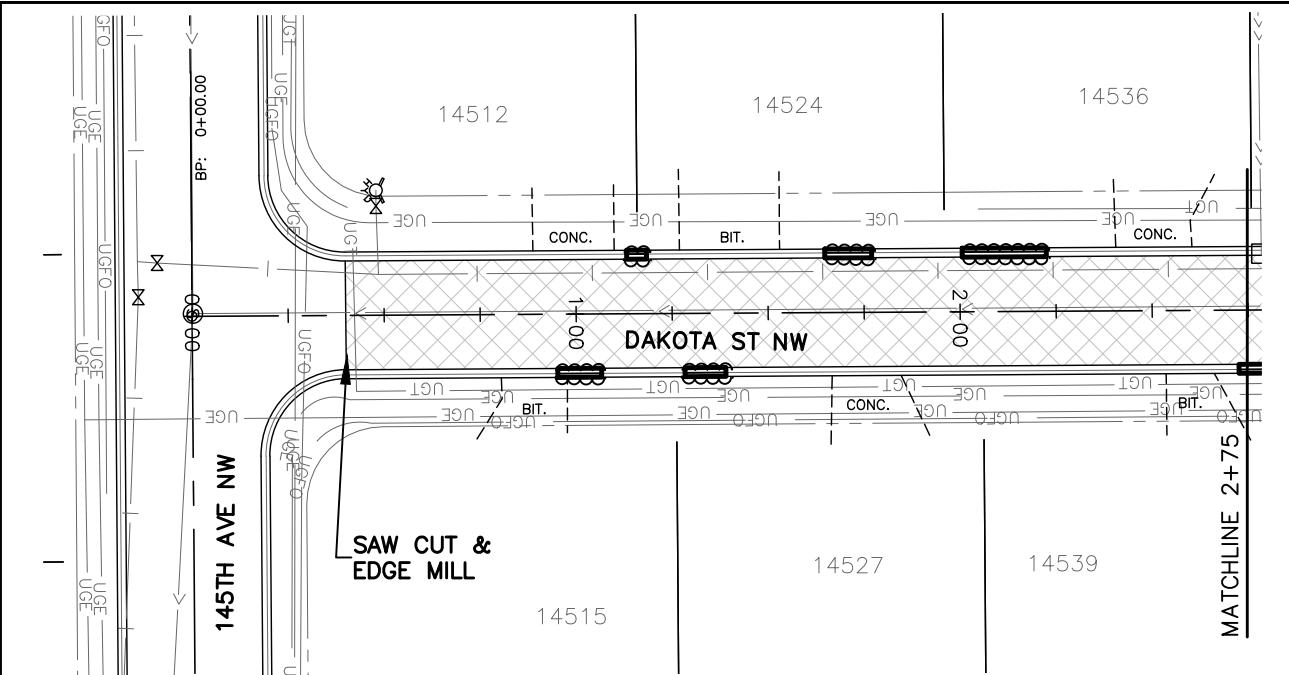
SEPARATE LANDING ①②
POUR REINFORCEMENT



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.





 SAW CUT, REMOVE/REPLACE CONCRETE/C&G

RECLAIM BIT PAVEMENT—
PAVE 3" BIT.

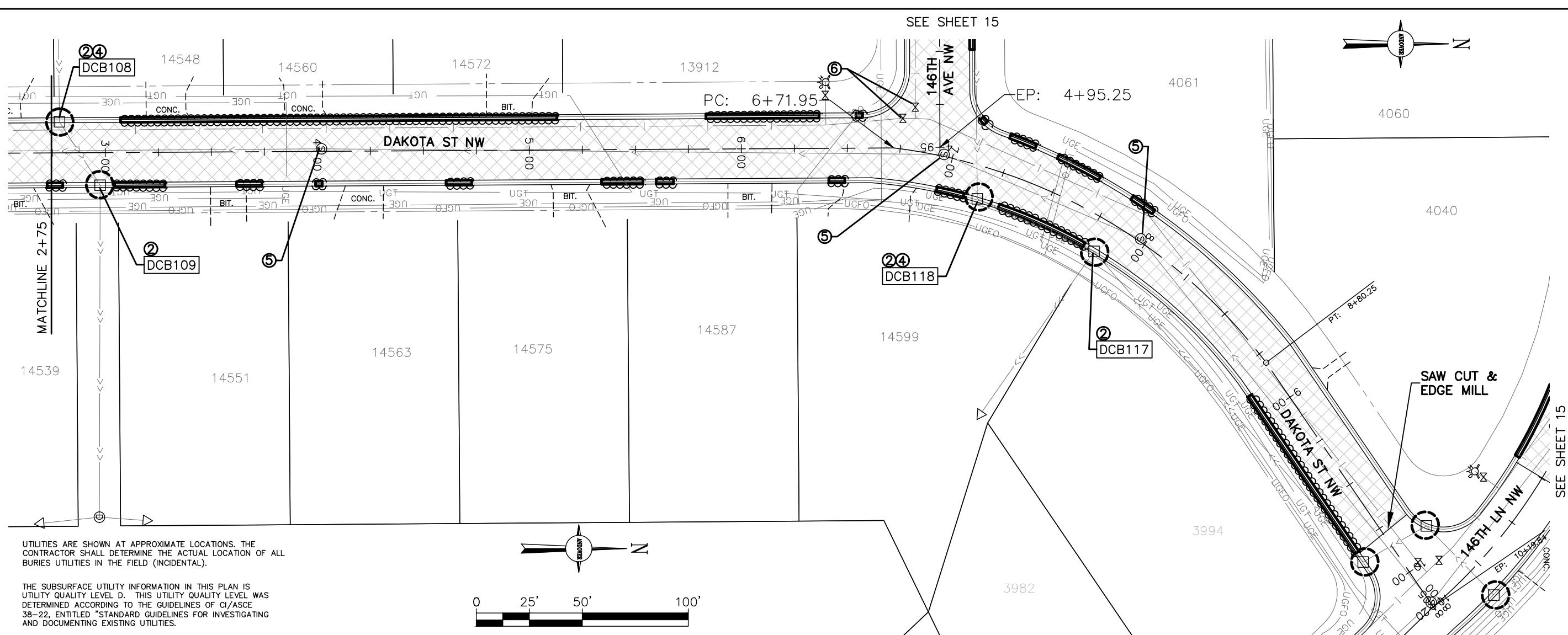
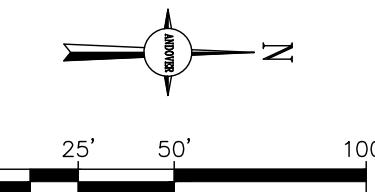
INLET PROTECTION

NOTE: RESTORE ALL DISTURBED AREAS BEHIND THE CURB WITH 4" MINIMUM TOPSOIL SEED, FERTILIZER & EROSION BLANKET.

NOTE: INSTALL INLET PROTECTION ON ALL STORM SEWER CATCH BASINS.

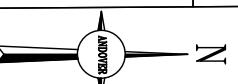
KEYNOTES:

- ① SALVAGE & INSTALL CASTING
- ② MUD EXISTING CASTING RINGS
- ③ MUD DOGHOUSE(S)
- ④ FILL SUMP/POUR INVERT
- ⑤ ADJUST FRAME & RING CASTING
- ⑥ ADJUST VALVE BOX
- ⑦ SALVAGE / INSTALL MAILBOX

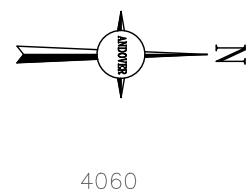


UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL BURIED UTILITIES IN THE FIELD (INCIDENTAL).

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES.



SEE SHEET 15

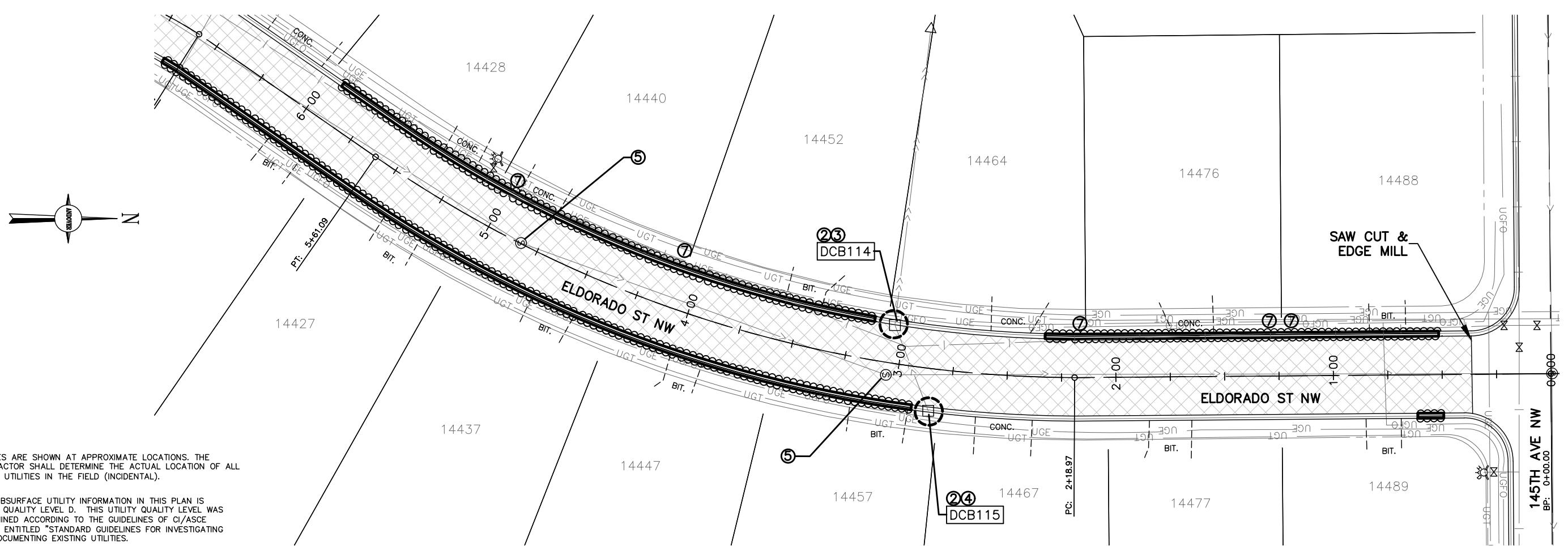
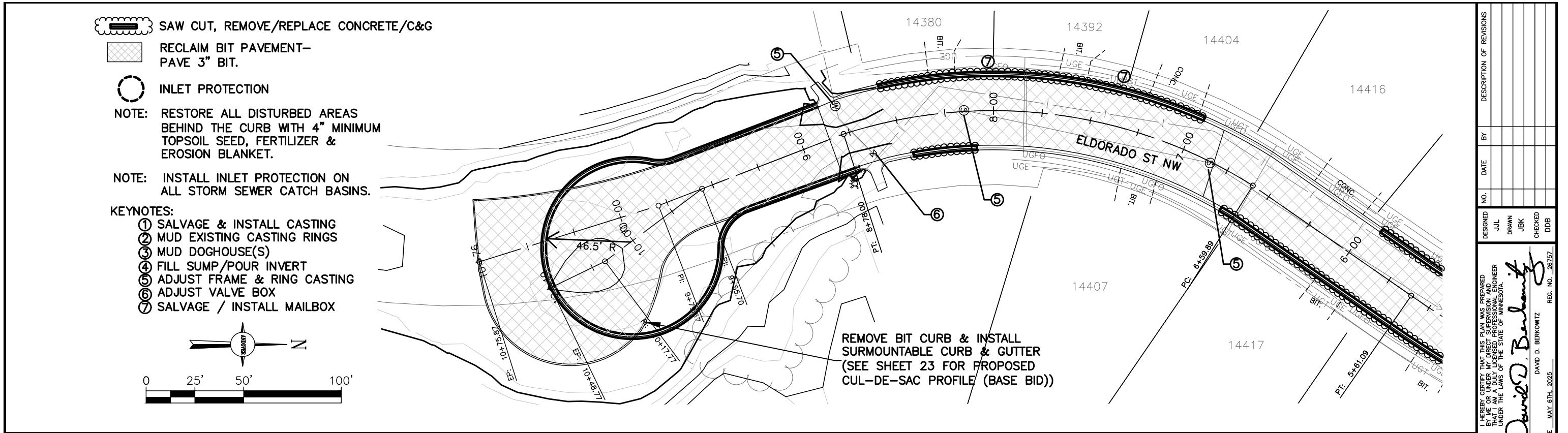


11 of 11

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		NO.	DATE	BY	DESCRIPTION OF REVISIONS
 DAVID D. BERKOWITZ		JUL			
		DRAWN			
		JK			
		CHECKED			
		DDB			
		REG. NO. 26757			
		DATE MAY 6TH, 2005			

REMOVALS, UTILITIES, STREET/PAVING

SHEET NO. 16 OF 23 SHEETS



SAW CUT, REMOVE/REPLACE CONCRETE/C&G

RECLAIM BIT PAVEMENT—PAVE 3" BIT.

INLET PROTECTION

NOTE: RESTORE ALL DISTURBED AREAS BEHIND THE CURB WITH 4" MINIMUM TOPSOIL SEED, FERTILIZER & EROSION BLANKET.

NOTE: INSTALL INLET PROTECTION ON ALL STORM SEWER CATCH BASINS.

KEYNOTES:

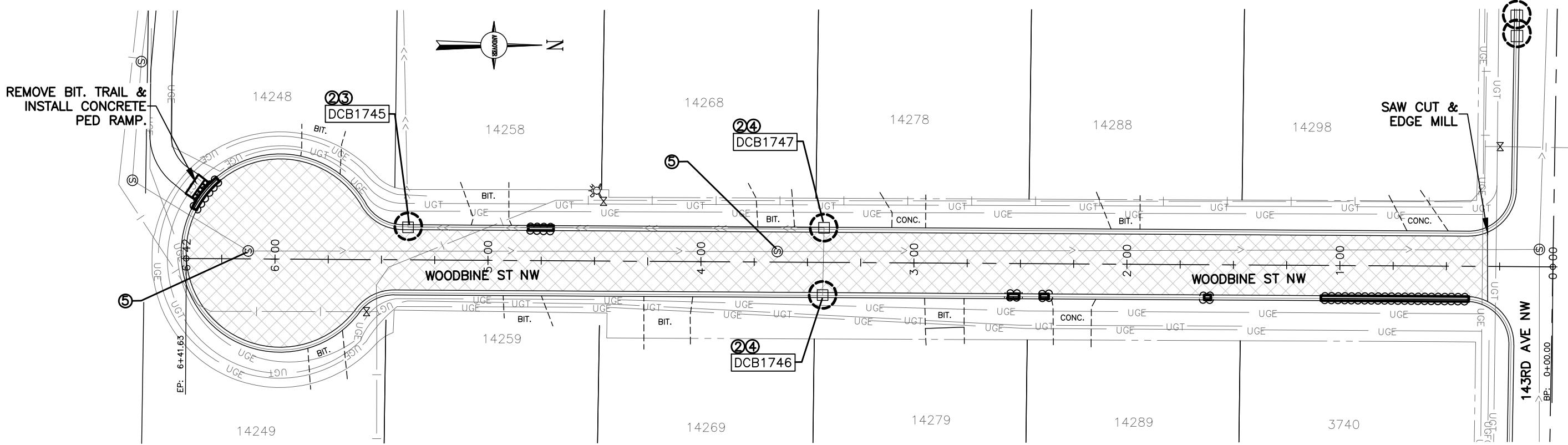
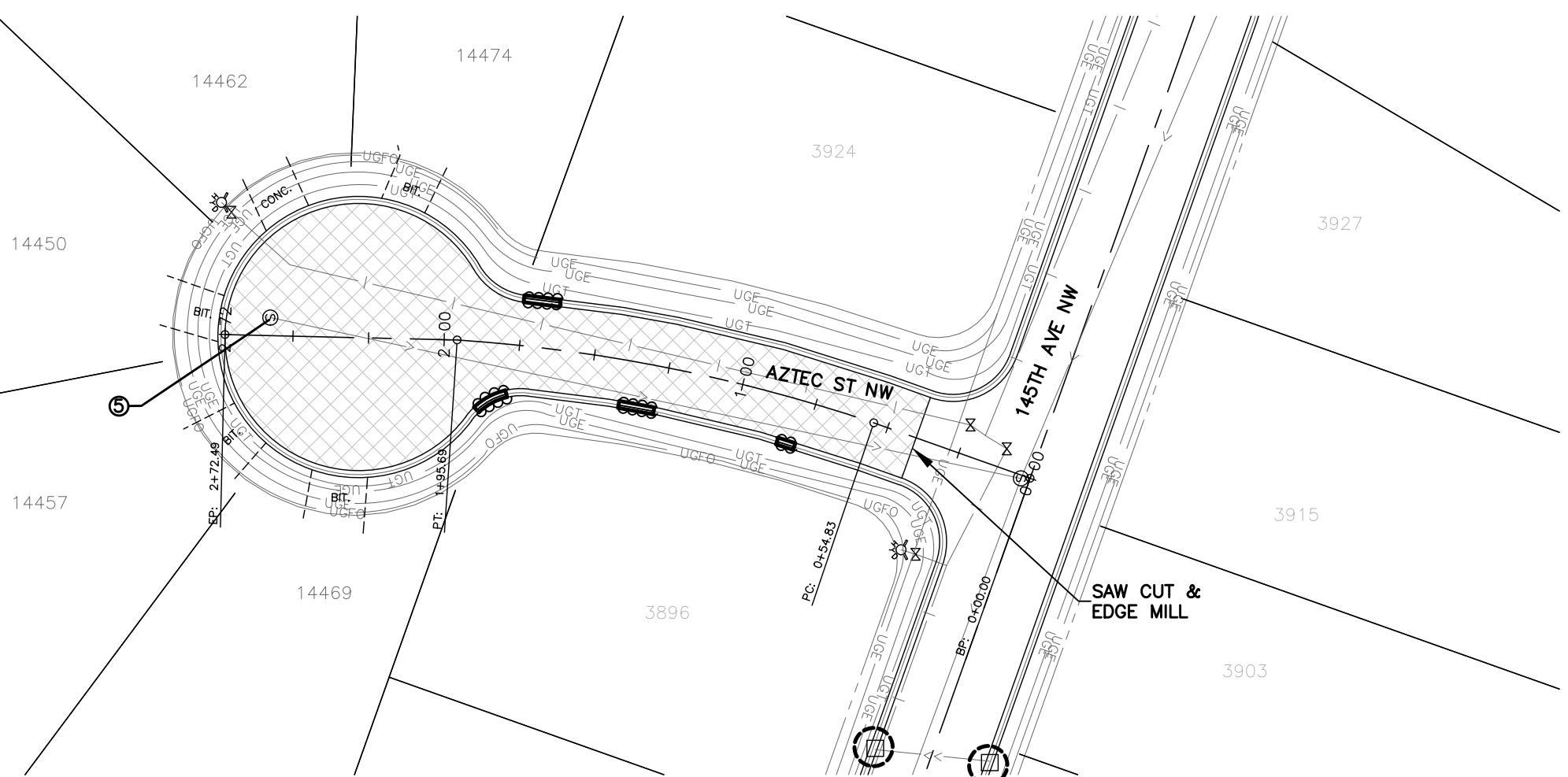
- ① SALVAGE & INSTALL CASTING
- ② MUD EXISTING CASTING RINGS
- ③ MUD DOGHOUSE(S)
- ④ FILL SUMP/POUR INVERT
- ⑤ ADJUST FRAME & RING CASTING
- ⑥ ADJUST VALVE BOX
- ⑦ SALVAGE / INSTALL MAILBOX

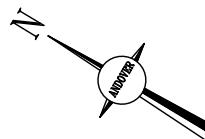


0 25' 50' 100'

UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL BURIED UTILITIES IN THE FIELD (INCIDENTAL).

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."





 SAW CUT, REMOVE/REPLACE CONCRETE/C&G

 RECLAIM BIT PAVEMENT—
PAVE 3" BIT.

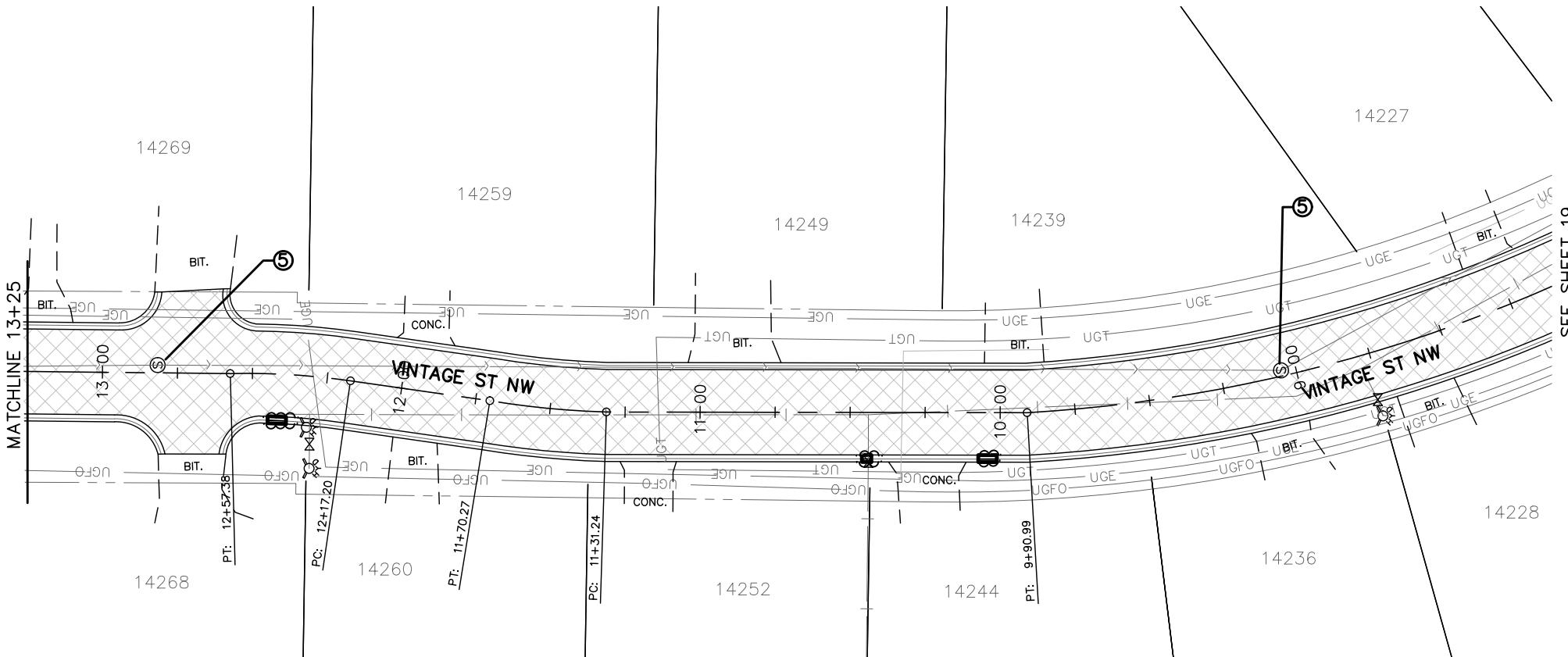
 INLET PROTECTION

NOTE: RESTORE ALL DISTURBED AREAS
BEHIND THE CURB WITH 4" MINIMUM
TOPSOIL SEED, FERTILIZER &
EROSION BLANKET.

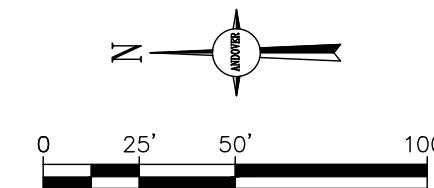
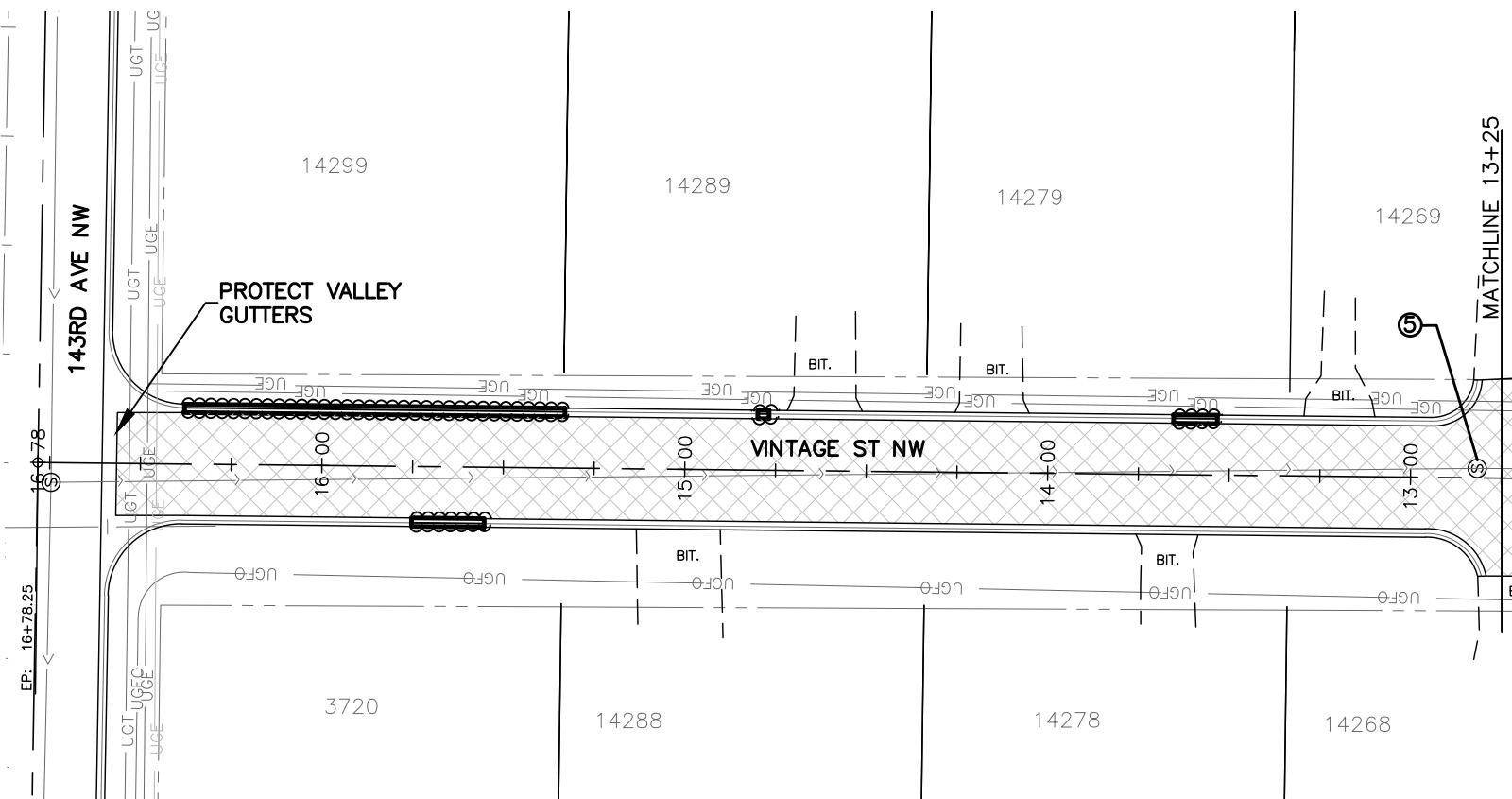
NOTE: INSTALL INLET PROTECTION ON
ALL STORM SEWER CATCH BASINS.

KEYNOTES:

- ① SALVAGE & INSTALL CASTING
- ② MUD EXISTING CASTING RINGS
- ③ MUD DOGHOUSE(S)
- ④ FILL SUMP/POUR INVERT
- ⑤ ADJUST FRAME & RING CASTING
- ⑥ ADJUST VALVE BOX
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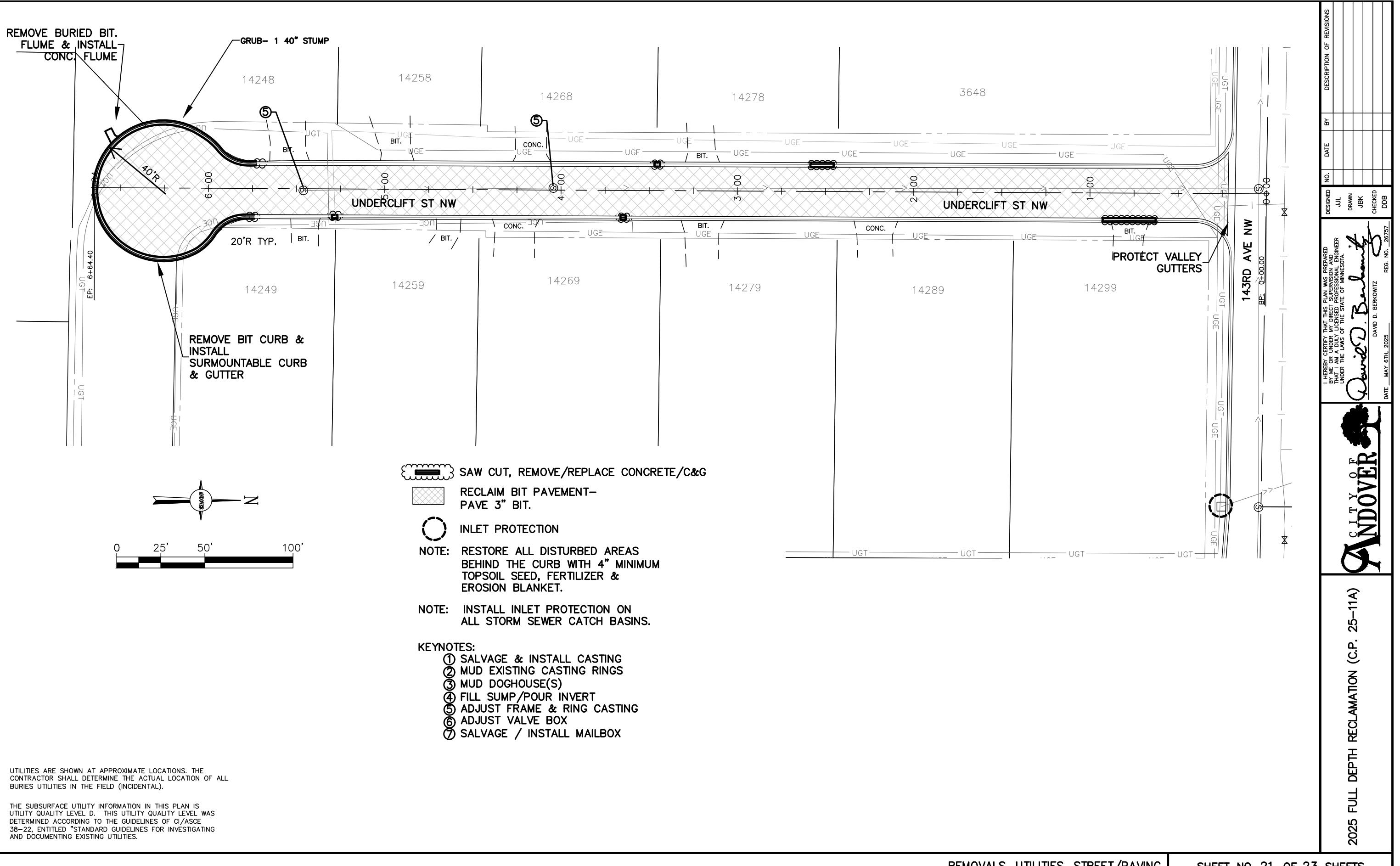


CULL 3111-13		DESCRIPTION OF REVISIONS		
NO.	DATE	BY		
DESIGNED	JUL			
DRAWN				
JKR				
CHECKED				
DDB				
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULUTH LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		<i>D. Berkowitz</i>		
DAVID D. BERKOWITZ		REG. NO. 26757		
DATE <u>MAY 6TH, 2025</u>				



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REMOVALS, UTILITIES, STREET/PAVING

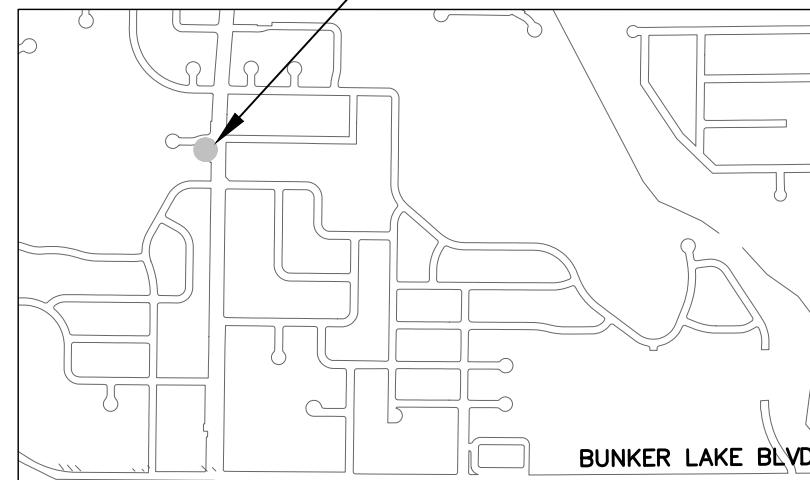
SHEET NO. 21 OF 23 SHEETS



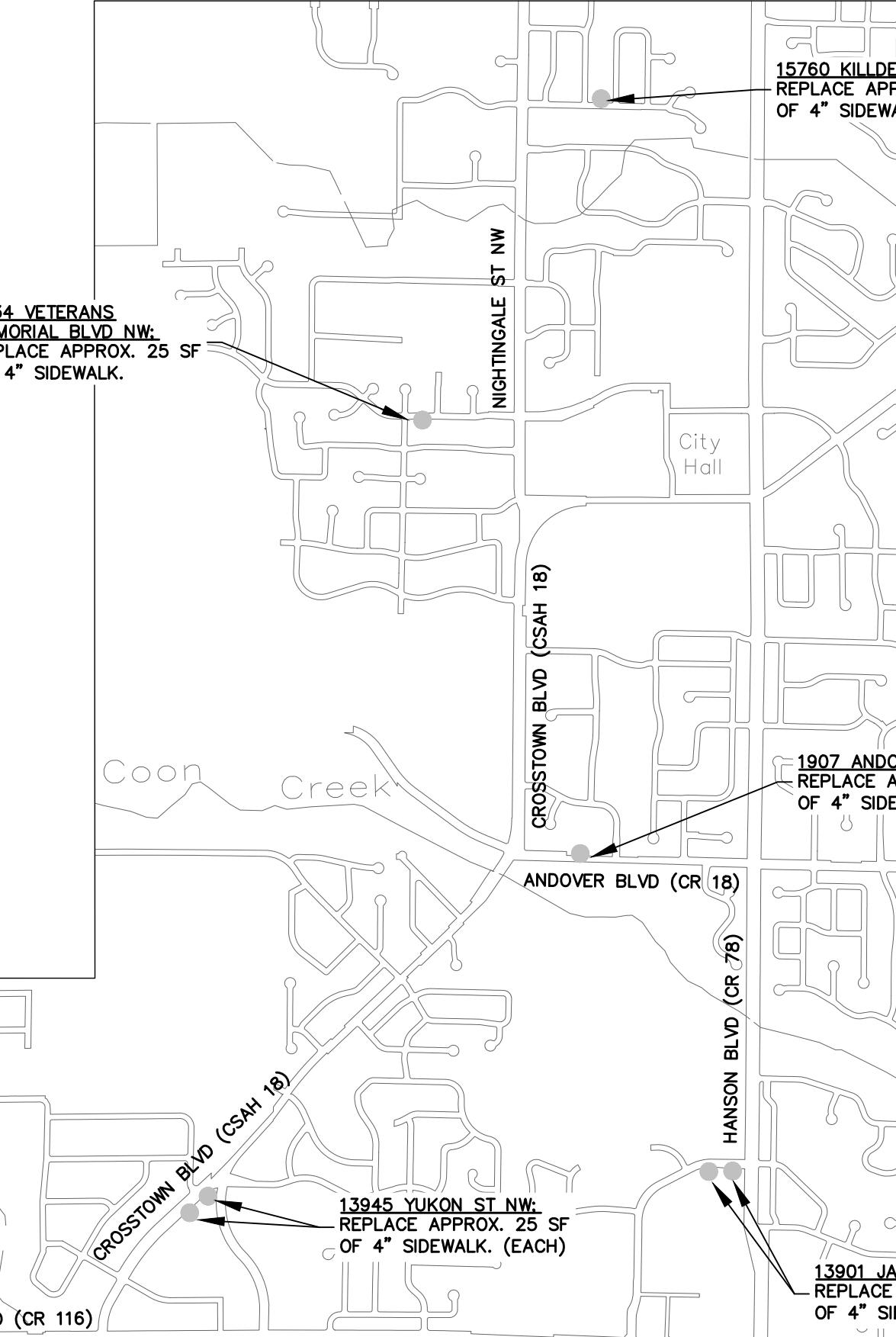
NO SCALE

● SAW CUT, REMOVE, REPLACE CONCRETE SIDEWALK PANEL(S). RESTORE WITH TOPSOIL, FERTILIZER, SEED.

NOTE: ① DRILL AND GROUT 2 - NO.4 12" REINFORCEMENT BARS (EPOXY COATED) AT 36" MAXIMUM CENTER TO CENTER MINIMUM 12" SPACING FROM CONSTRUCTION JOINTS. BARS TO BE ADJUSTED TO MATCH RAMP GRADE. (INCIDENTAL)



3614 141ST LN NW:
REPLACE APPROX. 36 SF
OF 4" SIDEWALK.
PROTECT UTILITY MH IN
SIDEWALK



2134 VETERANS
MEMORIAL BLVD NW:
REPLACE APPROX. 25 SF
OF 4" SIDEWALK.

15760 KILLDEER ST NW:
REPLACE APPROX. 25 SF
OF 4" SIDEWALK.

CROSTOWN BLVD (CSAH 18)

1907 ANDOVER BLVD NW:
REPLACE APPROX. 30 SF
OF 4" SIDEWALK.

ANDOVER BLVD (CR 18)

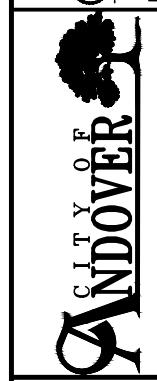
HANSON BLVD (CR 78)

13945 YUKON ST NW:
REPLACE APPROX. 25 SF
OF 4" SIDEWALK. (EACH)

13901 JAY ST NW:
REPLACE APPROX. 25 SF
OF 4" SIDEWALK. (EACH)

BUNKER LAKE BLVD (CR 116)

2025 SIDEWALK REPAIRS
CITY PROJECT 25-08



DESCRIPTION OF REVISIONS			
NO.	DATE	BY	DESCRIPTION OF REVISIONS
		JUL	
		DRAWN	
		AAK	
		CHECKED	
		DDB	

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

DAVID D. BERKOWITZ
DATE: MAY 6TH, 2025
REG. NO. 26757

