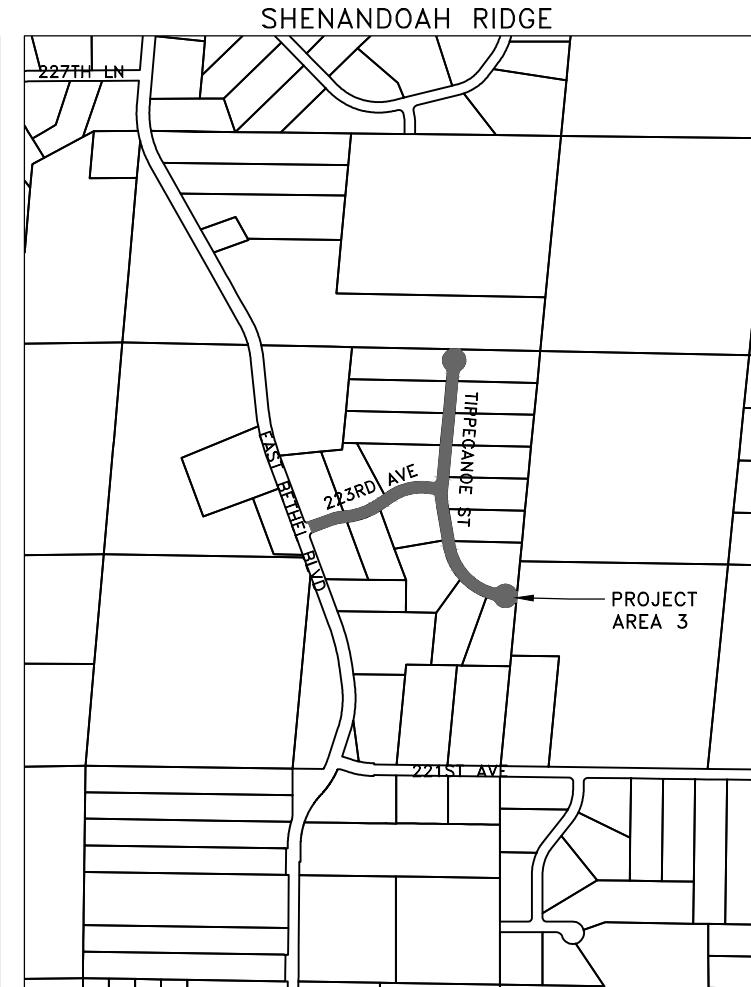
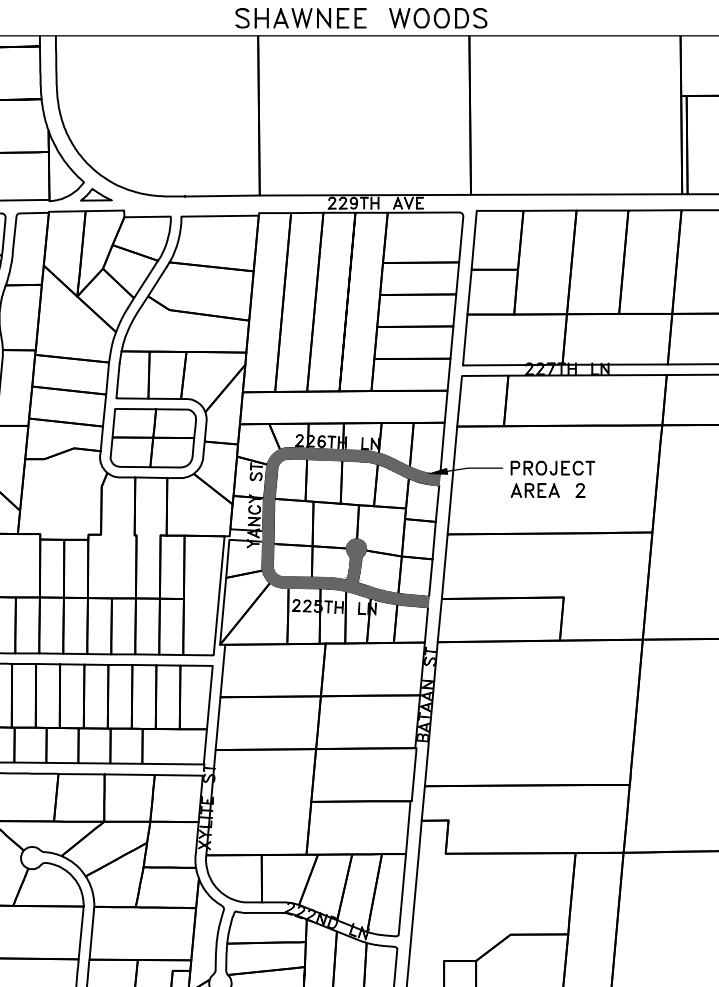
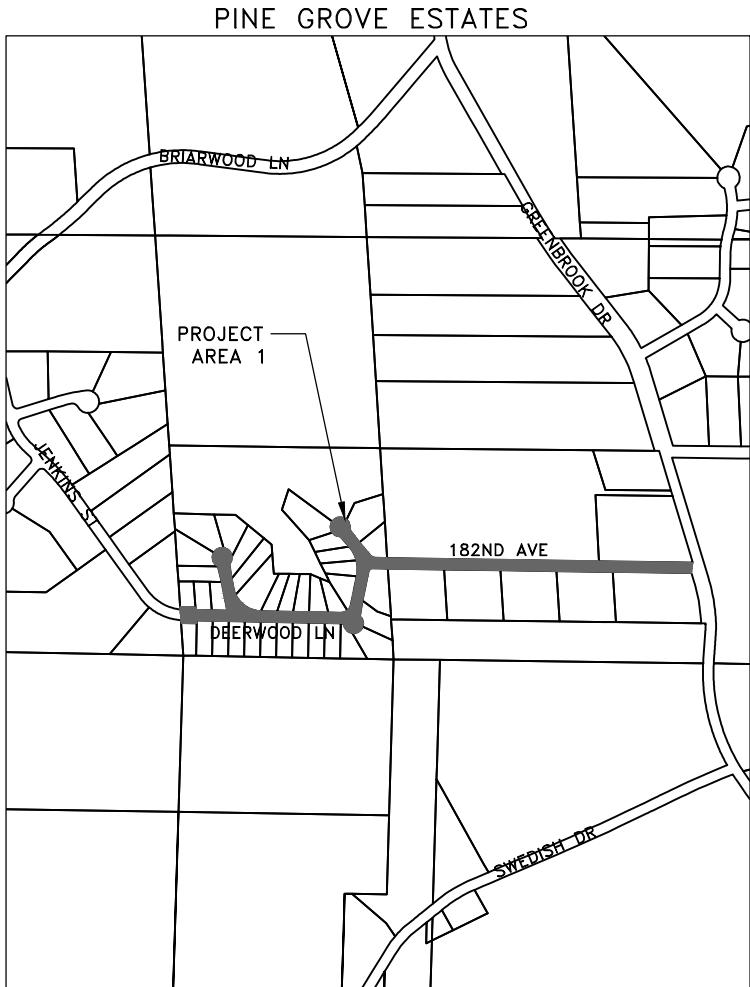


2022 STREET SURFACE IMPROVEMENT PROJECT

EAST BETHEL, MINNESOTA

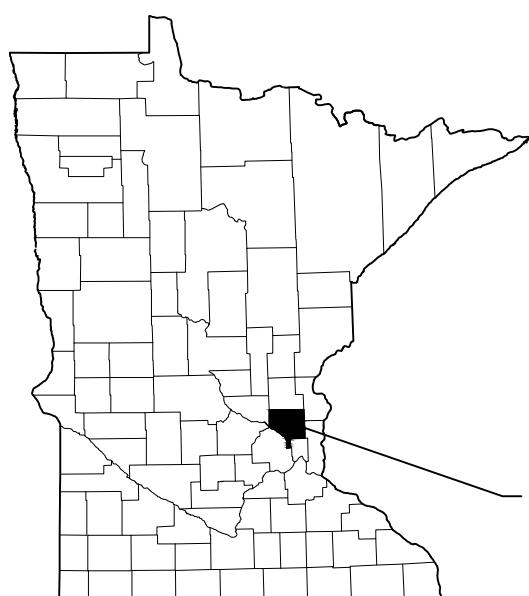


PROJECT LOCATION

Jun 03, 2022 - 2:32pm
K:\MUNICIPAL\EB358\ENGINEERING\PLAN.DWG\EB358_TITLE.dwg

**Hakanson
Anderson**
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520

THE SUBSURFACE UTILITY INFORMATION
IN THIS PLAN IS UTILITY QUALITY LEVEL
D. THIS QUALITY LEVEL WAS DETERMINED
ACCORDING TO THE GUIDELINES OF
CI/ASCE 38-2, ENTITLED "STANDARD
GUIDELINES FOR THE COLLECTION AND
DEPICTION OF EXISTING SUBSURFACE
UTILITY DATA."



CITY OF EAST BETHEL,
ANOKA COUNTY,
MINNESOTA

GOVERNING SPECIFICATIONS

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

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
LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC
CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR
TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

ALL REQUIREMENTS OF THE PROJECT MANUAL FOR THE 2022 STREET
SURFACE IMPROVEMENT PROJECT.

SHEET INDEX

THIS PLAN CONTAINS 19 SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES, TABULATIONS, AND CONSTRUCTION NOTES
3	TYPICAL SECTIONS AND DETAILS
4	DETAILS
5-10	PROJECT AREA 1 CONSTRUCTION PLANS
11-14	PROJECT AREA 2 CONSTRUCTION PLANS
15-17	PROJECT AREA 3 CONSTRUCTION PLANS
18	DEERWOOD LANE STORM SEWER REMOVAL PLAN
19	DEERWOOD LANE STORM SEWER CONSTRUCTION PLAN

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.


CRAIG J. JOCHUM, P.E.
HAKANSON ANDERSON
DESIGN ENGINEER

23461 DATE 5/23/22
LIC. NO.

DATE	REVISION

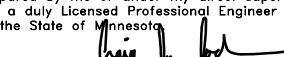
ESTIMATED QUANTITIES								
ITEM NO.	REF. NOTES	MN/DOT SPEC. NO.	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	PINE GROVE ESTATES - PROJECT AREA 1	SHAWNEE WOODS - PROJECT AREA 2	SHENANDOAH RIDGE - PROJECT AREA 3
		2021.501	MOBILIZATION	LUMP SUM				
		2104.503	SAWING CONCRETE PAVEMENT - FULL DEPTH	LIN FT	23		23	
		2104.503	SAWING BITUMINOUS PAVEMENT - FULL DEPTH	LIN FT	733	90		643
		2104.503	REMOVE PIPE CULVERT	LIN FT	156	156		
		2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	433	222		211
		2104.504	REMOVE CONCRETE PAVEMENT	SQ YD	18			18
		2211.509	AGGREGATE BASE CLASS 5	TON	132	79	2	51
		2232.604	MILL BITUMINOUS SURFACE (SPECIAL)	SQ YD	7335	3197	4138	
		2232.604	MILL BITUMINOUS SURFACE 1.5"	SQ YD	257	85	38	134
		2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLONS	2313	992	734	587
		2360.504	TYPE SP 9.5 WEARING COURSE MIXTURE (2;B) 2.5" THICK	SQ YD	221	10		211
		2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2;B)	TON	3160	1,370	994	796
		2411.502	CONCRETE FLUME	EACH	2		2	
		2501.502	15" RC PIPE APRON	EACH	2	2		
		2503.503	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	83	83		
		2506.502	CASTING ASSEMBLY	EACH	2	2		
		2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	11	11.1		
		2511.504	GEOTEXTILE FILTER TYPE 7	SQ YD	150	140	10	
		2511.507	RANDOM RIPRAP CLASS III	CU YD	60	50	10	
		2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	12	2		10
		2535.503	BITUMINOUS CURB	LIN FT	383		383	
		2540.618	SALVAGE RETAINING WALL	SQ FT	160	160		
		2563.601	TRAFFIC CONTROL	LUMP SUM				
		2573.502	STORM DRAIN INLET PROTECTION	EACH	2	2		
		2573.503	SILT FENCE; TYPE MS	LIN FT	30		30	
		2574.507	COMMON TOPSOIL BORROW	CU YD	200	60	10	130
		2574.508	FERTILIZER TYPE 1	POUND	150	30	30	90
		2575.504	ROLLED EROSION PREVENTION CATEGORY 25	SQ YD	160			160
		2575.505	SEEDING	ACRE	0.50	0.10	0.1	0.30
		2575.508	HYDRAULIC BONDED FIBER MATRIX	POUND	1750	350	350	1050
		2575.508	SEED, MIXTURE 25-121	POUND	74	15	15	44

STANDARD PLATES	
THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY	
PLATE NO.	DESCRIPTION
3000M	REINFORCED CONCRETE PIPE (6 SHEETS)
3006H	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
3007F	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133D	RIPRAP AT RCP OUTLETS
3145G	CONCRETE PIPE OR PRECAST CULVERT TIES
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS) (2 SHEETS)
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4108F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4149C	GRATE CASTING FOR CATCH BASIN - CASTING NO. 810
4160D	CURB BOX CASTING FOR CATCH BASIN - CASTING NO. 823A AND 833A
4180J	MANHOLE OR CATCH BASIN STEP
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)

BASIS OF ESTIMATED QUANTITIES	
AGGREGATE BASE CLASS 5	100 lbs/yd ² /in
NON WEARING BITUMINOUS COURSE MIXTURE	110 lbs/yd ² /in
WEARING COURSE BITUMINOUS MIXTURE	110 lbs/yd ² /in
BITUMINOUS MATERIAL FOR TACK COAT - NEW ASPHALT	0.06 gal/yd ²
BITUMINOUS MATERIAL FOR TACK COAT - OLD ASPHALT	0.07 gal/yd ²
BITUMINOUS MATERIAL FOR TACK COAT - MILLED ASPHALT	0.08 gal/yd ²
HYDRAULIC FIBER BONDED MATRIX	3500 lbs/acre
SEED MIX 25-121	122 lbs/acre
TYPE 1, COMMERCIAL FERTILIZER	300 lbs/acre

GENERAL CONSTRUCTION NOTES:

1. SALVAGING AND INSTALLING MAILBOXES OR SIGNS IF REQUIRED FOR CONSTRUCTION SHALL BE INCIDENTAL.
2. CONTRACTOR SHALL TAPER/RAMP THE MILL AT ALL MATCH POINTS. ON THE DAY THE PAVEMENT WILL BE CONSTRUCTED AT EACH MATCH POINT THE CONTRACTOR SHALL PROVIDE A STRAIGHT PERPENDICULAR MILL AND REMOVE THE TAPER/RAMP. TAPERING/RAMPING AND PROVIDING A PERPENDICULAR MILL AT ALL MATCH POINTS SHALL BE INCIDENTAL.
3. ALL DISTURBED AREAS AT REMOVAL LOCATIONS AND DRIVEWAYS SHALL BE SEDED, FERTILIZED AND MULCHED WITH HYDRAULIC BONDED FIBER MATRIX AT THE RATES SHOWN ON THE BASIS OF ESTIMATED QUANTITIES. CONTRACTOR SHALL SALVAGE AND REPLACE ALL EXISTING TOPSOIL. REMOVAL AND DISPOSAL OF EXISTING MATERIALS AND SOIL SHALL BE INCIDENTAL. ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO ESTABLISHING TURF SHALL BE INCLUDED IN THE ITEMS PROVIDED ON THE BID FORM. SALVAGING TOPSOIL SHALL BE INCIDENTAL.
4. BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH MN/DOT SPEC. 2104.
5. PERFORMANCE GRADE (PG) ASPHALT BINDER PG 58S-28, SPEC. 3151, SHALL BE USED FOR ALL BITUMINOUS MIXES IN THIS PROJECT, SPECIFIC PG GRADES SHALL BE STATED IN THE SPECIAL PROVISIONS AND AT THE END OF THE MIX DESIGNATION NUMBER SHOWN ON THE TYPICAL SECTION.
6. THE BITUMINOUS MIXTURES SHALL MEET THE REQUIREMENTS OF SPECIFICATIONS 2360 AND 3139.
7. CONTRACTOR SHALL SWEEP STREETS PRIOR TO PLACING THE WEARING COURSE. THIS WORK SHALL BE INCIDENTAL.
8. CONTRACTOR SHALL TAPER THE BITUMINOUS OVERLAYS TO MATCH THE EXISTING BITUMINOUS FLUMES UNLESS SHOWN ON THE PLANS FOR REMOVAL. THIS WORK SHALL BE INCIDENTAL. REMOVAL OF FLUMES SHALL BE PAID PER ITEM 2104 REMOVE BITUMINOUS PAVEMENT.
9. ANY DEWATERING REQUIRED TO COMPLETE THE WORK SHALL BE INCIDENTAL.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL IN LOCATES AND COORDINATE WITH THE SMALL UTILITIES (GAS, PHONE, ELECTRIC, ETC.) AS REQUIRED TO COMPLETE THE WORK.

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.			DESIGNED BY:	DRAWN BY:	CHECKED BY:
			CRAIG J. JOCHUM, P.E.	Lic. No. 23461	CJJ	SGJ	TAE
Date 5/23/22							

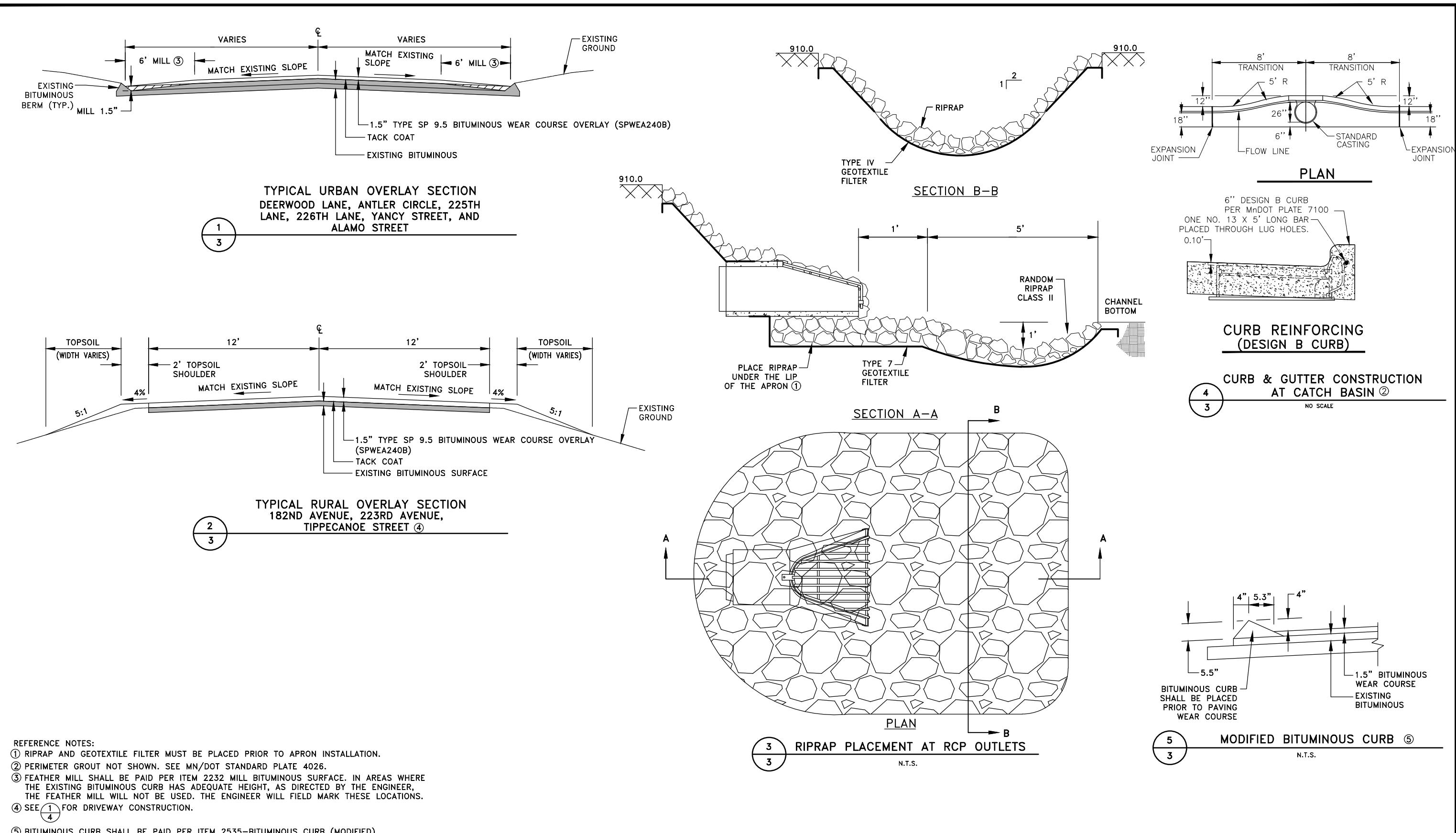


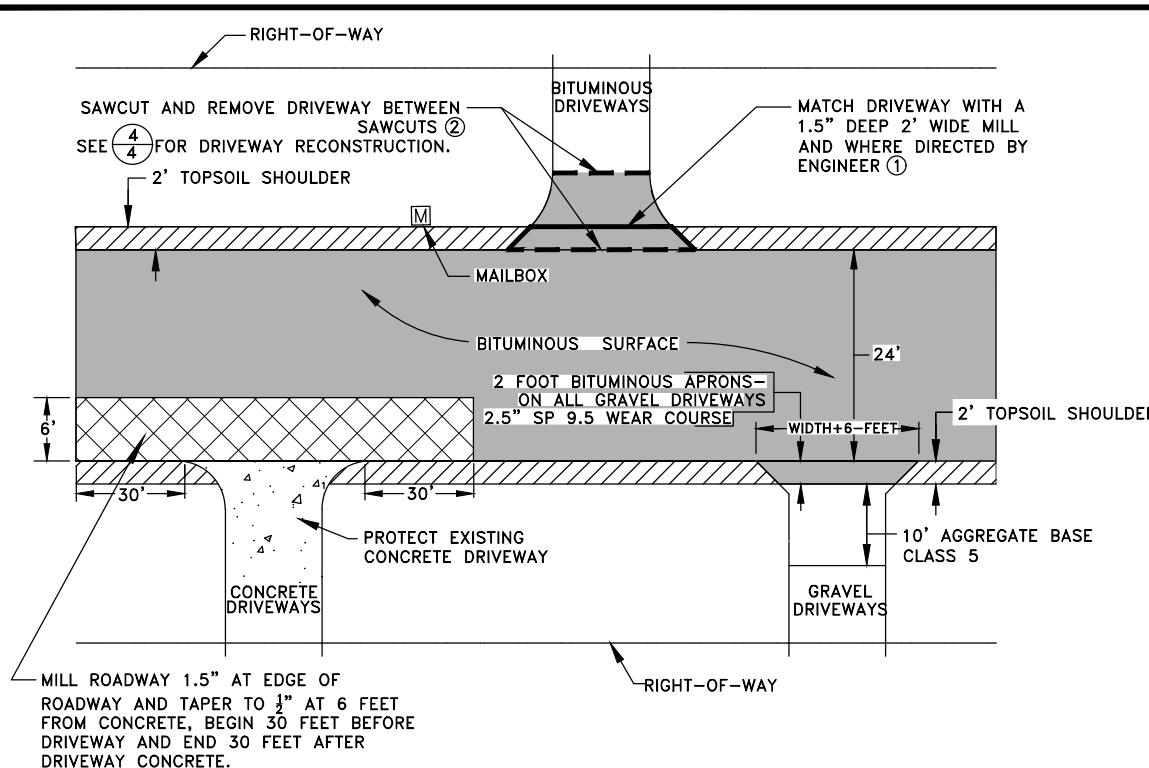
Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT
PROJECT

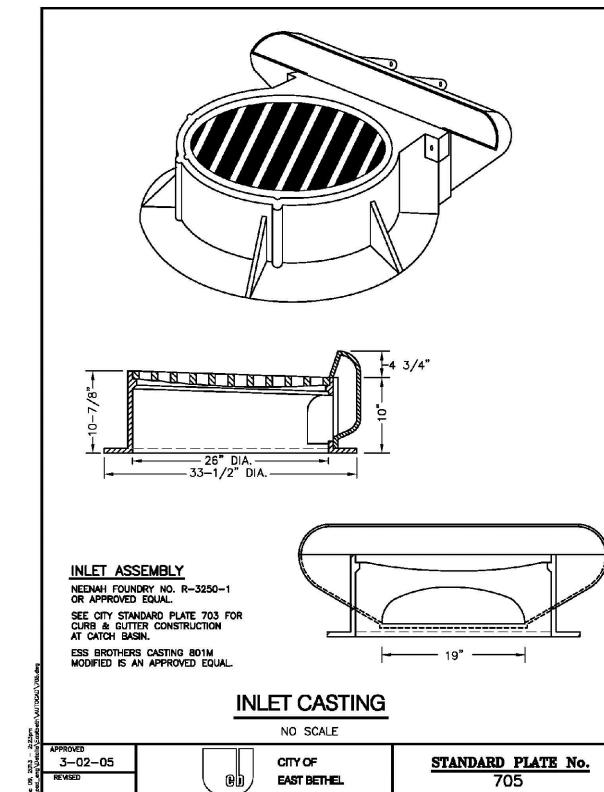
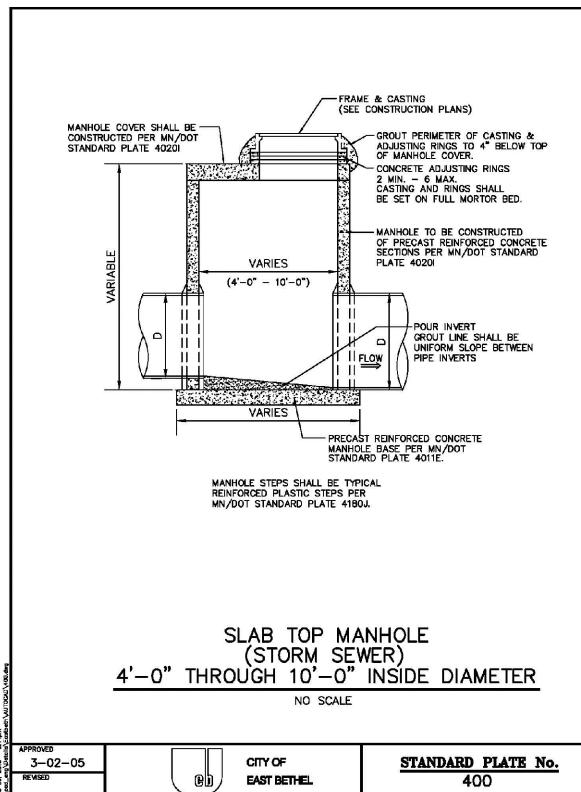
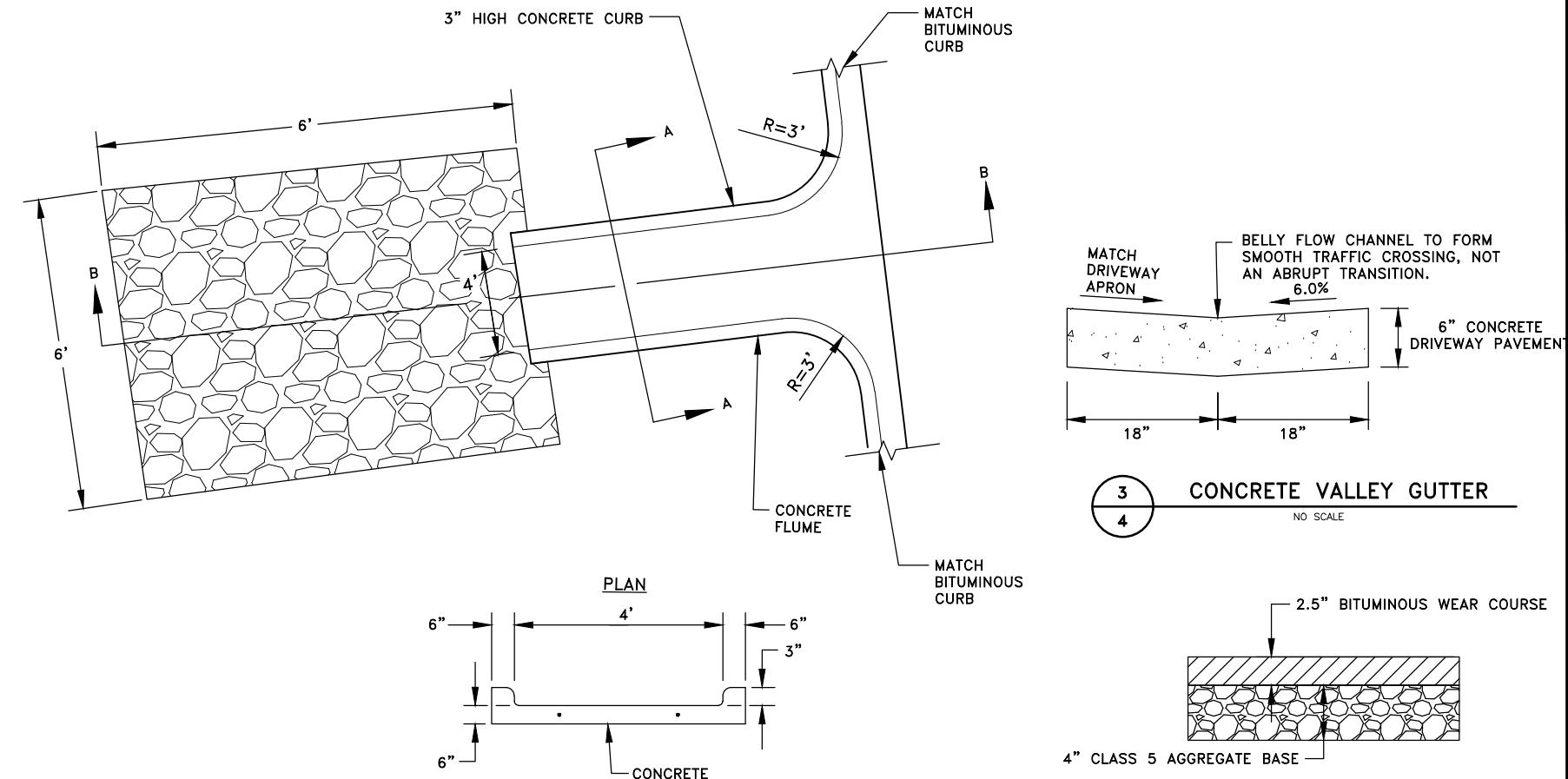
ESTIMATED QUANTITIES, TABULATIONS, AND
CONSTRUCTION NOTES
EAST BETHEL, MINNESOTA

2
19
SHEETS

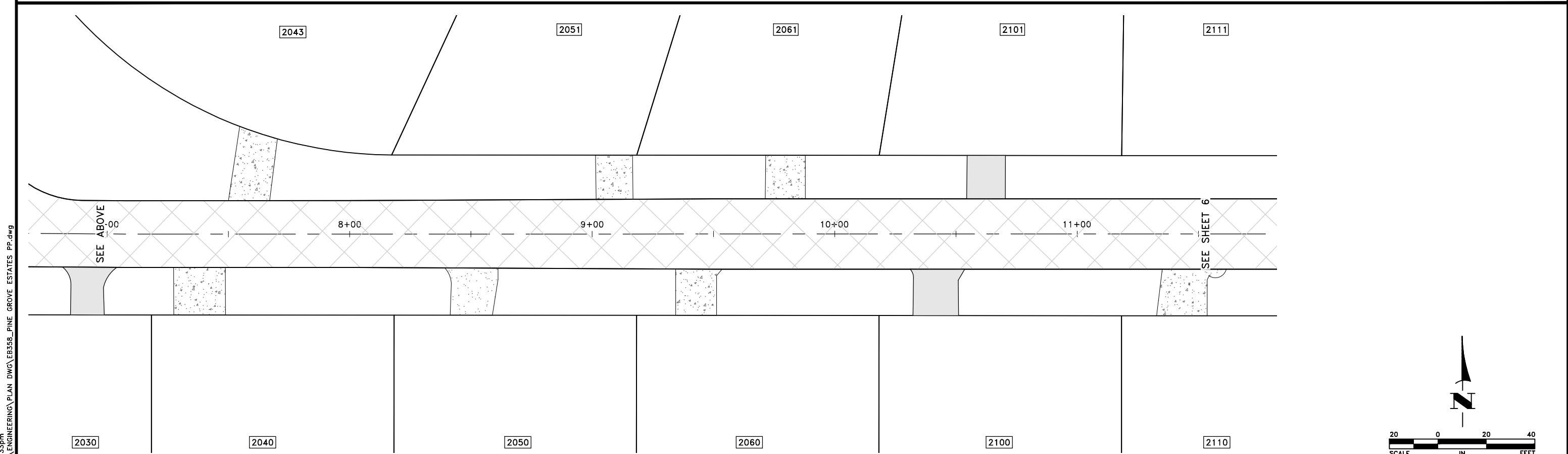
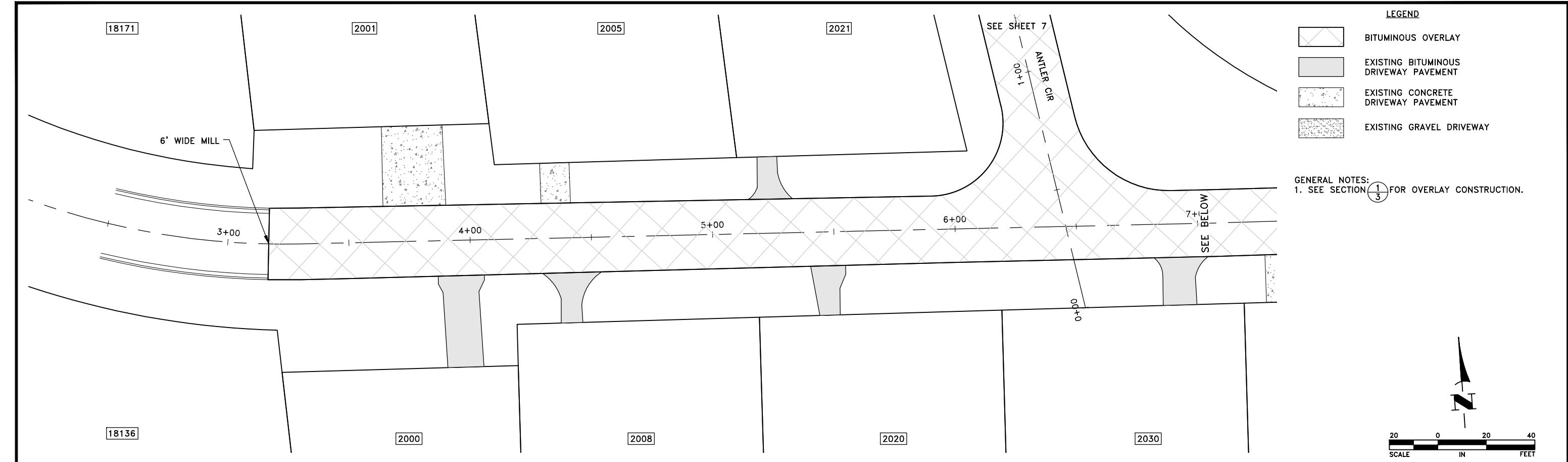




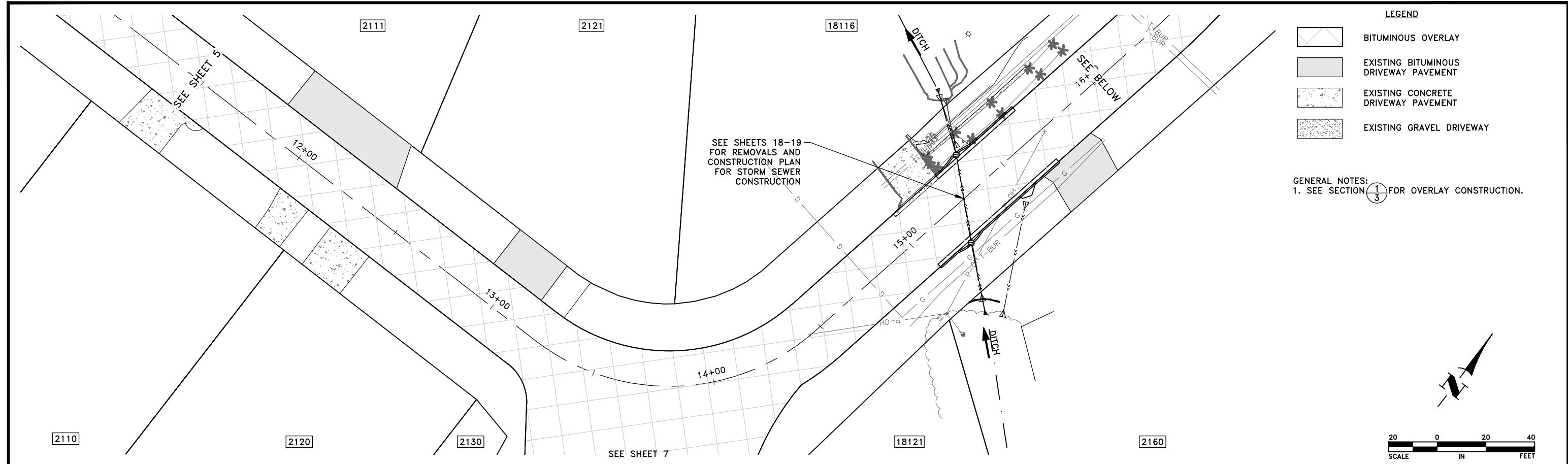
1 TYPICAL OVERLAY DRIVEWAY RURAL SECTION CONSTRUCTION
4 NO SCALE

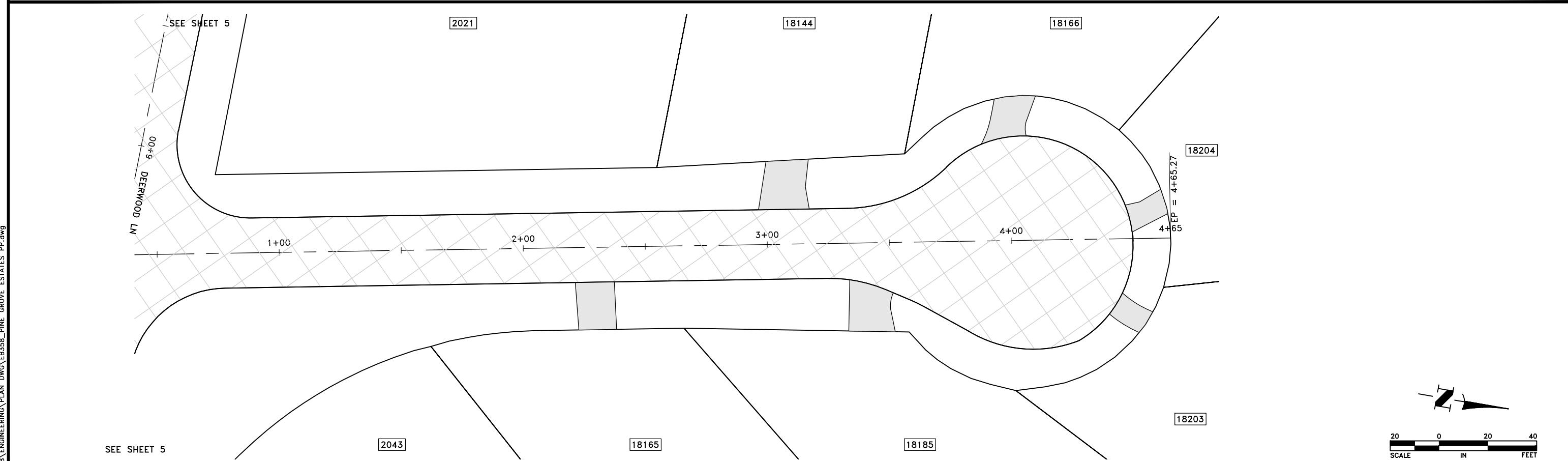
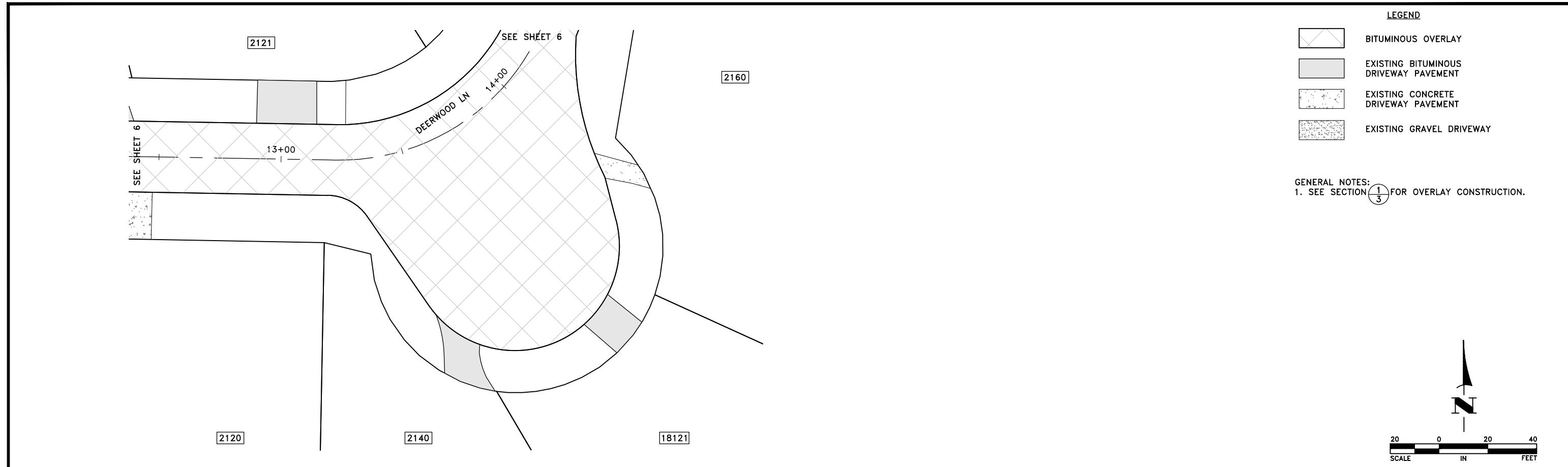


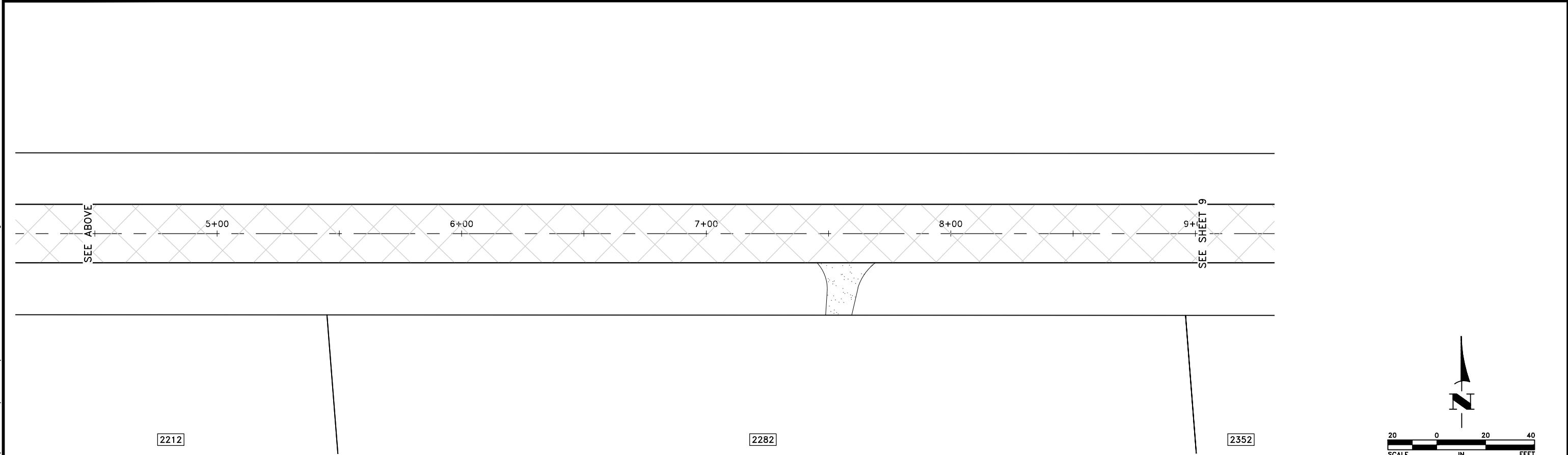
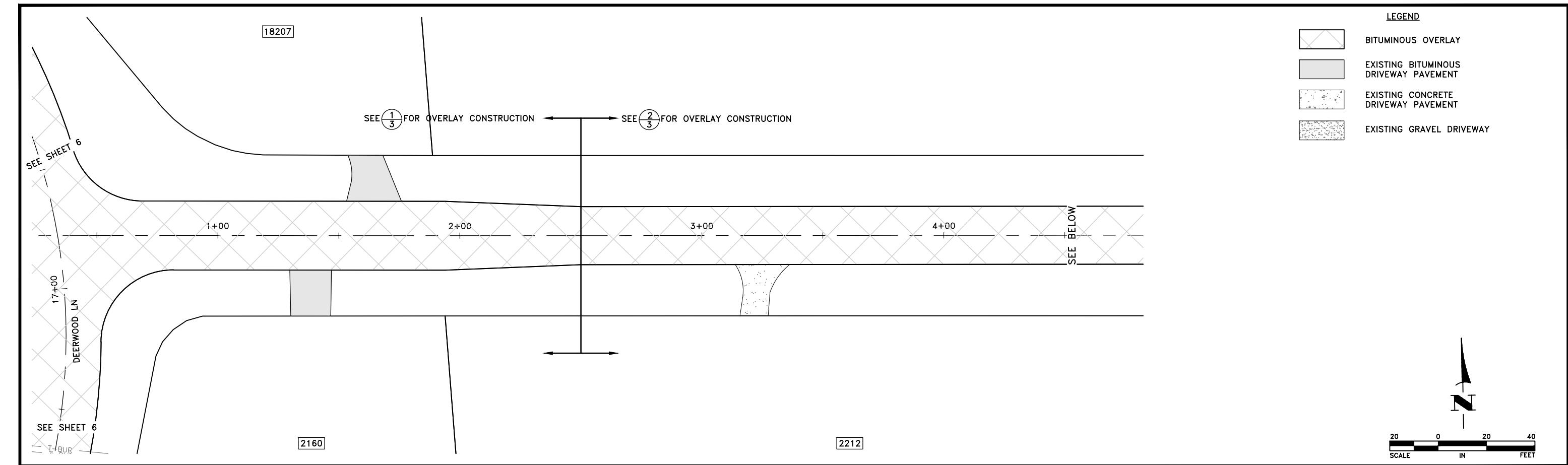
REFERENCE NOTES:
 ① IN THESE LOCATIONS CONTRACTOR WILL BE PAID ITEM 2232 MILL BITUMINOUS SURFACE 1.5". DRIVEWAY SHALL BE PAID WITH THE STREET WEAR COURSE AND WILL BE INCLUDED IN THE TONNAGE FOR THE WEARING COURSE.
 ② IN THESE LOCATIONS THE CONTRACTOR WILL BE PAID FOR THE SAWCUT AND BITUMINOUS REMOVAL.
 ③ REMOVAL AND DISPOSAL OF EXISTING SOIL TO CONSTRUCT PAVEMENT SECTION AS SHOWN SHALL BE INCIDENTAL. THE BITUMINOUS AND CLASS 5 WILL BE PAID PER THE ITEMS ON THE BID FORM.



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.			DESIGNED BY:	Hakanson Anderson		CONSTRUCTION PLANS		SHEET
Jun 03, 2022	2:33pm	CRAIG U. JOCHUM, P.E. Date 5/23/22			SGJ	Civil Engineers and Land Surveyors 3601 Thurston Ave., Anoka, Minnesota 55303 763-427-5860 FAX 763-427-0520 www.hakanson-anderson.com		2022 STREET SURFACE IMPROVEMENT PROJECT		5
		Lic. No. 23461			TAE			DEERWOOD LANE EAST BETHEL, MINNESOTA		19 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.			DESIGNED BY:
					CJJ
					DRAWN BY: SGJ
					CHECKED BY: TAE

CRAIG U. JOCHUM, P.E.
Date 5/23/22
Lic. No. 23461



Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT
PROJECT

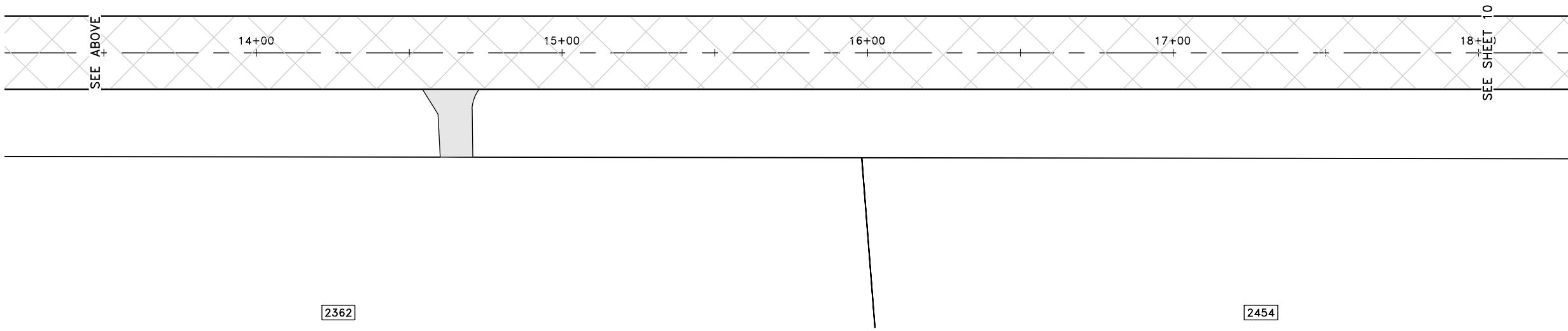
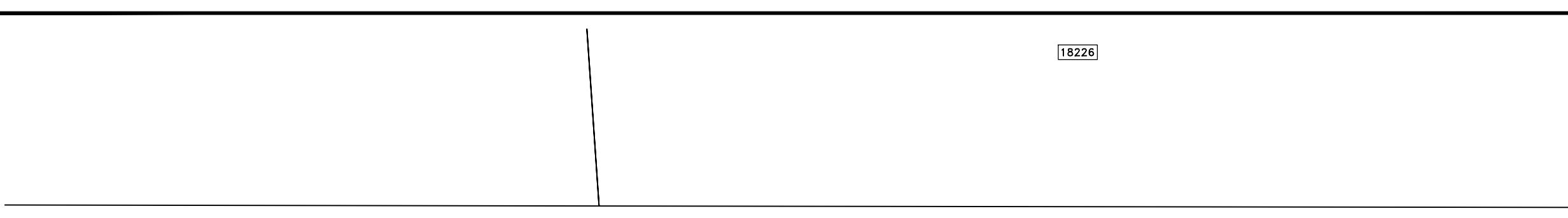
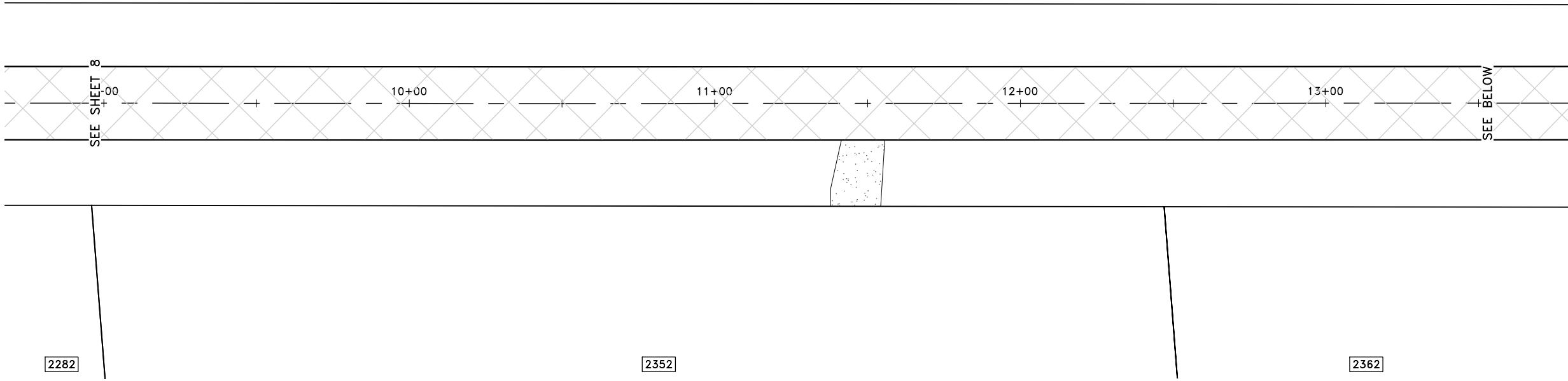
CONSTRUCTION PLANS
182ND AVENUE
EAST BETHEL, MINNESOTA

SHEET
8
OF
19
SHEETS

LEGEND

	BITUMINOUS OVERLAY
	EXISTING BITUMINOUS DRIVEWAY PAVEMENT
	EXISTING CONCRETE DRIVEWAY PAVEMENT
	EXISTING GRAVEL DRIVEWAY

GENERAL NOTES:
1. SEE SECTION 2 FOR OVERLAY CONSTRUCTION.



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.			DESIGNED BY:
				CRAIG U. JOCHUM, P.E. Date 5/23/22	CJJ
				Lic. No. 23461	DRAWN BY: SGJ
					CHECKED BY: TAE

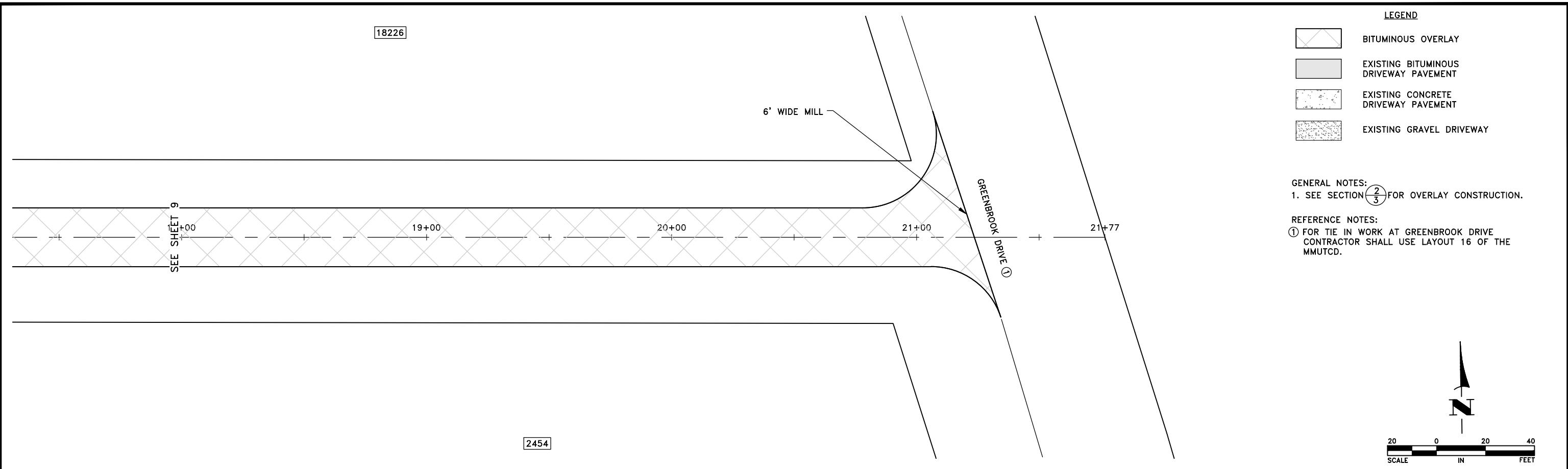


Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT
PROJECT

CONSTRUCTION PLANS
182ND AVENUE
EAST BETHEL, MINNESOTA

SHEET
9
OF
19
SHEETS

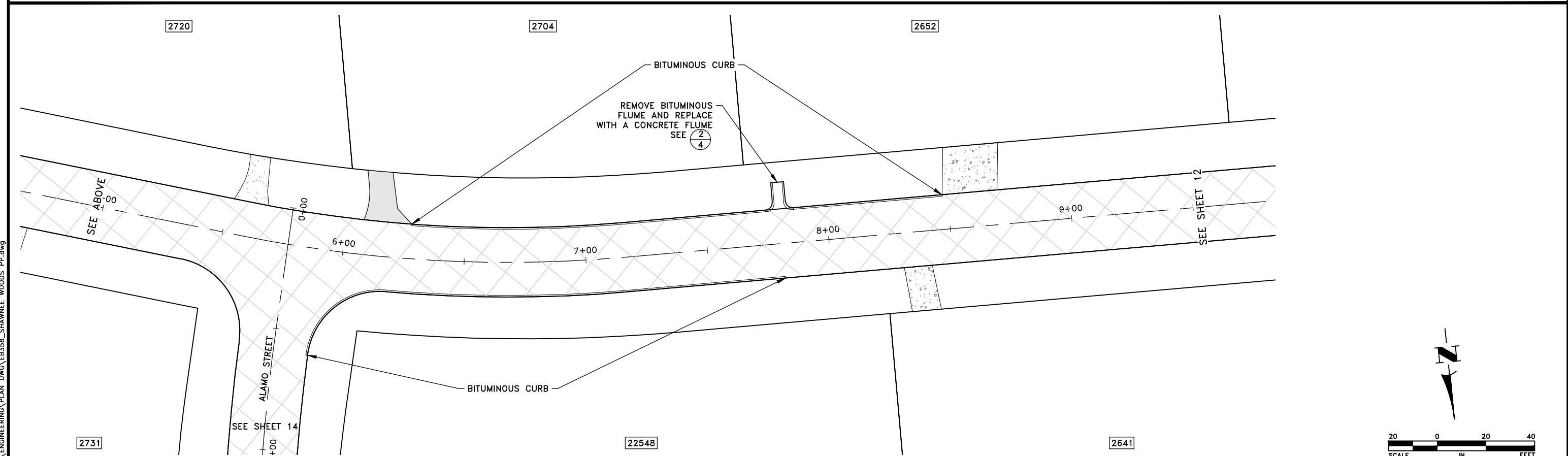
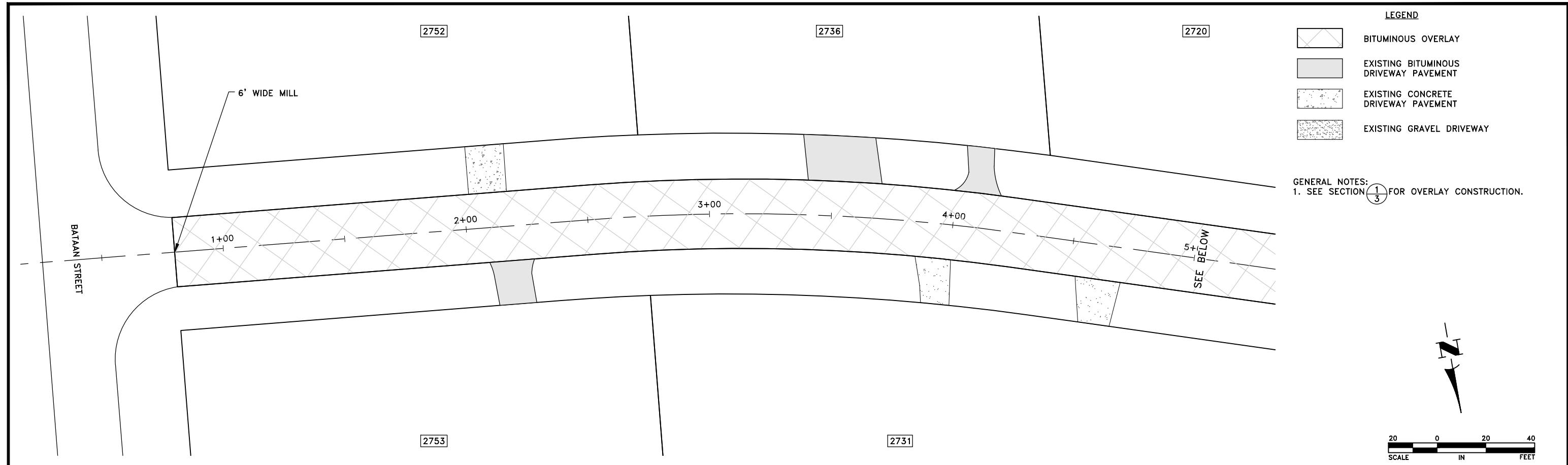


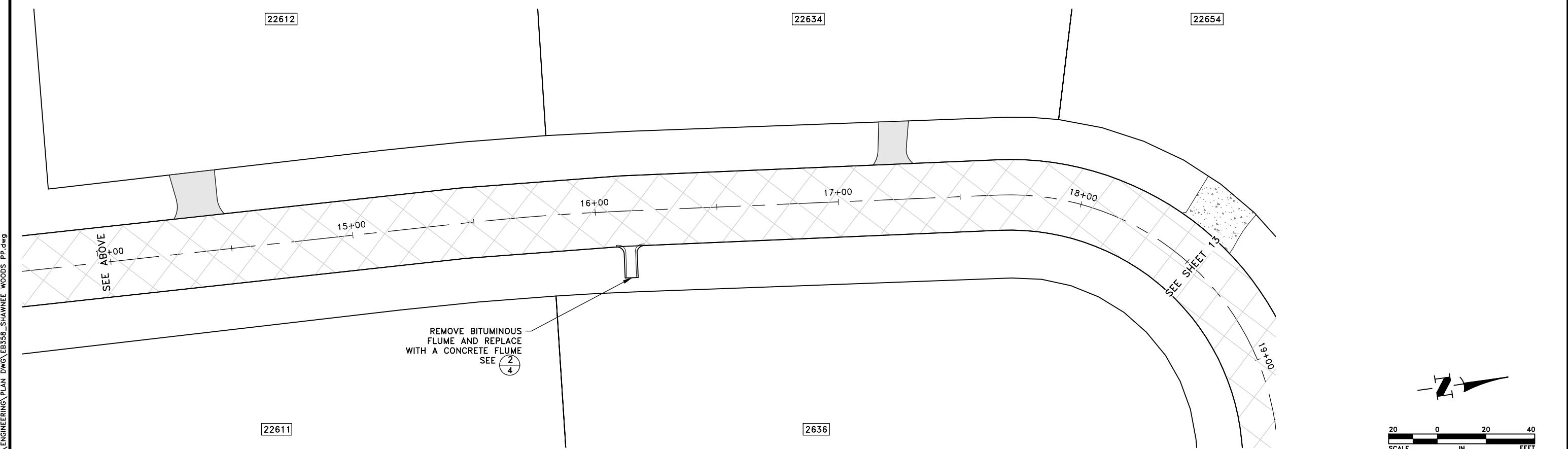
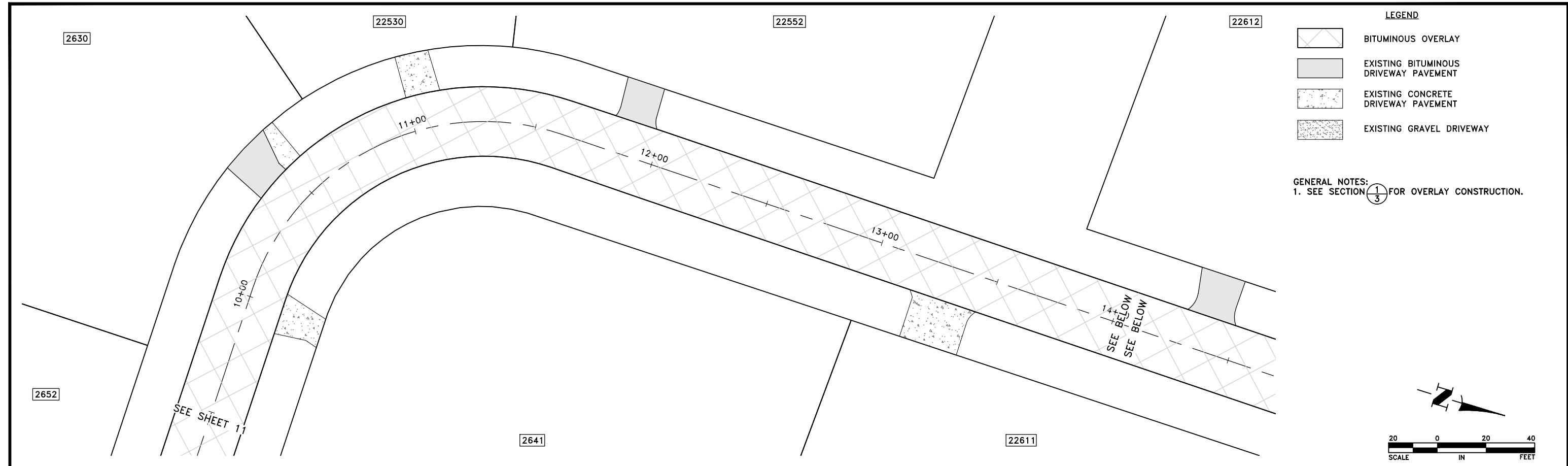
Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

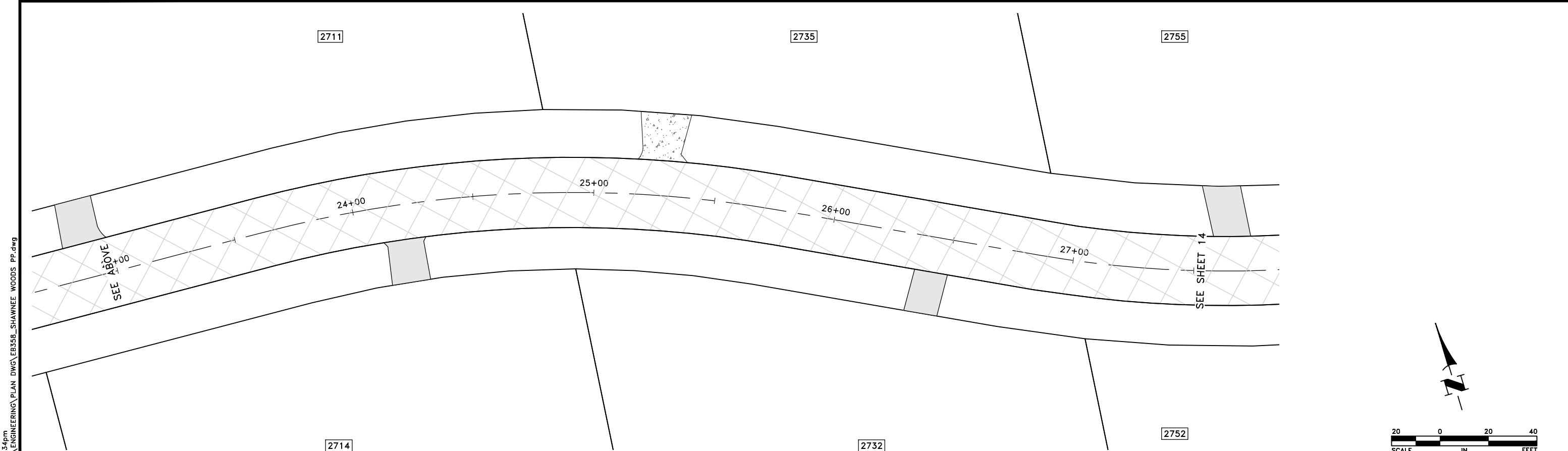
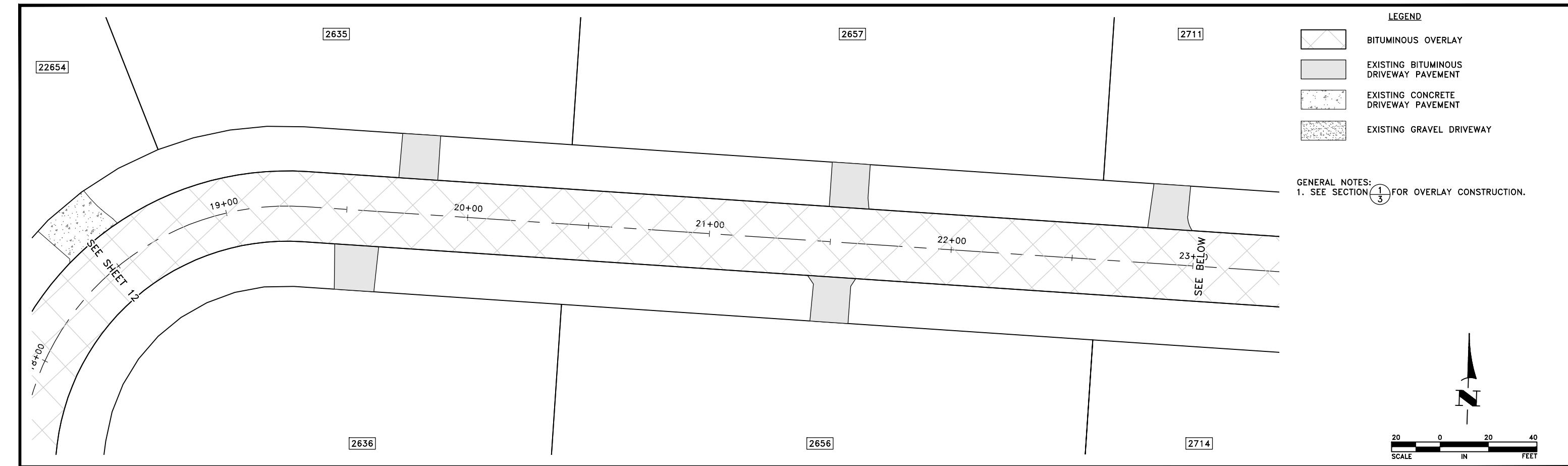
2022 STREET SURFACE IMPROVEMENT PROJECT

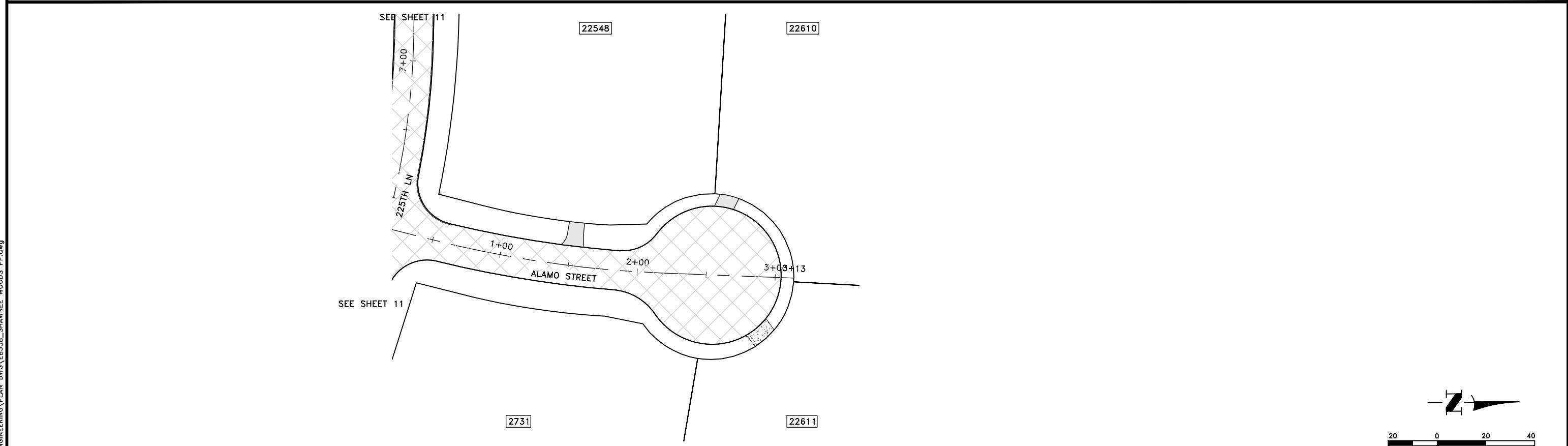
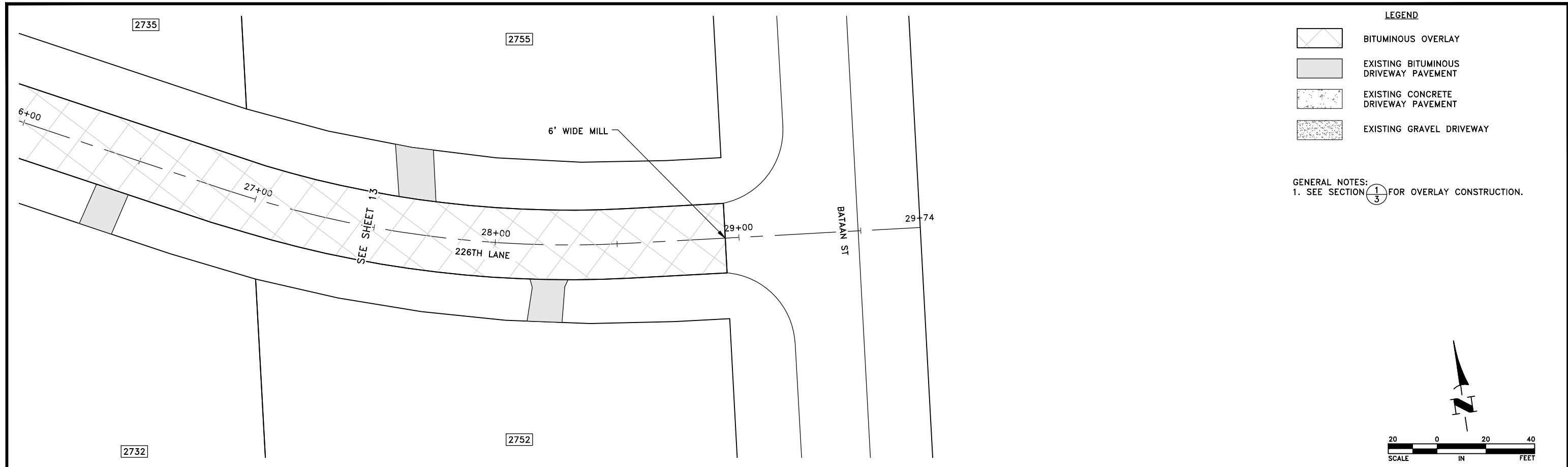
CONSTRUCTION PLANS
182ND AVENUE
EAST BETHEL, MINNESOTA

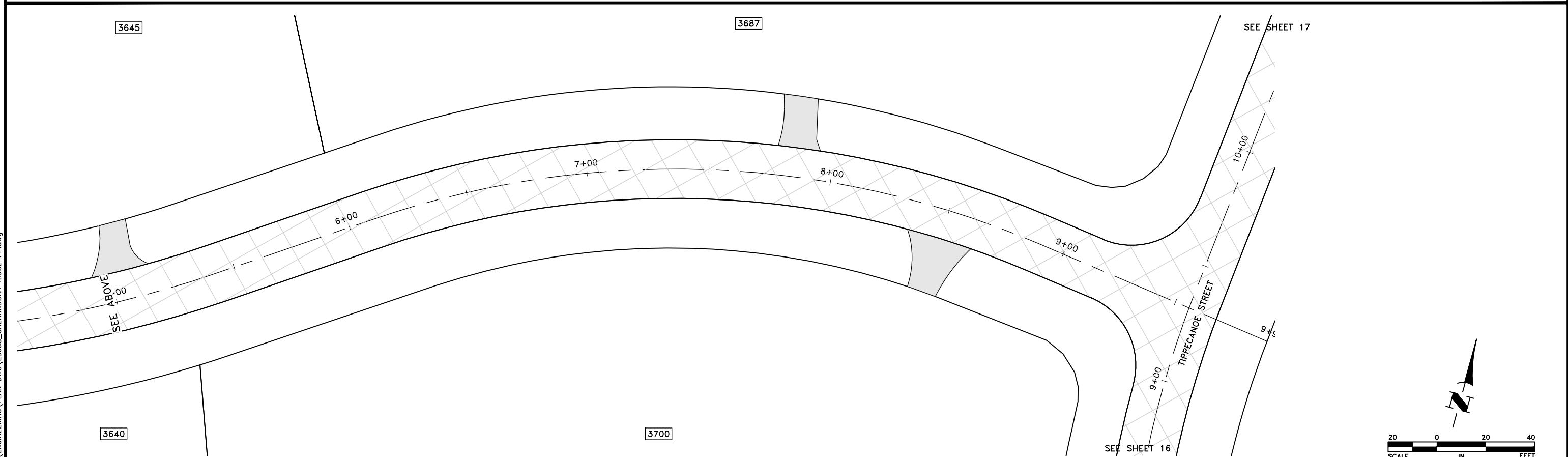
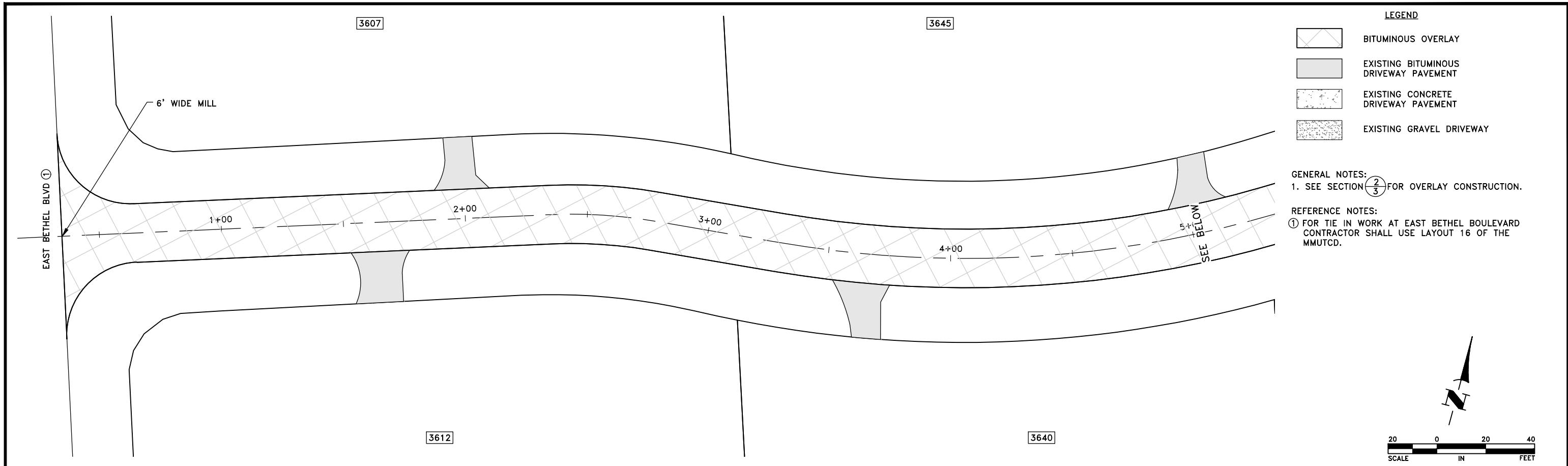
SHEET
10
OF
19
SHEETS











DATE	REVISION	
6/3/22	ADDENDUM NO. 1 ADD REF NOTE 1	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.
		
		CRAIG J. JOCHUM, P.E.
	Date 5/23/22	Lic. No. 2346

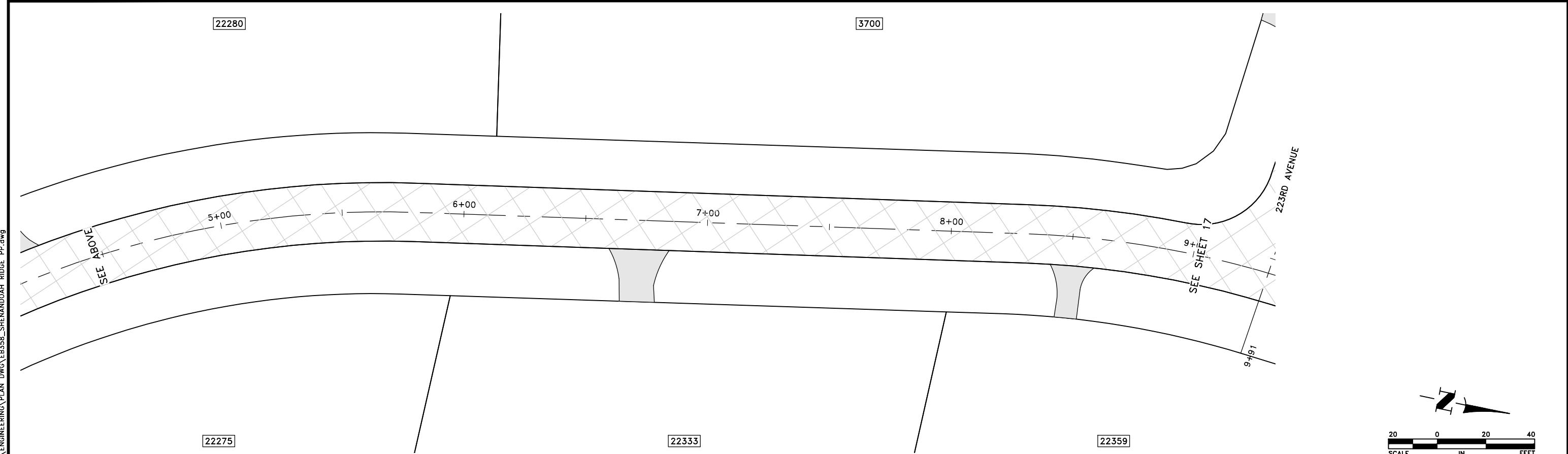
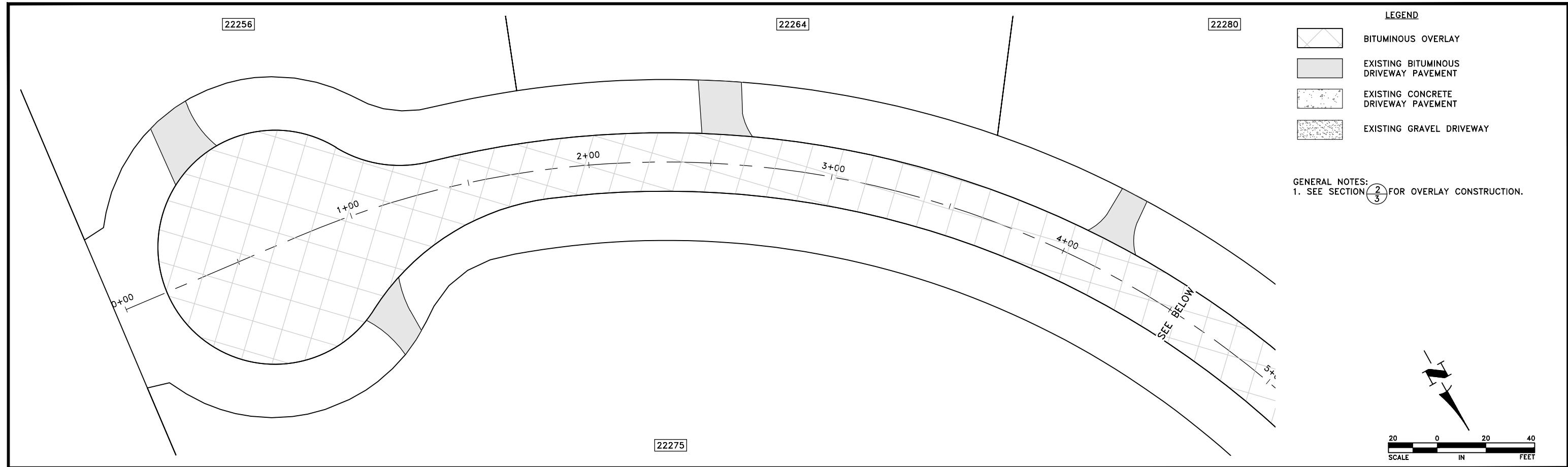


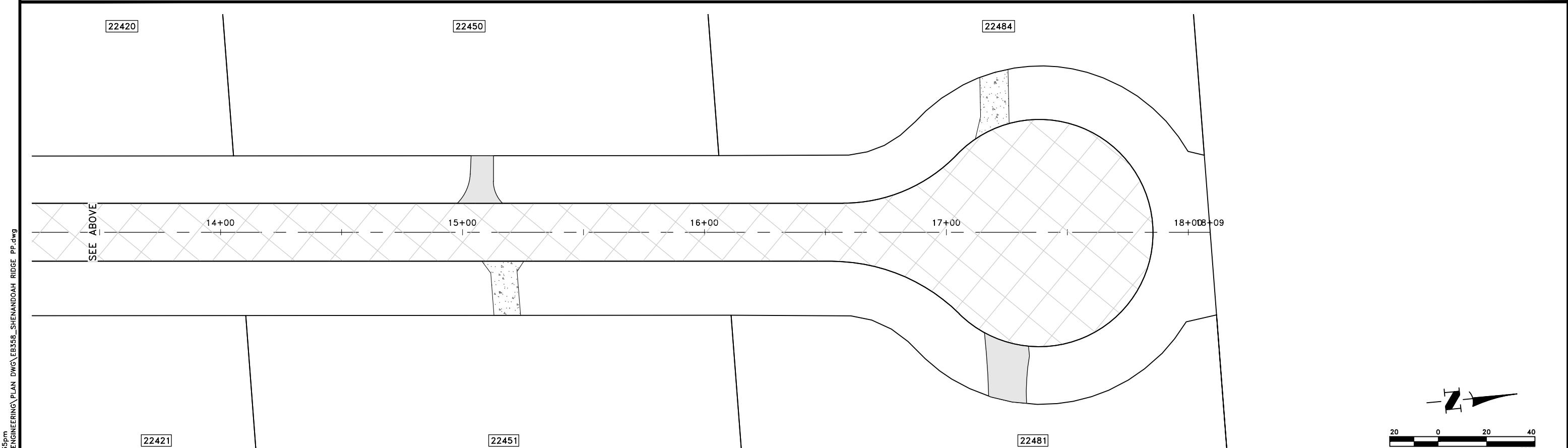
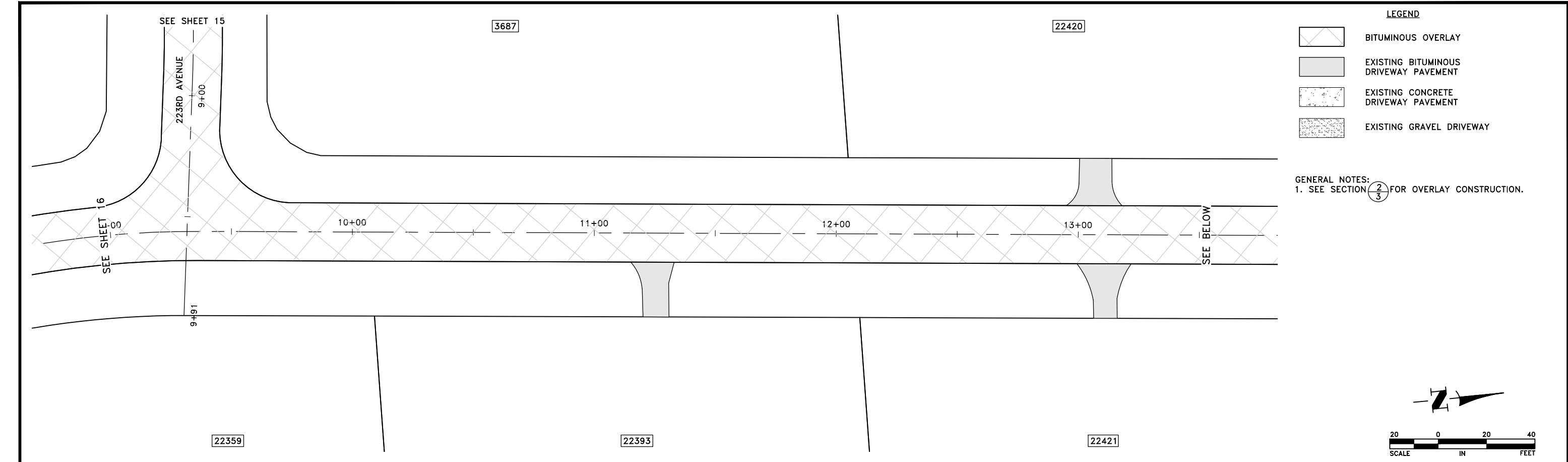
Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

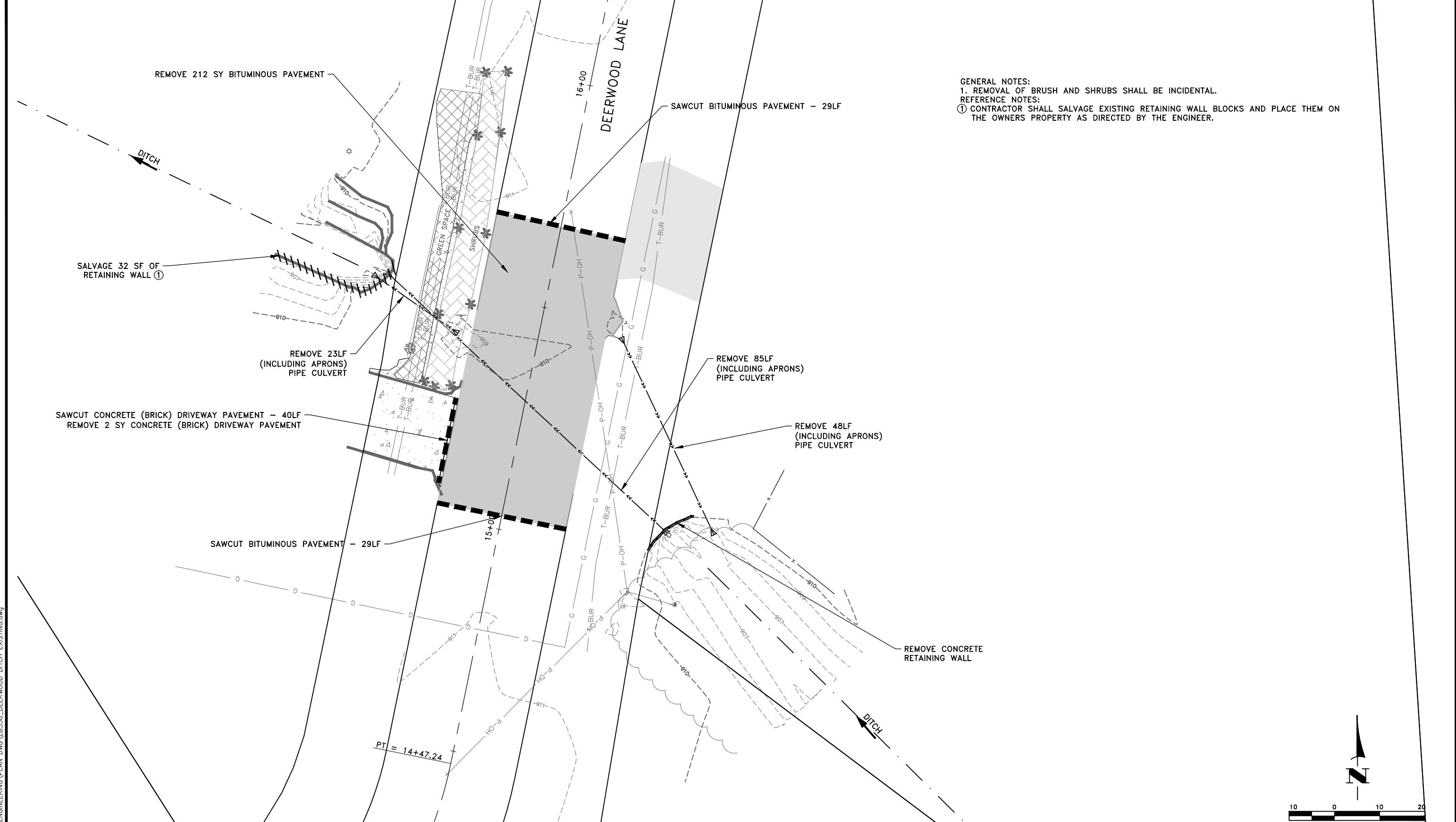
2022 STREET SURFACE IMPROVEMENT PROJECT

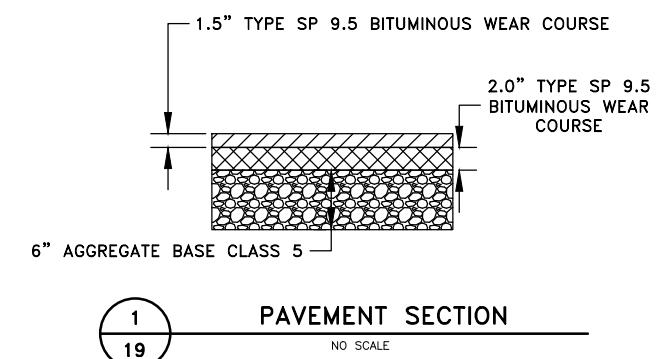
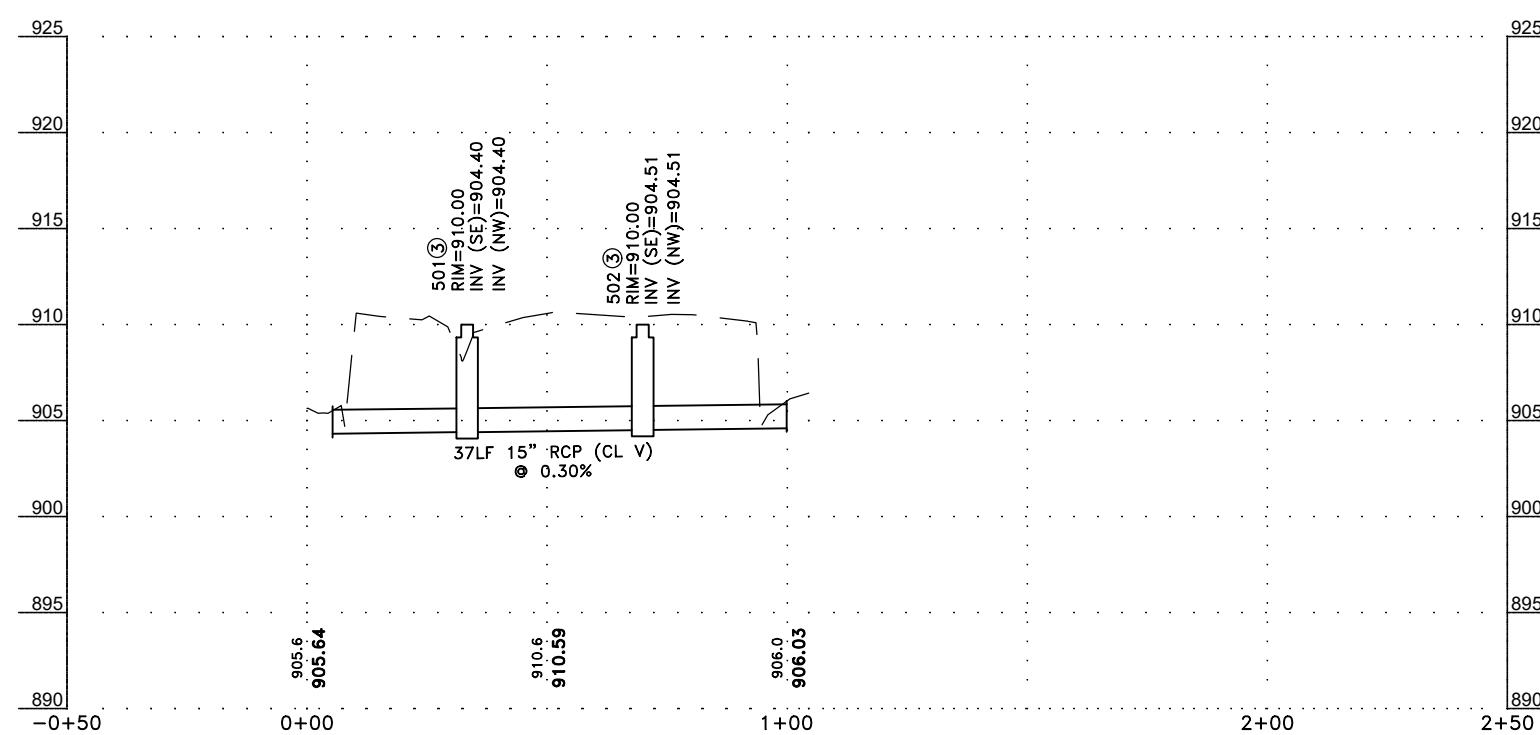
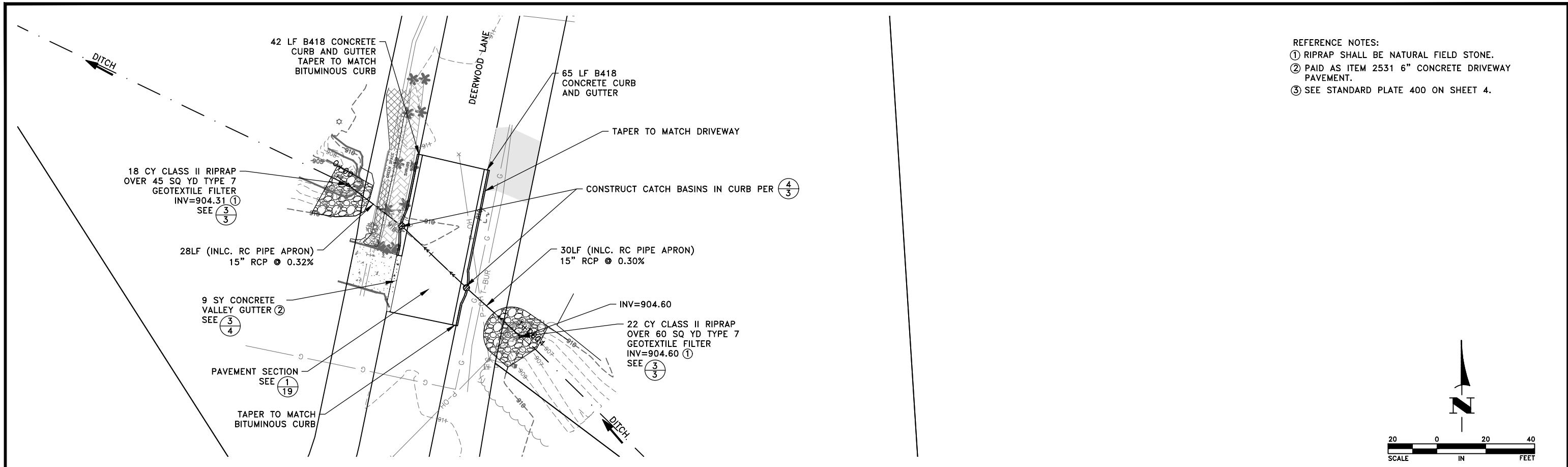
CONSTRUCTION PLANS
223RD AVENUE
EAST BETHEL, MINNESOTA

SHEET
15
OF
19
SHEETS









DATE	REVISION	I hereby certify that this plan, specification, or report prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
6/3/22	ADDENDUM NO. 1 ADDED UTILITIES	 CRAIG J. JOCHUM, P.E. Date 5/23/22



Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55301
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT PROJECT

DEERWOOD LANE STORM SEWER
CONSTRUCTION PLAN

SHEET
19
OF
19
SHEETS