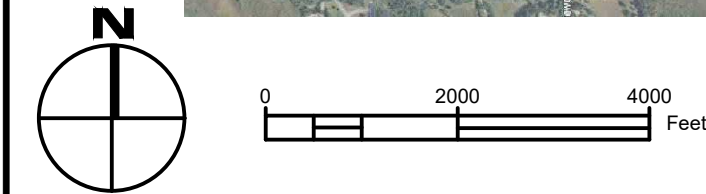




CONSTRUCTION PLANS FOR
DELLWOOD COUNTRY ESTATES
LINWOOD TOWNSHIP, ANOKA COUNTY, MN
AUGUST 2023



VICINITY MAP

PROJECT TITLE

CONTACTS

INDEX

NOTES

OWNER:

Dellwood Const. LTD
617 E. Main St., Ste #5
Anoka, MN 55303
Attn: Lee Hennen
Ph: 612.387.4131
dcltd1001@outlook.com

TOWNSHIP:

Linwood Township
22817 Typo Creek Drive
Stacy, MN 55079
Ph: 651.462.2812

TOWNSHIP ENGINEER:

Craig Jochum, PE (Hakanson-Anderson)
Ph: 763.427.5860
craigj@haa-inc.com

SURVEY:

Acre Land Surveying, Inc.
9140 Baltimore St NE Ste 100
Blaine, MN 55449
Attn: Lyle Reynolds, PS
Ph: 763.439.2702
lr.acrelandsurvey@gmail.com

COUNTY:

Anoka County Highway Dept.
1440 Bunker Hill Blvd NW
Andover, MN 55304
763.324.3100

CIVIL:

Civil Methods, Inc.
PO Box 28038
St. Paul, MN 55128
Attn: Dave Poggi, PE
Ph: 763.210.5713
dave.poggi@civilmethods.com

SHEET NO.	DESCRIPTION
C001	COVER SHEET
S101	EXISTING CONDITIONS
S102	PRELIMINARY PLAT
S103	LIVABILITY / DEVELOPMENT PLAN
C401	STREET PLAN & PROFILE - WILLYS ST
C402	STREET PLAN & PROFILE - WILLYS ST
C403	STREET PLAN & PROFILE - UNSER ST
C404	TURN LANES
C405-C407	STREET CROSS SECTIONS
C500	GRADING & DRAINAGE - COMPOSITE
C501	GRADING & DRAINAGE - SOUTHEAST
C502	GRADING & DRAINAGE - NORTH
C503	GRADING & DRAINAGE - SOUTHWEST
C601	EROSION & SEDIMENT CONTROL - SOUTHEAST
C602	EROSION & SEDIMENT CONTROL - NORTH
C603	EROSION & SEDIMENT CONTROL - SOUTHWEST
C604	SWPPP
C701-C707	DETAILS
C708	NOTES
T100	TEMPORARY TRAFFIC CONTROL PLAN

THE EXISTING UTILITY INFORMATION SHOWN IN THIS PLAN HAS BEEN SURVEYED BY OTHERS; THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY 811 OR GOPHER STATE ONE CALL (1.800.252.1166).

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 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

PLAN REFERENCES:

- LINWOOD TOWNSHIP AND ANOKA COUNTY STANDARDS
- MINNESOTA DEPT. OF TRANSPORTATION - STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION.
- UNREINFORCED CONCRETE PER ACI 330R-08 AND ACI 330.1-03.

APPROVED FOR COUNTY TURN LANE ITEMS ONLY

ANOKA COUNTY ENGINEER

DATE

LEGEND:

PROPERTY LINE	CURB & GUTTER	STORMWATER POND
SB SETBACK	STORM SEWER / CULVERT	ROCK RIPRAP, RANDOM CRUSHED
EASEMENT	DRAINTILE	EROSION CONTROL BLANKET
WETLAND	SANITARY SEWER	TURF REINFORCEMENT MAT
CONTOUR	WATERMAIN	GEOGRID OR ARTICULATED CONCRETE
SPOT ELEVATION	CLEANOUT	STABILIZED CONST. ENTRANCE
DRAINAGE DIRECTION	SANITARY MANHOLE	SF SILT FENCE
BITUMINOUS SURFACE	WETLAND BUFFER	SEDIMENT CONTROL LOG
BITUMINOUS SURFACE, HEAVY	BIORETENTION / INFILTRATION BASIN	INLET PROTECTION
CONCRETE SURFACE	TREE LINE	FENCE
		RETAINING WALL

CIVIL METHODS, INC.

P.O. Box 28038
St. Paul, MN 55128
o: 763.210.5713 | www.civilmethods.com

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.

DAVID M. POGGI

DATE: 08-31-2023

LIC. NO.: 44573

DESIGNED: DMP

DRAWN: DMP

CHECKED: KEB

DATE / REVISION:

03-06-2023 Preliminary Review Set. NOT FOR CONSTRUCTION
05-11-2023 Revised per Township review.
06-22-2023 Revised per Township & ACHD review.
07-18-2023 Revised per Township & ACHD review (revised sign requirements).
07-19-2023 Revised street section detail.
08-16-2023 Revised cover sheet.
08-31-2023 Added County sig line to Cover & striping and signage detail sheets.

DELLWOOD CONST. LTD

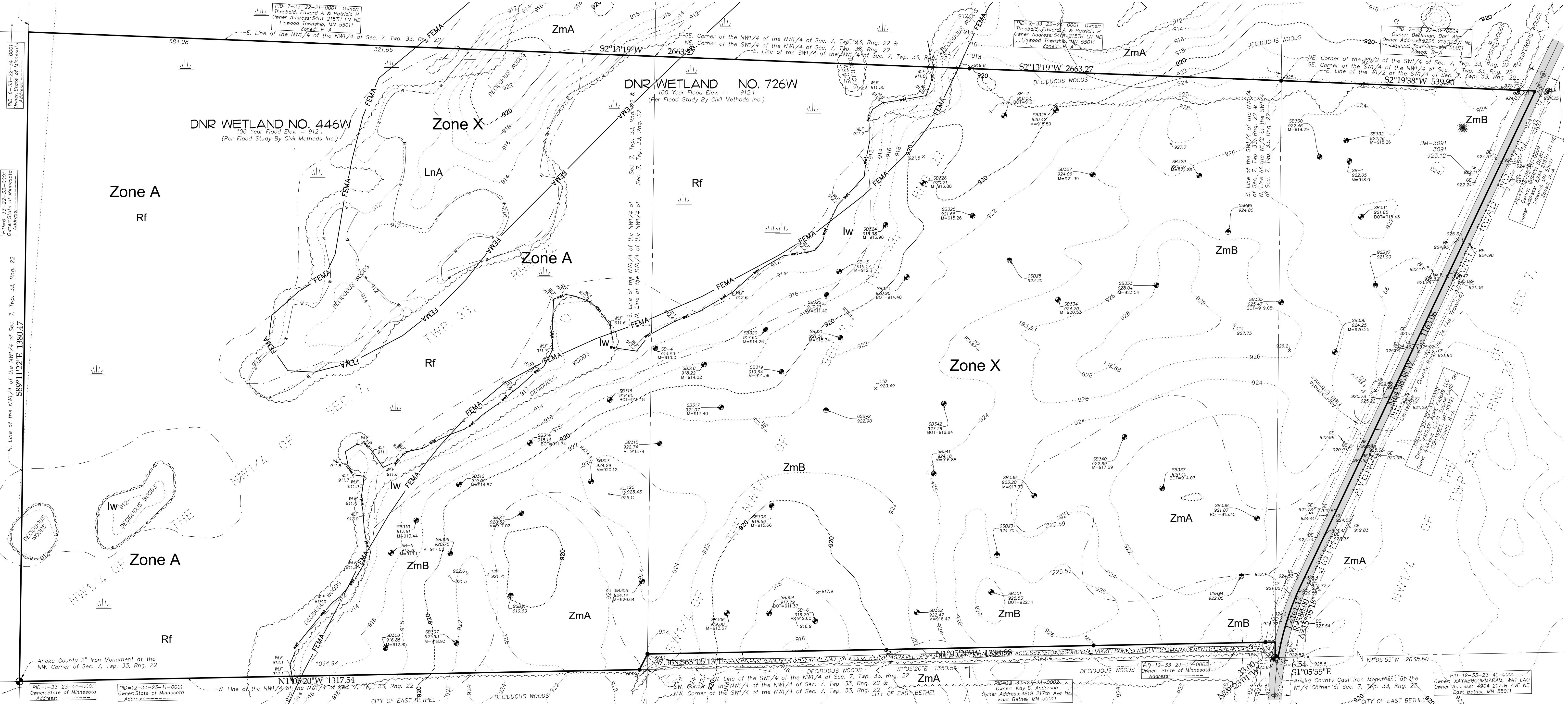
DELLWOOD COUNTRY ESTATES
LINWOOD TOWNSHIP, MN

COVER

SHEET NO:

C001





NOTES

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JOB #21841SP

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

Lytle C. Reynolds
LYLE C. REYNOLDS

Date: 3/08/23 Reg. No. 13072

EXISTING LEGAL DESCRIPTION

The Northwest Quarter of the Northwest Quarter (NW ¼ of NW ¼) and the Southwest Quarter of the Northwest Quarter (SW ¼ of NW ¼) of Section Seven (7), Township Thirty-three (33), Range Twenty-two (22); EXCEPTING THEREFROM the following described tract:

Beginning at a point on the west line of Section Seven (7), Township Thirty-three (33), Range Twenty-two (22) which said point is 16 ½ feet north of the southwest corner of the NW ¼ of NW ¼ of Section 7, thence from said point of beginning south-easterly to a point on the north line of the SW ¼ of NW ¼ of said Section 7, which said point is 33 feet east from the southwest corner of the NW ¼ of NW ¼ of said Section 7, and thence south parallel with the west line of said Section 7 to the south line of the Southwest Quarter of Northwest Quarter (SW ¼ of NW ¼) of said Section Seven (7), thence west to the west line of said Section Seven (7); thence North along the west line of said Section Seven (7) to the point of beginning.

AND

All that part of the West Half of the Southwest Quarter (W ½ of SW ¼) of Section 7, Township 33, Range 22, Anoka County, Minnesota, lying north of the centerline of Anoka County Road Number 74.

Subject to easements, restrictions, or reservations of record, if any.

AND

Subject to a 10 foot wide, non-exclusive, easement for drainage and utility purposes over, under, and across that part of the Subject Parcel, described below, which lies within 10 feet of the outside boundary of said parcel, as measured at right angles to said outside boundary.

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SOIL TYPE LEGEND

- Iw: Isanti fine sandy loam - (6.951 Acres)
- LnA: Lino Loamy fine sand 0% - 4% slopes - (6.185 Acres)
- Rf: Rife mucky peat - (27.926 Acres)
- ZmA: Zimmerman fine sand, 0% - 2% slopes - (6.351 Acres)
- ZmB: Zimmerman fine sand, 2% - 6% slopes - (39.673 Acres)

FEE OWNERS & Developers: Lee A. and Verna F. Hennen
Dellwood Const., LTD.
617 E. Main Street
Anoka, MN 55303
763-427-5100
dcltd1001@outlook.com

SURVEYOR: ACRE LAND SURVEYING, INC.
26450 RUM RIVER DRIVE NW.
ISANTI, MN 55040
Lyle. Reynolds, LS
(763) 439-2702 CELL
lr.acrelandsurvey@gmail.com

DRAWN BY:	LCR	JOB NO:	21841PP	DATE:	3-08-23
CHECK BY:	LCR	SCANNED	☐		
1	5/17/23	Revise per City Engineer Comments		LCR	
2	6/23/23	Revise per City Engineer Comments		LCR	
3					
4					
5					
NO.	DATE	DESCRIPTION		BY	

LEGEND

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- DENOTES IRON MONUMENT FOUND
- DENOTES IRON MONUMENT SET
- DENOTES BITUMINOUS SURFACE
- DENOTES GRAVEL
- DENOTES FENCE LINE
- DENOTES SOIL BORING BY MARK TRADEWELL
- DENOTES SURFACE ELEVATION
- DENOTES MOTTLED SOIL ELEVATION
- DENOTES BOTTOM OF BORING ELEVATION
- DENOTES WETLAND LINE BASED ON WETLAND REPORT BY EARTH SCIENCE ASSOCIATES.
- DENOTES WETLAND LINE NOT DELINEATED ON THE GROUND.
- DENOTES BUILDING SETBACK LINE
- DENOTES EXISTING CONTOURS BASED ON MN-TOPO LIDAR DATA AND ON SITE SPOT SHOTS AS NOTED.
- DENOTES WETLAND
- DENOTES SOIL TYPE BOUNDARIES BASED ON SOILS MAP FROM USDA-NRCS
- DENOTES ADJACENT PARCEL OWNER INFORMATION (PER ANOKA COUNTY TAX INFORMATION)
- DENOTES EXISTING TREE CANOPY BASED ON ANOKA COUNTY GIS PHOTO OVERLAY

NORTH

GRAPHIC SCALE



(IN FEET)

1 inch = 100 ft.

EXISTING CONDITIONS
DELLWOOD COUNTRY ESTATES

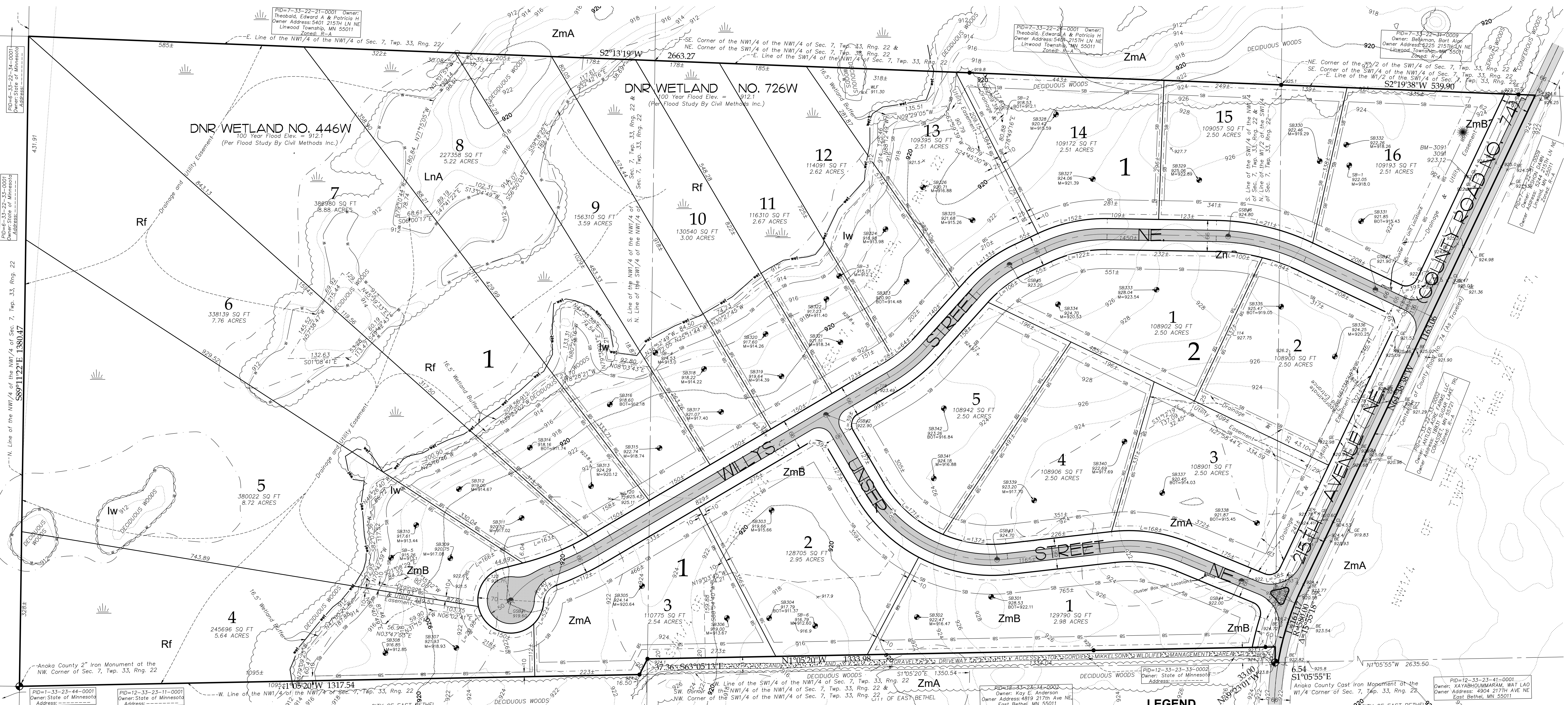
S101

PRELIMINARY PLAT

of: DELLWOOD COUNTRY ESTATES

For: DELLWOOD CONST. LTD

Property Address: 50XX 215TH AVENUE NE, LINWOOD, MN 55011



NOTES

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JOB #21841SP

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Lyle C. Reynolds

LYLE C. REYNOLDS

Date: 3/08/23 Reg. No. 13072

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DEVELOPMENT DATA

TOTAL PROJECT AREA:	86.039 ACRES
TOTAL NUMBER OF PROPOSED LOTS:	21
NUMBER OF OUTLOTS:	0
NUMBER OF PARKS:	0
MINIMUM PROPOSED LOT SIZE:	2,500 ACRES
AVERAGE LOT SIZE PROPOSED:	3,766 ACRES
PUBLIC RIGHT-OF-WAY:	6,961 ACRES
EXISTING AND PROPOSED ZONING:	R-1 (Single Family Residential)
LENGTH OF ROAD CL: 3445±	
CUL-DE-SAC LENGTH: 829±	

FEE OWNERS & Developers: Lee A. and Verna F. Hennen
Dellwood Const., LTD.
617 E. Main Street
Anoka, MN 55303
763-427-5100
dold1001@outlook.com

Phone: _____
Email: _____

SURVEYOR: ACRE LAND SURVEYING, INC.
26450 Rum River Drive NW.
ISANTI, MN 55040
Lyle, Reynolds, LS
(763) 439-2702 CELL
lr.acrelandsurvey@gmail.com

Phone: _____
Email: _____

DRAWN BY: LCR **JOB NO:** 21841PP **DATE:** 3-08-23

CHECK BY: LCR **SCANNED** ☐

1	4/14/23	Add Cluster Unit Box Locations±	LCR
2	5/17/23	Revise per City Engineer Comments	LCR
3	6/23/23	Revise per City Engineer Comments	LCR
4	7/08/23	Revise per City Engineer Comments	LCR
5			
NO.	DATE	DESCRIPTION	BY

R-1 BUILDING SETBACKS

COUNTY ROAD R/W:	40 FEET
FRONT:	40 FEET
REAR:	30 FEET
SIDE:	10 FEET
SIDE CORNER:	20 FEET

LEGEND

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- DENOTES "RIGHT OF ACCESS" DEDICATED TO ANOKA COUNTY.
- DENOTES EXISTING TREE CANOPY BASED ON ANOKA COUNTY GIS PHOTO OVERLAY

R-1 LOT STANDARDS

MINIMUM LOT SIZE:	2.5 ACRES
MINIMUM ROAD FRONTAGE:	150 FEET
MINIMUM LOT WIDTH:	150 FEET
BUILDABLE AREA, 1 FOOT ABOVE MOTTLED SOILS:	20,000 Sq. Ft.
BUILDABLE AREA, 3 FEET ABOVE MOTTLED SOILS:	
WITHIN BUILDING SETBACKS:	11,000 Sq. Ft.
MAXIMUM IMPERVIOUS SURFACE:	25% of parcel or 25% of Buildable Area, whichever is more restrictive.

ACRE LAND SURVEYING, INC.
26450 Rum River Drive NW.
Isanti, MN 55040
763-439-2702 lr.acrelandsurvey@gmail.com

LEGEND

DRAINAGE AND UTILITY EASEMENTS SHOWN THUS:

NO SCALE

BEING 5 FEET IN WIDTH AND ADJOINING SIDE LOT LINES AND BEING 10 FEET IN WIDTH AND ADJOINING STREET AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THIS PLAT.

NORTH

GRAPHIC SCALE

100 0 50 100 200 400

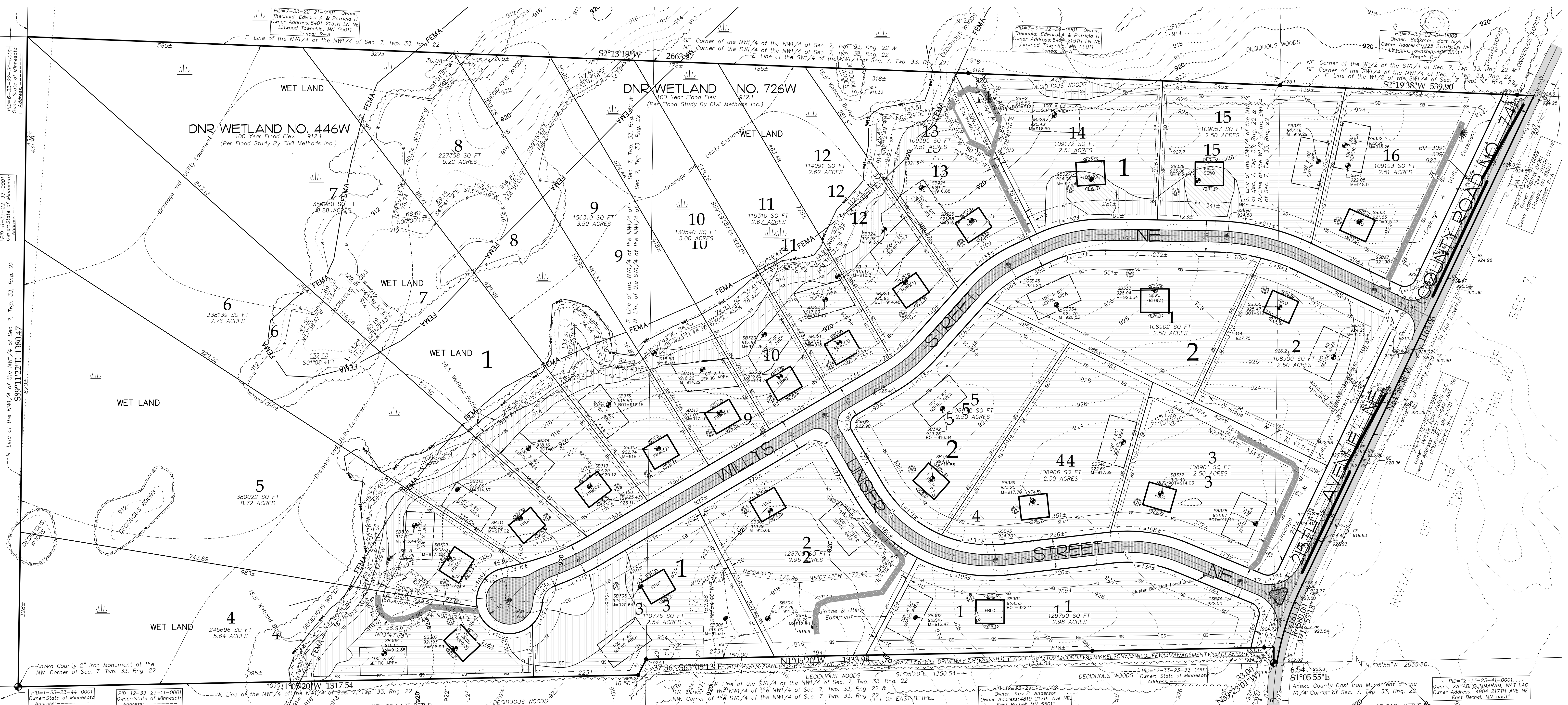
(IN FEET)

1 inch = 100 ft.

PRELIMINARY PLAT

DELLWOOD COUNTRY ESTATES

S102



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LEGEND

- ANOKA COUNTY MONUMENT FOUND
- IRON MONUMENT FOUND
- IRON MONUMENT SET
- BITUMINOUS SURFACE
- GRAVEL
- AREA 1' OR > ABOVE MOTTLED SOILS
- AREA 3' OR > ABOVE MOTTLED SOILS
- AREA TO BE 3' OR > ABOVE MOTTLED SOILS BASED ON PROPOSED FILL
- FENCE LINE
- SOIL BORING BY MARK TRADEWELL
- SURFACE ELEVATION
- MOTTLED SOIL ELEVATION
- BOTTOM OF BORING ELEVATION
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BUILDING DETAIL

Finished Grade at Front of House
Note: Garage Floor shall be 0.3' Above Finished Grade at Front of House.

Finished Grade 10' from Building Shall be 0.5' lower than the Finished Grade at Building Except adjacent to Concrete or Bituminous Surfaces.

Denotes proposed well location. Must be at least 50 feet from septic tank and/or drainfield.

Finished Grade at Back of House
(0.5' below Low Floor on Walkout Lots and 0.7' below Lowest Opening of Lookout and Full Basement Lots)

DRAINAGE AND UTILITY EASEMENTS SHOWN THUS:

NO SCALE

BEING 5 FEET IN WIDTH AND ADJOINING SIDE LOT LINES AND BEING 10 FEET IN WIDTH AND ADJOINING STREET AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THIS PLAT.

BUILDABLE AREA

LOT & BLOCK NO. SHADING WITHIN LOTS INDICATES > 3 FEET ABOVE MOTTLED SOILS (SEE LEGEND)

1,1	111,299 Sq. Ft.
2,1	71,423 Sq. Ft.
3,1	48,104 Sq. Ft. + 951 Sq. Ft. Fill
4,1	38,855 Sq. Ft.
5,1	28,955 Sq. Ft.
6,1	33,759 Sq. Ft.
7,1	42,908 Sq. Ft.
8,1	38,076 Sq. Ft.
9,1	28,465 Sq. Ft.
10,1	23,920 Sq. Ft.
11,1	29,042 Sq. Ft.
12,1	35,805 Sq. Ft.
13,1	51,439 Sq. Ft.
14,1	69,117 Sq. Ft. + 7,852 Sq. Ft. Fill
15,1	83,924 Sq. Ft. + 9,327 Sq. Ft. Fill
16,1	75,622 Sq. Ft.
1,2	96,562 Sq. Ft.
2,2	80,384 Sq. Ft.
3,2	73,929 Sq. Ft.
4,2	99,438 Sq. Ft.
5,2	97,957 Sq. Ft.

SOIL BORING TABLE

BORING #	ELEVATION	MOTTLED DEPTH	BORING #	ELEVATION	MOTTLED DEPTH
SB-1	922.0	48"	SB-334	924.70	50"
SB-2	918.5	30"	SB-335	925.47	NONE @ 77"
SB-3	915.2	18"		77"	
SB-4	914.5	20"	SB-336	924.25	48"
SB-5	915.3	30"	SB-337	920.45	NONE @ 77"
SB-6	918.8	40"	SB-338	921.87	NONE @ 77"
SB-301	928.53	None @ 77"	SB-339	923.20	66"
SB-302	922.47	72"	SB-340	922.69	66"
SB-303	919.86	48"	SB-341	924.18	66"
SB-304	917.79	None @ 77"	SB-342	923.26	NONE @ 77"
SB-305	924.14	42"			
SB-306	919.00	64"			
SB-307	921.93	36"			
SB-308	916.80	48"			
SB-309	920.75	44"			
SB-310	917.61	50"			
SB-311	920.52	42"			
SB-312	919.00	52"			
SB-313	924.29	50"			
SB-314	918.16	None @ 77"			
SB-315	922.74	48"			
SB-316	916.80	None @ 77"			
SB-317	921.07	44"			
SB-318	918.22	48"			
SB-319	919.64	63"			
SB-320	917.60	40"			
SB-321	921.51	38"			
SB-322	917.23	70"			
SB-323	920.90	None @ 77"			
SB-324	916.98	36"			
SB-325	921.68	None @ 77"			
SB-326	920.71	46"			
SB-327	924.06	32"			
SB-328	920.42	58"			
SB-329	922.66	28"			
SB-330	922.46	38"			
SB-331	921.85	None @ 77"			
SB-332	922.26	48"			
SB-333	928.04	54"			

FREE OWNERS & DEVELOPERS:

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763-427-5100
dcltd1001@outlook.com

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PUBLIC RIGHT-OF-WAY:	6,961 ACRES
EXISTING AND PROPOSED ZONING:	R-1 (Single Family Residential)
LENGTH OF ROAD CL 344S:	
CUL-DE-SAC LENGTH 829S:	

ACRE LAND SURVEYING, INC.

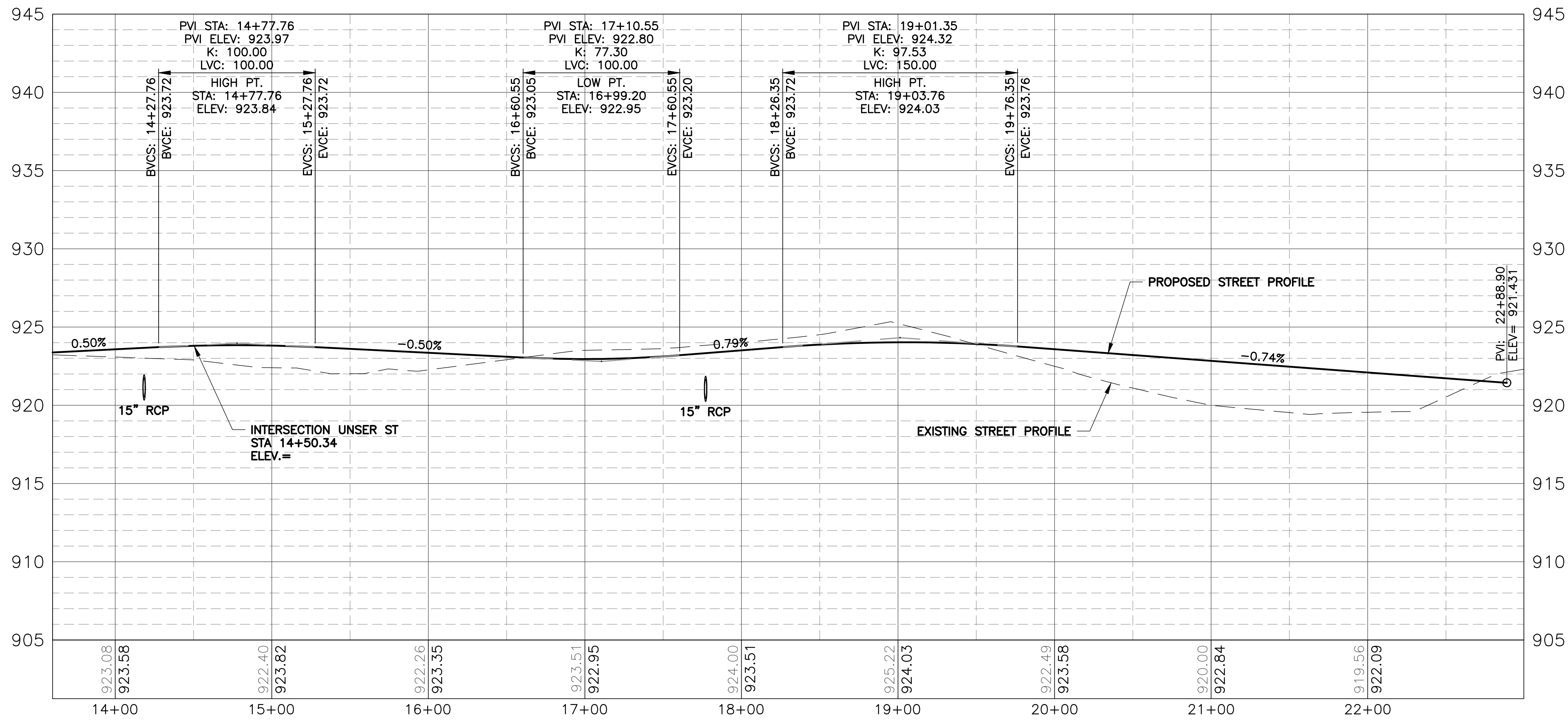
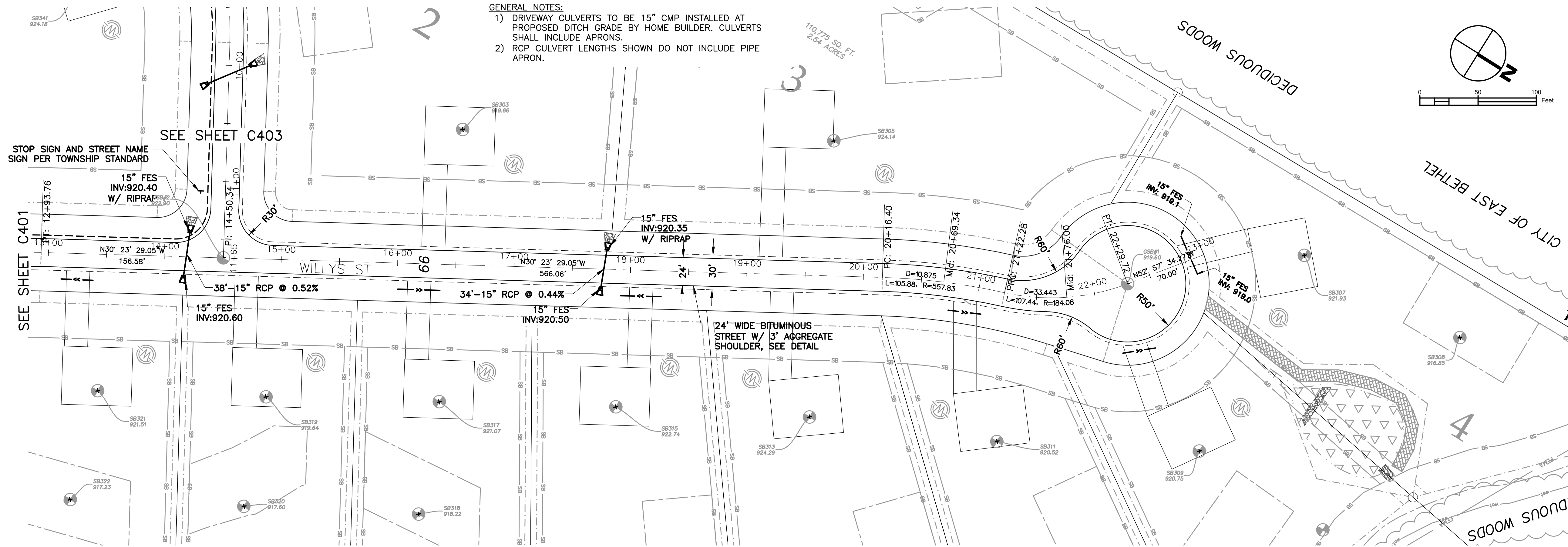
26450 Rum River Drive NW.
Isanti, MN 55040
763-439-2702 lr.acrelandsurvey@gmail.com

LIVABILITY/DEVELOPMENT PLAN

DELLWOOD COUNTRY ESTATES

S103

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DAVID M. POGGI

DATE: 08-31-2023

LIC. NO.: 44573

DESIGNED: DMP
DRAWN: DMP
CHECKED: KEB

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DELLWOOD CONST. LTD
DELLWOOD COUNTRY ESTATES
LINWOOD TOWNSHIP, MN

STREET PLAN & PROFILE
WILLYS ST

SHEET NO:
C402

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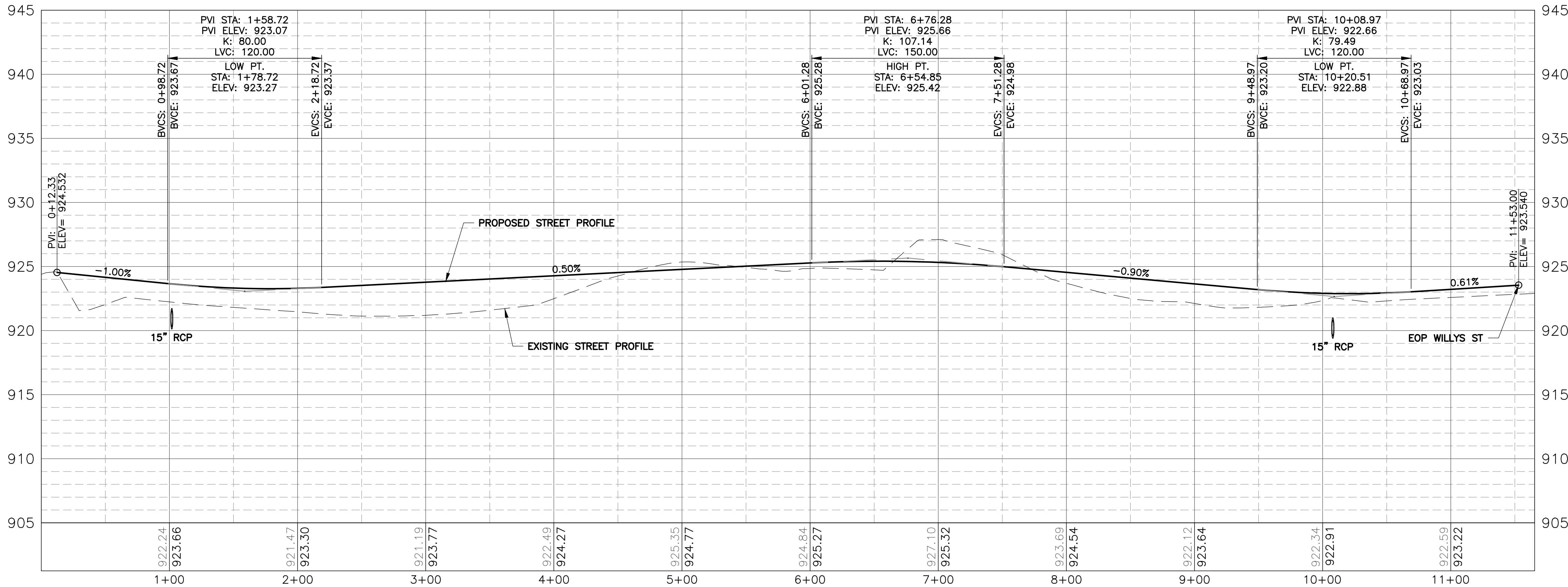
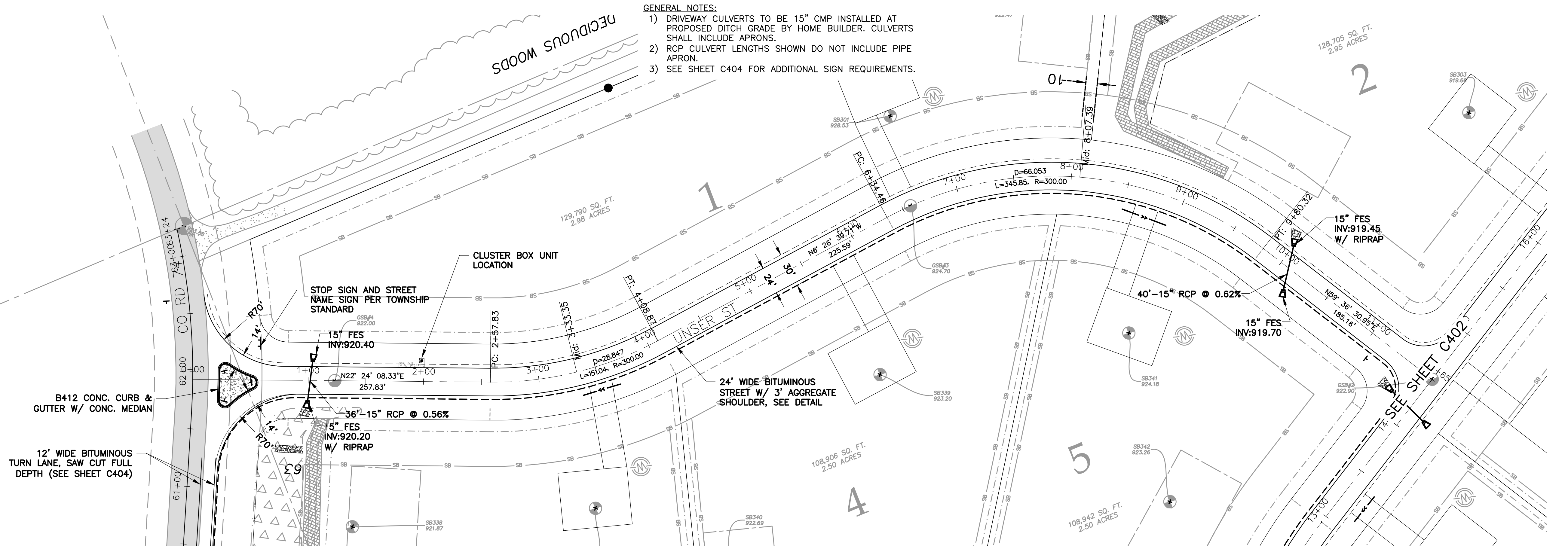
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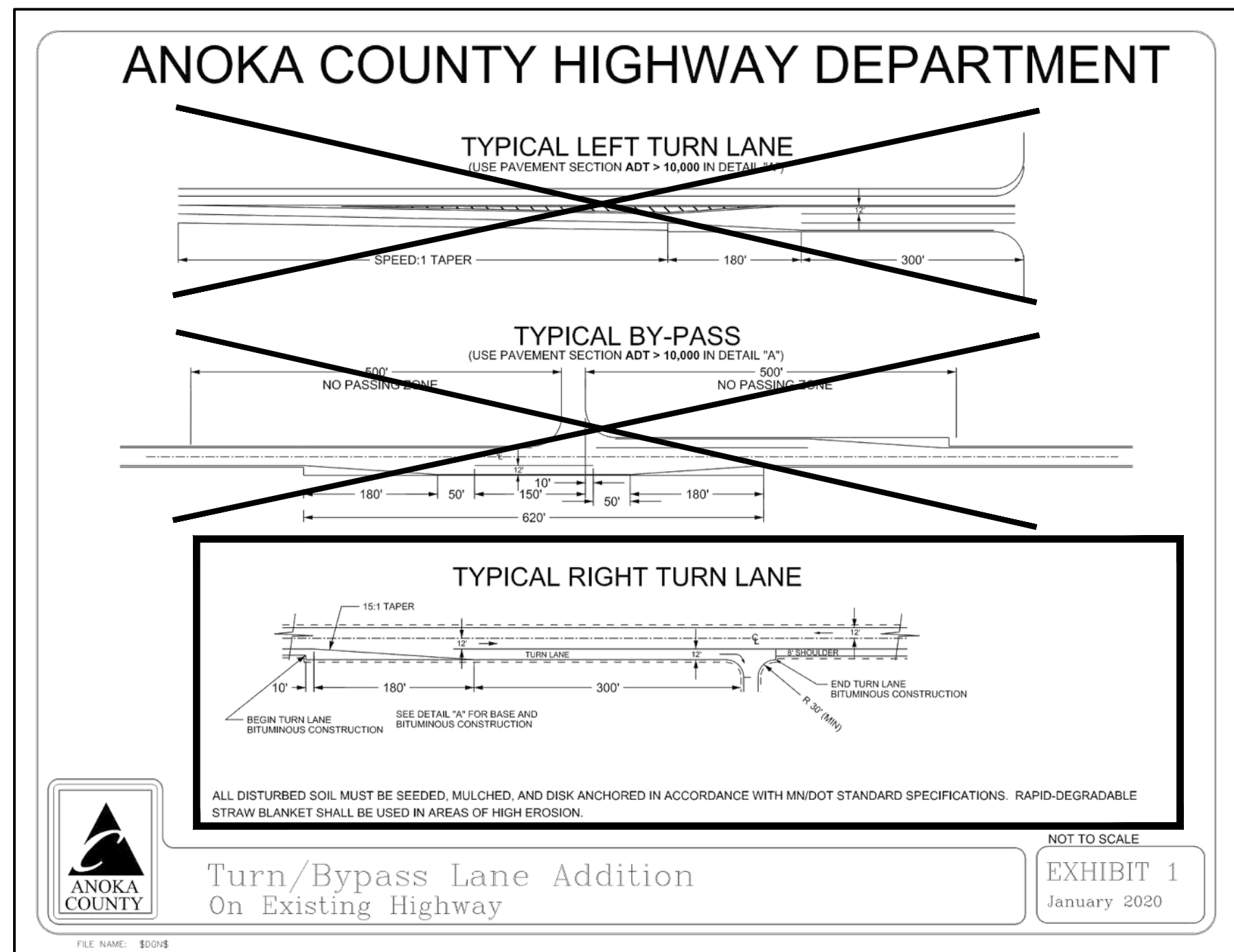
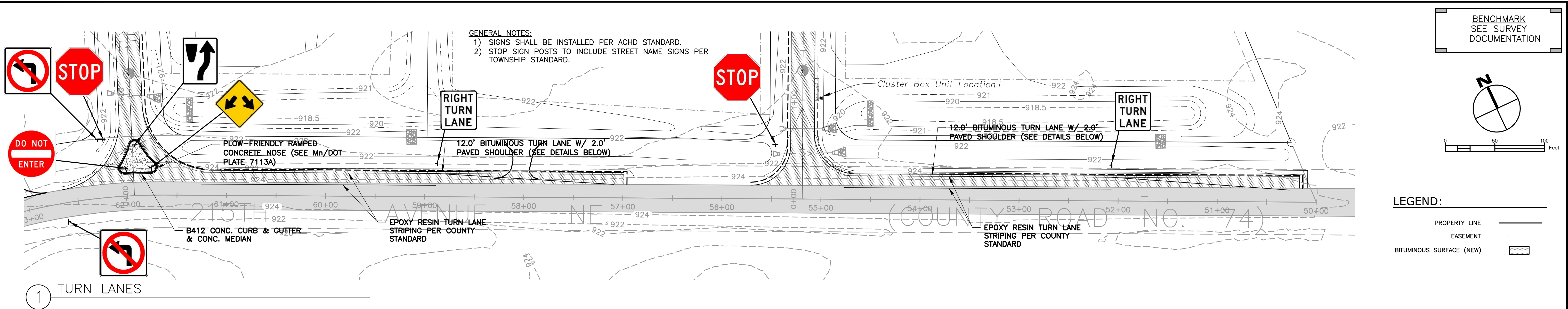
DELLWOOD CONST. LTD
DELLWOOD COUNTRY ESTATES
LINWOOD TOWNSHIP, MN

STREET PLAN & PROFILE
UNSER ST

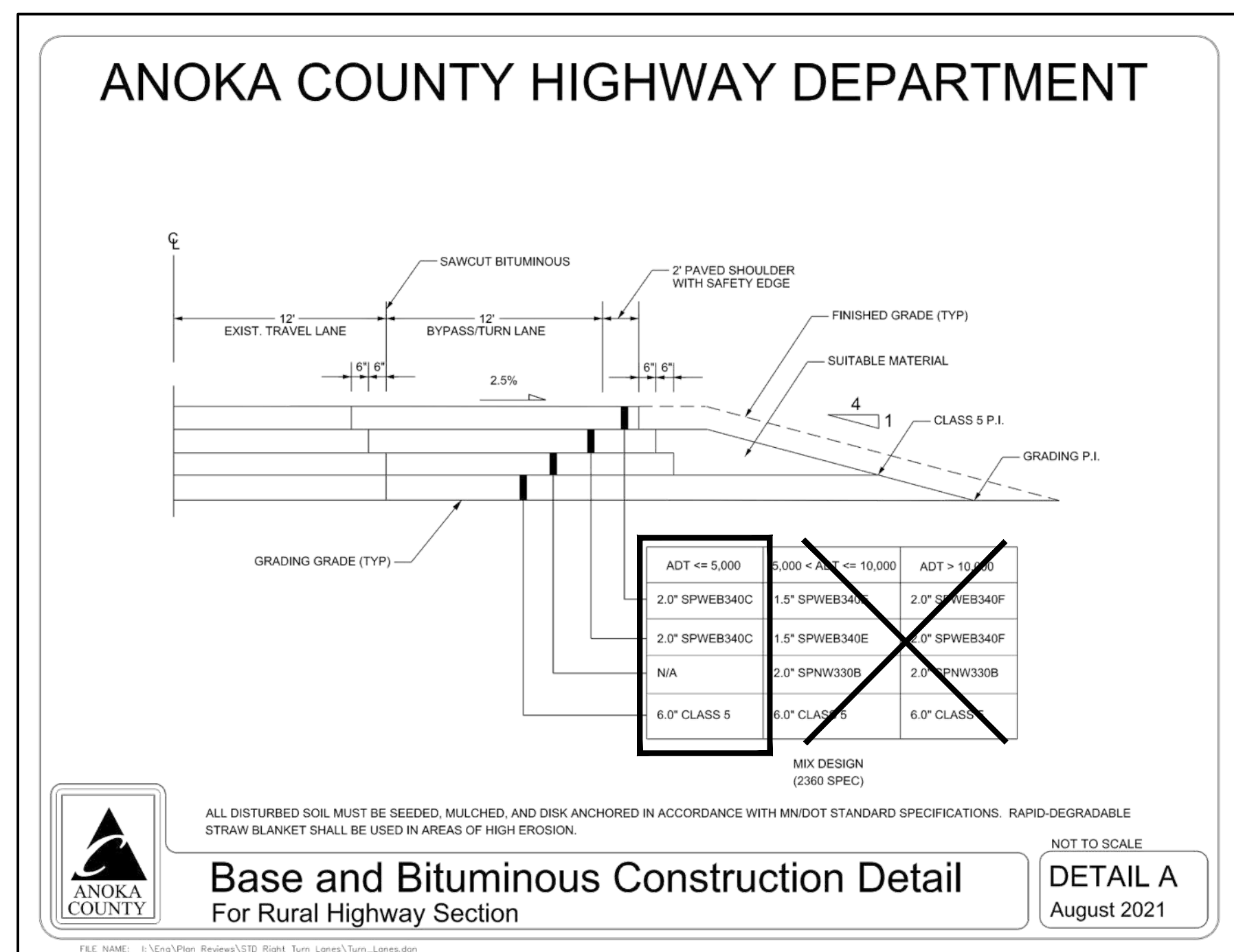
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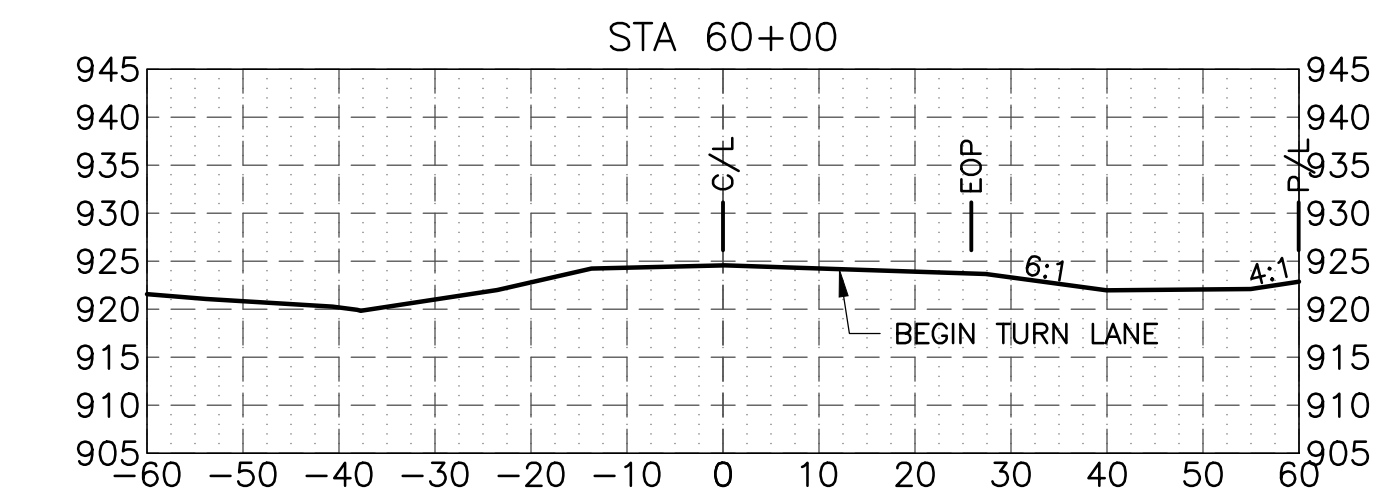
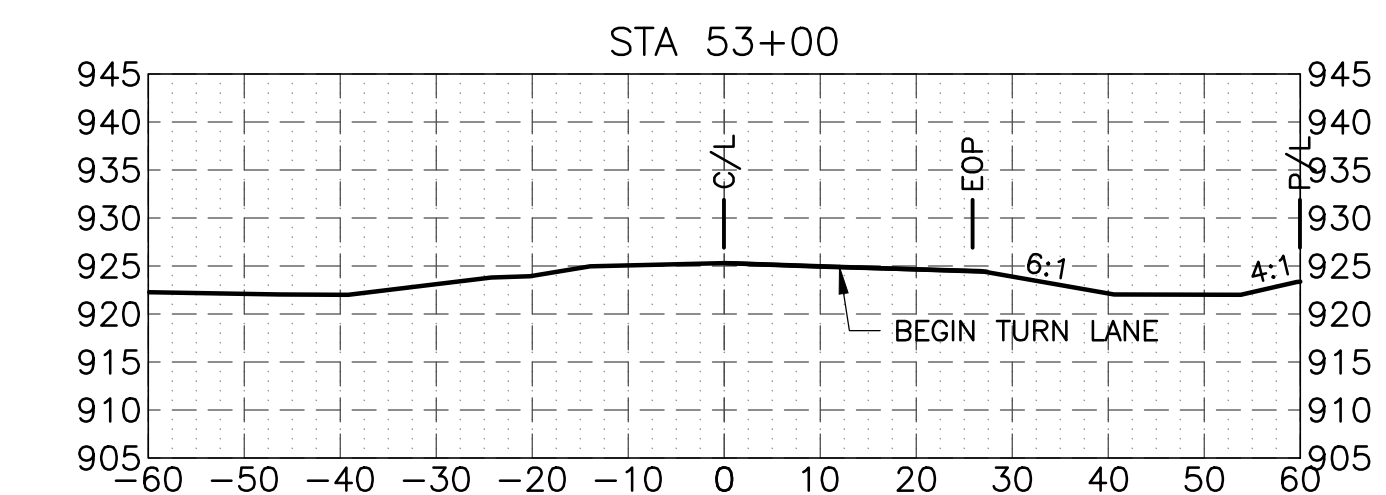
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2 TURN LANE PLAN

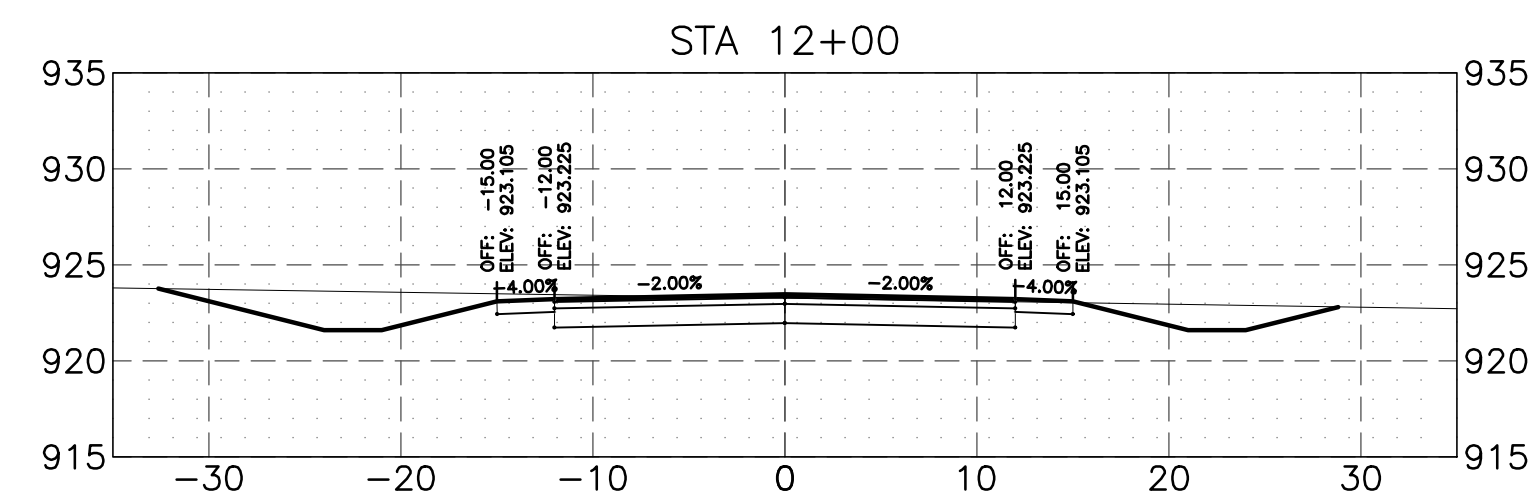
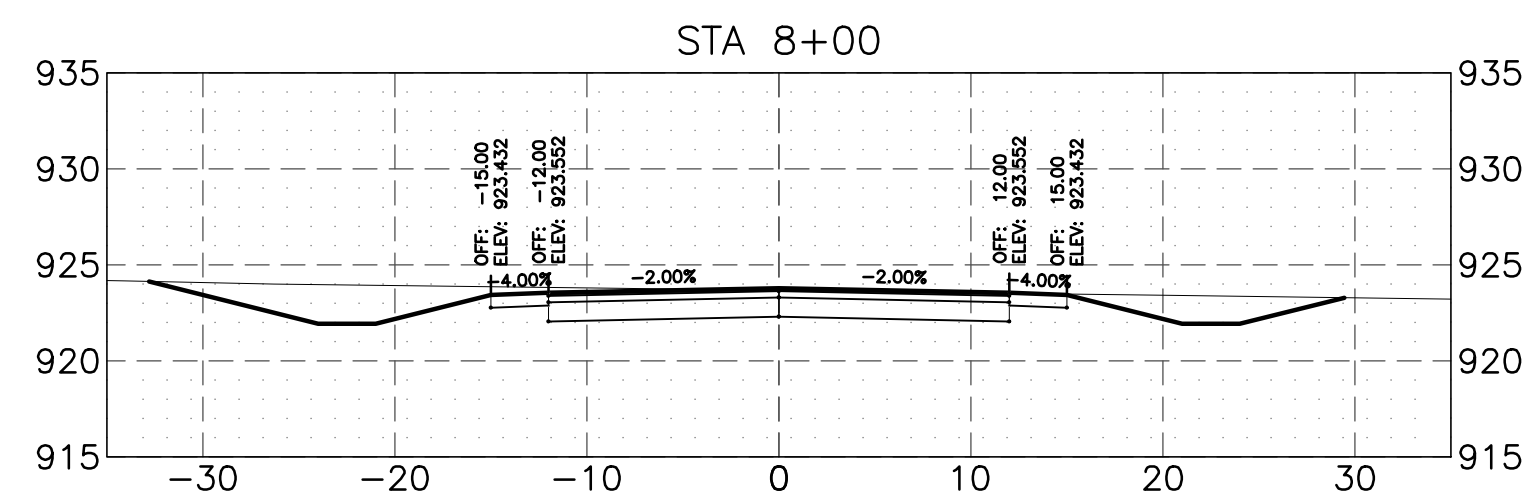
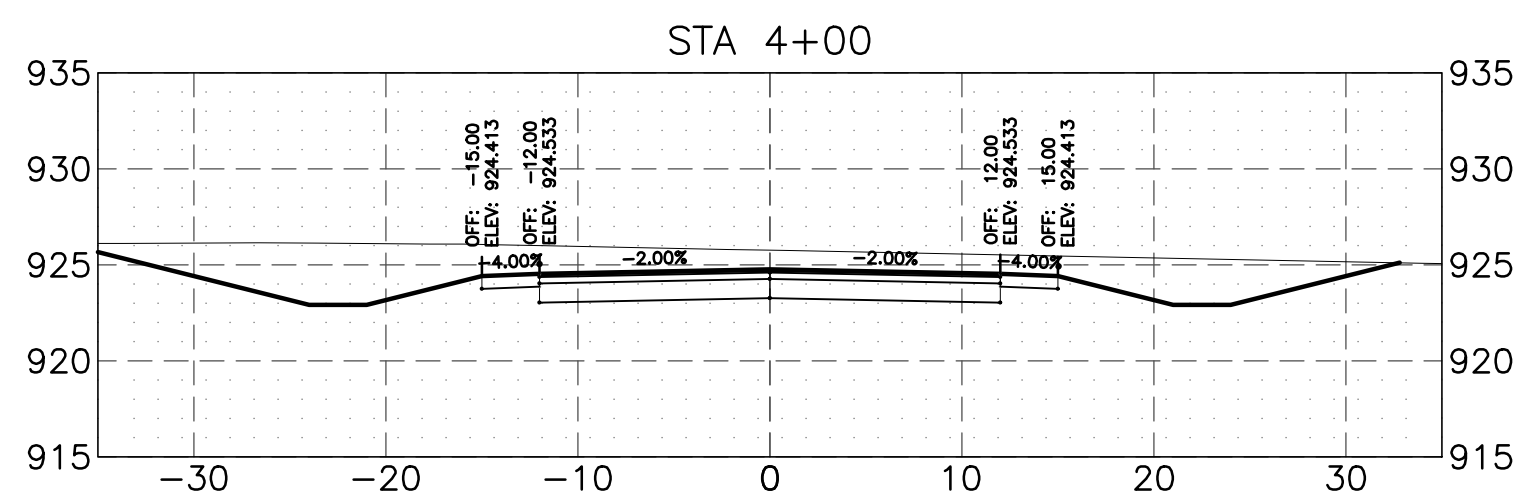
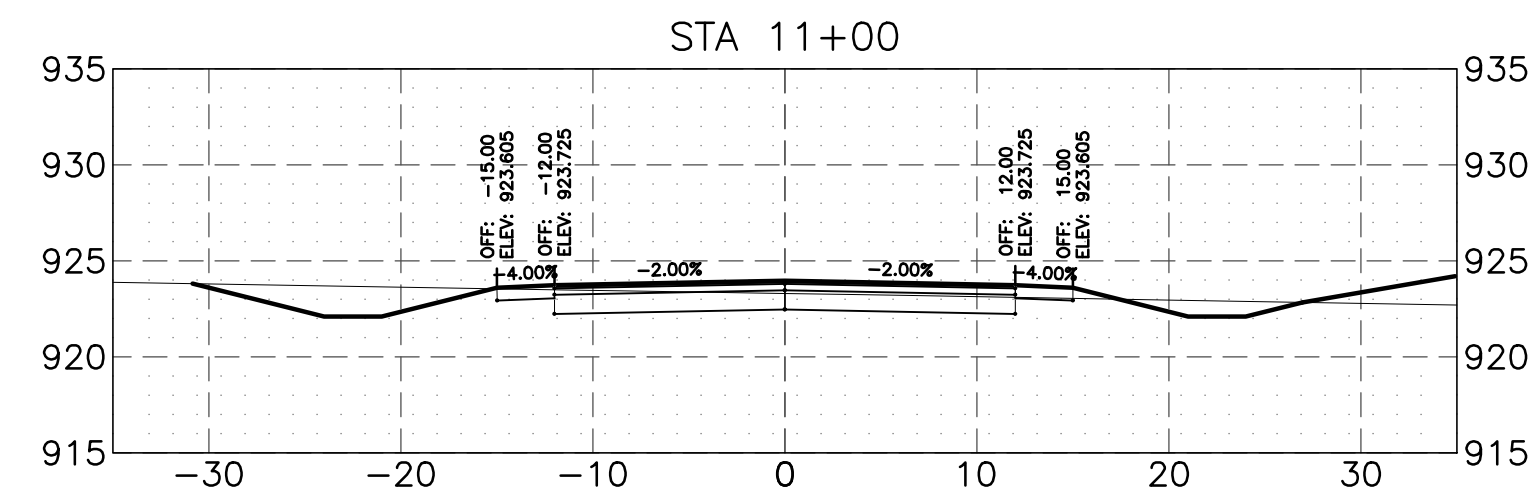
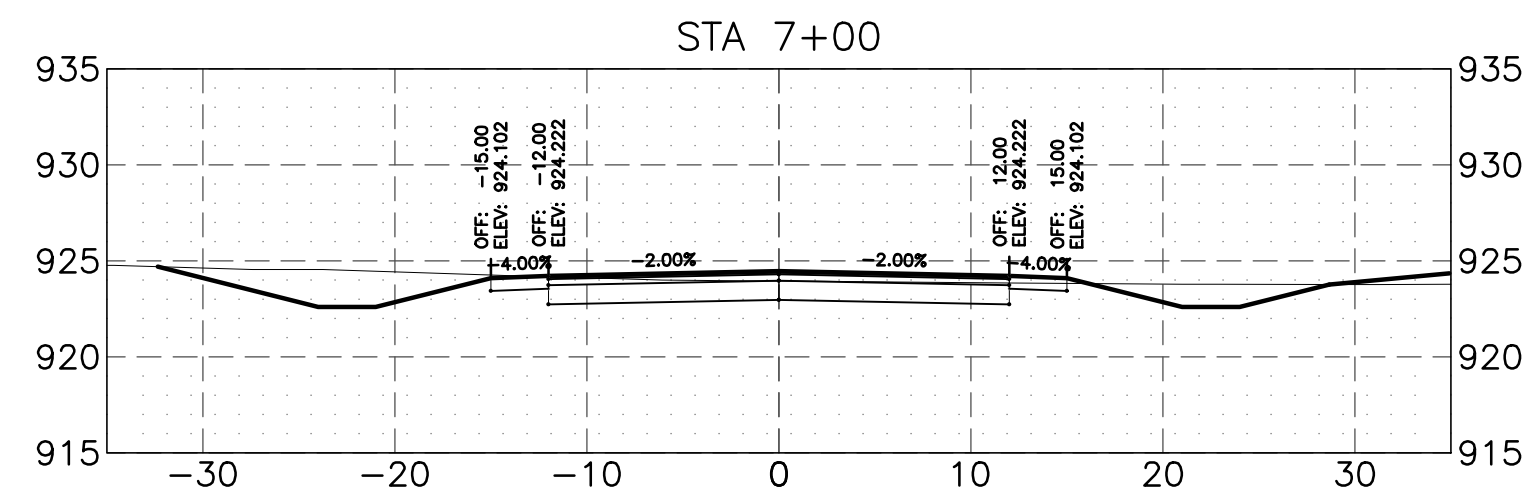
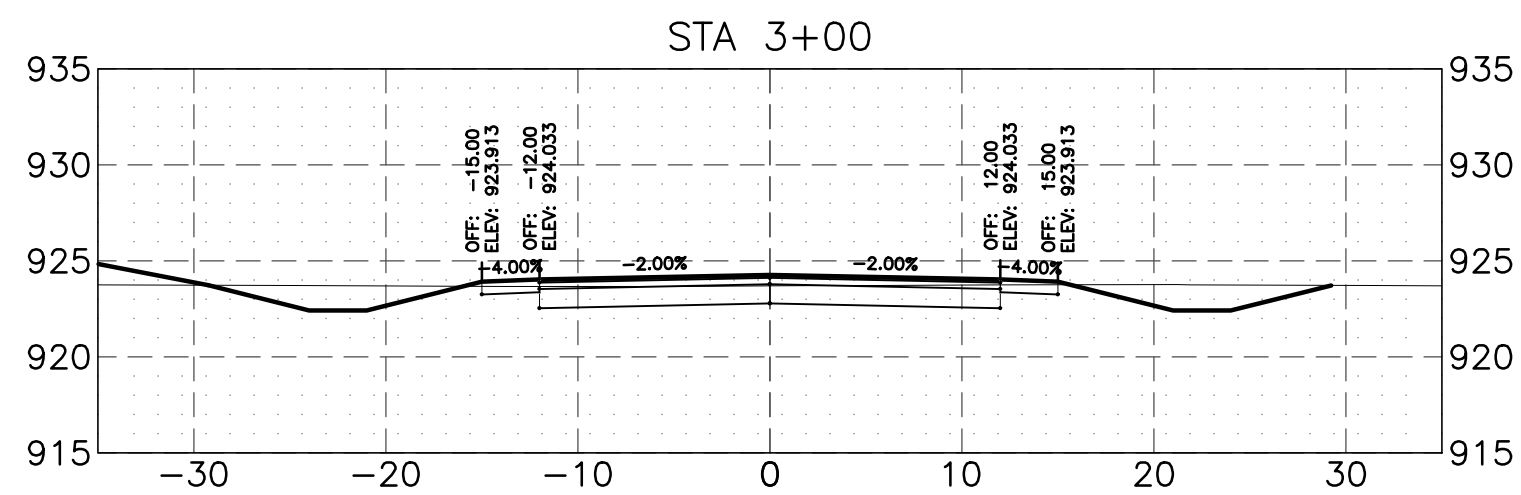
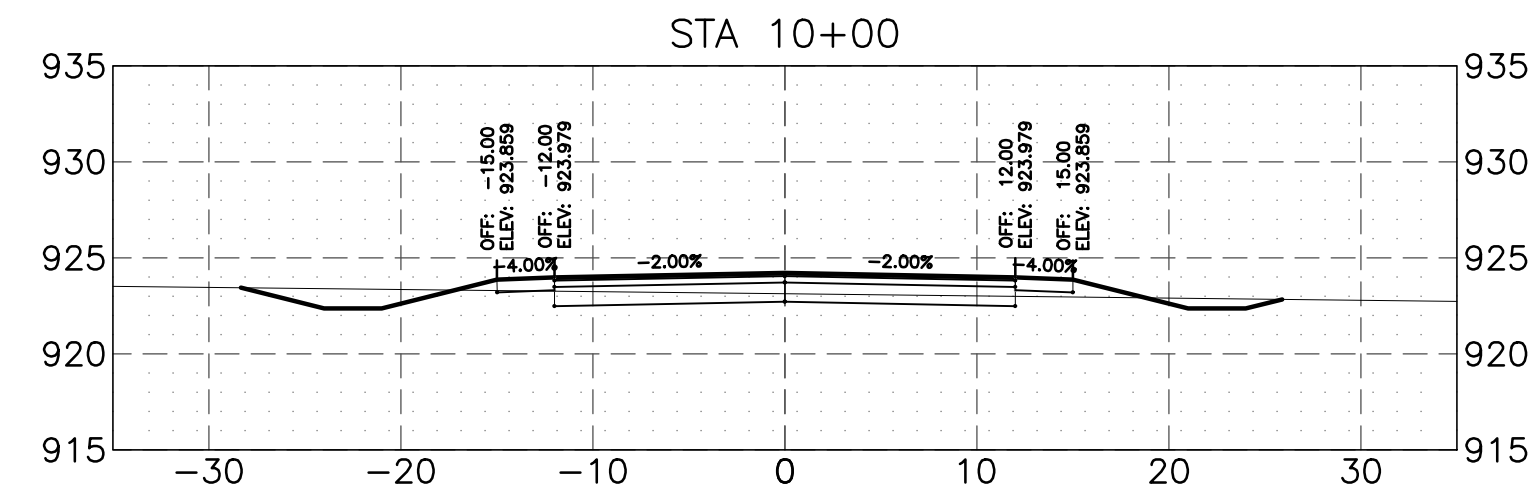
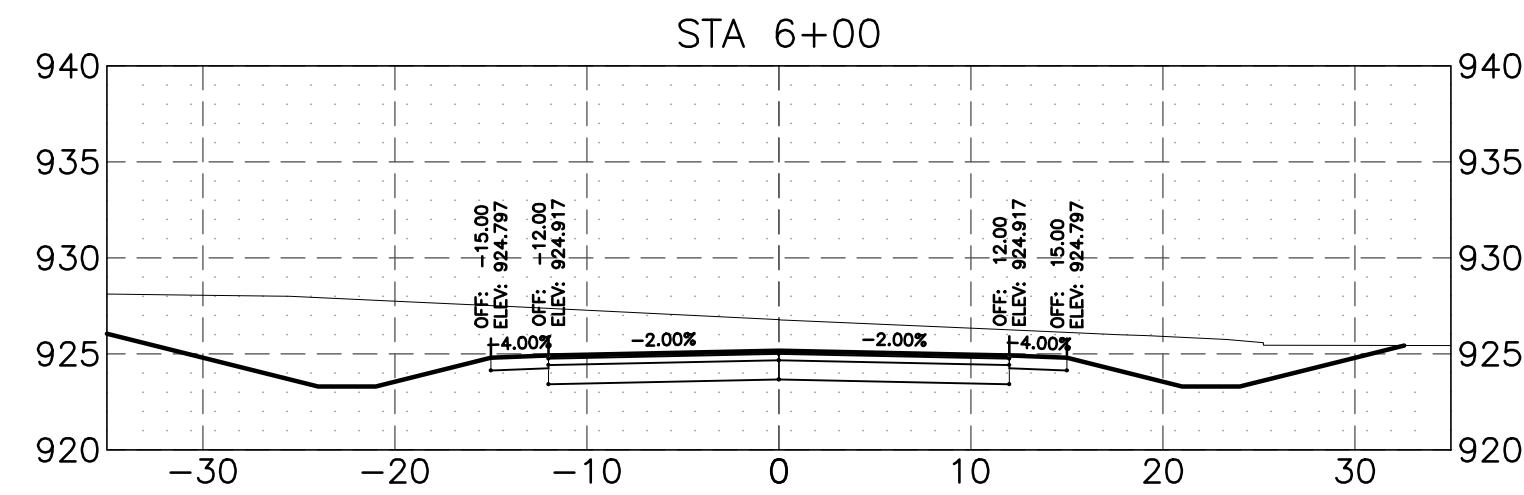
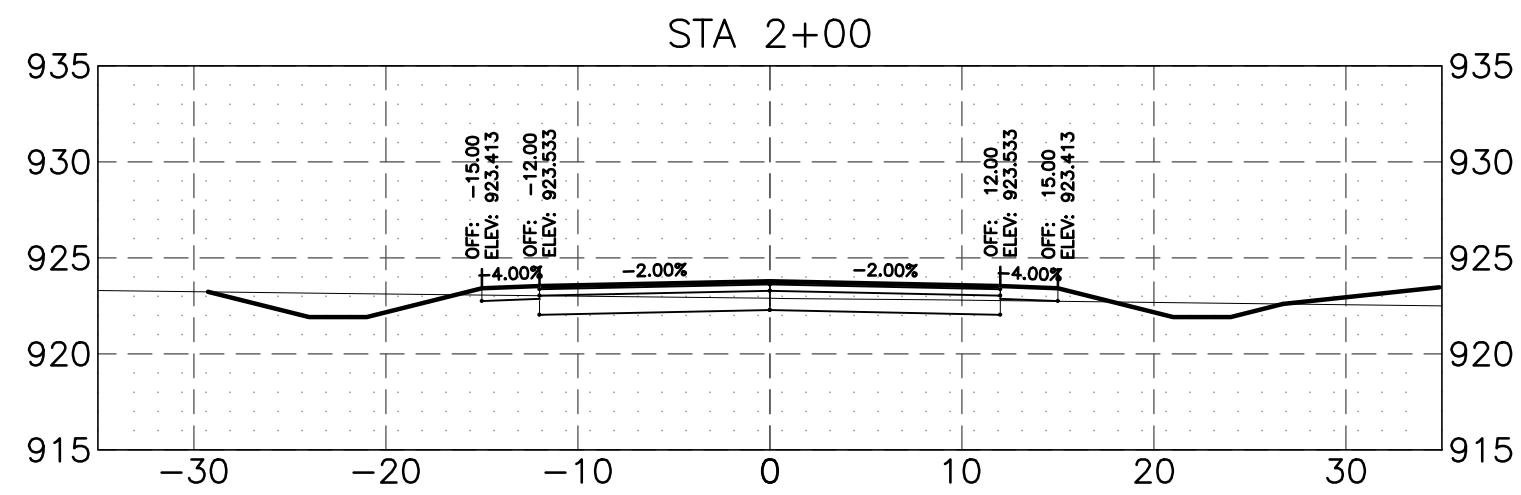
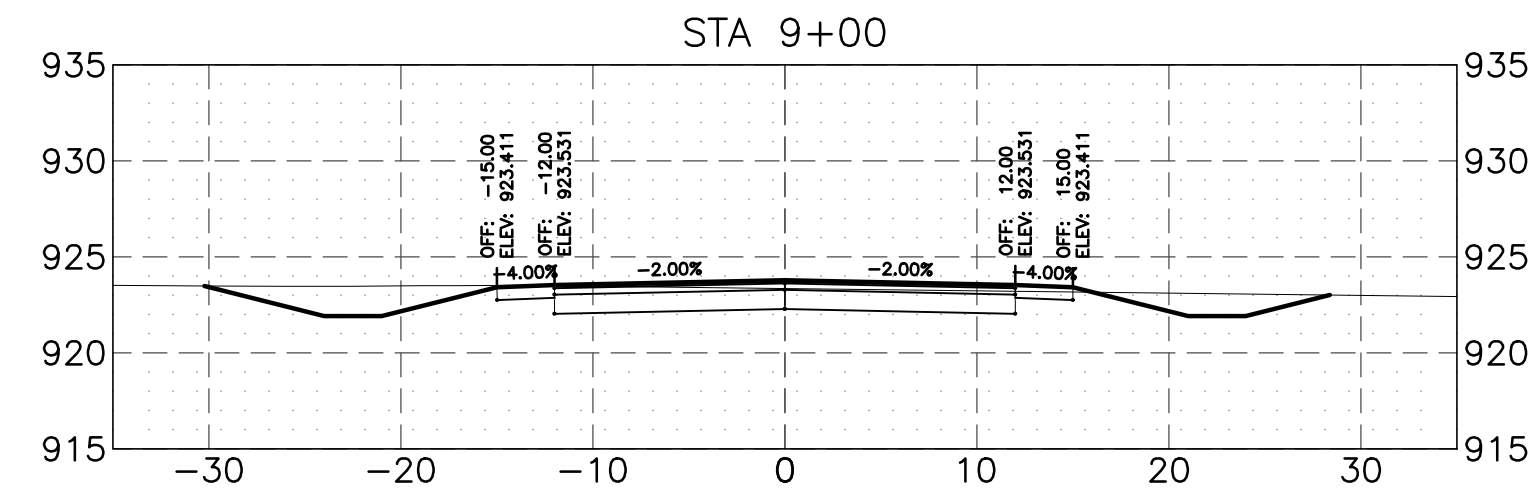
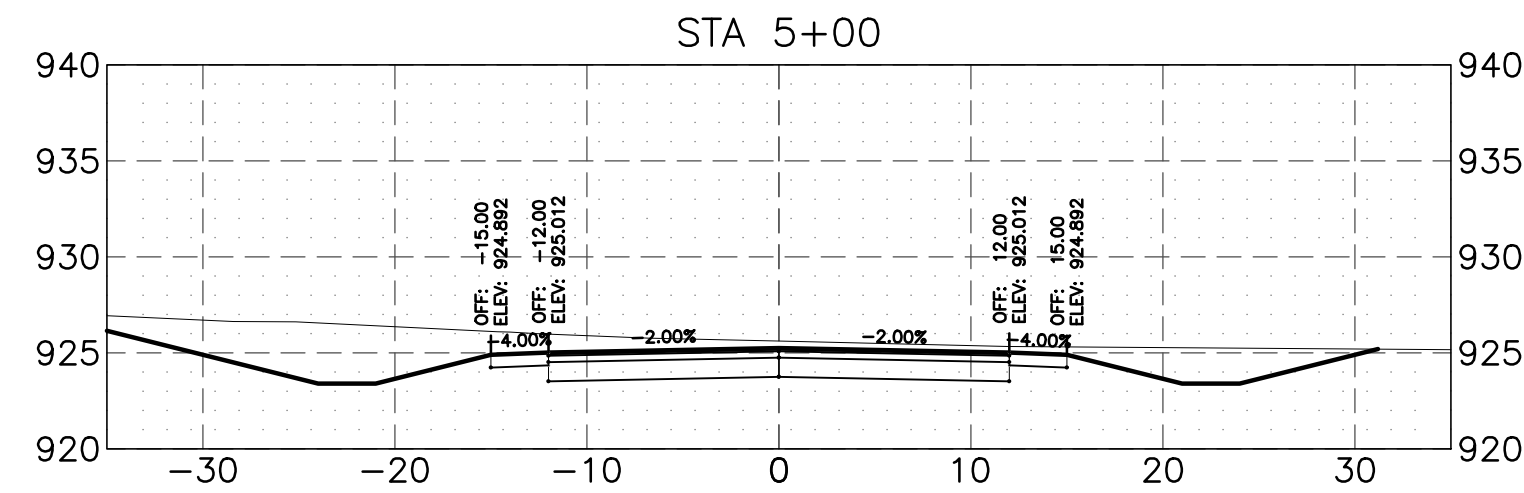
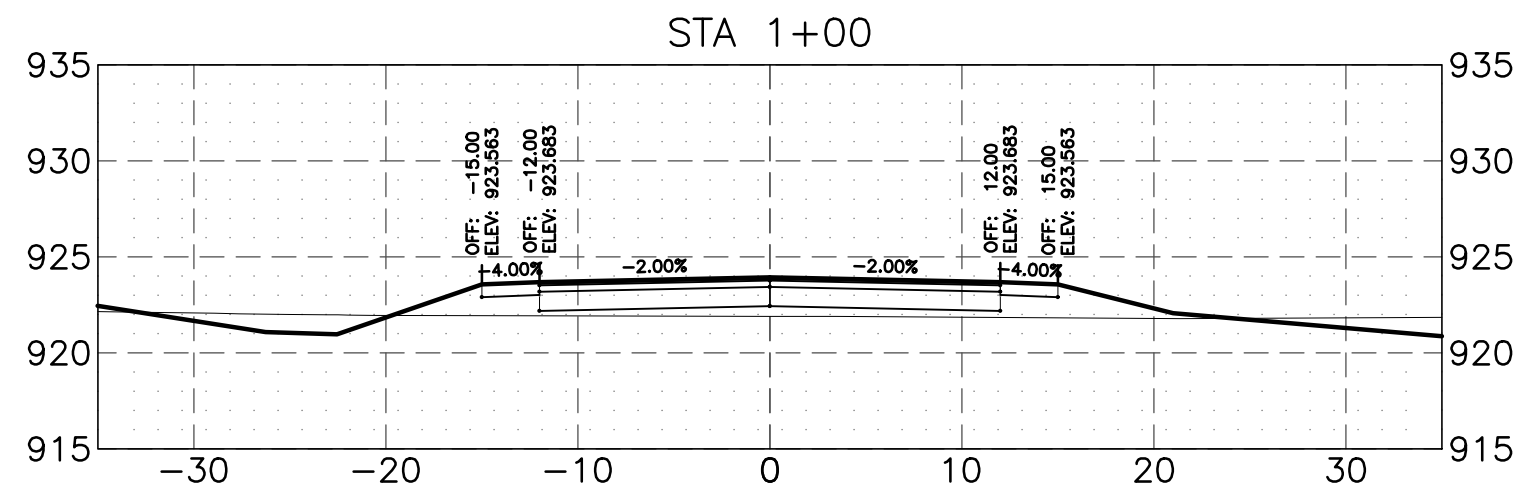


3 TURN LANE SECTION



3 CR74 CROSS SECTIONS

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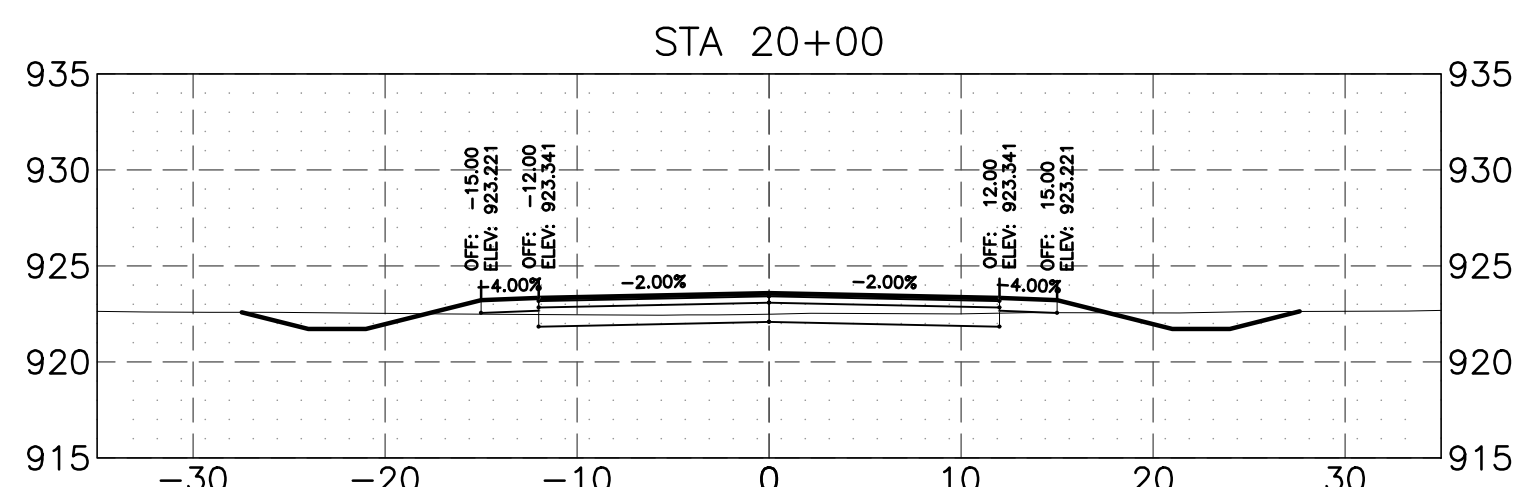
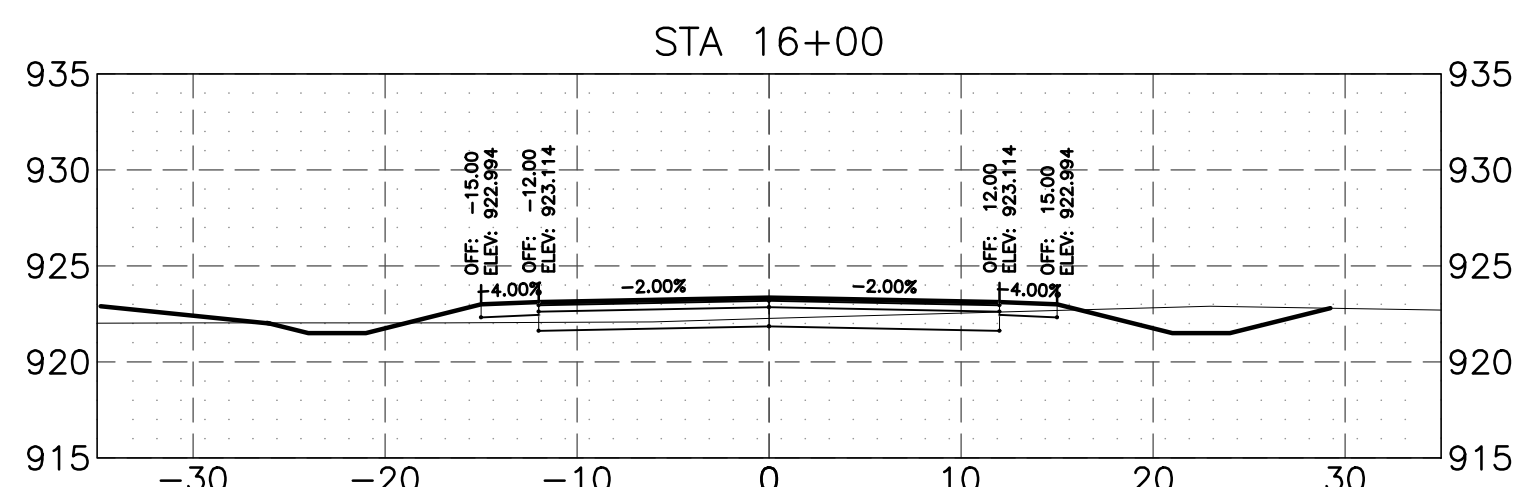
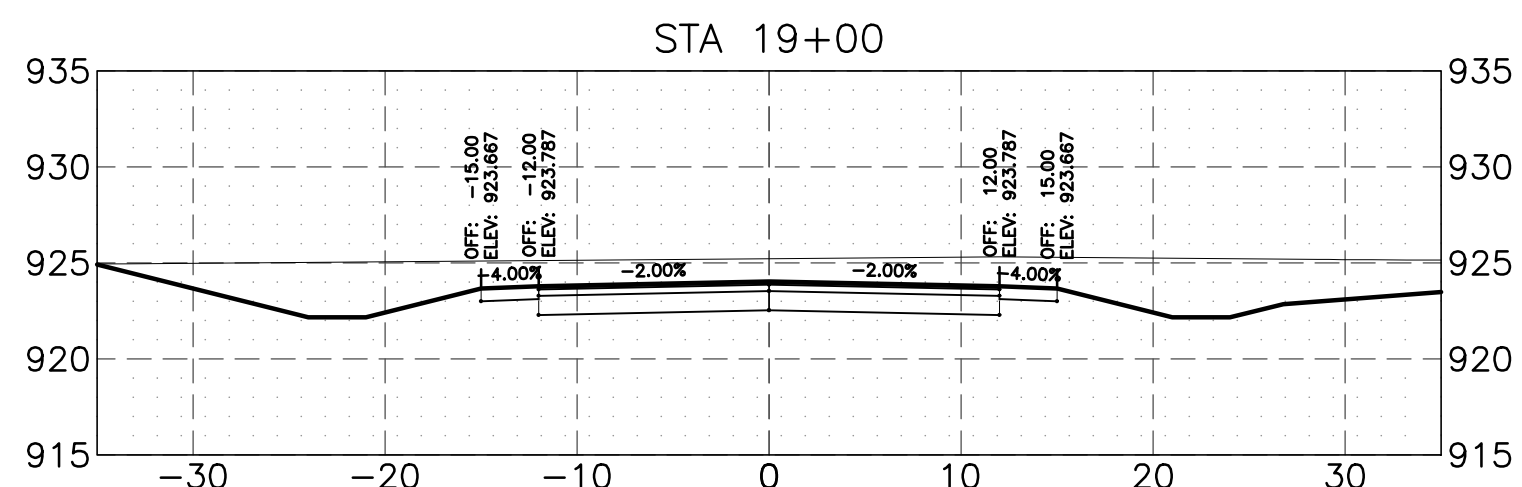
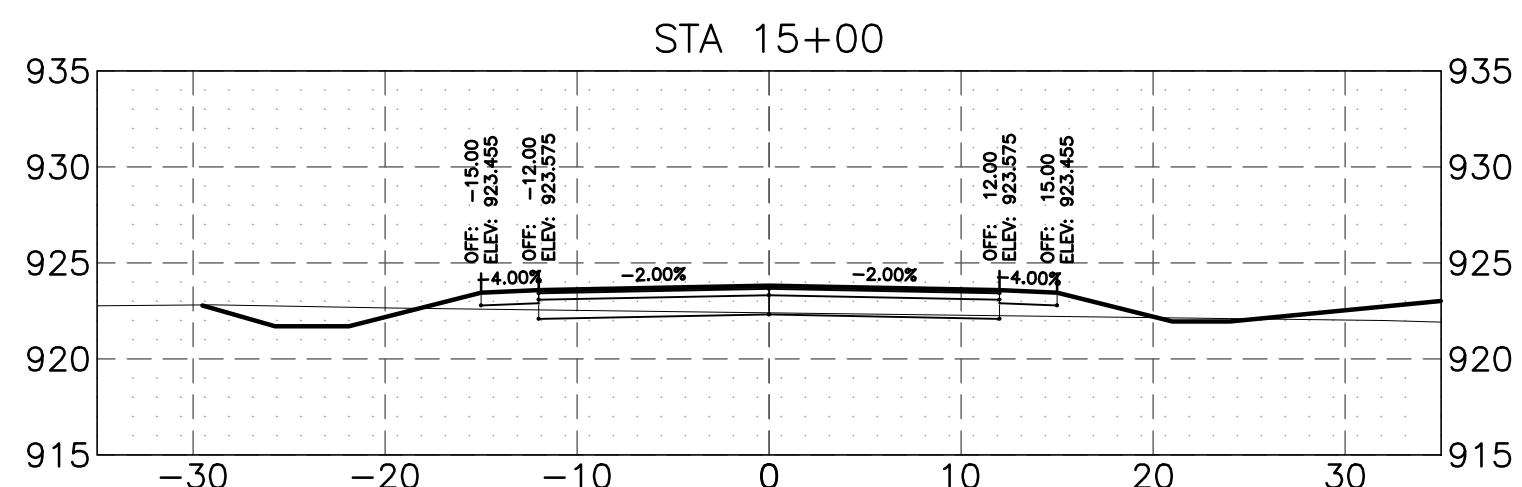
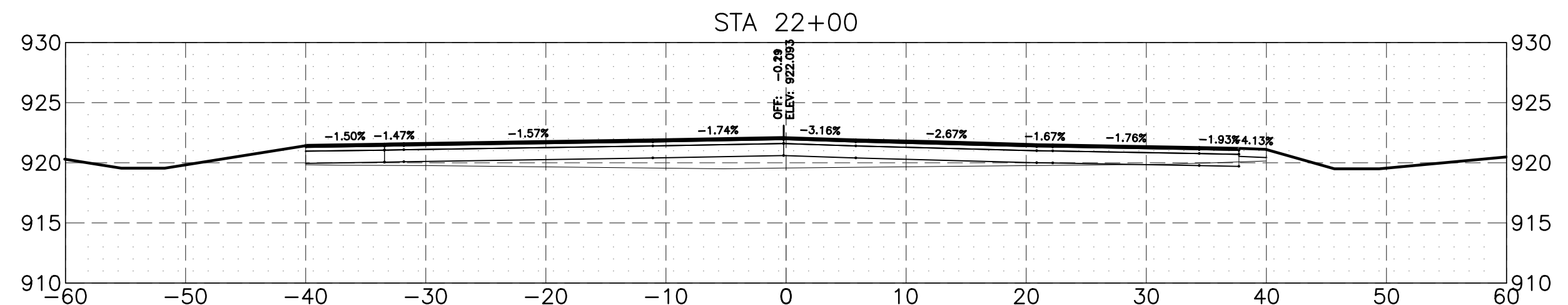
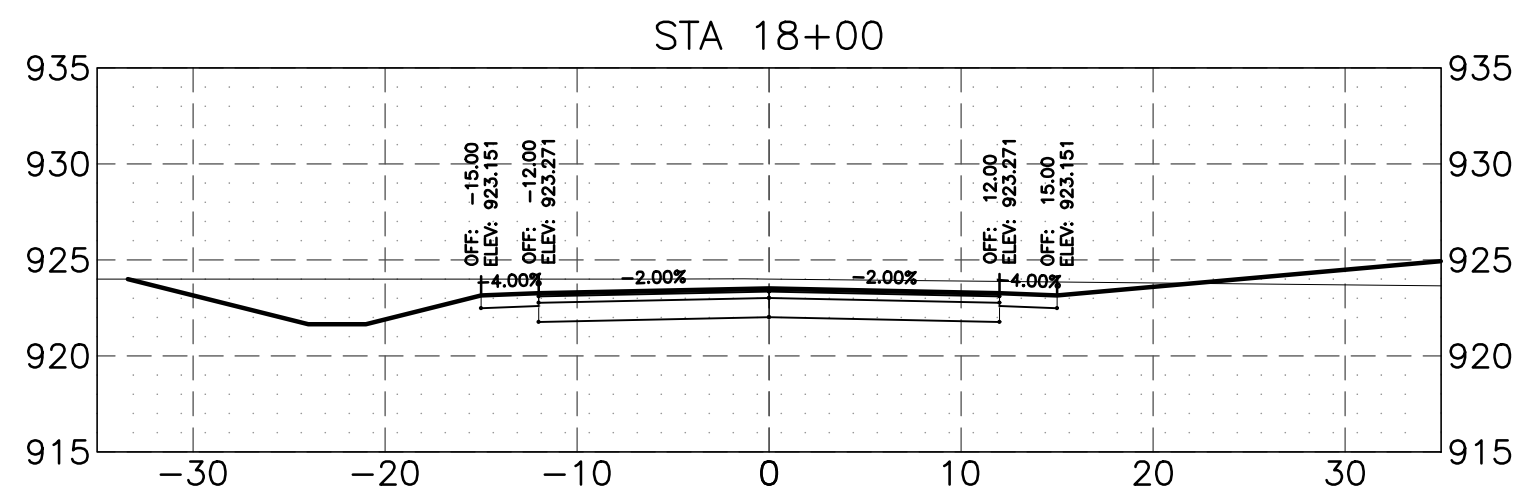
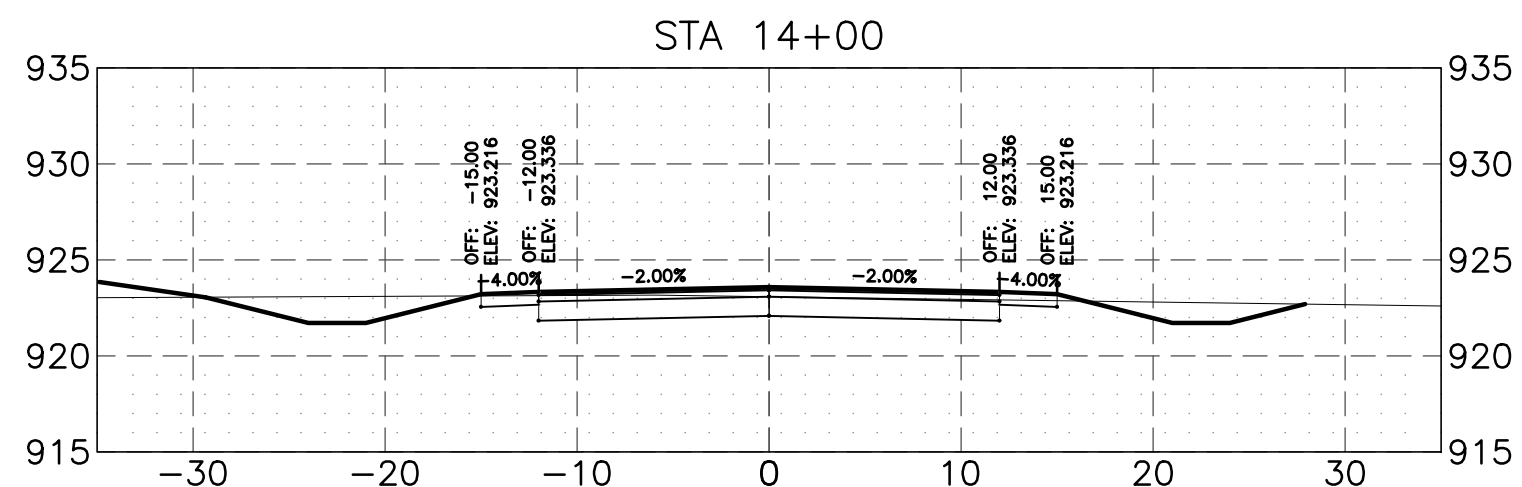
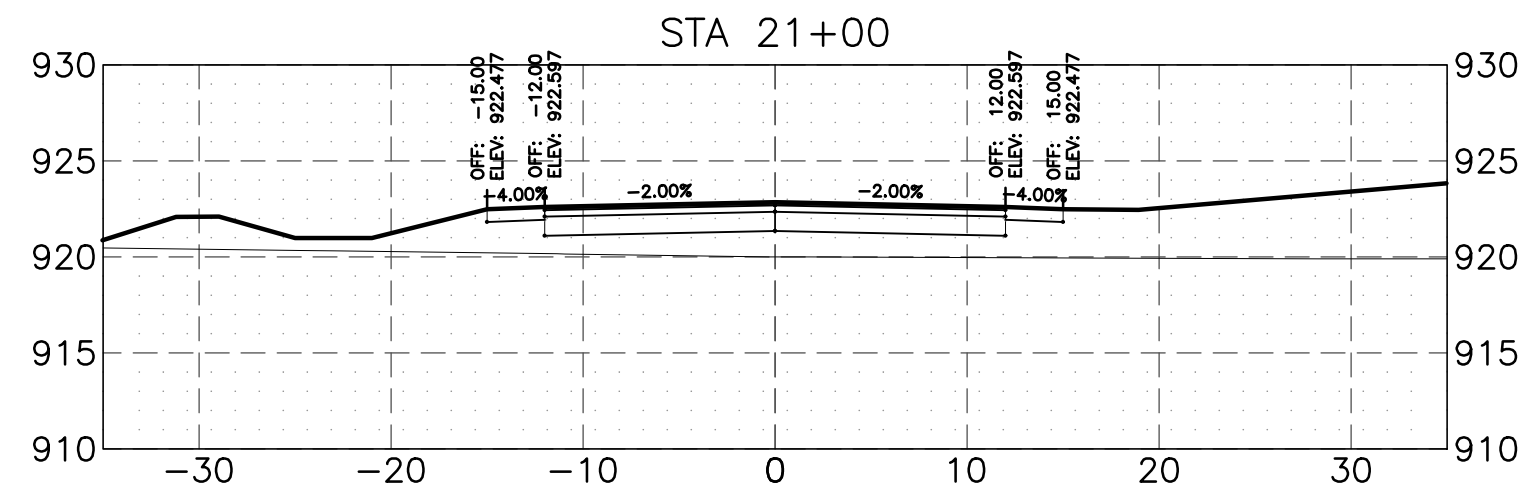
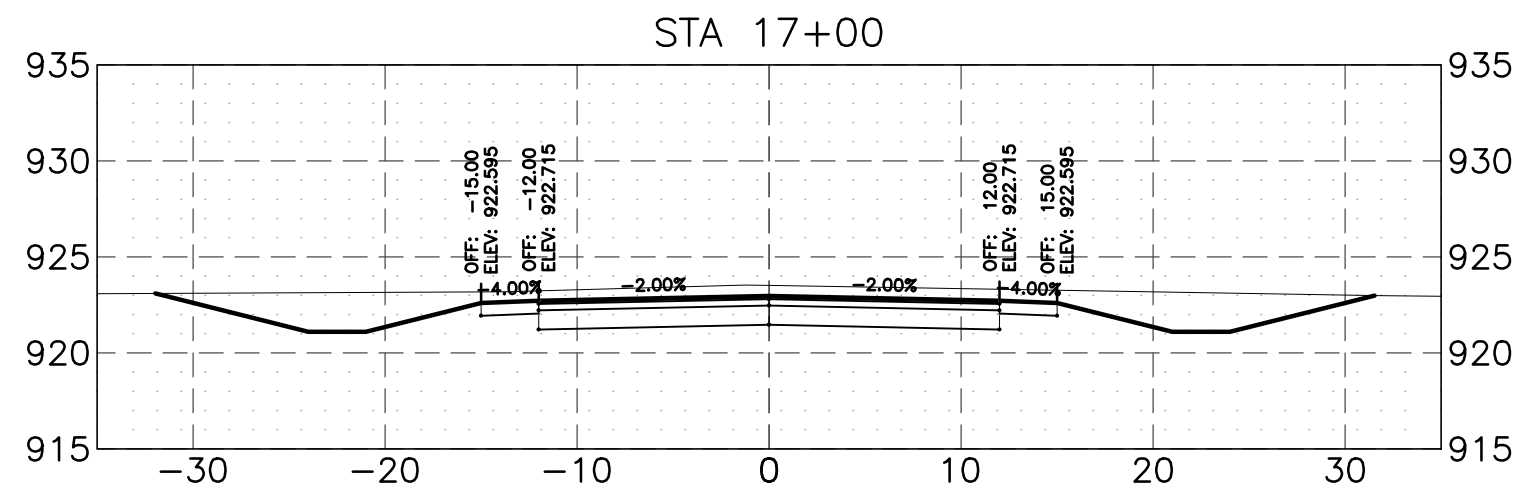
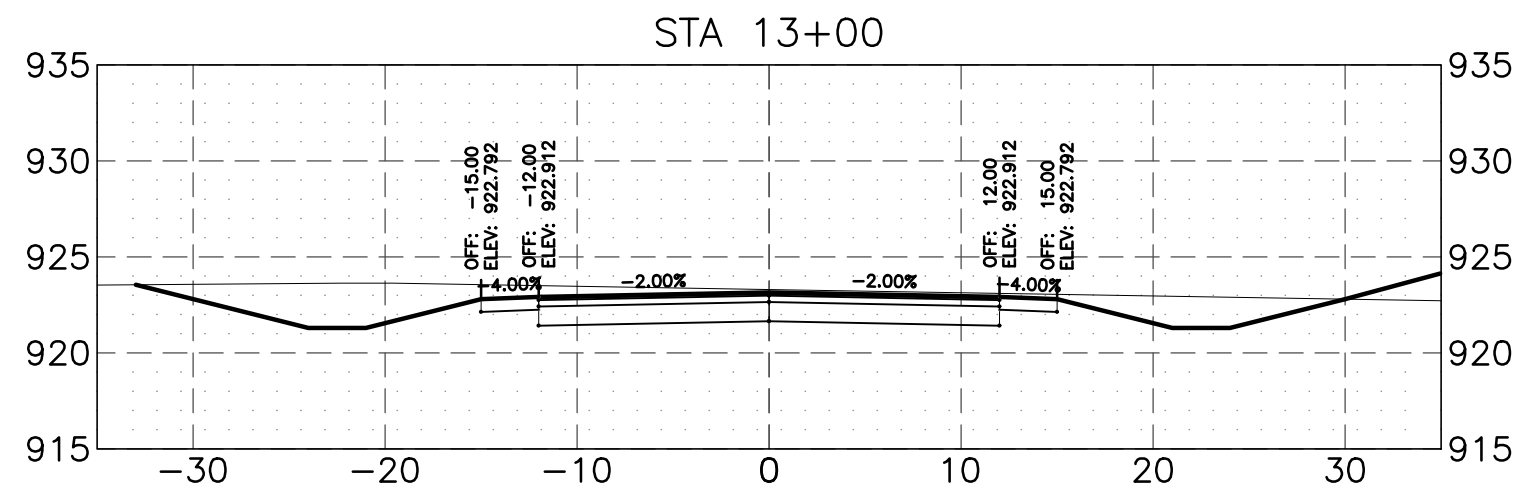
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LINWOOD TOWNSHIP, MN

ROAD CROSS SECTIONS
WILLYS ST

SHEET NO:
C405

Print Date: 8/31/2023 10:55 AM
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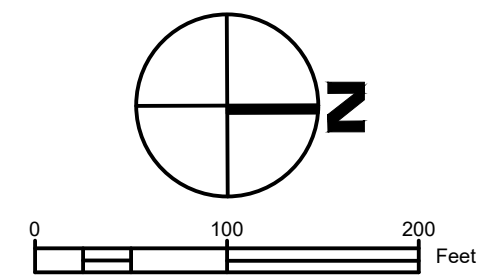
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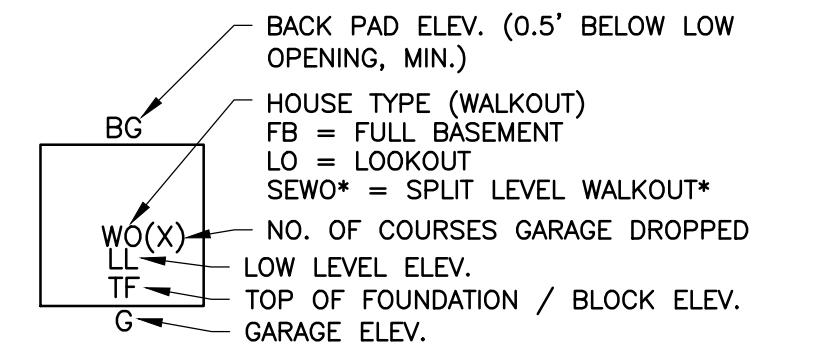
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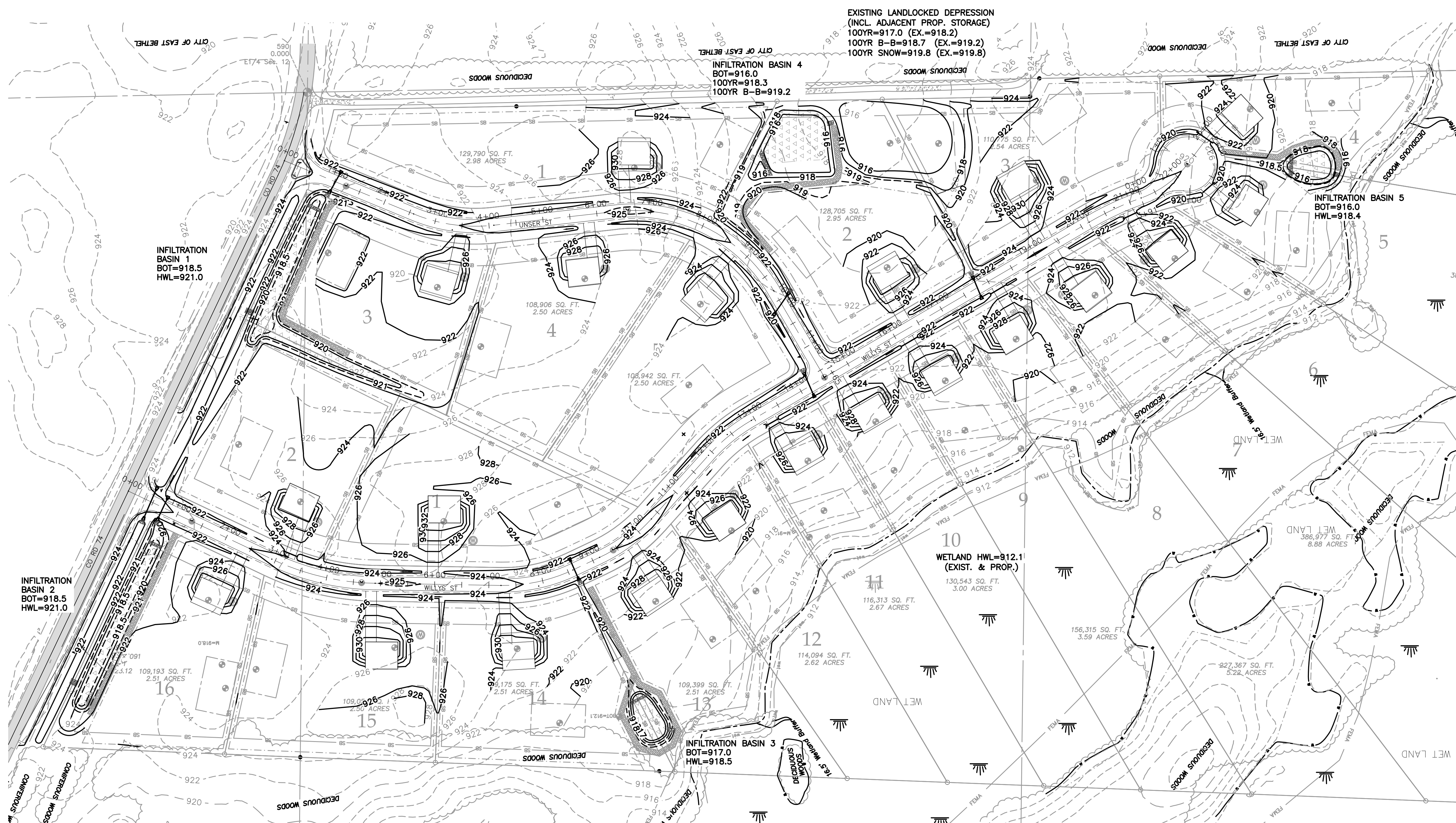
BENCHMARK
SEE SURVEY
DOCUMENTATION



- LEGEND:
- PROPERTY LINE
 - SETBACK
 - EASEMENT
 - WETLAND
 - CONTOUR
 - SPOT ELEVATION
 - DRAINAGE DIRECTION
 - STORM SEWER / CULVERT
 - RIPRAP
 - SEPTIC SITE
 - INFILTRATION BASIN
 - VEHICLE MAINTENANCE ACCESS AREA



TYPICAL LOT & HOUSE PAD



GENERAL NOTES:

- The subsurface utility location information in this plan is utility quality level D. This utility quality level was determined according to the guidelines of CI/ASCE 38-02, titled "Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data." Engineer does not guarantee the accuracy of utility locations or that all existing utilities are shown; Contractor is responsible for locating utilities prior to digging.
- Construction shall comply with all applicable governing codes.
- Damaged items or property shall be repaired or replaced at Contractor's expense.
- See erosion control plan and SWPPP for required controls to be installed prior to site disturbance.
- Contours shown are to final grade.
- The first 15 ft of driveway shall be flat and is reflected in grades indicated. Driveways shall be approved by Township inspector.
- Driveways and driveway culverts (15" dia.) shall be installed per Township standards by home builder. Culverts shall be installed where indicated on these plans and shall include FES.
- Septic areas shall be marked prior to grading and shall not be disturbed.
- Maximum grading slope to be 4:1 (H:V).
- Road ditch grades at a minimum of 0.4%.
- Site dirt work is not necessarily balanced; additional cut or fill for lot balancing shall not impact overall drainage patterns.
- See Erosion Control, SWPPP, Details and Notes sheets for additional specifications.



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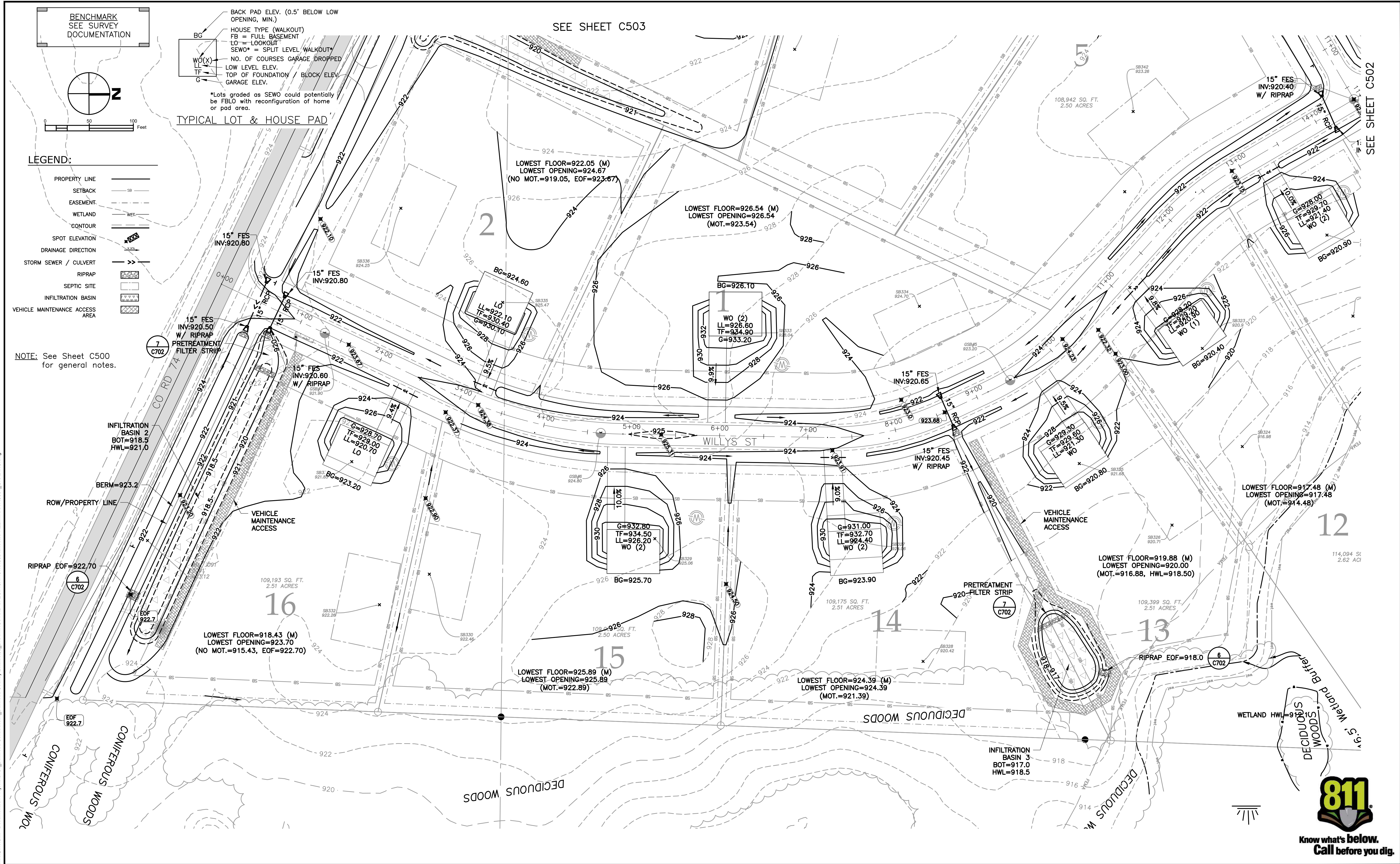
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**GRADING & DRAINAGE
COMPOSITE**

SHEET NO:
C500

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**GRADING & DRAINAGE
SOUTHEAST**

SHEET NO:
C501



A diagram of a circular pond with a radius of 25 feet. A rectangular walkway is shown adjacent to the pond, with a width of 10 feet and a length of 100 feet. The walkway is divided into three sections: a 10-foot section adjacent to the pond, a 50-foot section, and a 10-foot section. The total length of the walkway is 100 feet.

PROPERTY LINE	
SETBACK	
EASEMENT	
WETLAND	
CONTOUR	
SPOT ELEVATION	
DRAINAGE DIRECTION	
STORM SEWER / CULVERT	
RIPRAP	
SEPTIC SITE	
INFILTRATION BASIN	
VEHICLE MAINTENANCE	

TYPICAL LOT & HOUSE PAD



SHEET NO:

C502

SEE SHEET C501

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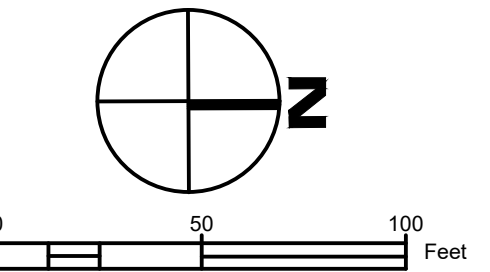
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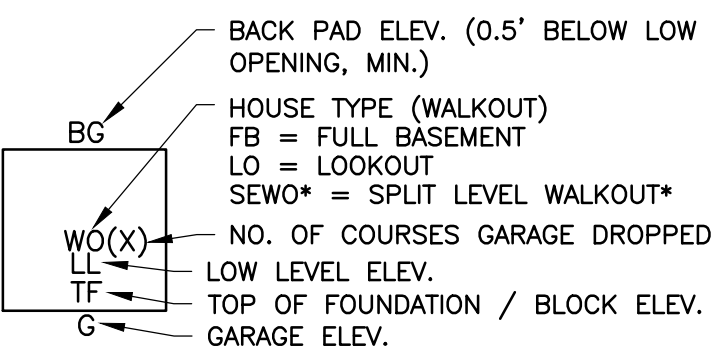
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LINWOOD TOWNSHIP, MN

GRADING & DRAINAGE NORTH



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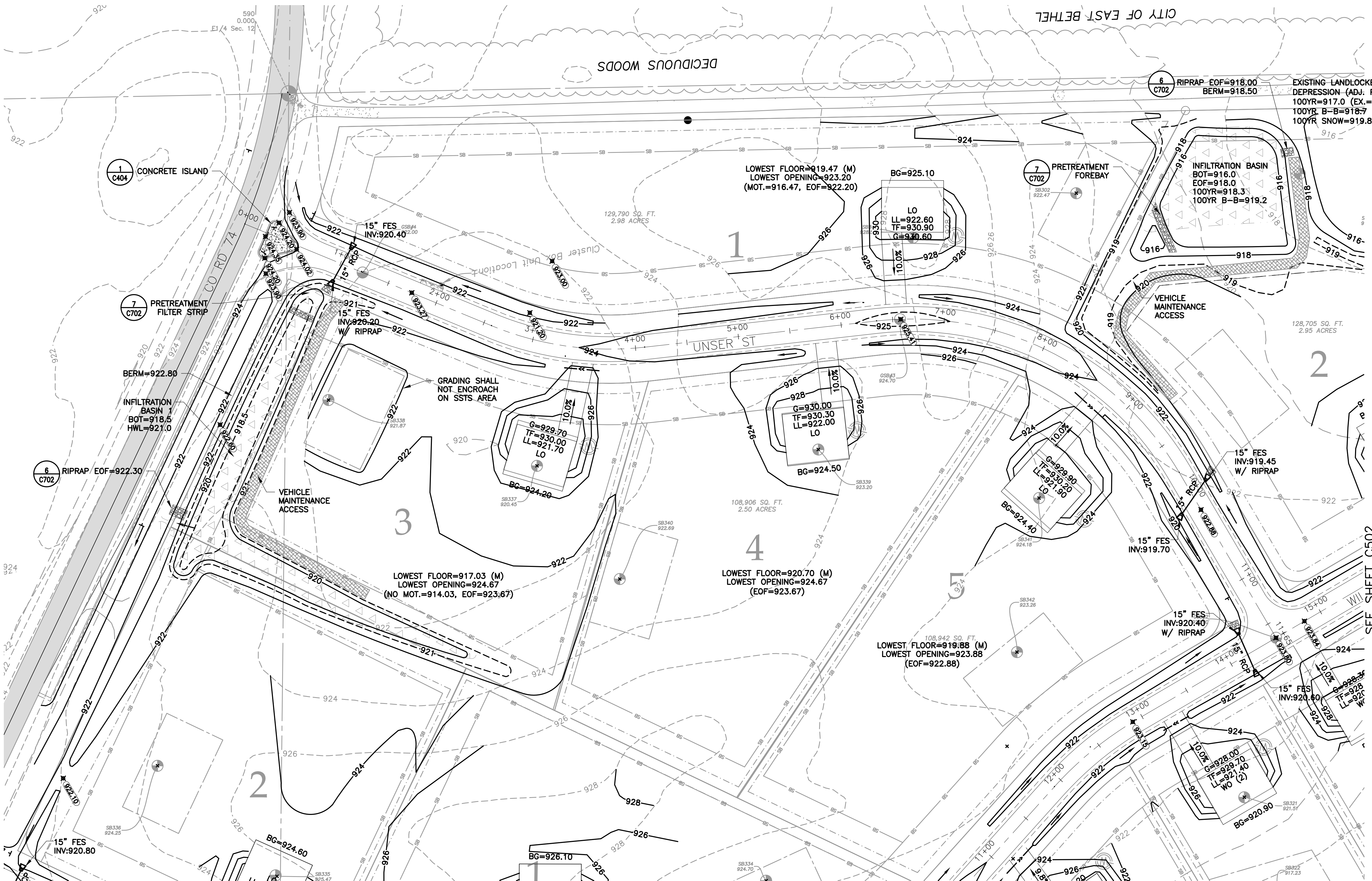
- PROPERTY LINE
SETBACK
EASEMENT
WETLAND
CONTOUR
SPOT ELEVATION
DRAINAGE DIRECTION
STORM SEWER / CULVERT
RIPRAP
SEPTIC SITE
INFILTRATION BASIN
VEHICLE MAINTENANCE ACCESS AREA



*Lots graded as SEWO could potentially be FBLO with reconfiguration of home or pad area.

TYPICAL LOT & HOUSE PAD

NOTE: See Sheet C500 for general notes.



SEE SHEET C501

SEE SHEET C501

SEE SHEET C502



SEE SHEET C603

PROPERTY LINE	
EASEMENT	
WETLAND	
WET	
CONTOUR	
ROCK RIPRAP, RANDOM CRUSHED	
EROSION CONTROL BLANKET, CAT. 10, OR HYDRAULIC MULCH MATRIX	
EROSION CONTROL BLANKET, CAT. 25	
STABILIZED CONST. ENTRANCE	
SILT FENCE	
SEDIMENT CONTROL LOG	
SEPTIC AREA	



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LINWOOD TOWNSHIP, MN

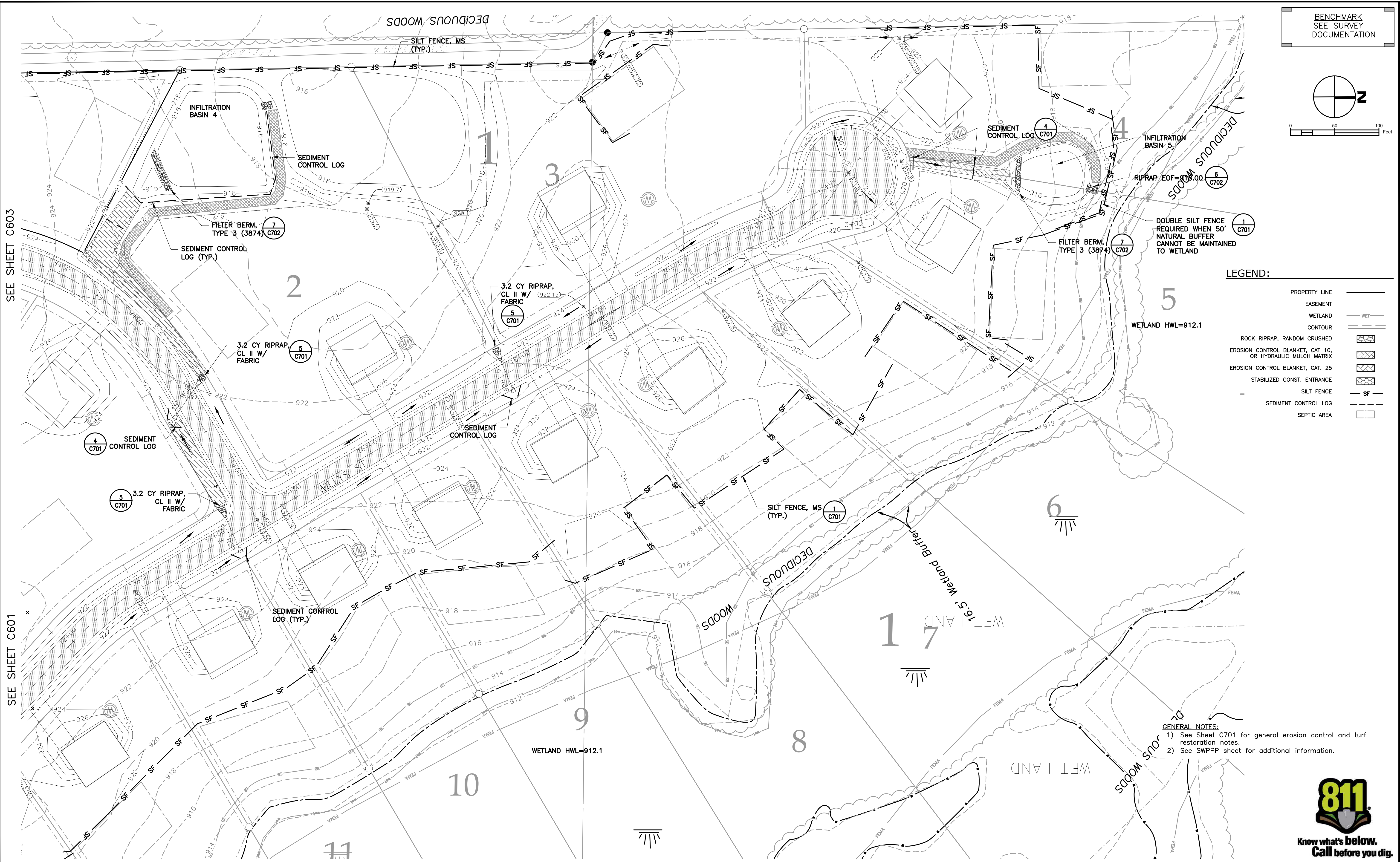
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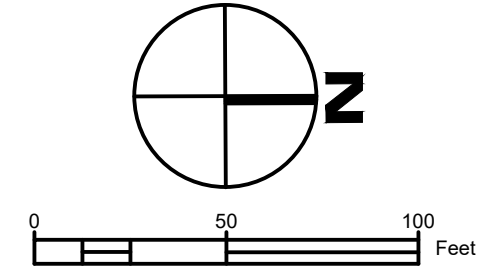


**Know what's below.
Call before you dig.**

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BENCHMARK
SEE SURVEY
DOCUMENTATION



LEGEND:

PROPERTY LINE	---
EASEMENT	---
WETLAND	---
WET	---
CONTOUR	---
ROCK RIPRAP, RANDOM CRUSHED	[Pattern]
EROSION CONTROL BLANKET, CAT. 10, OR HYDRAULIC MULCH MATRIX	[Pattern]
EROSION CONTROL BLANKET, CAT. 25	[Pattern]
STABILIZED CONST. ENTRANCE	[Pattern]
SILT FENCE	SF
SEDIMENT CONTROL LOG	[Symbol]
SEPTIC AREA	[Symbol]

GENERAL NOTES:
1) See Sheet C701 for general erosion control and turf restoration notes.
2) See SWPPP sheet for additional information.



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DAVID M. POGGI
DATE: 08-31-2023
LIC. NO.: 44573

DESIGNED: DMP
DRAWN: DMP
CHECKED: KEB

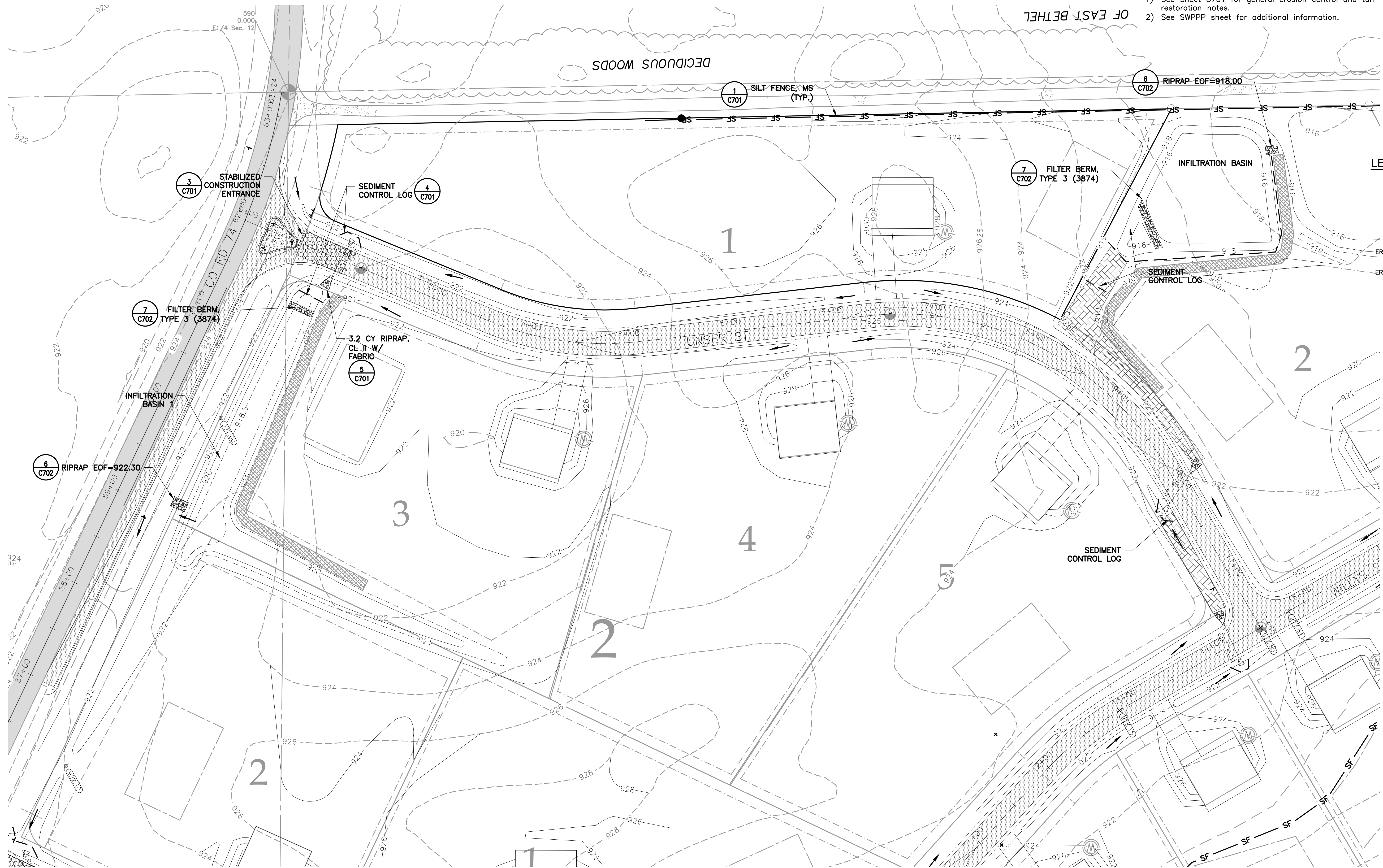
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**EROSION & SEDIMENT CONTROL
NORTH**

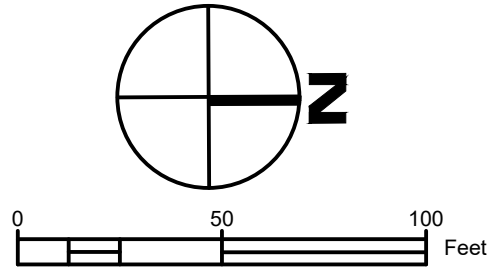
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C602

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- GENERAL NOTES:
- 1) See Sheet C701 for general erosion control and turf restoration notes.
 - 2) See SWPPP sheet for additional information.

BENCHMARK
SEE SURVEY
DOCUMENTATION



LEGEND:

- | | |
|---|-----------|
| PROPERTY LINE | --- |
| EASEMENT | - - - - |
| WETLAND | WET |
| CONTOUR | --- |
| ROCK RIPRAP, RANDOM CRUSHED | [Pattern] |
| EROSION CONTROL BLANKET, CAT. 10, OR HYDRAULIC MULCH MATRIX | [Pattern] |
| EROSION CONTROL BLANKET, CAT. 25 | [Pattern] |
| STABILIZED CONST. ENTRANCE | [Pattern] |
| SILT FENCE | SF |
| SEDIMENT CONTROL LOG | --- |
| SEPTIC AREA | [Pattern] |

SEE SHEET C601

SEE SHEET C602



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**EROSION & SEDIMENT CONTROL
SOUTHWEST**

SHEET NO:
C603

ALL CONSTRUCTION ACTIVITIES MUST MEET THE REQUIREMENTS OF THE MPCA'S **GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NPDES/SDS PROGRAM (MNR100001)**. All sheets of this planset, as well as the related Project SWMP, are hereby referenced as part of this SWPPP; any related pages shall be revised as appropriate for differing site conditions. Specific reference permit sections included in parentheses throughout.

SITE AND CONSTRUCTION DESCRIPTION:

This project includes site grading, utility and street work for a new residential subdivision in Linwood Township, Anoka County, MN (Lat: 45.363356, Long: -93.142742).

The site work will include disturbance of approximately 32.5 acres for the construction of a rural roadway section, drainage improvements and lot grading. Approximately 10,000 CY of material will be excavated and relocated on-site, and all areas will be stabilized and restored as indicated in the plans. Riprap will be installed at all storm pipe discharge locations and basin overflows.

The existing site is an agricultural area and no groundwater or soil contamination is anticipated (16.15).

The Contractor shall sign the MPCA NPDES Construction Stormwater Permit application as "Operator" and be solely responsible for meeting the erosion and sediment control requirements of the related plan sheets and the Permit.

Disturbed Area: 32.5 acres
Pre-Construction Impervious Area: 0.0 acres
Post-Construction Impervious Area: 5.16 acres
Newly Created Impervious Area: 5.16 acres
Permanent Stormwater Treatment Required (If >1.0 acre): YES

PERMANENT STORMWATER MANAGEMENT:

Permanent stormwater management is required by Linwood Township, the Anoka SWCD and the MPCA, and is described in detail in the project Stormwater Management Plan (SWMP) document. In summary, the site has been designed to infiltrate a WQV of 1.0" from the site impervious area, as well as ensure no increase in annual volume, TSS or TP discharging from the site. Key design storm discharge rates from the site will not be increased from the existing pre-construction condition.

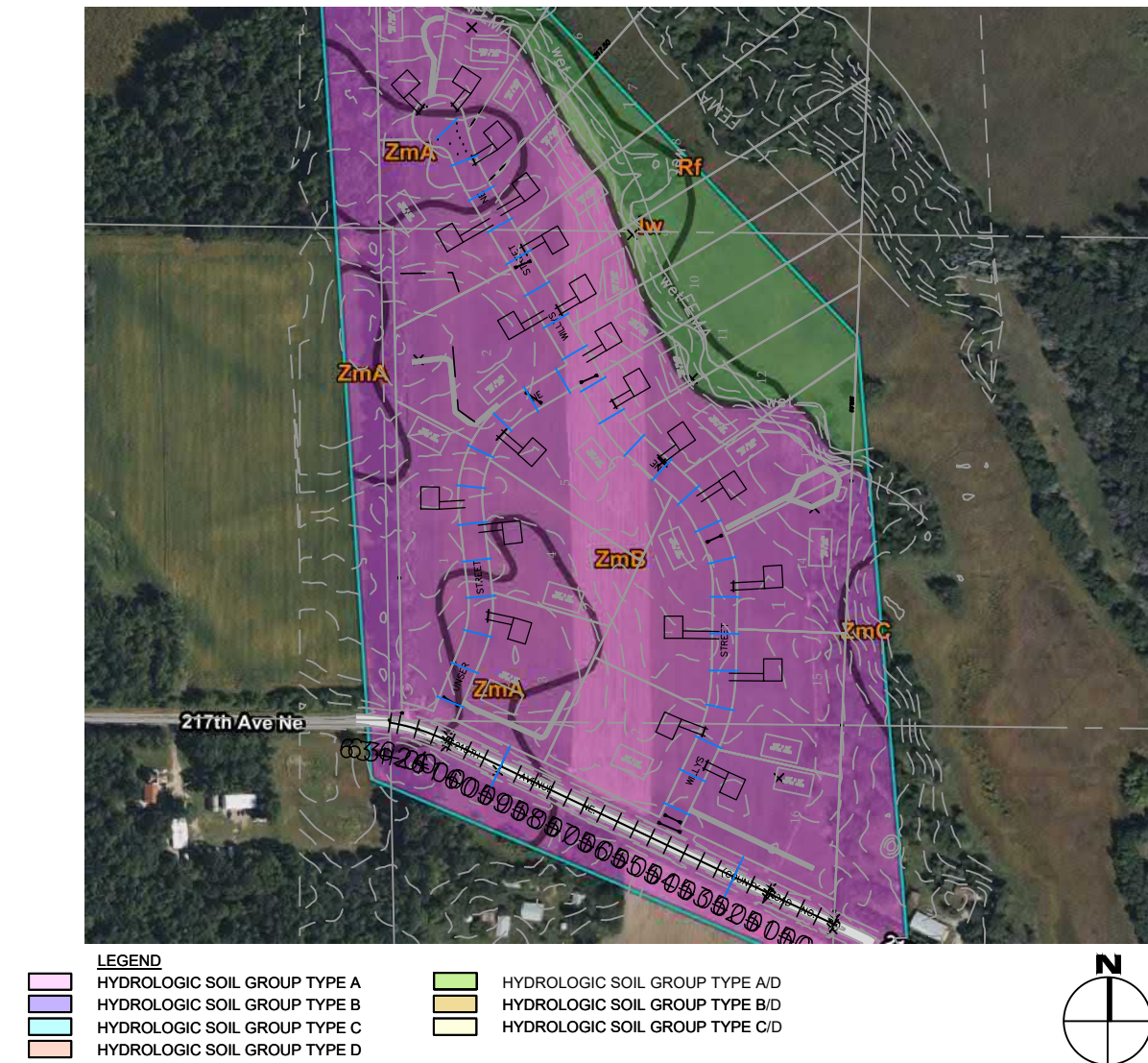
Seasonal high water table (SHWT) elevations have been approximated with mottled soils as identified with soil borings completed throughout the property. A minimum of 3' of separation is provided (as required) from bottom of infiltration basins to the SHWT elevation, or alternative BMPs are used.

Soils at the site are primarily sands and silty-sands as identified by mapping (below) and confirmed with a geotechnical investigation (Haugo, Nov. 2022). Additional soil probing done by the septic designer identified sands and mottled areas, likely due to cemented sands resulting in localized areas of perched water. The Hydrologic Soil Group (HSG) of sands is highly permeable HSG Type A.

The site includes multiple depression "land locked" storage areas as described in the project SWMP; this condition is managed with the proposed design. The property ultimately drains to the large wetland to the east. In an extreme event overflow discharge would occur to an offsite land-locked water body approximately 500' to the northwest.

The project site does not discharge to an Impaired Water within 1 mile, as defined by the State's Impaired Waters List.

SOILS MAP



DOWNSTREAM SURFACE WATERS AND WETLANDS



EROSION & SEDIMENT CONTROL QUANTITIES

EROSION & SEDIMENT CONTROL

- The contractor shall use phased construction whenever practical to minimize disturbed area at any one time.
- A 50' natural buffer shall be preserved within surface waters adjacent to construction. If not feasible, redundant (double) perimeter sediment controls separated by 5.0' are required. Special Waters require 100' buffer.
- All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
- The following shall be installed within 24 hours of connection to surface water or property edge:
 - Energy dissipation (riprap) at all outlet aprons
 - Stabilization of temporary or permanent drainage swales within 200' of property boundary or connection to surface water (e.g., storm sewer inlet, drainage swale, etc.)
- A vehicle tracking BMP must be installed at the site entrance where haul vehicles are entering and exiting the site, including: rock pad, slash mulch, wash rack, etc. Streets must be swept within 24 hours of discovery of offsite tracking.
- Temporary stockpiles must have silt fence or other applicable sediment control device around the base of the pile.
- The Contractor shall be responsible to control sediment-laden surface water from leaving site. All mobilized sediment that has left the construction zone shall be collected by the contractor and properly disposed of at no additional cost to the owner.
- Any fines levied due to inadequate erosion or sediment control practices, sediment discharging from the site, etc., shall be the responsibility of the Contractor.
- Inlets shall be protected from sediment at all times, with appropriate protection installed for each phase of development.
- Infiltration basins shall not be excavated to final grade until contributing drainage area has been fully stabilized, unless rigorous measures are incorporated to keep sediment from draining to the basins (16.4).
- When excavating to within 3' of final grade of infiltration system, areas shall be staked to ensure vehicles and equipment do not compact the soil.
- Adjacent roads must be inspected and kept clear of sediment; roads to be swept within 24 hours of tracked sediment discovery.
- Additional temporary BMPs may be required to reduce the potential for sediment transport during construction. If deemed necessary by onsite personnel, Engineer or Owner shall be contacted immediately for approval or guidance, if available. Otherwise best judgment shall be used to provide rapid stabilization or sediment controls as necessary to minimize potential pollutant discharge.

CONSTRUCTION IMPLEMENTATION SCHEDULE & PHASING

- Install perimeter silt fence and construction entrance as shown prior to site disturbance.
- Complete soil stripping and rough grading of site.
- Install infiltration areas and outlet means.
- Install sediment control logs.
- Install parking pavement and curbing as indicated.
- Replace topsoil and establish vegetative cover.
- Complete site restoration and final stabilization measures (remove temporary controls after construction activity has ceased and vegetation is established).
- Submit Notice of Termination (NOT) to MPCA within 30 days.

DEWATERING & BASIN DRAINING

- Dewatering water, if necessary, must be discharged to a temporary or permanent sediment basin when feasible; if not feasible, appropriate BMPs must be used to prevent sediment-laden water from discharging downstream.
- Use appropriate energy dissipation measures on all discharges to prevent erosion at discharge outlet. Discharge must not cause nuisance or erosive conditions to downstream properties or receiving channels. Excessive inundation of downstream wetlands is not permitted (if applicable).
- If filters with backwash water are used, all backwash water must be hauled offsite for disposal, returned to the beginning of the treatment process, or incorporated into the site in a manner not causing erosion.

INSPECTIONS & MAINTENANCE

- The contractor must routinely inspect the construction site once every 7 days during construction, and within 24 hrs of receiving more than ½" of rain in 24 hrs. Rainfall amounts must be measured by a properly installed rain gage onsite, or from a weather station within 1 mile of the project, or from a weather reporting system with site specific radar rainfall summaries (11.11).
- All inspections and rainfalls > ½" must be recorded and retained onsite with the SWPPP. Inspections shall include: date/time, name of individual, date & amount of rainfall, findings, corrective actions, observed discharge/location/description, any proposed SWPPP amendments.
- Inspections may be suspended when work is stopped due to frozen conditions. The Contractor's inspector must resume inspections within 24 hours after runoff occurs at the site or prior to resuming construction, whichever comes first.
- Silt fence (or related perimeter control device) must be maintained when accumulated sediment reaches ½ the height of the device, or if device becomes ineffective (by the end of the next business day following discovery).
- Permanent and temporary sediment basins, if applicable, shall be drained and cleaned when sediment depth reaches ½ of original storage volume; complete within 72 hrs of discovery. Must be cleaned prior to project completion.
- Non-functional BMPs must be repaired or replaced by the end of the next business day following discovery.
- Inspect downstream ditch / drainage system for signs of erosion or sediment buildup during each inspection; stabilize within 7 days.
- Inspect vehicle exit locations and adjacent streets; remove sediment from surfaces within 1 day.

POLLUTION PREVENTION

- All solid waste generated at the site must be disposed of in accordance with all applicable federal and state regulations.
- All hazardous materials must be properly stored/contained to prevent spills or leaks; materials must be properly disposed of per applicable regulations, including Minn. Rule Ch. 7045. Restricted access storage areas must be provided to prevent vandalism.
- Vehicle or equipment washing must be confined to a defined area (minimum of 100' from pond or drainage ditch); runoff containing any hazardous materials must be collected and properly disposed of. Defined area must be delineated with heavy-duty silt fence (incidental); no engine degreasing is allowed on-site.
- Pesticides, herbicides, insecticides, fertilizers, treatment chemicals, and landscape materials must be under cover to prevent pollutant discharge, or protected by similar means to minimize potential contact with stormwater.
- Concrete and other washout waste must be effectively contained – solid and liquid washout waste must not contact ground and must be disposed of properly in compliance with MPCA rules. A sign must be installed at washout area requiring personnel to utilize the proper facilities for disposal of concrete and other wastes.
- The contractor is solely responsible for monitoring air pollution and ensuring that it does not exceed levels set by any agency or LGU. This includes dust created by work performed at the site; air pollution and dust control measures are incidental to the contract. The engineer may require additional dust control measures to be implemented, as necessary.
- Adequate temporary restroom facilities shall be present onsite in a stable and secure location during construction operations, and shall be maintained in an adequate functioning condition.

FINAL STABILIZATION

- The Contractor must ensure final site stabilization meets the Permit requirements, and submit the NOT within 30 days.
- Final stabilization includes uniform perennial vegetative cover of at least 70% of the expected final growth density over the entire previous surface area, or other equivalent cover to prevent soil erosion.
- All temporary synthetic and structural BMPs must be removed as part of final stabilization.

RECORD RETENTION

- The SWPPP, all revisions to it, and inspection & maintenance records are the responsibility of the Contractor and must remain at the site during construction hours. The materials may be kept in a field office, onsite vehicle, or "SWPPP Mailbox".
- Training documentation shall be provided by Contractor as outlined below and required.
- The SWPPP, project permits, inspection/maintenance logs, stormwater maintenance agreements, and stormwater management design calculations must be retained for 3 years after submittal of permit NOT. Contractor shall provide Owner or Engineer copies of inspection and maintenance logs prior to final payment.

TRAINING REQUIREMENTS

- The permittees must comply with the training requirements as outlined in Section 21 of the Permit. The Contractor shall have a trained individual performing BMP installations and inspections, as required.
- Training table (below) to be completed prior to construction, as appropriate.

RESPONSIBLE PARTIES & TRAINING SUMMARY

	COMPANY	CONTACT	PHONE	TRAINING DATE	COURSE / ENTITY	CONTENT
OWNER:				NA	NA	NA
SWPPP PREPARER:	CIVIL METHODS, INC.	KENT BRANDER, PE	763.210.5713	1/24/2022	UNIVERSITY OF MN	DESIGN OF CONSTR. SWPPPS
GENERAL CONTRACTOR / INSPECTOR:						
EROSION & SEDIMENT CONTROL INSTALLER:						
PERMANENT BMP OPERATOR / MAINTAINER:				NA	NA	NA

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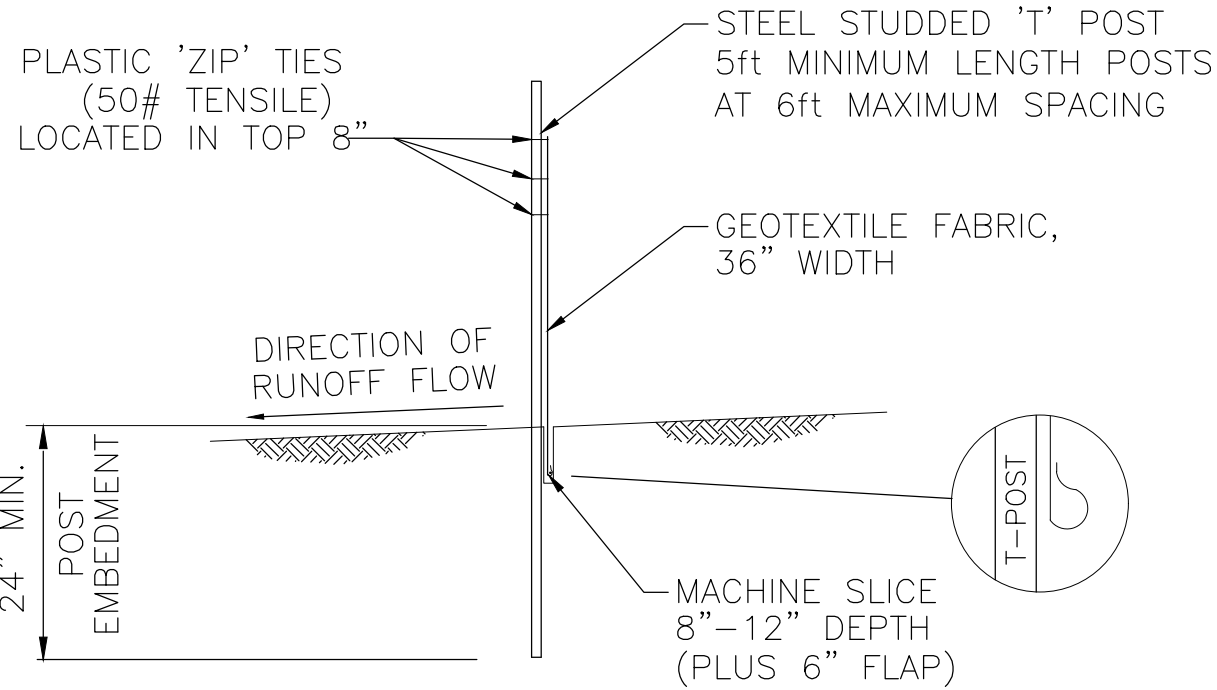
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SWPPP

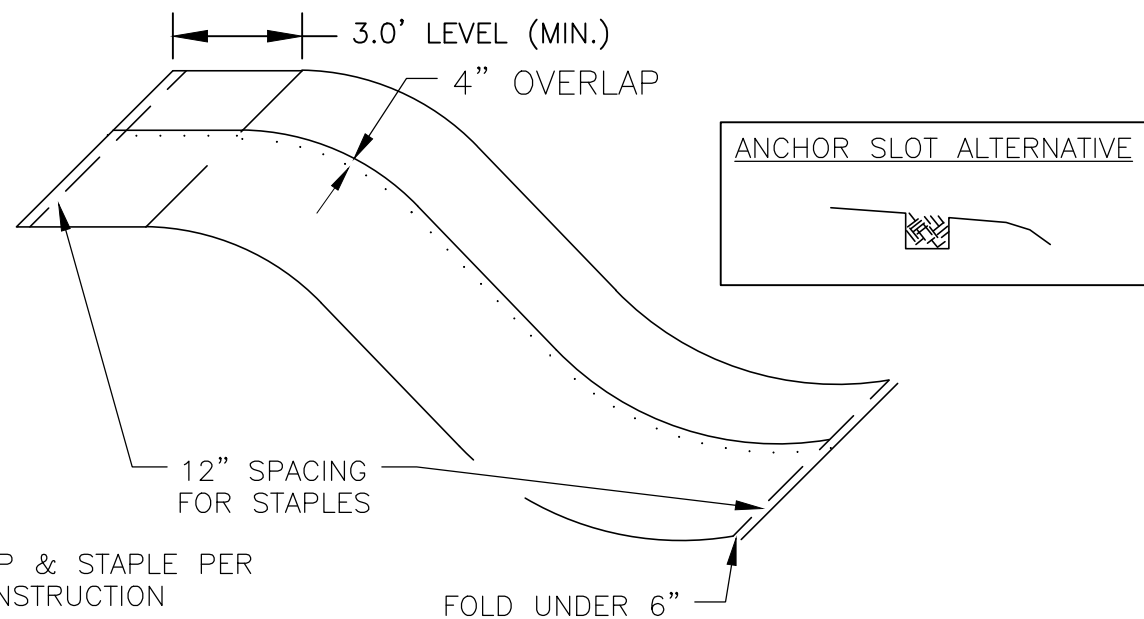
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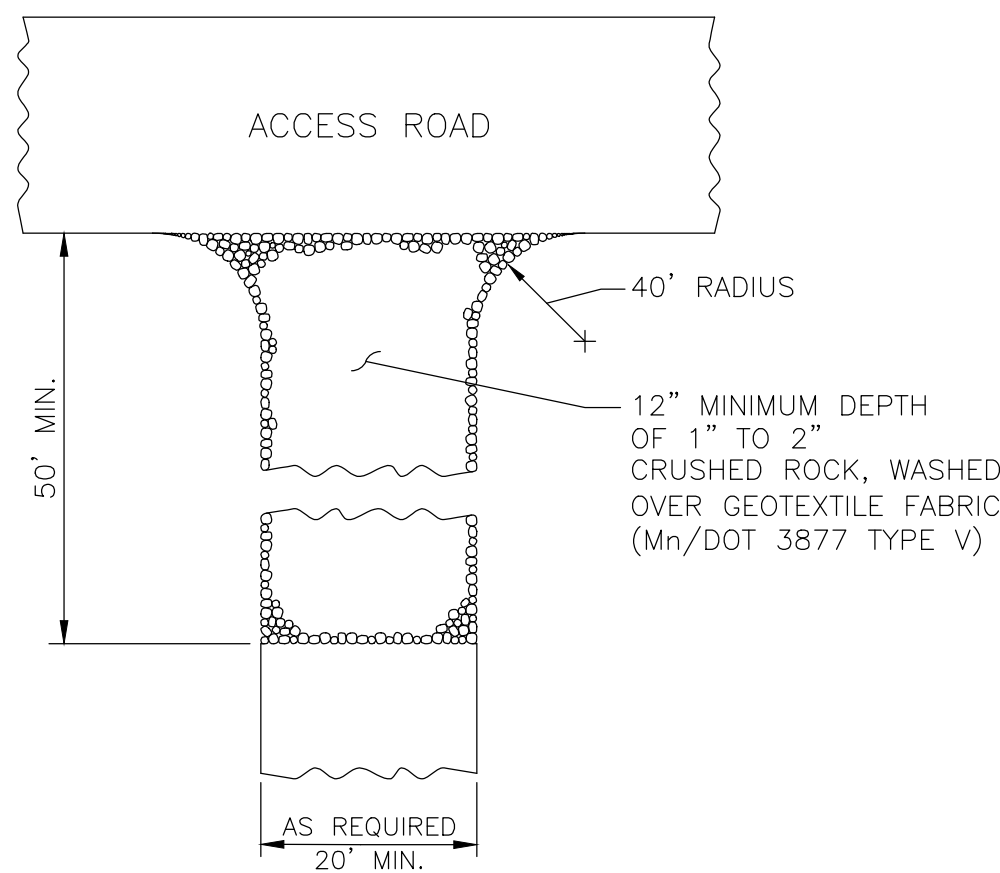
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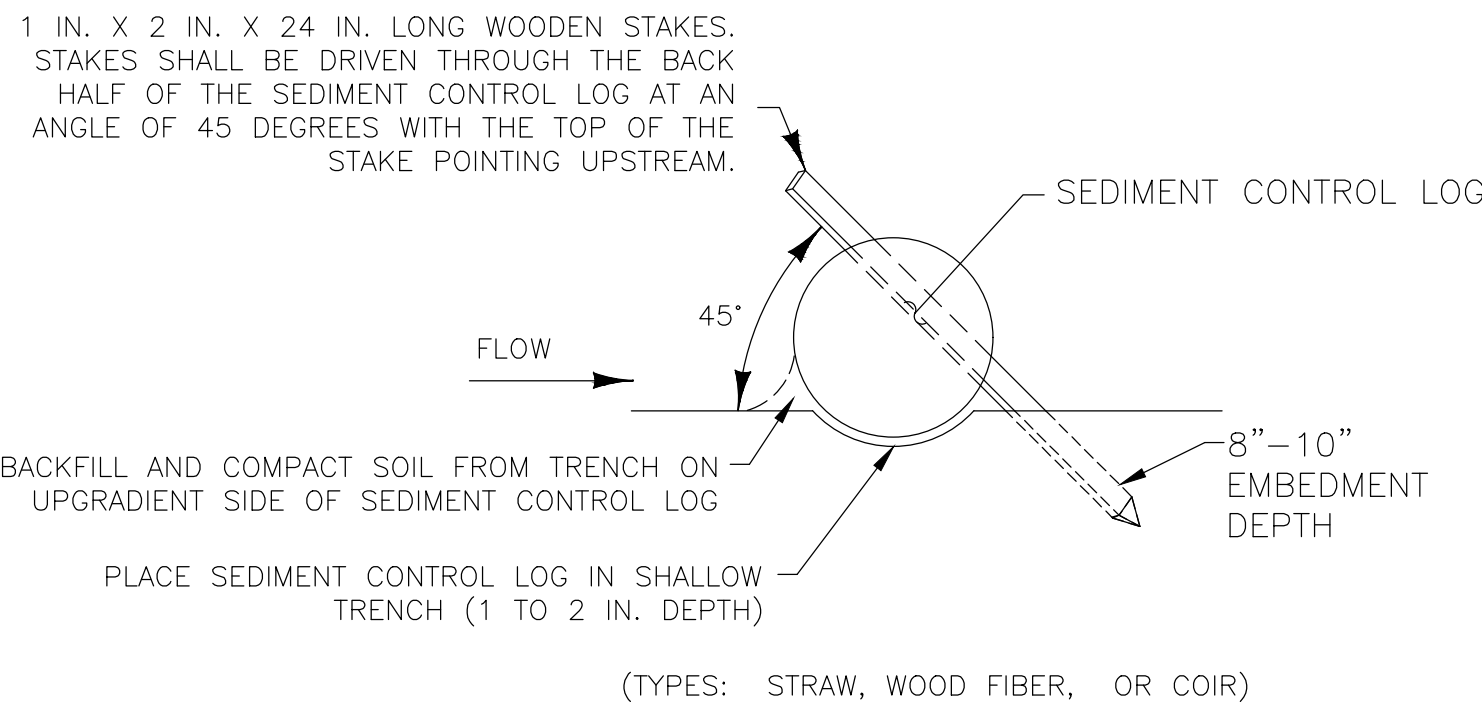
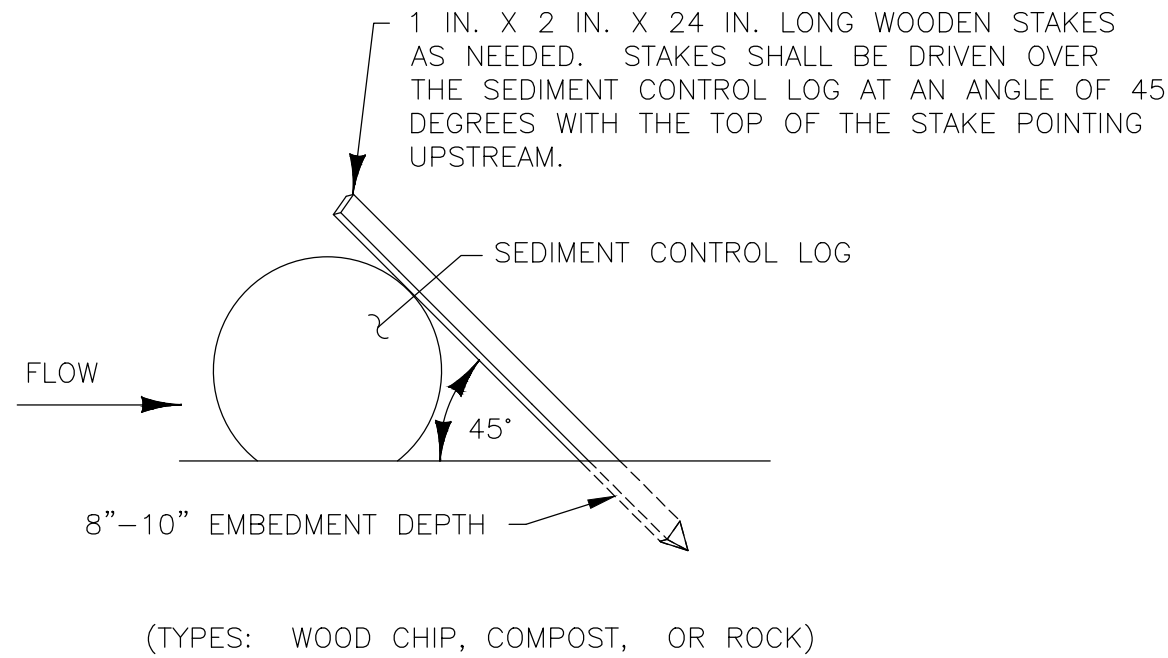
1 SILT FENCE – MACHINE SLICED



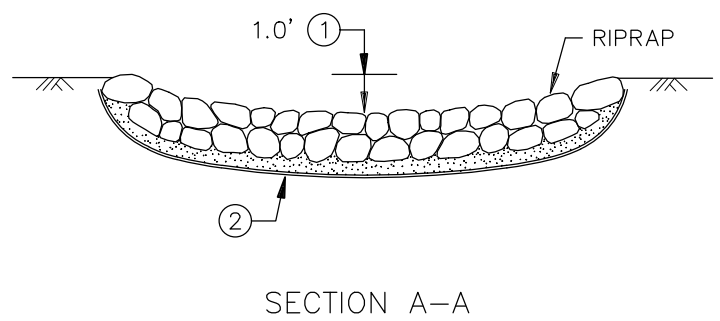
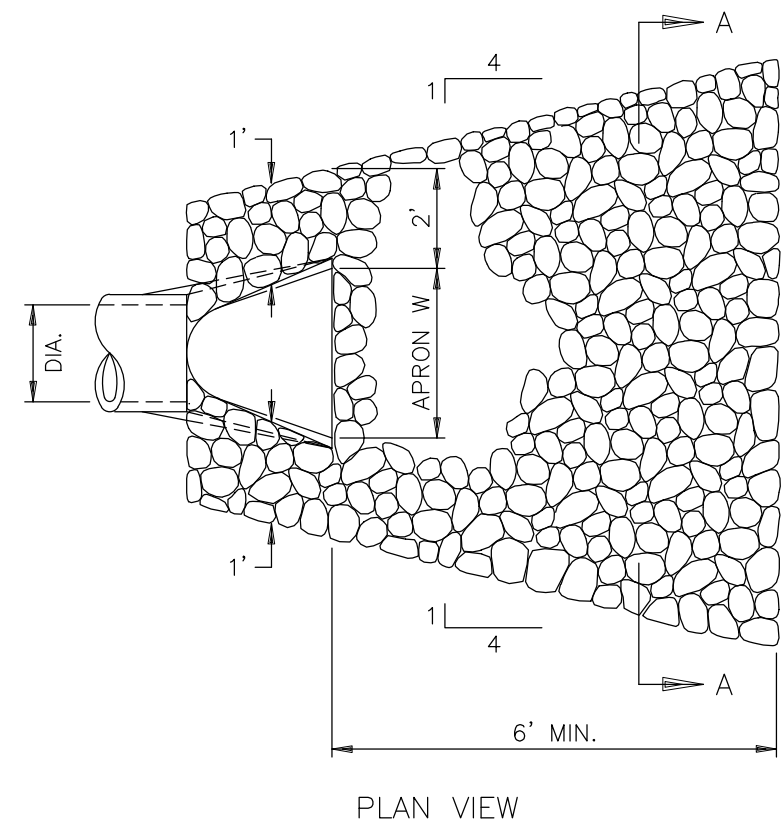
2 EROSION CONTROL BLANKET INSTALLATION



3 ROCK CONSTRUCTION ENTRANCE



4 SEDIMENT CONTROL LOGS



- NOTES:
RIPRAP TO BE INSTALLED PER Mn/DOT PLATE 3133D. REQUIREMENTS FOR GEOTEXTILE TYPE, RIPRAP SIZE AND THICKNESS WILL BE DESIGNATED IN THE PLANS.
- ① FOR PIPES GREATER THAN OR EQUAL TO 30", USE 1.5'. PROVIDE "BOWL" FOR ENERGY DISSIPATION.
- ② GEOTEXTILE FILTER FABRIC SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIPRAP

5 RIPRAP AT FLARED END

- Contractor must be familiar with the SWPPP plan sheet. SWPPP shall remain onsite at all times, as noted in "Record Retention" section of SWPPP.
- Topsoil, vegetation, and erosion control items installed and maintained per Mn/DOT 2571-2575.
- Perimeter sediment controls shall be installed as indicated prior to site disturbance, and shall be installed to allow for high-flow bypass to prevent failure during significant rainfall.
- Silt fence shall be of type indicated on the plan (Mn/DOT 3886). Double row of silt fence required adjacent to wetland when 50' natural buffer cannot be maintained.
- Install sediment control logs around rim of bioretention basins immediately after construction and leave in place until construction has ended and site is stabilized with vegetation.
- Sediment control logs shall be minimum 8" diameter wood or straw (Mn/DOT 3897).
- Devices shall be inspected weekly and after all rainfall events exceeding 1", and maintained as necessary to keep the intended functional condition.
- Accumulated sediment shall be removed from sediment control devices when $\frac{1}{3}$ of device height has been reached.
- After rough grading is completed, and topsoil spread, areas shall be seeded and blanketed (or sodded) within 7 days. Areas not being actively worked must be covered with temporary seed within 14 days.
- Random crushed riprap per Mn/DOT 3601 shall be of class and quantity as indicated, and shall include geotextile fabric (3733).
- Seed in yard areas shall be Mn/DOT Mix 25-151 (3876) residential turf or 25-131, low maintenance turf, or approved equal. Other areas to be seeded with Mix 35-241 (native prairie).
- Township ROW areas shall be restored with Type 1 mulch (disc anchored) or blanket, fertilizer and seed (Mix 25-131).
- Seed infiltration basin bottoms with Mn/DOT Mix 33-261.
- Seed pond edge and/or disturbed wetland buffer areas with native wet & dry-tolerant seed, Mn/DOT Mix 33-261 or 33-262.
- Ditch bottoms <1.5% shall include erosion control blanket, Cat.20 (3885).
- Ditch bottoms 1.5%-5% shall include erosion control blanket, Cat.25 (3885)..
- All other seeded areas, including infiltration basins shall be seeded (or planted) and covered with hydraulic mulch matrix (3884.B2), blanket (3885, Cat.10 or 15), or straw mulch, Type 1 (no straw in basins).
- Turf shall be installed by a qualified professional and/or per the Mn/DOT Seeding Manual (latest edition), at rates indicated in the manual.
- Perimeter sediment controls shall remain in place until vegetation is growing / established in all disturbed areas.
- Erosion during construction shall be repaired by the Contractor within 24 hours of discovery.

6 SEDIMENT CONTROL & TURF RESTORATION NOTES

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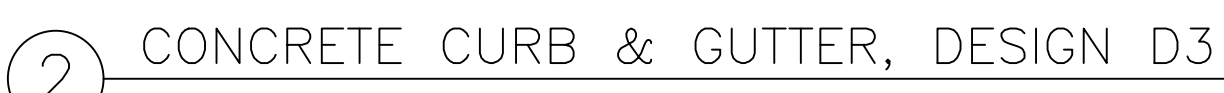
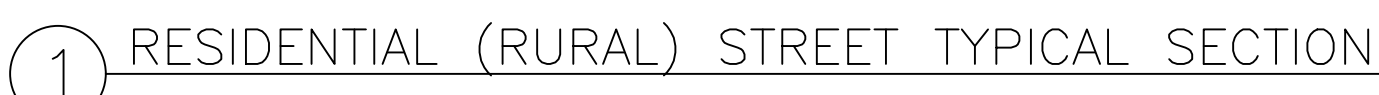
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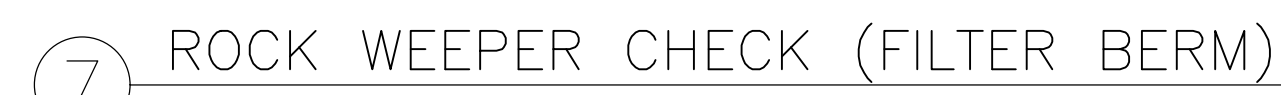
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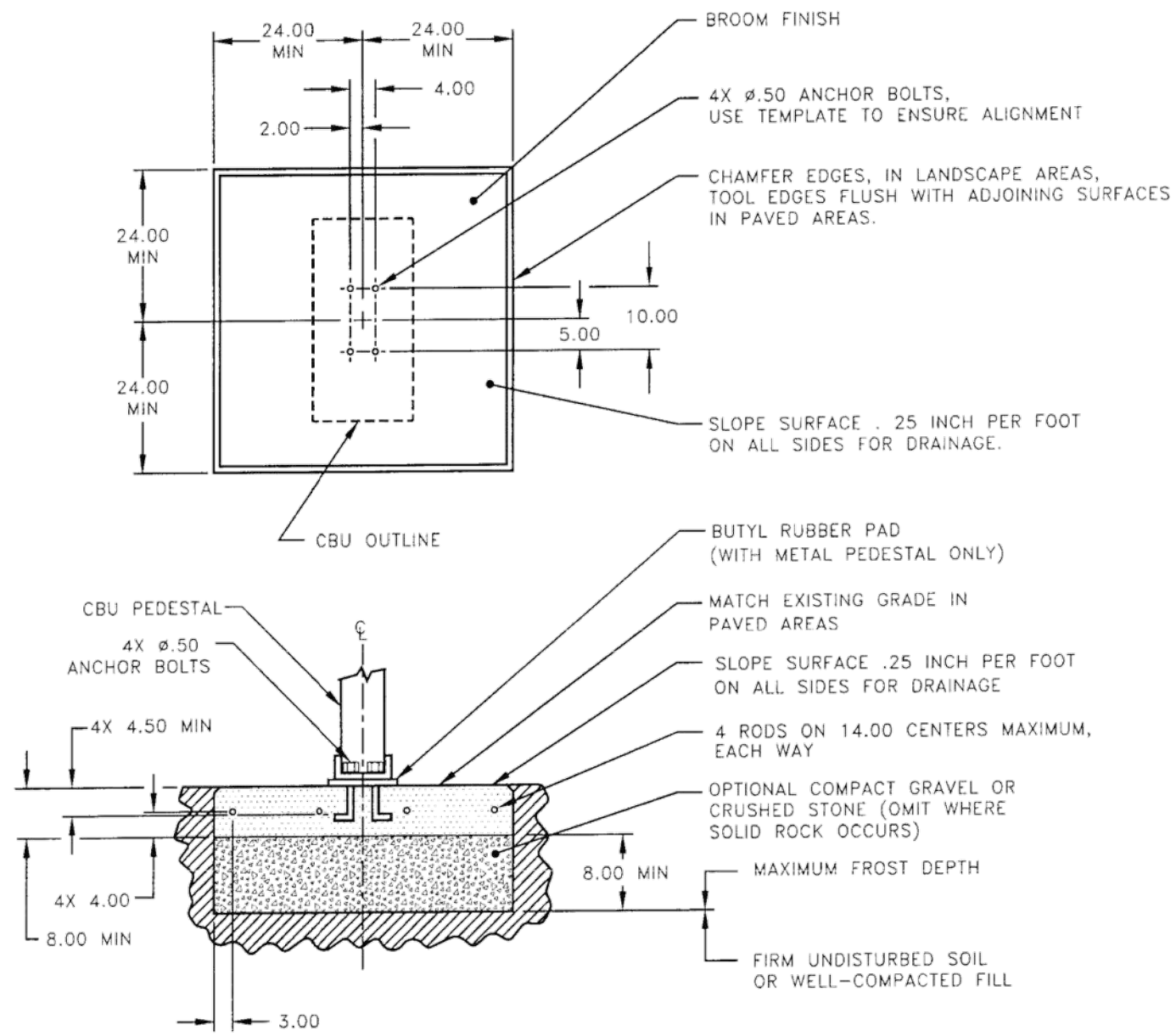


	A	B	C	D
BASIN 1	4.0'	10.0'	922.3'	0.5'
BASIN 2	4.0'	10.0'	922.7'	0.5'
BASIN 3	4.0'	8.0'	918.0'	0.5'
BASIN 4	4.0'	8.0'	918.0'	0.5'
BASIN 5	4.0'	8.0'	918.0'	0.5'



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USPS APPROVED SPECIFICATIONS – CONCRETE PAD (SINGLE UNIT)
(All measurements are in inches)



- NOTES:
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN – 6% MAX AIR ENTRAINMENT AND BE PLACED WITH A 3.50 – 4.50" SLUMP IN ACCORDANCE WITH ACI 301.
 2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
 3. ANCHOR BOLTS SHALL CONFORM TO ASTM A193, GRADE B8M, TYPE 316 STAINLESS STEEL.

15

CLUSTER BOX UNIT (CBU)
-ANCHORING METHODS-

CBU's must be level and mounted firmly in concrete, using one of the following methods.

1. The J-bolt method is the preferred method of installation of CBU's on concrete pads; however, the J-bolt pattern must be accurate with the CBU pedestal plate. When using J-bolts, in order to prevent any damage or accidents that could result from the exposed bolts, consideration should be given as to the time lapse between pouring the concrete and the actual installation. Expansion anchors must be installed in accordance with the manufacturer's instructions.
2. The use of anchor bolts for the installation of CBU's on concrete pads is also acceptable as long as the methods described below are followed.
 - a. Hilti Kwik bolt II, 1/2" diameter X 5-1/2" overall length
Catalog Number: 000-453-696, KB II 12-512
Stainless Steel Catalog Number: 000-454-744
Minimum embedment in concrete must be no less than 3-1/2"
 - b. ITW Ramset Redhead Trublot, galvanized, 1/2" diameter X 7" overall length
 - c. Rawl Stud, 1/2" diameter X 5 1/2" overall length, galvanized.
Catalog Number: 7324
Minimum embedment in concrete must be no less than 4"

CLUSTER BOX UNIT (CBU)
-CONCRETE PAD REQUIREMENTS-

- ALL FREE STANDING PADS MUST BE 8" THICK -

1 UNIT	SINGLE PAD	4' X 4'
2 UNITS	DOUBLE PAD	4' X 7'
3 UNITS	TRIPLE PAD	4' X 10'
4 UNITS	QUAD PAD	4' X 13'

***** WHEN PLACING A PARCEL LOCKER AT ANY CBU LOCATION,
INCREASE THE PAD SIZE BY AN ADDITIONAL 4' X 4'*****

17

1 USPS CLUSTER BOX PAD

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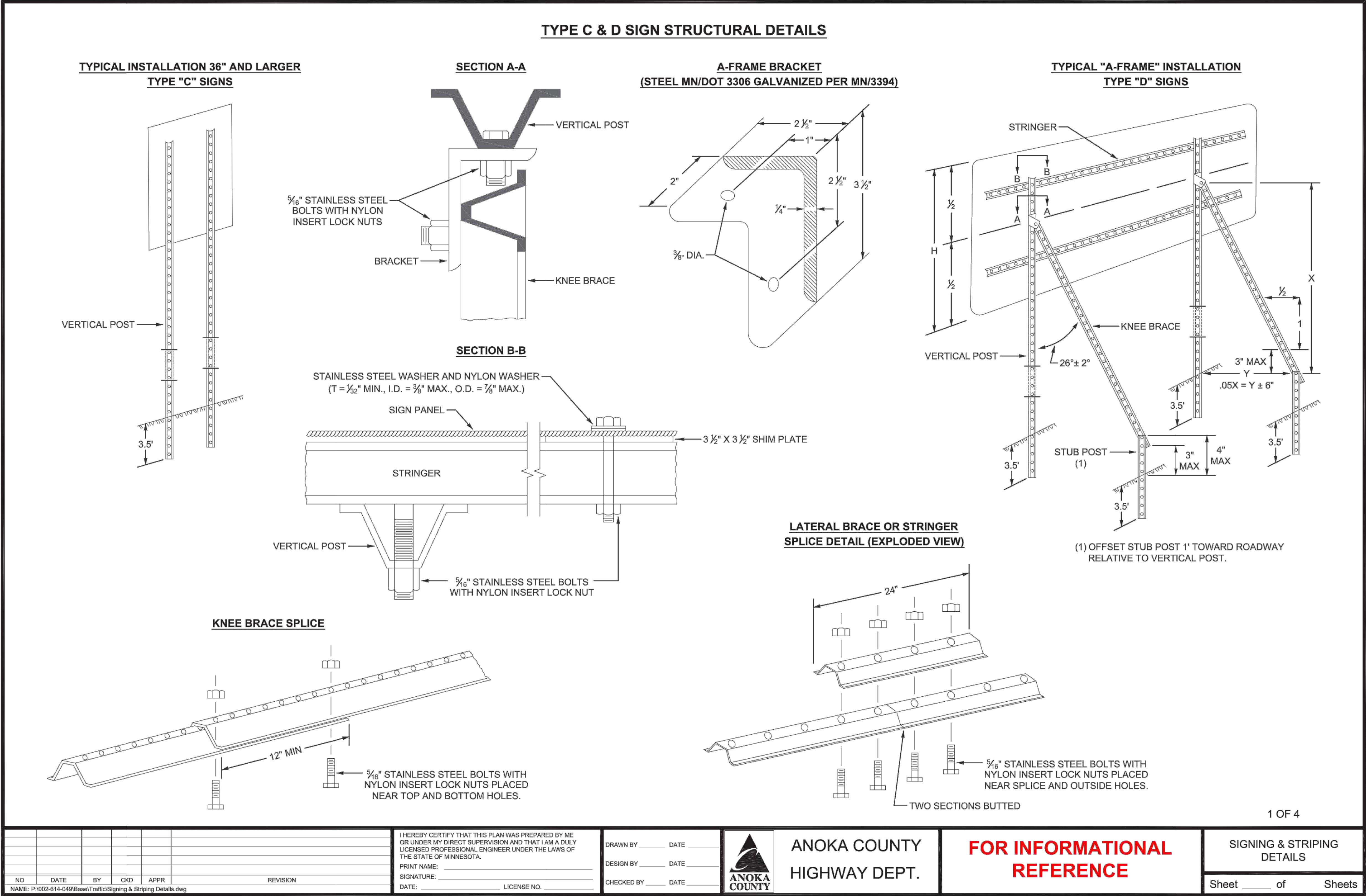
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CHECKED: KEB

DATE / REVISION:

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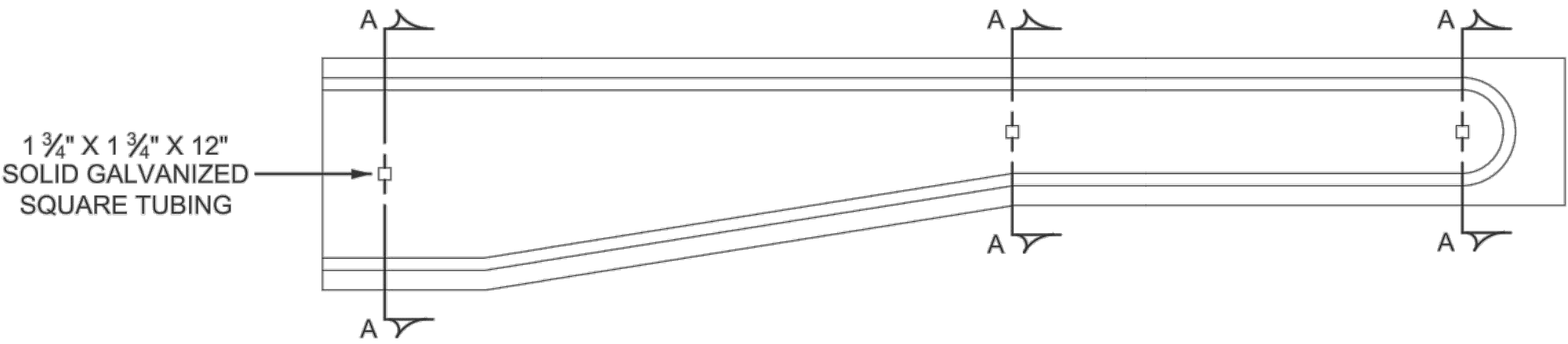
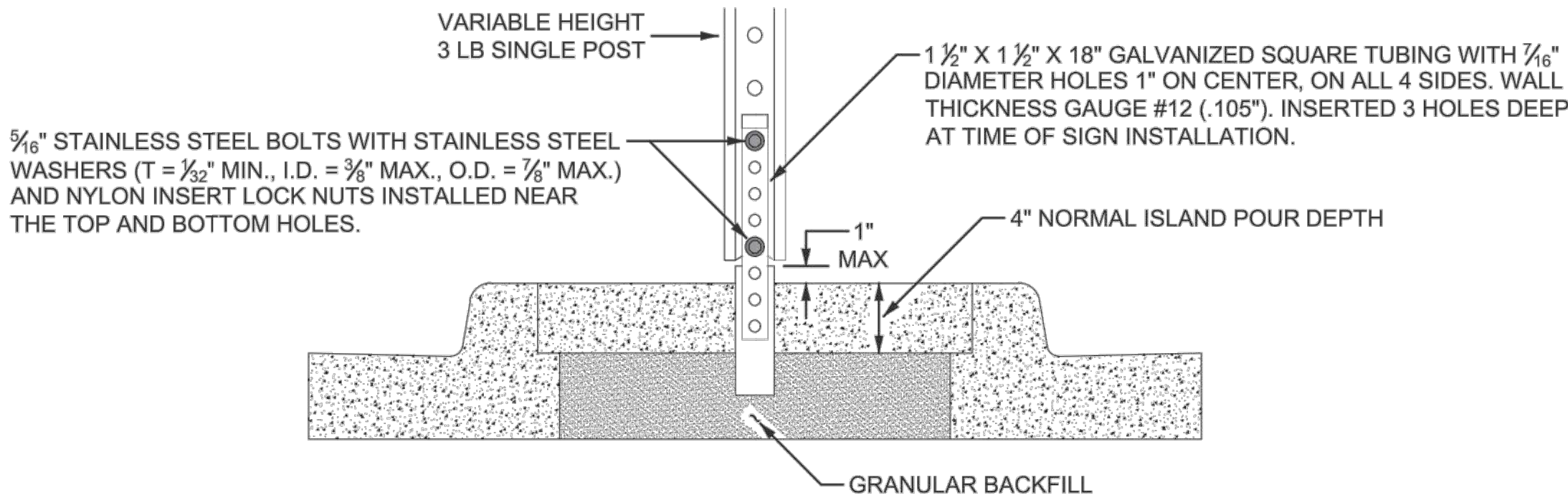
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DELLWOOD COUNTRY ESTATES
LINWOOD TOWNSHIP, MN

DETAILS

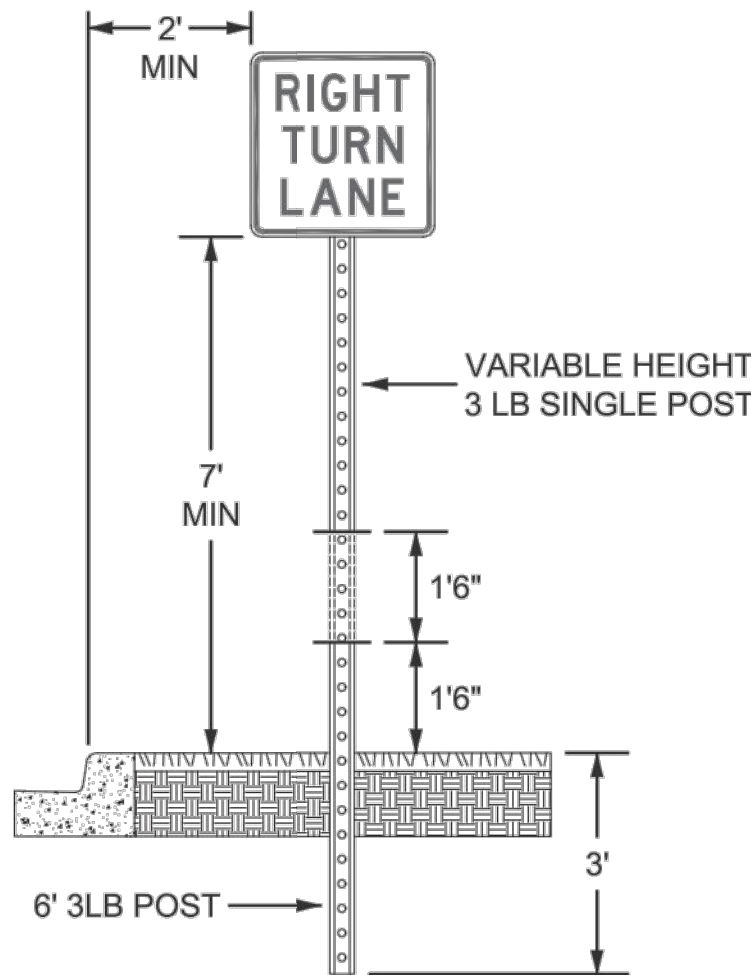
SHEET NO:
C704

SIGN INSTALLATION TYPICALS

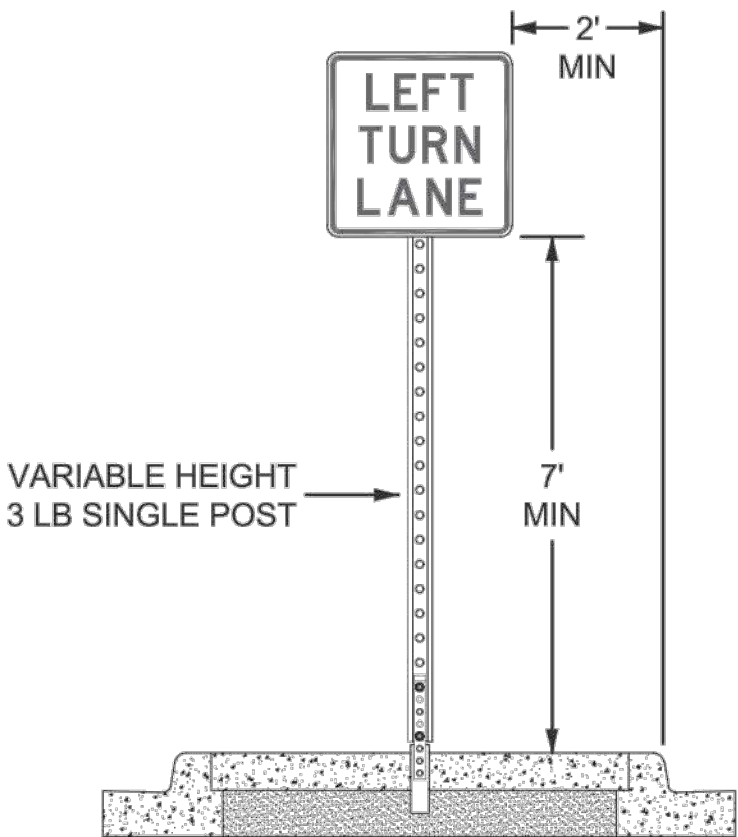
SECTION A-A



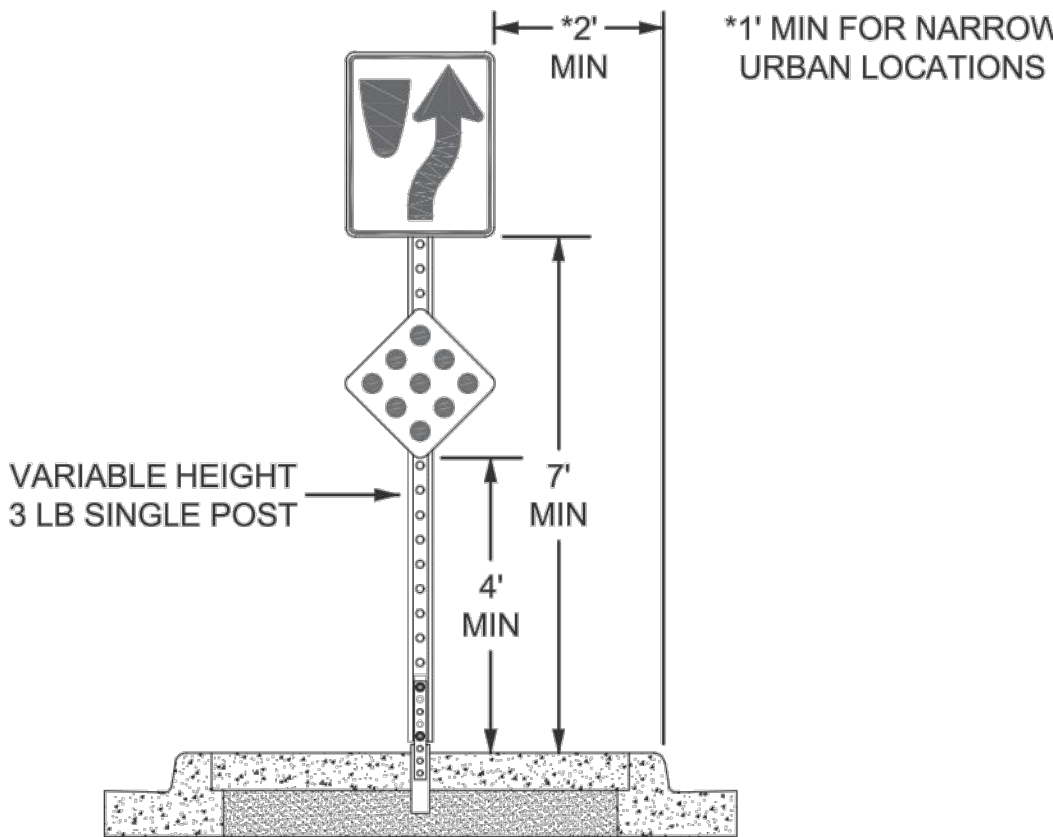
GROUND POST MOUNT
SIGN INSTALLATION TYPICAL



ISLAND MOUNT, BREAK-AWAY
SIGN INSTALLATION TYPICAL



ISLAND MOUNT, BREAK-AWAY
SIGN INSTALLATION TYPICAL
KEEP RIGHT/CLUSTER



- SIGN NOTES:**
- TELESAR INSERT NOT TO BE INSERTED MORE THAN 3 MOUNTING HOLES DEEP INTO BASE. TYPICAL ON ALL SIGN INSTALLATIONS.
- INSTALLATION NEAR SHARED-USE PATHWAY (MN MUTCD):**
- THE MINIMUM HEIGHT MEASURED VERTICALLY FROM THE SHARED-USE PATHWAY TO THE BOTTOM OF THE SIGN SHALL BE 7 FEET. IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN AND IS MOUNTED LESS THAN 7 FEET, IT SHALL NOT PROJECT MORE THAN 4 INCHES INTO THE SHARED-USE PATHWAY.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-614-049\Base\Traffic\Signing & Striping Details.dwg

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.

PRINT NAME: _____
SIGNATURE: _____
DATE: _____ LICENSE NO. _____

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____



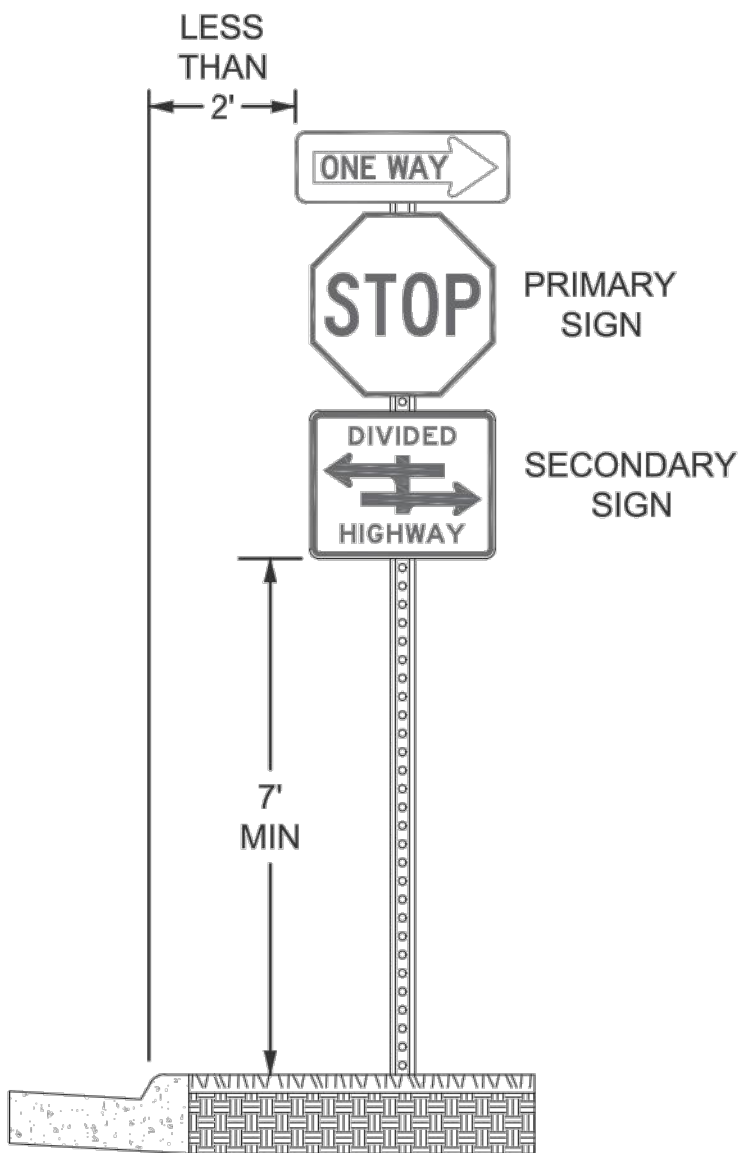
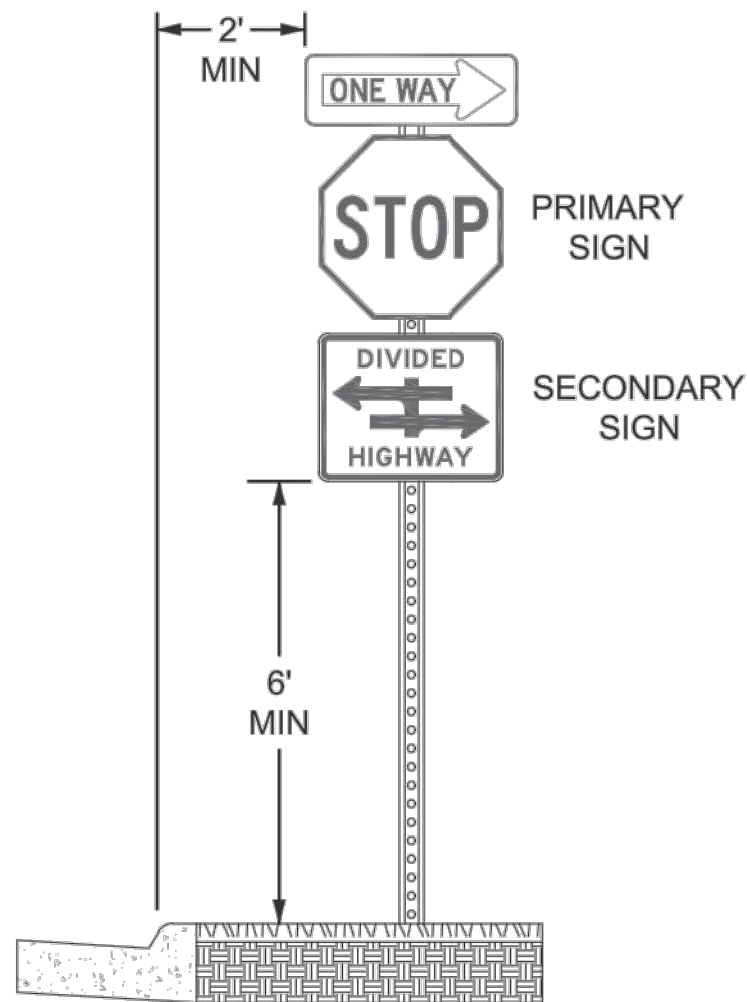
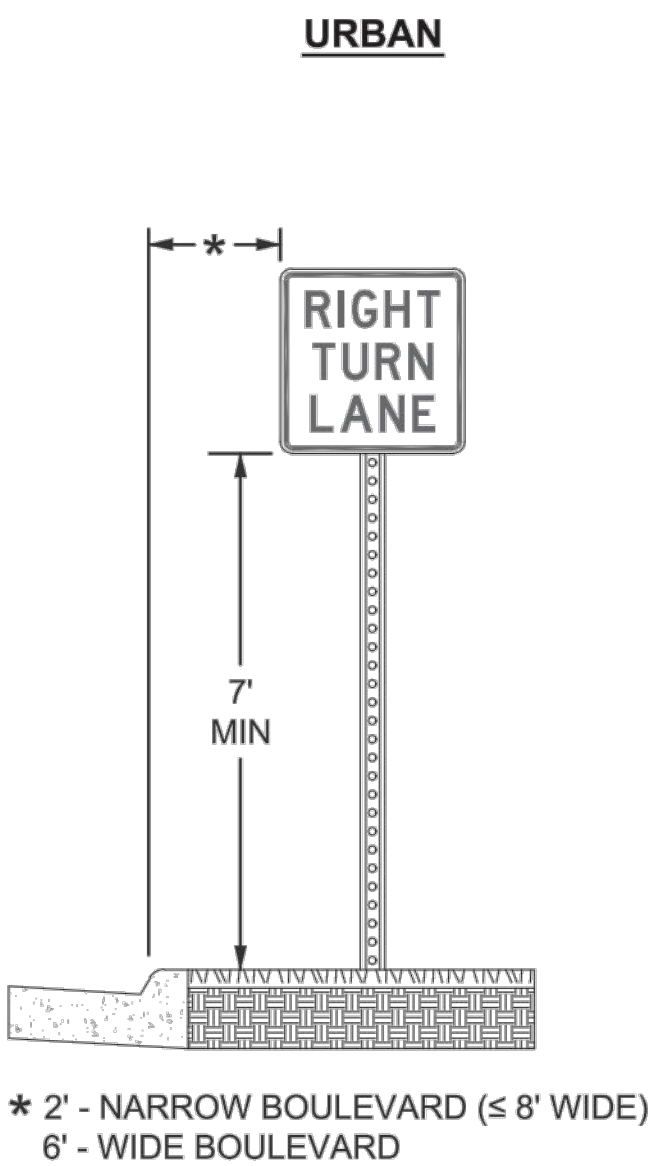
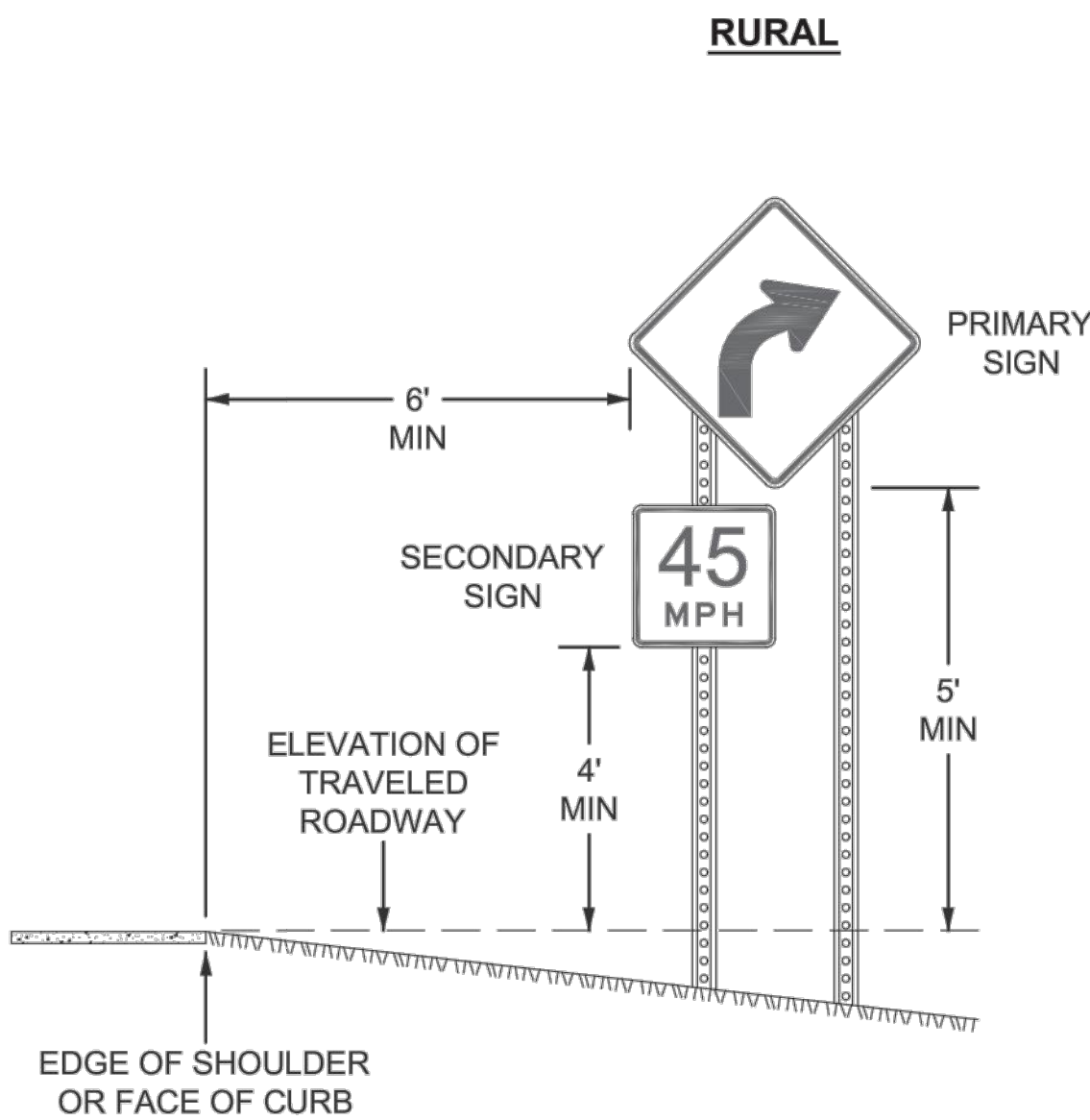
ANOKA COUNTY
HIGHWAY DEPT.

FOR INFORMATIONAL
REFERENCE

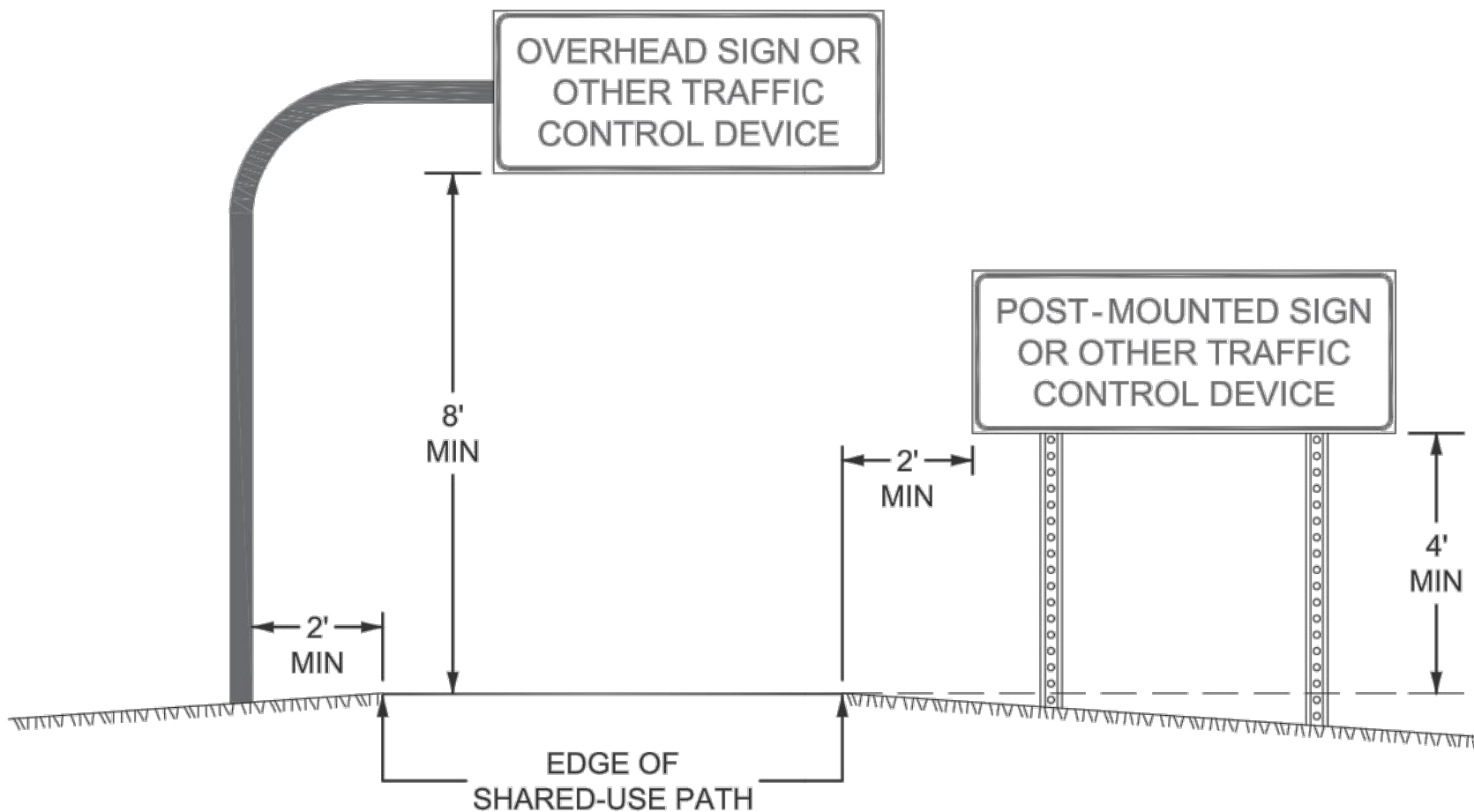
SIGNING & STRIPING
DETAILS

Sheet _____ of _____ Sheets

SIGN PLACEMENT TYPICALS



SHARED-USE PATH



- NOTES:
- ALL DIMENSIONS ARE MINIMUMS.
 - MAINTAIN A DISTANCE OF 2' BETWEEN TRAFFIC CONTROL DEVICE AND SHARED-USE PATH.
 - 7' SIGN CLEARANCE IF 2' DISTANCE BETWEEN SIGN AND SHARED-USE PATH CANNOT BE MAINTAINED.

3 OF 4

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: _____

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ANOKA COUNTY
HIGHWAY DEPT.

FOR INFORMATIONAL
REFERENCE

SIGNING & STRIPING
DETAILS

Sheet _____ of _____ Sheets

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DAVID M. POGGI

DATE: 08-31-2023

LIC. NO.: 44573

DESIGNED: DMP

DRAWN: DMP

CHECKED: KEB

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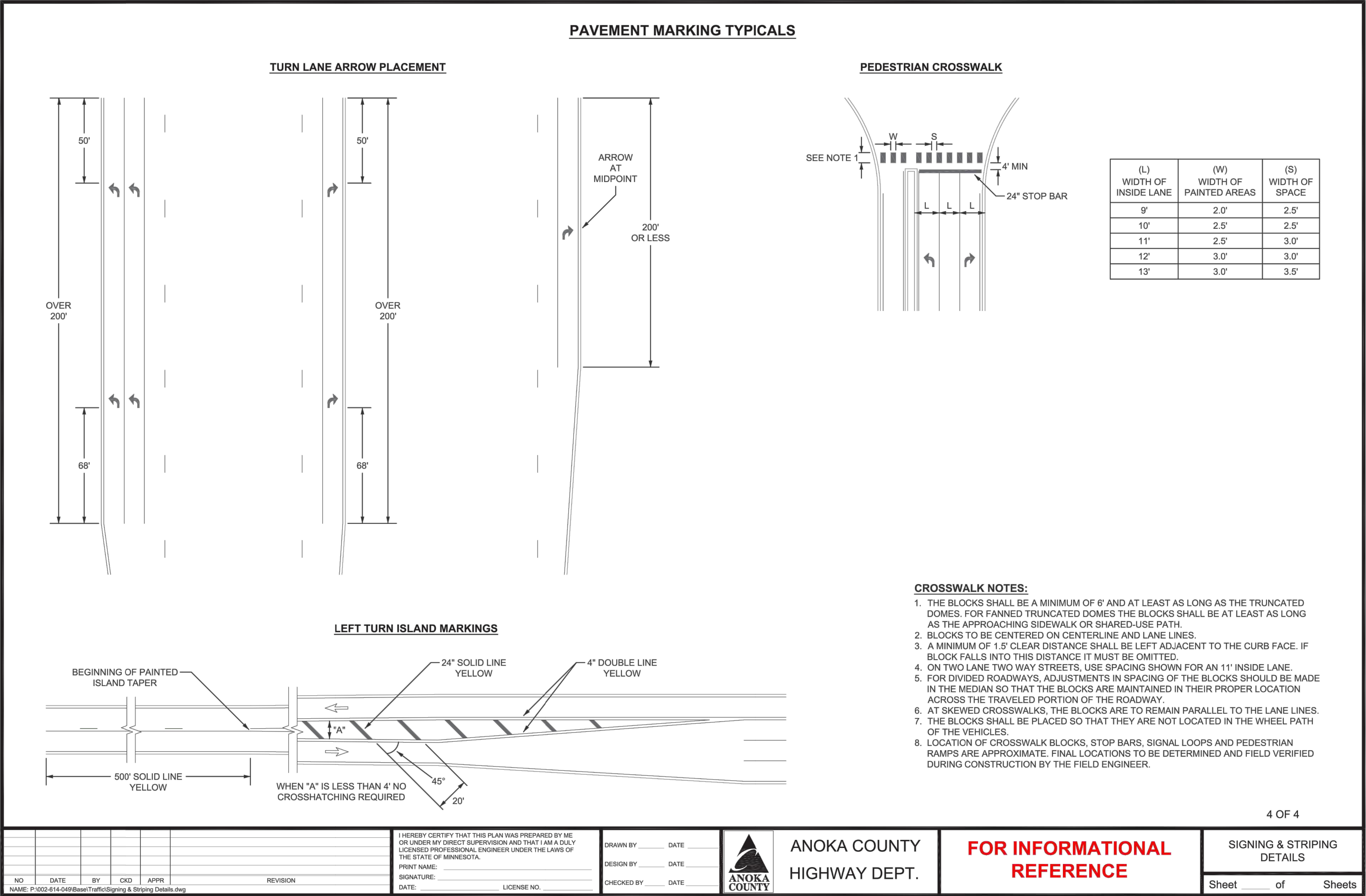
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DELLWOOD CONST. LTD
DELLWOOD COUNTRY ESTATES
LINWOOD TOWNSHIP, MN

DETAILS

SHEET NO:
C706

Print Date: 8/31/2023 10:59 AM
File Loc: C:\CIVIL\Civil Methods, Inc\CDM - Documents\7. Projects\0731_Dellwood Construction_Dellwood Country Estates\08_DRAWINGS AND SPECIFICATIONS\CID\Sheets\PRELIMINARY\C701_DETAILS.dwg



Print Date: 8/31/2023 10:59 AM
File Loc: C:\CIVIL\Methods, Inc\CDM - Documents\7 Projects\0731_Dellwood Const.Ltd., Dellwood Country Estates\08_DRAWINGS AND SPECIFICATIONS\CD Sheets\PRELIMINARY\CT01_DETAILS.dwg

GENERAL NOTES:

- Contractor shall obtain and pay for all permits, tests, inspections, etc. required by agencies that have jurisdiction over the project, not previously applied for by the Owner (Contractor to verify). Execute and inspect work in accordance with all Local and State codes, rules, ordinances, or regulations pertain to the particular type of work involved.
- The subsurface utility location information in this plan is utility quality level D. This utility quality level was determined according to the guidelines of CI/ASCE 38–02, titled “Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.” Engineer does not guarantee the accuracy of utility locations or that all existing utilities are shown; Contractor is responsible for locating utilities.
- Existing boundary, utility and topographic information shown on this plan is from the site survey performed by Acre Land Surveying.
- Contractor to call Digger’s Hotline / Gopher State One Call for location of all utilities within the construction area prior to beginning construction. Digger’s Hotline: 811 Gopher One; 800.252.1166.
- Where existing utilities such as gas, electric, telephone or cable lines conflict with the work, Contractor shall coordinate the abandonment, removal, relocation, offset, or support of the existing utilities with the appropriate local utility companies. Coordinate any new gas meter and gas line installation, electric meter and electric service installation, cable service, and telephone service installation with the local utility companies.
- Contractor is solely responsible for jobsite conditions, including safety of all persons and property throughout the duration of the project (not limited to working hours).
- Contractor is responsible for providing traffic control as necessary at site entrance, including barricades, flagmen, warning signs, etc. Controls shall be installed and maintained per Mn/DOT and MMUTCD standards.
- Construction shall be performed in accordance with the referenced standards and specifications, including: Mn/DOT, CEAM, Minnesota Plumbing Code, International Building Code, City Codes, ASTM, and the ADA.
- The 2020 Edition of the Minnesota Department of Transportation “Standard Specifications for Construction” and the “Supplemental Specifications” dated September 2022 shall govern for all work within Anoka County Highway R/W.
- Contractor shall include in prices bid for items listed all work and materials necessary to satisfactorily complete the project as indicated by these plans; additional payment will not be made for ancillary items unless prior approval is requested and received from Owner.
- The Contractor shall confirm with Owner who will be responsible for all construction staking necessary to accurately perform the work identified in these plans.
- Perform all grading, base construction, pavement construction, and miscellaneous construction in accordance with the Mn/DOT Standard Specifications (latest edition) and all subsequent amendments provided that the provisions for measurement and payment do not apply to the work of this contract.
- Protect subgrades from damage by surface water runoff. Provide and maintain temporary drainage throughout construction until the permanent drainage system is in place and operational. Install temporary ditches, piping, pumps, or other means as necessary in order to insure proper drainage at all times. Provide positive outfalls for low points at building pad and roadway locations.
- All pipe testing shall conform to current Mn/DOT standards, Township requirements, and/or as indicated on plans.
- All work shall be warranted free of defect per Owner agreement or for a period of 1 year from project closeout; repair or replacement necessary during this period shall be completed at Contractor expense, including areas of settlement.
- Contractor shall not impact adjacent properties and is solely responsible for any such impacts.

SITE GRADING & SUBGRADE PREPARATION:

- See Erosion Control and SWPPP sheets prior to beginning site disturbance.
- Grading and compaction in street areas shall generally conform to standards outlined in the Geotechnical Report prepared by Haugo (Nov. 18, 2022).
- Unless otherwise noted, all proposed grades shown are finished grades. Finished grades at the points between spot elevations or contours are determined by uniform slopes between the given grades.
- Earthwork is not necessarily balanced given topsoil assumptions; site work determination is the responsibility of the Contractor. Final pad elevations may be brought to grade through additional onsite borrow. Confirm with Owner.
- At locations where new work connects to existing work, field verify existing elevations and grades prior to beginning the new work. Match existing grades at construction limits.
- Topsoil from grading areas shall be stripped, salvaged and stockpiled; subcut below final grade for placement of a minimum of 4” salvaged topsoil in green areas (incidental).
- Swales and areas outside building or pavement footprints to be formed and compacted per Mn/DOT 2105. Spread in layers no thicker than 8” and compact with suitable compaction equipment.
- Remove all unsuitable material (organic soils, uncontrolled fill, debris, and natural or artificial obstructions) in the zone from 3.3 ft below the finished subgrade to the finished subgrade in the proposed pavement areas.
- Compact street section per geotechnical report recommendations (Haugo, Nov. 2022).
- Contractor shall provide one fully loaded tandem axle truck for test rolling (2111) in presence of Engineer. The Engineer shall determine which areas of the subgrade must be reworked or replaced; in general, a maximum deflection of 0.10’ will be allowed.
- Once the subgrade has been test rolled and accepted by the Engineer, no traffic or construction equipment shall be permitted to operate on the prepared area.

AGGREGATE BASE:

- Mn/DOT specification 2211 shall apply to the Class 5 aggregate base construction.
- Subgrade preparation is incidental to aggregate base construction, and shall be approved by Engineer prior to placement of aggregate.
- The depth and class of aggregate base to be constructed shall be as shown on the plans. Aggregate base construction shall take place only after the subgrade condition and grade has been examined by the Owner/Engineer.
- Aggregate shall be placed in lifts no greater than 4”. Each layer of base course shall be wetted and rolled to achieve maximum compaction of 100% Standard Proctor per Mn/DOT 2211.
- Grade of aggregate surface shall be verified by contractor with shots taken at no more than 20 ft intervals.
- Contractor shall perform testing by driving a fully loaded tandem truck over the aggregate and areas that deflect shall be reworked.

INFILTRATION BASIN NOTES:

- The infiltration area shall be staked / fenced prior to construction to prevent excessive compaction throughout construction. Minimize traffic in this area.
- Basin shall not be excavated to within less than 6” of final grade prior to street installation and seeding and mulching of contributing areas. Grade to final grade at time of planting. If engineered media being installed, can excavate to within 6” of final bottom of media elevation.
- Excavate infiltration basin to final grade with light–weight equipment or from outside the basin footprint to minimize compaction to extent practical.
- Place rock filter berm (or additional temporary sediment control logs) immediately (within 48 hrs or before next rainfall, whichever is sooner) after final basin grade is established.
- Soil borings indicate sand likely at infiltration basin bottom elevation; therefore, after final grade is reached, add 2” Grade 2 compost (Mn/DOT 3890.2B), till 12”–24” deep. Rooting topsoil borrow (3877.2E) shall be placed 12” deep in infiltration basin if clayey soils present.
- Plant native seed and hydromulch bottom and sideslopes of infiltration basin per plan.

TRENCH EXCAVATION, BEDDING & BACKFILL:

- Trench excavations shall be in accordance with the requirements of CEAM Standard Specifications Section 2600.3B
- Granular Bedding and Granular Encasement – Bedding and granular encasement materials used in the pipe zone area (4” below the pipe to 12” over the pipe) shall conform to Mn/DOT 3149.2F.
- Backfill material shall consist of soil from trench; in the case of unsuitable material, backfill shall consist of Mn/DOT 3149.D1.
- Bedding and encasement shall be compacted to 90% Standard Proctor using Specified Density Method, or as recommended by manufacturer, whichever is denser.
- Backfill shall be compacted in 12” lifts to Specified Density Method:
 - 100% Standard Proctor from subgrade elevation down 3 feet.
 - 95% Standard Proctor from bottom of excavation up to 3 feet below
- Backfill material around all manholes, catch basins, valve boxes, curb boxes, and hydrants shall be compacted with hand–machines. The maximum lift thickness shall be 6 inches.

INSTALLATION OF PIPE & FITTINGS:

- The Contractor shall keep accurate records as to the location of the service connections, field tile, utility crossings, etc., either constructed or encountered during construction.
- Commence pipe–laying at the lowest point in the proposed sewer line and lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
- The Contractor is responsible to inspect and clean, if necessary, all lines which have become compromised by the construction operations.
- All pipes shall be inspected or tested per Township requirements.

STORM SEWER SYSTEM:

- Pipe sewer per Mn/DOT 2503 and structures per Mn/DOT 2506
- RCP pipe shall be Class V unless noted otherwise).
- RCP joints shall include o–ring rubber gaskets and be water–tight.
- Driveway culverts may be aluminized corrugated metal with metal flared end sections.

CONCRETE CURBING, WALKS & MISC. CONCRETE WORK:

- ACI 330 R–08, ACI 330.1–03 Specifications and Mn/DOT Specification Section 2521 & 2531 shall apply to ready–mixed concrete pavement materials, construction, curing, and quality control for curb and gutter construction and miscellaneous concrete work (walks, driveway aprons, etc.).
- The concrete mix (2461) to be used shall be 3F52 for curb & gutter (2531), walks and drives (2521).
- Contractor shall supply mix design data for review.
- Provide contraction and expansion jointing per Mn/DOT 2521 / 2531. Curb contraction joints shall be placed at even 10’ increments.
- Isolation/expansion joint (I”) shall be provided at connection with existing concrete pad, as well as end of curb return; joints shall be filled with preformed joint filler material (3702).
- Contractor shall provide a smooth radius curb return.
- When vertical tapering is necessary (inlets and ends), taper shall be from curb height to zero height in no less than 3.0 feet (UNO).
- All concrete shall be coated with white pigmented curing compound immediately after finishing is complete in accordance with Mn/DOT 3754, meeting ASTM C309, Type 2.
- Testing shall be the responsibility of the Contractor, and performed by a certified independent tester as required by Owner, and may include:
 - One set of 3 cylinders taken for every 100 cu yd of concrete (one set per day minimum).
 - Air testing and slump testing shall be completed with each cylinder set that is molded, and should be performed at the site upon delivery, after water addition (if applicable), with results reported to Owner representative or Engineer immediately.
 - Concrete failing to meet strength shall be removed and replaced at Contractor’s expense.
- Minimum 6” depth of Class 5 (3138) aggregate base shall be furnished under all curb. All base material shall be compacted to 100% Standard Proctor upon the prepared subgrade.
- Base course shall be moist, but not saturated during concrete placement. Apply water not less than 6 hours before placement; if base dries, sprinkle water to moisten to avoid pools.
- Suitable salvaged material shall be used for backfill behind curb (once concrete has obtained sufficient strength).
- Contractor to install adequate barricades to keep automobile and pedestrian traffic off pavement for a minimum of 3 days, and truck traffic 7 days (incidental).

HOT MIX ASPHALT PARKING LOT AND STREET

- Bituminous pavement shall be of type indicated in the details, meeting all material and installation requirements of Mn/DOT Specification Section 2360.
- Test results and/or certificates of compliance shall be submitted for verification of mineral aggregates, gradation, aggregate quality, mix design, asphalt material, and tack coat.
- The bituminous surfacing shall be prepared, handled, and constructed per Mn/DOT 2360, with a maximum deviation of plus or minus ¼ inch from the planned compacted thickness.
- The bituminous material for tack coat shall be CSS–1, CSS–1h, CRS–1, or CRS–2 meeting requirements of Mn/DOT 2357.
- When connecting to old bituminous pavement, a clean, straight, vertical edge will be provided by saw–cutting full depth through the existing pavement. New bituminous pavement shall match grade of existing pavement, with no noticeable difference at joint.
- The contact surfaces of all fixed structures, the edge of the in–place mixture in all courses at transverse joints, and the wearing course at longitudinal joints shall be given a uniform coating of Liquid Asphalt or Emulsified Asphalt tackifier before placing the adjoining mixture. The bituminous material shall be applied at a rate of 0.05 Gal/SY and by methods that will ensure uniform coating and in no case shall the application be excessive. The contractor shall thoroughly clean all hard surfaces immediately before applying tack material.
- Protect pavement areas from overloading by delivery trucks, construction equipment, and other vehicles prior to final lift compaction and cooling.
- Compaction of all street asphalt pavement shall be installed in two lifts; each lift shall be compacted with the Specified Density Method and have a minimum density of 92% (2360) for nonwear and 93% for wear course.
- Contractor shall test density of the nonwear and wear courses through an independent tester using a nuclear density meter or density of the core samples (NW only).
- Pavement sections shall be per details.
- Pavement marking striping shall be per Mn/DOT 2582 with epoxy resin (3590)
- Bituminous asphalt item payment includes furnishing, preparing, hauling, placing, compacting and testing.

STREET SIGNAGE:

- All signs must meet requirements and specifications of the Township and MMUTCD.
- All sign sheathing to be Type IX Diamond Grade (DG3).
- Sign posts to be green powdered painted galvanized metal, 3.0 lbs/ft.
- Street sign posts to be 12” tubular post with 0.080” wall thickness.
- Street signs shall be 9” tall blades.
- Use BR952 – BR4 bracket, new style.
- Street sign to be placed on Stop Sign post at the locations indicated.

SUBMITTALS:

- Contractor shall submit all material data sheets and shop drawings with adequate time for review and approval prior to receiving materials onsite.
- Pipe sewer shop drawings
- Granular and aggregate material gradations.
- Geotextile fabric specification sheets.
- Erosion and sediment control materials.
- Turf restoration seed mixes.
- Bituminous mix: asphalt content and aggregate gradation.
- Concrete mix
- Compaction and other testing results, as required by Owner/LGU.

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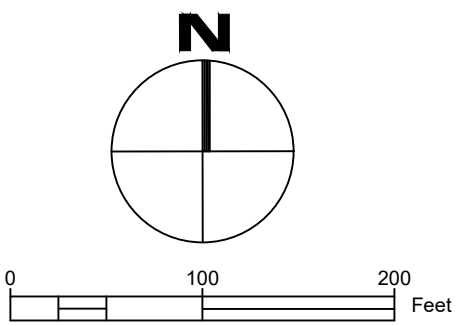
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LINWOOD TOWNSHIP, MN

NOTES

SHEET NO:

C708



LEGEND:

- CONSTRUCTION ZONE
CHANNELIZING DEVICE



NOTE: SIGN PLACEMENT NOT TO SCALE

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LINWOOD TOWNSHIP, MN

**TEMPORARY TRAFFIC CONTROL
PLAN**

SHEET NO:
T100