

MINNESOTA DEPARTMENT OF TRANSPORTATION
COUNTY OF WILKIN

CONSTRUCTION PLAN FOR STABILIZED FULL DEPTH RECLAMATION, BITUMINOUS SURFACING,
& AGGREGATE SHOULDERING

COUNTY STATE AID HIGHWAY NO. 19

SAP 084-619-045

GEOGRAPHIC DESCRIPTION FROM: JCT. OF CSAH #19 & CSAH #8

TO: JCT. OF CSAH #19 & TH #210

LEGAL DESCRIPTION FROM: 60 FT. N. OF THE SW COR OF SEC 2-T131N-45W

TO: 25 FT. S. OF THE NE COR OF SEC 3-T132N-45W

NEAREST TOWN: FOXHOME

	MUNICIPAL		RURAL		TOTAL	
GROSS LENGTH:	4,025.67 FT	0.762 MILE(S)	32,827.80 FT	6.217 MILE(S)	36,853.47 FT	6.979 MILE(S)
BRIDGE LENGTH:	0.00 FT	0.000 MILE(S)	216.97 FT	0.041 MILE(S)	216.97 FT	0.041 MILE(S)
EXCEPTIONS LENGTH:	0.00 FT	0.000 MILE(S)	0.00 FT	0.000 MILE(S)	0.00 FT	0.000 MILE(S)
NET LENGTH:	4,025.67 FT	0.762 MILE(S)	32,610.83 FT	6.176 MILE(S)	36,636.50 FT	6.938 MILE(S)

DESIGN DESIGNATION

ESALS :	200,000
R VALUE:	8.0
ADT (2025):	384
PROJECTED ADT (2045):	422
DESIGN:	10 TON
SHOULDER WIDTH:	5'0"
FUNCTIONAL CLASSIFICATION:	MAJOR COLLECTOR
NO. OF TRAFFIC LANES:	2
NO. OF PARKING LANES:	0
DESIGN SPEED:	50
BASED ON:	STOPPING DISTANCE
HEIGHT OF EYE:	3.5'
HEIGHT OF OBJECT:	2.0'
DESIGN SPEED NOT ACHIEVED AT:	
STA. _____ TO STA. _____	mph _____
STA. _____ TO STA. _____	mph _____
STA. _____ TO STA. _____	mph _____

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.

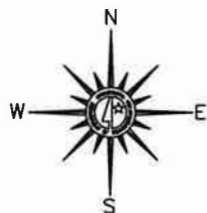
LIC. NO. 58724 Troy Wright DATE 1/10/25
TROY WRIGHT

REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY:

Nathan M.R. Gamm DATE 1/10/25
DISTRICT STATE AID ENGINEER

APPROVED FOR STATE AID FUNDING:

Nathan M.R. Gamm DATE 1/10/25
STATE AID ENGINEER



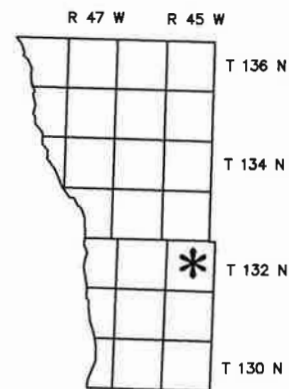
SCALE
0 1 2 3 4 MILES

Outline Map of Minnesota showing
location of the County within the State.



Outline Map of the County.

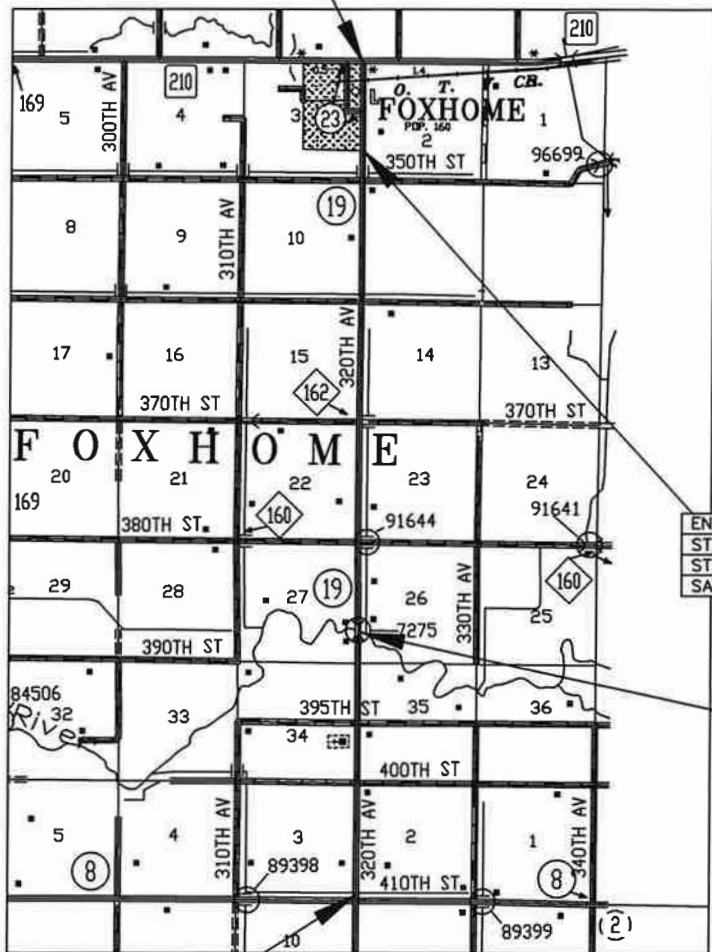
Area of this County 751 Sq. Miles
Land Area 751 Sq. Miles
2021 Total County Population 6,395



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 G/ASCE 38-22, ENTITLED "STANDARD GUIDELINES
FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".

END PROJECT
CSAH #19
STA. 368+53.47
SAP 084-619-045



END RURAL/
START MUNICIPAL
STA. 328+27.80
SAP 084-619-045

BRIDGE EXCEPTION
STA. 116+61.93 TO
STA. 118+78.90
SAP 084-619-045

SHEET INDEX

-THIS PLAN CONTAINS 5 SHEETS-

- 1 TITLE SHEET
- 2 ESTIMATED QUANTITIES
- 3-4 TYPICAL SECTIONS
- 5 TRAFFIC CONTROL

GOVERNING SPECIFICATIONS

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

WILKIN COUNTY HIGHWAY DEPARTMENT
515 SOUTH 8TH STREET
BRECKENRIDGE MN 56520

SAP 084-619-045
CSAH 19

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ESTIMATED QUANTITIES

NOTES	ITEM NO.	ITEM	UNIT	MUNICIPAL	RUAL	TOTAL
	2021.501	MOBILIZATION	LUMP SUM	0.13	0.87	1
	2051.501	MAINTENANCE AND RESTORATION OF HAUL ROADS	LUMP SUM	0.13	0.87	1
(1)	2104.604	SALVAGE AGGREGATE SHOULDERING	SQ YD	4,505 (P)	42,033 (P)	46,538 (P)
(1)	2118.509	AGGREGATE SURFACING CLASS 1 MODIFIED	TON	1,194	15,691	16,885
(2)	2123.510	MOTOR GRADER	hour	1	9	10
(1)(3)	2215.504	STABILIZED FULL DEPTH RECLAMATION (8.0")	SQ YD	17,249 (P)	126,797 (P)	144,046 (P)
(1)(5)	2232.504	MILL BITUMINOUS SURFACE (5.0")	SQ YD	12,799 (P)	89,371 (P)	102,170 (P)
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLONS	1,500	9,400	10,900
	2360.509	TYPE SP 9.5 WEAR COURSE MIXTURE (2,C)	TON	3,052	18,882	21,934
	2360.509	TYPE SP 12.5 NON WEAR COURSE MIXTURE (2,B)	TON	2,324	14,049	16,373
	2563.601	TRAFFIC CONTROL	LUMP SUM	0.13	0.87	1
(1)(4)	2580.501	INTERIM PAVEMENT MARKING	LUMP SUM	0.13	0.87	1
	2582.503	6" SOLID LINE WHITE-PAINT	LIN FT	8,052	65,656	73,708
	2582.503	4" BROKEN LINE YELLOW-PAINT	LIN FT	805	6,566	7,371
	2582.503	4" SOLID LINE YELLOW-PAINT	LIN FT	800	800	1,600

NOTES:

- (P) DENOTES PLAN QUANTITY PER SPEC. 1901.
- (1) SEE SPECIAL PROVISIONS.
- (2) EQUIPMENT HOURS HAVE BEEN PROVIDED FOR MAINTAINING DRAINAGE AND ANY ADDITIONAL WORK THE COUNTY DEEMS NECESSARY TO THE PROJECT.
- (3) ITEM INCLUDES LIQUID AGGREGATE STABILIZATION ADDITIVE TO BE SUPPLIED BY THE COUNTY AND INJECTED AS PER SPECIAL PROVISIONS.
- (4) INTERIM LANE MARKING TO BE PLACED ON FINAL LIFT AT SPACING OF 200'.
- (5) ITEM INCLUDES ALL BITUMINOUS X-RDS AND DRIVEWAYS TO THE R/W, AND KICKOUTS.

CONSTRUCTION NOTES:

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT PROPER AUTHORITIES FOR LOCATION OF UTILITIES ON THIS PROJECT.

APPROACHES TO BE PAVED ACCORDING TO STANDARD PLATE NO. 9000E

X-RDS AND DRIVEWAYS TO BE PAVED TO R/W LINE,

ALL DRIVEWAYS TO HAVE A 3' KICK OUT BY 170' LONG CENTERED ON ENTRANCE.

ALL FIELD ENTRANCES TO HAVE A 3' KICK OUT BY 80' LONG CENTERED ON ENTRANCE.

MAILBOXES TO HAVE A 3' KICK OUT BY 50' LONG CENTERED ON THE MAILBOX.

ALL APPROACHES SHALL BE PAVED WITH 2-3" LIFTS TO BE COMPLETED ON FIRST LIFT MIX SPNWB230B AND THIRD LIFT MIX SPWEA230C.

BASIS FOR PLANNED QUANTITIES:

AGGREGATE BASE, CLASS 5	- 105LBS/SQ YD PER 1" DEPTH (CV)
AGGREGATE SURFACING, CLASS 1 MODIFIED	- 110LBS/SQ YD PER 1" DEPTH (CV)
NON WEAR COURSE MIXTURE TYPE SP	- 110LBS/SQ YD PER 1" DEPTH (CV)
WEAR COURSE MIXTURE TYPE SP	- 110LBS/SQ YD PER 1" DEPTH (CV)
BITUMINOUS MATERIAL	- FOR MIXTURE SHALL BE PG 58S-28 & PG 58H-34
	- FOR TACK COAT SHALL BE CQS-1H AT 0.05 GAL/SQ YD
ALL UNITS AND DIMENSIONS ARE ENGLISH.	

STANDARD PLATES	
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FHWA, SHALL APPLY ON THIS PROJECT.	
PLATE NO.	DESCRIPTION
8000K	TEMPORARY CHANNELIZERS
9000E	APPROACH AND ENTRANCES (SIDE SLOPE 1:4)
ALL UNITS AND DIMENSIONS ARE ENGLISH.	

CONSTRUCTION DETAILS

WEAR COURSE MIXTURE (SPWEA230C)					
WEAR COURSE MIXTURE FOR BIT. SURFACE = 110LBS/SQ YD/IN OF THICKNESS (1.5"THICK)					
STATION TO STATION	LENGTH STATIONS	WIDTH FEET	MIXTURE PER STA.	LINEAR FT PER TON OF MIXTURE	TON
0+00 TO 328+27.80	328	24	21.87	4.57	7,174
328+27.80 TO 368+53.47	40	30	22.15	4.51	886
SLOPE CORRECTION & RIDE 5%					403
APPROACHES, ENTRANCES, MAILBOX, PAVED SHOULDERS					1,378
TOTAL:					9,841

WEAR COURSE MIXTURE (SPWEA230C)					
WEAR COURSE MIXTURE FOR BIT. SURFACE = 110LBS/SQ YD/IN OF THICKNESS (2"THICK)					
STATION TO STATION	LENGTH STATIONS	WIDTH FEET	MIXTURE PER STA.	LINEAR FT PER TON OF MIXTURE	TON
0+00 TO 328+27.80	328	24.50	29.77	3.36	9,765
328+27.80 TO 368+53.47	40	30.50	30.15	3.32	1,206
SLOPE CORRECTION & RIDE 5%					548
APPROACHES, ENTRANCES, MAILBOX, PAVED SHOULDERS					574
TOTAL:					12,093

NON WEAR COURSE MIXTURE (SPNWB230B)					
NON WEAR COURSE MIXTURE FOR BIT. SURFACE = 110LBS/SQ YD/IN OF THICKNESS (2.5" THICK)					
STATION TO STATION	LENGTH STATIONS	WIDTH FEET	MIXTURE PER STA.	LINEAR FT PER TON OF MIXTURE	TON
0+00 TO 328+27.80	328	25	37.98	2.63	12,456
328+27.80 TO 368+53.47	40	31	38.45	2.60	1,538
SLOPE CORRECTION & RIDE 5%					700
APPROACHES, ENTRANCES, MAILBOX, PAVED SHOULDERS					1,679
TOTAL:					16,373

AGGREGATE SURFACING CLASS 1 MODIFIED					
SHOULDERING = 110LBS/SQ YD/IN OF THICKNESS (6.0" THICK)					
STATION TO STATION	LENGTH STATIONS	WIDTH FEET	AGG MAT'L PER STA.	LINEAR FT PER TON OF AGG MAT'L	TON
0+00 TO 328+27.80	656	5	20.55	4.87	13,483
328+27.80 TO 368+53.47	80	2	11.08	9.03	886
SLOPE CORRECTION 10%					1,436
APPROACHES, ENTRANCES, MAILBOX					1,080
TOTAL:					16,885

NEW DESIGN	
10 TON	
ESALS	200,000
R VALUE	8.0
REQUIRED GE	25.39
4" AGGREGATE BASE CL4	3.00
8" CLASS 7 STABILIZED	10.00
2.5" TYPE SP NON WEAR	5.60
2" TYPE SP WEAR	4.50
1.5" TYPE SP WEAR	3.40
TOTAL GE = 26.50	

CURRENT DESIGN	
9 TON	
ADT	384
SOIL FACTOR	130%
REQUIRED GE	25.39
TOTAL GE = 26.5	

CERTIFIED BY Troy Wright

LIC. NO. 58724 1/10 20 25

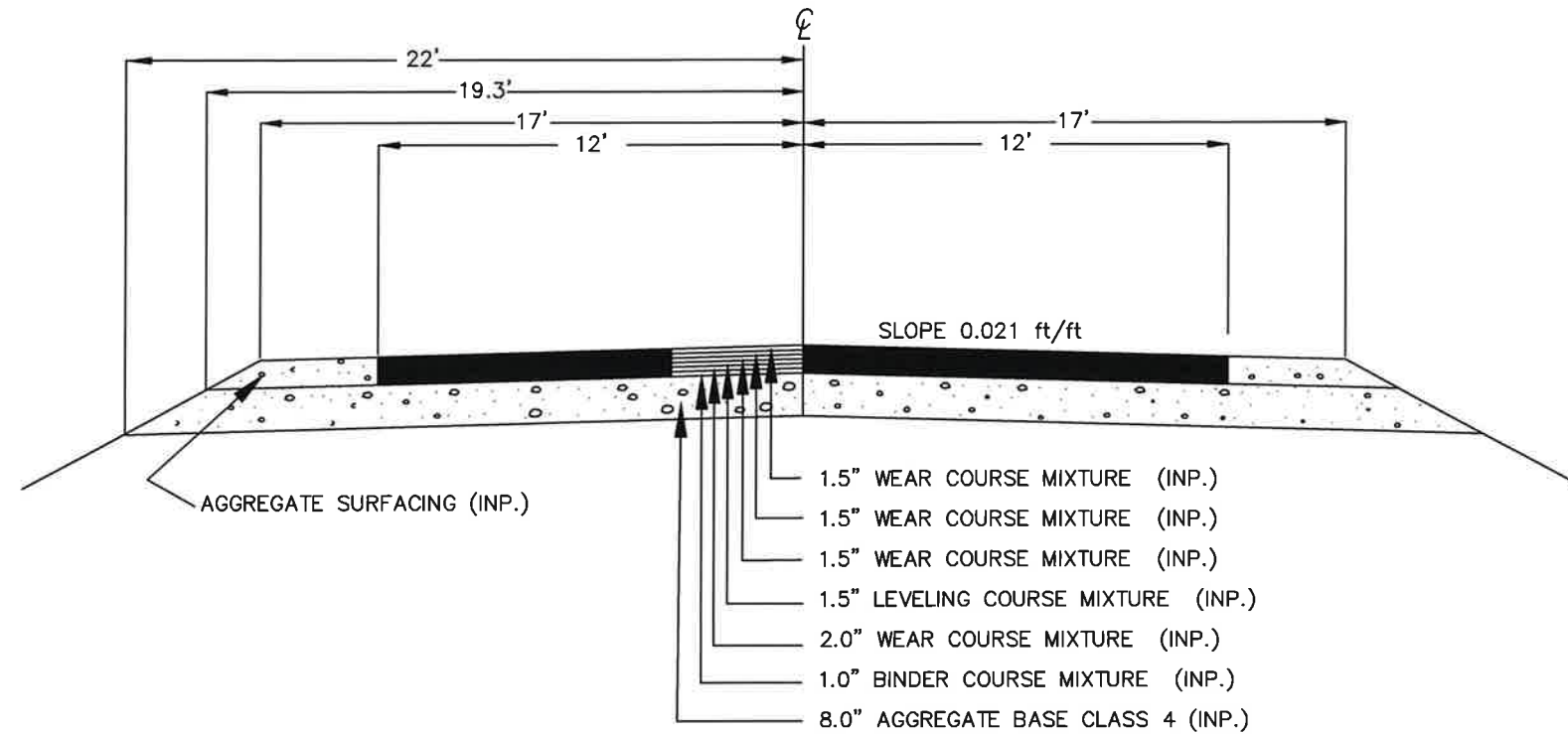
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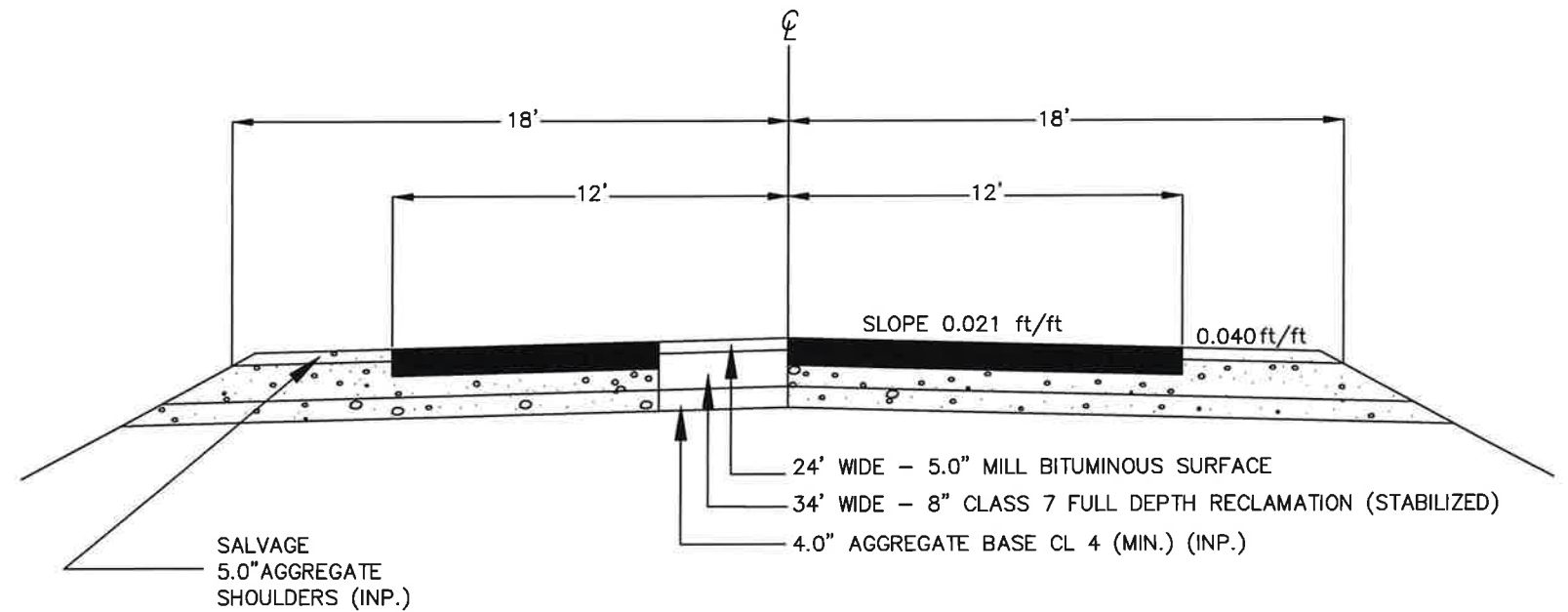
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TYPICAL INPLACE SECTION
NO SCALE
0+00 to 116+61.93
118+78.90 to 368+53.47



MILL & RECLAIM TYPICAL SECTION
NO SCALE
0+00 to 116+61.93
118+78.90 to 368+53.47



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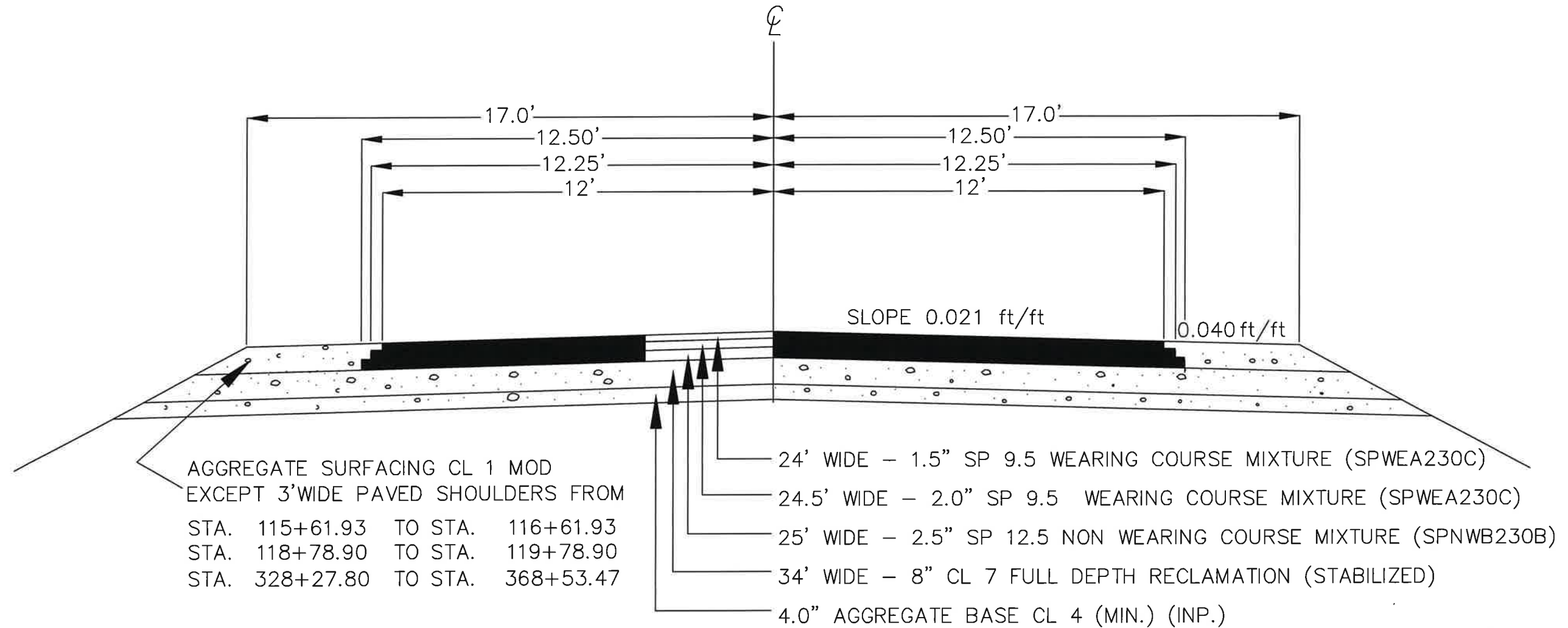
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PROPOSED TYPICAL SECTION
NO SCALE

0+00 to 116+61.93
118+78.90 to 368+53.47

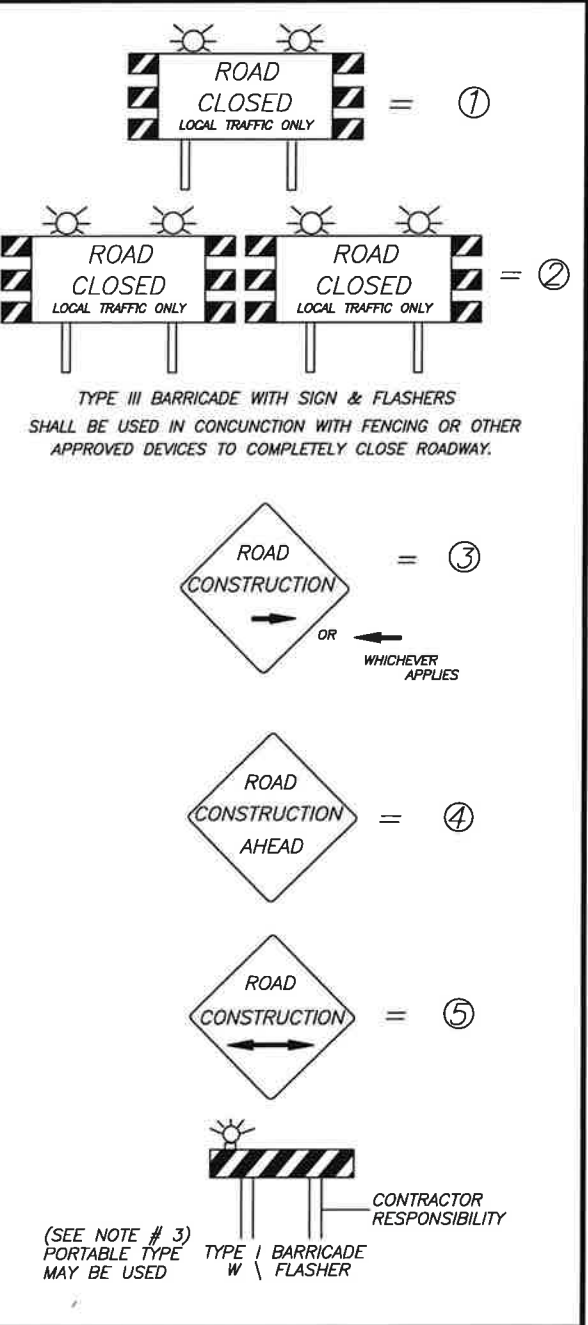
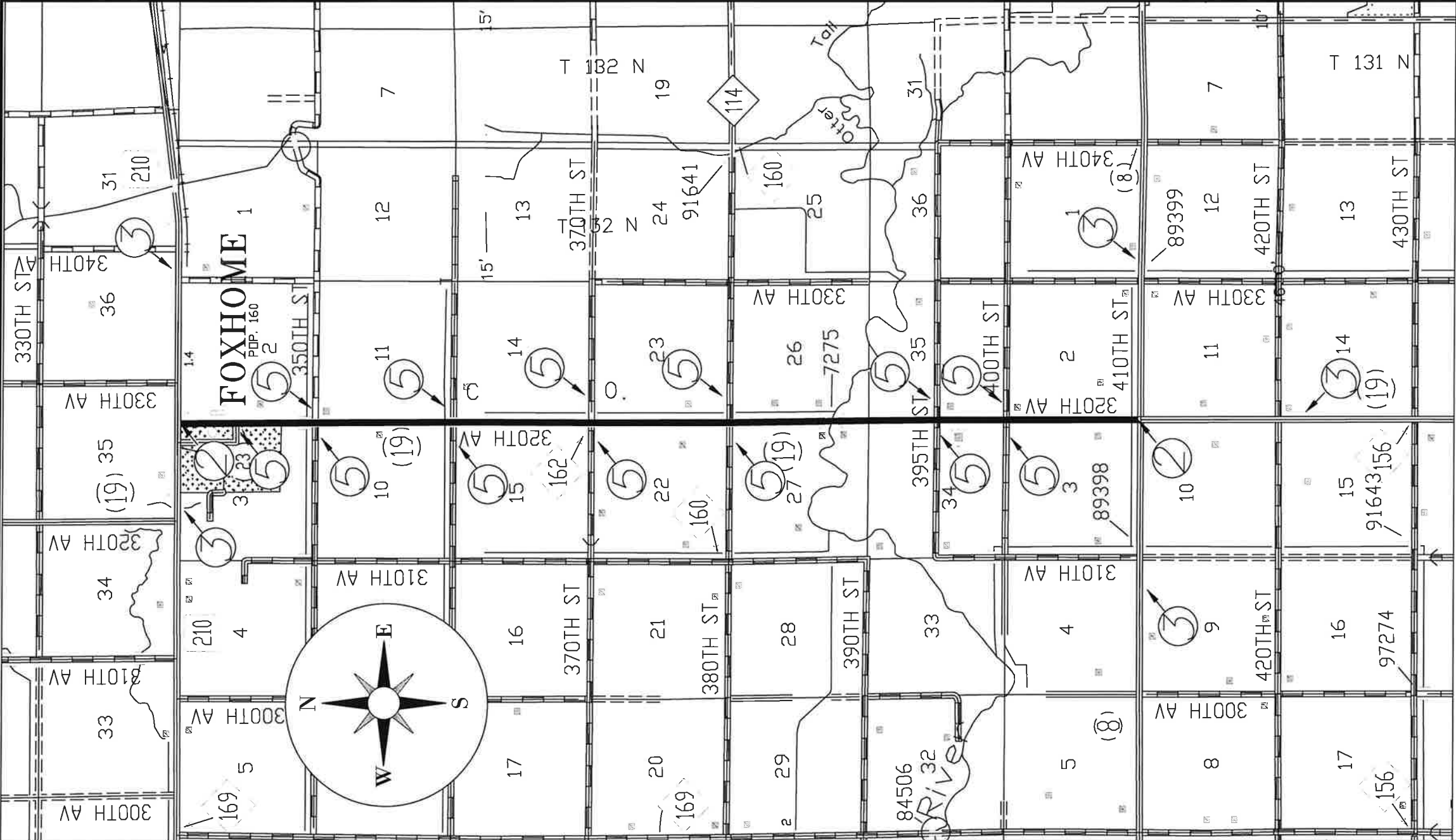


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NOTES

1. ALL TRAFFIC CONTROL SIGNING OUTSIDE CONSTRUCTION ZONE SHALL BE FURNISHED, INSTALLED AND MAINTAINED BY COUNTY.
2. ALL TRAFFIC CONTROL SIGNING SHALL BE IN PLACE BEFORE WORK MAY BEGIN.
3. A "TYPE 1" BARRICADE WITH FLASHERS WILL BE REQUIRED ON EACH END OF ANY PIPE OR OTHER MATERIALS PLACED ON OR DIRECTLY ADJACENT TO THE TRAVELED ROADWAY.
4. ALL TRAFFIC CONTROL SIGNING SHALL BE IN CONFORMANCE WITH THE MOST RECENT EDITION OF THE "M.M.U.T.C.D." INCLUDING "FIELD MANUAL FOR TEMPORARY TRIFFIC CONTROL ZONE LAYOUTS."
5. ALL TRAFFIC CONTROL DEVICES SHALL HAVE RETROREFLECTIVE SHEETING.
6. CONTRACTOR RESPONSIBLE FOR ALL SIGNAGE ON THE PROJECT FROM THE BEGINNING TERMINI TO THE ENDING TERMINI.

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