!! CAUTION !!
UTILITIES IN THE AREA, BEFORE CONSTRUCTION
UTILIZE 1 CALL 1-800-252-1166

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL " B". THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

PLAN SYMBOLS

RIGHT-OF-WAY LINE ROAD	R/W
RIGHT-OF-WAY LINE DRAINAGE DITCH	
SECTION LINE	
QUARTER LINE	
PROPERTY LINE	
EASEMENT LINE	
RAILROAD	
FENCE	
SANITARY SEWER - EXISTING	SS
SANITARY SEWER - PROPOSED	SS
SANITARY SEWER SERVICE - EXISTING	SS-SV
SANITARY SEWER SERVICE - PROPOSED	SS-SV
SANITARY SEWER FORCE MAIN	SS-FM
STORM SEWER - EXISTING	ST
STORM SEWER - PROPOSED	ST
WATER - EXISTING	W
WATER - PROPOSED	W
WATER SERVICE - EXISTING	W-SV
WATER SERVICE - PROPOSED	W-SV
TELEPHONE	TEL
TELEVISION	CATV
FIBER OPTIC	FBR
OVERHEAD POWER	OHP
UNDERGROUND POWER	UGP
PETROLEUM PIPELINE	PETRO
GAS	G
CURB & GUTTER - EXISTING	
CURB & GUTTER - PROPOSED	
SANITARY MANHOLE	SS
STORM MANHOLE	
EXISTING MANHOLE	ST
HYDRANT	
EXISTING HYDRANT	
GATE VALVE	
EXISTING GATE VALVE	
CLEAN OUT	CO
CURB STOP	
PROPOSED INLET	
EXISTING INLET	
SIGN - STREET NAME	
SIGN - REGULATORY / WARNING	
POWER POLE	or
STREET LIGHT	or
ELECTRICAL TRANSFORMER	or
UTILITY PEDESTAL	or
EXISTING TREE	
BUSH / HEDGE	

SPECIFICATION REFERENCE

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE 2014 EDITION OF THE "MATERIALS LAB SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN, AS MODIFIED BY THE CITY OF MOORHEAD SPECIFICATIONS AND SPECIAL PROVISIONS.

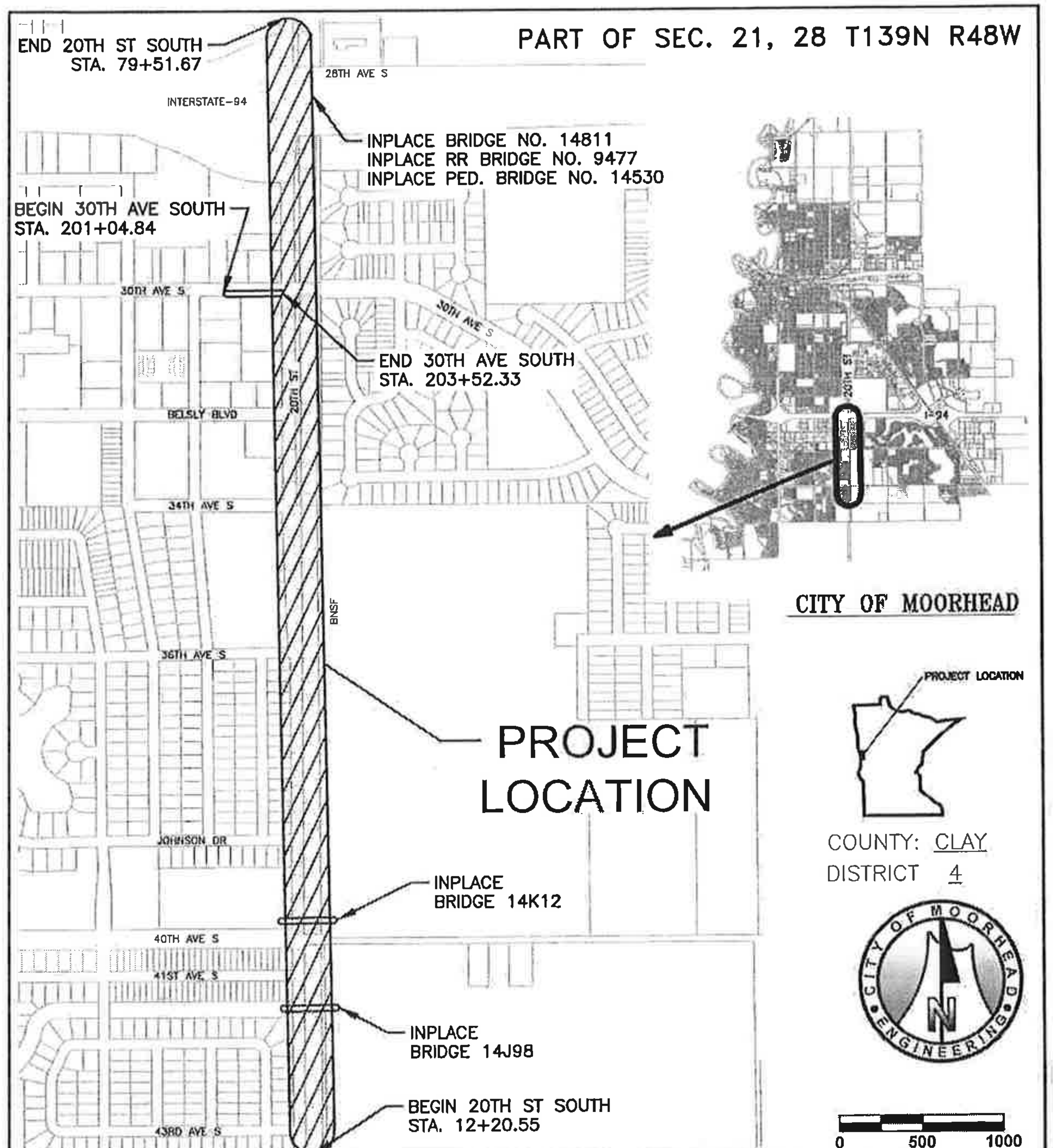
ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MNMUTCD, INCLUDING "FIELD MANUAL FOR TRAFFIC CONTROL ZONE LAYOUTS".

MINNESOTA DEPARTMENT OF TRANSPORTATION

CLAY COUNTY

GRADING, AGGREGATE BASE, BITUMINOUS & CONCRETE PAVING, STORM & SANITARY SEWER, CONCRETE CURB & GUTTER, TRAFFIC SIGNAL, SIGNAL INTERCONNECT, SIGNING, STRIPING & INCIDENTALS

LOCATED ON 20TH STREET SOUTH FROM 43RD AVENUE SOUTH TO 28TH AVENUE SOUTH IN MOORHEAD, MN. (Geographical Description)



DESIGN DESIGNATION FOR :	20TH STREET	20TH STREET	20TH STREET	30TH AVENUE SOUTH
FROM:	28TH AVE TO 30TH AVE	30TH AVE TO 40TH AVE	40TH AVE TO 43RD AVE	18TH ST TO 20TH ST
R-VALUE:	7.0	7.0	7.0	7.0
ADT (OPENING YEAR) 2015:	9,900	9,900	700	7,300
ADT (FUTURE YEAR) 2035:	13,300 (20 YEAR)	11,300 (20 YEAR)	1,500 (20 YEAR)	8,800 (20 YEAR)
ADT (FUTURE YEAR) 2050:	17,900 (35 YEAR)	15,208 (35 YEAR)	2,018 (35 YEAR)	11,843 (35 YEAR)
PAVEMENT DESIGN:	10 TON	10 TON	10 TON	10 TON
FUNCTIONAL CLASSIFICATION:	MINOR ARTERIAL	MINOR ARTERIAL	MINOR ARTERIAL	MINOR ARTERIAL
NO. OF TRAFFIC LANES:	2	2	2	2
NO. OF PARKING LANES:	0	0	0	0
BESALS (20 YEAR):	944,000	968,000	102,000	733,000
CESALS (35 YEAR):	2,624,000	2,592,000	305,000	1,987,000
DESIGN SPEED:	30 MPH	30 MPH	30 MPH	30 MPH
BASED ON SIGHT DISTANCE:	STOPPING	STOPPING	STOPPING	STOPPING
HEIGHT OF EYE/HEIGHT OF OBJECT:	3.5'/2.0'	3.5'/2.0'	3.5'/2.0'	3.5'/2.0'
DESIGN SPEED NOT ACHIEVED AT:	N/A	N/A	N/A	N/A

MINN. PROJ. NO.

INDEX

THIS PLAN CONTAINS 201 SHEETS

STATE PROJ. NO. S.A.P. 144-126-014

20TH STREET SOUTH		
GROSS LENGTH	6731.12 FEET	1.275 MILES
BRIDGES-LENGTH	257 FEET	0.049 MILES
EXCEPTION-LENGTH	N/A	N/A
NET-LENGTH	6731.12 FEET	1.275 MILES

30TH AVENUE SOUTH		
GROSS LENGTH	247.49 FEET	0.047 MILES
BRIDGES-LENGTH	N/A	N/A
EXCEPTION-LENGTH	N/A	N/A
NET-LENGTH	247.49 FEET	0.047 MILES

BENCHMARK

INTERSECTION: TRUNK HIGHWAY 75 AND 37TH AVE S
ELEVATION: 905.46
DATUM: NAVD88(BASED ON GEOID03)

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

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

SIGNATURE [signature]
DATE 2/5/15 LIC. NO. 51054 PRINT NAME SCOTT MIDDAUGH

SIGNAL DESIGN ENGINEER: I HEREBY CERTIFY THAT THESE SIGNAL PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, THAT THIS PLAN CONFORMS TO THE CURRENT MNMUTCD (EXCEPT WHERE A VARIANCE HAS BEEN GRANTED), AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE Mike Bittner
DATE 2-5-15 LIC. NO. 51576 PRINT NAME MIKE BITTNER

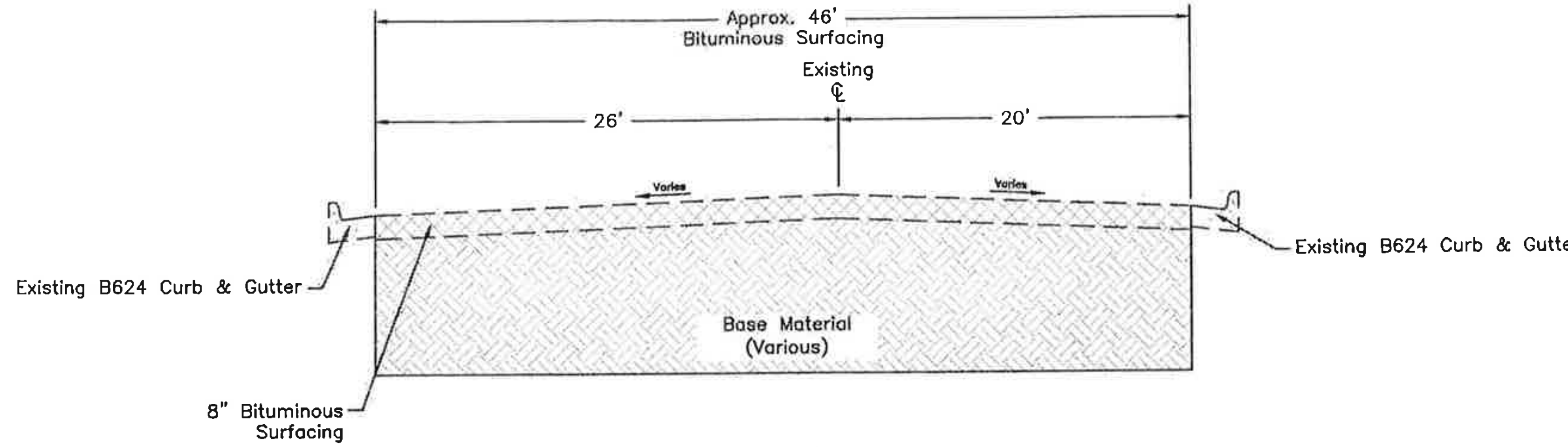
[signature] 2-9-15
APPROVED: CITY ENGINEER DATE

Merle Earley 2-10-15
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE-AID RULES/POLICY DATE

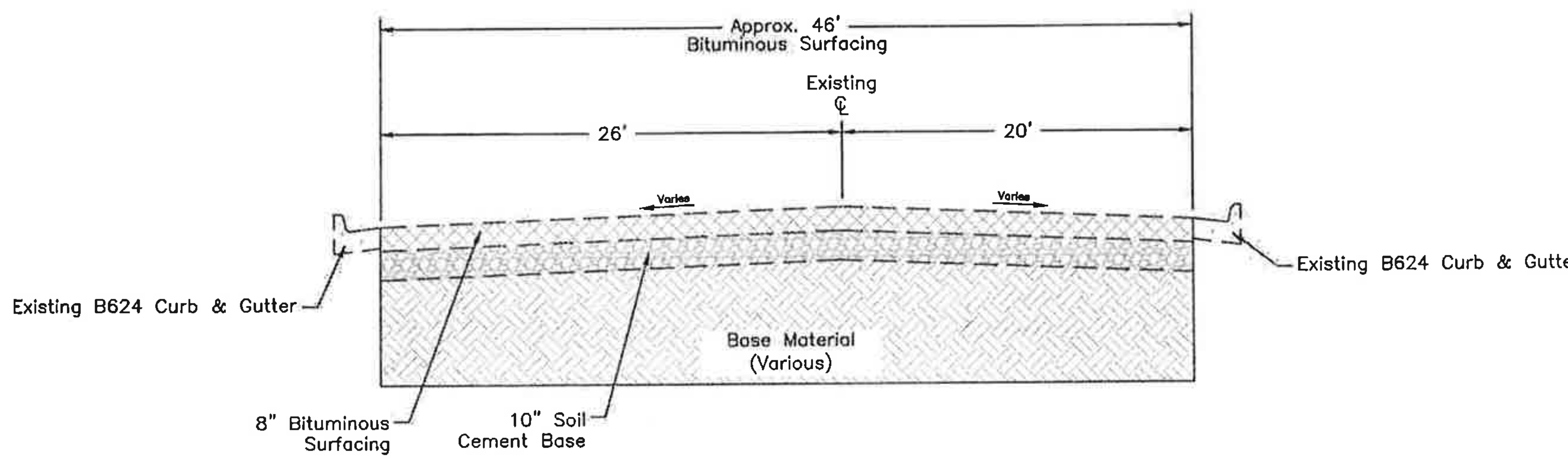
Merle Earley 2-10-15
STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING DATE

KLJ

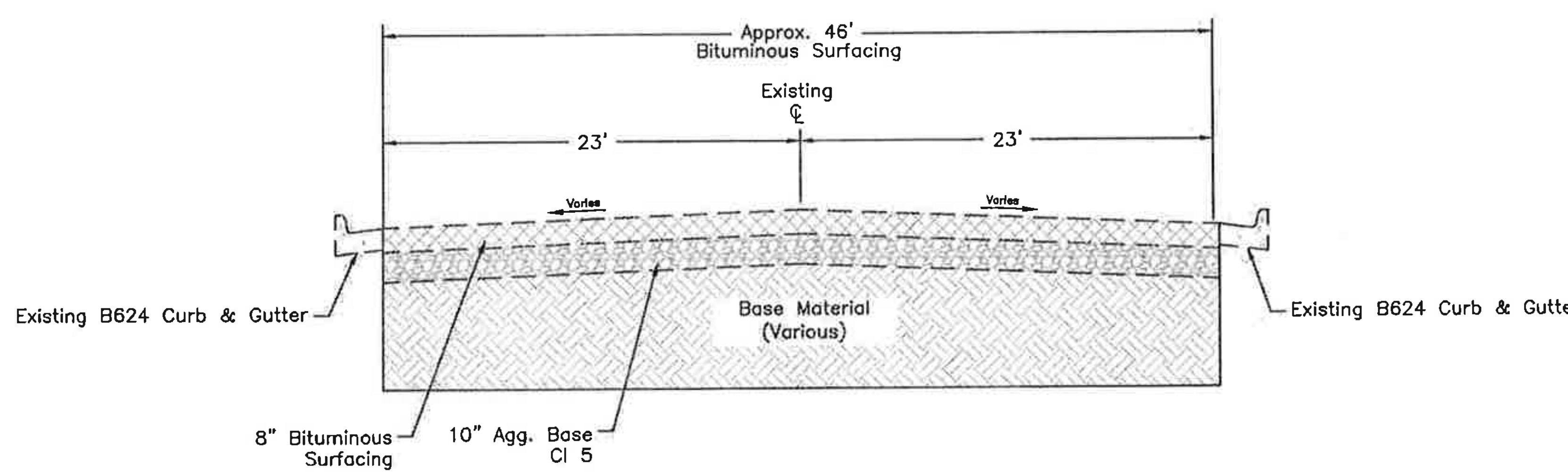
STATE PROJECT NO. 144-126-014



EXISTING TYPICAL SECTION
50+96.31 to 64+19.62



EXISTING TYPICAL SECTION
64+66.82 to 71+25.29



EXISTING TYPICAL SECTION
201+04.85 to 203+30.34

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MOORHEAD MINNESOTA ENGINEERING DEPARTMENT | KLJ | MINNESOTA DEPARTMENT OF TRANSPORTATION

JL	EH	SM
DRAWN BY	CHECKED BY	APPROVED BY

144-126-014 S.A.P. No. | 14-A2-02 ENG. No. | MN. No.

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.

Signature - Project Engineer | Date 1/21/15

SCOTT MIDDAUGH
Name - Project Engineer | 51054 License No.

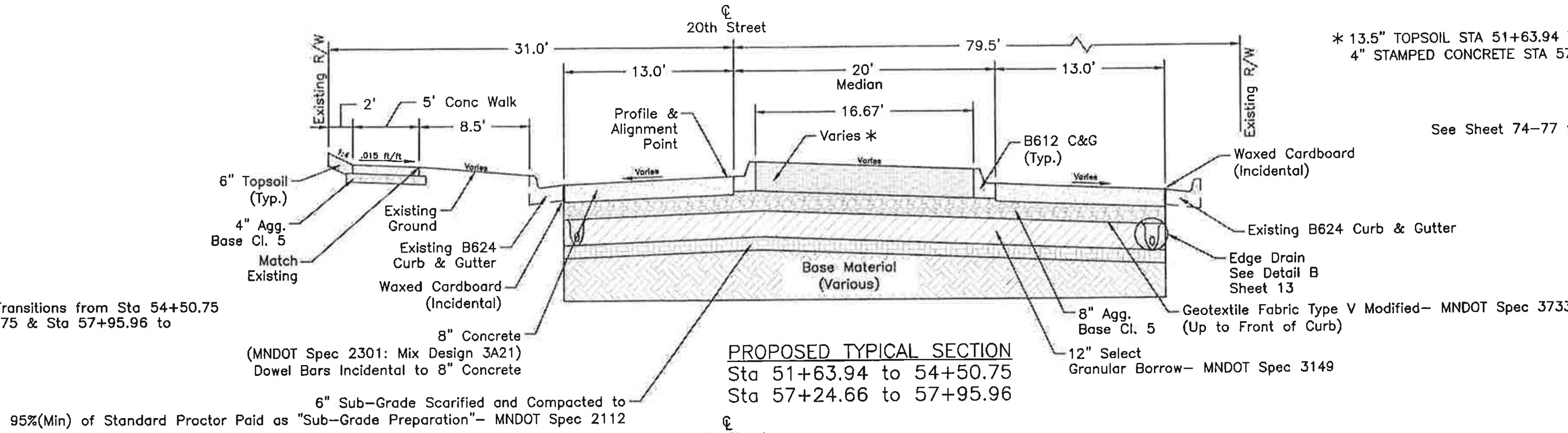
Typical Sections

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

* 13.5" TOPSOIL STA 51+63.94 TO 54+50.75
4" STAMPED CONCRETE STA 57+24.66 TO 57+95.96

See Sheet 74–77 for Jointing Layout

Roadway Transitions from Sta 54+50.75 to 55+38.75 & Sta 57+95.96 to 58+84.10

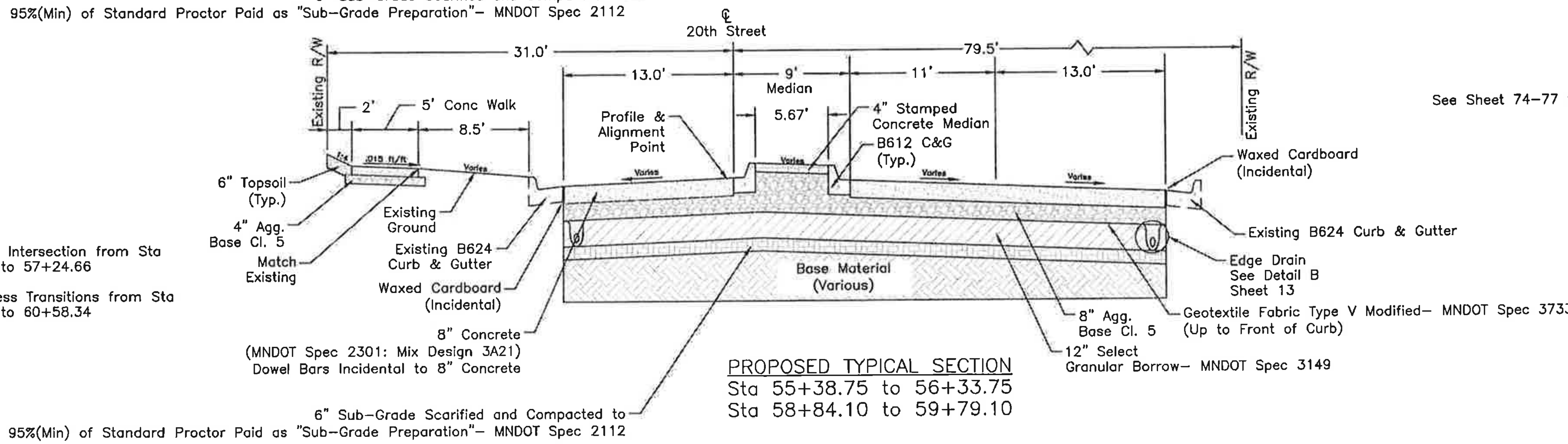


PROPOSED TYPICAL SECTION
Sta 51+63.94 to 54+50.75
Sta 57+24.66 to 57+95.96

See Sheet 74–77 for Jointing Layout

Belsly Blvd Intersection from Sta 56+33.75 to 57+24.66

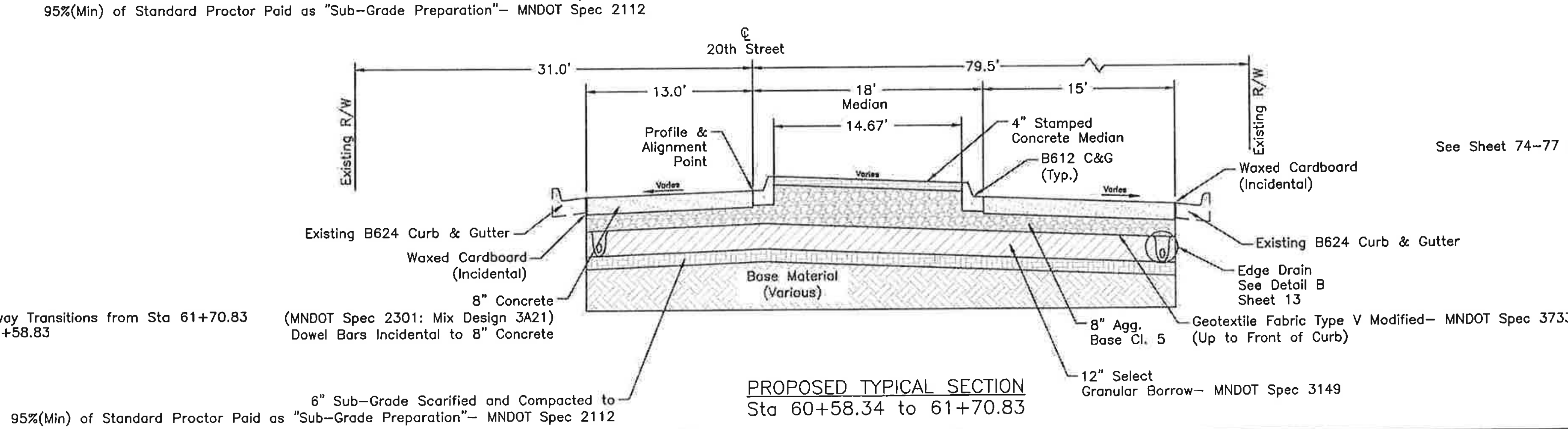
Private Acess Transitions from Sta 59+79.60 to 60+58.34



PROPOSED TYPICAL SECTION
Sta 55+38.75 to 56+33.75
Sta 58+84.10 to 59+79.10

See Sheet 74–77 for Jointing Layout

Roadway Transitions from Sta 61+70.83 to 62+58.83



PROPOSED TYPICAL SECTION
Sta 60+58.34 to 61+70.83

City of MOORHEAD MINNESOTA ENGINEERING DEPARTMENT
KLJ
MINNESOTA DEPARTMENT OF TRANSPORTATION

DRAWN BY	CHECKED BY	APPROVED BY
JL	EH	SM

S.A.P. No.	ENG. No.	MN. No.
144-126-014	14-A2-02	

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Signature - Project Engineer
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51054
License No.

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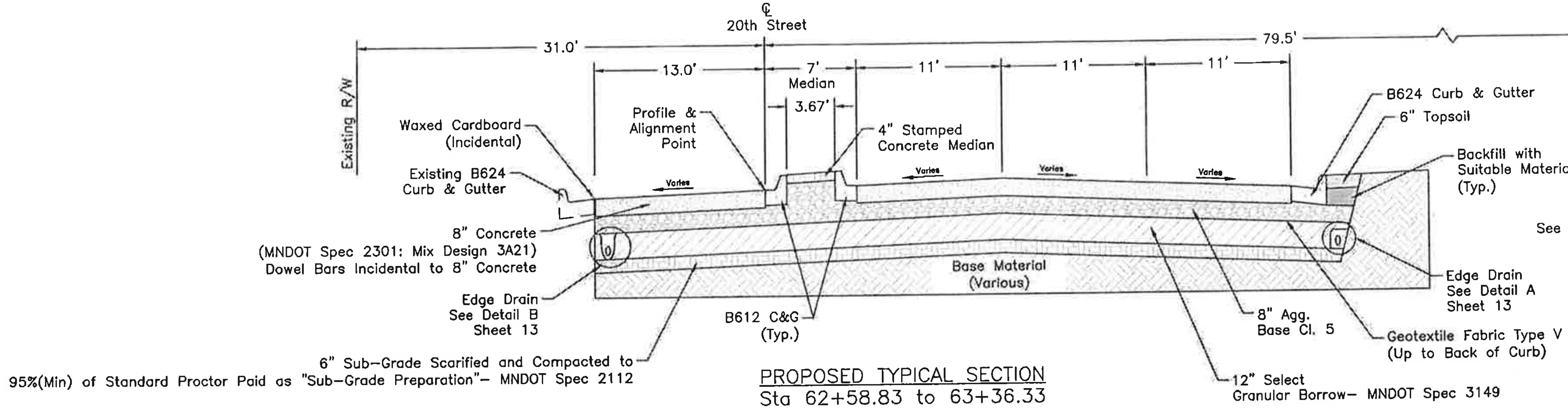
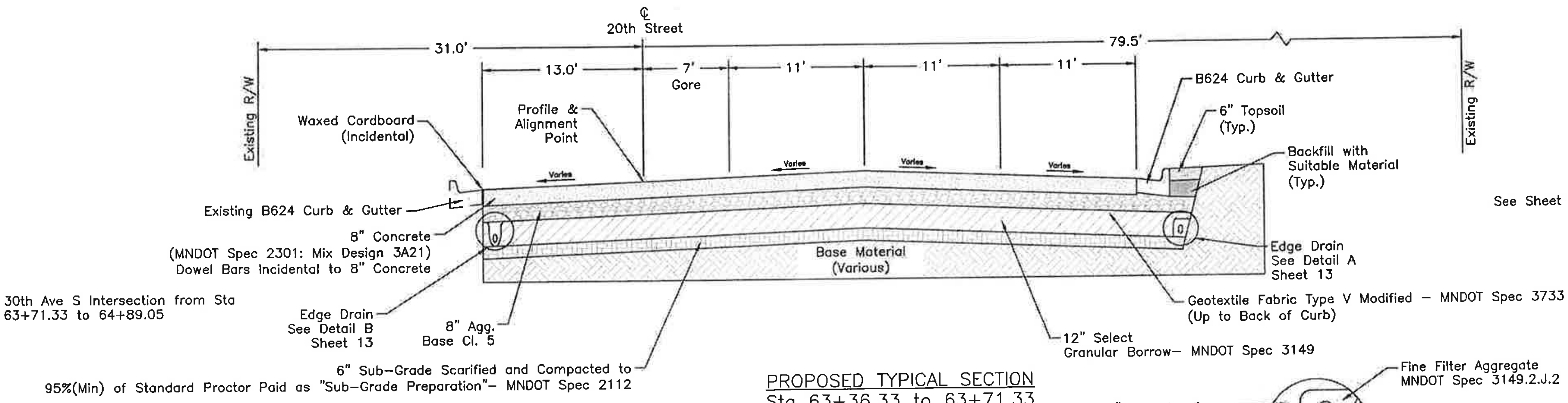


See Sheet 74–77 for Jointing Layout

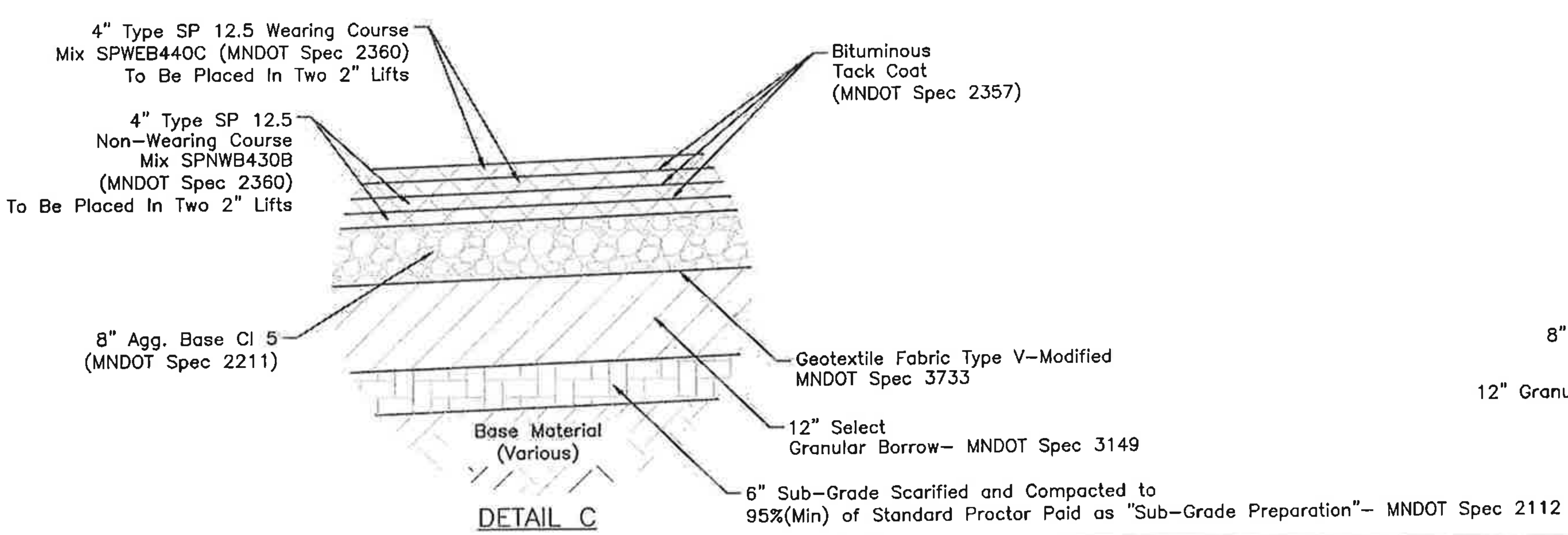
PROPOSED TYPICAL SECTION
Sta 62+58.83 to 63+36.33



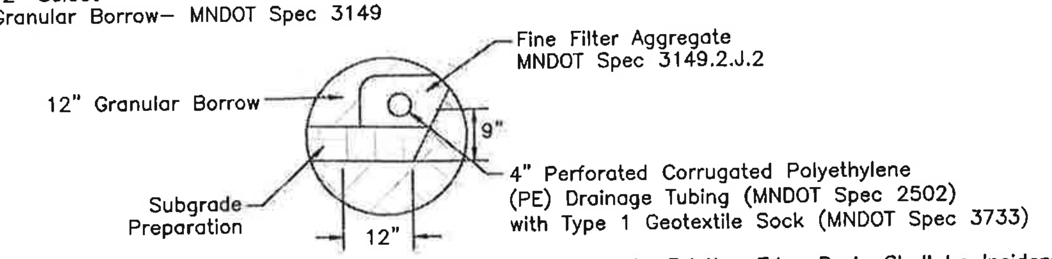
See Sheet 74–77 for Jointing Layout

30th Ave S Intersection from Sta
63+71.33 to 64+89.05

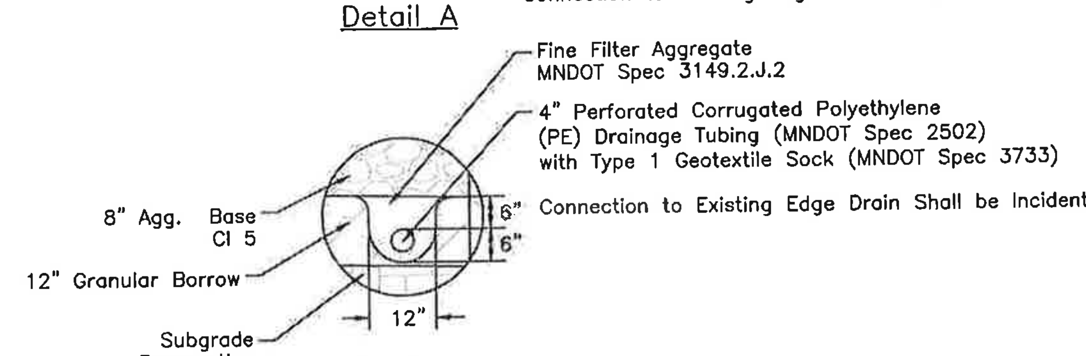
PROPOSED TYPICAL SECTION
Sta 63+36.33 to 63+71.33



DETAIL C



Detail A



Detail B

MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

KLJ

JL | EH | SM
DRAWN BY | CHECKED BY | APPROVED BY

144-126-014 | 14-A2-02
S.A.P. No | ENG. No | MN. No

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51054
License No.

Typical Sections

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

SHEET
13 OF 141

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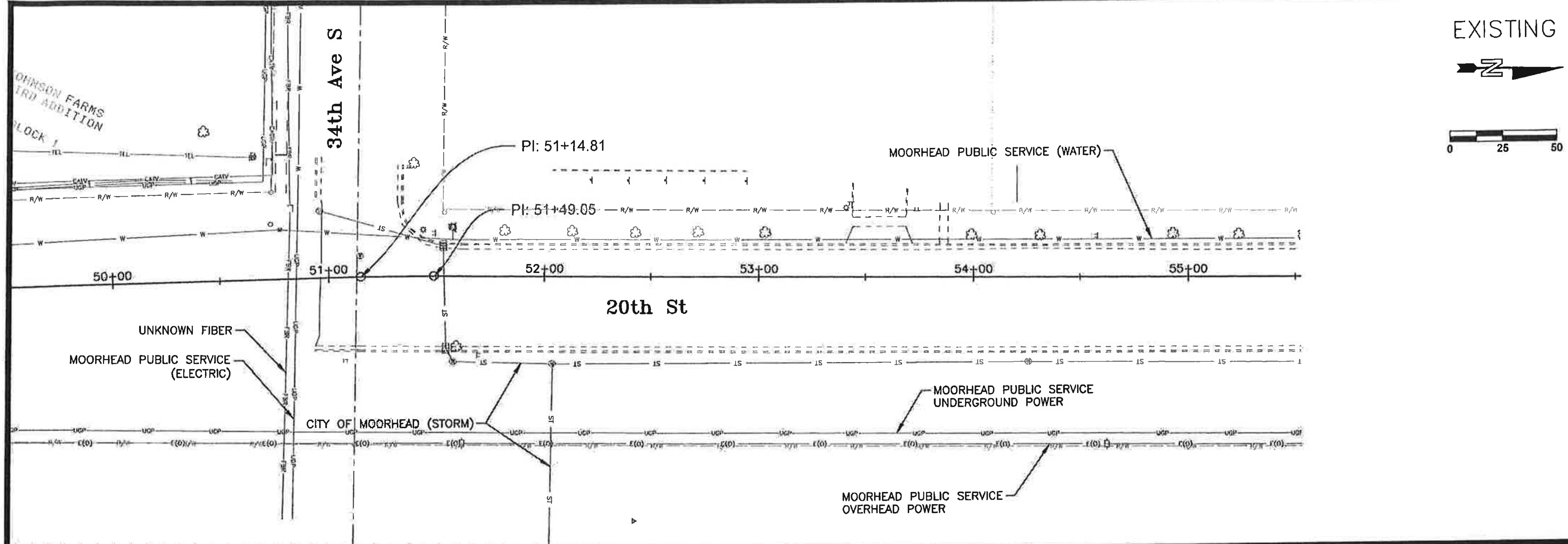

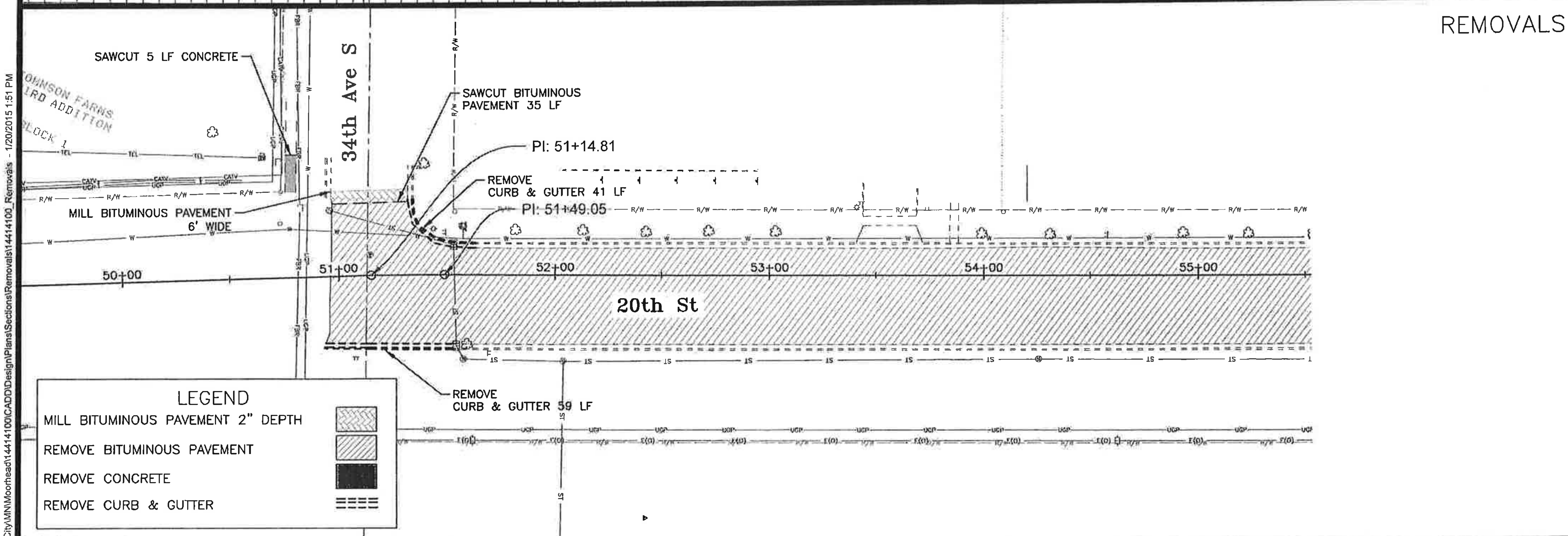

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MINNESOTA DEPARTMENT OF TRANSPORTATION

KLJ

CITY OF MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

JL DRAWN BY | JN CHECKED BY | SM APPROVED BY

144-126-014 S.A.P. No. | 14-A2-02 ENG. No. | MN. No.

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1/21/15 Date

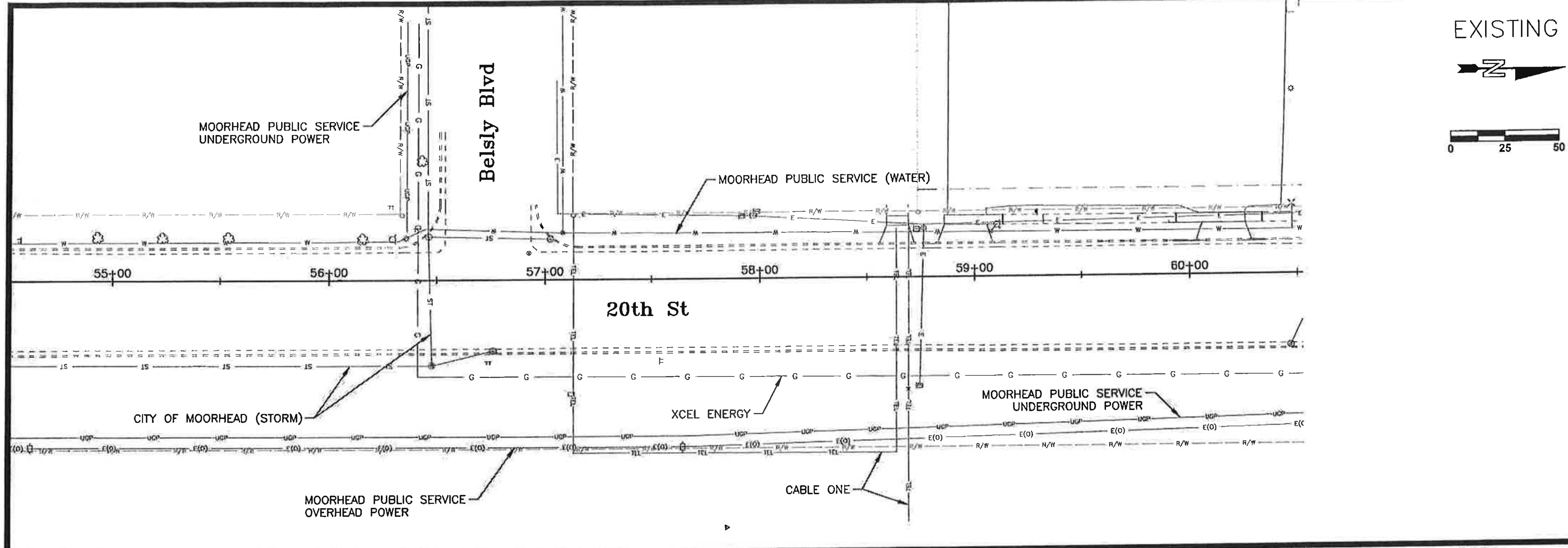
SCOTT MIDDAUGH Name - Project Engineer

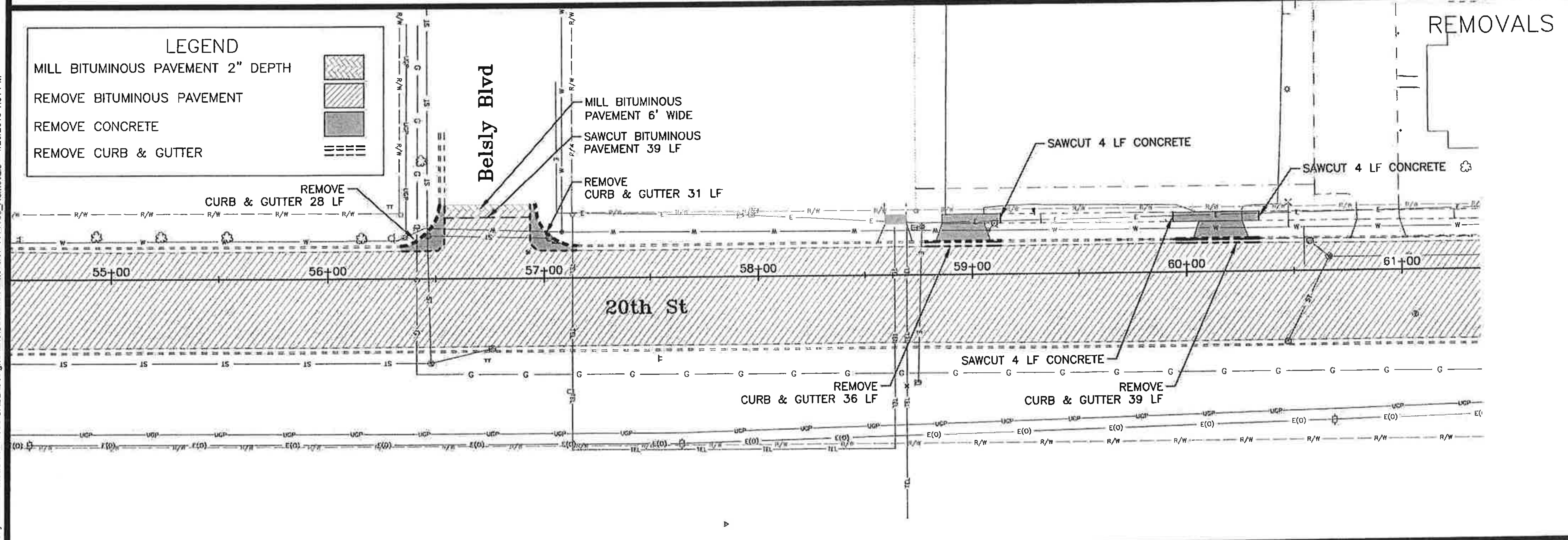
51054 License No.

Existing Conditions & Removals

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

SHEET





MOORHEAD
MINNESOTA
ENGINEERING DEPARTMENT

KLJ

JL	JN	SM
DRAWN BY	CHECKED BY	APPROVED BY

144-126-014	14-A2-02	
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Existing Conditions & Removals

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

SHEET
38 OF 141

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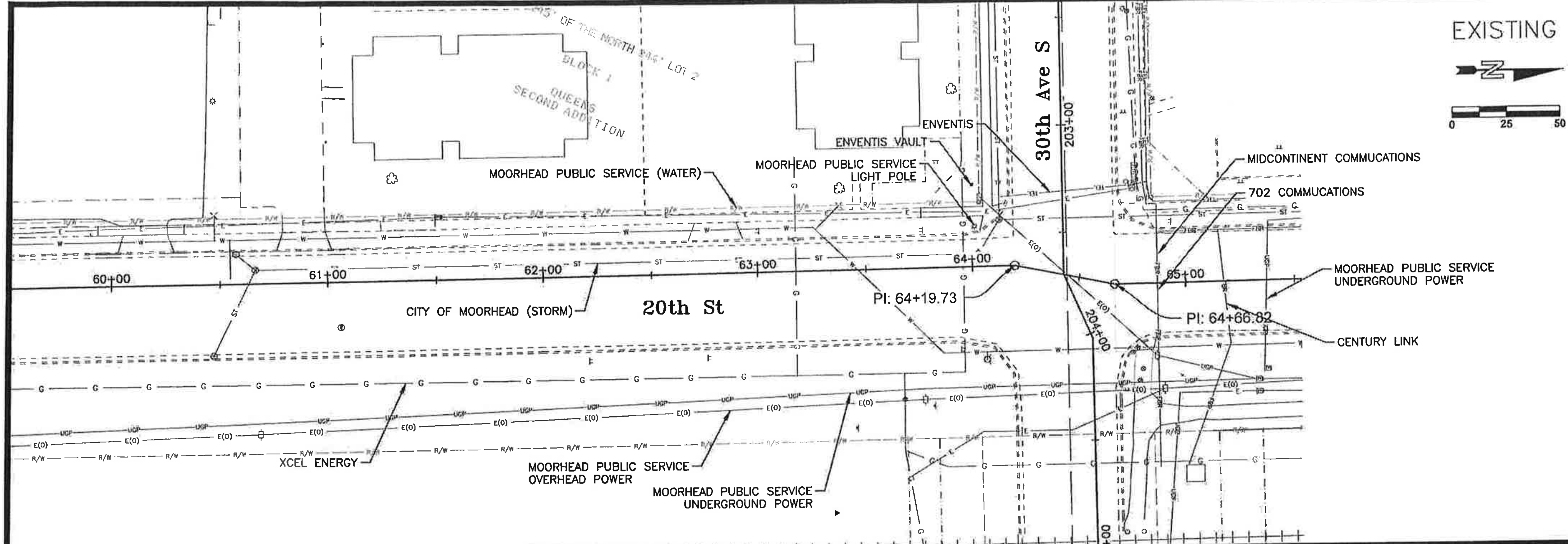

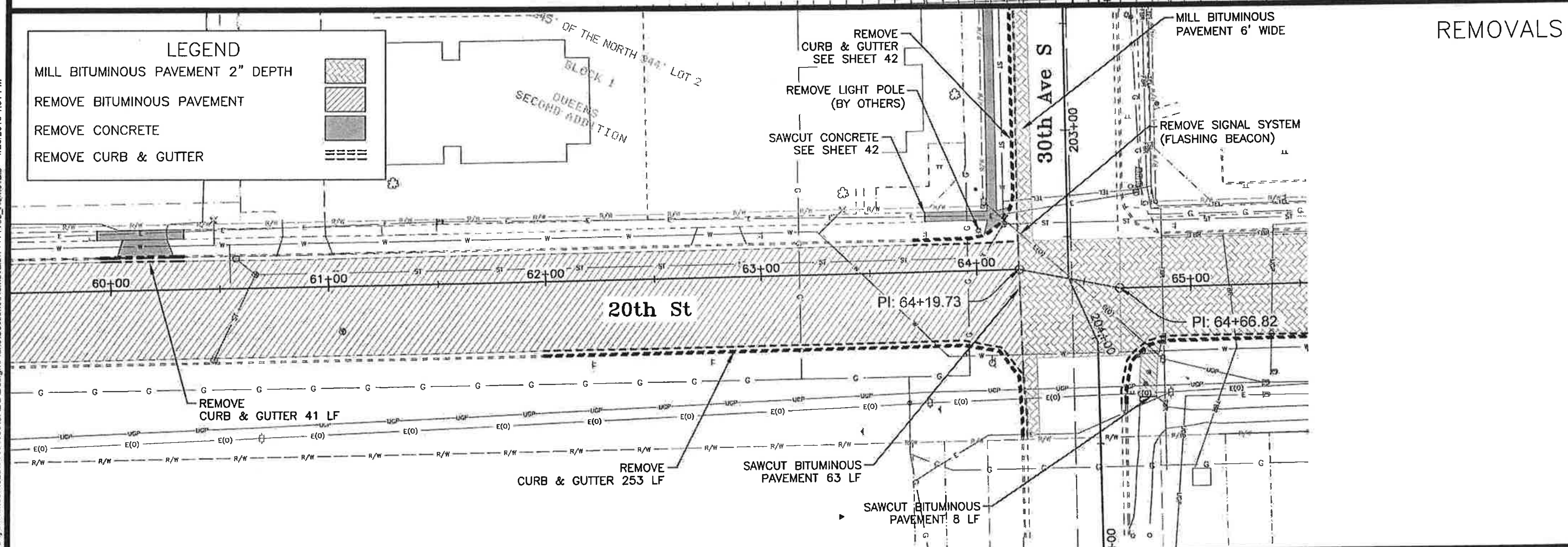

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MINNESOTA DEPARTMENT OF TRANSPORTATION

CITY OF MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

KLJ

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DRAWN BY	CHECKED BY	APPROVED BY

144-126-014	14-A2-02	
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51054
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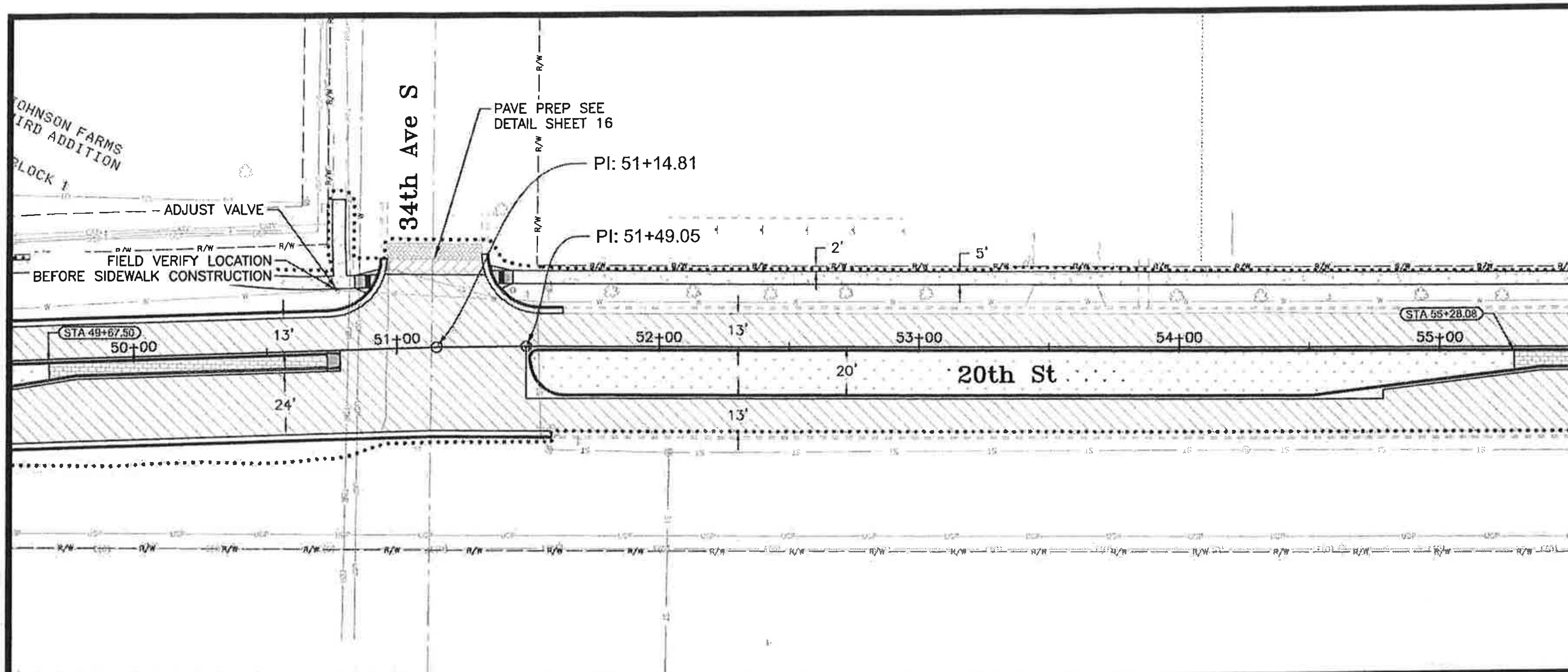
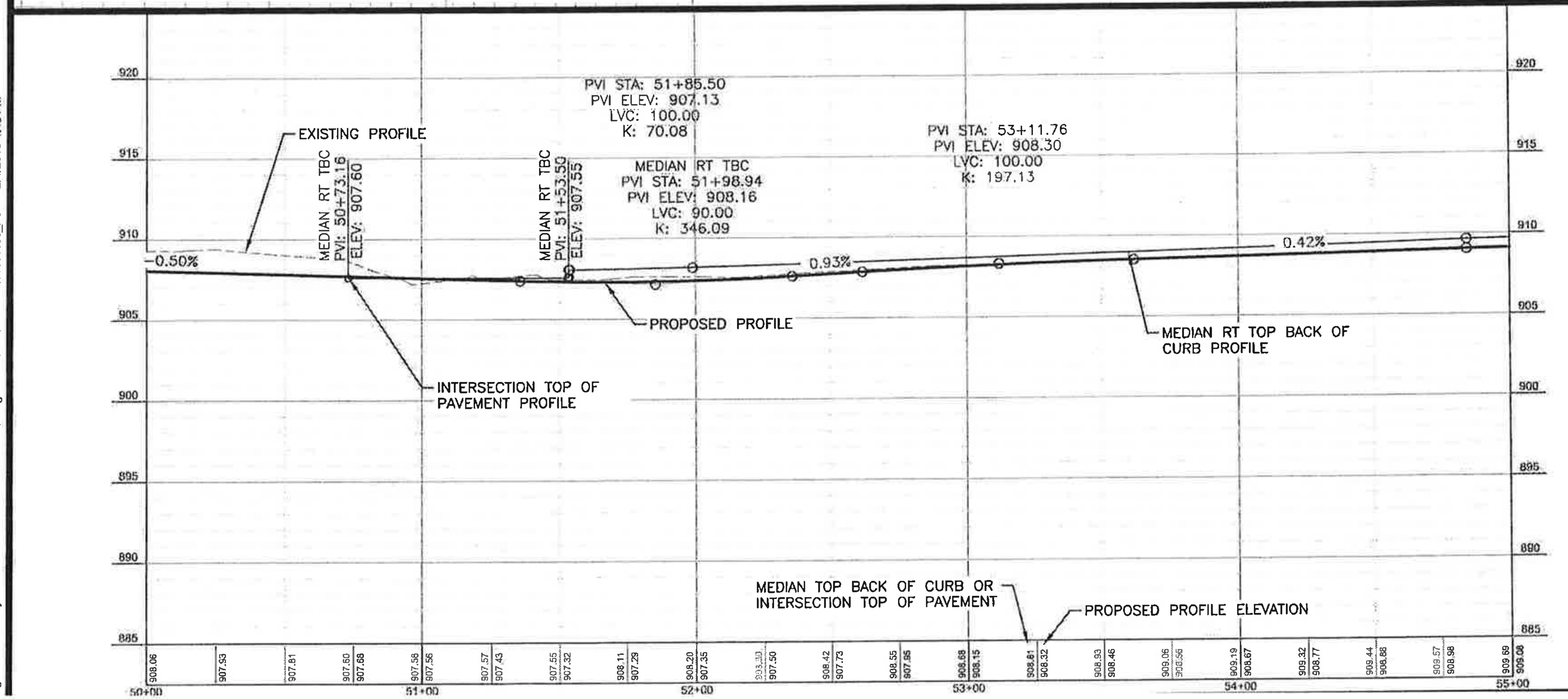
Existing Conditions & Removals

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

SHEET
39 OF 141





LEGEND

NEW BITUMINOUS PAVEMENT 8" DEPTH	
NEW CONCRETE PAVEMENT 8" DEPTH	
STAMPED AND COLORED CONCRETE	
NEW CONCRETE SIDEWALK 4" DEPTH	
NEW CONCRETE 6" DEPTH	
NEW CONCRETE DRIVEWAY 7" DEPTH	
TURF ESTABLISMENT	
NEW CURB & GUTTER*	
IN PLACE STORM SEWER	ST
GRADING LIMITS	

MINNESOTA DEPARTMENT OF TRANSPORTATION

MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

KLJ

JL	EH	SM
DRAWN BY	CHECKED BY	APPROVED BY

144-126-014	14-A2-02	
S.A.P. No.	ENG. No.	MN. No.

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Signature - Project Engineer

Date 2/5/15

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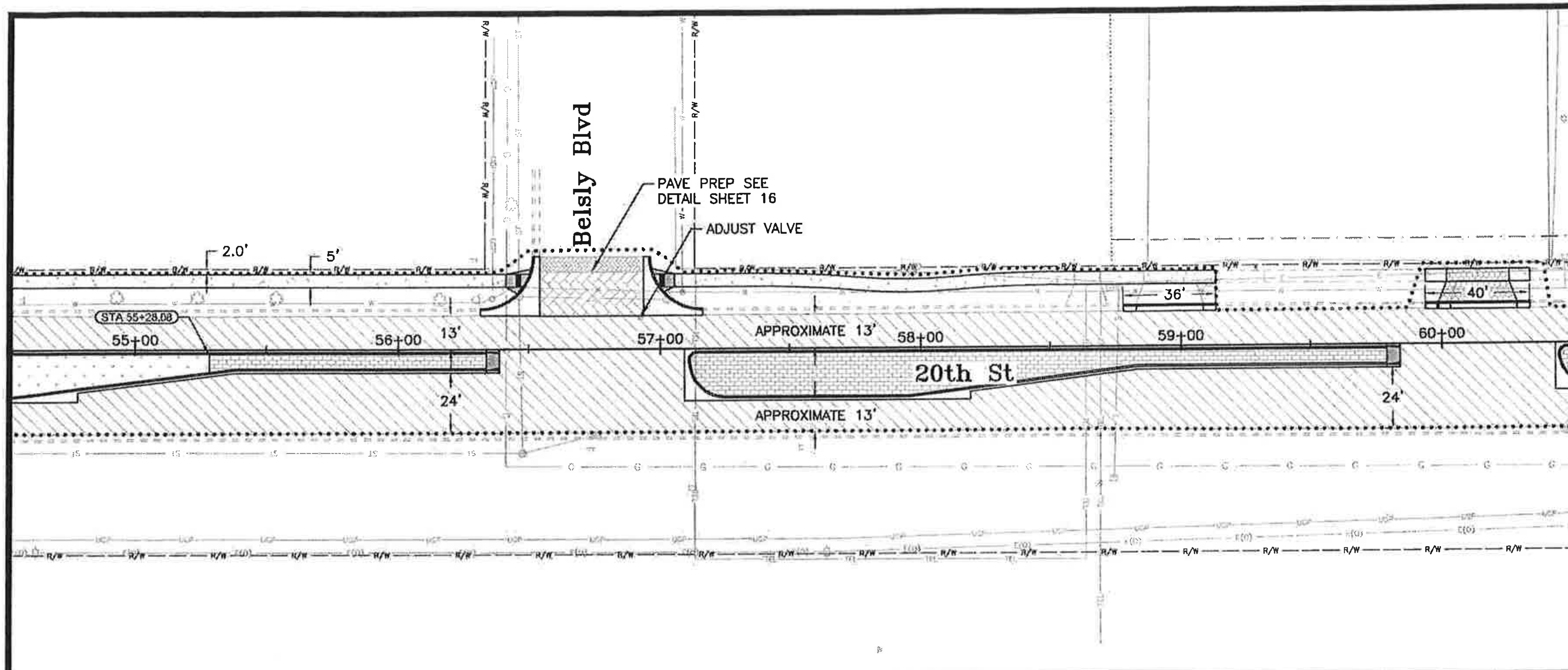
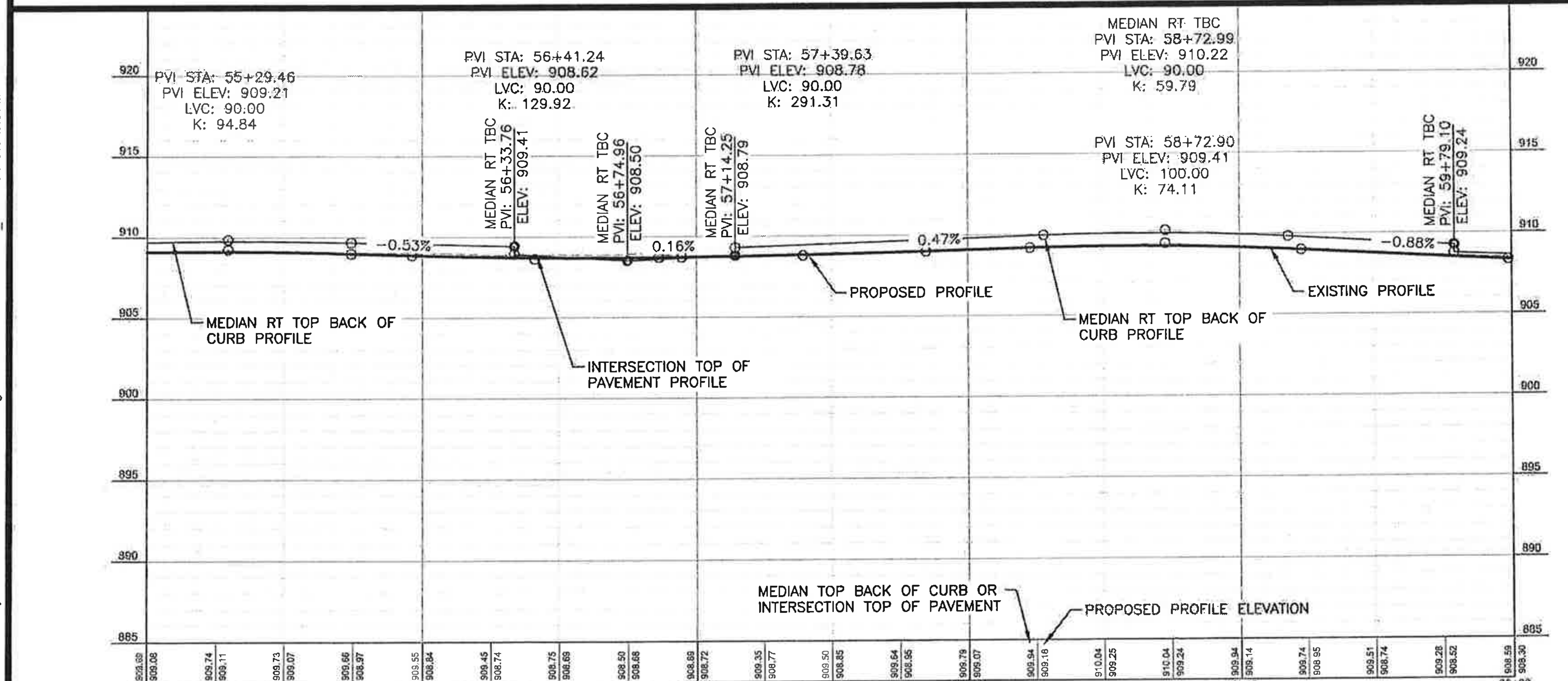
51054
License No.

Construction Plan and Profiles

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

SHEET 68 OF 141





LEGEND

- NEW BITUMINOUS PAVEMENT 8" DEPTH
- NEW BITUMINOUS PAVEMENT 2" DEPTH
- NEW CONCRETE PAVEMENT 8" DEPTH
- STAMPED AND COLORED CONCRETE
- NEW CONCRETE SIDEWALK 4" DEPTH
- NEW CONCRETE 6" DEPTH
- NEW CONCRETE DRIVEWAY 7" DEPTH
- TURF ESTABLISMENT
- NEW CURB & GUTTER*
- IN PLACE STORM SEWER
- GRADING LIMITS

MINNESOTA DEPARTMENT OF TRANSPORTATION

CITY OF MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

KLJ

DRAWN BY	CHECKED BY	APPROVED BY
JL	EH	SM

S.A.P. No. 144-126-014

ENG. No. 14-A2-02

MN. No.

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Date 2/5/15

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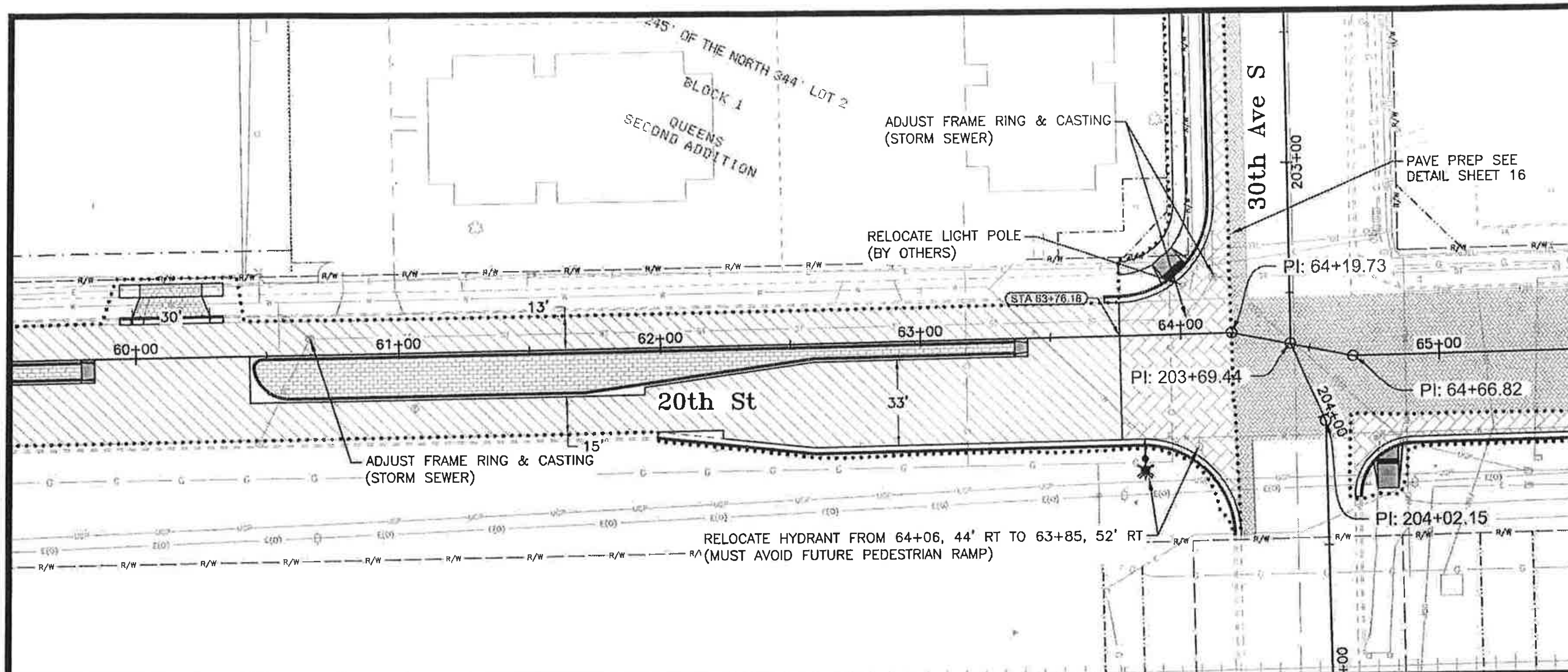
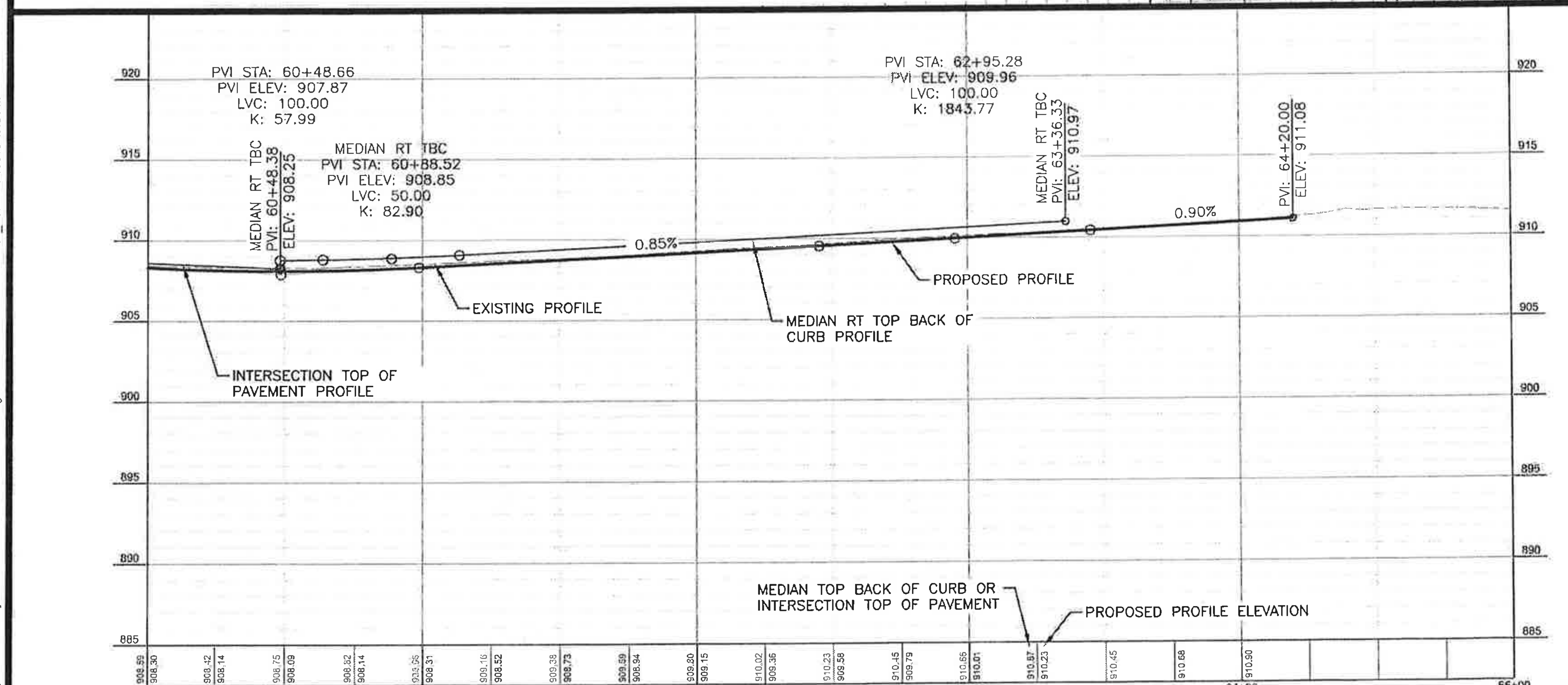
License No.

Construction Plan and Profiles

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals





LEGEND

NEW BITUMINOUS PAVEMENT 8" DEPTH	
NEW BITUMINOUS PAVEMENT 2" DEPTH	
NEW CONCRETE PAVEMENT 8" DEPTH	
STAMPED AND COLORED CONCRETE	
NEW CONCRETE SIDEWALK 4" DEPTH	
NEW CONCRETE 6" DEPTH	
NEW CONCRETE DRIVEWAY 7" DEPTH	
TURF ESTABLISMENT	
NEW CURB & GUTTER*	
IN PLACE STORM SEWER	ST
GRADING LIMITS	

MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

KLJ

JL DRAWN BY | EH CHECKED BY | SM APPROVED BY

144-126-014 S.A.P. No. | 14-A2-02 ENG. No. | MN. No.

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Signature - Project Engineer

2/5/15 Date

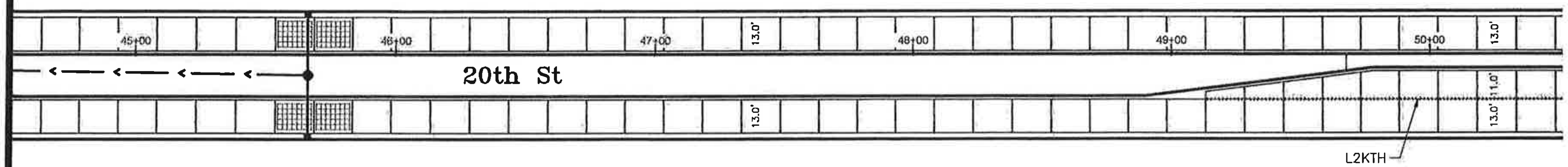
SCOTT MIDDAUGH Name - Project Engineer

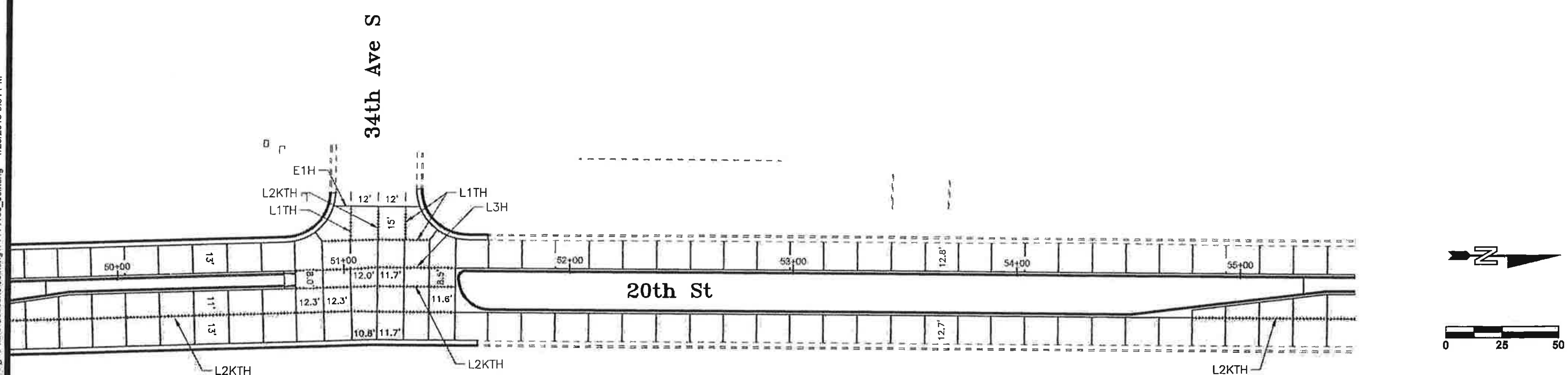
51054 License No.

Construction Plan and Profiles

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

SHEET 70 OF 141





Transverse Joint (C2H–D)

Longitudinal Joint

Supplemental Reinforcement (Refer to Standard Plate 1070M)

NOTES:
1. ALL TRANSVERSE JOINT SPACING SHALL BE 15' UNLESS OTHERWISE SHOWN.
2. ALL JOINTS ADJACENT TO PROPOSED CURB AND GUTTER SHALL BE KEYED & TIED (JOINT TYPE L2KTU).
3. ALL JOINTS ADJACENT TO EXISTING CURB AND GUTTER SHALL HAVE WAXED CARDBOARD BETWEEN THE EXISTING CURB AND THE PROPOSED PAVEMENT SECTION. (SEE TYPICAL SECTION)
4. ALL LANE WIDTHS ALONG EXISTING CURB AND GUTTER ARE APPROXIMATE.

MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

KLJ

JL DRAWN BY | EH CHECKED BY | SM APPROVED BY

144-126-014 S.A.P. No | 14-A2-02 ENG. No | MN No

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Signature - Project Engineer

1/21/15 Date

SCOTT MIDDAUGH Name - Project Engineer

51064 License No.

Jointing Layout

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

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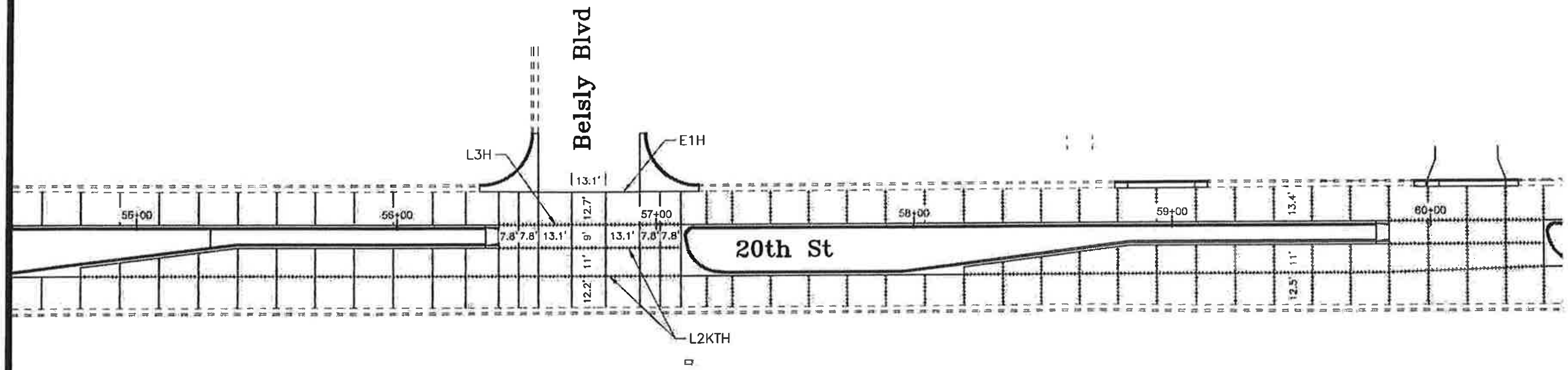
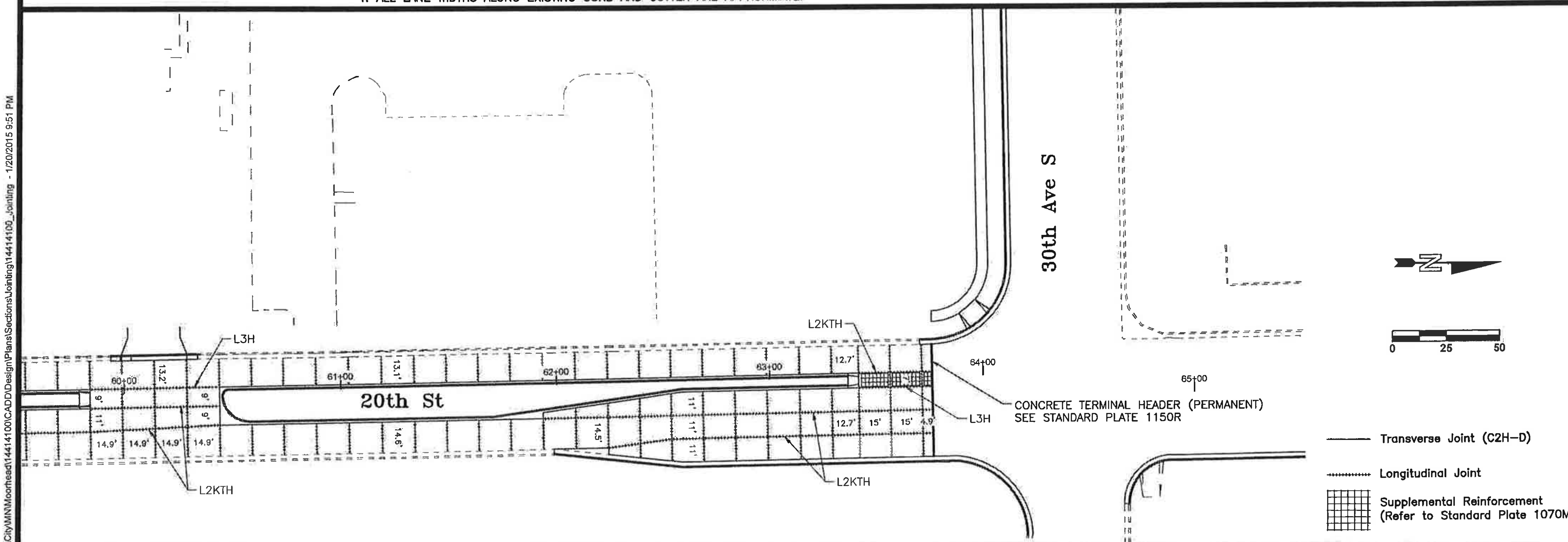


NOTES:
1. ALL TRANSVERSE JOINT SPACING SHALL BE 15' UNLESS OTHERWISE SHOWN.
2. ALL JOINTS ADJACENT TO PROPOSED CURB AND GUTTER SHALL BE KEYED & TIED (JOINT TYPE L2KTU).
3. ALL JOINTS ADJACENT TO EXISTING CURB AND GUTTER SHALL HAVE WAXED CARDBOARD BETWEEN THE EXISTING CURB AND THE PROPOSED PAVEMENT SECTION. (SEE TYPICAL SECTION)
4. ALL LANE WIDTHS ALONG EXISTING CURB AND GUTTER ARE APPROXIMATE.



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MINNESOTA DEPARTMENT OF TRANSPORTATION

CITY OF MOORHEAD MINNESOTA ENGINEERING DEPARTMENT

KLJ

JL	EH	SM
DRAWN BY	CHECKED BY	APPROVED BY

144-126-014	14-A2-02	
S.A.P. No.	ENG. No.	MN. No.

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.

Signature - Project Engineer

Date: 1/21/15

SCOTT MIDDAUGH
Name - Project Engineer

51054
License No.

Jointing Layout

Grading, Aggregate Base, Bituminous & Concrete Paving, Storm Sewer, Concrete Curb & Gutter, Signing, Striping & Incidentals

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