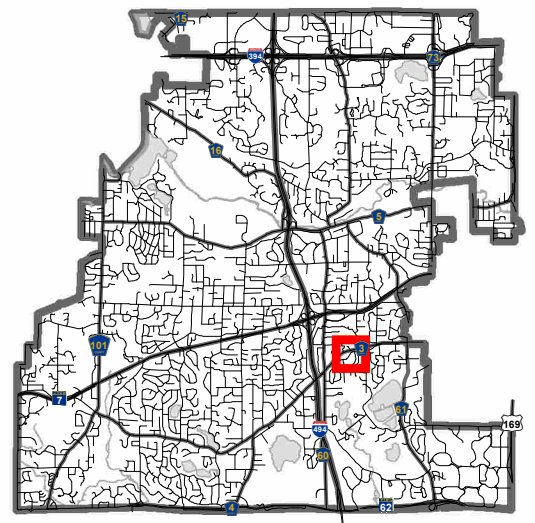




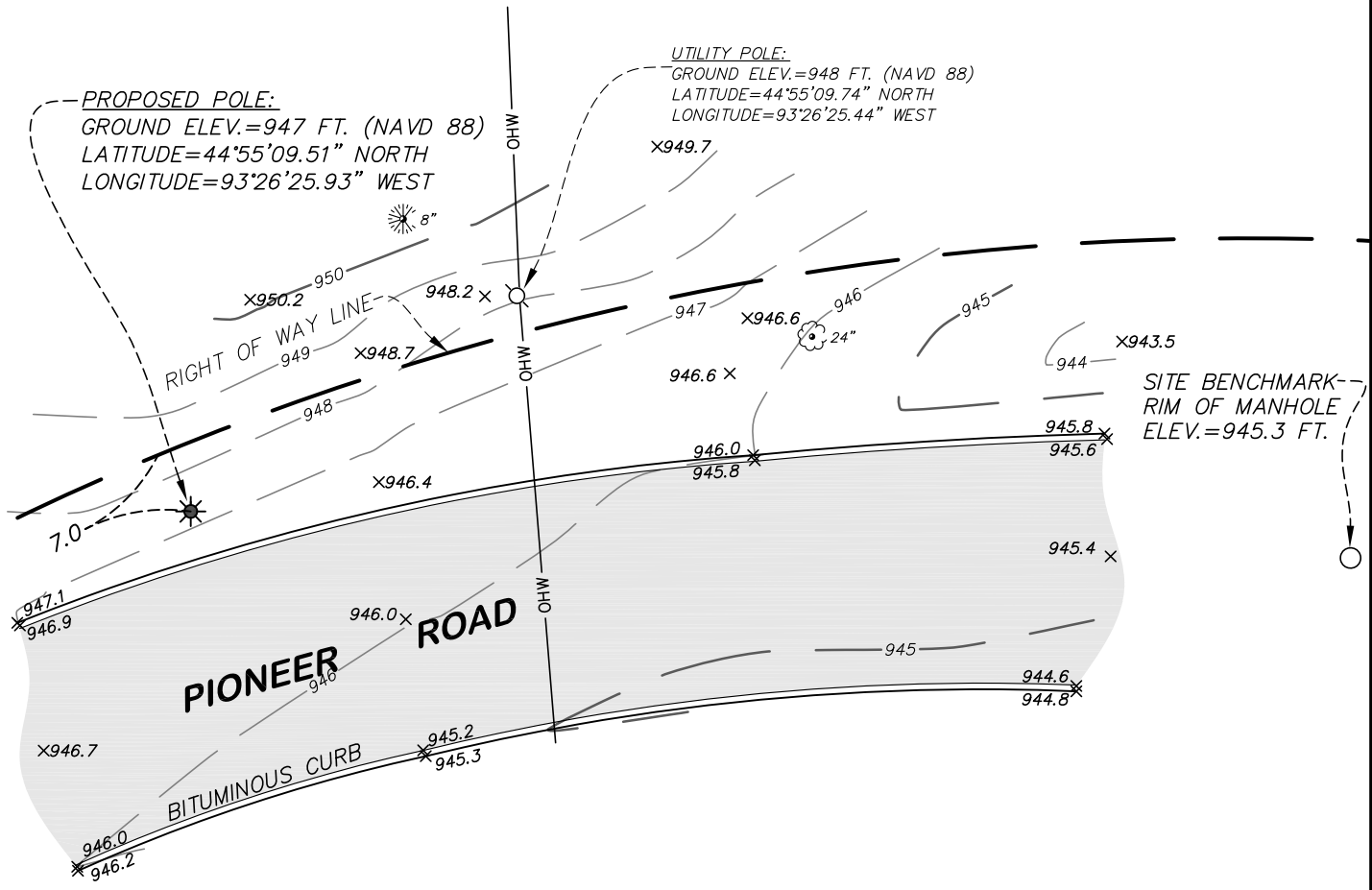
Location Map

Project: Verizon Small Cell Wireless
Location: Pioneer Road



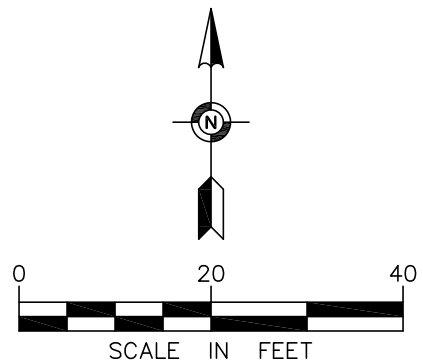
**SITE LOCATION SURVEY FOR:
EDGE CONSULTING ENGINEERS, INC.**

**SITE LOCATION: Pioneer Road and Merilee Drive, Minnetonka, Minnesota
SITE NAME: MIN TONKA SC3**



NOTES:

1. The orientation of this survey is based on the Hennepin County, Minnesota Coordinate Grid, NAD 83-2011 Adjustment.
2. Elevations shown hereon are based on the MNDOT VRS Network, Adjusted Vertical Datum of 1988 (NAVD 88).
3. No boundary work was performed in the preparation of this exhibit. The right-of-way line depicted hereon is based on County Re-survey section coordinates supplemented by information shown on the plats of LONE ACRE and VALLEY VIEW KNOLL.
4. Existing utilities, services and underground structures shown hereon were located either physically, from existing records made available to us, by resident testimony, or by locations provided by Gopher State One Call, per Ticket No. 182203243. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary. Other utilities and services may be present and verification and location of all utilities and services should be obtained from the owners of the respective utilities prior to any design, planning or excavation.
5. The field work for this survey was performed on August 17, 2018.



LEGEND

- UTILITY POLE
- MANHOLE
- TREE
- OHW
- SPOT ELEVATION
- EXISTING CONTOUR LINE
- BITUMINOUS SURFACE

EFN PROJECT NO. 37836

SITE LOCATION SURVEY FOR:

EDGE CONSULTING ENGINEERS, INC.

SITE LOCATION: Pioneer Road and Merilee Drive, Minnetonka, Minnesota



Egan, Field & Nowak, Inc.

land surveyors since 1872

1229 Tyler Street NE, Suite 100
Minneapolis, Minnesota 55413
PHONE: (612) 466-3300
FAX: (612) 466-3383
WWW.EFNSURVEY.COM

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A PHOTOGRAPH BEFORE SIMULATION

B PHOTOGRAPH AFTER SIMULATION

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
 952.683.1032 VOICE
 952.405.8583 FAX
 www.edgeconsult.com

CLIENT:
verizon
 10801 BUSH LAKE RD
 BLOOMINGTON, MN 55438
 952.946.4694 VOICE

PHOTO SIMULATION
 MINNETONKA SC1 3
 MINNETONKA, MINNESOTA

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PROJECT NO:	20181926410
LOCATION CODE:	499316
RFDS DATE:	04/07/2020

STRUCTURAL ANALYSIS:	
DATE:	DESCRIPTION:
N/A	N/A

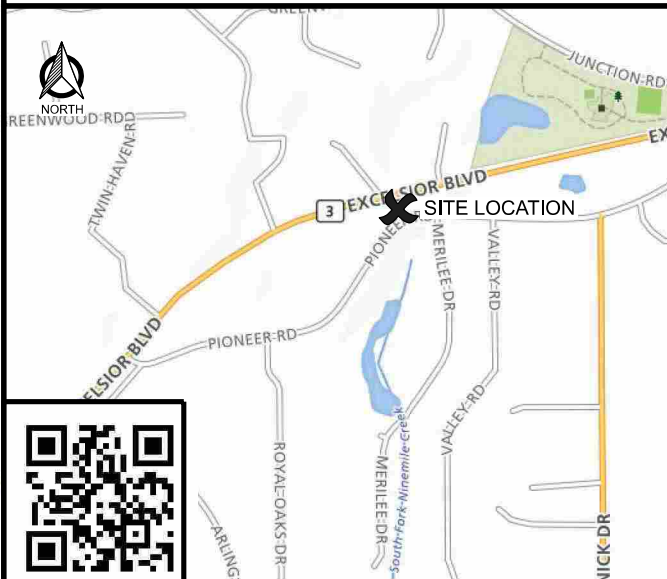
SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
JDM	01/26/2021	PHOTOSIM

CHECKED BY:	OGD
PLOT DATE:	1/26/2021
PROJECT NUMBER:	20154
SET TYPE:	FINAL

SHEET NUMBER **T-901**

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SITE LOCATION MAP



verizon

**MIN TONKA SC1 3
MINNETONKA, MINNESOTA
NEW POLE**

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
 952.683.1032 VOICE
 952.405.8583 FAX
 www.edgeconsult.com

CLIENT:
verizon
 10801 BUSH LAKE RD
 BLOOMINGTON, MN 55438
 952.946.4694 VOICE

TITLE SHEET
 MIN TONKA SC1 3
 MINNETONKA, MINNESOTA

POLE LOCATION



SCOPE OF WORK

WORK PRODUCT	SUPPLIED BY	INSTALLED BY
NEW POLE	EDGE	CONTRACTOR
NEW CONCRETE FOUNDATION	VERIZON	CONTRACTOR
ELECTRICAL CONDUIT	VERIZON	CONTRACTOR
FIBER CONDUIT, BETWEEN HAND HOLE/DEMARC AND POLE BASE	VERIZON	CONTRACTOR
FIBER CONDUIT, WITHIN RIGHT OF WAY	FIBER PROVIDER	FIBER PROVIDER
FIBER HAND HOLE, WITHIN RIGHT OF WAY	FIBER PROVIDER	FIBER PROVIDER
NEW VERIZON EQUIPMENT	VERIZON	CONTRACTOR
NEW ELECTRIC METER	VERIZON	CONTRACTOR

SHEET INDEX

NO.:	SHEET TITLE
G-001	TITLE SHEET
C-101	SITE PLAN
T-201	SITE ELEVATION & ANTENNA CONFIGURATION
T-501	MOUNTING DETAILS
T-502	MOUNTING DETAILS
T-701	ANTENNA & EQUIPMENT SPECIFICATIONS
T-702	ANTENNA & EQUIPMENT SPECIFICATIONS
S-501	FOUNDATION DETAILS
E-101	FIBER & POWER ROUTING PLAN
E-501	GROUNDING & UTILITY DETAILS
D-101	TRAFFIC & PEDESTRIAN PLANS
R-001	GENERAL NOTES
R-002	GENERAL NOTES

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PROJECT NO: 20181826410
 LOCATION CODE: 499316
 RFDS DATE: 04/07/2020

STRUCTURAL ANALYSIS:
 DATE: 05/06/2020 DESCRIPTION: REPORT NO. 20154

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS/CONDITIONS ON SITE. IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING ANY WORK OR BE RESPONSIBLE FOR THE SAME.

PROJECT INFO

APPROX. ADDRESS:
 12701 PIONEER RD.
 MINNETONKA, MN 55343
 HENNEPIN COUNTY

PROJECT NUMBER:
 20181826410

LOCATION CODE:
 499316

EXISTING POLE TYPE:
 N/A

EXISTING POLE FINISH:
 N/A

NEW POLE MATERIAL:
 STEEL

NEW POLE FINISH:
 PAINTED

PAINT CODE:
 SHERWIN WILLIAMS "NETWORK GRAY" SW 7073

POLE DISPOSAL INFORMATION:
 N/A

DIRECTORY

VERIZON PROJECT MANAGER:
 CONTACT: KATIE POSER
 PHONE: 612.968.9077
 EMAIL: katie.poser@verizonwireless.com

ENGINEER:
 EDGE CONSULTING ENGINEERS, INC.
 2101 HIGHWAY 13 W.
 BURNSVILLE, MN 55337
 CONTACT: MIKE MLINER
 PHONE: 608.644.1449

ASSET OWNER:
 VERIZON WIRELESS
 10801 BUSH LAKE RD.
 BLOOMINGTON, MN 55438
 PHONE: 952.946.4694

ROW CONTACT:
 CITY OF MINNETONKA
 14600 MINNETONKA BLVD.
 MINNETONKA, MN 55435
 PHONE: 952.939.8200

POWER PROVIDER:
 XCEL ENERGY
 414 NICOLLET MALL
 MINNEAPOLIS, MN 55401
 PHONE: 1.800.895.4999

CONTRACTOR TO REVIEW STRUCTURAL REPORT IN ITS ENTIRETY. ANY DISCREPANCIES OR DISAGREEMENTS BETWEEN THE REPORT AND THESE PLAN SHOULD BE RESOLVED PRIOR TO CONSTRUCTION.

THESE SITE PLANS ADHERE TO ALL OF THE REQUIREMENTS CALLED OUT IN THE JURISDICTION, PLANNING, AND ZONING FOR ANTENNAS AND SUPPORT STRUCTURE WHERE SITE IS LOCATED.

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

- AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 1ST EDITION
- 2012 INTERNATIONAL BUILDING CODE
- 2017 NATIONAL ELECTRIC CODE
- TIA/EIA-222-G OR LATEST EDITION

IN THE EVENT OF CONFLICT THE MOST RESTRICTIVE CODE SHALL PREVAIL.

SUBMITTAL:

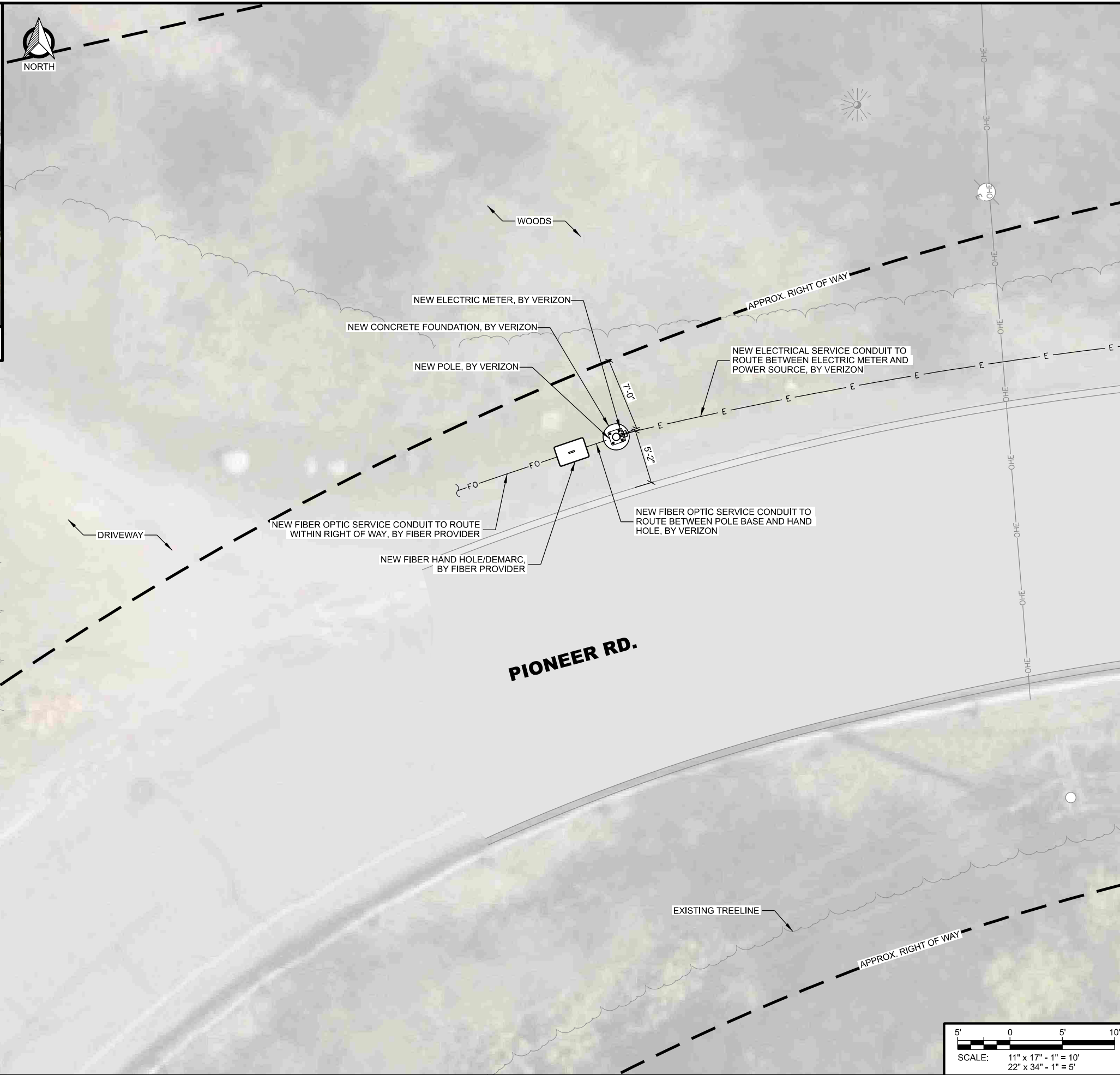
INT.	DATE	DESCRIPTION:
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY	MJM
PLOT DATE	1/27/2021
PROJECT NUMBER	20154
SET TYPE	FINAL
SHEET NUMBER	G-001

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A **SITE OVERVIEW**



CONSULTANT:
Edge
 Consulting Engineers, Inc.
 2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
 952.683.1032 VOICE
 952.405.8583 FAX
 www.edgeconsult.com

CLIENT:
verizon
 10801 BUSH LAKE RD
 BLOOMINGTON, MN 55438
 952.946.4694 VOICE

SITE PLAN
 MINNETONKA SC1 3
 MINNETONKA, MINNESOTA

ENGINEER SEAL:
 APPROVED -
 SEE TITLE SHEET FOR
 ENGINEER SEAL

SIGNATURE: _____
 DATE: _____
 I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PROJECT NO: 20181926410
 LOCATION CODE: 499316
 RFDS DATE: 04/07/2020

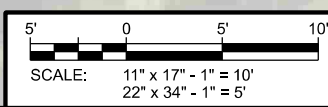
STRUCTURAL ANALYSIS:
 DATE: 05/06/2020 DESCRIPTION: REPORT NO. 20154

SUBMITTAL:

INT.	DATE	DESCRIPTION
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY: MJM
 PLOT DATE: 1/27/2021
 PROJECT NUMBER: 20154
 SET TYPE: FINAL

SHEET NUMBER: **C-101**



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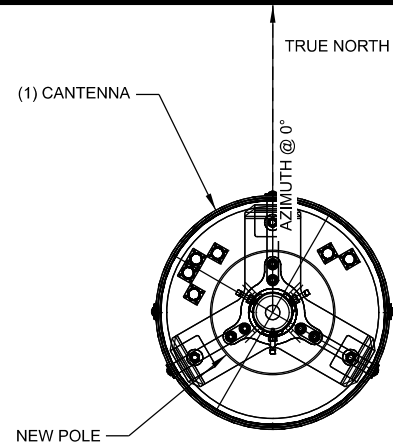
PROPOSED ANTENNA KEY											
NODE	AZIMUTH	QTY	MANUFACTURER	MODEL	ANTENNA HEIGHT	ANTENNA WIDTH	ANTENNA WEIGHT	ANTENNA TIP	ANTENNA CENTER	ELEC DOWNTILT	MECH DOWNTILT
SC	0	1	JMA	CX160MI236-LC	35.4"	14"	35 lbs	33'-5"	32'-0"	0°	0°

PROPOSED EQUIPMENT KEY					
QTY.	MANUFACTURER	MODEL	HEIGHT	ORIENTATION	MOUNT
2	COMMSCOPE	CBC1923T-DS-43	27'-6"	Street, Street + 180°	Band Strap
1	ERICSSON	RRU 8843	26'-0"	Street	Aluma-Form
1	ERICSSON	RRU 4449	26'-0"	Street + 180°	Aluma-Form
2	ERICSSON	PSU 6302	23'-0"	Street, Street + 180°	Aluma-Form
1	RAYCAP	RSCAC-1333-P-240	21'-0"	Street	Band Strap

NOTES:

- ALL HARDWARE SHALL BE STAINLESS STEEL.
- ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS.
- LIGHTNING RODS SHALL BE INCLUDED WHERE REQUIRED.
- ALL NEW POLE MOUNTED EQUIPMENT TO BE PAINTED TO MATCH POLE.
- PAINT SPECIFICATION: SHERWIN WILLIAMS "NETWORK GRAY" SW 7073
- THE ORIENTATION SHOWN IN ELEVATION "A" IS FOR CLARITY AND DOES NOT ACCURATELY REPRESENT THE AZIMUTH OF THE ANTENNAS.
- CONTRACTOR TO SECURE ALL CABLING TO POLE EXTERIOR BY USE OF CABLE BLOCK (SITE PRO 1 #: CXB12 OR APPROVED EQUAL) AND TOWER STANDOFF BRACKET (1-1/2" TO 3" DIA. USE SITE PRO 1 #: MST OR APPROVED EQUAL; 3" DIA. AND UP USE SITE PRO 1 #: LST OR APPROVED EQUAL); SECURE CABLE BLOCK TO STANDOFF BRACKET WITH HARDWARE KIT (SITE PRO 1 #: CH35 OR APPROVED EQUAL); SPACE NO MORE THAN 36" O.C., MAXIMUM

A ANTENNA AND EQUIPMENT KEY



NOTE:
1. ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.

B ANTENNA LAYOUT PLAN
SCALE: 11" x 17" - 3/4" = 1'-0"
22" x 34" - 1-1/2" = 1'-0"

THIS SPACE INTENTIONALLY LEFT BLANK

View Direction:

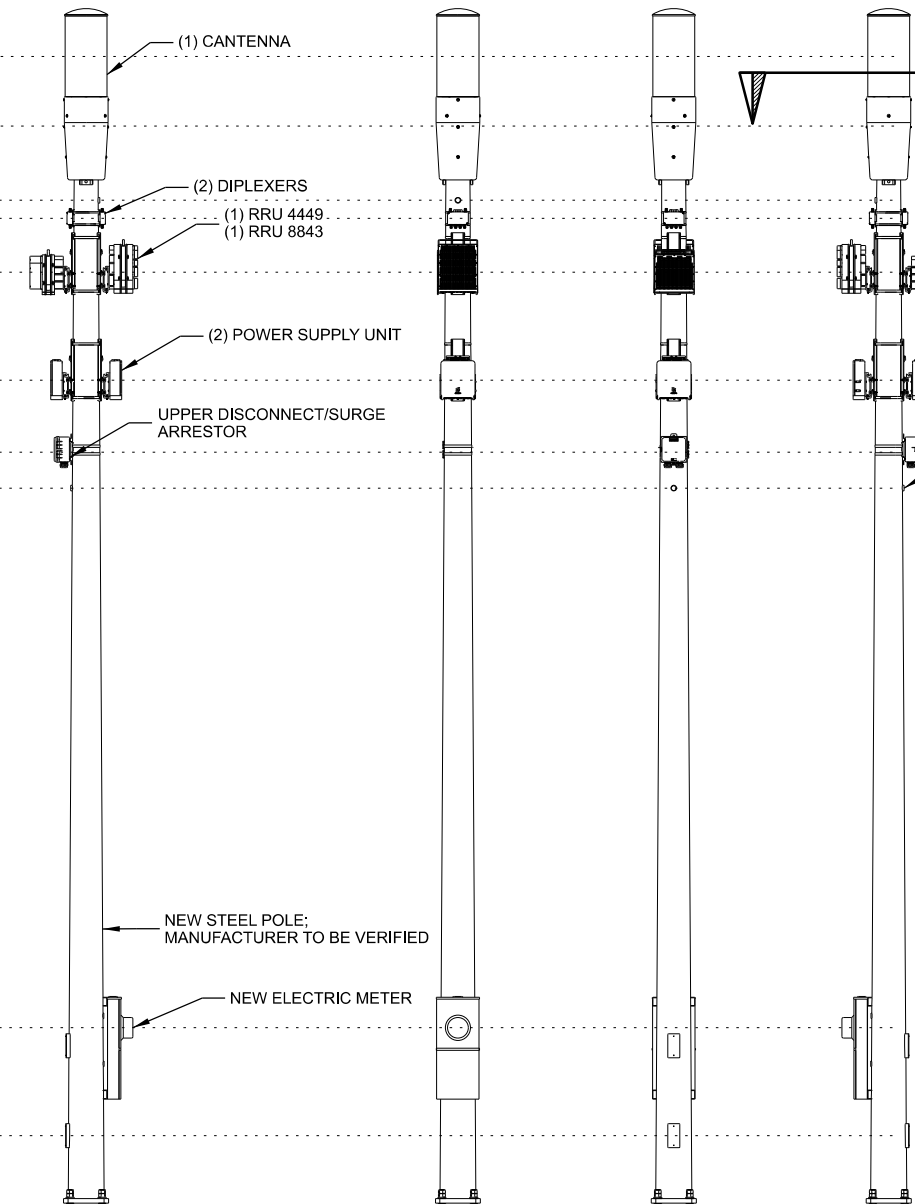
STREET -90°

STREET +180°

STREET

STREET +90°

- C/L OF ANTENNA ELEV: 32'-0"
- TOP OF POLE ELEV: 30'-0"
- C/L OF POLE PENETRATION ELEV: 28'-0"
- C/L OF ANCILLARY EQUIPMENT ELEV: 27'-6"
- C/L OF ANCILLARY EQUIPMENT ELEV: 26'-0"
- C/L OF ANCILLARY EQUIPMENT ELEV: 23'-0"
- C/L OF ANCILLARY EQUIPMENT ELEV: 21'-0"
- C/L OF POLE PENETRATION ELEV: 20'-0"



EXISTING POLE	
POLE HEIGHT:	N/A
MAXIMUM APPURTENANCE HEIGHT:	N/A

PROPOSED POLE	
POLE HEIGHT:	30'-0" T.O.C.
ANTENNA TIP HEIGHT:	33'-5" A.G.L.
MAXIMUM APPURTENANCE HEIGHT:	33'-5" A.G.L.

CABLE ROUTING NOT SHOWN FOR CLARITY. CONTRACTOR TO REFERENCE NOTE 6 OF T-201 FOR CABLE ROUTING SPECIFICATIONS

CONTRACTOR TO WEATHERPROOF POLE PENETRATIONS PER VERIZON REQUIREMENTS

SEE S-501 FOR BELOW GRADE DETAILS

C POLE ELEVATION
SCALE: 11" x 17" - 3/16" = 1'-0"
22" x 34" - 3/8" = 1'-0"

CONSULTANT:
Edge Consulting Engineers, Inc.
2101 HIGHWAY 13 W
BURNSVILLE, MN 55337
952.683.1032 VOICE
952.405.8583 FAX
www.edgeconsult.com

CLIENT:
verizon
10801 BUSH LAKE RD
BLOOMINGTON, MN 55438
952.946.4694 VOICE

SITE ELEVATION & ANTENNA CONFIGURATION
MINNETONKA SC13
MINNETONKA, MINNESOTA

ENGINEER SEAL:
APPROVED - SEE TITLE SHEET FOR ENGINEER SEAL

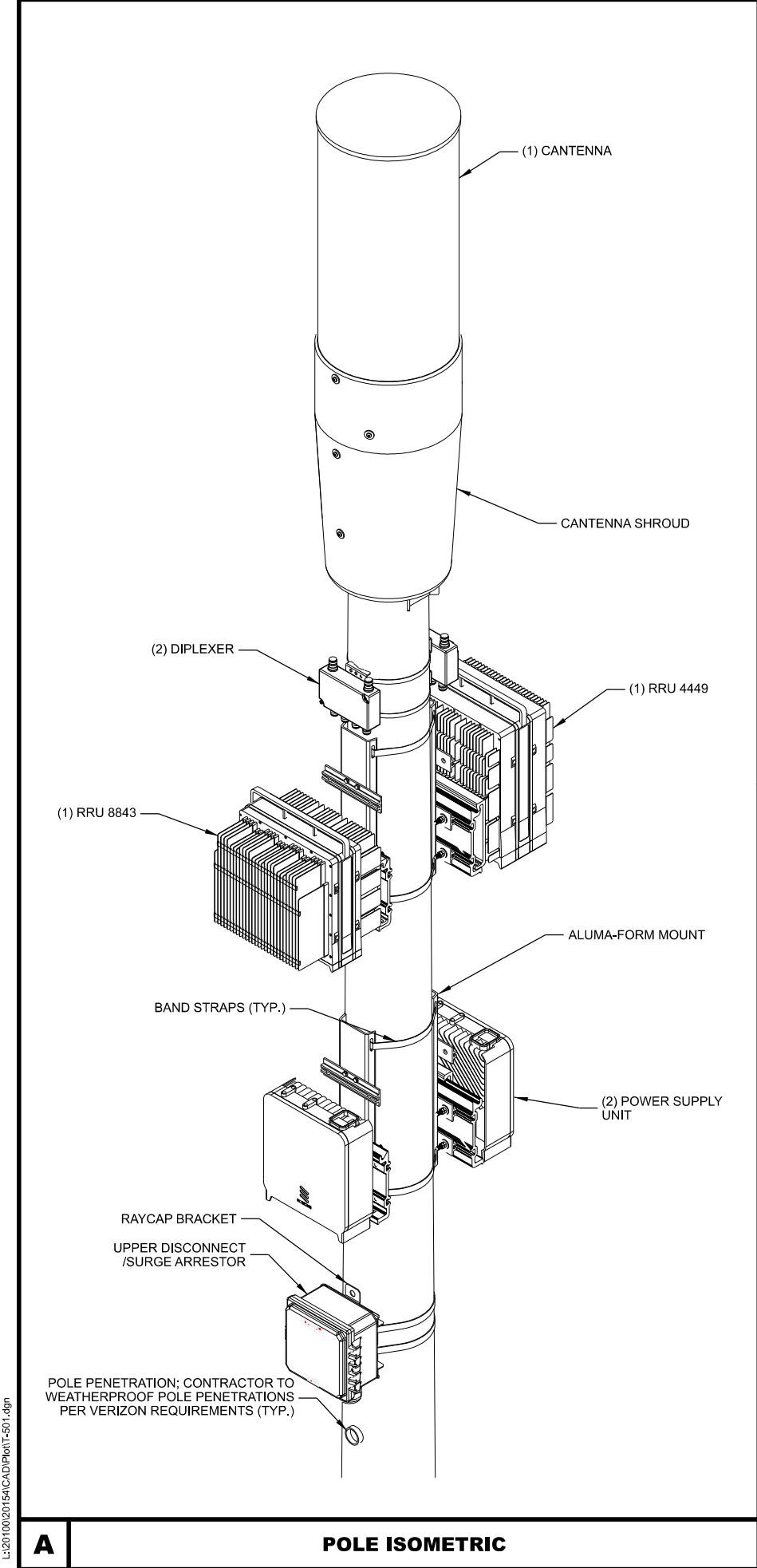
SIGNATURE: _____
DATE: _____
I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PROJECT NO:	20181826410
LOCATION CODE:	499316
RFDS DATE:	04/07/2020

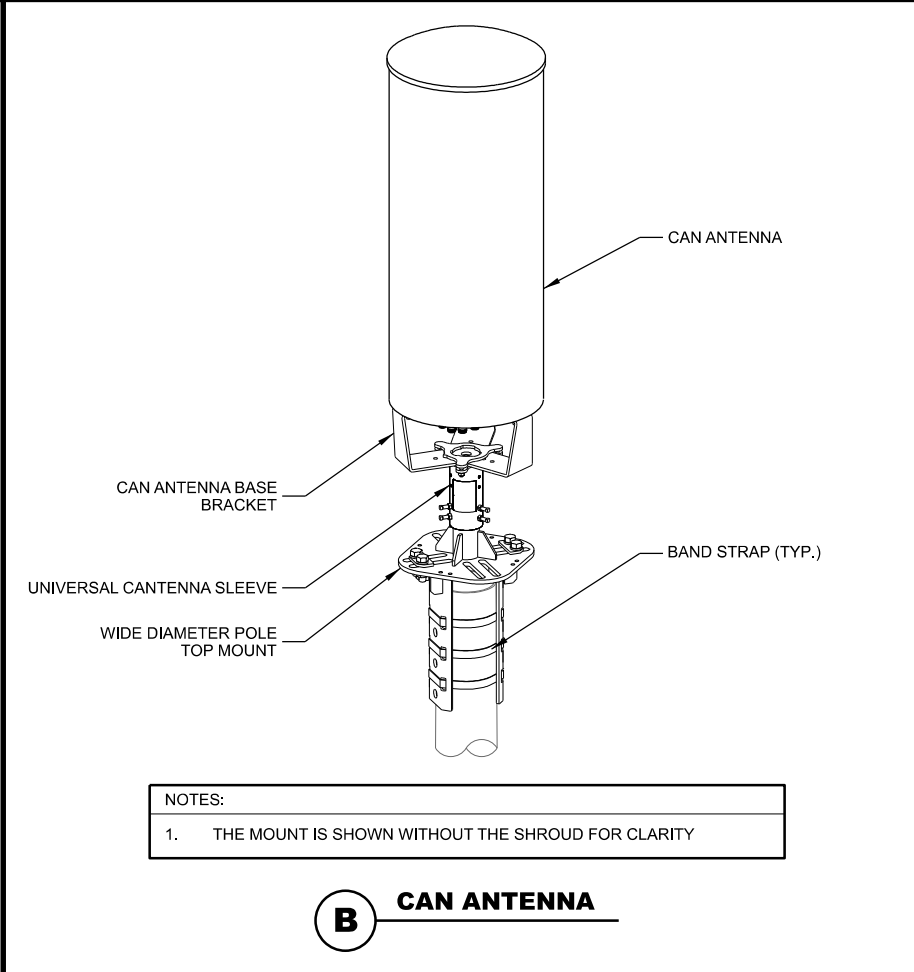
STRUCTURAL ANALYSIS:		
DATE:	DESCRIPTION:	REPORT NO.
05/06/2020		20154

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY:	MJM
PLOT DATE:	1/27/2021
PROJECT NUMBER:	20154
SET TYPE:	FINAL
SHEET NUMBER:	T-201

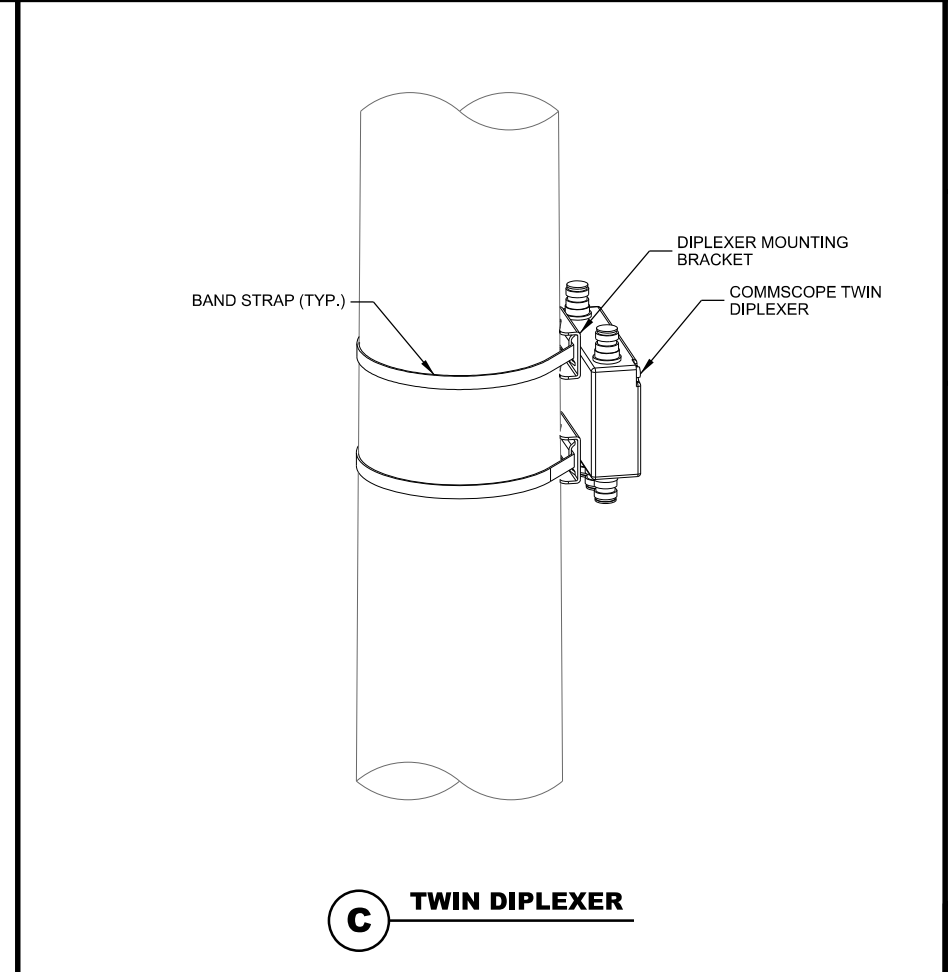


A POLE ISOMETRIC

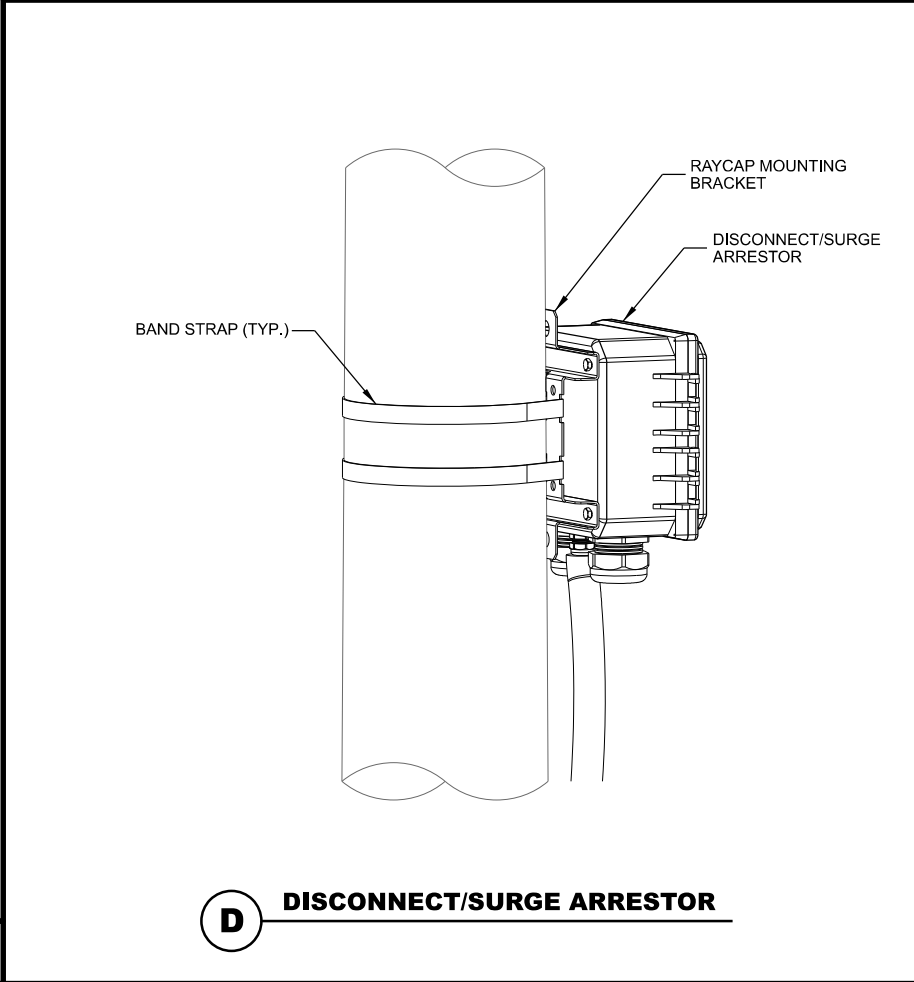


NOTES:
1. THE MOUNT IS SHOWN WITHOUT THE SHROUD FOR CLARITY

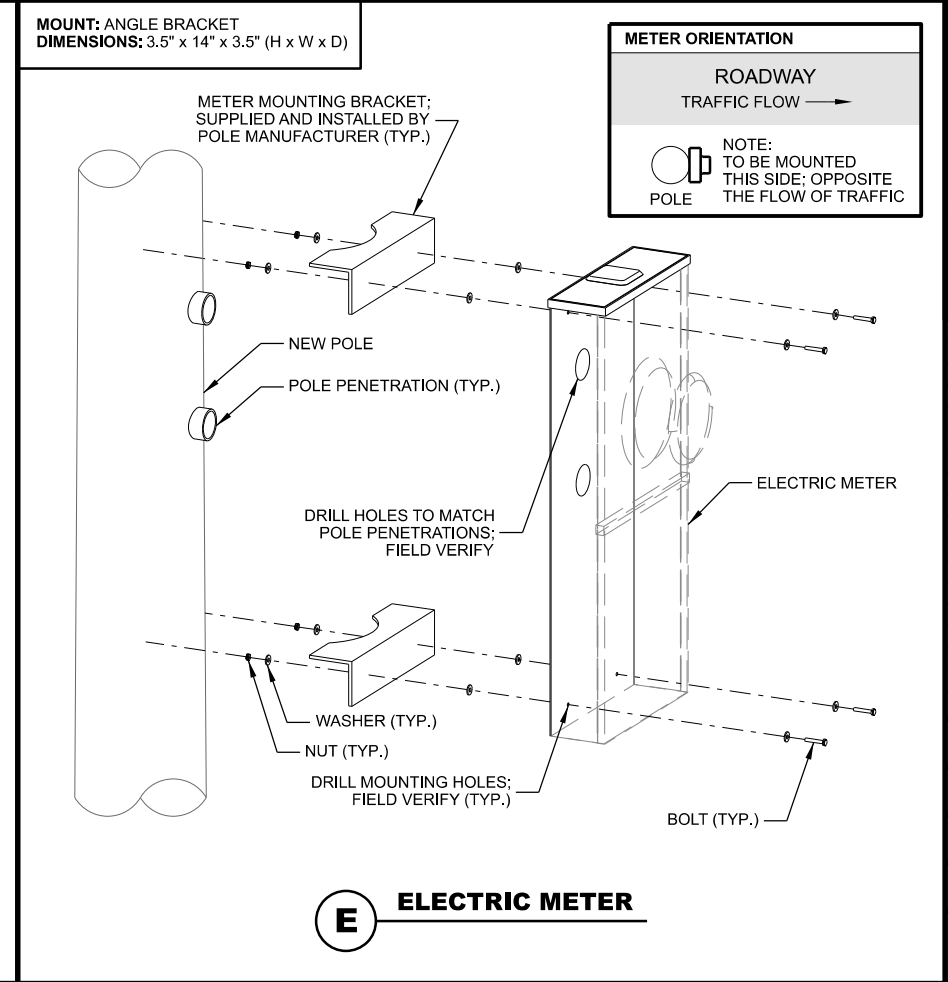
B CAN ANTENNA



C TWIN DIPLEXER



D DISCONNECT/SURGE ARRESTOR



E ELECTRIC METER

MOUNT: ANGLE BRACKET
DIMENSIONS: 3.5" x 14" x 3.5" (H x W x D)

CONSULTANT:
Edge
Consulting Engineers, Inc.
2101 HIGHWAY 13 W
BURNSVILLE, MN 55337
952.683.1032 VOICE
952.405.8583 FAX
www.edgeconsult.com

CLIENT:
verizon
10801 BUSH LAKE RD
BLOOMINGTON, MN 55438
952.946.4694 VOICE

MOUNTING DETAILS
MINNETONKA SC1 3
MINNETONKA, MINNESOTA

ENGINEER SEAL:
APPROVED - SEE TITLE SHEET FOR ENGINEER SEAL

SIGNATURE: _____
DATE: _____

PROJECT NO: 20181926410
LOCATION CODE: 499316
RFDS DATE: 04/07/2020

STRUCTURAL ANALYSIS:

DATE:	DESCRIPTION:
05/06/2020	REPORT NO. 20154

SUBMITTAL:

INT.	DATE	DESCRIPTION:
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY:	MJM
PLOT DATE:	1/27/2021
PROJECT NUMBER:	20154
SET TYPE:	FINAL
SHEET NUMBER:	T-501

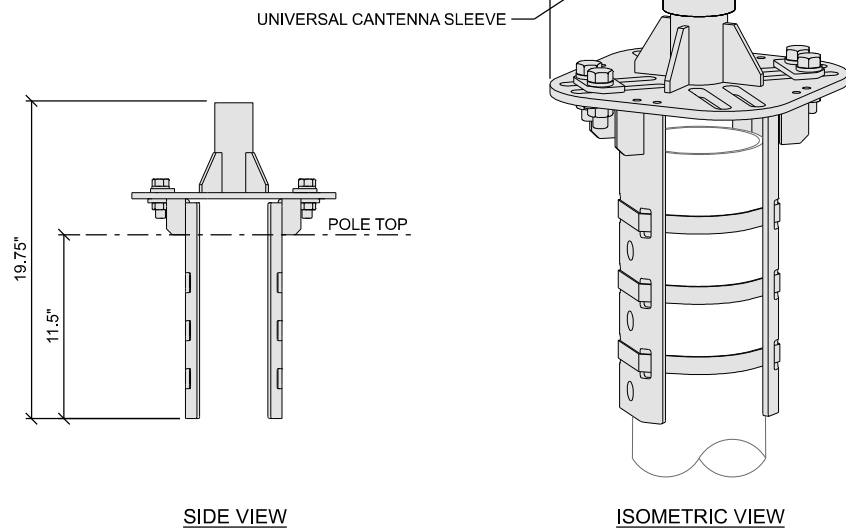
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MANUFACTURER: CONCEALFAB
MODEL: WIDE DIAMETER POLE TOP MOUNT (PART # 007951-F)
DIMENSIONS: 19.75" x 12.75" (H x W)

TO BE USED WITH UNIVERSAL ANTENNA SLEEVE MOUNT W/ SINGLE BOLT ADAPTER PLATE (PART # 900192-F)

POLE TOP LEG ARRANGEMENT #1:
 FITS POLES 7-1/2" DIA. TO 14-1/8" DIA.

POLE TOP LEG ARRANGEMENT #2:
 FITS POLES 5-1/4" DIA. TO 7-1/8" DIA.



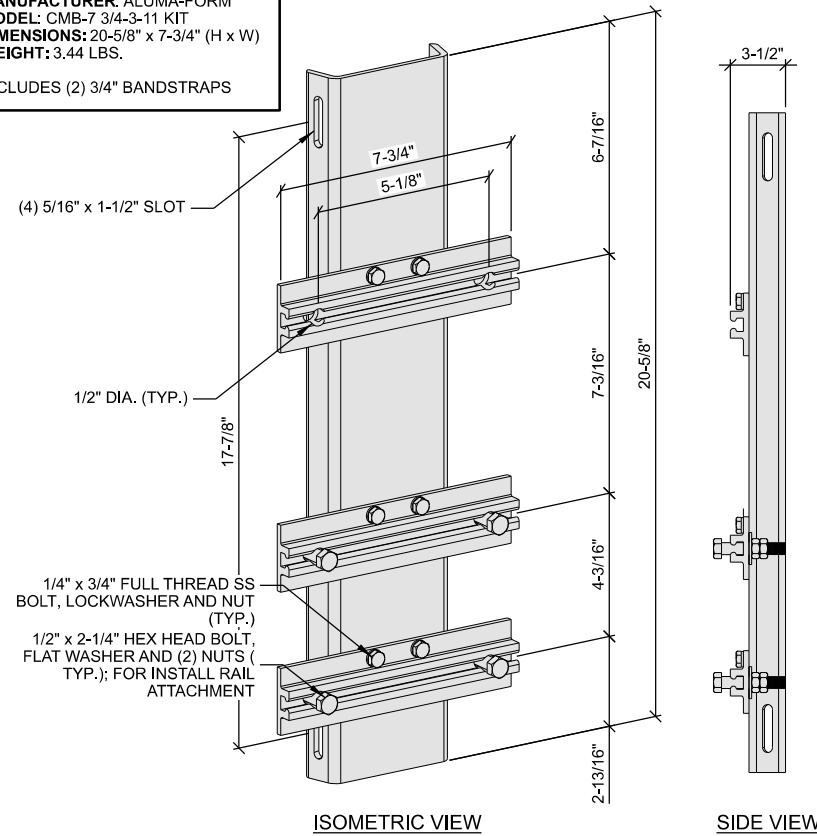
SIDE VIEW

ISOMETRIC VIEW

A WIDE DIAMETER POLE TOP MOUNT

MANUFACTURER: ALUMA-FORM
MODEL: CMB-7 3/4-3-11 KIT
DIMENSIONS: 20-5/8" x 7-3/4" (H x W)
WEIGHT: 3.44 LBS.

INCLUDES (2) 3/4" BANDSTRAPS

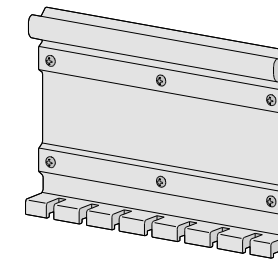


ISOMETRIC VIEW

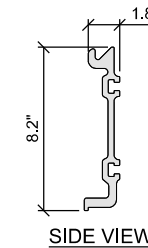
SIDE VIEW

B ALUMAFORM MOUNT

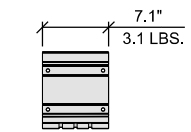
MANUFACTURER: ERICSSON
MODEL: INSTALL RAIL
DIMENSIONS: 8.2" x VARIES x 1.8" (H x W x D)
WEIGHT: VARIES



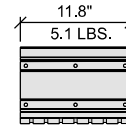
RAIL



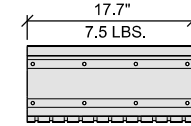
SIDE VIEW



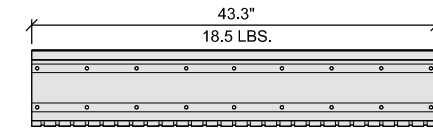
3.1 LBS.



5.1 LBS.



7.5 LBS.

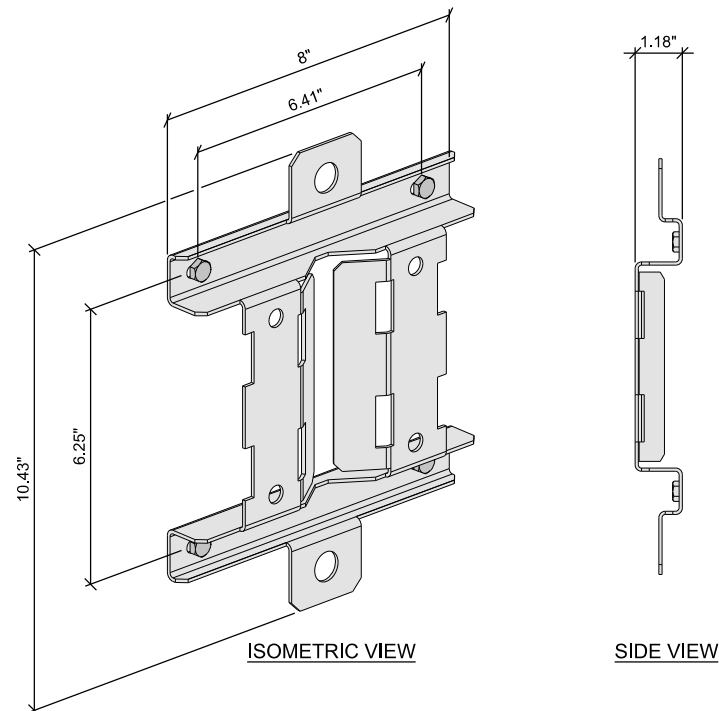


18.5 LBS.

FRONT VIEW

C ERICSSON INSTALL RAIL

MANUFACTURER: RAYCAP
MODEL: RVZDC-2210-P-48
DIMENSIONS: 10.43" x 8.59" x 5.06" (H x W x D)
WEIGHT: 8 LBS.



ISOMETRIC VIEW

SIDE VIEW

D RAYCAP MOUNTING BRACKET

THIS SPACE INTENTIONALLY LEFT BLANK

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
 952.683.1032 VOICE
 952.405.8583 FAX
 www.edgeconsult.com

CLIENT:
verizon
 10801 BUSH LAKE RD
 BLOOMINGTON, MN 55438
 952.946.4694 VOICE

MOUNTING DETAILS
 MINNETONKA SC1 3
 MINNETONKA, MINNESOTA

ENGINEER SEAL:

APPROVED-
 SEE TITLE SHEET FOR
 ENGINEER SEAL

SIGNATURE: _____
 DATE: _____

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PROJECT NO: 20181926410
 LOCATION CODE: 499316
 RFDS DATE: 04/07/2020

STRUCTURAL ANALYSIS:
 DATE: DESCRIPTION:
 05/06/2020 REPORT NO. 20154

SUBMITTAL:

INT.	DATE	DESCRIPTION:
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY: MJM

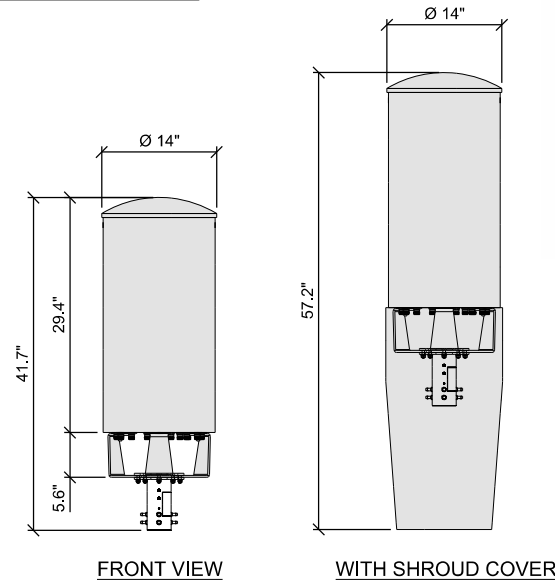
PLOT DATE: 1/27/2021

PROJECT NUMBER: 20154

SET TYPE: FINAL

SHEET NUMBER: **T-502**

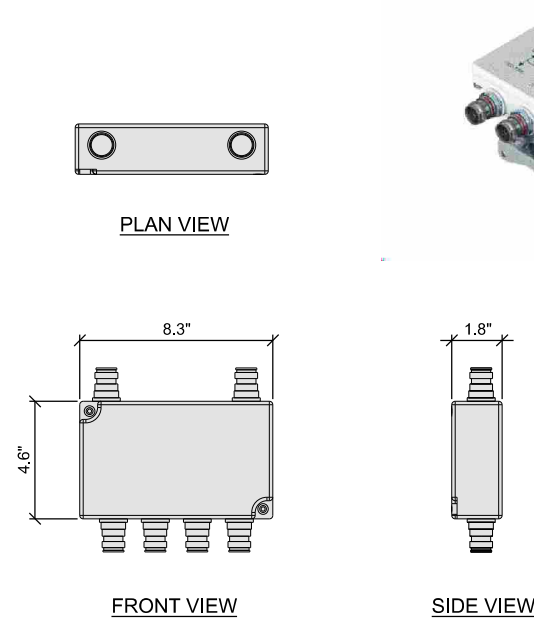
MANUFACTURER: JMA
 MODEL: CX060MI236-1C
 DIMENSIONS: 29.4" x Ø 14" (H x W)
 WEIGHT: 38.6 LBS.
 INSTALLATION TYPE: POLE TOP MOUNT



NOTES:
 1. ANTENNA(S) TO BE MOUNTED TO POLE EXTERIOR WITH CONCEALFAB WIDE DIAMETER POLE TOP MOUNT (PART # 007951-F)

A CANTENNA

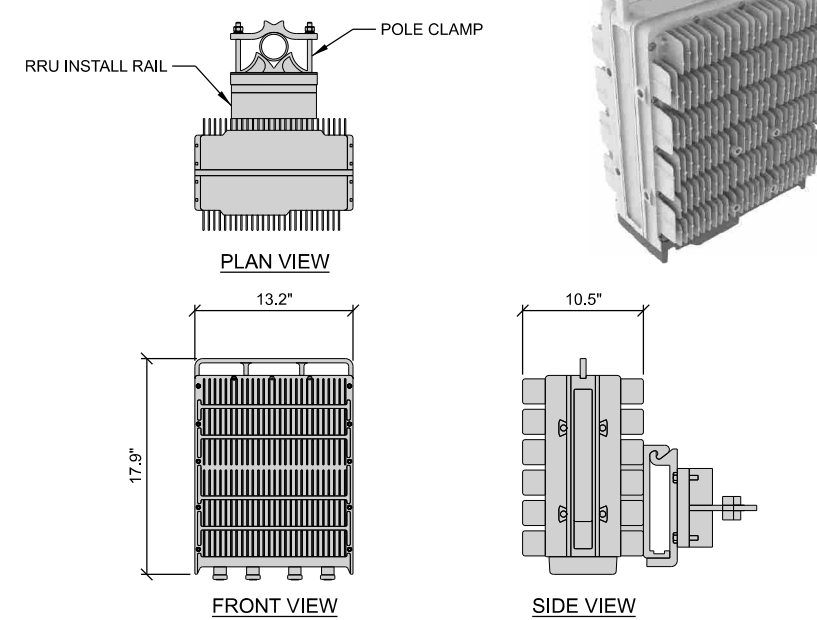
MANUFACTURER: COMMSCOPE
 MODEL: DIPLEXER CBC1923T-43
 DIMENSIONS: 4.6" x 8.3" x 1.8" (H x W x D)
 WEIGHT: 4.3 LBS



NOTES:
 1. DIPLEXERS MUST BE POWERED UP WITHIN 48 HOURS OF INSTALLATION.

B TWIN DIPLEXER

MANUFACTURER: ERICSSON
 MODEL: RADIO 4449
 DIMENSIONS: 17.9" x 13.2" x 10.5" (H x W x D)
 WEIGHT: 70.5 LBS



NOTES:
 1. REMOTE RADIO UNITS MUST BE POWERED UP WITHIN 48 HOURS OF INSTALLATION.

C REMOTE RADIO UNIT (RRU)

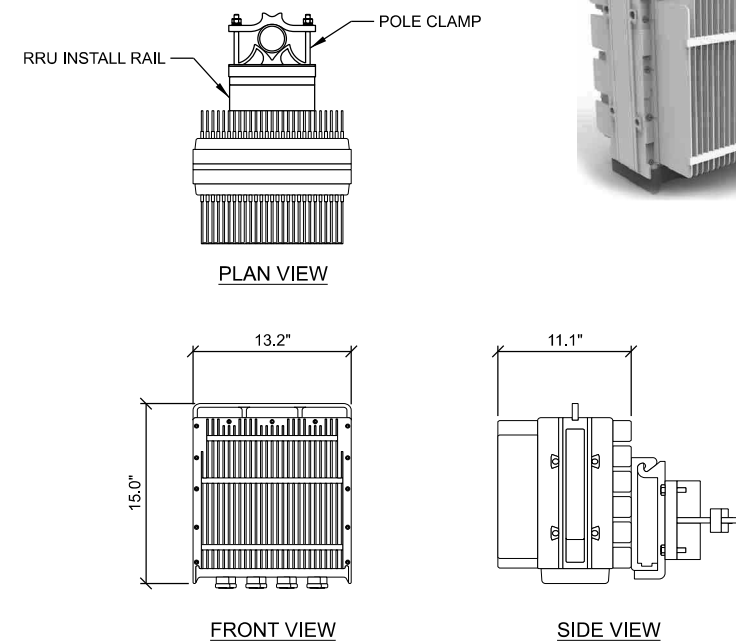
CAUTION
 Transmitting Antenna(s)
 Radio frequency fields beyond this point MAY EXCEED the FCC Occupational exposure limit.
 Obey all posted signs and site guidelines.
 Call Verizon at 1-800-264-6620 PRIOR to working beyond this point.
 Site ID/ PSLC: _____
 verizon

NOTICE
 Transmitting Antenna(s)
 Radio frequency fields beyond this point MAY EXCEED the FCC General Population exposure limit.
 Obey all posted signs and site guidelines.
 Call Verizon at 1-800-264-6620 PRIOR to working beyond this point.
 Site ID/ PSLC: _____
 verizon

NOTES:
 1. RF WARNING SIGNS TO BE MOUNTED @ 7'-0" A.G.L.

D RF WARNING SIGNS

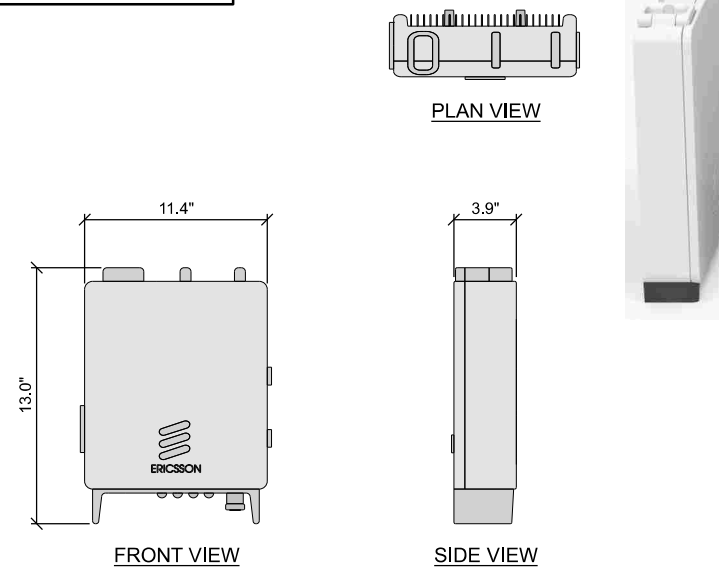
MANUFACTURER: ERICSSON
 MODEL: RRU 8843
 DIMENSIONS: 15.0" x 13.2" x 11.1" (H x W x D)
 WEIGHT: 75 LBS.



NOTES:
 1. REMOTE RADIO UNITS MUST BE POWERED UP WITHIN 48 HOURS OF INSTALLATION.

E REMOTE RADIO UNIT (RRU)

MANUFACTURER: ERICSSON
 MODEL: PSU 6302
 DIMENSIONS: 13.0" x 11.4" x 3.9" (H x W x D)
 WEIGHT: 22 LBS.



F POWER SUPPLY UNIT (PSU)

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
 952.683.1032 VOICE
 952.405.8583 FAX
 www.edgeconsult.com

CLIENT:
verizon
 10801 BUSH LAKE RD
 BLOOMINGTON, MN 55438
 952.946.4694 VOICE

ANTENNA & EQUIPMENT SPECIFICATIONS
 MINNETONKA SC1 3
 MINNETONKA, MINNESOTA

ENGINEER SEAL:
 APPROVED -
 SEE TITLE SHEET FOR
 ENGINEER SEAL

SIGNATURE: _____
 DATE: _____

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PROJECT NO: 20181926410
 LOCATION CODE: 499316
 RFDS DATE: 04/07/2020

STRUCTURAL ANALYSIS:
 DATE: 05/06/2020
 DESCRIPTION: REPORT NO. 20154

SUBMITTAL:

INT.	DATE	DESCRIPTION
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY: MJM

PLOT DATE: 1/27/2021

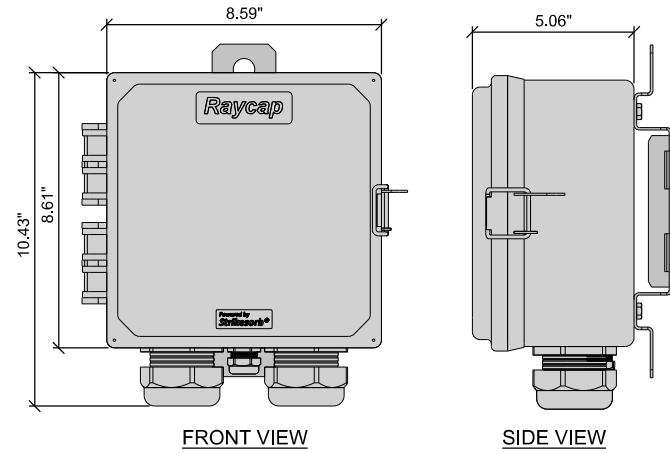
PROJECT NUMBER: 20154

SET TYPE: FINAL

SHEET NUMBER: **T-701**

MANUFACTURER: RAYCAP
 MODEL: RSCAC-1333-P-240
 DIMENSIONS: 10.43" x 8.59" x 5.06" (H x W x D)
 WEIGHT: 8 LBS.

SUPPLIED WITH MOUNTING BRACKET:
 RVZDC-2210-P-48

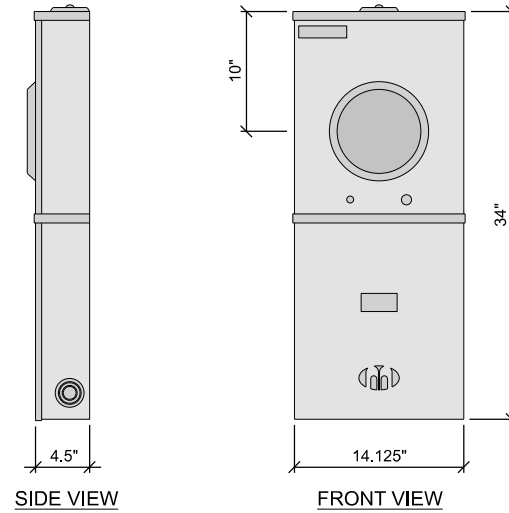


A DISCONNECT / SURGE ARRESTOR

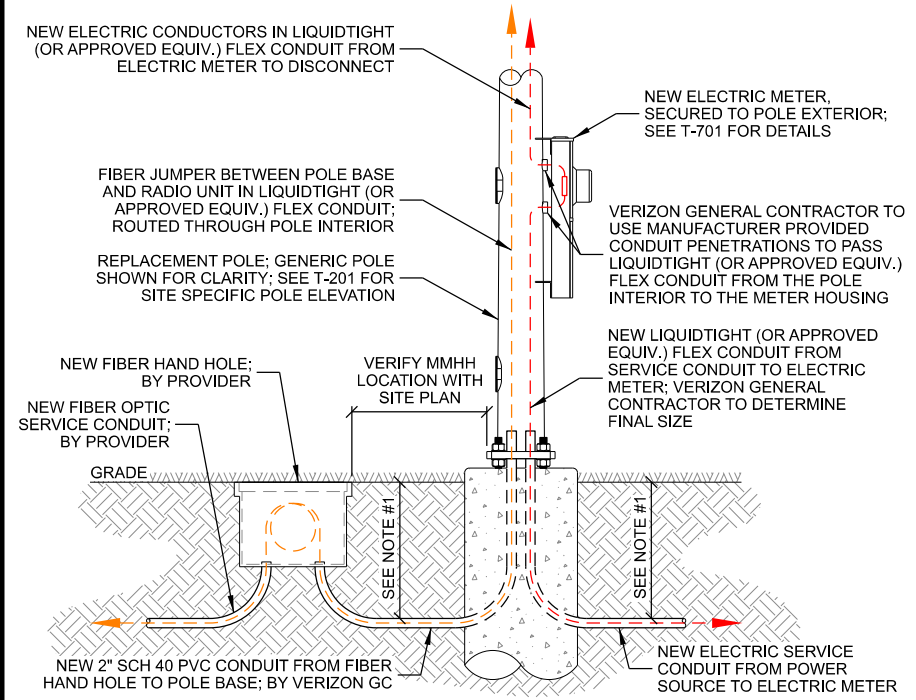
MANUFACTURER: MILBANK
 MODEL: U6821-(-)(-AMP)
 DIMENSIONS: 34" x 14.125" x 4.5" (H x W x D)
 WEIGHT: 41 LBS.

200 AMP HD BYPASS RNLGS 4T/5T SIDE WIREWAY
 OH/UG METER MAIN 22kA SCCR

***OR APPROVED EQUIVALENT

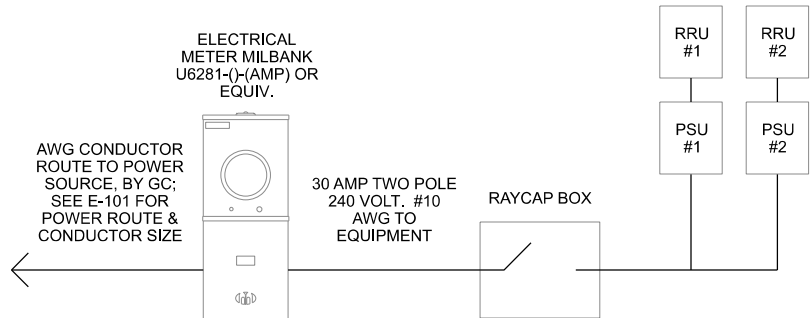


B ELECTRIC METER



- NOTES:
- CONDUIT TO BE 42" BELOW GRADE OR 6" BELOW FROST DEPTH, WHICHEVER IS DEEPER.
 - DUE TO PRESENCE OF ELECTRIC SERVICE WIRES IN POLE BASE, ALL CONDUCTIVE WIRES (ELECTRIC, GROUNDING, ARMORED, FIBER, ETC.) TO BE PLACED IN CONDUIT, PER THE NATIONAL ELECTRICAL CODE.

C CONDUIT ROUTING DETAIL



- NOTES:
- ELECTRICAL CONTRACTOR TO VERIFY FINAL ELECTRICAL ROUTING WITH UTILITY COMPANY ON-SITE.
 - ELECTRICAL CONDUCTOR SIZING IS BASED ON THE FOLLOWING ASSUMPTIONS: 240 VOLT SERVICE, SINGLE PHASE POWER, 100 A CIRCUIT, AND 3% ALLOWABLE VOLTAGE DROP.
 - THE VERIZON GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY ALL REQUIRED CONDUCTOR AND CONDUIT SIZES DURING THE BIDDING PROCESS.

D ELECTRICAL ONE-LINE DIAGRAM

THIS SPACE INTENTIONALLY LEFT BLANK

CONSULTANT:

Edge
 Consulting Engineers, Inc.

2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
 952.683.1032 VOICE
 952.405.8583 FAX
 www.edgeconsult.com

CLIENT:

verizon

10801 BUSH LAKE RD
 BLOOMINGTON, MN 55438
 952.946.4694 VOICE

ANTENNA & EQUIPMENT SPECIFICATIONS
 MINNETONKA SC1 3
 MINNETONKA, MINNESOTA

ENGINEER SEAL:

APPROVED - SEE TITLE SHEET FOR ENGINEER SEAL

SIGNATURE: _____
 DATE: _____

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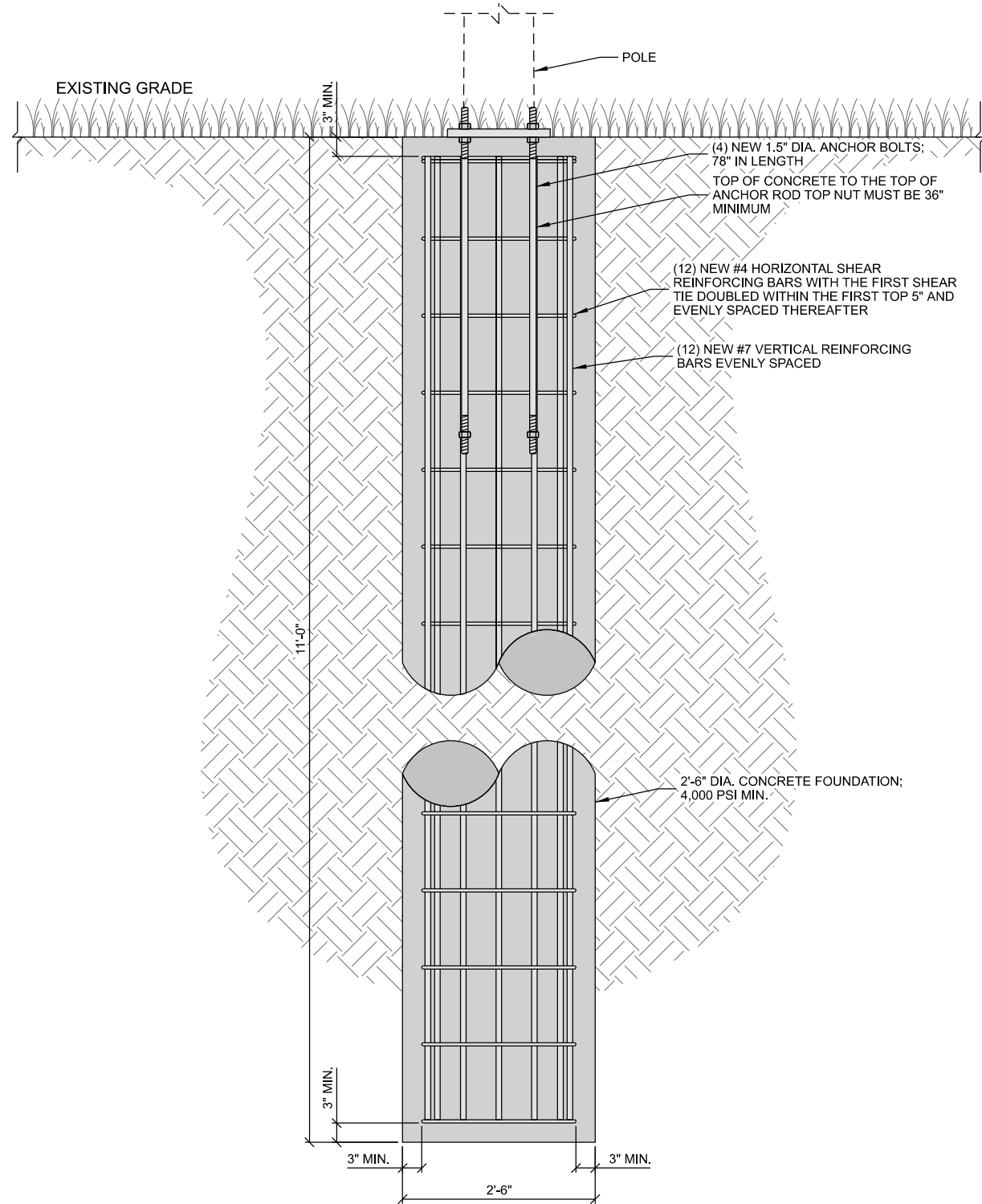
PROJECT NO:	20181826410
LOCATION CODE:	499316
RFDS DATE:	04/07/2020

STRUCTURAL ANALYSIS:		
DATE:	DESCRIPTION:	
05/06/2020	REPORT NO. 20154	

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

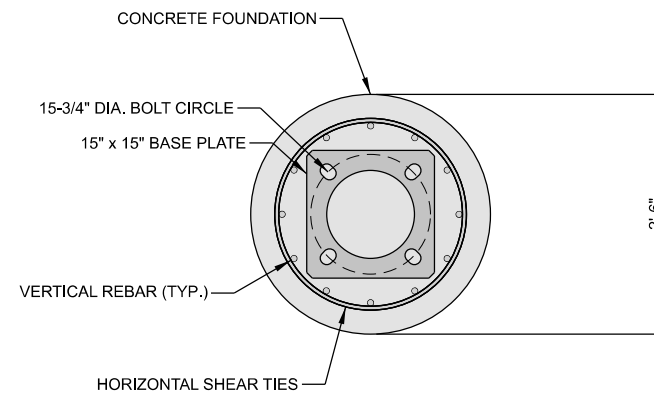
CHECKED BY:	MJM
PLOT DATE:	1/27/2021
PROJECT NUMBER:	20154
SET TYPE:	FINAL
SHEET NUMBER:	T-702

L:\201\001020154\CAD\DWG\T-702.dwg



ELEVATION VIEW

TABLE OF QUANTITIES		
MATERIAL	DESCRIPTION	SUPPLIED BY
HORIZONTAL REBAR	(12) #4	CONTRACTOR
VERTICAL REBAR	(12) #7	CONTRACTOR
ANCHOR BOLT	(4) 1.5" DIA. x 78"	EDGE
CONCRETE	4,000 PSI MIN.	CONTRACTOR



PLAN VIEW

NOTE:
1. VERIFY DETAILS WITH STRUCTURAL ANALYSIS LISTED ON THE TITLE SHEET.

A FOUNDATION DETAIL

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
 952.683.1032 VOICE
 952.405.8583 FAX
 www.edgeconsult.com

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verizon
 10801 BUSH LAKE RD
 BLOOMINGTON, MN 55438
 952.946.4694 VOICE

FOUNDATION DETAILS
 MINNETONKA SC1 3
 MINNETONKA, MINNESOTA

ENGINEER SEAL:

 APPROVED-
 SEE TITLE SHEET FOR
 ENGINEER SEAL

SIGNATURE: _____
 DATE: _____

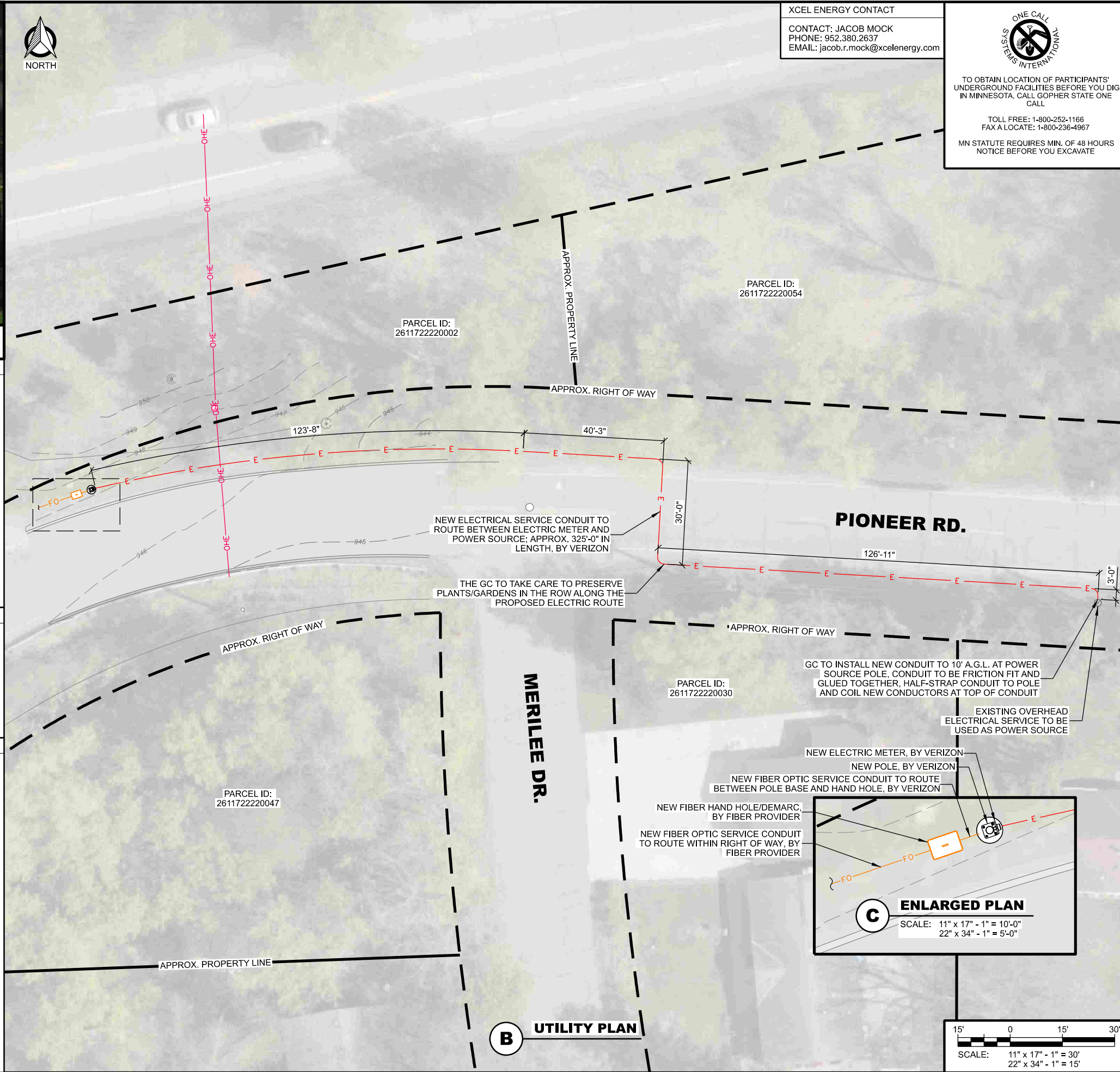
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PROJECT NO:	20181926410
LOCATION CODE:	499316
RFDS DATE:	04/07/2020

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05/06/2020	REPORT NO. 20154

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ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY:	MJM
PLOT DATE:	1/27/2021
PROJECT NUMBER:	20154
SET TYPE:	FINAL
SHEET NUMBER:	S-501



XCEL ENERGY CONTACT
 CONTACT: JACOB MOCK
 PHONE: 952.380.2637
 EMAIL: jacob.r.mock@xcelenergy.com

ONE CALL
 SYSTEMS INTERNATIONAL

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN MINNESOTA, CALL GOPHER STATE ONE CALL

TOLL FREE: 1-800-252-1166
 FAX A LOCATE: 1-800-236-4967

MN STATUTE REQUIRES MIN. OF 48 HOURS NOTICE BEFORE YOU EXCAVATE

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 2101 HIGHWAY 13 W
 BURNSVILLE, MN 55337
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 952.946.4694 VOICE

FIBER & POWER ROUTING PLAN
 MINNETONKA SC1 3
 MINNETONKA, MINNESOTA

A POWER SOURCE

LEGEND:

GAS MAIN	G	G
SANITARY SEWER	SS	SS
STORM SEWER	ST	ST
STREET LIGHTS	E	E
FIBER OPTIC	FO	FO
WATER	W	W
TELEPHONE	T	T
OVERHEAD ELECTRIC	OHE	OHE
NEW ELECTRIC	E	E
NEW FIBER OPTIC	FO	FO

ELECTRICAL CONDUCTOR SIZING:
 THE FOLLOWING ASSUMPTIONS WERE MADE IN CALCULATING THE PROPOSED ELECTRICAL CONDUCTOR SIZING:
 240 VOLT SERVICE
 SINGLE PHASE POWER
 100A CIRCUIT
 3% ALLOWABLE VOLTAGE DROP
 CONDUCTOR WIRE SIZE: 1 / 0 AWG COPPER
 GC REQUIRED TO VERIFY WIRE SIZE WITH A MASTER ELECTRICIAN

- NOTES:
- CONTRACTOR TO COMPLETE UTILITY LOCATE PRIOR TO COMPLETING ANY CONSTRUCTION ACTIVITIES.
 - CONTRACTOR TO MAINTAIN A MINIMUM 48" OF COVER BETWEEN DIRECTIONAL CORE AND ROADWAY PAVEMENT TO THE EXTENT PRACTICAL.
 - CONTRACTOR TO PROVIDE A MINIMUM OF 12" OF CLEARANCE BETWEEN NEW CONDUIT AND EXISTING UTILITIES.
 - ALL CONCRETE DAMAGED AS PART OF THIS WORK TO BE REPAIRED/REPLACED TO ITS ORIGINAL CONDITION.
 - ALL ASPHALT REMOVED DURING CONSTRUCTION IS TO BE PATCHED AND REPAIRED TO ITS ORIGINAL CONDITION.
 - POT HOLE AND PATCH OVER ALL SANITARY SEWER LINES.
 - POT HOLE AND PATCH OVER ALL WATER LINES/MAINS.
 - THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY 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.

ENGINEER SEAL:
 APPROVED SHEET FOR ENGINEER SEAL

SIGNATURE: _____
 DATE: _____

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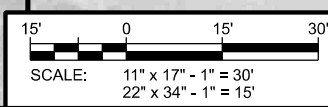
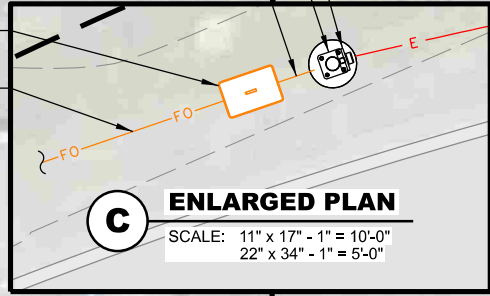
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STRUCTURAL ANALYSIS:
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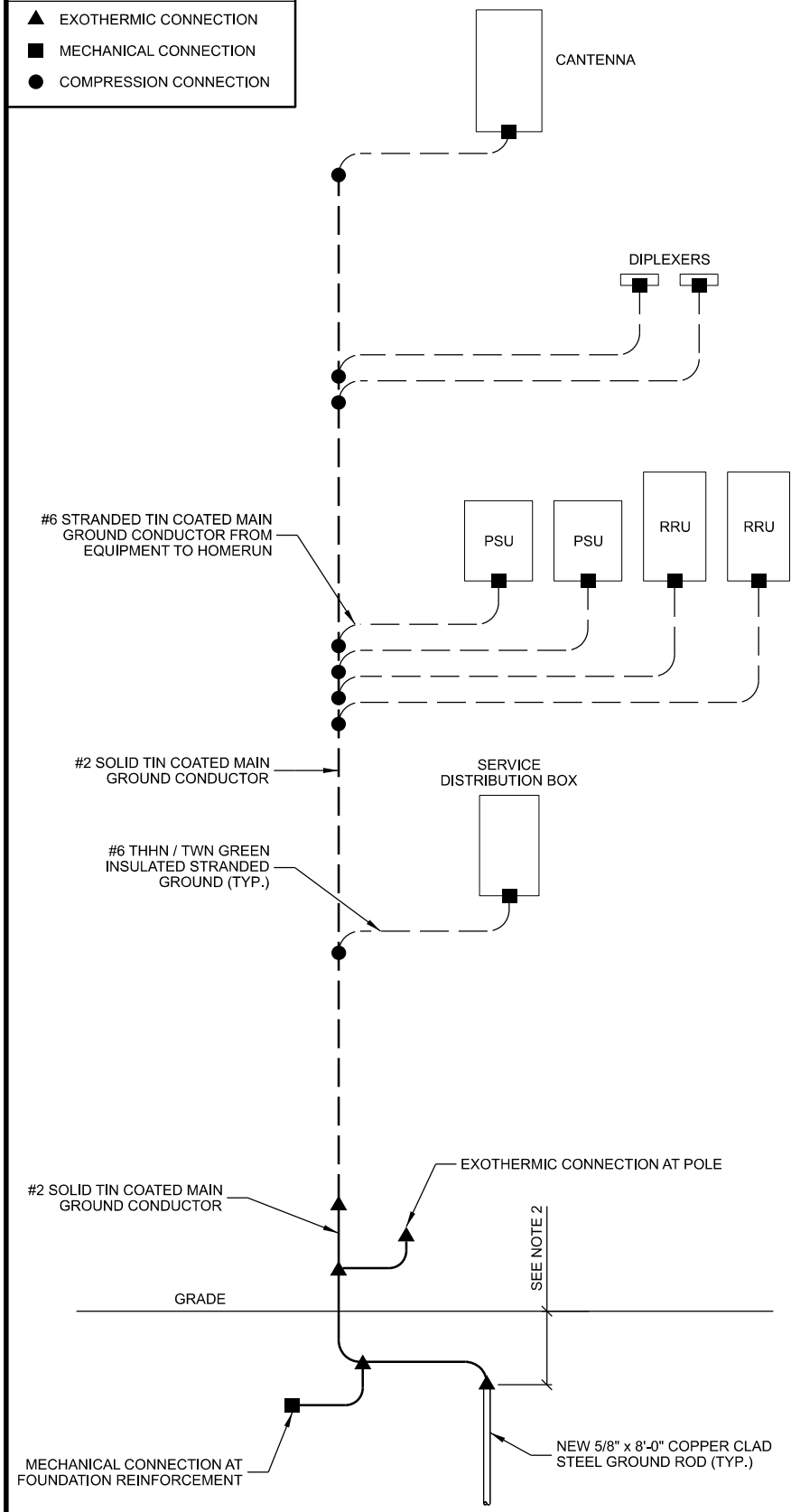
INT.	DATE	DESCRIPTION
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY: MJM
 PLOT DATE: 1/27/2021
 PROJECT NUMBER: 20154
 SET TYPE: FINAL
 SHEET NUMBER: **E-101**



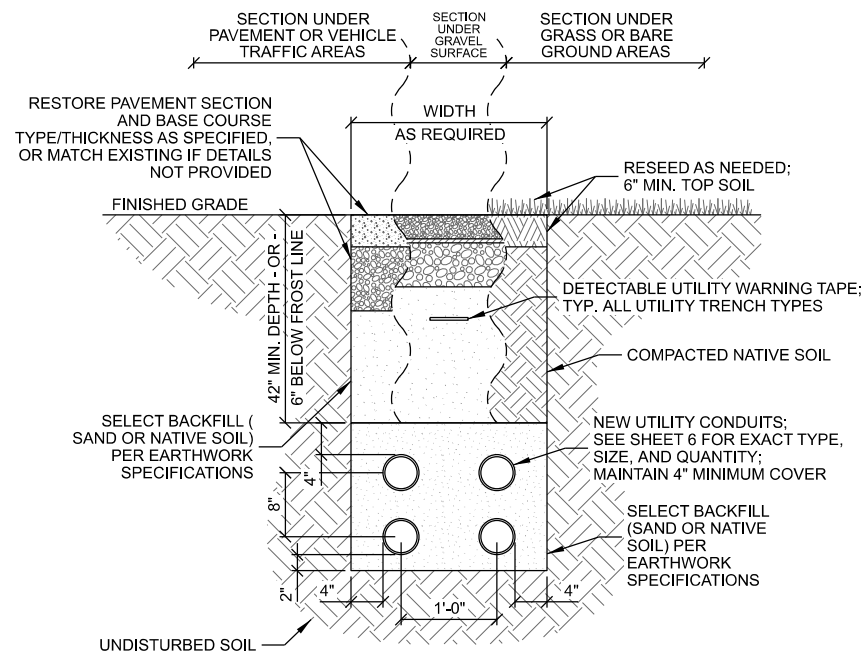
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- LEGEND: (THIS SHEET)
- ▲ EXOTHERMIC CONNECTION
 - MECHANICAL CONNECTION
 - COMPRESSION CONNECTION



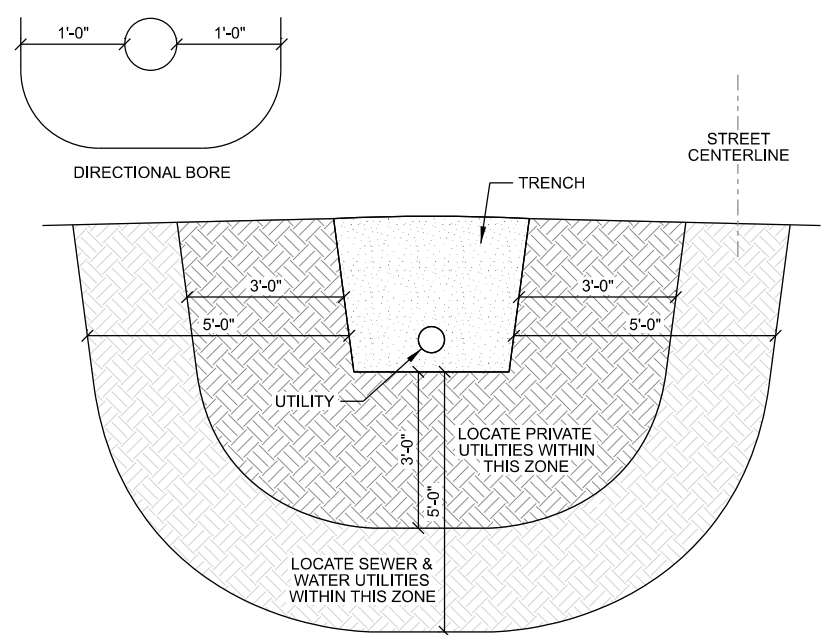
- NOTES:
- GROUNDING RISER FOR DIAGRAMMATIC PURPOSES ONLY. SEE ELEVATION DRAWINGS FOR EQUIPMENT AND ANTENNA LOCATIONS.
 - DRIVE GROUND RODS TO A MINIMUM DEPTH OF 30" OR 6" BELOW FROST LINE

A GROUNDING RISER DIAGRAM



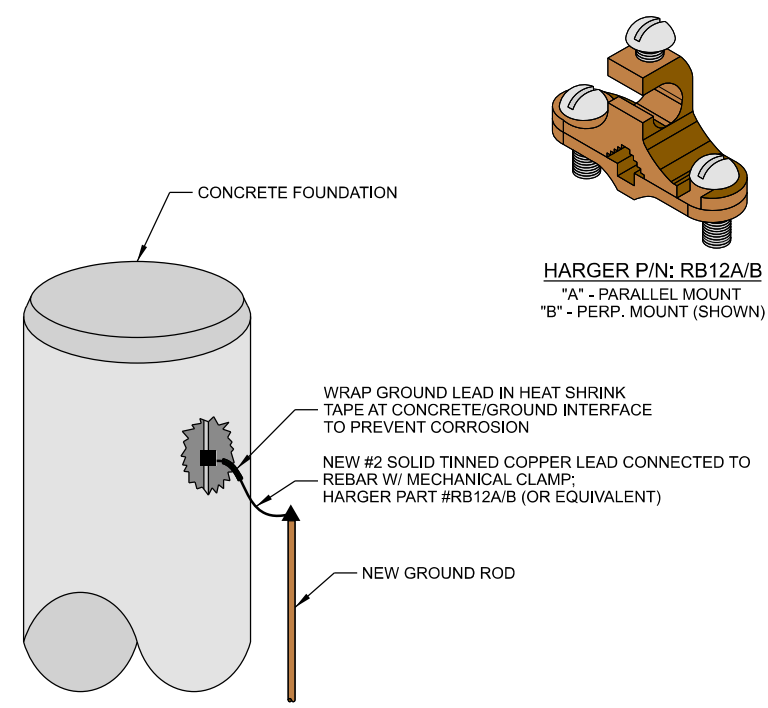
- NOTES:
- UTILITY CONDUITS TO BE BURIED A MINIMUM DEPTH OF 42" BELOW GROUND LEVEL OR 6" BELOW THE FROST LINE.
 - CONDUIT TYPE, SIZE, AND QUANTITY TO BE VERIFIED WITH PROVIDER.

B UTILITY TRENCH DETAIL



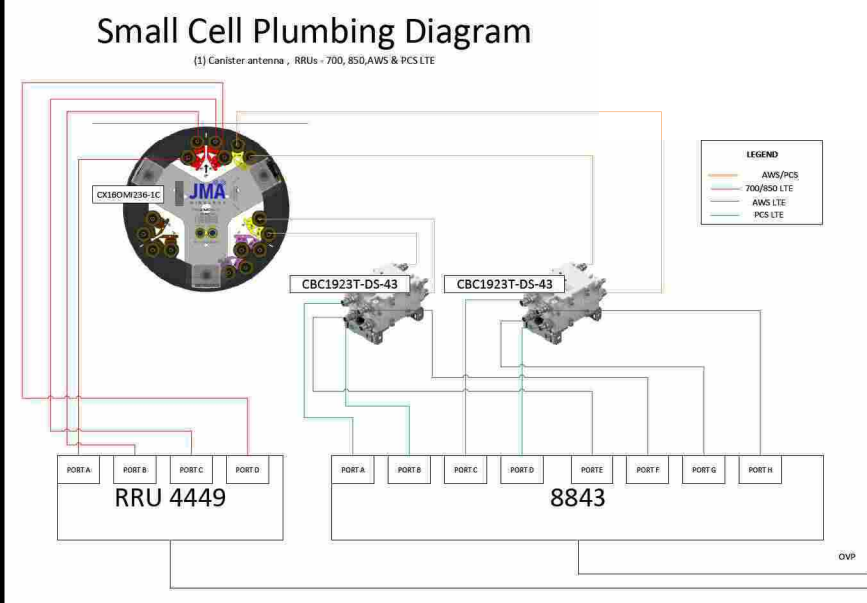
- NOTES:
- CROSS SECTION REQUIRED WHEN TRENCH IS WITHIN 3' OF PRIVATE UTILITIES, OR WITHIN 5' OF SEWER AND WATER UTILITIES (OR WHEN DIRECTIONAL BORE IS WITHIN 1' OF ANY UTILITY)

C TRENCH LOCATE REQUIREMENTS



- NOTES:
- FOUNDATION SHOWN IS TYPICAL.
 - GROUNDING CONNECTIONS TO BE COVERED BY A MINIMUM OF 3" CONCRETE.
 - CONTRACTOR TO PROVIDE ALL REQUIRED COMPRESSION CONNECTIONS.

D REBAR CONNECTION



E PLUMBING DIAGRAM

CONSULTANT:

Edge
Consulting Engineers, Inc.
2101 HIGHWAY 13 W
BURNSVILLE, MN 55337
952.683.1032 VOICE
952.405.8583 FAX
www.edgeconsult.com

CLIENT:

verizon
10801 BUSH LAKE RD
BLOOMINGTON, MN 55438
952.946.4694 VOICE

GROUNDING & UTILITY DETAILS
MINNETONKA SC13
MINNETONKA, MINNESOTA

ENGINEER SEAL:

APPROVED -
SEE TITLE SHEET FOR
ENGINEER SEAL

SIGNATURE: _____
DATE: _____

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PROJECT NO: 20181926410
LOCATION CODE: 499316
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SUBMITTAL:

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ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY: MJM

PLOT DATE: 1/27/2021

PROJECT NUMBER: 20154

SET TYPE: FINAL

SHEET NUMBER: **E-501**

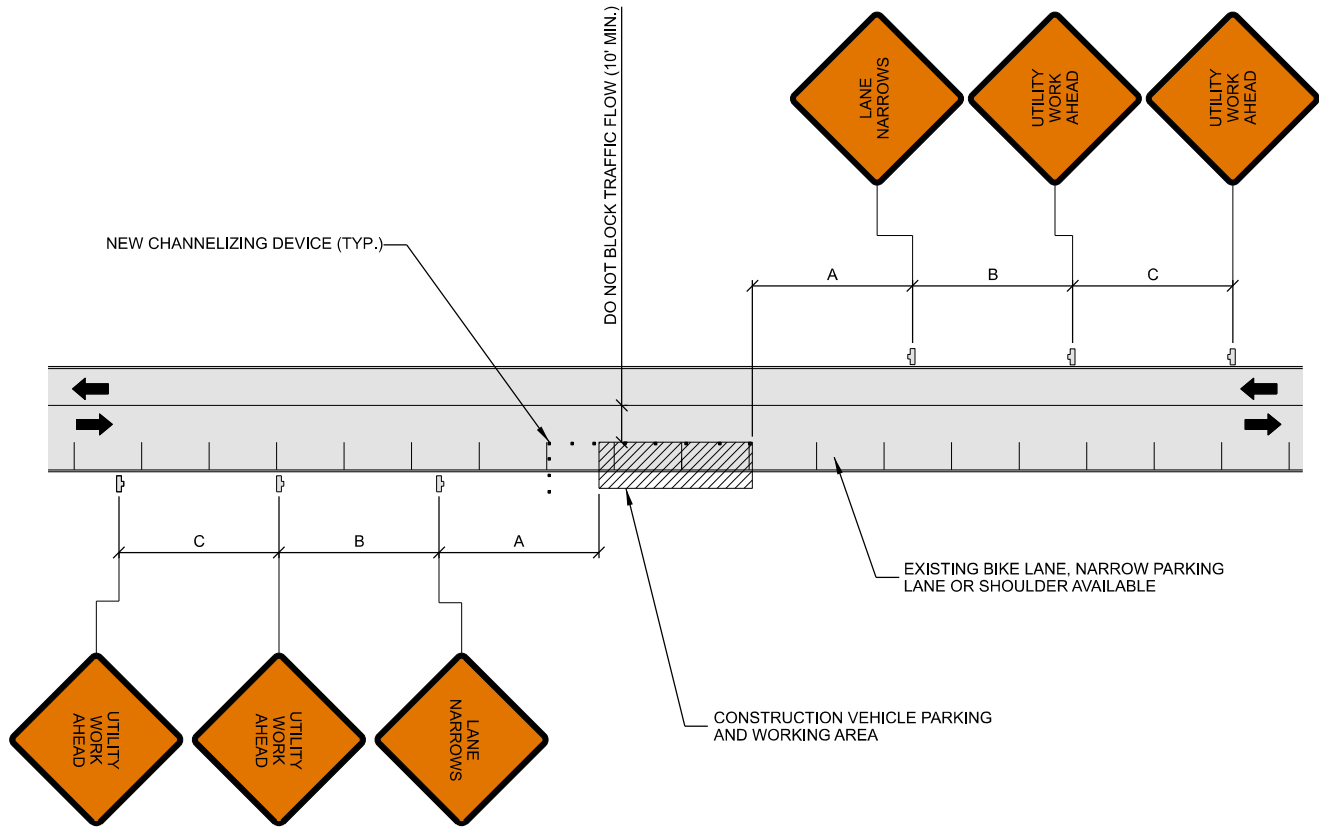


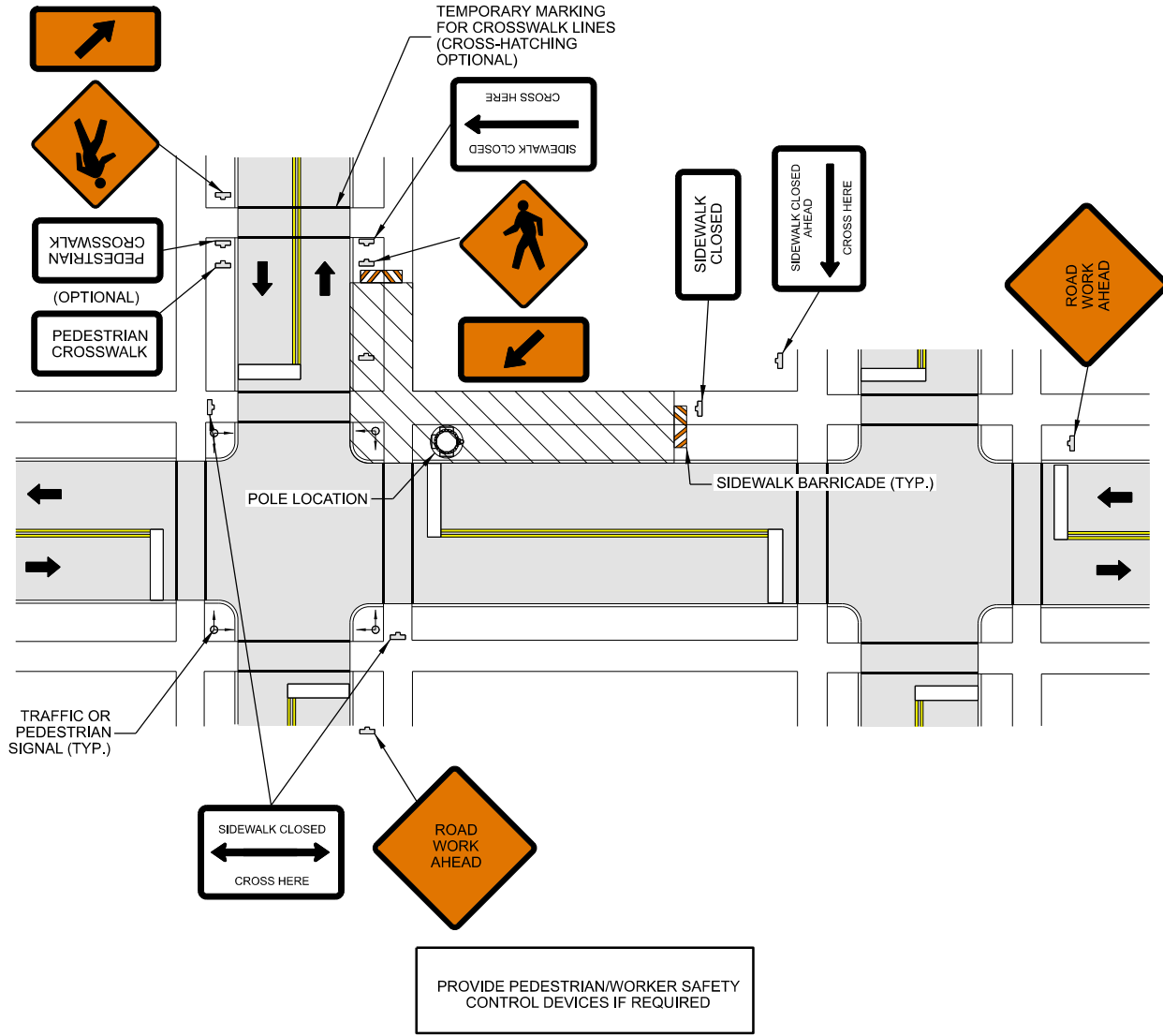
TABLE 1

POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

- NOTES:
- DISTANCES IN FEET UNLESS OTHERWISE NOTED.
 - CONTRACTOR TO VERIFY EXISTING SPEED LIMIT.
 - DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE D.O.T. MANUAL FOR DISTANCES.
 - ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION. SEE NOTE 1/D-502.
 - TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH. SEE NOTE 18/D-502.

- NOTES:
- PLANS DEPICTED ARE GENERAL GUIDELINES FOR TEMPORARY VEHICULAR TRAFFIC CONTROL PLANS (TCP) TO INCLUDE PEDESTRIAN AND WORKER SAFETY. CONTRACTOR IS REQUIRED TO HAVE PREPARED A SITE-SPECIFIC TCP FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE TCP SHALL BE AUTHORIZED OR CERTIFIED BY THE AUTHORITY HAVING JURISDICTION.
 - EXTEND CHANNELIZATION DEVICES INTO SHOULDER WHERE APPLICABLE.
 - DISTANCES AS INDICATED IN TABLE 1 SHOULD BE INCREASED FOR CONDITIONS THAT WOULD AFFECT STOPPING. DISTANCE SUCH AS DOWNGRADES OR LIMITED SIGHT DISTANCES. DISTANCES CAN BE DECREASED FOR LOW-SPEED (RESIDENTIAL) AREAS WITH APPROVAL BY THE AUTHORITY HAVING JURISDICTION. NIGHT-TIME WORK IS PROHIBITED UNLESS IT IS REQUIRED AS A CONDITION OF APPROVAL BY THE HIGHWAY AND LOCAL AUTHORITY HAVING JURISDICTION.
 - SHOULDER TAPERS SHOULD BE 1/3 OF THE ON-STREET TAPER LENGTH.
 - MAINTAIN A MINIMUM LANE WIDTH OF 10'.

A TRAFFIC CONTROL PLAN



- NOTES
- ALL TEMPORARY TRAFFIC CONTROL SIGNAGE, LAYOUTS AND PROCEDURES SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, WHICHEVER IS MORE STRINGENT.
 - PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
 - TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
 - SELECTION, PLACEMENT, MAINTENANCE, AND PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) - PART VI "TEMPORARY TRAFFIC CONTROL", AND LOCAL JURISDICTIONAL REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.
 - ADVANCE WARNING SIGNS, DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY AND FOR ACTUAL TRAFFIC SPEEDS IF IN EXCESS OF POSTED SPEED LIMITS.
 - TAPERS SHALL BE LOCATED TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.
 - CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON THE EXISTING TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
 - ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE NEW TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED, OR RELOCATED. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO MATCH PRE-CONSTRUCTION CONDITION AFTER COMPLETION OF WORK.
 - CONTRACTOR SHALL CONTACT LOCAL AUTHORITY HAVING HIGHWAY JURISDICTION AND PROVIDE ADDITIONAL "FLAGMEN" OR POLICE SUPERVISION, IF REQUIRED.
 - ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 6H:1V SLOPE PRIOR TO END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAR ZONE ARE TO BE EITHER BACKFILLED OR PRECAST CONCRETE CURB BARRIER CONSTRUCTION BARRIER SET TEMPORARILY IN PLACE TO SHIELD VEHICULAR AND PEDESTRIAN TRAFFIC.
 - WHERE DICTATED BY LOCAL CONDITIONS, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN AND WORKER CROSSING LOCATIONS IN ACCORDANCE WITH ALL APPLICABLE CODES AND OSHA REQUIREMENTS.
 - CONSTRUCTION ZONE SPEED LIMIT IF REDUCED FROM POSTED LIMITS SHALL BE IN ACCORDANCE WITH MUTCD AND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
 - THERE SHALL BE NO WORKERS, EQUIPMENT, OR OTHER VEHICLES IN THE BUFFER SPACE OR THE ROLL AHEAD SPACE.
 - DRIVEWAYS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-1 SIGN (ROAD WORK AHEAD) AS A MINIMUM.
 - CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION PROVIDED THEY COMPLY WITH MUTCD.
 - THE SPACING BETWEEN CONES, TUBULAR MARKERS, VERTICAL PANELS, DRUMS, AND BARRICADES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.
 - WHEN CHANNELIZATION DEVICES HAVE THE POTENTIAL OF LEADING VEHICULAR TRAFFIC OUT OF THE INTENDED VEHICULAR TRAFFIC SPACE, THE CHANNELIZATION DEVICES SHOULD BE EXTENDED A DISTANCE IN FEET OF 2.0 TIMES THE SPEED LIMIT IN MPH BEYOND THE DOWNSTREAM END OF THE TRANSITION AREA.
 - TAPER LENGTHS ARE CALCULATED AS FOLLOWS: $L = WS^2/60$ (40 MPH AND HIGHER) OR $L2 = WS$ (OVER 40 MPH), WHERE W= OFFSET WIDTH (FT), S= TRAFFIC SPEED (MPH).

B PEDESTRIAN SAFETY PLAN

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TRAFFIC & PEDESTRIAN PLANS
 MINNETONKA SC13
 MINNETONKA, MINNESOTA

ENGINEER SEAL:
 I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____
 DATE: _____

PROJECT NO: 20181826410
 LOCATION CODE: 499316
 RFDS DATE: 04/07/2020

STRUCTURAL ANALYSIS:

DATE:	DESCRIPTION:
05/06/2020	REPORT NO. 20154

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
RJK	04/28/2020	REV. A
ZRS	06/02/2020	REV. 0
ZRS	09/04/2020	REV. 1
MJM	01/27/2021	REV. 2

CHECKED BY:	MJM
PLOT DATE:	1/27/2021
PROJECT NUMBER:	20154
SET TYPE:	FINAL
SHEET NUMBER:	D-101

GENERAL REQUIREMENTS

1.1 PURPOSE AND INTENT

- A. THE DRAWINGS ARE SUPPLEMENTAL TO ANY WRITTEN SPECIFICATIONS OR REQUIREMENTS. SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED IN ONE AND NOT THE OTHER, OR IF ANY DISCREPANCIES OR DISAGREEMENTS ARE IDENTIFIED, THIS SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER AND/OR ENGINEER.
B. THE CONTRACTOR SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.

1.2 CONFLICTS

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MEASUREMENTS AT THE SITE BEFORE ORDERING MATERIALS OR DOING ANY WORK. NO EXTRA COMPENSATION WILL BE ALLOWED DUE TO DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS SHOWN ON THE PLANS.
B. THE CONTRACTOR IS REQUIRED TO VISIT THE SITE TO ASSESS CONDITIONS PRIOR TO BIDDING. IN ADDITION, CONTRACTOR SHALL PERFORM TESTING AND ADDITIONAL INVESTIGATION AS DEEMED NECESSARY TO SUBMIT A FIXED BID.
C. THE CONTRACTOR MUST PROVIDE NOTICE IN WRITING ON PROPER FORMS OF ANY POTENTIAL CLAIM FOR CONCEALED OR UNKNOWN CONDITIONS...

1.3 CLEANUP

- A. THE CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATION OF WASTE CAUSED BY EMPLOYEES. AT THE COMPLETION OF THE WORK, REMOVE ALL WASTE AND NON-CONSTRUCTION MATERIAL, INCLUDING ALL CONTRACTOR TOOLS.
B. IF CLEARING IS REQUIRED, ALL BRUSH, STUMPS, AND OTHER WASTE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
C. THE SITE SHALL BE LEFT IN A CONDITION EQUIVALENT TO THE PRE-CONSTRUCTION CONDITION AND SATISFACTORY TO THE OWNER.

1.4 CODES

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND RULES. THIS RESPONSIBILITY IS IN EFFECT REGARDLESS OF WHETHER THE LAW, ORDINANCE, REGULATION OR RULE IS MENTIONED IN THE DRAWINGS OR WRITTEN SPECIFICATIONS.

1.5 QUALITY ASSURANCE

- A. THE CONTRACTOR SHALL PROVIDE A PROJECT SCHEDULE PRIOR TO COMMENCING ANY WORK. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CHANGES TO THE SCHEDULE AS SOON AS THEY ARE KNOWN.
B. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF ALL COMPLETED WORK AND PROVIDE THESE TO THE OWNER ON A WEEKLY BASIS.
C. THE CONTRACTOR IS THE GUARANTOR OF ALL WORK. FAILURE TO IDENTIFY A DISCREPANCY/DEFECT OR IMMEDIATELY NOTIFY THE OWNER/ENGINEER OF SAID DEFECT DOES NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITIES IN THIS REGARD.
D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT INSPECTIONS OCCUR PRIOR TO COMPLETION OF WORK.

1.6 BUILDING PERMITS

THE CONTRACTOR IS RESPONSIBLE TO OBTAIN THE BUILDING PERMIT. CONTRACTOR SHALL COORDINATE AND SCHEDULE REQUIRED INSPECTIONS AT THE JOB SITE, COMPLY WITH SPECIFIC PROJECT RELATED REQUESTS AND SUGGESTIONS MADE BY BUILDING INSPECTOR, AND INFORM THE OWNER OF ANY REQUIREMENTS THAT MAY DEVIATE FROM THE CONSTRUCTION DOCUMENTS.

1.7 SITE SECURITY

THE CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY THROUGHOUT THE CONSTRUCTION PHASE. THE SITE MUST BE SECURELY FENCED (PERMANENTLY OR TEMPORARILY) WITHIN 24 HOURS OF EQUIPMENT ERECTION.

1.8 SITE CONTROL

- A. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR CONTAINMENT OF SEDIMENT AND CONTROL OF EROSION AT THE SITE. ANY DAMAGE TO ADJACENT OR DOWNSTREAM PROPERTIES WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.
B. IF WETLANDS ARE PRESENT IN THE PROJECT VICINITY THE CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT THEY ARE NOT DISTURBED IN ANY MANNER.
C. THE CONTRACTOR SHALL CONTAIN ALL CONSTRUCTION ACTIVITIES, MATERIALS, EQUIPMENT, ETC. TO THE LEASED AREA AND LEGAL EASEMENTS UNLESS PERMISSION TO DO OTHERWISE IS GRANTED BY THE PROPERTY OWNER.

1.9 FOUNDATION NOTES

- A. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO COMMENCING ANY WORK.
B. THIS DRAWING IS NOT VALID IF LOADS OTHER THAN THOSE CONSIDERED IN THE STRUCTURAL ANALYSIS ARE TO BE ADDED OR REMOVED FROM THE STRUCTURE UNLESS APPROVED IN WRITING BY EDGE CONSULTING ENGINEERS, INC.
C. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE UNLESS NOTED OTHERWISE.
D. THE DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS OR EQUIPMENT FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION UNLESS NOTED OTHERWISE.
E. BEFORE PROCEEDING WITH ANY WORK ADJACENT TO OR WITHIN THE EXISTING STRUCTURE, THE CONTRACTOR SHALL BECOME FAMILIAR WITH EXISTING CONDITIONS.
F. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ON-SITE SAFETY ASSOCIATED WITH THE WORK TO BE PERFORMED.
G. IT SHOULD BE UNDERSTOOD THAT THE CONTRACTOR IS THE GUARANTOR OF ALL WORK AND RESPONSIBLE TO CONSTRUCT THE STRUCTURE SITE ACCORDING TO APPLICABLE PLANS, SPECIFICATIONS AND STANDARDS.
H. SECTIONS, DETAILS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR CONDITIONS ELSEWHERE.
I. ALL MATERIALS, WORKMANSHIP, AND DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE BUILDING CODE.
J. ALL PROPOSED INSTALLATIONS SHALL NOT DENY OR INTERFERE WITH ACCESS TO ANY OPERATIONAL OR SAFETY EQUIPMENT/APPURTENANCES.

EARTHWORK

2.1 SCOPE OF WORK

REFER TO THE SURVEY AND SITE PLAN FOR EXISTING GRADES AND FINAL ELEVATIONS.

2.2 SITE PREPARATION

- A. CLEAR TREES, BRUSH AND DEBRIS FROM SITE AREA AS REQUIRED. SEE SITE PLAN FOR APPROPRIATE AREA TO BE CLEARED. REMOVE DETRIMENTAL MATERIAL COMPLETELY.
B. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, CONTRACTOR SHALL REMOVE ALL TOPSOIL, ORGANIC MATERIALS AND WET OR POOR SOILS.

2.3 EXCAVATION

- A. CONTRACTOR SHALL EXCAVATE TO DEPTH, AND GRADES SHOWN ON THE PLANS. MINIMUM COMPACTION SHALL BE 90% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557 FOR SITE WORK AND 95% MAXIMUM DRY DENSITY UNDER STRUCTURAL ELEMENTS.
B. CONTRACTOR SHALL REVIEW AVAILABLE GRADING PLANS, GEOTECHNICAL REPORT, AND FOUNDATION PLANS THOROUGHLY PRIOR TO BIDDING.
C. IT IS RECOMMENDED THAT THE OWNER HIRE AN INDEPENDENT GEOTECHNICAL ENGINEER TO REVIEW SOIL CONDITIONS AND AN ACI CERTIFIED INSPECTOR TO REVIEW ALL FOUNDATION ELEMENTS.
D. REGARDLESS OF THE ABOVE RECOMMENDATION, THE CONTRACTOR IS RESPONSIBLE TO OBSERVE SITE AND SOIL CONDITIONS THROUGHOUT THE CONSTRUCTION PROCESS AND COMPARE THE ABOVE TO THE GEOTECHNICAL REPORT, THE PLANS, AND THE STRUCTURE DRAWINGS.

2.4 SITE GRADING

- A. CONTRACTOR SHALL USE ON-SITE MATERIALS OR IMPORTED FILL TO MATCH THE LINES, GRADES, AND CROSS SECTIONS SHOWN ON THE DRAWINGS.
B. THE CONTRACTOR SHALL LIMIT ALL SITE GRADING AND CONSTRUCTION ACTIVITIES TO SITE AREA. IF THIS IS NOT POSSIBLE, CONTACT THE PROJECT MANAGER AND OBTAIN OWNER APPROVAL PRIOR TO WORKING OUTSIDE THE ABOVE LIMITS.
C. IT IS RECOMMENDED THAT THE OWNER HIRE AN INDEPENDENT GEOTECHNICAL ENGINEER TO REVIEW SOIL CONDITIONS AND AN ACI CERTIFIED INSPECTOR TO REVIEW ALL FOUNDATION ELEMENTS.
D. REGARDLESS OF THE ABOVE RECOMMENDATION, THE CONTRACTOR IS RESPONSIBLE TO OBSERVE SITE AND SOIL CONDITIONS THROUGHOUT THE CONSTRUCTION PROCESS AND COMPARE THE ABOVE TO THE GEOTECHNICAL REPORT, THE PLANS, AND THE STRUCTURE DRAWINGS.

2.4 SITE GRADING

- A. ALL FINISHED SURFACES SHOULD BE GRADED TO DRAIN FROM FOUNDATION, PROVIDER PROPER DITCHING AND ROUTING OF SURFACE WATER, AND AVOID PONDING AND EROSION.
B. CONTRACTOR SHALL USE ON-SITE MATERIALS OR IMPORTED FILL TO MATCH THE LINES, GRADES, AND CROSS SECTIONS SHOWN ON THE DRAWINGS.
C. THE CONTRACTOR SHALL LIMIT ALL SITE GRADING AND CONSTRUCTION ACTIVITIES TO SITE AREA. IF THIS IS NOT POSSIBLE, CONTACT THE PROJECT MANAGER AND OBTAIN OWNER APPROVAL PRIOR TO WORKING OUTSIDE THE ABOVE LIMITS.
D. REGARDLESS OF THE CONTOURS DEPICTED IN THE PLANS, ALL REQUIREMENTS IN THE FOUNDATION DRAWINGS (INCLUDING THE MINIMUM SOIL COVER) MUST BE ADHERED TO STRICTLY.
2.5 FOUNDATION EARTHWORK
A. ALL SUBTERRANEAN STRUCTURE, UTILITIES, PIPING, ETC. IN THE AREA OF EXCAVATIONS SHALL BE LOCATED AND MARKED BY CONTRACTOR PRIOR TO EARTH REMOVAL WORK.
B. BEFORE PLACING FOOTING, FOUNDATIONS OR SLAB-ON-GRADE, THE SUB-GRADE SHALL BE PREPARED AND INSPECTED AS REQUIRED.
C. WHERE STRUCTURES DERIVE SUPPORT FROM FILL-SUPPORTED FOUNDATIONS AND AT SLAB-ON-GRADE, FILL SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM 1557).
D. NO FILL SHALL BE PLACED OVER FROZEN, MUDDY, OR OTHER DELETERIOUS MATERIAL.
E. BACKFILL AGAINST FOUNDATION/ANCHORS SHALL BE COMPLETED BEFORE ERECTION/MODIFICATION OF THE STRUCTURE BEGINS.
F. BACKFILL SHALL BE COMPACTED UNIFORMLY AROUND THE FOUNDATION IN LIFTS TO MINIMUM 90% COMPACTION.
G. BACKFILL SHALL BE NATIVE SOIL; IMPORTED FILL SHALL BE VERIFIED WITH THE GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER PRIOR TO BACKFILLING.

TRENCHING

3.1 MATERIALS

FILL MATERIALS SHALL BE OBTAINED, WHEN POSSIBLE, FROM MATERIALS EXCAVATED FROM TRENCHES ON-SITE. STRUCTURAL FILL, SAND OR SLURRY SHALL BE APPROVED BY THE CONSTRUCTION MANAGER AND SHALL CONFORM TO LOCAL UTILITY COMPANY REQUIREMENTS. THE FILL MATERIAL SHALL CONTAIN NO ORGANIC MATERIALS OR ROCKS. ALL FILL MATERIAL SHALL BE FREE OF OBJECTIONABLE MATERIALS AND/OR MATERIALS DESIGNATED AS HAZARDOUS OR POTENTIALLY HAZARDOUS.

3.2 PIPE DETECTION AND IDENTIFICATION

ALL ELECTRIC SERVICE TRENCHES SHALL BE MARKED WITH DETECTABLE WARNING TAPE.

3.3 TRENCH EXCAVATION

- A. DIG TRENCH TO DEPTHS AND GRADES SHOWN ON THE PLANS OR AS DIRECTED BY THE CONSTRUCTION MANAGER. USE HAND EXCAVATION METHODS WHEN REQUIRED BY LOCAL OR STATE GUIDELINES.
B. TRENCH LENGTH SHALL BE SUFFICIENT TO ALLOW FOR SATISFACTORY CONSTRUCTION AND INSPECTION OF THE PROJECT, WITHOUT ENDANGERING OTHER CONSTRUCTION WORK OR ADJACENT FACILITIES.
C. DISPOSE OF EXCESS AND UNSUITABLE EXCAVATION MATERIAL PROPERLY.

3.4 TRENCH PROTECTION

- A. PROVIDE MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO PROTECT TRENCHES AT ALL TIMES.
B. SHEETING AND BRACING SHOULD MEET OR EXCEED OSHA REQUIREMENTS.

3.5 BACKFILLING

- A. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AT LEAST 24 HOURS IN ADVANCE OF BACKFILLING.
B. PROTECT CONDUIT FROM LATERAL MOVEMENT, DAMAGE FROM IMPACT, OR UNBALANCED LOADING TO AVOID DISPLACEMENT OF CONDUIT AND/OR STRUCTURES. DO NOT FREE FALL BACKFILL INTO TRENCH UNTIL THERE IS AT LEAST 12 INCHES OF COVER OVER THE CONDUIT.

3.6 COMPACTION

- A. COMPACT BACKFILL TO AT LEAST 95% STANDARD PROCTOR. IF REQUIRED COMPACTION DENSITY IS NOT OBTAINED, REMOVE BACKFILL FROM TRENCH, REPLACE WITH APPROVED BACKFILL, AND RECOMPACT AS SPECIFIED.
B. ANY SUBSEQUENT SETTLEMENT OF TRENCH OR BACKFILL DURING MAINTENANCE PERIOD (1 YEAR MINIMUM) SHALL BE REMOVED, REPLACED, AND RECOMPACTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.

CONCRETE WORK

4.1 CONCRETE FORMWORK

- A. CONTRACTOR SHALL FOLLOW ALL APPLICABLE CODES AND STANDARDS (IBC, ACI, ETC.)
B. FORMS SHALL BE SMOOTH AND FREE OF SURFACE IRREGULARITIES. CONTRACTOR SHALL UTILIZE FROM RELEASE AGENTS AS NECESSARY.
C. EXPOSED EDGES OF ALL FOUNDATIONS SHALL RECEIVE A 3/4" CHAMFER. OTHER EXPOSED EDGES SHALL RECEIVE A TOOLED RADIUS FINISH.
D. REFER TO PLANS AND DRAWINGS FOR ADDITIONAL REQUIREMENTS.

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GENERAL NOTES MINNETONKA SC1 3 MINNETONKA, MINNESOTA

ENGINEER SEAL: APPROVED - SEE TITLE SHEET FOR ENGINEER SEAL SIGNATURE: DATE:

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Table with 2 columns: FIELD, VALUE. PROJECT NO: 20181826410, LOCATION CODE: 499316, RFDS DATE: 04/07/2020

STRUCTURAL ANALYSIS: DATE: 05/06/2020, DESCRIPTION: REPORT NO. 20154

SUBMITTAL: Table with 3 columns: INT., DATE, DESCRIPTION. Rows for RJK, ZRS, ZRS, MJM

CHECKED BY: MJM

PLOT DATE: 1/27/2021

PROJECT NUMBER: 20154

SET TYPE: FINAL

SHEET NUMBER: R-001

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