

CASE FILE #PL201600185



APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017

SITE NAME: MIN SOUTHTOWN SC1

SITE NUMBER: 20141029022

LOCATION CODE: 289036

SITE TYPE: SMALL CELL

POLE TYPE: REPLACEMENT LIGHT POLE



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



Edge  
Consulting Engineers, Inc.

17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

SITE INFORMATION

APPROXIMATE ADDRESS:  
7803 PENN AVE.  
BLOOMINGTON, MN 55431  
HENNEPIN COUNTY

LATITUDE & LONGITUDE:  
LAT: 44°-51'-37.12"N  
LONG: 93°-18'-26.14"W  
GROUND ELEVATION: 830' AMSL  
(PER 1A CERTIFICATE)

POLE HEIGHT:  
36'-9" T.O.C.

MAXIMUM APPURTENANCE HEIGHT:  
40'-0" A.G.L.

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

- 2012 INTERNATIONAL BUILDING CODE
- 2014 NATIONAL ELECTRIC CODE
- TIA/EIA-222-G OR LATEST EDITION

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

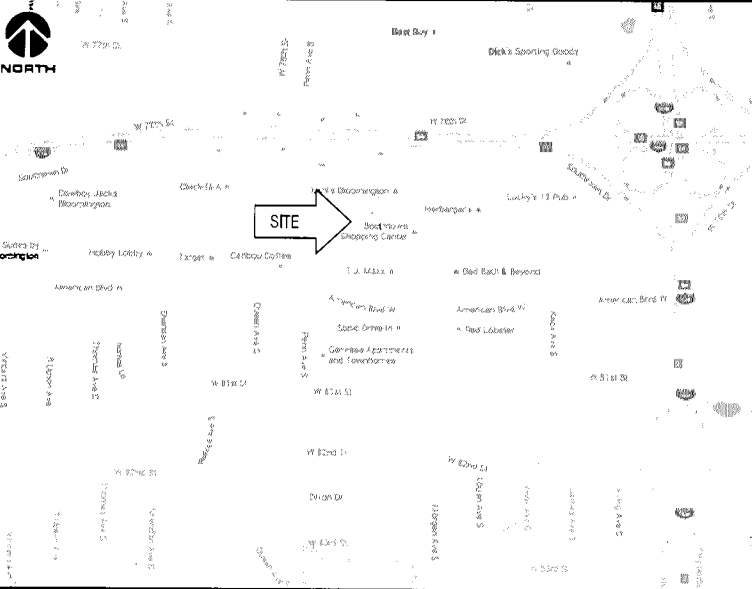
LOCATION SCAN



AREA MAP



LOCATION MAP



PROJECT DESCRIPTION/SOW

- INSTALL (1) REPLACEMENT 36-FT 9-IN STEEL LIGHT POLE AND ASSOCIATED CONCRETE FOUNDATION
- INSTALLATION OF PANEL ANTENNAS
- INSTALLATION OF ERICSSON RRU'S AND POWER CONVERTERS
- INSTALLATION OF LOAD CENTER/BREAKER BOX
- INSTALLATION OF (4) COUPLERS
- INSTALLATION OF HAND HOLE FOR FIBER AT POLE BASE, BY VERIZON
- INSTALLATION OF HAND HOLE FOR ELECTRIC TO UTILIZE EXISTING CONDUIT, BY VERIZON
- INSTALLATION OF CONDUIT FOR FIBER BETWEEN HAND HOLE AND POLE BASE (APPROX. 6'-6"), TO BE DIRECTIONALLY BORED BELOW GRADE, BY VERIZON
- INSTALLATION OF CONDUIT FOR FIBER BETWEEN HAND HOLE AND ROW, (APPROX. 350'-0" IN LENGTH) TO BE DIRECTIONALLY BORED BELOW GRADE, BY VERIZON
- INSTALLATION OF CONDUIT FOR ELECTRIC BETWEEN HAND HOLE AND POLE BASE (APPROX. 180'-0"), TO BE DIRECTIONALLY BORED BELOW GRADE, BY VERIZON
- EXISTING ELECTRIC CONDUIT TO BE UTILIZED
- INSTALLATION OF GROUND RING AROUND POLE FOUNDATION
- ALL OTHER CONSTRUCTION RELATED ACTIVITIES TO BE COMPLETED BY OTHERS

PROJECT DIRECTORY

LESSEE:  
VERIZON WIRELESS  
10801 BUSH LAKE RD  
BLOOMINGTON, MN 55438  
CONTACT: COURTNEY BEDNARZ  
PHONE: 952.946.4694

LESSOR:  
KRAUS-ANDERSON INC.  
523 8TH ST. S.  
MINNEAPOLIS, MN 55404  
PHONE: 612.332.7281

ENGINEERING COMPANY:  
EDGE CONSULTING ENGINEERS, INC.  
17645 JUNIPER PATH  
SUITE 105  
LAKEVILLE, MN 55044  
CONTACT: OTTO DINGFELDER III, P.E.  
PHONE: 608.644.1449

RE ENGINEER:  
VERIZON WIRELESS  
10801 BUSH LAKE RD  
BLOOMINGTON, MN 55438  
CONTACT: MIHAELA OXLEY

SITE ACQUISITION:  
BUELL CONSULTING, INC.  
1360 ENERGY PARK DRIVE  
SUITE 210  
ST. PAUL, MN 55108  
CONTACT: ROB VIERA  
PHONE: 651.225.0792

SHEET INDEX

NO: SHEET TITLE

T-1	TITLE SHEET & PROJECT DATA
C-1	SITE PLAN
C-2	ENLARGED SITE PLAN
A-1	POLE ELEVATION
A-2	MOUNTING DETAILS
A-3	ANTENNA DETAILS
A-4	EQUIPMENT DETAILS
A-5	CABLE MOUNTING DETAILS
E-1	CABLING DETAILS
E-2	ELECTRICAL NOTES
G-1	GROUNDING PLAN
G-2	GROUNDING DETAILS

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

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

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.

ENGINEER OF RECORD

EDGE CONSULTING ENGINEERS, INC.  
CONTACT: OTTO DINGFELDER III (PE # 49720 (MN))  
PHONE: 608.644.1449

STRUCTURAL REVIEW

LIGHT POLE STRUCTURAL ANALYSIS TO BE COMPLETED BY OTHERS.

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

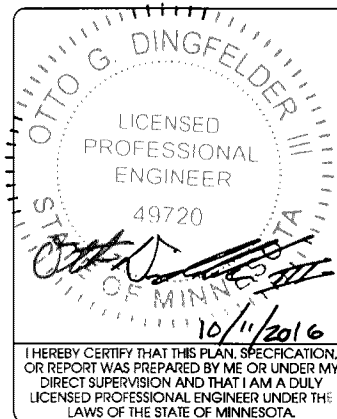
PROJECT NO: 20141029022

EDGE PROJECT NO: 14969

DRAWN BY: NBT

CHECKED BY: OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
0	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT



MIN SOUTHTOWN SC1  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE  
TITLE SHEET &  
PROJECT DATA

SHEET NUMBER

T-1

CASE FILE #PL201600185



APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017

verizon



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com

Edge

Consulting Engineers, Inc.  
17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

PROJECT NO: 20141029022

EDGE PROJECT NO: 14969

DRAWN BY: NBT

CHECKED BY: OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
U	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT

APPROVED

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.

MIN SOUTHTOWN SC1  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE

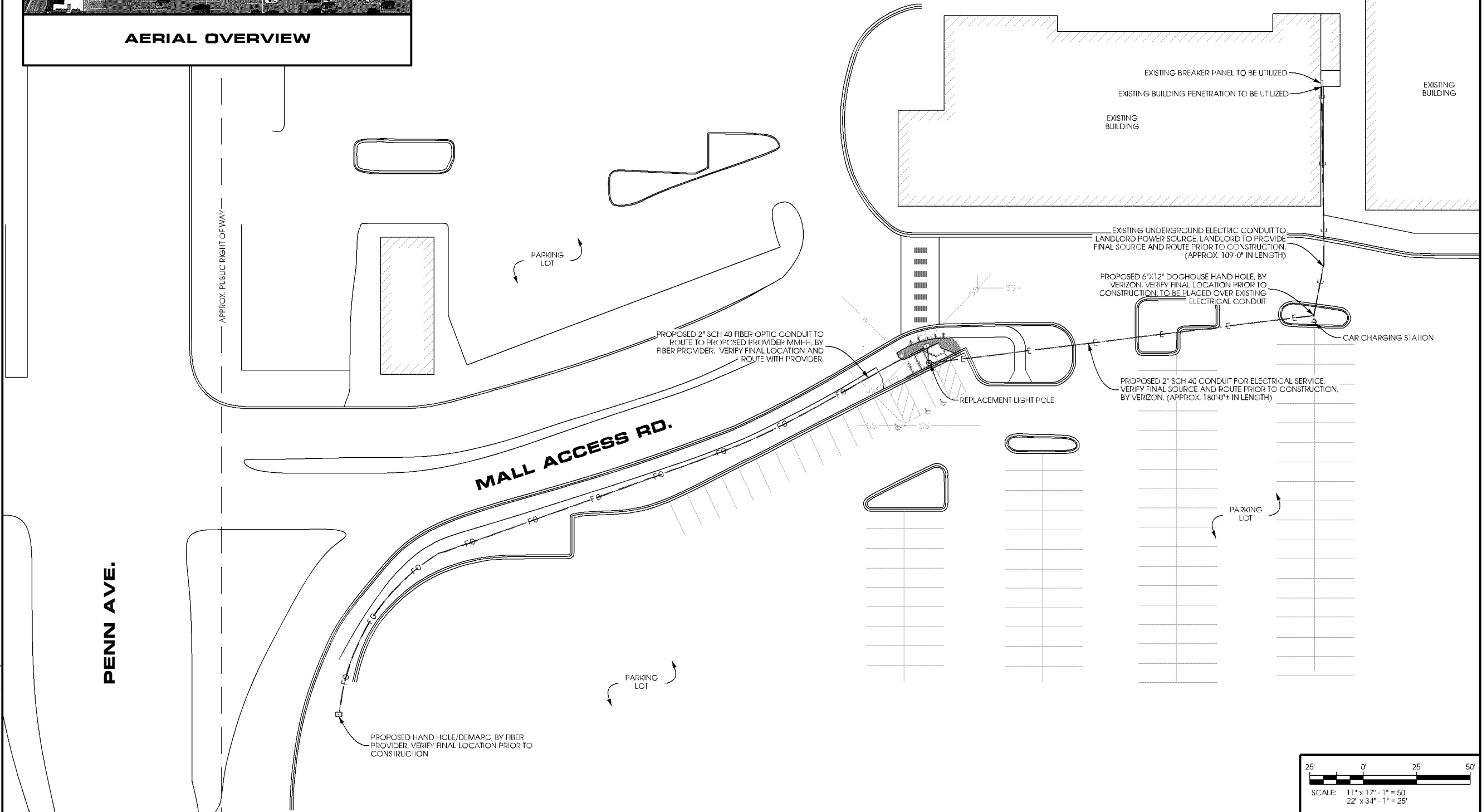
SITE PLAN

SHEET NUMBER

C-1



AERIAL OVERVIEW



L:\4003\14969\CADD\Plot\Bldgmain\A-C-1.dgn



AERIAL OVERVIEW



SITE OVERVIEW  
[LOOKING NORTHEAST]

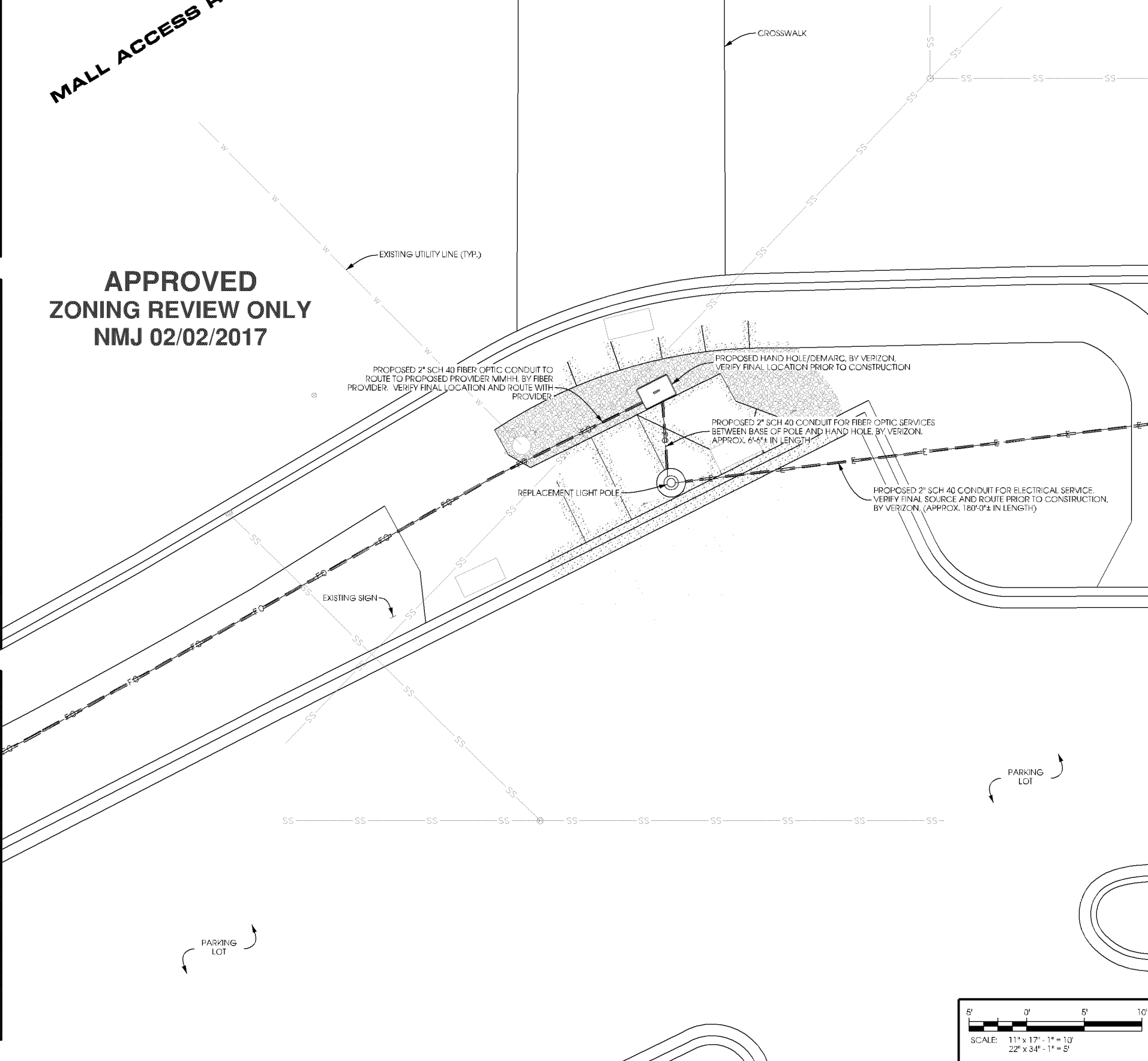


SITE OVERVIEW  
[LOOKING SOUTHWEST]

CASE FILE #PL201600185

MALL ACCESS ROAD

APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017



verizon



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

PROJECT NO:	20141029022
EDGE PROJECT NO:	14969
DRAWN BY:	NBT
CHECKED BY:	OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
U	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT

APPROVED

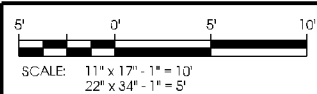
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MIN SOUTHTOWN SC1  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE  
**ENLARGED SITE  
PLAN**

SHEET NUMBER

**C-2**



CASE FILE #PL201600185

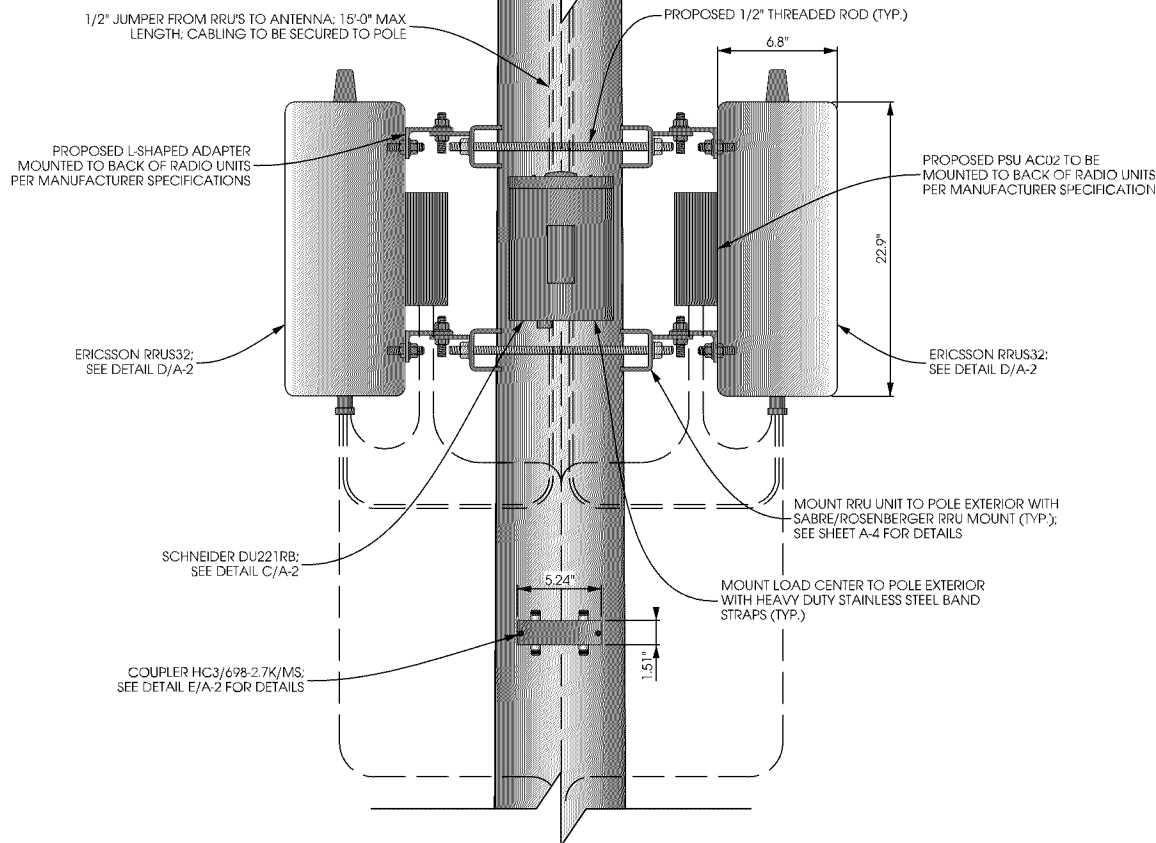
NODE INFO					RADIO					ANTENNA																
					Band	eNB ID	Model	DU#	DU Port#	AZIMUTH	POSITION	QTY	MFR.	MODEL	PORT	C/L	ADJ ELEC TILT	MECH TILT								
PCI:	Full Node Name: (Name SC1 Node#) SOUTHTOWN SC1				AWS	TBD	RRUS32 B66A	1	TBD	50	1.1	1	JMA Wireless	X7CQAP-FRO-260-V	+45	25	0	0								
											1.2				-45											
TBD	Coordinates	DEG	MIN	SEC							1.3				-45											
		LATITUDE	44	51							37.12				1.4				-45							
	LONGITUDE	93	18	26.14							1.5				+45											
		Ground Elevation:		830							1.6				-45											
										RF Splitter: (4) ClearLink-HC3/698-2.7K/MS	195	1.1	1	JMA Wireless	X7CQAP-FRO-260-V	+45	25	0	0							
												1.2				-45										
												1.3				+45										
												1.4				-45										
					1.5	+45																				
					1.6	-45																				

NOTE:

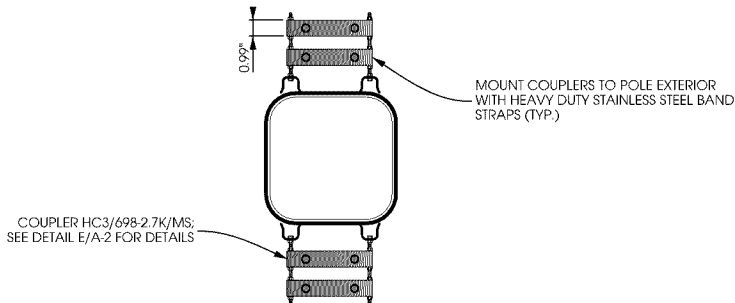
PAINT ALL ANTENNAS, OUTDOOR EQUIPMENT, AND MOUNTING HARDWARE TO MATCH THE PROPOSED LIGHT POLE

POLE SIZE AT RRU HEIGHT IS 7 1/2"

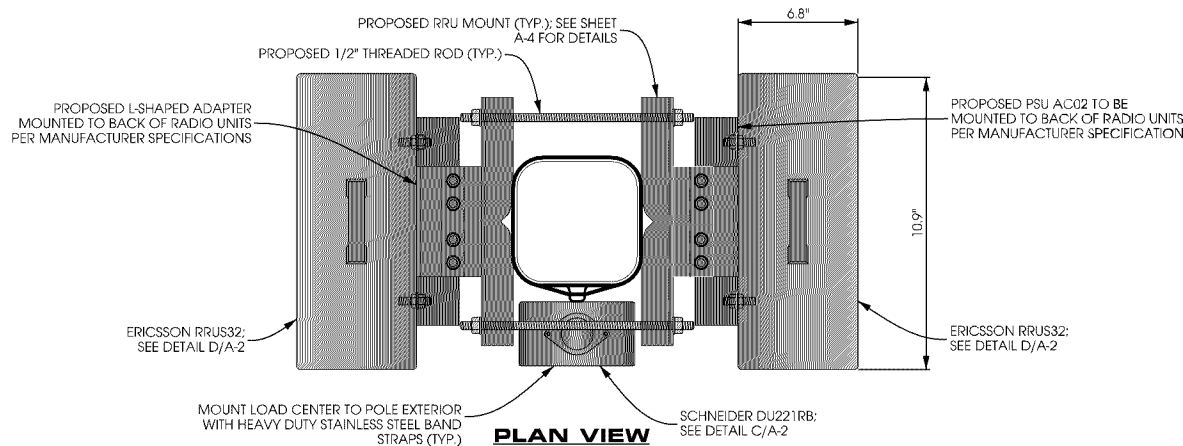
CASE FILE #PL201600185



ELEVATION VIEW

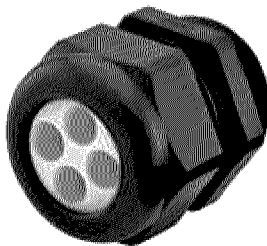


SPLITTER PLAN VIEW



A EQUIPMENT MOUNTING DETAIL  
SCALE: 11 x 17 - 1" = 1'-0"  
22 x 34 - 1" = 0'-6"

APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017



NPT GLAND

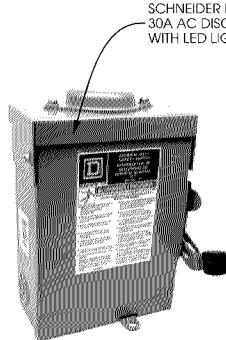
THREE HOLE 1-1/2" NPT GLAND FOR TWO 5MM FIBER AND ONE 13.8MM POWER CABLE. INCLUDES LOCK NUT AND O-RING; ROSENBERGER MODEL #: CX-CD36XX-XX2 OR APPROVED EQUIV.

CONDUIT PIPE PRODUCTS, CO. 1-1/2" CONDUIT COUPLING OR APPROVED EQUIV. TO BE INSTALLED IN 2" FULL PIPE COUPLING WITH EPOXY

2" FULL PIPE (2-3/8" I.D.) TO BE INSTALLED BY LIGHT POLE MANUFACTURER TO ACCEPT NPT GLAND

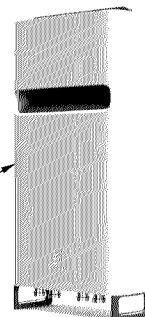
B PENETRATION DETAIL  
SCALE: NTS

SCHNEIDER ELECTRIC SQUARE D: DU221RB  
NUMBER OF POLES: 2  
MAX. CURRENT RATING: 30 A  
VOLTAGE RATING: 240 VAC  
DIMENSIONS: 9.36" x 7.25" x 3.75"  
WEIGHT: 4.62 lbs  
CONTRACTOR TO INSTALL LED LIGHT



SCHNEIDER DU221RB  
30A AC DISCONNECT  
WITH LED LIGHT

ERICSSON RRU32  
- SINGLE-BAND 4Tx/4Rx  
- 40MHz ISW  
- UP TO 4 x 40W OUTPUT POWER  
- SUPPORT 2 x 20MHz LTE  
- 2 PORTS x 10 Gbps CPRI  
DIMENSIONS: 22.9" x 10.9" x 6.3"  
(W/OUT COVER)  
WEIGHT: 46.3 LBS  
(W/OUT COVER)



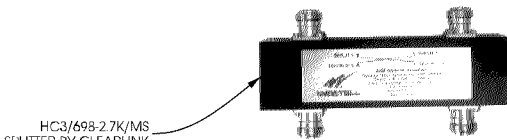
ERICSSON RRU32

\*SHOWN WITH COVER

C LOAD CENTER DETAIL  
SCALE: NTS

D RADIO DETAIL  
SCALE: NTS

CLEARLINK HC3 COUPLER  
- 200 WATTS AVG. POWER  
- 1P45 COMPLIANT  
- RoHS COMPLIANT  
- 698-2700 MHz FREQUENCY RANGE  
DIMENSIONS: 5.24" x 1.58" x 0.99"



HC3/698-2.7K/MS  
SPLITTER BY CLEARLINK

E COUPLER DETAIL  
SCALE: NTS

verizon



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

PROJECT NO:	20141029022
EDGE PROJECT NO:	14969
DRAWN BY:	NBT
CHECKED BY:	OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
C	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT

APPROVED

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.

MIN SOUTHTOWN SC1  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE  
MOUNTING DETAILS

SHEET NUMBER  
A-2



CASE FILE #PL201600185



APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017

SITE NAME:

MIN SOUTHTOWN SC2

SITE NUMBER:

20151187111

LOCATION CODE:

320992

SITE TYPE:

SMALL CELL

POLE TYPE:

REPLACEMENT LIGHT POLE



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



**Edge**  
Consulting Engineers, Inc.

17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

SITE INFORMATION

APPROXIMATE ADDRESS:  
7803 PENN AVE.  
BLOOMINGTON, MN 55431  
HENNEPIN COUNTY

LATITUDE & LONGITUDE:  
LAT: 44°-51'-34.77"N  
LONG: 93°-18'-15.72"W  
GROUND ELEVATION: 834' AMSL  
(PER 1A CERTIFICATE)

POLE HEIGHT:  
36'-9" I.O.C.

MAXIMUM APPURTENANCE HEIGHT:  
40'-0" A.G.L.

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

- 2012 INTERNATIONAL BUILDING CODE
- 2014 NATIONAL ELECTRIC CODE
- TIA/EIA-222-G OR LATEST EDITION

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

LOCATION SCAN



AREA MAP



LOCATION MAP



PROJECT DESCRIPTION/SOW

- INSTALL (1) REPLACEMENT 36-FT 94IN STEEL LIGHT POLE AND ASSOCIATED CONCRETE FOUNDATION
- INSTALLATION OF PANEL ANTENNAS
- INSTALLATION OF ERICSSON RRU'S AND POWER CONVERTERS
- INSTALLATION OF LOAD CENTER/BREAKER BOX
- INSTALLATION OF (4) COUPLERS
- INSTALLATION OF HAND HOLE FOR FIBER AT POLE BASE, BY VERIZON
- INSTALLATION OF CONDUIT FOR FIBER BETWEEN HAND HOLE AND POLE BASE (APPROX. 2'-0"). TO BE TRENCHED BELOW GRADE, BY VERIZON
- INSTALLATION OF CONDUIT FOR FIBER BETWEEN HAND HOLE AND ROW, (APPROX. 533'-0" IN LENGTH) TO BE DIRECTIONALLY BORED BELOW GRADE, BY PROVIDER
- INSTALLATION OF CONDUIT FOR ELECTRIC BETWEEN POLE BASE AND POWER SOURCE, (APPROX. 502'-0" IN LENGTH) TO BE DIRECTIONALLY BORED BELOW GRADE, BY VERIZON
- INSTALLATION OF GROUND RING AROUND POLE FOUNDATION
- BUILDING PENETRATION REQUIRED FOR ELECTRIC SERVICE
- ALL OTHER CONSTRUCTION RELATED ACTIVITIES TO BE COMPLETED BY OTHERS

PROJECT DIRECTORY

**LESSEE:**  
VERIZON WIRELESS  
10801 BUSH LAKE RD  
BLOOMINGTON, MN 55438  
CONTACT: COURTNEY BEDNARZ  
PHONE: 952.946.4694

**LESSOR:**  
KRAUS-ANDERSON INC.  
523 8TH ST. S.  
MINNEAPOLIS, MN 55404  
PHONE: 612.332.7281

**ENGINEERING COMPANY:**  
EDGE CONSULTING ENGINEERS, INC.  
17645 JUNIPER PATH  
SUITE 105  
LAKEVILLE, MN 55044  
CONTACT: OTTO DINGFELDER III, P.E.  
PHONE: 608.644.1449

**RE ENGINEER:**  
VERIZON WIRELESS  
10801 BUSH LAKE RD  
BLOOMINGTON, MN 55438  
CONTACT: MIHAELA OXLEY

**SITE ACQUISITION:**  
BUELL CONSULTING, INC.  
1360 ENERGY PARK DRIVE  
SUITE 210  
ST. PAUL, MN 55108  
CONTACT: ROB VIERA  
PHONE: 651.225.0792

SHEET INDEX

NO:	SHEET TITLE
T-1	TITLE SHEET & PROJECT DATA
C-1	SITE PLAN
C-2	ENLARGED SITE PLAN
A-1	POLE ELEVATION
A-2	MOUNTING DETAILS
A-3	ANTENNA DETAILS
A-4	EQUIPMENT DETAILS
A-5	CABLE MOUNTING DETAILS
E-1	CABLING DETAILS
E-2	ELECTRICAL NOTES
G-1	GROUNDING PLAN
G-2	GROUNDING DETAILS

11"x17" PLOT WILL BE HALF SCALE  
UNLESS OTHERWISE NOTED

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

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.

ENGINEER OF RECORD

EDGE CONSULTING ENGINEERS, INC.  
CONTACT: OTTO DINGFELDER III (PE # 49720 (MN))  
PHONE: 608.644.1449

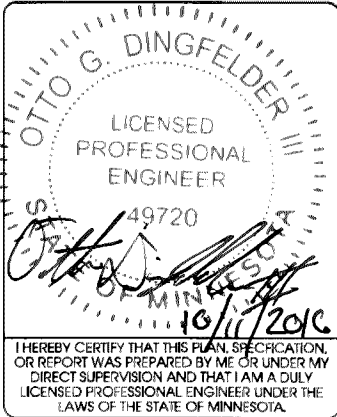
STRUCTURAL REVIEW

LIGHT POLE STRUCTURAL ANALYSIS TO BE COMPLETED BY OTHERS.

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

PROJECT NO: 20151187111  
EDGE PROJECT NO: 14970  
DRAWN BY: NBT  
CHECKED BY: OGD

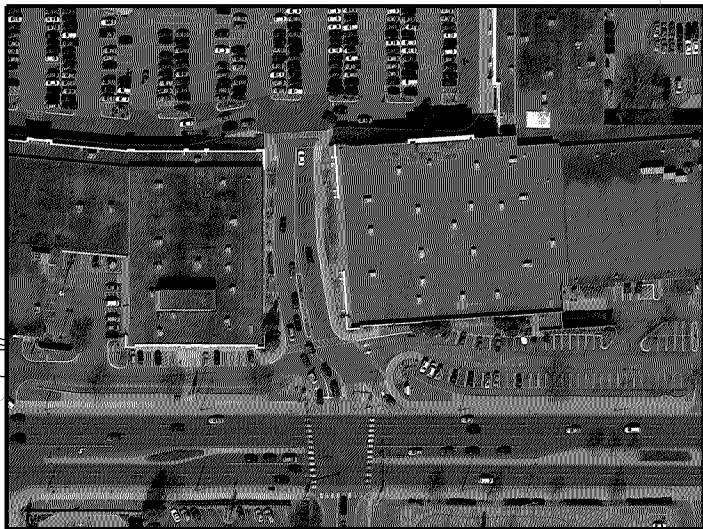
REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
O	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT



MIN SOUTHTOWN SC2  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE  
TITLE SHEET &  
PROJECT DATA

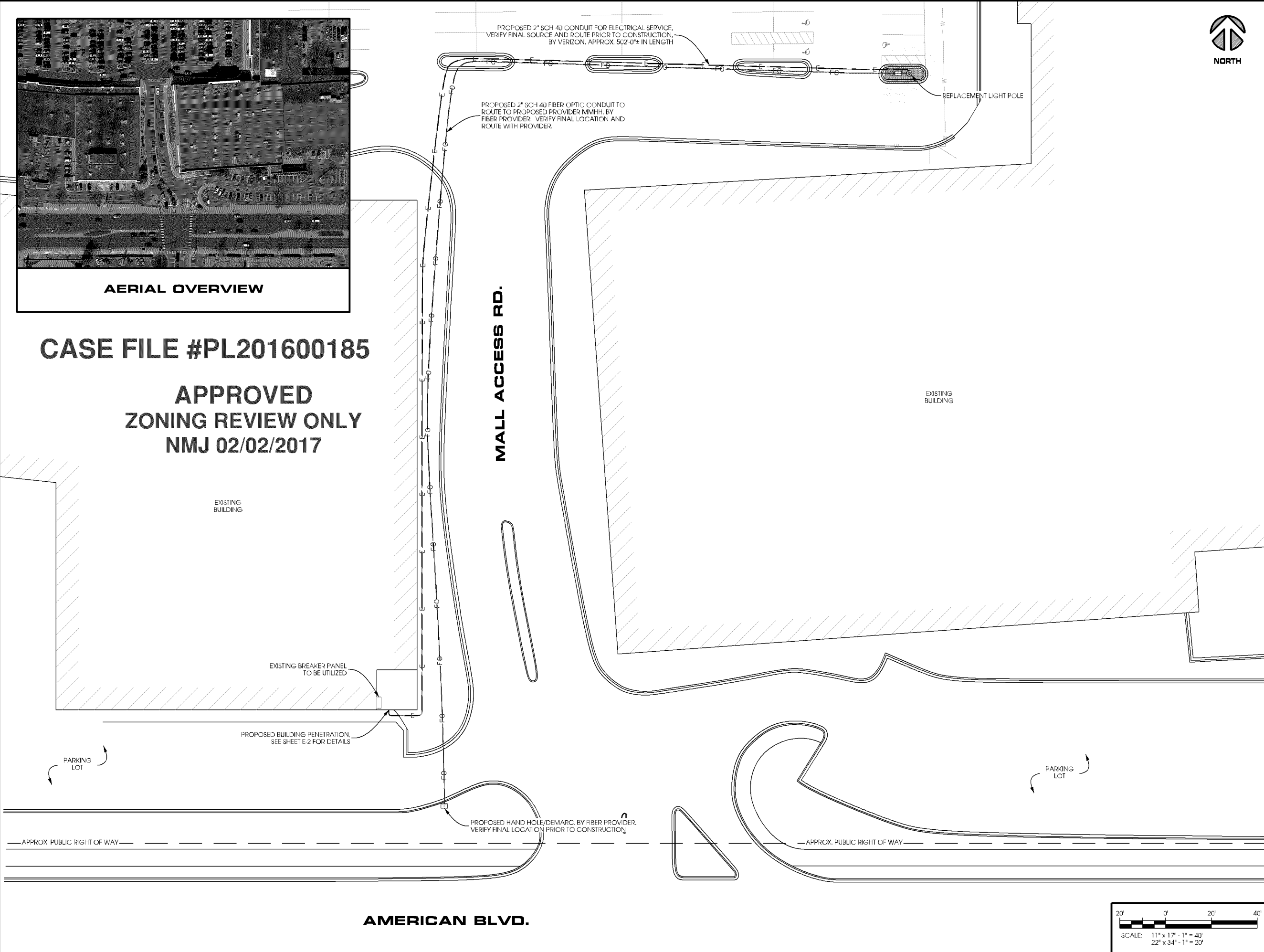
SHEET NUMBER  
**T-1**



AERIAL OVERVIEW

CASE FILE #PL201600185

APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017



verizon



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

PROJECT NO:	20151187111
EDGE PROJECT NO:	14970
DRAWN BY:	NBT
CHECKED BY:	OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
U	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT

APPROVED

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.

MIN SOUTHTOWN SC2  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE

SITE PLAN

SHEET NUMBER

C-1



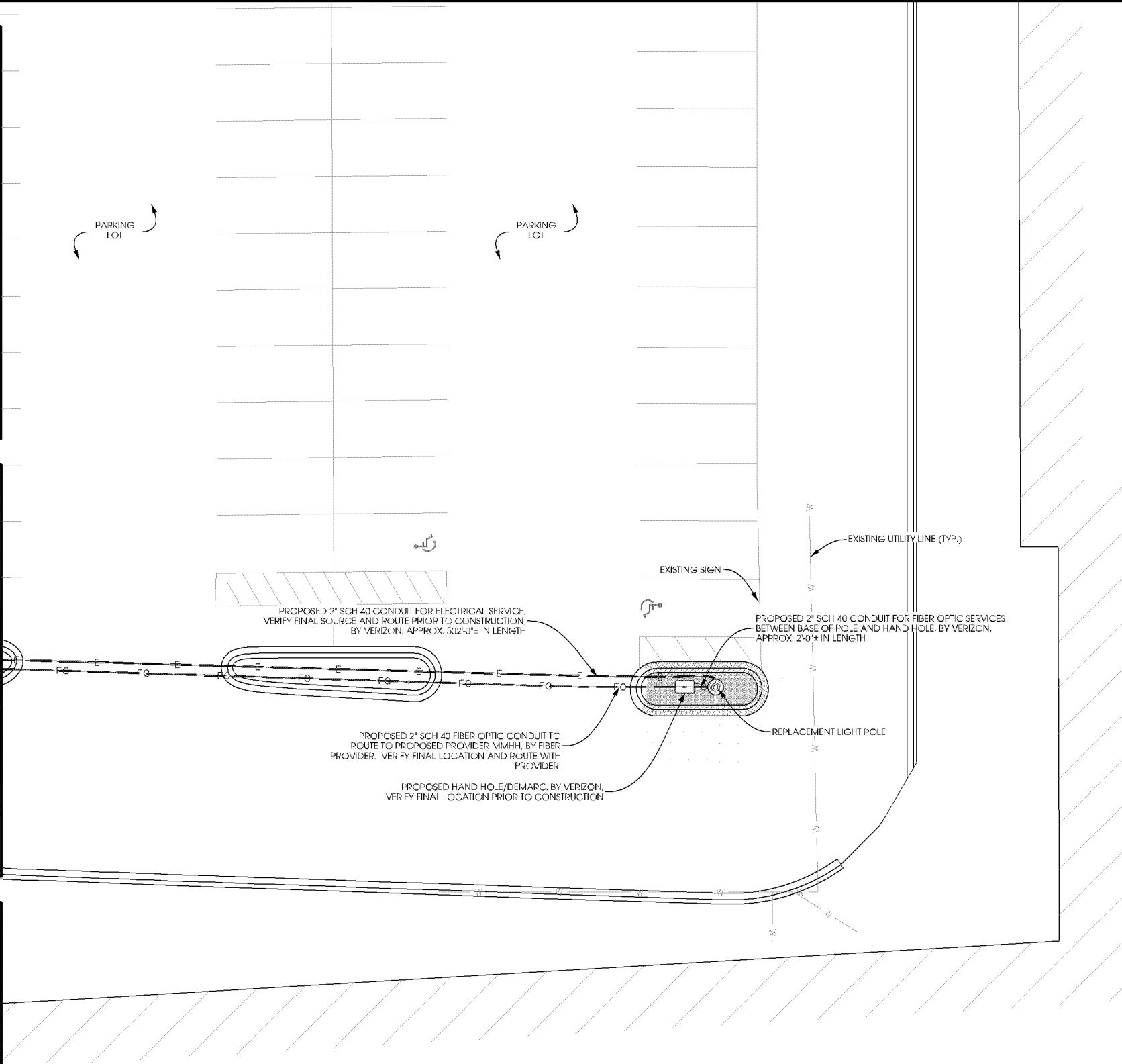
AERIAL OVERVIEW



SITE OVERVIEW  
[LOOKING WEST]



SITE OVERVIEW  
[LOOKING NORTH]



CASE FILE #PL201600185

APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017



verizon



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

PROJECT NO:	20151187111
EDGE PROJECT NO:	14970
DRAWN BY:	NBT
CHECKED BY:	OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
U	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT

APPROVED

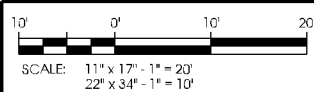
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MIN SOUTHTOWN SC2  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE  
ENLARGED SITE  
PLAN

SHEET NUMBER

C-2



SCALE: 11" x 17" - 1" = 20'  
22" x 34" - 1" = 10'



CASE FILE #PL201600185

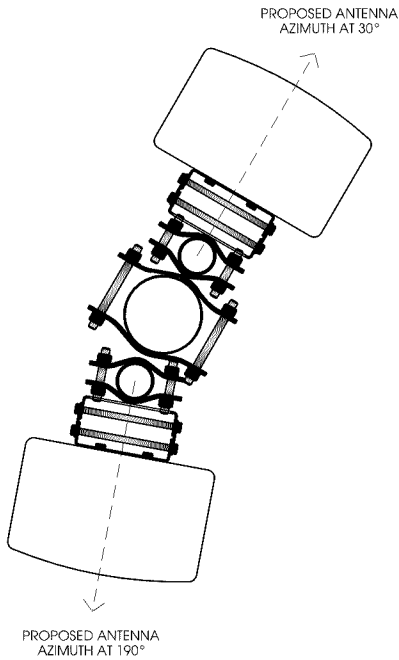
NODE INFO					RADIO					ANTENNA									
		Band	eNB ID	Model	DU#	DU Port#	AZ/MUTH	POSITION	QTY	MFR.	MODEL	PORT	C/L	ADJ ELEC TILT	MECH TILT				
PCI:	Full Node Name: (Name SC2 Node#)				AWS	TBD	RRUS32 B66A	1	TBD	30	1.1	1	JMA Wireless	X7CQAP-FRO-260-V	+45	35	0	0	
	TBD	SOUTHTOWN SC2								1.2					-45				
Coordinates		DEG	MIN	SEC						1.3					+45				
	LATITUDE	44	51	34.77						1.4					-45				
	LONGITUDE	93	18	15.72						1.5					+45				
	Ground Elevation:	834								1.6					-45				
1A Coordinates 08-01-2016						PCS	TBD	RRUS32 B2	1	TBD	190	1.1	1	JMA Wireless	X7CQAP-FRO-260-V	+45	35	0	0
											1.2					-45			
											1.3					+45			
											1.4					-45			
											1.5					+45			
											1.6					-45			
					RF Splitter: (4) ClearLink-HC3/698-2.7K/MS														

RF Splitter: (4) ClearLink-HC3/698-2.7K/MS

APPROVED  
ZONING REVIEW ONLY  
NMJ 02/02/2017

COAX						
QTY	TYPE	MFR.	MODEL	DIELECTRIC	DIA.	RUN
TERMINATE PORTS						
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD
TERMINATE PORTS						
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD
1	Jumper	Commscope	LFD4-50	Foam	1/2"	TBD

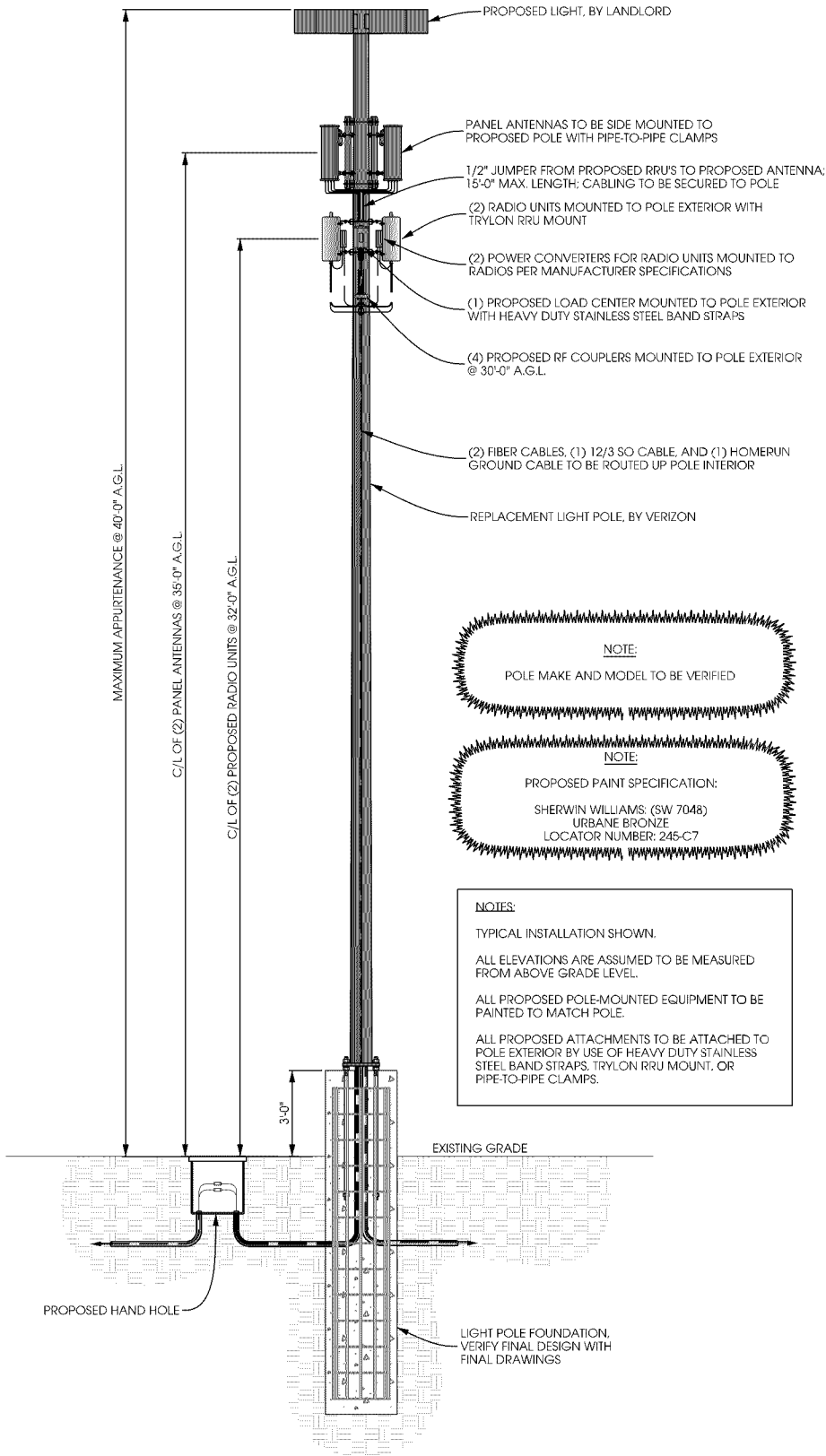
A ANTENNA AND COAX  
SCALE: NTS



B ANTENNA ORIENTATION  
SCALE: NTS



LIGHT POLE ELEVATION



C LIGHT POLE ELEVATION  
SCALE: 11" x 17" - 1" = 5'-0"  
22" x 34" - 1" = 2'-6"



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

PROJECT NO:	20151187111
EDGE PROJECT NO:	14970
DRAWN BY:	NBT
CHECKED BY:	OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
U	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT

APPROVED

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.

MIN SOUTHTOWN SC2  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE  
**POLE ELEVATION**

SHEET NUMBER

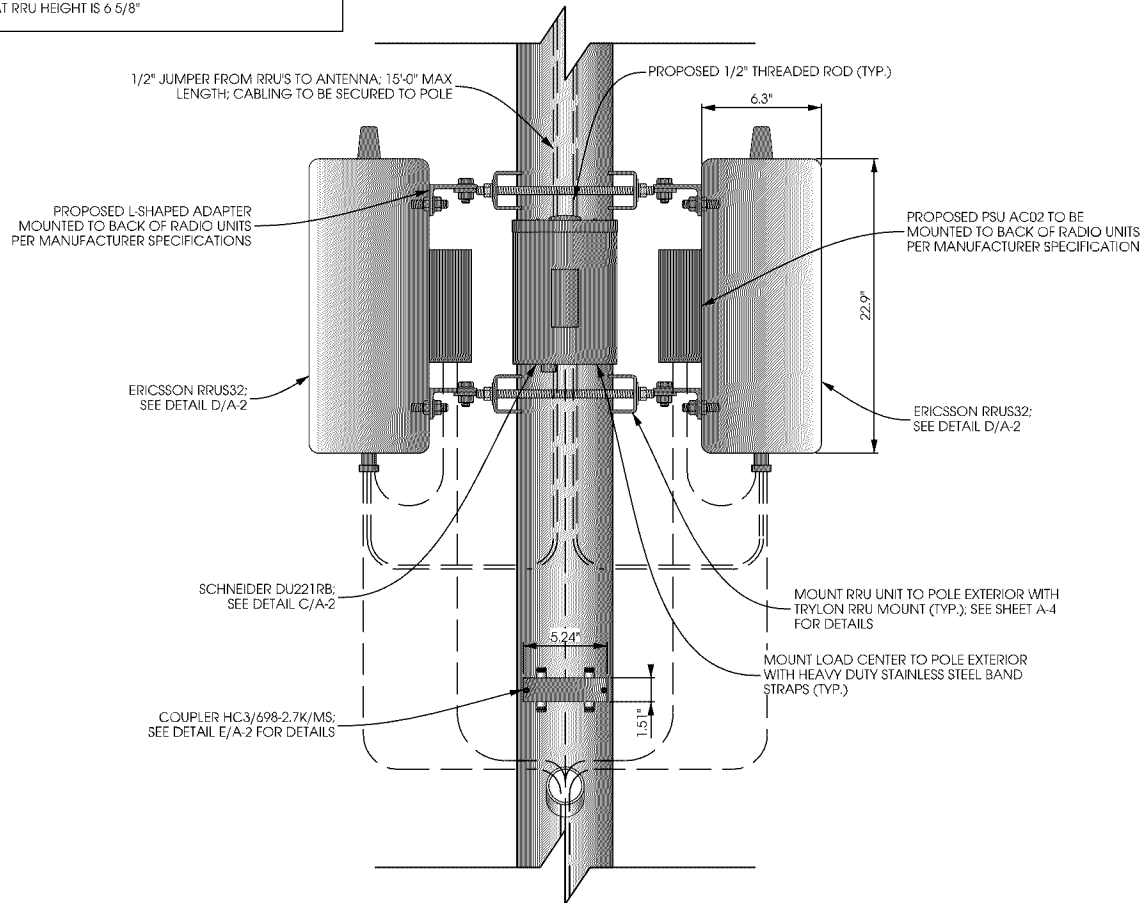
**A-1**

NOTE:

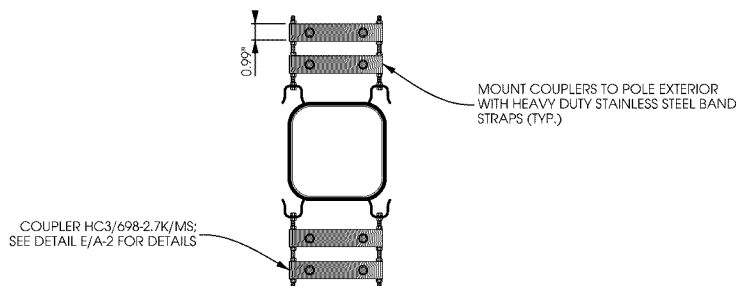
PAINT ALL ANTENNAS, OUTDOOR EQUIPMENT, AND MOUNTING HARDWARE TO MATCH THE PROPOSED LIGHT POLE

POLE SIZE AT RRU HEIGHT IS 6 5/8"

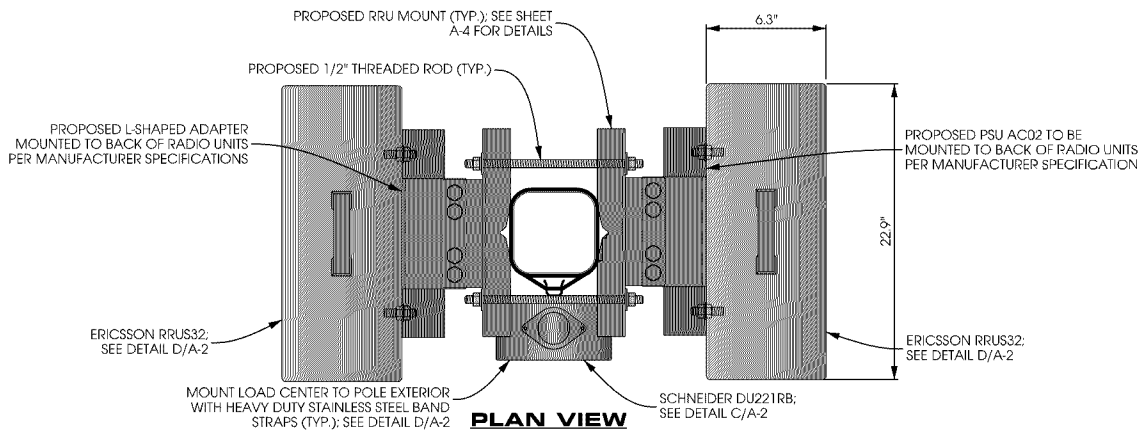
# CASE FILE #PL201600185



ELEVATION VIEW



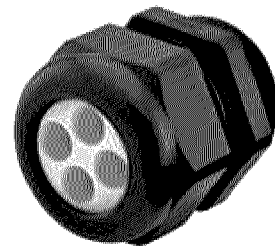
SPLITTER PLAN VIEW



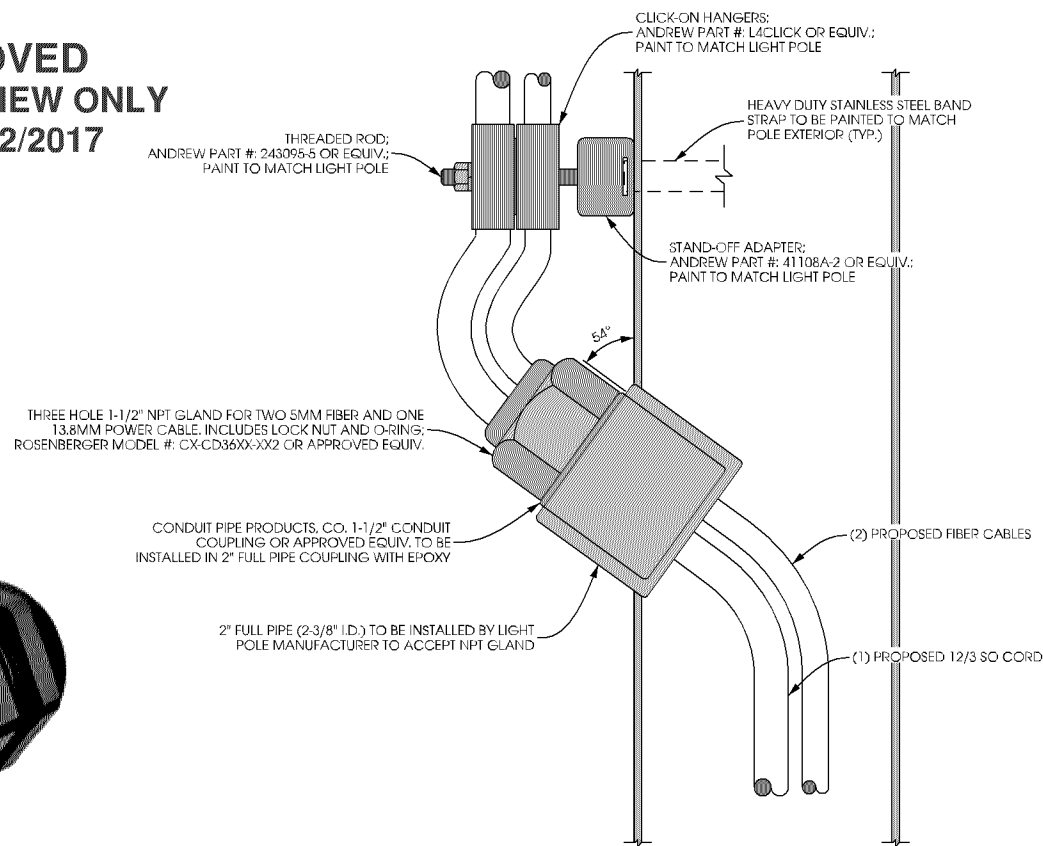
PLAN VIEW

**A EQUIPMENT MOUNTING DETAIL**  
SCALE: 11 x 17 - 1" = 1'-0"  
22 x 34 - 1" = 0'-6"

## APPROVED ZONING REVIEW ONLY NMJ 02/02/2017

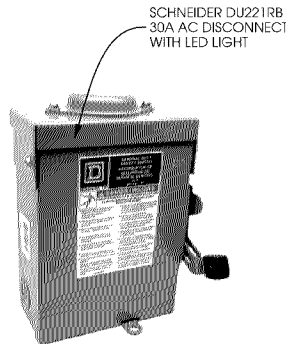


NPT GLAND



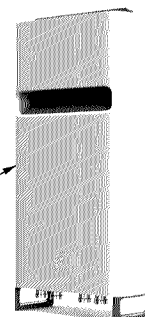
**B PENETRATION DETAIL**  
SCALE: NTS

SCHNEIDER ELECTRIC SQUARE D:  
DU221RB  
NUMBER OF POLES: 2  
MAX. CURRENT RATING: 30 A  
VOLTAGE RATING: 240 VAC  
DIMENSIONS: 9.36" x 7.25" x 3.75"  
WEIGHT: 4.62 lbs  
CONTRACTOR TO INSTALL LED LIGHT



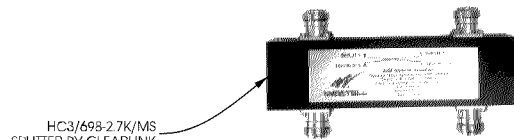
**C LOAD CENTER DETAIL**  
SCALE: NTS

ERICSSON RRU32  
- SINGLE-BAND 4Tx/4Rx  
- 40MHz IBW  
- UP TO 4 x 40W OUTPUT POWER  
- SUPPORT 2 x 20MHz LTE  
- 2 PORTS x 10 Gbps CPRI  
DIMENSIONS: 22.9" x 10.9" x 6.3"  
(W/OUT COVER)  
WEIGHT: 46.3 LBS  
(W/OUT COVER)



**D RADIO DETAIL**  
SCALE: NTS

CLEARLINK HC3 SPLITTER  
- 200 WATTS AVG. POWER  
- 1P45 COMPLIANT  
- RoHS COMPLIANT  
- 698-2700 MHz FREQUENCY RANGE  
DIMENSIONS: 5.24" x 1.58" x 0.99"



**E COUPLER DETAIL**  
SCALE: NTS

verizon



1360 Energy Park Drive, Suite 210  
St. Paul, MN 55108  
651.225.0793 voice  
www.buellconsulting.com



17645 Juniper Path, Suite 105  
Lakeville, MN 55044  
608.644.1449 voice  
608.644.1549 fax  
www.edgeconsult.com

PROJECT NO:	20151187111
EDGE PROJECT NO:	14970
DRAWN BY:	NBT
CHECKED BY:	OGD

REV.	DATE	DESCRIPTION	
A	08/15/2016	PRELIM SMALL CELL DWGS	TKB
C	08/30/2016	FINAL DWGS	TKB
1	10/11/2016	FINAL DWGS	NBT

APPROVED

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.

MIN SOUTHTOWN SC2  
BLOOMINGTON, MN  
REPLACEMENT LIGHT POLE  
SMALL CELL DRAWINGS

SHEET TITLE  
**MOUNTING DETAILS**

SHEET NUMBER  
**A-2**