



CITY OF DULUTH

Community Planning Division

411 W 1st St, Rm 208 * Duluth, Minnesota 55802-1197

Phone: 218/730.5580 Fax: 218/723-3559

File Number	PL 18-134, CUP	Contact	Steven Robertson, 218-730-5295	
Type	Concurrent Use Permit to Place Private Obstructions in Public Right of Way/Public Facilities (Utility/Light Pole)	Planning Commission Date		November 13, 2018
Deadline for Action	Application Date	October 9, 2018		
	Date Extension Letter Mailed	N/A	90 Days* (237.163)	January 7, 2019
Location of Subject		3800 Trinity Road		
Applicant	Verizon Wireless	Contact		
Agent	Amy Dresch, Jacobs Telecom	Contact		
Legal Description				
Site Visit Date		November 6, 2018	Sign Notice Date	October 30, 2018
Neighbor Letter Date		N/A for Concurrent Use	Number of Letters Sent	N/A for Concurrent Use

Proposal: The applicant is seeking a concurrent use permit to allow a private obstruction (utility pole mounted antennas and related equipment) in the public right of way.

Recommended Action: Recommend to the City Council to Approve With Conditions (Ordinance).

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	MU-C	Public Right of Way	Large Scale Commercial
North	MU-C	Undeveloped/ Commercial	Large Scale Commercial
South	MU-C/R-1	Undeveloped	Preservation
East	MU-C	Commercial	Large Scale Commercial
West	MU-C	Commercial	Large Scale Commercial

Summary of Code Requirements

UDC Section 50-37.7.C. The planning commission shall review the application, and council shall approve the application or approve it with modifications, if it determines that:

- 1) The proposed concurrent use will not harm or inconvenience the health, safety and general welfare of the city;
- 2) No portion of a public easement proposed of use is being physically occupied by the public.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Principle #4 - Support emerging economic growth sectors. Emerging economic sectors add economic, cultural and social diversity. These include higher education, medical, value-added manufacturing, commercial outdoor recreation, historic resources interpretation, arts and music, information technology and visitor services.

The installation falls with the provisions of Minnesota Statute 237.162 and 247.1643, as amended in 2017.

Future Land Use: Large Scale Commercial Mall, shopping center and big box retail development, with associated surrounding retail and service uses, but only ancillary office uses and no residential uses. Oriented primarily to the motorist, with planned internal circulation patterns while still accommodating pedestrian movement. Requires access to regional transportation routes. May include regional green infrastructure for watershed protection.

Review and Discussion Items

1) The applicant is seeking a concurrent use permit to allow a private obstruction (utility pole mounted antennas and equipment mount) in the public right of way.

According to the application submitted, the “small wireless facility (will be installed) on a replacement wood utility pole, which will be 5 feet taller than the current pole for a height of 36 feet above ground level. The new equipment will be installed at least 34 feet above ground level and the new ancillary equipment will be installed at least 19 feet above ground level with no ground equipment”. The wireless facilities will not be stealthed or camouflaged; the equipment will be visibly attached to the exterior of the pole. The attachments will include 1 exterior mounted panel antenna and 2 radio units.

2) The applicant included a letter from Minnesota Power, dated October 5, 2018, giving consent to allow the wireless facility (DUL Miller Hill Mall SC1) on their pole, with the understanding that Verizon will obtain an attachment permit from Minnesota Power.

3) Granting a concurrent use permit would give the applicant the ability to use dedicated public rights-of-way, with conditions, while preserving other existing public uses in the same right-of-way corridors. Concurrent use permits require a public hearing and recommendation by the Planning Commission, and is approved by the City Council via ordinance. Unlike street right-of-way vacations, concurrent use permits are not recorded at the County as they are voidable permits issued by the City to applicants who are private users of public rights-of-way.

4) Ownership of the poles will remain with Minnesota Power, and the public right of way will remain unchanged.

5) Granting the proposed concurrent use permits will not harm or inconvenience the health, safety and general welfare of the city. The area proposed for the concurrent use permit will not take away from the public's ability to use the public right-of-way. The city will own the poles and continue to use them for utility purposes (lighting).

6) The UDC generally requires that new wireless facilities follow a location standard: first they should be collocated on existing towers or other structures on city owned properties first, and then existing towers or other structures on other (private) property, and so forth down the location standard list. As these small wireless facilities would be located on existing infrastructure in public right of way, and as per the recent change in state statute, the city is processing these applications as concurrent use permits and not special use permits, and the UDC's use-specific standards do not apply in this specific situation.

7) The city has the ability to regulate land use, however, the Federal Communications Commission preempts local review on the potential environmental effects of radio frequency (RF) emissions, with the presumption that the applicant and service provider complies with the Commission's RF rules. The applicant included an FCC checklist used to determine exemption from RF regulations (unlikely to cause exposure in excess of the FCC's guidelines).

8) At the time that this memo was written, no written comments from the public have been received. City Engineering was still reviewing the exhibits at the time this staff report was written, and will likely have some requests for changes related to some of the technical aspects of the installations in the right of way.

Staff Recommendation:

Based on the above findings, Staff recommends that the Planning Commission recommend approval of the two concurrent use permits subject to the following conditions:

- 1) The project be limited to, constructed, and maintained according to construction drawings submitted and included with this staff report (signed 10/9/2018)
- 2) Applicant, and/or successors, shall remove the proposed obstructions at applicant's expense if directed to do so by the City with appropriate notice, and shall adhere to other standards and obligations established in the approving document (ordinance).
- 3) Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission approval; however, all other changes must be approved by amending the City Council's approved ordinance.



Legend

Zoning Boundaries

Shoreland (UDC)

Cold Water

Natural Environment

General Development

Trout Stream (GPS)

Other Stream (GPS)

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.





PL 18-134
CUP Small Cell Wireless Facility

Legend

Gas Main

Water Main

Hydrant

Sanitary Sewer Mains

CITY OF DULUTH

WLSSD; PRIVATE

Sanitary Sewer Forced Main

Storage Basin

PS

Pump Station

Storm Sewer Mains

Storm Sewer Pipe

Storm Sewer Catch Basin

Trout Stream (GPS)

Other Stream (GPS)

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Aerial photography flown 2016

Prepared by: City of Duluth Community Planning Division, Nov 6, 2018. Source: City of Duluth.



DUL Burning Tree Plaza SC3 & DUL Miller Hill Mall SC1

Proposed Site Candidate Locations

Verizon Small Cell





SITE NAME: DUL MILLER HILL MALL SC

SITE NUMBER: 20181847133

LOCATION CODE: 504067

SITE TYPE: SMALL CELL

INSTALLATION TYPE: REPLACEMENT WOOD UTILITY POLE



PROJECT NO: 20181847133

LOCATION CODE: 504067

EDGE PROJECT NO: 20095

CHECKED BY: OGD

REV.	DATE	DESCRIPTION	INT.
A	08/09/2018	PRELIM SMALL CELL DWGS	MWH
B	08/28/2018	PRELIM SMALL CELL DWGS	MWH
0	10/08/2018	FINAL SMALL CELL DWGS	JMK



DUL MILLER HILL MALL SC
DULUTH, MN
REPLACEMENT WOOD UTILITY POLE
SMALL CELL DRAWINGS

SHEET TITLE
TITLE SHEET & PROJECT DATA

SHEET NUMBER
G-001

SITE INFORMATION	REPLACEMENT POLE	PROJECT DESCRIPTION/SOW		SHEET INDEX	
<p>APPROXIMATE ADDRESS: 3800 TRINITY RD DULUTH, MN 55806 ST. LOUIS COUNTY</p> <p>SITE COORDINATES: LAT: 46°-48'-07.89" N LONG: 92°-09'-15.51" W GROUND ELEVATION: 1329.2' AMSL (PER 1A CERTIFICATE)</p>		WORK PRODUCT	INSTALLED BY	NO:	SHEET TITLE
		REPLACEMENT WOOD UTILITY POLE	MN POWER	G-001	TITLE SHEET & PROJECT DATA
		OVERHEAD ELECTRICAL SERVICE WIRE BETWEEN REPLACEMENT POLE AND POWER SOURCE	MN POWER	G-002	GENERAL SPECIFICATIONS
		FIBER CONDUIT, BETWEEN HAND HOLE AND POLE BASE, TO BE TRENCHED/DIRECTIONALLY BORED BELOW GRADE	FIBER PROVIDER	G-003	GENERAL SPECIFICATIONS
		FIBER CONDUIT, WITHIN RIGHT OF WAY, TO BE TRENCHED/DIRECTIONALLY BORED BELOW GRADE	FIBER PROVIDER	C-101	SITE PLAN
		FIBER HAND HOLE AT POLE BASE	FIBER PROVIDER	T-201	SITE ELEVATION
		DIPLEXERS	VERIZON	T-501	ANTENNA DETAILS
		LOAD CENTER/DISCONNECT	VERIZON	T-502	EQUIPMENT DETAILS
		ELECTRICAL METER	VERIZON	E-101	UTILITY PLAN
		ERICSSON RRUS AND POWER CONVERTERS	VERIZON	E-102	GROUNDING PLAN
		PANEL ANTENNA	VERIZON	E-501	UTILITY DETAILS
				E-502	GROUNDING DETAILS
		APPLICABLE CODES	LOCATION MAP	PROJECT DIRECTORY	
<p>ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:</p> <ul style="list-style-type: none">- 2012 INTERNATIONAL BUILDING CODE- 2014 NATIONAL ELECTRIC CODE- TIA/EIA-222-G OR LATEST EDITION <p>IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL</p>		<p>LESSEE: VERIZON WIRELESS 10801 BUSH LAKE RD BLOOMINGTON, MN 55438 CONTACT: AMANDA TURNER PHONE: 952.946.4706</p> <p>LESSOR: MN POWER 30 W SUPERIOR ST DULUTH, MN 55802 CONTACT: JAKE PATTON PHONE: 218.256.3763</p> <p>ENGINEERING COMPANY: EDGE CONSULTING ENGINEERS, INC. 2101 HIGHWAY 13 W BURNSVILLE, MN 55337 CONTACT: OTTO DINGFELDER III PHONE: 608.644.1449</p> <p>RF ENGINEER: VERIZON WIRELESS 10801 BUSH LAKE RD BLOOMINGTON, MN 55438 CONTACT: MICHAEL KOCH</p> <p>SITE ACQUISITION: JACOBS ENGINEERING GROUP, INC. 2727 PATTON ROAD ROSEVILLE, MN 55113 CONTACT: AMY DRESCH PHONE: 952.831.1043</p>		<p>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.</p> <p>ENGINEER OF RECORD</p> <p>EDGE CONSULTING ENGINEERS, INC. CONTACT: OTTO DINGFELDER III (PE # 49720 (MN)) PHONE: 608.644.1449</p> <p>STRUCTURAL REVIEW</p> <p>STRUCTURAL ANALYSIS COMPLETED BY OTHERS .</p> <p>CONTRACTOR TO REVIEW STRUCTURAL REPORT IN ITS ENTIRETY. ANY DISCREPANCIES OR DISAGREEMENTS BETWEEN THE REPORT AND THESE PLANS SHOULD BE RESOLVED PRIOR TO CONSTRUCTION.</p>	
		<p>LOCATION SCAN</p>			



A

AERIAL OVERVIEW



B

SITE OVERVIEW



C

SITE OVERVIEW

POWER AND FIBER ROUTING NOTE:
THE PROPOSED POWER AND FIBER ROUTES ARE PRELIMINARY, AND WILL BE CONFIRMED WITH THE LANDLORD AND FIBER PROVIDER PRIOR TO CONSTRUCTION. IF THE GENERAL CONTRACTOR NOTICES ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ACTUAL SOURCES OF POWER AND FIBER, THE VERIZON CONSTRUCTION ENGINEER AND PROJECT ENGINEER ARE TO BE NOTIFIED PRIOR TO COMMENCING WORK.

TRINITY RD/US HWY 53

APPROX. PROPERTY LINE

PROPOSED OVERHEAD ELECTRIC SERVICE WIRE TO ROUTE FROM REPLACEMENT POLE TO POWER SOURCE, BY MN POWER, SEE SHEET E-101 FOR DETAILS

PROPOSED FIBER HAND HOLE/DEMARC, BY PROVIDER
PROPOSED FIBER OPTIC SERVICE CONDUIT TO ROUTE FROM POLE BASE TO HAND HOLE, BY PROVIDER, SEE SHEET E-101 FOR DETAILS

PROPOSED FIBER OPTIC SERVICE CONDUIT TO ROUTE WITHIN RIGHT OF WAY, BY PROVIDER, SEE SHEET E-101 FOR DETAILS

EXISTING SIGN

EXISTING OVERHEAD ELECTRIC SERVICE WIRE (TYP.) TO BE RELOCATED TO REPLACEMENT POLE, BY MN POWER

GRASS

10' X 5' PREMISES

REPLACEMENT WOOD UTILITY POLE, BY MN POWER

EXISTING POLE LOCATION

PROPOSED SINGLE METER, BY VERIZON



NORTH



PROJECT NO:	20181847133
LOCATION CODE:	504067
EDGE PROJECT NO:	20095
CHECKED BY:	OGD

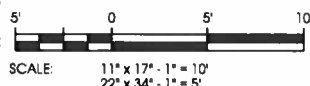
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OTTO G. DINGFELDER III
LICENSED PROFESSIONAL ENGINEER
49720
10/9/2018
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DUL MILLER HILL MALL SC
DULUTH, MN
REPLACEMENT WOOD UTILITY POLE
SMALL CELL DRAWINGS

SHEET TITLE
SITE PLAN

SHEET NUMBER
C-101



L:\20000\20095 CAD\Plan\Preliminary\C-101.dgn

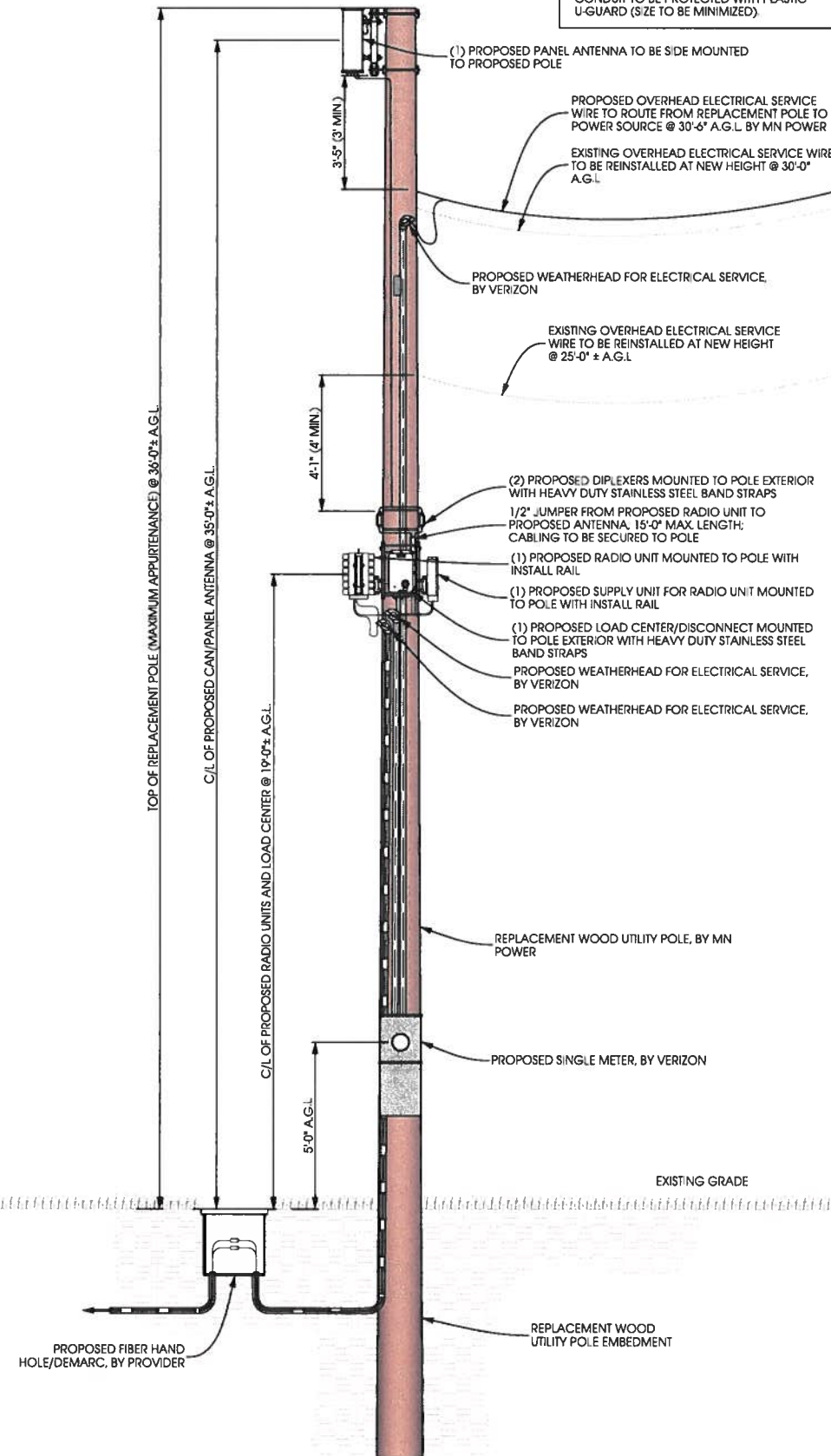
EXISTING POLE	
POLE HEIGHT:	33'-5" A.G.L.
MAXIMUM APPURTENANCE HEIGHT:	34'-2" A.G.L.
PROPOSED POLE	
POLE HEIGHT:	36'-0" A.G.L.
ANTENNA TIP HEIGHT:	36'-0" A.G.L.
MAXIMUM APPURTENANCE HEIGHT:	36'-0" A.G.L.

NOTES:

PROPOSED POWER AND FIBER RISE CONDUITS TO BE GROUPED TOGETHER TO MAXIMIZE AVAILABLE FREE SPACE ON POLE.

PROPOSED POWER AND FIBER RISE CONDUIT SIZES TO BE MINIMIZED WHERE POSSIBLE.

ALL PROPOSED JUMPER CABLES NOT IN CONDUIT TO BE PROTECTED WITH PLASTIC U-GUARD (SIZE TO BE MINIMIZED).



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

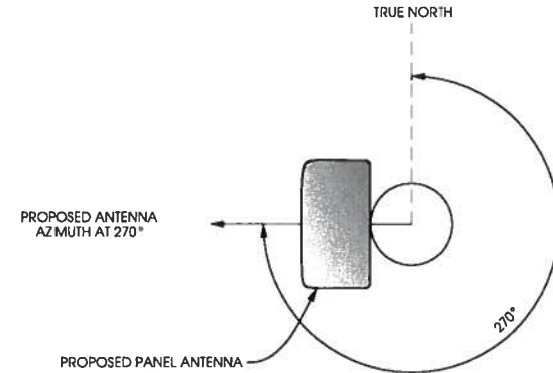


B SITE ELEVATION



NOTES:

VERIZON TO PROVIDE FINAL RF CONFIGURATION



C ANTENNA ORIENTATION
SCALE: NTS

ANTENNAS					
QUANTITY	MAKE	MODEL	CENTERLINE	TIP HEIGHT	AZIMUTH
1	ANDREW	HBXX-6513DS-A2M	35'-0" AGL	36'-0" AGL	270°

EQUIPMENT			
QUANTITY	TYPE	MAKE	MODEL
1	RRU	ERICSSON	RRUS8843
1	PSU	ERICSSON	PSU 6302
2	DIPLEXER	COMMSCOPE	CBC1293T-4310

CABLING			
QUANTITY	TYPE	MAKE	MODEL
12	COAX	COMMSCOPE	F4-HMDM-1M-D

D ANTENNA AND CABLING
SCALE: NTS

verizon

JACOBS

Jacobs Engineering Group, Inc.
2727 Patton Road
Roseville, Minnesota 55113
www.jacobs.com

Edge
Consulting Engineers, Inc.

2101 Highway 13 W
Burnsville, MN 55337
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

PROJECT NO:	20181847133
LOCATION CODE:	504067
EDGE PROJECT NO:	20095
CHECKED BY:	OGD

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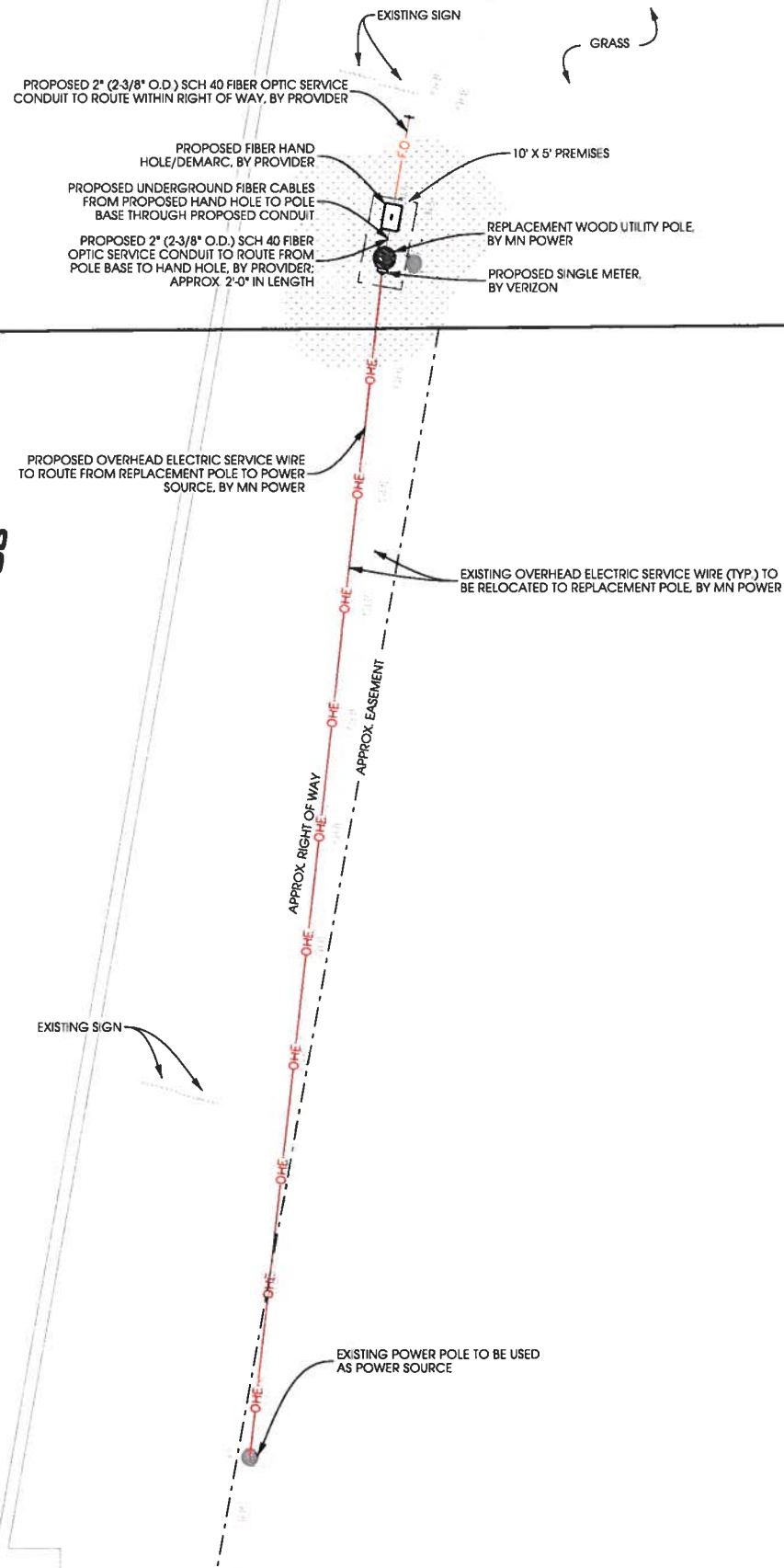


DUL MILLER HILL MALL SC
DULUTH, MN
REPLACEMENT WOOD UTILITY POLE
SMALL CELL DRAWINGS

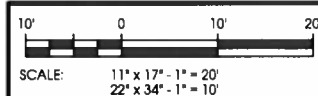
SHEET TITLE
SITE ELEVATION

SHEET NUMBER
T-201

POWER AND FIBER ROUTING NOTE:
THE PROPOSED POWER AND FIBER ROUTES ARE PRELIMINARY, AND WILL BE CONFIRMED WITH THE LANDLORD AND FIBER PROVIDER PRIOR TO CONSTRUCTION. IF THE GENERAL CONTRACTOR NOTICES ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ACTUAL SOURCES OF POWER AND FIBER, THE VERIZON CONSTRUCTION ENGINEER AND PROJECT ENGINEER ARE TO BE NOTIFIED PRIOR TO COMMENCING WORK.



A **UTILITY PLAN**



- SUBMITTAL OF BID INDICATES CONTRACTOR IS AWARE OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINE WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
- HEIGHTS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
- THESE PLANS ARE DIAGRAMMATIC ONLY. FOLLOW AS CLOSELY AS POSSIBLE.
- EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL BOARD, PULLBOX, J-BOX, SWITCH BOX, ETC. IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
- CONTRACTOR SHALL PROVIDE LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY THE UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "I" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, AND NBFU.
- CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
- CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.
- PROVIDE CONSTRUCTION ENGINEER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
- ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
- USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR.
- ALL CONDUCTORS SHALL BE COPPER.
- ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES AND DRAWINGS.
- RECEPTACLES SHALL BE 20 AMPERE, 125 VOLT A.C., WHITE AS REQUIRED BY THE ARCHITECT OR APPROVED EQUAL.
- WALL SWITCHES SHALL BE SINGLE-POLE, HUBBELL #1201 OR EQUIVALENT, WHITE AS REQUIRED BY THE ARCHITECT.
- PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS, SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROOF RECEPTACLES SHALL HAVE RACO #800, 1/2" RAISED WORK COVERS.
- WIRE AND CABLE CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM, NO BX OR ROMEX CABLE IS PERMITTED UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS.
- GROUND RODS SHALL BE AS SPECIFIED ON THE GROUNDING DRAWINGS.
- METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS. MANUFACTURED BY SQUARE D COMPANY OR APPROVED EQUAL. IF HOST FACILITY REQUIRES THE NEW SERVICE TO BE SUB-METERED FROM THE EXISTING SERVICE, SUB-METER SHALL BE OF THE 10x OR 16x TYPE.
- ALL MATERIALS SHALL BE U.L. LISTED.
- CONDUIT:
A. SERVICE CONDUITS SHALL BE GRAY SCH.40 PVC BURIED MIN. 36", EXCEPT THAT SCH.80 SHALL BE USED UNDER ROADWAYS AND IN LOCATIONS SUBJECT TO CASUAL IMPACTS. BENDS SHALL BE MADE USING "WIDE SWEEP" (12" MIN. RADIUS) ELBOW FITTINGS. ANY CODE-REQUIRED RIGID STEEL CONDUIT SHALL BE U.L. LABEL, GALVANIZED INSIDE AND OUTSIDE. CONDUIT SHALL EXTEND MIN. 36" BELOW GRADE, WITH "SWEEP" ELBOWS (12" R. MIN.) ENDING IN PVC TRANSITION FITTINGS. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAP-WRAPPED WITH HUNTS PROCESS NO. 3 EXTENDING MIN. 12" ABOVE GRADE.
B. INTERIOR CONDUITS SHALL BE ELECTRICAL METALLIC TUBING HAVING U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE.
C. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. NO SUCH CONDUIT SHALL EXCEED SIX FEET IN LENGTH.
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
- PATCH, REPAIR, AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH SECTION 712, PENETRATIONS - INTERNATIONAL BUILDING CODE (IBC)
- DRILLING OR CORING HOLES IN CONCRETE WALLS OR DECKS, WHETHER FOR FASTENING OR ANCHORING PURPOSES, REQUIRES THAT TENDONS OR REINFORCING STEEL MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT (X-RAY OR OTHER DEVICE) THAT CAN ACCURATELY LOCATE THEM. TENDONS OR REINFORCING MUST NOT BE DRILLED, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO CONSTRUCTION ENGINEER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF BOTH TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS TO BE PAID BY CONTRACTOR.
- CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS AS NECESSARY TO COMPLETE THE INSTALLATION OF ANY TOWER LIGHTING SYSTEM DESCRIBED IN THE RFG.

GENERAL ELECTRICAL NOTES

verizon

JACOBS

Jacobs Engineering Group, Inc.
2727 Patton Road
Roseville, Minnesota 55113
www.jacobs.com

Edge
Consulting Engineers, Inc.

2101 Highway 13 W
Burnsville, MN 55337
608.644.1449 voice
608.644.1549 fax
www.edgeconsult.com

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DULUTH, MN
REPLACEMENT WOOD UTILITY POLE
SMALL CELL DRAWINGS

SHEET TITLE
UTILITY PLAN

SHEET NUMBER
E-101