



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 18-126, CUP	Contact	Steven Robertson, 218-730-5295	
Type	Concurrent Use Permit to Place Private Obstruction in the Public Right of Way/Public Facilities	Planning Commission Date		October 9, 2018
Deadline for Action	Application Date	September 10, 2018		
	Date Extension Letter Mailed	N/A	90 Days* (237.163)	January 8, 2019
Location of Subject	One Site Near Spirit Mountain (8551 Grand Avenue)			
Applicant	Verizon Wireless	Contact		
Agent	Amy Dresch	Contact		
Legal Description	On-file			
Site Visit Date	September 26, 2018	Sign Notice Date	September 24, 2018	
Neighbor Letter Date	N/A for Concurrent Use	Number of Letters Sent	N/A for Concurrent Use	

Proposal. The applicant is proposing to install a small cell installation “on a Minnesota Power wood light pole in the right-of-way of Grand Avenue near the entrance of the Spirit Mountain Grand Avenue Chalet”. The proposed project will consist of replacing the existing 29-foot-tall wood light pole with a 34-foot wood pole and installing one small panel antenna mounted at the top of the pole along with two small radios mounted lower down on the pole and an electric meter mounted at the base of the pole.

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

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	MU-N	Public Recreation	Neighborhood Commercial
North	R-1	Public Recreation	Preservation
South	MU-P	Undeveloped	General Mixed Use
East	MU-P	Residential	Preservation
West	P-1, R-1	Public Recreation	Preservation

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: Neighborhood Commercial. Small- to moderate scale commercial, serving primarily the adjacent neighborhood(s). May include specialty retail; community gathering businesses such as coffee shops or lower intensity entertainment; offices; studios or housing above retail (storefront retail with vertical mixed use). Typically situated in or adjacent to residential neighborhoods. May transition to neighborhood mixed use.

Review and Discussion Items

- 1) The applicant is proposing one small wireless facility on an existing Minnesota Power pole. The proposal will consist of replacing the existing 29-foot-tall wood light pole with a 34-foot wood pole and installing one small panel antenna mounted at the top of the pole along with two small radios mounted lower down on the pole and an electric meter mounted at the base of the pole.
- 2) 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.
- 3) Ownership of the pole will remain with Minnesota Power.
- 4) The site and replacement wooden pole will have a structure analysis by the manufacturer to ensure that they can support the weight of the private small cell facility and required public infrastructure.
- 5) Granting the proposed concurrent use permit 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.
- 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 is in compliance with the Commission's RF rules. The applicant has submitted FCC categorical exclusion documentation for the site with the initial application.
- 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.

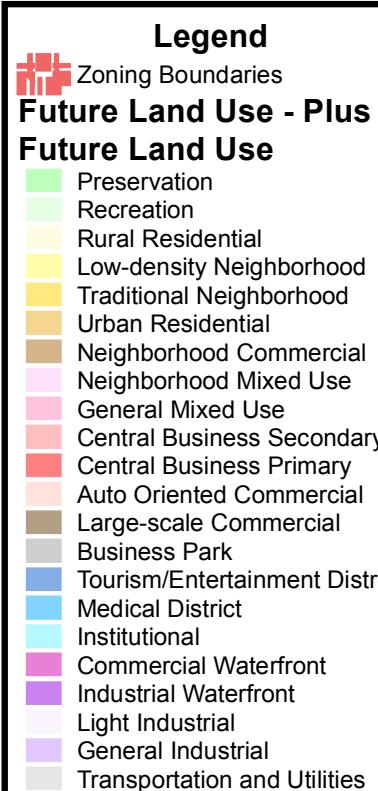
Staff Recommendation:

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

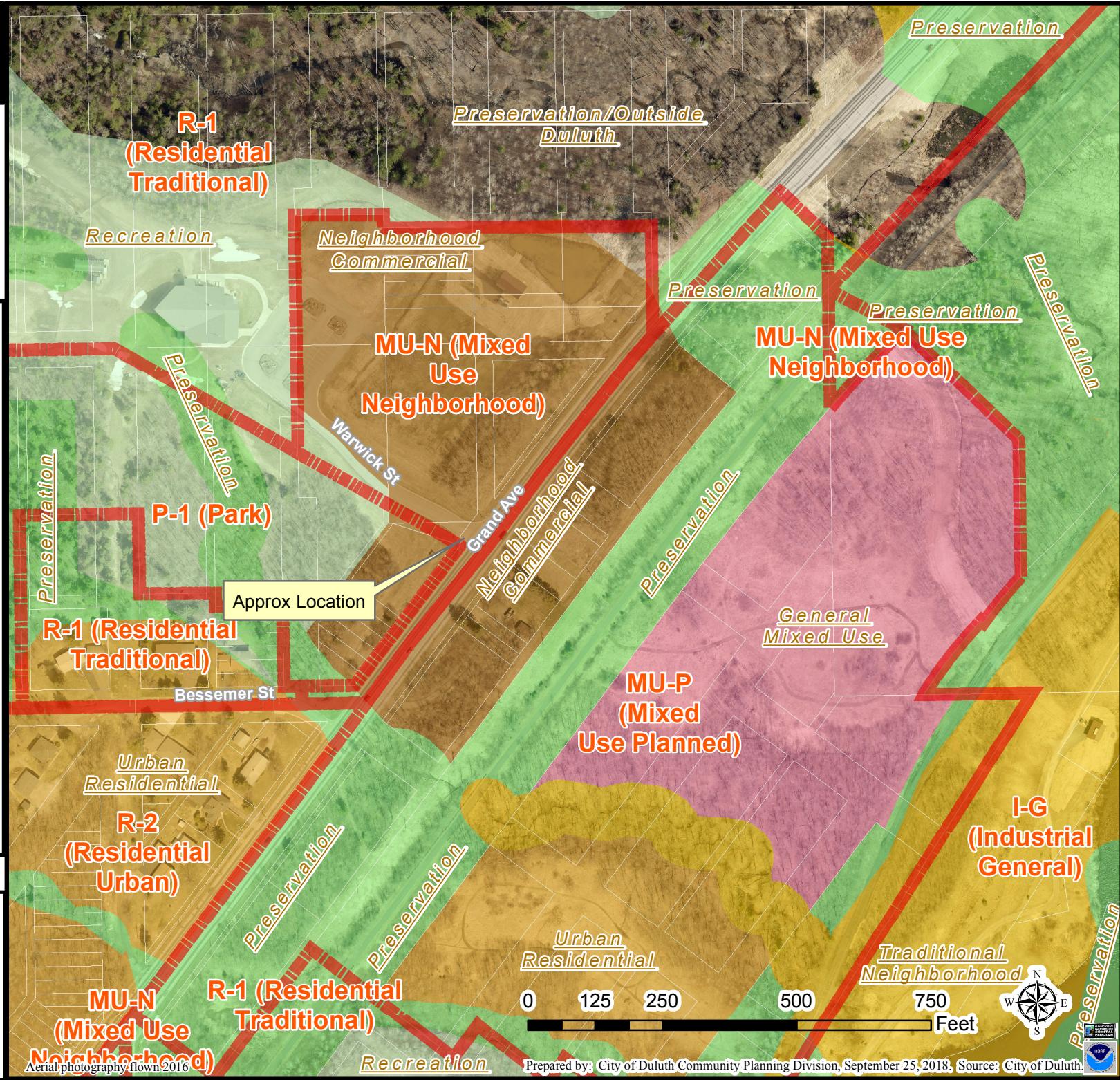
- 1) The project be limited to, constructed, and maintained according to construction drawings submitted and included with this staff report

- 2) Applicant, or his or her successors, shall remove the proposed obstructions at applicant's expense if directed to do so by the City with appropriate notice.
- 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.



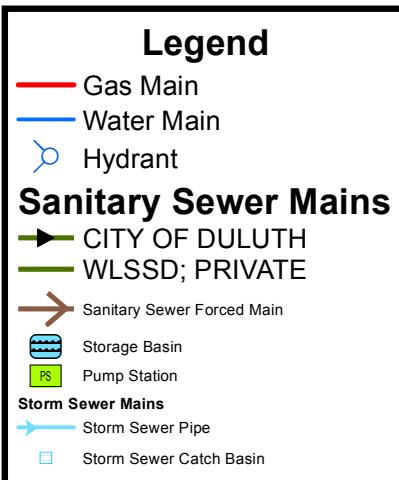


The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used 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.

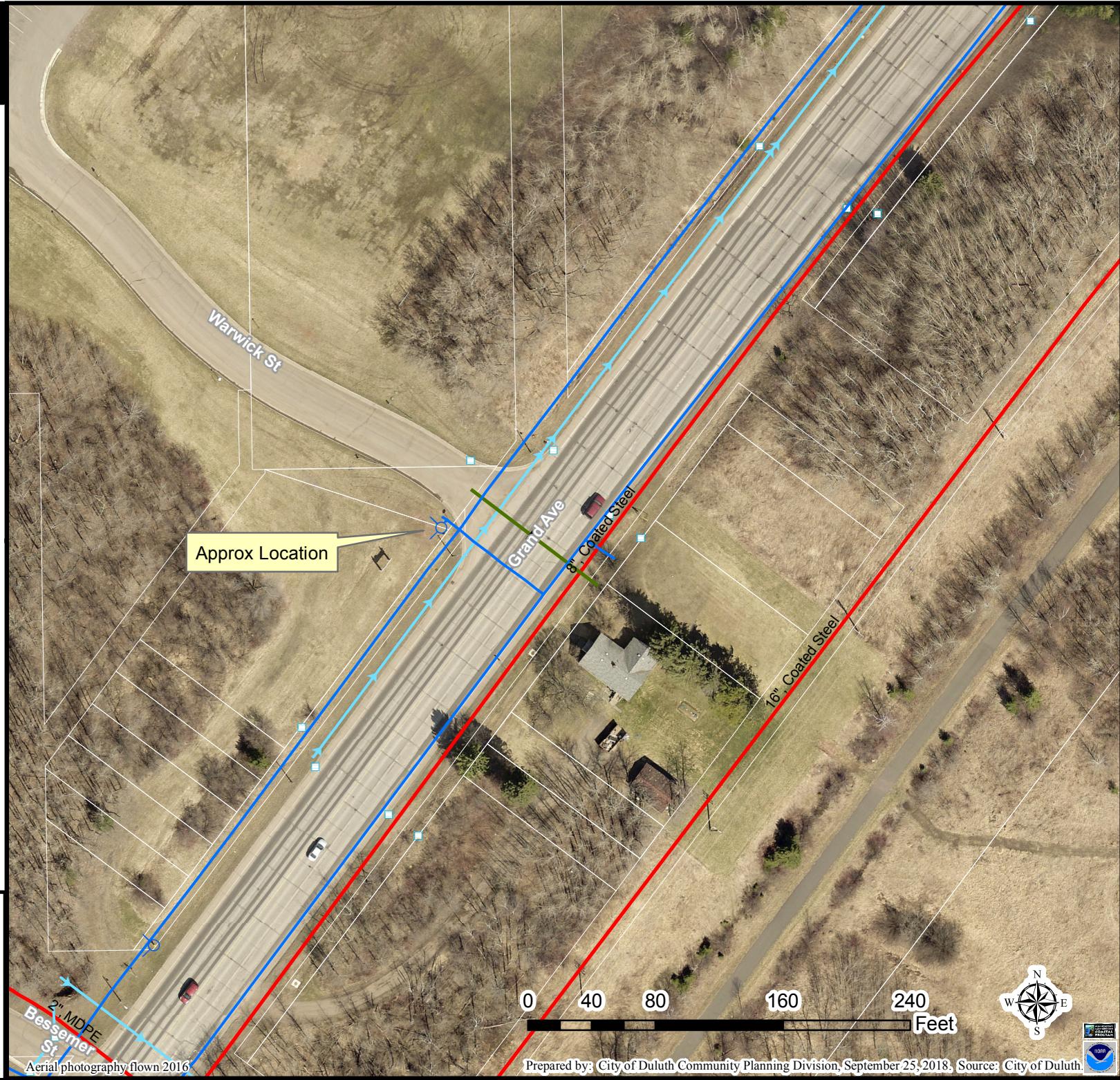




PL 18-126 CUP



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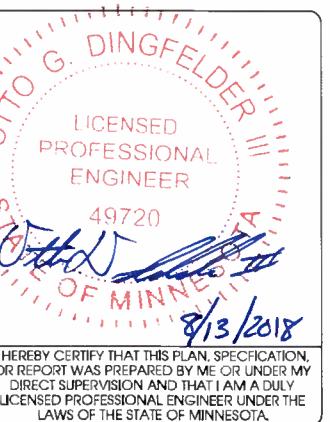


SITE NAME: DUL SPIRIT MOUNTAIN SC1 1
SITE NUMBER: 20130991644
LOCATION CODE: 281691
SITE TYPE: SMALL CELL
INSTALLATION TYPE: REPLACEMENT LIGHT POLE

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.edgetech.com



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

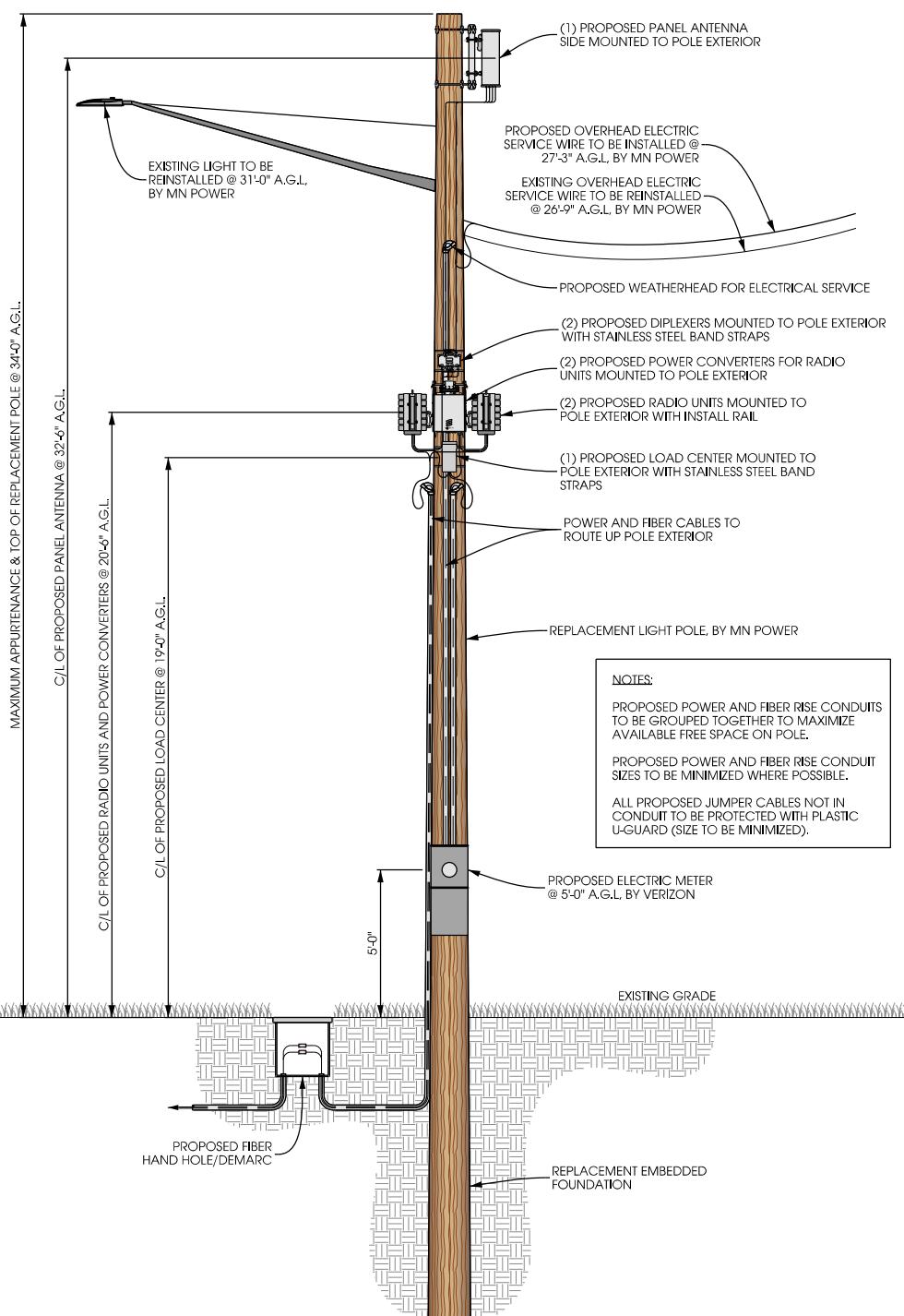
DUL SPIRIT MOUNTAIN SC11
DULUTH, MINNESOTA
REPLACEMENT LIGHT POLE
SMALL CELL DRAWINGS

SHEET TITLE

SHEET NUMBER
G-001

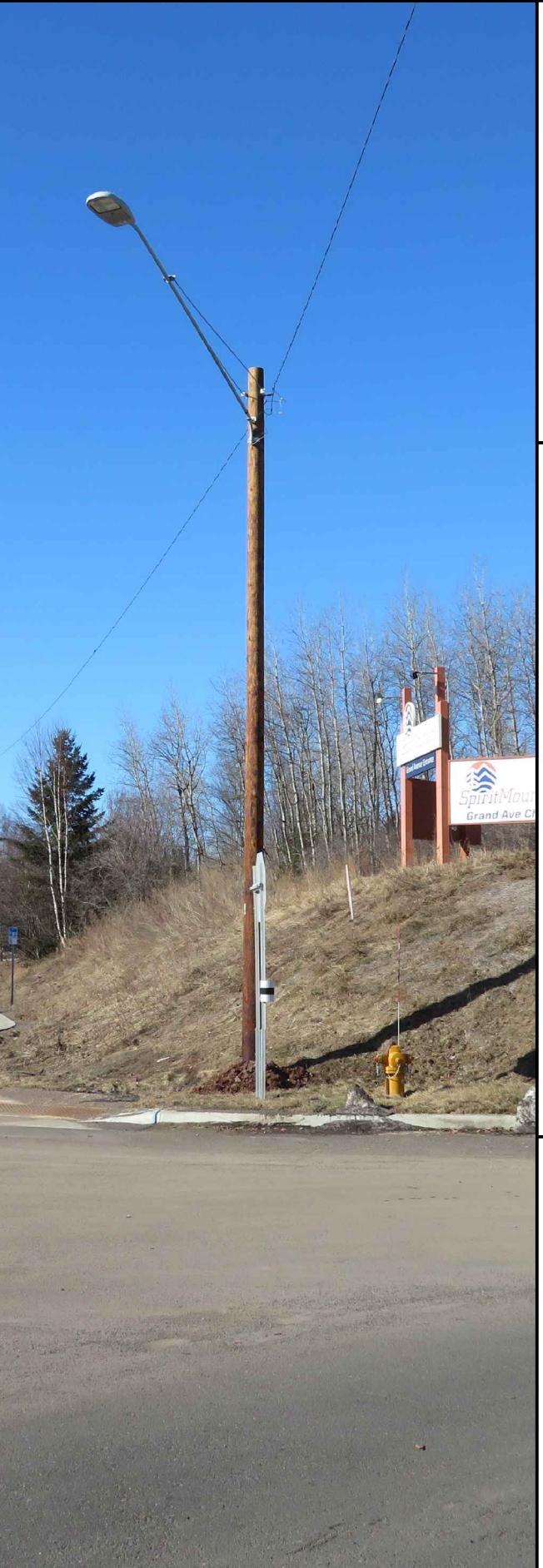
EXISTING POLE	
POLE HEIGHT:	29'-0" A.G.L.
MAXIMUM APPUTENANCE HEIGHT:	29'-0" A.G.L.
PROPOSED POLE	
POLE HEIGHT:	34'-0" A.G.L.
ANTENNA TIP HEIGHT:	33'-8" A.G.L.
MAXIMUM APPUTENANCE HEIGHT:	34'-0" A.G.L.

NOTES:
TYPICAL INSTALLATION SHOWN.
ALL ELEVATIONS ARE ASSUMED TO BE
MEASURED FROM ABOVE GRADE LEVEL.

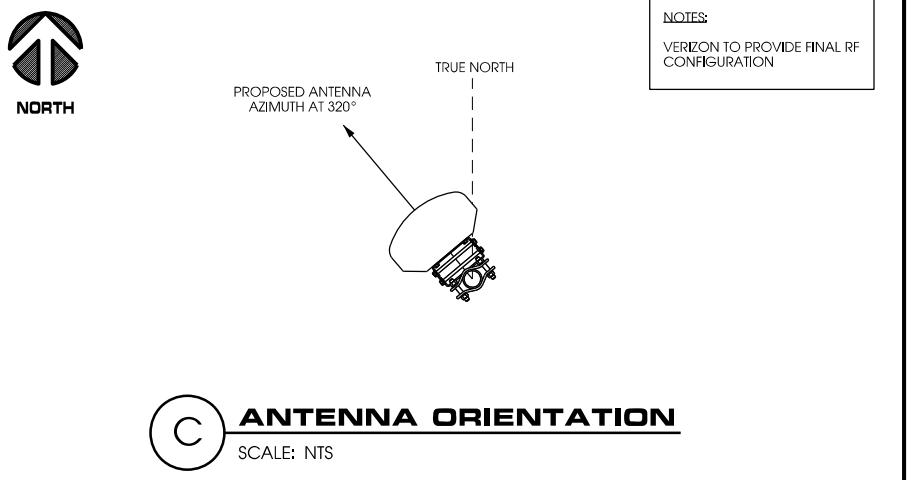


A **POLE ELEVATION**

SCALE: 11" x 17" - 1" = 6'-0"
22" x 34" - 1" = 3'-0"



SITE ELEVATION



ANTENNA ORIENTATION

SCALE: NTS

ANTENNAS					
QUANTITY	MAKE	MODEL	CENTERLINE	TIP HEIGHT	AZIMUTH
1	JMA	X7CQAP-FRO-260	32'-6" AGL	33'-8" AGL	320°

EQUIPMENT			
QUANTITY	TYPE	MAKE	MODEL
1	RRU	ERICSSON	RRUS8843
1	RRU	ERICSSON	RRUS4449
2	PSU	ERICSSON	PSU 6302
2	DIPLEXER	COMMSCOPE	CBC1923T-4310 E11F13PO6

CABLING			
QUANTITY	TYPE	MAKE	MODEL
16	COAX	COMMSCOPE	LDF4-50



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- APPROVED
SEE SHEET G-001
ENGINEER SEAL

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.

JUL SPIRIT MOUNTAIN SC1 1
DULUTH, MINNESOTA
REPLACEMENT LIGHT POLE
SMALL CELL DRAWINGS

SHEET TITLE

SITE ELEVATION

HEET NUMBER

T-201



September 7, 2018

Mr. Steven Robertson
City Planner | Community Planning
City of Duluth
411 W. 1st Street, Room 208
Duluth, MN 55802

via FedEx: 7731 6661 9587

Re: Concurrent Use of Streets Permit Application
Verizon Small Cell Sites: DUL Spirit Mountain SC1

Dear Mr. Robertson,

Enclosed please find a Concurrent Use of Streets Permit Application for a Verizon Wireless small cell installation on a Minnesota Power wood light pole in the right-of-way of Grand Avenue near the entrance of the Spirit Mountain Grand Avenue Chalet. The proposed small cell installations consist of replacing the existing 29-ft. tall wood light pole with a 34-ft. wood pole and installing one (1) small panel antenna mounted at the top of the pole along with two (2) small radios mounted lower down on the pole and an electric meter mounted at the base of the pole. A set of design drawings for the proposed installation has been included. The elevation sheet in the design drawings for the proposed location contains the proposed distance between the antenna and the remote radio units to meet the Minnesota Power separation requirements.

It is important that cities like the City of Duluth encourage well-developed networks so that cellphones, tablets, and other "smart" devices will work properly when they are needed most. More than 50% of adults in the United States have only a wireless telephone with no traditional landline telephone service at all. That percentage will only rise as the next generation moves into adulthood, since more than 60% of children live in households that have a wireless phone as the only telephone. Here in the Midwest, 52.5% of adults live in households with no landline.¹ With these trends at work, wireless telephone users everywhere – including those in Duluth – require more cell sites to support the voice & data capabilities of their devices.

We look forward to working with the City to improve Verizon Wireless' wireless coverage in the community.

Sincerely,

Amy Dresch

JACOBS | TELECOM | P: (612) 802-0452 | E: amy.dresch@jacobs.com

Enclosure

¹See U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, January-June 2017* (Dec. 2017) at p.1 available at <https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201712.pdf>



verizon✓

DUL Spirit Mountain SC1

Proposed Site Candidate Location

Verizon Small Cell

JACOBS



® **minnesota power** / 30 west superior street / duluth, minnesota 55802-2093 / 218-722-5642 / www.mnpower.com

August 28, 2018

Mr. Steven Robertson
City Planner | Community Planning
City of Duluth
411 W. 1st Street, room 208
Duluth, MN 55802

Re: Verizon Wireless Small Cell Projects
DUL Spirit Mountain SC1 | MN Power Pole ID 14647195 | Alden Conversation
655239
DUL Super One SC1 | MN Power Pole ID 11329030 | Alden Conversation
655274
DUL Super One SC2 | MN Power Pole ID 11406260 | Alden Conversation
655286
DUL Super One SC3 | MN Power Pole ID 11329005 | Alden Conversation
655291

Dear Mr. Robertson,

As owner of the above referenced utility poles, we consent to allowing Verizon Wireless to apply for City permits for small cell wireless antennas and equipment on these poles.

As an attachment to our poles, Verizon will also be required to obtain an attachment permit from Minnesota Power and meet our attachment design standards.

Sincerely,

A handwritten signature in black ink that appears to read "Jodi Corrow".

Jodi Corrow
Distribution Assets Coordinator Sr.
Minnesota Power



August 14, 2018

Mr. Steven Robertson, Senior Planner
City of Duluth – Community Planning
411 W. 1st Street, Room 208
Duluth, MN 55802

Dear Mr. Robertson,

Cellular Inc. Network Corporation d/b/a Verizon Wireless is aware of the interference issues that can arise while co-locating with other carriers. In the event a collocation by an additional carrier is proposed, careful isolation studies will be performed to determine the correct vertical and horizontal separation between Verizon Wireless' antennas and any other carrier. This will avoid the possibility of our frequency interfering with other equipment. In addition, Verizon Wireless has acquired an FCC license, which exclusively entitles the company to operate within an assigned frequency range. This in turn eliminates any interference issues from CB radios, electronic appliances, pacemakers, fire and police equipment as well as other carriers. In the highly unlikely event that interference does occur, Verizon Wireless agrees to fully cooperate with the entity experiencing interference to identify and correct, to the extent reasonably possible, any issues caused by its installation.

Sincerely,

Michael Koch

Michael Koch
RF Engineer – Northern MN Market

Optional Local Government Checklist (page 2)

EVALUATION OF CATEGORICAL EXCLUSION

12. Licensed Radio Service (see attached Table 1): Cellular Radiotelephone Service & Personal Communications Svc.

13. Structure Type (free-standing or building/roof-mounted): Light Pole

14. Antenna Type [omnidirectional or directional (includes sectored)]: Panel/directional

15. Height above ground of the lowest point of the antenna (in meters): 9.4488 (31 ft. AGL)

16. Check if all of the following are true:

- (a) This facility will be operated in the Multipoint Distribution Service, Paging and Radiotelephone Service, Cellular Radiotelephone Service, Narrowband or Broadband Personal Communications Service, Private Land Mobile Radio Services Paging Operations, Private Land Mobile Radio Service Specialized Mobile Radio, Local Multipoint Distribution Service, or service regulated under Part 74, Subpart I (see question 12).
- (b) This facility will not be mounted on a building (see question 13).
- (c) The lowest point of the antenna will be at least 10 meters above the ground (see question 15).

If box 16 is checked, this facility is categorically excluded and is unlikely to cause exposure in excess of the FCC's guidelines. The remainder of the checklist need not be completed. If box 16 is not checked, continue to question 17.

17. Enter the power threshold for categorical exclusion for this service from the attached Table 1 in watts ERP or EIRP* (note: $EIRP = (1.64) \times ERP$): (see below)

18. Enter the total number of channels if this will be an omnidirectional antenna, or the maximum number of channels in any sector if this will be a sectored antenna: (see below)

19. Enter the ERP or EIRP per channel (using the same units as in question 17): (see below)

20. Multiply answer 18 by answer 19: (see below)

21. Is the answer to question 20 less than or equal to the value from question 17 (yes or no)?
(see below)

If the answer to question 21 is YES, this facility is categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines.

If the answer to question 21 is NO, this facility is not categorically excluded. Further investigation may be appropriate to verify whether the facility may cause exposure in excess of the FCC's guidelines.

17. 1000 ERP (700 MHz), 2000W ERP (1900 MHz/PCS, 2100 MHz/AWS)

18. 2 bands per block (LTE & AWS)

19. 365.72 ERP + 437.67 ERP (700 MHz + 850 MHz LTE) and 377.59 ERP + 377.59 ERP (2100 MHz AWS1 + AWS3)

20. 803.39 ERP (700 MHz + 850 MHz LTE) + 755.18 ERP (2100 MHz AWS1 + AWS3) = 1558.57 W ERP

21. Yes

*"ERP" means "effective radiated power" and "EIRP" means "effective isotropic radiated power"