



April 26, 2021

Mr. Sean Gehin, P.E.  
Director of Public Works  
Village of Allouez  
1900 Libal Street  
Allouez, WI 54301

Re: Allouez, Wisconsin  
US Cellular Equipment Modernization Plan Review  
Site No. MC 781314  
McM. No. A0012-09-21-00343.00

Dear Sean:

This letter addresses US Cellular's request for the modifications of antennae and ancillary equipment on the Village's standpipe. McMahon Associates, Inc. reviewed the construction plans dated 4/5/21, and the structural analysis reports dated 3/26/21 and 3/29/21. Below are our review comments:

**Construction Plans**

Drawing G-001 – Title Sheet

1. Scope of Work - The number of antennas will decrease by three. The number of radios will increase by three. It appears that the radio units will be stacked. No additional space required on standpipe for equipment modifications.

Drawing C-101 – Site Plan

1. No comments.

Drawing C-102 – Enlarged Site Plan

1. No comments.

Drawing C-501 – Site Details

1. No comments.

Drawing A-101 – Shelter Interior Plan

1. No comments.

Drawing A-501 – Block Diagram

1. No comments.

Drawing T-001 – Antenna Specifications

1. The LTE and LTE/CDMA antennas are the same one shown on T-001.

Drawings T-002 – Equipment Specifications

1. No comments.

Drawing T-003 – Mounting Specifications

1. No comments.

Drawing T-201 – Site Elevation

1. No comments.

Drawing T-301 – Antenna Configuration

1. Touch-up paint antenna masts where paint is missing due to mounting changes and antenna removals.

Drawing T-501 – Installation Details

1. Touch-up paint radio masts where paint is missing due to radio changes.
2. Support new cabling from railing.

Drawing T-502 – Cable Details

1. No comments.

Drawing T-503 – Cable Banding Details

1. No comments.

Drawing T-504 – Cable Routing

1. No comments.

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Drawing T-505- Plumbing Diagram

1. No comments.

Drawing T-901 – Site Photos

1. Seal cable penetrations at catwalk with new boots, if existing boots cannot be re-used.
2. Support new cabling on railing.

Drawing E-501 - Grounding Details

1. No comments.

**Structural Calculations**

- Standpipe

The Structural Calculations indicate the standpipe is not compromised and is adequate to support the new equipment.

- Corral Analysis

The structural calculations indicate that the corral has adequate capacity to support the new equipment.

**Intermodulation Report**

No Intermodulation Report was conducted. Should any intermodulation distortion problems occur, it is the responsibility of T-Mobile to resolve.

If you have any questions or comments, please contact me.

Respectively,

McMahon Associates, Inc.



Jeffrey A. Kellner, P.E.  
Associate / Sr. Construction Engineer  
NACE Coating Inspector Level 1

JAK:sdk

cc: Brad Werner, P.E. - McMahon Associates, Inc.

**SECOND AMENDMENT TO TOWER LEASE AGREEMENT**

This Second Amendment to Tower Lease Agreement (“Second Amendment”), made this \_\_\_\_\_ day of \_\_\_\_\_, 2021, modifies that certain Tower Lease Agreement dated April 30, 1999 (the “Lease”) by and between Village of Allouez, a Wisconsin municipal corporation having an address at Attention Village Administrator, 1900 Libal Street, Green Bay, Wisconsin 54301-2453 (“Landlord”) and United States Cellular Operating Company LLC, a Delaware limited liability company, having an address at Attention: Real Estate Lease Administration, 8410 West Bryn Mawr Avenue, Chicago, Illinois 60631, (“Tenant”).

WHEREAS, Landlord is the owner of certain real property located at 2612 South Webster Avenue, Village of Allouez, Wisconsin, 54301 (the “Premises”); and,

WHEREAS, Landlord and Tenant entered into said Tower Lease Agreement dated April 30, 1999 as amended by Amendment Number One to Tower Lease Agreement dated April 16, 2013 (collectively, the “Lease”) and,

WHEREAS, pursuant to the Lease, Landlord has leased to Tenant certain attachment locations on Landlord’s Water Tower (the “Tower”) and a parcel of ground space adjacent to the Tower for Landlord’s cellular common carrier mobile radio station operations; and,

WHEREAS, Parties wish to document Tenants’s intended changes (“Modifications”) to equipment at said Premises.

NOW THEREFORE, in consideration of the terms of the Lease and this Second Amendment and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant agree as follows:

I. Lease Exhibit C-1 is hereby deleted and replaced with Exhibit C-2 attached hereto.

III. In all other respects the Lease is hereby ratified and affirmed without change.

[END OF AMENDMENT-SIGNATURE PAGE TO FOLLOW]

Site Name: Allouez

Site Number: 781314

IN WITNESS WHEREOF, Landlord and Tenant have executed this Second Amendment as of the last signature below.

LANDLORD:

TENANT:

Village of Allouez

United States Cellular Operating Company,  
LLC

By: \_\_\_\_\_

By: \_\_\_\_\_

Printed: \_\_\_\_\_

Printed: \_\_\_\_\_

Title: \_\_\_\_\_

Title: Vice President

Date: \_\_\_\_\_

Date: \_\_\_\_\_

[NOTARY PAGE TO FOLLOW]

Site Name: Allouez

Site Number: 781314

STATE OF WISCONSIN )  
 )  
COUNTY OF BROWN )

I, the undersigned, a notary public in and for the State and County aforesaid, do hereby certify that \_\_\_\_\_, known to me to be the same person whose name is subscribed to the foregoing Second Amendment to Tower Lease Agreement, appeared before me this day in person and acknowledged that he signed the said Amendment as his free and voluntary act for the uses and purposes therein stated.

Given under my hand and seal this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_

Notary Public

My commission expires \_\_\_\_\_

STATE OF ILLINOIS )  
 )  
COUNTY OF COOK )

I, the undersigned, a notary public in and for the State and County aforesaid, do hereby certify that \_\_\_\_\_, Vice President, known to me to be the same person whose name is subscribed to the foregoing Second Amendment to Tower Lease Agreement appeared before me this day in person and acknowledged that, pursuant to his authority, he signed the said Amendment as his free and voluntary act on behalf of the named Tenant limited liability company, for the uses and purposes therein stated.

Given under my hand and seal this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_

Notary Public

My commission expires \_\_\_\_\_

**EXHIBIT C-2**

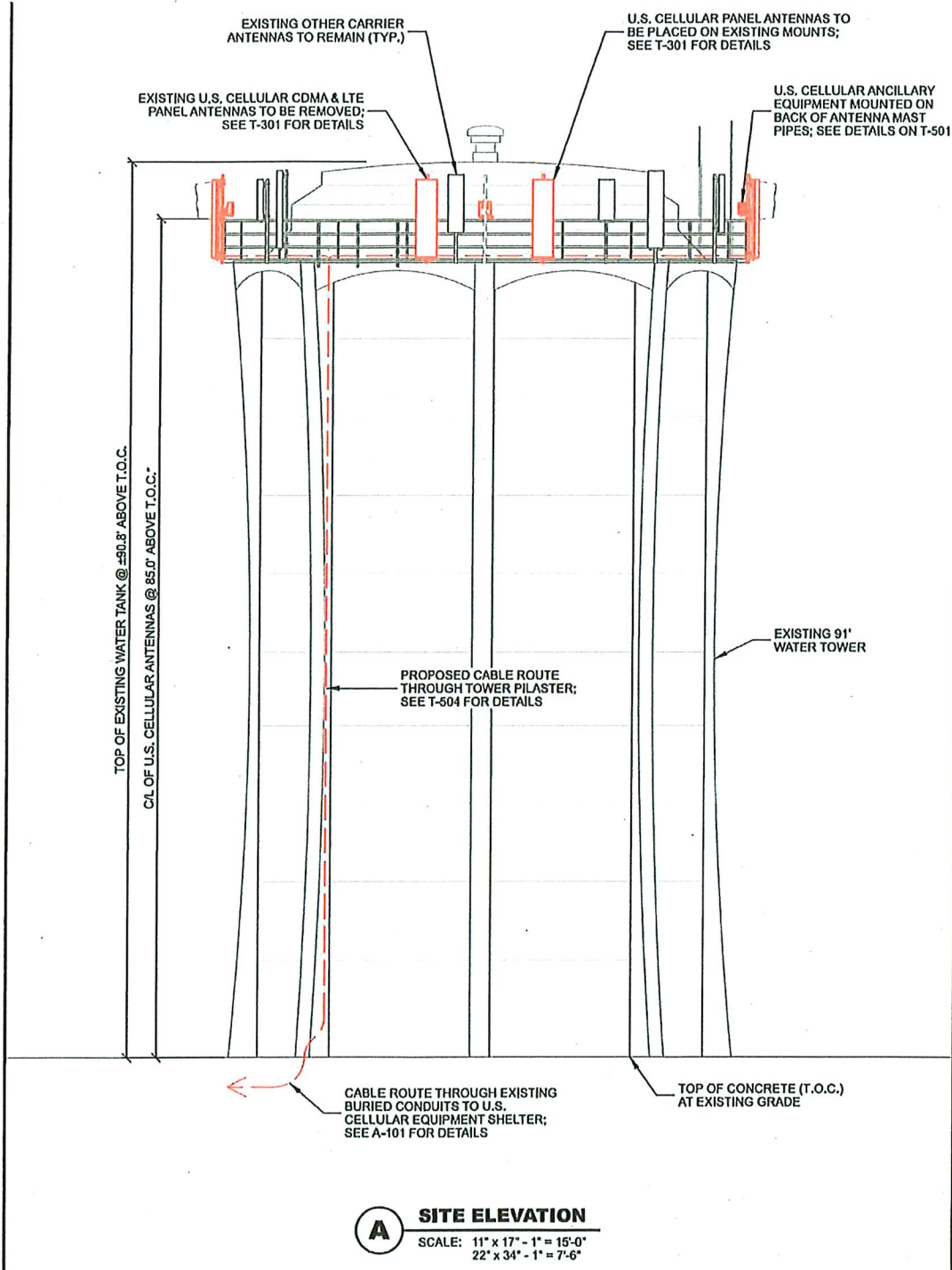
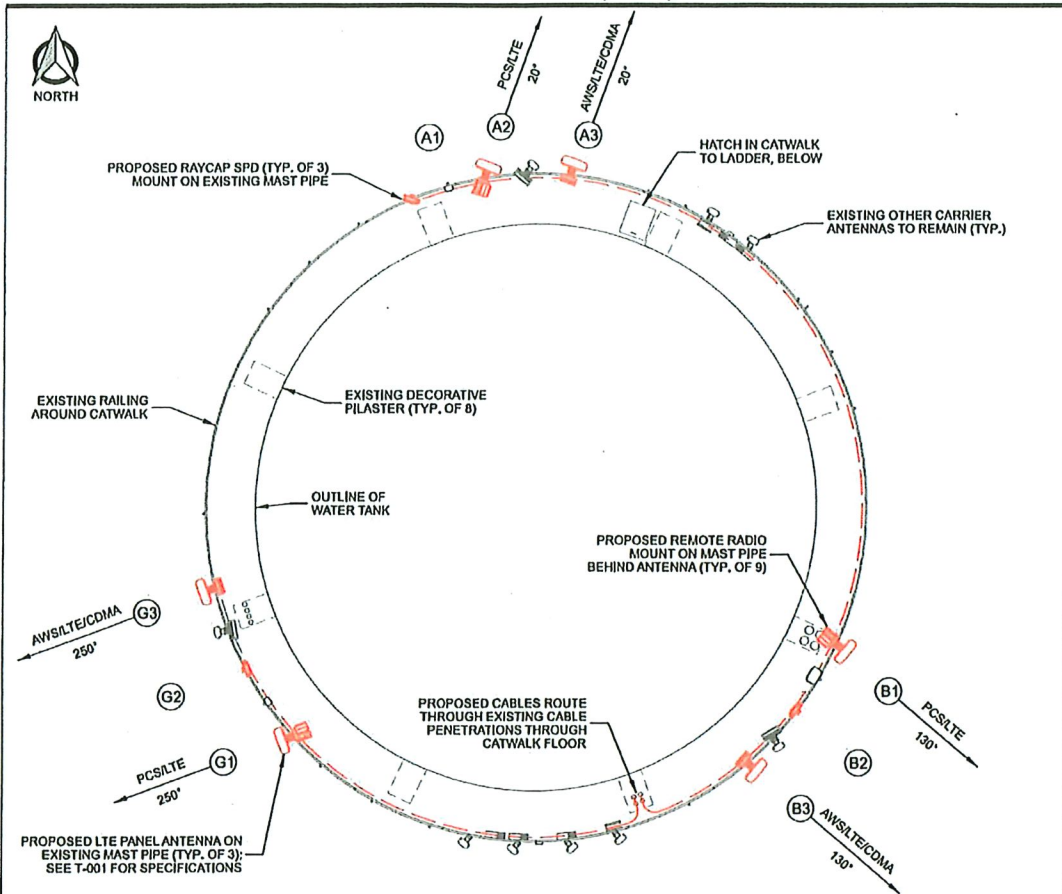


EXHIBIT C-2 (cont.)



Antenna Position	Technology	Antenna Model	Antenna Quantity	RAD Center	Azimuth	L.B. Elect. Tilt	M.U. Elect. Tilt	Mech. Tilt	Surge Protector Qty.	B71/B12 Radio	Radio Qty.	B2 Radio	Radio Qty.	B5 Radio	Radio Qty.	Cable Type	Cable Qty.	
ALPHA	A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	A2	PCS/LTE	Diagyo OCT8-2LX2H-X6BW65	1	85°	20°	4°	4°	0°	1	RRU4449	1	RRU4415	1	-	-	1-1/4" Hybrid	1
	A3	AWS/LTE/CDMA	Diagyo OCT8-2LX2H-X6BW65	1	85°	20°	4°	-	0°	Shared	-	-	-	-	RRU11	1	7/8" Coax	2
BETA	B1	PCS/LTE	Diagyo OCT8-2LX2H-X6BW65	1	85°	130°	5°	5°	0°	1	RRU4449	1	RRU4415	1	-	-	1-1/4" Hybrid	1
	B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	B3	AWS/LTE/CDMA	Diagyo OCT8-2LX2H-X6BW65	1	85°	130°	5°	-	0°	Shared	-	-	-	-	RRU11	1	7/8" Coax	2
GAMMA	G1	PCS/LTE	Diagyo OCT8-2LX2H-X6BW65	1	85°	250°	5°	5°	0°	1	RRU4449	1	RRU4415	1	-	-	1-1/4" Hybrid	1
	G2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	G3	AWS/LTE/CDMA	Diagyo OCT8-2LX2H-X6BW65	1	85°	250°	5°	-	0°	Shared	-	-	-	-	RRU11	1	7/8" Coax	2
<b>Total:</b>			<b>6</b>						<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>			<b>9</b>		

Black Text = Existing Red Text = Proposed

\*X110P-5S-CDMA

- NOTES:
1. ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.
  2. CONTRACTOR MAY NEED ADDITIONAL 9'-0" LONG MAST PIPES FOR TEMPORARY RELOCATION OF LTE ANTENNAS.
  3. ANTENNA SEPARATION AS FOLLOWS (CENTER OF ANTENNA TO CENTER OF ANTENNA):  
 LTE TO CDMA: 2'-0" MIN.      LTE TO LTE: 4'-0" MIN.      CDMA TO CDMA: 4'-0" MIN.

**B** PROPOSED ANTENNA LAYOUT

SCALE: 11" x 17" - 1/4" = 1'-0"  
 22" x 34" - 1/2" = 1'-0"