



CITY OF KENNEWICK HEARING EXAMINER
Andrew Kottkamp, Hearing Examiner

AGENDA

**MONDAY, MARCH 13, 2023
6:00 P.M.**

**CITY OF KENNEWICK
HYBRID COUNCIL CHAMBERS & VIRTUAL MEETING
210 W. 6TH AVE, KENNEWICK, WA 99336**

Procedure for Participation

- Please register and sign in to Zoom if you wish to receive a copy of the decision when it is issued and if you plan to give testimony.
- When recognized by the Examiner, state your name, address and whether you are representing only yourself or others.
- All remarks, comments, and questions should be addressed to the Hearing Examiner and not to the audience or parties. You may offer written comments or other items (such as photographs) to the Hearing Examiner as an exhibit for the permanent record. Please provide at least three (3) copies of each item submitted: one copy for the Hearing Examiner, one for the Official Record, and one for Staff). During an Appeal Hearing, if the appellant and the applicant are different parties, then a fourth copy of all documentation is requested.

I. CALL TO ORDER

II. PROCEDURAL INFORMATION

III. PUBLIC HEARING

- A. Variance (VAR-2022-0001), proposing a variance to extend the height of an existing wireless communication facility by 20-feet, for a total height of 88-feet, located 1311 W. 4th Avenue. The site is currently zoned Commercial, Community (CC), the Comprehensive Plan designation is Commercial. The applicant is Josh Gray, Powder River Development, 408 S. Eagle Rd. Suite 200, Eagle, ID, 83616, and property owner is Hendrickson Fir Grove LLC, c/o Kristi Nelson CPA, 1333 Columbia Park Trail #210, Richland, WA 99352.

IV. ADJOURN



COMMUNITY PLANNING DEPARTMENT

STAFF REPORT AND RECOMMENDATION TO THE HEARING EXAMINER

FILE No: VAR-2022-0001

Staff Report Date:	15 February 2023
Public Hearing Date and Location:	13 March 2023, City Council Chambers / Online Hybrid
Report Prepared By:	Matt Halitsky, AICP, Planner
Report Reviewed By:	Steve Donovan, AICP, Senior Planner
Summary Recommendation:	The City of Kennewick recommends DENIAL of VAR-2022-0001.
Summary of Proposal:	Extend the height of an existing wireless communication facility by 20-feet, for a total height of 88-feet.
Proposal Location:	1311 W 4 th Avenue Parcel Number 1-0189-3BP-5684-002
Legal Description:	THE WEST 17152 FEET, AS MEASURED ALONG THE NORTH LINE OF THAT PORTION OF THE NORTH 340 FEET OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 8 NORTH, RANGE 25 EAST, WM, RECORDS OF BENTON COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF LOT 1, BLOCK 2, AMENDED PLAT OF BLOCKS 1-2-3-4, ANDERSON ADDITION; THENCE NORTH 89°37'00" WEST 50.00 FEET; THENCE NORTH 32°07'00" WEST 103.50 FEET; THENCE NORTH 47°52'00" WEST 192.49 FEET; THENCE NORTH 63°37'00" WEST 700.00 FEET; THENCE NORTH 40°44'00" WEST 90.00 FEET; THENCE NORTH 13°44'00" WEST 233.93 FEET. MORE OR LESS. TO A POINT ON THE NORTH LINE OFF SAID NORTHWEST QUARTER OF THE SOUTHWEST QUARTER; THENCE ALONG SAID NORTH LINE NORTH 88°45'00" WEST 338.82 FEET TO A POINT THAT IS SOUTH 88°45'00" EAST A DISTANCE OF 50755 FEET FROM THE WEST QUARTER

EXHIBIT 1

CORNER OF SAID SECTION 1; THENCE SOUTH 00°12'12" WEST 340.00 FEET TO THE SOUTH LINE OF SAID NORTH 340 FEET; THENCE SOUTH 88°45'00" EAST 434.72 FEET; THENCE NORTH 00°04'21" EAST 45.15 FEET TO THE TRUE POINT OF BEGINNING, EXCEPT THAT PORTION LYING WITHIN WEST FOURTH AVENUE.

PROPERTY LEGAL FROM RECORD OF SURVEY VOL 1 PG828 AND LEGAL FROM PROVIDED TITLE REPORT DO NOT MATCH.

Property Owner(s): Hendrickson Fir Grove LLC
c/o Kristi Nelson, CPA
1333 Columbia Park Trail #210
Richland, Washington 99352

Applicant: Josh Gray
Powder River Development
408 S Eagle Road #200
Eagle, Idaho 83616

Approval Criteria:

1. Comprehensive Plan – Land Use
2. Kennewick Municipal Code (KMC) Title 18 – Zoning

Key Application Processing Dates:

Application Submittal	20 December 2022
Determination of Completeness Issued	3 January 2023
Notice of Application	3 January 2023
Property Posting Sign	3 January 2023
Date of Published Notice of Public Hearing	26 February 2023
Date of Mailed Notice of Public Hearing	23 February 2023

Exhibits:

1. Staff Report
2. Legal Descriptions
3. Application
4. Variance Justification by Applicant
5. Vicinity Map
6. Land Use Map
7. Zoning Map
8. Drawings
9. Notice of Public Hearing, 300-ft. mailing list and mailing affidavit

Request:

Powder River Development, on behalf of T-Mobile, requests a variance to the maximum height of an existing wireless communication facility located at 1311 W 4th Avenue. The property is zoned Commercial, Community (CC). Specifically, the applicant proposes to increase the height of an existing monopole from 68-feet to 88-feet. The maximum height of wireless communication facilities in the CC zone is 55-feet, with a single extension of 20-feet allowed for a colocation. The subject monopole was extended from 48-feet to 68-feet in November 2020. The applicant's request states the following:

The variance will not constitute a grant of special privilege inconsistent with the limitation upon uses of other properties in the vicinity and zone in which the property is located. Such variance is necessary because of special circumstances relating to the size, shape, topography, location or surroundings of the subject property, to provide it with use rights and privileges permitted to other properties in the vicinity and the zone in which the subject property is located. The granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the subject property is situated.

Staff Analysis:

Pursuant to KMC 18.54.050 – Findings for Variance, the Hearing Examiner shall approve an application for a variance only when all of the following conditions are found:

1. The variance will not constitute a grant of special privilege inconsistent with the limitation upon uses or other properties in the vicinity and zone in which the property, on behalf of which the application was filed, is located; and
2. That such variance is necessary because of special circumstances relating to size, shape, topography, location, or surroundings of the subject property, to provide it with use rights and privileges permitted to other properties in the vicinity and in the zone in which the subject property is located; and
3. That granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the subject property is situated.

As indicated above, pursuant to KMC 18.12.310(3), new wireless communication facilities up to 55-feet in height are permitted uses in all commercial zones save for the Commercial, Neighborhood (CN) zoning district. In addition, KMC 18.12.310(1) allows for colocations on existing wireless communication structures with only one increase in height of no more than 20-feet above the highest point of the parent structure. The subject monopole was increased from 48-feet to 68-feet in height in November 2020 for one such colocation. A second increase of 20-feet for a subsequent colocation is not allowed by Code. The surrounding neighborhood is a mixture of commercial and residential uses mostly of a single story aesthetic. The maximum height allowed in these zones does not exceed 45-feet. Thus, the proposed variance does constitute a grant of special privilege inconsistent with both the Kennewick Municipal Code and the zone in which the facility is located, as well as the general neighborhood in which it is proposed.

Nor does the subject property present a special circumstance relative to size, shape, topography, location, or surroundings that limit use rights and privileges relative to those afforded to other properties within the vicinity. The neighborhood in which the wireless facility is located is generally flat, with no structures or landforms present in the vicinity exceeding the height of the existing antenna arrays. An analysis indicating gaps in coverage or other hindrances for which the increased height would alleviate a poor-quality signal has not been provided by the applicant.

Finally, the granting of the requested variance does have the potential to be injurious to property and improvements within the vicinity as a visual nuisance to the surrounding residential neighborhoods. The granting of an increase in height to 88-feet, and beyond that allowed by Code, will render the facility more visible to the single-family neighborhoods to the north and west of the subject property. A line-of-sight analysis has not been provided by the applicant.

The variance application was referred to City of Kennewick departments and outside agencies for comment on 3 January 2023. It was also sent to all adjoining property owners within 300-feet of the subject property on 23 February 2023 and a notice of public hearing was published in the Tri-City Herald. The property was also posted on 23 February 2023 with a notice of public hearing. To date, no comments have been received either for or against the applicant's proposal.

Comprehensive Plan:

Section 5 / Utilities of the City of Kennewick Comprehensive Plan speaks to the coordination, compatibility, and siting of non-City owned utilities. Specifically:

Utilities Goal 4: Promote access to telecommunication services for businesses and residents and site new telecommunication facilities in a way that minimizes impacts.

Policy 3: Require the placement and design of wireless communication facilities in a manner that minimizes the adverse impacts on adjacent land uses.

Policy 4. Require the siting and location of telecommunications facilities be accomplished in a manner that minimizes adverse impacts on the environment and adjacent land uses.

Based on the analysis above, the request is not consistent with the goals and policies of the City of Kennewick Comprehensive Plan. The placement and design of the proposed colocation fails to minimize adverse impacts to surrounding land uses, as the height exceeds that allowed by the Kennewick Municipal Code.

The City of Kennewick hereby recommends DENIAL of VAR-2022-0001.

Legal Description

THE WEST 17152 FEET, AS MEASURED ALONG THE NORTH LINE OF THAT PORTION OF THE NORTH 340 FEET OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 8 NORTH, RANGE 25 EAST, WM, RECORDS OF BENTON COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF LOT 1, BLOCK 2, AMENDED PLAT OF BLOCKS 1-2-3-4, ANDERSON ADDITION; THENCE NORTH 89°37'00" WEST 50.00 FEET; THENCE NORTH 32°07'00" WEST 103.50 FEET; THENCE NORTH 47°52'00" WEST 192.49 FEET; THENCE NORTH 63°37'00" WEST 700.00 FEET; THENCE NORTH 40°44'00" WEST 90.00 FEET; THENCE NORTH 13°44'00" WEST 233.93 FEET. MORE OR LESS. TO A POINT ON THE NORTH LINE OFF SAID NORTHWEST QUARTER OF THE SOUTHWEST QUARTER; THENCE ALONG SAID NORTH LINE NORTH 88°45'00" WEST 338.82 FEET TO A POINT THAT IS SOUTH 88°45'00" EAST A DISTANCE OF 50755 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 1; THENCE SOUTH 00°12'12" WEST 340.00 FEET TO THE SOUTH LINE OF SAID NORTH 340 FEET; THENCE SOUTH 88°45'00" EAST 434.72 FEET; THENCE NORTH 00°04'21" EAST 45.15 FEET TO THE TRUE POINT OF BEGINNING, EXCEPT THAT PORTION LYING WITHIN WEST FOURTH AVENUE.

PROPERTY LEGAL FROM RECORD OF SURVEY VOL 1 PG828 AND LEGAL FROM PROVIDED TITLE REPORT DO NOT MATCH.

CITY OF KENNEWICK
COMMUNITY PLANNING & DEVELOPMENT SERVICES
APPLICATION (general form)

PROJECT # _____ - _____ PLN- _____ - _____ FEE \$ _____

Please completely fill out this form and return it to Community Planning & Development Services, PO Box 6108, Kennewick, WA 99336, along with the application fee (see fee schedule). Attach a copy of the checklist for the land use application you are submitting. The application submittal must contain all of the information requested on the checklist in order to be processed. **Incomplete applications will not be accepted.**

Check one of the following for the type of application you are submitting:

Site Plan Tier 1 ☐ Tier 2 ☐ Tier 3 ☐ Binding Site Plan ☐

Short Plat ☐ Conditional Use ☒ Other _____

Environmental Determination PLN- _____ - _____ Pre Application Meeting PLN- _____ - _____

Applicant: Josh Gray

Address: 408 S. Eagle Rd. Suite 200 Eagle, ID 83616

Telephone: _____ Cell Phone: 925.352.2677 Fax: _____ E-mail: josh.gray@powderriverdev.com

Property Owner (if other than applicant): Hendrickson Fir Grove LLC Ground Owner (ATC) Tower Owner

Address: 1333 Columbia Park Trail #210 Richland, WA 99352

Telephone: _____ Cell Phone: _____ E-mail: _____

SITE INFORMATION

Parcel No. 101893BP4641002 Acres .7710 Zoning: 53

Address of property: 1305 W 4th Ave Kennewick, WA

Number of Existing Parking Spaces 0 Number of Proposed (New) Parking Spaces 0

Present use of property Wireless Communication Tower

Size of existing structure: 20,000 sq. ft. Size of Proposed addition/New structure: 20,000 sq. ft.

Height of building: 68' Cubic feet of excavation: 1200 Cost of new construction 40,000

Benton County Assessor Market Improvement Value: _____

Description of Project: 12' Tower extension, Install (6) antenna's, (6) RRU's, a 10'X15' concrete pad, and 10'X10' ice canopy. Install (1) battery cabinet w/(4) batteries, and ice bridge, antenna, and a 2.0 junction box. Install (2) 2.0 pendant style hybrid cables.

I, the undersigned, do hereby certify that, to the best of my knowledge, the information provided above is true and correct.

Josh Gray
Applicant's Signature

Josh Gray
Signature of owner or owner's authorized representative

Date: 12/6/2022



Powder River Development Services, LLC
408 S. Eagle Rd. Suite 200
Eagle, ID 83616
(208) 938-8844 office
(208) 938-8855 fax
www.powderriverdev.com

November 15, 2022

T-Mobile

Variance Justification

Subject: ATC Site No: **410832 TRI Underwood**
TMO Site No: **SP01477A Amistada**
Site Address: **1305 W. 4th Ave**
Kennewick, WA 99336
Parcel # **101893BP4641002**

Powder River Development Services is working with ATC on the tower extension for the proposed T-Mobile collocation at the site listed above. The jurisdiction, Kennewick, WA, does not allow towers to be extended past 75' without a variance. In order to apply for the variance, we need to justify why the extension will not violate the three criteria items below:

- The variance will not constitute a grant of special privilege inconsistent with the limitation upon uses of other properties in the vicinity and zone in which the property, on behalf of which the application was filed, is located
- Such variance is necessary because of special circumstances relating to the size, shape, topography, location or surroundings of the subject property, to provide it with use rights and privileges permitted to other properties in the vicinity and the zone in which the subject property is located
- The granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the subject property is situated.

If you have any questions or need more information, please let me know.

Respectfully,

Josh Gray
Site Acquisition Agent
Powder River Development Services, LLC
408 S. Eagle Rd. Suite 200
Eagle, ID 83616
925-352-2677
Josh.gray@powderriverdev.com

Vicinity Map

Exhibit 5



February 17, 2023 This plan is suitable for informational use only. City of Kennewick accepts no liability for any error whatsoever.

StreetName	Apartment	Mobile Home	SurveyCityLimits
SurveyAddressPoint	Building	Parcel	SV_CI_KENNEWICK_10
<all other values>	Condo		SV_CI_RICHLAND_10

SV_CI_COUNTY_1



1 inch = 230 feet

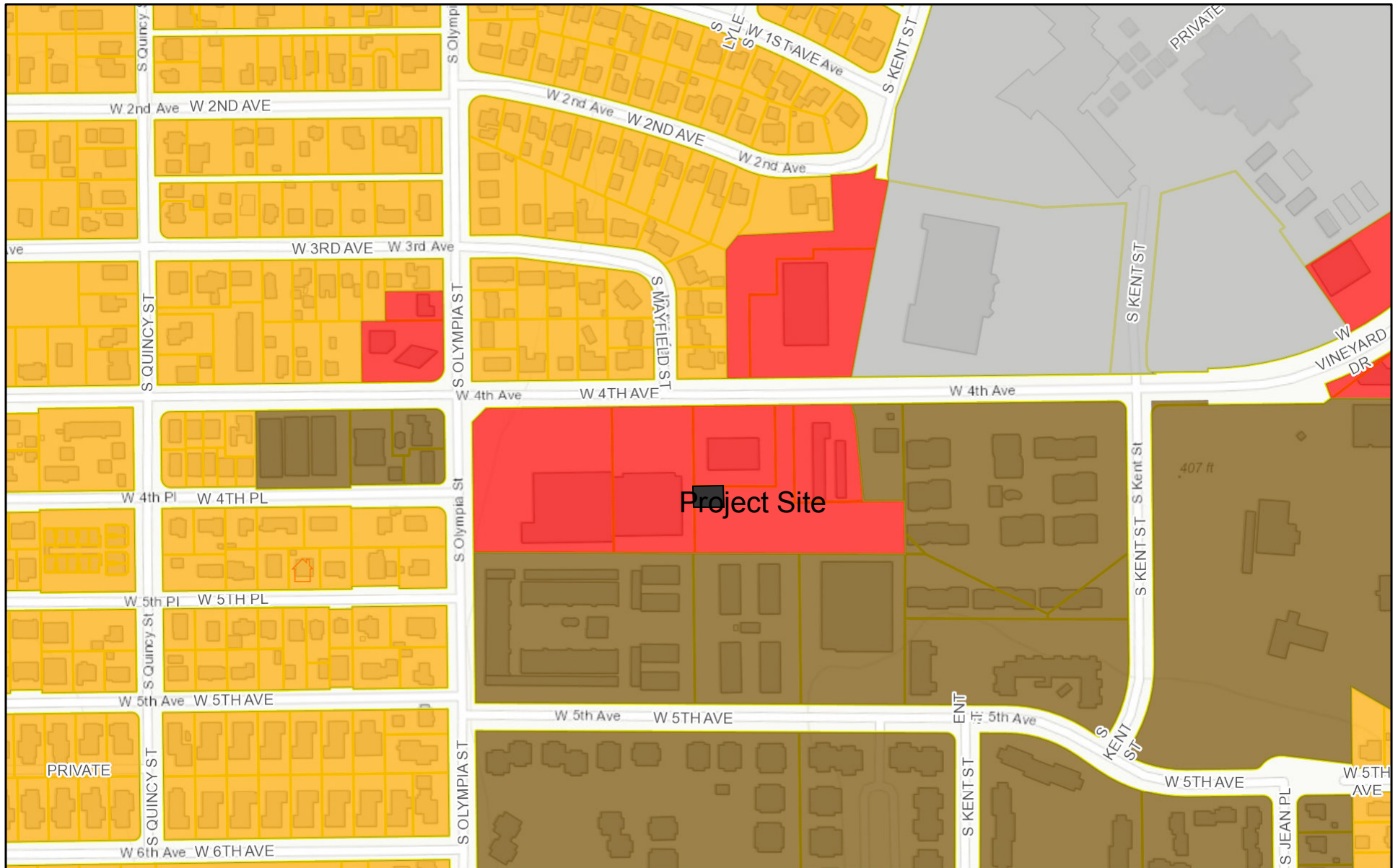
1:2,760

0 0.02 0.04 0.08 mi

0 0.0325 0.065 0.13 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,

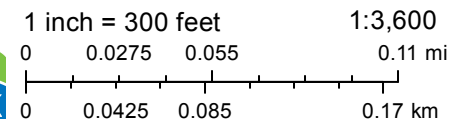
Land Use Map



March 2, 2023

This plan is suitable for informational use only. City of Kennewick accepts no liability for any error whatsoever.

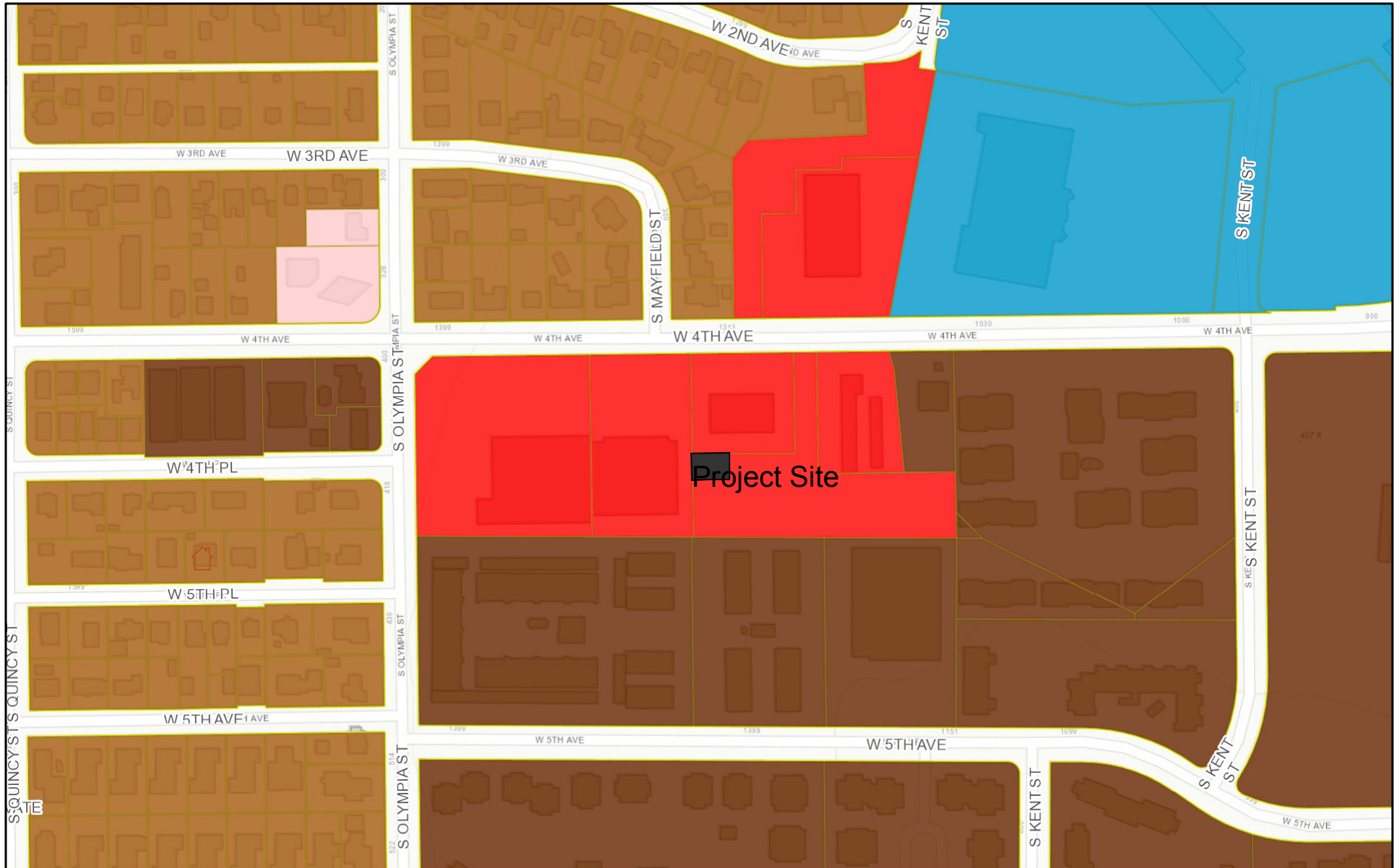
StreetName	SV_CI_RICHLAND_10
SurveyCityLimits	SV_CI_COUNTY_10
SV_CI_KENNEWICK_10	SurveyUrbanGrowthBoundary



Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,

Zoning Map

Exhibit 7



March 2, 2023

This plan is suitable for informational use only. City of Kennewick accepts no liability for any error whatsoever.

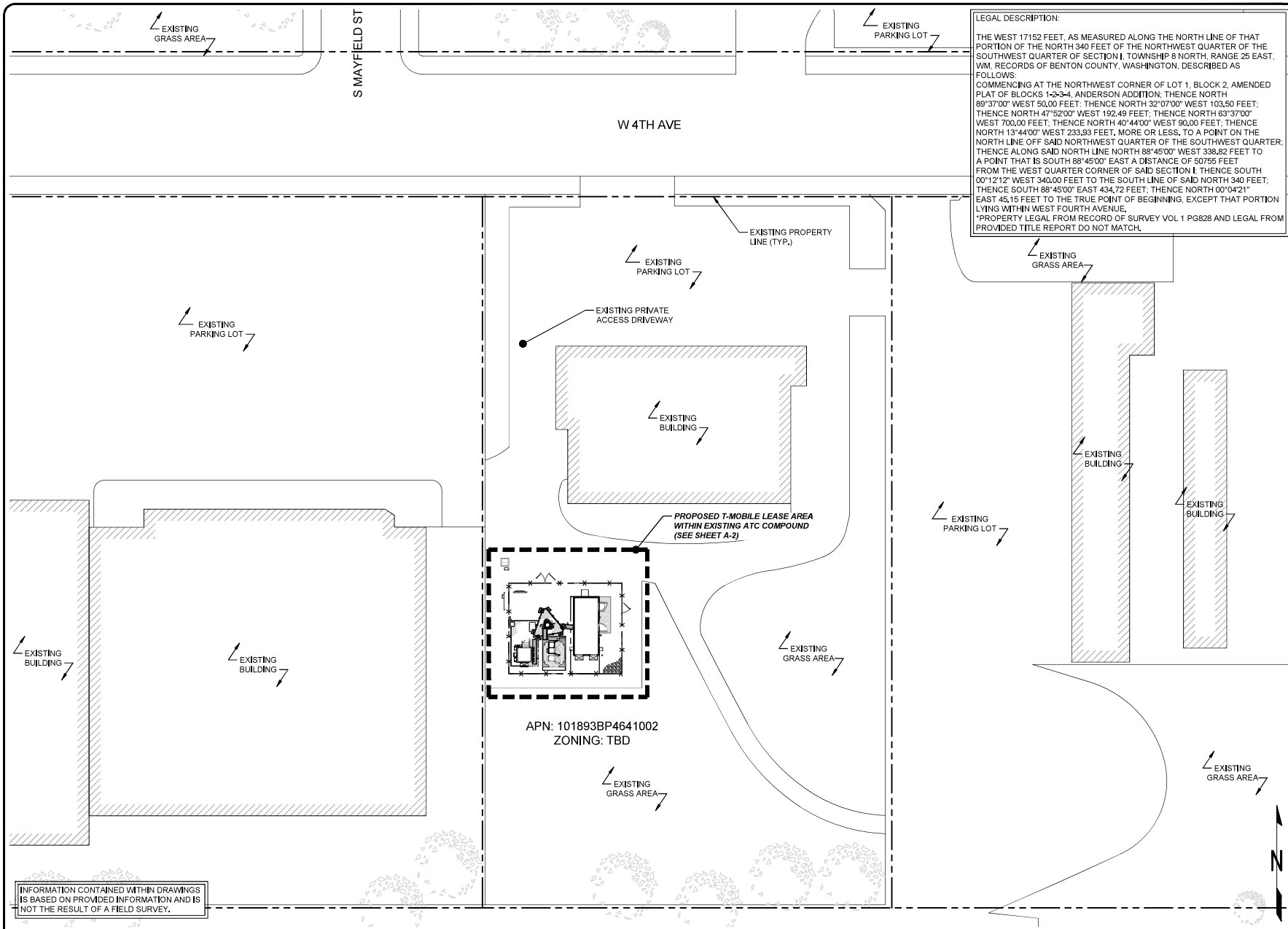
StreetName	SV_CI_RICHLAND_10
SurveyCityLimits	SV_CI_COUNTY_10
SV_CI_KENNEWICK_10	SurveyUrbanGrowthBoundary



1 inch = 240 feet
 0 0.0225 0.045 0.09 mi
 0 0.035 0.07 0.14 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,

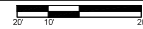
ArcGIS WebApp Builder
 City of Kennewick



INFORMATION CONTAINED WITHIN DRAWINGS IS BASED ON PROVIDED INFORMATION AND IS NOT THE RESULT OF A FIELD SURVEY.

1 OVERALL SITE PLAN

22'x34' SCALE: 1" = 20'-0"
 11'x17' SCALE: 1" = 45'-0"



T Mobile

601 W 1ST AVE, SUITE 1400 (RM# 1441)
 SPOKANE, WA 99201



INFINIGY
 FROM ZERO TO INFINIGY
 the solutions are endless

BELLEVUE, WA 98004

T-MOBILE SITE:
 SP01477A
 AMISTADA - ATC

ATC SITE:
 410832
 TRI UNDERWOOD WA

1305 WEST 4TH AVE
 KENNEWICK, WA 99336
 BENTON COUNTY

68'-0" MONOPOLE

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QAGG
A	06/07/22	RCD	PRELIMINARY REVIEW	TT
0	07/11/22	WJR	100% CONSTRUCTION	TT



SHEET TITLE:
 OVERALL
 SITE PLAN

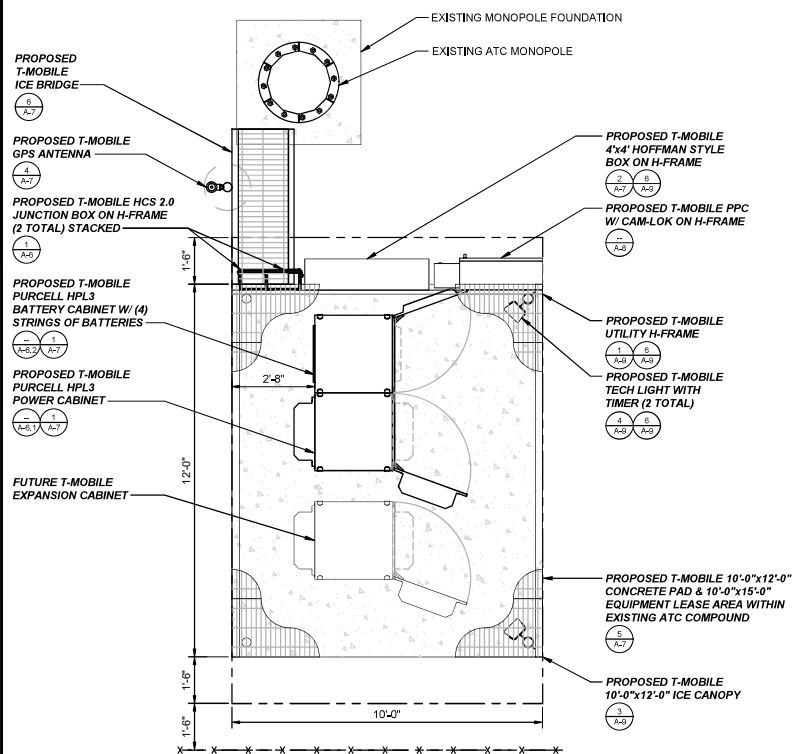
SHEET NUMBER:
A-1

REVISION:
0

RF EQUIPMENT SCOPE OF WORK-SEE RFDS

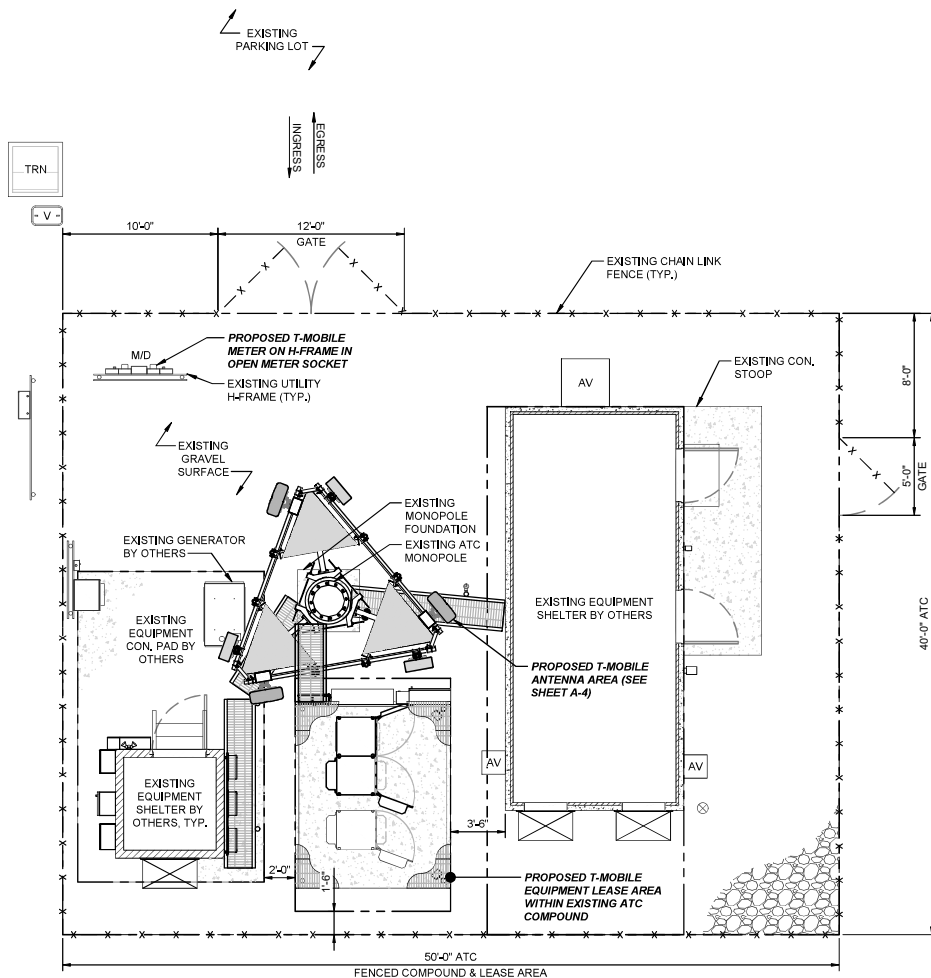
- INSTALL (1) AIA W/ BASEBAND MODULES PER RFDS, (1) CSR IRE ROUTER, (1) VOLTAGE BOOSTER W/ (2) AMPLIFIERS, & (1) EXTRA AMPLIFIER INSIDE POWER CABINET

INFORMATION CONTAINED WITHIN DRAWINGS IS BASED ON PROVIDED INFORMATION AND IS NOT THE RESULT OF A FIELD SURVEY.



22'x34' SCALE: 1/2" = 1'-0"
11'x17' SCALE: 1/4" = 1'-0"

2 ENLARGED EQUIPMENT PLAN



22'x34' SCALE: 1/4" = 1'-0"
11'x17' SCALE: 1/8" = 1'-0"

1 ENLARGED SITE PLAN

T-Mobile

601 W 1ST AVE, SUITE 1400 (RM# 1441)
SPOKANE, WA 99201

AMERICAN TOWER CORPORATION

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

BELLEVUE, WA 98004

T-MOBILE SITE:
SP01477A
AMISTADA - ATC

ATC SITE:
410832
TRI UNDERWOOD WA

1305 WEST 4TH AVE
KENNEWICK, WA 99336
BENTON COUNTY

68'-0" MONOPOLE

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QAGG
A	06/07/22	RCD	PRELIMINARY REVIEW	TT
0	07/11/22	WJR	100% CONSTRUCTION	TT



ENLARGED SITE PLANS

SHEET NUMBER: A-2

REVISION: 0



AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 3408

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
△	FIRST ISSUE	TCA	07/07/22
△			
△			
△			
△			

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

Expires: 12 / 02 / 2023



Authorized by "EOR"
08 Jul 2022 03:16:40



DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

COVER

SHEET NUMBER:	REVISION:
G-001	0



VICINITY MAP



AMERICAN TOWER®

SITE NAME: TRI UNDERWOOD WA
SITE NUMBER: 410832
ATC PROJECT NUMBER: 14103450_C6_05
SITE ADDRESS: 1305 WEST 4TH AVE
KENNEWICK, WA 99336



LOCATION MAP

68 FT MONOPOLE
W/ PROPOSED 20 FT EXTENSION

PROJECT TEAM	PROJECT DESCRIPTION	SHEET	SHEET TITLE	REV.
TOWER OWNER AMERICAN TOWER 10 PRESIDENTAL WAY WOBURN, MA 01801 ENGINEERED BY ATC TOWER SERVICES 3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518 CARRIER INFORMATION CARRIER: T-MOBILE CARRIER SITE NAME: AMISTADA - ATC CARRIER SITE NUMBER: SP01477A	THE PROJECT DEPICTED IN THESE PLANS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 14103450_C3_04 DATED 06/01/22. SATISFACTORY COMPLETION OF THE WORK INDICATED IN THESE PLANS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED.	G-002	IBC GENERAL NOTES	0
		G-003	SPECIAL INSPECTION CHECKLIST	0
		G-004	BILL OF MATERIALS	0
		C-101	DETAILED SITE PLAN	0
		S-201	MODIFICATION PROFILE	0
	PROJECT NOTE	S-501	MONOPOLE EXTENSION INSTALLATION DETAILS	0
		Z-501	MONOPOLE EXTENSION WELDMENT FABRICATION DETAILS	0
		Z-502	MONOPOLE EXTENSION WELDMENT FABRICATION DETAILS (CONT'D)	0
		Z-503	CAP PLATE FABRICATION DETAILS	0
	COMPLIANCE CODE			
	ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.			
	1. ANSI/TIA/EIA: STRUCTURAL STANDARDS (222-H EDITION) 2. INTERNATIONAL BUILDING CODE (2018 IBC)			
	PROJECT LOCATION			
	GEOGRAPHIC COORDINATES			
	LATITUDE: 46.20514789 LONGITUDE: -119.1357585			





THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
	FIRST ISSUE	TCA	07/07/22
			
			
			
			

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

Expires: 12 / 02 / 2023



Authorized by "EOR"
08 Jul 2022 03:16:40



DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

IBC GENERAL NOTES

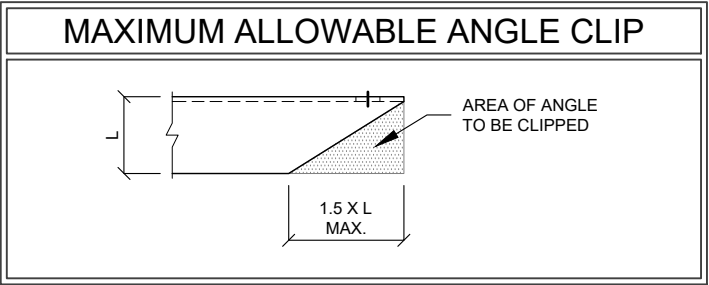
SHEET NUMBER: G-002	REVISION: 0
-------------------------------	-----------------------

GENERAL

- ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
- ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
- ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
- CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

- ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
- FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
- ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-9 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
- CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
- ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.



PAINT

- AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

WELDING

- ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER AND/OR BASE METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- IN CASES WHERE BASE METAL GRADE IS UNKNOWN, ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES; ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES, UNLESS NOTED OTHERWISE.
- PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

BOLT TIGHTENING PROCEDURE

- STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
- FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
- IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

- SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

8.2.1 TURN-OF-NUT PRETENSIONING

BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

- ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

APPLICABLE CODES AND STANDARDS

- ANSI/TIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-H EDITION.
- 2018 INTERNATIONAL BUILDING CODE.
- ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE. REFERENCE LATEST APPROPRIATE EDITION TO MATCH LOCAL AND/OR INTERNATIONAL BUILDING CODE(S) LISTED ABOVE.
- CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
- AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

SPECIAL INSPECTION

- A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH IBC 2018, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
 - STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELD ONLY)
 - HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 EXTENSION FLANGE BOLTS TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD)
- THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH IBC 2018, SECTION 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.



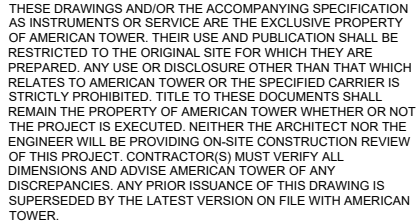
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	TCA	07/07/22



SPECIAL INSPECTION CHECKLIST

0

SPECIAL INSPECTION CHECKLIST								
INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY	SI REVIEW REQUIRED			INSPECTION FREQUENCY	
				PRE CX	DURING CX	POST CX	PERIODIC	CONTINUOUS
SPECIAL INSPECTION FIELD WORK & REPORT	DOCUMENTATION AND SITE VISIT CONDUCTED BY AN ATC APPROVED SPECIAL INSPECTOR AS REQUIRED BY ATC AND OTHER AUTHORITIES HAVING JURISDICTION. INSPECTION PARAMETERS TO FOLLOW ATC'S STANDARD SPECIFICATION FOR WIRELESS TOWER SITES.	✓	SI			✓		
ENGINEERING ASSEMBLY DRAWINGS	GC SHALL SUBMIT DRAWINGS TO SI FOR INCLUSION IN SI REPORT	✓	GC	✓				
FABRICATED MATERIAL VERIFICATION & INSPECTION	MTR AND OR MILL CERTIFICATIONS FOR SUPPLIED MATERIALS GC SHALL SUPPLY SI WITH REPORTS TO BE INCLUDED IN SI REPORT WHEN REQUIRED BY ATC	✓	SI	✓				
CERTIFIED WELD INSPECTION	INSPECTION AND REPORT OF STRUCTURAL WELDING PERFORMED DURING PROJECT COMPLETED BY A CWI AND INCLUDED WITHIN SI REPORT		GC / TA					
FOUNDATION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF FOUNDATION EXCAVATION, REBAR PLACEMENT, CASING/SHORING/FORMING PLACEMENT, AND ANCHOR TEMPLATE AND ANCHOR PLACEMENT - TO BE SI APPROVED PRIOR TO CONCRETE POUR AND DOCUMENTED IN THE SI REPORT		SI					
ANCHOR, ROCK ANCHOR OR HELICAL PULL-OUT TEST	PULL TESTING OF INSTALLED ANCHORS TO BE COMPLETED AND DOCUMENTED IN SI REPORT		GC / TA					
CONCRETE INSPECTION & VERIFICATION	CONCRETE MIX DESIGN, SLUMP TEST, COMPRESSIVE TESTING, AND SAMPLE GATHERING TECHNIQUES ARE TO BE PROVIDED FOR INCLUSION IN THE SI REPORT. SI SHALL VERIFY CONCRETE PLACEMENT AS REQUIRED BY THE DESIGN DOCUMENTS (INSPECTION FREQUENCY IS MARKED CONTINUOUS)		GC / TA					
DYWIDAG PLACEMENT/ANCHOR BOLT EMBEDMENT - EPOXY/GROUT INSTALL	ANCHOR/BAR EMBEDMENT, HOLE SIZE, EPOXY/GROUT TYPE, INSTALLATION TEMPERATURE AND INSTALLATION SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT		GC / SI					
BASE PLATE GROUT INSPECTION & VERIFICATION	BASE PLATE GROUTING TYPE AND PLACEMENT SHALL BE CONFIRMED BY THE SI AND INCLUDED IN THE SI REPORT		GC / SI					
EARTHWORK INSPECTION & VERIFICATION	EXCAVATION, FILL, SLOPE, GRADE AND OTHER EARTHWORK REQUIREMENTS PER PLANS SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT		GC / TA					
COMPACTION VERIFICATION	CONTRACTOR SHALL PROVIDE AN INDEPENDENT THIRD PARTY CERTIFIED INSPECTION WHICH PROVIDES TEST RESULTS FOR COMPACTION TEST OF SOILS IN PLACE TO ASTM STANDARDS.		GC / TA					
GROUND TESTING & VERIFICATION	GC SHALL PROVIDE DOCUMENTATION SHOWING THAT THE GROUNDING SYSTEM SHALL HAVE A MEASURED RESISTANCE TO THE GROUND OF NOT MORE THAN THE RECOMMENDED 10 OHMS. PER THE ATC CONSTRUCTION SPECIFICATION UNDER SECTION 2.15 THIS DOCUMENTATION MUST BE AN INDEPENDENT CERTIFICATION.		GC					
STEEL CONSTRUCTION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF STEEL CONSTRUCTION TO BE PERFORMED BY THE SI. INSPECTION TO INCLUDE VERIFICATION OF NEW CONSTRUCTION OR MODIFICATION OF EXISTING CONSTRUCTION PER ENGINEERED PLANS. DETAILED VERIFICATION SHALL BE INCLUDED IN SI REPORT.	✓	SI			✓	✓	
ON-SITE COLD GALVANIZING VERIFICATION	SI SHALL VERIFY WITH GC ALL COLD GALVANIZATION TYPE AND APPLICATION AND INCLUDE SUMMARY IN SI REPORT	✓	GC			✓	✓	
GUY WIRE TENSIONING & TOWER ALIGNMENT REPORT	GC SHALL PROVIDE SI EVIDENCE OF PROPER GUY TENSIONING AND TOWER PLUMB PER PLANS. SI SHALL VERIFY AND INCLUDE PLUMB AND TENSION REPORTING IN SI REPORT.		GC					
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	GC SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO SI FOR APPROVAL/REVIEW AND INCLUSION IN SI REPORT	✓	GC			✓		
SI AS-BUILT DRAWINGS WITH INSPECTION RED-LINES (AS REQUIRED)	SI SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS WITHIN SI REPORT	✓	SI			✓		
TIA INSPECTION	SI SHALL COMPLETE TIA INSPECTION AND PROVIDE SEPARATE TIA INSPECTION DOCUMENTATION TO ATC CM		SI					
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF SPECIAL INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE SI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN SI REPORT.	✓	GC / SI			✓		
NOTE: SPECIAL INSPECTIONS ARE INTENDED TO BE A COLLABORATIVE EFFORT BETWEEN GC AND SI. WHENEVER POSSIBLE GC IS TO PROVIDE SI WITH PHOTOGRAPHIC OR OTHER ACCEPTABLE EVIDENCE OF PROPER INSTALLATION IF PERIODIC INSPECTION FREQUENCY IS ACCEPTABLE. THE GC AND SI SHALL WORK TO COMPILE EVIDENCE OF PROPER CONSTRUCTION AND LIMIT THE NUMBER OF SI SITE VISITS REQUIRED.								
TABLE KEY: SI - ATC APPROVED SPECIAL INSPECTOR CX - CONSTRUCTION GC - GENERAL CONTRACTOR CM - CONSTRUCTION MANAGER TA - 3RD PARTY TESTING AGENCY ATC - AMERICAN TOWER CORPORATION								



ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336



BILL OF MATERIALS

SHEET NUMBER: G-004	REVISION: 0
-------------------------------	-----------------------

[illegible]



AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 3408

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
△	FIRST ISSUE	TCA	07/07/22
△			
△			
△			
△			

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

Expires: 12 / 02 / 2023



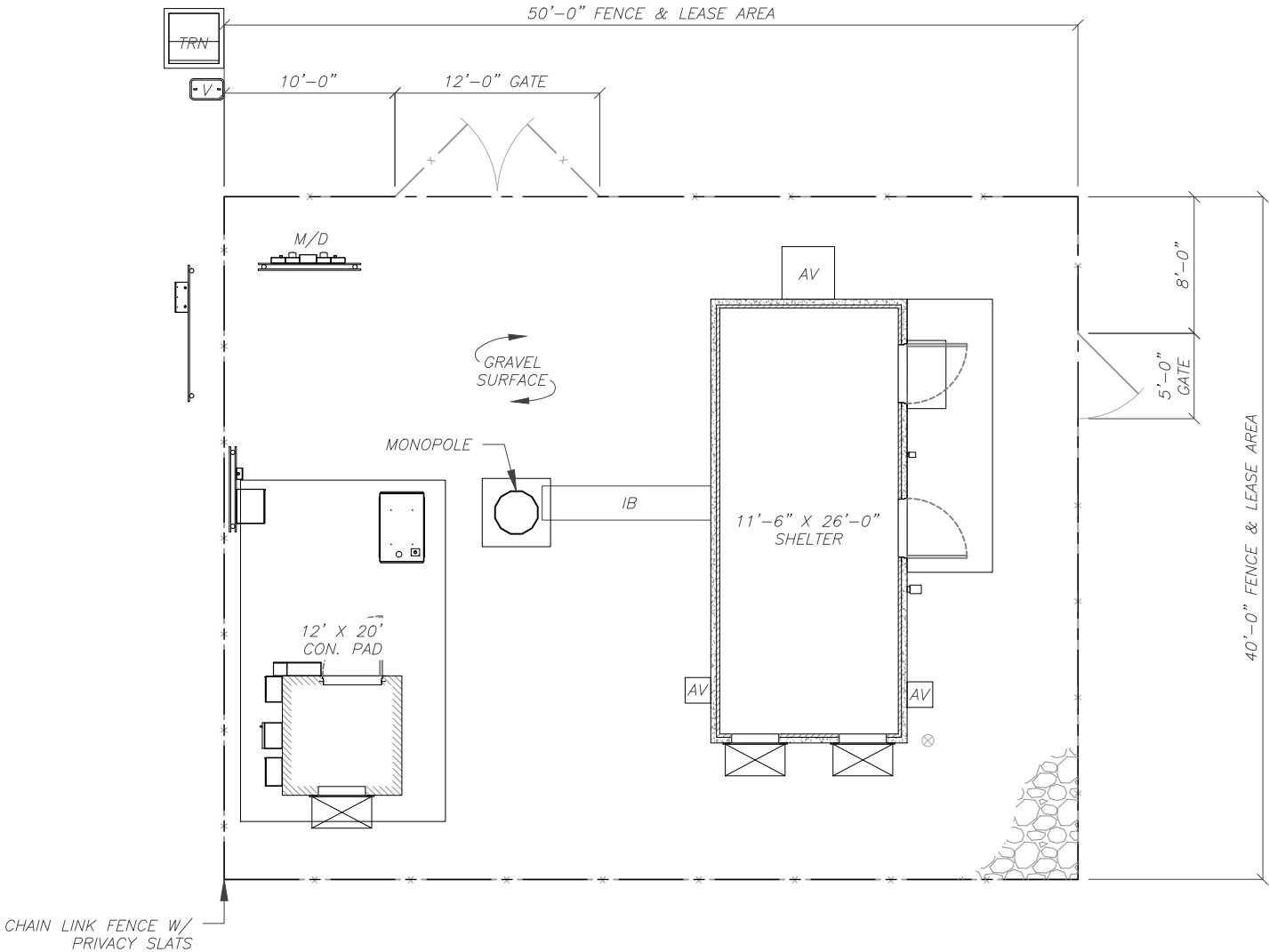
Authorized by "EOR"
08 Jul 2022 03:16:40



DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

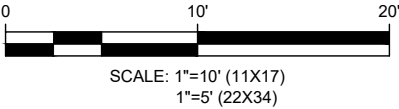
DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0



LEGEND

⊗	GROUNDING TEST WELL
AV, A/V	AIR VENT
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
C	CABINET
CS	COAX SHROUD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
HFC	HYDROGEN FUEL CELL
HSM	HYDROGEN STORAGE MATERIAL
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
LPG	LIQUID PROPANE GAS
M	METER
OHW	OVERHEAD WIRE
P	POWER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
---	PROPERTY LINE
- - -	ADJACENT PROPERTY LINE
- - - -	LEASE AREA
- - - - -	EASEMENT
-○-○-○-	WOOD FENCE
-+--+ -	WIRE FENCE
-□-□-□-	METAL FENCE
-○- - -	GUARD RAIL
-x- - -	CHAINLINK FENCE
=====	ROAD (DIRT)
=====	ROAD (STONE)
=====	ROAD (PAVED)





AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 3408

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	TCA	07/07/22

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

Expires: 12 / 02 / 2023



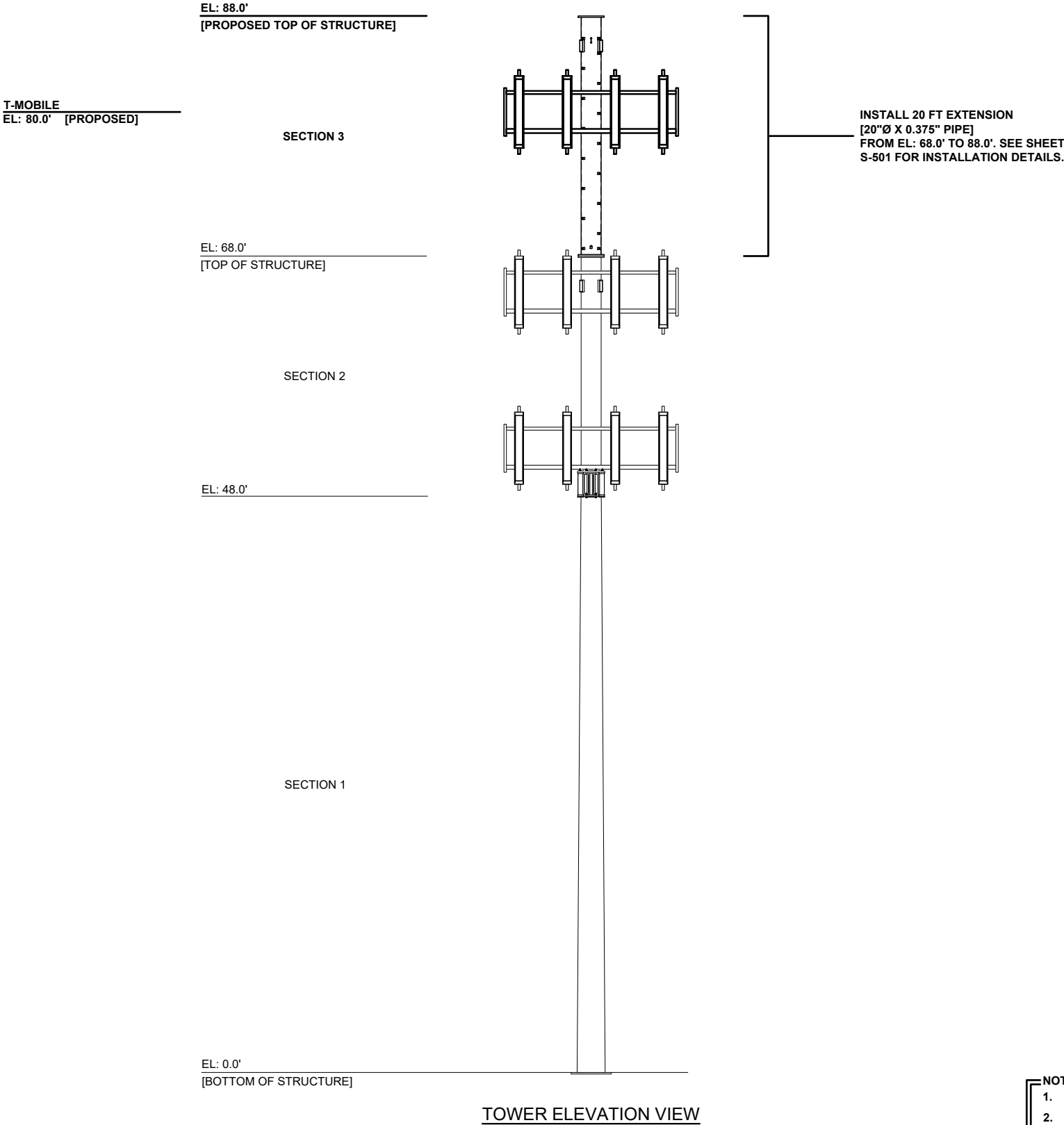
Authorized by "EOR"
08 Jul 2022 03:16:41



DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

MODIFICATION PROFILE

SHEET NUMBER:	REVISION:
S-201	0



- NOTES:
- PROPOSED T-MOBILE COAX TO BE INSTALLED INSIDE MONOPOLE.
 - CONTACT AMERICAN TOWER FIELD OPERATIONS WHEN EXISTING EQUIPMENT INTERFERES WITH INSTALLATION OF MODIFICATIONS. ONCE APPROVED, EXISTING EQUIPMENT MAY BE TEMPORARILY MOVED DURING INSTALLATION & REINSTALLED TO THE ORIGINAL HEIGHT & LOCATION BY CONTRACTOR POST COMPLETION OF MODIFICATIONS.



AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 3408

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	TCA	07/07/22

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

Expires: 12 / 02 / 2023



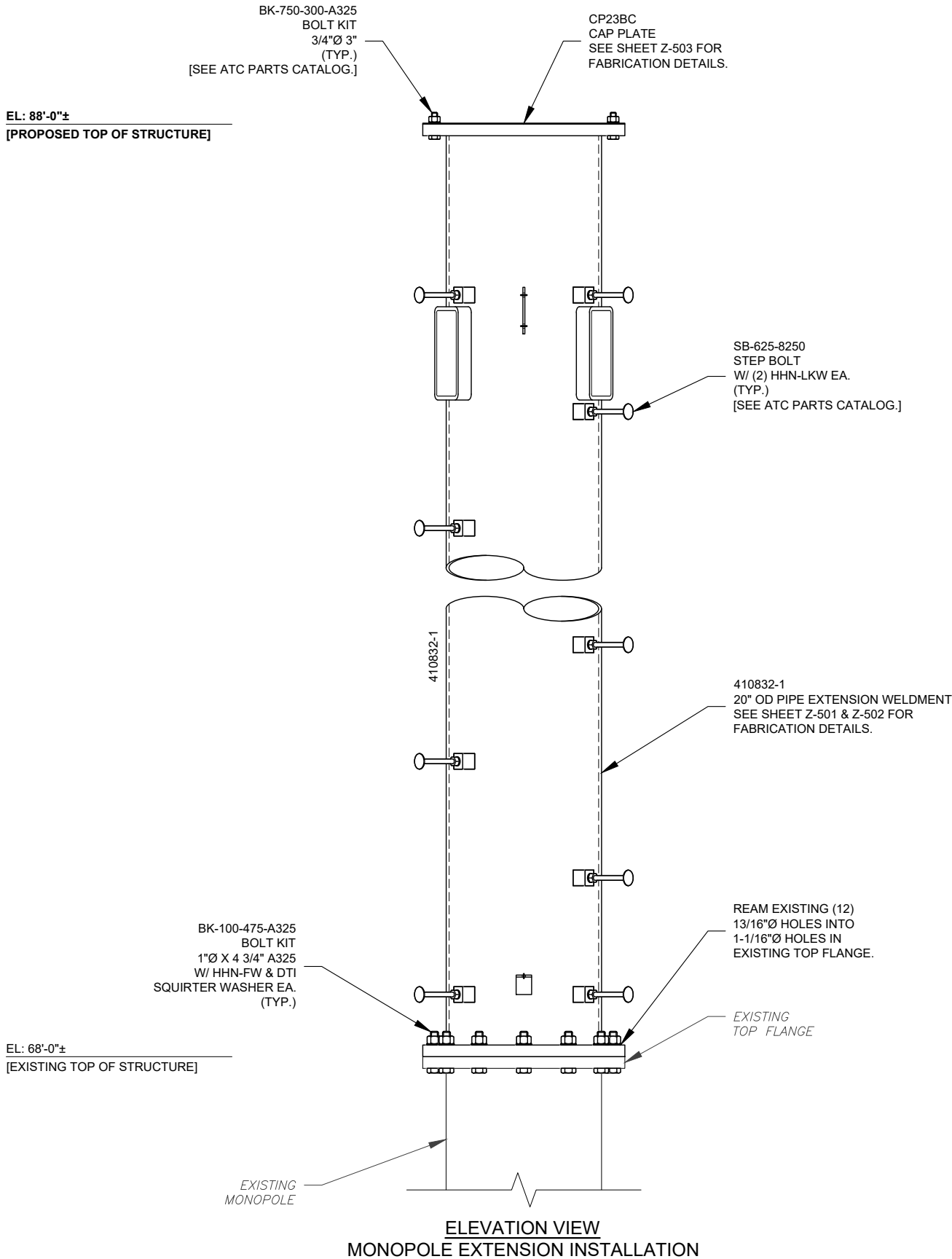
Authorized by "EOR"
08 Jul 2022 03:16:41



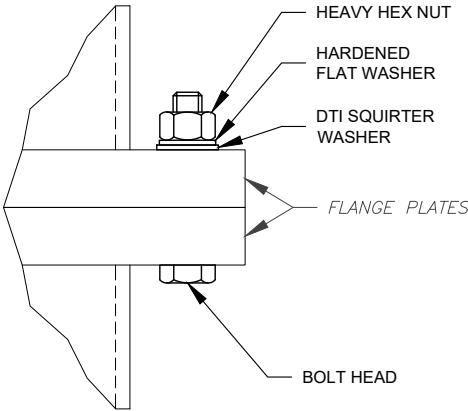
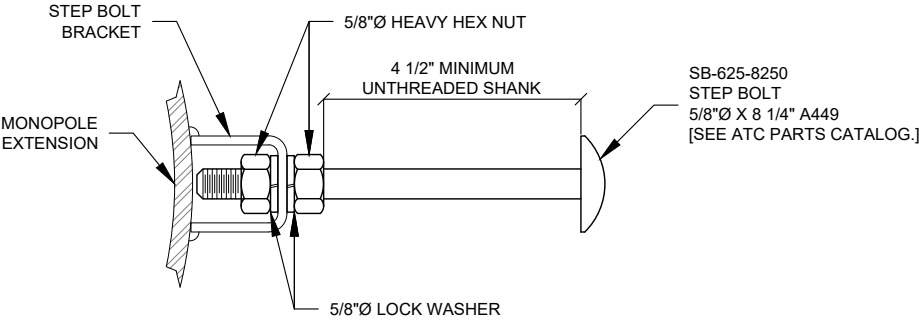
DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

MONOPOLE EXTENSION
INSTALLATION DETAILS

SHEET NUMBER:	REVISION:
S-501	0



- NOTES:
1. ALIGN NEW EXTENSION WELDMENT SAFETY CLIMB BRACKETS TO MATCH EXISTING SAFETY CLIMB SYSTEM AND CLIMBING PATH.
 2. REMOVE EXISTING SAFETY CLIMB CABLE AND ASSOCIATED HARDWARE / MOUNTS. INSTALL NEW ATC-APPROVED SAFETY CLIMB SYSTEM WITH NEW 3/8"Ø SAFETY CLIMB CABLE. ENSURE 100% TIE-OFF IS MAINTAINED AND CABLE IS FREE OF ALL OBSTRUCTIONS. CONTRACTOR SHALL INSTALL THE PROVIDED SAFETY CLIMB IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



1. ALL FLANGE BOLTS SHALL BE TIGHTENED USING DTI SQUIRTER WASHERS FOR TENSION VERIFICATION. SEE SHEET G-002 FOR DETAILS.
2. PROPER TORQUE GENERATING EQUIPMENT, WHICH MAY INCLUDE IMPACT WRENCHES, IS REQUIRED IN ORDER TO ACHIEVE DTI COMPRESSION WITH SQUIRT INDICATION. MANUFACTURER GUIDELINES FOR DTI INSTALLATION ARE TO BE FOLLOWED.



AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 3408

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
△0	FIRST ISSUE	TCA	07/07/22
△1			
△2			
△3			
△4			

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

Expires: 12 / 02 / 2023



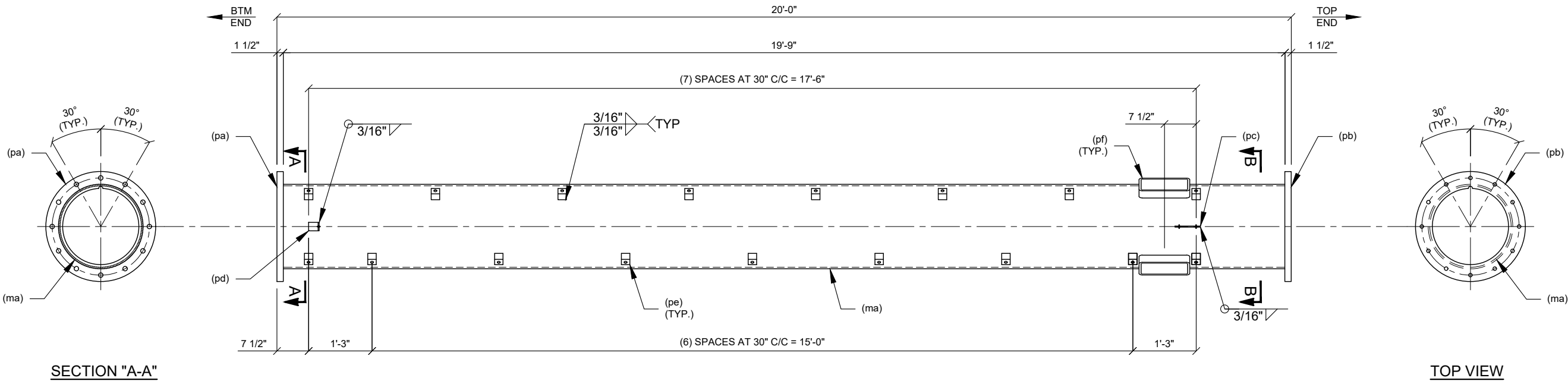
Authorized by "EOR"
08 Jul 2022 03:16:41



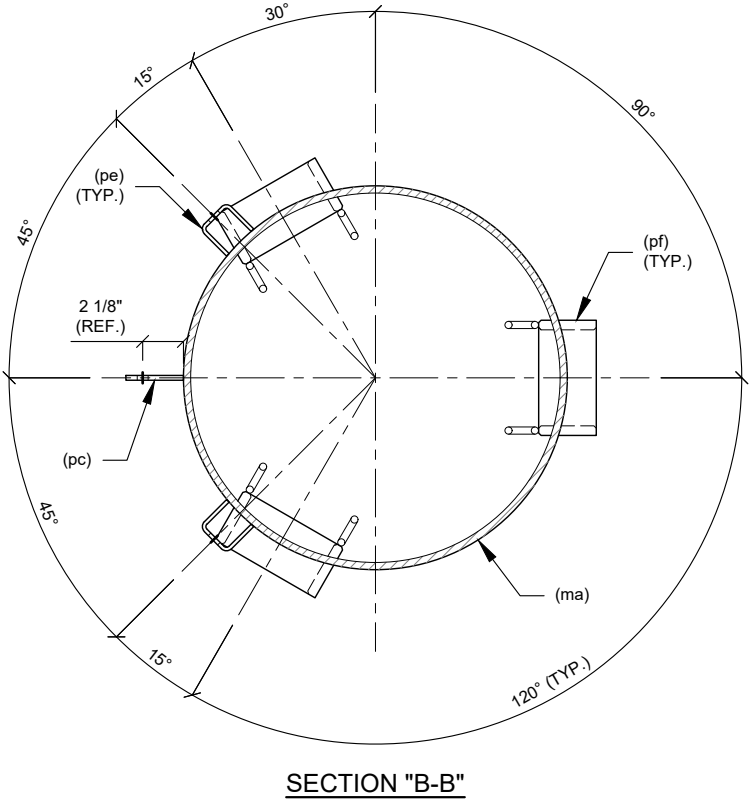
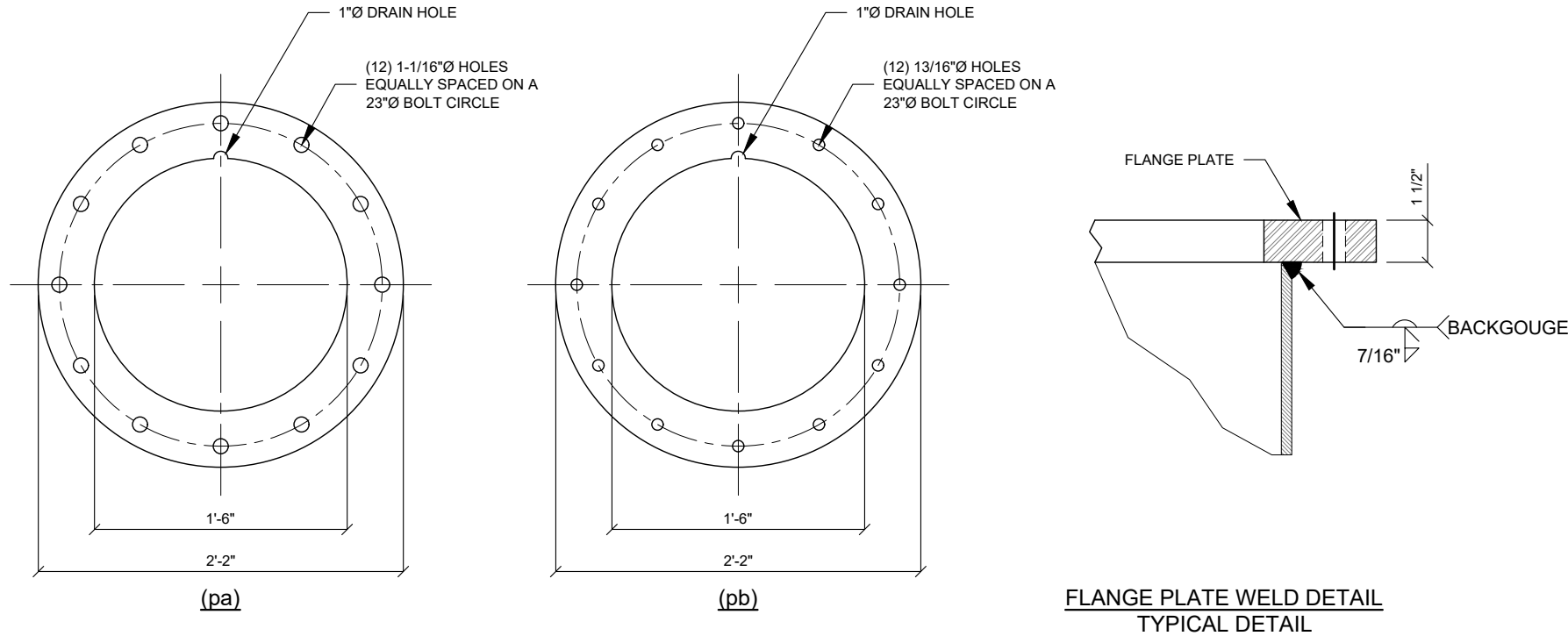
DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

**MONOPOLE EXTENSION
WELDMENT
FABRICATION DETAILS**

SHEET NUMBER:	REVISION:
Z-501	0



410832-1
20" OD PIPE EXTENSION WELDMENT



(pf)	3	PORTHOLE WELDMENT	0'-3"		Z-502	42.6#
(pe)	17	STEP BOLT BRACKET	0'-2"		Z-502	10.2#
(pd)	1	L 3" X 2 1/2" X 1/4"	0'-2"		Z-502	0.8#
(pc)	1	PL 1/4" X 3"	0'-6"		Z-502	1.3#
(pb)	1	PL 1 1/2" X 26"	2'-2"	A572 GR. 50 / ROUND	Z-501	117.4#
(pa)	1	PL 1 1/2" X 26"	2'-2"	A572 GR. 50 / ROUND	Z-501	117.4#
(ma)	1	20" OD X 0.375" PIPE	19'-9"	A53 GR. B / SC2E	Z-501	1552.4#
410832-1	1	20" OD PIPE EXTENSION WELDMENT	20'-0"		Z-501	1842.1#
PART NO.	QTY	DESCRIPTION	LENGTH	NOTES	SHEET	BLK WT
MATERIAL: A36 U.N.O.		FINISH: GALVANIZED	HOLES: AS NOTED		GALV WT:	1934.2#



AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 3408

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	TCA	07/07/22

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

Expires: 12 / 02 / 2023



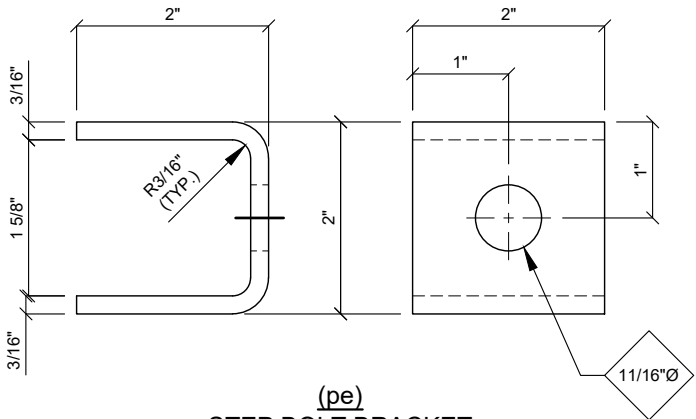
Authorized by "EOR"
08 Jul 2022 03:16:41



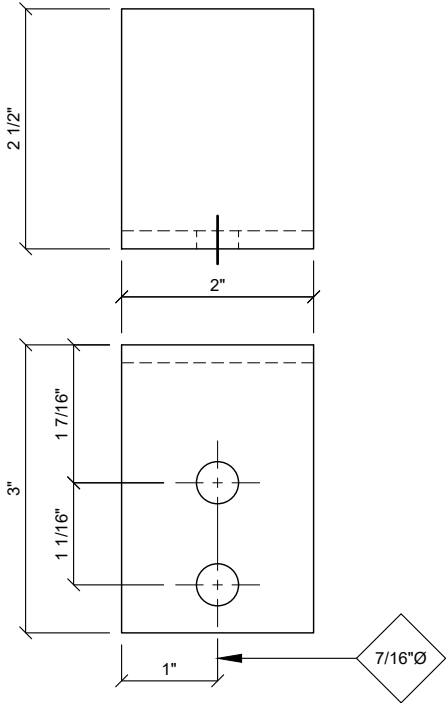
DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

MONOPOLE EXTENSION
WELDMENT FABRICATION
DETAILS (CONT'D)

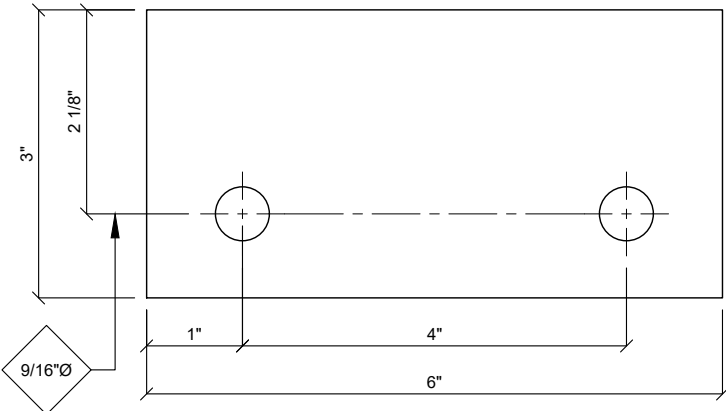
SHEET NUMBER:	REVISION:
Z-502	0



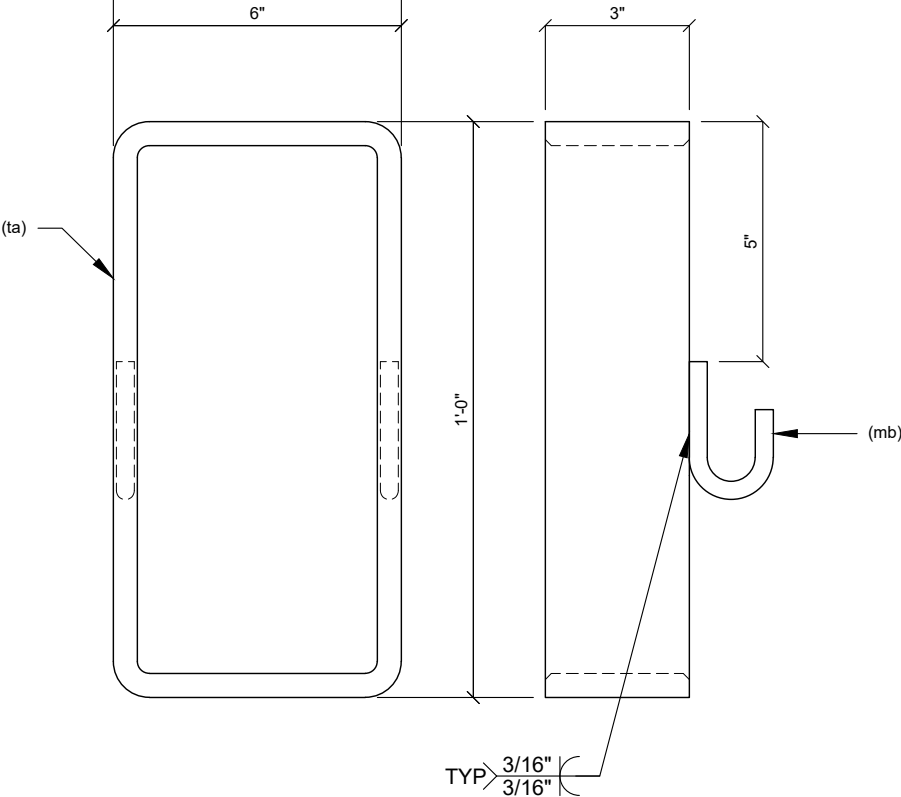
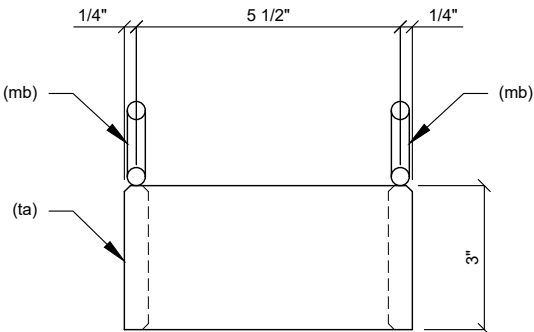
(pe)
STEP BOLT BRACKET



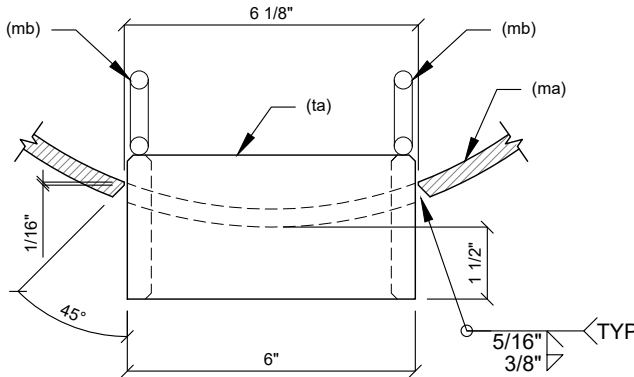
(pd)
SAFETY CLIMB STANDOFF BRACKET



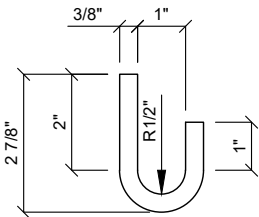
(pc)
SAFETY CLIMB TOP BRACKET



(pf)
PORTHOLE DETAIL
NOTE: CHAMFER ALL
INSIDE EDGES 1/8" (TYP.)



(pf)
PORTHOLE INSTALLATION
WELDING DETAIL



(mb)
KELLUM HOOK

(mb)	2	3/8"Ø SR	0'-5 1/16"		0.3#
(ta)	1	HSS 12" X 6" X 0.500"	0'-3"	A500 GR. B	13.9#
(pf)	1	PORTHOLE WELDMENT	0'-3"		14.2#
PART NO.	QTY	DESCRIPTION	LENGTH	NOTES	BLK WT
MATERIAL: A36 U.N.O.		FINISH: GALVANIZED		HOLES: N/A	GALV WT: N/A



AMERICAN TOWER®
ATC TOWER SERVICES, LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 3408

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	TCA	07/07/22

ATC SITE NUMBER:
410832

ATC SITE NAME:
TRI UNDERWOOD WA
WASHINGTON

SITE ADDRESS:
1305 WEST 4TH AVE
KENNEWICK, WA 99336

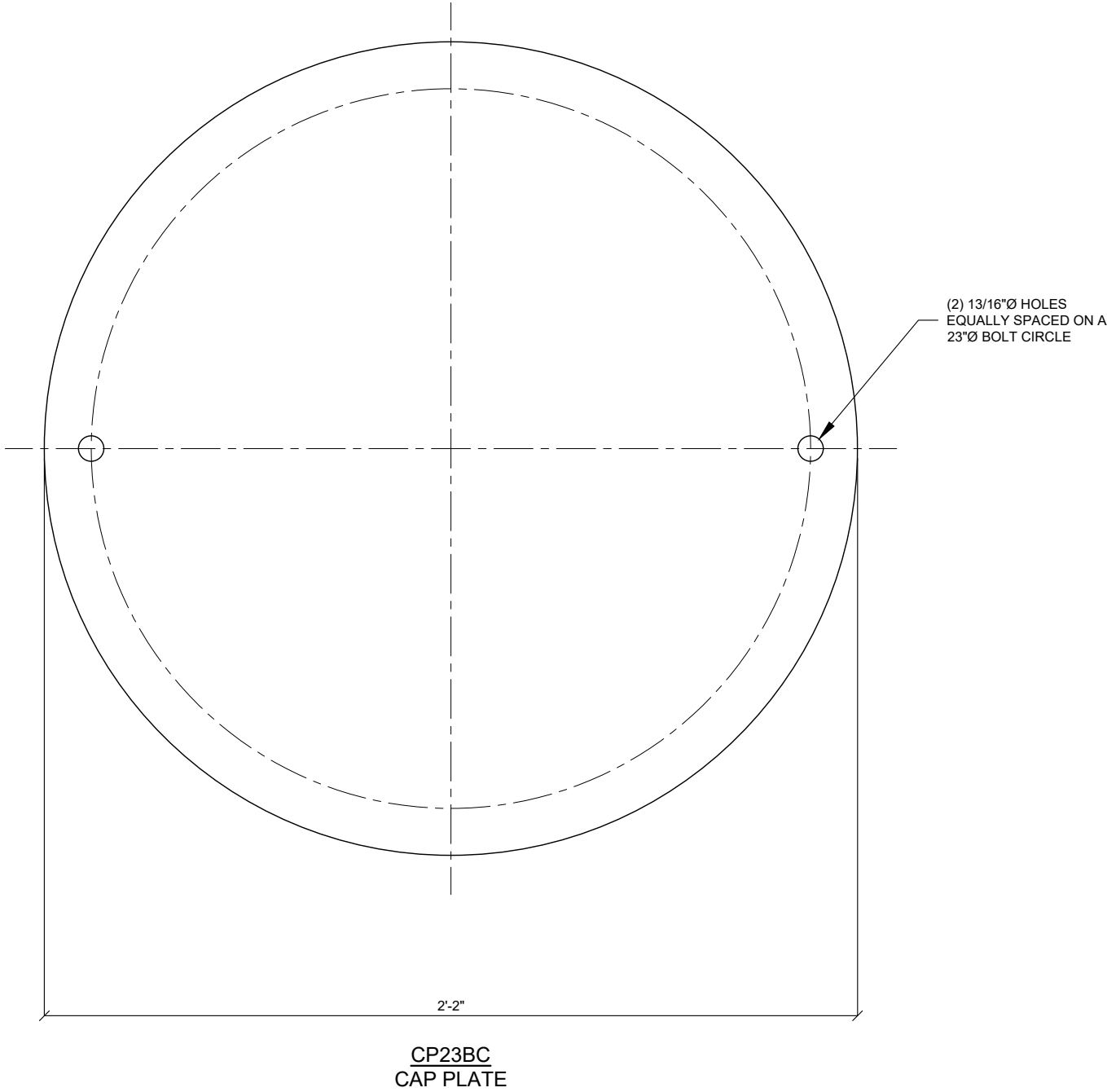
Expires: 12 / 02 / 2023



Authorized by "EOR"
08 Jul 2022 03:16:41

DRAWN BY:	TCA
APPROVED BY:	THP
DATE DRAWN:	07/07/22
ATC JOB NO:	14103450_C6_05

CAP PLATE FABRICATION DETAILS	
SHEET NUMBER: Z-503	REVISION: 0



CP23BC	PL 1/8" X 26"	2'-2"	ROUND	18.8#	19.8#
PART NO.	DESCRIPTION	LENGTH	NOTES	BLK WT	GALV WT
MATERIAL: A36		FINISH: GALVANIZED		HOLES: AS NOTED	



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



**TOWER
ENGINEERING
PROFESSIONALS**

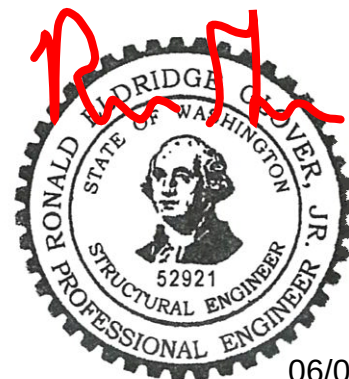
Structural Analysis Report

Structure : 68 ft Monopole with Proposed 20 ft Extension
ATC Site Name : TRI UNDERWOOD WA,WA
ATC Site Number : 410832
Engineering Number : 14103450_C3_04
Proposed Carrier : T-MOBILE
Carrier Site Name : Amistada - ATC
Carrier Site Number : SP01477A
Site Location : 1305 West 4th Ave
Kennewick, WA 99336-5032
46.2051, -119.1358
County : Benton
Date : June 1, 2022
Max Usage : 91%
Result : Pass

Prepared By:

Jack Logan
TEP

Reviewed By:



06/02/2022

COA : 3408



Table of Contents

Introduction	3
Supporting Documents	3
Analysis	3
Conclusion	3
Existing and Reserved Equipment.....	4
Equipment to be Removed	4
Proposed Equipment	4
Structure Usages.....	5
Foundations	5
Deflection, Twist and Sway*	5
Standard Conditions	6
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 68 ft Monopole with proposed 20 ft extension to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	Ehresmann Job #61230, dated February 23, 2004
Foundation Drawing	Ehresmann Job #61230, dated February 23, 2004
Geotechnical Report	LSI Adapt Project #WA03-10485-GEO, dated December 8, 2003
Modifications	ATC Job #OAA756047_C6_04, dated May 26, 2020

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	100 mph (3-second gust)
Basic Wind Speed w/ Ice:	40 mph (3-second gust) w/ 1.00" radial ice concurrent
Code:	ANSI/TIA-222-H / 2018 IBC
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	$S_s = 0.41$, $S_i = 0.16$
Site Class:	D - Stiff Soil - Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

- The proposed extension will be designed in a subsequent service.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
65.1	6	Generic 96" x 24" Panel	Triangular Platform with Handrails	(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6	AT&T MOBILITY
65.0	3	Nokia RRH 4T4R B30 100W AHNA (34.2 lbs)			
	3	Nokia Airscale Dual RRH 4T4R B12/B14 320W AHLBA			
	3	Nokia AirScale Dual RRH 4T4R B25/66 320W AHFIB			
	2	Raycap DC9-48-60-24-8C-EV			
	3	Nokia AirScale RRH 4T4R B5 160W AHCA			
52.0	6	CellMax CMA-UBTULBULBHH/6516/17/21/21	Triangular Platform with Handrails	(12) 1 5/8" Coax (3) 1.25" (31.8mm) Hybrid	VERIZON WIRELESS
	3	Raycap RxxDC-3315-PF-48			
	3	Ericsson RRUS 32 B66			
	6	Ericsson RRUS 11 B13			
	6	Comsat PCSA060-19-x			
	4	Commscope SBNHH-1D45A			
	2	Andrew SBNHH-1D45C			
	1	VZW Unused Reserve (15365.52 sqin)			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
No loading was considered as removed as part of this analysis.					

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
80.0	2	Commscope HELIAX FiberFeed 12 RRU Pendant Connect	Square Platform with Handrails	(2) 1.55" (39.5mm) Hybrid	T-MOBILE
	3	Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA			
	3	Nokia AHFIG			
	3	Nokia AEHC			
	3	Commscope FFVV-65C-R3-V1			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	60%	Pass
Shaft	91%	Pass
Base Plate	45%	Pass
Flanges	68%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	791.6	68%
Shear (Kips)	12.7	20%
Axial (Kips)	27.3	37%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
80.0	Commscope HELIAX FiberFeed 12 RRU Pendant Connect	T-MOBILE	1.178	1.280
	Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA			
	Commscope FFVV-65C-R3-V1			
	Nokia AEHC			
	Nokia AHFIG			

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



Standard Conditions

All engineering services performed by ATC Tower Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of ATC Tower Services LLC

It is the responsibility of the client to ensure that the information provided to ATC Tower Services LLC and used in the performance of our engineering services is correct and complete.

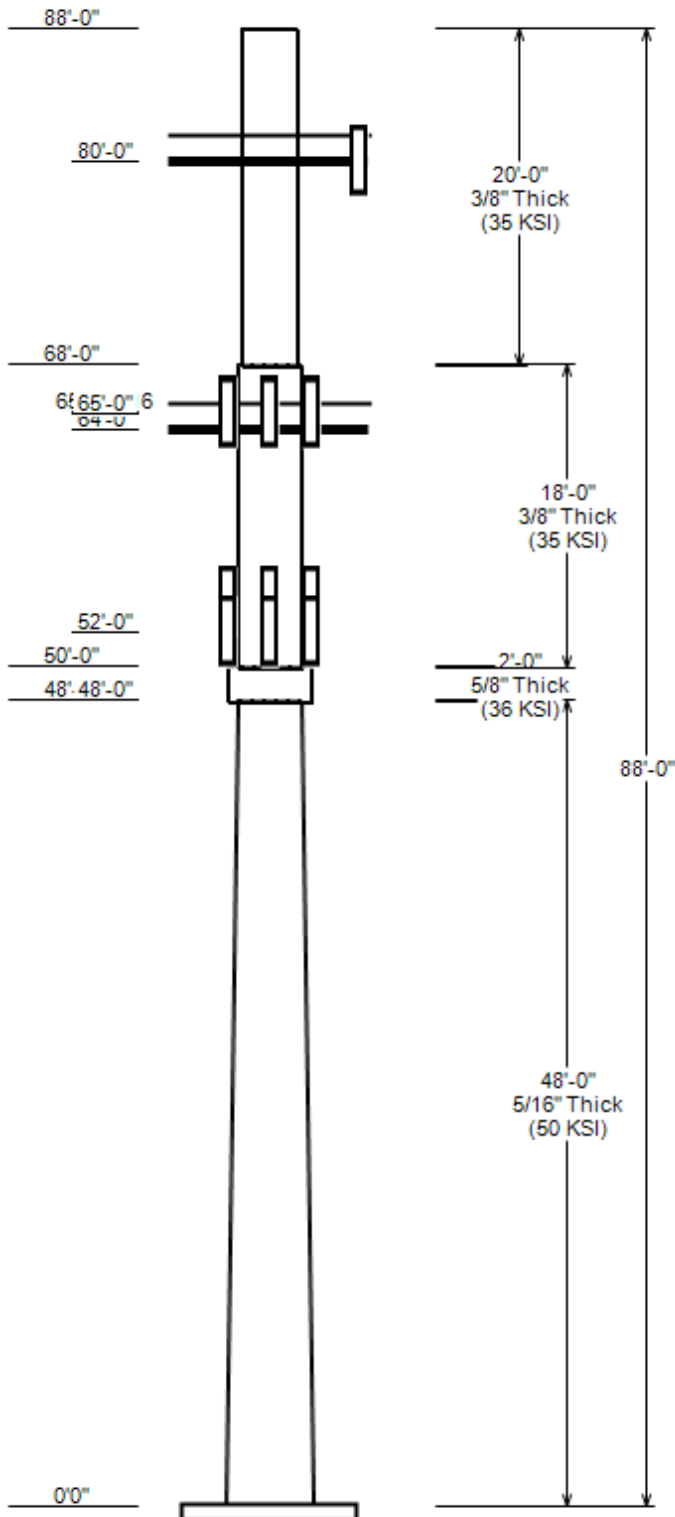
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively “American Tower”) are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and ATC Tower Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Asset : 410832, TRI UNDERWOOD WA
 Client : T-MOBILE
 Code : ANSI/TIA-222-H

Height : 88 ft
 Base Width : 28
 Shape : 12 Sides



SITE PARAMETERS

Nominal Wind: 100 mph wind with no ice Topo Category: 1
 Ice Wind: 40 mph wind with 1" radial Topo Method: Method 1
 Base Elev (ft): 0.00 Taper : 0.16400(in/ft) Topo Feature:
 Structure Class: II Exposure : B S_s : 0.413 S_1 : 0.156

SECTION PROPERTIES

Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
		Across Flats	Top Bottom					
1	48.000	20.12	28.00	0.312		0.000	12 Sides	50
2	2.000	27.00	27.00	0.625	Butt Joint	0.000	8 Sides	36
3	18.000	20.00	20.00	0.375	Butt Joint	0.000	Round	35
4	20.000	18.00	18.00	0.375	Butt Joint	0.000	Round	35

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
80.0	80.0	2	Commscope HELIAX FiberFeed 12
80.0	80.0	3	Nokia AirScale Dual RRH 4T4R B
80.0	80.0	3	Nokia AHFIG
80.0	80.0	3	Nokia AEHC
80.0	80.0	3	Commscope FFVV-65C-R3-V1
80.0	80.0	1	Generic Square Platform with H
65.1	65.1	6	Generic 96" x 24" Panel
65.0	67.4	3	Nokia AirScale RRH 4T4R B5 160
65.0	64.4	3	Nokia RRH 4T4R B30 100W AHNA (
65.0	67.4	3	Nokia Airscale Dual RRH 4T4R B
65.0	64.4	3	Nokia AirScale Dual RRH 4T4R B
65.0	64.9	2	Raycap DC9-48-60-24-8C-EV
65.0	65.0	6	CellMax CMA-UBTULBULBHH/6516/1
64.0	64.0	1	Generic Mount Reinforcement
64.0	64.0	1	Generic Round Platform with Ha
52.0	52.0	3	Raycap RxxDC-3315-PF-48
52.0	52.0	3	Ericsson RRUS 32 B66
52.0	52.0	6	Ericsson RRUS 11 B13
52.0	53.0	6	Comsat PCSA060-19-x
52.0	52.0	4	Commscope SBNHH-1D45A
52.0	52.0	2	Andrew SBNHH-1D45C
52.0	52.0	1	VZW Unused Reserve (15365.52 s
48.0	48.0	1	Generic Mount Reinforcement
48.0	48.0	1	Round Platform with Flat Handr

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	80.0	1.55" (39.5mm) Hybrid	No
0.0	65.0	0.78" (19.7mm) 8 AWG 6	No
0.0	65.0	0.39" (10mm) Fiber Trunk	No
0.0	52.0	1.25" (31.8mm) Hybrid	No
0.0	52.0	1 5/8" Coax	No
0.0	52.0	1 5/8" Coax	No

LOAD CASES

1.2D + 1.0W Normal	100 mph wind with no ice
0.9D + 1.0W Normal	100 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Nor	40 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Nor	Seismic
0.9D - 1.0Ev + 1.0Eh Nor	Seismic (Reduced DL)
1.0D + 1.0W Service Norm	60 mph Wind with No Ice

Asset : 410832, TRI UNDERWOOD WA
Client : T-MOBILE
Code : ANSI/TIA-222-H

Height : 88 ft
Base Width : 28
Shape : 12 Sides

REACTIONS

Load Case	Moment (kip-ft)	Shear (Kip)	Axial (Kip)
1.2D + 1.0W Normal	791.63	12.68	27.27
0.9D + 1.0W Normal	775.01	12.66	20.44
1.2D + 1.0Di + 1.0Wi Normal	192.92	2.91	39.14
1.2D + 1.0Ev + 1.0Eh Normal	112.46	1.54	28.45
0.9D - 1.0Ev + 1.0Eh Normal	108.70	1.53	18.19
1.0D + 1.0W Service Normal	251.58	4.08	22.76

DISH DEFLECTIONS

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
-----------	---------------------	--------------------	-------------------

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

ANALYSIS PARAMETERS

Location:	Benton County,WA	Height:	88 ft
Type and Shape:	Custom, Round	Base Diameter:	28.00 in
Manufacturer:	Ehresmann	Top Diameter:	20.00 in
K_d (non-service):	0.95	Taper:	0.1640 in/ft
K_e:	0.99	Rotation:	0.000°

ICE & WIND PARAMETERS

Exposure Category:	B	Design Wind Speed w/o Ice:	100 mph
Risk Category:	II	Design Wind Speed w/Ice:	40 mph
Topo Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.00 in
Crest Height:	0 ft	HMSL:	407.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):	2.37
T_L (sec):	16	P:	1
S_s:	0.413	S₁:	0.156
F_a:	1.470	F_v:	2.288
S_{ds}:	0.405	S_{d1}:	0.238
		C_s:	0.067
		C_s Max:	0.067
		C_s Min:	0.030

LOAD CASES

1.2D + 1.0W Normal	100 mph wind with no ice
0.9D + 1.0W Normal	100 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	40 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

SHAFT SECTION PROPERTIES

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint len (in)	Weight (lb)	Bottom						Top						Taper (in/ft)
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	
1-12	48.00	0.3125	50		0.00	3,903	28.00	0.000	27.86	2,726.1	21.33	89.60	20.12	48.00	19.93	998.6	14.57	64.39	0.1641
2-8	2.00	0.6250	36	Butt	0.00	372	27.00	48.000	54.73	5,022.6	17.07	43.20	27.00	50.00	54.73	5,022.6	17.07	43.20	0.0000
3-R	18.00	0.3750	35	Butt	0.00	1,416	20.00	50.000	23.12	1,113.9	0.00	53.33	20.00	68.00	23.12	1,113.9	0.00	53.33	0.0000
4-R	20.00	0.3750	35	Butt	0.00	1,413	18.00	68.000	20.76	806.9	0.00	48.00	18.00	88.00	20.76	806.9	0.00	48.00	0.0000
Shaft Weight						7,104													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice		
					Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor
80.00	Commscope FFVV-65C-R3-V1	3	0.75	0.000	124.60	21.113	0.63	383.09	23.440	0.63
80.00	Nokia AEHC	3	0.75	0.000	103.60	6.844	0.62	200.28	7.947	0.62
80.00	Nokia AHFIG	3	0.75	0.000	79.40	3.082	0.66	128.48	3.846	0.66
80.00	Nokia AirScale Dual RRH 4T4R B	3	0.75	0.000	83.80	2.218	0.67	123.63	2.854	0.67
80.00	Commscope HELIAX FiberFeed 12	2	0.75	0.000	20.00	0.944	0.50	37.89	1.391	0.50
80.00	Generic Square Platform with H	1	1.00	0.000	3790.00	49.300	1.00	6563.88	102.564	1.00
65.10	Generic 96" x 24" Panel	6	0.75	0.000	100.00	20.267	0.66	368.93	22.549	0.66
65.00	Nokia AirScale RRH 4T4R B5 160	3	0.75	2.400	35.30	1.286	0.50	59.44	1.748	0.50
65.00	CellMax CMA-UBTULBULBHH/6516/1	6	0.75	0.000	78.00	16.509	0.60	275.14	18.310	0.60
65.00	Raycap DC9-48-60-24-8C-EV	2	0.75	-0.100	16.00	4.788	0.75	95.26	5.691	0.75
65.00	Nokia AirScale Dual RRH 4T4R B	3	0.75	-0.600	88.20	3.683	0.68	151.47	4.488	0.68
65.00	Nokia Airscale Dual RRH 4T4R B	3	0.75	2.400	77.20	2.228	0.67	115.27	2.855	0.67
65.00	Nokia RRH 4T4R B30 100W AHNA (	3	0.75	-0.600	34.20	1.341	0.50	57.17	1.811	0.50
64.00	Generic Mount Reinforcement	1	1.00	0.000	200.00	7.500	1.00	318.35	12.079	1.00
64.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3490.54	42.149	1.00
52.00	Comsat PCSA060-19-x	6	0.75	1.000	27.50	6.460	0.76	119.28	7.961	0.76
52.00	Andrew SBNHH-1D45C	2	0.75	0.000	79.60	15.892	0.73	258.69	18.103	0.73
52.00	Commscope SBNHH-1D45A	4	0.75	0.000	50.50	7.244	0.63	145.28	8.418	0.63
52.00	Raycap RxxDC-3315-PF-48	3	0.75	0.000	21.40	2.512	0.67	69.17	3.136	0.67
52.00	Ericsson RRUS 32 B66	3	0.75	0.000	53.00	2.743	0.67	97.11	3.444	0.67
52.00	Ericsson RRUS 11 B13	6	0.75	0.000	50.70	2.791	0.67	94.12	3.449	0.67
52.00	VZW Unused Reserve (15365.52 s	1	0.75	0.000	1446.40	106.710	0.90	2050.70	151.293	0.90
48.00	Round Platform with Flat Handr	1	1.00	0.000	2500.00	36.600	1.00	3462.45	56.145	1.00
48.00	Generic Mount Reinforcement	1	1.00	0.000	200.00	7.500	1.00	315.00	11.949	1.00
Totals	Num Loadings: 24	70			14,708.90			26,865.87		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg) : _

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax/ Row	Dist Between Rows(in)	Dist Between Cols(in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	80.00	2	1.55" (39.5mm) Hybrid	1.55	0.55	N	0	0	0	0	0	N	T-MOBILE
0.00	65.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	65.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	52.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
0.00	52.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
0.00	52.00	3	1.25" (31.8mm) Hybrid	1.25	1.21	N	0	0	0	0	0	N	VERIZON WIREL

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

SEGMENT PROPERTIES

(Max Len: 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.3125	28.000	27.861	2,726.10	21.33	89.60	63	188.1	0.0	0.0
5.00		0.3125	27.180	27.035	2,490.90	20.63	86.97	63	177.0	0.0	467.0
10.00		0.3125	26.359	26.209	2,269.60	19.92	84.35	63	166.3	0.0	452.9
15.00		0.3125	25.539	25.384	2,061.80	19.22	81.72	63	156.0	0.0	438.9
20.00		0.3125	24.718	24.558	1,867.00	18.51	79.10	63	145.9	0.0	424.9
25.00		0.3125	23.898	23.732	1,685.00	17.81	76.47	63	136.2	0.0	410.8
30.00		0.3125	23.077	22.907	1,515.20	17.11	73.85	63	126.8	0.0	396.8
35.00		0.3125	22.257	22.081	1,357.20	16.40	71.22	63	117.8	0.0	382.7
40.00		0.3125	21.436	21.256	1,210.60	15.70	68.60	63	109.1	0.0	368.7
45.00		0.3125	20.616	20.430	1,074.90	15.00	65.97	63	100.7	0.0	354.6
48.00	Top - Section 1	0.3125	20.123	19.935	998.60	14.57	64.39	63	95.9	0.0	206.0
48.00	Bot - Section 2	0.6250	27.000	54.728	5,022.60	17.07	43.20	44.6	343.7	0.0	
50.00	Top - Section 2	0.6250	27.000	54.728	5,022.60	17.07	43.20	44.6	343.7	0.0	372.5
50.00	Bot - Section 3	0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	
52.00		0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	157.3
55.00		0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	236.0
60.00		0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	393.4
64.00		0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	314.7
65.00		0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	78.7
65.10		0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	7.9
68.00	Top - Section 3	0.3750	20.000	23.120	1,113.90	0.00	53.33	35	111.4	144.4	228.2
68.00	Bot - Section 4	0.3750	18.000	20.764	806.90	0.00	48.00	35	89.7	116.5	
70.00		0.3750	18.000	20.764	806.90	0.00	48.00	35	89.7	116.5	141.3
75.00		0.3750	18.000	20.764	806.90	0.00	48.00	35	89.7	116.5	353.3
80.00		0.3750	18.000	20.764	806.90	0.00	48.00	35	89.7	116.5	353.3
85.00		0.3750	18.000	20.764	806.90	0.00	48.00	35	89.7	116.5	353.3
88.00		0.3750	18.000	20.764	806.90	0.00	48.00	35	89.7	116.5	212.0
Totals:										7,105.2	

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

Load Case: 1.2D + 1.0W Normal	100 mph wind with no ice	23 Iterations
Gust Response Factor:	1.10	
Dead load Factor:	1.20	
Wind Load Factor:	1.00	

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-27.27	-12.68	0.00	-791.6	0.00	791.63	1,579.69	376.12	982.55	888.71	0	0	0.909
5.00	-26.52	-12.66	0.00	-728.2	0.00	728.21	1,532.88	364.97	925.20	836.53	0.21	-0.4	0.889
10.00	-25.79	-12.63	0.00	-664.9	0.00	664.91	1,486.07	353.83	869.57	785.93	0.84	-0.79	0.865
15.00	-25.08	-12.60	0.00	-601.7	0.00	601.73	1,439.25	342.68	815.67	736.91	1.89	-1.19	0.835
20.00	-24.39	-12.57	0.00	-538.7	0.00	538.72	1,392.44	331.53	763.50	689.47	3.35	-1.58	0.800
25.00	-23.71	-12.53	0.00	-475.9	0.00	475.87	1,345.63	320.39	713.04	643.61	5.21	-1.97	0.759
30.00	-23.06	-12.48	0.00	-413.2	0.00	413.24	1,298.81	309.24	664.32	599.33	7.48	-2.35	0.709
35.00	-22.44	-12.41	0.00	-350.8	0.00	350.85	1,252.00	298.10	617.31	556.62	10.13	-2.71	0.650
40.00	-21.83	-12.33	0.00	-288.8	0.00	288.79	1,205.19	286.95	572.03	515.49	13.15	-3.04	0.580
45.00	-21.26	-12.25	0.00	-227.1	0.00	227.13	1,158.37	275.80	528.48	475.94	16.5	-3.34	0.498
48.00	-17.76	-11.03	0.00	-190.4	0.00	190.38	2,198.76	531.96	1,451.12	1,150.80	18.65	-3.51	0.174
48.00	-17.76	-11.03	0.00	-190.4	0.00	190.38	1,130.29	269.12	503.17	452.97	18.65	-3.51	0.438
50.00	-17.27	-10.94	0.00	-168.3	0.00	168.32	2,198.76	531.96	1,451.12	1,150.80	20.14	-3.61	0.155
50.00	-17.27	-10.94	0.00	-168.3	0.00	168.32	728.28	218.49	376.97	379.17	20.14	-3.61	0.470
52.00	-14.23	-7.64	0.00	-146.0	0.00	145.96	728.28	218.49	376.97	379.17	21.66	-3.63	0.406
55.00	-13.93	-7.56	0.00	-123.0	0.00	123.05	728.28	218.49	376.97	379.17	23.97	-3.73	0.345
60.00	-13.43	-7.45	0.00	-85.2	0.00	85.24	728.28	218.49	376.97	379.17	27.95	-3.87	0.244
64.00	-9.85	-6.36	0.00	-55.4	0.00	55.44	728.28	218.49	376.97	379.17	31.22	-3.94	0.161
65.00	-8.41	-4.82	0.00	-48.9	0.00	48.92	728.28	218.49	376.97	379.17	32.05	-3.95	0.141
65.10	-7.78	-3.35	0.00	-48.4	0.00	48.44	728.28	218.49	376.97	379.17	32.13	-3.95	0.139
68.00	-7.51	-3.28	0.00	-38.7	0.00	38.72	728.28	218.49	376.97	379.17	34.54	-3.98	0.113
68.00	-7.51	-3.28	0.00	-38.7	0.00	38.72	654.06	196.22	304.05	305.83	34.54	-3.98	0.138
70.00	-7.34	-3.20	0.00	-32.2	0.00	32.15	654.06	196.22	304.05	305.83	36.21	-4	0.117
75.00	-6.91	-3.07	0.00	-16.2	0.00	16.16	654.06	196.22	304.05	305.83	40.42	-4.04	0.064
80.00	-0.67	-0.14	0.00	-0.8	0.00	0.83	654.06	196.22	304.05	305.83	44.67	-4.06	0.004
85.00	-0.25	-0.04	0.00	-0.1	0.00	0.13	654.06	196.22	304.05	305.83	48.91	-4.06	0.001
88.00	0.00	-0.03	0.00	0.0	0.00	0.00	654.06	196.22	304.05	305.83	51.46	-4.06	0.000

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

Load Case: 0.9D + 1.0W Normal	100 mph wind with no ice	23 Iterations
Gust Response Factor:	1.10	
Dead load Factor:	0.90	
Wind Load Factor:	1.00	

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-20.44	-12.66	0.00	-775.0	0.00	775.01	1,579.69	376.12	982.55	888.71	0	0	0.886
5.00	-19.86	-12.59	0.00	-711.7	0.00	711.72	1,532.88	364.97	925.20	836.53	0.21	-0.39	0.865
10.00	-19.30	-12.51	0.00	-648.8	0.00	648.78	1,486.07	353.83	869.57	785.93	0.82	-0.78	0.840
15.00	-18.74	-12.44	0.00	-586.2	0.00	586.22	1,439.25	342.68	815.67	736.91	1.84	-1.16	0.810
20.00	-18.21	-12.36	0.00	-524.0	0.00	524.02	1,392.44	331.53	763.50	689.47	3.27	-1.55	0.775
25.00	-17.69	-12.28	0.00	-462.2	0.00	462.21	1,345.63	320.39	713.04	643.61	5.09	-1.92	0.733
30.00	-17.19	-12.20	0.00	-400.8	0.00	400.80	1,298.81	309.24	664.32	599.33	7.3	-2.29	0.684
35.00	-16.70	-12.10	0.00	-339.8	0.00	339.82	1,252.00	298.10	617.31	556.62	9.88	-2.63	0.625
40.00	-16.24	-11.99	0.00	-279.3	0.00	279.31	1,205.19	286.95	572.03	515.49	12.82	-2.96	0.557
45.00	-15.80	-11.89	0.00	-219.3	0.00	219.34	1,158.37	275.80	528.48	475.94	16.08	-3.25	0.476
48.00	-13.18	-10.72	0.00	-183.7	0.00	183.66	2,198.76	531.96	1,451.12	1,150.80	18.17	-3.41	0.166
48.00	-13.18	-10.72	0.00	-183.7	0.00	183.66	1,130.29	269.12	503.17	452.97	18.17	-3.41	0.419
50.00	-12.81	-10.63	0.00	-162.2	0.00	162.21	2,198.76	531.96	1,451.12	1,150.80	19.62	-3.51	0.147
50.00	-12.81	-10.63	0.00	-162.2	0.00	162.21	728.28	218.49	376.97	379.17	19.62	-3.51	0.448
52.00	-10.58	-7.38	0.00	-140.5	0.00	140.47	728.28	218.49	376.97	379.17	21.09	-3.53	0.386
55.00	-10.35	-7.30	0.00	-118.3	0.00	118.32	728.28	218.49	376.97	379.17	23.34	-3.63	0.327
60.00	-9.97	-7.19	0.00	-81.8	0.00	81.80	728.28	218.49	376.97	379.17	27.21	-3.75	0.231
64.00	-7.31	-6.17	0.00	-53.0	0.00	53.03	728.28	218.49	376.97	379.17	30.38	-3.82	0.151
65.00	-6.25	-4.66	0.00	-46.7	0.00	46.70	728.28	218.49	376.97	379.17	31.19	-3.84	0.132
65.10	-5.79	-3.20	0.00	-46.2	0.00	46.23	728.28	218.49	376.97	379.17	31.27	-3.84	0.130
68.00	-5.59	-3.14	0.00	-37.0	0.00	36.95	728.28	218.49	376.97	379.17	33.6	-3.87	0.105
68.00	-5.59	-3.14	0.00	-37.0	0.00	36.95	654.06	196.22	304.05	305.83	33.6	-3.87	0.130
70.00	-5.46	-3.06	0.00	-30.7	0.00	30.67	654.06	196.22	304.05	305.83	35.23	-3.89	0.109
75.00	-5.15	-2.93	0.00	-15.4	0.00	15.39	654.06	196.22	304.05	305.83	39.32	-3.93	0.058
80.00	-0.50	-0.13	0.00	-0.8	0.00	0.75	654.06	196.22	304.05	305.83	43.43	-3.94	0.003
85.00	-0.19	-0.04	0.00	-0.1	0.00	0.11	654.06	196.22	304.05	305.83	47.56	-3.94	0.001
88.00	0.00	-0.03	0.00	0.0	0.00	0.00	654.06	196.22	304.05	305.83	50.03	-3.94	0.000

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

Load Case: 1.2D + 1.0Di + 1.0Wi Normal			40 mph wind with 1" radial ice			23 Iterations		
Gust Response Factor:	1.10		Ice Dead Load Factor	1.00				
Dead load Factor:	1.20					Ice Importance Factor	1.00	
Wind Load Factor:	1.00							

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-39.14	-2.91	0.00	-192.9	0.00	192.92	1,579.69	376.12	982.55	888.71	0	0	0.242
5.00	-38.33	-2.93	0.00	-178.4	0.00	178.36	1,532.88	364.97	925.20	836.53	0.05	-0.1	0.238
10.00	-37.53	-2.95	0.00	-163.7	0.00	163.69	1,486.07	353.83	869.57	785.93	0.21	-0.19	0.234
15.00	-36.74	-2.97	0.00	-148.9	0.00	148.93	1,439.25	342.68	815.67	736.91	0.46	-0.29	0.228
20.00	-35.97	-2.99	0.00	-134.1	0.00	134.07	1,392.44	331.53	763.50	689.47	0.82	-0.39	0.220
25.00	-35.21	-3.00	0.00	-119.1	0.00	119.14	1,345.63	320.39	713.04	643.61	1.28	-0.49	0.211
30.00	-34.48	-3.01	0.00	-104.1	0.00	104.14	1,298.81	309.24	664.32	599.33	1.84	-0.58	0.200
35.00	-33.76	-3.02	0.00	-89.1	0.00	89.09	1,252.00	298.10	617.31	556.62	2.5	-0.67	0.187
40.00	-33.07	-3.02	0.00	-74.0	0.00	74.02	1,205.19	286.95	572.03	515.49	3.25	-0.76	0.171
45.00	-32.39	-3.01	0.00	-58.9	0.00	58.94	1,158.37	275.80	528.48	475.94	4.08	-0.84	0.152
48.00	-27.94	-2.71	0.00	-49.9	0.00	49.91	2,198.76	531.96	1,451.12	1,150.80	4.62	-0.88	0.056
48.00	-27.94	-2.71	0.00	-49.9	0.00	49.91	1,130.29	269.12	503.17	452.97	4.62	-0.88	0.135
50.00	-27.37	-2.69	0.00	-44.5	0.00	44.50	2,198.76	531.96	1,451.12	1,150.80	5	-0.91	0.051
50.00	-27.37	-2.69	0.00	-44.5	0.00	44.50	728.28	218.49	376.97	379.17	5	-0.91	0.155
52.00	-22.25	-1.95	0.00	-39.0	0.00	39.03	728.28	218.49	376.97	379.17	5.38	-0.91	0.134
55.00	-21.88	-1.93	0.00	-33.2	0.00	33.18	728.28	218.49	376.97	379.17	5.96	-0.94	0.118
60.00	-21.25	-1.89	0.00	-23.5	0.00	23.54	728.28	218.49	376.97	379.17	6.96	-0.97	0.091
64.00	-16.66	-1.60	0.00	-16.0	0.00	15.98	728.28	218.49	376.97	379.17	7.79	-0.99	0.065
65.00	-13.72	-1.28	0.00	-14.4	0.00	14.35	728.28	218.49	376.97	379.17	7.99	-1	0.057
65.10	-11.76	-0.99	0.00	-14.2	0.00	14.22	728.28	218.49	376.97	379.17	8.02	-1	0.054
68.00	-11.40	-0.96	0.00	-11.4	0.00	11.36	728.28	218.49	376.97	379.17	8.63	-1.01	0.046
68.00	-11.40	-0.96	0.00	-11.4	0.00	11.36	654.06	196.22	304.05	305.83	8.63	-1.01	0.055
70.00	-11.18	-0.93	0.00	-9.4	0.00	9.43	654.06	196.22	304.05	305.83	9.05	-1.01	0.048
75.00	-10.62	-0.89	0.00	-4.8	0.00	4.77	654.06	196.22	304.05	305.83	10.12	-1.03	0.032
80.00	-0.88	-0.06	0.00	-0.3	0.00	0.33	654.06	196.22	304.05	305.83	11.19	-1.03	0.002
85.00	-0.33	-0.02	0.00	-0.0	0.00	0.05	654.06	196.22	304.05	305.83	12.27	-1.03	0.001
88.00	0.00	-0.01	0.00	0.0	0.00	0.00	654.06	196.22	304.05	305.83	12.92	-1.03	0.000

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

Load Case: 1.0D + 1.0W Service Normal	60 mph Wind with No Ice	22 Iterations
Gust Response Factor:	1.10	
Dead load Factor:	1.00	
Wind Load Factor:	1.00	

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-22.76	-4.08	0.00	-251.6	0.00	251.58	1,579.69	376.12	982.55	888.71	0	0	0.298
5.00	-22.20	-4.06	0.00	-231.2	0.00	231.18	1,532.88	364.97	925.20	836.53	0.07	-0.13	0.291
10.00	-21.65	-4.04	0.00	-210.9	0.00	210.87	1,486.07	353.83	869.57	785.93	0.27	-0.25	0.283
15.00	-21.12	-4.02	0.00	-190.7	0.00	190.66	1,439.25	342.68	815.67	736.91	0.6	-0.38	0.274
20.00	-20.60	-4.01	0.00	-170.5	0.00	170.53	1,392.44	331.53	763.50	689.47	1.06	-0.5	0.262
25.00	-20.10	-3.98	0.00	-150.5	0.00	150.51	1,345.63	320.39	713.04	643.61	1.65	-0.62	0.249
30.00	-19.61	-3.96	0.00	-130.6	0.00	130.59	1,298.81	309.24	664.32	599.33	2.37	-0.74	0.233
35.00	-19.13	-3.93	0.00	-110.8	0.00	110.78	1,252.00	298.10	617.31	556.62	3.21	-0.86	0.214
40.00	-18.67	-3.90	0.00	-91.1	0.00	91.11	1,205.19	286.95	572.03	515.49	4.17	-0.96	0.192
45.00	-18.23	-3.87	0.00	-71.6	0.00	71.59	1,158.37	275.80	528.48	475.94	5.23	-1.06	0.166
48.00	-15.28	-3.49	0.00	-60.0	0.00	59.97	2,198.76	531.96	1,451.12	1,150.80	5.91	-1.11	0.059
48.00	-15.28	-3.49	0.00	-60.0	0.00	59.97	1,130.29	269.12	503.17	452.97	5.91	-1.11	0.146
50.00	-14.87	-3.46	0.00	-53.0	0.00	52.98	2,198.76	531.96	1,451.12	1,150.80	6.38	-1.14	0.053
50.00	-14.87	-3.46	0.00	-53.0	0.00	52.98	728.28	218.49	376.97	379.17	6.38	-1.14	0.160
52.00	-12.20	-2.41	0.00	-45.9	0.00	45.91	728.28	218.49	376.97	379.17	6.86	-1.15	0.138
55.00	-11.95	-2.38	0.00	-38.7	0.00	38.68	728.28	218.49	376.97	379.17	7.6	-1.18	0.119
60.00	-11.54	-2.35	0.00	-26.8	0.00	26.76	728.28	218.49	376.97	379.17	8.86	-1.22	0.087
64.00	-8.51	-2.01	0.00	-17.4	0.00	17.37	728.28	218.49	376.97	379.17	9.89	-1.25	0.058
65.00	-7.24	-1.52	0.00	-15.3	0.00	15.30	728.28	218.49	376.97	379.17	10.15	-1.25	0.050
65.10	-6.64	-1.05	0.00	-15.2	0.00	15.15	728.28	218.49	376.97	379.17	10.18	-1.25	0.049
68.00	-6.41	-1.03	0.00	-12.1	0.00	12.11	728.28	218.49	376.97	379.17	10.94	-1.26	0.041
68.00	-6.41	-1.03	0.00	-12.1	0.00	12.11	654.06	196.22	304.05	305.83	10.94	-1.26	0.049
70.00	-6.27	-1.00	0.00	-10.0	0.00	10.05	654.06	196.22	304.05	305.83	11.47	-1.27	0.042
75.00	-5.91	-0.96	0.00	-5.0	0.00	5.05	654.06	196.22	304.05	305.83	12.8	-1.28	0.026
80.00	-0.56	-0.04	0.00	-0.2	0.00	0.25	654.06	196.22	304.05	305.83	14.14	-1.28	0.002
85.00	-0.21	-0.01	0.00	-0.0	0.00	0.04	654.06	196.22	304.05	305.83	15.49	-1.28	0.000
88.00	0.00	-0.01	0.00	0.0	0.00	0.00	654.06	196.22	304.05	305.83	16.29	-1.28	0.000

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period (S_S):	0.413
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.156
Long-Period Transition Period (T_L – Seconds):	16
Importance Factor (I_e):	1.000
Site Coefficient F_a :	1.470
Site Coefficient F_v :	2.288
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.405
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.238
Seismic Response Coefficient (C_s):	0.067
Upper Limit C_s :	0.067
Lower Limit C_s :	0.030
Period based on Rayleigh Method (sec):	2.370
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.930
Total Unfactored Dead Load:	22.760 k
Seismic Base Shear (E):	1.520 k

1.2D + 1.0Ev + 1.0Eh Normal

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
23	86.5	212	1,185	0.019	29	272
22	82.5	353	1,802	0.029	44	453
21	77.5	359	1,622	0.026	40	460
20	72.5	359	1,426	0.023	35	460
19	69	144	518	0.008	13	184
18	66.55	231	779	0.012	19	296
17	65.05	8	26	0.000	1	10
16	64.5	82	261	0.004	6	105
15	62	329	966	0.016	24	421
14	57.5	411	1,044	0.017	26	527
13	53.5	247	545	0.009	13	316
12	51	191	385	0.006	9	245
11	49	407	757	0.012	19	521
10	46.5	257	433	0.007	11	329
9	42.5	440	622	0.010	15	563
8	37.5	454	504	0.008	12	581
7	32.5	468	394	0.006	10	599
6	27.5	482	294	0.005	7	617
5	22.5	496	205	0.003	5	635
4	17.5	510	130	0.002	3	653
3	12.5	524	69	0.001	2	671
2	7.5	538	27	0.000	1	689
1	2.5	552	3	0.000	0	707
Commscope HELIAX FiberFeed 12 RRU Pendant Connect	80	40	192	0.003	5	51
Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA	80	251	1,209	0.019	30	322
Nokia AHFIG	80	238	1,145	0.018	28	305
Nokia AEHC	80	311	1,494	0.024	37	398
Commscope FFVV-65C-R3-V1	80	374	1,797	0.029	44	479
Generic Square Platform with Handrails	80	3,790	18,219	0.292	445	4,855
Generic 96" x 24" Panel	65.1	600	1,936	0.031	47	769
Nokia AirScale RRH 4T4R B5 160W AHCA	65	106	341	0.006	8	136
Nokia RRH 4T4R B30 100W AHNA (34.2 lbs)	65	103	330	0.005	8	131

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
Nokia Airscale Dual RRH 4T4R B12/B14 320W AHLBA	65	232	745	0.012	18	297
Nokia AirScale Dual RRH 4T4R B25/66 320W AHFIB	65	265	851	0.014	21	339
Raycap DC9-48-60-24-8C-EV	65	32	103	0.002	3	41
CellMax CMA-UBTULBULBHH/6516/17/21/21	65	468	1,505	0.024	37	599
Generic Mount Reinforcement	64	200	624	0.010	15	256
Generic Mount Reinforcement	48	200	358	0.006	9	256
Generic Round Platform with Handrails	64	2,500	7,804	0.125	191	3,202
Raycap RxxDC-3315-PF-48	52	64	134	0.002	3	82
Ericsson RRUS 32 B66	52	159	332	0.005	8	204
Ericsson RRUS 11 B13	52	304	635	0.010	16	390
Comsat PCSA060-19-x	52	165	345	0.006	8	211
Commscope SBNHH-1D45A	52	202	422	0.007	10	259
Andrew SBNHH-1D45C	52	159	333	0.005	8	204
VZW Unused Reserve (15365.52 sqin)	52	1,446	3,022	0.048	74	1,853
Round Platform with Flat Handrails	48	2,500	4,473	0.072	109	3,202
		22,763	62,345	1.000	1,524	29,158

0.9D - 1.0Ev + 1.0Eh Normal**Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
23	86.5	212	1,185	0.019	29	174
22	82.5	353	1,802	0.029	44	289
21	77.5	359	1,622	0.026	40	294
20	72.5	359	1,426	0.023	35	294
19	69	144	518	0.008	13	118
18	66.55	231	779	0.012	19	189
17	65.05	8	26	0.000	1	7
16	64.5	82	261	0.004	6	67
15	62	329	966	0.016	24	269
14	57.5	411	1,044	0.017	26	337
13	53.5	247	545	0.009	13	202
12	51	191	385	0.006	9	157
11	49	407	757	0.012	19	333
10	46.5	257	433	0.007	11	211
9	42.5	440	622	0.010	15	360
8	37.5	454	504	0.008	12	372
7	32.5	468	394	0.006	10	383
6	27.5	482	294	0.005	7	395
5	22.5	496	205	0.003	5	406
4	17.5	510	130	0.002	3	418
3	12.5	524	69	0.001	2	429
2	7.5	538	27	0.000	1	441
1	2.5	552	3	0.000	0	452
Commscope HELIAX FiberFeed 12 RRU Pendant Connect	80	40	192	0.003	5	33
Nokia AirScale Dual RRH 4T4R B12/71 240W AHLOA	80	251	1,209	0.019	30	206
Nokia AHFIG	80	238	1,145	0.018	28	195
Nokia AEHC	80	311	1,494	0.024	37	255
Commscope FFV-65C-R3-V1	80	374	1,797	0.029	44	306
Generic Square Platform with Handrails	80	3,790	18,219	0.292	445	3,104
Generic 96" x 24" Panel	65.1	600	1,936	0.031	47	491
Nokia AirScale RRH 4T4R B5 160W AHCA	65	106	341	0.006	8	87
Nokia RRH 4T4R B30 100W AHNA (34.2 lbs)	65	103	330	0.005	8	84
Nokia Airscale Dual RRH 4T4R B12/B14 320W AHLBA	65	232	745	0.012	18	190
Nokia AirScale Dual RRH 4T4R B25/66 320W AHFIB	65	265	851	0.014	21	217
Raycap DC9-48-60-24-8C-EV	65	32	103	0.002	3	26
CellMax CMA-UBTULBULBHH/6516/17/21/21	65	468	1,505	0.024	37	383

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
Generic Mount Reinforcement	64	200	624	0.010	15	164
Generic Mount Reinforcement	48	200	358	0.006	9	164
Generic Round Platform with Handrails	64	2,500	7,804	0.125	191	2,048
Raycap RxDC-3315-PF-48	52	64	134	0.002	3	53
Ericsson RRUS 32 B66	52	159	332	0.005	8	130
Ericsson RRUS 11 B13	52	304	635	0.010	16	249
Comsat PCSA060-19-x	52	165	345	0.006	8	135
Commscope SBNHH-1D45A	52	202	422	0.007	10	165
Andrew SBNHH-1D45C	52	159	333	0.005	8	130
VZW Unused Reserve (15365.52 sqin)	52	1,446	3,022	0.048	74	1,185
Round Platform with Flat Handrails	48	2,500	4,473	0.072	109	2,048
		22,763	62,345	1.000	1,524	18,645

1.2D + 1.0Ev + 1.0Eh Normal

Seismic

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-28.45	-1.54	0.00	-112.46	0.00	112.46	1,579.69	376.12	983	888.71	0.00	0.00	0.15
5.00	-27.76	-1.56	0.00	-104.77	0.00	104.77	1,532.88	364.97	925	836.53	0.03	-0.06	0.14
10.00	-27.09	-1.59	0.00	-96.95	0.00	96.95	1,486.07	353.83	870	785.93	0.12	-0.11	0.14
15.00	-26.43	-1.61	0.00	-89.00	0.00	89.00	1,439.25	342.68	816	736.91	0.27	-0.17	0.14
20.00	-25.79	-1.63	0.00	-80.94	0.00	80.94	1,392.44	331.53	764	689.47	0.48	-0.23	0.14
25.00	-25.18	-1.65	0.00	-72.79	0.00	72.79	1,345.63	320.39	713	643.61	0.76	-0.29	0.13
30.00	-24.57	-1.66	0.00	-64.56	0.00	64.56	1,298.81	309.24	664	599.33	1.09	-0.35	0.13
35.00	-23.99	-1.67	0.00	-56.27	0.00	56.27	1,252.00	298.10	617	556.62	1.49	-0.40	0.12
40.00	-23.43	-1.67	0.00	-47.95	0.00	47.95	1,205.19	286.95	572	515.49	1.94	-0.46	0.11
45.00	-23.10	-1.67	0.00	-39.61	0.00	39.61	1,158.37	275.80	528	475.94	2.45	-0.51	0.10
48.00	-19.12	-1.51	0.00	-34.60	0.00	34.60	2,198.76	531.96	1,451	1,150.80	2.78	-0.54	0.04
48.00	-19.12	-1.51	0.00	-34.60	0.00	34.60	1,130.29	269.12	503	452.97	2.78	-0.54	0.09
50.00	-18.87	-1.50	0.00	-31.59	0.00	31.59	728.28	218.49	377	379.17	3.01	-0.56	0.11
50.00	-18.87	-1.50	0.00	-31.59	0.00	31.59	2,198.76	531.96	1,451	1,150.80	3.01	-0.56	0.04
52.00	-15.35	-1.32	0.00	-28.59	0.00	28.59	728.28	218.49	377	379.17	3.24	-0.56	0.10
55.00	-14.83	-1.30	0.00	-24.62	0.00	24.62	728.28	218.49	377	379.17	3.60	-0.58	0.09
60.00	-14.41	-1.28	0.00	-18.12	0.00	18.12	728.28	218.49	377	379.17	4.23	-0.61	0.07
64.00	-10.84	-1.03	0.00	-13.01	0.00	13.01	728.28	218.49	377	379.17	4.75	-0.63	0.05
65.00	-9.29	-0.92	0.00	-11.98	0.00	11.98	728.28	218.49	377	379.17	4.88	-0.63	0.04
65.10	-8.23	-0.84	0.00	-11.89	0.00	11.89	728.28	218.49	377	379.17	4.89	-0.63	0.04
68.00	-8.04	-0.83	0.00	-9.45	0.00	9.45	654.06	196.22	304	305.83	5.28	-0.64	0.04
68.00	-8.04	-0.83	0.00	-9.45	0.00	9.45	728.28	218.49	377	379.17	5.28	-0.64	0.04
70.00	-7.59	-0.79	0.00	-7.80	0.00	7.80	654.06	196.22	304	305.83	5.54	-0.64	0.04
75.00	-7.13	-0.74	0.00	-3.87	0.00	3.87	654.06	196.22	304	305.83	6.22	-0.65	0.02
80.00	-0.27	-0.03	0.00	-0.16	0.00	0.16	654.06	196.22	304	305.83	6.91	-0.66	0.00
85.00	0.00	0.00	0.00	0.00	0.00	0.00	654.06	196.22	304	305.83	7.59	-0.66	0.00
88.00	0.00	0.00	0.00	0.00	0.00	0.00	654.06	196.22	304	305.83	8.01	-0.66	0.00

0.9D - 1.0Ev + 1.0Eh Normal

Seismic (Reduced DL)

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-18.19	-1.53	0.00	-108.70	0.00	108.70	1,579.69	376.12	983	888.71	0.00	0.00	0.13
5.00	-17.75	-1.55	0.00	-101.04	0.00	101.04	1,532.88	364.97	925	836.53	0.03	-0.05	0.13
10.00	-17.32	-1.56	0.00	-93.30	0.00	93.30	1,486.07	353.83	870	785.93	0.12	-0.11	0.13
15.00	-16.90	-1.58	0.00	-85.48	0.00	85.48	1,439.25	342.68	816	736.91	0.26	-0.17	0.13
20.00	-16.49	-1.59	0.00	-77.60	0.00	77.60	1,392.44	331.53	764	689.47	0.47	-0.22	0.12
25.00	-16.10	-1.59	0.00	-69.68	0.00	69.68	1,345.63	320.39	713	643.61	0.73	-0.28	0.12
30.00	-15.71	-1.60	0.00	-61.72	0.00	61.72	1,298.81	309.24	664	599.33	1.05	-0.33	0.12
35.00	-15.34	-1.60	0.00	-53.74	0.00	53.74	1,252.00	298.10	617	556.62	1.43	-0.39	0.11
40.00	-14.98	-1.59	0.00	-45.76	0.00	45.76	1,205.19	286.95	572	515.49	1.86	-0.44	0.10

ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 ENG NO: 14103450_C3_04

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
45.00	-14.76	-1.59	0.00	-37.81	0.00	37.81	1,158.37	275.80	528	475.94	2.35	-0.49	0.09
48.00	-12.22	-1.43	0.00	-33.04	0.00	33.04	2,198.76	531.96	1,451	1,150.80	2.67	-0.52	0.03
48.00	-12.22	-1.43	0.00	-33.04	0.00	33.04	1,130.29	269.12	503	452.97	2.67	-0.52	0.08
50.00	-12.06	-1.43	0.00	-30.18	0.00	30.18	728.28	218.49	377	379.17	2.89	-0.54	0.10
50.00	-12.06	-1.43	0.00	-30.18	0.00	30.18	2,198.76	531.96	1,451	1,150.80	2.89	-0.54	0.03
52.00	-9.81	-1.27	0.00	-27.33	0.00	27.33	728.28	218.49	377	379.17	3.12	-0.54	0.09
55.00	-9.48	-1.24	0.00	-23.53	0.00	23.53	728.28	218.49	377	379.17	3.46	-0.56	0.08
60.00	-9.21	-1.22	0.00	-17.33	0.00	17.33	728.28	218.49	377	379.17	4.06	-0.58	0.06
64.00	-6.93	-0.98	0.00	-12.46	0.00	12.46	728.28	218.49	377	379.17	4.56	-0.60	0.04
65.00	-5.94	-0.88	0.00	-11.47	0.00	11.47	728.28	218.49	377	379.17	4.68	-0.60	0.04
65.10	-5.26	-0.80	0.00	-11.39	0.00	11.39	728.28	218.49	377	379.17	4.69	-0.60	0.04
68.00	-5.14	-0.79	0.00	-9.06	0.00	9.06	654.06	196.22	304	305.83	5.06	-0.61	0.04
68.00	-5.14	-0.79	0.00	-9.06	0.00	9.06	728.28	218.49	377	379.17	5.06	-0.61	0.03
70.00	-4.85	-0.75	0.00	-7.47	0.00	7.47	654.06	196.22	304	305.83	5.32	-0.61	0.03
75.00	-4.55	-0.71	0.00	-3.71	0.00	3.71	654.06	196.22	304	305.83	5.97	-0.62	0.02
80.00	-0.17	-0.03	0.00	-0.15	0.00	0.15	654.06	196.22	304	305.83	6.63	-0.63	0.00
85.00	0.00	0.00	0.00	0.00	0.00	0.00	654.06	196.22	304	305.83	7.28	-0.63	0.00
88.00	0.00	0.00	0.00	0.00	0.00	0.00	654.06	196.22	304	305.83	7.68	-0.63	0.00

ASSET: 410832, TRI UNDERWOOD WA
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14103450_C3_04

ANALYSIS SUMMARY

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W Normal	12.68	0.00	27.27	0.00	0.00	791.63	0.00	0.91
0.9D + 1.0W Normal	12.66	0.00	20.44	0.00	0.00	775.01	0.00	0.89
1.2D + 1.0Di + 1.0Wi Normal	3.02	0.00	39.14	0.00	0.00	192.92	0.00	0.24
1.2D + 1.0Ev + 1.0Eh Normal	1.67	0.00	28.45	0.00	0.00	112.46	0.00	0.14
0.9D - 1.0Ev + 1.0Eh Normal	1.60	0.00	18.19	0.00	0.00	108.70	0.00	0.13
1.0D + 1.0W Service Normal	4.08	0.00	22.76	0.00	0.00	251.58	0.00	0.3

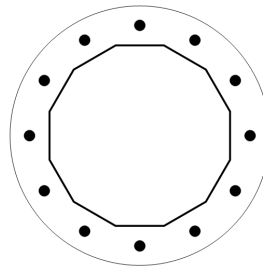
ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: OAA776838

BASE PLATE ANALYSIS @ 0 FT

PLATE PARAMETERS (ID# 18560)

Diameter: 40 in
 Shape: Round
 Thickness: 1.5 in
 Grade: A572-50
 Yield Strength: 50 ksi
 Tensile Strength: 65 ksi
 Rod Detail Type: d
 Clear Distance: 2 in
 Base Weld Size: 0.125 in
 Orientation Offset: 15 °
 Analysis Type: Plastic
 Neutral Axis: 136 °



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	Fy (ksi)	Fu (ksi)	Spacing (in)	Offset (°)
Original [ID# 19029]	Radial	12	1.75	34	A615-75	75	100	-	-

ANCHOR ROD GEOMETRY AND APPLIED LOADS --- ORIGINAL (12) 1.75"Ø [ID 19029]

Position	Radians	X (in)	Y (in)	Moment Arm (in)	Inertia (in ⁴)	Axial Load (k)	Shear Load (k)
1	0.524	14.72	8.50	-15.350	447.851	-72.45	0.45
2	1.047	8.50	14.72	-15.494	456.303	-72.45	0.40
3	1.571	0.00	17.00	-11.487	250.921	-72.45	1.14
4	2.094	-8.50	14.72	-4.402	37.087	-72.45	1.58
5	2.618	-14.72	8.50	3.863	28.635	81.54	1.59
6	3.142	-17.00	0.00	11.093	234.017	81.54	1.18
7	3.665	-14.72	-8.50	15.350	447.851	81.54	0.45
8	4.189	-8.50	-14.72	15.494	456.303	81.54	0.40
9	4.712	0.00	-17.00	11.487	250.921	81.54	1.14
10	5.236	8.50	-14.72	4.402	37.087	81.54	1.58
11	5.760	14.72	-8.50	-3.863	28.635	-72.45	1.59
12	6.283	17.00	0.00	-11.093	234.017	-72.45	1.18

REACTION DISTRIBUTION

Component	ID	Moment Mu (k-ft)	Axial Load Pu (k)	Shear Vu (k)	Moment Factor
Pole	28"Ø x 0.3125" (12 Sides)	791.6	27.27	12.68	1.000
Bolt Group	Original (12) 1.75"Ø	791.6	-	12.68	1.000
TOTALS		791.63	27.27	12.68	

COMPONENT PROPERTIES						
Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	28"Ø x 0.3125" (12 Sides)	26.8727	-	-	2575.95	-
Bolt Group	Original (12) 1.75"Ø	2.4053	1.8995	0.2871	2909.63	5.0

EXTERNAL BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES			PLATE PROPERTIES		
Flat-to-Flat Diameter:	28.12	in	Neutral Axis:	136	°
Point-to-Point Diameter:	29.12	in	Bend Line Lower Limit:	3.359	rad
Flat Width:	7.536	in	Bend Line Upper Limit:	4.495	rad
Flat Radians:	0.524	rad			

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in ³)	Applied Moment Mu (k-in)	Moment Capacity ϕMn (k-in)	Ratio
Flat	23.518	0.00	13.229	266.3	595.3	0.447
Corner	22.278	0.00	12.531	169.2	563.9	0.300
Circumferential	28.594	0.00	16.084	276.2	723.8	0.382

PLASTIC ANCHOR ROD ANALYSIS						
Class	Group Quantity	Rod Diameter (in)	Applied Axial Load Pu (k)	Applied Shear Load Vu (k)	Compressive Capacity ϕPn (k)	Ratio
Original	12	1.75	81.5	1.6	142.5	0.595

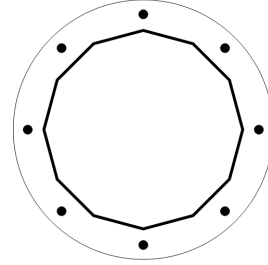
ASSET: 410832, TRI UNDERWOOD WA
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: OAA776838

LOWER FLANGE PLATE ANALYSIS @ 48 FT

PLATE PARAMETERS (ID# 18558)

Diameter: 27 in
 Shape: Round
 Thickness: 1 in
 Grade: A36
 Yield Strength: 36 ksi
 Tensile Strength: 58 ksi
 Pole Weld Size: 0.125 in
 Orientation Offset: - °
 Analysis Type: Plastic
 Neutral Axis: 90 °



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	Fy (ksi)	Fu (ksi)	Spacing (in)	Offset (°)
Original [ID# 19030]	Radial	8	1	24	A490	130	150	-	-

FLANGE BOLT GEOMETRY AND APPLIED LOADS --- ORIGINAL (8) 1"Ø [ID 19030]

Position	Radians	X (in)	Y (in)	Moment Arm (in)	Inertia (in ⁴)	Axial Load (k)	Shear Load (k)
1	0.785	8.48	8.48	-8.043	39.218	-37.16	1.62
2	1.571	0.00	12.00	0.000	0.029	46.04	2.28
3	2.356	-8.48	8.48	8.043	39.218	46.04	1.62
4	3.142	-12.00	0.00	11.375	78.407	46.04	0.00
5	3.927	-8.48	-8.48	8.043	39.218	46.04	1.62
6	4.712	0.00	-12.00	0.000	0.029	46.04	2.28
7	5.498	8.48	-8.48	-8.043	39.218	-37.16	1.62
8	6.283	12.00	0.00	-11.375	78.407	-37.16	0.00

REACTION DISTRIBUTION

Component	ID	Moment Mu (k-ft)	Axial Load Pu (k)	Shear Vu (k)	Moment Factor
Pole	20.1232"Ø x 0.3125" (12 Sides)	190.4	17.76	11.03	1.000
Bolt Group	Original (8) 1"Ø	190.4	-	11.03	1.000
TOTALS		190.38	17.76	11.03	

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	20.1232"Ø x 0.3125" (12 Sides)	19.2277	-	-	943.90	-
Bolt Group	Original (8) 1"Ø	0.7854	0.6057	0.0292	313.74	8.0

EXTERNAL LOWER FLANGE PLATE BEND LINE ANALYSIS @ 48 FT

POLE PROPERTIES			PLATE PROPERTIES		
Flat-to-Flat Diameter:	20.25	in	Neutral Axis:	90	°
Point-to-Point Diameter:	20.96	in	Bend Line Lower Limit:	2.551	rad
Flat Width:	5.425	in	Bend Line Upper Limit:	3.732	rad
Flat Radians:	0.524	rad			

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in ³)	Applied Moment Mu (k-in)	Moment Capacity ϕMn (k-in)	Ratio
Flat	15.623	0.00	3.906	65.5	126.5	0.518
Corner	14.651	0.00	3.663	46.8	118.7	0.395
Circumferential	19.944	0.00	4.986	46.8	161.5	0.290

PLASTIC FLANGE BOLT ANALYSIS

Class	Group	Quantity	Bolt Diameter (in)	Applied Axial Load Pu (k)	Applied Shear Load Vu (k)	Compressive Capacity ϕPn (k)	Ratio
Original		8	1	46.0	2.3	68.1	0.676

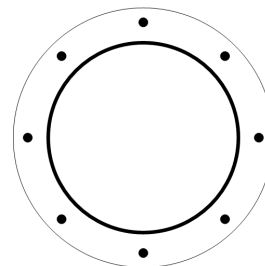
ASSET: 410832, TRI UNDERWOOD WA
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
ENG NO: OAA776838

UPPER FLANGE PLATE ANALYSIS @ 50 FT

PLATE PARAMETERS (ID# 18639)

Diameter: 27 in
Shape: Round
Thickness: 1.5 in
Grade: A572-50
Yield Strength: 50 ksi
Tensile Strength: 65 ksi
Pole Weld Size: 0.125 in
Orientation Offset: - °
Analysis Type: Plastic
Neutral Axis: 22 °



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	Fy (ksi)	Fu (ksi)	Spacing (in)	Offset (°)
Original [ID# 19109]	Radial	8	1	24	A490	130	150	-	-

FLANGE BOLT GEOMETRY AND APPLIED LOADS --- ORIGINAL (8) 1"Ø [ID 19109]

Position	Radians	X (in)	Y (in)	Moment Arm (in)	Inertia (in ⁴)	Axial Load (k)	Shear Load (k)
1	0.785	8.48	8.48	4.445	11.995	38.30	1.93
2	1.571	0.00	12.00	10.547	67.408	38.30	0.78
3	2.356	-8.48	8.48	10.471	66.441	38.30	0.82
4	3.142	-12.00	0.00	4.261	11.028	38.30	1.94
5	3.927	-8.48	-8.48	-4.445	11.995	-29.66	1.93
6	4.712	0.00	-12.00	-10.547	67.408	-29.66	0.78
7	5.498	8.48	-8.48	-10.471	66.441	-29.66	0.82
8	6.283	12.00	0.00	-4.261	11.028	-29.66	1.94

REACTION DISTRIBUTION

Component	ID	Moment Mu (k-ft)	Axial Load Pu (k)	Shear Vu (k)	Moment Factor
Pole	20"Ø x 0.375" (Round)	168.3	17.27	10.94	1.000
Bolt Group	Original (8) 1"Ø	168.3	-	10.94	1.000
TOTALS		168.32	17.27	10.94	

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	20"Ø x 0.375" (Round)	23.1199	-	-	1114.14	-
Bolt Group	Original (8) 1"Ø	0.7854	0.6057	0.0292	313.74	8.0

ASSET: 410832, TRI UNDERWOOD WA
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
ENG NO: OAA776838

EXTERNAL UPPER FLANGE PLATE BEND LINE ANALYSIS @ 50 FT**POLE PROPERTIES**

Flat-to-Flat Diameter: 20.12 in
Point-to-Point Diameter: 20.12 in
Flat Width: 0.176 in
Flat Radians: 0.017 rad

PLATE PROPERTIES

Neutral Axis: 22 °
Bend Line Lower Limit: 0.988 rad
Bend Line Upper Limit: 2.939 rad

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in ³)	Applied Moment Mu (k-in)	Moment Capacity φMn (k-in)	Ratio
Flat	15.782	0.00	8.877	38.5	399.5	0.096
Corner	15.782	0.00	8.877	38.5	399.5	0.096
Circumferential	27.514	0.00	15.476	113.2	696.4	0.163

PLASTIC FLANGE BOLT ANALYSIS

Class	Group	Quantity	Bolt Diameter (in)	Applied Axial Load Pu (k)	Applied Shear Load Vu (k)	Compressive Capacity φPn (k)	Ratio
Original		8	1	38.3	1.9	68.1	0.562

Monolithic Mat Foundation Analysis (ANSI/TIA-222-H)

Foundation & Tower Parameters

Ignore Mat Rebar?		N	
Ignore Pier Rebar?		N	
Foundation has Pier(s)?		Y	
Pier Shape		Square	
Pier Diameter	D	4	ft
Pier Height Above Ground	h	0.25	ft
Pier Length	l	3.75	ft
Mat Base Depth	$l+T-h$	6	ft
Mat Length	L	14	ft
Mat Width	W	14	ft
Mat Thickness	T	2.5	ft
Unit Weight of Concrete		150	pcf
Tower Eccentricity	ecc	0	ft
Tower Face Width	FW	1	ft
Tower Leg Count		1	

Soil Parameters

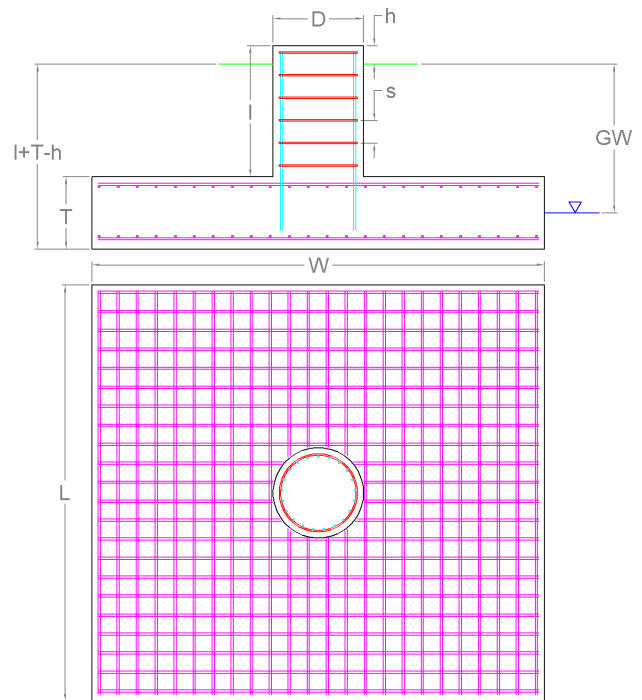
Water Table Depth [BGL]	GW	-	ft
Unit Weight of Soil		127	pcf
Unit Weight of Soil [Submerged]		64.6	pcf
Shear Friction Coefficient		0.42	
Ultimate Bearing Pressure		10,070	psf
Bearing Pressure Type		Gross	
Conical Failure Angle		34	°
Capacity Increase (Transient Loads)		1.00	
Soil Strength Reduction Factor, ϕ_s		0.75	
Dead Load Factor		1.2	

Soil Capacities

Design Moment, M_u	870.88	k-ft
Nominal Moment Capacity, $\phi_m M_n$	1,280.26	k-ft
$M_u / \phi_s M_n$	68.0%	
Net Bearing Pressure	2,822	k
Nominal Bearing Capacity, $\phi_b P_n$	7,552	k
Bearing Pressure Controlling Load Direction	Diagonal to Pad Edge	
$P_u / \phi_s P_n$	37.4%	
Ultimate Friction Resistance	77.8	k
Ultimate Passive Pressure Resistance	21.11	k
Nominal Shear Capacity, $\phi_s V_n$	74.18	k
$V_u / \phi_s V_n$	17.0%	

Reactions

Moment, M_u	791.63	k-ft
Shear, V_u	12.68	k
Axial, P_u	27.27	k
Uplift, T_u	0	k
Tower Weight	27.27	k
Tower Dead Load Factor	0.9	



Mat Reinforcement Parameters		
Concrete Compressive Strength, f'_c	4,000	psi
Mat Rebar Quantity [Lower]	15	
Mat Rebar Size # [Lower]	8	
Mat Single Rebar Area [Lower]	0.79	in ²
Mat Rebar Quantity [Upper]	15	
Mat Rebar Size # [Upper]	8	
Mat Single Rebar Area [Upper]	0.79	in ²
Mat Rebar Yield Strength, F_y	60	ksi
Mat Clear Cover	3	in
Bending Reduction Factor, ϕ_B	0.9	
Shear Reduction Factor, ϕ_V	0.75	
Compression Reduction Factor, ϕ_C	0.65	
Steel Elastic Modulus	29,000	ksi

Mat Reinforcement Capacities		
Compression Zone Factor, β_1	0.85	
Lower Reinforcement Spacing	11.54	in
Upper Reinforcement Spacing	11.54	in
One Way Design Shear, V_u	67.7	k
One Way Shear Capacity, ϕV_c	339.37	k
One Way Shear Controlling Load Direction	Diagonal to Pad Edge	
$V_u / \phi V_c$	19.9%	
Punching Design Shear Stress, v_u	25.53	psi
Punching Shear Capacity, $\phi_c V_n$	189.74	psi
$v_u / \phi_c V_n$	13.5%	
Moment Transfer Effective Flexural Width, ℓ	11.5	in
Neutral Axis Depth	1.31	In
Moment Transfer Flexural Capacity, $\phi M_{sc,f}$	14,070.1	k-in
$\gamma_f M_{sc} / \phi M_{sc,f}$	0.0%	
Flexure Due to Soil Pressure, M_u	379.7	k-ft
Lower Steel Mat Moment Capacity, ϕM_n	1,358.24	k-ft
Flexural Steel Controlling Load Direction	Parallel to Pad Edge	
$M_u / \phi M_n$	28.0%	
Flexure Due to Uplift, M_u	143.41	k-ft
Upper Steel Mat Moment Capacity, ϕM_n	1,358.24	k-ft
$M_u / \phi M_n$	10.6%	

Pier Reinforcement Parameters		
Concrete Compressive Strength (f'_c)	4,000	psi
Pier Rebar Quantity	15	
Pier Rebar Size #	10	
Pier Single Rebar Area	1.27	in ²
Pier Rebar Yield Strength (F_y)	60	ksi
Tie Rebar Size #	4	
Tie Rebar Area (Single)	0.2	in ²
Tie Rebar Spacing	12	in
Tie Rebar Yield Strength (F_y)	40	ksi
Rebar Cage Diameter	39.75	in

Pier Reinforcement Capacities		
Design Moment (M_u)	839.18	k-ft
Nominal Moment Capacity ($\phi_B M_n$)	1,454.84	k-ft
$M_u / \phi_B M_n$	57.7%	
Design Shear (V_u)	12.68	k
Nominal Shear Capacity ($\phi_V V_n$)	258.27	k
$V_u / \phi_V V_n$	4.9%	
Design Compression (P_u)	27.27	k
Nominal Compression Capacity ($\phi_P P_n$)	4,079.42	k
$P_u / \phi_P P_n$	0.7%	
Pier Reinforcement Ratio	0.001	-
$M_u / \phi_B M_n + T_u / \phi_T T_n$	57.7%	





NOTICE OF PUBLIC HEARING

PLAT MAP ON BACK

Proposal: Powder River Development, on behalf of T-Mobile, submitted a variance application to extend the height of an existing wireless communication facility by 20-feet, for a total height of 88-feet, located at 1311 W 4th Avenue. The Comprehensive Plan Land Use Designation for the site is Commercial, and the site is zoned Commercial, Community (CC). The file number is VAR-2022-0001.

Open Record Hearing: The City of Kennewick Hearing Examiner will conduct an open record hearing at 6:00 p.m. on 13 March 2023 at 210 W 6th Avenue, City Hall Council Chambers. The meeting will be conducted in a hybrid format, which allows in-person or virtual participation. To participate in the meeting virtually, use the link found at www.go2kennewick.com/244/Hearing-Examiner.

Submitting Written Comments

- The City asks all members of the public that would like to comment regarding the Public Hearing to fill out an online form at <https://www.go2kennewick.com/244/Hearing-Examiner> no later than 5:00 p.m. on Friday, March 10th to be included in the Hearing Examiner packet for the record.
- Interested parties may also submit written comments to P.O. Box 6108, Kennewick, WA 99336; or e-mail matt.halitsky@ci.kennewick.wa.us no later than 5:00 p.m. on Friday, March 3rd to be included in the Hearing Examiner packet for the record. Comments received after that date will be presented at the hearing.

Commenting at the Meeting

- If you wish to comment during the Public Hearing, please register at <https://www.go2kennewick.com/244/Hearing-Examiner>. Registrations must be received by 4:00 p.m. on Monday, March 13th.

Determination of Completeness: The application was determined complete for processing on 3 January 2023.

Project Permits Associated with this Proposal: Building Permit

Preliminary Determination of Regulations Used for Project Mitigation: Title 18 (Zoning), Title 4 (Administrative Procedures) of the Kennewick Municipal Code and the land use policies contained in the Kennewick Comprehensive Plan.

Estimated Date of Decision: Within 10 business days of the Hearing Date of 13 March 2023.

To Receive Notification of the Decision: Contact the Development Services Division at 210 W. 6th Avenue, Kennewick, WA 99336 or via telephone at (509) 585-4280.

Appeal: Any person aggrieved by the decision of the Kennewick Hearing Examiner on this proposal may appeal to the Superior Court of Benton County within twenty-one (21) days of the date of decision.

Matthew Halitsky, Senior Planner

The City of Kennewick welcomes full participation in public meetings by all citizens and does not discriminate on the basis of disability, pursuant to the requirements of the American with Disabilities Act of 1990, pub. L 101-336. No qualified individual with a disability shall be excluded or denied the benefit of participating in such meetings. If you wish to use auxiliary aids or require assistance to comment at this public meeting, please contact the City of Kennewick, Matt Halitsky, Development Services Department at (509) 585-4416 or TDD (509) 585-4425 or through the Washington Relay Service Center TTY at #711 at least ten days prior to the date of the meeting to make arrangements for special needs.

210 W. Sixth Avenue / PO Box 6108, Kennewick WA 99336

Vicinity Map



February 17, 2023 This plan is suitable for informational use only. City of Kennewick accepts no liability for any error whatsoever.

StreetName

SurveyAddressPoint

<all other values>

Apartment

Mobile Home

Parcel

Condo

SV_CI_KENNEWICK_10

SV_CI_RICHLAND_10

SV_CI_COUNTY_1

0

0.02

0.04

0.065

0.13 km

0

0.0325

0.065

0.13 km

1 inch = 230 feet

1:2,760

Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,

ArCGIS WebApp Builder

City of Kennewick





NOTIFICATION OF MAILING

I, _____, on _____, 20_____

Mailed _____ copies of _____

for _____

to _____

as shown on the attached list.

Signature



	37 KENNEWICK SCHOOL DISTRICT 1000 W 4TH AVE Kennewick, WA 99336	37 SHAWNA JIMENEZ 1308 W 4TH AVE Kennewick, WA 99336
37 AUTOZONE DEVELOPMENT CORP PO BOX 2198 Memphis, TN 38101	37 HENDRICKSON FIR GROVE LLC C/O KRISTI NELSON, CPA 1333 COLUMBIA PARK TRAIL #210 Richland, WA 99352	37 KENNEWICK HOUSING LLC 425 S OLYMPIA ST Kennewick, WA 99336
37 4TH AVE STORAGE LLC 1333 COLUMBIA PARK TRAIL SUITE 210 Richland, WA 99352	37 JOSE H & LIDIA TOVAR 97 N ROBINSON RD Nampa, ID 83687	37 TEE TAR & NIN HSU 313 S MAYFIELD ST Kennewick, WA 99336
37 DOMINGUEZ 312 S MAYFIELD Kennewick, WA 99336	37 GREENLAKE PASCO LLC 201 SOUTH DIVISION STREET SUITE C Auburn, WA 98001	37 NATIONAL PETCARE CENTERS INC 12401 W OLYMPIC BLVD Los Angeles, CA 90064
37 MASUE LLC 185 NW SPANISH RIVER BLVD #100 Boca Raton, FL 33431	37 PEDRO MORALES 5511 S WASHINGTON ST Kennewick, WA 99337	37 RYLAN M & CARRIE A GRIMES 99504 SNIVELY RD Richland, WA 99352
37 MARGARET A RACY 198818 E 73RD AVE Kennewick, WA 99337	37 ALEJANDRO ZAC NAVA 2107 N RD 32 Pasco, WA 99301	37 DANTE NIETO ZAPATA 301 S MAYFIELD STREET Kennewick, WA 99336
37 TRI-CONSTRUCTION LLC PO BOX 6004 Kennewick, WA 99336	37 RENEE NASH 1327 W 3RD AVE Kennewick, WA 99336	37 MEADOW PARK 155 LLC 1401 DOVE ST, STE 620 Newport Beach, CA 92660
37 MICHAEL PAUL MARQUEZ 1101 W 1ST AVE Kennewick, WA 99336	37 CERVANTES RAMIREZ ISABEL D 1318 W 3RD AVE Kennewick, WA 99336	37 TOMMY J JOHNSEN 1333 W 3RD AVE Kennewick, WA 99336
37 RAJBIR SANDHU 308 S OLYMPIA ST Kennewick, WA 99336	37 NYAN B & DEBORAH A PRATER 728 W 22ND AVE Kennewick, WA 99337	37 ELLEN BOWMAN 1105 W 2ND AVE Kennewick, WA 99336

37 DANIEL J & ASHLEY CALLAWAY 1109 W 2ND AVE Kennewick, WA 99336	37 KAREN D TOLLIVER 1322 W 3RD AVENUE Kennewick, WA 99336	37 JAMIE ROSE & COREY SCOTT KINCAID 1114 W 2ND AVE Kennewick, WA 99336
37 GERGIS S OKMNTE & SIMA A KARAMA 1101 W 2ND AVE Kennewick, WA 99336	37 JOSE B & GLORIA M SEGOVIA 1115 W 2ND AVE Kennewick, WA 99336	37 ANNALIESE C MEZA 1344 W 4TH AVE Kennewick, WA 99336
37 ISRAEL LOPEZ 1326 W 3RD AVE Kennewick, WA 99336	37 MICHAEL E WARNER 1201 W 2ND AVE Kennewick, WA 99336	37 ALFONSO & MA DEL SOCORRO VIDRIO 311 S OLYMPIA ST Kennewick, WA 99336
37 1000 W 5TH AVE LLC 8346 NE 140TH ST Kirkland, WA 98034	37 MANUEL I & EVELIA V RAMOS 307 S OLYMPIA ST Kennewick, WA 99336	37 REKA ROBINSON 1205 W 2ND AVE Kennewick, WA 99336
37 CHARLOTTE M DIXON 430 S OLYMPIA ST Kennewick, WA 99336	37 DANG THUY NGOC & OANH HOANG 1345 W 3RD AVE Kennewick, WA 99336	37 SHAWN BART 1209 W 2ND AVE Kennewick, WA 99336
37 GALLINGER 82703 E SAGEBRUSH RD Kennewick, WA 99338	37 MARQUINA PROPERTIES LLC 505 S OLYMPIA ST APT M3 Kennewick, WA 99336	37 DALLAS D LONN 1213 W 2ND AVE Kennewick, WA 99336
37 MARQUINA LLC 505 S OLYMPIA ST APT M3 Kennewick, WA 99336	37 ALVAREZ GRACIELA 643 S CLOVERLEAF ST Porterville, CA 93257	37 OLIVERIO NINO 304 S OLYMPIA ST Kennewick, WA 99336
37 WILLIAM J HYRKAS 1203 S GARFIELD ST Kennewick, WA 99337	37 STEVEN J & SUSAN R OORD 4956 W RIO GRANDE AVE Kennewick, WA 99336	37 VASILY DOROSHCHUK JR 3502 WATERFORD ST Richland, WA 99352
37 KEVIN & KRISTIN SWISHER 2113 HARRIS AVE Richland, WA 99354	37 RAFAEL & MARTHA L CORTES 1106 W 2ND AVE Kennewick, WA 99336	37 RAJBIR ENTERPRISES INC 1400 W 4TH Kennewick, WA 99336
37 RALPH V & MARIA H MERCADO 1102 W 2ND AVE Kennewick, WA 99336	37 LINDA S JANCOVIC 1221 W 2ND AVE Kennewick, WA 99336	37 JAQUEZ ROJO VICTOR ANDRES 1110 W 2ND AVE Kennewick, WA 99336