CONNECTICUT SITING COUNCIL

PETITION OF NEW CINGULAR WIRELESS)	
PCS, LLC ("AT&T") TO THE CONNECTICUT	~	s .
SITING COUNCIL FOR A DECLARATORY)	
RULING THAT NO CERTIFICATE OF)	PETITION NO.
ENVIRONMENTAL COMPATIBILITY AND		
PUBLIC NEED IS REQUIRED TO)	FEBRUARY 1, 2019
CONSTRUCT A UNIPOLE ON AN EXISTING)	
BUILDING ROOFTOP COLLOCATED WITH	,	
OTHER CARRIER FACILITIES LOCATED		
AT 500 NEWFIELD AVENUE		
STAMFORD, CONNECTICUT		

PETITION FOR DECLARATORY RULING TO CONSTRUCT A UNIPOLE ON AN EXISTING BUILDING ROOFTOP COLLOCATED WITH OTHER CARRIER FACILITIES LOCATED AT 500 NEWFIELD AVENUE, STAMFORD, CONNECTICUT

I. Introduction

New Cingular Wireless PCS, LLC ("AT&T"), the "Petitioner", hereby petitions the Connecticut Siting Council ("Council") pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies ("R.C.S.A.") for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50k of the Connecticut General Statutes ("C.G.S.") to construct a unipole¹ on an existing building rooftop where other carriers have wireless facilities collocated at 500 Newfield Avenue in Stamford, Connecticut (the "Site" or "Property"). Included in Attachment 1 is a December 24, 2018 Letter of Authorization from WCL Limited Partnership, the property owner, authorizing AT&T to file this Petition.

II. <u>The Site and Existing Wireless Facilities</u>

The Site is a 0.750-acre parcel improved with a four-story, approximately 38-foot tall, brick building consisting of multi-family apartments and office space. Roof-mounted wireless facilities for T-Mobile and Verizon, approved by the City of Stamford, are located on the rooftop with antenna heights of 53' above ground level ("AGL") and 47' AGL, respectively. The existing carrier

¹ References in the enclosed supporting materials to a proposed "flagpole" refer to a flagpole without a flag, otherwise known as a unipole in industry terms.

facilities include several ballast mounts and steel platforms supporting antennas and equipment above the roofline of the existing building. The property abuts residential and light commercial uses with neighborhood commercial development located to the north along Newfield Avenue and Barrett Field, a City park, located to the east.

III. AT&T's Proposed Rooftop Tower

AT&T is licensed by the Federal Communications Commission ("FCC") to provide wireless services in this area of the State of Connecticut. The proposed facility would be located on the roof of the existing building on the Property and will consist of a 34'-4" stealth unipole antenna structure approximately 75' AGL. A total of six (6) CCI OctoPort Multi-Band Antennas (Model No. CCI OPA65R-BU8B) will be concealed inside the steel frame of the unipole, with three (3) antennas at a centerline height of 71' AGL and three (3) antennas at a centerline height of 61' AGL. Unmanned equipment cabinets will be located on a steel equipment platform mounted to the rooftop along with other ancillary cabling and equipment. Vehicle and utility access to the facility would be from the existing paved parking area entrance on Oaklawn Avenue with no change. No new access points are required and there are no changes in use associated with the proposed facility. Site drawings for the proposed facility are included in Attachment 2. A Structural Report confirming that the building can accommodate AT&T's proposed facility is included in Attachment 3.

IV. The Proposal Will Not Have a Substantial Adverse Environmental Effect

A comparison of the existing and proposed conditions reveals no substantial or significant environmental impacts associated with AT&T's proposed facility. The combination of a relatively low overall height, topography and surrounding mature tree cover minimize the visibility of the unipole, as noted in the All-Points Technology Corporation, P.C., Visual Analysis, included in Attachment 4. Photosimulations depicting the existing and proposed facility at 22 surrounding locations are included in All-Points Technology Corporation's Visual Analysis. These photosimulations demonstrate that visibility of the proposed rooftop unipole is very limited and to select locations within approximately one-half (0.5) mile south/southwest and northeast of the Site, an area that equates to only approximately 1.8% of the 20,010-acre Visual Study Area.

Additionally, included in Attachment 5 is a copy of the summary of SAI Communications' NEPA review for the proposed facility ("NEPA checklist"). The attached NEPA checklist further supports

that AT&T's proposed modification to this existing wireless Site will not have a substantial adverse environmental effect on any historic, species or other resources. Also enclosed in Attachment 6 is confirmation that the proposed unipole will not require any Federal Aviation Administration marking or lighting ("FAA").

V. No Physical Impacts

AT&T's proposed facility will not result in any additional ground disturbance to the Site as it will be located on the rooftop of the existing building. Existing access to the site will continue to be utilized and no tree removal or other ground disturbances are necessary for construction of the facility. The facility is unmanned and requires no water or wastewater connections and generates no waste.

VI. Compliance with MPE Limits

The operation of AT&T's antennas along with the operation of Verizon Wireless and T-Mobile's antennas will not increase the total radio frequency electromagnetic power density at the Site to a level at or above applicable standards. A Power Density calculation is included in Attachment 7 and a Radio Frequency Safety Survey Report is included in Attachment 8. The total radio frequency power density will be 22.59% of the allowable FCC established general public limit at ground level and well within standards adopted by the Connecticut Department of Environmental Protection as set forth in in Section 22a-162 of the Connecticut General Statutes.

VII. AT&T's Need for the Proposed Rooftop Tower to Provide Reliable Service

As demonstrated by AT&T's radio frequency coverage maps, included in the Radio Frequency Analysis Report, prepared by C Squared Systems, LLC² enclosed in Attachment 9, the proposed facility is required for AT&T to provide reliable service within its network along Newfield Avenue and in the surrounding residential areas of Stamford.³ The proposed facility will provide wireless coverage to approximately 3,645 people in the 700 MHz frequency band and approximately 2,025 people in the 1900 MHz band.⁴ Further, as many as 13,400 vehicles per day pass through the

² AT&T's coverage maps are shown in "RSRP" or Referenced Signal Received Power, which is the metric used to evaluate LTE services.

³ The Radio Frequency Analysis Report includes AT&T's radio frequency coverage maps which depict the existing coverage without AT&T's proposed facility and the proposed facility's coverage with centerline antenna heights of 71' and 61' AGL.

⁴ Please see Table 2 on page 5 of the Radio Frequency Analysis Report included in Attachment 9.

proposed coverage area on Newfield Avenue.⁵ Aside from the proposed building rooftop, no other existing properties or tall structures were identified and available for construction of a facility to satisfy the coverage requirements needed for this area of Stamford.

Additionally, several rooftop configurations at this specific Site were evaluated by AT&T including antenna mounts similar to those of T-Mobile and Verizon. Beyond the height issues, physical space on the rooftop was found to be limited due to the configurations of the existing carriers' ballast mounts, equipment platforms, an equipment room and mechanical equipment for the building on the roof. The lack of physical space on the roof needed for each sector required as part of an AT&T facility was one of the principal factors that led to evaluation of a rooftop tower. AT&T evaluated the installation of a monopole type tower stub design on the roof, however, after consultation with the property owner and consideration of the aesthetic design of such a facility, a unipole was determined to be a viable option. Both AT&T and the property owner determined that such a rooftop tower would sufficiently addresses aesthetics, accommodate antennas AT&T requires and could be physically installed towards the center of the rooftop of the building.

Finally, the proposed height of the unipole is not only necessary for AT&T's coverage needs, but necessary to avoid interference carrier to carrier and as part of AT&T's own FCC spectrum usage. Page 5 of C Squared Systems' Radio Frequency Analysis Report details these technical issues and the need for the proposed configuration as proposed. Specifically, to maintain required frequency isolations, carrier to carrier, AT&T has to build a vertical structure that provides vertical separation above the existing carrier antennas. Additionally, since a typical monopole platform is not proposed which would allow for horizontal antenna separation between AT&T's 2300 MHz Wireless Communication Service ("WCS") and 700 MHz frequency spectrum, the vertical structure must also allow for vertical separation between AT&T's antennas to prevent frequency interference.

While the Council does not have to find a public need for the facility as part of a ruling on this Petition, it is respectfully submitted that the enclosed information fully demonstrates the need for

⁵ Please see the Connecticut DOT Average Annual Daily Traffic Data, discussed on page 4 of the Radio Frequency Analysis Report provided as Attachment 9.

the proposed rooftop unipole facility as configured for AT&T to provide reliable wireless service to thousands of residents and travelers in this area of Stamford.

VIII. Notice of Petition Filing

Pursuant to R.C.S.A. Section 16-50j-40(a), notice of AT&T's intent to file this Petition was sent to each person appearing of record as an owner of property that abuts the Site, as well as the appropriate municipal officials and government agencies as listed in Section 16-50e of the C.G.S. Certification of such notice, a copy of the notice and the list of property owners is included in Attachment 10 along with the map from the City's GIS Department used to identify abutting property owners. Attachment 10 also includes a certification of service to municipal officials and government agencies to whom notice was sent.

IX. Conclusion

As set forth herein, AT&T's proposed facility collocated on a roof with other wireless facilities is wholly consistent with legislative findings outlined in C.G.S. Sections 16-50g and 16-50aa that seek to avoid the unnecessary proliferation of towers in the State. It is respectfully submitted that AT&T's proposed facility does not present any significant adverse environmental effects as listed in Section 16-50p of the General Statutes. Therefore, and for all the foregoing reasons, AT&T petitions the Connecticut Siting Council for a determination that the proposed wireless telecommunications facility does not require a Certificate of Environmental Compatibility and Public Need and that the Council issue an order approving same.

Respectfully Submitted,

Kristen Motel, Esq.

Christopher B. Fisher, Esq.

On behalf of the Petitioner, AT&T

Cuddy & Feder LLP

445 Hamilton Avenue, 14th Floor

White Plains, NY 10601

(914) 761-1300

cc:

City of Stamford

Abutting Property Owners

AT&T

SAI Communications, Inc.

500 Newfield Avenue Stamford, CT 06905

203-358-4077 WCLmanagement@gmail.com

LETTER OF AUTHORIZATION

This Letter of Authorization, dated this 24 day of Decembern, 2018, provides written authorization for New Cingular Wireless PCS, LLC and its affiliates ("AT&T"), its agents or representatives, to apply for and execute any necessary zoning applications or petitions, permits or any other approvals, including, but not limited to, the filing of applications for building permits, which are necessary for purposes of installing, operating and maintaining a wireless telecommunications facility on a portion of the real property with an address of 500 Newfield Avenue, Stamford, CT 06905 [Assessor's Map/Block/Lot 105/216/C] and owned by WCL Limited Partnership("Owner").

A copy of this letter shall be regarded as having the same effect as the original.

OWNER: WCL Limited Partucishio

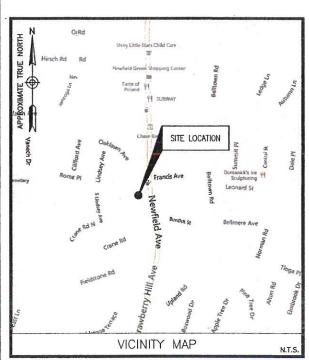
NAME: Peter B. Levive

TITLE: Executive Manager

CONNECTICUT SITING COUNCIL



SITE NAME: STAMFORD NEWFIELD AVENUE SITE NUMBER: CT2818 500 NEWFIELD AVENUE STAMFORD, CT 06905



DIRECTIONS FROM 500 ENTERPRISE DRIVE, ROCKY HILL, CT:

DEPART ENTERPRISE DR TOWARD CAPITOL BLVD. TURN LEFT ONTO CAPITOL BLVD. TURN LEFT ONTO WEST ST. TAKE RAMP LEFT FOR I-91 S. AT EXIT 17, TAKE RAMP RIGHT FOR CT-15 SOUTH TOWARD E MAIN ST/W CROSS PKWY. AT EXIT 35, TAKE RAMP RIGHT AND FOLLOW SIGNS FOR CT-137. TURN RIGHT ONTO CT-137/HIGH RIDGE RD. TURN LEFT ONTO VINE RD. TURN RIGHT ONTO NEWFIELD AVE. SITE WILL BE ON THE RIGHT.

SITE COORDINATES:
LATITUDE: 41'-04'-36.561" N
LONGITUDE: 73'-32'-03.268" W
(PER FAA 1-A SURVEY)

ELEVATION DATA

GRADE ELEVATION AT BUILDING = 130.9'± A.M.S.L.

(PER FAA 1-A SURVEY)

ELEVATION (TO TOP OF UNIPOLE)
ELEVATION = 75.0'± A.G.L., 205.9'± A.M.S.L.

SITE INFORMATION

THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF 3 SECTORS OF 2 PANEL ANTENNAS PER SECTOR WHICH SHALL BE MOUNTED IN A PROPOSED 34'-4" TALL UNIPOLE ON AN EXISTING ROOF, AND THE INSTALLATION OF EQUIPMENT ROOM ON A STEEL PLATFORM ON THE ROOF. THIS SYSTEM WILL BOTH TRANSMIT AND RECEIVE RADIO SIGNALS.

THE PROPOSED USE DOES NOT REQUIRE FULL—TIME OR PART—TIME EMPLOYEES AT THE SITE. IT WILL BE TYPICALLY VISITED ONCE PER MONTH FOR MAINTENANCE. THE FACILITY IS NOT EXPECTED TO GENERATE ADDITIONAL NOISE, FUMES OR VIBRATIONS. POWER SERVICE WILL BE TAKEN FROM THE EXISTING BUILDING. TELCO SERVICE WILL BE ROUTED IN UNDERGROUND CONDUITS TO THE EQUIPMENT ROOM. NO WATER OR SEWER SERVICES ARE

PROJECT DESCRIPTION

SITE NAME: STAMFORD NEWFIELD AVENUE

SITE NUMBER:

SITE ADDRESS:
500 NEWFIELD AVENUE
CITY OF STAMFORD, FAIRFIELD COUNTY, CONNECTICUT 06905

TAX MAP DESIGNATION:
PARCEL ID: 001-3170
MAP:105 BLOCK:216 LOT:C

PROPERTY OWNER: WCL LIMITED PARTNERSHIP 500 NEWFIELD AVENUE STAMFORD, CT 06905

OWNER CONTACT PERSON:
PETER LEVINE
PHONE #: (203) 358-4077

APPLICANT/LESSEE:

AT&T MOBILITY

500 ENTERPRISE DRIVE, SUITE 3A

ROCKY HILL, CT 06067

PROJECT INFORMATION

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

SHEET NUMBER	DESCRIPTION
T-1	TITLE SHEET
Z-1	PERIMETER PLAN
Z-2	AERIAL PLAN
Z-3	EXISTING CONDITIONS PLAN
Z4	PROPOSED ROOF PLAN
Z-5	PROPOSED EQUIPMENT PLAN
Z-6	NEWFIELD AVENUE ELEVATION
Z-7	NORTHWEST ELEVATION
Z-8	CONSTRUCTION DETAILS I
Z9	CONSTRUCTION DETAILS II
Z-10	CONSTRUCTION DETAILS III
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500 ENTERPRISE DRIVE SUITE 3/ ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD NEWFIELD AVENUE

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1		ISSUED FOR SUBMITTAL
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A	09/25/17	PRELIMINARY SUBMISSION

Dewberry

Dewberry Engineers Inc.

600 PARSIPPANY ROAD SUITE 301 PARSIPPANY, NJ 07054 PHONE: 973.739.9400



JMMD 1503 中主 CONNECTICUT LICENSE NO. 0023222

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THEY ARE ACTING UNDER THE DIRECTION OF A
LICENSED PROFESSIONAL ENGINEER TO ALTER THIS
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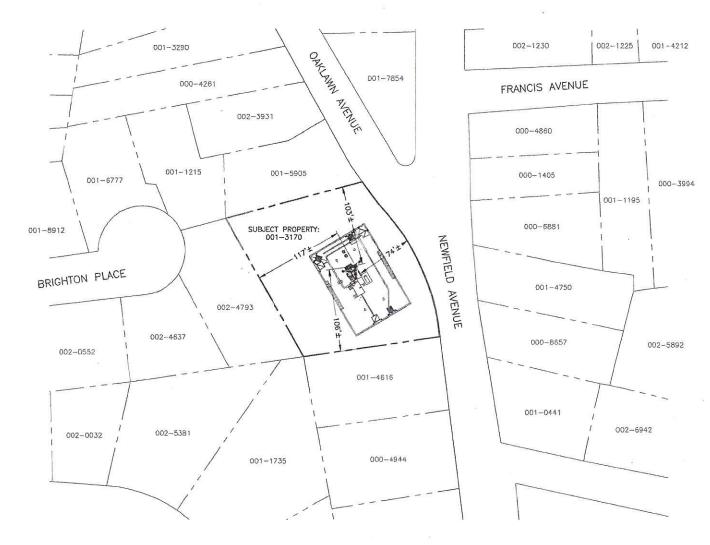
500 NEWFIELD AVENUE STAMFORD, CT 06905

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



NOTE:

 PLAN & ABUTTER INFORMATION WAS COMPILED FROM INFORMATION OBTAINED FROM THE CITY OF STAMFORD ASSESSORS OFFICE.



ABUTTERS				
ACCOUNT NUMBER	NAME	MAILING ADDRESS		
000-1405	HEKAL, MOHAMED A., ET. AL.	503 NEWFIELD AVENUE, STAMFORD, CT 06905		
000-4860	ZUCKER, SHIRA N.	507 NEWFIELD AVENUE, STAMFORD, CT 06905		
0006881	MASTROLUCA, JOSEPH, ET. AL.	495 NEWFIELD AVENUE, STAMFORD, CT 06905		
000-8657	VELEZ, SERGIO ALVAREZ, ET. AL.	489 NEWFIELD AVENUE, STAMFORD, CT 06902		
001-7854	BAK PAPAJ LLC	5 NIGHT HAWK LANE, SANDY HOOK, CT 06482		
001-1215	YOUNG, SETH M., ET. AL.	26 BRIGHTON PLACE, STAMFORD, CT 06902		
001-1735	KINAHAN, CHRISTOPHER, ET. AL.	11 CRANE ROAD NORTH, STAMFORD, CT 06902		
001-4616	TURNER, ERIN, ET. AL.	486 NEWFIELD AVENUE, STAMFORD, CT 06905		
001-4750	MASTROLUCA, JOSEPH, ET. AL.	495 NEWFIELD AVENUE, STAMFORD, CT 06905		
001-5905	FLEURIMOND SADRACK	14 OAKLAWN AVENUE, STAMFORD, CT 06905		
002-4793	MCCULLEY, LEON L. JR., ET. AL.	27 BRIGHTON PLACE, STAMFORD, CT 06902		

NOTE:

 ABUTTERS LIST CONSISTS OF PARCELS PHYSICALLY TOUCHING THE SUBJECT PARCEL OR ABUT ACROSS THE STREET FROM THE SUBJECT PARCEL.



500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD NEWFIELD AVENUE

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Dewberry Engineers Inc.

500 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973,739,9400



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DRAWN BY: JC

REVIEWED BY: BSH

CHECKED BY: GHN

PROJECT NUMBER: 50065694

SITE ADDRESS:

500 NEWFIELD AVENUE STAMFORD, CT 06905

SHEET TITLE

PERIMETER PLAN

SHEET NUMBER

Z - 1

PROPOSED 34'-4"± 1 1 TALL UNIPOLE Z-7



PROPOSED AT&T EQUIPMENT
CABINETS MOUNTED TO -PROPOSED STEEL PLATFORM

1. AERIAL BASED ON GOOGLE MAPS.

AERIAL PLAN

SCALE: 1"=400' FOR 11"x17"
1"=200' FOR 22"x34"



500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 **STAMFORD NEWFIELD AVENUE**

SITING COUNCIL 01/28/19 ISSUED FOR SUBMITTAL 10/11/17 ISSUED FOR SUBMITTAL 10/05/17 ISSUED FOR SUBMITTAL 09/25/17 FRELIMINARY SUBMISSION

Dewberry*

Dewberry Engineers Inc. 600 PARSIPPANY ROAD SUITE 901 PARSIPPANY, NJ 07054 PARSIPPANY, NJ 07054 PARSIPPANY, NJ 07054 FAX: 173/1799,9710



JIANG YU, P.E. CONNECTICUT LICENSE NO. 0023222

DRAWN BY: JC REVIEWED BY: BSH CHECKED BY: GHN PROJECT NUMBER: 50055106

JOB NUMBER: 50065694

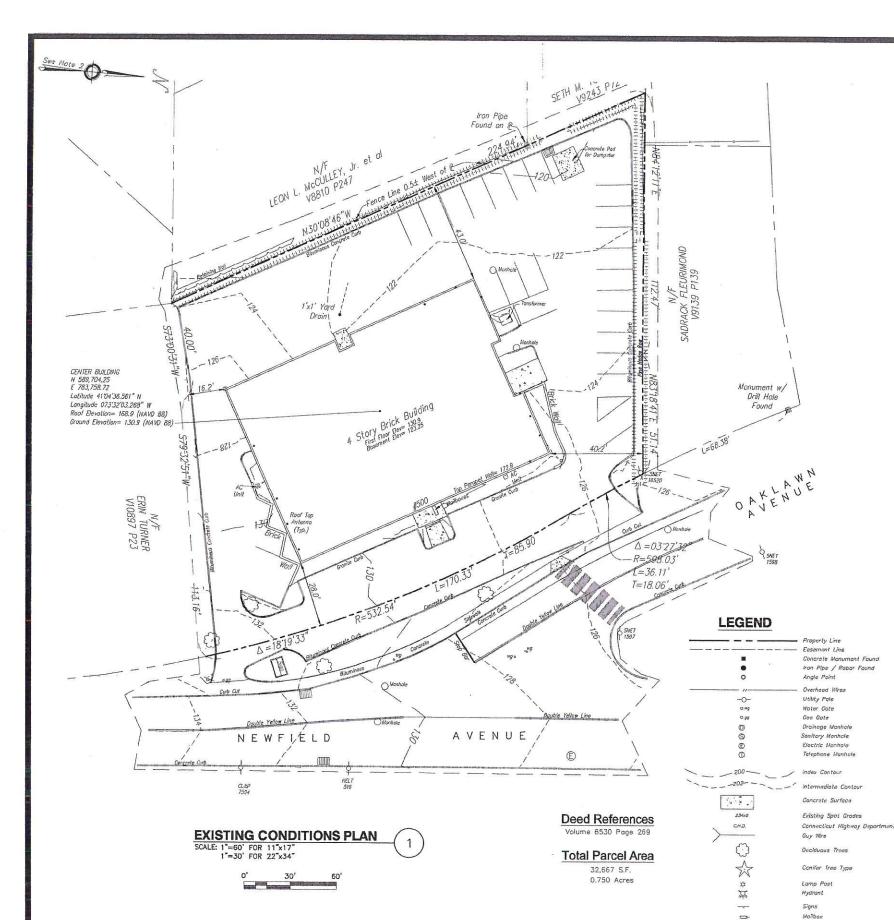
SITE ADDRESS:

500 NEWFIELD AVENUE STAMFORD, CT 06905

SHEET TITLE

AERIAL PLAN

SHEET NUMBER



GENERAL NOTES

- SUBJECT PROPERTY IS KNOWN AS PARCEL 001-3170 AS SHOWN ON THE CITY OF STAMFORD ASSESSORS MAP.
- 2. APPLICANT:

AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

PROPERTY OWNER:

WCL LIMITED PARTNERSHIP 500 NEWFIELD AVENUE STAMFORD, CT 06905

- 4. SITE PLAN DATA OBTAINED FROM SURVEY INFORMATION BY LRC GROUP DATED 04/03/15.
- THE PROPOSED USE IS FOR TELECOMMUNICATIONS AND IS NOT INTENDED FOR PERMANENT EMPLOYEE OCCUPANCY. THEREFORE, POTABLE WATER, SANITARY SEWER AND ADDITIONAL ON-SITE PARKING ARE NOT REQUIRED.
- FACILITY SHALL BE VISITED ON THE AVERAGE OF ONCE A MONTH FOR MAINTENANCE AND SHALL BE CONTINUOUSLY MONITORED FROM A REMOTE FACILITY.
- ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH AT&T MOBILITY SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (1-800-922-4455) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- 9. THERE WILL NOT BE ANY SIGNS OR ADVERTISING ON THE ANTENNAS OR EQUIPMENT.
- 10. BASED ON THE U.S. FISH & WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY, WETLANDS MAPPER, THE CLOSEST WETLAND TO THE PROPOSED TOWER LOCATION IS $1,056^{\circ}\pm$.
- 11. BASED ON GOOGLE MAPS, THE CLOSEST RESIDENCE TO THE PROPOSED TOWER LOCATION
- 12. BASED ON THE MAP OF STAMFORD, CONNECTICUT PREPARED BY MEDIA VENTURES, INC. DATED 2008, THE DISTANCE TO THE TOWN OF DARIEN IS 4,579'±.
- 13. BASED ON THE CITY OF STAMFORD ASSESSORS MAP & DATA, THERE ARE NO SCHOOLS OR CHILD DAY CARE CENTERS WITHIN 1000' OF THE PROPOSED TOWER LOCATION.
- 14. NO TREES ARE TO BE REMOVED AS THIS IS A ROOFTOP TOWER FACILITY.

SURVEY NOTES:

This survey and map have been prepared pursuant to the regulations of Connecticut State Agencies, section 20-300b-1 through 20-300b-20 and the "Standards For Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1996.

The type of Survey performed and the mapped features depicted hereon are in accordance with the requirements of a Property & Topographic Survey and is intended to note or depict the wristing boundaries of the parcel with respect to monumentation found and improvements such as structures, parking areas, fence lines, hedge rows, stone walls, retaining walls and sidewalks. Boundary determination/ opinion is based upon a resurvey of the map referenced in note 4A.

This survey conforms to class A-2.

- 2. Bearings are referenced to the North American Datum (NAD) of 1983 projected onto the Connecticut State Plane Coordinate System, using the Keystone VRS GPS Network
- 3. Elevations are referriced to the North American Vertical Datum (NAVD) of 1988.
- 4. Reference is made to the following maps:
- A. "Map Showing Subdivision Prepared For William B. Levine, Stamford, Conn.," scale 1"=60", dated June 26, 1968, prepared by Edward J. Frattoroli & Co., Surveyors, map on file in the Stamford City Clerks Office as map #8680.

 B. "Map No. 1, Newfield Avenue Tract, Property of Revonah Incorporated, Stamfors, Conn.," scale
- 1"=30', dated May 12, 1939, prepared by Horry L. Fish (sp), map on file in the Stamford City Clerks Office as map #2658. C. "Map Showing Change Of Line Between Properties Of William B. Levine and Thomas J. O'Brien,
- C. Mop Snowing Change Of Line Between Properties Of William B. Levine and Fromas J. O'Brien, Et. Al., Stamford, Conn., "scale I"=60", doted December 23, 1968, prepared by Edward J. Frotlaroli & Co., Surveyors, map on file in the Stamford City Clerks Office as map #8803.

 D. "Crane Manor, Stamford, Connecticut," scale 1"=60", doted April 23, 1941, prepared by Albert B. Tracey, Surveyor, map on file in the Stamford City Clerks Office as map #2923.

 E. "Oak Lawn Manor, Property of C. Pond Webb and M. Lindsey Vick, Stamford, Conn.," scale
- 1"=80", dated January, 1921, prepared by W.B. Peirre, map on file in the Stamford City Clerks
 Office as map \$758. F. "Map Showing Subdivision Of Plot 1, Map No. 5307- S.L.R., Property of Crescent Development Corporation, Stamford, Conn.," scale 1°=30′, dated May 27, 1955, prepared by Edward J. Frattaroli Surveyor, map on file in the Stamford City Clerks Office as map #5388.

 G. "Map Showing Subdivision of Property of The Gar Realty Corporation, Stamford, Conn.," scale
- 1"=60", dated April 4, 1955, prepared by Edward J. Frottaroli Surveyor, map on file in the Stamford City Clerks Office as map #5307.
- 5. Parcel is depicted as Assessors lot 3170 on map 1.

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- 6. Property is located in flood Zone X (Area outside 100 year flood) as depicted on FIRM, City of Stamford, Foirfield County, Connecticut, Panel 508 of 626, Community No. 090015, suffix F, effective date June 18, 2010.
- 7. Location of all underground utilities depicted hereon are approximate and are based on field location of visible structures such as catch basins, manholes, water gates, exc. and compiling information from plans supplied by the respective utility componies and government agencies. All contractors are required by State Regulations to contact Call—Before-You—Dis at 1–800–922–4455 for locations and stake out of utilities prior to any excavation.



500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD **NEWFIELD AVENUE**

NOTE:	SI	TING COUNCIL
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A	09/25/17	PFELIMINARY SUBMISSION



Dewberry Engineers Inc. 600 PARSIPPANY ROAD SUITE 301 PARSIPPANY, NJ 07054 FAX: 973.739.9710



CONNECTICUT SUGENSE NO. 0023222 TIS A VIOLATION OF LAW FOR ANY PERSON, UNLES THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS BOCUMENT.

DRAWN BY:	JC
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS.	

500 NEWFIELD AVENUE STAMFORD, CT 06905

SHEET TITLE

EXISTING CONDITIONS PLAN

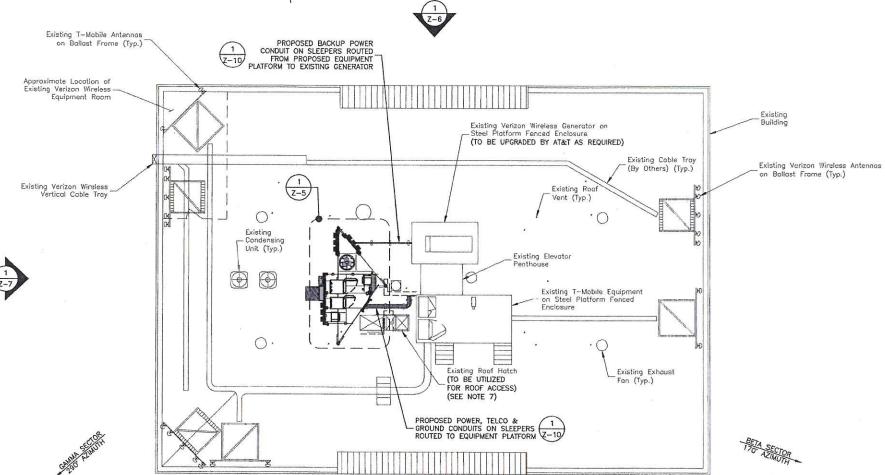
SHEET NUMBER

7 - 3





NEWFIELD AVENUE



NOTES:

- 1. NORTH SHOWN AS APPROXIMATE.
- 2. NOT ALL EXISTING & PROPOSED INFORMATION SHOWN FOR CLARITY.
- ROOF PLAN BASED ON SITE VISITS BY DEWBERRY ENGINEERS INC. ON 05/24/17 & 06/30/17 AND EXISTING DRAWINGS BY NATCOMM, INC. DATED 05/08/09.
- UNIPOLE & STRUCTURAL STEEL SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED TBD.
- EXISTING WOOD COLUMNS ON 4TH FLOOR SHALL BE REPLACED WITH PROPOSED STEEL COLUMNS IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED TBD.
- 6. GROUND ALL PROPOSED EQUIPMENT TO EXISTING WATER METER.
- 7. EXISTING ROOF ACCESS LADDER TO BE RESECURED INTO EXISTING WALL.
- TEMPORARY RAILING TO BE INSTALLED ON ROOF DURING CONSTRUCTION.
- YELLOW RF CAUTION SIGNS SHALL BE INSTALLED AT THE BASE OF THE UNIPOLE AND AT ALL T-MOBILE & VERIZON WIRELESS ANTENNA LOCATIONS IN ACCORDANCE WITH THE RF SITE COMPLIANCE REPORT COMPLETED BY SITE SAFE DATED MARCH 4, 2015.





500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD NEWFIELD AVENUE

	SI	TING COUNCIL
-		
2	01/28/19	ISSUED FOR SUBMITTAL
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CONNECTICUT LICENSE NO. 0023222

DRAWN BY: JC

REVIEWED BY: BSH

CHECKED BY: GHN

PROJECT NUMBER: 50055106

500 NEWFIELD AVENUE STAMFORD, CT 06905

50065694

SHEET TITLE

JOB NUMBER:

SITE ADDRESS:

PROPOSED ROOF PLAN

SHEET NUMBER

Z-4

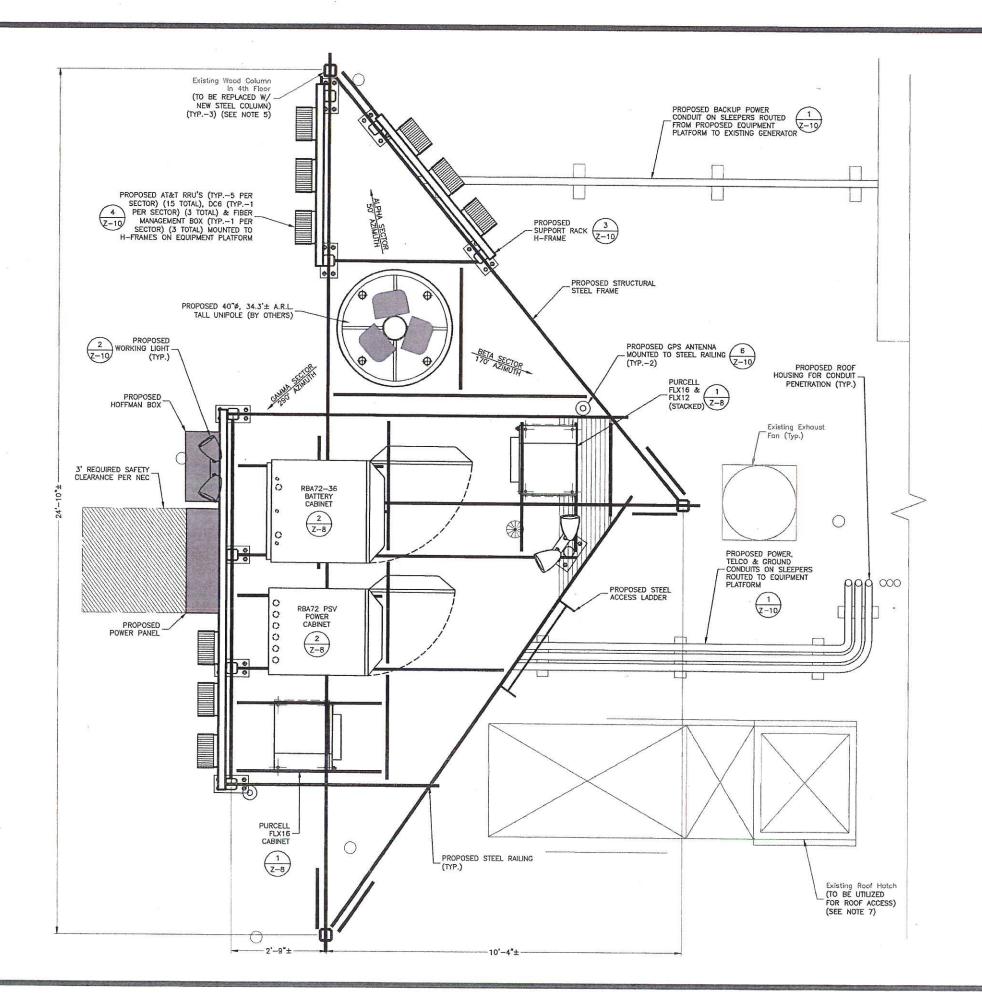


NOTES:

- 1. NORTH SHOWN AS APPROXIMATE.
- 2. NOT ALL EXISTING & PROPOSED INFORMATION SHOWN FOR CLARITY.
- ROOF PLAN BASED ON SITE VISITS BY DEWBERRY ENGINEERS INC. ON 05/24/17 & 06/30/17 AND EXISTING DRAWINGS BY NATCOMM, INC. DATED 05/08/09.
- STRUCTURAL STEEL SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 11/01/17.
- EXISTING WOOD COLUMNS ON 4TH FLOOR SHALL BE REPLACED WITH PROPOSED STEEL COLUMNS IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 11/01/17.
- 6. GROUND ALL PROPOSED EQUIPMENT TO EXISTING WATER METER STREET SIDE.
- EXISTING ROOF ACCESS LADDER TO BE RESECURED INTO EXISTING WALL.
- TEMPORARY RAILING TO BE INSTALLED ON ROOF DURING CONSTRUCTION.
- YELLOW RF CAUTION SIGNS SHALL BE INSTALLED AT THE BASE OF THE UNIPOLE AND AT ALL T-MOBILE & VERIZON WIRELESS ANTENNA LOCATIONS IN ACCORDANCE WITH THE RF SITE COMPLIANCE REPORT COMPLETED BY SITE SAFE DATED MARCH 4, 2015.
- 10. CONTRACTOR TO ENSURE ALL ROOFING PENETRATIONS ARE PROPERLY SEALED ACCORDING TO ROOFING MANUFACTURERS RECOMMENDATIONS AND IN CONFORMANCE WITH ANY WARRANTY REQUIREMENTS.
- 11. A.R.L. = ABOVE ROOF LEVEL.









500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD NEWFIELD AVENUE

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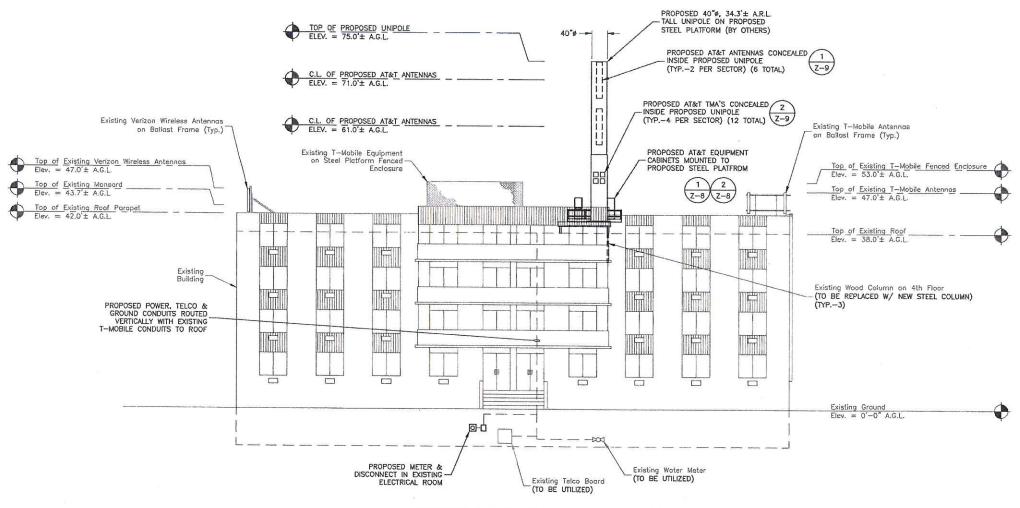
500 NEWFIELD AVENUE STAMFORD, CT 06905

SHEET TITLE

PROPOSED EQUIPMENT PLAN

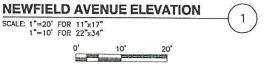
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- 6. GROUND ALL PROPOSED EQUIPMENT TO EXISTING WATER METER.
- 7. EXISTING ROOF ACCESS LADDER TO BE RESECURED INTO EXISTING WALL.
- TEMPORARY RAILING TO BE INSTALLED ON ROOF DURING CONSTRUCTION.
- YELLOW RF CAUTION SIGNS SHALL BE INSTALLED AT THE BASE OF THE UNIPOLE AND AT ALL T-MOBILE & VERIZON WIRELESS ANTENNA LOCATIONS IN ACCORDANCE WITH THE RF SITE COMPLIANCE REPORT COMPLETED BY SITE SAFE DATED MARCH 4, 2015.





500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD NEWFIELD AVENUE

SITING COUNCIL

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CHECKED BY: CHN

PROJECT NUMBER: 50055106

50065694

SITE ADDRESS:

500 NEWFIELD AVENUE STAMFORD, CT 06905

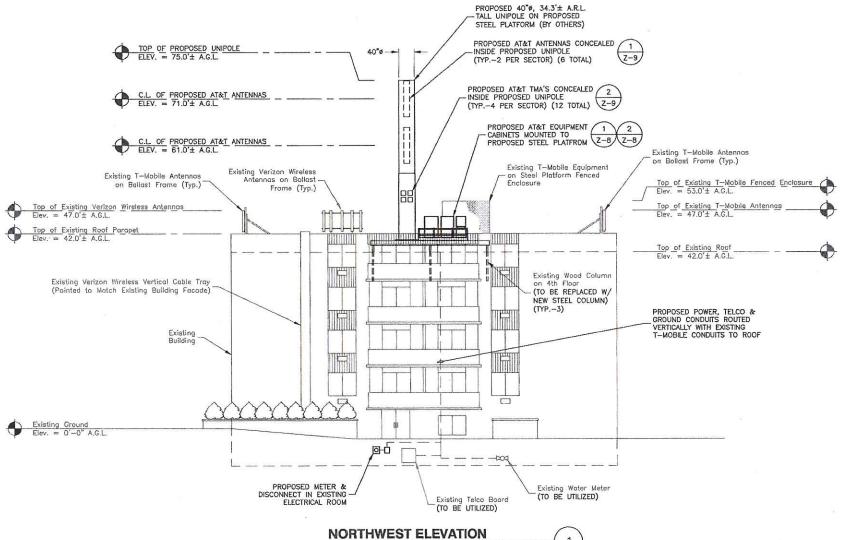
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JOB NUMBER:

NEWFIELD AVENUE ELEVATION

SHEET NUMBER

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NOTES:

- 1. NORTH SHOWN AS APPROXIMATE.
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CT2818 **STAMFORD NEWFIELD AVENUE**

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PROJECT NUMBER: 50055106

JOB NUMBER: 50065694 SITE ADDRESS:

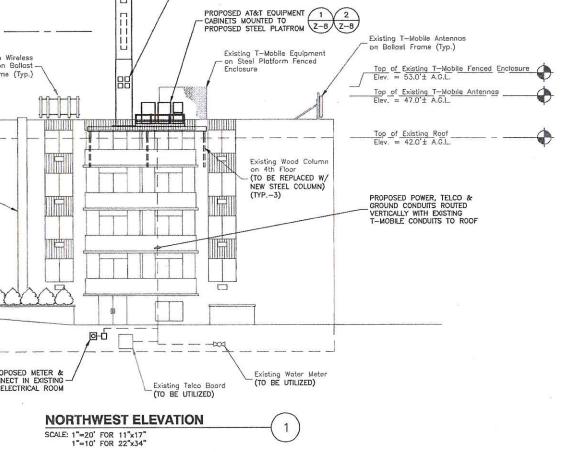
500 NEWFIELD AVENUE STAMFORD, CT 06905

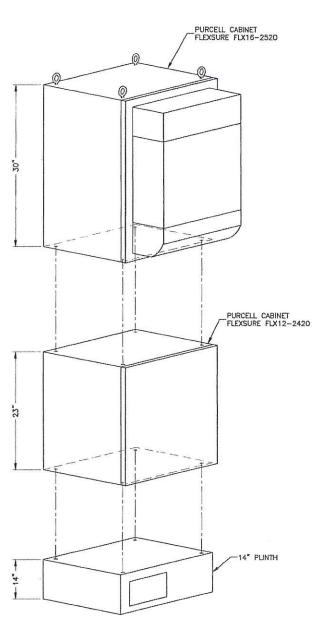
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NORTHWEST ELEVATION

SHEET NUMBER

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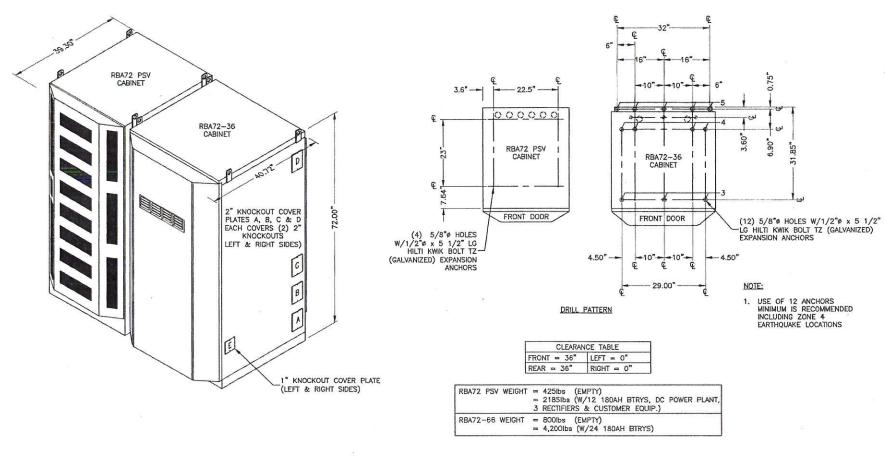


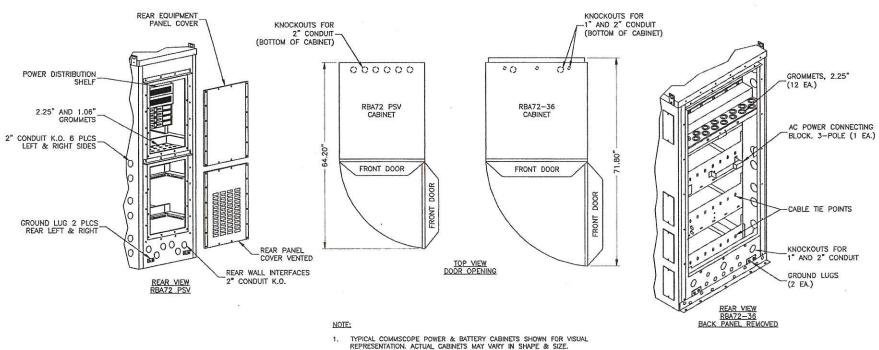




- TYPICAL PURCELL CABINETS SHOWN FOR VISUAL REPRESENTATION. ACTUAL CABINETS MAY VARY IN SHAPE & SIZE.
- 2. ALL MOUNTING HARDWARE TO BE GALVANIZED.
- 3. BOLT PLINTH DIRECTLY TO STEEL GRATING.







COMMSCOPE RBA72 CABINETS DETAIL

—(2)



500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD NEWFIELD AVENUE

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SITE ADDRESS:	8900 January - Mary 1110 -

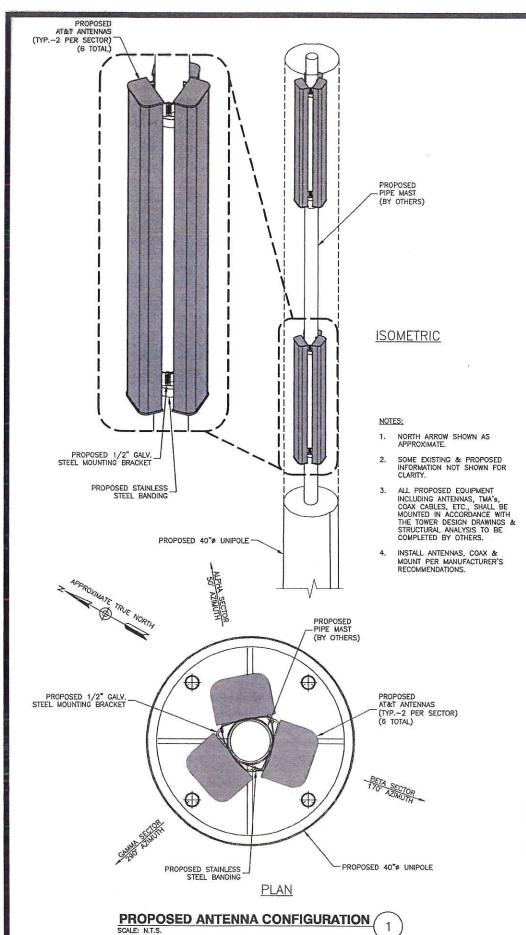
500 NEWFIELD AVENUE STAMFORD, CT 06905

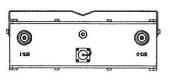
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CONSTRUCTION DETAILS I

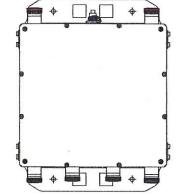
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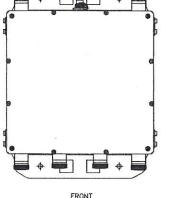
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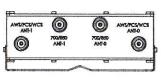


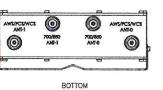


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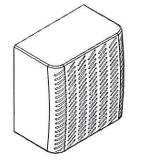








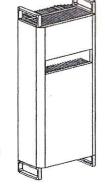
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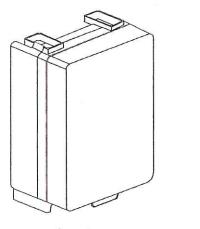
RRUS-11

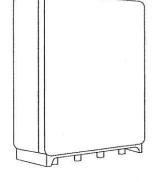
RRU NOTES:

- TYPICAL RRU'S SHOWN FOR VISUAL REPRESENTATION. ACTUAL RRU'S MAY VARY IN SHAPE &
- 2. MOUNT EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- 3. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
- CONFIRM REQUIRED EQUIPMENT WITH THE LATEST RFDS.



RRUS 32 B2





RRUS 4478 B14

RRUS 4415 B25

REMOTE RADIO UNIT DETAILS SCALE: N.T.S.

3

			FINAL	EQUIPM	ENT CO	NFIGURATION			
SECTOR	BAND	ANTENNA	SIZE (INCHES) (LxWxD)	RAD. CENTER	AZIMUTH	ТМА	RRU	SIZE (INCHES) (LxWxD)	COAX/ CABLES
ALPHA	LTE 700 BC/850/PCS	CCI OPA65R-BU8B	95.9x11.7x8.4	71.0'	50"	(2) TMABPDB7823VG12A	RRUS-11E (700) RRUS 4478 B5 (850) RRUS 4415 B25 (1900)	19.7 x 17.0 x 7.2 15.0 x 13.2 x 7.4 15.0 x 13.2 x 5.4	(4) 1-5/8"
7 7 6 7	LTE 700 DE/850/WCS	CCI OPA65R-BU8B	95.9x11.7x8.4	61.0*	50'	(2) TMABPDB7823VG12A	RRUS-32 (WCS)	27.2 × 12.1 × 7.0	(4) 1-5/8"
BETA	LTE 700 BC/850/PCS	CCI OPA65R-BU8B	95.9x11.7x8.4	71.0'	170	(2) TMABPDB7823VG12A	RRUS-11E (700) RRUS 4478 B5 (850) RRUS 4415 B25 (1900)	19.7 x 17.0 x 7.2 15.0 x 13.2 x 7.4 15.0 x 13.2 x 5.4	(4) 1-5/8"
	LTE 700 DE/850/WCS	CCI OPA65R-BU8B	95.9x11.7x8.4	61.0°	170	(2) TMABPDB7823VG12A	RRUS-32 (WCS)	27.2 x 12.1 x 7.0	(4) 1-5/8"
GAMMA	LTE 700 BC/850/PCS	CCI OPA65R-BU8B	95.9x11.7x8.4	71.0'	290	(2) TMABPDB7823VG12A	RRUS-11E (700) RRUS 4478 B5 (850) RRUS 4415 B25 (1900)	19.7 × 17.0 × 7.2 15.0 × 13.2 × 7.4 15.0 × 13.2 × 5.4	(4) 1-5/8
	LTE 700 DE/850/WCS	CCI OPA65R-BU8B	95.9x11.7x8.4	61.0	290	(2) TMABPDB7823VG12A	RRUS-32 (WCS)	27.2 × 12.1 × 7.0	(4) 1-5/8

NOTES:

- 1. RF PLUMBING DIAGRAM BASED ON CT2818 RFDS VERSION 2.00 DATED D3/06/2018.
- 2. CONTRACTOR TO VERIFY FINAL RFDS AND CABLE LENGTHS PRIOR TO CONSTRUCTION.

FINAL EQUIPMENT CONFIGURATION



500 ENTERPRISE DRIVE SUITE 3A ROCKY HILL, CT 06067



27 NORTHWESTERN HIGHWAY SALEM, NH 03079

CT2818 STAMFORD **NEWFIELD AVENUE**

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REVIEWED BY: BSH CHECKED BY: GHN PROJECT NUMBER: 50055106

> 50065694 JOB NUMBER:

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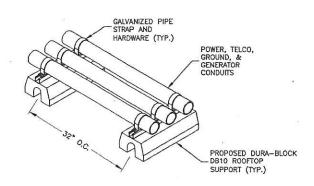
500 NEWFIELD AVENUE STAMFORD, CT 06905

SHEET TITLE

CONSTRUCTION DETAILS II

SHEET NUMBER

Z - 9



ROOF MOUNTED CONDUIT DETAIL

PROPOSED AT&T FIBER MANAGEMENT BOX MOUNTED TO H-FRAME -(TYP.-1 PER SECTOR) (3 TOTAL)

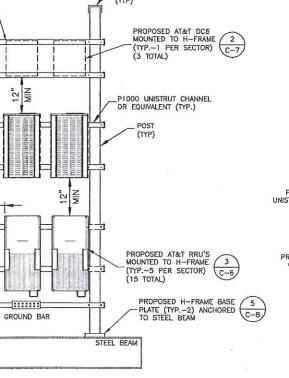
PROPOSED RAB -DUAL FLOOD LIGHT, P/N HB2B (TYP.-2) PROPOSED CONDUIT SUPPORT (AS REQUIRED) PROPOSED GALV. 1/2"Ø U-BOLT

-PROPOSED POST

NOTE:

1. COORDINATE FINAL QUANTITY & LOCATION WITH AT&T CM.

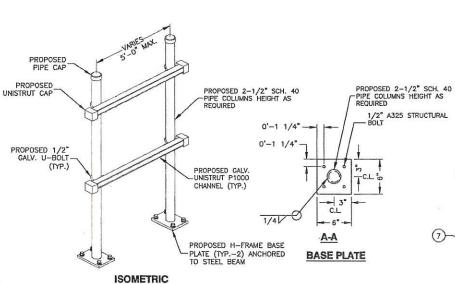




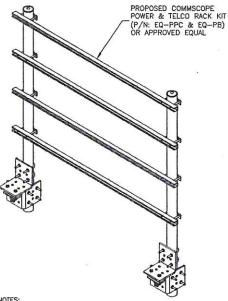
- SUBCONTRACTOR SHALL SUPPLY AND INSTALL UNISTRUT(OR EQUIVALENT)
- SUBCONTRACTOR SHALL SUPPLY AND INSTALL ICE BRIDGE POSTS AS REQUIRED.
- COAX BRIDGE POSTS SHALL BE 3 1/2"O.D. SCHED. 40 PIPE (ASTM-A36, A53 OR EQUIVALENT).
- SUBCONTRACTOR SHALL SUPPLY
 (BUT NOT INSTALL) 3/8° W UNISTRUT
 BOLTING HARDWARE AND SPRING
 NUTS. TYPICAL FOUR PER RRH.
 SUBCONTRACTOR SHALL BAG THE
 BOLTING HARDWARE AND HANG
 FROM INSTALLED UNISTRUT FRAME.
- SPACING MAY VARY BASED ON SELECTED EQUIPMENT. ADJUSTMENTS TO SPACING WILL BE MADE BY RRH INSTALLER.
- THE BOX MAY BE MOUNTED DIRECTLY BEHIND THE RRH'S IF SPACE IS AVAILABLE.
- BEHIND EACH OTHER. NO PAINTING OF THE RRH OR SOLAR SHIELD IS ALLOWED.

RRH'S TO BE MOUNTED DIRECTLY

- PLACE DUMMY LOADS ON (2) UNUSED 700 RRH PORTS.







NOTES:

- 1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- ALL EQUIPMENT SHALL BE GROUNDED PER VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
- 4. ALL MOUNTING HARDWARE TO BE GALVANIZED.



B.O.M.

- 1) GPS ANTENNA (2) L BRACKET MOUNT KIT
- 3 COAXIAL CABLE
- 4 STAINLESS STEEL BUTTERFLY KIT & STAND OFF MOUNT
- 5 L4x4x3/8
- 6 1/2 SALV. U-BOLT
- 3/8"ø ASTM A325 STRUCTURAL BOLTS (TYP.-4)

NOTES:

-(6)

- GPS TO BE THROUGH BOLTED TO STRUCTURAL STEEL PLATFORM. FINAL MOUNT LOCATION TO BE VERIFIED WITH AT&T CONSTRUCTION MANAGER.
- 3. TIE MOUNT INTO GROUNDING SYSTEM.

GPS ANTENNA DETAIL

SCALE: N.T.S.





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DRAWN BY: JC REVIEWED BY: BSH CHECKED BY: GHN PROJECT NUMBER: 50055106 JOB NUMBER: 50065694

500 NEWFIELD AVENUE STAMFORD, CT 06905

SHEET TITLE

SITE ADDRESS:

CONSTRUCTION DETAILS III

SHEET NUMBER

Z - 10

H-FRAME DETAIL SCALEI N.T.S.

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Dewberry Engineers Inc. 600 Parsippany Road, Suite 301

973.739.9400 973,428,8509 fax Parsippany, NJ 07054 www.dewberry.com

Structural Analysis Report and Design Calculations For a Wireless Telecommunications Upgrade

Site Name: Stamford Newfield Avenue Site Number: CT2818 Site Address: 500 Newfield Avenue Stamford, CT 06905 **Fairfield County**

Prepared for:

AT&T 500 Enterprise Drive Suite 3A Rocky Hill, CT 06067

SAI Communications 27 Northwestern Highway Salem, NH 03079

January 10. 2019

Prepared by:

Dewberry Engineers Inc. 600 Parsippany Road, Suite 301 Parsippany, NJ 07054

Dewberry Project Number: 50065694

Prepared by:

Graduate Engineer

Connecticut Professional Engineer

License No. 23222

Reviewed by

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APPE	ENDIX B	EQUIPMENT SPECIFICATIONS		
APPE	NDIX C	REFERENCED MATERIALS		

Project No.: 50065694 January 10, 2019

1.0 INTRODUCTION AND PROJECT SUMMARY

The objective of this report is to assess the proposed installation of a new concealment flagpole and equipment cabinets on a steel dunnage platform on the roof of an existing building. This structural analysis is limited to the proposed steel dunnage and existing building assessment only. Proposed flagpole will be designed by others.

The existing structure appears to be a four-story residential building located in Stamford, CT. The proposed configuration consists of antennas and equipment installed within a new concealment flagpole in sectors Alpha, Beta & Gamma, and equipment cabinets attached to a proposed steel dunnage platform. Proposed platform is to be installed at roof level, and attached to existing building masonry wall & new steel building columns to replace existing. Proposed antennas are to be installed with centerline elevations of approximately 61.0ft and 71.0ft above grade. Proposed remote radio heads are to be mounted to the handrail of the proposed equipment platform.

2.0 EXISTING & PROPOSED ANTENNAS & EQUIPMENT

The following antennas and equipment are proposed in each sector.

- · Sectors Alpha, Beta & Gamma:
 - > Two (2) CCI OPA65R-BU8B panel antenna measuring 95.9"H x 11.7" W x 8.4" D (69.0 lb).
 - > One (1) RRUS-11 remote radio head measuring 19.7"H x 17.0"W x 7.2"D (50.6 lb).
 - > One (1) 4478 B5 remote radio head measuring 15"H x 13.2"W x 7.4"D (59.9 lb).
 - > One (1) 4415 B25 remote radio head measuring 15"H x 13.2"W x 5.4"D (44 lb).
 - > One (1) RRUS-32 B2 remote radio head measuring 27.2"H x 12.1"W x 7"D (53 lb).
 - > One (1) RRUS-E2 remote radio head measuring 20.4"H x 18.5"W x 7.5"D (60 lb).
 - > Miscellaneous equipment and cables negligible in weight and profile.

The following equipment cabinets are proposed on the steel dunnage platform.

- > Two (2) Purcell FLX16 cabinet weighing 105.0lb.
- > One (1) Purcell FLX12 cabinet weighing 82.0lbs.
- > One (1) RBA72 PSV power cabinet weighing up to 2,185lbs.
- > One (1) RBA73-36 battery cabinet weighing up to 4,200lbs.
- > Miscellaneous equipment and cables negligible in weight and profile.

For final configuration, refer to the table below:

	Table 1: APPURTENANCE LOADING					
Elev.	Status	Carrier	Appurtenance Description			
71'	Final	AT&T	(3) - OPA65R-BU8B			
61'	Final	AT&T	(3) – OPA65R-BU8B			
50'	Final	AT&T	(12) – TMA			
42'	Final	AT&T	(3) – RRUS-11			
42'	Final	AT&T	(3) - 4478 B5			
42'	Final	AT&T	(3) – 4415 B25			
42'	Final	AT&T	(3) – RRUS-32 B2			
42'	Final	AT&T	(3) – RRUS-E2			
AT&T						

Client: SAI Communications

Site Name: CT2818 Stamford Newfield Avenue

Project No.: 50065694 January 10, 2019

3.0 CODES, STANDARDS, AND REFERENCES

The structure was analyzed and the proposed installation designed per the provisions of the following Codes and standards. See Appendix C for additional information.

- 2016 Connecticut State Building Code Amendments to IBC 2012.
- International Building Code (IBC) 2012, International Code Council.
- Steel Construction Manual 14th Ed, American Institute of Steel Construction.
- ASCE 7-10 Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers.

4.0 LOADING AND PERFORMANCE CRITERIA

The following Code-specified strength limit state (ASD) load combinations were considered in the analysis of the antenna mounts (ASCE 7-10):

- 1. D+L
- 2. D + (Lr or S)
- 3. D + 0.75L + 0.7s (Lr or S)
- 4. D + 0.6W
- 5. D + 0.75L + 0.75(Lr or S) + 0.75(0.6W)
- 6. 0.6D + 0.6W

Where:

D = dead load of structure, steel, and new equipment.

L = live load

Lr = live load on roof

S = snow load

W = design wind load

The following site-specific design parameters were considered in this analysis per the provisions of ASCE 7-10:

- · Class: II
- Exposure: B
- Design Wind Speed: 118 mph

ASCE 7-10 Figure 26.5-1A

5.0 CALCULATIONS

Calculations for this analysis and the design of the installation are included in the Appendices of this report.

Client: SAI Communications Site Name: CT2818 Stamford Newfield Avenue Project No.: 50065694 January 10, 2019

6.0 CONCLUSIONS, COMMENTARY, AND RECOMMENDATIONS

The analysis concludes that the proposed equipment platform and new building columns have <u>sufficient structural capacity</u> to support the proposed installation. Under the proposed conditions, the maximum utilization of a single structural member is <u>67.5%</u>. Proposed installation is to be constructed in accordance with Construction Drawings by Dewberry.

Please note this analysis is limited to the proposed flagpole and platform only. If actual field conditions vary from what was assumed in this analysis, the results and conclusions expressed herein are invalid and further evaluation is recommended for any proposed installation to continue.

Dewberry Engineers Inc. reserves the right to add to or modify this report if more information becomes available. The conclusions reached by Dewberry Engineers Inc. in this report are only applicable to the previously mentioned existing structural elements supporting the proposed wireless telecommunications installation. The results of this report are based on the assumption that existing structural elements have been installed per the original design documents, have been well maintained, and are uncompromised. This report does not imply that a thorough inspection of the existing structure has been performed. Any deviation of the support condition, loading, location, placement, equipment configuration, etc., will require Dewberry Engineers Inc. to generate an additional structural analysis. Further, no structural qualification is made or implied by this report of any existing structural elements.

APPENDIX A



Suite 301 973.739.9710 fax

Parsippany, NJ 07054 www.dewberry.com

Designer: GJB Date: 1/10/2019 Checker JY Date: 1/10/2019 CT2818 Stamford Newfield Avenue_Stamford, CT 06905 Job No. 50065694 Subject: Load Calculation for Equipment & Flagpole Dunnage Sheet No. 1 of

Telecom DUNNAGE analysis

Design Criteria:

ASCE 7-10

International Building Code 2012

2016 Connecticut Building Code - Amendments to IBC 2012 AISC 360-10, Specifications for Structural Steel Buildings

Dead and Live Load

Telecom Equipment Loadings

Equipment	Weight (lbs)	Quantity	Location	Status	
Purcell FLX16	105	2		Proposed	
Purcell FLX12	82	1	Fauin Dunnaga	Proposed	
RBA72 PSV	2185	1	Equip Dunnage	Proposed	
RBA73-36	4,200	1		Proposed	
Flagpole	1,250	1		Proposed	
40"dia. FRP Concealment	1,000	1	Flagpole	Proposed	
CCI OPA65R-BU8B	64.3	6		Proposed	
RRUS-11	50.6	3		Proposed	
4478 B5	59.9	3		Proposed	
4415 B25	44.0	3	Handrail	Proposed	٦
RRUS-32-B2	53.0	3	1	Proposed	
RRUS-E2	60.0	3		Proposed	
TMA	15	12	Flagpole	Proposed	

assumed assumed

Flagpole Location Equipment Loading: 2,815.8 lb

Flagpole Transistion Plate: 1,300.0 lb (assumed based on 4'x4'x2" steel plate)

Misc Telecom: 8.5 psf Grating:

10 psf

Roof Dead Load: 20.0 psf (assumed based on similar structures)

Column 1 Area: 152.7 sf

minus Platform Overlap Area:

136.8 sf

Column 2 Area: 146.6 sf Column 3 Area: 126.5 sf minus Platform Overlap Area: minus Platform Overlap Area:

82.7 sf 110.5 sf

Telecom Live Load:

30

Roof Live Load:

30 psf

Snow Load:

Pg =	30	psf	(Figure 7-1, Ground Snow Pg, ASCE)
1 =	1.0		

Ce = 1.0

Ct = 1.2

Pf = 0.7 * Ce * Ct * I * Pg = Use 25.2 psf as Snow Load

25.20 psf > 20 * I = 20 psf (min snow)

Wind load:

ltem	Value	Comments
V =	118 mph	Fairfield County, CT
Exposure =	В	Section 26.7
l=	1.0	Table 1.5-2
z=h=	52.50 ft	CL of flagpole < 60' A.G.L.
Kd =	0.85	Table 26.6-1
Kzt =	1	Section 26.8.2
α=	7	Table 26.9-1
zg=	1200 .	Table 26.9-1
Kz =	0.82	Table 29.3-1



600 Parsippany Road 973.576.9600

Suite 301 973.739.9710 fax

Parsippany, NJ 07054 www.dewberry.com

Designer: GJB Date: 1/10/2019 Checker JΥ 1/10/2019 Date: CT2818 Stamford Newfield Avenue Stamford, CT 06905 Title: Job No. 50065694 Subject: Load Calculation for Equipment & Flagpole Dunnage Sheet No. 1 of

Telecom DUNNAGE analysis

GCr	1.9	Section 29.5.1
qz =	24.91 psf	qz=0.00256(Kz)(Kzt)(Kd)(V^2) psf
p =	47.32 psf	p=gz(GCr)

Appurtenance	Aa (sq ft)	At (sq ft)	0.6*Front Wind	0.6*Side Wind
40" O.D. Fiberglass Shroud x 30"-0"	50.00	50.00	1419.72	1419.72

Item	Value	Comments	
V =	118 mph	Fairfield County, CT	
Exposure =	В	Section 26.7	
1 =	1.0	Table 1.5-2	
z=h=	67.50 ft	CL of flagpole > 60' A.G.L.	
Kd =	0.85	Table 26.6-1	
Kzt =	1	Section 26.8.2	
α=	7	Table 26.9-1	
zg=	1200	Table 26.9-1	
Kz =	0.88	Table 29.3-1	
G =	0.85	Section 26.9.1	
Cf =	0.861	Figure 29.5-1	
qz =	26.76 psf	qz=0.00256(Kz)(Kzt)(Kd)(V^2) psf	
p =	19.59 psf	p=qzGCf	

Appurtenance	Aa (sq ft)	At (sq ft)	0.6*Front Wind	0.6*Side Wind
40" O.D. Fiberglass Shroud x 30"-0"	50.00	50.00	587.56	587.56

Loading Combinations:

Per section 2.4.1

1.) D + L:

D+ (Lr or S)

D + 0.75L + 0.75(Lr or S)

D + 0.6W

D + 0.75(L + (Lr or S) + (0.6W)):

D=

Dead load L= Live Load

Roof Live Load Lr =

W = Load Due to Wind Pressure

S = Snow Load

0.6D + 0.6W

3	Job No 50065694	Sheet No 1	Rev 0		
Software licensed to Dewberry	Part Equipment Dunnage				
Job Title CT2818 Stamford Newfield Avenue	Ref	1)			
	By MLS	Dat∈10/30/17 Chd JY	8		
Client SAI	File CT2818 Stamfo	rd-Platforn Date/Time 01-Nov-	2017 13:18		

Job Information

	Engineer	Checked	Approved
Name:	MLS	JY	
Date:	10/30/17	10/31/17	

Project ID	
Project Name	2

Structure Type | SPACE FRAME

Number of Nodes	80	Highest Node	82
Number of Elements	113	Highest Beam	137
Number of Plates	13	Highest Plate	115

Number of Basic Load Cases	10
Number of Combination Load Cases	27

Included in this printout are data for:

All	The Whole Structure

Included in this printout are results for load cases:

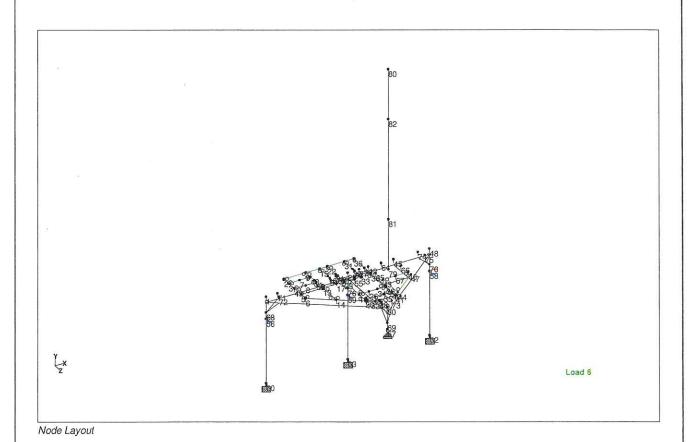
Туре	L/C	Name
Primary	1	SELF WEIGHT
Primary	2	DEAD (TELECOM)
Primary	3	ROOF DEAD
Primary	4	LIVE
Primary	5	SNOW
Primary	6	ROOF SNOW
Primary	7	0.6*WIND(X)
Primary	8	0.6*WIND(Z)
Primary	9	0.6*WIND(45A)
Primary	10	0.6*WIND(-45B)
Combination	11	D+L
Combination	12	D+S
Combination	13	D+0.75(L+S)
Combination	14	D+0.6W(X)
Combination	15	D+0.6W(Z)
Combination	16	D+0.6W(-X)
Combination	17	D+0.6W(-Z)
Combination	18	D+0.6W(45A)
Combination	19	D+0.6W(45B)
Combination	20	D+0.6W(-45A)
Combination	21	D+0.6W(-45B)
Combination	22	D+0.75(L+S+0.6W(X))
Combination	23	D+0.75(L+S+0.6W(Z))
Combination	24	D+0.75(L+S+0.6W(-X))

2	Job No Sheet No 2					
Software licensed to Dewberry	Part Equipment Dunnage					
Job Title CT2818 Stamford Newfield Avenue	Ref					
	By MLS	Date 10/30/17 Chd JY				
Client SAI	File CT2818 Stamfo	rd-Platform Date/Time 01-Nov-	2017 13:18			

Job Information Cont...

Туре	L/C	Name	
Combination	28	D+0.75(L+S+0.6W(-45A))	
Combination	29	D+0.75(L+S+0.6W (-45B))	
Combination	30	0.6D+0.6W(X)	
Combination	31	0.6D+0.6W(Z)	
Combination	32	0.6D+0.6W(-X)	
Combination	33	0.6D+0.6W(-Z)	
Combination	34	0.6D+0.6W(45A)	
Combination	35	0.6D+0.6W(45B)	
Combination	36	0.6D+0.6W(-45A)	
Combination	37	0.6D+0.6W(-45B)	

	Job No 50065694	Sheet No	3	Rev 0	
Software licensed to Dewberry	Part Equipment Dunnage				
Job Title CT2818 Stamford Newfield Avenue	Ref				
	By MLS Date10/30/17 Chd JY				
Client SAI	File CT2818 Stamfo	rd-Platform	Date/Time 01-Nov-2	2017 13:18	



2	Јор No 500 65694	Sheet No 4	Rev 0			
Software licensed to Dewberry	Part Equipment Dunnage					
Job Title CT2818 Stamford Newfield Avenue	Ref					
	By MLS	Date 10/30/17 Chd JY	()			
Client SAI	File CT2818 Stamfo	ord-Platform Date/Time 01-Nov-	2017 13:18			

Nodes

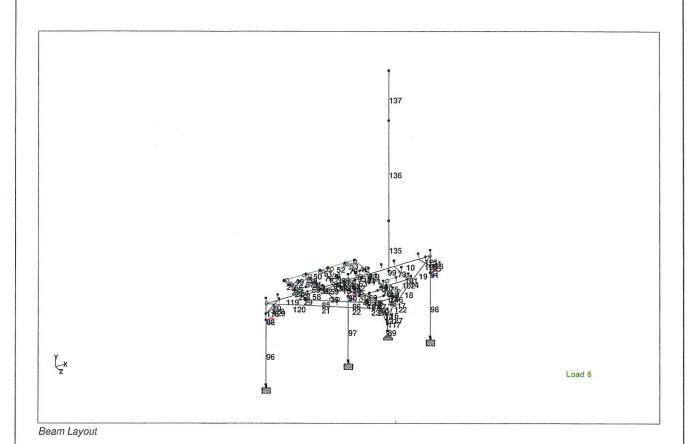
Node	Х	Υ	Z
	(ft)	(ft)	(ft)
1	0.000	0.000	0.000
2	4.317	0.000	-2.750
3	4.317	0.000	-1.498
4	4.317	0.000	0.086
5	4.317	0.000	1.750
6	4.317	0.000	3.000
7	5.983	0.000	-1.498
8	5.983	0.000	0.086
9	7.650	0.000	-2.750
10	7.650	0.000	-1.498
11	7.650	0.000	-0.500
12	7.650	0.000	0.086
13	7.650	0.000	1.750
14	7.650	0.000	5.316
15	9.741	0.000	-2.750
16	9.741	0.000	-0.500
17	9.741	0.000	1.750
18	10.905	0.000	7.575
19	10.905	0.000	5.618
20	10.905	0.000	7.201
21	10.905	0.000	-0.500
22	10.905	0.000	-2.750
23	10.905	0.000	1.750
24	11.803	0.000	8.202
25	12.427	0.000	0.000
26	12.427	0.000	5.618
27	12.427	0.000	7.201
28	12.427	0.000	8.202
29	12.427	0.000	8.635
30	12.427	0.000	10.302
31	13.472	0.000	-2.750
32	13.472	0.000	-0.500
33	13.472	0.000	1.750
34	13.686	0.000	5.615
35	13.686	0.000	7.201
36	14.951	0.000	-2.750
37	14.951	0.000	0.000
38	14.951	0.000	1.750
39	14.951	0.000	5.618
40	14.951	0.000	7.201
41	14.951	0.000	8.202
42	15.534	0.000	0.000
43	15.534	0.000	3.833
44	15.534	0.000	7.716
45	19.368	0.000	0.000

3	Job No 50065694	5694 Sheet No Rev		
Software licensed to Dewberry	Part Equipment Dun	nage		
Job Title CT2818 Stamford Newfield Avenue	Ref			
	By MLS	Date 10/30/17 Chd JY		
Client SAI	File CT2818 Stamfo	ord-Platforn Date/Time 01-Nov-	2017 13:18	

Nodes Cont...

Node	Х	Υ	Z
	(ft)	(ft)	(ft)
46	19.368	0.000	3.833
47	19.368	0.000	4.526
48	24.806	0.000	0.000
49	4.317	0.000	0.000
50	7.650	0.000	0.000
51	9.741	0.000	0.000
52	10.905	0.000	0.000
53	13.472	0.000	0.000
55	12.427	0.000	1.750
56	0.000	-3.333	0.000
57	12.427	-3.333	10.302
58	24.806	-3.333	0.000
59	12.427	-3.333	0.000
60	0.000	-12.916	0.000
62	24.806	-12.916	0.000
63	12.427	-12.916	0.000
64	17.451	0.000	0.000
65	15.534	0.000	1.916
66	19.368	0.000	1.916
67	17.451	0.000	3.833
68	0.000	-2.333	0.000
69	12.427	-2.333	10.302
70	24.806	-2.333	0.000
71	1.750	0.000	0.000
72	1.437	0.000	0.999
73	13.772	0.000	9.183
74	23.056	0.000	0.000
75	23.461	0.000	1.120
76	12.427	-2.333	0.000
77	14.177	0.000	0.000
78	10.677	0.000	0.000
79	17.451	0.000	1.916
80	17.451	30.000 1.916	
81	17.451	7.500	1.916
82	17.451	22.500	1.916

2	Job No Sheet No 6 Rev 0
Software licensed to Dewberry	Part Equipment Dunnage
Job Title CT2818 Stamford Newfield Avenue	Ref
	By MLS Date 10/30/17 Chd JY
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2	Job No	
Software licensed to Dewberry	Part Equipment Dunnage	
Job Title CT2818 Stamford Newfield Avenue	Ref	
	By MLS Date 10/30/17 Chd JY	
Client SAI	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 13:18	

Beams

Beam	Node A	Node B	Length	Property	β	
			(ft)		(degrees)	
1	1	71	1.750	2	0	
2	49	50	3.333	2	0	
5	52	25	1.522	2	0	
6	25	53	1.045	2	0	
7	53	77	0.705	2	0	
8	37	42	0.583	2	0	
9	42	64	1.917	2	0	
10	45	74	3.688	2	0	
11	30	29	1.667	2	0	
12	29	28	0.433	2	0	
13	28	27	1.001	2	0	
14	27	26	1.583	2	0	
15	26	55	3.868	2	0	
16	30	73	1.750	2	0	
17	41	44	0.759	2	0	
18	44	47	4.988	2	. 0	
19	47	75	5.325	2	0	
20	1	72	1.750	2	0	
21	6	14	4.059	2	0	
22	14	18	3.962	2	0	
23	18	24	1.095	2		
24	24	29	0.760	2	0	
25	2	3	1.252	3	0	
26	3	49	1.498	3	0	
27	49	4	0.086	4	0	
28	4	5	1.664	3	0	
29	5	6	1.250	3	0	
30	9	10	1.252	3	0	
31	10	11	0.998	3	0	
32	11	50	0.500	3	0	
33	50	12	0.086	4	0	
34	12	13	1.664	3	0	
35	13	14	3.566	3	0	
36	22	21	2.250	3	0	
37	21	52	0.500	3	0	
38	52	23	1.750	3	0	
39	23	19	3.868	3	0	
40	19	20	1.583	3	0	
41	20	18	0.374	3	0	
42	36	37	2.750	3	0	
43	37	38	1.750	3	0	
44	38	39	3.868	3	0	
45	39	40	1.583	3	0	
46	40	41	1.001	3	0	
47	24	28	0.624	5	0	

2	Job No
Software licensed to Dewberry	Part Equipment Dunnage
Job Title CT2818 Stamford Newfield Avenue	Ref
	By MLS Date10/30/17 Chd JY
Client SAI	File CT2818 Stamford-Platform Date/Time 01-Nov-2017 13:18

Beams Cont...

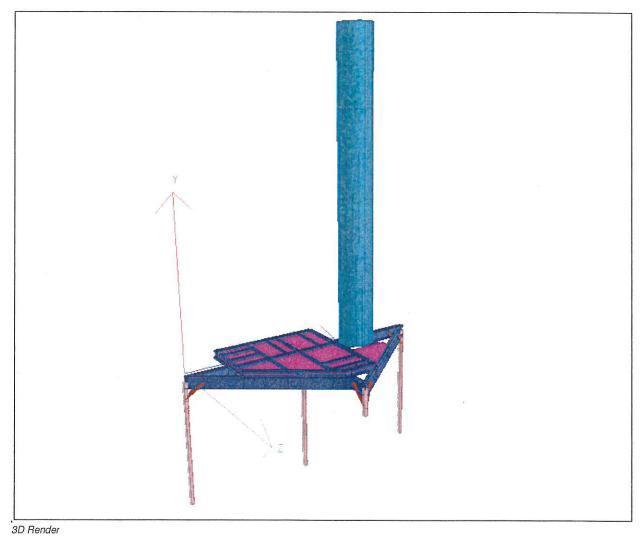
48 28 41 2.524 5 49 2 9 3.333 5 50 9 15 2.091 5 51 15 22 1.164 5 52 22 31 2.567 5 53 31 36 1.479 5 54 4 8 1.666 4 55 8 12 1.667 4 56 3 7 1.666 4 57 7 10 1.667 4 58 5 13 3.333 5 59 13 17 2.091 5 60 17 23 1.164 5 61 55 25 1.750 2 62 23 55 1.522 5 63 55 33 1.045 5 64 33 38 1.479 5 <th>β</th> <th>perty</th> <th>Pr</th> <th>Length</th> <th>Node B</th> <th></th> <th>Beam</th> <th>ĺ</th>	β	perty	Pr	Length	Node B		Beam	ĺ
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3	Job No Sheet No 9 Rev 0	
Software licensed to Dewberry	Part Equipment Dunnage	
Job Title CT2818 Stamford Newfield Avenue	Ref	
	By MLS Date10/30/17 Chd JY	
Client SAI	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 13:18	,

Beams Cont...

Beam	Node A	Node B	Length	Property	β
			(ft)		(degrees)
102	67	46	1.917	2	0
116	68	1	1.750	6	0
117	69	30	1.750	6	0
118	70	48	1.750	6	0
119	71	49	2.567	2	0
120	72	6	3.507	2	0
121	69	29	2.243	8	0
122	73	41	1.533	2	0
123	74	48	1.750	2	0
124	75	48	1.750	2	0
125	70	75	2.305	8	0
126	70	74	2.305	8	0
127	69	73	2.305	8	0
128	68	71	2.305	8	0
129	68	72	2.305	8	0
130	76	25	1.750	6	0
131	77	37	0.774	2	0
132	76	53	1.828	8	0
133	78	52	0.228	2	0
134	76	78	2.305	8	0
135	79	81	7.500	9	0
136	81	82	15.000	9	0
137	82	80	7.500	9	0

2	Job No
Software licensed to Dewberry	Part Equipment Dunnage
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Client SAI	File CT2818 Stamford-Platform Date/Time 01-Nov-2017 13:1



3	Job No 50065694	Sheet No 11	Rev 0		
Software licensed to Dewberry	Part Equipment Dunnage				
Job Title CT2818 Stamford Newfield Avenue	Ref				
	By MLS	Date 10/30/17	Chd JY		
Client SAI	File CT2818 Stam	ford-Platforn Date/Ti	ime 01-Nov-2017 13:18		

<u>Plates</u>

Plate	Node A	Node B	Node C	Node D	Property
103	2	9	10	3	1
104	3	10	12	4	1
105	4	12	14	6	1
106	9	15	17	13	1
107	15	22	23	17	1
108	13	23	18	14	1
109	22	31	33	23	1
110	31	36	38	33	1
111	23	38	39	19	1
112	19	39	40	20	1
113	20	40	41	24	1
114	20	24	18		1
115	44	43	46	47	1

Section Properties

Prop	Section	Area (in²)	l _{yy} (in ⁴)	l _{zz} (in ⁴)	J (in⁴)	Material
2	W12X26	7.650	17.300	204.000	0.285	STEEL
3	W8X18	5.260	7.970	61.900	0.157	STEEL
4	W8X10	2.960	2.090	30.800	0.035	STEEL
5	W8X18	5.260	7.970	61.900	0.157	STEEL
6	TUB40404	3.590	8.200	8.200	13.184	STEEL
7	TUB35355	3.730	6.100	6.100	10.120	STEEL
8	L30304	1.440	1.982	0.506	0.031	STEEL
9	Round 40.0X40.0X0.2	31.211	6.17E+3	6.17E+3	12.3E+3	STEEL

Plate Thickness

Prop	Node A (in)	Node B (in)	Node C (in)	Node D (in)	Material
1	0.250	0.250	0.250	0.250	STEEL

Materials

Mat	Name	E (kip/in²)	ν	Density (kip/in³)	α (/°F)
1	STEEL	29E+3	0.300	0.000	6E -6
2	STAINLESSSTEEL	28E+3	0.300	0.000	10E -6
3	ALUMINUM	10E+3	0.330	0.000	13E -6
4	CONCRETE	3.15E+3	0.170	0.000	5E -6

	Job No Sheet No 12 Rev	0
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<u>Supports</u>

Node	Х	Υ	Z	rX	rY	rZ
	(kip/in)	(kip/in)	(kip/in)	(kip ⁻ ft/deg)	(kip ⁻ ft/deg)	(kip ft/deg)
56	0.417	2	0.417	120	72	=
57	Fixed	Fixed	Fixed	-	72	-
58	0.417	-	0.417	*	94	-
59	0.417	12	0.417	120	52	-
60	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
62	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
63	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Releases

Beam ends not shown in this table are fixed in all directions.

Beam Node x y z rx

Beam	Node	x	У	z	rx	ry	rz
5	25	Fixed	Fixed	Fixed ·	Fixed	Pin	Pin
6	25	Fixed	Fixed	Fixed	Fixed	Pin	Pin
16	30	Fixed	Fixed	Fixed	Fixed	Pin	Pin
20	1	Fixed	Fixed	Fixed	Fixed	Pin	Pin
24	29	Fixed	Fixed	Fixed	Fixed	Pin	Pin
25	2	Fixed	Fixed	Fixed	Fixed	Pin	Pin
29	6	Fixed	Fixed	Fixed	Fixed	Pin	Pin
30	9	Fixed	Fixed	Fixed	Fixed	Pin	Pin
35	14	Fixed	Fixed	Fixed	Fixed	Pin	Pin
36	22	Fixed	Fixed	Fixed	Fixed	Pin	Pin
41	18	Fixed	Fixed	Fixed	Fixed	Pin	Pin
42	36	Fixed	Fixed	Fixed	Fixed	Pin	Pin
46	41	Fixed	Fixed	Fixed	Fixed	Pin	Pin
54	4	Fixed	Fixed	Fixed	Fixed	Pin	Pin
55	12	Fixed	Fixed	Fixed	Fixed	Pin	Pin
56	3	Fixed	Fixed	Fixed	Fixed	Pin	Pin
57	10	Fixed	Fixed	Fixed	Fixed	Pin	Pin
58	5	Fixed	Fixed	Fixed	Fixed	Pin	Pin
58	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
59	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
60	23	Fixed	Fixed	Fixed	Fixed	Pin	Pin
62	23	Fixed	Fixed	Fixed	Fixed	Pin	Pin
64	38	Fixed	Fixed	Fixed	Fixed	Pin	Pin
66	20	Fixed	Fixed	Fixed	Fixed	Pin	Pin
67	40	Fixed	Fixed	Fixed	Fixed	Pin	Pin
69	19	Fixed	Fixed	Fixed	Fixed	Pin	Pin
70	39	Fixed	Fixed	Fixed	Fixed	Pin	Pin
76	15	Fixed	Fixed	Fixed	Fixed	Pin	Pin
79	31	Fixed	Fixed	Fixed	Fixed	Pin	Pin
94	17	Fixed	Fixed	Fixed	Fixed	Pin	Pin
95	33	Fixed	Fixed	Fixed	Fixed	Pin	Pin

3	Job No Sheet No 13 Rev 0				
Software licensed to Dewberry	Part Equipment Dunnage				
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Releases Cont...

Beam	Node	х	У	z	rx	ry	rz
124	48	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Primary Load Cases

Number	Name	Туре
1	SELF WEIGHT	None
2	DEAD (TELECOM)	None
3	ROOF DEAD	None
4	LIVE	None
5	SNOW	None
6	ROOF SNOW	None
7	0.6*WIND(X)	None
8	0.6*WIND(Z)	None
9	0.6*WIND(45A)	None
10	0.6*WIND(-45B)	None

Combination Load Cases

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
11	D+L	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	1.00
12	D+S	1	SELF WEIGHT	1.00
250000000000000000000000000000000000000		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		5	SNOW	1.00
		6	ROOF SNOW	1.00
13	D+0.75(L+S)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		5	SNOW	0.75
		6	ROOF SNOW	0.75
14	D+0.6W(X)	1	SELF WEIGHT	1.00
	2:	2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
***************************************		7	0.6*WIND(X)	1.00
15	D+0.6W(Z)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		8	0.6*WIND(Z)	1.00

2	Job No	
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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
16	D+0.6W(-X)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		7	0.6*WIND(X)	-1.00
17	D+0.6W(-Z)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		8	0.6*WIND(Z)	-1.00
18	D+0.6W(45A)	1	SELF WEIGHT	1.00
1		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		9	0.6*WIND(45A)	1.00
19	D+0.6W(45B)		SELF WEIGHT	1:00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		10	0.6*WIND(-45B)	1.00
20	D+0.6W(-45A)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		9	0.6*WIND(45A)	-1.00
21	D+0.6W(-45B)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
	D 0 754 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10	0.6*WIND(-45B)	-1.00
22	D+0.75(L+S+0.6W(X))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
-		6	ROOF SNOW	0.75
		5	SNOW	0.75
00	D. 0.75(1 - C. 0.0M//7))	1	0.6*WIND(X)	0.75
23	D+0.75(L+S+0.6W(Z))	2	SELF WEIGHT	1.00
		3	DEAD (TELECOM) ROOF DEAD	1.00
		4	LIVE	0.75
		5	SNOW	
		6	ROOF SNOW	0.75
		8	0.6*WIND(Z)	0.75
24	D+0.75(L+S+0.6W(-X))	1	SELF WEIGHT	1.00
24	D+0.75(L+3+0.0W(-A))	2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		5	SNOW	0.75
		7	ROOF SNOW 0.6*WIND(X)	0.75 -0.75

2	Job No Sheet No 15 Rev 0
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Combination Load Cases Cont...

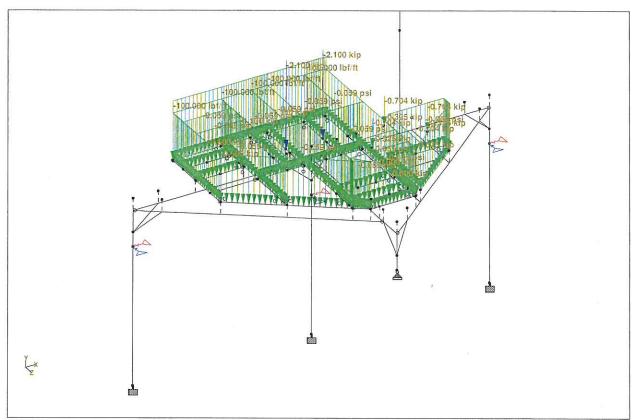
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
25	D+0.75(L+S+0.6W(-Z))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
ļ		4	LIVE	0.75
		5	SNOW	0.75
		6	ROOF SNOW	0.75
	D 0.75(1 0 0.0)M/45A))	8	0.6*WIND(Z)	-0.75
26	D+0.75(L+S+0.6W (45A))	2	SELF WEIGHT DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		5	SNOW	0.75
		6	ROOF SNOW	0.75
		9	0.6*WIND(45A)	0.75
27	D+0.75(L+S+0.6W(45B))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
***************************************	A 100	5	SNOW	0.75
		6	ROOF SNOW	0.75
		10	0.6*WIND(-45B)	0.75
28	D+0.75(L+S+0.6W(-45A))	1	SELF WEIGHT	1.00
	8	2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4.	LIVE	0.75
		5	SNOW	0.75
		6	ROOF SNOW	0.75
		9	0.6*WIND(45A)	-0.75
29	D+0.75(L+S+0.6W(-45B))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75 0.75
		5	ROOF SNOW	0.75
		10	0.6*WIND(-45B)	-0.75
30	0.6D+0.6W(X)	1	SELF WEIGHT	0.60
	0.0510.000(//)	2	DEAD (TELECOM)	0.60
		3	ROOF DEAD	0.60
		7	0.6*WIND(X)	1.00
31	0.6D+0.6W(Z)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		3	ROOF DEAD	0.60
		8	0.6*WIND(Z)	1.00
32	0.6D+0.6W(-X)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60

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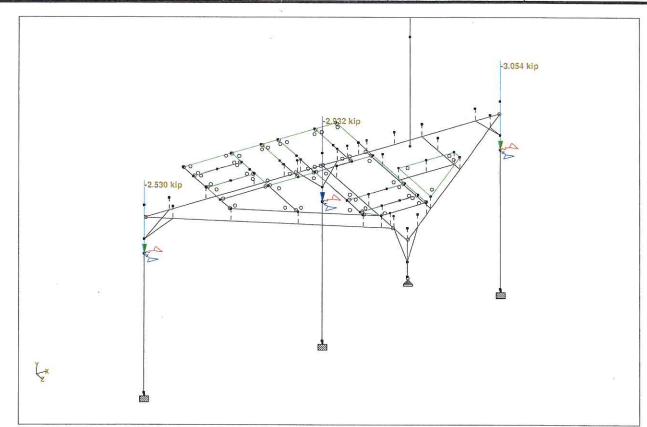
Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor	
		3	ROOF DEAD	0.60	
		7	0.6*WIND(X)	-1.00	
33	0.6D+0.6W(-Z)	1	SELF WEIGHT	0.60	
		2	DEAD (TELECOM)	0.60	
		3	ROOF DEAD	0.60	
		8	0.6*WIND(Z)	-1.00	
34	0.6D+0.6W(45A)	1	SELF WEIGHT	0.60	
	0	2	DEAD (TELECOM)	0.60	
		3	ROOF DEAD	0.60	
		9	0.6*WIND(45A)	1.00	
35	0.6D+0.6W(45B)	1	SELF WEIGHT	0.60	
(2)		2	DEAD (TELECOM)	0.60	
		3	ROOF DEAD	0.60	
		10	0.6*WIND(-45B)	1.00	
36	0.6D+0.6W(-45A)	1	SELF WEIGHT	0.60	
		2	DEAD (TELECOM)	0.60	
		3	ROOF DEAD	0.60	
		9	0.6*WIND(45A)	-1.00	
37	0.6D+0.6W(-45B)	1	SELF WEIGHT	0.60	
		2	DEAD (TELECOM)	0.60	
		3	ROOF DEAD	0.60	
		10	0.6*WIND(-45B)	-1.00	

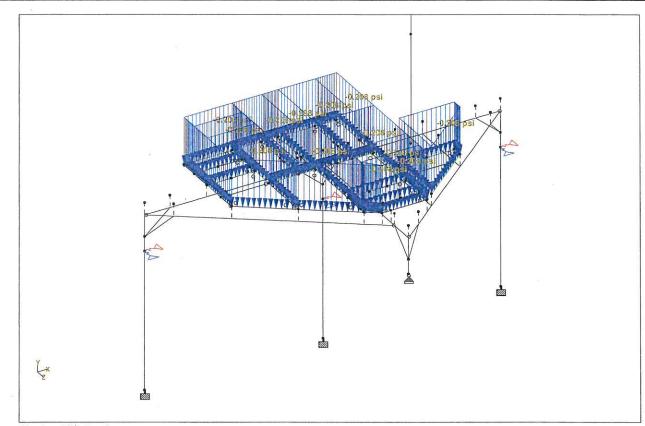
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Software licensed to Dewberry	Part Equipment Dunnage				
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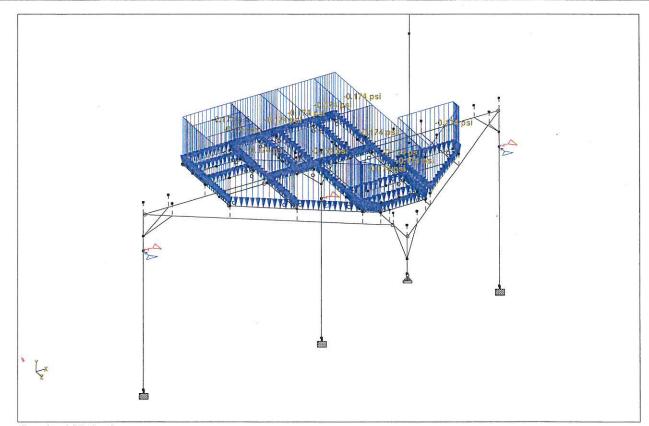
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2	Job No 50065694	Sheet No	19	Rev 0
Software licensed to Dewberry	Part Equipment Dunnage			
Job Title CT2818 Stamford Newfield Avenue	Ref		The second secon	
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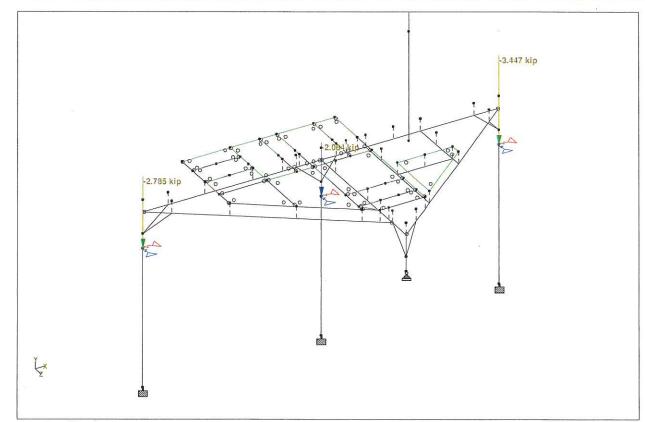


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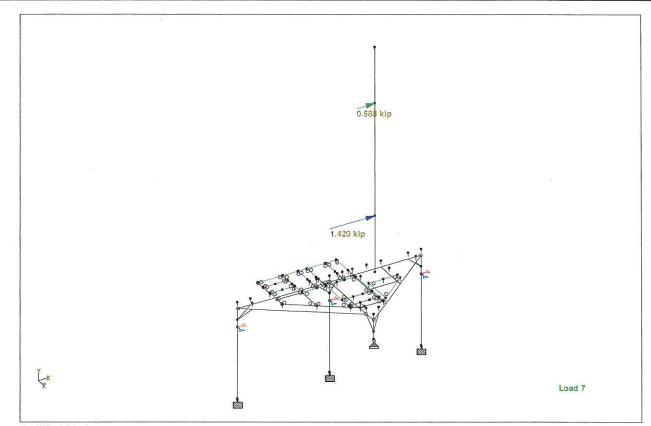


Snow Load (Platform)

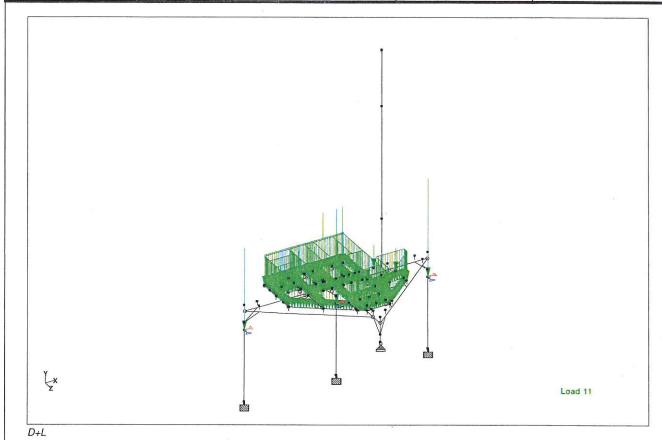
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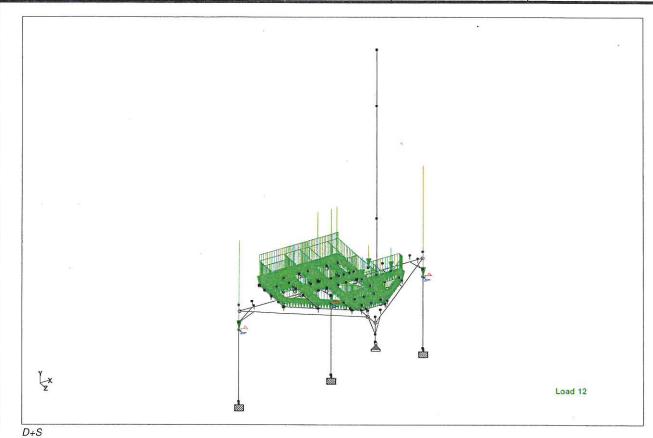
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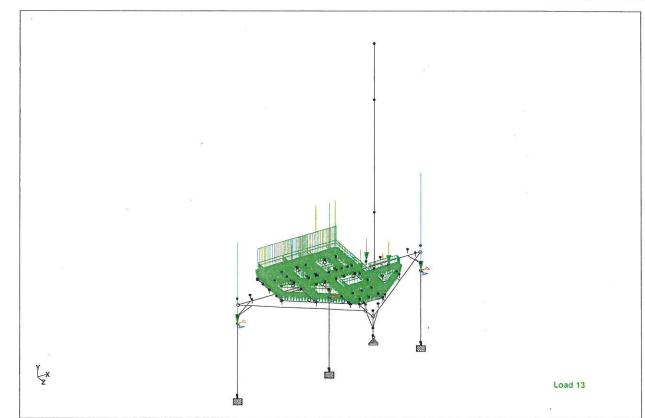
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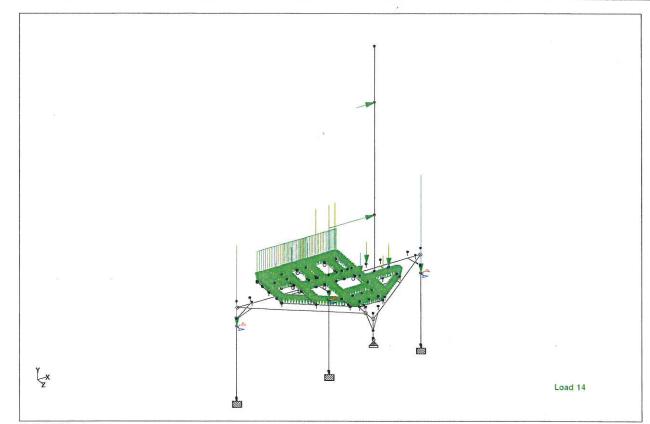
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Software licensed to Dewberry	Part Equipment Dunnage					
Job Title CT2818 Stamford Newfield Avenue	Ref					
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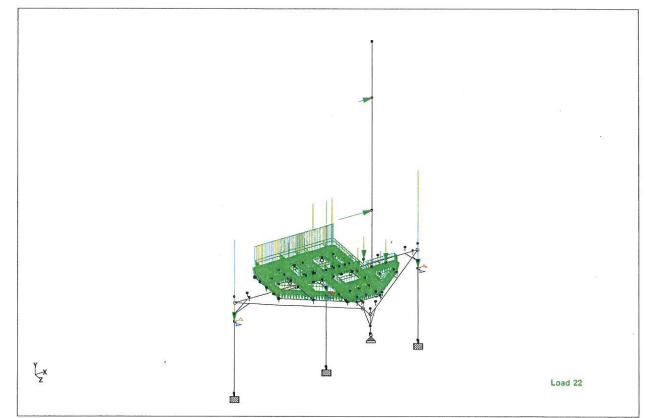
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Software licensed to Dewberry		Part Equipment Dun	nage		
Job Title CT2818 Stamford Newfield Avenue	8	Ref			
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2	Job No Sheet No 26 Rev 0
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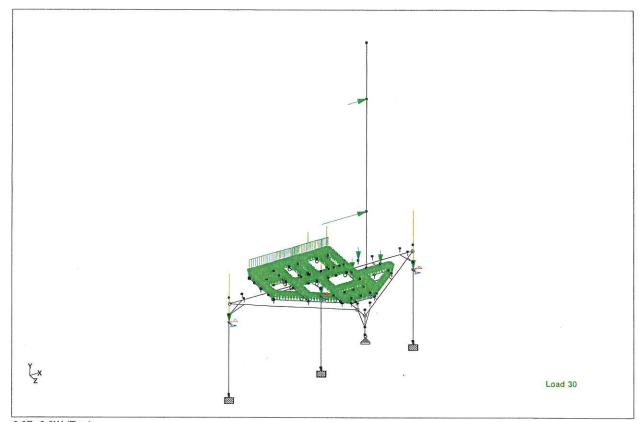


2	Job No Sheet No 27 Rev 0
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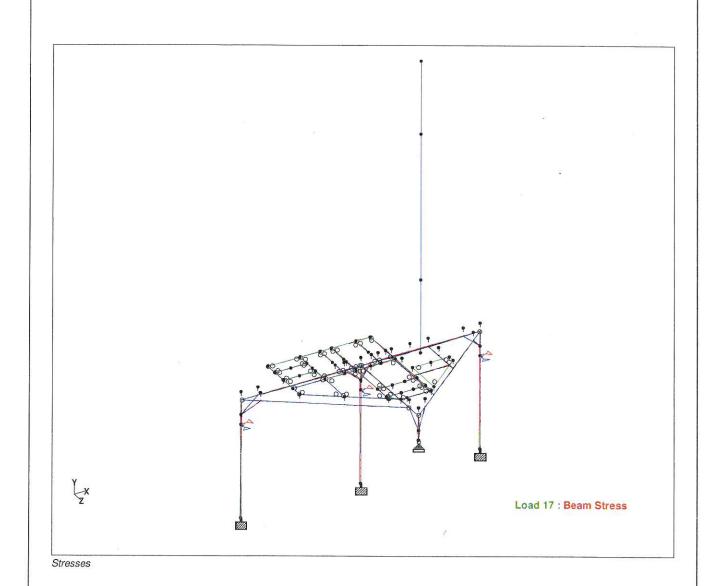


D+0.75(L+S+0.6W) (Typ.)

2	Job No Sheet No 28 Rev 0	
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3	Job No Sheet No 29 Rev 0					
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Reaction Summary

			Horizontal	Vertical	Horizontal		Moment	
	Node	L/C	FX	FY	FZ	MX	MY	MZ
			(kip)	(kip)	(kip)	(kip⁻in)	(kip⁻in)	(kip in)
Max FX	57	19:D+0.6W(45	1.274	4.932	-1.408	0.000	0.000	0.000
Min FX	57	37:0.6D+0.6W	-1.092	-0.392	1.406	0.000	0.000	0.000
Max FY	63	28:D+0.75(L+S	0.171	24.529	0.031	2.041	-1.065	-11.283
Min FY	63	9:0.6*WIND(45	-0.287	-3.333	-0.010	-0.778	1.630	18.474
Max FZ	57	33:0.6D+0.6W	-0.535	-1.269	1.963	0.000	0.000	0.000
Min FZ	57	15:D+0.6W(Z)	0.717	5.809	-1.965	0.000	0.000	0.000
Max MX	62	20:D+0.6W(-45	0.162	4.748	0.222	16.190	-1.686	-12.138
Min MX	60	20:D+0.6W(-45	0.275	5.091	-0.228	-15.372	-1.611	-17.504
Max MY	60	18:D+0.6W(45.	-0.203	4.316	0.115	10.631	1.997	14.879
Min MY	62	36:0.6D+0.6W	0.196	2.204	0.210	15.547	-1.699	-13.934
Max MZ	62	18:D+0.6W(45	-0.335	7.973	-0.161	-12.975	1.752	21.118
Min MZ	60	20:D+0.6W(-45	0.275	5.091	-0.228	-15.372	-1.611	-17.504

Utilization Ratio

Beam	Analysis	Design	Actual	Allowable	Ratio	Clause	L/C	Ax	lz	ly	lx
	Property	Property	Ratio	Ratio	(Act./Allow.)			(in²)	(in ⁴)	(in ⁴)	(in ⁴)
1	W12X26	W12X26	0.107	1.000	0.107	AISC- H1-3	18	7.650	204.000	17.300	0.300
2	W12X26	W12X26	0.195	1.000	0.195	AISC- H2-1	26	7.650	204.000	17.300	0.300
5	W12X26	W12X26	0.190	1.000	0.190	AISC- H2-1	26	7.650	204.000	17.300	0.300
6	W12X26	W12X26	0.138	1.000	0.138	SHEAR -Y	22	7.650	204.000	17.300	0.300
7	W12X26	W12X26	0.245	1.000	0.245	SHEAR -Y	20	7.650	204.000	17.300	0.300
8	W12X26	W12X26	0.242	1.000	0.242	AISC- H1-3	20	7.650	204.000	17.300	0.300
9	W12X26	W12X26	0.252	1.000	0.252	AISC- H1-3	20	7.650	204.000	17.300	0.300
10	W12X26	W12X26	0.247	1.000	0.247	AISC- H1-3	14	7.650	204.000	17.300	0.300
11	W12X26	W12X26	0.128	1.000	0.128	AISC- H2-1	26	7.650	204.000	17.300	0.300
12	W12X26	W12X26	0.140	1.000	0.140	AISC- H2-1	26	7.650	204.000	17.300	0.300
13	W12X26	W12X26	0.111	1.000	0.111	AISC- H2-1	26	7.650	204.000	17.300	0.300
14	W12X26	W12X26	0.098	1.000	0.098	AISC- H2-1	26	7.650	204.000	17.300	0.300
15	W12X26	W12X26	0.076	1.000	0.076	AISC- H2-1	26	7.650	204.000	17.300	0.300
16	W12X26	W12X26	0.087	1.000	0.087	AISC- H1-3	14	7.650	204.000	17.300	0.300
17	W12X26	W12X26	0.199	1.000	0.199	AISC- H1-3	15	7.650	204.000	17.300	0.300
18	W12X26	W12X26	0.230	1.000	0.230	AISC- H2-1	15	7.650	204.000	17.300	0.300
19	W12X26	W12X26	0.215	1.000	0.215	AISC- H2-1	14	7.650	204.000	17.300	0.300
20	W12X26	W12X26	0.050	1.000	0.050	AISC- H1-3	20	7.650	204.000	17.300	0.300
21	W12X26	W12X26	0.054	1.000	0.054	AISC- H1-3	18	7.650	204.000	17.300	0.300
22	W12X26	W12X26	0.064	1.000	0.064	AISC- H1-3	18	7.650	204.000	17.300	0.300
23	W12X26	W12X26	0.067	1.000	0.067	AISC- H1-3	18	7.650	204.000	17.300	0.300
24	W12X26	W12X26	0.095	1.000	0.095	AISC- H1-3	18	7.650	204.000	17.300	0.300
25	W8X18	W8X18	0.061	1.000	0.061	AISC- H1-3	23	5.260	61.900	7.970	0.172
26	W8X18	W8X18	0.153	1.000	0.153	AISC- H2-1	23	5.260	61.900	7.970	0.172
27	W8X10	W8X10	0.507	1.000	0.507	SHEAR -Z	26	2.960	30.800	2.090	0.043
28	W8X18	W8X18	0.096	1.000	0.096	AISC- H2-1	26	5.260	61.900	7.970	0.172

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Utilization Ratio Cont...

Beam	Analysis	Design	Actual	Allowable	Ratio	Clause	L/C	Ax	lz	ly	lx
	Property	Property	Ratio	Ratio	(Act./Allow.)	520000000000		(in ²)	(in⁴)	(in ⁴)	(in ⁴)
29	W8X18	W8X18	0.048	1.000	0.048	AISC- H2-1	28	5.260	61.900	7.970	0.172
30	W8X18	W8X18	0.060	1.000	0.060	AISC- H1-3	26	5.260	61.900	7.970	0.172
31	W8X18	W8X18	0.096	1.000	0.096	AISC- H2-1	26	5.260	61.900	7.970	0.172
32	W8X18	W8X18	0.172	1.000	0.172	AISC- H2-1	26	5.260	61.900	7.970	0.172
33	W8X10	W8X10	0.536	1.000	0.536	SHEAR -Z	26	2.960	30.800	2.090	0.043
34	W8X18	W8X18	0.114	1.000	0.114	AISC- H2-1	26	5.260	61.900	7.970	0.172
35	W8X18	W8X18	0.050	1.000	0.050	AISC- H1-3	14	5.260	61.900	7.970	0.172
36	W8X18	W8X18	0.241	1.000	0.241	AISC- H1-3	22	5.260	61.900	7.970	0.17
37	W8X18	W8X18	0.329	1.000	0.329	AISC- H1-3	22	5.260	61.900	7.970	0.17
38	W8X18	W8X18	0.264	1.000	0.264	AISC- H2-1	26	5.260	61.900	7.970	0.17
39	W8X18	W8X18	0.159	1.000	0.159	AISC- H1-3	22	5.260	61.900	7.970	0.17
40	W8X18	W8X18	0.049	1.000	0.049	AISC- H1-3	26	5.260	61.900	7.970	0.17
41	W8X18	W8X18	0.039	1.000	0.039	AISC- H1-3	26	5.260	61.900	7.970	0.17
42	W8X18	W8X18	0.186	1.000	0.186	AISC- H1-3	29	5.260	61.900	7.970	0.17
43	W8X18	W8X18	0.225	1.000	0.225	AISC- H2-1	29	5.260	61.900	7.970	0.17
44	W8X18	W8X18	0.103	1.000	0.103	AISC- H1-3	22	5.260	61.900	7.970	0.17
45	W8X18	W8X18	0.064	1.000	0.064	AISC- H2-1	25	5.260	61.900	7.970	0.17
46	W8X18	W8X18	0.036	1.000	0.036	SHEAR -Y	28	5.260	61.900	7.970	0.17
47	W8X18	W8X18	0.166	1.000	0.166	AISC- H2-1	18	5.260	61.900	7.970	0.17
48	W8X18	W8X18	0.194	1.000	0.194	AISC- H1-3	18	5.260	61.900	7.970	0.17
49	W8X18	W8X18	0.037	1.000	0.037	AISC- H2-1	23	5.260	61.900	7.970	0.17
50	W8X18	W8X18	0.048	1.000	0.048	AISC- H1-3	23	5.260	61.900	7.970	0.17
51	W8X18	W8X18	0.049	1.000	0.049	AISC- H1-3	23	5.260	61.900	7.970	0.17
52	W8X18	W8X18	0.058	1.000	0.058	AISC- H1-3	23	5.260	61.900	7.970	0.17
53	W8X18	W8X18	0.056	1.000	0.056	AISC- H2-1	23	5.260	61.900	7.970	0.17
54	W8X10	W8X10	0.097	1.000	0.097	AISC- H1-3	26	2.960	30.800	2.090	0.04
55	W8X10	W8X10	0.097	1.000	0.097	AISC- H1-3	26	2.960	30.800	2.090	0.04
56	W8X10	W8X10	0.036	1.000	0.036	AISC- H2-1	28	2.960	30.800	2.090	0.04
57	W8X10	W8X10	0.036	1.000	0.036	AISC- H2-1	28	2.960	30.800	2.090	0.04
58	W8X18	W8X18	0.003	1.000	0.003	AISC- H2-1	18	5.260	61.900	7.970	0.17
59	W8X18	W8X18	0.024	1.000	0.024	AISC- H2-1	26	5.260	61.900	7.970	0.17
60	W8X18	W8X18	0.026	1.000	0.026	AISC- H2-1	26	5.260	61.900	7.970	0.17
61	W12X26	W12X26	0.146	1.000	0.146	AISC- H1-3	25	7.650	204.000	17.300	0.30
62	W8X18	W8X18	0.134	1.000	0.134	AISC- H2-1	25	5.260	61.900	7.970	0.17
63	W8X18	W8X18	0.265	1.000	0.265	AISC- H2-1	29	5.260	61.900	7.970	0.17
64	W8X18	W8X18	0.108	1.000	0.108	AISC- H2-1	26	5.260	61.900	7.970	0.17
66	W8X10	W8X10	0.044	1.000	0.044	AISC- H2-1	26	2.960	30.800	2.090	0.04
67	W8X10	W8X10	0.044	1.000	0.044	AISC- H2-1	26	2.960	30.800	2.090	0.04
69	W8X10	W8X10	0.038	1.000	0.038	AISC- H1-3	17	2.960	30.800	2.090	0.04
70	W8X10	W8X10	0.038	1.000	0.038	AISC- H1-3	17	2.960	30.800	2.090	0.04
71	W12X26	W12X26	0.200	1.000	0.200	AISC- H1-3	20	7.650	204.000	17.300	0.30
72	W12X26	W12X26	0.203	1.000	0.203	AISC- H2-1	15	7.650	204.000	17.300	0.30
73	W12X26	W12X26	0.140	1.000	0.140	AISC- H1-3	14	7.650	204.000	17.300	0.30
74	W12X26	W12X26	0.208	1.000	0.208	AISC- H2-1	17	7.650	204.000	17.300	0.30
75	W12X26	W12X26	0.129	1.000	0.129	AISC- H2-1	15	7.650	204.000	17.300	0.30

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Utilization Ratio Cont...

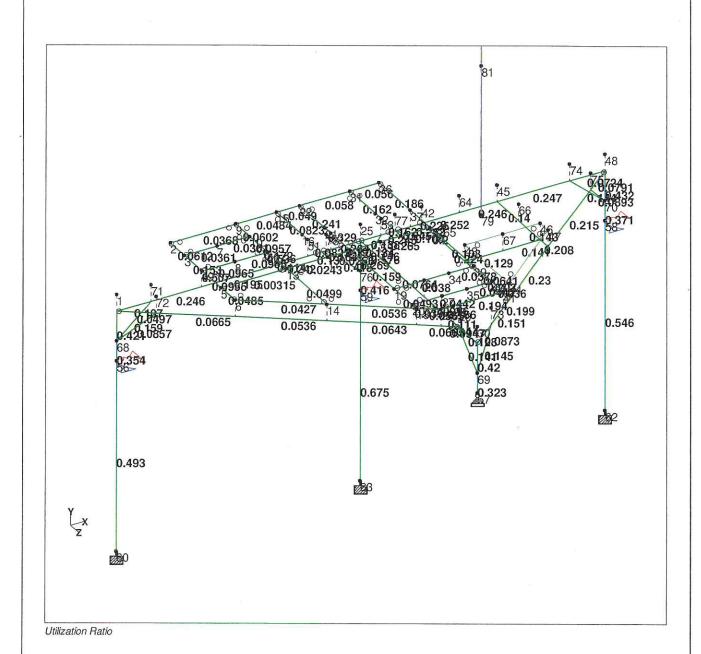
Beam	Analysis	Design	Actual	Allowable	Ratio	Clause	L/C	Ax	İz	ly	lx
	Property	Property	Ratio	Ratio	(Act./Allow.)	Service State House Co.		(in²)	(in⁴)	(in ⁴)	(in ⁴)
76	W8X10	W8X10	0.082	1.000	0.082	AISC- H1-3	18	2.960	30.800	2.090	0.043
79	W8X10	W8X10	0.162	1.000	0.162	AISC- H2-1	29	2.960	30.800	2.090	0.043
82	W12X26	W12X26	0.242	1.000	0.242	AISC- H2-1	26	7.650	204.000	17.300	0.300
83	W12X26	W12X26	0.130	1.000	0.130	AISC- H2-1	23	7.650	204.000	17.300	0.300
85	W8X18	W8X18	0.043	1.000	0.043	AISC- H2-1	18	5.260	61.900	7.970	0.172
86	W8X18	W8X18	0.054	1.000	0.054	AISC- H2-1	18	5.260	61.900	7.970	0.172
87	W8X18	W8X18	0.056	1.000	0.056	AISC- H2-1	18	5.260	61.900	7.970	0.172
88	TUB40404	TÜB40404	0.354	1.000	0.354	AISC- H1-3	20	3.590	8.200	8.200	13.500
89	TUB40404	TUB40404	0.323	1.000	0.323	AISC- H1-3	15	3.590	8.200	8.200	13.500
90	TUB40404	TUB40404	0.416	1.000	0.416	AISC- H1-2	20	3.590	8.200	8.200	13.500
91	TUB40404	TUB40404	0.371	1.000	0.371	AISC- H1-3	14	3.590	8.200	8.200	13.500
94	W8X10	W8X10	0.082	1.000	0.082	AISC- H1-3	18	2.960	30.800	2.090	0.043
95	W8X10	W8X10	0.162	1.000	0.162	AISC- H2-1	29	2.960	30.800	2.090	0.043
96	TUB35355	TUB35355	0.493	1.000	0.493	AISC- H1-3	20	3.730	6.100	6.100	10.400
97	TUB35355	TUB35355	0.675	1.000	0.675	AISC- H1-1	28	3.730	6.100	6.100	10.400
98	TUB35355	TUB35355	0.546	1.000	0.546	AISC- H1-1	18	3.730	6.100	6.100	10.400
99	W12X26	W12X26	0.246	1.000	0.246	AISC- H1-3	14	7.650	204.000	17.300	0.300
100	W12X26	W12X26	0.224	1.000	0.224	AISC- H1-3	15	7.650	204.000	17.300	0.300
101	W12X26	W12X26	0.143	1.000	0.143	AISC- H1-3	15	7.650	204.000	17.300	0.300
102	W12X26	W12X26	0.141	1.000	0.141	AISC- H2-1	15	7.650	204.000	17.300	0.300
116	TUB40404	TUB40404	0.421	1.000	0.421	AISC- H1-3	20	3.590	8.200	8.200	13.500
117	TUB40404	TUB40404	0.420	1.000	0.420	AISC- H1-3	15	3.590	8.200	8.200	13.500
118	TUB40404	TUB40404	0.432	1.000	0.432	AISC- H1-3	14	3.590	8.200	8.200	13.500
119	W12X26	W12X26	0.246	1.000	0.246	AISC- H2-1	26	7.650	204.000	17.300	0.300
120	W12X26	W12X26	0.066	1.000	0.066	AISC- H1-3	18	7.650	204.000	17.300	0.300
121	L30304	L30304	0.141	1.000	0.141	AISC- H1-3	9	1.440	0.493	1.996	0.030
122	W12X26	W12X26	0.151	1.000	0.151	AISC- H1-3	23	7.650	204.000	17.300	0.300
123	W12X26	W12X26	0.072	1.000	0.072	AISC- H1-3	20	7.650	204.000	17.300	0.300
124	W12X26	W12X26	0.079	1.000	0.079	AISC- H1-3	18	7.650	204.000	17.300	0.300
125	L30304	L30304	0.089	1.000	0.089	AISC- H1-3	20	1.440	0.493	1.996	0.030
126	L30304	L30304	0.144	1.000	0.144	AISC- H1-3	18	1.440	0.493	1.996	0.030
127	L30304	L30304	0.145	1.000	0.145	AISC- H1-3	19	1.440	0.493	1.996	0.030
128	L30304	L30304	0.159	1.000	0.159	AISC- H1-1	20	1.440	0.493	1.996	0.030
129	L30304	L30304	0.086	1.000	0.086	TENSION	20	1.440	0.493	1.996	0.030
130	TUB40404	TUB40404	0.269	1.000	0.269	AISC- H2-1	18	3.590	8.200	8.200	13.500
131	W12X26	W12X26	0.245	1.000	0.245	SHEAR -Y	20	7.650	204.000	17.300	0.300
132	L30304	L30304	0.576	1.000	0.576	AISC- H1-1	28	1.440	0.493	1.996	0.030
133	W12X26	W12X26	0.164	1.000	0.164	AISC- H2-1	23	7.650	204.000	17.300	0.300
134	L30304	L30304	0.418	1.000	0.418	AISC- H1-1	29	1.440	0.493	1.996	0.030
135	Round 40.0>	N/A						31.212	6.16E+3	6.16E+3	12.3E+3
136	Round 40.0>	N/A						31.212	6.16E+3	6.16E+3	12.3E+3
137	Round 40.0>	N/A						31.212	6.16E+3	6.16E+3	12.3E+3

2	Job No Sheet No 33 Rev)				
Software licensed to Dewberry	Part Equipment Dunnage					
Job Title CT2818 Stamford Newfield Avenue	Ref					
	By MLS Date 10/30/17 Chd JY					
Client SAI	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 13	3:18				

Failed Members

There is no data of this type.

3	Job No 50065694	Sheet No 34	Rev 0
Software licensed to Dewberry	Part Equipment Du	nnage	
Job Title CT2818 Stamford Newfield Avenue	Ref		
*	By MLS	Date 10/30/17 Chd	JY
Client SAI	File CT2818 Stamt	ford-Platforn Date/Time 01-N	ov-2017 13:18



3	Job No
Software licensed to Dewberry	Part Equipment Dunnage
Job Title CT2818 Stamford Newfield Avenue	Ref
	By MLS Date10/30/17 Chd JY
Client SAI	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 13:18

Node Displacements

12:D+S	Node	L/C	Х	Y	Z	Resultant	rX	rY	rZ
12:D+S			(in)	(in)	(in)	(in)	(rad)	(rad)	(rad)
12:D+S	2	11:D+L	0.027	-0.094	-0.025	0.101	0.000	-0.000	-0.000
14:D+0.6W(X)		12:D+S			-0.025	0.102	0.000		-0.000
15:D+0.6W(Z)		13:D+0.75(L+S	0.028	-0.101	-0.027	0.108	0.000	-0.000	-0.000
15:D+0.6W(Z)		14:D+0.6W(X)	0.327	-0.099	-0.185	0.389	0.000	-0.002	0.000
17:D+0.6W(-Z)		15:D+0.6W(Z)	0.223	-0.102	-0.113	0.270		-0.001	0.000
18:D+0.6W(45 0.379 0.108 0.202 0.448 0.000 0.000 0.000 0.000 19:D+0.6W(45 -0.049 -0.084 0.030 0.102 0.000 0.000 0.000 0.000 20:D+0.6W(-45 0.329 -0.057 0.161 0.371 0.000 0.000 0.000 0.000 21:D+0.6W(-45 0.988 -0.080 -0.071 0.146 0.000 0.000 -0.000 0.000 22:D+0.75(L+8 0.255 -0.114 -0.150 0.317 0.000 -0.001 0.000 23:D+0.75(L+8 0.177 -0.116 -0.096 0.232 0.000 -0.001 0.000 23:D+0.75(L+8 0.177 -0.116 -0.096 0.238 0.000 -0.001 0.000 25:D+0.75(L+8 -0.120 -0.088 0.096 0.238 0.000 0.001 -0.000 25:D+0.75(L+8 -0.120 -0.086 0.042 0.154 0.000 0.001 -0.000 25:D+0.75(L+8 -0.027 -0.102 0.111 0.106 0.000 0.000 -0.000 27:D+0.75(L+8 -0.237 -0.082 0.109 0.274 0.000 0.000 -0.000 29:D+0.75(L+8 0.237 -0.082 0.109 0.274 0.000 0.000 -0.000 30:0.6D+0.6W(0.317 -0.066 -0.177 0.369 0.000 -0.000 -0.000 32:0.6D+0.6W(0.213 -0.069 -0.155 0.327 0.000 -0.000 -0.001 33:0.6D+0.6W(0.213 -0.069 -0.152 0.327 0.000 -0.001 -0.000 33:0.6D+0.6W(0.288 -0.032 0.152 0.327 0.000 0.000 -0.001 33:0.6D+0.6W(0.369 -0.075 -0.194 0.424 0.000 -0.000 -0.000 33:0.6D+0.6W(0.369 -0.075 -0.194 0.424 0.000 0.000 -0.000 33:0.6D+0.6W(0.339 -0.075 -0.194 0.424 0.000 0.000 -0.000 37:0.6D+0.6W(0.339 -0.075 -0.194 0.424 0.000 0.000 -0.000 37:0.6D+0.6W(0.089 -0.051 0.039 0.887 0.000 0.000 -0.000 37:0.6D+0.6W(0.089 -0.051 0.039 0.887 0.000 0.000 -0.000 -0.000 37:0.6D+0.6W(0.089 -0.051 0.039 0.887 0.000 0.000 -0.000 -0.000 37:0.6D+0.6W(0.089 -0.051 0.039 0.887 0.000 0.000 -0.000 -0.000 36:0.6D+0.6W(0.004 0.004 -0.005 0.00		16:D+0.6W(-X)	-0.278	-0.065	0.144	0.320	0.000	0.002	-0.000
19:D+0.6W(45		17:D+0.6W(-Z)	-0.174	-0.063	0.072	0.198	0.000	0.001	-0.000
20:D+0.6W(-4£ -0.329 -0.057 0.161 0.371 0.000 0.002 -0.000 21:D+0.6W(-4£ 0.098 -0.080 -0.071 0.146 0.000 -0.000 -0.000 -0.000 22:D+0.75(L+S 0.255 -0.114 -0.150 0.317 0.000 -0.001 0.000 23:D+0.75(L+S 0.177 -0.116 -0.096 0.232 0.000 -0.001 0.000 24:D+0.75(L+S -0.198 -0.088 0.096 0.238 0.000 0.001 -0.000 25:D+0.75(L+S -0.120 -0.086 0.042 0.154 0.000 0.001 -0.000 25:D+0.75(L+S -0.294 -0.120 -0.163 0.357 0.000 -0.002 0.000 27:D+0.75(L+S -0.027 -0.102 0.011 0.106 0.000 0.000 -0.000 28:D+0.75(L+S -0.027 -0.102 0.111 0.106 0.000 0.000 -0.000 29:D+0.75(L+S -0.023 -0.082 0.109 0.274 0.000 0.000 -0.000 29:D+0.75(L+S 0.084 -0.100 -0.065 0.145 0.000 -0.000 -0.000 30:06D+0.6Wi 0.317 -0.066 -0.177 0.369 0.000 -0.001 0.000 32:06D+0.6Wi 0.213 -0.069 -0.105 0.247 0.000 -0.001 0.000 33:0.6D+0.6Wi -0.288 -0.032 0.152 0.327 0.000 0.000 -0.000 33:0.6D+0.6Wi -0.288 -0.032 0.152 0.327 0.000 0.000 -0.000 34:0.6D+0.6Wi -0.369 -0.075 -0.194 0.424 0.000 -0.002 0.000 33:0.6D+0.6Wi 0.369 -0.075 -0.194 0.424 0.000 -0.000 -0.000 33:0.6D+0.6Wi 0.369 -0.051 0.039 0.087 0.000 0.000 -0.000 33:0.6D+0.6Wi 0.059 -0.051 0.039 0.087 0.000 0.000 -0.000 33:0.6D+0.6Wi 0.059 -0.051 0.039 0.087 0.000 0.000 -0.000 -0.000 33:0.6D+0.6Wi 0.059 -0.051 0.039 0.087 0.000 0.000 -0.000 -0.000 33:0.6D+0.6Wi 0.059 -0.051 0.039 0.087 0.000 0.000 -0.000 -0.000 33:0.6D+0.6Wi 0.059 -0.051 0.039 0.087 0.000 0.000 -0.000		18:D+0.6W (45.	0.379	-0.108	-0.202	0.443	0.000	-0.002	0.000
21:D+0.6W(4\$ 0.098 -0.080 -0.071 0.146 0.000 -0.000 -0.001 0.00 22:D+0.75(L+S 0.255 -0.114 -0.150 0.317 0.000 -0.001 0.00 23:D+0.75(L+S 0.177 -0.116 -0.096 0.232 0.000 0.001 0.00 24:D+0.75(L+S -0.198 -0.088 0.096 0.238 0.000 0.001 -0.00 24:D+0.75(L+S -0.120 -0.086 0.042 0.154 0.000 0.001 -0.00 25:D+0.75(L+S 0.294 -0.120 -0.163 0.357 0.000 -0.002 0.00 27:D+0.75(L+S -0.294 -0.120 0.011 0.106 0.000 0.000 -0.00 -0.00 28:D+0.75(L+S -0.237 -0.082 0.109 0.274 0.000 0.000 -0.00 28:D+0.75(L+S -0.237 -0.082 0.109 0.274 0.000 0.000 -0.00 0.00 30:0.6D+0.6Wi 0.317 -0.066 -0.177 0.369 0.000 -0.000 -0.00 30:0.6D+0.6Wi 0.213 -0.069 -0.105 0.247 0.000 -0.001 0.00 32:0.6D+0.6Wi 0.213 -0.069 -0.105 0.247 0.000 0.002 -0.00 33:0.6D+0.6Wi 0.288 -0.032 0.152 0.327 0.000 0.001 -0.00 33:0.6D+0.6Wi 0.369 -0.075 -0.194 0.424 0.000 -0.002 0.00 34:0.6D+0.6Wi 0.369 -0.075 -0.194 0.424 0.000 -0.002 0.00 35:0.6D+0.6Wi 0.369 -0.051 0.039 0.087 0.000 0.000 -0.000 -0.00 36:0.6D+0.6Wi 0.039 -0.051 0.039 0.087 0.000 0.000 -0.000 -0.00 37:0.6D+0.6Wi 0.039 -0.051 0.039 0.087 0.000 0.000 -0.000 -0.00 37:0.6D+0.6Wi 0.039 -0.048 -0.063 0.119 0.000 -0.000 -0.00 -0.000		19:D+0.6W(45	-0.049	-0.084	0.030	0.102	0.000	0.000	-0.000
22:D+0.75(L+S		20:D+0.6W(-45	-0.329	-0.057	0.161	0.371	0.000	0.002	-0.000
23:D+0.75(L+S 0.177 -0.116 -0.096 0.232 0.000 -0.001 0.00		21:D+0.6W(-45	0.098	-0.080	-0.071	0.146	0.000	-0.000	-0.000
24:D+0.75(L+S		22:D+0.75(L+S	0.255	-0.114	-0.150	0.317	0.000	-0.001	0.000
25:D+0.75(L+S		23:D+0.75(L+S	0.177	-0.116	-0.096	0.232	0.000	-0.001	0.000
26:D+0.75(L+S 0.294 -0.120 -0.163 0.357 0.000 -0.002 0.00		24:D+0.75(L+S	-0.198	-0.088	0.096	0.238	0.000	0.001	-0.000
27:D+0.75(L+S			-0.120	-0.086	0.042	0.154	0.000	0.001	-0.000
28:D+0.75(L+S -0.237 -0.082 0.109 0.274 0.000 0.002 -0.00 29:D+0.75(L+S 0.084 -0.100 -0.065 0.145 0.000 -0.000 -0.000 30:0.6D+0.6WI 0.317 -0.066 -0.177 0.369 0.000 -0.002 0.00 31:0.6D+0.6WI -0.288 -0.032 0.152 0.327 0.000 -0.001 0.00 32:0.6D+0.6WI -0.184 -0.030 0.080 0.202 0.000 0.001 -0.00 33:0.6D+0.6WI -0.184 -0.030 0.080 0.202 0.000 0.001 -0.00 35:0.6D+0.6WI -0.389 -0.075 -0.194 0.424 0.000 -0.002 0.00 36:0.6D+0.6WI -0.059 -0.051 0.039 0.087 0.000 0.000 -0.00 37:0.6D+0.6WI -0.059 -0.044 -0.063 0.119 0.000 -0.000 -0.000 4 11:D+L 0.027 -0.046 -0.025 0.0		26:D+0.75(L+S	0.294	-0.120	-0.163	0.357	0.000	-0.002	0.000
29:D+0.75(L+S		27:D+0.75(L+S	-0.027	-0.102	0.011	0.106	0.000	0.000	-0.000
30:0.6D+0.6Wi		28:D+0.75(L+S	-0.237	-0.082	0.109	0.274	0.000	0.002	-0.000
31:0.6D+0.6W 0.213 -0.069 -0.105 0.247 0.000 -0.001 0.00 32:0.6D+0.6W -0.288 -0.032 0.152 0.327 0.000 0.002 -0.00 33:0.6D+0.6W -0.184 -0.030 0.080 0.202 0.000 0.001 -0.00 34:0.6D+0.6W 0.369 -0.075 -0.194 0.424 0.000 -0.002 0.00 35:0.6D+0.6W -0.059 -0.051 0.039 0.087 0.000 0.000 -0.00 36:0.6D+0.6W -0.339 -0.024 0.169 0.380 0.000 0.002 -0.00 37:0.6D+0.6W 0.089 -0.048 -0.063 0.119 0.000 -0.000 -0.00 4 11:D+L 0.027 -0.046 -0.025 0.059 -0.001 -0.000 -0.00 12:D+S 0.027 -0.047 -0.025 0.060 -0.001 -0.000 -0.00 13:D+0.75(L+S 0.028 -0.050 -0.027 0.064 -0.001 -0.000 -0.00 14:D+0.6W(X) 0.269 -0.043 -0.185 0.329 -0.001 -0.002 -0.00 15:D+0.6W(Z) 0.184 -0.044 -0.113 0.220 -0.002 -0.001 -0.00 17:D+0.6W(Z) -0.134 -0.034 0.072 0.156 -0.001 0.000 -0.00 18:D+0.6W(45 0.310 -0.045 -0.202 0.372 -0.002 -0.002 -0.00 20:D+0.6W(4\$ 0.085 -0.039 0.031 0.061 -0.001 0.000 -0.00 22:D+0.75(L+S 0.211 -0.054 -0.150 0.264 -0.002 -0.001 -0.00 22:D+0.75(L+S 0.211 -0.054 -0.055 -0.163 0.297 -0.002 -0.002 -0.000 22:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.000 -0.000 22:D+0.75(L+S 0.242 -0.055		29:D+0.75(L+S	0.084	-0.100	-0.065	0.145	0.000	-0.000	-0.000
32:0.6D+0.6W -0.288							0.000	-0.002	0.000
33:0.6D+0.6W						207,750,000		-0.001	0.000
34:0.6D+0.6W		32:0.6D+0.6W		-0.032					-0.000
35:0.6D+0.6W -0.059						0.202	0.000	0.001	-0.000
36:0.6D+0.6W -0.339 -0.024 0.169 0.380 0.000 0.002 -0.000 37:0.6D+0.6W 0.089 -0.048 -0.063 0.119 0.000 -0.000 -0.000 -0.000 4 11:D+L 0.027 -0.046 -0.025 0.059 -0.001 -0.000 -0.000 -0.000 12:D+S 0.027 -0.047 -0.025 0.060 -0.001 -0.000 -0.000 -0.000 13:D+0.75(L+S 0.028 -0.050 -0.027 0.064 -0.001 -0.000 -0.000 14:D+0.6W(X) 0.269 -0.043 -0.185 0.329 -0.001 -0.002 -0.000 15:D+0.6W(Z) 0.184 -0.044 -0.113 0.220 -0.002 -0.001 -0.000 16:D+0.6W(-X) -0.219 -0.034 0.144 0.264 -0.001 0.002 -0.000 17:D+0.6W(-Z) -0.134 -0.034 0.072 0.156 -0.001 0.001 -0.000 18:D+0.6W(45 0.310 -0.045 -0.202 0.372 -0.002 -0.002 -0.000 19:D+0.6W(45 -0.035 -0.039 0.031 0.061 -0.001 0.000 -0.000 20:D+0.6W(-4\xi -0.260 -0.032 0.161 0.307 -0.001 0.002 -0.000 21:D+0.6W(-4\xi 0.085 -0.038 -0.071 0.117 -0.001 -0.000 -0.000 22:D+0.75(L+S 0.211 -0.054 -0.150 0.264 -0.002 -0.001 -0.000 22:D+0.75(L+S 0.147 -0.054 -0.096 0.184 -0.002 -0.001 -0.000 25:D+0.75(L+S -0.155 -0.047 0.096 0.188 -0.001 0.001 -0.000 25:D+0.75(L+S -0.155 -0.047 0.096 0.188 -0.001 0.001 -0.000 27:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.002 -0.000 27:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.002 -0.000 27:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.000 -0.000 -0.000 27:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.001 -0.000 -0.000 -0.000 27:D+0.75(L+S -0.017 -0.051 0.011 0.055 -0.001 0.000 -0.000 -0.000 -0.000 -0.	Y.						0.000	-0.002	0.000
37:0.6D+0.6W 0.089 -0.048 -0.063 0.119 0.000 -0.000 -0.000 4						2874 2740 487			-0.000
4 11:D+L 0.027 -0.046 -0.025 0.059 -0.001 -0.000 -0.00 12:D+S 0.027 -0.047 -0.025 0.060 -0.001 -0.000 -0.00 13:D+0.75(L+S 0.028 -0.050 -0.027 0.064 -0.001 -0.000 -0.00 14:D+0.6W(X) 0.269 -0.043 -0.185 0.329 -0.001 -0.002 -0.00 15:D+0.6W(Z) 0.184 -0.044 -0.113 0.220 -0.002 -0.001 -0.00 16:D+0.6W(-X) -0.219 -0.034 0.144 0.264 -0.001 0.002 -0.00 17:D+0.6W(-X) -0.134 -0.034 0.072 0.156 -0.001 0.001 -0.00 18:D+0.6W(45 0.310 -0.045 -0.202 0.372 -0.002 -0.002 -0.002 19:D+0.6W(45 -0.035 -0.039 0.031 0.061 -0.001 0.000 -0.00 21:D+0.6W(-4! -0.260 -0.032 0.161 0.307 -0.001 -0.000 -0.00 22:D+0.75(L+S <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-0.000</td></td<>									-0.000
12:D+S			-						-0.000
13:D+0.75(L+S	4								-0.000
14:D+0.6W(X) 0.269 -0.043 -0.185 0.329 -0.001 -0.002 -0.001 15:D+0.6W(Z) 0.184 -0.044 -0.113 0.220 -0.002 -0.001 -0.00 16:D+0.6W(-X) -0.219 -0.034 0.144 0.264 -0.001 0.002 -0.00 17:D+0.6W(-X) -0.134 -0.034 0.072 0.156 -0.001 0.001 -0.00 18:D+0.6W(45 0.310 -0.045 -0.202 0.372 -0.002 -0.002 -0.002 19:D+0.6W(45 -0.035 -0.039 0.031 0.061 -0.001 0.000 -0.00 20:D+0.6W(-4£ -0.260 -0.032 0.161 0.307 -0.001 0.002 -0.00 21:D+0.6W(-4£ 0.085 -0.038 -0.071 0.117 -0.001 -0.000 -0.00 22:D+0.75(L+S 0.211 -0.054 -0.150 0.264 -0.002 -0.001 -0.00 23:D+0.75(L+S 0.147 -0.054 -0.096 0.184 -0.002 -0.001 -0.00 25:D+0.75(L+S -0				-					
15:D+0.6W(Z)									-0.000
16:D+0.6W(-X) -0.219 -0.034 0.144 0.264 -0.001 0.002 -0.00 17:D+0.6W(-Z) -0.134 -0.034 0.072 0.156 -0.001 0.001 -0.00 18:D+0.6W(45. 0.310 -0.045 -0.202 0.372 -0.002 -0.002 -0.002 -0.00 19:D+0.6W(45 -0.035 -0.039 0.031 0.061 -0.001 0.000 -0.00 20:D+0.6W(-4\xi -0.260 -0.032 0.161 0.307 -0.001 0.002 -0.00 21:D+0.6W(-4\xi 0.085 -0.038 -0.071 0.117 -0.001 -0.000 -0.00 22:D+0.75(L+S 0.211 -0.054 -0.150 0.264 -0.002 -0.001 -0.00 23:D+0.75(L+S 0.147 -0.054 -0.096 0.184 -0.002 -0.001 -0.00 24:D+0.75(L+S -0.155 -0.047 0.096 0.188 -0.001 0.001 -0.00 25:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.002 -0.002 -0.000 27:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.001 0.000 -0.00 27:D+0.75(L+S -0.017 -0.051 0.011 0.055 -0.001 0.000 -0.0000 -0.0000 -0.0000 -0.0000 -0.0000 -0.0000 -0.0000 -0.0000 -0.0									
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18:D+0.6W(45. 0.310 -0.045 -0.202 0.372 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.000 -0.000 -0.001 0.000 -0.000 -0.000 -0.001 0.002 -0.00 -0.00 -0.001 -0.001 -0.000 -0.000 -0.001 -0.000 -0.000 -0.001 -0.000 -0.000 -0.000 -0.001 -0.000 -0.000 -0.001 -0.000 -0.001 -0.000 -0.001 -0.002 -0.002 -0.002 -0.002 -0.001 -0.001 -0.001 -0.001 -0.001 -0.001 -0.001 -0.001 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002				-					
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23:D+0.75(L+S 0.147 -0.054 -0.096 0.184 -0.002 -0.001 -0.00									
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25:D+0.75(L+S -0.091 -0.046 0.042 0.111 -0.001 0.001 -0.00 26:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.002 -0.00 27:D+0.75(L+S -0.017 -0.051 0.011 0.055 -0.001 0.000 -0.00									
26:D+0.75(L+S 0.242 -0.055 -0.163 0.297 -0.002 -0.002 -0.00 27:D+0.75(L+S -0.017 -0.051 0.011 0.055 -0.001 0.000 -0.00									25 (2010)
27:D+0.75(L+S -0.017 -0.051 0.011 0.055 -0.001 0.000 -0.00								****	
								OHIO CONTRACTOR OF THE PARTY OF	
28:D+0.75(L+S -0.185 -0.045 0.109 0.220 -0.001 0.001 -0.00		28:D+0.75(L+S							-0.000

3	Job No 50065694	Sheet No 2	Rev 0				
Software licensed to Dewberry	Part Equipment Dunnage						
Job Title CT2818 Stamford Newfield Avenue	Ref		***************************************				
	By MLS Date 10/30/17 Chd JY						
Client SAI	File CT2818 Stamf	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 1					

Node Displacements Cont...

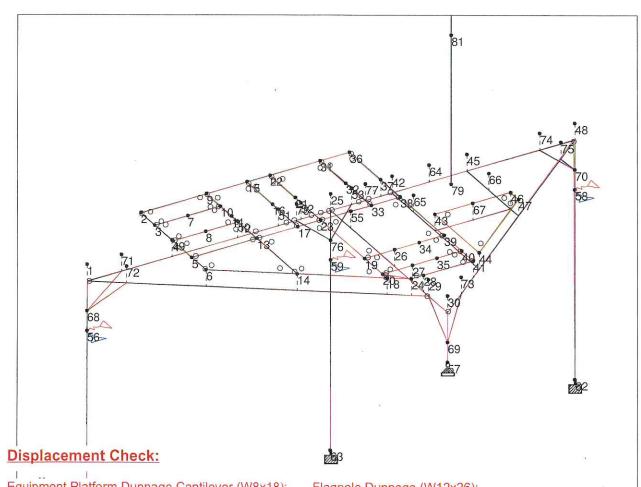
Node	L/C	Х	Υ	Z	Resultant	rX	rY	rZ
		(in)	(in)	(in)	(in)	(rad)	(rad)	(rad)
	29:D+0.75(L+S	0.073	-0.050	-0.065	0.110	-0.001	-0.000	-0.000
	30:0.6D+0.6W	0.259	-0.028	-0.177	0.315	-0.001	-0.002	-0.000
	31:0.6D+0.6W	0.174	-0.028	-0.105	0.205	-0.001	-0.001	-0.000
	32:0.6D+0.6W	-0.229	-0.019	0.152	0.276	-0.000	0.002	-0.000
	33:0.6D+0.6W	-0.144	-0.018	0.080	0.166	-0.000	0.001	-0.000
	34:0.6D+0.6W	0.300	-0.030	-0.194	0.358	-0.001	-0.002	-0.000
	35:0.6D+0.6W	-0.045	-0.024	0.039	0.064	-0.001	0.000	-0.000
CHIPCHY AND	36:0.6D+0.6W	-0.270	-0.017	0.169	0.319	-0.000	0.002	-0.000
	37:0.6D+0.6W1	0.075	-0.023	-0.063	0.101	-0.001	-0.000	-0.000
45	11:D+L	0.024	-0.052	-0.013	0.059	0.000	-0.000	0.000
	12:D+S	0.024	-0.055	-0.014	0.061	0.000	-0.000	0.000
	13:D+0.75(L+S	0.025	-0.055	-0.014	0.062	0.000	-0.000	0.000
	14:D+0.6W(X)	0.270	-0.062	0.139	0.310	0.000	-0.002	0.000
	15:D+0.6W(Z)	0.183	-0.031	0.114	0.218	0.001	-0.001	0.000
	16:D+0.6W(-X)	-0.226	-0.039	-0.162	0.281	-0.000	0.002	0.000
	17:D+0.6W(-Z)	-0.140	-0.070	-0.137	0.208	-0.001	0.001	0.000
11	18:D+0.6W(45.	0.311	-0.045	0.184	0.364	0.001	-0.002	0.000
	19:D+0.6W(45	-0.039	-0.028	-0.029	0.056	0.001	0.000	0.000
	20:D+0.6W(-45	-0.268	-0.056	-0.207	0.343	-0.001	0.002	0.000
-20100000000000000000000000000000000000	21:D+0.6W(-45	0.083	-0.072	0.006	0.110	-0.000	-0.000	0.000
	22:D+0.75(L+S	0.211	-0.064	0.099	0.241	0.000	-0.001	0.000
	23:D+0.75(L+S	0.146	-0.040	0.080	0.171	0.001	-0.001	0.000
	24:D+0.75(L+S	-0.161	-0.046	-0.127	0.210	-0.000	0.001	0.000
	25:D+0.75(L+S	-0.096	-0.070	-0.109	0.161	-0.000	0.001	0.000
	26:D+0.75(L+S	0.242	-0.051	0.132	0.281	0.001	-0.002	0.000
	27:D+0.75(L+S	-0.021	-0.039	-0.027	0.052	0.000	0.000	0.000
	28:D+0.75(L+S	-0.192	-0.059	-0.161	0.258	-0.000	0.001	0.000
	29:D+0.75(L+S	0.071	-0.072	-0.001	0.101	-0.000	-0.000	0.000
	30:0.6D+0.6W	0.261	-0.042	0.144	0.301	0.000	-0.002	-0.000
	31:0.6D+0.6W	0.175	-0.011	0.119	0.212	0.001	-0.001	0.000
	32:0.6D+0.6W	-0.235	-0.018	-0.157	0.283	-0.000	0.002	0.000
	33:0.6D+0.6W	-0.149	-0.050	-0.133	0.205	-0.001	0.001	0.000
	34:0.6D+0.6W	0.303	-0.025	0.189	0.357	0.001	-0.002	-0.000
	35:0.6D+0.6W	-0.048	-0.008	-0.024	0.054	0.000	0.000	0.000
	36:0.6D+0.6W	-0.277	-0.036	-0.202	0.344	-0.001	0.002	0.000
47	37:0.6D+0.6W	0.074	-0.052	0.011	0.091	-0.000	-0.000	0.000
4/	11:D+L 12:D+S	0.023	-0.058	-0.015	0.064	0.000	-0.000	0.000
		0.023	-0.060	-0.015	0.066	0.000	-0.000	-0.000
	13:D+0.75(L+S 14:D+0.6W(X)	0.024 0.176	-0.061	-0.016	0.067	0.000	-0.000	-0.000
	15:D+0.6W(Z)	0.178	-0.081 -0.079	0.137 0.111	0.237	0.000	-0.002	-0.000
	16:D+0.6W(-X)	-0.133	-0.029	-0.163	0.181 0.212	0.001	-0.001	-0.000
	17:D+0.6W(-X)	-0.133	-0.029	-0.137	0.212	-0.000 -0.001	0.002	0.000
	18:D+0.6W(45.	0.200	-0.031	0.181	0.180	0.001	-0.001	0.000
	19:D+0.6W(45	-0.019	-0.090	-0.031				-0.000
	13.0+0.000 (45	-0.019	-0.054	-0.031	0.065	0.000	0.000	-0.000

3	Job No	
Software licensed to Dewberry	Part Equipment Dunnage	
Job Title CT2818 Stamford Newfield Avenue	Ref	
	By MLS Dat∈10/30/17 Chd JY	
Client SAI	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 13:18	}

Node Displacements Cont...

Node	L/C	Х	Υ	Z	Resultant	rX	rY	rZ
		(in)	(in)	(in)	(in)	(rad)	(rad)	(rad)
	20:D+0.6W (-45	-0.157	-0.020	-0.207	0.260	-0.001	0.002	0.000
	21:D+0.6W (-45	0.062	-0.056	0.005	0.084	-0.000	-0.000	0.000
	22:D+0.75(L+S	0.140	-0.080	0.097	0.188	0.000	-0.001	-0.000
	23:D+0.75(L+S	0.097	-0.079	0.077	0.147	0.001	-0.001	-0.000
	24:D+0.75(L+S	-0.092	-0.042	-0.128	0.163	-0.000	0.001	0.000
	25:D+0.75(L+S	-0.049	-0.043	-0.109	0.127	-0.000	0.001	0.000
	26:D+0.75(L+S	0.158	-0.087	0.130	0.222	0.001	-0.002	-0.000
	27:D+0.75(L+S	-0.006	-0.060	-0.029	0.067	0.000	0.000	-0.000
	28:D+0.75(L+S	-0.110	-0.034	-0.161	0.198	-0.000	0.002	0.000
	29:D+0.75(L+S	0.054	-0.062	-0.002	0.082	-0.000	-0.000	0.000
	30:0.6D+0.6W	0.168	-0.059	0.142	0.227	0.000	-0.002	-0.000
	31:0.6D+0.6W	0.111	-0.057	0.116	0.170	0.001	-0.001	-0.000
	32:0.6D+0.6W	-0.142	-0.007	-0.158	0.212	-0.000	0.002	0.000
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	33:0.6D+0.6W	-0.085	-0.009	-0.132	0.157	-0.001	0.001	0.000
	34:0.6D+0.6W	0.191	-0.068	0.186	0.275	0.001	-0.002	-0.000
	35:0.6D+0.6W	-0.027	-0.032	-0.026	0.049	0.000	0.000	-0.000
	36:0.6D+0.6W	-0.165	0.002	-0.202	0.261	-0.001	0.002	0.000
	37:0.6D+0.6W	0.053	-0.034	0.010	0.064	-0.000	-0.000	0.000
48	11:D+L	0.018	-0.008	-0.008	0.021	0.000	-0.000	0.001
	12:D+S	0.018	-0.011	-0.009	0.023	0.000	-0.000	0.001
	13:D+0.75(L+S	0.019	-0.010	-0.009	0.023	0.000	-0.000	0.001
	14:D+0.6W(X)	0.261	-0.010	0.262	0.370	0.001	-0.002	0.001
- West - James -	15:D+0.6W(Z)	0.180	-0.007	0.202	0.271	0.001	-0.001	0.000
-	16:D+0.6W(-X)	-0.229	-0.004	-0.276	0.359	-0.001	0.002	0.001
	17:D+0.6W(-Z) 18:D+0.6W(45	-0.148 0.305	-0.008 -0.010	-0.217	0.262	-0.001	0.001	0.001
	19:D+0.6W (45	-0.041	-0.010	0.331 -0.050	0.450	0.002	-0.002	0.001
	20:D+0.6W(-45	-0.273	-0.005	-0.030	0.065	-0.001	0.000	0.000
	21:D+0.6W(-45	0.073	-0.003	0.035	0.440	0.000	-0.000	0.001
	22:D+0.75(L+S	0.203	-0.013	0.193	0.280	0.000	-0.000	0.001
	23:D+0.75(L+S	0.142	-0.010	0.148	0.206	0.001	-0.001	0.001
**********	24:D+0.75(L+S	-0.164	-0.008	-0.211	0.267	-0.000	0.001	0.001
	25:D+0.75(L+S	-0.104	-0.011	-0.166	0.196	-0.001	0.001	0.001
	26:D+0.75(L+S	0.236	-0.012	0.245	0.340	0.001	-0.002	0.001
	27:D+0.75(L+S	-0.024	-0.009	-0.041	0.048	0.001	0.000	0.001
	28:D+0.75(L+S	-0.198	-0.009	-0.262	0.329	-0.001	0.001	0.001
	29:D+0.75(L+S	0.062	-0.012	0.023	0.067	0.000	-0.000	0.001
	30:0.6D+0.6W	0.254	-0.007	0.265	0.367	0.001	-0.002	0.001
1	31:0.6D+0.6W	0.174	-0.004	0.205	0.269	0.001	-0.001	0.000
	32:0.6D+0.6W	-0.235	-0.002	-0.274	0.361	-0.001	0.002	0.000
	33:0.6D+0.6W	-0.154	-0.005	-0.214	0.264	-0.001	0.001	0.001
	34:0.6D+0.6W	0.299	-0.007	0.334	0.448	0.002	-0.002	0.000
	35:0.6D+0.6W	-0.047	-0.002	-0.047	0.067	0.000	0.000	0.000
	36:0.6D+0.6W	-0.279	-0.002	-0.343	0.442	-0.001	0.002	0.001
	37:0.6D+0.6W	0.067	-0.007	0.038	0.077	-0.000	-0.000	0.001

2	Job No Sheet No Rev 0				
Software licensed to Dewberry	Part Equipment Dunnage				
Job Title CT2818 Stamford Newfield Avenue	Ref				
	By MLS Date 10/30/17 Chd JY				
Client SAI	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 13:18				



Equipment Platform Dunnage Cantilever (W8x18):

Max Displacement = 0.443 - 0.372 = 0.071"

(Node 2 with respect to Node 4)

Flagpole Dunnage (W12x26): Max Displacement = 0.284" (Node 47)

Allowable Displacement = L/180 cantilever = 0.178"

Allowable Displacement = L/240 beam span = 0.805"

0.071" < 0.178" -- OK

0.284" < 0.805" -- OK

Flagpole Dunnage (W12x26): Max Displacement = 0.364" (Node 45)

Top of Dunnage Post-Down (TSS4x4x1/4):

Max Displacement = 0.448"
(Node 48)

Allowable Displacement = L/240 beam span = 0.619". Allowable Displacement = L/180 cantilever = 0.861"

it Run 4 of 4

2	Job No Sheet No Rev 0					
Software licensed to Dewberry	Part Equipment Dunnage					
Job Title CT2818 Stamford Newfield Avenue	Ref					
	By MLS Date 10/30/17 Chd JY					
Client SAI	File CT2818 Stamford-Platforn Date/Time 01-Nov-2017 13:18					

Reaction Summary

			Horizontal	Vertical	Horizontal		Moment		
	Node	L/C	FX	FY	FZ	MX	MY	MZ	
			(kip)	(kip)	(kip)	(kip⁻in)	(kip⁻in)	(kip⁻in)	Max Shear
Max FX	57	19:D+0.6W(45	1.274	4.932	-1.408	0.000	0.000	0.000	Reaction
Min FX	57	37:0.6D+0.6W	-1.092	-0.392	1.406	0.000	0.000	0.000	
Max FY	57	23:D+0.75(L+S	0.575	6.013	-1.485	0.000	0.000	0.000	
Min FY	57	33:0.6D+0.6W	-0.535	-1.269	< 1.963	0.000	0.000	0.000	Max Vertical Uplift
Max FZ	57	33:0.6D+0.6W	-0.535	-1.269	1.963	0.000	0.000	0.000	
Min FZ	57	15:D+0.6W(Z)	0.717	5.809	-1.965	0.000	0.000	0.000	
Max MX	57	11:D+L	0.120	3.525	-0.010	0.000	0.000	0.000	Max Tension
Min MX	57	11:D+L	0.120	3.525	-0.010	0.000	0.000	0.000	Reaction
Max MY	57	11:D+L	0.120	3.525	-0.010	0.000	0.000	0.000	rtodotion
Min MY	57	11:D+L	0.120	3.525	-0.010	0.000	0.000	0.000	
Max MZ	57	11:D+L	0.120	3.525	-0.010	0.000	0.000	0.000	
Min MZ	57	11:D+L	0.120	3.525	-0.010	0.000	0.000	0.000	

Dewberry

Ca	Cul	atio	n Sh	pot

MLS 2616 STAMEDED NEWFIELD AVE UPLIFT CHECK	Job No
UPLIFT CHECK	Sheet No
	P= 1.269K
CHECK EXISTING STRUCTURE	
COUNTER WEIGHT	01/40
V Control of the Cont	
A-3(1.667) +2x(3tan30)(3)	WXXXI.
Company of the Compan	THE RESIDENCE OF STREET, STREE
W+#= 1	
= 10.197 5 =	HY70
	6 EM1
W= 10.197 (150) = 1529.6 #	HY70 6' EH1 3'-0" (8) 1
1.529k 1.205 > 1.0 OK +	+ 300
	+100
1,269	L. L.
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20"	
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MAY EXA! (SHEAR) MAP RXN (TENSION)	
E = 0,575 K(V) Fy = -0.584 K(V)	
Fy 6.012 K (V) Ry -1.269 K (V)	
FOLLUSION FOR FOLLOW KAT	
TENSION	
1.93	e e e
5/8" 4 HILTI HY70 W/ 6" EMB,	
C7 VALOW - 1405#	
TAVLOW : 1025#	
1,400 M	
0 525 x 6 012 - 084 1 50 VT	
0.575 + 6.012 0.586 × 1.0 10 KJ	
1402 (8)	
0.5341 1.269 + 1.962 1405 (8) 1025 (8) 0.399 < 1.6	TAKI
1405 (8)	LYPI
Land to Cal	
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CHELK MASONEY BEARING	
The state of the s	
Ey (MAX)= 6.012 K 6.012 (1000 = 4	

APPENDIX B



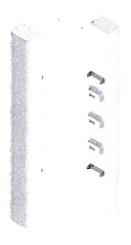




DATA SHEET

OctoPort Multi-Band Antenna

OPA65R-BU8B



- Eight foot (2.4 m) multiband, eight port antenna with a 65° azimuth beamwidth covering 698-798, 824-896 MHz and 1695-2400 MHz frequencies
- Four wide high band ports covering 1695-2400 MHz and four frequency specific low band ports covering 698-798 MHz and 824-896 MHz (over a distributed diplexers) in a single antenna
- New enclosure with <12" (305 mm) width, narrowest enclosure in the industry
- Full Spectrum Compliance for WCS and AWS-3 frequencies and upcoming Band 14 Operations
- LTE Optimized FBR and SPR performance, providing for an efficient use of valuable radio capacity
- LTE Optimized Boresight and Sector XPD and USL performance, essential for LTE Performance
- Exceeds minimum PIM performance requirements
- Equipped with new 4.3-10 connector, which is 40% smaller than traditional 7/16 DIN connector

Overview

The CCI OctoPort multiband array is an eight port antenna, with four wide high band ports covering 1695-2400 MHz and four frequency specific low band ports covering 698-798 MHz and 824-896 MHz. The antenna provides the capability to deploy 4x4 Multiple-input Multiple-output (MIMO) in the high band and 2x2 Multiple-input Multiple-output (MIMO) across each of the paired low band ports.

The CCI OctoPort allows independent tilt control between the low band ports and high band ports, in a three RET Controller (Type 1 External) configuration. The 1st RET is dedicated for the 700 MHz Low Band ports and the 2nd RET is dedicated for the 850 MHz Low Band ports. The 3rd RET is dedicated for the High Band ports. With the use of a single RET in the High Band, equal tilt is achieved across all four High Band ports, which ensures optimal 4x4 MIMO performance.

CCI antennas are designed and produced to ISO 9001:2008 certification standards for reliability and quality in our state-of-the-art manufacturing facilities.

Applications

- 4x4 MIMO for the high band and 2x2 MIMO for the low band
- Ready for Network Standardization on 4.3-10 DIN connectors
- With CCI's multiband antennas, wireless providers can connect multiple platforms to a single antenna, reducing tower load, lease expense, deployment time and installation costs





SPECIFICATIONS

OctoPort Multi-Band Antenna

OPA65R-BU8B

Electrical

Ports	2 x Low Band Ports for 698-798 MHz	2 x Low Band Ports for 824-896 MHz		
Frequency Range	698-798 MHz	824-896 MHz		
Gain [†]	15.3 dBi	15.8 dBi		
Gain (Average) ²	14.8 dBi	15.2 dBi		
Azimuth Beamwidth (-3dB)	67°	66°		
Elevation Beamwidth (-3dB)	9.7°	8.1°		
Electrical Downtilt	0° to 10°	0° to 10°		
Elevation Sidelobes (1st Upper)	<-18 dB	<-20 dB		
Front-to-Back Ratio @180°	> 35 dB	> 35 dB		
Cross-Polar Discrimination at Peak	> 25 dB	> 25 dB		
Cross-Polar Discrimination at Sector ²	> 13 dB	> 14 dB		
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB		
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1		
Passive Intermodulation (2×20W)	≤ -150 dBc	≤ -150 dBc		
Input Power Continuous Wave (CW)	500 watts	500 watts		
Polarization	Dual Linear 45°	Dual Linear 45°		
Input Impedance	50 ohms	50 ohms		
Lightning Protection	DC Ground	DC Ground		

Ports		4 × High Band Ports		
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz
Gain	18.0 dBi	18.2 dBi	18.4 dBi	18.0 dBi
Gain (Average) ²	17.1 dBi	17.5 dBi	17.7 dBi	17.2 dBi
Azimuth Beamwidth (-3dB)	62°	62°	62°	59°
Elevation Beamwidth (-3dB)	5.6°	5.1°	4.7°	4.0°
Electrical Downtilt	0° to 8°	0° to 8°	0° to 8°	0° to 8°
Elevation Sidelobes (1st Upper)	<-18 dB	<-19 dB	<-18 dB	<-16 dB
Front-to-Back Ratio @180°	> 35 dB	> 35 dB	> 35 dB	' > 35 dB
Cross-Polar Discrimination at Peak	> 18 dB	> 17 dB	> 18 dB	> 17 dB
Cross-Polar Discrimination at Sector ²	> 11 dB	> 9 dB	> 9 dB	> 7 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2×20W)	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc
Input Power Continuous Wave (CW)	300 watts	300 watts	300 watts	300 watts
Polarization	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground

¹Peak gain across sub-bands.
2Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V9.6.

Peak gain across sub-bands.
²Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V9.6.





SPECIFICATIONS

OctoPort Multi-Band Antenna

OPA65R-BU8B

Mechanical	
Dimensions (L×W×D)	95.9×11.7×8.4 in (2437×297×214 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	287 lbs (1278 N) @ 100 mph (161 kph)
Side Wind Load	229 lbs (1018 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	11.2 ft ² (1.0 m ²)
Weight *	69.0 lbs (31.3 kg)
RET Weight	5.0 lbs (2.3 kg)
Connector	8 × 4.3-10 female
Mounting Pole	2 to 5 in (5 to 12 cm)

^{*} Weight excludes mounting and RET





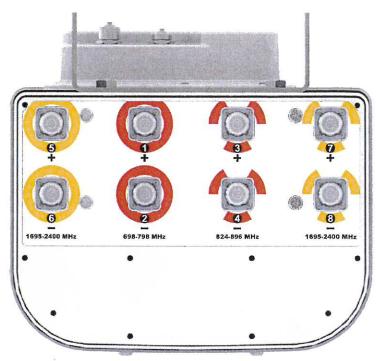
SPECIFICATIONS

OctoPort Multi-Band Antenna

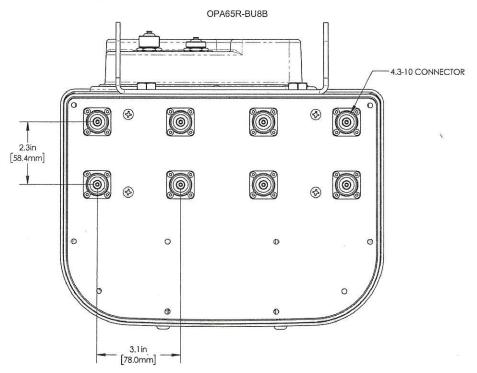
OPA65R-BU8B

Bottom View





Connection Spacing Diagram







OctoPort Multi-Band Antenna

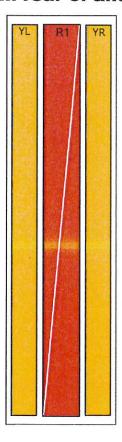
OPA65R-BU8B

SPECIFICATIONS

RET to Element Configuration

OPA65R-BU8BA Element and RET configuration

Element arrays as viewed from rear of antenna



RET placement as viewed from rear of antenna

Top of antenna



698-798 Ports 1 & 2 (R1)



1695-2400 Ports 5, 6, 7 & 8 (YL & YR)



824-896 Ports 3 & 4 (R1)

Array	Ports	Freq (MHz)	Ports controlled by common RET
R1	1, 2	698-798	1, 2
R1	3, 4	824-896	3, 4
YL	5, 6	1695-2400	
YR	7, 8	1695-2400	5, 6, 7, 8





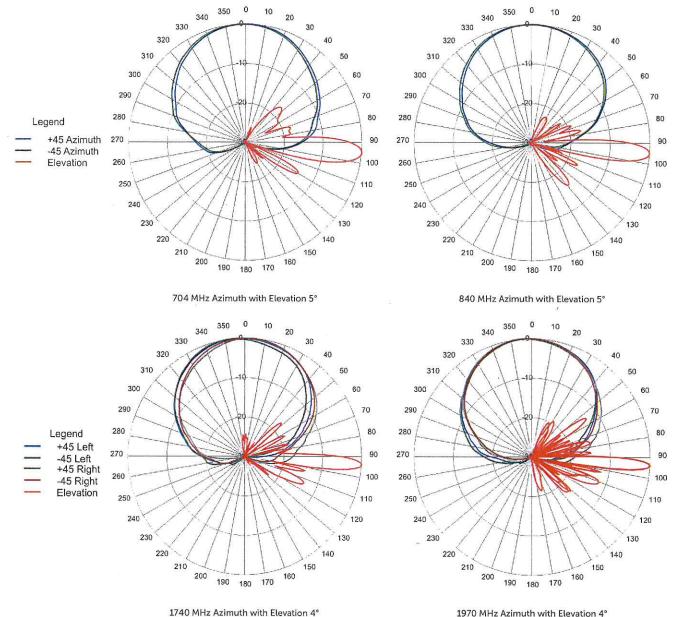
SPECIFICATIONS

OctoPort Multi-Band Antenna

OPA65R-BU8B

Typical Antenna Patterns

For detailed information on additional antenna patterns, contact customer support at support@cciproducts.com



1970 MHz Azimuth with Elevation 4°

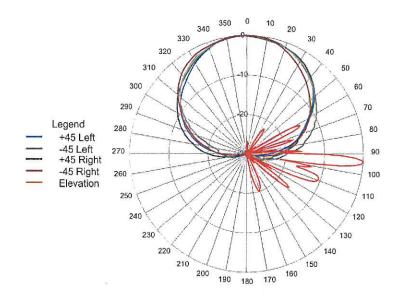




SPECIFICATIONS

OctoPort Multi-Band Antenna

OPA65R-BU8B



2155 MHz Azimuth with Elevation 4°



MultiPort Series

ORDERING

OctoPort Multi-Band Antenna

OPA65R-BU8B

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	(Y	AL.L.	2011

OPA65R-BU8BA-K Eight foot (2.4 m) OctoPort antenna with 65° azimuth beamwidth, 4.3-10 female connectors, three factory installed BSA-RET200 RET actuators (Type 1 external) and MBK-01 mounting bracket

OPA65R-BU8BB-K (Future Development) Eight foot (2.4 m) OctoPort antenna with 65° azimuth beamwidth, 4.3-10 female connectors, three factory installed BSA-RET400 RET actuators (Type 17 internal) and MBK-02 mounting

bracket

MBK-01 Mounting bracket kit (top and bottom) with 0° to 10° mechanical tilt adjustment

BSA-RET200 Remote electrical tilt actuator

HPA-CBK-AG-RRU RRU AISG cable kit for three RET antenna

HPA-CBK-RA-AG-RRU RRU AISG right angle cable kit for three RET antenna





Mounting Bracket Kit

MBK-01

	hanica

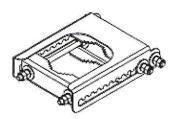
Weight 12.6 lbs (5.7 kg)
Hinge Pitch 47.25 in (1200 mm)

Mounting Pole Dimension 2 to 5 in (5 to 12 cm)

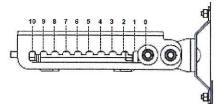
Fastener Size M12

Installation Torque 40 ft·lb (54 Nm)

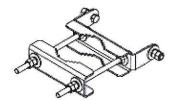
Mechanical Tilt Adjustment 0° - 10°



MBK-01 Top Adjustable Bracket



MBK-01 Top Adjustable Bracket Side View



MBK-01 Bottom Fixed Bracket





Remote Electrical Tilt Actuator (RET)

BSA-RET200

General Specifications

Part Number BSA-RET200
Protocols AISG 2.0
RET Type Type 1
Adjustment Cycles >10,000 cycles
Tilt Accuracy ±0.1°
Temperature Range -40° C to 70° C

Electrical

Data Interface Signal DC
Input Voltage 10-30 Vdc

Current Consumption Tilt 120 mA at V_{in}=24

Current Consumption Idle 55 mA at V_{in}=24

Hardware Interface AISG-RS 485 A/B
Input Connector Male 1 x 8 pin Daisy Chain

Output Connector Female 1 x 8 pin Daisy Chain

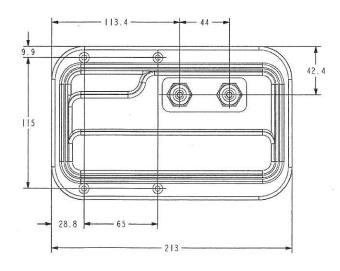
Mechanical

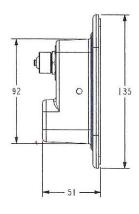
Dimensions (LxWxD) 8.0x5.0x2.0 in. (213x135x51 mm)

Housing ASA/ABS/Aluminum

Weight 1.7 lbs (0.75 kg)

ASA= Acrylic Styrene Acrylonitrile ABS=Acrylanitrile Butadiene Styrene









AISG Cable Kit

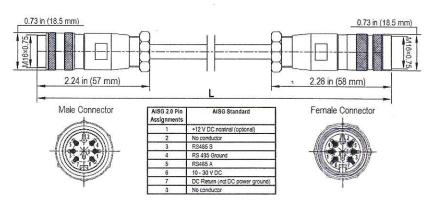
HPA-CBK-AG-RRU

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-	CCLICA	LUNG		Jali	UIIS

Individual Cable Part Number		AISGC-M-F-10FT
Cable style	UL2464	UL2464
Protocol	AISG 1.1 and AISG 2.0	AISG 1.1 and AISG 2.0
Maximum voltage	300 V	300 V
Rated current	5 A at 104° F (40° C)	5 A at 104° F (40° C)

Mechanical Specifications

Individual Cable Part Number	AISGC-M-F-18	AISGC-M-F-10FT
Cables per kit	2	2
Connectors	2 x 8 pin IEC 60130-9 Straight male/straight female	2 x 8 pin IEC 60130-9 Straight male/straight female
Tightening torque	Hand tighten only ≈ 1.84 ft-lbs (2.5 Nm)	Hand tighten only ≈ 1.84 ft-lbs (2.5 Nm)
Construction	Shielded (Tinned Copper Braid)	Shielded (Tinned Copper Braid)
Braid coverage	85%	85%
Jacket Material	Matte Polyurethane (Black)	Matte Polyurethane (Black)
Conductors	1 twisted pair - 24 AWG 3 conductors - 19 AWG AWM style 2464	1 twisted pair - 24 AWG 3 conductors - 19 AWG AWM style 2464
Cable Diameter	0.307 in (7.8 mm)	0.307 in (7.8 mm)
Length	18 - 20 in (457 - 508 mm)	120 in (3048 mm)
Weight	0.27 lbs (0.12 kg)	0.69 lbs (.31 kg)
Minimum bend radius	3.9 in (100 mm)	3.9 in (100 mm)



AISG-Male to AISG-Female Jumper Cable

Environmental Specifications

Individual Cable Part Number	AISGC-M-F-18	AISGC-M-F-10FT
Temperature Range	-40° to 80° C	-40° to 80° C
Flammability	UL 1581 VW-1	UL 1581 VW-1
Ingress Protection	IEC 60529:2001, IP67	IEC 60529:2001, IP67





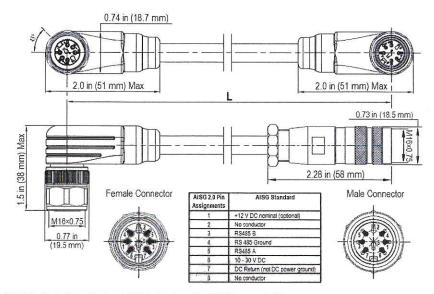
AISG Cable Kit

HPA-CBK-RA-AG-RRU

Electrical/Mechanical/Environmental Specifications

	RET to RET Cables	RRU to Antenna Cables
Individual Cable Part Number	AISGC-MRA-FRA-20	AISGC-M-FRA-10FT
Cable style	UL24	164
Protocol	AISG 1.1 and	d AISG 2.0
Maximum voltage	300) V
Rated current	5 A at 104°	F (40° C)
Temperature Range	-40° to	80° C
Flammability	UL 1581	. VW-1
Ingress Protection	IEC 60529:	2001, IP67
Tightening torque	Hand tighten only ≈ 1	84 ft-lbs (2.5& Nm)
Construction	Shielded (Tinned	l Copper Braid)
Braid coverage	85	%
Jacket Material	Matte Polyure	thane (Black)
Conductors	1 twisted pair - 24 AWG s 3 conductors - 19 AWG AWM style 2464	
Cable Diameter	0.307 in (7.8 mm)
Minimum bend radius	3.9 in (10	00 mm)
Connectors	2 x 8 pin IEC 60130-9 Right angle male/right angle female	2 x 8 pin IEC 60130-9 Straight male/right angle female
Length	20 in (508 mm)	120 in (3048 mm)
Weight	0.23 lbs (0.10 kg)	0.77 lbs (0.35 kg)
Cables per kit	2	2

Mechanical Specifications



Right Angle to Right Angle and Right Angle to Straight Jumper Cable





STANDARDS & CERTIFICATIONS

OctoPort Multi-Band Antenna

OPA65R-BU8B

Standards & Compliance

Safety EN 60950-1, UL 60950-1

Emission EN 55022

Immunity EN 55024

Environmental IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC-60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-29, IEC 60068-2-30, IEC 60068-2-5, IEC 60068-2-64,

GR-63-CORE 4.3.1, EN 60529, IP 24

Certifications

Antenna Interface Standards Group (AISG), Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US, ISO 9001:2008











FlexSure® FLX12-2420

Power and Equipment Enclosure Solutions

Purcell System's Flexible EncloSure (FlexSure®) solution architecture allows the rapid creation and growth of virtually any outdoor cabinet configuration by leveraging pre-engineered common interchangeable components. The FlexSure® series is available in 12, 16, 20, 25, and 36 RU equipment bay options.

FlexSure® enclosures are UL 508 Listed, and certified by independent third-party Nationally Recognized Testing Laboratories to Telcordia GR-487. A wide range of thermal management system technologies and capacities ensures that the equipment you deploy in the cabinet will operate within its design parameters with the highest reliability and lowest Total Cost of Ownership. Options include battery backup, AC/DC power termination and distribution, cross connect and line protection, equipment and enclosure mounting features.

Applications

Provides a secure, thermally-controlled environment for any electronic equipment supporting a wide-range of Cable/MSO, Energy/Utility, Land Mobile Radio, Transportation, U.S. Government/Military, and Wireless and Wireline Telecommunication applications.

Product Features:

- Telcordia GR-487 certified, UL508 Listed
- Highly flexible and scalable
- Energy efficient advanced thermal solutions
- Field upgradeable
- AC and DC power options
- · Pad, pole, wall, H-frame mounting options





The Purcell Advantage

Purcell Systems designs and manufactures thermally-managed outdoor enclosures that meet the exact needs of the enclosed equipment for network operators and utilities. Our enclosures provide comparable solutions to prefabricated buildings, containers and shelters at a fraction of the cost. Both standard and custom enclosures are delivered with the following capabilities:

Choice of Options: Pre-engineered and interchangeable modules provide optimal configurations with minimal cost and lead time.

Thermal Management: The industry's widest selection of heating and cooling systems ensures the most efficient thermal management solution with the lowest energy consumption.

Lowest Total Cost of Ownership: Engineering analysis and modeling ensures your enclosure configuration minimizes installation, maintenance, repair, capital, and operational expenses.

Equipment Integration and Staging: Electronic equipment can be staged and installed in our enclosures prior to final deployment and installation.

Fanatical Service®: A national service organization with 24/7/365 access means procurement, installation, support, and warranty requests are addressed immediately.

FlexSure® FLX12-2420

Dimensions and Expansion Options			Thermal Management Systems		
Ex	erior Dimensions	Rack Units	Air Conditioner	Heat Exchanger	Thermoelectric Cooler
No plinth	24"W x 20"D x 23"H 610mm x 508mm x 584mm				
4" plinth	24"W x 20"D x 27"H 610mm x 508mm x 686mm	12RU	2K BTU/585W with 500W	39 W/°C	
14" plinth	24"W x 20"D x 37"H 610mm x 508mm x 940mm		heater	741W	400W with heater
13" Battery Base	24"W x 20"D x 36"H 610mm x 508mm x 914mm				

Specifications	EDZNAKON PREMATORIAS	
EXTERIOR	Mounting Options	Other Options
Construction • Frame: 0.125" Corrosion Resistant Aluminum:	Anchor Plate Kit for Concrete Pad Mounting Pole Mount Kit	Convenience Outlets: 15 or 20A, GFCI or
single wall construction	Wall or H-Frame Mount Kit	standard Bonding and Grounding: Copper isolated or
Finish: Ultra-light gray polyester powder coat	Plinth: 4" or 14" Height, standard footprint	integrated, up to 15 positions
Weight (Base Configuration): 82 lbs	Corrosion inhibiting pad gasket	Alarm Blocks: Up to 16 positions (includes)
Door/Side/Top Panels	Stack on FLX16-2520 or FLX12-2420 for	intrusion and thermal alarms)
Doors: Front and rear doors, left or right open;	increased capacity in same footprint	• 400 Watts -48VDC Heater ; 240 Watts +24VDC
rear hatch	INTERIOR	heater
Door Handles: Pad-lockable	Equipment Mounting	6" high demark box
Door Hinges: Hidden hinges	19" equipment rails; configurable locations	Cable access box (with battery pedestal)
Cable Entry	front-to-back	Side chamber optional (left side)
 Ingress/Egress: Knockouts on bottom/sides 	Second set of 19" 12RU equipment rails optional	Accessories: Optical fiber storage, Service light,
Battery Pedestal	AC Power Termination and Distribution	document holder, equipment security partitions
Ventilated compartment	Load Center Location: internal to equipment bay	OTHER
13" Height; Supports up to (4) 100Ahr 12 Volt	6-12 position internal load centers	Agency Compliance
batteries	Up to 30 Amp Main Breaker	Telcordia GR-487 Issue 2, Issue 3 Optional
Battery heater mat: 130 Watts	Surge Protection Device (SPD)	UL Listed — UL508A
 Compatible with pad, pole, or wall/H-frame 	Generator Cable - 15 Amp	NEMA 3R
mount	DC Power Systems and Distribution	Environmental
Side Chamber	Multiple suppliers and configurations available	IP Protection: Designed to IP 54
Side chamber: left side, 12" depth	DC Distribution: Up to 20 positions	Maximum Earthquake Risk Zone-4 (as per Telcordia GR-63)
		Warranty
		5 Years on Enclosure, 1 Year on Thermal System



FlexSure® FLX16-2520

Power and Equipment Enclosure Solutions

Purcell System's Flexible EncloSure (FlexSure®) solution architecture allows the rapid creation and growth of virtually any outdoor cabinet configuration by leveraging pre-engineered common interchangeable components. The FlexSure® series is available in 12, 16, 20, 25, and 36 RU equipment bay options.

FlexSure® enclosures are UL 508 Listed, and certified by independent third-party Nationally Recognized Testing Laboratories to Telcordia GR-487. A wide range of thermal management system technologies and capacities ensures that the equipment you deploy in the cabinet will operate within its design parameters with the highest reliability and lowest Total Cost of Ownership. Options include battery backup, AC/DC power termination and distribution, cross connect and line protection, equipment and enclosure mounting features.

Applications

Provides a secure, thermally-controlled environment for any electronic equipment supporting a wide-range of Cable/MSO, Energy/Utility, Land Mobile Radio, Transportation, U.S. Government/Military, and Wireless and Wireline Telecommunication applications.

Product Features:

- Telcordia GR-487 certified, UL508 Listed
- Highly flexible and scalable
- Energy efficient advanced thermal solutions
- Field upgradeable
- AC and DC power options
- · Pad, pole, wall, H-frame mounting options





The Purcell Advantage

Purcell Systems designs and manufactures thermally-managed outdoor enclosures that meet the exact needs of the enclosed equipment for network operators and utilities. Our enclosures provide comparable solutions to prefabricated buildings, containers and shelters at a fraction of the cost. Both standard and custom enclosures are delivered with the following capabilities:

Choice of Options: Pre-engineered and interchangeable modules provide optimal configurations with minimal cost and lead time.

Thermal Management: The industry's widest selection of heating and cooling systems ensures the most efficient thermal management solution with the lowest energy consumption.

Lowest Total Cost of Ownership: Engineering analysis and modeling ensures your enclosure configuration minimizes installation, maintenance, repair, capital, and operational expenses.

Equipment Integration and Staging: Electronic equipment can be staged and installed in our enclosures prior to final deployment and installation.

Fanatical Service®: A national service organization with 24/7/365 access means procurement, installation, support, and warranty requests are addressed immediately.

FlexSure® FLX16-2520

Dimensions and Expansion Options			Thermal Management Systems			
Exterior Dimensions		Rack Units	Air Conditioner	Heat Exchanger		
No plinth	25"W x 20"D x 30"H 635mm x 508mm x 762mm					
4" plinth	25"W x 20"D x 34"H 635mm x 508mm x 864mm	16RU	2K BTU/hr 585W	39 W/°C	70 W/°C	130 W/°
14" plinth	25"W x 20"D x 44"H 635mm x 508mm x 1118mm		with 500W heater	741W	1330W	2470W
13" Battery Base	25"W x 20"D x 43"H 635mm x 508mm x 1092mm					

EXTERIOR	Mounting Options	Other Options	
Construction	Anchor Plate Kit for Concrete Pad Mounting	Convenience Outlets: 15 or 20A, GFCI or	
Frame: 0.090" (walls), 0.125" (base and top)	Pole Mount Kit	standard	
Corrosion Resistant Aluminum; single wall	Wall or H-Frame Mount Kit	Bonding and Grounding: Copper isolated or	
construction	Plinth: 4" or 14" Height, standard footprint	integrated, up to 24 positions	
Insulation: Internal foil-backed insulation in top	Corrosion inhibiting pad gasket	Alarm Blocks: Up to 24 positions (includes	
Finish: Ultra-light gray polyester powder coat	 Stack on FLX16-2520 or FLX12-2420 for 	intrusion and thermal alarms)	
Weight (Base Configuration): 105 lbs	increased capacity in same footprint	800 Watts -48VDC Heater	
Door/Side/Top Panels	INTERIOR	6" high demark box	
Doors: Front and rear doors, left or right open;	Equipment Mounting	Cable access box (with battery pedestal)	
rear hatch		Accessories: Optical fiber storage, Service light document holder, equipment security partitions	
Door Handles: Pad-lockable			
Door Hinges: Hidden hinges		OTHER	
Cable Entry		Agency Compliance	
Ingress/Egress: Knockouts on bottom/sides	Second set of 19" equipment rails optional	Telcordia GR-487 Issue 3 or Issue 4	
Pattery Pedestal	AC Power Termination and Distribution	UL Listed – UL508A	
Ventilated compartment	Load Center Location: internal to equipment bay	• UL Listed — UL60950-1	
13" Height; Supports up to (4) 100 Ahr 12 Volt	6-12 position internal load centers	Designed to UL60950-22	
batteries	Up to 30 Amp Main Breaker	NEMA 3	
Battery heater mat: 130 Watts	Surge Protection Device (SPD)	Environmental	
Compatible with pad, pole, or wall/H-frame	Generator Cable - 15 Amp	IP Protection: Designed to IP 54	
mount	DC Power Systems and Distribution	Maximum Earthquake Risk Zone-4 (as per	
	 Multiple suppliers and configurations available 	Telcordia GR-63)	
	DC Distribution: Up to 20 GMT positions, up to 5	Warranty	
	DC circuit breakers	. 5 Years on Enclosure, 1 Year on Thermal System	



AT&T RBA72 48V Primary / 24V Secondary Power and Battery Cabinet

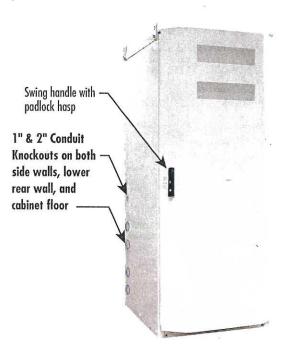
How To Order

Description	AT&T Part #	CommScope Part #
RBA72 48/24 PSV power and battery cabinet	NEQ.15276	760162909

Note: Please use the GE Energy Ordering Guide to order GE Energy rectifier and converter modules and breakers.

Battery Voltage Configuration

• RBA72 Power / Battery Cabinet with 3 strings @ -48 VDC, 540 total Ah



Description

battery on discharge

• AC Surge Protection Device Equipped with Raycap Strikesorb surge protection modules

30-V1-HV-DMR

rectifier fail, battery breaker fail, high/low input voltage,



GE Energy System, Linear Pulsar Controller, DC Distribution (8 RU)

Top Distribution: 48V Only

- 24 Circuit Breaker Positions
- 6 GMT Fuse Positions

Lower Distribution: 24 or 48V

- 26 Selectable Circuit Breaker Positions
 - GE Energy Rectifier (4 RU)
 - 400A 48V & 300A 24V Capacity OR
 - 600A 48V Capacity
 Note: Rectifier and Converter
 Modules are not included
 - Available equipment space (2 RU) for RayCap Remote Head Surge Protection
 - Door mounted heat exchanger (electronics cooling)
 - Door mounted ventilation system (battery cooling)
 - Document storage pockets

- Battery Compartment

- 3 strings of 155 or 180 Ah batteries @ - 48 VDC
- Equipped with battery heaters
- Batteries are not included
- VRLA or Saft TelX NiCd Batteries may be used. See Saft AT&T Ordering Guide for the NiCD battery part number

Additional Features

- Sealed to outside air
- 3-point latching mechanism for door
- Removable kick plate for easy install
- (2) Lockable rear access panels
- GR-487 Zone 4 compliant

COMMSC PE°

• DC Surge Protection Device Not included

Feature



OPEX Savings

- Reduced power consumption no AC or TEC
- Reduced maintenance no compressor or filters

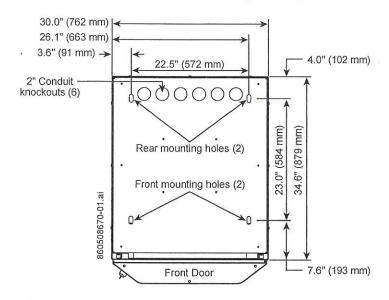
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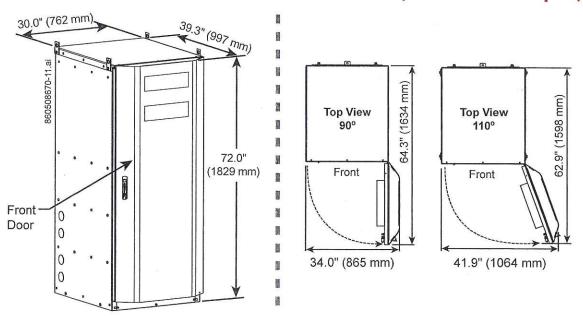
Private And Confidential – © 2012 CommScope, Inc. All rights reserved. – CO-105637-EN (02/12)

Specifications

RBA Series 30-Inch Wide Cabinet Mounting Footprint



RBA72 Cabinet Dimensions and Door Clearances (90° and 110° Open)



Band	Band Name	RRH Type/Model	Tx/fix	RF Power (W)	Max No. of LTE Carriers	IBW (MHz)	ABW (MHz)	HxWxD (in)	Weight (Ibs)
1.1	0.00	RRUS-11	E CL	2×30	A)	ứi ⊮i	ini et	29.7×71×7.2	50,5
		ARUS-11 E	272R	2×40	ru.	ÎN PH	15	19.7×17×7.2	មា
On CVI	700 DE Lower	RRUS-E2	ing.	3×40	4	9	10	20.4 x 18.5 x 7.5	80
name#PID		RRUS-11	212A	2 x 40	2	20	20	19.7×17×7.2	50.6
v 1	C W	RRUS-12	2T2R	N AGO	24	NA SA	20	20.4×18.5×7.5	141
1)	2203	2728	*	n-ir	Ŋ	25	7,9×7,9×4	Ö.
- Continue in the second of the second		4478 (20 2018)	4748	Ot × t	Silver Si	Futi Band??	200	15×13.2×7.4	5.00
		RRUS-11	Kete	2×40	r-i	20	20	19.7 × 1.7 × 7.2	50.6
y/100		RRUS-12	272R	2×50	7	Q	20	20.4 x 18.5 x 7.5	D.
u c c	ţ	ARU5-32	がかいす	07×4	מיח	P	9	27.2 × 12.1 × 7	80
Can h	2	2203	2128	N W	re).	ra ra	est.	7.9×7.9×4	ବର ଫୁ
		mRRUS-12	2728	in X	7	25.	20	18.1 x 10.4 x 5.5	H
		4415 (10, 2018)	4748	4 x 40	679	9077	566	15×13,2×5,4	थ
		iA (4') Built in	2748	2×30	N	20	20	57 x 14.9 x 9.5	197) e-d H-1
		A (6') Built in	74.22	2×30	N	20	20	78.4×14.9×9.5	133
***	Na Paris	IA(8') Built in	2T4R	2 x 30	r4	30	2	96×12.1×8.7	g-6 274 p-8
5	7	RNS-11	さてされ	2×40	N	20	20	19.7×1.7×7.2	50.5
	- mu d	RRUS-12	2728	2×60	N	9+	20	20.4 x 18.5 x 7.5	2
		mRRUS-12	C	17) ** **	ř-t	ri Fi	52	18:1×10:4×5,5	CA CA
		RRU5-32	C. P. L. P.	O4×+	m	20	60	27.2 × 12.1 × 7	n n
998	AWS1+AWS0	2203	2T2R	in K	(v ²)	45	45	7,9×7,9×4	Ø)
		4415 (10 2018)	4748	04×40	627	9072	ice	15×13.2×5.4	20
830	wcs	20.00 M	高サーキ	4×25	m	to	9	27.2 x 12.1 x 3	en W
00 17	Training Contracts	o r	-		eres				1

APPENDIX C

ASCE 7 Windspeed

ASCE 7 Ground Snow Load

Related Resources

Sponsors

About ATC

Contact

Search Results

Query Date: Fri Oct 27 2017

Latitude: 41.0768 Longitude: -73.5343

ASCE 7-10 Windspeeds (3-sec peak gust in mph*):

Risk Category I: 108 Risk Category II: 118 Risk Category III-IV: 127 MRI** 10-Year: 76 MRI** 25-Year: 85 MRI** 50-Year: 91

MRI** 100-Year: 97

ASCE 7-05 Windspeed: 108 (3-sec peak gust in mph) ASCE 7-93 Windspeed:

80 (fastest mile in mph)

Belltown Rd Swoot Belltown Rd Chase Bank Vanech Dr Young Israel of Stamford Fairland St Rome PI Francis Ave 9 Leonard St Crane Rd N Burdick St. Bellmere Ave Claus Kg Barrett Field Norman Rd Due 197 Alatone Rd Pine > Google Map aReport a map errore

Users should consult with local building officials to determine if there are community-specific wind speed requirements that govern.



WINDSPEED WEBSITE DISCLAIMER

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^{*}Miles per hour **Mean Recurrence Interval



SNOW LOADS BY LOCATION

Search Result

Elevation Limitation: ASCE 7* Ground Snow

Load

Ouerv Date: October 30, 2017

Address: 500 newfield avenue, stamford ct 06905

Latitude: 41.0768457 Longitude: -73.5342802 Elevation: 129.2 Feet

Any elevation: Ground Snow Load is 30 psf

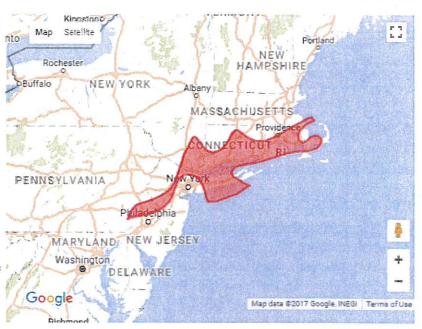
All loading data is in pounds per square foot.

For a site-specific case study area, a case study is required to establish ground snow loads.

*Based on Figure 7-1 Ground Snow Loads printed in ASCE 7-95 through ASCE 7-10.

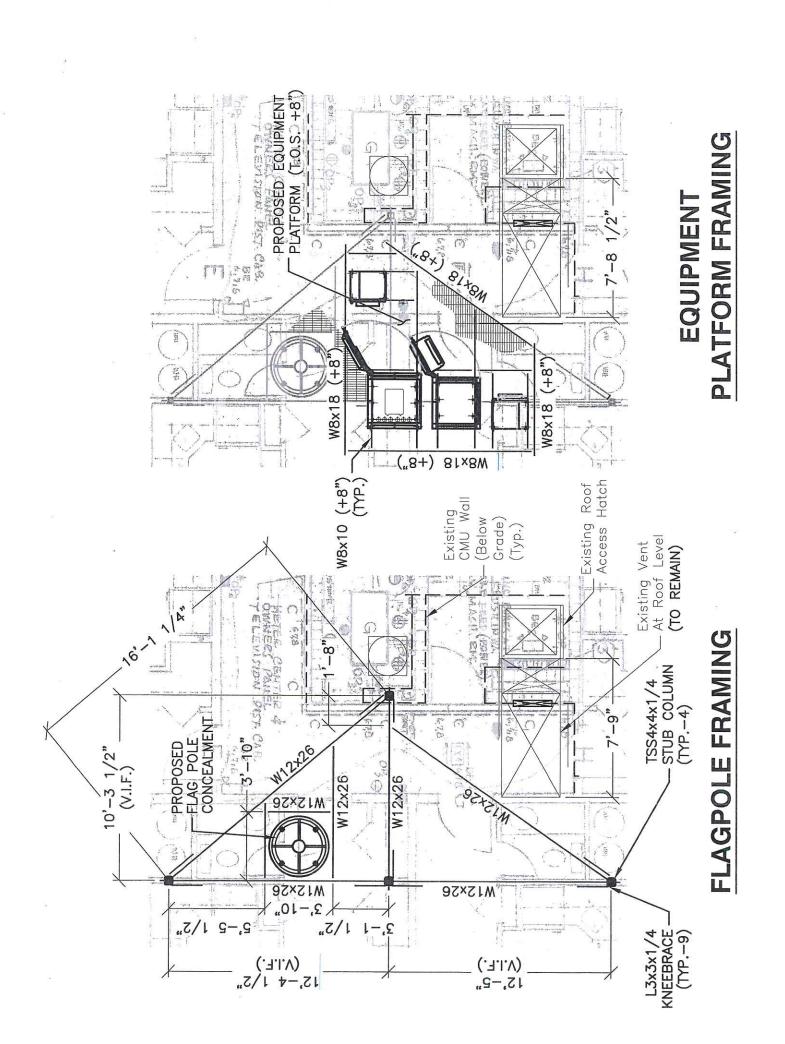
Users should consult with local building officials to determine if there are community-specific snow load requirements that govern.

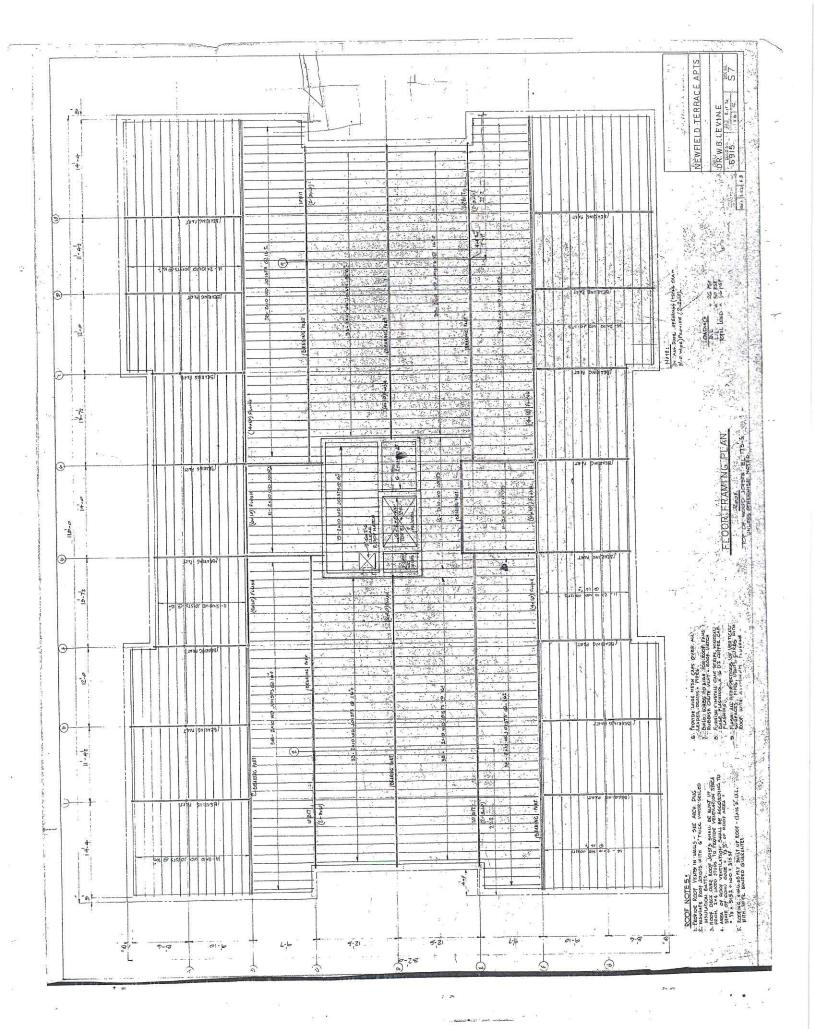
Red shaded area is the load specific boundaries. Any darker red area is the overlapping load specific boundary.

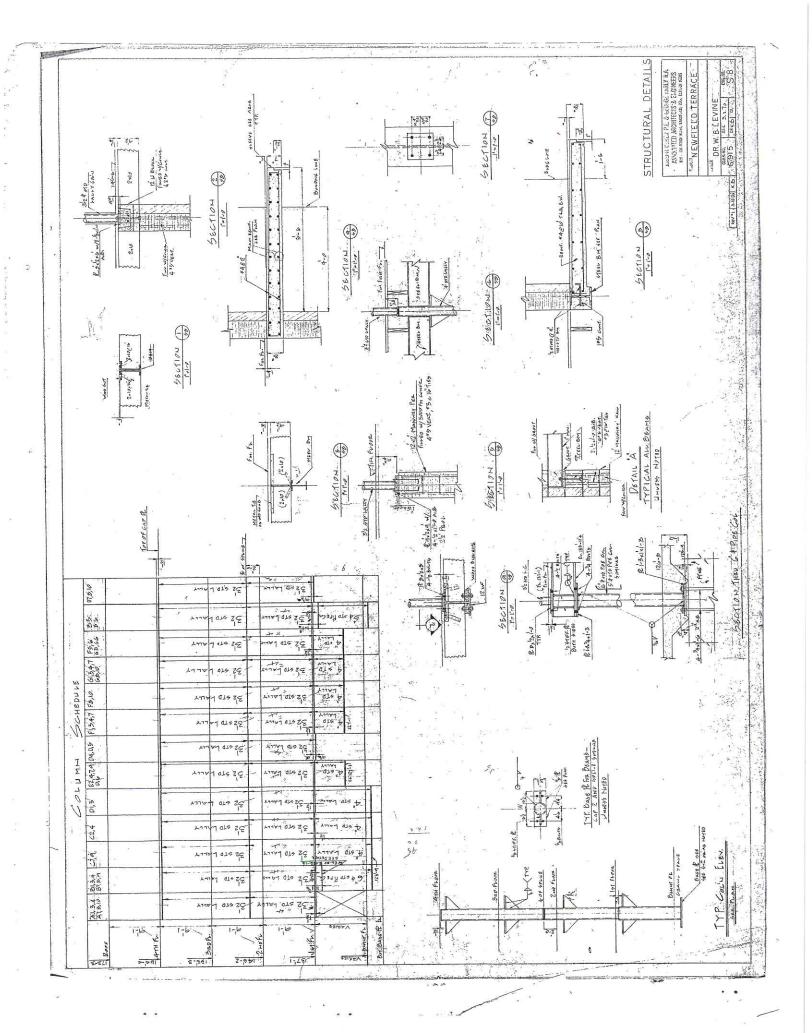


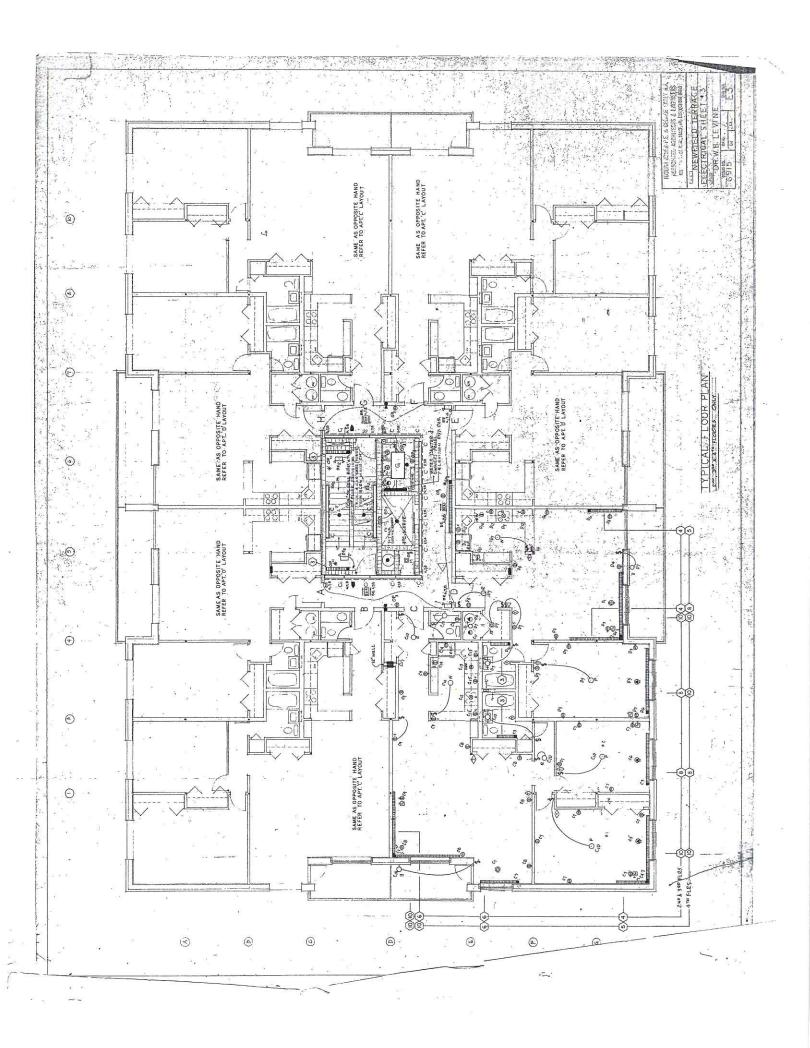
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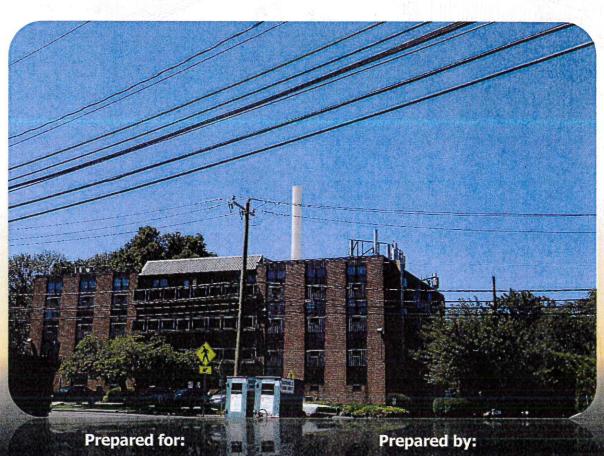






VISIBILITY ANALYSIS

CT2818
STAMFORD NEWFIELD AVENUE
500 NEWFIELD AVENUE
STAMFORD, CT 06905



AT&T c/o SAI Communications 27 Northwestern Drive Salem, NH 03079 All-Points Technology Corporation, P.C. 3 Saddlebrook Drive Killingworth, CT 06419

August 2018

Project Introduction

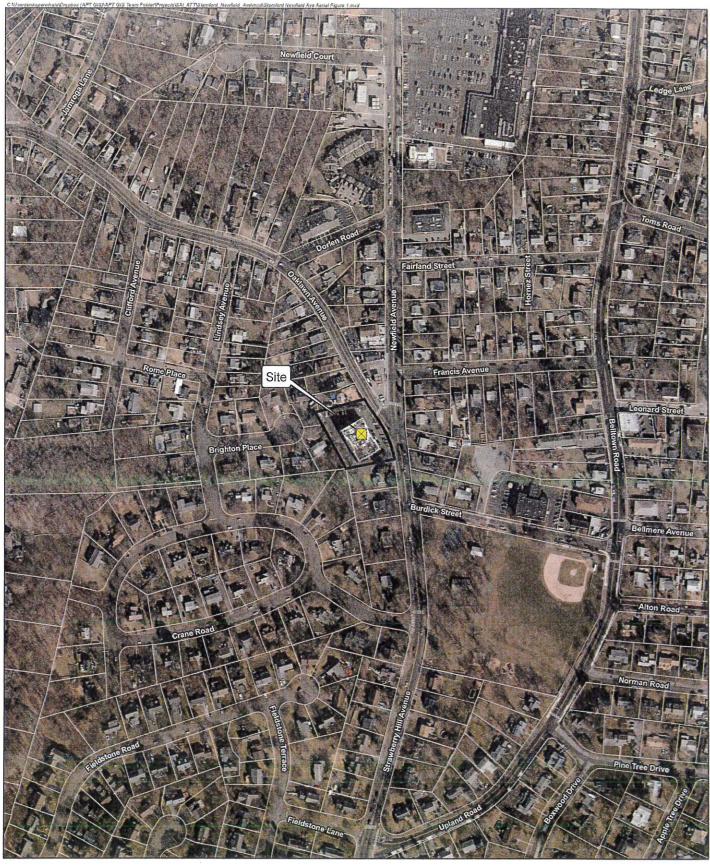
AT&T Mobility is pursuing approval for the development of a new wireless communications facility ("Facility") at 500 Newfield Avenue in Stamford, Connecticut (the "Host Property"). At the request of SAI Communications and on behalf of AT&T Mobility, All-Points Technology Corporation, P.C. ("APT") prepared this Visibility Analysis to evaluate the potential visual impacts associated with the proposed Facility from within a one-mile radius (the "Study Area").

Site Description and Setting

The Host Property is located west of the intersection of Oaklawn and Newfield Avenues and consists of ± 0.75 acres of commercially developed land that is currently occupied by a four-story brick building surrounded by paved parking areas. Verizon Wireless and T-Mobile currently maintain existing ballast frame-mounted rooftop wireless facilities at this same location. The proposed Facility would be located atop the central portion of the roof of the existing building (the "Site"). See *Figure 1 – Site Location Map*.

The proposed Facility would include a ± 34.33 -foot tall (40-inch diameter) unipole (designed as a flagpole to conceal antennas and appurtenances) located on an irregularly shaped steel dunnage frame equipment platform containing all necessary electric, telco and power equipment. Electric power and telco lines would be routed internally from existing locations within the building's basement to the proposed equipment platform.

The top of the proposed Facility would extend to an approximate height of 75 feet above ground level ("AGL") and ±33 feet above an existing roof parapet wall with all antennas and appurtenances concealed within the unipole. Access to the Site would be gained from the existing Host Property parking area access point located off Oaklawn Street. No new access points are required for the proposed Facility. The proposed Facility components and



Legend



Subject Property

Approximate Parcel Boundary (CTDEEP GIS)

Map Notes:
Base Map Source: CT ECO 2016 Imagery
Map Scale: 1 inch = 300 feet
Map Date: July 2018



Figure 1 - Site Location Map

Proposed Wireless Telecommunications Facility Stamford Newfield Avenue CT2818 500 Newfield Avenue Stamford, Connecticut





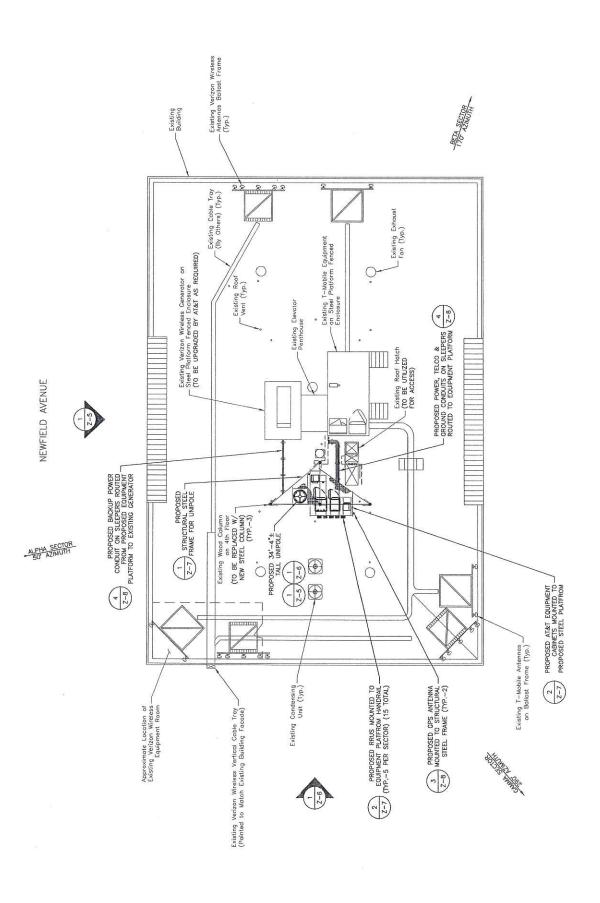


FIGURE 2 - PROPOSED EQUIPMENT LOCATION PLAN
Details extracted from technical drawings provided by Dewberry Engineers Inc., dated 10-11-17. NOT TO SCALE.

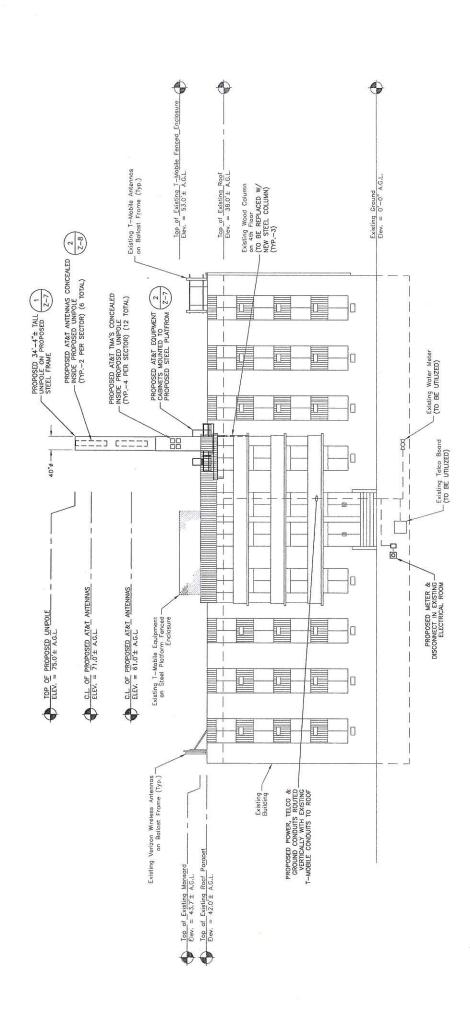


FIGURE 3 - PROPOSED EQUIPMENT ELEVATION PLANDetails extracted from technical drawings provided by Dewberry Engineers Inc. dated 10-11-17. NOT TO SCALE.

their locations are illustrated in *Figure 2 – Proposed Equipment Location Plan* and *Figure 3 – Proposed Equipment Elevation Plan*.

Land use within the immediate vicinity of the Site is predominantly residential with limited commercial development located to the north along Newfield Avenue. Barrett Field is located approximately 615 feet southeast of the Host Property while Fairfield Memorial Park is located ± 0.25 mile to the west.

The topography within the Study Area is characterized as generally level to undulating terrain with slightly higher elevations located to the east of the Site. Ground elevations range from sea level to approximately 220 feet above mean sea level. Due to residential and commercial development within the Study Area, tree cover is limited (consisting primarily of mixed deciduous hardwoods with a few interspersed conifers) and occupies approximately 824 acres of the 2,010-acre Study Area ($\pm 40\%$).

Methodology

APT used the combination of a predictive computer model and in-field analysis to evaluate the visibility associated with the proposed Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of potential visibility throughout the entire Study Area including private properties and other areas inaccessible for direct observations. The in-field analyses included a balloon float and field reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory seasonal and year-round view locations, and provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Preliminary Computer Modeling

To conduct this assessment, a predictive computer model was developed specifically for this project using TerrSet, an image analysis program developed by Clark Labs at Clark University, to provide an estimation of potential visibility throughout the Study Area. The predictive model incorporates Project and Study Area-specific data, including the site location, its ground elevation and the proposed Facility height, as well as the surrounding topography, existing vegetation, and structures (which are the primary features that can block direct lines of sight).

Information used in the model included lidar¹-based digital elevation data and customized land use data layers developed specifically for this analysis. Lidar is a remote-sensing technology that develops elevation data in meters by measuring the time it takes for laser light to return from the surface to the instrument's sensors. The varying reflectivity of objects also means that the returns can be classified based on the characteristics of the reflected light, normally into categories such as "bare earth," "vegetation," "road," or "building." The system is also designed to capture many more data points than older radar-based systems. Thus, the lidar-based digital elevation model ("DEM") has a much finer resolution and can also identify the different features of the landscape at the time that it was captured.

The lidar-based DEM created for this analysis represents topographic information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in 2016 with a sub-meter horizontal resolution. In addition, multiple land use data layers were created from the Natural Resources Conservation Service (through the USDA) aerial photography (flown in 2016) using the image processing tools. TerrSet develops light reflective classes defined by statistical analysis of individual pixels, which are then grouped based on common reflective values such that distinctions can be made automatically between deciduous and coniferous tree species, as well as grassland, impervious surface areas, surface water and other distinct land use features.

¹ Lidar (a word invented to mean "light radar") may also be referred to as LiDAR, an acronym for Light Detection and Ranging. It is a technology that utilized lasers to determine the distance to an object or surface. LiDAR is similar to radar but incorporates laser pulses rather than sound waves. It measures the time delay between transmission and reflection of the laser pulse.

With these data inputs, the model is then queried to determine where the top of the Facility can be seen from any point(s) within the Study Area, given the intervening existing topography and vegetation. The results of the preliminary analysis are intended to provide a representation of those areas where portions of the Facility *may* potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of five (5) feet above the ground and the combination of intervening topography, trees and other vegetation, and structures. The Facility however may not necessarily be visible from all locations within those areas identified by the predictive model.

It is important to note that the computer model cannot account for mass density, the height, diameter and branching variability of the trees, or the degradation of views that occur with distance. In addition, each point (or pixel) represents about one square meter in area, and thus is not predicting visibility from all viewpoints through all possible obstacles. Although large portions of the predicted viewshed may theoretically offer visibility of the Facility, because of these unavoidable limitations the quality of those views may not be sufficient for the human eye to recognize the tower or discriminate it from other surrounding objects.

Visibility also varies seasonally with increased, albeit obstructed, views occurring during "leaf-off" conditions. Beyond the density of woodlands found within the given Study Area, each individual tree has its own unique trunk, pole timber and branching pattern characteristics that provide varying degrees of screening in leafless conditions which cannot be precisely modeled.

Once the data layers were entered, image processing tools were applied and overlaid onto USGS topographic base maps and aerial photographs to achieve an estimate of locations where the Facility might be visible.

Balloon Float and Field Reconnaissance

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a balloon float, vehicular and pedestrian reconnaissance, and photo-documentation.

A balloon float and field reconnaissance were conducted on July 19, 2018 to evaluate the visibility associated with the proposed Facility and to obtain photographs for use in this report. The balloon float consisted of raising a brightly colored, approximately four-foot diameter, helium-filled balloon tethered to a string height of ±75 feet AGL² at the Site. Weather conditions were favorable for the in-field activities, with calm winds (9 mph and below) and mostly sunny skies. Once the balloons were secured, APT conducted a Study Area reconnaissance by driving along the local and State roads and other publicly accessible locations to document and inventory where the balloons could be seen above/through the tree canopy. Visual observations from the reconnaissance were also used to evaluate the results of the preliminary visibility mapping and identify any discrepancies in the initial modeling.

Photographic Documentation

APT drove the public roads within the Study Area and photo-documented representative areas where the balloon was visible. At each photo location, the geographic coordinates of the camera's position were logged using global positioning system ("GPS") technology. Photographs were taken with a Canon EOS 6D digital camera body and Canon EF 24 to 105 millimeter ("mm") zoom lens. APT used a focal length of 50mm at all but one of the photo locations to provide a consistent field of view to the extent possible.

² The bottom of the balloon represented the top of unipole.

Photograph Locations

The table below summarizes the photographs and simulations for each field reconnaissance date presented in the attachment to this report including a description of each location, view orientation, the distance from where the photo was taken relative to the proposed Facility and the general characteristics of that view. The photo locations are depicted on the photolog and viewshed maps provided as attachments to this report.

View	Location	Orientation	Distance to Site	View Characteristics
1	Sandford Lane	Southeast	±0.74 Mile	Not Visible
2	Brinckerhoff Avenue	South	±0.49 Mile	Not Visible
3	Newfield Avenue	South	±0.52 Mile	Not Visible
4	Newfield Avenue	South	±0.50 Mile	Visible
5	Todd Lane	South	±0.48 Mile	Not Visible
6	Newfield Avenue	South	±0.34 Mile	Visible
7	Hirsch Road	South	±0.31 Mile	Not Visible
8	Newfield Avenue	South	±0.31 Mile	Not Visible
9	Newfield Green Plaza	Southwest	±0.31 Mile	Seasonal
10	Newfield Avenue	South	±0.13 Mile	Not Visible
11	Francis Avenue at Newfield Avenue	Southwest	±275 Feet	Visible
12	Leonard Street at Belltown Road	West	±0.16 Mile	Not Visible
13	Leonard Street	West	±0.33 Mile	Not Visible
14	Upland Road	Northwest	±0.18 Mile	Not Visible
15	Barrett Field	Northwest	±0.19 Mile	Not Visible
16	Upland Road	Northwest	±0.19 Mile	Not Visible
17	Upland Road at Strawberry Hill Avenue	North	±0.25 Mile	Not Visible
18	Fieldstone Road	North	±0.17 Mile	Not Visible
19	Crane Road at South Lindsey Avenue	Northeast	±0.10 Mile	Visible
20	East Lane	Northeast	±0.26 Mile	Not Visible
21	Clifford Avenue	Southeast	±0.16 Mile	Not Visible
22	Fairfield Memorial Park	East	±0.46 Mile	Not Visible

Photographic Simulations

Photographic simulations were generated to portray scaled renderings of the proposed Facility from the four locations presented herein where the balloon could be viewed above or through the trees. Using field data, Site plan information and 3-dimension (3D) modeling software, spatially referenced models of the Site and Facility were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs. The scale of the subjects in the photograph (the balloon) and its corresponding simulation (the unipole) are proportional to their surroundings.

For presentation purposes in this report, the photographs were produced in an approximate 7-inch by 10.5-inch format. When reproducing the images in this format size, we believe it is important to present the largest view while providing key contextual landscape elements (existing development, street signs, utility poles, etc.) so that the viewer can determine the proportionate scale of each object within the scene.

Photo-documentation of the field reconnaissance and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. The field reconnaissance photos that include the balloon in the view provide visual reference points for the approximate height and location of the proposed Facility relative to the scene.

All photo-simulations³ were created to represent the proposed Facility height of ± 75 feet AGL and are intended to provide the reader with a general understanding of the different views that might be achieved of the Facility. Photographs were taken from publicly-accessible locations and were chosen to present unobstructed view lines (wherever

³ No accompanying photo simulation was created for photograph 9 due to seasonal leaf cover.

possible). Due to the time of year, the photographs represent "leaf-on" conditions and may not be indicative of views then the leaves are off the deciduous trees.

Final Visibility Mapping

Information obtained during each field reconnaissance was incorporated into the mapping data layers, including observations of the field reconnaissance, the photo locations, areas that experienced recent land use changes and those places where the initial model was found to over or under-predict visibility. Once the additional data was integrated into the model, APT re-calculated the visibility of the proposed Facility from within the Study Area to assist in producing the final viewshed map.

Visibility Analysis Results

Results of this analysis are graphically displayed on the viewshed maps provided in the attachment to the end of this report. The maps also include the locations of photographs and corresponding simulations.

Areas from where the Facility would be visible comprise ±8.4 acres of year-round visibility and ±28.3 acres of seasonal visibility. Cumulatively, this equals approximately 1.8% of the Study Area. The design of the Facility as a faux flagpole helps reduce potential visibility impacts as no external antennas or other equipment would be visible. As seen on the attached visibility maps, year-round views beyond the Host Property would be limited to select locations within approximately 0.5 mile of the Site. Obstructed seasonal views, when the leaves are off the trees, would not extend beyond these same areas and would be limited to select locations up to 0.3 mile away. The combination of the relatively low unipole height, flat topography and surrounding mature tree cover within the Study Area serves to minimize the extent of visibility.

Proximity to Schools And Commercial Child Day Care Centers

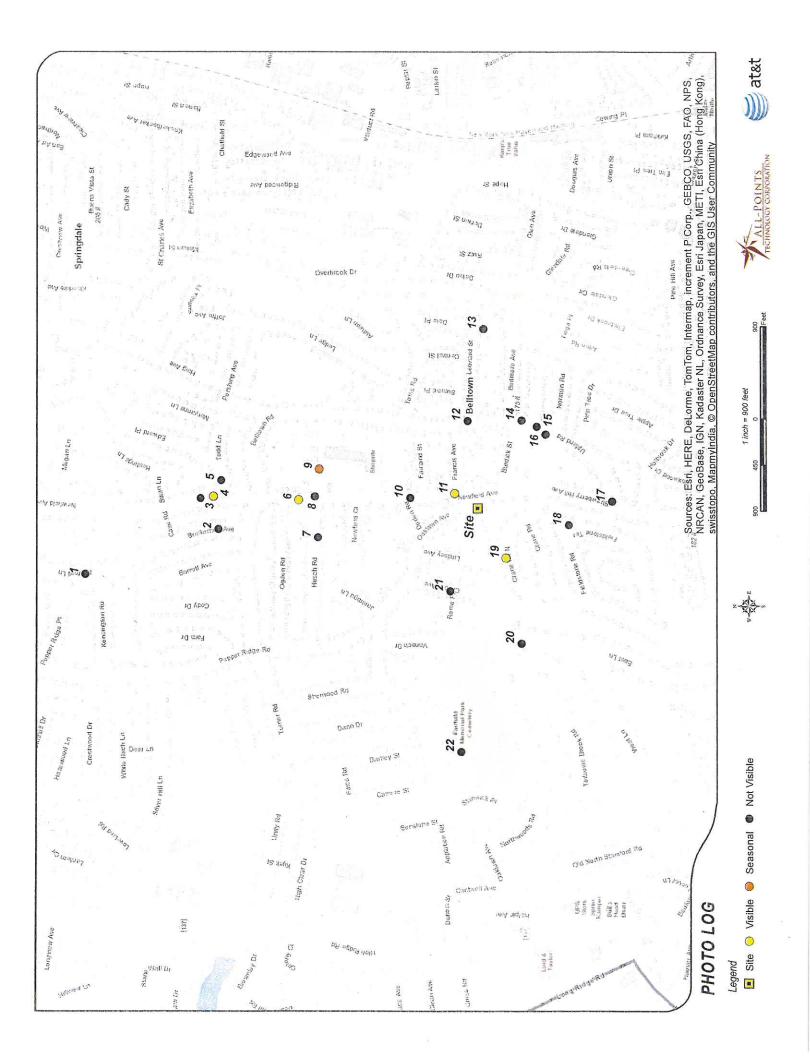
The nearest commercial child day care center is Lucy's Loving Home Daycare, located approximately 0.25 mile to the northeast at 16 Summit Place in Stamford. The nearest school is the Dolan Middle School, located approximately 0.5 mile to the northeast at 51 Toms Road in Stamford. No direct views of the Facility are anticipated from these locations.

Limitations

The viewshed maps presented in the attachment to this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2016 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The simulations provide a representation of the Facility under similar settings as those encountered during the balloon float and reconnaissance. Views can change throughout the seasons and the time of day and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location. Weather conditions on the day of the balloon float included mostly sunny skies.

ATTACHMENTS



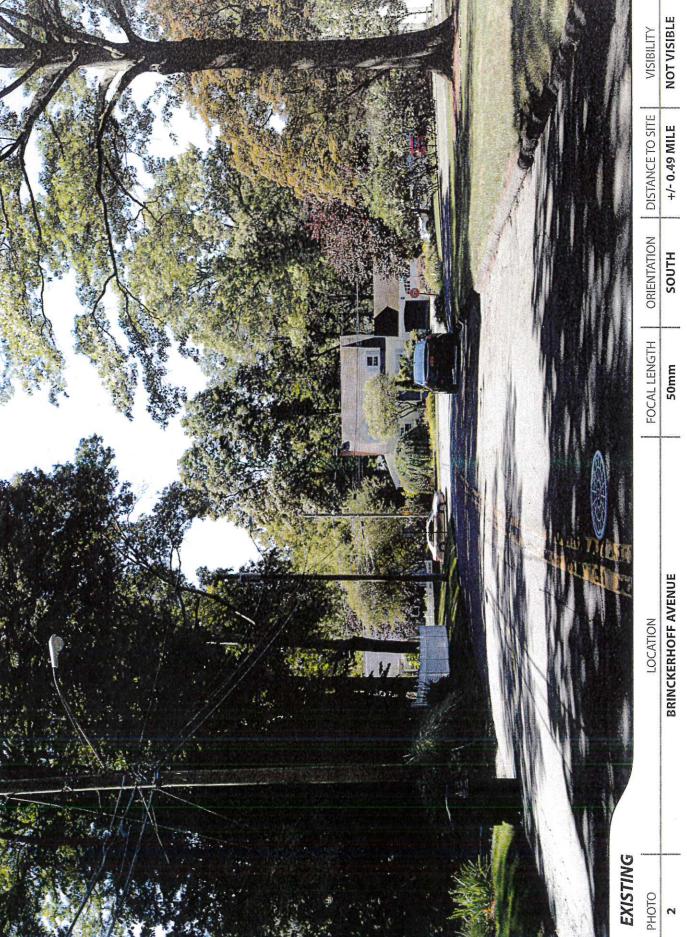


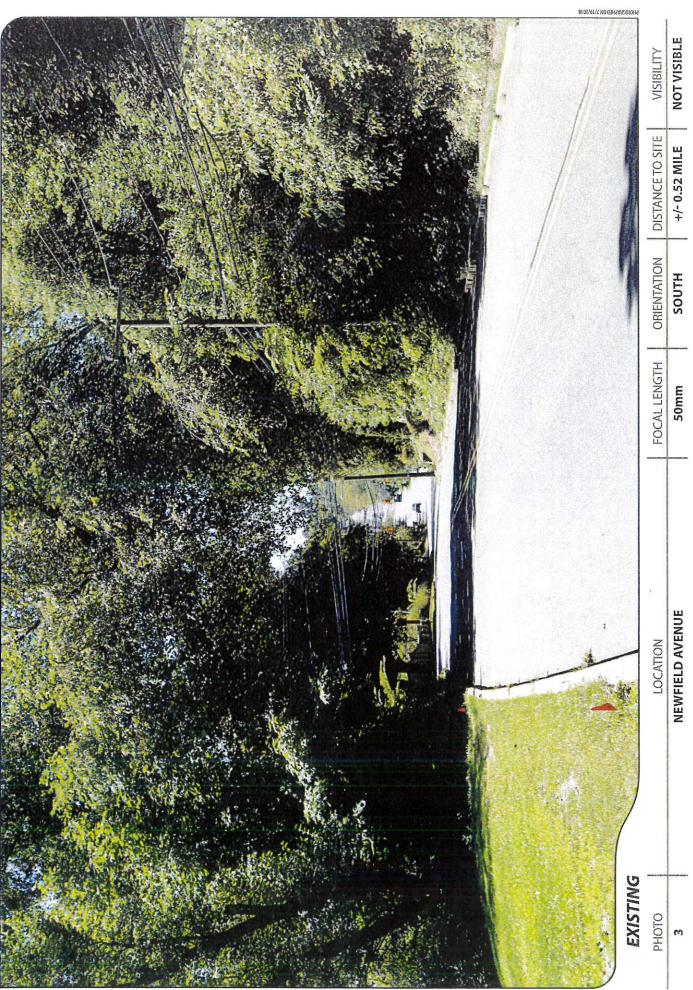






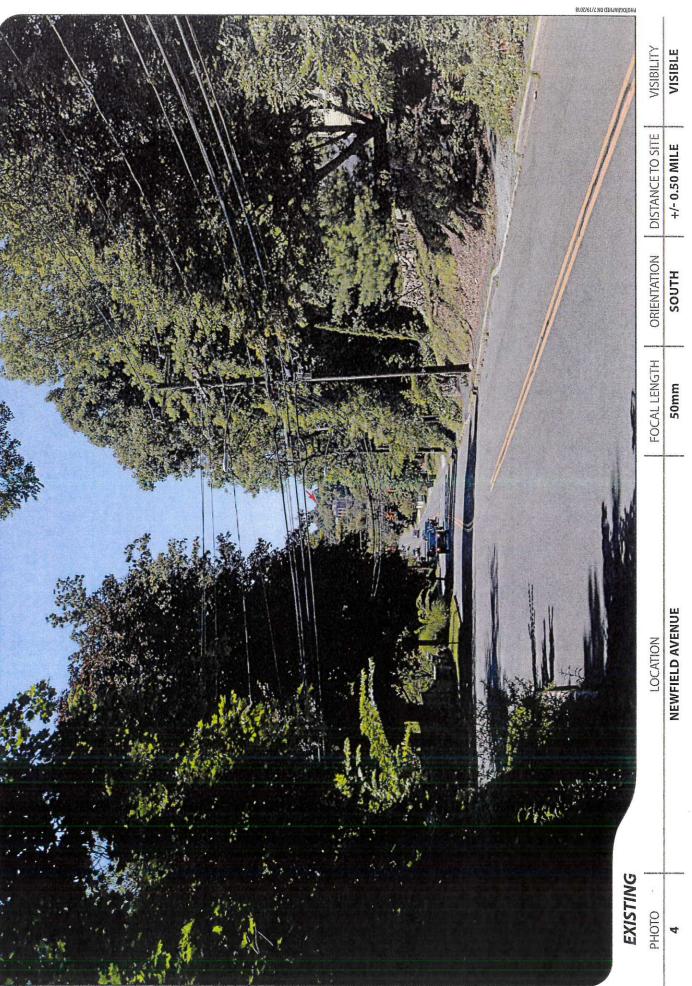
PHOTOGRAPHED ON 7/19/2018





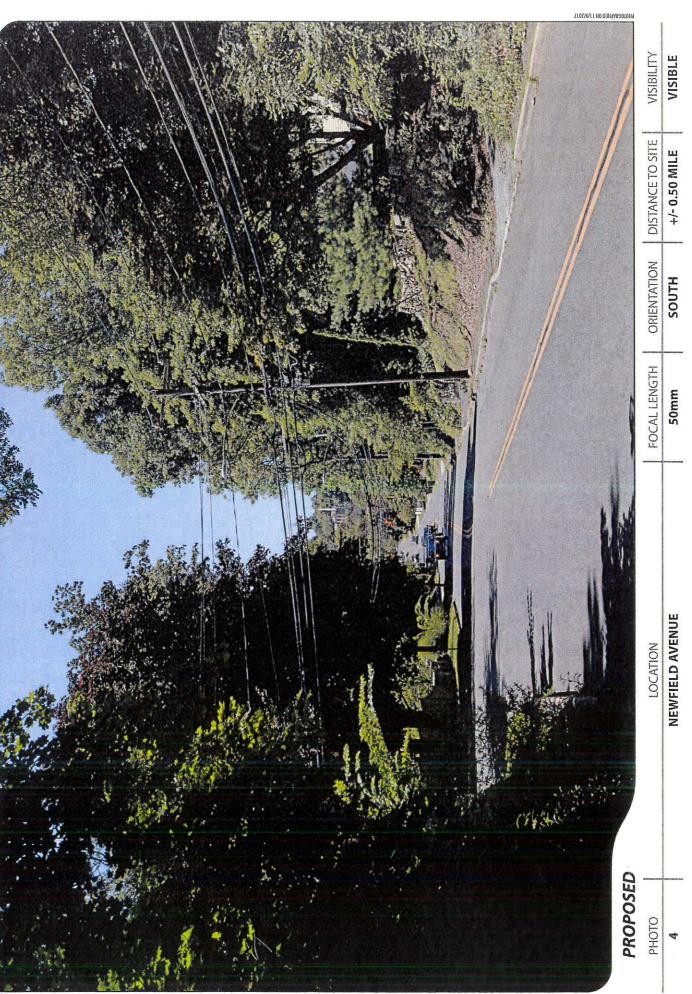






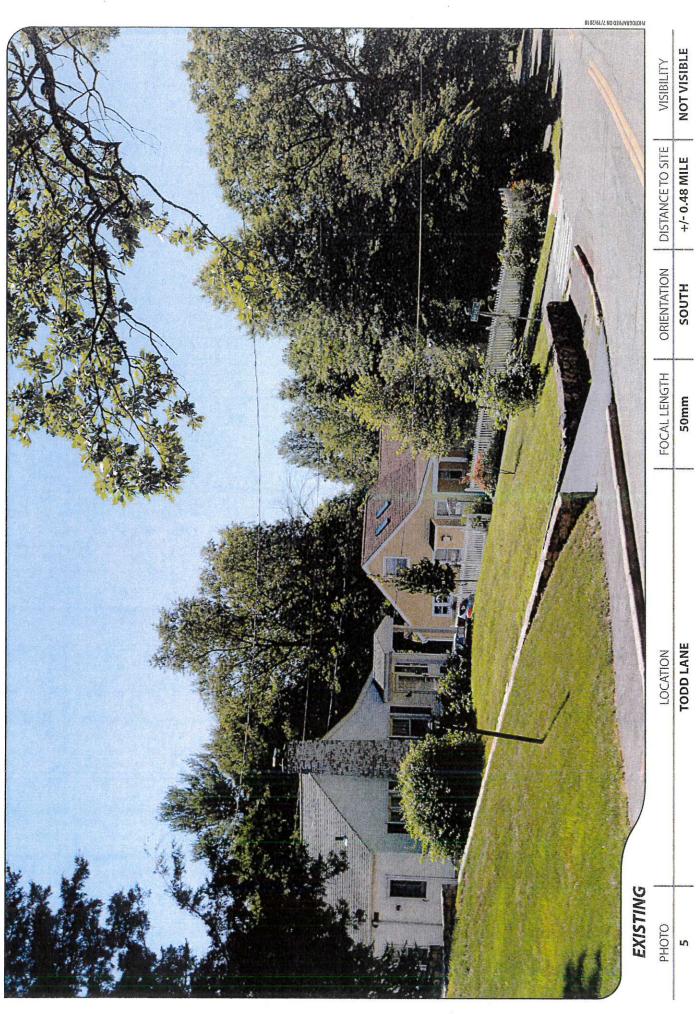






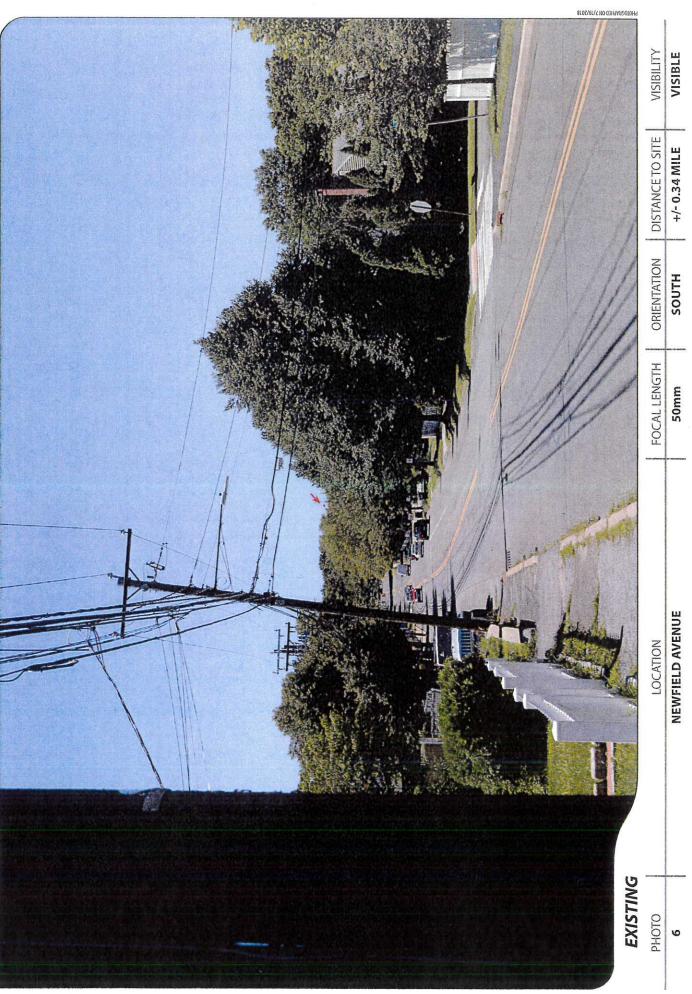






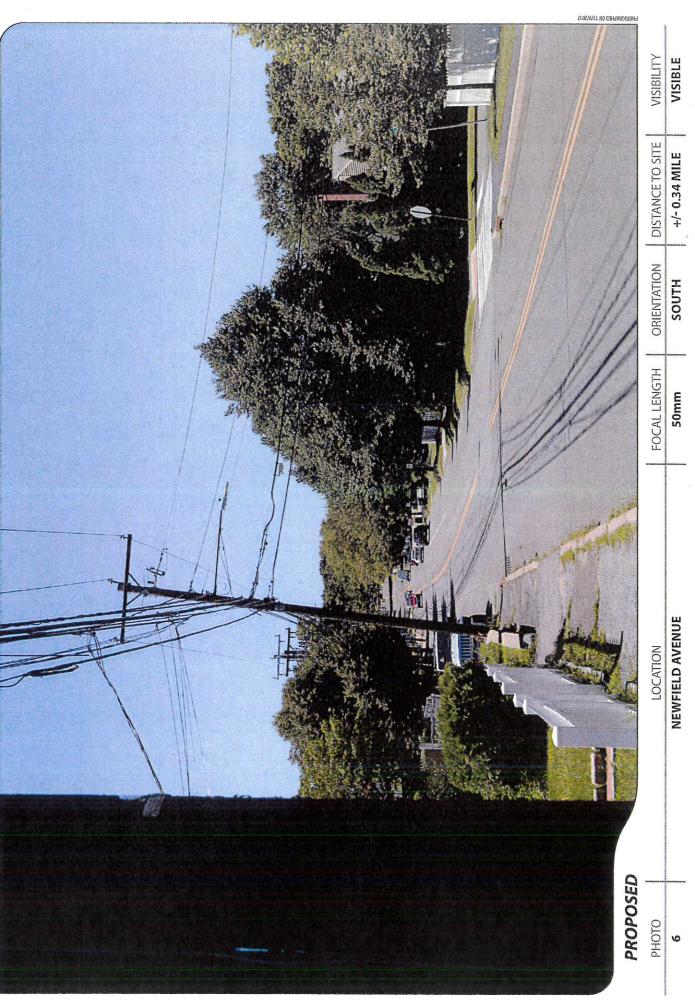






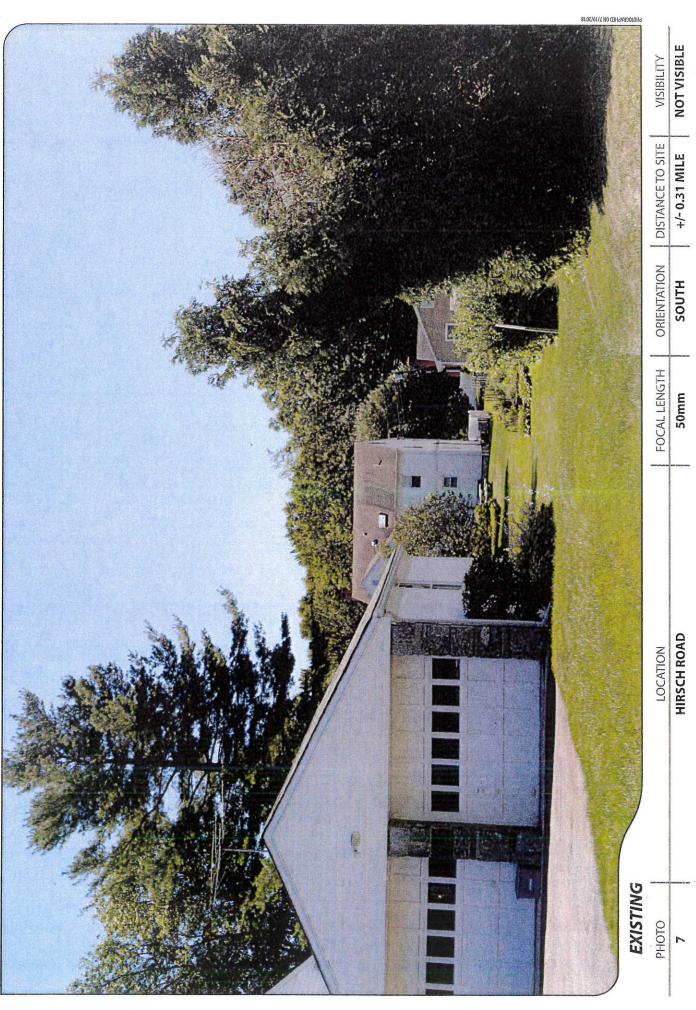






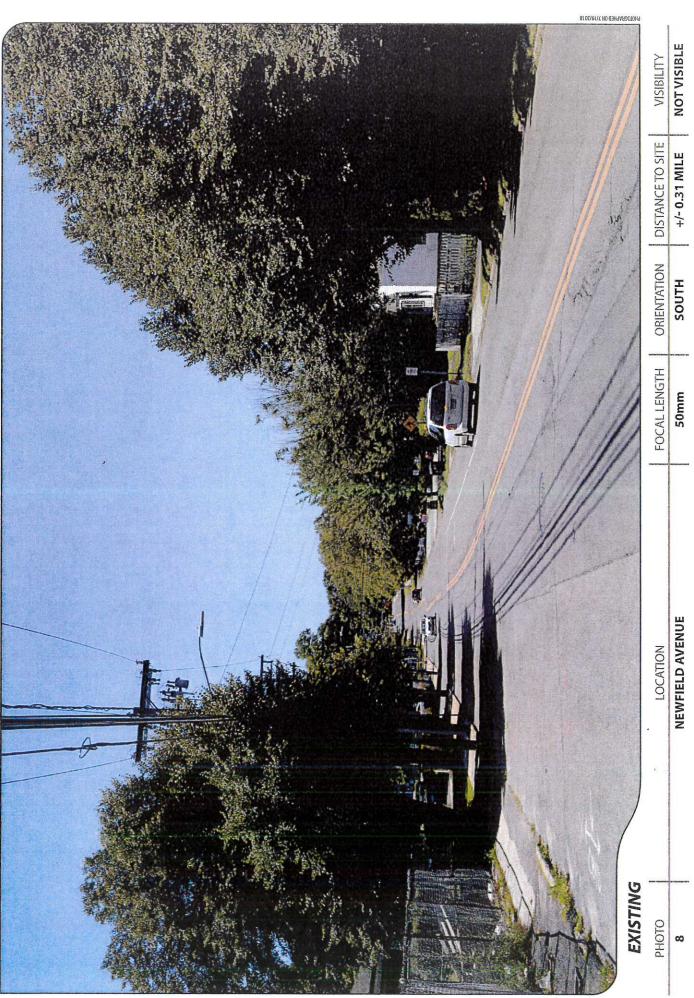






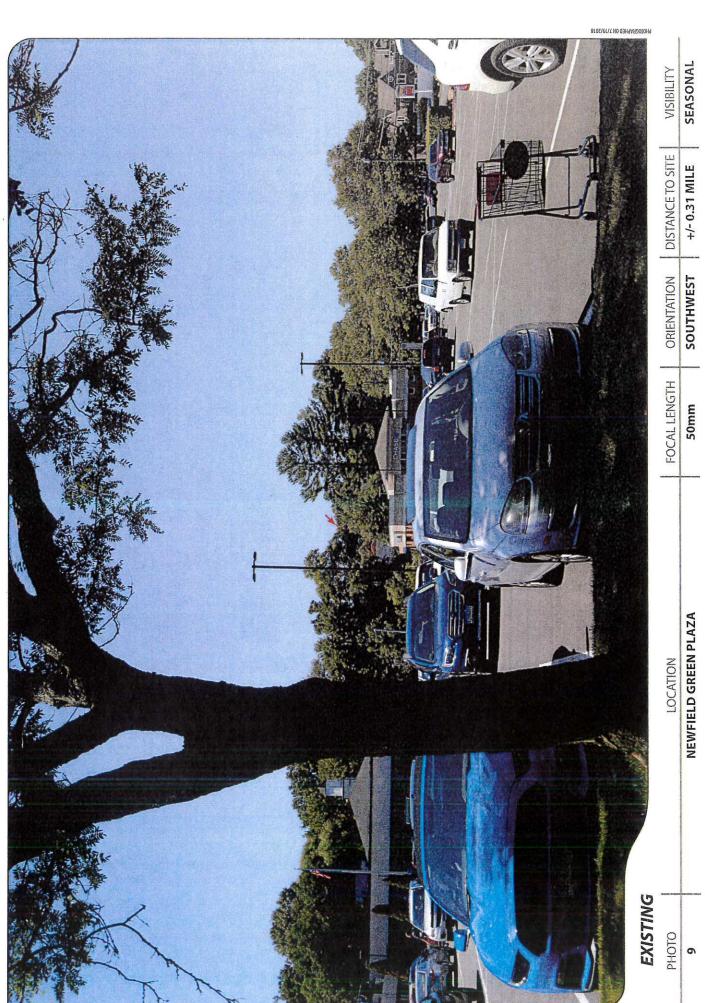








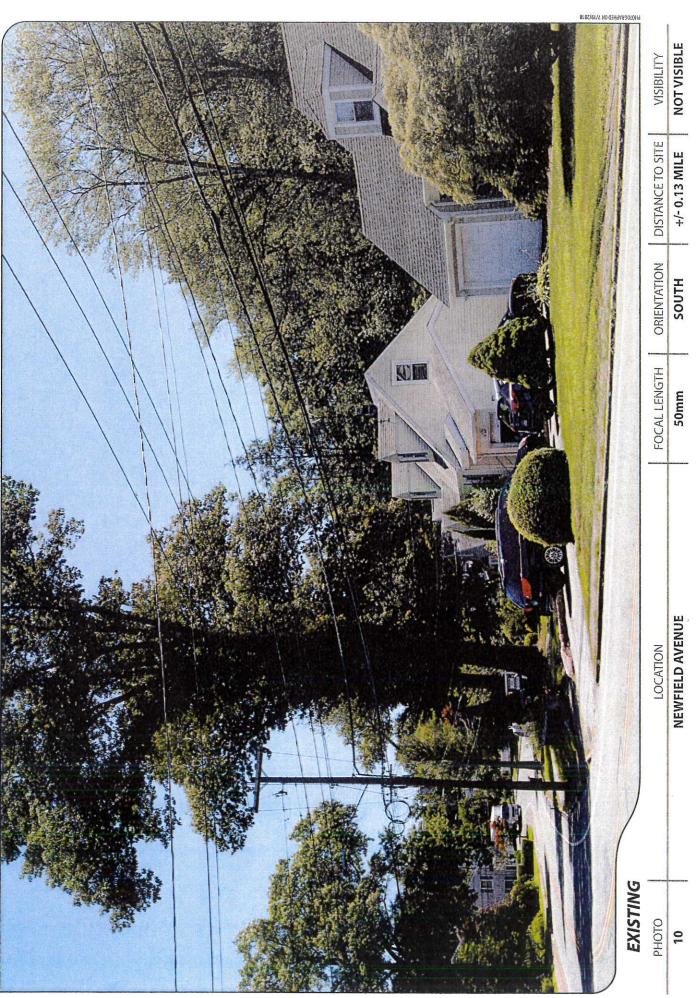








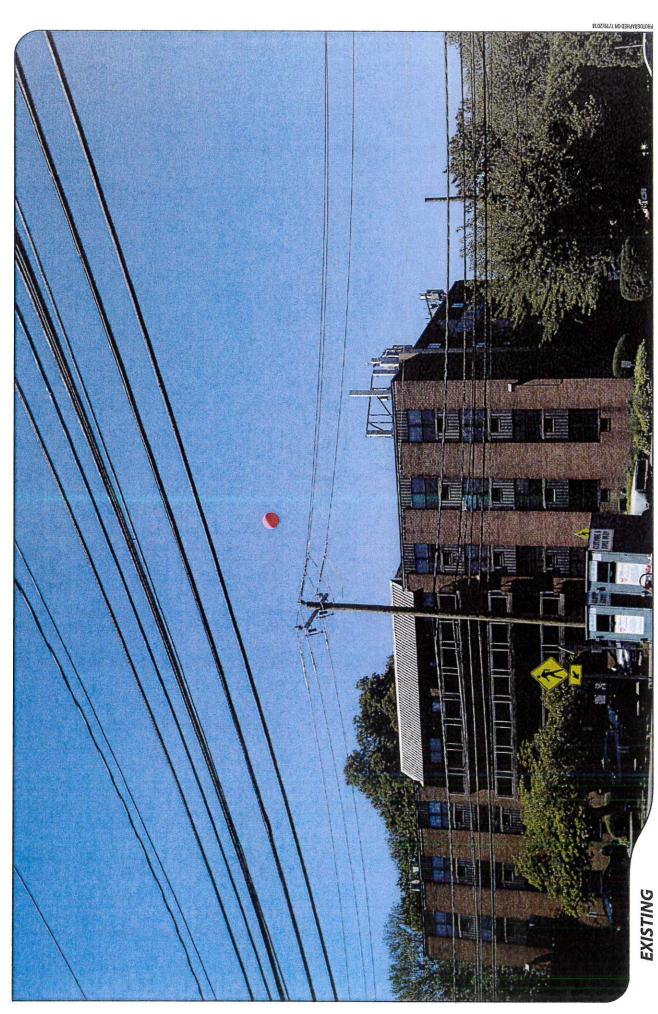
ALL-POINTS
TECHNOLOGY CORPORATION







ALL-POINTS CHNOLOGY CORPORATION







FRANCIS AVENUE AT NEWFIELD AVENUE

LOCATION

РНОТО <u>--</u>

FOCAL LENGTH 50mm

ORIENTATION SOUTHWEST

DISTANCE TO SITE

VISIBILITY

+/- 275 FEET

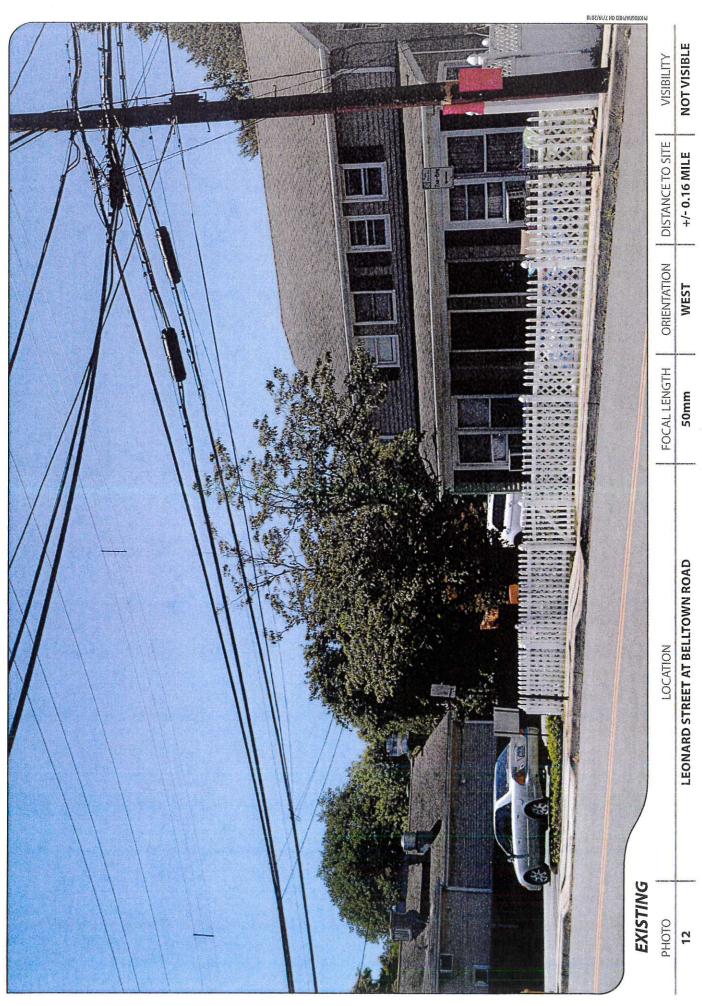
VISIBLE





PHOTOGRAPHED ON 11/9/2017





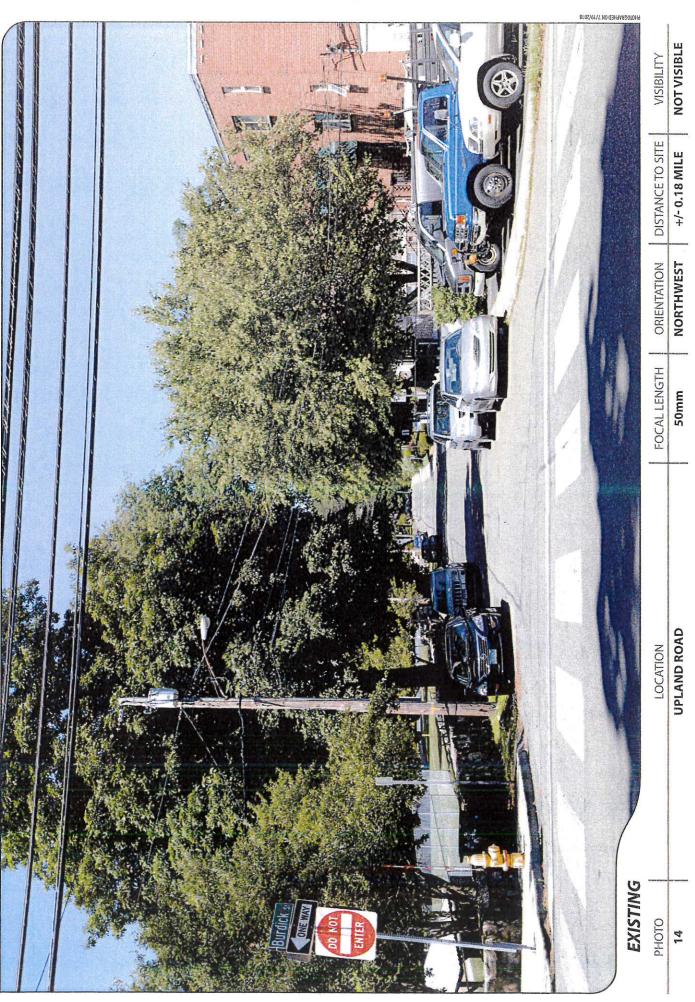






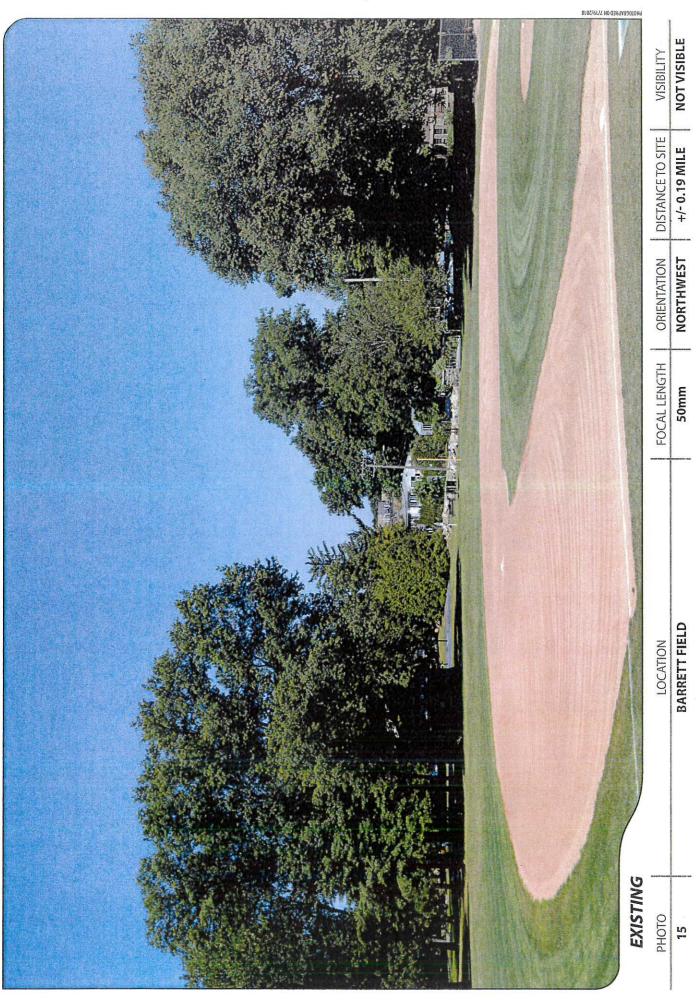






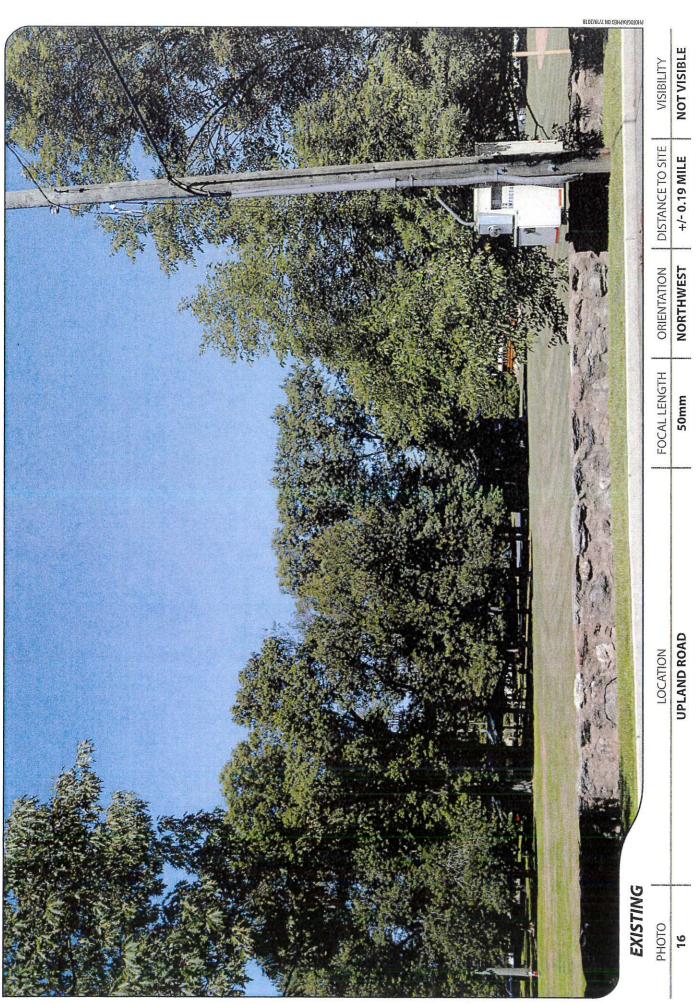












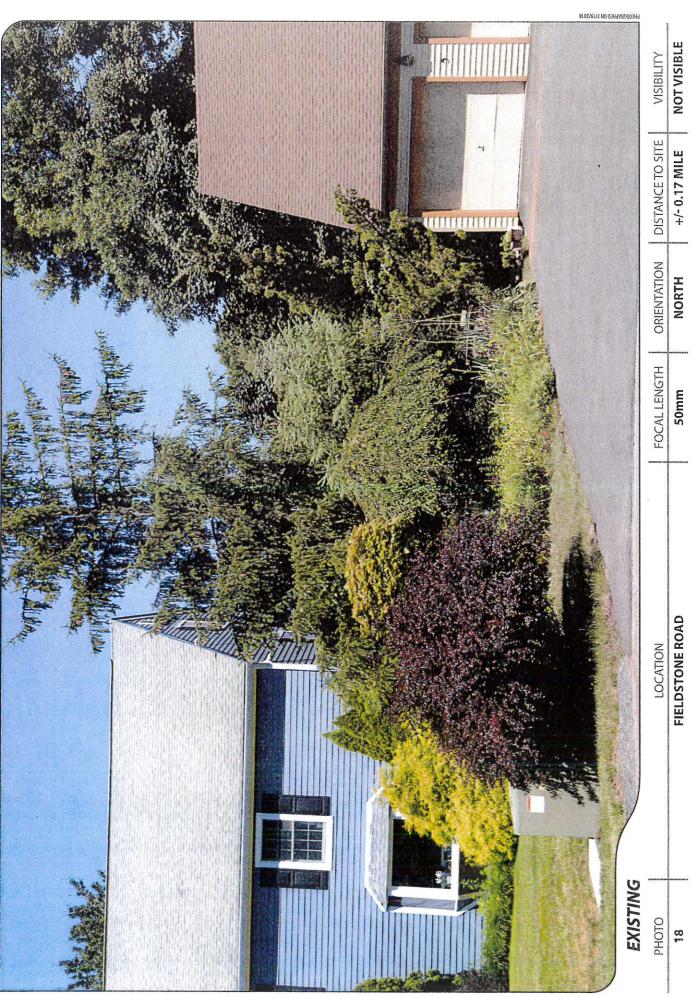


















PHOTOGRAPHED ON 7/19/2018













NOT VISIBLE

+/- 0.26 MILE

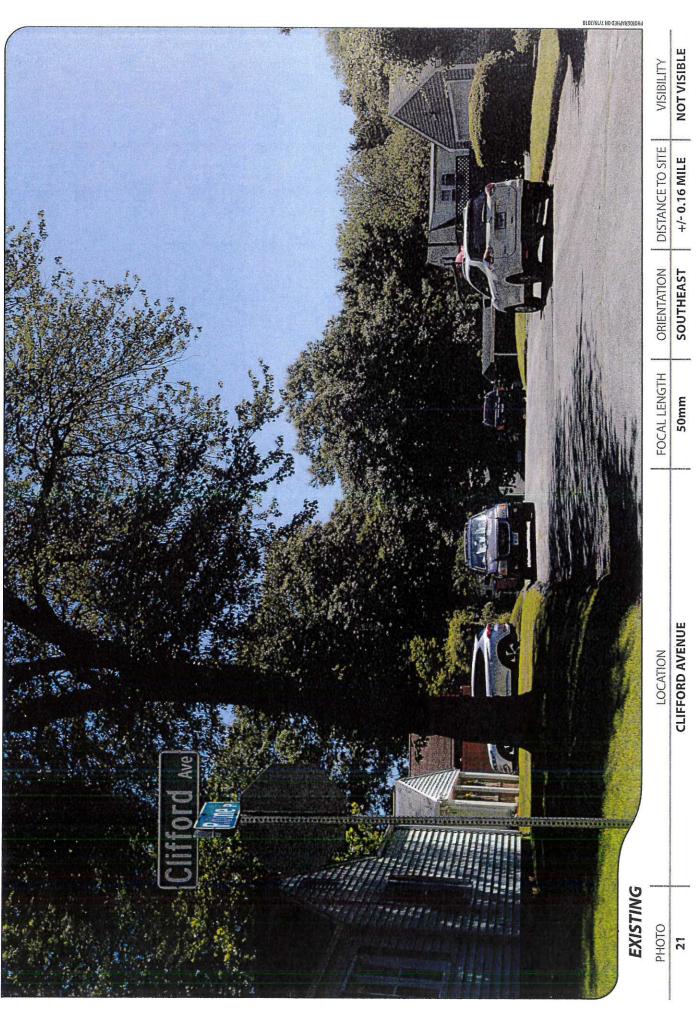
NORTHEAST

50mm

EAST LANE

20







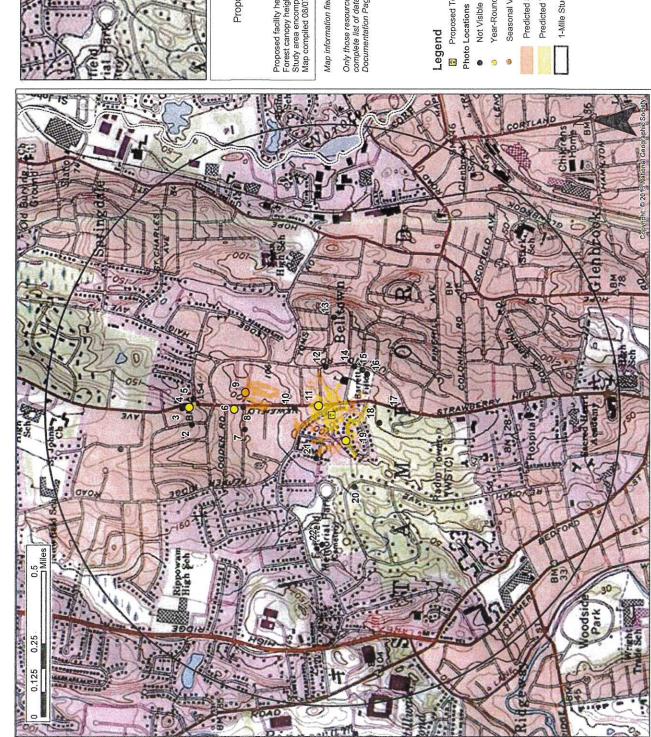


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Viewshed Map - Topo Base

Proposed Wireless Telecommunications Facility 500 Newfield Avenue, Stamford, CT

Proposed facility height is 75 feet AGL.
Forest canopy height is derived from lidar data.
Study area encompasses a one-mile radius and includes 2,010 acres of land.
Map compiled 08/07/2018

Map information field verified by APT on 07/19/2018.

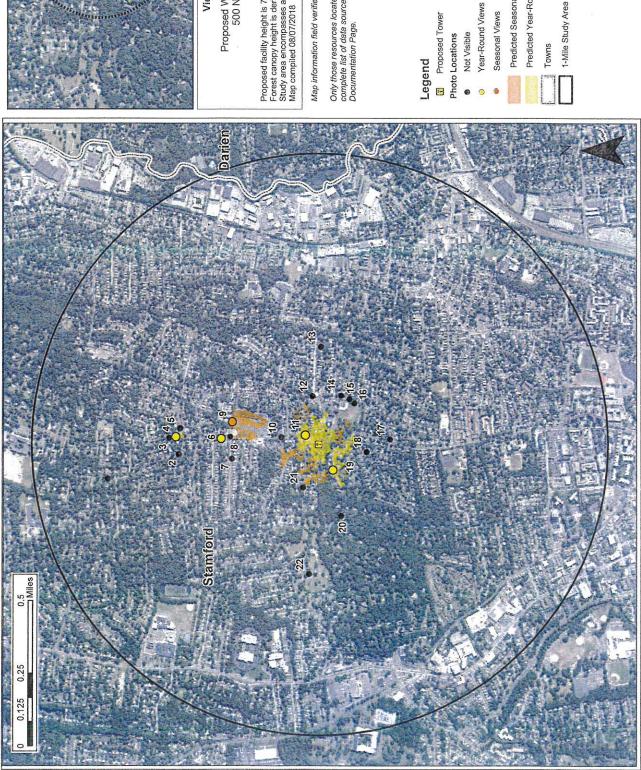
Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

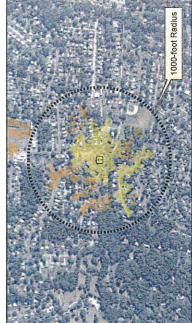
- Proposed Tower
- Year-Round Views
- Seasonal Views
- Predicted Year-Round Visibility (8.4 Acres) Predicted Seasonal Visibility (28.3 Acres)
- 1-Mile Study Area











Viewshed Map - Aerial Base

Proposed Wireless Telecommunications Facility 500 Newfield Avenue, Stamford, CT

Proposed facility height is 75 feet AGL.
Forest canopy height is derived from lidar data.
Study area encompasses a one-mile radius and includes 2,010 acres of land.
Map compiled 08/07/2018

Map information field verified by APT on 07/19/2018.

Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

- Proposed Tower

- Seasonal Views
- Predicted Year-Round Visibility (8.4 Acres) Predicted Seasonal Visibility (28.3 Acres)
- Towns
- 1-Mile Study Area

at&t

Location



DOCUMENTATION

SOURCES CONSULTED FOR VIEWSHED MAPS 500 Newfield Avenue Stamford, Connecticut

Physical Geography / Background Data

Digital elevation model (DEM) derived from 2016 1-foot resolution lidar data collected and processed by Sanborn Mapping Compony for CROG and distributed by NOAA, which has a horizontal accuracy of 0.7 meter or less.

Forest areas are generated with TerrSet (Clark University) image processing from 2016 NRCS/NAIP digital orthophotos with 1-foot pixel resolution (leaf-on) and CLEAR 2016 0.34-foot (leaf-off).

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP and the towns.

United States Geological Survey

*USGS topographic quadrangle maps – Stamford (1984)

Department of Transportation data

^State Scenic Highways (2015)

Heritage Consultants

^Municipal Scenic Roads

Cultural Resources

Heritage Consultants

^National Register

^State Register of Historic Places

^Local Survey Data

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP)

*DEEP Property (May 2007)

*Federal Open Space (1997)

*Municipal and Private Open Space (1997)

*DEEP Boat Launches (1994)

Connecticut Forest & Parks Association

^Connecticut Walk Books East & West - The Guide to the Blue-Blazed Hiking Trails of Western Connecticut Western Connecticut, 19th Edition, 2006.

Other

^ConnDOT Scenic Strips (based on Department of Transportation data)

*Available to the public in GIS-compatible format (some require fees)

^ Data not available to general public in GIS format. Reviewed independently and, where applicable, GIS data later prepared specifically for this Study Area.

NOTE Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.

LIMITATIONS

Viewshed analysis conducted using Clark University's TerrSet. The visibility analysis map(s) presented in this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating the lidar DEM, 2016 digital aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties beyond the host Property was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.



December 12, 2018

Esther McNany AT&T Mobility, LLC Manager Network Compliance – New England

Subject: NEPA Review

CT2818 NSB

Stamford Newfield Avenue

FA 10577823

500 Newfield Avenue, Stamford, Fairfield County, CT

Dear Ms. McNany,

SAI is pleased to provide you with a NEPA review for the proposed telecommunications installation at the address noted above (the Subject Property). The following summarizes the findings of the National Environmental Policy Act (NEPA) screening review performed by SAI on the proposed AT&T Mobility, LLC installation.

As of the date of this review, AT&T Mobility, LLC's proposes to collocate a telecommunications facility on the existing building at the above-referenced address. 6 Antennas and 15 RRU's will be added to the rooftop of the existing building, which is less than 45 years old. The antennas will be placed within a 35' unipole to be located on the roof. Equipment will be located on a platform on the rooftop. Utilities will be routed from existing sources within the building. As described, the telecommunications installation consists of the mounting of equipment on an existing structure, with no planned ground disturbance. Additionally, according to client representatives and site plans, the telecommunications installation will not include high intensity white lights and be located in a residential neighborhood.

Pursuant to 47 CFR I.1306, Note I of the Federal Communications Commission's (FCC) rules for implementing the NEPA, the preparation of an Environmental Assessment (EA) is not required for the mounting of antenna(s) on an existing building or antenna tower, unless the proposed facility (i) may affect districts, sites, buildings, structures or objects, significant in American history, architecture, archaeology, engineering or culture, that are listed, or are eligible for listing, in the National Register of Historic Places; or (ii) would result in human exposure to radiofrequency radiation in excess of applicable health and safety guidelines.

Further, under the provisions of the 2001 Nationwide Programmatic Agreement for the Collocation of Wireless Antennas (Collocation Agreement), certain undertakings are exempt from the Section 106 review process, which would otherwise be required to identify possible adverse effects on historic resources. The Collocation Agreement sets forth stipulations under which certain collocations may proceed without further Section 106 review by State Historic Preservation Officers (SHPO), Tribal Historic Preservation Officers (THPO), the FCC, or the Advisory Council on Historic Preservation (ACHP).

The purpose of this review is to summarize the proposed undertaking and its applicability to the aforementioned exclusionary conditions.

Collocation Agreement Evaluation Criteria and Findings

Based on and readily-available information obtained by SAI, as well as project details provided by AT&T Mobility, LLC, SAI evaluated the proposed installation against Stipulation V (Collocations on buildings and non-tower structures outside historic districts) of the *Collocation Agreement*. According to Stipulation V.A. of the Collocation NPA, "An antenna may be mounted on a building or non-tower structure without such collocation being reviewed under the consultation a process set forth under Subpart B of 36 CFR Part 800, unless:

1. The building or non-tower structure is over 45 years old.

According to records available online, the bulding on which the facility is located was constructed in 1976, which is less than 45 years of age.

2. The building or non-tower structure is (a) inside the boundary of a historic district, or (b) outside (but within 250 feet of) the boundary of a historic district and the antenna is visible from ground level anywhere within the historic district).

A review of Connecticut SHPO files indicates that the building is not a National Historic Landmark, or listed or eligible for listing on the National Register of Historic Places. Further, a review of the Connecticut SHPO files also indicates that the Subject Property is not within the boundaries of a historic district, or within 250 feet of and visible from ground level of a historic district.

3. The building or non-tower structure is a National Historic Landmark, or listed or eligible for listing on the National Register of Historic Places.

Based on a review of the above-mentioned resources, SAI determined that the existing building upon which AT&T Mobility, LLC proposes to collocate its antennas is not a National Historic Landmark or listed or eligible for listing on the National Register of Historic Places.

4. The collocation licensee or owner of the building or non-tower structure has received notification of complaint from the public, SHPO, or Council that the collocation will have an adverse effect on historic properties.

As of the date of this Summary, AT&T Mobility, LLC has not received notification of complaint from the public, SHPO, or Council that the collocation will have an adverse effect on historic properties.

Radio Frequency Radiation

An evaluation to determine whether radiofrequency (RF) emissions standards are met was not included as part of this Report. SAI understands that the proposed AT&T Mobility, LLC installation will not result in human exposure to RF emissions in excess of the applicable FCC standards, as outlined in 47 CFR §1.1307b

Conclusions

SAI determined that the proposed AT&T Mobility, LLC installation at the above-referenced property

meets the conditions set forth in the Stipulations of the Collocation Agreement as expanded by the Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies. As such, AT&T Mobility, LLC's proposed telecommunications installation is recognized to have minimal or no adverse effect on historic properties and Indian religious sites or culturally- significant properties, and consultation or review under Section 106 is not required.

David W. Perry, PhD. Compliance Manager

SAI

Attachments: AT&T Checklists

NEPA checklist Site Drawings Qualifications

LEASED NEPA REVIEW

All holdings and affiliates of AT&T Mobility, LLC (including affiliated tower companies) must complete this form for all new site construction and/or site modifications to leased structures/towers.

PROJECT INFORMATION

FCC Mkt. Type of Structure/Tower: Building CT2818 FA 10577823 Site Name: Stamford Newfield Ave. Type of Action: Modification ☐ Audit New New Will this involve: Top mounting Side mounting on the structure? Explain what you will be doing at the site: AT&T Mobility, LLC proposes to collocate telecommunications equipment on the rooftop of the Subject Property building. 6 Antennas and 15 RRU's will be added to the rooftop of the existing building. which is less than 45 years old. The antennas will be placed within a 35' unipole to be located on the roof. Equipment will be located on a platform on the rooftop. Utilities will be routed from existing sources within the building. As described, the telecommunications installation consists of the mounting of equipment on an existing structure, with no planned ground disturbance. Location of Action (address, city, county, state): _ 500 Newfield Avenue, Stamford, Fairfield County, CT 1A. Is this modification exempt from NEPA review other than Section 106 and RF exposure? X Yes No IB. Is this modification exempt from Section 106 review? IC. Is this structure located in a right of way designated for communications or other utility use and in active use for that purpose? ☐ Yes ☐ No **TOWERS CONSTRUCTED ON OR BEFORE MARCH 16, 2001** If you answer "yes" to any of the questions below, a SHPO approval or other documentation showing no impact must be obtained prior to submitting NEPA approval. **2A.** Will the height of the tower be increased by more than the greater of: ☐ N/A (due to ii) 10% of the height of the tower; or Yes No ii) the height extension needed to accommodate one additional antenna array with a separation of 20 feet from the nearest existing antenna? ☐ Yes □ No Will the collocation add an appurtenance to the tower that would protrude from the edge of the tower by more than the 2B. greater of: 20 feet; or; ☐ Yes☐ No ☐ N/A (due to ii) the width of the tower at the level of the appurtenance (not applicable to appurtenances to shelter antennas from inclement weather or connect antennas to the tower via cable)? 2C. Will mounting antennas involve excavation outside the current tower site*? No 2D. Will the collocations require the installation of more than the standard number of new equipment cabinets, not to exceed four, or more than one new equipment shelter? No Yes 2E. Is the tower the subject of a pending environmental review or proceeding before the FCC involving Section 106 compliance? Yes 2F. Has the tower been determined by the FCC to have an unresolved effect on one or more historic properties? No 2G. Has the FCC notified AT&T or the tower owner that the FCC has received a complaint that the collocation will have an adverse effect on a historic property? Yes No *Current tower site is defined as the boundaries of the existing leased or owned property surrounding the tower and any access or utility easements

currently related to the site.

If you	ERS CONSTRUCTED AFTER MARCH 16, 2001 Inswer "yes" to any of the questions below, a SHPO approval or other documentation showing no impact must be ed prior to submitting NEPA approval.						
3 A. Wi i) ii)	If the height of the tower be increased by more than the greater of: 10% of the height of the tower; or Yes No N/A (due to ii) the height extension needed to accommodate one additional antenna array with a separation of 20 feet from the nearest existing antenna? Yes No						
3B. greater i) ii)	Will the collocation add an appurtenance to the tower that would protrude from the edge of the tower by more than the of: 20 feet; or; or Yes No N/A (due to ii) the width of the tower at the level of the appurtenance (not applicable to appurtenances to shelter antennas from inclement weather or connect antennas to the tower via cable)? Yes No						
3C.	Will mounting antennas involve excavation outside the current tower site*? Yes No						
3D . four, or	Will the collocations require the installation of more than the standard number of new equipment cabinets, not to exceed more than one new equipment shelter? Yes No						
3E. Is t	he tower lacking a completed Section 106 review?						
3F. No	Has the tower been determined by the FCC to have an unresolved effect on one or more historic properties? Yes						
	s the FCC notified AT&T or the tower owner that the FCC has received a complaint that the collocation will have an erse effect on a historic property?						
*Current tower site is defined as the boundaries of the existing leased or owned property surrounding the tower and any access or utility easements currently related to the site. BUILDINGS OR NON-TOWER STRUCTURES (water tanks, smoke stacks, bill boards)							
	inswer "yes" to any of the questions below, a SHPO approval or other documentation showing no impact must be ed prior to submitting NEPA for approval*						
obtaine	inswer "yes" to any of the questions below, a SHPO approval or other documentation showing no impact must be						
4A. Is t4B. Is t	inswer "yes" to any of the questions below, a SHPO approval or other documentation showing no impact must be ed prior to submitting NEPA for approval*						
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4A. Is to 4B. Is to for the 4C. Doo i) il)	the building or structure over 45 years old? Yes* No the building or structure located inside the boundary of a historic district and are some of the antennas or equipment needed collocation visible from outside the building or structure? Yes No es the facility meet both of the following requirements: the building or structure is inside the boundary or within 250 feet of a historic district, and; the antenna on the building or non-tower structure is visible from ground level anywhere within the historic district?						
4A. Is to 4B. Is to for the 4C. Doo i) il) 4D. National	the building or structure located inside the boundary of a historic district and are some of the antennas or equipment needed collocation visible from outside the building or structure? Yes No set the facility meet both of the following requirements: the building or structure is inside the boundary or within 250 feet of a historic district, and; the antenna on the building or non-tower structure is visible from ground level anywhere within the historic district? Yes No Is the building or structure designated as a National Historic Landmark, or listed in or eligible for listing in the						
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NEPA ENVIRONMENTAL EFFECTS CHECKLIST:

- I. Is the site located in an officially designated wilderness area?
 - n/a CNPA exempt
- 2. Is the site located in an officially designated wildlife preserve?
 - n/a CNPA exempt
- 3. Will the facility affect listed threatened or endangered species or designated critical habitats? n/a - CNPA exempt
- 4. Will the facility be located in, on, or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archeology, engineering or culture, that is listed, or eligible for listing on the State or National Registers of Historic Places?
 - n/a CNPA exempt
- 5. Will the facility affect an Indian religious site?
 - n/a CNPA exempt
- 6. Is the site located on a "floodplain"?
 - n/a CNPA exempt
- 7. Will construction involve significant change in surface features (impacts to wetlands, deforestation, water diversion, etc.)?
 - n/a CNPA exempt

.



FCC Home | Search | Updates | E-Filing | Initiatives | For Consumers | Find People



Antenna Structure Registration

FCC > WTB > ASR > Online Systems > TOWAIR

FCC Site Map

TOWAIR Determination Results

? HELP

New Search Printable Page

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	41-04-36.5 north
Longitude	073-32-03.2 west
Measurements (Meters)	
Overall Structure Height (AGL)	22.9

Support Structure Height (AGL) 11.6 Site Elevation (AMSL) 39.9

Structure Type

BPOLE - Building with Pole

Tower Construction Notifications

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

ASR Help ASR License Glossary - FAQ - Online Help - Documentation - Technical Support

ASR Online Systems TOWAIR- CORES - ASR Online Filing - Application Search - Registration Search

About ASR Privacy Statement - About ASR - ASR Home

FCC | Wireless | ULS | CORES

Help | Tech Support

Federal Communications Commission 445 12th Street SW Washington, DC 20554

Phone: 1-877-480-3201 TTY: 1-717-338-2824 Submit Help Request



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Antenna Structure Registration

FCC > WTB > ASR > Online Systems > TOWAIR

FCC Site Map

TOWAIR Determination

? HELP

The FCC does not require each antenna structure to be registered. This screen enables the user to enter and submit key information about their antenna structure in order to determine whether or not registration with the FCC is necessary. After submitting the form, you receive one of two reply messages:

- The antenna structure requires registration. A list of reasons is provided.
- · The antenna structure does not require registration. A list of reasons is provided.

For more details on the FCC rules on antenna structure registration see the Code of Federal Regulations (CFR) 47 Part 17.7 (Revision 10/01/1996).

Tower Construction Notifications

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

DETERMINE if Registration is Necessary NAD83 Coordinates (Convert from NAD27)

Latitude	41	° 04	36.5	" N (+) ▼
Longitude	73	° 32	' 3.2	" W (+) ▼
Measurements				
Measurement System	Feet	▼]		
Overall Structure Height (AGL)	75	the survey of the survey of		
Support Structure Height (AGL)	38	mperiore mean		
Site Elevation (AMSL)	130.9	The second second		
Structure Type				
BPOLE - Building with Pole		v]		
	Submit	Reset		

ASR Help

ASR License Glossary - FAQ - Online Help - Documentation - Technical Support

ASR Online Systems TOWAIR- CORES - ASR Online Filing - Application Search - Registration Search

About ASR

Privacy Statement - About ASR - ASR Home

FCC | Wireless | ULS | CORES

Help | Tech Support

Federal Communications Commission 445 12th Street SW Washington, DC 20554

Phone: 1-877-480-3201 TTY: 1-717-338-2824 Submit Help Request

1-A CERTIFICATION

Client:	AT&T				
39	Suite 3	nterprise Drive			
		Hill, CT 06067			
	ROCKY	iiii, C1 00007			
Site Name:	Stamfo	ord Newfield Avenue			i.
Site Address:	500 N	ewfield Avenue			
	Stamfo	ord, CT 06905			
Havigantal Da	4	V. CDC C.			
Horizontal Da	itum:	X_GPS Survey			
Vertical Datu	m:	X GPS Survey			
Structure Typ	e:	New Tower	v	Vater T	ank
		Existing Tower	S	moke S	Stack
		_ X_Roof Top	Darage contraction of	O.W.	
		Temporary Site	C	ther:_	7.75 to specific and a second
Latitude:		41°04'36.561" North - NAD 83			
Longitude:		73°32'03.268" West - NAD 83			
(Center of Exis	ting Str		*		
		,			ā
Ground Eleva (Ground at Fron		130.9 AMSL (Above Mean Sea L	evel) -	-NAV	D 88
Support Struc	turo Ho	ight: (Top Proposed Unipole)		75.0	ACT (A1 C11 - 1)
Support Struc	ture He	(Top Existing HVAC)		75.0 41.1'	AGL (Above Ground Level)
		(Top Existing Vent)		40.8	
		(Top Existing Roof)		38.0	
		(Top Lower Existing Parapet	t)	42.0	7
		(Top Higher Existing Parape		43.7	
D		70 m			
		T&T Antenna Tip:			
(Top of Highest		ed antenna) ll AT&T Antenna Height:	74.9	AGI	,
(Top of Highest			205	8' AM	ici
Design RAD C			205.	o Ally	ISL
(Center of High			71.0	, AG	L
		that the latitude of 41°04'36.561"			
	West ar	re accurate to within +/- 20 feet hor	rizontal	lly, and	that the ground elevation of
	130.9	AMSL is accurate to within +/- 3 fe	eet ver	tically.	The horizontal datum
		nate) are in terms of the North Ame			
	express	ed in degrees, minutes and seconds	s. The	vertical	datum (elevations) are in
	terms o	f the North American Vertical Date	um of .	1988 ar	id are expressed in feet.
Company:	The LR	.C Group		OF C	ONNE
<u></u>		est Street, Suite E	Sept A	E OOW	AGENO
		ell, CT 06416	20	8 3	7.6
		860-635-2877; Fax: 869-635-4226	Mea.	2 = 2	32 F 7
	11.	A Was letter	大	No.	17791 **
Signature:	XXV)- Wasewall	1	100	INCEPITA!
	John F.	Wagenblatt L.S. No. 17791	May	10°	INVE SUMMERS
Date: April 12	2015			Constituted in	tranger me fitter
Date. April	, 2013	•			



C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

January 15, 2019

Connecticut Siting Council

Subject: New Cingular Wireless PCS, LLC ("AT&T") – (S2818A) – 500 Newfield Avenue, Stamford, CT

Dear Connecticut Siting Council:

C Squared Systems has been retained by New Cingular Wireless PCS, LLC ("AT&T") to investigate RF Power Density levels for the AT&T antenna arrays, to be installed within the proposed stealth unipole tower, to be located on the building at 500 Newfield Avenue, Stamford, CT.

Calculations were done in accordance with FCC OET Bulletin 65. These worst-case calculations assume that all transmitters are simultaneously operating at full power and that there is 0 dB of cable loss. The calculation point is 6 feet above ground level to model the RF power density at the head of a person standing at ground level, and the calculations do not take into account building penetration losses.

Due to the directional nature of the proposed AT&T antennas, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to the Attachment for the vertical patterns of the proposed AT&T antennas. The calculated results below include a nominal 10 dB off-beam pattern loss to account for the lower relative gain directly below the antennas.

Location	Carrier	Vertical Distance to Antenna (Ft.)	Operating Frequency (MHz)	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Power Density (mw/cm ²)	Limit	%МРЕ
	AT&T LTE	71	734	1	1652	0.0141	0.4893	2.87%
	AT&T LTE	71	880	1	1854	0.0158	0.5867	2.69%
fig. 1	AT&T LTE	71	1900	1	6444	0.0549	1.0000	5.49%
Ground Level	AT&T LTE	61	716	1	1652	0.0196	0.4773	4.12%
	AT&T LTE	61	880	1	1854	0.0220	0.5867	3.76%
	AT&T LTE	61	2300	1	3077	0.0366	1.0000	3.66%
						N .	Total	22.59%

Summary: Under worst-case assumptions, RF Power Density levels for the proposed AT&T antenna arrays will not exceed **22.59%**¹ of the FCC MPE limit for General Public/Uncontrolled Environments.

Sincerely,

Senior RF Engineer

C Squared Systems, LLC

Mark Jan

¹ The total % MPE is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

Attachment: AT&T's Antenna Data Sheets and Electrical Patterns

750 MHz

Manufacturer: CCI Products

Model #:

OPA65R-BU8B

Frequency Band:

698-798 MHz

Gain:

13.15 dBd

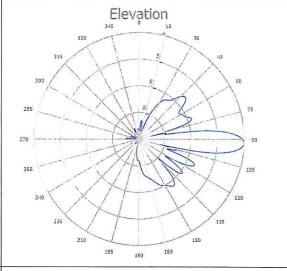
Vertical Beamwidth: 9.7°

Horizontal Beamwidth: 67°

Polarization: Dual Linear 45°

Size L x W x D: 95.9" x 11.7" x 8.4"





850 MHz

Manufacturer: CCI Products

Model #: OPA65R-BU8B

Frequency Band: 824-896 MHz

Gain: 13.65 dBd

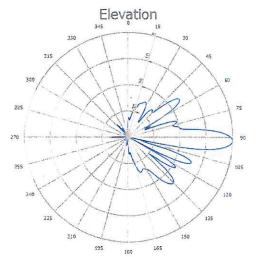
Vertical Beamwidth: 8.1°

Horizontal Beamwidth:

66°

Polarization: Dual Linear 45°

Size L x W x D: 95.9" x 11.7" x 8.4"



1900 MHz

Manufacturer: CCI Products

Model #:

OPA65R-BU8B

Frequency Band:

1850-1990 MHz

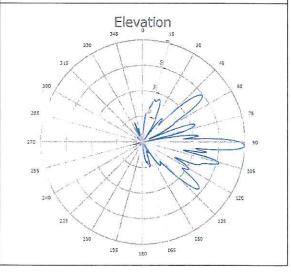
Gain: 16.05 dBd

Vertical Beamwidth: 5.1°

Horizontal Beamwidth: 62°

Polarization: Dual Linear 45°

Size L x W x D: 95.9" x 11.7" x 8.4"



2300 MHz

Manufacturer: CCI Products

Model #: OPA65R-BU8B

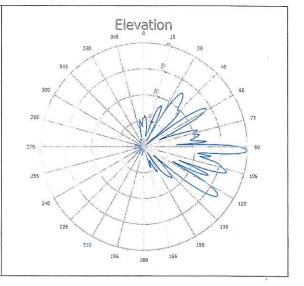
Frequency Band: 2300-2400 MHz

Gain: 15.85 dBd

Vertical Beamwidth: 4.0° Horizontal Beamwidth: 59°

Polarization: Dual Linear 45°

Size L x W x D: 95.9" x 11.7" x 8.4"







SAI on behalf of AT&T Mobility, LLC Site FA – 10577823 Site ID – CT2818 (MRCTB006490) USID – 168773 Site Name – Stamford Newfield Avenue

21 Burdick Street Stamford, CT 06905

Latitude: N41-4-36.56 Longitude: W73-32-03.38 Structure Type: Rooftop

Report generated date: December 13, 2018

Report by: Leo Romero

Customer Contact: Toni-Marie Vaughn

AT&T Mobility, LLC will be compliant when the remediation recommended in Section 5.2 or other appropriate remediation is implemented.

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1 General Site Summary

1.1 Report Summary

AT&T Mobility, LLC	Summary
Access to Antennas Locked?	No
Max Cumulative Simulated RFE Level on the Rooftop	<1% General Public Limit
Max Cumulative Simulated RFE, Level on the Rooftop Walking Surface	<1% General Public Limit
Max Cumulative Simulated RFE Level on the Ground	<1% General Public Limit
FCC & AT&T Compliant?	Will Be Compliant
Optional AT&T Mitigation Items?	No

The following documents were provided by the client and were utilized to create this report:

RFDS: NEW-ENGLAND_CONNECTICUT_CT2818_2019-New-Site_New_ra9161_2051A0B1VZ_10577823_168773_05-10-2017_Final-RF-Approval_v2.00

RF Powers Used: AT&T Engineering Defaults

1.2 Signage Summary

AT&T Signage Locations	S. SCOPPLANE	INFORMATION	A	A	CAUTEN	CAUTION	A		
	Information 1	Information 2	Notice	Notice 2	Caution	Caution 2	Warning	Warning 2	Barriers
Access Point(s)							_		
Alpha					-				
Beta									
Gamma									
Delta									
Epsilon									

1.3 Fall Arrest Anchor Point Summary

Fall Arrest	Parapet Available	Parapet Height	Fall Arrest Anchor
Anchor &	(Y/N)	(inches)	Available (Y/N)
Parapet Info			· 大学的 医多种
Roof Safety Info	Y	10	N

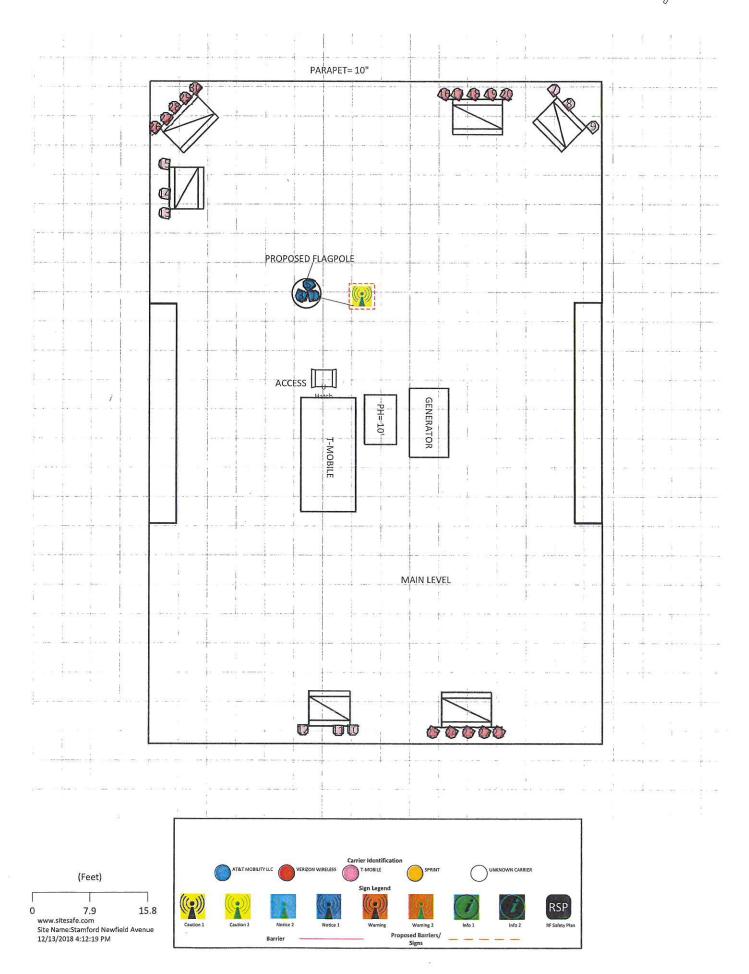


2 Scale Maps of Site

The following diagrams are included:

- Site Scale Map
- RF Exposure Diagram
- AT&T Mobility, LLC Contribution







3 Antenna Inventory

The following antenna inventory was obtained by the customer and was utilized to create the site model diagrams:

								Ant									
Ant	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	E E	Power	Power Type	Power Unit	Radio	Total ERP (Watts)	Ant Gain (dBd)	Z	MDT	EDT
-	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	737	LTE	50	64	ω	09	TPO	Waff	-	1186.2	12.96	23'	o o	2'
-	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	850	T.E	50	67.2	ω	09	TPO	Watt	-	1132.8	12.76	23'	ó	2'
-	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	1900	LTE	50	61.9	ω	09	TPO	Waff	2	3429.1	14.56	23'	,o	2'
2	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	2300	LTE	50	56.9	ω	09	TPO	Watt	-	1,600.1	14.26	13,	ò	2,
က	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	737	LTE	170	64	ω	09	TPO	Watt	_	1186.2	12.96	23.	ŏ	2.
က	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	850	LTE	170	67.2	ω,	09	TPO	Watt	-	1132.8	12.76	23.	ō	2
ю	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	1900	LTE	170	61.9	_∞	09	TPO	Watt	2	3429.1	14.56	23'	ō.	7.
4	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	2300	LTE	170	56.9	8	09	TPO	Watt	-	1,600.1	14.26	13,	,o	2'
5	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	737	LTE	290	64	8	09	TPO	Watt	-	1186.2	12.96	23'	,o	2
5	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	850	LTE	290	67.2	8	09	TPO	Watt	-	1132.8	12.76	23'	,0	2'
5	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	1900	LTE	290	61.9	80	09	TPO	Watt	2	3429.1	14.56	23'	,	2'
9	AT&T MOBILITY LLC (Proposed)	Cci OPA65R-BU8B	Panel	2300	LTE	290	56.9	8	09	TPO	Watt	1	1,600.1	14.26	13'	, O	2
7	T-MOBILE	Ericsson AIR 21 B2A B4P	Panel	1900		20	99	4.7	09	TPO	Watt	0	2066.1	15.37	3.7	ō.	ō
∞	T-MOBILE	Generic Panel	Panel	700		20	65	ω	09	TPO	Watt	0	1416.3	13.73	3	ō	ō
6	T-MOBILE	Ericsson AIR 21 B4A B2P	Panel	2100		20	99	4.7	09	TPO	Watt	0	2066.1	15.37	3.7	ō	0
0	T-MOBILE	Ericsson AIR 21 B2A B4P	Panel	1900		150	99	4.7	09	TPO	Watt	0	2066.1	15.37	3.7	ō	ō
Ξ	T-MOBILE	Generic Panel	Panel	700		150	65	80	09	TPO	Watt	0	1416.3	13.73	Ś	O.	0
12	T-MOBILE	Ericsson AIR 21 B4A B2P	Panel	2100		150	65	4.7	09	TPO	Watt	0	2066.1	15.37	3.7'	0	ō
13	T-MOBILE	Ericsson AIR 21 B2A B4P	Panel	1900		250	92	4.7	09	TPO	Watt	0	2066.1	15.37	3.7	ō	.0
14	T-MOBILE	Generic Panel	Panel	700		250	99	8	09	TPO	Watt	0	1416.3	13.73	'n	ō	o.
15	T-MOBILE	Ericsson AIR 21 B4A B2P	Panel	2100		250	65	4.7	09	TPO	Watt	0	2066.1	15.37	3.7	Ó,	ō
16	VERIZON WIRELESS	Generic Panel	Panel	850		0	65	4.6	40	TPO	Watt	0	756.9	12.77	3.7	ó	ō
17	VERIZON WIRELESS	Generic Panel	Panel	2100		0	65	4.6	09	TPO	Watt	0	2000.6	15.23	3.7	Ö.	ō



								Ant					a ^X				
ID Ant	Operator	Antenna Make & Model	Туре	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	(#)	Power	Power	Power Unit	Radio	Total ERP (Watts)	Ant Gain (dBd)	Z	MDT	EDT
18	VERIZON WIRELESS	Generic Panel	Panel	751		0	92	4.6	09	TPO	Watt	0	982.1	12.14	3.7	0,	, O
19	VERIZON WIRELESS	Generic Panel	Panel	1900		0	99	4.6	09	TPO	Watt	0	2094.8	15.43	3.7	Ō	ō
20	VERIZON WIRELESS	Generic Panel	Panel	850		0	92	4.6	40	TPO	Watt	0	756.9	12.77	3.7	O,	, O
21	VERIZON WIRELESS	Generic Panel	Panel	850		180	99	4.6	40	TPO	Watt	0	756.9	12.77	3.7	o,	ō
22	VERIZON WIRELESS	Generic Panel	Panel	2100		180	99	4.6	09	TPO	Watt	0	2000.6	15.23	3.7	, O	ō
23	VERIZON WIRELESS	Generic Panel	Panel	751		180	92	4.6	09	TPO	Watt	0	982.1	12.14	3.7	0,	0,
24	VERIZON WIRELESS	Generic Panel	Panel	1900		180	92	4.6	09	TPO	Watt	0	2094.8	15.43	3.7	0,	O
25	VERIZON WIRELESS	Generic Panel	Panel	850		180	99	4.6	40	TPO	Watt	0	756.9	12.77	3.7	,O	0
26	VERIZON WIRELESS	Generic Panel	Panel	850		280	99	4.6	40	TPO	Watt	0	756.9	12.77	3.7'	0,	0,
27	VERIZON WIRELESS	Generic Panel	Panel	2100		280	99	4.6	09	TPO	Watt	0	2000.6	15.23	3.7	O,	ō
28	VERIZON WIRELESS	Generic Panel	Panel	751		280	99	4.6	09	TPO	Watt	0	982.1	12.14	3.7'	,0	,
29	VERIZON WIRELESS	Generic Panel	Panel	1900		280	99	4.6	09	TPO	Watt	0	2094.8	15.43	3.7'	,0	, O
30	VERIZON WIRELESS	Generic Panel	Panel	850		280	65	4.6	40	TPO	Waff	0	756.9	12.77	3.7'	,0	O,

antenna information was not available nor could it be secured while on site. Other operator's equipment, antenna models and powers used for modeling are based on obtained information or Sitesafe experience. Specifically, the Z reference indicates the bottom of the antenna height above the main site level unless otherwise indicated. The distance to the bottom of the antenna is calculated by subtracting half of the length of the antenna from the antenna centerline. Effective Radiated Power (ERP) is provided by the operator or based on Sitesafe experience. The values used in the modeling may be greater than are currently deployed. For other operators at this site the use of "Generic" as an antenna model or "Unknown" for a wireless operator means the information with regard to operator, their FCC license and/or X, Y and Z indicate relative position of the bottom of the antenna to the origin location on the site, displayed in the model results diagram.



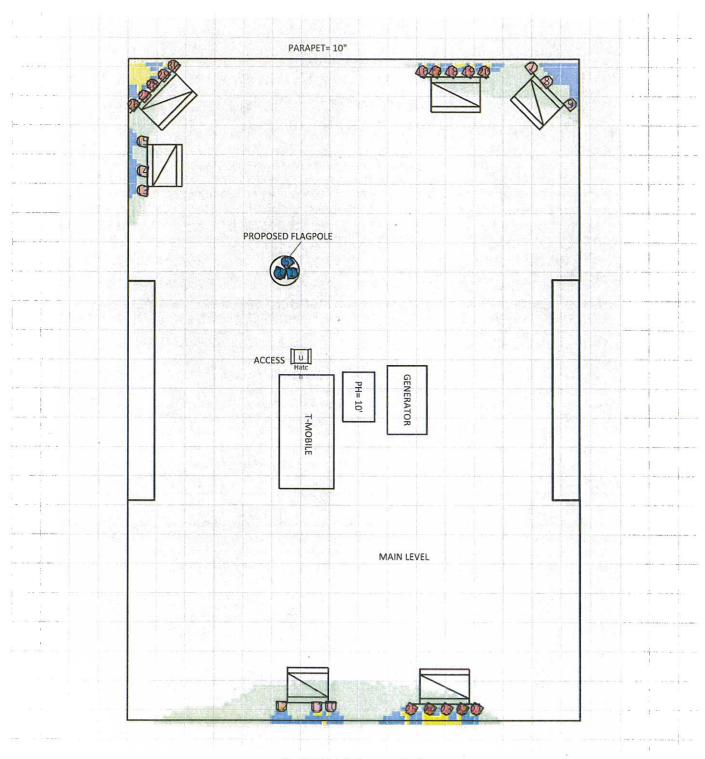
4 Emission Predictions

In the RF Exposure Simulations below all heights are reflected with respect to main site level. In most rooftop cases this is the height of the main rooftop and in other cases this can be ground level. Each different height area, rooftop, or platform level is labeled with its height relative to the main site level. Emissions are calculated appropriately based on the relative height and location of that area to all antennas. The total analyzed elevations in the below RF Exposure Simulations are listed below.

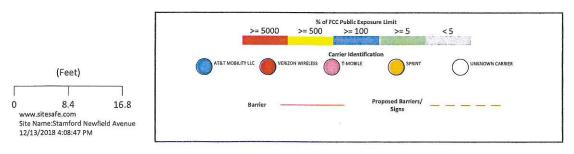
- MAIN LEVEL = 0'
- PH1 = 10'

The Antenna Inventory heights are referenced to the same level.





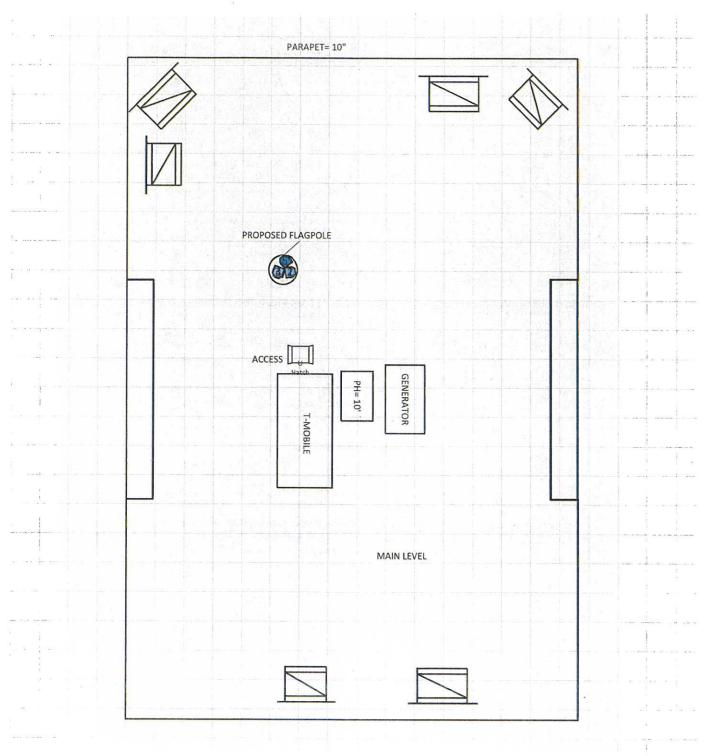
% of FCC Public Exposure Limit Spatial average 0' - 6'



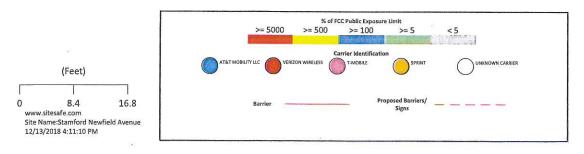
Sitesafe OET-65 Model Near Field Boundary: 1.5 * Aperture Reflection Factor: 1 Spatially Averaged

RF Exposure Simulation For: Stamford Newfield Avenue AT&T Mobility, LLC Contribution





% of FCC Public Exposure Limit Spatial average 0' - 6'



Sitesafe OET-65 Model Near Field Boundary: 1.5 * Aperture Reflection Factor: 1 Spatially Averaged



5 Site Compliance

5.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, RF hazard signage and antenna locations, Sitesafe has determined that:

AT&T Mobility, LLC will be compliant when the remediation recommended in Section 5.2 or other appropriate remediation is implemented.

The compliance determination is based on General Public RFE levels derived from theoretical modeling, RF signage placement, proposed antenna inventory and the level of restricted access to the antennas at the site. Any deviation from the AT&T Mobility, LLC's proposed deployment plan could result in the site being rendered non-compliant.

Modeling is used for determining compliance and the percentage of MPE contribution.

5.2 Actions for Site Compliance

Based on FCC regulations, common industry practice, and our understanding of AT&T Mobility, LLC RF Safety Policy requirements, this section provides a statement of recommendations for site compliance. Recommendations have been proposed based on our understanding of existing access restrictions, signage, and an analysis of predicted RFE levels.

AT&T Mobility, LLC will be made compliant if the following changes are implemented:

Base of Flagpole

Install a Caution 2B sign.



6 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

That I am an employee of Sitesafe, LLC., in Vienna, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Leo Romero.

December 13, 2018

Young Min Kim



Appendix A - Statement of Limiting Conditions

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, that Sitesafe became aware of during the normal research involved in creating this report. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data collected by Sitesafe provided by a second party and data collected by Sitesafe, the data will be used.



Appendix B - Regulatory Background Information

FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for the evaluating of the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 ("OET Bulletin 65"), Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to accessible areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

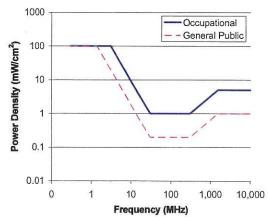
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:

FCC Limits for Maximum Permissible Exposure (MPE) Plane-wave Equivalent Power Density





Limits for Occupational/Controlled Exposure (MPE)

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time E ² , H ² or S (minutes)
(MHz)	Strength (E) (V/m)	Strength (H) (A/m)	(mW/cm²)	
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500		-	f/300	6
1500-		(23)	5	6
100,000				

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency	Electric	Magnetic	Power	Averaging Time E 2,
Range	Field	Field	Density (S)	H ² or S (minutes)
(MHz)	Strength (E) (V/m)	Strength (H) (A/m)	(mW/cm ²)	
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-	7 41	3) <u>====</u> ()	1.0	30
100,000				

f = frequency in MHz

OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

- (a) Each employer -
 - shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
 - (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lock Out Tag Out procedure aimed to control the unexpected energization or start up of machines when maintenance or service is being performed.

^{*}Plane-wave equivalent power density



Appendix C - Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

<u>General Maintenance Work</u>: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

<u>Iraining and Qualification Verification:</u> All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).

Physical Access Control: Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- Locked door or gate
- Alarmed door
- Locked ladder access
- Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

<u>RF Signage:</u> Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

<u>Maintain a 3 foot clearance from all antennas:</u> There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

<u>Site RF Emissions Diagram:</u> Section 4 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.



Appendix D - RF Emissions

The RF Emissions Simulation(s) in this report display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix E.

The key at the bottom of each RF Emissions Simulation indicates percentages displayed referenced to FCC General Public Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

- Areas indicated as Gray are predicted to be below 5% of the MPE limits. Gray represents areas more than 20 times below the most conservative exposure limit.
- Green represents areas are predicted to be between 5% and 100% of the MPE limits. Green areas are accessible to anyone.
- Blue represents areas predicted to exceed the General Public MPE limits but are less than Occupational limits. Blue areas should be accessible only to RF trained workers.
- Yellow represents areas predicted to exceed Occupational MPE limits. Yellow areas should be accessible only to RF trained workers able to assess current exposure levels.
- Red represents areas predicted to have exposure more than 10 times the
 Occupational MPE limits. Red indicates that the RF levels must be reduced prior to
 access. An RF Safety Plan is required which outlines how to reduce the RF energy in
 these areas prior to access.



Appendix E – Assumptions and Definitions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The modeling is based on recommendations from the FCC's OET-65 bulletin with the following variances per AT&T guidance. Reflection has not been considered in the modeling, i.e. the reflection factor is 1.0. The near / far field boundary has been set to 1.5 times the aperture height of the antenna and modeling beyond that point is the lesser of the near field cylindrical model and the far field model taking into account the gain of the antenna.

The site has been modeled with these assumptions to show the maximum RF energy density. Areas modeled with exposure greater than 100% of the General Public MPE level may not actually occur, but are shown as a prediction that could be realized. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Use of Generic Antennas

For the purposes of this report, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, Sitesafe recommends remodeling of the site utilizing the more complete and accurate data. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest Maximum Permissible Exposure (MPE), resulting in a conservative analysis.



Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.

Gain (of an antenna) – The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from an isotropic radiator. Gain is a measure of the relative efficiency of a directional antennas as compared to an omni directional antenna.

General Population/Uncontrolled Environment – Defined by the FCC, as an area where exposure to RF energy may occur to persons who are **unaware** of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The maximum levels of RF exposure a person may be exposed to without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are **aware** of the



potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of Radio Frequency radiation on Humans. The guideline was published in August 1997.

OSHA (Occupational Safety and Health Administration) – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency (RF) – The frequencies of electromagnetic waves which are used for radio communications. Approximately 3 kHz to 300 GHz.

Radio Frequency Exposure (RFE) – The amount of RF power density that a person is or might be exposed to.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average power density an average sized human will be exposed to at a location.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.



Appendix F - References

The following references can be followed for further information about RF Health and Safety.

Sitesafe, LLC.

http://www.sitesafe.com

FCC Radio Frequency Safety

http://www.fcc.gov/encyclopedia/radio-frequency-safety

National Council on Radiation Protection and Measurements (NCRP)

http://www.ncrponline.org

Institute of Electrical and Electronics Engineers, Inc., (IEEE)

http://www.ieee.org

American National Standards Institute (ANSI)

http://www.ansi.org

Environmental Protection Agency (EPA)

http://www.epa.gov/radtown/wireless-tech.html

National Institutes of Health (NIH)

http://www.niehs.nih.gov/health/topics/agents/emf/

Occupational Safety and Health Agency (OSHA)

http://www.osha.gov/SLTC/radiofrequencyradiation/

International Commission on Non-Ionizing Radiation Protection (ICNIRP)

http://www.icnirp.org

World Health Organization (WHO)

http://www.who.int/peh-emf/en/

National Cancer Institute

http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones

American Cancer Society (ACS)

http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?sitearea=PED

European Commission Scientific Committee on Emerging and Newly Identified Health Risks

http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_022.pdf

Fairfax County, Virginia Public School Survey

http://www.fcps.edu/fts/safety-security/RFEESurvey/

UK Health Protection Agency Advisory Group on Non-ionising Radiation

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368

Norwegian Institute of Public Health

http://www.fhi.no/dokumenter/545eea7147.pdf

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Radio Frequency Analysis Report

S2818 500 Newfield Avenue, Stamford, CT



November 12, 2018



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1. Overview

C Squared Systems was retained by New Cingular Wireless PCS, LLC ("AT&T") to evaluate the proposed wireless communications facility at 500 Newfield Avenue, Stamford, CT at 71 feet AGL.

AT&T is licensed by the FCC to provide wireless communications services throughout the State of Connecticut including the City of Stamford where the proposed facility would be located.

This report addresses AT&T's need for the proposed wireless facility and confirms that there are no other suitable existing structures that could address the coverage gaps in their wireless communications network.

The coverage analysis completed by C Squared Systems confirms: AT&T has a gap in reliable service in Stamford, and that the Proposed Facility provides AT&T with coverage in that service gap. Included as attachments in this report are coverage maps detailing the existing network and expected coverage from the proposed facility, pertinent site information, terrain and network layout maps.

2. Technology Advances & Design Evolution

AT&T provides digital voice and data services using 3rd Generation (3G) UMTS technology in the 800 MHz and 1900 MHz frequency band, and advanced 4th Generation (4G) services over LTE technology in the 700 MHz and 1900 MHz frequency bands as allocated by the FCC. These data networks are used by mobile devices for fast web browsing, media streaming, and other applications that require broadband connections. The mobile devices that benefit from these advanced data networks are not limited to basic handheld phones, but also include devices such as smartphones, PDA's, tablets, and laptop air-cards. 4G LTE services and devices have enabled AT&T customers to have even faster connections to people, information, and entertainment.

It is important to note that with AT&T's migration from 3G to 4G services come changes in the base station infrastructure and resultant changes in the operating thresholds required by the LTE network. In the past, AT&T has presented receive signal thresholds of -74 dBm for their in-building coverage threshold and -82 dBm for their invehicle coverage threshold. Those thresholds were based on network requirements to support 2G/3G data speeds and past usage demand. Today, customers expect low latency and faster data speeds as evidenced by increasing data usage trends and customer demand.

AT&T's 4G LTE technology is designed to thresholds of -83 dBm and -93 dBm for their 700 MHz LTE and -86 dBm and -96 dBm for their 1900 MHz LTE.¹ The stronger thresholds (-83 dBm and -86 dBm) yield greater throughputs and improved customer experience. The -93 dBm and -96 dBm thresholds are the minimum acceptable levels required to meet customer expectations for 4G service.

¹ The threshold range differences between the 700 MHz and 1900 MHz frequency bands directly correlates to the type branch diversity receivers deployed in AT&T's receiver design.

3. Coverage Objective

There is a significant coverage deficiency in the existing AT&T wireless communications network along Newfield Avenue and the surrounding residential areas in Stamford. A deficiency in coverage is evidenced by the inability to adequately and reliably transmit/receive quality calls and/or utilize data services offered by the network. Seamless reliable coverage provides users with the ability to successfully originate, receive, and maintain quality calls and/or utilize data applications throughout a service area. Overlapping coverage is required for users to be able to move throughout the service area and reliably "hand-off" between cells to maintain uninterrupted connections.

Due to terrain characteristics and the distance between the targeted coverage area and the existing sites, AT&T's options to provide services in this area are quite limited (maps of the terrain in this area and the distance to neighboring AT&T sites from the proposed site are included as Attachments 1 & 2, respectively.) AT&T's network requires a deployment of antennas throughout the area to be covered. These antennas are connected to receivers and transmitters that operate in a limited geographic area known as a "cell." AT&T's wireless network, including their wireless handsets and devices, operate by transmitting and receiving low power radio frequency signals to and from these cell sites. The signals are transferred to and from the landline telephone network and routed to their destinations by sophisticated electronic equipment. The size of the area served by each cell site is dependent on several factors, including the number of antennas used, the height at which the antennas are deployed, the topography of the land, vegetative cover and natural or man-made obstructions in the area. As customers move throughout the service area, the transmission from the portable devices is automatically transferred to the AT&T facility with the best connection to the device, without interruption in service provided that there is overlapping coverage from the cells.

In order to define the extent of the coverage gap to be filled, both propagation modeling and real-world drive testing has been conducted in the area of Stamford around the subject areas. Propagation modeling uses PC software to determine the network coverage based on the specific technical parameters of each site including, but not limited to, location, ground elevation, antenna models, antenna heights, and also databases of terrain and ground cover in the area. Drive testing consists of traveling along area roadways in a vehicle equipped with a sophisticated setup of test devices and receivers that collect a variety of network performance metrics. The data are then processed and mapped in conjunction with the propagation modeling to determine the coverage gaps.

Analysis of the propagation modeling and drive testing in and around Stamford reveal that AT&T's network is unreliable throughout much of the area due to gaps in coverage, and that there is a service deficiency as a result. In order to fill in these coverage gaps and improve the network reliability to Stamford, a new facility is needed in the area.

AT&T S2818

Table 1 below approximates the current coverage gap of AT&T's 700 MHz and 1900 MHz (PCS) LTE technology in the vicinity of the proposed site.

	Existing 700 l Coverage		Existing 1900 M Coverage (Existing 2300 MH Ga	
D. I. I.	(≥ -83 dBm)	5927	(≥ -86 dBm)	7149	(≥ -86 dBm)	8817
Population: ²	(≥ -93 dBm)	3857	(≥ -96 dBm)	5433	(≥ -96 dBm)	6394
	大型新型	con promoti		2 48 -248-24-1137-1-137-1		200 000W
A	(≥ -83 dBm)	1.37	(≥ -86 dBm)	1.39	(≥ -86 dBm)	1.66
Area (mi²):	(≥ -93 dBm)	1.47	(≥ -96 dBm)	1.15	(≥ -96 dBm)	1.36
	Main:	1.9	Main:	2.2	Main:	2.4
Roadway (mi):	Secondary:	10.8	Secondary:	15.4	Secondary:	18.2
	Total:	12.7	Total:	17.6	Total:	20.6

Table 1: Estimated Existing Coverage Gap Statistics

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² Population figures are based upon 2010 US Census Block Data

Included with this report are Attachments 1-8, which are explained below to help describe AT&T's network in and around Stamford, and the need for the proposed facility.

- Attachment 1: 3D Terrain Map details the terrain features around the area of deficient service being targeted by the proposed site in Stamford. These terrain features play a key role in determining site designs and dictating the unique coverage achieved from a given location. This map is included to provide a visual representation of the ridges and valleys that must be considered when siting a wireless facility. The darker green and blue shades correspond to lower elevations, whereas the yellow and red shades indicate higher elevations.
- Attachment 2: *Map of Distance to Neighbor Sites* Stamford provides an overview of AT&T's network of sites in the area, with distances shown from the proposed Newfield Avenue site in Stamford to the existing sites in the surrounding area.
- Attachment 3: Neighbor Site Data and Distance to Proposed Site provides site specific information of existing neighboring sites used to perform the coverage analysis provided in Attachments 4 through 7.
- Attachment 4: "Existing 700 MHz LTE Coverage" for the Current AT&T Network depicts 700 MHz LTE coverage from existing sites and demonstrates that there are currently gaps in 700 MHz LTE coverage effecting service along Newfield Avenue and the surrounding residential neighborhoods in Stamford. The coverage shown is where the signal strengths are: >-83 dBm (minimum level required for reliable, high quality service and performance at 700 MHz) and, >-93 dBm (minimum level required for adequate level of service at 700 MHz). In an effort to provide the required levels of coverage to these areas, AT&T is proposing to install a wireless facility at the 500 Newfield Avenue location.
- Attachment 5: "Existing & Proposed 700 MHz LTE Coverage" with Stamford Site for the AT&T Network shows how this proposed site would fill in the existing coverage gaps and improve AT&T's 700 MHz LTE network within the targeted areas, as detailed in Table 2.
- Attachment 6: "Existing 1900 MHz LTE Coverage" for the Current AT&T Network depicts 1900 MHz LTE coverage from existing sites and demonstrates that there are currently gaps in 1900 MHz LTE coverage effecting service along Newfield Avenue and the surrounding residential neighborhoods in the Stamford, CT area. The coverage shown is where the signal strengths are >-86 dBm (minimum level required for reliable high quality service and performance at 1900 MHz) and >-96 dBm (the minimum required for adequate level of service at 1900 MHz).
- Attachment 7: "Existing & Proposed 1900 MHz Coverage" with Stamford Site for the AT&T Network shows how this proposed site would fill in the existing coverage gaps and improve AT&T's 1900 MHz LTE network within the targeted areas, as detailed in Table 2.
- Attachment 8: Connecticut DOT Average Annual Daily Traffic Data Stamford shows the available vehicular traffic volume data for the subject area from the Connecticut Department of Transportation. This data shows as many as 13,400 vehicles per day passing through the subject area on Newfield Avenue.

Table 2 below lists the coverage statistics that were compiled for each frequency band of the proposed site:

	Incremental Coverage from Proposed Site (700 MHz)		Incremental Co Proposed Site (CONTRACTOR OF THE PROPERTY OF	Incremental Coverage from Proposed Site (2300 MHz)		
Population	(≥ -83 dBm)	3645	(≥ -86 dBm)	2025	(≥ -86 dBm)	1620	
Coverage:3	(≥ -93 dBm)	2712	(≥ -96 dBm)	4747	(≥ -96 dBm)	4469	
	2						
Area Covered	(≥ -83 dBm)	0.68	(≥ -86 dBm)	0.36	(≥ -86 dBm)	0.28	
(mi²):	(≥ -93 dBm)	0.58	(≥ -96 dBm)	0.94	(≥ -96 dBm)	0.87	
	Main:	1.2	Main:	2.1	Main:	2.0	
Roadway	Secondary:	6.5	Secondary:	12.9	Secondary:	12.2	
Coverage (mi):	Total:	7.7	Total;	15.0	Total:	14.2	

Table 2: Coverage Statistics

4. Site Configuration

AT&T also has a unique spectrum usage issue which necessitates the configuration of the proposed facility. The spectrum in question is the 2300 MHz WCS (Wireless Communications Service) spectrum. The frequencies for WCS are in the. 2305-2320 and 2345-2360 MHz bands. The specific frequencies allocated by the FCC result in an intermodulation product if the WCS antennas are not sufficiently isolated from the 700 MHz LTE antennas (an intermodulation product is formed when two or more radio signals mix together in a non-linear device to produce another signal at a different frequency). This difficulty with WCS frequencies is unique to AT&T as it is authorized for all the WCS licenses allocated by the FCC (except for those covering the Gulf of Mexico).

In order to obtain the needed isolation on this rooftop, AT&T proposes to build a vertical antenna concealment structure in the approximate center of the roof. This will provide vertical separation between AT&T's WCS and 700 MHz LTE antennas as well as keeping the AT&T WCS antennas behind the antennas of the other wireless providers on the rooftop. This keeps the AT&T WCS antennas out of the main beams of the antennas of the other wireless providers, which is necessary to prevent the intermodulation product. Thus, the existing carrier antenna locations and potential for interference with AT&T's WCS spectrum is a contributing factor for the physical configuration of AT&T's proposed antennas on this specific rooftop.

³ Population figures are based upon 2010 US Census Block Data

5. Conclusion

AT&T has identified an area of deficient coverage affecting a significant portion of Stamford, including key traffic corridors through the residential areas of the town. The proposed Stamford facility at the height proposed will bring the needed fill-in coverage to significant portions of along Newfield Avenue and the residential neighborhoods in the vicinity of these roads, all of which are currently within this coverage gap of AT&T's network.

No existing structures were identified and available that would be able to satisfy the coverage requirements needed for this area. The location and the minimum height selected were chosen to achieve an optimal balance between meeting coverage objectives, overcoming the tree line for signal propagation, minimizing the aesthetic impact to the community, and current collocation issues related to the roof of this building.

As discussed in this report and depicted in the attached plots, the proposed AT&T site will provide the public need for service in this area, by providing an appropriate coverage footprint for the Stamford community along with effective connectivity to the rest of AT&T's existing network.

Without a site in this area, at the height requested, significant gaps in service will exist within the City of Stamford, and the identified public need for reliable wireless services in this area will not be met.

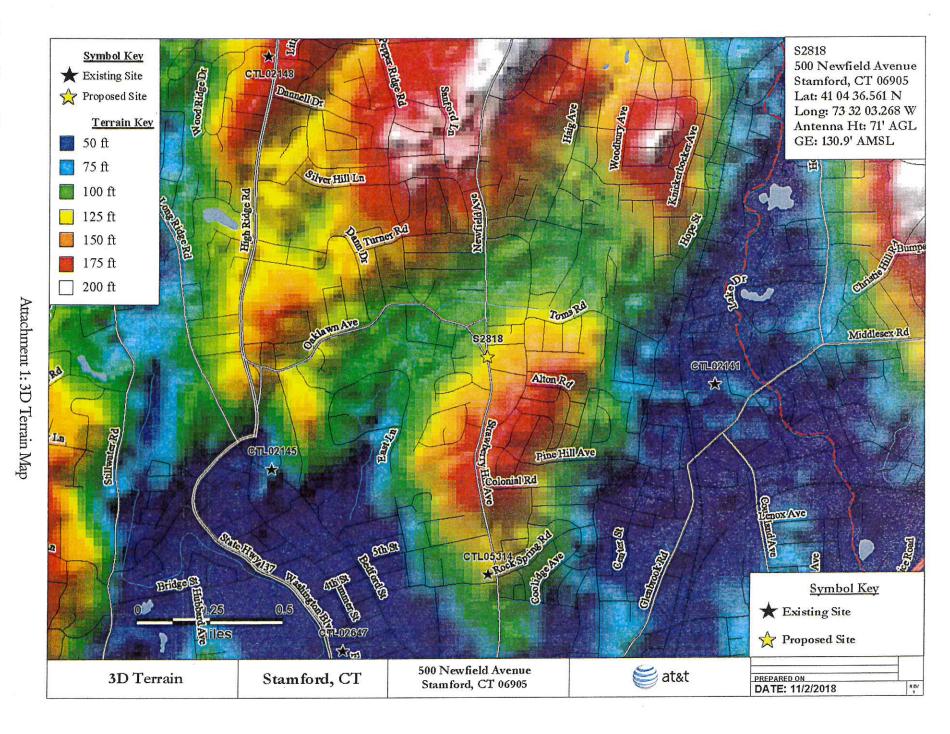
6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate.

Martin J. Lavin
C Squared Systems, LLC

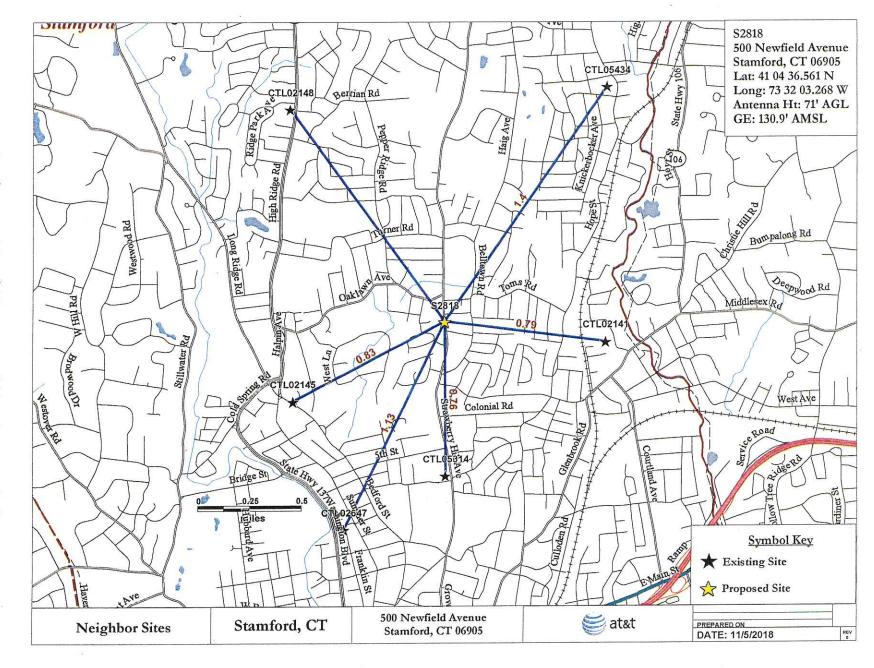
7. Attachments





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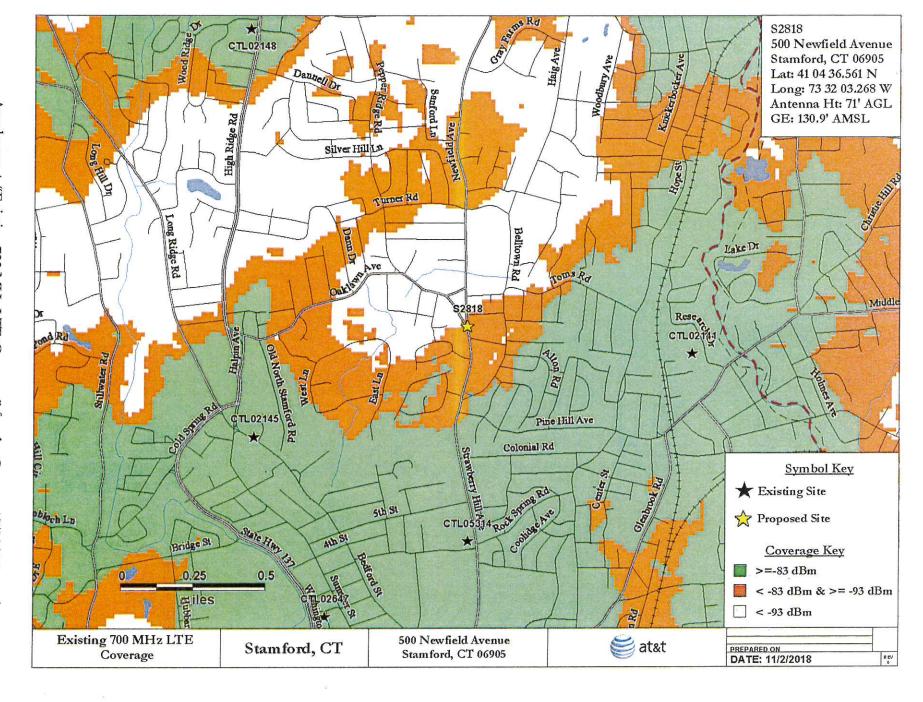
November 12, 2018



Attachment 2: Map of Distance to Neighbor Sites - Stamford

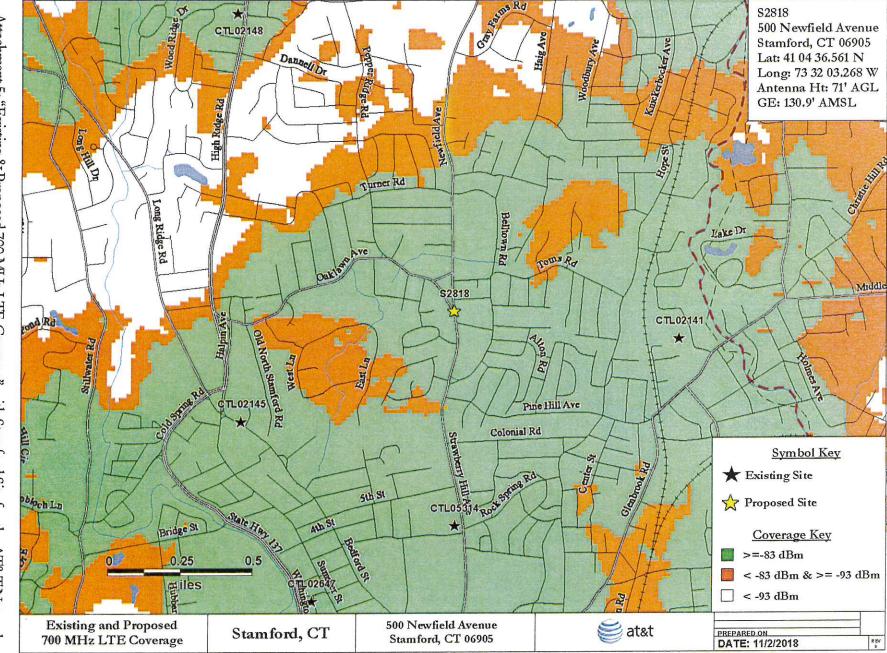
Site Name	Address	Town	Latitude	Longitude	Antenna Centerline (feet)	Distance to Proposed Site (miles)	Structure Type	Ground Elevation (feet)
CTL02141	652 Glenbrook Road	Stamford	41.0754	-73.5193	96/100	0.79	Water Tank	49
CTL02145	3001 Summer Street	Stamford	41.0712	-73.5484	100	0.83	Rooftop	72
CTL02148	602 High Ridge Road	Stamford	41.0920	-73.5486	45	1.29	Rooftop	170
CTL02647	1633 Washington Boulevard	Stamford	41.0620	-73.5436	85/87	1.13	Rooftop	20
CTL05314	1 Strawberry Hill Court	Stamford	41.0658	-73.5342	126	0.76	Rooftop	118
CTL05434	18 Knapp Street	Stamford	41.0936	-73.5192	64	1.40	Rooftop	72

Attachment 3: Neighbor Site Data and Distance to Proposed Site



Attachment 4: "Existing 700 MHz LTE Coverage" for the Current AT&T Network

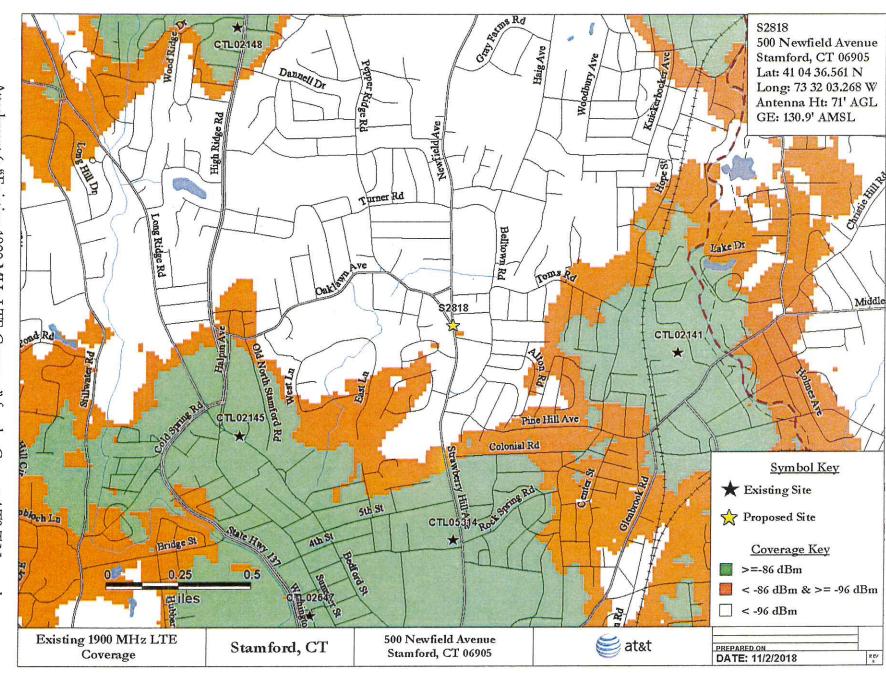
November 12, 2018



Attachment 5: "Existing & Proposed 700 MHz LTE Coverage" with Stamford Site for the AT&T Network

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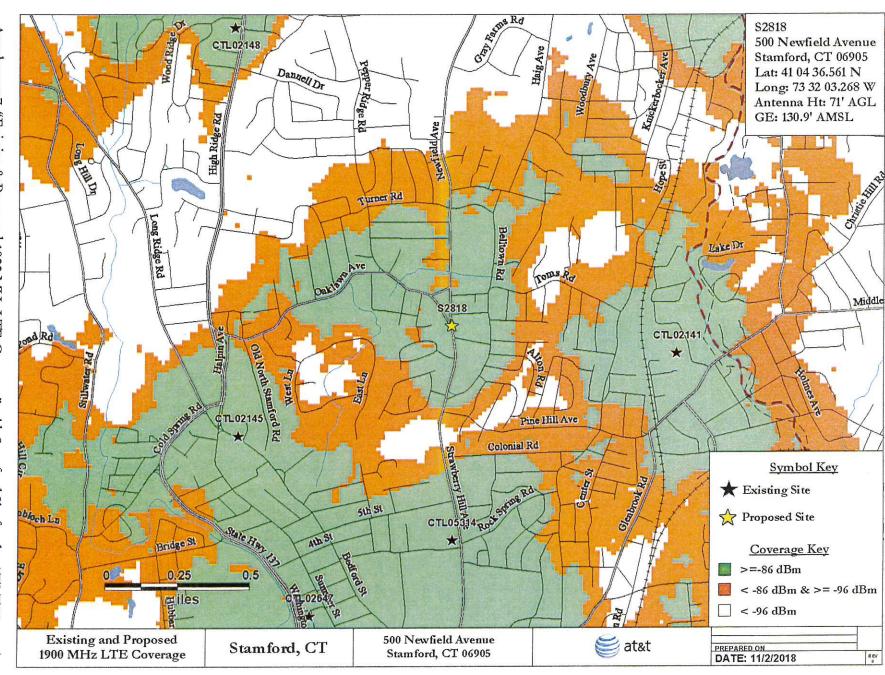
500 Newfield Avenue



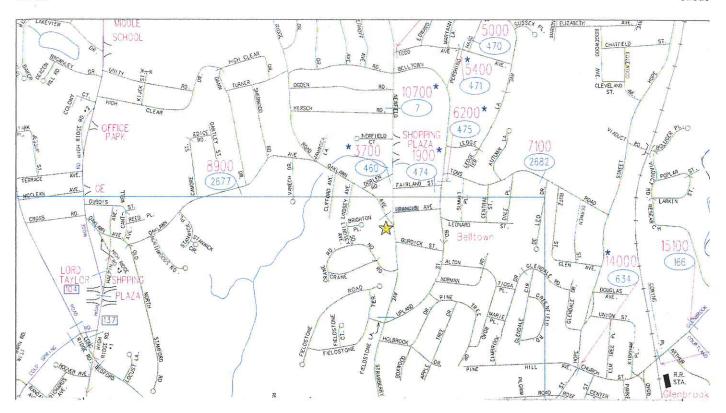
CTL02148

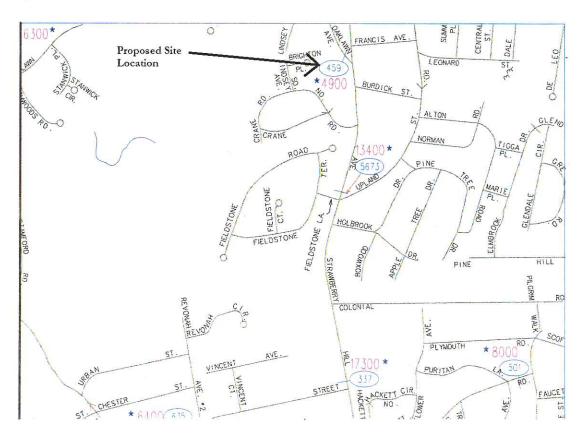
Attachment 6: "Existing 1900 MHz LTE Coverage" for the Current AT&T Network





Attachment 7: "Existing & Proposed 1900 MHz LTE Coverage" with Stamford Site for the AT&T Network





Attachment 8: Connecticut DOT Average Annual Daily Traffic Data - Stamford

NOTICE

Notice is hereby given, pursuant to Section 16-50j-40(a) of the Regulations of Connecticut State Agencies of a Petition being filed with the Connecticut Siting Council ("Siting Council") on or after February 1, 2019 by New Cingular Wireless PCS, LLC ("AT&T") the ("Petitioner"). AT&T seeks a declaratory ruling that a rooftop "unipole" tower proposed on the existing building located at 500 Newfield Avenue in the City of Stamford, Connecticut (the "Proposed Facility") will not have significant adverse environmental effects that might otherwise require a certificate of environmental compatibility and public need ("Certificate").

The proposed facility will be located on property owned by the WCL Limited Partnership, located at 500 Newfield Avenue in the City of Stamford and identified on the City of Stamford Assessor's Map as Map/Block/Lot 105/216/C (the "Property"). The Property is an approximately 0.750-acre parcel improved with a four-story brick apartment building. The roof of the building is currently occupied by two other wireless carriers operating municipally-approved wireless facilities. The proposed facility will consist of a 34'-4" stealth unipole antenna structure to be located on the roof of the existing building, with the top of the unipole approximately 75 feet above ground level ("AGL"). Unmanned equipment will be contained in the pole and on the roof of the building. Vehicle and utility access to the facility would be from the existing paved driveway entrance on Oaklawn Avenue. The Facility is proposed to allow wireless services along Newfield Avenue and the surrounding residential areas in Stamford.

The Petition will provide additional details of the proposal and explain why AT&T submits that this proposed facility presents no significant adverse environmental effects. The location, height and other features of the proposed Facility are subject to review and potential change under provisions of the Connecticut General Statutes Sections 16-50g et. seq.

Copies of the Petition will be available for review during normal business hours on or after February 1, 2019 at the following offices:

Connecticut Siting Council 10 Franklin Square New Britain, Connecticut 06051 City of Stamford City & Town Clerk – Lyda Ruijter Stamford Government Center 888 Washington Boulevard Ground Floor Stamford, CT 06901

or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

Kristen Motel, Esq. Cuddy & Feder LLP 445 Hamilton Ave, 14th Floor White Plains, New York 10601 (914) 761-1300 Attorneys for the Petitioner

CERTIFICATION OF SERVICE

I hereby certify that on the 31st day of January 2019, a copy of the foregoing notice of the intended filing of a Petition with the Connecticut Siting Council for a declaratory ruling was sent by certified mail, return receipt requested, to the list below:

Dated: 13119

Cuddy & Feder LLP

45 Hamilton Avenue, 14th Floor

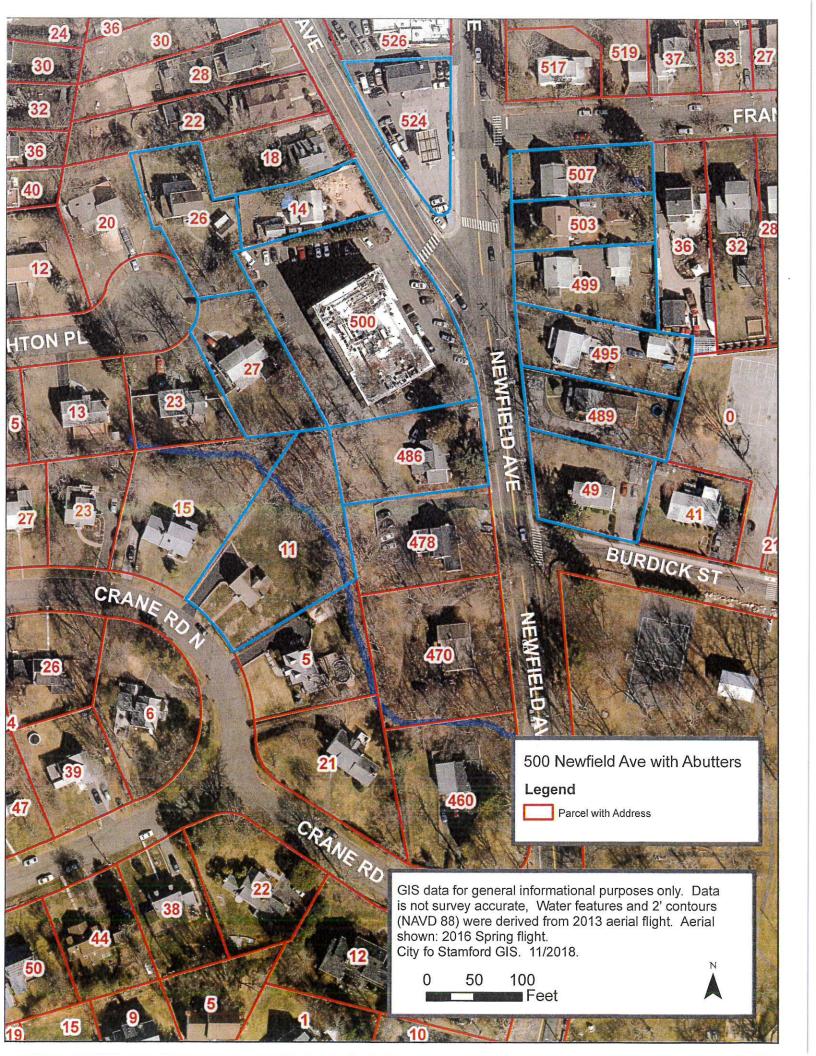
White Plains, New York 10601

Attorneys for:

New Cingular Wireless PCS, LLC (AT&T)

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Stamford, CT 06905-3616	Bagdad, FI 32530-0504
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Stamford, CT 06905	Stamford, CT 06902-2504
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5 Night Hawk Lane	507 Newfield Avenue
Sandy Hook, CT 06482-1590	Stamford, CT 06905-3708
Mohamed A. Hekal	Mastro 5 LLC
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Stamford, CT 06905	Norwalk, CT 06855-1109
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Stamford, CT 06905-3731	



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BAK PAPAJ LLC		5 NIGHT HAWK LANE	SANDY HOOK	CT	06482-1590
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ZUCKER SHIRA N		507 NEWFIELD AVENUE	STAMFORD	CT	06905-3708
FLEURIMOND SADRACK		14 OAKLAWN AVENUE	STAMFORD	CT	06905-3616
HEKAL MOHAMED A ET AL		503 NEWFIELD AVENUE	STAMFORD	CT	06905
WCL LIMITED PARTNERSHIP		500 NEWFIELD AVENUE	STAMFORD	CT	06905
MASTRO 5 LLC		191 EAST AVENUE	NORWALK	CT	06855-1109
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VELEZ SERGIO ALVAREZ ET AL	MENDEZ YUVIANA	489 NEWFIELD AVENUE	STAMFORD	CT	06902-7030
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KINAHAN CHRISTOPHER (LU) ET AL	KINAHAN AGNES T (LU)	11 CRANE ROAD NORTH	STAMFORD	CT	06902-2504
WALTERS CYNARA ET AL	MARTIN MISEVIC SUR CL	49 BURDICK STREET	STAMFORD	CT	06905-3731

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Dated: 1 31 19

Cuddy & Feder LLP

45 Hamilton Avenue, 14th Floor

White Plains, New York 10601

Attorneys for:

New Cingular Wireless PCS, LLC (AT&T)

State and Regional

The Honorable George Jepsen	Department of Economic and
Attorney General	Community Development
Office of the Attorney General	Catherine Smith, Commissioner
55 Elm Street	450 Columbus Boulevard, Suite 5
Hartford, CT 06106	Hartford, CT 06103
Department of Public Health	Department of Energy and
Dr. Raul Pino, Commissioner	Environmental Protection
410 Capitol Avenue	Public Utilities Regulatory Authority
P.O. Box 340308	Chair Katie Dykes
Hartford, CT 06134	Ten Franklin Square
¥	New Britain, CT 06051
Council on Environmental Quality	Department of Transportation
Karl J. Wagener, Executive Director	James P. Redeker, Commissioner
79 Elm Street	2800 Berlin Turnpike
Hartford, CT 06106	Newington, CT 06111

Department of Energy & Environmental	Department of Agriculture
Protection	Steven K. Reviczky, Commissioner
Rob Klee, Commissioner	450 Columbus Boulevard, Suite 701
79 Elm Street	Hartford, CT 06103
Hartford, CT 06106	
Office of Policy and Management	State House Representative-District 144
Benjamin Barnes, Secretary	Caroline Simmons
450 Capitol Avenue	State Capitol, Room C110
Hartford, CT 06106	210 Capitol Avenue
	Hartford, CT 06106
Department of Emergency Services &	State Senator -District S27
Public Protection	Carlo Leone
Division of Emergency Management and	Legislative Office Building
Homeland Security	300 Capitol Avenue
William J. Hackett, State Emergency	Room 3300
Management Director	Hartford, CT 06106
111 Country Club Road, 3rd Floor	
Middletown, CT 06457	
Department of Economic and Community	Western Connecticut Council of
Development-Offices of Culture and	Governments
Tourism	Francis Pickering, Executive Director
Todd Levine, State Historic Preservation	1 Riverside Road
Officer, Historian/Environmental Reviewer	Sandy Hook, CT 06482
450 Columbus Blvd., Suite 5	
Hartford, CT 06103	

Federal

Federal Communications Commission	Federal Aviation Administration
445 12 th Street SW	800 Independence Avenue, SW
Washington, D.C. 20554	Washington, DC 20591
U.S. Congressman Jim Himes	U.S. Senator Richard Blumenthal
211 State Street, 2 nd Floor	90 State House Square, 10th Floor
Bridgeport, CT 06604	Hartford, CT 06103
U.S. Senator Christopher Murphy	*
Colt Gateway	,
120 Huyshope Avenue	a.
Suite 401	
Hartford, CT 06106	6

City of Stamford

(100-201	
David Martin, Mayor	Planning Board
Stamford Government Center	Stamford Government Center
888 Washington Boulevard	888 Washington Boulevard, 7th Floor
Stamford, CT 06901	Stamford, CT 06901
Zoning Board	Environmental Protection Bureau
Stamford Government Center	Stamford Government Center
888 Washington Boulevard, 7th Floor	888 Washington Boulevard, 7th Floor
Stamford, CT 06901	Stamford, CT 06901
Ralph Blessing	James Lunney, III
Land Use Bureau Chief/ Director of	Zoning Enforcement Officer
Planning & Zoning	Stamford Government Center
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